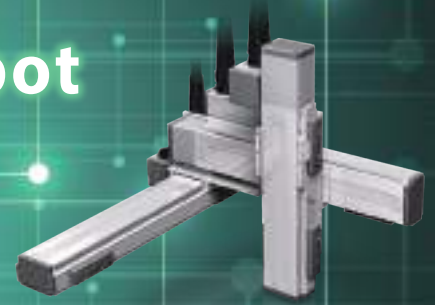


Cartesian Robot **ICSB/ICSPB** **ICSA/ICSPA**

IS(P)B configuration type with battery-less absolute encoder equipped as standard



Industry first! Cartesian Robot with Battery-less Absolute Encoder



[MERIT]

1

Now Equipped with a Battery-less Absolute Encoder as Standard

IS(P)B configuration type with battery-less absolute encoder equipped as standard.

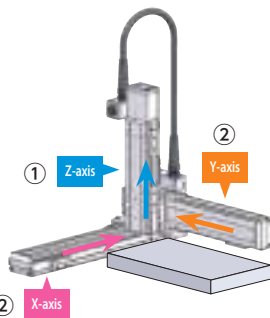
The advantages of using an absolute encoder.

- 1 Home return is not necessary since the current position is always known.
- 2 No external home sensor is required since home return is not necessary.
- 3 Removal of current workpieces is not necessary even in an emergency stop.
- 4 The troublesome creation of home-return programs is not necessary even when stopping inside of a complex machine.



Battery-less Absolute Encoder

No Battery, No Maintenance,
No Homing, and No Price Increase.
No Going Back to Incremental.



Incremental specification

- (1) Z-axis home return
- (2) X/Y-axis home return

Startup takes time as home return is performed while avoiding interference.

Battery-less Absolute Encoder specification

Moves to work home while avoiding interference, without home return.

Home return is eliminated, reducing startup time.

! Furthermore, battery-related errors do not occur.

[MERIT]

2

Cost Reduction

The battery-less absolute encoder type costs the same as the incremental encoder type. Without a battery, the price is less than the conventional absolute encoder specification.

Example ICSB3-BA+MSCON Controller

Absolute Encoder Specification

Reduction

Battery-less Absolute Encoder Specification

! Furthermore, there is no need for regular battery replacement.

[MERIT]

3

Extensive Variations

A wide range of configurations is available, from 2-axis to 6-axis specifications and small to large models.

Select a model suited to the payload, travel stroke and installation space.

954 variations are available, including 726 models compatible with the battery-less absolute encoder.

Encoder type	Configuration specifications			
	2-axis	3-axis	4-axis	6-axis
Battery-less Absolute Encoder	[7 types] 202 versions	[7 types] 524 versions		
Incremental Encoder/ Absolute Encoder	[1 types] 60 versions	[2 types] 148 versions	[2 types] 11 versions	[2 types] 9 versions

Variations

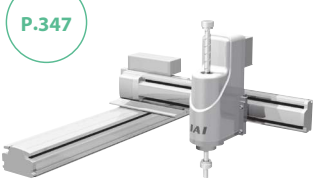
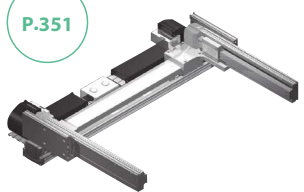
2-axis Configurations

 <p>P.13 [Y-axis Base Mount]</p> <p>XYB Type</p>	 <p>P.71 [Y-axis Slider Mount]</p> <p>XYS Type</p>	 <p>P.85 [Z-axis Upright Mount]</p> <p>XZ Type</p>	 <p>P.101 [Z-axis Slider Mount]</p> <p>YZS Type</p>
 <p>P.111 [Z-axis Base Mount]</p> <p>YZB Type</p>	 <p>P.123 [Y-axis Horizontal Gantry]</p> <p>XYG Type</p>	 <p>P.127 [Y-axis Side-mounted Gantry]</p> <p>XYBG Type</p>	

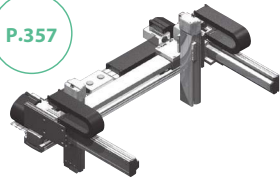
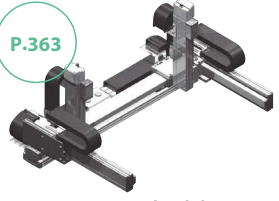
3-axis Configurations

 <p>P.149 [Y-axis Base Mount] [Z-axis Base Mount]</p> <p>XYB+ZB Type</p>	 <p>P.213 [Y-axis Base Mount] [Z-axis Slider Mount]</p> <p>XYB+ZS Type</p>	 <p>P.259 [Z-axis Upright Mount] [Y-axis Slider Mount]</p> <p>XZ+YS Type</p>	 <p>P.263 [Y-axis Horizontal Gantry] [Z-axis Base Mount]</p> <p>XYG+ZB Type</p>
 <p>P.275 [Y-axis Horizontal Gantry] [Z-axis Slider Mount]</p> <p>XYG+ZS Type</p>	 <p>P.287 [Y-axis Side-mounted Gantry] [Z-axis Base Mount]</p> <p>XYBG+ZB Type</p>	 <p>P.319 [Y-axis Side-mounted Gantry] [Z-axis Slider Mount]</p> <p>XYBG+ZS Type</p>	

4-axis Configurations

 <p>P.347 [Y-axis Side Base Mount] [ZR-axis Base Mount]</p> <p>XYB+ZRB Type</p>	 <p>P.351 [X-axis Multi-Slider] [Y-axis Base Mount]</p> <p>XMYB Type</p>
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6-axis Configurations

 <p>P.357 [X-axis Multi-Slider] [Y-axis Side Base Mount] [Z-axis Base Mount]</p> <p>XMYB+ZB Type</p>	 <p>P.363 [X-axis Multi-Slider] [Y-axis Side Base Mount] [Z-axis Slider Mount]</p> <p>XMYB+ZS Type</p>
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Model Selection Tables Select the optimal model for your working conditions from the model list below.


Cartesian Robot 2-axis Configurations

XYB Type (Y-axis Base Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B2 (IS(P)B+IS(P)B 2-axis Configurations) 	BA□H	WA	900	400	—	6.1	960	960	—	P.13
	BA□M	WA	900	400	—	19.4	480	480	—	P.15
	BB□H	WA	1100	400	—	12	1200	960	—	P.17
	BB□M	WA	1100	400	—	25	600	480	—	P.19
	BC□H	WA	1100	500	—	20	1200	1200	—	P.21
	BC□M	WA	1100	500	—	30	600	600	—	P.23
	BD□H	WA	2000	500	—	20	1200	1200	—	P.25
	BE□S	WA	1300	700	—	25.7	2400	1800	—	P.27
	BE□H	WA	1300	700	—	45	1200	1200	—	P.29
	BE□M	WA	1300	700	—	60	600	600	—	P.31
	BF□S	WA	2500	700	—	25.7	2400	1800	—	P.33
	BF□H	WA	2500	700	—	45	1200	1200	—	P.35
	BG□S	WA	1300	700	—	20.9	2400	2400	—	P.37
	BH□S	WA	2500	700	—	20.9	2400	2400	—	P.39
ICS(P)B2 (IS(P)A+IS(P)B 2-axis Configurations) 	BK□H	I/A	1300	700	—	36.6	2400	2400	—	P.41
	BK□M	I/A	1300	700	—	65	1200	1200	—	P.43
	BL□H	I/A	2500	700	—	36.6	2400	2400	—	P.45
ICS(P)B2 (SSPA+IS(P)B 2-axis Configurations) 	BL□M	I/A	2500	700	—	65	1200	1200	—	P.47
	BM□H	I/A	1500	700	—	36.4	2500	2400	—	P.49
ICS(P)B2 (SSPA+IS(P)B 2-axis Configurations) 	BM□M	I/A	1500	700	—	78.6	1250	1200	—	P.51
	ICS(P)A2 (IS(P)A+IS(P)A 2-axis Configurations) 	BP□H	I/A	1300	700	—	31.7	2000	2400	—
BP□M		I/A	1300	700	—	62.3	1250	1200	—	P.55
BQ□H		I/A	2500	700	—	31.7	2000	2400	—	P.57
BQ□M		I/A	2500	700	—	62.3	1250	1200	—	P.59
ICSPA2 (NS+ISPA 2-axis Configurations) 	B1N□H	I/A	2200	700	—	21.2	2400	1200	—	P.61
	B1N□M	I/A	2200	700	—	40	1300	1200	—	P.63
	B2N□H	I/A	3000	700	—	21.2	2400	1200	—	P.65
	B2N□M	I/A	3000	700	—	40	1300	1200	—	P.67
ICSPA2 (LSA+ISPA 2-axis Configurations) 	B1L□H	I	4155	400	—	21.2	2500	1200	—	P.69

* The payload shown is the maximum value for the rated acceleration.

XYB Type (Y-axis Slider Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B2 (IS(P)B+IS(P)B 2-axis Configurations) 	SA□H	WA	600	400	—	6.6	960	960	—	P.71
	SA□M	WA	600	400	—	19.9	480	480	—	P.73
	S1C□H	WA	800	500	—	10	1200	1200	—	P.75
	S1C□M	WA	800	500	—	30	600	600	—	P.77
	S2C□H	WA	800	500	—	31.7	1200	1200	—	P.79
	SG□S	WA	800	600	—	22.6	2400	2400	—	P.81
	SG□H	WA	800	600	—	27.5	1200	1200	—	P.83

* The payload shown is the maximum value for the rated acceleration.

XZ Type (Z-axis Upright Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B2 (IS(P)B+IS(P)B 2-axis Configurations)	ZA□H	WA	900	—	300	7.0	960	—	480	P.85
	ZA□M	WA	900	—	300	13	480	—	240	P.87
	Z1C□H	WA	1100	—	400	10	1200	—	600	P.89
	Z1C□M	WA	1100	—	400	20	600	—	300	P.91
	Z2C□H	WA	1100	—	400	18.3	1200	—	600	P.93
	ZD□H	WA	2000	—	400	18.3	1200	—	600	P.95
	ZG□S	WA	1300	—	500	20	2400	—	1200	P.97
	ZH□S	WA	2500	—	500	20	2400	—	1200	P.99

* The payload shown is the maximum value for the rated acceleration.

YZS Type (Z-axis Slider Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B2 (IS(P)B+IS(P)B 2-axis Configurations)	YSA□H	WA	—	500	400	3.9	—	960	480	P.101
	YSA□M	WA	—	500	400	11	—	480	240	P.103
	YSC□H	WA	—	700	500	13.6	—	1200	600	P.105
	YSC□M	WA	—	700	500	13.3	—	600	300	P.107
	YSG□H	WA	—	700	500	28.8	—	1200	600	P.109

* The payload shown is the maximum value for the rated acceleration.

YZB Type (Z-axis Base Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B2 (IS(P)B+IS(P)B 2-axis Configurations)	YBA□H	WA	—	900	400	7.0	—	960	480	P.111
	YBA□M	WA	—	900	400	14	—	480	240	P.113
	YBC□H	WA	—	1100	500	20	—	1200	600	P.115
	YBC□M	WA	—	1100	500	20	—	600	300	P.117
	YBG□S	WA	—	1300	500	20	—	2400	1200	P.119
	YBG□H	WA	—	1300	500	40	—	1200	600	P.121

* The payload shown is the maximum value for the rated acceleration.

XYG Type (Y-axis Horizontal Gantry)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B2 (IS(P)B+IS(P)B 2-axis Configurations)	G1J□H	WA	2500	700	—	45	1200	1200	—	P.123
	G2J□H	WA	2500	1200	—	45	1200	1200	—	P.125

* The payload shown is the maximum value for the rated acceleration.





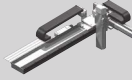
XYBG Type (Y-axis Side-mounted Gantry)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B2 (IS(P)B+IS(P)B 2-axis Configurations)	GB□H	WA	1100	600	—	12.9	1200	960	—	P.127
	GB□M	WA	1100	600	—	27	600	480	—	P.129
	GC□H	WA	1100	700	—	23	1200	1200	—	P.131
	GC□M	WA	1100	700	—	26.6	600	600	—	P.133
	GD□H	WA	2000	700	—	23	1200	1200	—	P.135
	GE□H	WA	1300	900	—	45	1200	1200	—	P.137
	GE□M	WA	1300	900	—	60	600	600	—	P.139
	GF□H	WA	2500	900	—	45	1200	1200	—	P.141
	GG□H	WA	1300	1100	—	34.5	1200	1200	—	P.143
	GG□M	WA	1300	1100	—	34.5	600	600	—	P.145
	GH□H	WA	2500	1100	—	34.5	1200	1200	—	P.147

* The payload shown is the maximum value for the rated acceleration.

Cartesian Robot 3-axis Configurations

XYB+ZB Type (Y-axis Base Mount/Z-axis Base Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)*			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B3 IS(P)B+IS(P)B+IS(P)B 3-axis Configurations 	BA□MB1□	WA	900	400	300	3.5/7.0/8.9	480	480	960/480/240	P.149
	BB□HB1□	WA	1100	400	300	3.5/7.0/7.7	1200	960	960/480/240	P.151
	BB□MB1□	WA	1100	400	300	3.5/7/14	600	480	960/480/240	P.153
	BC□HB1□	WA	1100	500	400	3.5/7/14	1200	1200	960/480/240	P.155
	BC□HB2□	WA	1100	500	400	5/10/13.1	1200	1200	1200/600/300	P.157
	BC□HB3□	WA	1100	500	400	10/12.6	1200	1200	1200/600	P.159
	BC□MB2□	WA	1100	500	400	5/10/19	600	600	1200/600/300	P.161
	BC□MB3□	WA	1100	500	400	10/18.5	600	600	1200/600	P.163
	BD□HB1□	WA	2000	500	400	3.5/7/14	1200	1200	960/480/240	P.165
	BD□HB2□	WA	2000	500	400	5/10/13.1	1200	1200	1200/600/300	P.167
	BD□HB3□	WA	2000	500	400	10/12.6	1200	1200	1200/600	P.169
	BE□HB1□	WA	1300	700	500	3.5/7/14	1200	1200	960/480/240	P.171
	BE□HB2□	WA	1300	700	500	5/10/20	1200	1200	1200/600/300	P.173
	BE□HB3□	WA	1300	700	500	10/20	1200	1200	1200/600	P.175
	BF□HB1□	WA	2500	700	500	3.5/7/14	1200	1200	960/480/240	P.177
	BF□HB2□	WA	2500	700	500	5/10/20	1200	1200	1200/600/300	P.179
	BF□HB3□	WA	2500	700	500	10/20	1200	1200	1200/600	P.181
	ICS(P)B3 IS(P)A+IS(P)B+IS(P)B 3-axis Configurations 	BK□HB3□	I/A	1300	700	500	10/20	2400	2400	1200/600
BK□HB4H		I/A	1300	700	500	20	2400	2400	1200	P.185
BK□MB3M		I/A	1300	700	500	20	1200	1200	600	P.187
BK□MB4M		I/A	1300	700	500	36.4	1200	1200	600	P.189
BL□HB3□		I/A	2500	700	500	10/20	2400	2400	1200/600	P.191
BL□HB4H		I/A	2500	700	500	20	2400	2400	1200	P.193
BL□MB3M		I/A	2500	700	500	20	1200	1200	600	P.195
BL□MB4M		I/A	2500	700	500	36.4	1200	1200	600	P.197
BM□HB4H		I/A	1500	700	500	20	2500	2400	1200	P.199
ICS(P)B3 SSPA+IS(P)B+IS(P)B 3-axis Configurations 	BM□MB4M	I/A	1500	700	500	33.1	1250	1200	600	P.201
ICSPA3 NS+ISPA+ISPA 3-axis Configurations 	B1N□HB3□	I/A	2200	700	500	9/11.2	2400	1200	1200/600	P.203
	B1N□MB3□	I/A	2200	700	500	9/19	1300	1200	1200/600	P.205
	B2N□HB3□	I/A	3000	700	500	9/11.2	2400	1200	1200/600	P.207
	B2N□MB3□	I/A	3000	700	500	9/19	1300	1200	1200/600	P.209
ICSPA3 LSA+ISPA+ISPA 3-axis Configurations 	B1L□HB3□	I	4155	400	400	9/11.2	2500	1200	1200/600	P.211

* The payload shown is the maximum value for the rated acceleration.
 * For those with multiple lead types, the payload and maximum speed are listed in the order of high lead/medium lead/low lead.

XYB+ZS Type (Y-axis Base Mount/Z-axis Slider Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)*			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B3 (IS(P)B+IS(P)B+IS(P)B) 3-axis Configurations	BA□MS1□	WA	700	400	300	4.3/11.3	480	480	480/240	P.213
	BB□HS1□	WA	1000	400	300	4.3/8.1	1200	960	480/240	P.215
	BB□MS1□	WA	1000	400	300	4.3/11.3	600	480	480/240	P.217
	BC□HS1□	WA	1000	500	400	4.3/11.3	1200	1200	480/240	P.219
	BC□HS3M	WA	1000	500	400	13.2	1200	1200	600	P.221
	BC□MS3M	WA	1000	500	400	14.3	600	600	600	P.223
	BD□HS1□	WA	2000	500	400	4.3/11.3	1200	1200	480/240	P.225
	BD□HS3M	WA	2000	500	400	13.2	1200	1200	600	P.227
	BE□HS1□	WA	1000	700	400	4.3/11.3	1200	1200	480/240	P.229
	BE□HS3M	WA	1000	700	400	14.3	1200	1200	600	P.231
	BF□HS1□	WA	2500	700	400	4.3/11.3	1200	1200	480/240	P.233
	BF□HS3M	WA	2500	700	400	14.3	1200	1200	600	P.235
ICS(P)B3 (IS(P)A+IS(P)B+IS(P)B) 3-axis Configurations	BK□HS4□	I/A	1000	700	500	12/25.1	2400	2400	1200/600	P.237
	BK□MS4□	I/A	1000	700	500	12/32	1200	1200	1200/600	P.239
	BL□HS4□	I/A	2500	700	500	12/25.1	2400	2400	1200/600	P.241
ICS(P)B3 (SSPA+IS(P)B+IS(P)B) 3-axis Configurations	BL□MS4□	I/A	2500	700	500	12/32	1200	1200	1200/600	P.243
	BM□HS4H	I/A	1000	700	500	12	2500	2400	1200	P.245
ICS(P)B3 (SSPA+IS(P)B+IS(P)B) 3-axis Configurations	BM□MS4M	I/A	1000	700	500	32	1250	1200	600	P.247
	ICSPA3 (NS+ISPA+ISPA) 3-axis Configurations	B1N□HS3M	I/A	2200	700	400	11.5	2400	1200	600
B1N□MS3M		I/A	2200	700	400	13	1300	1200	600	P.251
B2N□HS3M		I/A	3000	700	400	11.5	2400	1200	600	P.253
B2N□MS3M		I/A	3000	700	400	13	1300	1200	600	P.255
ICSPA3 (LSA+ISPA+ISPA) 3-axis Configurations	B1L□HS3M	I	4155	400	300	11.5	2500	1200	600	P.257

* The payload shown is the maximum value for the rated acceleration.

* For those with multiple lead types, the payload and maximum speed are listed in the order of high lead/medium lead/low lead.

XZ+YS Type (Z-axis Upright Mount/Y-axis Slider Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)	Max. speed (mm/s)			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B3 (IS(P)B+IS(P)B+IS(P)B) 3-axis Configurations	Z3C□HS1H	WA	1070	400	400	9.5	1200	960	600	P.259
	Z3G□HS2H	WA	1270	500	500	16.5	2400	1200	600	P.261

* The payload shown is the maximum value for the rated acceleration.

XYG+ZB Type (Y-axis Horizontal Gantry/Z-axis Base Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)*			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B3 (IS(P)B+IS(P)B+IS(P)B) 3-axis Configurations	G1J□HB1□	WA	2500	700	600	3.5/7/14	1200	1200	960/480/240	P.263
	G1J□HB2□	WA	2500	700	600	5/10/20	1200	1200	1200/600/300	P.265
	G1J□HB3□	WA	2500	700	600	10/20	1200	1200	1200/600	P.267
	G2J□HB1□	WA	2500	1200	600	3.5/7/14	1200	1200	960/480/240	P.269
	G2J□HB2□	WA	2500	1200	600	5/10/20	1200	1200	1200/600/300	P.271
	G2J□HB3□	WA	2500	1200	600	10/20	1200	1200	1200/600	P.273

* The payload shown is the maximum value for the rated acceleration.

* For those with multiple lead types, the payload and maximum speed are listed in the order of high lead/medium lead/low lead.

XYG+ZS Type (Y-axis Horizontal Gantry/Z-axis Slider Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)*			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B3 (IS(P)B+IS(P)B+IS(P)B) 3-axis Configurations	G1J□HS1□	WA	2500	700	400	4.3/11.3	1200	1200	480/240	P.275
	G1J□HS2L	WA	2500	700	500	14.8	1200	1200	300	P.277
	G1J□HS3M	WA	2500	700	500	14.3	1200	1200	600	P.279
	G2J□HS1□	WA	2500	1200	400	4.3/11.3	1200	1200	480/240	P.281
	G2J□HS2L	WA	2500	1200	500	14.8	1200	1200	300	P.283
	G2J□HS3M	WA	2500	1200	500	14.3	1200	1200	600	P.285

* The payload shown is the maximum value for the rated acceleration.

* For those with multiple lead types, the payload and maximum speed are listed in the order of high lead/medium lead/low lead.

Cartesian Robot 3-axis Configurations

XYGB+ZB Type (Y-axis Side-mounted Gantry/Z-axis Base Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)*			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B3 (IS(P)B+IS(P)B+IS(P)B) 3-axis Configurations	GB□HB1□	WA	1100	600	300	7/7.6	1200	960	480/240	P.287
	GB□MB1□	WA	1100	600	300	7/14	600	480	480/240	P.289
	GC□HB1□	WA	1100	700	400	7/14	1200	1200	480/240	P.291
	GC□HB2□	WA	1100	700	400	10/13	1200	1200	600/300	P.293
	GC□HB3H	WA	1100	700	400	10	1200	1200	1200	P.295
	GC□MB2L	WA	1100	700	400	17.6	600	600	300	P.297
	GC□MB3M	WA	1100	700	400	17.1	600	600	600	P.299
	GD□HB1□	WA	2000	700	400	7/14	1200	1200	480/240	P.301
	GD□HB2□	WA	2000	700	400	10/13	1200	1200	600/300	P.303
	GD□HB3H	WA	2000	700	400	10	1200	1200	1200	P.305
	GE□HB1L	WA	1300	900	500	14	1200	1200	240	P.307
	GE□HB2□	WA	1300	900	500	10/20	1200	1200	600/300	P.309
	GE□HB3□	WA	1300	900	500	10/20/31.8	1200	1200	1200/600/300	P.311
	GF□HB1L	WA	2500	900	500	14	1200	1200	240	P.313
	GF□HB2□	WA	2500	900	500	10/20	1200	1200	600/300	P.315
	GF□HB3□	WA	2500	900	500	10/20/31.8	1200	1200	1200/600/300	P.317

* The payload shown is the maximum value for the rated acceleration.
* For those with multiple lead types, the payload and maximum speed are listed in the order of high lead/medium lead/low lead.

XYGB+ZS Type (Y-axis Side-mounted Gantry/Z-axis Slider Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)*			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)B3 (IS(P)B+IS(P)B+IS(P)B) 3-axis Configurations	GB□HS1□	WA	1000	600	300	4.3/8	1200	960	480/240	P.319
	GB□MS1□	WA	1000	600	300	4.3/11.3	600	480	480/240	P.321
	GC□HS1□	WA	1000	700	400	4.3/11.3	1200	1200	480/240	P.323
	GC□HS3M	WA	1000	700	400	13.1	1200	1200	600	P.325
	GC□MS1□	WA	1000	700	400	4.3/11.3	600	600	480/240	P.327
	GC□MS3M	WA	1000	700	400	14.3	600	600	600	P.329
	GD□HS1□	WA	2000	700	400	4.3/11.3	1200	1200	480/240	P.331
	GD□HS3M	WA	2000	700	400	13.1	1200	1200	600	P.333
	GE□HS1□	WA	1000	900	400	4.3/11.3	1200	1200	480/240	P.335
	GE□HS3□	WA	1000	900	400	14.3/32.9	1200	1200	600/300	P.337
	GE□MS1□	WA	1000	900	400	4.3/11.3	600	600	480/240	P.339
	GE□MS3L	WA	1000	900	400	34.3	600	600	300	P.341
	GF□HS1□	WA	2500	900	400	4.3/11.3	1200	1200	480/240	P.343
	GF□HS3□	WA	2500	900	400	14.3/32.9	1200	1200	600/300	P.345

* The payload shown is the maximum value for the rated acceleration.
* For those with multiple lead types, the payload and maximum speed are listed in the order of high lead/medium lead/low lead.

Cartesian Robot 4-axis Configurations

XYB+ZRB Type (Y-axis Side Base Mount/ZR-axis Base Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICS(P)A4 (IS(P)A+IS(P)A+ZR 4-axis Configurations)	BB□HZRS	I/A	800	400	150	1	1200	960	1005	P.347
	BE□HZRM	I/A	1000	700	200	2	1200	1200	1256	P.349

* The payload shown is the maximum value for the rated acceleration.

XMYB Type (X-axis Multi-Slider/Y-axis Base Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICSPA4 (NS+ISPA+ISPA 4-axis Configurations)	B3N1H	I/A	2250	700	—	21.2	2400	1200	—	P.351
	B3N1M	I/A	2250	700	—	40	1300	1200	—	P.353
ICSPA4 (LSA+ISPA+ISPA 4-axis Configurations)	B2L1H	I	3835	400	—	21.2	2500	1200	—	P.355

* The payload shown is the maximum value for the rated acceleration.

Cartesian Robot 6-axis Configurations

XMYB+ZB Type (X-axis Multi-Slider/Y-axis Side Base Mount/Z-axis Base Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)*			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICSPA6 (NS+ISPA+ISPA+ISPA+ISPA 6-axis Configurations)	B3N1HB3□	I/A	2250	700	500	9/11.2	2400	1200	1200/600	P.357
	B3N1MB3□	I/A	2250	700	500	9/19	1300	1200	1200/600	P.359
ICSPA6 (LSA+ISPA+ISPA+ISPA+ISPA 6-axis Configurations)	B2L1HB3□	I	3835	400	400	9/11.2	2500	1200	1200/600	P.361

* The payload shown is the maximum value for the rated acceleration.

* For those with multiple lead types, the payload and maximum speed are listed in the order of high lead/medium lead/low lead.

XMYB+ZS Type (X-axis Multi-Slider/Y-axis Side Base Mount/Z-axis Slider Mount)

Classification	Model	Encoder type	Stroke (mm)			Payload (kg)*	Max. speed (mm/s)			Reference page
			X-axis maximum	Y-axis maximum	Z-axis maximum		X-axis	Y-axis	Z-axis	
ICSPA6 (NS+ISPA+ISPA+ISPA+ISPA 6-axis Configurations)	B3N1HS3M	I/A	2250	700	400	11.5	2400	1200	600	P.363
	B3N1MS3M	I/A	2250	700	400	13	1300	1200	600	P.365
ICSPA6 (LSA+ISPA+ISPA+ISPA+ISPA 6-axis Configurations)	B2L1HS3M	I	3835	400	300	11.5	2500	1200	600	P.367

* The payload shown is the maximum value for the rated acceleration.

Cartesian Robot Selection Notes

Wiring Method Types and Features

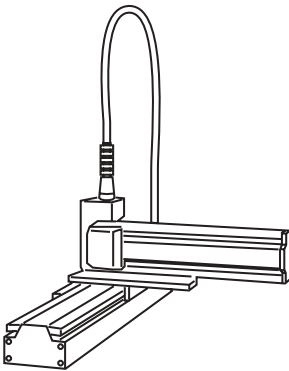
The motor/encoder cable management method can be "Self-standing cable" or "Cable track".
(Please refer to product pages for selectable wiring methods.)

■ Self-standing Cable

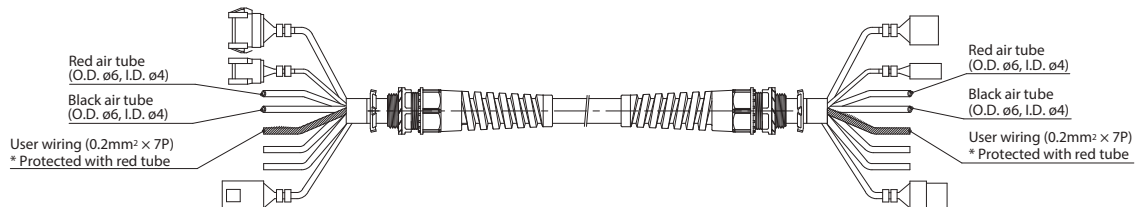
Cable Management Model: SC

Features

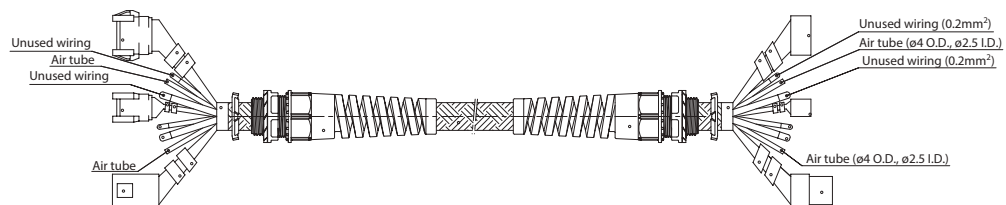
- The flex radius is large, making disconnection less likely.
- Vertical space is required.
- The composite cable contains service wiring and tubing for users.



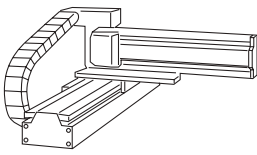
ICSB Series



ICSA Series



■ Cable Track



Cable Management Model: CT□□

- Features**
- Since height can be minimized, vertical space is not required.
 - The wiring of equipment to be mounted on the Y-axis and Z-axis can be stored in the cable track.
 - Four different track sizes can be selected according to the amount of cable to be stored. (ICSA Series exclusive)

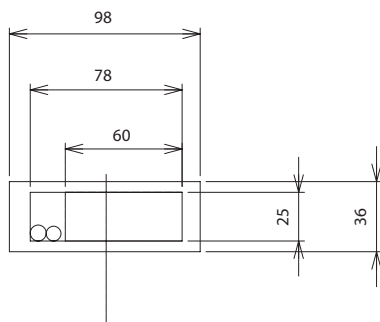
ICSB Series

Please refer to the dimensions on the product pages.

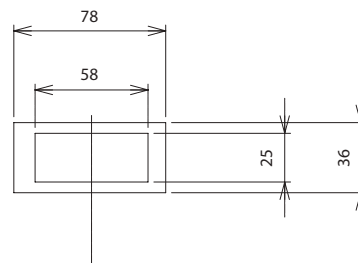
ICSA Series

● ISA extra-large type 2-axis configurations

Applicable models: BP□□/ BQ□□



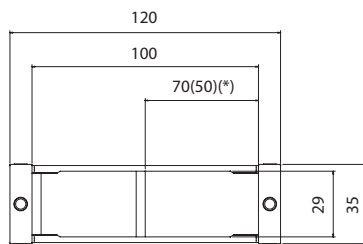
Cable track for Y-axis wiring



Cable track for Z-axis wiring (optional)

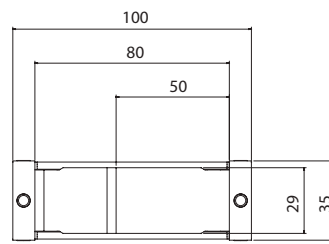
● Nut rotation actuator/linear servo actuator 2-axis/3-axis/4-axis/6-axis configurations

Applicable models: B1N□□□□/ B2N□□□□/ B3N□□□□/
B1L□□□□/ B2L□□□□



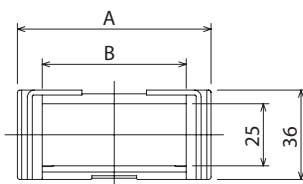
Cable track for Y-axis wiring

(*) 70 for 2-axis configurations and 50 for 3-axis configurations or more.



Cable track for Z-axis wiring (optional)

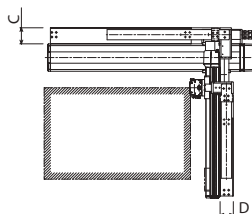
● ISA+ZR unit 4-axis configurations



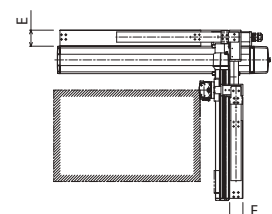
Model number	A	B	C	D	E	F
CT (standard)	56	38	87.7	79.2	87.7	72.2
CTM	78	58	107.7	99.2	107.7	92.2
CTL	98	78	127.7	119.2	127.7	112.2
CTXL	123	103	152.7	144.2	152.7	137.2

(Units: mm)

Applicable models: BB□□□□



Applicable models: BE□□□□



Cable Exit Direction/Sensor Mounting Direction/Z-axis Wiring Option

Cable Exit Direction/Sensor Mounting Direction

The cable exit direction of the cartesian robot configured axis and mounting direction of the sensor (creep sensor/home limit switch) differ depending on the configuration type. Please refer to the table below for more information.

(1) Cable exit direction * Applies only to 2-axis/3-axis configurations.

The cable exit direction is set only when the configured axis is IS(P)B, SSPA or IS(P)A-W.

Only the cable exit direction of the first axis can be changed as an option.

(However, it cannot be changed for YZS/YZB type and ICS(P)A Series.)

To set a different direction from the normal setting, indicate the cable exit direction symbol in the X-axis Option.

If the configured axis is IS(P)A-W, indicate the exit direction symbol in the configuration model name even for the normal setting.

(2) Sensor (creep sensor/home limit switch) mounting direction

The sensor mounting direction cannot be changed.

Even if the mounting direction is opposite, the option code notation in the configuration type will be "C/L".

Also, if the configured axis is IS(P)A-W, LSA or NS, the sensor mounting position will be "C/L" regardless of the configuration direction.

Depending on the configured axis, the sensor may not be mountable. Please check the Options table on the product pages.

2-axis Configurations

Type	Configuration direction	First axis		Second axis		Second axis wiring
		Cable exit direction *1	Sensor mounting direction *2	Cable exit direction	Sensor mounting direction	
XYB XYBG	1	A3S[A3]	CL/LL(C/L)	A1S	C/L	SC CT
	2	A1S[A1]	C/L(C/L)	A3S	CL/LL	
	3	A3S[A3]	CL/LL(C/L)	A3S	CL/LL	
	4	A1S[A1]	C/L(C/L)	A1S	C/L	
XYS	1	A3S	CL/LL	A3S	C/L	SC
	2	A1S	C/L	A1S	CL/LL	
	3	A3S	CL/LL	A1S	CL/LL	
	4	A1S	C/L	A3S	C/L	
XZ	1	A3S	CL/LL	A3S	CL/LL	CT
	2	A1S	C/L	A1S	C/L	
	3	A3S	CL/LL	A1S	C/L	
	4	A1S	C/L	A3S	CL/LL	
	5	A3S	CL/LL	A1S	C/L	
	6	A1S	C/L	A3S	CL/LL	
YZS	1	A1E	C/L	A3E	CL/LL	SC
	2	A3E	CL/LL	A1E	C/L	
YZB	1	A1E	C/L	A3S	CL/LL	CT
				A1E	C/L	SC
	2	A3E	CL/LL	A1S	C/L	CT
XYG	1	A3S	CL/LL	A3E	C/L	SC
	2	A1S	C/L	A1E	CL/LL	CT
				A3E	C/L	SC

*1 Direction in the normal setting. Cable exit direction can be changed as an option (YZS/YZB cannot be changed).

[] is for IS(P)A-W.

*2 [] is for IS(P)A-W, LSA or NS axis configuration.

Table legend

● Actuator cable exit direction

Axis configuration	Code	Legend
IS(P)B SSPA	A1E	Exit direction: Back left
	A1S	Exit direction: Left
	A3E	Exit direction: Back right
IS(P)A-W	A3S	Exit direction: Right
	A1	Exit from left side
	A3	Exit from right side

● Sensor (creep sensor/home limit switch) mounting direction

Code	Legend
C/L	Mounting direction: Body right (standard)
CL/LL *	Mounting direction: Body left (opposite side)

* The option code notation in the configuration type will be "C/L".

● Wiring

Code	Legend
SC	Self-standing Cable
CT	Cable Track

3-axis Configurations

Type	Configuration direction	First axis			Second axis		Third axis		Third axis wiring
		Cable exit direction *1	Sensor mounting direction *2		Cable exit direction	Sensor mounting direction	Cable exit direction	Sensor mounting direction	
XYB + ZB	1	A3S[A3]	CL/LL(C/L)		A1S	C/L	A3S	CL/LL	CT
							A3E		SC
	2	A1S[A1]	C/L(C/L)		A3S	CL/LL	A1S	C/L	CT
							A1E		SC
XYB + ZS	1	A3S[A3]	CL/LL(C/L)		A1S	C/L	A1E	C/L	CT
							A3S	CL/LL	SC
	2	A1S[A1]	C/L(C/L)		A3S	CL/LL	A3E	CL/LL	CT
							A1E		SC
XZ+YS	1	A3S	CL/LL		A3E	CL/LL	A3S	C/L	SC
	2	A1S	C/L		A1E	C/L	A1S	CL/LL	SC
XYG+ZB	1	A3S	CL/LL		A3E	C/L	A1S	C/L	CT
	2	A1S	C/L		A1E	CL/LL	A3S	CL/LL	SC
XYG+ZS	1	A3S	CL/LL		A3E	C/L	A3E	CL/LL	SC
	2	A1S	C/L		A1E	CL/LL	A1E	C/L	CT
XYBG + ZB	1	A3S	CL/LL		A1S	C/L	A3S	CL/LL	CT
							A3E		SC
	2	A1S	C/L		A3S	CL/LL	A1S	C/L	CT
							A1E		SC
XYBG + ZS	1	A3S	CL/LL		A1S	C/L	A1E	C/L	CT
							A3E	CL/LL	SC
	2	A1S	C/L		A3S	CL/LL	A3E	CL/LL	CT
							A1E		SC

*1 Direction in the normal setting. Cable exit direction can be changed as an option.

[] is for IS(P)A-W.

*2 [] is for IS(P)A-W, LSA or NS axis configuration.

4-axis Configurations

Type	Configuration direction	Sensor mounting direction				Wiring
		First axis	Second axis	Third axis	Fourth axis	
XYB + ZRB	1	CL/LL	CL/LL	L	-	CT
	2	C/L	C/L	L	-	
	3	CL/LL	C/L	L	-	
	4	C/L	CL/LL	L	-	
XMYB	1	C/L	-	C/L	CL/LL	CT

6-axis Configurations

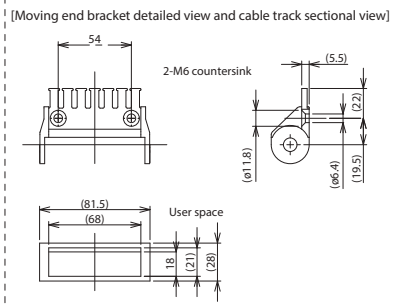
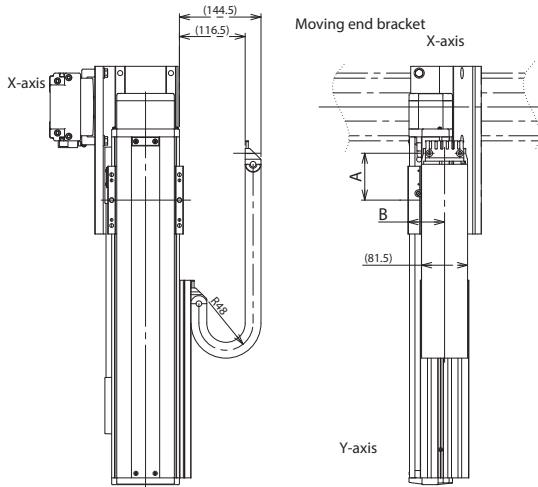
Type	Configuration direction	Sensor mounting direction						Wiring
		First axis	Second axis	Third axis	Fourth axis	Fifth axis	Sixth axis	
XMYB + ZB	1	C/L	-	C/L	C/L	CL/LL	CL/LL	CT
XMYB + ZS	1	C/L	-	C/L	CL/LL	CL/LL	C/L	CT

Z-axis Wiring Option

* Only ICS(P)B2 can be selected

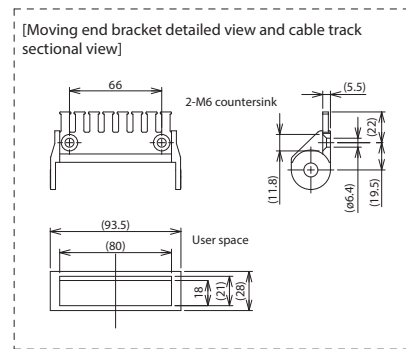
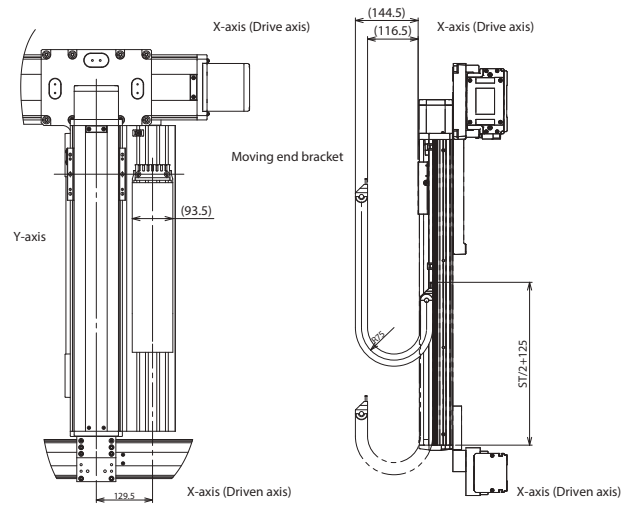
Cable track for wiring is set as an option on the Y-axis slider of XYB, XYBG and XYG for customer device mounting.

<Configuration type: XYB, XYBG>



Configuration type	Dimension A	Dimension B
BA□□/BB□□	73	54
BC□□/BD□□/BE□□/BF□□	83	65
BG□□/BH□□/BK□□/BL□□/BM□□	83	80
GB□□	73	54
GC□□/GD□□/GE□□/GF□□	83	65
GG□□/GH□□	83	80

<Configuration type: XYG-G1J/G2J>



Cartesian Robot - Controller Connecting Cable

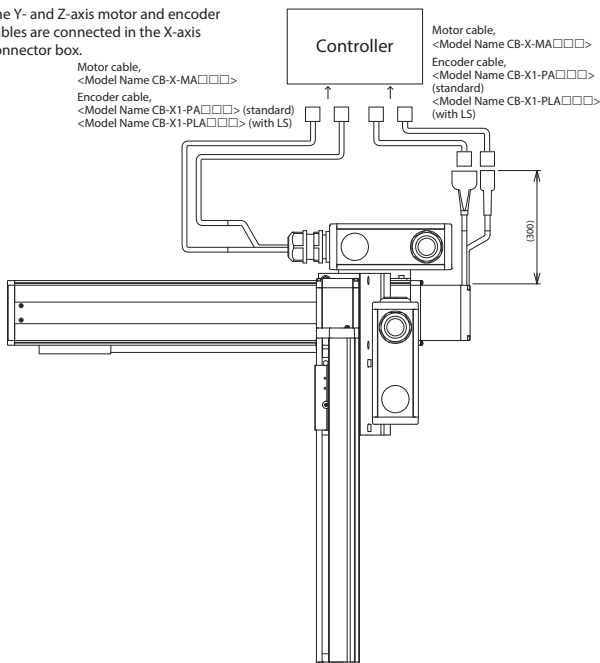
*ICS(P)B

Connect the cartesian robot - controller connecting cable using the single axis robot cable for each configured axis.

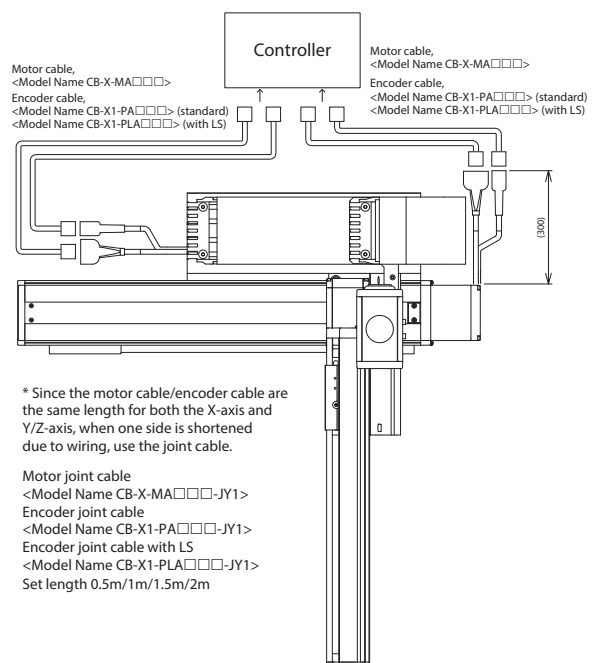
Please contact IAI for more details on the cables.

<Self-standing cable specification>

The Y- and Z-axis motor and encoder cables are connected in the X-axis connector box.



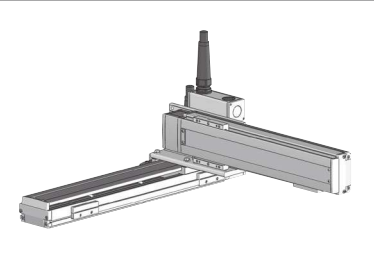
<Cable track specification>



ICSB2-BA□H

ICSPB2-BA□H High-Precision Specification

±10μm Standard
±5μm High-Precision
Battery-less Absolute
X-Y 2-axis
XYB (Y Base Mount)
High Speed Type
X: 5m (60W)
Y: 5m (60W)



Model Specification Items

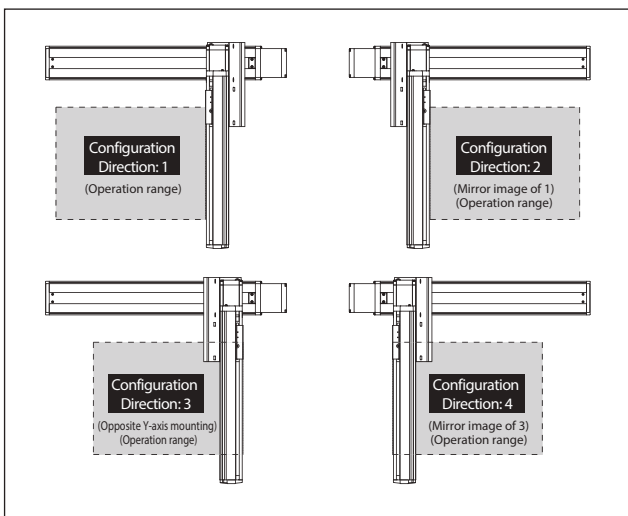
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 90: 900mm <70: 700mm>* (Every 50mm) * For self-standing cable specification	10: 100mm 40: 400mm Refer to Options table below.	T2: SCQN SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BA1H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-BA2H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-BA3H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-BA4H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 90: 900mm (70: 700mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 40: 400mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
[8]	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 700mm for the self-standing cable specification.

*2 Please specify only when required.
Selectable only when the Y-axis Cable Management is "CT".
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-SXM-[1]-60-16-[2]-T2-[9]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM-[1]-60-16-[2]-T2-[9]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [3] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~600	650~700	750~800	850~900
X-axis	960	655	515	415	
Y-axis	960				

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Y-axis stroke						
	100	150	200	250	300	350	400
0.2	6.1	5.8	5.5	5.3	5.0	4.7	4.5
0.3	6.1	5.8	5.5	5.3	5.0	4.7	4.5
0.4	6.1	5.8	5.5	5.3	5.0	4.7	4.5
0.5	3.4	3.1	2.8	2.6	2.3	2.0	1.8
0.6	1.6	1.3	1.0	0.8	0.5	—	—
0.7	0.7	0.4	—	—	—	—	—
0.8	—	—	—	—	—	—	—
0.9	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—
1.1	—	—	—	—	—	—	—
1.2	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	60W/16mm
Y-axis motor output/lead	60W/16mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.

The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

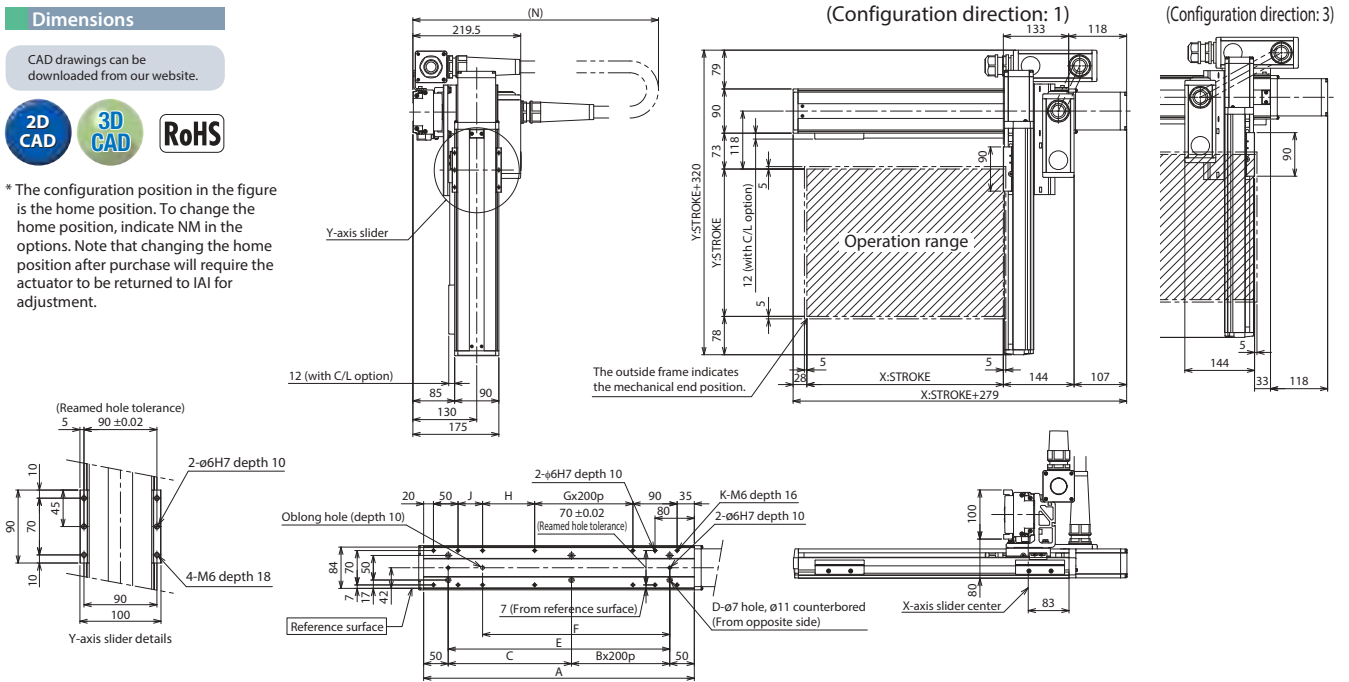
ICSB2 [ICSPB2]-BA□H-SC (Self-standing cable specification)

Dimensions

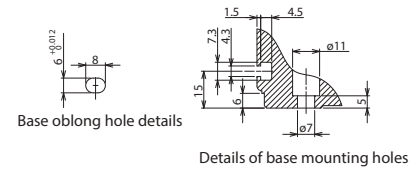
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
A	251	301	351	401	451	501	551	601	651	701	751	801	851
B	0	0	0	1	1	1	1	2	2	2	2	3	3
C	151	201	251	101	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8	8	8	10	10
E	151	201	251	301	351	401	451	501	551	601	651	701	751
F	131	131	181	231	281	331	381	431	481	531	581	631	681
G	0	0	0	0	0	0	1	1	1	1	2	2	2
H	56	56	106	156	206	256	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14	14	14
N	500	550	550	600	600	650	650	650	700	700	750	750	800



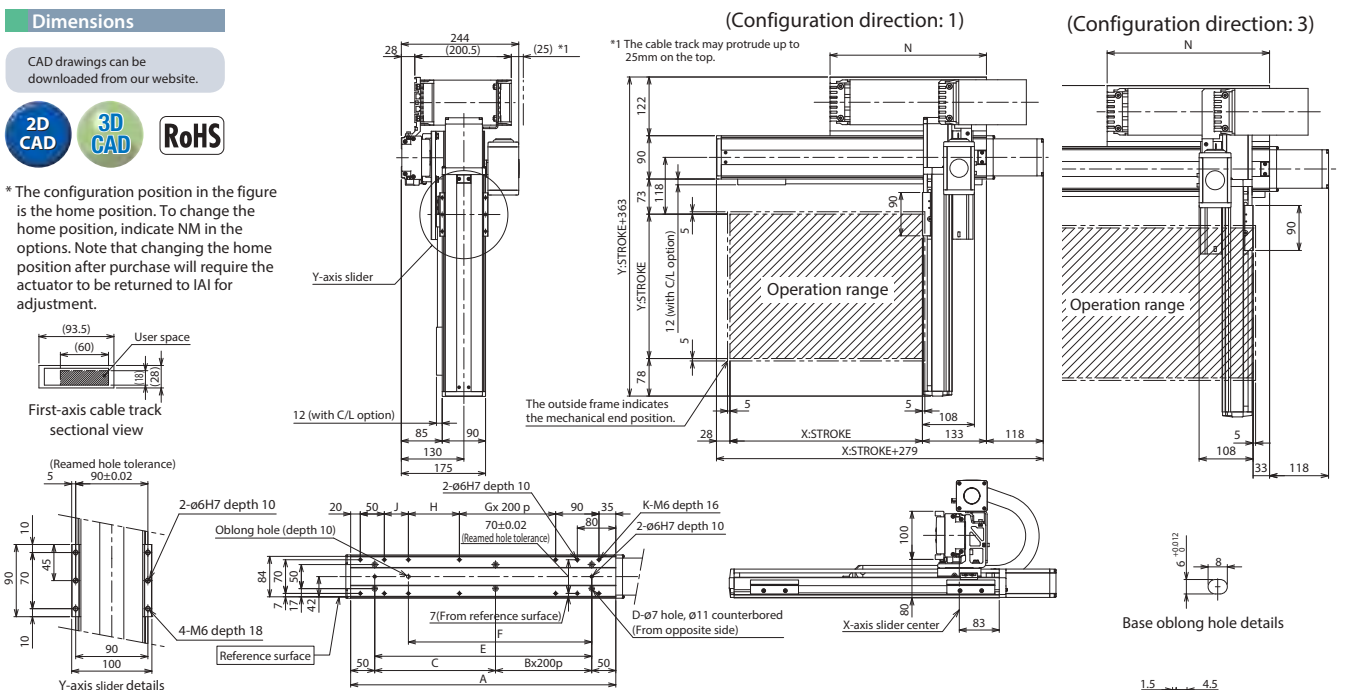
ICSB2 [ICSPB2]-BA□H-CT (Cable specification)

Dimensions

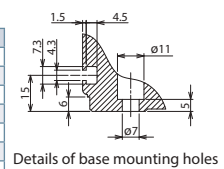
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
A	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051
B	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4
C	151	201	251	101	151	201	251	101	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12
E	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951
F	131	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3
H	56	56	106	156	206	256	106	156	206	256	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575

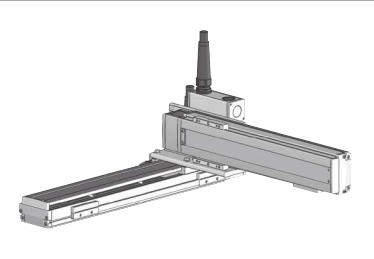


ICSB2-BA□M

ICSPB2-BA□M

High-Precision Specification

±10µm Standard
±5µm High-Precision
Battery-less Absolute
X-Y 2-axis
XYB (Y Base Mount)
Medium Speed Type
X: 5m (60W)
Y: 5m (60W)



Model Specification Items

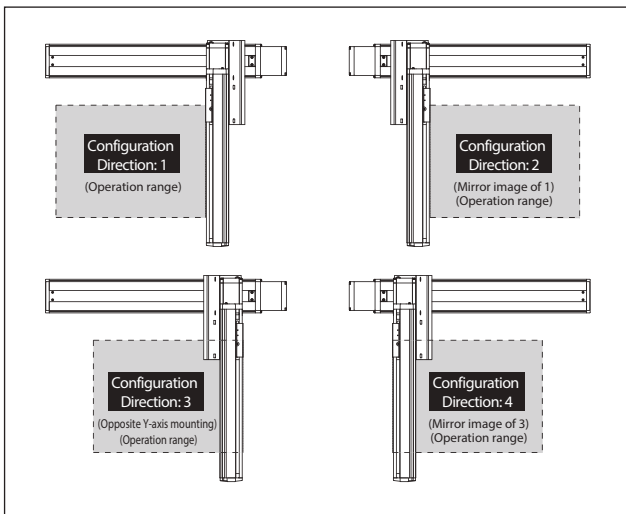
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm ? : 900mm <70: 700mm> * (Every 50mm)	10: 100mm ? : 400mm (Every 50mm)	T2: SC/ON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: □m	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BA1M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-BA2M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-BA3M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-BA4M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm ? : 900mm (70: 700mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm ? : 400mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
[8]	Z-axis Cable Management (Option)	CT: Cable track *2

*1 The maximum X-axis stroke is 700mm for the self-standing cable specification.

*2 Please specify only when required. Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	60W/8mm
Y-axis motor output/lead	60W/8mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-SXM-[1]-60-8-[2]-T2-[3]-[4]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM-[1]-60-8-[4]-T2-[3]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names. Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [2] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~600	650~700	750~800	850~900
X-axis	480		330	260	210
Y-axis	480				

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke						
		100	150	200	250	300	350	400
Acceleration *1	0.2	19.4	19.0	16.4	13.9	12.0	10.3	9.0
	0.3	19.4	19.0	16.4	13.9	12.0	10.3	9.0
	0.4	19.4	19.0	16.4	13.9	12.0	10.3	9.0
	0.5	13.1	12.7	12.4	12.0	11.7	10.1	8.9
	0.6	8.6	8.2	7.9	7.5	7.2	6.9	6.6
	0.7	5.9	5.5	5.2	4.8	4.5	4.2	3.9
	0.8	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

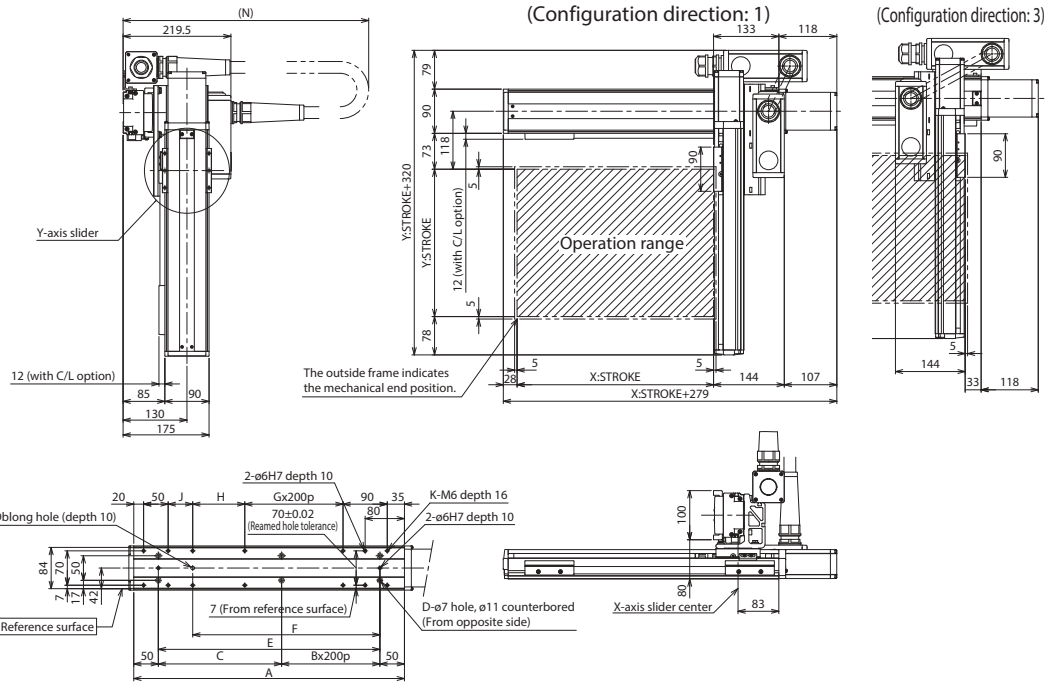
ICSB2 [ICSPB2]-BA□M-SC (Self-standing cable specification)

Dimensions

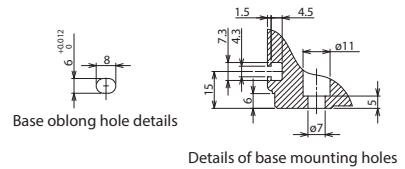
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
A	251	301	351	401	451	501	551	601	651	701	751	801	851
B	0	0	0	1	1	1	1	2	2	2	2	3	3
C	151	201	251	101	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8	8	8	10	10
E	151	201	251	301	351	401	451	501	551	601	651	701	751
F	131	131	181	231	281	331	381	431	481	531	581	631	681
G	0	0	0	0	0	0	1	1	1	1	2	2	2
H	56	56	106	156	206	256	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14	14	14
N	500	550	550	600	600	650	650	650	700	700	750	750	800



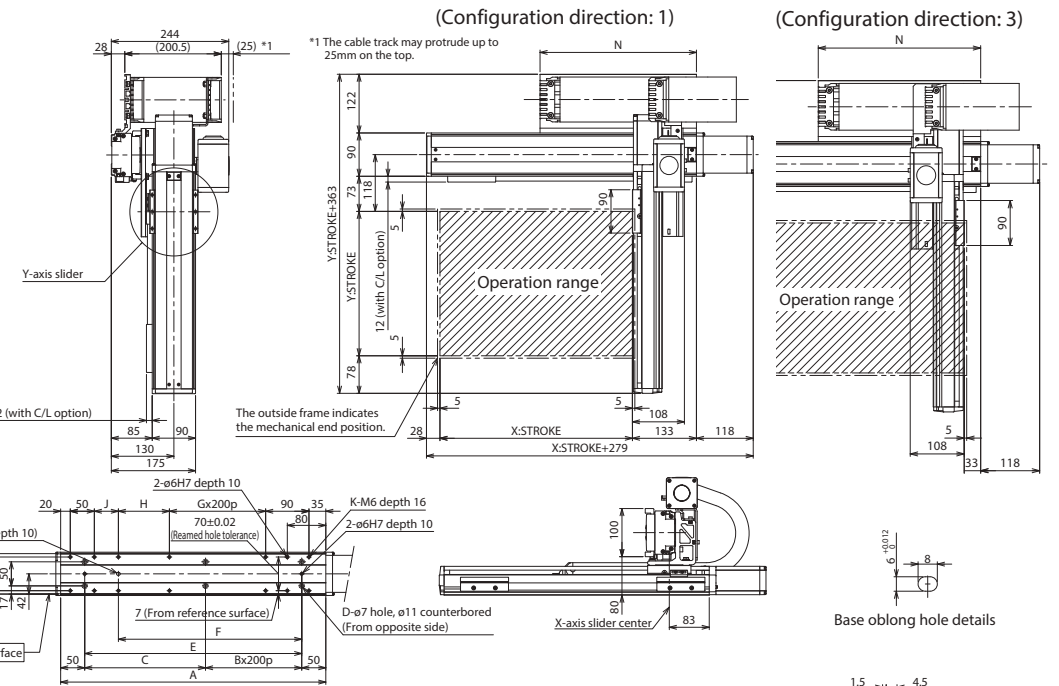
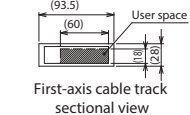
ICSB2 [ICSPB2]-BA□M-CT (Cable track specification)

Dimensions

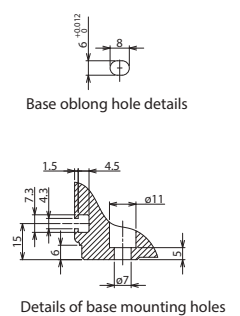
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



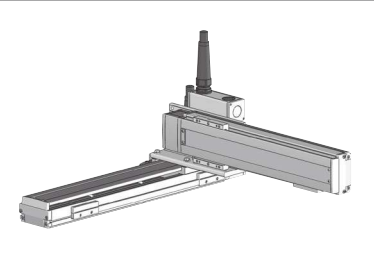
X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
A	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051
B	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4
C	151	201	251	101	151	201	251	101	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12
E	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951
F	131	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3
H	56	56	106	156	206	256	106	156	206	256	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575



ICSB2-BB□H

ICSPB2-BB□H High-Precision Specification

±10µm Standard
±5µm High-Precision
Battery-less Absolute
X-Y 2-axis
XYB (Y Base Mount)
High Speed Type
X: Md (100W) Y: 5m (60W)



Model Specification Items

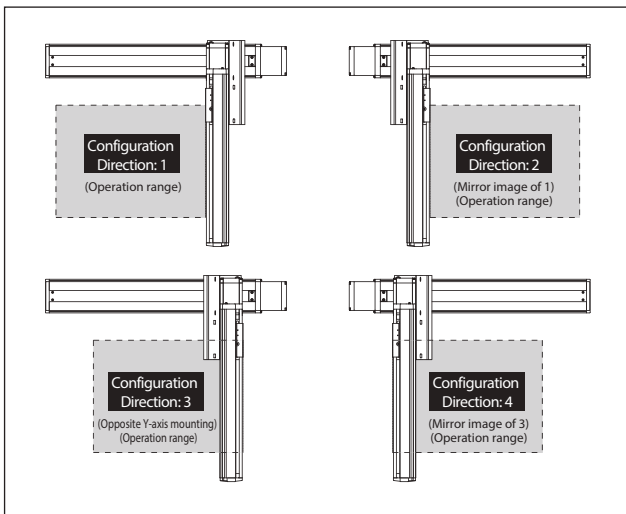
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm (100: 1000mm)* <100: 1000mm>* below. (Every 50mm) * For self-standing cable specification	10: 100mm 40: 400mm (Every 50mm) table below.	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: □m	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BB1H-①-②-③-④-⑤-T2-⑥-⑦-⑧
2	ICSB2[ICSPB2]-BB2H-①-②-③-④-⑤-T2-⑥-⑦-⑧
3	ICSB2[ICSPB2]-BB3H-①-②-③-④-⑤-T2-⑥-⑦-⑧
4	ICSB2[ICSPB2]-BB4H-①-②-③-④-⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-100-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM-①-60-16-②-T2-③-④	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑨ in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~700	750~800	850~900	950~1000	1000~1100
X-axis	1200		860	695	570	460
Y-axis	960			—		

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke						
		100	150	200	250	300	350	400
Acceleration *1	0.2	12.0	12.0	12.0	11.8	11.5	11.3	11.0
	0.3	12.0	12.0	12.0	11.8	11.5	11.3	11.0
	0.4	12.0	12.0	12.0	11.8	11.5	11.3	11.0
	0.5	8.1	7.8	7.6	7.3	7.0	6.8	6.5
	0.6	5.4	5.1	4.9	4.6	4.3	4.1	3.8
	0.7	3.6	3.3	3.1	2.8	2.5	2.3	2.0
	0.8	2.3	2.0	1.7	1.4	1.2	0.9	0.6
	0.9	1.4	1.1	0.8	0.5	—	—	—
	1	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option)	CT: Cable track *2

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required.
Selectable only when the Y-axis Cable Management is "CT".
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/20mm
Y-axis motor output/lead	60W/16mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.

The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

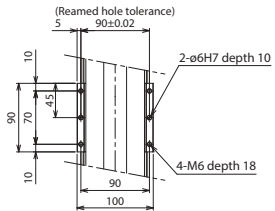
ICSB2 [ICSPB2]-BB□H-SC (Self-standing cable specification)

Dimensions

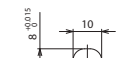
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

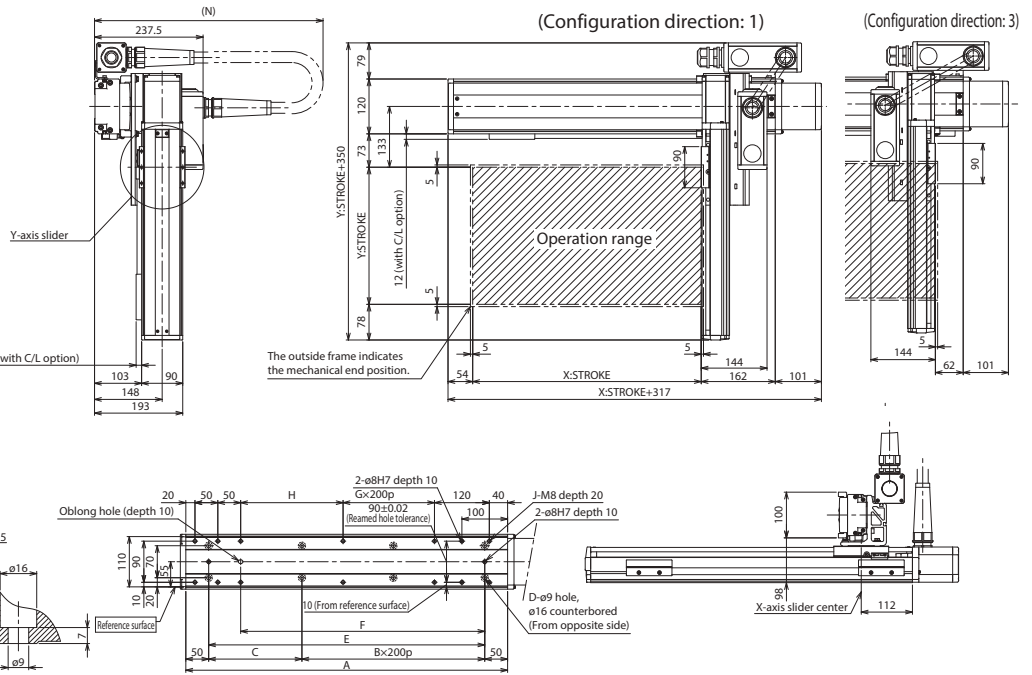


Y-axis slider details



Base oblong hole details

Details of base mounting holes



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	550	550	600	600	650	650	700	700	750	750	750	800	800	850	850	900	900	950	950

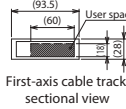
ICSB2 [ICSPB2]-BB□H-CT (Cable track specification)

Dimensions

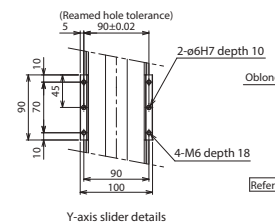
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

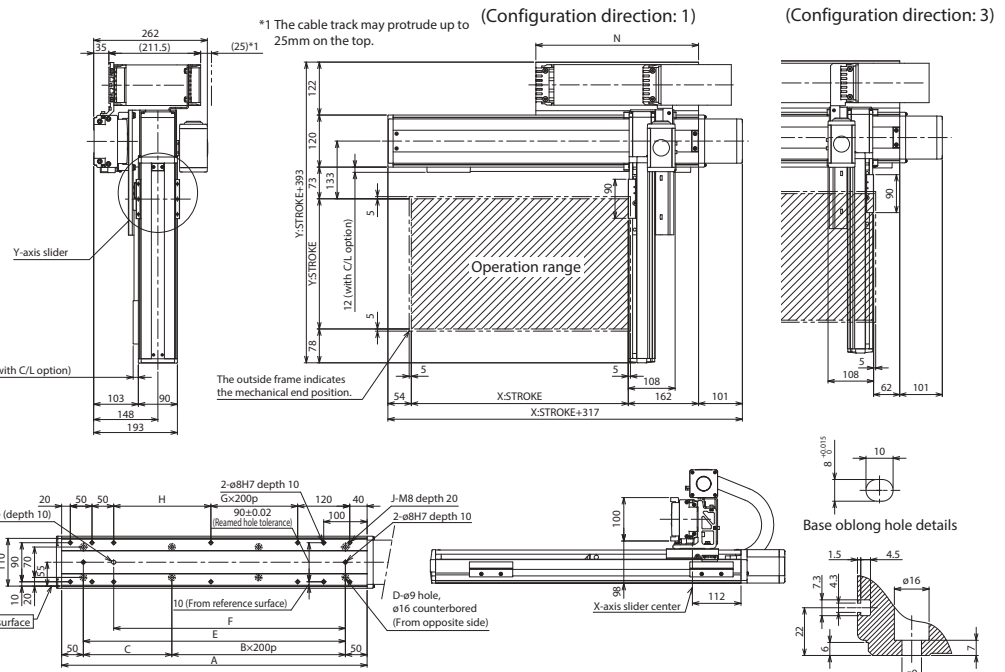


First-axis cable track section view



Y-axis slider details

Details of base mounting holes

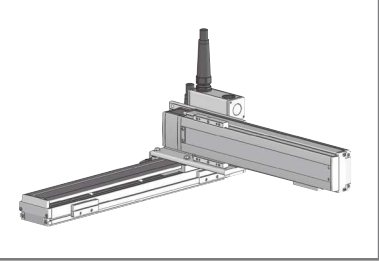


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB2-BB□M

ICSPB2-BB□M High-Precision Specification

±10µm Standard
Battery-less Absolute
X-Y 2-axis
XYB (Y Base Mount)
Medium Speed Type
X: Md (100W) Y: 5m (60W)



Model Specification Items

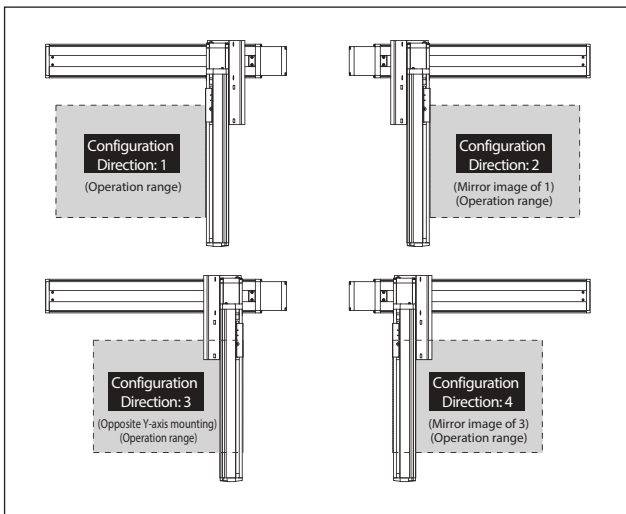
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm>* below. (Every 50mm) * For self-standing cable specification	10: 100mm 40: 400mm table below. (Every 50mm)	T2: SCION SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BB1M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-BB2M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-BB3M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-BB4M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-[1]-100-10-[2]-T2-[3]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM-[1]-60-8-[4]-T2-[5]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [9] in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	600		430	345	280	230
Y-axis	480			—		

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke						
		100	150	200	250	300	350	400
Acceleration *1	0.2	25.0	25.0	25.0	25.0	25.0	23.0	22.0
	0.3	25.0	25.0	25.0	25.0	25.0	23.0	22.0
	0.4	25.0	25.0	25.0	25.0	25.0	23.0	22.0
	0.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
	0.6	15.0	14.8	14.4	14.0	13.8	13.4	13.1
	0.7	12.0	12.0	11.7	11.3	11.1	10.7	10.4
	0.8	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 40: 400mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
[8]	Z-axis Cable Management (Option)	CT: Cable track *2

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required.
Selectable only when the Y-axis Cable Management is "CT".
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	60W/8mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) Please note that a longer stroke will result in a lower max speed.
- (Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

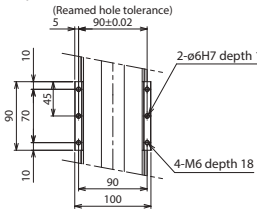
ICSB2 [ICSPB2]-BB□M-SC (Self-standing cable specification)

Dimensions

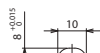
CAD drawings can be downloaded from our website.



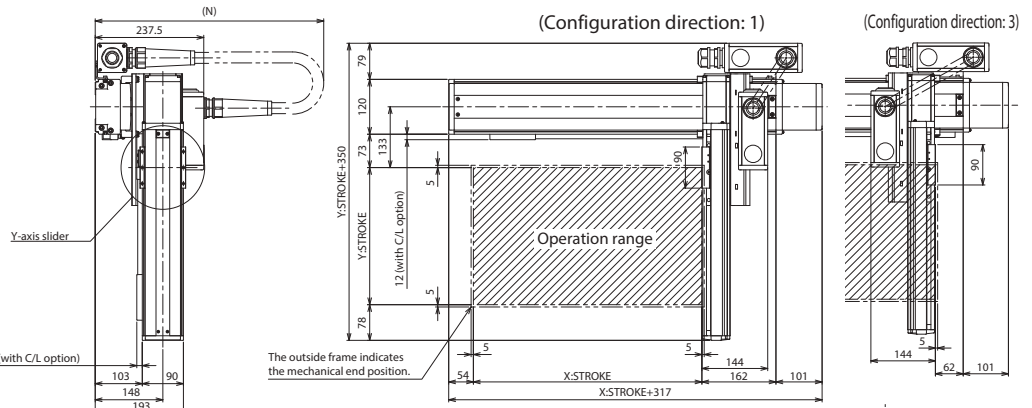
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Y-axis slider details



Base oblong hole details



Details of base mounting holes

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	550	550	600	600	650	650	700	700	750	750	750	800	800	850	850	900	900	950	950

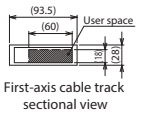
ICSB2 [ICSPB2]-BB□M-CT (Cable track specification)

Dimensions

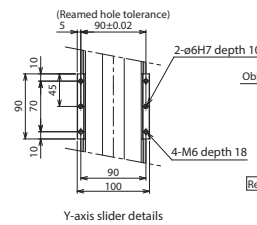
CAD drawings can be downloaded from our website.



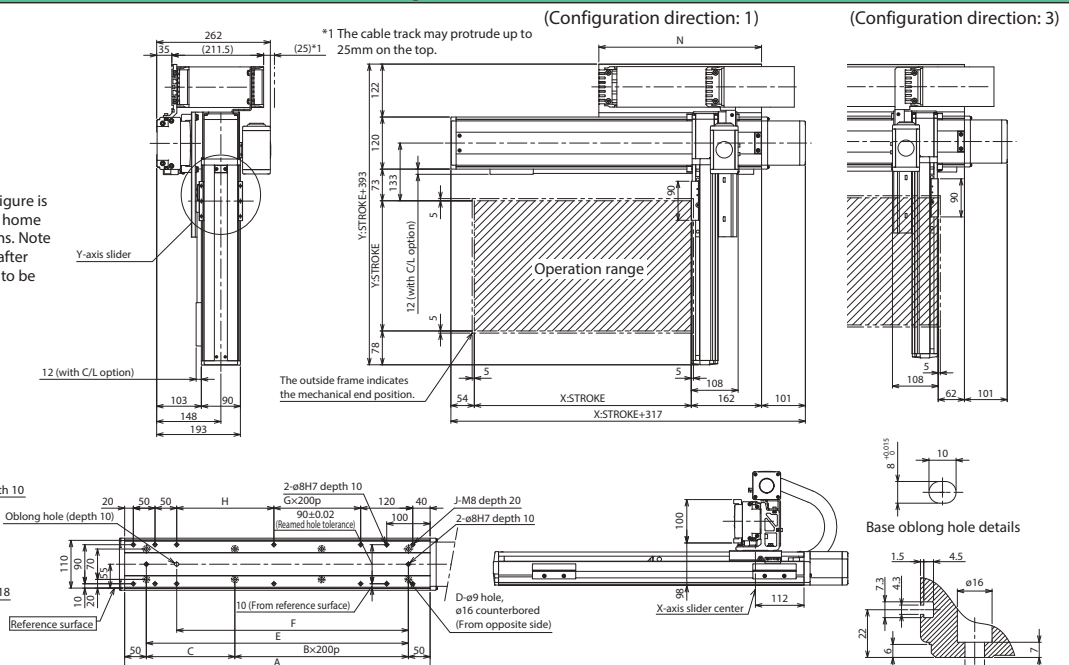
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



First-axis cable track sectional view



Y-axis slider details



Base oblong hole details

Details of base mounting holes

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB2-BC□H

ICSPB2-BC□H High-Precision Specification



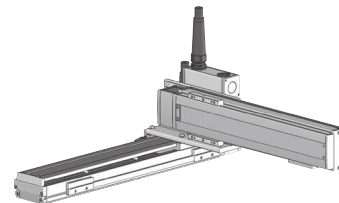
Battery-less Absolute

X-Y 2-axis

XYB (Y Base Mount)

High Speed Type

X: Md (200W)
Y: Sm (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm>* below. (Every 50mm) *For self-standing cable specification	10: 100mm 50: 500mm table below. (Every 50mm)	T2: SCION SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

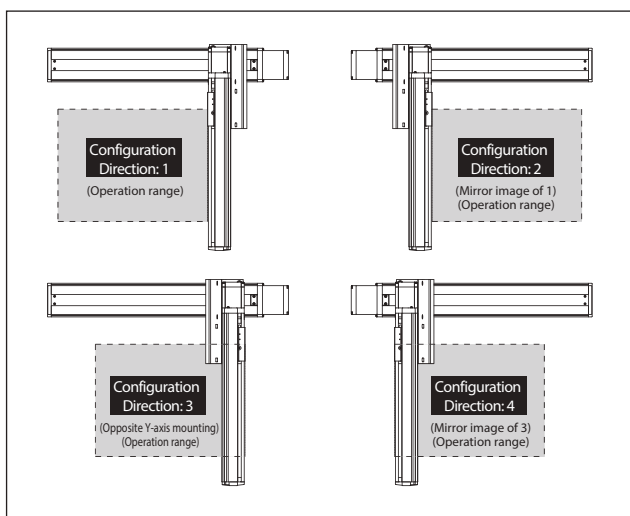
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BC1H-①-②-③-④-⑤-T2-⑥-⑦-⑧
2	ICSB2[ICSPB2]-BC2H-①-②-③-④-⑤-T2-⑥-⑦-⑧
3	ICSB2[ICSPB2]-BC3H-①-②-③-④-⑤-T2-⑥-⑦-⑧
4	ICSB2[ICSPB2]-BC4H-①-②-③-④-⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option)	CT: Cable track *2

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required. Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-100-20-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ② in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~700	750~800	850~900	950~1000	1050~1100
X-axis	1200		860	695	570	460
Y-axis	1200			—		

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.6	16.6
	0.3	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.6	16.6
	0.4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.6	16.6
	0.5	15.0	15.0	15.0	15.0	15.0	14.9	14.4	14.0	13.4
	0.6	11.8	11.3	10.9	10.4	9.9	9.5	9.0	8.6	8.0
	0.7	8.2	7.7	7.3	6.8	6.3	5.9	5.4	5.0	4.4
	0.8	5.5	5.0	4.6	4.1	3.6	3.2	2.7	2.3	1.7
	0.9	3.7	3.2	2.8	2.3	1.8	1.4	0.9	0.5	—
	1	2.3	1.9	1.4	1.0	0.5	—	—	—	—
	1.1	1.0	0.5	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

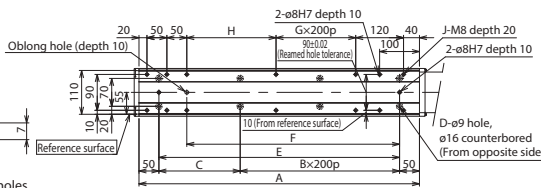
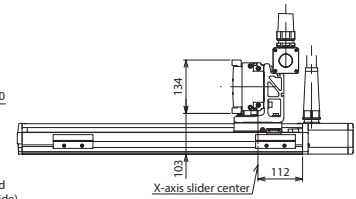
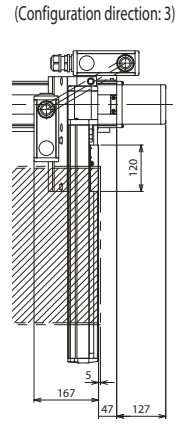
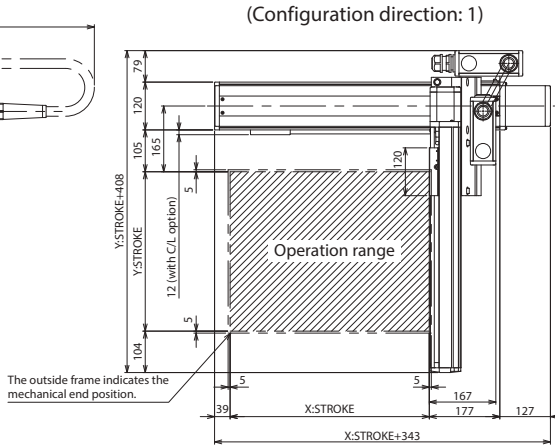
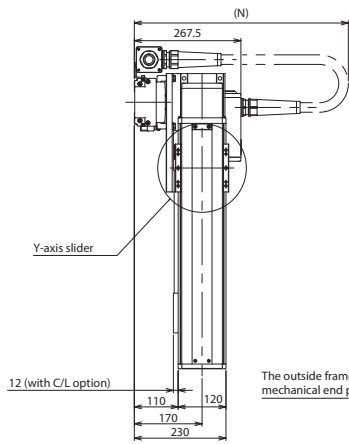
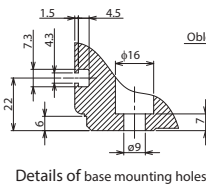
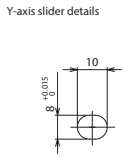
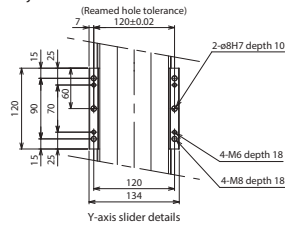
ICSB2 [ICSPB2]-BC□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	600	600	650	650	700	700	700	750	750	800	800	850	850	900	900	900	950	950	1000

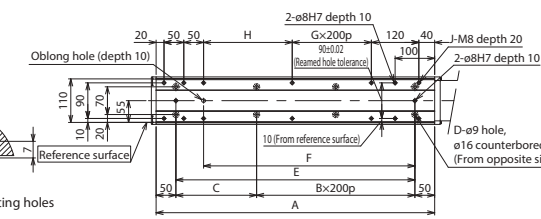
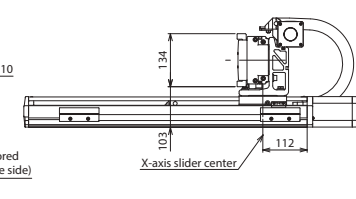
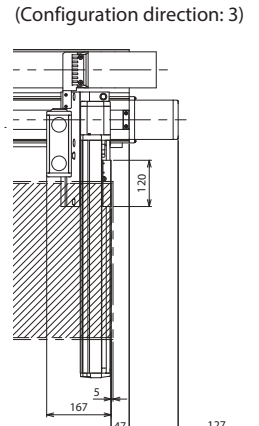
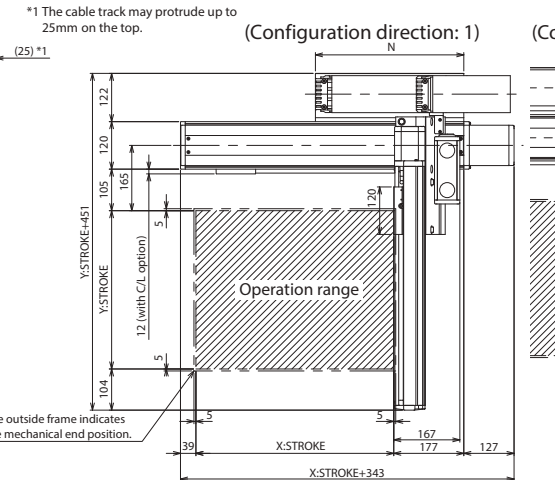
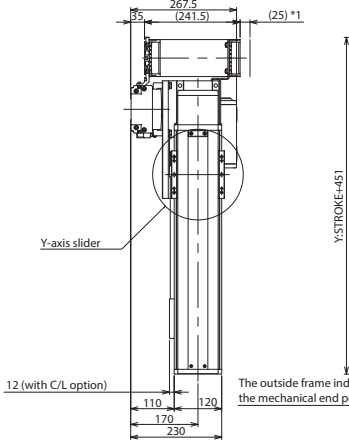
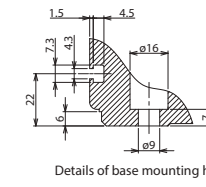
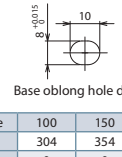
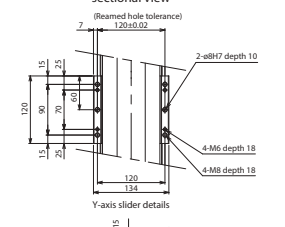
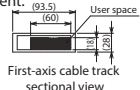
ICSB2 [ICSPB2]-BC□H-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

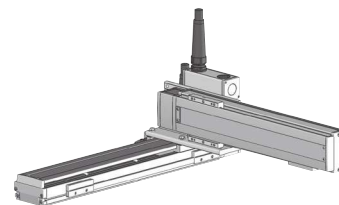


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB2-BC□M

ICSPB2-BC□M High-Precision Specification

±10μm Standard
±5μm High-Precision
Battery-less Absolute
X-Y 2-axis
XYB (Y Base Mount)
Medium Speed Type
X: Md (100W)
Y: Sm (100W)



Model Specification Items

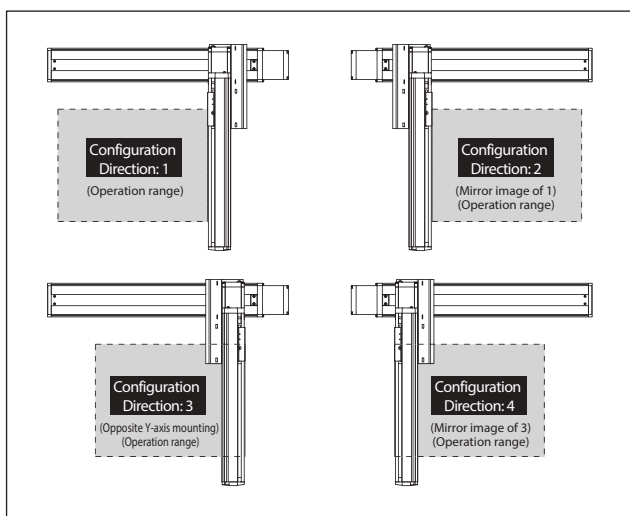
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm <100: 1000mm>* below. (Every 50mm) * For self-standing cable specification	10: 100mm 50: 500mm Refer to Options table below.	T2: SCION SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: □m	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BC1M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-BC2M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-BC3M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-BC4M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
[8]	Z-axis Cable Management (Option)	CT: Cable track *2

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required. Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-[1]-100-10-[2]-T2-[3]-[4]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-[1]-100-10-[4]-T2-[3]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names. Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [2] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~700	750~800	850~900	950~1000	1050~1100
X-axis	600		430	345	280	230
Y-axis	600					

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	30.0	30.0	29.5	29.2	26.7	23.5	20.9	18.6	16.6
	0.3	30.0	30.0	29.5	29.2	26.7	23.5	20.9	18.6	16.6
	0.4	30.0	30.0	29.5	29.2	26.7	23.5	20.9	18.6	16.6
	0.5	17.4	16.8	16.3	15.7	15.1	14.5	14.0	13.4	12.9
	0.6	11.1	10.5	10.0	9.4	8.8	8.2	7.7	7.1	6.6
	0.7	8.4	7.8	7.3	6.7	6.1	5.5	5.0	4.4	3.9
	0.8	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.

The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

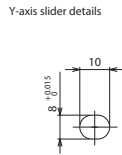
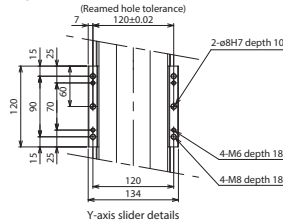
ICSB2 [ICSPB2]-BC□M-SC (Self-standing cable specification)

Dimensions

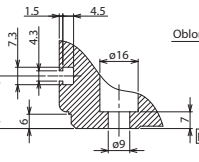
CAD drawings can be downloaded from our website.



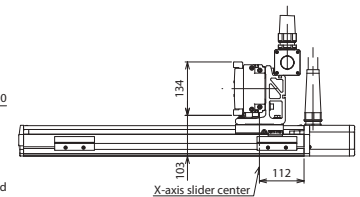
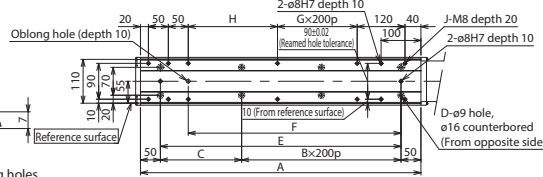
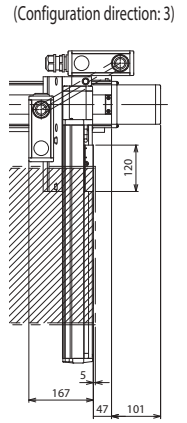
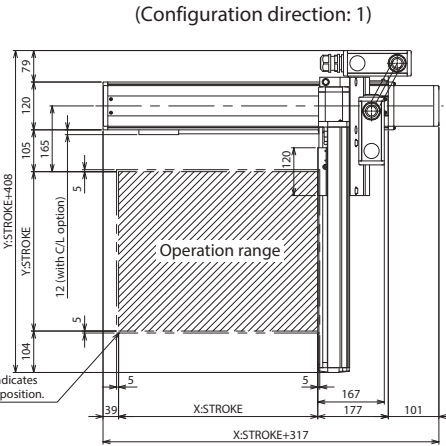
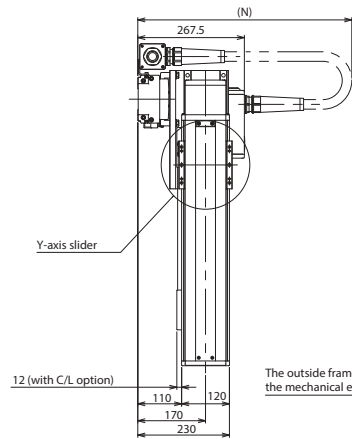
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Base oblong hole details



Details of base mounting holes



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	600	600	650	650	700	700	700	750	750	800	800	850	850	900	900	900	950	950	1000

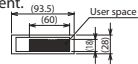
ICSB2 [ICSPB2]-BC□M-CT (Cable track specification)

Dimensions

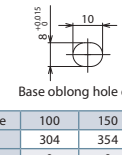
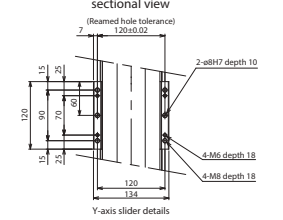
CAD drawings can be downloaded from our website.



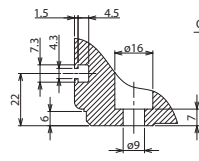
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



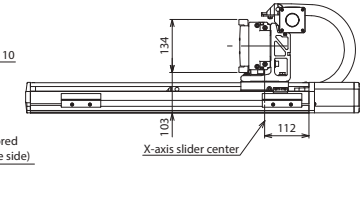
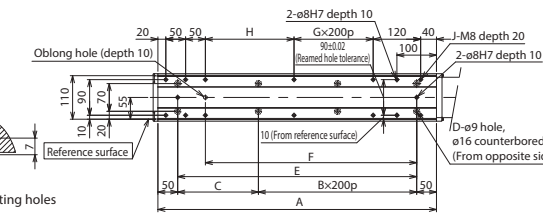
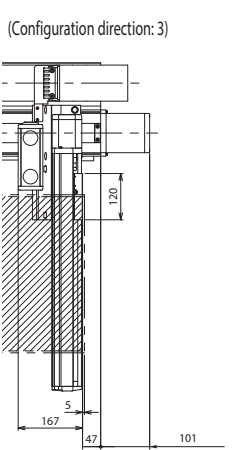
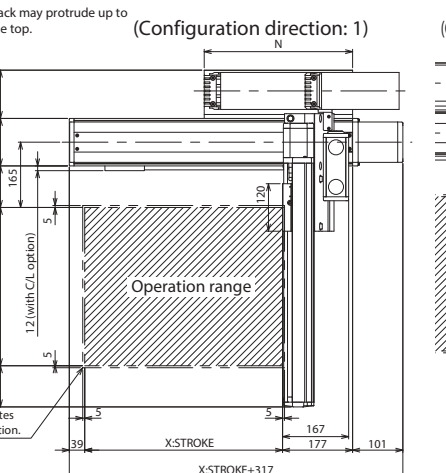
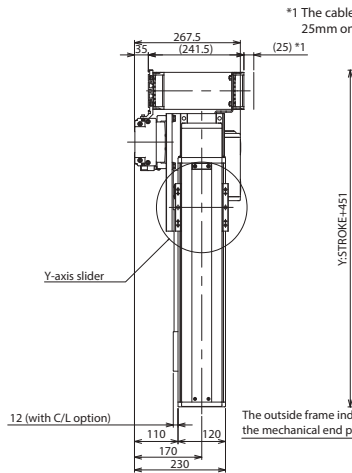
First-axis cable track sectional view



Base oblong hole details



Details of base mounting holes

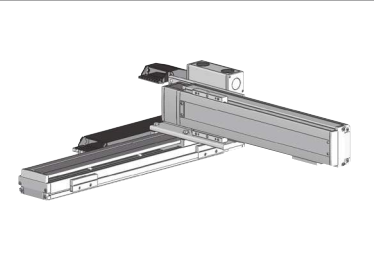


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB2-BD□H

ICSPB2-BD□H High-Precision Specification

±10μm Standard
±5μm High-Precision
Battery-less Absolute
X-Y 2-axis
XYB (Y Base Mount)
High Speed Long Type
X: Md (200W)
Y: Md (100W)



Model Specification Items

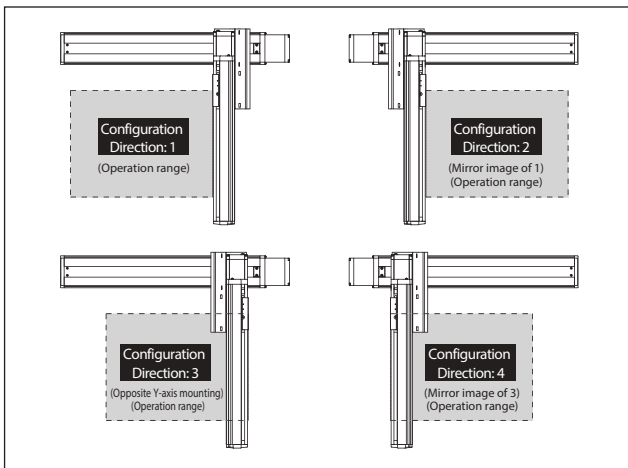
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 100mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BD1H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-BD2H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-BD3H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-BD4H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[3]-[4]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[4]-T2-[3]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [2] in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	800~1100	1200	1300	1400	1500
X-axis	—	1200	1100	1000	950	800
Y-axis	1200	—	—	—	—	—

	1600	1700	1800	1900	2000
X-axis	700	600	550	500	450
Y-axis	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.6	16.6
	0.3	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.6	16.6
	0.4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.6	16.6
	0.5	—	—	—	—	—	—	—	—	—
	0.6	—	—	—	—	—	—	—	—	—
	0.7	—	—	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	CT: Cable track
[8]	Z-axis Cable Management (Option) *2	CT: Cable track

*2 Please specify only when required.
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) Please note that a longer stroke will result in a lower max speed.
- (Note 4) The rated acceleration is 0.4G. (The upper limit of acceleration is 0.4G)

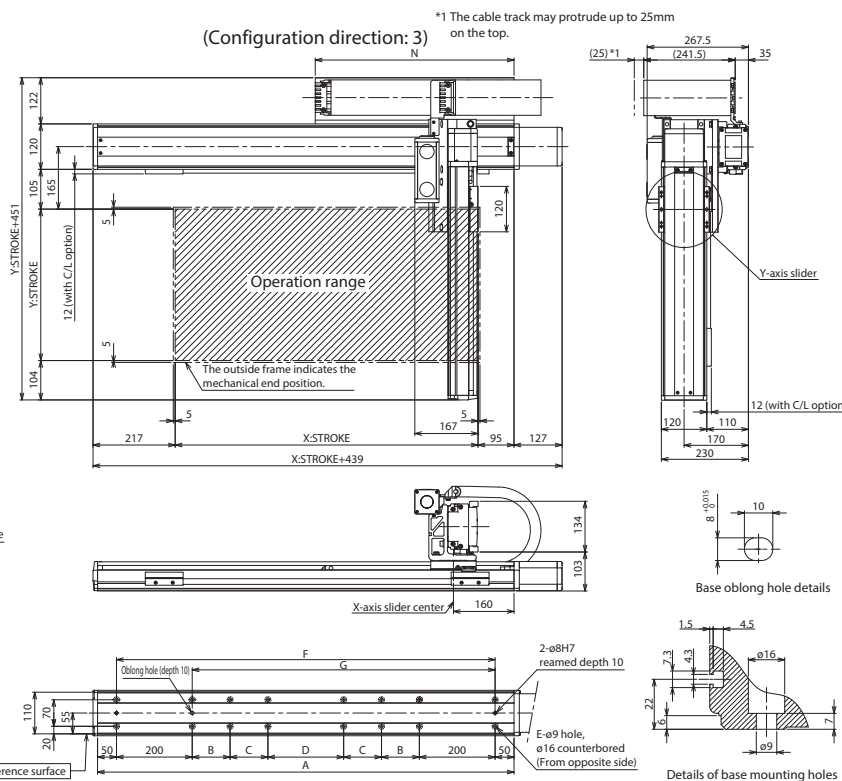
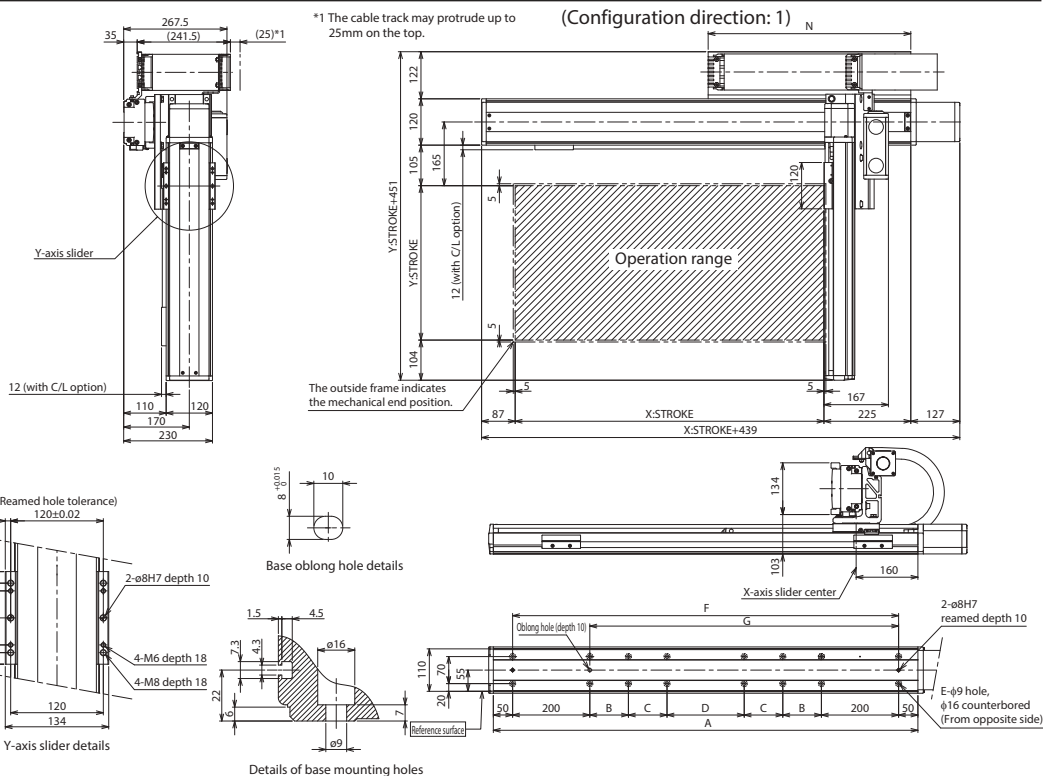
ICSB2 [ICSPB2]-BD□H-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

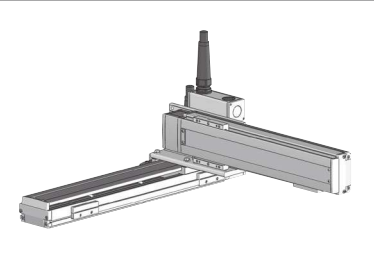


X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

ICSB2-BE□S

ICSPB2-BE□S High-Precision Specification

±10μm Standard
±5μm High-Precision
Battery-less Absolute
X-Y 2-axis (Y Base Mount)
XYB (Y Base Mount)
Ultra High-Speed Type
X: Lg (400W) Y: Md (200W)



Model Specification Items

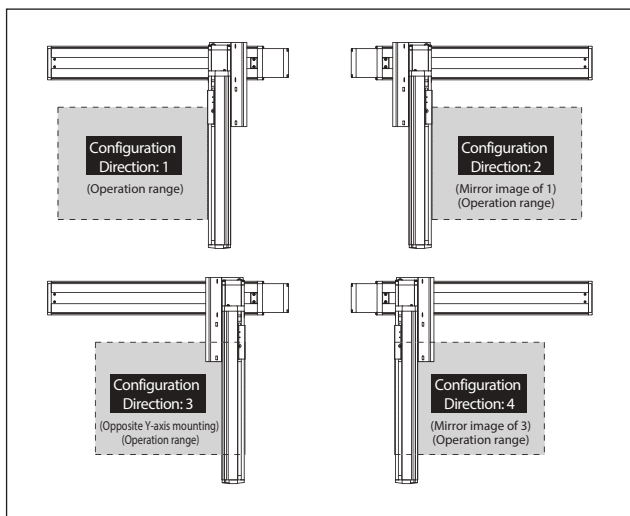
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm table <100: 1000mm>* below. (Every 50mm) * For self-standing cable specification	10: 100mm 70: 700mm table below. (Every 50mm)	T2: SCOM SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BE1S-①-②-③-④-⑤-T2-⑥-⑦-⑧
2	ICSB2[ICSPB2]-BE2S-①-②-③-④-⑤-T2-⑥-⑦-⑧
3	ICSB2[ICSPB2]-BE3S-①-②-③-④-⑤-T2-⑥-⑦-⑧
4	ICSB2[ICSPB2]-BE4S-①-②-③-④-⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required. Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM-①-400-40-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-200-30-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	2400	1840	1530	1290	1100	880	
Y-axis	1800						

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		100	150	200	250	300	350	400	450	500	550	600	650	700
Acceleration *1	0.2	25.7	25.1	24.6	23.9	23.4	22.9	22.3	21.7	21.2	20.5	20.0	19.4	18.9
	0.3	25.7	25.1	24.6	23.9	23.4	22.9	22.3	21.7	21.2	20.5	20.0	19.4	18.9
	0.4	25.7	25.1	24.6	23.9	23.4	22.9	22.3	21.7	21.2	20.5	20.0	19.4	18.9
	0.5	18.5	17.9	17.4	16.7	16.2	15.7	15.1	14.5	14.0	13.3	12.8	12.2	11.7
	0.6	14.0	13.4	12.9	12.2	11.7	11.2	10.6	10.0	9.5	8.8	8.3	7.7	7.2
	0.7	10.4	9.8	9.3	8.6	8.1	7.6	7.0	6.4	5.9	5.2	4.7	4.1	3.6
	0.8	8.6	8.0	7.5	6.8	6.3	5.8	5.2	4.6	4.1	3.4	2.9	2.3	1.8
	0.9	6.8	6.2	5.7	5.0	4.5	4.0	3.4	2.8	2.3	1.6	1.1	0.5	—
	1	5.0	4.4	3.9	3.2	2.7	2.2	1.6	1.0	0.5	—	—	—	—
	1.1	4.1	3.5	3.0	2.3	1.8	1.3	0.7	—	—	—	—	—	—
	1.2	3.2	2.6	2.1	1.4	0.9	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

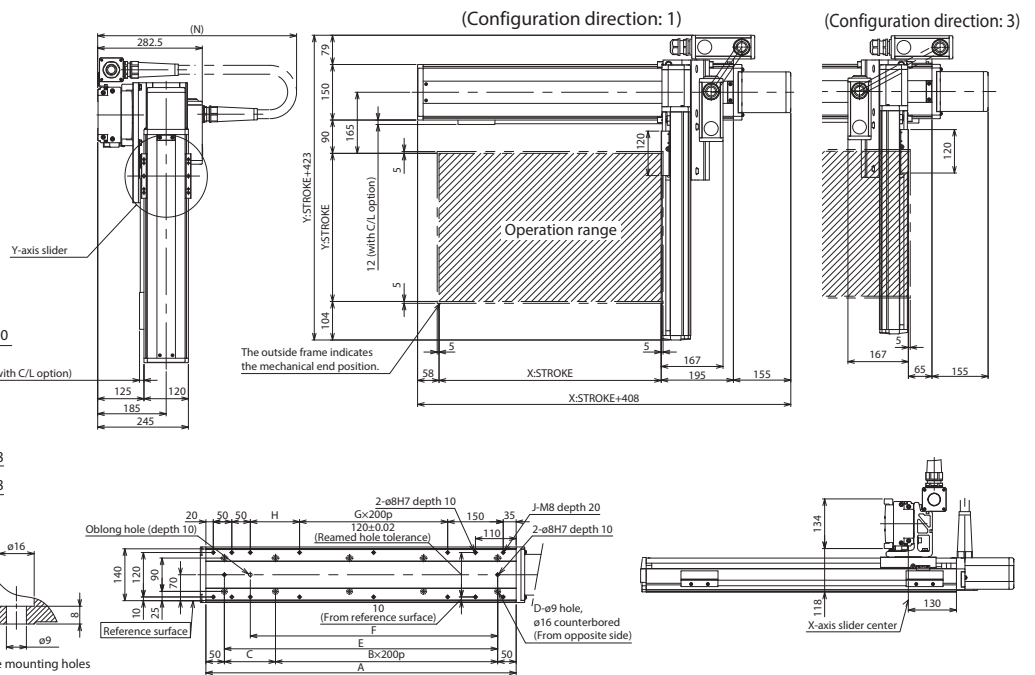
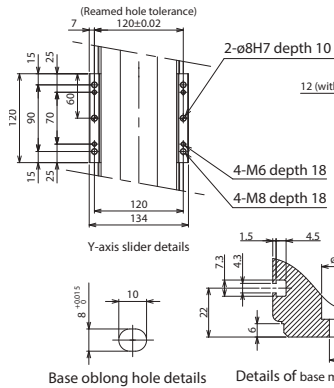
ICSB2 [ICSPB2]-BE□S-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500

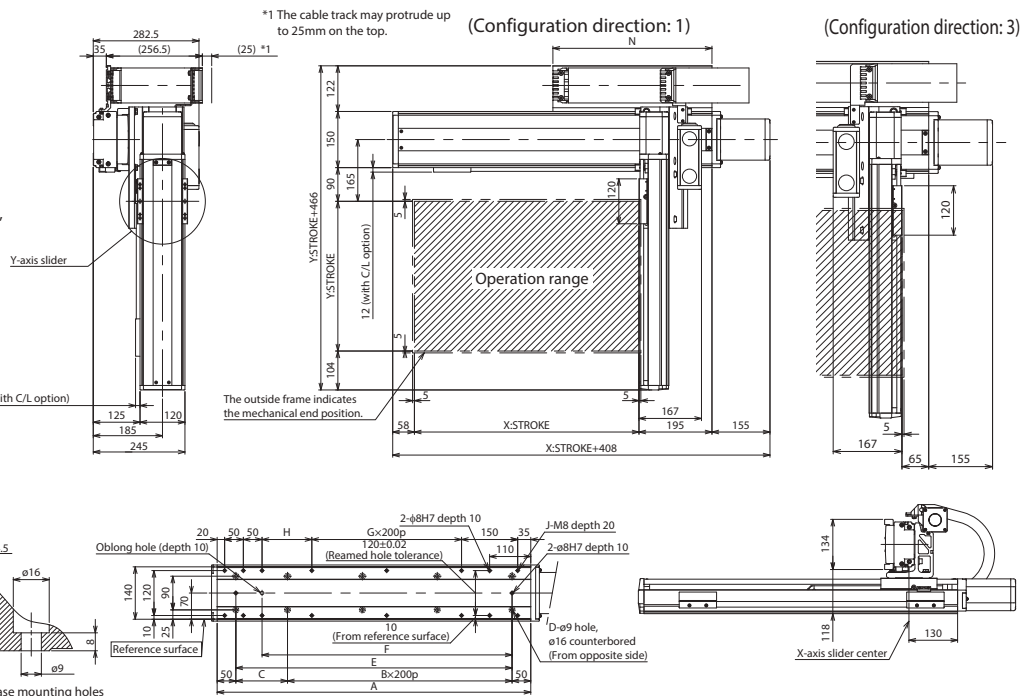
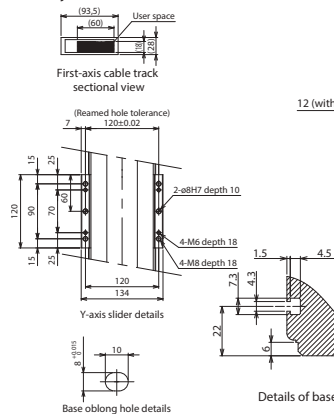
ICSB2 [ICSPB2]-BE□S-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

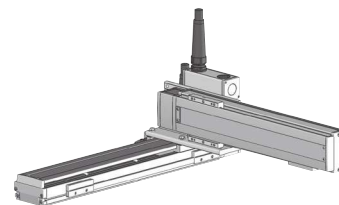


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB2-BE□H

ICSPB2-BE□H High-Precision Specification

±10μm Standard
±5μm High-Precision
Battery-less Absolute
X-Y 2-axis
XYB (Y Base Mount)
High Speed Type
X: Lg (400W)
Y: Md (200W)



Model Specification Items

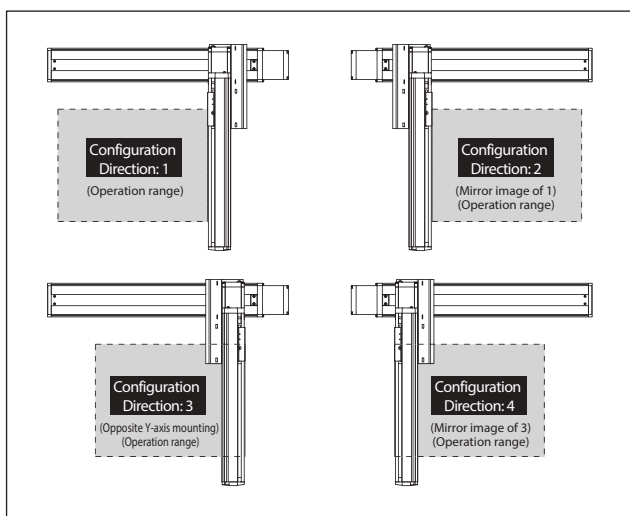
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm <100: 1000mm>* (Every 50mm) *For self-standing cable specification	10: 100mm 70: 700mm (Every 50mm) Refer to Options table below.	T2: SCION SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BE1H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> -T2- <u>6</u> - <u>7</u> - <u>8</u>
2	ICSB2[ICSPB2]-BE2H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> -T2- <u>6</u> - <u>7</u> - <u>8</u>
3	ICSB2[ICSPB2]-BE3H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> -T2- <u>6</u> - <u>7</u> - <u>8</u>
4	ICSB2[ICSPB2]-BE4H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> -T2- <u>6</u> - <u>7</u> - <u>8</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required. Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM- <u>1</u> -400-20- <u>2</u> -T2- <u>9</u> - <u>3</u>	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM- <u>1</u> -200-20- <u>4</u> -T2- <u>9</u> - <u>5</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names. Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑨ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	1200		920	765	645	550	440
Y-axis	1200						

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Y-axis stroke												
	100	150	200	250	300	350	400	450	500	550	600	650	700
0.2	45.0	45.0	45.0	45.0	43.4	38.8	34.9	31.5	28.6	26.0	23.7	21.6	19.7
0.3	45.0	45.0	45.0	45.0	43.4	38.8	34.9	31.5	28.6	26.0	23.7	21.6	19.7
0.4	45.0	45.0	45.0	45.0	43.4	38.8	34.9	31.5	28.6	26.0	23.7	21.6	19.7
0.5	35.0	35.0	35.0	35.0	35.0	35.0	34.1	30.9	28.0	25.5	23.3	21.2	19.4
0.6	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	25.4	22.9	20.6	18.6	16.8
0.7	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.9	20.4	18.2	17.0	14.5	12.9
0.8	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.9	16.7	14.7	13.0	11.4	9.9
0.9	17.0	17.0	17.0	17.0	17.0	17.0	17.0	15.7	13.8	12.0	10.4	9.0	7.7
1	15.0	15.0	15.0	14.9	14.4	13.9	13.3	12.7	11.5	9.8	8.4	7.0	5.8
1.1	13.0	13.0	12.9	12.2	11.7	11.2	10.6	10.0	9.5	8.0	6.7	5.5	4.3
1.2	11.3	10.7	10.2	9.5	9.0	8.5	7.9	7.3	6.8	6.1	5.3	4.1	3.1

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

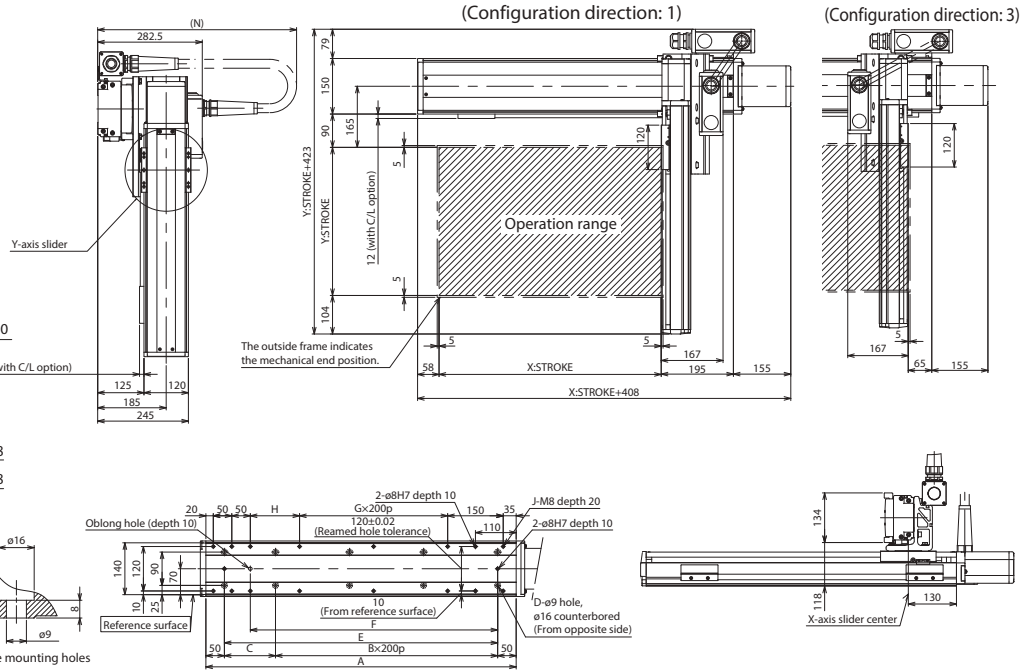
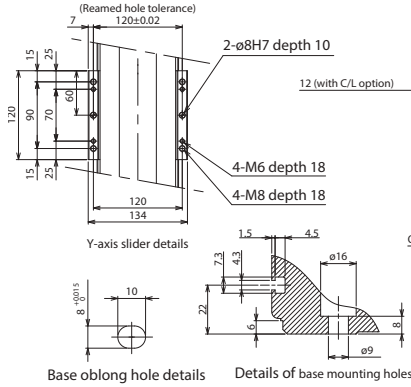
ICSB2 [ICSPB2]-BE□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500

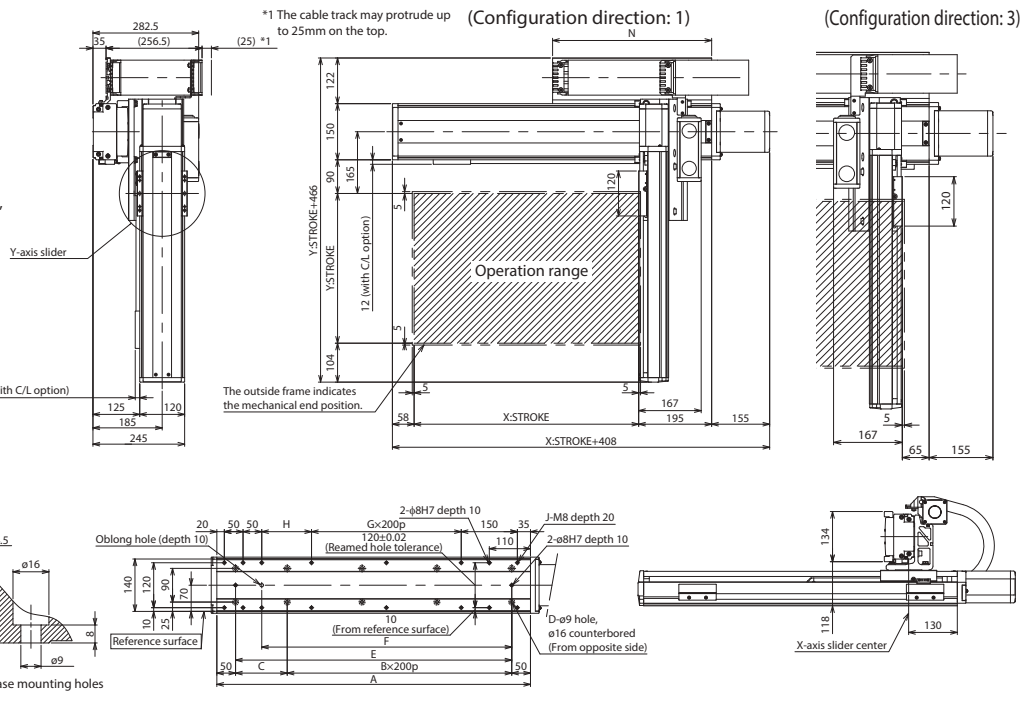
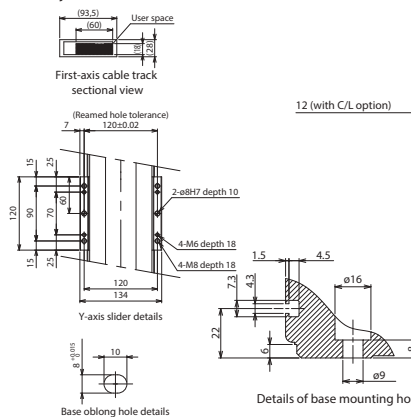
ICSB2 [ICSPB2]-BE□H-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

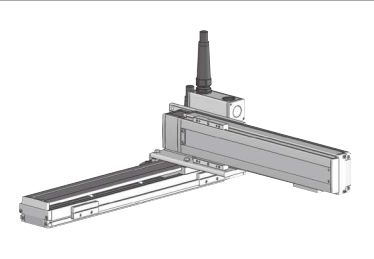


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB2-BE□M

ICSPB2-BE□M High-Precision Specification

±10μm Standard
Battery-less Absolute
X-Y 2-axis
XYB (Y Base Mount)
Medium Speed Type
X: Lg (200W) Y: Md (200W)



Model Specification Items

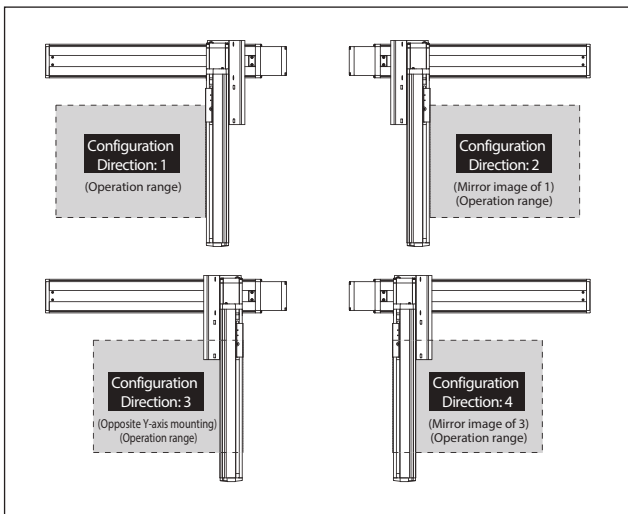
Series	BE□M	Type	WA	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm <100: 1000mm>* (Every 50mm) * For self-standing cable specification	10: 100mm 70: 700mm (Every 50mm)	T2: SCON XSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	Refer to Explanation of Model Designations below		

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BE1M-①-②-③-④-⑤-T2-⑥-⑦-⑧
2	ICSB2[ICSPB2]-BE2M-①-②-③-④-⑤-T2-⑥-⑦-⑧
3	ICSB2[ICSPB2]-BE3M-①-②-③-④-⑤-T2-⑥-⑦-⑧
4	ICSB2[ICSPB2]-BE4M-①-②-③-④-⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required. Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM-①-200-10-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-200-10-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ② in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	600	460	380	320	270	220	—
Y-axis	600	—	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Y-axis stroke												
	100	150	200	250	300	350	400	450	500	550	600	650	700
0.2	60.0	60.0	55.6	48.8	43.4	38.8	34.9	31.5	28.6	26.0	23.7	21.6	19.7
0.3	60.0	60.0	55.6	48.8	43.4	38.8	34.9	31.5	28.6	26.0	23.7	21.6	19.7
0.4	60.0	60.0	55.6	48.8	43.4	38.8	34.9	31.5	28.6	26.0	23.7	21.6	19.7
0.5	49.1	48.5	48.0	47.3	42.2	37.9	34.1	30.9	28.0	25.5	23.3	21.2	19.4
0.6	35.6	35.0	34.5	33.8	33.3	32.8	31.5	28.2	25.4	22.9	20.6	18.6	16.8
0.7	25.7	25.1	24.6	23.9	23.4	22.9	22.3	21.7	20.4	18.2	16.3	14.5	12.9
0.8	—	—	—	—	—	—	—	—	—	—	—	—	—
0.9	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—	—	—	—	—	—	—
1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

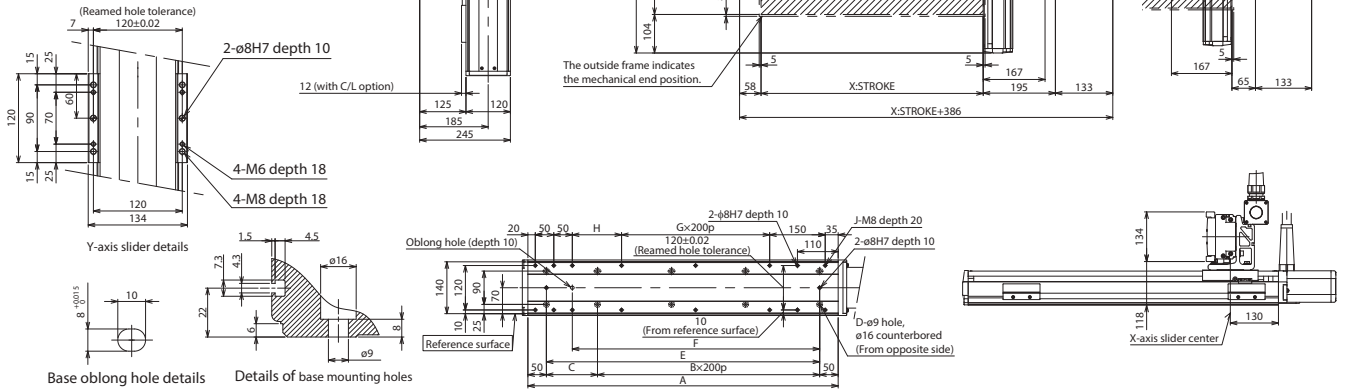
ICSB2 [ICSPB2]-BE□M-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500

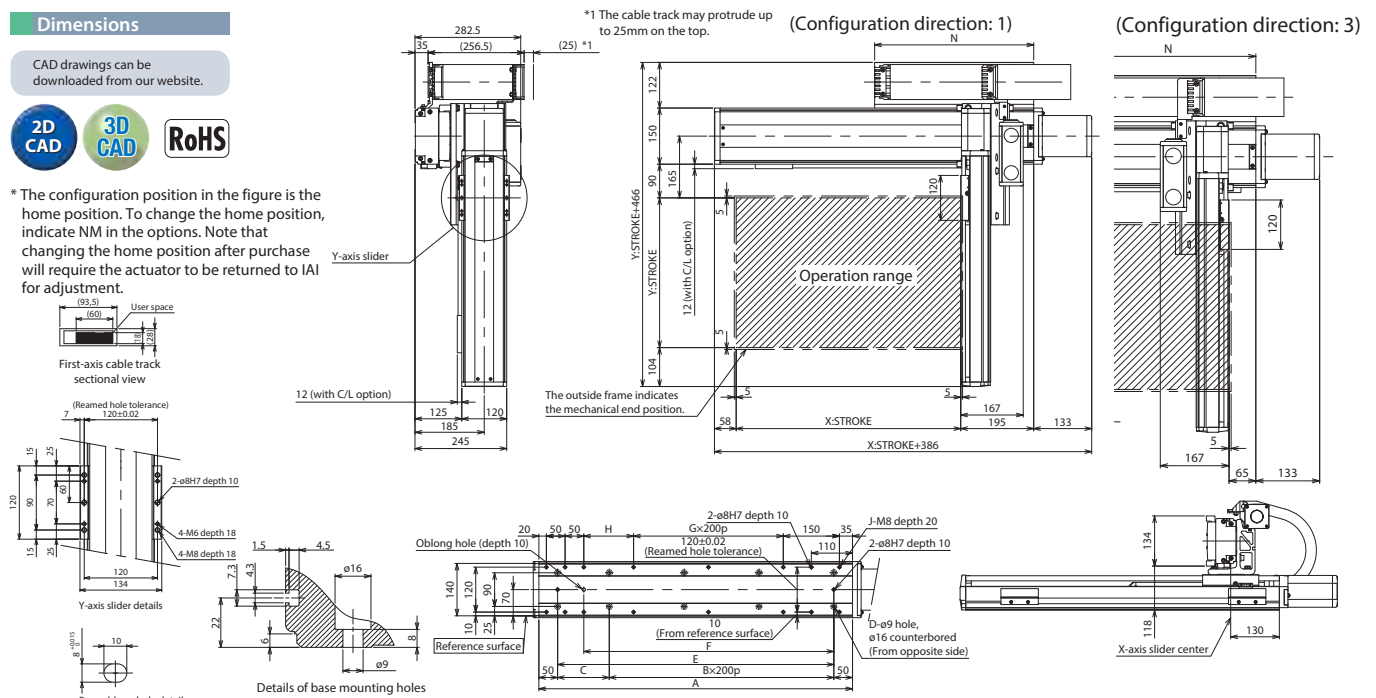
ICSB2 [ICSPB2]-BE□M-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

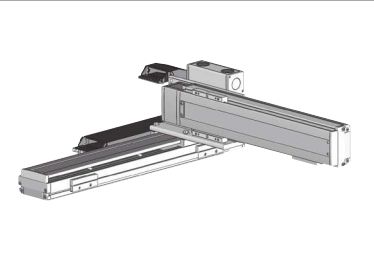


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB2-BF□S

ICSPB2-BF□S High-Precision Specification

±10μm Standard
±5μm High-Precision
Battery-less Absolute
X-Y 2-axis
XYB (Y Base Mount)
Ultra High Speed Long Type
X: Lg (400W) Y: Md (200W)



Model Specification Items

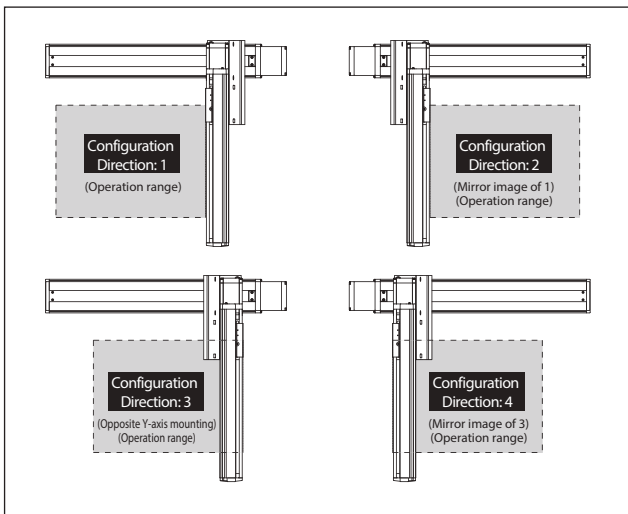
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	10: 100mm 70: 700mm (Every 50mm)	T2: SSCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BF1S- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> -T2- <u>6</u> - <u>7</u> - <u>8</u>
2	ICSB2[ICSPB2]-BF2S- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> -T2- <u>6</u> - <u>7</u> - <u>8</u>
3	ICSB2[ICSPB2]-BF3S- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> -T2- <u>6</u> - <u>7</u> - <u>8</u>
4	ICSB2[ICSPB2]-BF4S- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> -T2- <u>6</u> - <u>7</u> - <u>8</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXMX- <u>1</u> -400-40- <u>2</u> -T2- <u>9</u> - <u>3</u>	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM- <u>1</u> -200-30- <u>4</u> -T2- <u>9</u> - <u>5</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑨ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	1000~1200	1300	1400	1500	1600	1700	1800
X-axis	—	2400	2300	2000	1900	1660	1480	1300
Y-axis	1800							

	1900	2000	2100	2200	2300	2400	2500
X-axis	1180	1080	980	880	820	740	680
Y-axis							

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		100	150	200	250	300	350	400	450	500	550	600	650	700
Acceleration *1	0.2	25.7	25.1	24.6	23.9	23.4	22.9	22.3	21.7	21.2	20.5	20.0	19.4	18.9
	0.3	25.7	25.1	24.6	23.9	23.4	22.9	22.3	21.7	21.2	20.5	20.0	19.4	18.9
	0.4	25.7	25.1	24.6	23.9	23.4	22.9	22.3	21.7	21.2	20.5	20.0	19.4	18.9
	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.6	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.7	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track
⑧	Z-axis Cable Management (Option)	CT: Cable track *2

*2 Please specify only when required. For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/30mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. (The upper limit of acceleration is 0.4G.)

ICSB2 [ICSPB2]-BF□S-CT (Cable track specification)

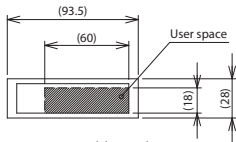
Dimensions

CAD drawings can be downloaded from our website.

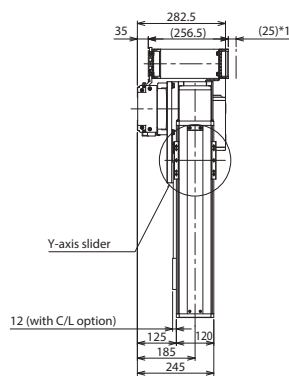


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

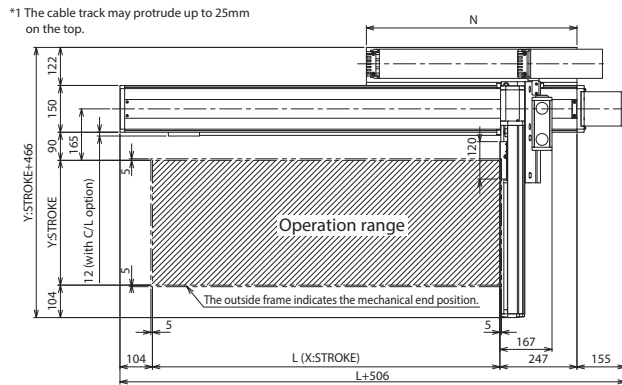
(Configuration direction: 1)



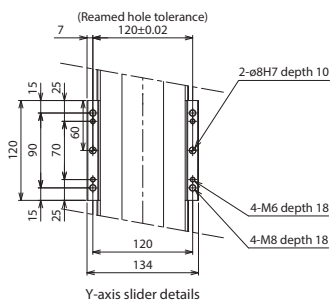
First-axis cable track sectional view



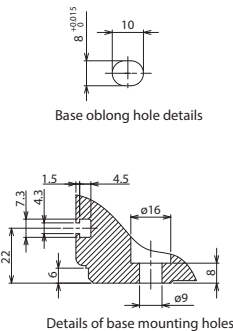
Y-axis slider



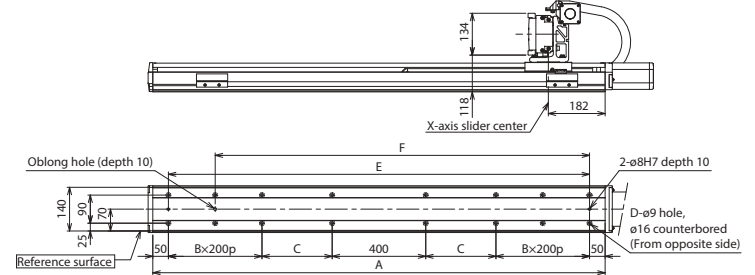
*1 The cable track may protrude up to 25mm on the top.



Y-axis slider details



Details of base mounting holes

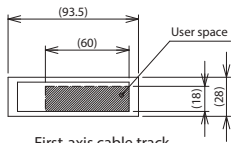


Oblong hole (depth 10)

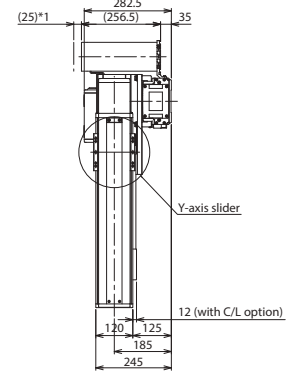
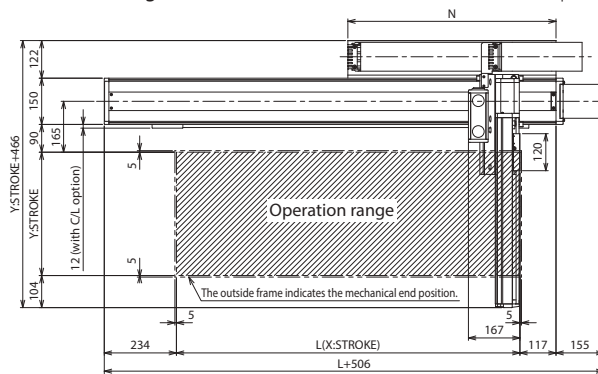
X-axis slider center

(Configuration direction: 3)

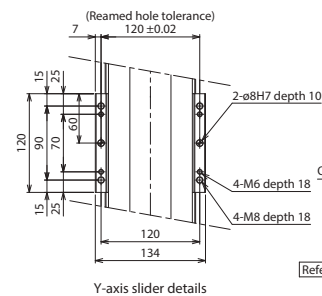
*1 The cable track may protrude up to 25mm on the top.



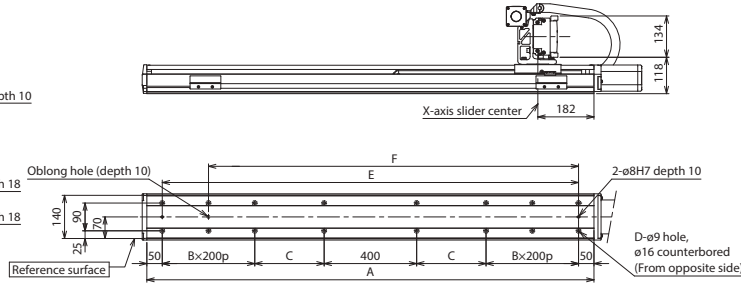
First-axis cable track sectional view



Y-axis slider

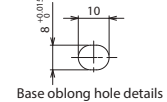


Y-axis slider details



Oblong hole (depth 10)

X-axis slider center



Base oblong hole details

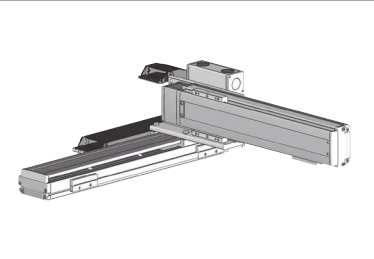
Details of base mounting holes

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	3	3	3	3	3
C	225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
D	12	12	12	12	12	12	12	12	16	16	16	20	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB2-BF□H

ICSPB2-BF□H High-Precision Specification

±10μm Standard
±5μm High-Precision
Battery-less Absolute
X-Y 2-axis
XYB (Y Base Mount)
High Speed Long Type
X: Lg (400W) Y: Md (200W)



Model Specification Items

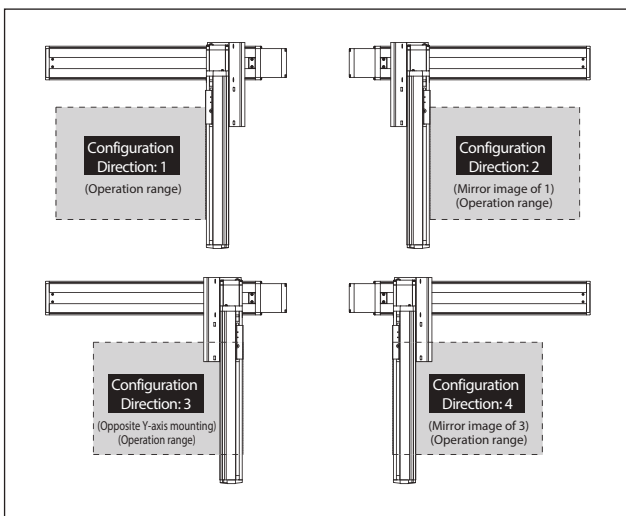
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	10: 100mm 70: 700mm (Every 50mm)	T2: SSCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	(Option)

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BF1H-①-②-③-④-⑤-T2-⑥-⑦-⑧
2	ICSB2[ICSPB2]-BF2H-①-②-③-④-⑤-T2-⑥-⑦-⑧
3	ICSB2[ICSPB2]-BF3H-①-②-③-④-⑤-T2-⑥-⑦-⑧
4	ICSB2[ICSPB2]-BF4H-①-②-③-④-⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track
⑧	Z-axis Cable Management (Option)	CT: Cable track *2

*2 Please specify only when required. For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 Cannot be selected for High-Precision Specification.

*3 To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM□-①-400-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑥ in the above model names. Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ③ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	1000~1200	1300	1400	1500	1600	1700	1800
X-axis	—	1200	1150	1000	950	830	740	650
Y-axis	1200	—	—	—	—	—	—	—

	1900	2000	2100	2200	2300	2400	2500
X-axis	590	540	490	440	410	370	340
Y-axis	—	—	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Y-axis stroke												
	100	150	200	250	300	350	400	450	500	550	600	650	700
0.2	45.0	45.0	45.0	45.0	43.4	38.8	34.9	31.5	28.6	26.0	23.7	21.6	19.7
0.3	45.0	45.0	45.0	45.0	43.4	38.8	34.9	31.5	28.6	26.0	23.7	21.6	19.7
0.4	45.0	45.0	45.0	45.0	43.4	38.8	34.9	31.5	28.6	26.0	23.7	21.6	19.7
0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
0.6	—	—	—	—	—	—	—	—	—	—	—	—	—
0.7	—	—	—	—	—	—	—	—	—	—	—	—	—
0.8	—	—	—	—	—	—	—	—	—	—	—	—	—
0.9	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—	—	—	—	—	—	—
1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. (The upper limit of acceleration is 0.4G.)

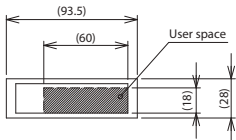
ICSB2 [ICSPB2]-BF□H-CT (Cable track specification)

Dimensions

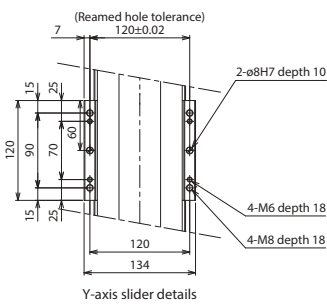
CAD drawings can be downloaded from our website.



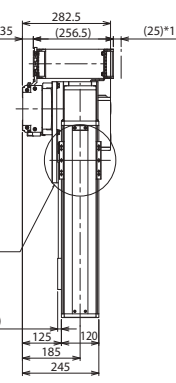
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



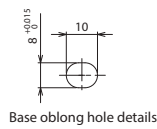
First-axis cable track sectional view



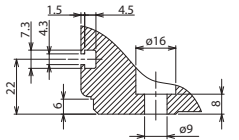
Y-axis slider details



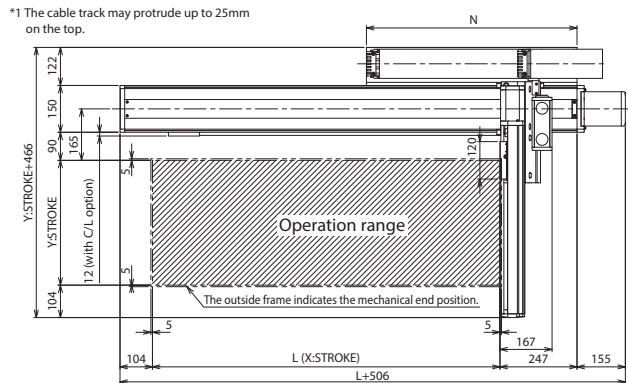
Y-axis slider



Base oblong hole details



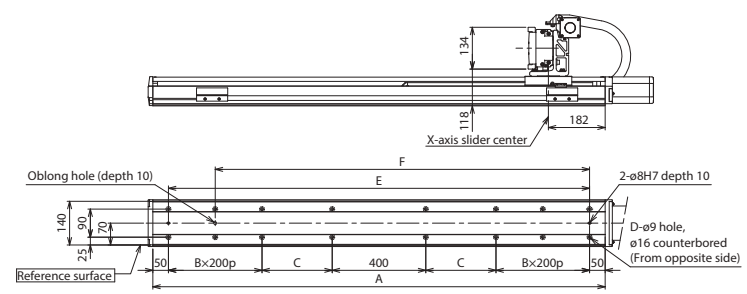
Details of base mounting holes



*1 The cable track may protrude up to 25mm on the top.

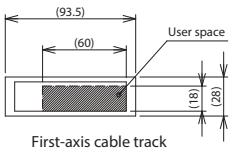
Operation range

The outside frame indicates the mechanical end position.

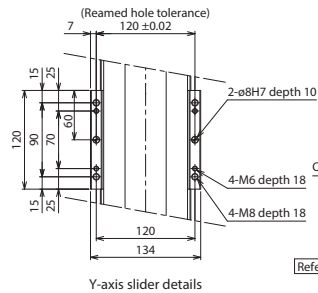


(Configuration direction: 3)

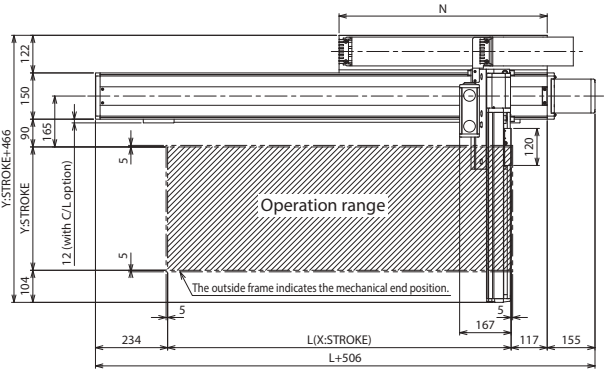
*1 The cable track may protrude up to 25mm on the top.



First-axis cable track sectional view

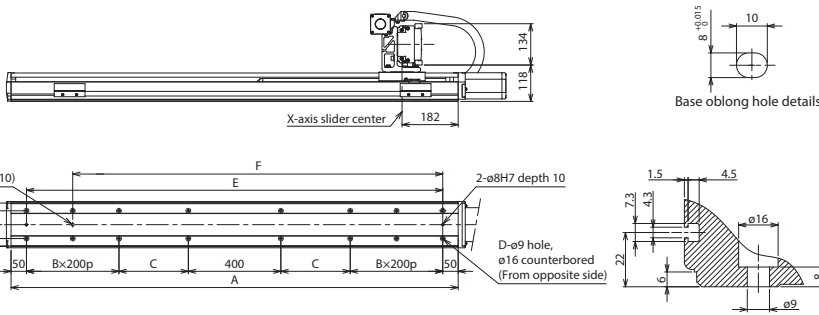


Y-axis slider details



Operation range

The outside frame indicates the mechanical end position.



Base oblong hole details

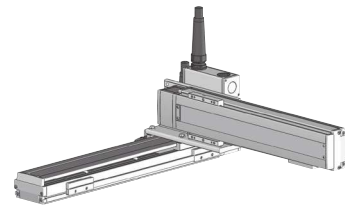
Details of base mounting holes

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	3	3	3	3	3
C	225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
D	12	12	12	12	12	12	12	12	16	16	16	20	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB2-BG□S

ICSPB2-BG□S High-Precision Specification

±10μm Standard
±5μm High-Precision
Battery-less Absolute
X-Y 2-axis
XYB (Y Base Mount)
High Speed Type
X:Lg (400W)
Y:Lg (400W)



Model Specification Items

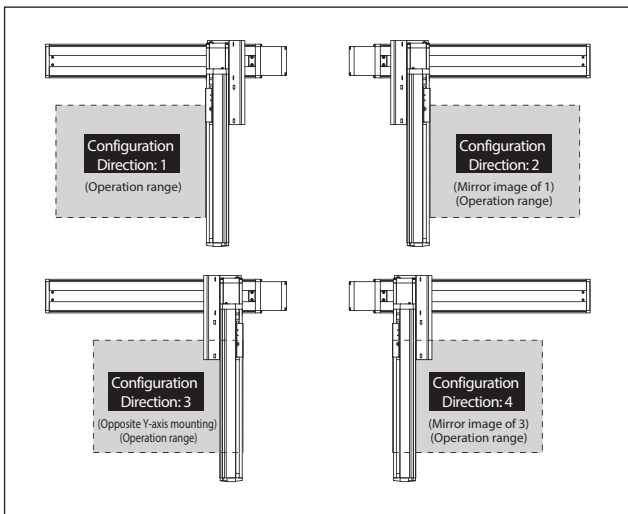
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm <100: 1000mm>* below. (Every 50mm) * For self-standing cable specification	10: 100mm 70: 700mm (Every 50mm) below.	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BG1S-①-②③④⑤-T2-⑥-⑦-⑧
2	ICSB2[ICSPB2]-BG2S-①-②③④⑤-T2-⑥-⑦-⑧
3	ICSB2[ICSPB2]-BG3S-①-②③④⑤-T2-⑥-⑦-⑧
4	ICSB2[ICSPB2]-BG4S-①-②③④⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required.

Selectable only when the Y-axis Cable Management is "CT".
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (Standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM-①-400-40-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-①-400-40-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ② in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	2400	1840	1530	1290	1100	880	
Y-axis	2400						

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Y-axis stroke												
	100	150	200	250	300	350	400	450	500	550	600	650	700
0.2	20.9	20.1	19.3	18.5	17.7	16.9	16.2	15.4	14.6	13.8	13.1	12.2	11.5
0.3	20.9	20.1	19.3	18.5	17.7	16.9	16.2	15.4	14.6	13.8	13.1	12.2	11.5
0.4	20.9	20.1	19.3	18.5	17.7	16.9	16.2	15.4	14.6	13.8	13.1	12.2	11.5
0.5	13.7	12.9	12.1	11.3	10.5	9.7	9.0	8.2	7.4	6.6	5.9	5.0	4.3
0.6	9.2	8.4	7.6	6.8	6.0	5.2	4.5	3.7	2.9	2.1	1.4	0.5	—
0.7	5.6	4.8	4.0	3.2	2.4	1.6	0.9	—	—	—	—	—	—
0.8	3.8	3.0	2.2	1.4	0.6	—	—	—	—	—	—	—	—
0.9	2.0	1.2	—	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—	—	—	—	—	—	—
1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

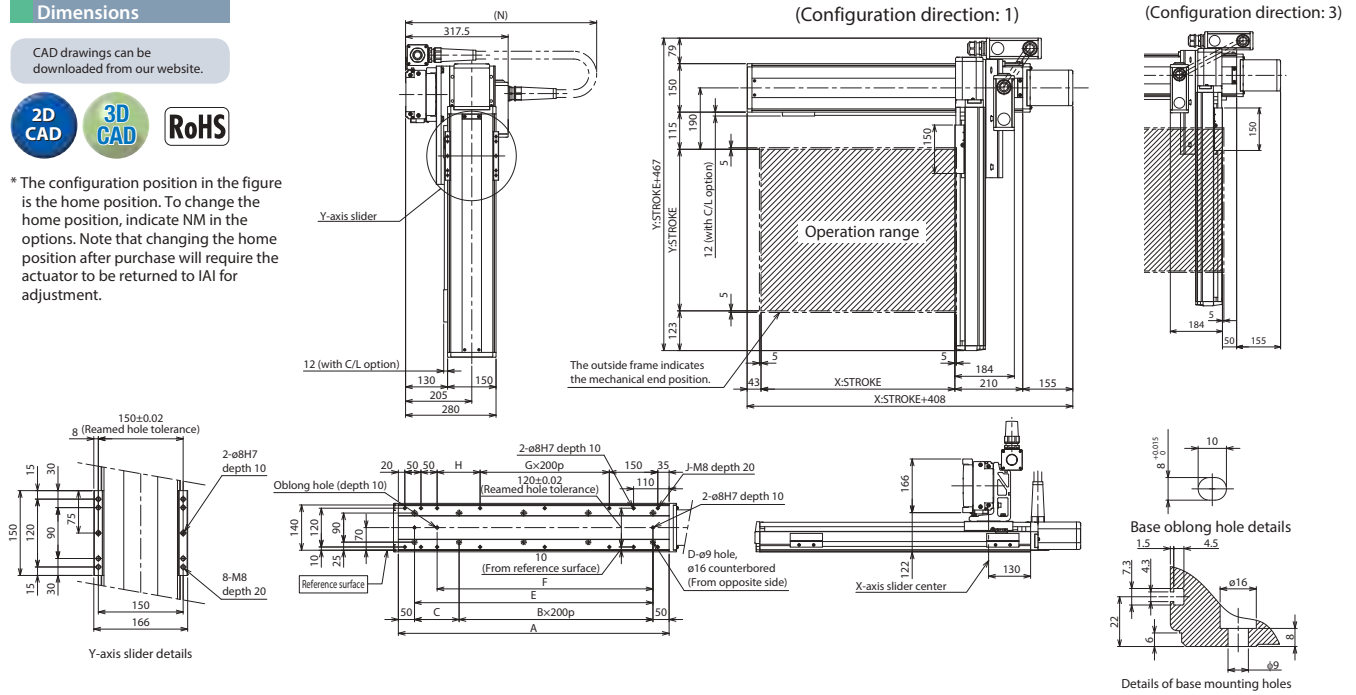
ICSB2 [ICSPB2]-BG□S-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	650	650	700	700	750	750	800	800	850	850	900	900	950	950	950	1000	1000	1050	1050

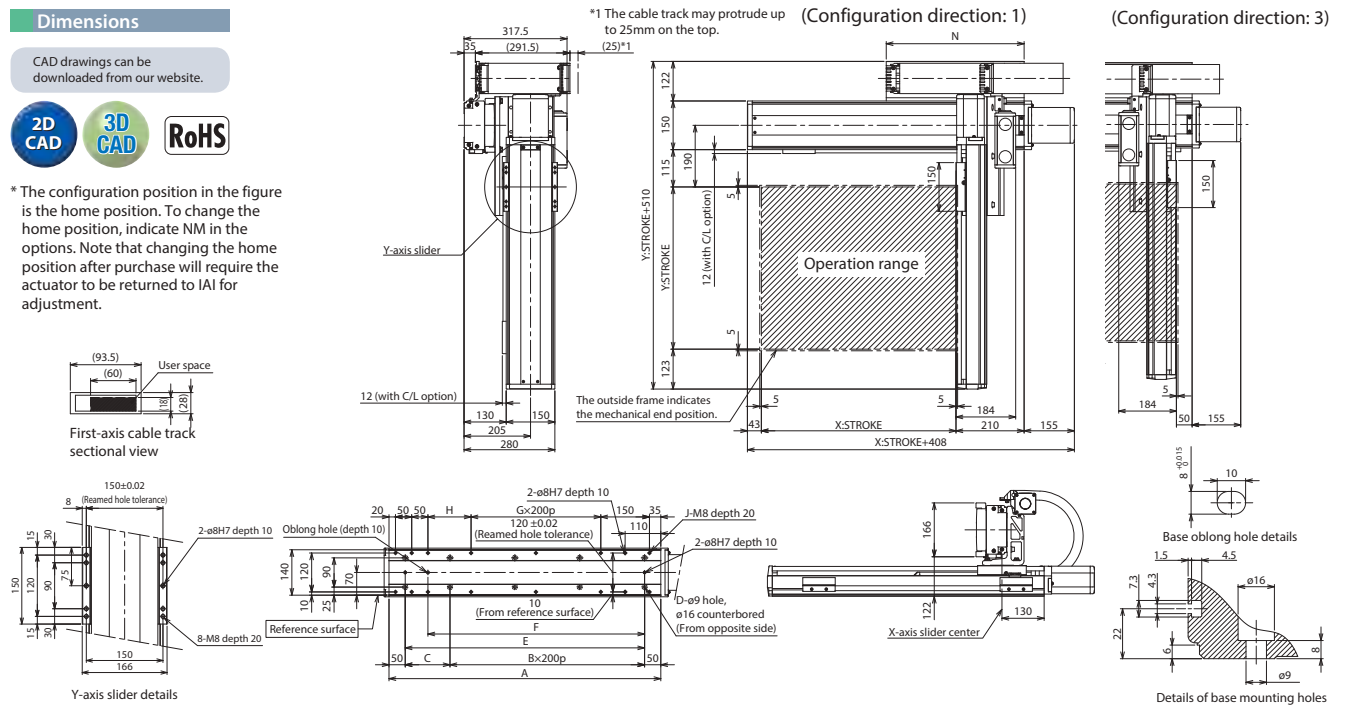
ICSB2 [ICSPB2]-BG□S-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	5	5	5
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750

ICSB2-BH□S

ICSPB2-BH□S High-Precision Specification

±10μm
Standard

Battery-less Absolute

X-Y 2-axis

XYB (Y Base Mount)

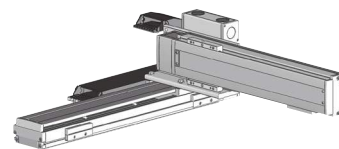
Ultra High Speed Long Type

X:Lg (400W)
Y:Lg (400W)

±5μm
High Precision

Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	10: 100mm 70: 700mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	



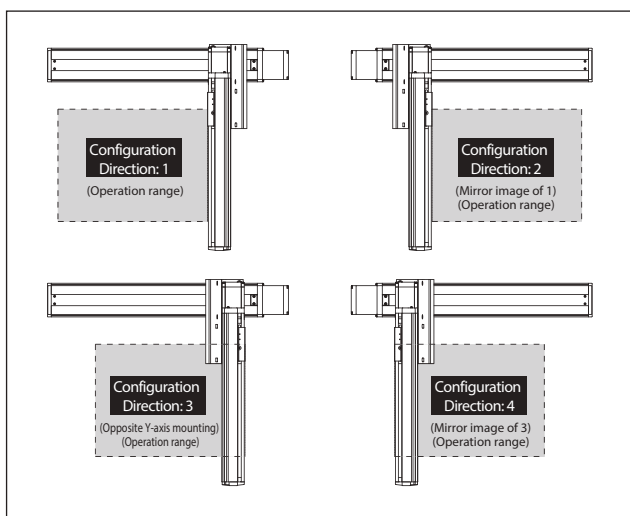
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BH1S-①-②-③-④-⑤-T2-⑥-⑦-⑧
2	ICSB2[ICSPB2]-BH2S-①-②-③-④-⑤-T2-⑥-⑦-⑧
3	ICSB2[ICSPB2]-BH3S-①-②-③-④-⑤-T2-⑥-⑦-⑧
4	ICSB2[ICSPB2]-BH4S-①-②-③-④-⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXXM-①-400-40-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-①-400-40-④-T2-⑤-⑥	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑨ in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	1000~1200	1300	1400	1500	1600	1700	1800
X-axis	—	2400	2300	2000	1900	1660	1480	1300
Y-axis	2400	—	—	—	—	—	—	—

	1900	2000	2100	2200	2300	2400	2500
X-axis	1180	1080	980	880	820	740	680
Y-axis	—	—	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		100	150	200	250	300	350	400	450	500	550	600	650	700
Acceleration *1	0.2	20.9	20.1	19.3	18.5	17.7	16.9	16.2	15.4	14.6	13.8	13.1	12.2	11.5
	0.3	20.9	20.1	19.3	18.5	17.7	16.9	16.2	15.4	14.6	13.8	13.1	12.2	11.5
	0.4	20.9	20.1	19.3	18.5	17.7	16.9	16.2	15.4	14.6	13.8	13.1	12.2	11.5
	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.6	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.7	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track
⑧	Z-axis Cable Management (Option) *2	CT: Cable track

*2 Please specify only when required.
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm[±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	400W/40mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) Please note that a longer stroke will result in a lower max speed.
- (Note 4) The rated acceleration is 0.4G.
(The upper limit of acceleration is 0.4G.)

ICSB2 [ICSPB2]-BH□S-CT (Cable track specification)

Dimensions

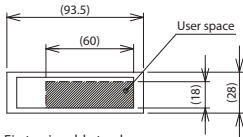
CAD drawings can be downloaded from our website.



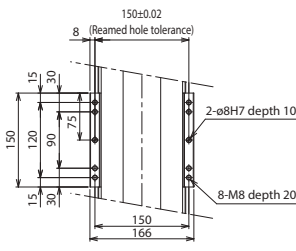
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*1 The cable track may protrude up to 25mm on the top.

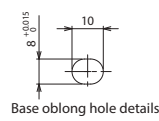
(Configuration direction: 1)



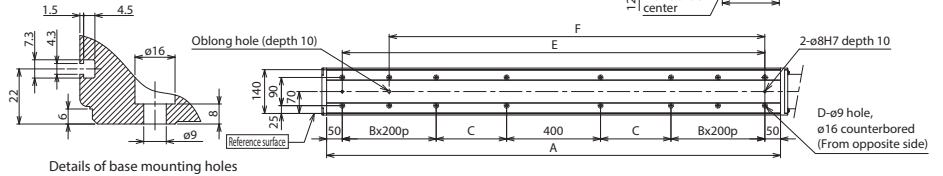
First-axis cable track sectional view



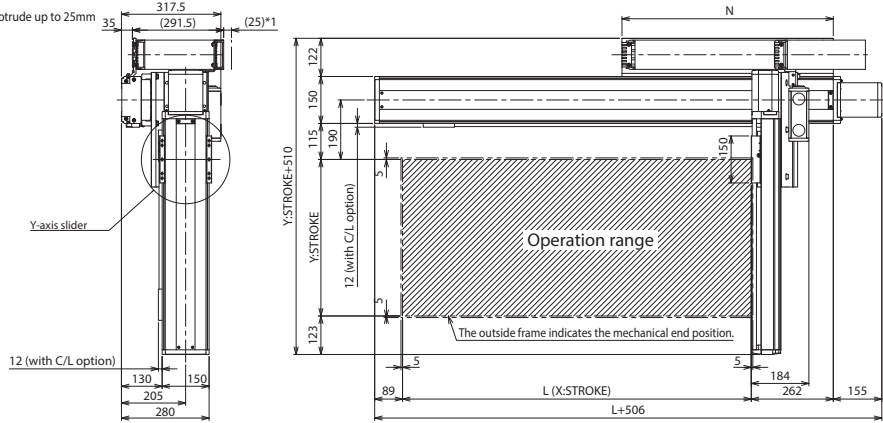
Y-axis slider details



Base oblong hole details

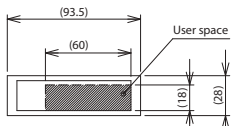


Details of base mounting holes

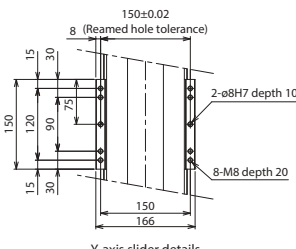


(Configuration direction: 3)

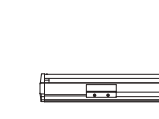
*1 The cable track may protrude up to 25mm on the top.



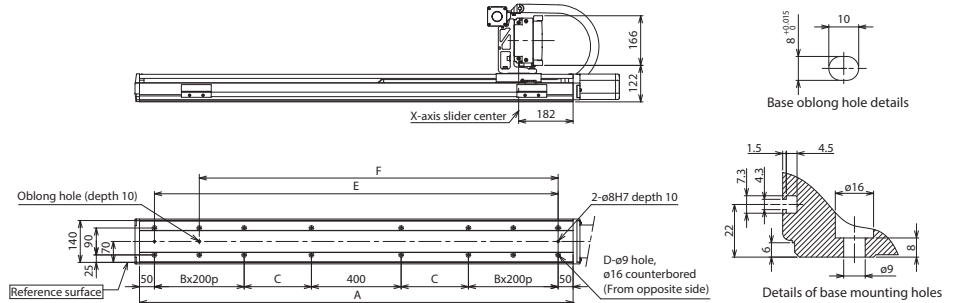
First-axis cable track sectional view



Y-axis slider details



Base oblong hole details



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	425	475	525	425	475	525	575	575
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

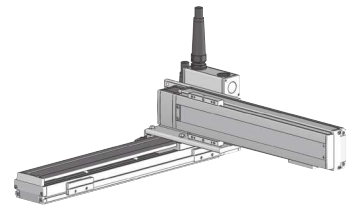
ICSB2-BK□H

ICSPB2-BK□H High-Precision Specification

X ± 20µm
Y ± 10µm

X ± 10µm
Y ± 5µm

X-Y 2-axis XYB (Y Base Mount) High Speed Type X: XL (600W) Y: Lg (400W)



Model Specification Items

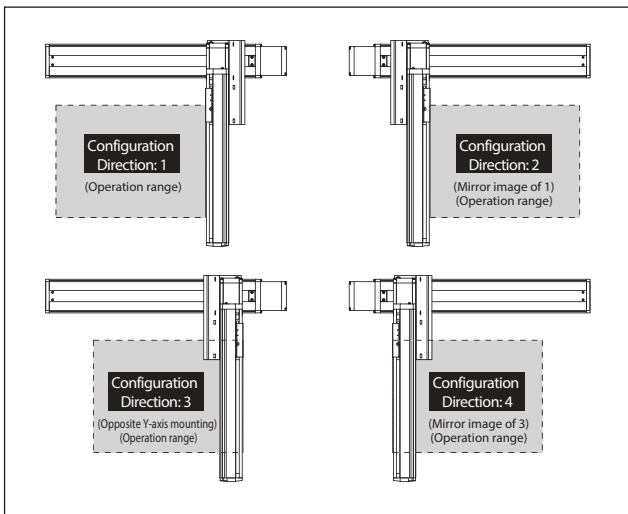
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	10: 100mm 130: 1300mm (100: 1000mm)* <100: 1000mm>* below. (Every 50mm) * For self-standing cable specification	10: 100mm 70: 700mm table below. (Every 50mm)	T2: SCON XSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BK1H-[1]-[2]A[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-BK2H-[1]-[2]A1[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-BK3H-[1]-[2]A[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-BK4H-[1]-[2]A1[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm)*1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option)	CT: Cable track *2

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required. Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y-axis)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit.

Please contact IAI for the detail.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

* Please refer to P.11 for the X-axis cable exit direction.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM-[1]-600-40-[2]-T2-[9]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-400-40-[4]-T2-[9]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names. Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [3] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	2400	1840	1530	1290	1100	880	
Y-axis	2400						

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		100	150	200	250	300	350	400	450	500	550	600	650	700
Acceleration *1	0.2	36.6	35.8	35.0	34.2	33.5	32.7	32.0	31.1	30.3	29.5	28.8	28.0	27.3
	0.3	36.6	35.8	35.0	34.2	33.5	32.7	32.0	31.1	30.3	29.5	28.8	28.0	27.3
	0.4	23.1	22.3	21.5	20.7	20.0	19.2	18.5	17.6	16.8	16.0	15.3	14.5	13.8
	0.5	15.0	14.2	13.4	12.6	11.9	11.1	10.4	9.5	8.7	7.9	7.2	6.4	5.7
	0.6	9.6	8.8	8.0	7.2	6.5	5.7	5.0	4.1	3.3	2.5	1.8	1.0	—
	0.7	6.0	5.2	4.4	3.6	2.9	2.1	1.4	0.5	—	—	—	—	—
	0.8	2.4	1.6	0.8	—	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
1.2	—	—	—	—	—	—	—	—	—	—	—	—	—	

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.3G. When the acceleration is increased, the payload will be reduced.

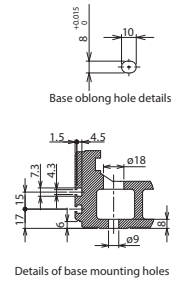
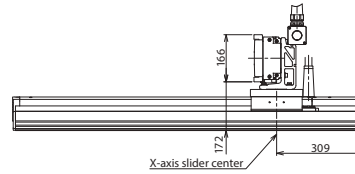
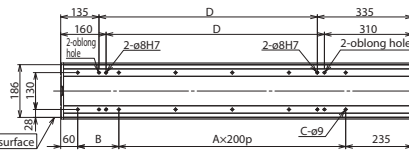
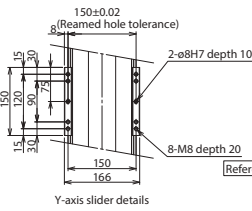
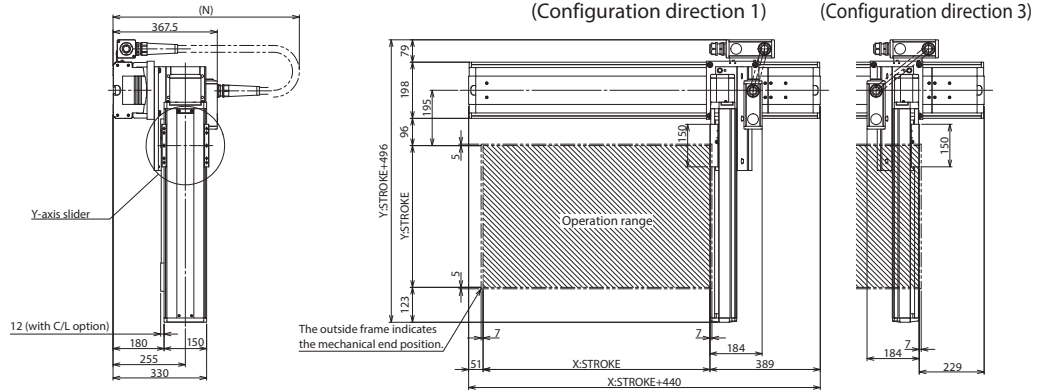
ICSB2 [ICSPB2]-BK□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970
N	450	450	500	500	550	550	600	600	650	650	700	700	700	750	750	800	800	850	850

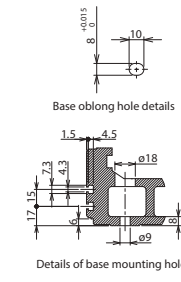
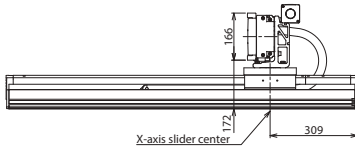
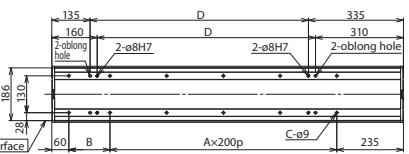
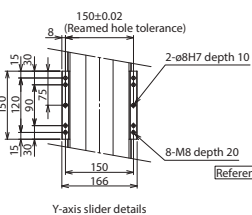
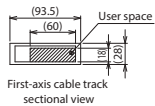
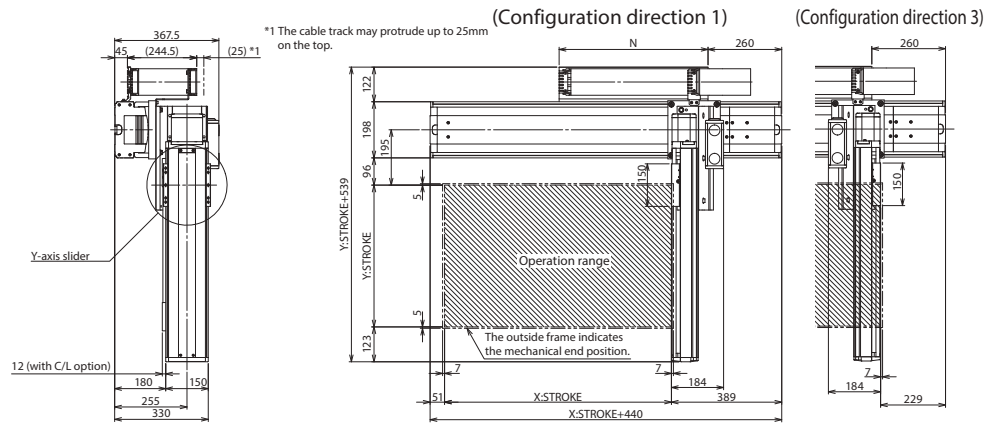
ICSB2 [ICSPB2]-BK□H-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



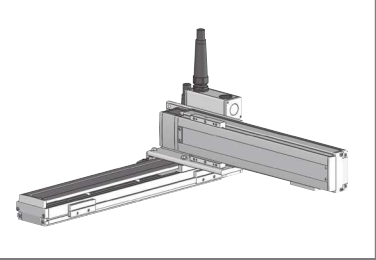
X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB2-BK□M

ICSPB2-BK□M High-Precision Specification

X: ±20µm
Y: ±10µm
CO: [] Standard
CO: [] High-Precision

X-Y 2-axis XYB (Y Base Mount) Medium Speed Type X: XL (600W) Y: Lg (400W)



Model Specification Items

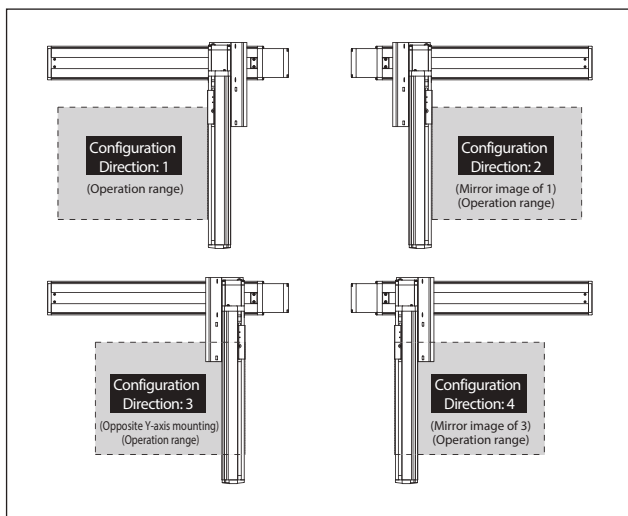
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	10: 100mm 130: 1300mm (100: 1000mm)* <100: 1000mm>* below. (Every 50mm) *For self-standing cable specification	10: 100mm 70: 700mm table below. (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BK1M-[1]-[2]A3[3]-[4]5-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-BK2M-[1]-[2]A1[3]-[4]5-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-BK3M-[1]-[2]A3[3]-[4]5-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-BK4M-[1]-[2]A1[3]-[4]5-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm)*1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
[8]	Z-axis Cable Management (Option)	CT: Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required. Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y-axis)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit.

Please contact IAI for the detail.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

* Please refer to P.11 for the X-axis cable exit direction.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM-[1]-600-20-[2]-T2-[9]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-400-20-[4]-T2-[9]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [9] in the above model names. Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [3] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	1200		920	765	645	550	475
Y-axis	1200						

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		100	150	200	250	300	350	400	450	500	550	600	650	700
Acceleration *1	0.2	65.0	65.0	65.0	65.0	62.3	55.9	50.7	46.1	42.0	38.4	35.2	32.2	29.6
	0.3	65.0	65.0	65.0	65.0	62.3	55.9	50.7	46.1	42.0	38.4	35.2	32.2	29.6
	0.4	64.5	63.7	62.9	62.1	59.9	54.1	49.8	44.8	40.9	37.4	34.3	31.5	28.9
	0.5	47.4	46.6	45.8	45.0	44.3	43.5	42.8	40.4	36.5	33.0	29.9	27.0	24.5
	0.6	36.6	35.8	35.0	34.2	33.5	32.7	32.0	31.1	27.8	24.8	22.2	19.8	17.6
	0.7	29.4	28.6	27.8	27.0	26.3	25.5	24.8	23.9	21.6	19.0	16.7	14.6	12.7
	0.8	23.1	22.3	21.5	20.7	20.0	19.2	18.5	17.6	16.8	14.7	12.6	10.7	9.0
	0.9	18.6	17.8	17.0	16.2	15.5	14.7	14.0	13.1	12.3	11.3	9.4	7.7	6.1
	1	15.0	14.2	13.4	12.6	11.9	11.1	10.4	9.5	8.7	7.9	6.9	5.2	3.8
	1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.3G. When the acceleration is increased, the payload will be reduced.

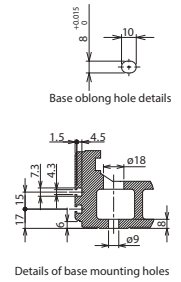
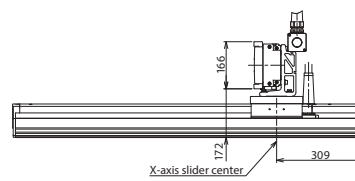
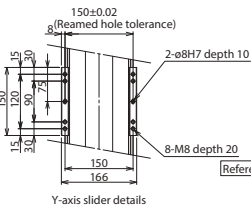
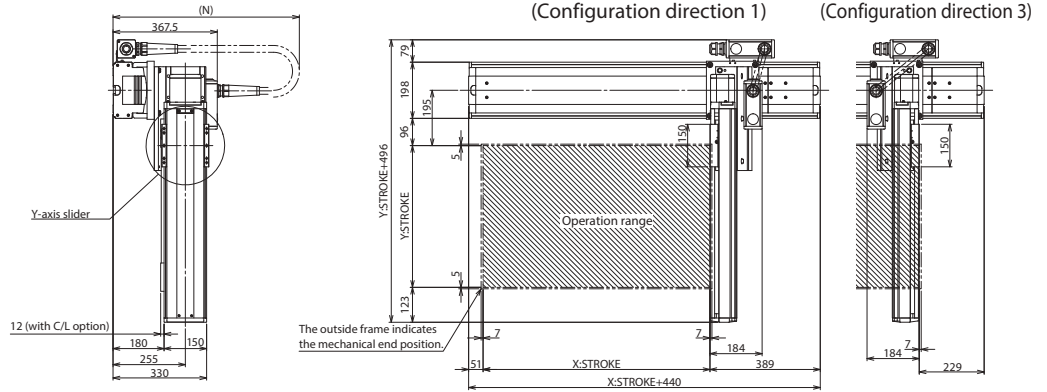
ICSB2 [ICSPB2]-BK□M-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Details of base mounting holes

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970
N	450	450	500	500	550	550	600	600	650	650	700	700	700	750	750	800	800	850	850

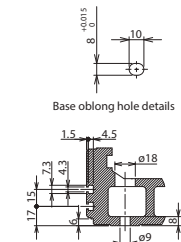
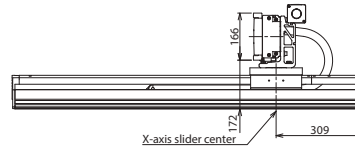
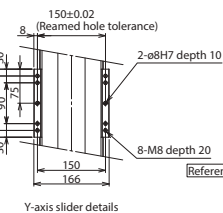
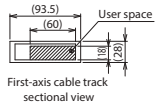
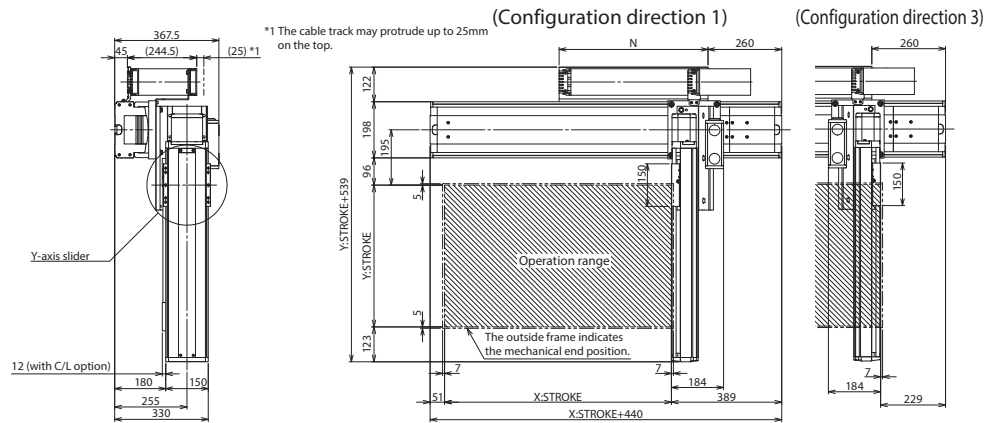
ICSB2 [ICSPB2]-BK□M-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Details of base mounting holes

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB2-BL□H

ICSPB2-BL□H High-Precision Specification

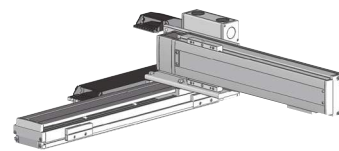
X ± 20µm
Y ± 10µm
C O [] Standard

X-Y
2-axis

XYB
(Y Base Mount)

Ultra
High Speed
Long Type

X: XL (600W)
Y: Lg (400W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	90: 900mm 250: 2500mm (Every 100mm)	10: 100mm 70: 700mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

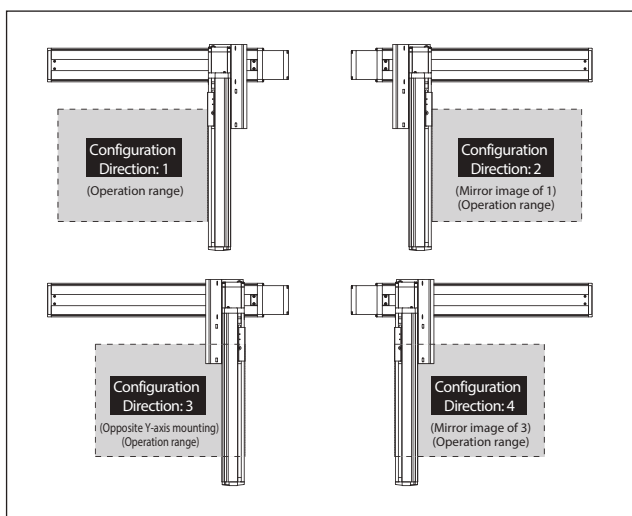
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BL1H-[1]-[2]A[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-BL2H-[1]-[2]A[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-BL3H-[1]-[2]A[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-BL4H-[1]-[2]A[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXXM-[1]-600-40-[2]-T2-[9]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-400-40-[4]-T2-[9]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [9] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	900~1200	1300	1400	1500	1600	1700	1800
X-axis	—	2400	2200	1965	1725	1530	1365	1225
Y-axis	2400	—	—	—	—	—	—	—

	1900	2000	2100	2200	2300	2400	2500
X-axis	1110	1005	915	840	770	710	655
Y-axis	—	—	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Y-axis stroke												
	100	150	200	250	300	350	400	450	500	550	600	650	700
0.2	36.6	35.8	35.0	34.2	33.5	32.7	32.0	31.1	30.3	29.5	28.8	28.0	27.3
0.3	36.6	35.8	35.0	34.2	33.5	32.7	32.0	31.1	30.3	29.5	28.8	28.0	27.3
0.4	—	—	—	—	—	—	—	—	—	—	—	—	—
0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
0.6	—	—	—	—	—	—	—	—	—	—	—	—	—
0.7	—	—	—	—	—	—	—	—	—	—	—	—	—
0.8	—	—	—	—	—	—	—	—	—	—	—	—	—
0.9	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—	—	—	—	—	—	—
1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	90: 900mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	CT: Cable track
[8]	Z-axis Cable Management (Option) *2	CT: Cable track

*2 Please specify only when required. For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y-axis)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit.

Please contact IAI for the detail.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm [±0.01mm] Y-axis ±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/40mm
Y-axis motor output/lead	400W/40mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) Please note that a longer stroke will result in a lower max speed.
- (Note 4) The rated acceleration is 0.3G. (The upper limit of acceleration is 0.3G.)

ICSB2 [ICSPB2]-BL□H-CT (Cable track specification)

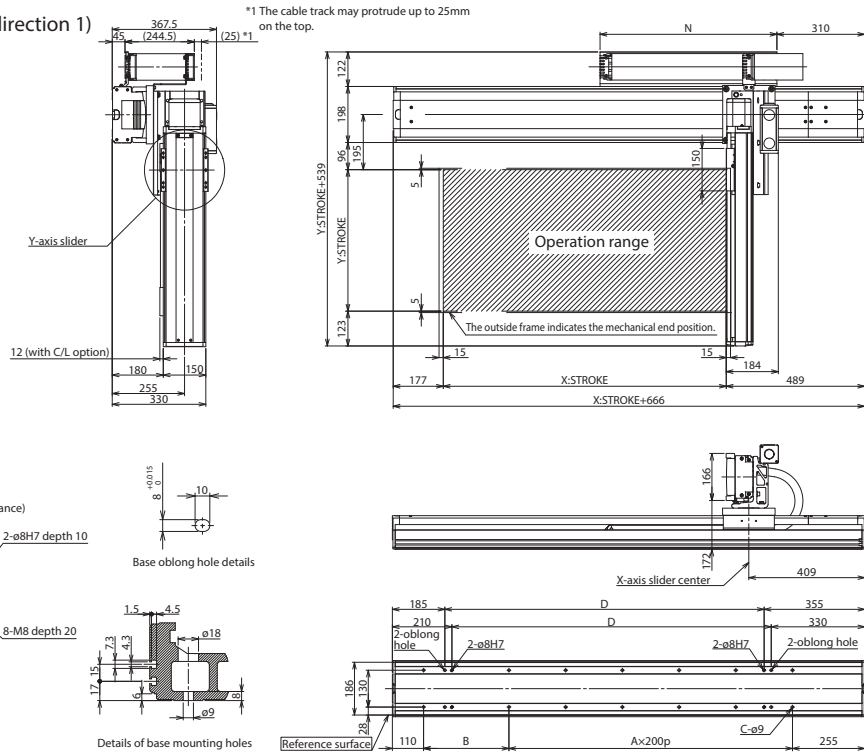
Dimensions

CAD drawings can be downloaded from our website.

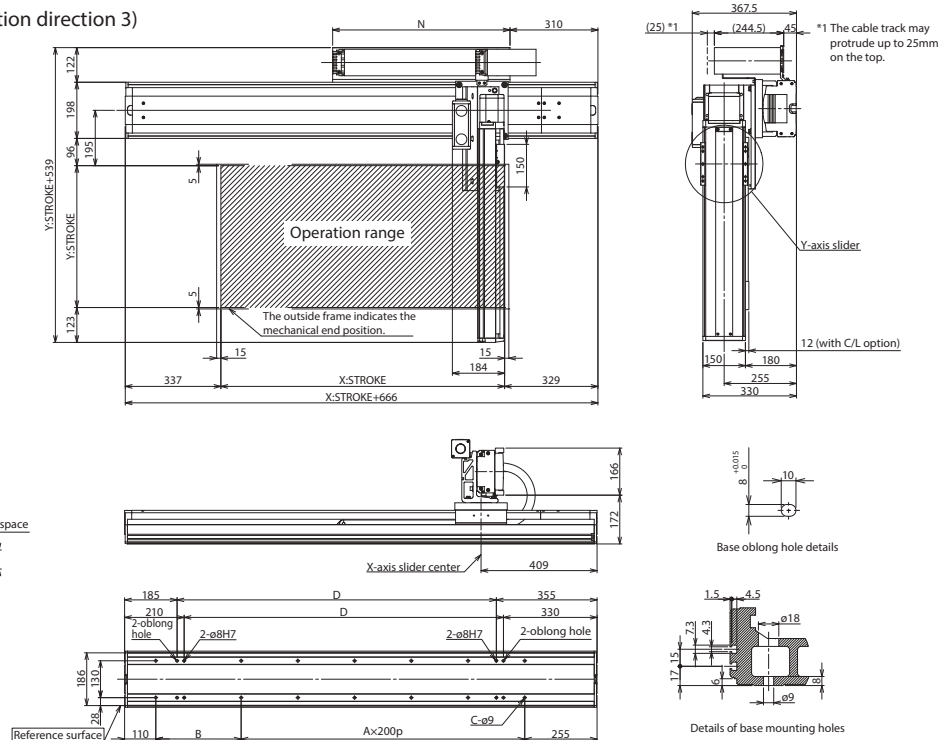


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction 1)



(Configuration direction 3)



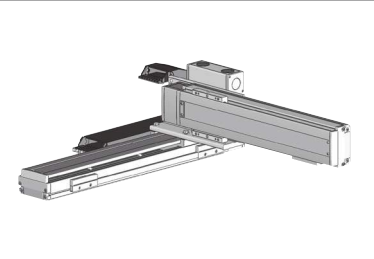
X-axis stroke	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
A	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
B	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201
C	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
D	1026	1126	1226	1326	1426	1526	1626	1726	1826	1926	2026	2126	2226	2326	2426	2526	2626
N	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB2-BL□M

ICSPB2-BL□M High-Precision Specification

X ±20µm
Y ±10µm
C0-1 Standard

X-Y 2-axis
XYB (Y Base Mount)
Medium Speed Long Type
X: XL (600W)
Y: Lg (400W)



Model Specification Items

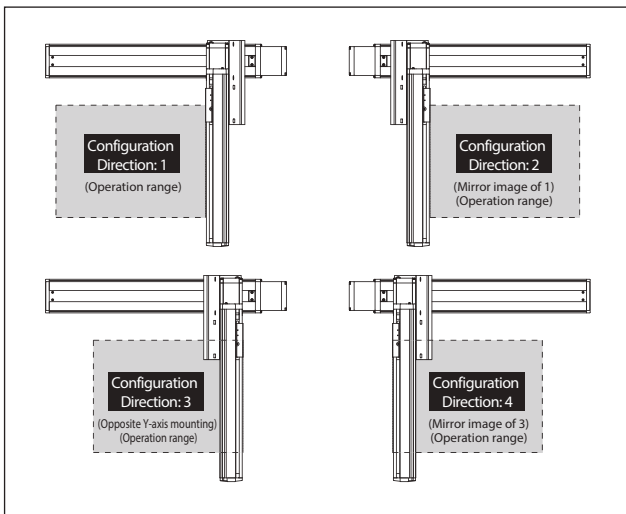
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	90: 900mm 250: 2500mm (Every 100mm)	10: 100mm 70: 700mm (Every 50mm)	T2: SSCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BL1M-[1]-[2]A[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-BL2M-[1]-[2]A1[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-BL3M-[1]-[2]A3[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-BL4M-[1]-[2]A1[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXMX-[1]-600-20-[2]-T2-[3]-[4]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-400-20-[4]-T2-[5]-[6]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [6] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [9] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	900~1200	1300	1400	1500	1600	1700	1800
X-axis	—	1200	1100	980	860	765	680	610
Y-axis	1200							

	1900	2000	2100	2200	2300	2400	2500
X-axis	555	500	455	420	385	355	325
Y-axis							

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		100	150	200	250	300	350	400	450	500	550	600	650	700
Acceleration *1	0.2	65.0	65.0	65.0	65.0	62.3	55.9	50.7	46.1	42.0	38.4	35.2	32.2	29.6
	0.3	65.0	65.0	65.0	65.0	62.3	55.9	50.7	46.1	42.0	38.4	35.2	32.2	29.6
	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.6	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.7	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	90: 900mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	CT: Cable track
[8]	Z-axis Cable Management (Option) *2	CT: Cable track

*2 Please specify only when required. For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y-axis)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for the detail.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm [±0.01mm] Y-axis ±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/20mm
Y-axis motor output/lead	400W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.3G. (The upper limit of acceleration is 0.3G.)

ICSB2 [ICSPB2]-BL□M-CT (Cable track specification)

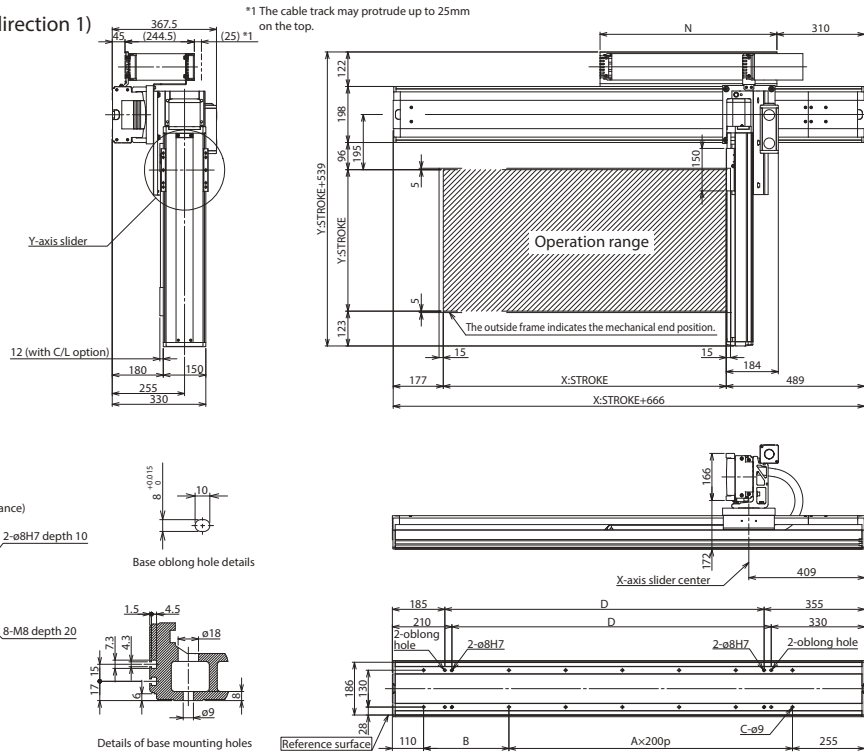
Dimensions

CAD drawings can be downloaded from our website.

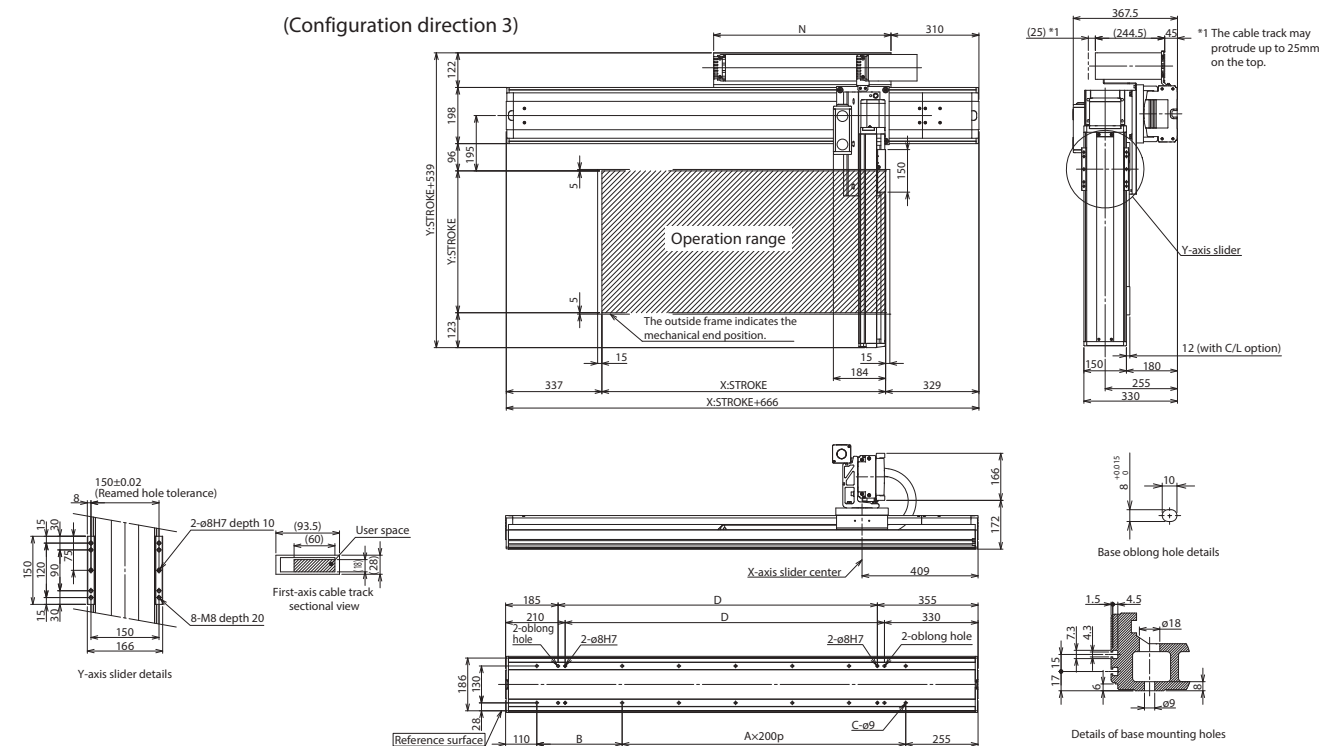


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction 1)



(Configuration direction 3)



X-axis stroke	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
A	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
B	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201
C	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
D	1026	1126	1226	1326	1426	1526	1626	1726	1826	1926	2026	2126	2226	2326	2426	2526	2626
N	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB2-BM□H

ICSPB2-BM□H High-Precision Specification

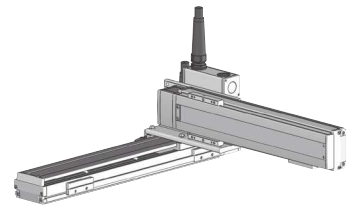
±10µm
Standard

X-Y
2-axis

XYB
(Y Base Mount)

High
Speed
Type

X: High-rigidity Lg (750W)
Y: Lg (400W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	10: 100mm 150: 1500mm <100: 1000mm>* (Every 50mm) * For self-standing cable specification	10: 100mm 70: 700mm (Every 50mm)	T2: SCOM SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: □m	Refer to Explanation of Model Designations below	

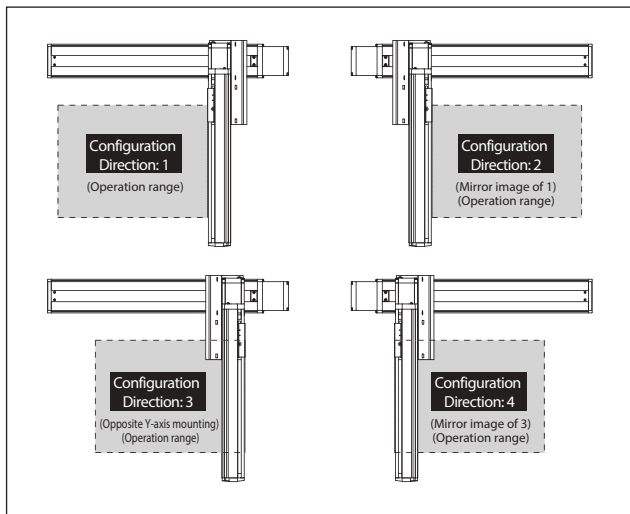
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BM1H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-BM2H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-BM3H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-BM4H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	10: 100mm 150: 1500mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
[8]	Z-axis Cable Management (Option)	CT: Cable track *2

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required.

Selectable only when the Y-axis Cable Management is "CT".
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	SSPA-LXM-[1]-750-50-[2]-T2-[3]-[4]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-400-40-[4]-T2-[3]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [2] in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	750~900	950~1000	1050~1100	1150~1200	1250~1300	1350~1400	1450~1500
X-axis	2500		2320	1950	1660	1440	1250	1100
Y-axis	2400							

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Y-axis stroke												
	100	150	200	250	300	350	400	450	500	550	600	650	700
0.2	36.4	35.6	34.8	34.0	33.3	32.4	31.7	30.9	30.1	29.3	28.6	27.5	25.0
0.3	36.4	35.6	34.8	34.0	33.3	32.4	31.7	30.9	30.1	29.3	28.6	26.9	24.5
0.4	36.4	35.6	34.8	34.0	33.3	32.4	31.7	30.9	30.1	27.4	24.6	22.0	19.6
0.5	25.6	24.8	24.0	23.2	22.5	21.6	20.9	20.1	19.3	18.5	16.4	14.3	12.3
0.6	18.4	17.6	16.8	16.0	15.3	14.4	13.7	12.9	12.1	11.3	10.6	9.1	7.5
0.7	13.0	12.2	11.4	10.6	9.9	9.0	8.3	7.5	6.7	5.9	5.2	4.4	3.6
0.8	9.4	8.6	7.8	7.0	6.3	5.4	4.7	3.9	3.1	2.3	1.6	—	—
0.9	6.7	5.9	5.1	4.3	3.6	2.7	2.0	1.2	—	—	—	—	—
1	4.0	3.2	2.4	1.6	—	—	—	—	—	—	—	—	—
1.1	2.2	1.4	—	—	—	—	—	—	—	—	—	—	—
1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

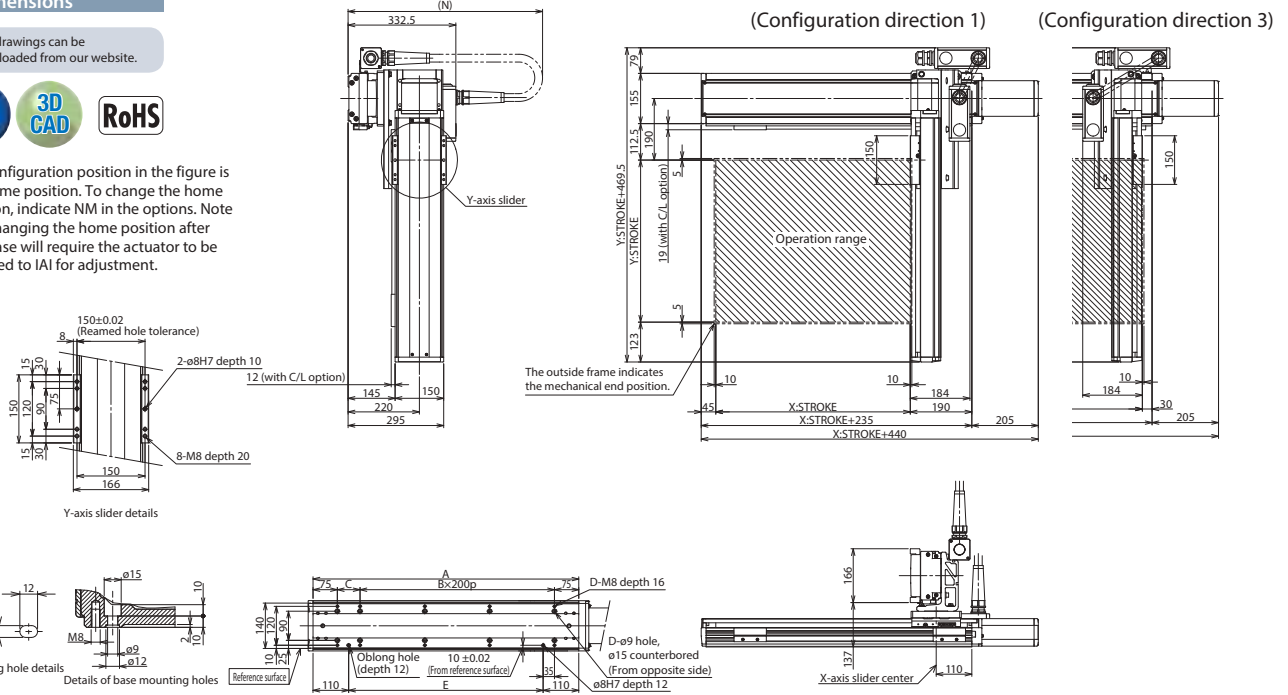
ICSB2 [ICSPB2]-BM□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
N	650	700	700	750	750	750	800	800	850	850	900	900	950	950	950	1000	1000	1050	1050

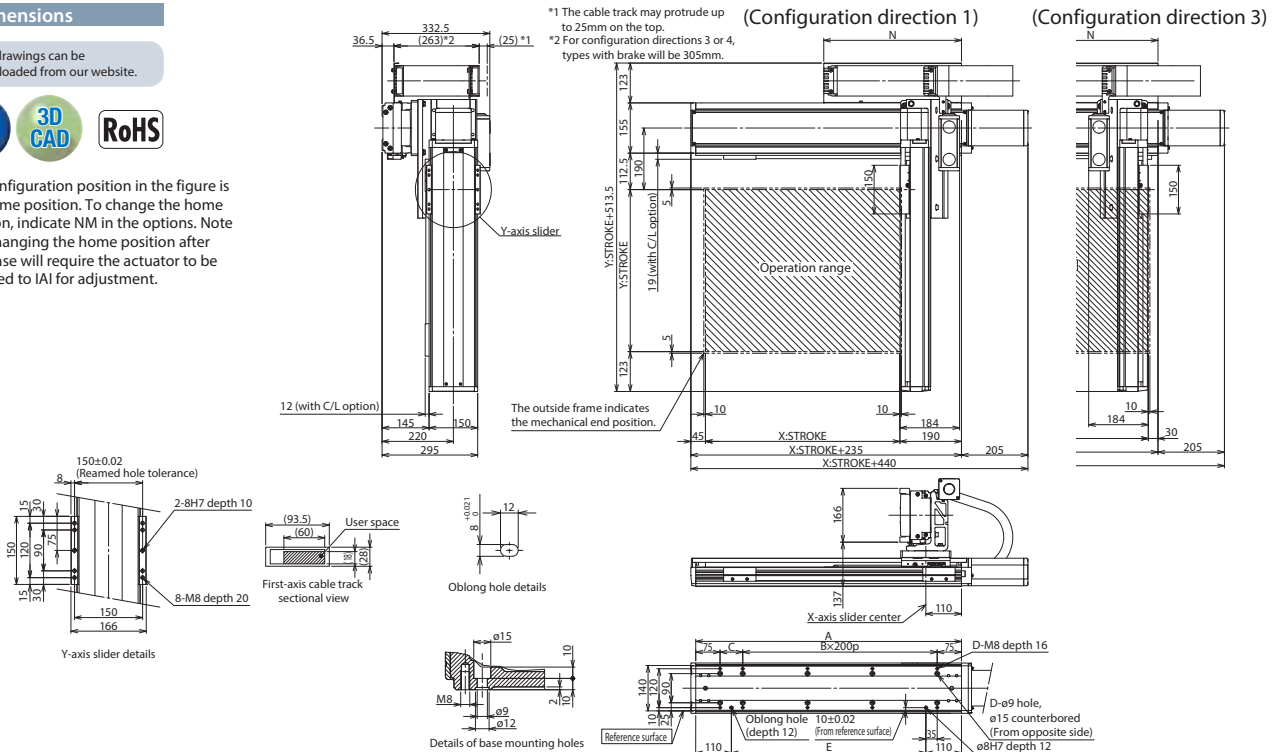
ICSB2 [ICSPB2]-BM□H-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



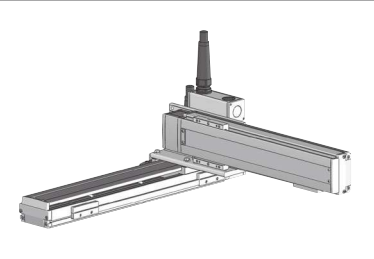
X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
A	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	1320	1370	1420	1470	1520	1570	1620	1670	1720
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7
C	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
E	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	825	850	875

ICSB2-BM□M

ICSPB2-BM□M High-Precision Specification



- X-Y 2-axis
- XYB (Y Base Mount)
- Medium Speed Type
- X: High-rigidity Lg (750W)
Y: Lg (400W)



Model Specification Items

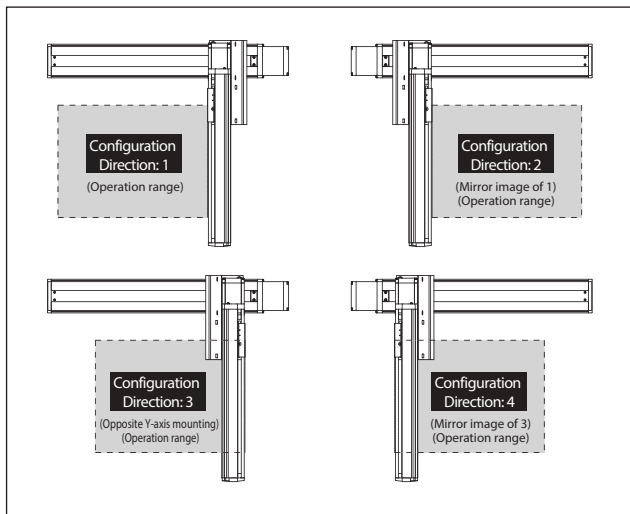
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	10: 100mm 150: 1500mm <100: 1000mm>* (Every 50mm) *For self-standing cable specification	10: 100mm 70: 700mm (Every 50mm) Refer to Options table below.	T2: SCOM SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: □m	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-BM1M-①-②-③-④-⑤-T2-⑥-⑦-⑧
2	ICSB2[ICSPB2]-BM2M-①-②-③-④-⑤-T2-⑥-⑦-⑧
3	ICSB2[ICSPB2]-BM3M-①-②-③-④-⑤-T2-⑥-⑦-⑧
4	ICSB2[ICSPB2]-BM4M-①-②-③-④-⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	10: 100mm 150: 1500mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option)	CT: Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.
*2 Please specify only when required.
Selectable only when the Y-axis Cable Management is "CT".
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	SSPA-LXM-①-750-25-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-①-400-20-②-T2-③-④	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ④ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ③ in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~700	750~900	950~1000	1050~1100	1150~1200	1250~1300	1350~1400	1450~1500
X-axis	1250	1160	970	830	720	620	550	
Y-axis	1200							

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		100	150	200	250	300	350	400	450	500	550	600	650	700
Acceleration *1	0.2	90.0	83.0	72.0	63.2	56.1	50.1	45.0	40.6	36.7	33.3	30.2	27.5	25.0
	0.3	90.0	79.1	69.0	60.8	54.2	48.5	43.7	39.5	35.8	32.5	29.5	26.9	24.5
	0.4	78.6	70.9	61.8	54.2	48.0	42.7	38.2	34.1	30.6	27.4	24.6	22.0	19.6
	0.5	63.4	54.1	46.7	40.6	35.6	31.3	27.6	24.3	21.4	18.7	16.4	14.3	12.3
	0.6	50.6	42.8	36.6	31.5	27.3	23.7	20.5	17.7	15.2	13.0	11.0	9.1	7.5
	0.7	41.5	34.8	29.5	25.1	21.4	18.2	15.5	13.1	10.9	8.9	7.1	5.5	4.0
	0.8	34.6	28.8	24.1	20.2	17.0	14.1	11.7	9.5	7.6	5.8	4.2	2.7	1.4
	0.9	29.3	24.1	19.9	16.4	13.5	11.0	8.8	6.8	5.0	3.4	2.0	—	—
	1	25.1	20.4	16.6	13.4	10.8	8.4	6.4	4.6	3.0	1.5	—	—	—
	1.1	21.6	17.3	13.8	10.9	8.5	6.4	4.5	2.8	1.3	—	—	—	—
	1.2	18.4	14.7	11.5	8.8	6.6	4.6	2.9	1.3	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

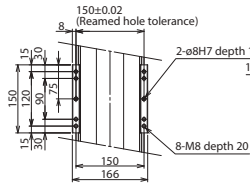
ICSB2 [ICSPB2]-BM□M-SC (Self-standing cable specification)

Dimensions

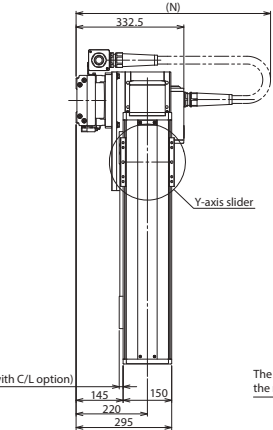
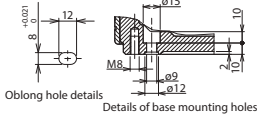
CAD drawings can be downloaded from our website.



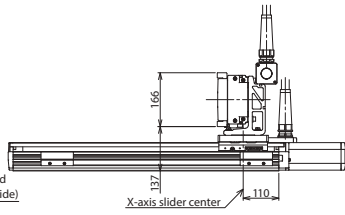
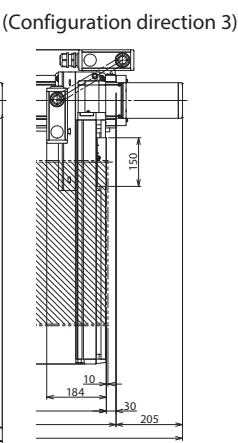
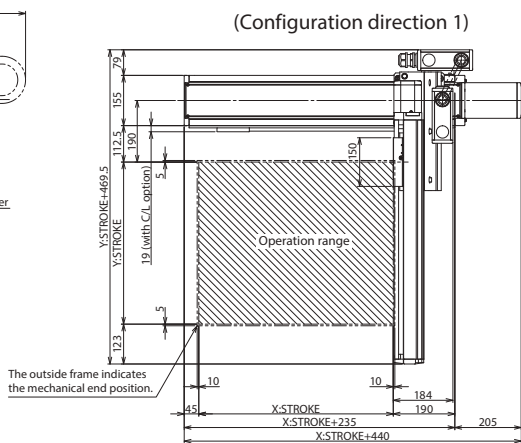
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Y-axis slider details



The outside frame indicates the mechanical end position.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
N	650	700	700	750	750	750	800	800	850	850	900	900	950	950	950	1000	1000	1050	1050

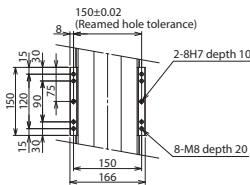
ICSB2 [ICSPB2]-BM□M-CT (Cable track specification)

Dimensions

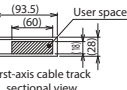
CAD drawings can be downloaded from our website.



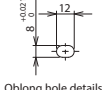
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



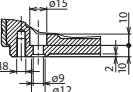
Y-axis slider details



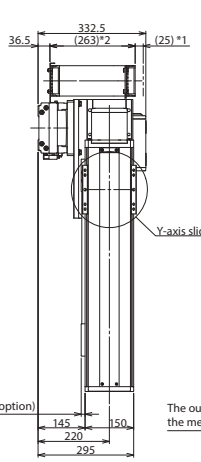
First-axis cable track sectional view



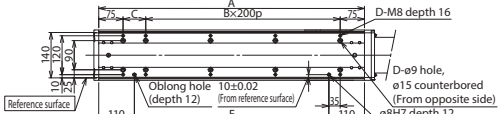
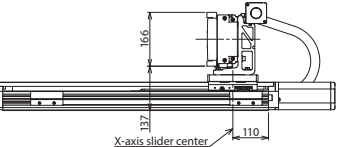
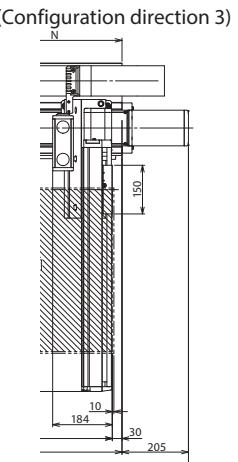
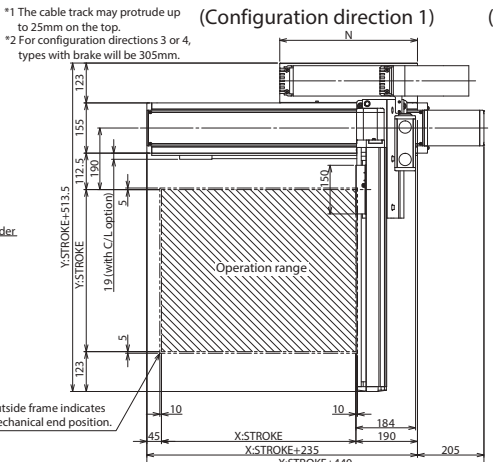
Oblong hole details



Details of base mounting holes



The outside frame indicates the mechanical end position.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
A	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	1320	1370	1420	1470	1520	1570	1620	1670	1720
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7
C	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
E	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	825	850	875

ICSA2-BP□H

ICSPA2-BP□H High-Precision Specification



- X-Y 2-axis
- XYB (Y Base Mount)
- Ultra High Speed Type
- X: XL (750W) Y: Lg (400W)



Model Specification Items

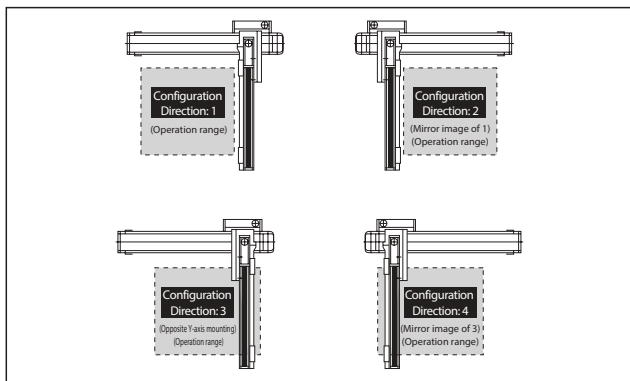
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management
ICSA2: Standard 2-axis specification ICSPA2: High precision 2-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	30: 300mm 130: 1300mm (Every 100mm)	30: 300mm 70: 700mm (Every 100mm)	T2: SC0N XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	CTL: Cable Track L Size	CTM: Cable Track M Size

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSA2[ICSPA2]-BP1H- 1 - 2 - 3 - 4 - 5 -T2- 6 - 7 - 8
2	ICSA2[ICSPA2]-BP2H- 1 - 2 - 3 - 4 - 5 -T2- 6 - 7 - 8
3	ICSA2[ICSPA2]-BP3H- 1 - 2 - 3 - 4 - 5 -T2- 6 - 7 - 8
4	ICSA2[ICSPA2]-BP4H- 1 - 2 - 3 - 4 - 5 -T2- 6 - 7 - 8

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM- 1 -750-50- 2 -T2- 3 - 4	→ Please contact IAI for more details
Y-axis	ISA[ISPA]-LYM- 1 -400-40- 4 -T2- 5	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ③ in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	300~700	800~1000	1100	1200	1300
X-axis	2000	1840	1570	1360	—
Y-axis	2400	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke				
		300	400	500	600	700
Acceleration	0.3	31.7	30.2	28.8	27.5	26.0
	0.4	18.2	16.7	15.3	14.0	12.5
	0.5	10.1	8.6	7.2	5.9	4.4
	0.6	4.7	3.2	1.8	0.5	—
	0.7	0.2	—	—	—	—
	0.8	—	—	—	—	—
	0.9	—	—	—	—	—
	1.0	—	—	—	—	—

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	30: 300mm 130: 1300mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CTL: Cable track L size *1
⑧	Z-axis Cable Management (Option) *2	CTM: Cable track M size *1

*1 Please refer to P.10 for the cable track dimensions.
*2 Specify the Z-axis Cable Management only when required.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/LC	See P.369
Home limit switch (equipped as standard on X-axis) *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.02mm[±0.01mm]
Lost motion	0.05mm or less [0.02mm or less]
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	750W/50mm
Y-axis motor output/lead	400W/40mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
- (Note 3) Please note that a longer stroke will result in a lower max speed.
- (Note 4) The rated acceleration is 0.3G. When the acceleration is increased, the payload will be reduced.

ICSA2 [ICSPA2]-BP□H-CT (Cable track specification)

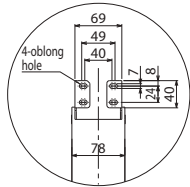
Dimensions

(Configuration direction 1)

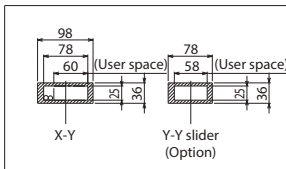
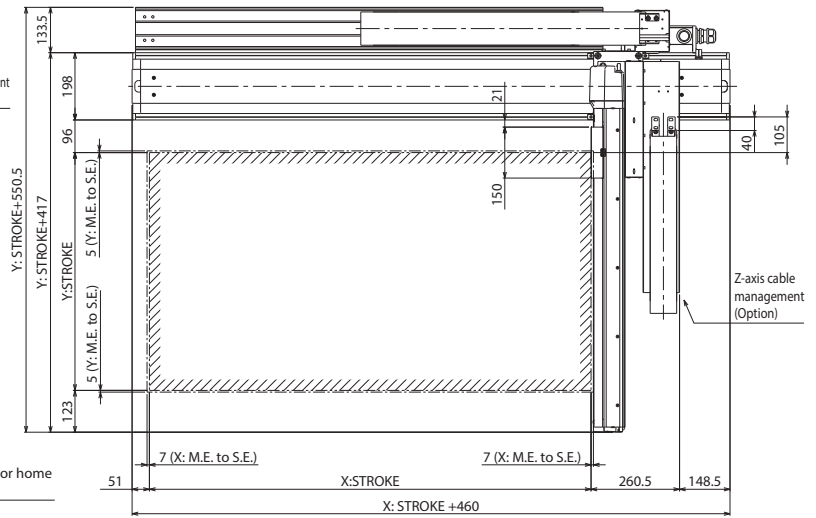
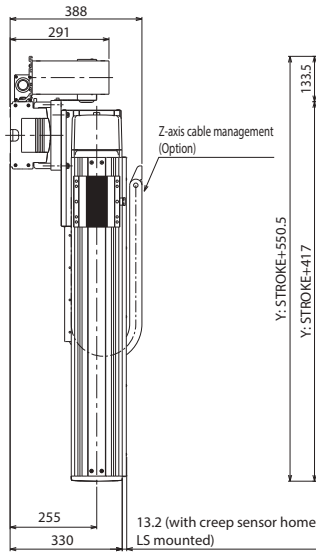
CAD drawings can be downloaded from our website.



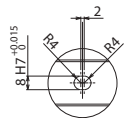
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



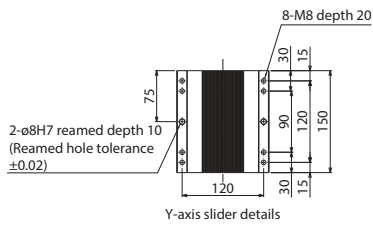
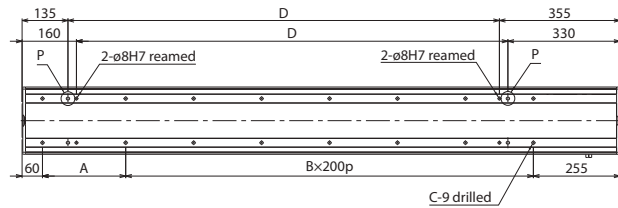
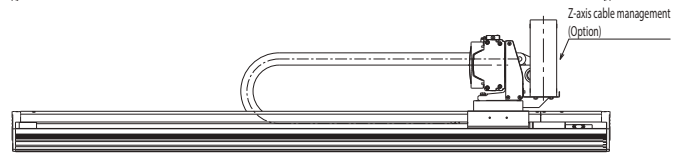
Z-axis cable management
Cable track moving end detailed view



Cable storage sectional view



Details of P section



Y-axis slider details

Notes

The moving end of the cable track for the Z-axis cable management is to be fixed to a plate, or something similar, on the Y-axis slider by the customer.

X stroke	300	400	500	600	700	800	900	1000	1100	1200	1300
A	245	145	245	145	245	145	245	145	245	145	245
B	1	2	2	3	3	4	4	5	5	6	6
C	6	8	8	10	10	12	12	14	14	16	16
D	270	370	470	570	670	770	870	970	1070	1170	1270

ICSA2-BP□M

ICSPA2-BP□M High-Precision Specification



X-Y 2-axis XYB (Y Base Mount) Medium Speed Type X: XL (750W) Y: Lg (400W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management
ICSA2: Standard 2-axis specification ICSPA2: High precision 2-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	30: 300mm 130: 1300mm (Every 100mm)	30: 300mm 70: 700mm (Every 100mm)	T2: SCOV XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	CTL: Cable Track L Size	CTM: Cable Track M Size (Option)

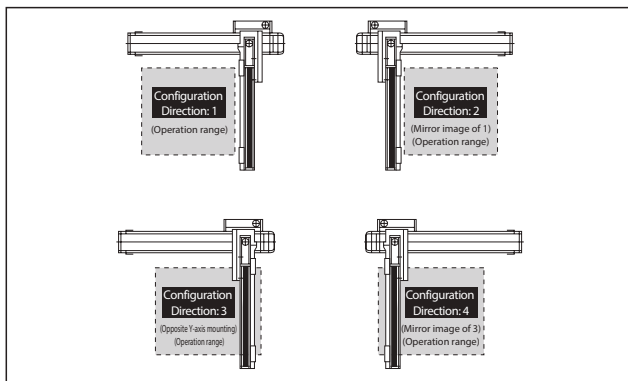
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSA2[ICSPA2]-BP1M-①-②③④⑤-T2-⑥-⑦-⑧
2	ICSA2[ICSPA2]-BP2M-①-②③④⑤-T2-⑥-⑦-⑧
3	ICSA2[ICSPA2]-BP3M-①-②③④⑤-T2-⑥-⑦-⑧
4	ICSA2[ICSPA2]-BP4M-①-②③④⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM-①-750-25-②-T2-③④⑤	→ Please contact IAI for more details
Y-axis	ISA[ISPA]-LYM-①-400-20-④-T2-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ③ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	300~700	800~900	1000	1100	1200	1300
X-axis	1250	1090	920	785	680	—
Y-axis	1200	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration	Y-axis stroke					
	300	400	500	600	700	
0.3	62.3	49.8	40.7	33.7	28.1	
0.4	54.5	49.8	40.7	33.7	28.1	
0.5	42.5	41.0	39.6	33.7	28.1	
0.6	31.7	30.2	28.8	27.5	26.0	
0.7	24.5	23.0	21.6	20.3	18.8	
0.8	18.2	16.7	15.3	14.0	12.5	
0.9	13.7	12.2	10.8	9.5	8.0	
1.0	10.1	8.6	7.2	5.9	4.4	

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	30: 300mm 130: 1300mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CTL: Cable track L size *1
⑧	Z-axis Cable Management (Option) *2	CTM: Cable track M size *1

*1 Please refer to P.10 for the cable track dimensions.

*2 Specify the Z-axis Cable Management only when required.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/LC	See P.369
Home limit switch (equipped as standard on X-axis) *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.02mm[±0.01mm]
Lost motion	0.05mm or less [0.02mm or less]
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	750W/25mm
Y-axis motor output/lead	400W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.3G. When the acceleration is increased, the payload will be reduced.

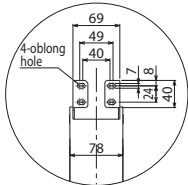
ICSA2 [ICSPA2]-BP□M-CT (Cable track specification)

Dimensions (Configuration direction 1)

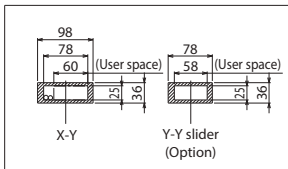
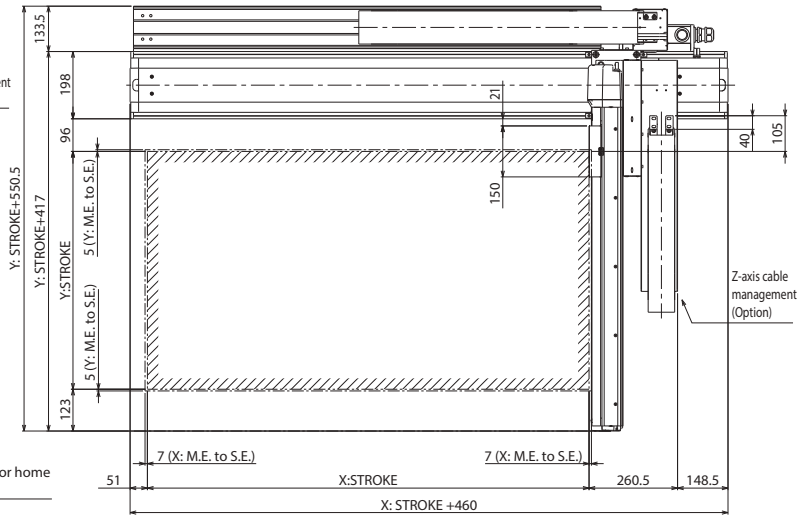
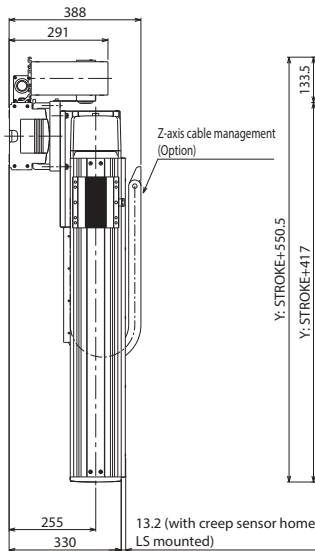
CAD drawings can be downloaded from our website.



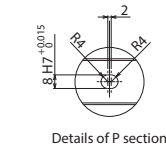
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



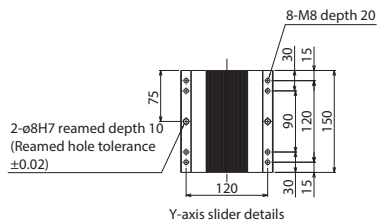
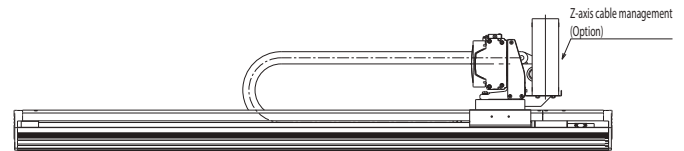
Z-axis cable management
Cable track moving end detailed view



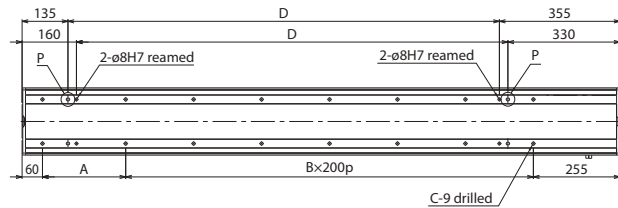
Cable storage sectional view



Details of P section



Y-axis slider details



Notes
The moving end of the cable track for the Z-axis cable management is to be fixed to a plate, or something similar, on the Y-axis slider by the customer.

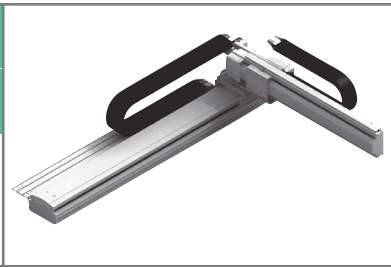
X stroke	300	400	500	600	700	800	900	1000	1100	1200	1300
A	245	145	245	145	245	145	245	145	245	145	245
B	1	2	2	3	3	4	4	5	5	6	6
C	6	8	8	10	10	12	12	14	14	16	16
D	270	370	470	570	670	770	870	970	1070	1170	1270

ICSA2-BQ□H

ICSPA2-BQ□H High-Precision Specification



- X-Y 2-axis
- XYB (Y Base Mount)
- Ultra High Speed Long Type
- X: XL (750W) Y: Lg (400W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management
ICSA2: Standard 2-axis specification ICSPA2: High precision 2-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	90: 900mm 250: 2500mm (Every 100mm)	30: 300mm 70: 700mm (Every 100mm)	T2: SCOV XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	CTL: Cable Track L Size	CTM: Cable Track M Size (Option)

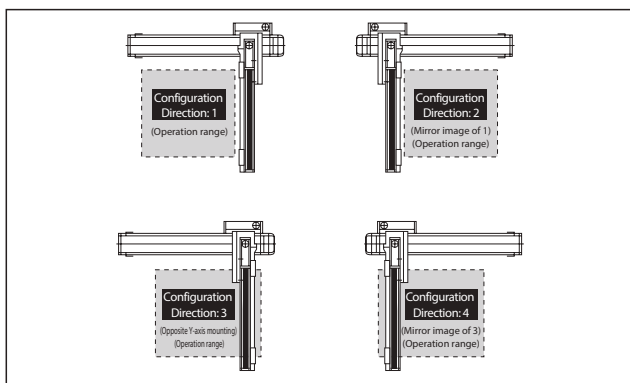
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSA2[ICSPA2]-BQ1H-①-②-③-④-⑤-T2-⑥-⑦-⑧
2	ICSA2[ICSPA2]-BQ2H-①-②-③-④-⑤-T2-⑥-⑦-⑧
3	ICSA2[ICSPA2]-BQ3H-①-②-③-④-⑤-T2-⑥-⑦-⑧
4	ICSA2[ICSPA2]-BQ4H-①-②-③-④-⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM□-①-750-50-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISA[ISPA]-LYM□-①-400-40-④-T2-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ③ in the above model names.

Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	300~700	900~1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	2000	1930	1740	1580	1440	1320	1210	1115	1035
Y-axis	2400	—	—	—	—	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke				
		300	400	500	600	700
Acceleration	0.3	31.7	30.2	28.8	27.5	26.0
	0.4	—	—	—	—	—
	0.5	—	—	—	—	—
	0.6	—	—	—	—	—
	0.7	—	—	—	—	—
	0.8	—	—	—	—	—
	0.9	—	—	—	—	—
	1.0	—	—	—	—	—

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	90: 900mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CTL: Cable track L size *1
⑧	Z-axis Cable Management (Option) *2	CTM: Cable track M size *1

*1 Please refer to P.10 for the cable track dimensions.

*2 Specify the Z-axis Cable Management only when required.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/LC	See P.369
Home limit switch (equipped as standard on X-axis) *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.02mm[±0.01mm]
Lost motion	0.05mm or less [0.02mm or less]
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	750W/50mm
Y-axis motor output/lead	400W/40mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.

The maximum length is 20m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.3G. (The upper limit of acceleration is 0.3G)

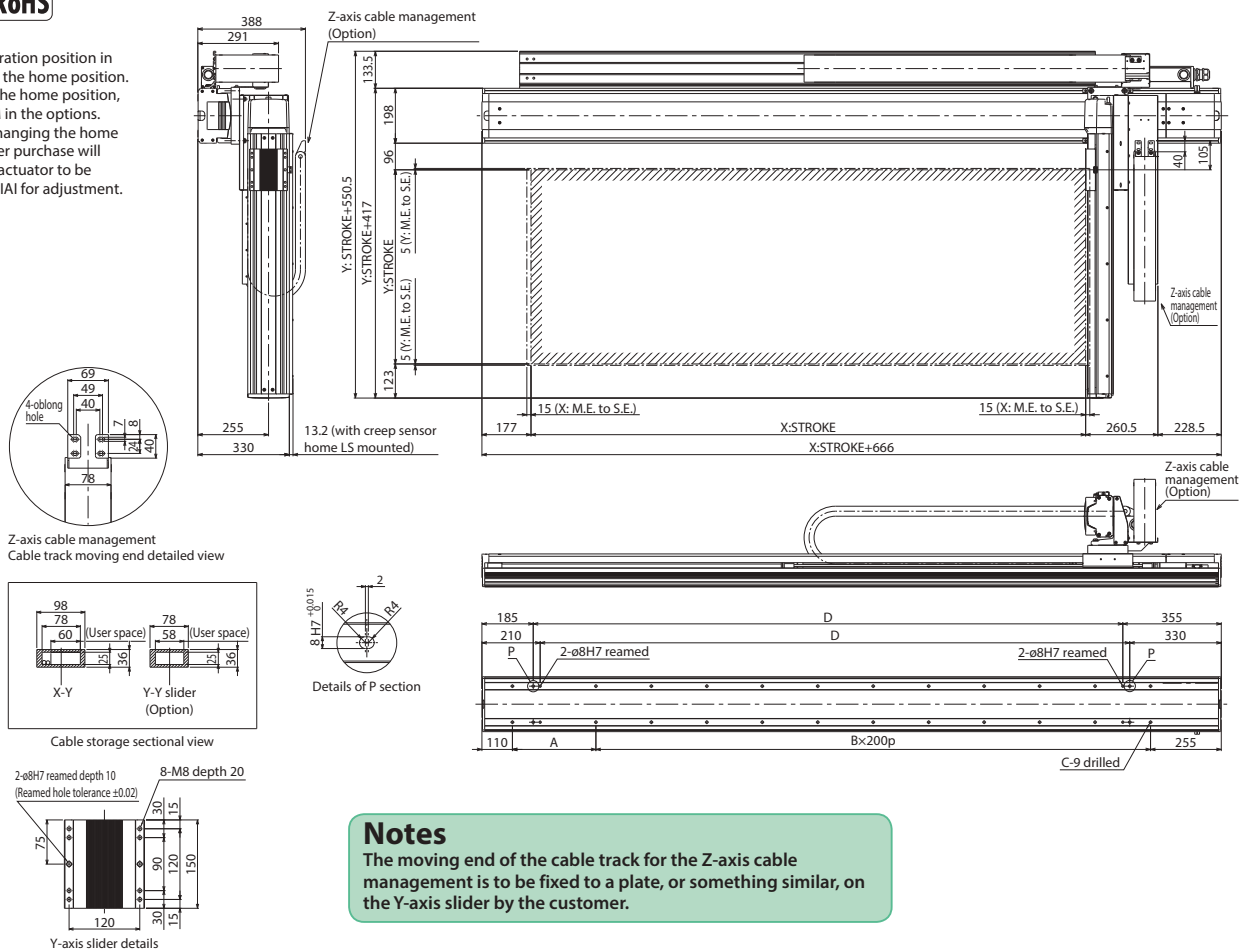
ICSA2 [ICSPA2]-BQ□H-CT (Cable track specification)

Dimensions (Configuration direction 1)

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Notes
The moving end of the cable track for the Z-axis cable management is to be fixed to a plate, or something similar, on the Y-axis slider by the customer.

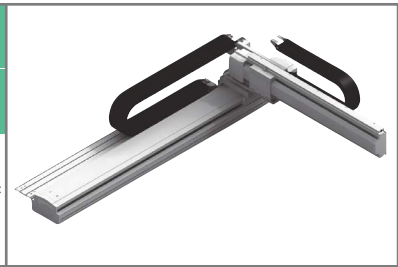
X stroke	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
A	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201
B	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
C	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
D	1026	1126	1226	1326	1426	1526	1626	1726	1826	1926	2026	2126	2226	2326	2426	2526	2626

ICSA2-BQ□M

ICSPA2-BQ□M High-Precision Specification



- X-Y 2-axis
- XYB (Y Base Mount)
- Medium Speed Long Type
- X: XL (750W) Y: Lg (400W)



Model Specification Items

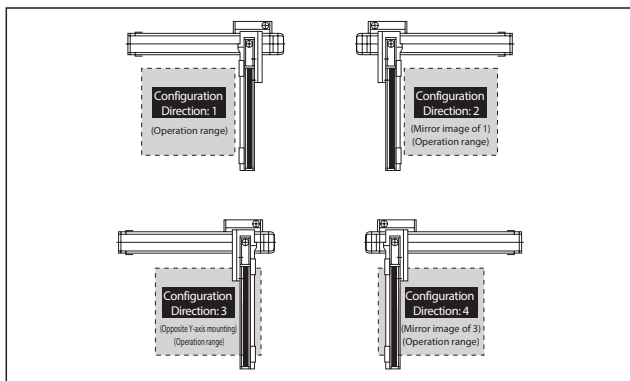
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management
ICSA2: Standard 2-axis specification ICSPA2: High precision 2-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	90: 900mm 250: 2500mm (Every 100mm)	30: 300mm 70: 700mm (Every 100mm)	T2: SCOV XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	CTL: Cable Track L Size	CTM: Cable Track M Size

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSA2[ICSPA2]-BQ1M-①-②③④⑤-T2-⑥-⑦-⑧
2	ICSA2[ICSPA2]-BQ2M-①-②③④⑤-T2-⑥-⑦-⑧
3	ICSA2[ICSPA2]-BQ3M-①-②③④⑤-T2-⑥-⑦-⑧
4	ICSA2[ICSPA2]-BQ4M-①-②③④⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM-①-750-25-②-T2-③④	→ Please contact IAI for more details
Y-axis	ISA[ISPA]-LYM-①-400-20-④-T2-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ③ in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	300~700	900~1500	1600	1700	1800	1900
X-axis	—	1250	1200	1075	965	870
Y-axis	1200	—	—	—	—	—

	2000	2100	2200	2300	2400	2500
X-axis	790	720	660	605	555	515
Y-axis	—	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke				
		300	400	500	600	700
Acceleration	0.3	62.3	49.8	40.7	33.7	28.1
	0.4	—	—	—	—	—
	0.5	—	—	—	—	—
	0.6	—	—	—	—	—
	0.7	—	—	—	—	—
	0.8	—	—	—	—	—
	1.0	—	—	—	—	—

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	90: 900mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CTL: Cable track L size *1
⑧	Z-axis Cable Management (Option) *2	CTM: Cable track M size *1

*1 Please refer to P.10 for the cable track dimensions.
*2 Specify the Z-axis Cable Management only when required.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/LC	See P.369
Home limit switch (equipped as standard on X-axis) *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.02mm[±0.01mm]
Lost motion	0.05mm or less [0.02mm or less]
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	750W/25mm
Y-axis motor output/lead	400W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) Please note that a longer stroke will result in a lower max speed.
- (Note 4) The rated acceleration is 0.3G. (The upper limit of acceleration is 0.3G)

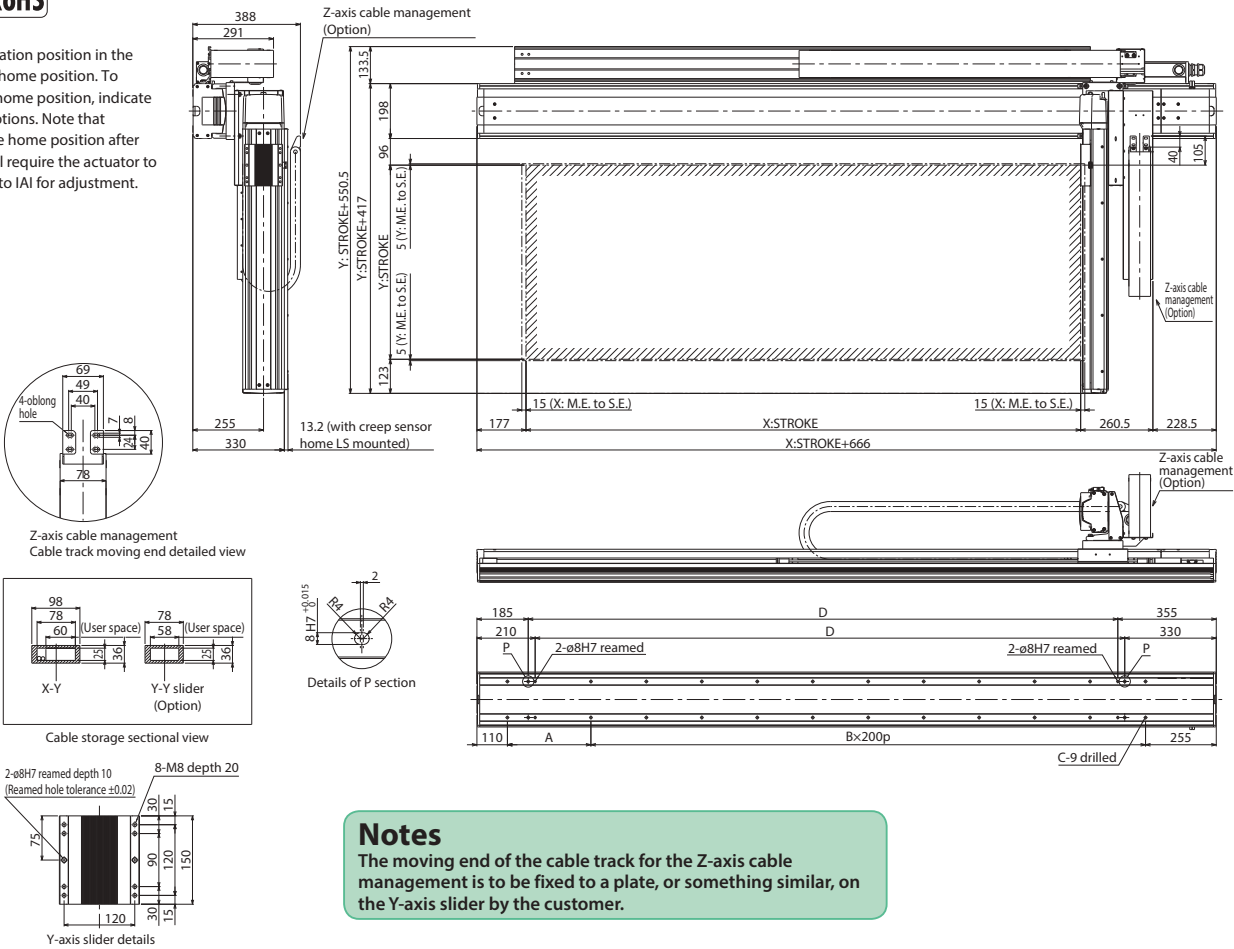
ICSA2 [ICSPA2]-BQ□M-CT (Cable track specification)

Dimensions (Configuration direction 1)

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Notes
The moving end of the cable track for the Z-axis cable management is to be fixed to a plate, or something similar, on the Y-axis slider by the customer.

X stroke	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
A	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201
B	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
C	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
D	1026	1126	1226	1326	1426	1526	1626	1726	1826	1926	2026	2126	2226	2326	2426	2526	2626

ICSPA2-B1N□H High-Precision Specification

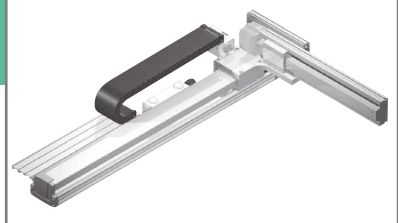


X-Y 2-axis (NS+ISPA)

XYB (Y Base Mount)

High Speed Type

X-Lg (400W)
Y-Md (200W)



Model Specification Items

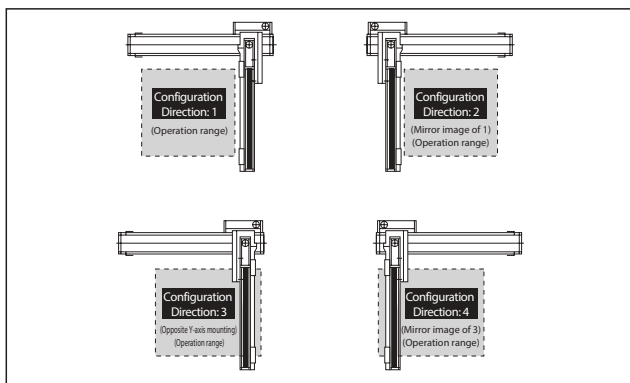
Series ICSPA2: High precision 2-axis specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 50: 500mm 220: 2200mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Applicable Controllers T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis Cable Management CT: Cable Track
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Model Specification

XY configuration direction *1	Model
1	ICSPA2-B1N1H-①-②-③-④-⑤-T2-⑥-⑦
2	ICSPA2-B1N2H-①-②-③-④-⑤-T2-⑥-⑦
3	ICSPA2-B1N3H-①-②-③-④-⑤-T2-⑥-⑦
4	ICSPA2-B1N4H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMS-①-400-40-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-②-T2-③	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ④ in the above model names.

* The following symbols are specified with ③ in the above model names.

NT1: For cartesian configuration directions 1 and 3

NT2: For cartesian configuration directions 2 and 4

Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).

Maximum Speed by Stroke (mm/s)

	200~400	500~700	800~2200
X-axis	—	2400	—
Y-axis	1200	—	—

Payload by Acceleration/Deceleration (kg) (Note 3)

		Y-axis stroke					
		200	300	400	500	600	700
Acceleration	0.3	21.2	20.3	19.4	18.4	17.5	16.6
	0.4	12.2	11.3	10.4	9.4	8.5	7.6
	0.5	7.7	6.8	5.9	4.9	4.0	3.1
	0.6	3.2	2.3	1.4	—	—	—
	0.7	—	—	—	—	—	—
	0.8	—	—	—	—	—	—
	0.9	—	—	—	—	—	—
	1.0	—	—	—	—	—	—

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	50: 500mm 220: 2200mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track *1

*1 Please refer to P.10 for the cable track dimensions.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y-axis only) *1	B	See P.369
Creep sensor *2	C/LC	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.

(Note 3) The rated acceleration is 0.3G. When the acceleration is increased, the payload will be reduced.

ICSPA2-B1N□M

High-Precision Specification

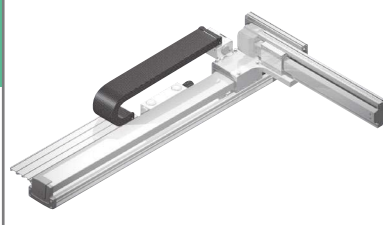


X-Y 2-axis (NS+ISPA)

XYB (Y Base Mount)

Medium Speed Type

X-Lg (400W)
Y-Md (200W)



Model Specification Items

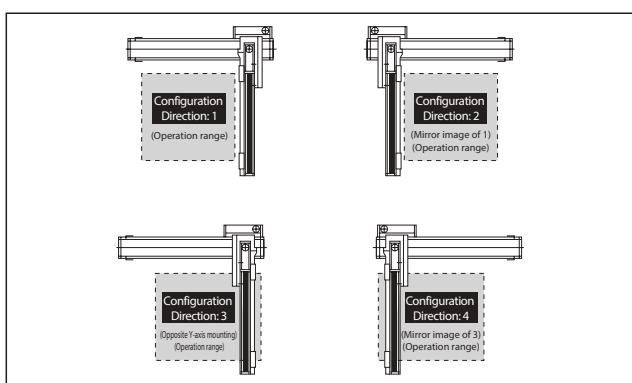
Series ICSPA2: High precision 2-axis specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 50: 500mm 220: 2200mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Applicable Controllers T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis Cable Management CT: Cable Track
--------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	----------------------------------------------------------------------	--------------------------------------------------------------------	-----------------------------------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------

Model Specification

XY configuration direction *1	Model
1	ICSPA2-B1N1M-①-②-③-④-⑤-T2-⑥-⑦
2	ICSPA2-B1N2M-①-②-③-④-⑤-T2-⑥-⑦
3	ICSPA2-B1N3M-①-②-③-④-⑤-T2-⑥-⑦
4	ICSPA2-B1N4M-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMS-①-400-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-②-T2-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.

* The following symbols are specified with ③ in the above model names.

NT1: For cartesian configuration directions 1 and 3
NT2: For cartesian configuration directions 2 and 4

Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).

Maximum Speed by Stroke (mm/s)

	200~400	500~700	800~2200
X-axis	—	—	1300
Y-axis	1200	—	—

Payload by Acceleration/Deceleration (kg) (Note 3)

		Y-axis stroke					
		200	300	400	500	600	700
Acceleration	0.3	40.0	40.0	33.0	27.3	22.9	19.3
	0.4	30.0	30.0	30.0	27.3	22.9	19.3
	0.5	21.6	21.6	21.6	21.6	21.6	19.3
	0.6	18.0	18.0	18.0	18.0	17.5	16.6
	0.7	15.3	14.9	14.0	13.0	12.1	11.2
	0.8	12.2	11.3	10.4	9.4	8.5	7.6
	0.9	9.5	8.6	7.7	6.7	5.8	4.9
	1.0	6.8	5.9	5.0	—	—	—

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	50: 500mm 220: 2200mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track *1

*1 Please refer to P.10 for the cable track dimensions.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y-axis only) *1	B	See P.369
Creep sensor *2	C/LC	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 0.3G. When the acceleration is increased, the payload will be reduced.

ICSPA2-B1N□M-CT (Cable track specification)

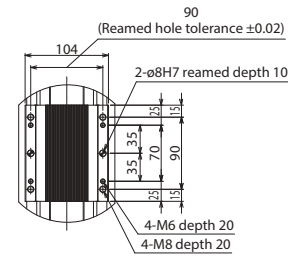
Dimensions (Configuration direction 1)

CAD drawings can be downloaded from our website.

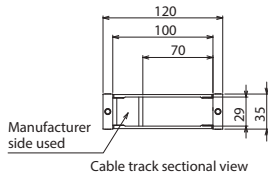
M.E: Mechanical end
S.E: Stroke end



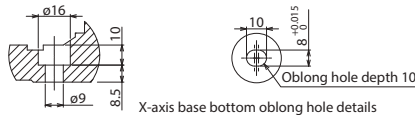
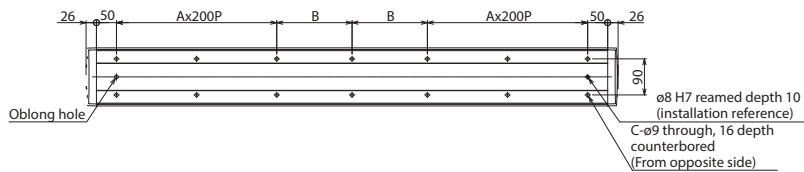
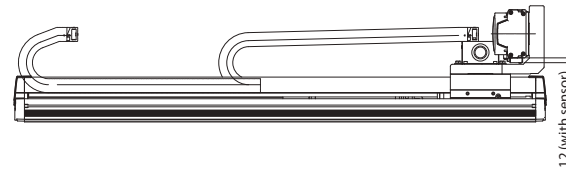
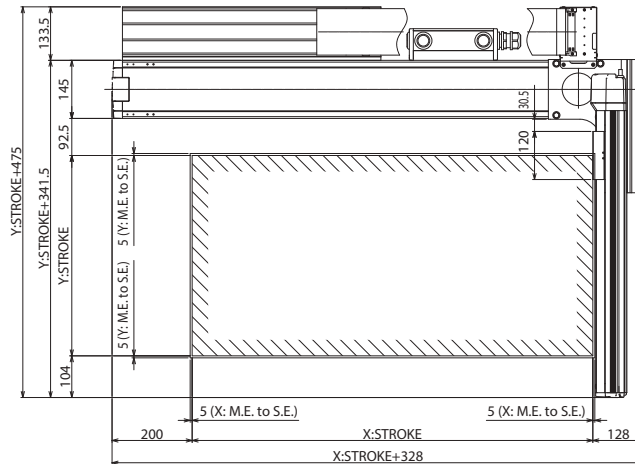
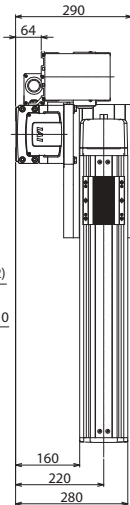
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Y-axis slider details



Cable track sectional view



X-axis base mounting hole details

X stroke	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3
B	138	163	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18

X stroke	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200
A	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5
B	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588
C	18	18	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26

ICSPA2-B2N□H High-Precision Specification

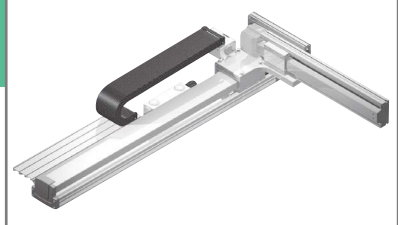
±10µm High Precision

X-Y 2-axis (NS+ISPA)

XYB (Y Base Mount)

High Speed Long Type

X:Lg (400W)
Y:Md (200W)



Model Specification Items

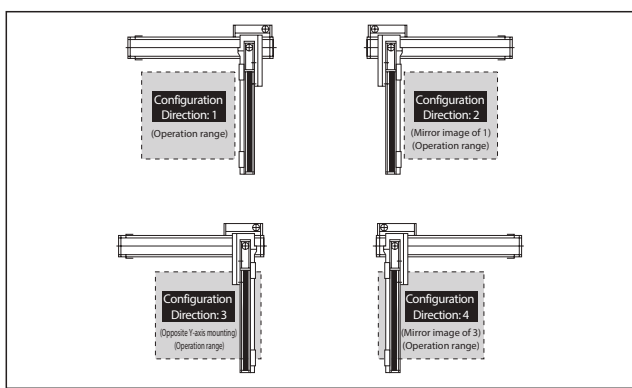
Series ICSPA2: High precision 2-axis specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 225: 2250mm 300: 3000mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Applicable Controllers T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis Cable Management CT: Cable Track
--------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	------------------------------------------------------------------------	--------------------------------------------------------------------	-----------------------------------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------

Model Specification

XY configuration direction *1	Model
1	ICSPA2-B2N1H-①-②-③-④-⑤-T2-⑥-⑦
2	ICSPA2-B2N2H-①-②-③-④-⑤-T2-⑥-⑦
3	ICSPA2-B2N3H-①-②-③-④-⑤-T2-⑥-⑦
4	ICSPA2-B2N4H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMXS-①-400-40-②-T2-③-⑧	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.

* The following symbols are specified with ⑧ in the above model names.

NT1: For cartesian configuration directions 1 and 3
NT2: For cartesian configuration directions 2 and 4

Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).

Maximum Speed by Stroke (mm/s)

	200~700	2250~3000
X-axis	—	2400
Y-axis	1200	—

Payload by Acceleration/Deceleration (kg) (Note 3)

		Y-axis stroke					
		200	300	400	500	600	700
Acceleration	0.3	21.2	20.3	19.4	18.4	17.5	16.6
	0.4	12.2	11.3	10.4	9.4	8.5	7.6
	0.5	7.7	6.8	5.9	4.9	4.0	3.1
	0.6	3.2	2.3	1.4	—	—	—
	0.7	—	—	—	—	—	—
	0.8	—	—	—	—	—	—
	0.9	—	—	—	—	—	—
	1.0	—	—	—	—	—	—

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	225: 2250mm 300: 3000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track *1

*1 Please refer to P.10 for the cable track dimensions.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y-axis only) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01 mm
Lost motion	0.02 mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 0.3G. Y-axis is operable up to 1G, but the upper limit for the X-axis is 0.3G.

ICSPA2-B2N□H-CT (Cable track specification)

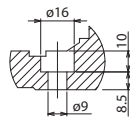
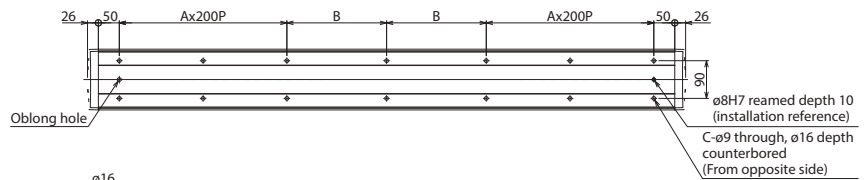
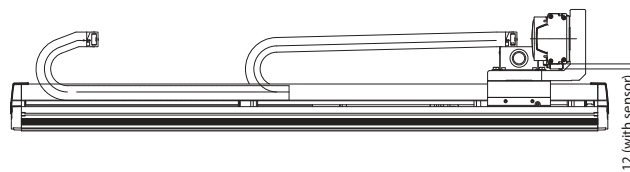
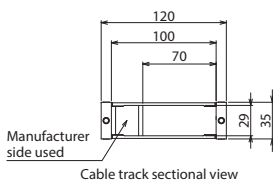
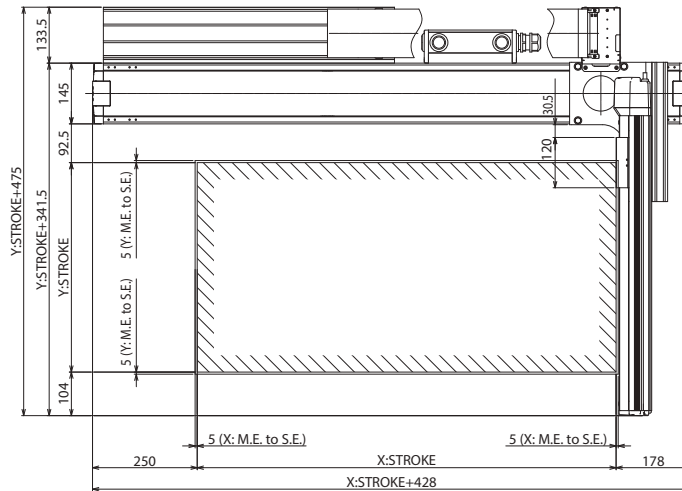
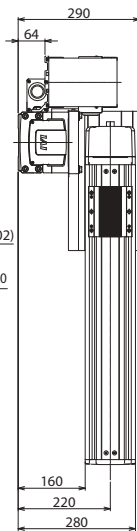
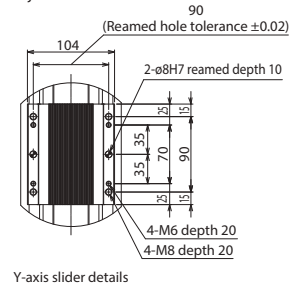
Dimensions (Configuration direction 1)

CAD drawings can be downloaded from our website.

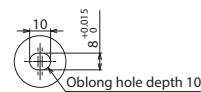
M.E: Mechanical end
S.E: Stroke end



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis base mounting hole details



X-axis base bottom oblong hole details

X stroke	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
A	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7
B	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238
C	26	26	26	30	30	30	30	30	30	30	30	34	34	34	34	34

ICSPA2-B2N□M High-Precision Specification

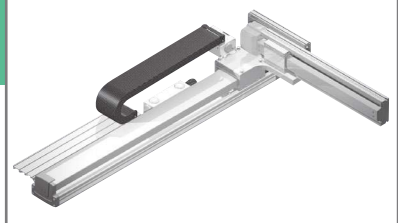


X-Y 2-axis (NS+ISPA)

XYB (Y Base Mount)

Medium Speed Long Type

X-Lg (400W) Y-Md (200W)



Model Specification Items

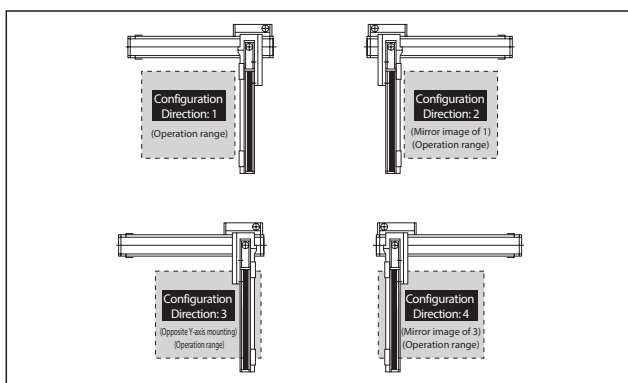
Series ICSPA2: High precision 2-axis specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 225: 2250mm 300: 3000mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Applicable Controllers T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis Cable Management CT: Cable Track
--------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	------------------------------------------------------------------------	--------------------------------------------------------------------	-----------------------------------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------

Model Specification

XY configuration direction *1	Model
1	ICSPA2-B2N1M-①-②-③-④-⑤-T2-⑥-⑦
2	ICSPA2-B2N2M-①-②-③-④-⑤-T2-⑥-⑦
3	ICSPA2-B2N3M-①-②-③-④-⑤-T2-⑥-⑦
4	ICSPA2-B2N4M-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMXS-①-400-20-②-T2-③-④-⑧	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-②-T2-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.

* The following symbols are specified with ⑧ in the above model names.

NT1: For cartesian configuration directions 1 and 3
NT2: For cartesian configuration directions 2 and 4

Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).

Maximum Speed by Stroke (mm/s)

	200~700	2250~3000
X-axis	—	1300
Y-axis	1200	—

Payload by Acceleration/Deceleration (kg) (Note 3)

		Y-axis stroke					
		200	300	400	500	600	700
Acceleration	0.3	40.0	40.0	33.0	27.3	22.9	19.3
	0.4	30.0	30.0	30.0	27.3	22.9	19.3
	0.5	21.6	21.6	21.6	21.6	21.6	19.3
	0.6	18.0	18.0	18.0	18.0	17.5	16.6
	0.7	15.3	14.9	14.0	13.0	12.1	11.2
	0.8	12.2	11.3	10.4	9.4	8.5	7.6
	0.9	9.5	8.6	7.7	6.7	5.8	4.9
	1.0	6.8	5.9	5.0	—	—	—

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	225: 2250mm 300: 3000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track *1

*1 Please refer to P.10 for the cable track dimensions.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y-axis only) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.

(Note 3) The rated acceleration is 0.3G. Y-axis is operable up to 1G, but the upper limit for the X-axis is 0.3G.

ICSPA2-B2N□M-CT (Cable track specification)

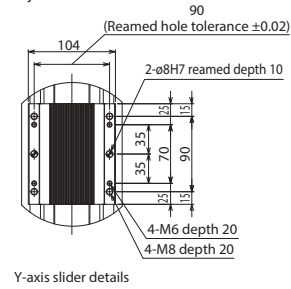
Dimensions (Configuration direction 1)

CAD drawings can be downloaded from our website.

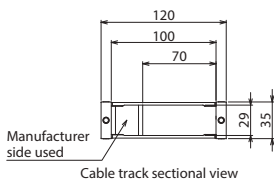
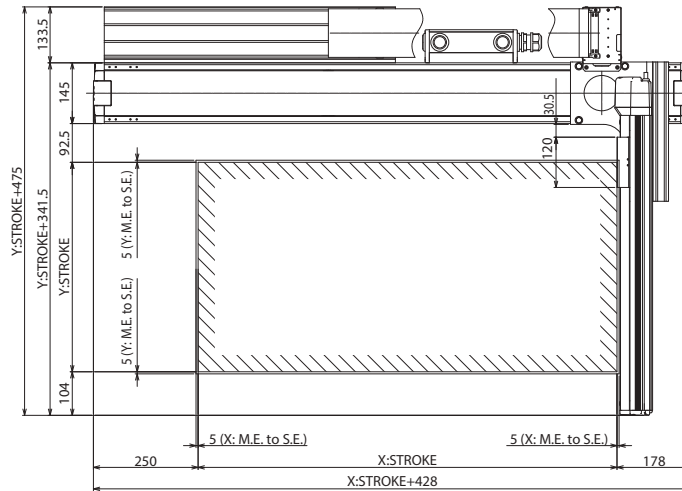
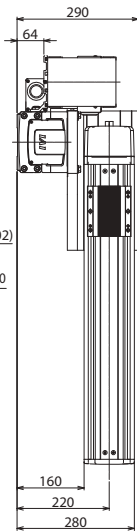
M.E: Mechanical end
S.E: Stroke end



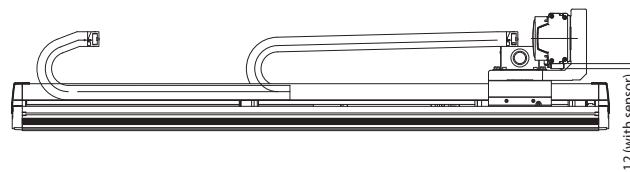
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



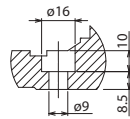
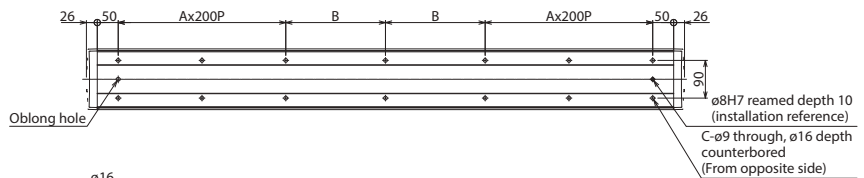
Y-axis slider details



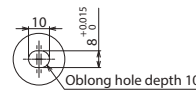
Cable track sectional view



12 (with sensor)



X-axis base mounting hole details

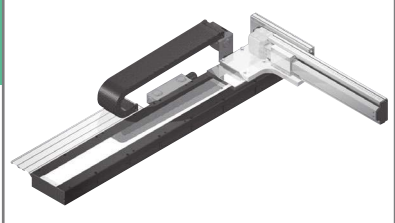


X-axis base bottom oblong hole details

X stroke	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
A	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7
B	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238
C	26	26	26	30	30	30	30	30	30	30	30	34	34	34	34	34

ICSPA2-B1L□H High-Precision Specification

X ±5μm
Y ±10μm
X-Y
2-axis
(LSA+ISPA)
XYB
(Y Base Mount)
High
Speed
Long Type
X: Lg (400W)
Y: Md (200W)



Model Specification Items

Series ICSPA2: High precision 2-axis specification	Type Refer to Model Specification table below	Encoder Type I: Incremental	X-axis Stroke/Option 105: 1050mm 415: 4155mm (Every 135mm)	Y-axis Stroke/Option 20: 200mm 40: 400mm (Every 50mm)	Applicable Controllers T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis Cable Management CT: Cable Track
--------------------------------------------------------------	---------------------------------------------------------	---------------------------------------	-------------------------------------------------------------------------	--------------------------------------------------------------------	-----------------------------------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------

Model Specification

XY configuration direction *1	Model
1	ICSPA2-B1L1H-①-②③④⑤-T2-⑥-⑦
2	ICSPA2-B1L2H-①-②③④⑤-T2-⑥-⑦
3	ICSPA2-B1L3H-①-②③④⑤-T2-⑥-⑦
4	ICSPA2-B1L4H-①-②③④⑤-T2-⑥-⑦

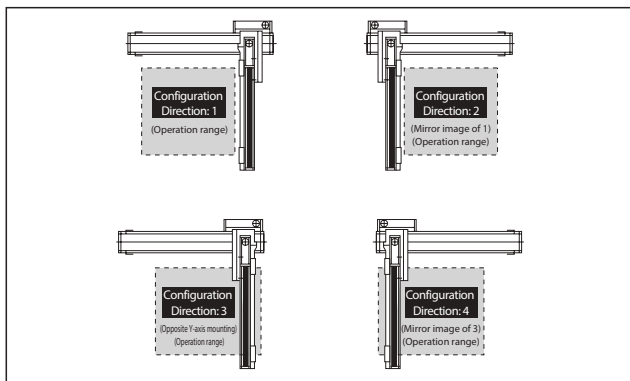
*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	I: Incremental
②	X-axis stroke (Note 1)	105: 1050mm 415: 4155mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track *1

*1 Please refer to P.10 for the cable track dimensions.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	LSA-W21SS-①-400-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20②-T2-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.

* The following symbols are specified with ⑧ in the above model names.

NT1: For cartesian configuration directions 1 and 3
NT2: For cartesian configuration directions 2 and 4

Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).

Maximum Speed by Stroke (mm/s)

	200~400	1050~4155
X-axis	—	2500
Y-axis	1200	—

Payload by Acceleration/Deceleration (kg) (Note 3)

		Y-axis stroke				
		200	250	300	350	400
Acceleration	X-axis 1.0G	21.2	20.0	20.0	17.4	15.2
	Y-axis 0.3G	21.2	20.0	20.0	17.4	15.2

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (equipped as standard on Y-axis only)	AQ	See P.369
Brake (Y-axis only) *1	B	See P.369
Creep sensor (Y-axis only) *2	C/CL	See P.369
Home limit switch (equipped as standard on X-axis) *2	L/LL	See P.369
Non-motor end specification (Y-axis only)	NM	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

Common Specifications

Drive system	X-axis: Linear servo motor Y-axis: Ball screw, equivalent to rolled C5
Positioning repeatability	X-axis: ±0.005mm Y-axis: ±0.01mm
Lost motion	0.02mm or less
Guide	X-axis: Linear guide Y-axis: Base integrated guide
Base	X-axis: Aluminum with black alumite treatment Y-axis: Aluminum with white alumite treatment
X-axis motor output/lead	400W or equivalent/(none)
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 1G for X-axis and 0.3G for Y-axis. Although the Y-axis is operable up to 1G, increasing the acceleration will reduce the payload. (Please inquire regarding the payload at increased acceleration)

ICSPA2-B1L□H-CT (Cable track specification)

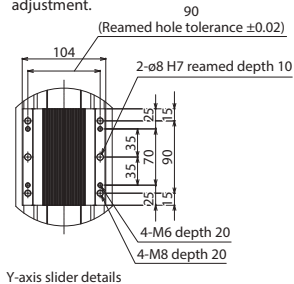
Dimensions (Configuration direction 1)

CAD drawings can be downloaded from our website.

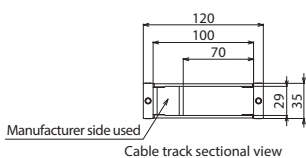
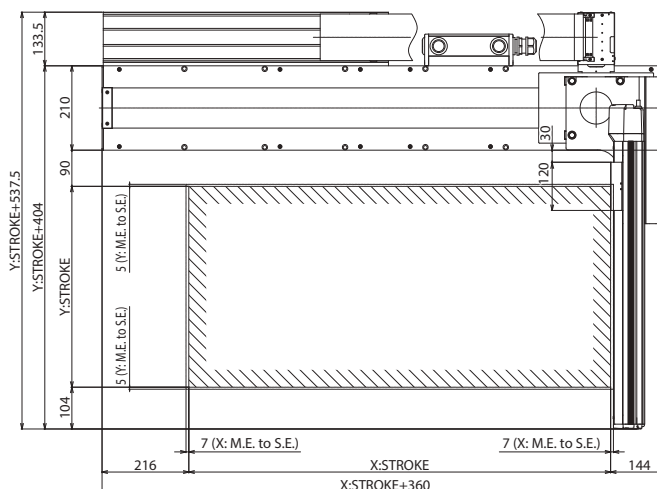
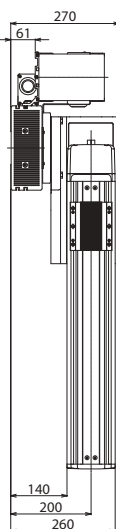
M.E: Mechanical end
S.E: Stroke end



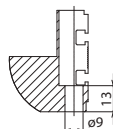
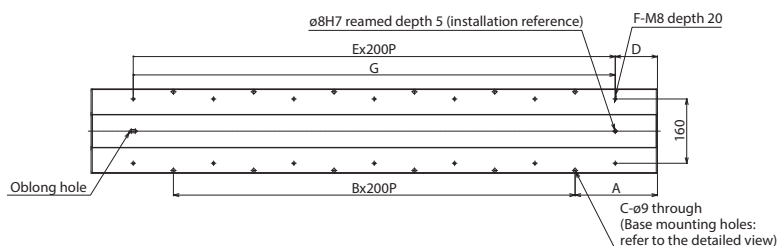
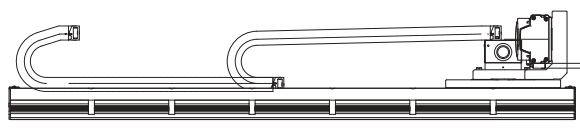
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



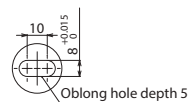
Y-axis slider details



Cable track sectional view



X-axis base mounting hole details



X-axis base bottom oblong hole details

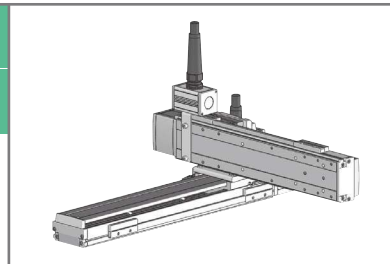
X stroke	1050	1185	1320	1455	1590	1725	1860	1995	2130	2265	2400	2535
A	205	72.5	140	207.5	75	142.5	210	77.5	145	212.5	80	147.5
B	5	7	7	7	9	9	9	11	11	11	13	13
C	12	16	16	16	20	20	20	24	24	24	28	28
D	105	172.5	40	107.5	175	42.5	110	177.5	45	112.5	180	47.5
E	6	6	8	8	8	10	10	10	12	12	12	14
F	14	14	18	18	18	22	22	22	26	26	26	30
G	1200	1200	1600	1600	1600	2000	2000	2000	2400	2400	2400	2800

X stroke	2670	2805	2940	3075	3210	3345	3480	3615	3750	3885	4020	4155
A	215	82.5	150	217.5	85	152.5	220	87.5	155	222.5	90	157.5
B	13	15	15	15	17	17	17	19	19	19	21	21
C	28	32	32	32	36	36	36	40	40	40	44	44
D	115	182.5	50	117.5	185	52.5	120	187.5	55	122.5	190	57.5
E	14	14	16	16	16	18	18	18	20	20	20	22
F	30	30	34	34	34	38	38	38	42	42	42	46
G	2800	2800	3200	3200	3200	3600	3600	3600	4000	4000	4000	4400

ICSB2-SA□H

ICSPB2-SA□H High-Precision Specification

±10μm Standard
±5μm High-Precision
Battery-less Absolute
X-Y 2-axis
XYS (Y Slider)
High Speed Type
X:5ml (60W)
Y:5ml (60W)



Model Specification Items

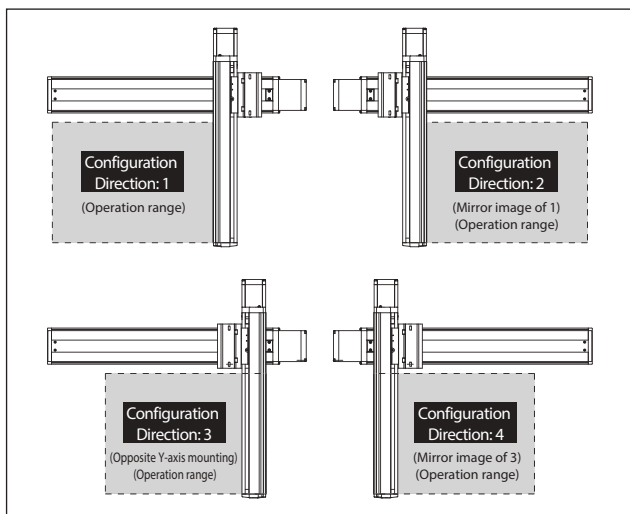
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 60: 600mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCION SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-SA1H-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-SA2H-①-②-③-④-⑤-T2-⑥-⑦
3	ICSB2[ICSPB2]-SA3H-①-②-③-④-⑤-T2-⑥-⑦
4	ICSB2[ICSPB2]-SA4H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-SXM-①-60-16-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM-①-60-16-②-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑥ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~600
X-axis	960	—
Y-axis	960	—

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Y-axis stroke						
	100	150	200	250	300	350	400
0.2	6.6	6.3	6.1	5.8	5.5	4.9	3.9
0.3	6.6	6.3	6.1	5.8	5.5	4.9	3.9
0.4	6.6	6.3	6.1	5.8	5.5	4.9	3.9
0.5	3.9	3.6	3.4	3.1	2.8	2.6	2.3
0.6	2.1	1.8	1.6	1.3	1.0	0.8	0.5
0.7	1.2	0.9	0.7	—	—	—	—
0.8	—	—	—	—	—	—	—
0.9	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—
1.1	—	—	—	—	—	—	—
1.2	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 60: 600mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm[±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	60W/16mm
Y-axis motor output/lead	60W/16mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.

The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

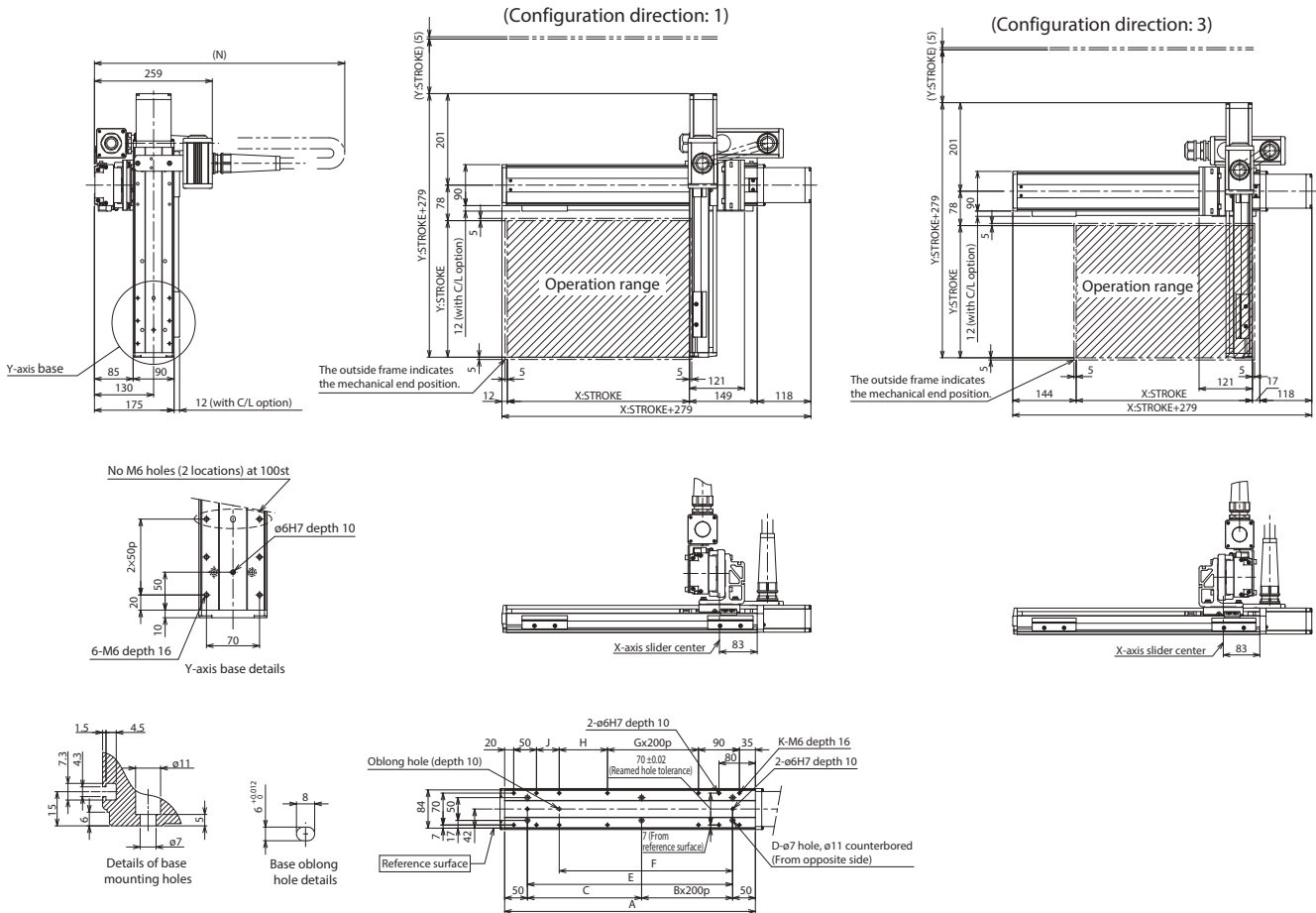
ICSB2 [ICSPB2]-SA□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



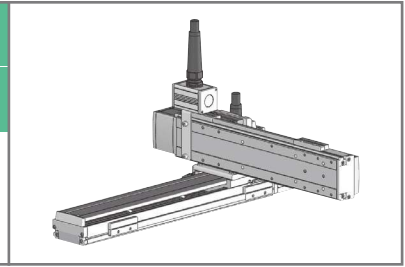
X-axis stroke	100	150	200	250	300	350	400	450	500	550	600
A	251	301	351	401	451	501	551	601	651	701	751
B	0	0	0	1	1	1	1	2	2	2	2
C	151	201	251	101	151	201	251	101	151	201	251
D	4	4	4	6	6	6	6	8	8	8	8
E	151	201	251	301	351	401	451	501	551	601	651
F	131	131	181	231	281	331	381	431	481	531	581
G	0	0	0	0	0	0	1	1	1	1	2
H	56	56	106	156	206	256	106	156	206	256	106
J	0	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14

Y-axis	N											
	X-axis	100	150	200	250	300	350	400	450	500	550	600
100	550	550	600	600	650	650	650	700	700	750	750	750
150	550	600	600	650	650	650	700	700	750	750	800	800
200	550	600	600	650	650	650	700	700	750	750	800	800
250	600	600	650	650	650	700	700	750	750	800	800	800
300	600	600	650	650	650	700	700	750	750	800	800	800
350	600	650	650	650	650	700	700	750	750	800	800	850
400	600	650	650	650	700	700	750	750	800	800	850	850

ICSB2-SA□M

ICSPB2-SA□M High-Precision Specification

±10μm Standard
Battery-less Absolute
X-Y 2-axis
XY5 (Y Slider)
Medium Speed Type
X: 5ml (60W) Y: 5ml (60W)



Model Specification Items

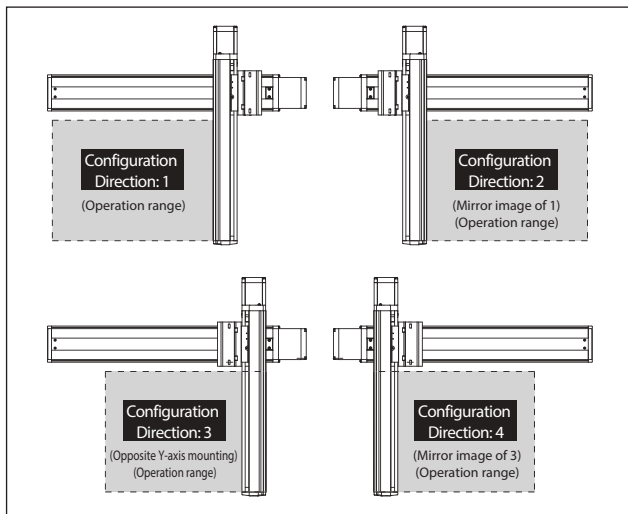
Series ICSB2: Standard 2-axis specification
 ICSPB2: High precision 2-axis specification
Type Refer to Model Specification table below
Encoder Type WA: Battery-less Absolute
X-axis Stroke/Option 10: 100mm
 60: 600mm (Every 50mm)
Y-axis Stroke/Option 10: 100mm
 40: 400mm (Every 50mm)
Applicable Controllers T2: SCION
 SSEL
 XSEL-P/Q
 XSEL-RA/SA
Cable Length 3L: 3m
 5L: 5m
 □L: Specified length
Y-axis Cable Management Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-SA1M-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-SA2M-①-②-③-④-⑤-T2-⑥-⑦
3	ICSB2[ICSPB2]-SA3M-①-②-③-④-⑤-T2-⑥-⑦
4	ICSB2[ICSPB2]-SA4M-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-SXM-①-60-8-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM-①-60-8-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~600
X-axis	480	—
Y-axis	480	—

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Y-axis stroke						
	100	150	200	250	300	350	400
0.2	19.9	15.1	10.8	8.1	6.3	4.9	3.9
0.3	19.9	15.1	10.8	8.1	6.3	4.9	3.9
0.4	19.9	15.1	10.8	8.1	6.3	4.9	3.9
0.5	13.6	13.3	10.8	8.1	6.3	4.9	3.9
0.6	9.1	8.8	8.4	8.1	6.3	4.9	3.9
0.7	6.4	6.1	5.7	5.4	5.1	4.5	3.6
0.8	—	—	—	—	—	—	—
0.9	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—
1.1	—	—	—	—	—	—	—
1.2	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm ? : 60: 600mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm ? : 40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

* Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm[±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	60W/8mm
Y-axis motor output/lead	60W/8mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

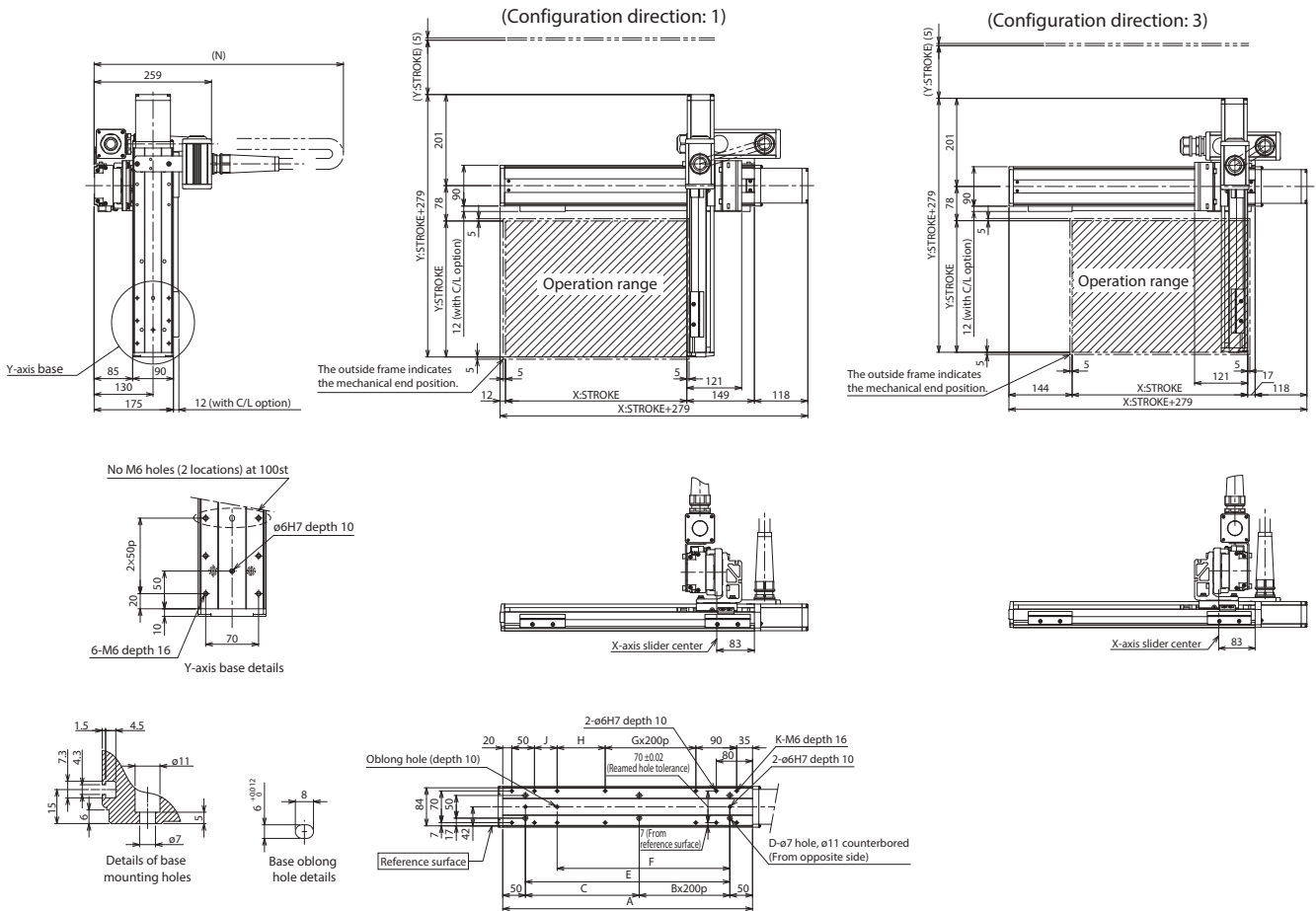
ICSB2 [ICSPB2]-SA □ M-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



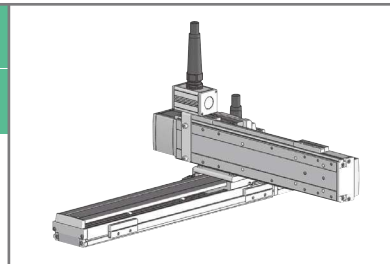
X-axis stroke	100	150	200	250	300	350	400	450	500	550	600
A	251	301	351	401	451	501	551	601	651	701	751
B	0	0	0	1	1	1	1	2	2	2	2
C	151	201	251	101	151	201	251	101	151	201	251
D	4	4	4	6	6	6	6	8	8	8	8
E	151	201	251	301	351	401	451	501	551	601	651
F	131	131	181	231	281	331	381	431	481	531	581
G	0	0	0	0	0	0	1	1	1	1	2
H	56	56	106	156	206	256	106	156	206	256	106
J	0	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14

Y-axis	N											
	X-axis	100	150	200	250	300	350	400	450	500	550	600
100	550	550	600	600	650	650	650	700	700	750	750	750
150	550	600	600	650	650	650	700	700	750	750	800	800
200	550	600	600	650	650	650	700	700	750	750	800	800
250	600	600	650	650	650	650	700	700	750	750	800	800
300	600	600	650	650	650	650	700	700	750	750	800	800
350	600	650	650	650	650	650	700	700	750	750	800	850
400	600	650	650	650	650	650	700	700	750	750	800	850

ICSB2-S1C□H

ICSPB2-S1C□H High-Precision Specification

±10µm Standard
±5µm High-Precision
Battery-less Absolute
X-Y 2-axis
XY (Y Slider)
High Speed Type
X: Md (100W)
Y: Md (100W)



Model Specification Items

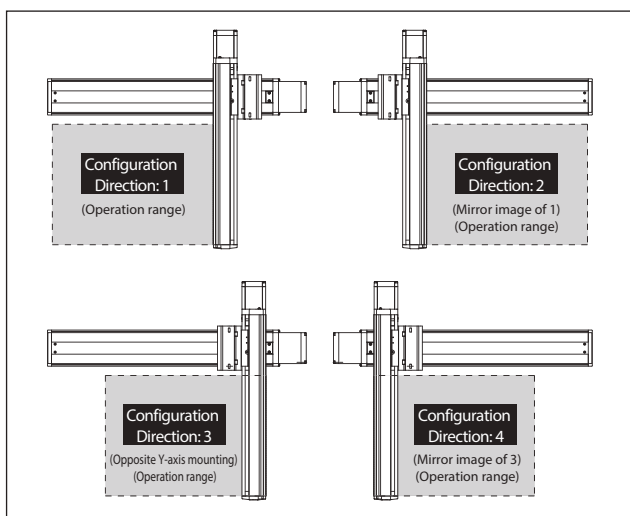
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 80: 800mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-S1C1H-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-S1C2H-①-②-③-④-⑤-T2-⑥-⑦
3	ICSB2[ICSPB2]-S1C3H-①-②-③-④-⑤-T2-⑥-⑦
4	ICSB2[ICSPB2]-S1C4H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 80: 800mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-100-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-100-20-②-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ③ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~700	750~800
X-axis	1200		860
Y-axis	1200	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Y-axis stroke									
	100	150	200	250	300	350	400	450	500	
0.2	10.0	9.4	8.7	8.2	7.7	7.2	6.7	6.2	5.6	
0.3	10.0	9.4	8.7	8.2	7.7	7.2	6.7	6.2	5.6	
0.4	10.0	9.4	8.7	8.2	7.7	7.2	6.7	6.2	5.6	
0.5	4.9	4.5	4.0	3.6	3.0	2.6	2.1	1.7	1.1	
0.6	2.2	1.8	1.3	0.9	—	—	—	—	—	
0.7	—	—	—	—	—	—	—	—	—	
0.8	—	—	—	—	—	—	—	—	—	
0.9	—	—	—	—	—	—	—	—	—	
1	—	—	—	—	—	—	—	—	—	
1.1	—	—	—	—	—	—	—	—	—	
1.2	—	—	—	—	—	—	—	—	—	

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm[±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/20mm
Y-axis motor output/lead	100W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) Please note that a longer stroke will result in a lower max speed.
- (Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

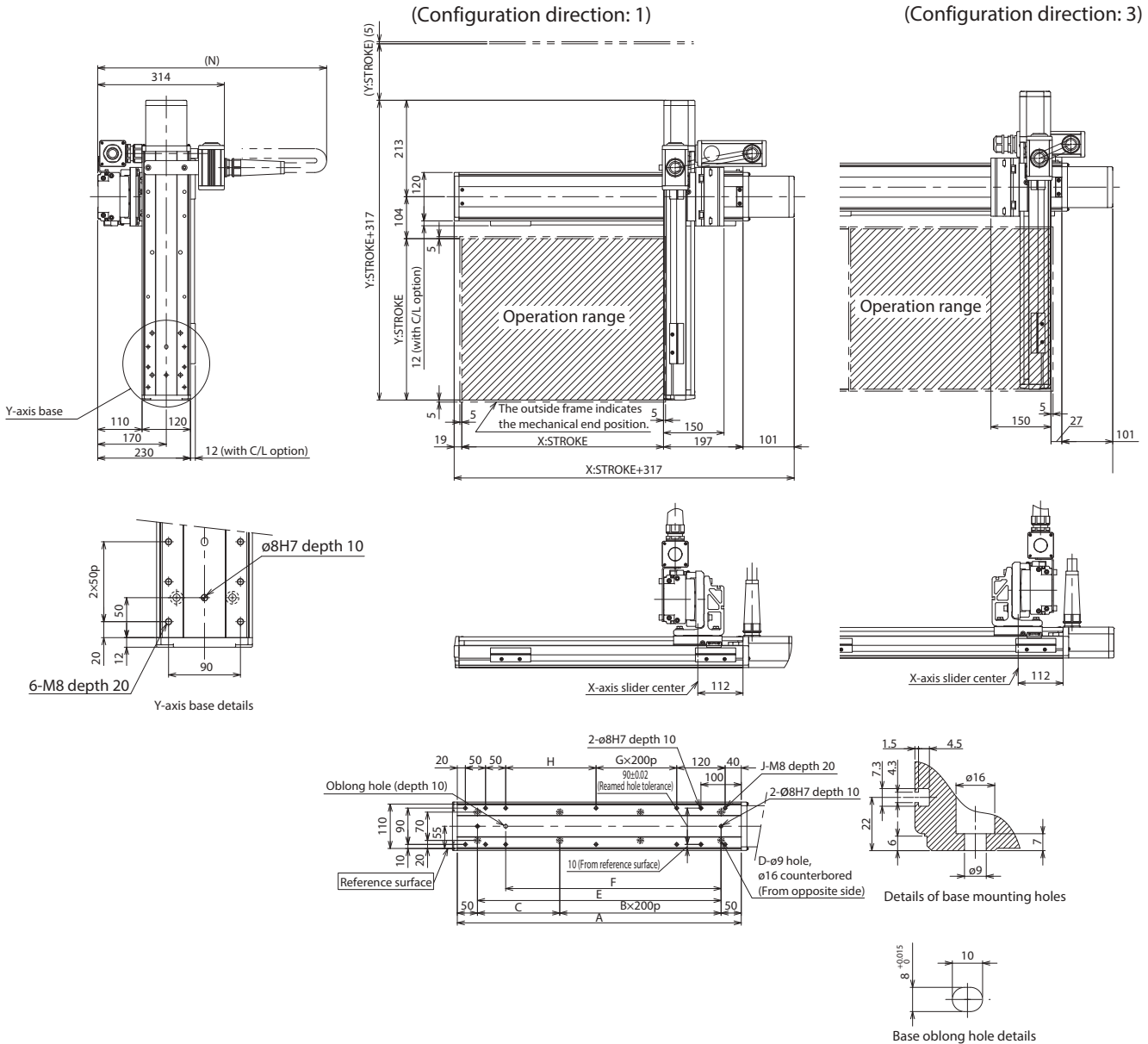
ICSB2 [ICSPB2]-S1C□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16

		N														
X-axis stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Y-axis stroke	100	600	600	650	650	700	700	700	750	750	800	800	850	850	900	900
	150	600	650	650	700	700	700	750	750	800	800	850	850	900	900	950
	200	600	650	650	700	700	700	750	750	800	800	850	850	900	900	950
	250	650	650	700	700	700	750	750	800	800	850	850	900	900	950	950
	300	650	650	700	700	700	750	750	800	800	850	850	900	900	950	950
	350	650	700	700	700	750	750	800	800	850	850	900	900	950	950	950
	400	650	700	700	700	750	750	800	800	850	850	900	900	950	950	950
450	700	700	700	750	750	800	800	850	850	900	900	950	950	950	1000	
500	700	700	700	750	750	800	800	850	850	900	900	950	950	950	1000	

ICSB2-S1C□M

ICSPB2-S1C□M High-Precision Specification



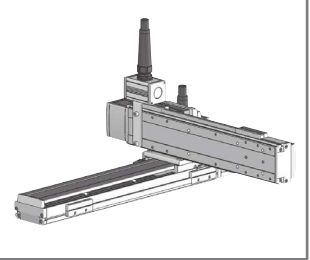
Battery-less Absolute

X-Y 2-axis

XYS (Y Slider)

Medium Speed Type

X: Md (100W)
Y: Md (100W)



Model Specification Items

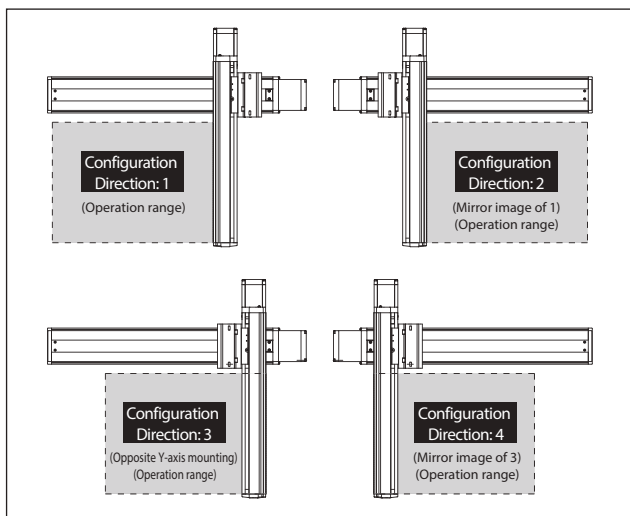
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 80: 800mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-S1C1M-①-②③④⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-S1C2M-①-②③④⑤-T2-⑥-⑦
3	ICSB2[ICSPB2]-S1C3M-①-②③④⑤-T2-⑥-⑦
4	ICSB2[ICSPB2]-S1C4M-①-②③④⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-100-10-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑥ in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~700	750~800
X-axis	600		430
Y-axis	600		—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	30.0	29.0	27.4	21.0	16.6	13.4	10.9	8.9	7.3
	0.3	30.0	29.0	27.4	21.0	16.6	13.4	10.9	8.9	7.3
	0.4	30.0	29.0	27.4	21.0	16.6	13.4	10.9	8.9	7.3
	0.5	18.6	18.0	17.5	16.9	16.3	13.4	10.9	8.9	7.3
	0.6	12.3	11.7	11.2	10.6	10.0	9.4	8.9	8.3	7.3
	0.7	9.6	9.0	8.5	7.9	7.3	6.7	6.2	5.6	5.1
	0.8	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 80: 800mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm[±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

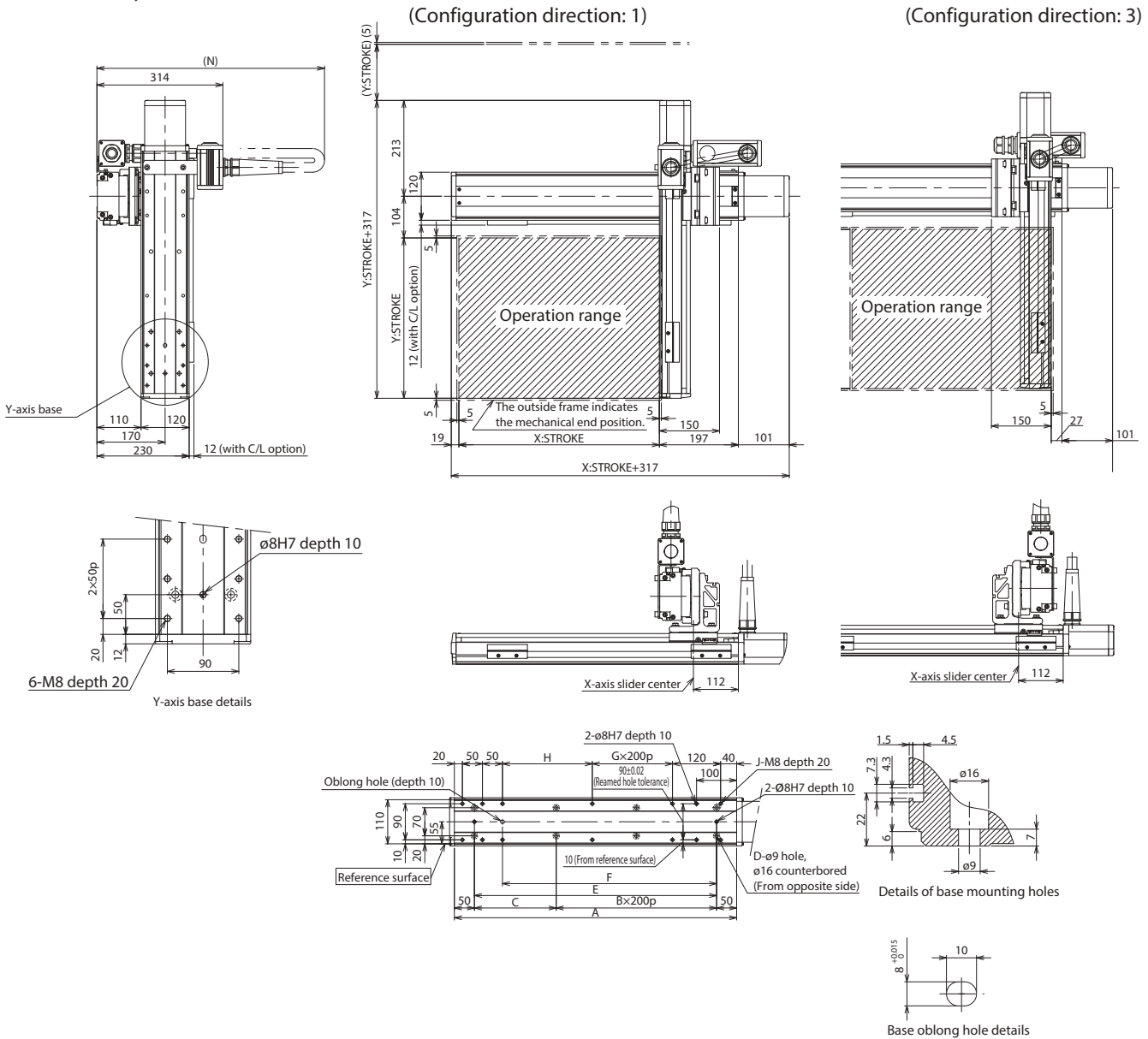
ICSB2 [ICSPB2]-S1C□M-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16

		N														
X-axis stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Y-axis stroke	100	600	600	650	650	700	700	700	750	750	800	800	850	850	900	900
	150	600	650	650	700	700	700	750	750	800	800	850	850	900	900	950
	200	600	650	650	700	700	700	750	750	800	800	850	850	900	900	950
	250	650	650	700	700	700	750	750	800	800	850	850	900	900	950	950
	300	650	650	700	700	700	750	750	800	800	850	850	900	900	950	950
	350	650	700	700	700	750	750	800	800	850	850	900	900	950	950	950
	400	650	700	700	700	750	750	800	800	850	850	900	900	950	950	950
450	700	700	700	750	750	800	800	850	850	900	900	950	950	950	1000	
500	700	700	700	750	750	800	800	850	850	900	900	950	950	950	1000	

ICSB2-S2C□H

ICSPB2-S2C□H

High-Precision Specification



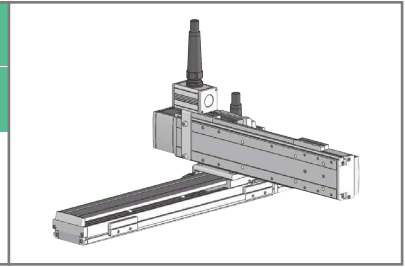
Battery-less Absolute

X-Y 2-axis

XYS (Y Slider)

High Speed Type

X: Md (200W)
Y: Md (200W)



Model Specification Items

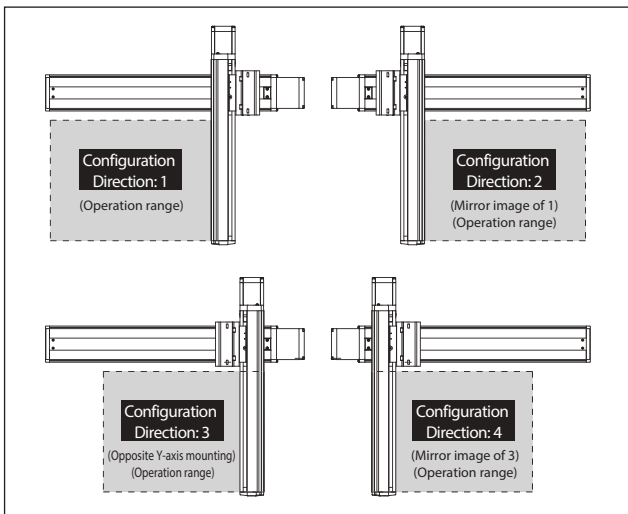
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 80: 800mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SC/ON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-S2C1H-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-S2C2H-①-②-③-④-⑤-T2-⑥-⑦
3	ICSB2[ICSPB2]-S2C3H-①-②-③-④-⑤-T2-⑥-⑦
4	ICSB2[ICSPB2]-S2C4H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑥ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~700	750~800
X-axis	1200		860
Y-axis	1200	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Y-axis stroke								
	100	150	200	250	300	350	400	450	500
0.2	31.7	31.1	27.1	20.7	16.4	13.2	10.7	8.7	7.0
0.3	31.7	31.1	27.1	20.7	16.4	13.2	10.7	8.7	7.0
0.4	31.7	31.1	27.1	20.7	16.4	13.2	10.7	8.7	7.0
0.5	18.0	17.6	17.1	16.7	16.2	13.2	10.7	8.7	7.0
0.6	12.6	12.2	11.7	11.3	10.8	10.3	9.9	8.7	7.0
0.7	9.0	8.6	8.1	7.7	7.2	6.7	6.3	5.8	5.3
0.8	6.3	5.9	5.4	5.0	4.5	4.0	3.6	3.1	2.6
0.9	4.5	4.1	3.6	3.2	2.7	2.2	1.8	1.3	0.8
1	3.2	2.7	2.3	1.8	1.3	0.9	—	—	—
1.1	1.8	1.4	0.9	0.5	—	—	—	—	—
1.2	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 80: 800mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

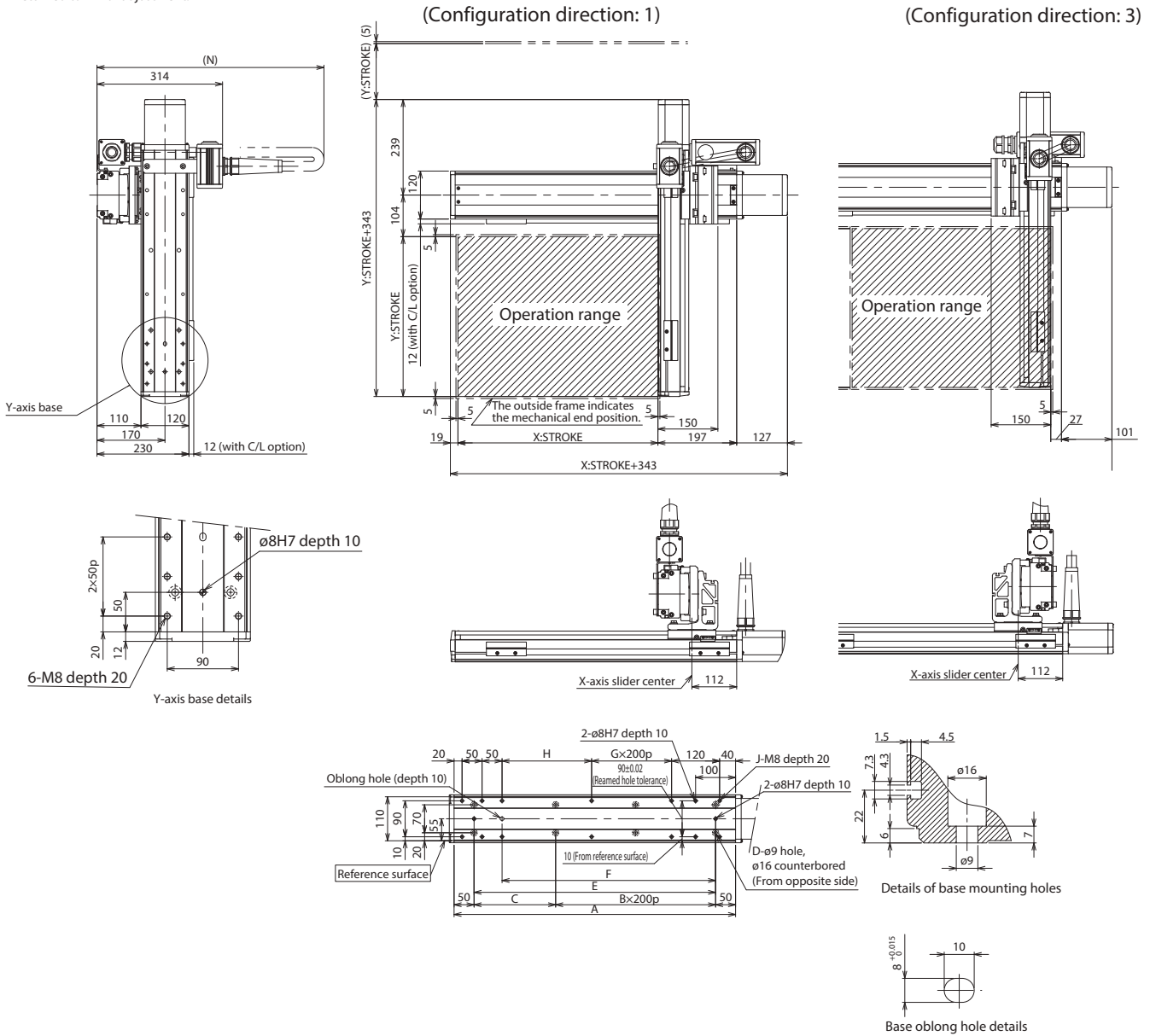
ICSB2 [ICSPB2]-S2C□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



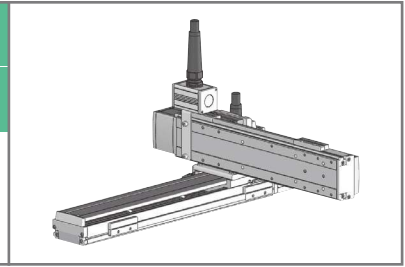
X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16

		N															
X-axis stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
Y-axis stroke	100	600	600	650	650	700	700	700	750	750	800	800	850	850	900	900	
	150	600	650	650	700	700	700	750	750	800	800	850	850	900	900	950	
	200	600	650	650	700	700	700	750	750	800	800	850	850	900	900	950	
	250	650	650	700	700	700	750	750	800	800	850	850	900	900	950	950	
	300	650	650	700	700	700	750	750	800	800	850	850	900	900	950	950	
	350	650	700	700	700	750	750	800	800	850	850	900	900	950	950	950	
	400	650	700	700	700	750	750	800	800	850	850	900	900	950	950	950	
450	700	700	700	750	750	800	800	850	850	900	900	950	950	950	1000		
500	700	700	700	750	750	800	800	850	850	900	900	950	950	950	1000		

ICSB2-SG□S

ICSPB2-SG□S High-Precision Specification

±10μm Standard
±5μm High Precision
Battery-less Absolute
X-Y 2-axis
XY5 (Y Slider)
Ultra High Speed Type
X:Lg (400W) Y:Lg (400W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 80: 800mm (Every 50mm)	10: 100mm 60: 600mm (Every 50mm)	T2: SCION SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

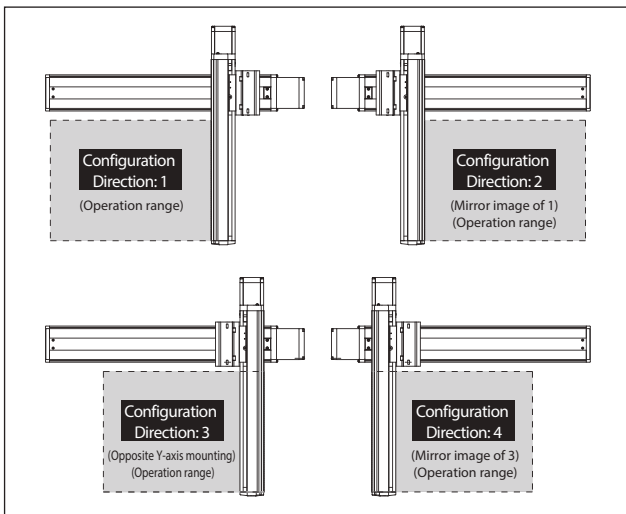
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-SG1S-①-②③④⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-SG2S-①-②③④⑤-T2-⑥-⑦
3	ICSB2[ICSPB2]-SG3S-①-②③④⑤-T2-⑥-⑦
4	ICSB2[ICSPB2]-SG4S-①-②③④⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 80: 800mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 60: 600mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM-①-400-40-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-①-400-40-②-T2-③-④	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ④ in the above model names. Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ③ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~600	650~800
X-axis	2400	
Y-axis	2400	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke										
		100	150	200	250	300	350	400	450	500	550	600
Acceleration *1	0.2	22.6	21.8	21.0	20.2	19.5	18.7	16.9	13.8	11.3	9.2	7.4
	0.3	22.6	21.8	21.0	20.2	19.5	18.7	16.9	13.8	11.3	9.2	7.4
	0.4	22.6	21.8	21.0	20.2	19.5	18.7	16.9	13.8	11.3	9.2	7.4
	0.5	15.4	14.6	13.8	13.0	12.3	11.5	10.8	9.9	9.1	8.3	7.4
	0.6	10.9	10.1	9.3	8.5	7.8	7.0	6.3	5.4	4.6	3.8	3.1
	0.7	7.3	6.5	5.7	4.9	4.2	3.4	2.7	1.8	1.0	—	—
	0.8	5.5	4.7	3.9	3.1	2.4	1.6	0.9	—	—	—	—
	0.9	3.7	2.9	2.1	1.3	0.6	—	—	—	—	—	—
	1	1.9	1.1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

ICSB2 [ICSPB2]-SG□S-SC (Self-standing cable specification)

Dimensions

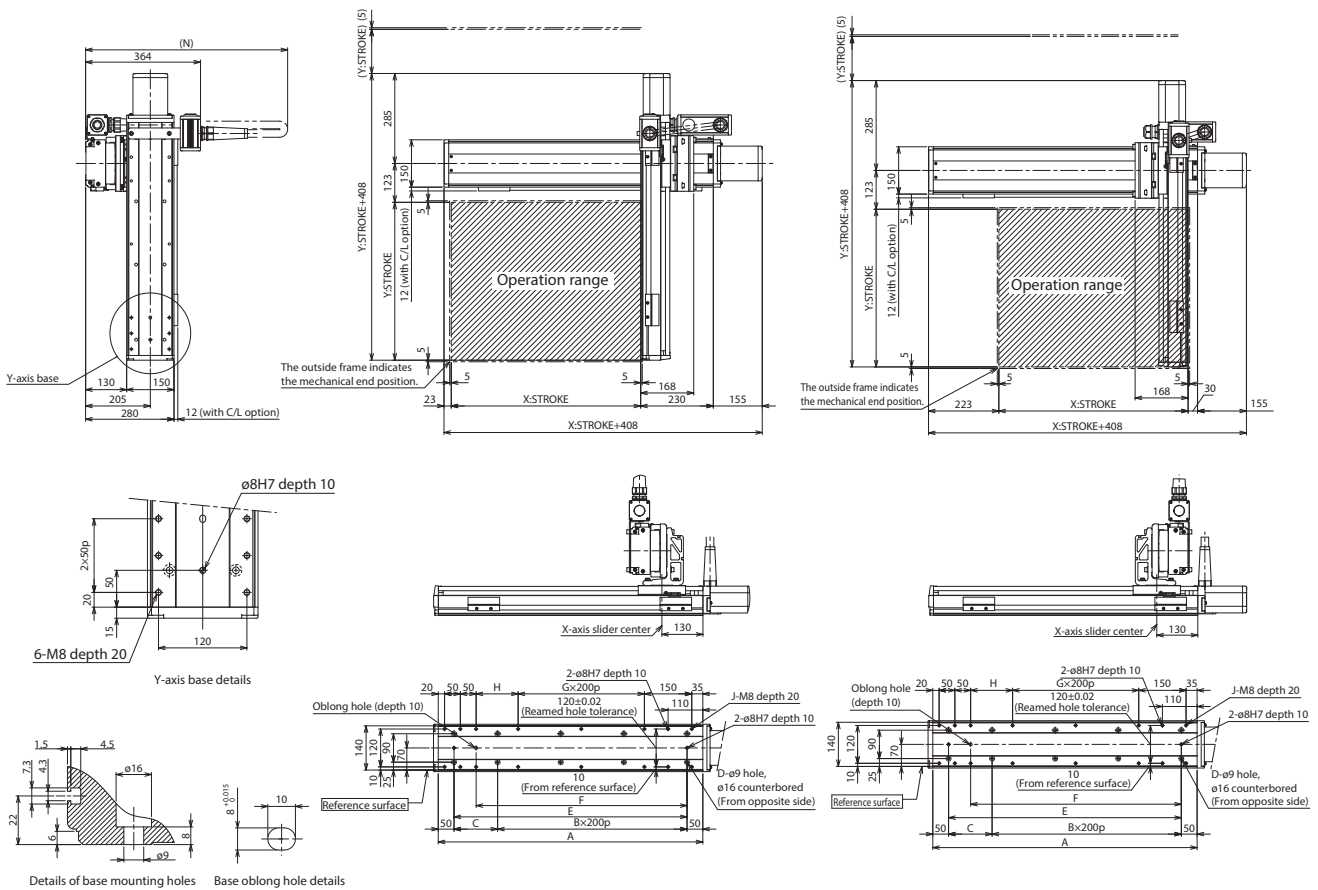
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)

(Configuration direction: 3)



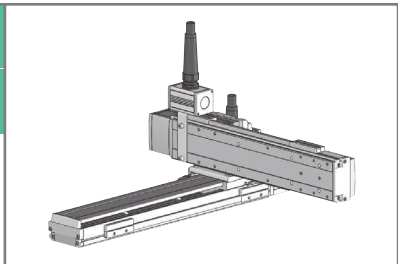
X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16

		N														
Y-axis	X-axis	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
	100	600	650	650	700	700	750	750	750	750	800	800	850	850	900	900
150	650	650	700	700	750	750	750	750	800	800	850	850	900	900	950	950
200	650	650	700	700	750	750	750	800	800	850	850	900	900	900	950	950
250	650	700	700	750	750	750	800	800	850	850	900	900	900	950	950	1000
300	650	700	700	750	750	750	800	800	850	850	900	900	900	950	950	1000
350	700	700	750	750	750	800	800	850	850	900	900	950	950	1000	1000	
400	700	700	750	750	750	800	800	850	850	900	900	950	950	1000	1000	
450	700	750	750	750	800	800	850	850	900	900	950	950	1000	1000	1000	
500	700	750	750	750	800	800	850	850	900	900	950	950	1000	1000	1000	
550	750	750	750	800	800	850	850	900	900	950	950	1000	1000	1000	1050	
600	750	750	750	800	800	850	850	900	900	950	950	1000	1000	1000	1050	

ICSB2-SG□H

ICSPB2-SG□H High-Precision Specification

±10µm Standard
±5µm High Precision
Battery-less Absolute
X-Y 2-axis
XY (Y Slider)
High Speed Type
X:Lg (200W)
Y:Lg (200W)



Model Specification Items

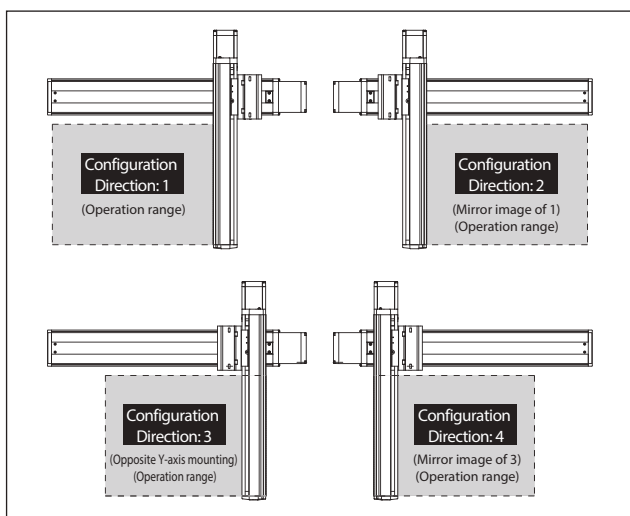
Series ICSB2: Standard 2-axis specification
 ICSPB2: High precision 2-axis specification
Type Refer to Model Specification table below
Encoder Type WA: Battery-less Absolute
X-axis Stroke/Option 10: 100mm
 80: 800mm (Every 50mm)
Y-axis Stroke/Option 10: 100mm
 60: 600mm (Every 50mm)
Applicable Controllers T2: SCON
 SSEL
 XSEL-P/Q
 XSEL-RA/SA
Cable Length 3L: 3m
 5L: 5m
 □L: □m
Y-axis Cable Management Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-SG1H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
2	ICSB2[ICSPB2]-SG2H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
3	ICSB2[ICSPB2]-SG3H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
4	ICSB2[ICSPB2]-SG4H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [7] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm ? : 80: 800mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm ? : 60: 600mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
 *2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
 Please refer to P.11 for more information.
 *3 Cannot be selected for High-Precision Specification.
 * To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
 Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM-[1]-200-20-[2]-T2-[8]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-200-20-[2]-T2-[8]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.
 Note that the strokes are indicated in mm (millimeters).
 * Cable exit direction is specified with [8] in the above model names.
 Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~600	650~800
X-axis	1200	—
Y-axis	1200	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke										
		100	150	200	250	300	350	400	450	500	550	600
Acceleration *1	0.2	29.2	28.4	27.7	26.9	25.7	20.8	17.1	14.0	11.6	9.4	7.6
	0.3	29.2	28.4	27.7	26.9	25.7	20.8	17.1	14.0	11.6	9.4	7.6
	0.4	27.5	26.7	26.0	25.2	24.4	20.8	17.1	14.0	11.6	9.4	7.6
	0.5	18.5	17.7	17.0	16.2	15.4	14.6	13.8	13.0	11.6	9.4	7.6
	0.6	12.2	11.4	10.7	9.9	9.1	8.3	7.5	6.7	6.0	5.2	4.5
	0.7	7.7	6.9	6.2	5.4	4.6	3.8	3.0	2.2	1.5	0.7	—
	0.8	5.0	4.2	3.5	2.7	1.9	1.1	—	—	—	—	—
	0.9	2.3	1.5	0.8	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

ICSB2 [ICSPB2]-SG□H-SC (Self-standing cable specification)

Dimensions

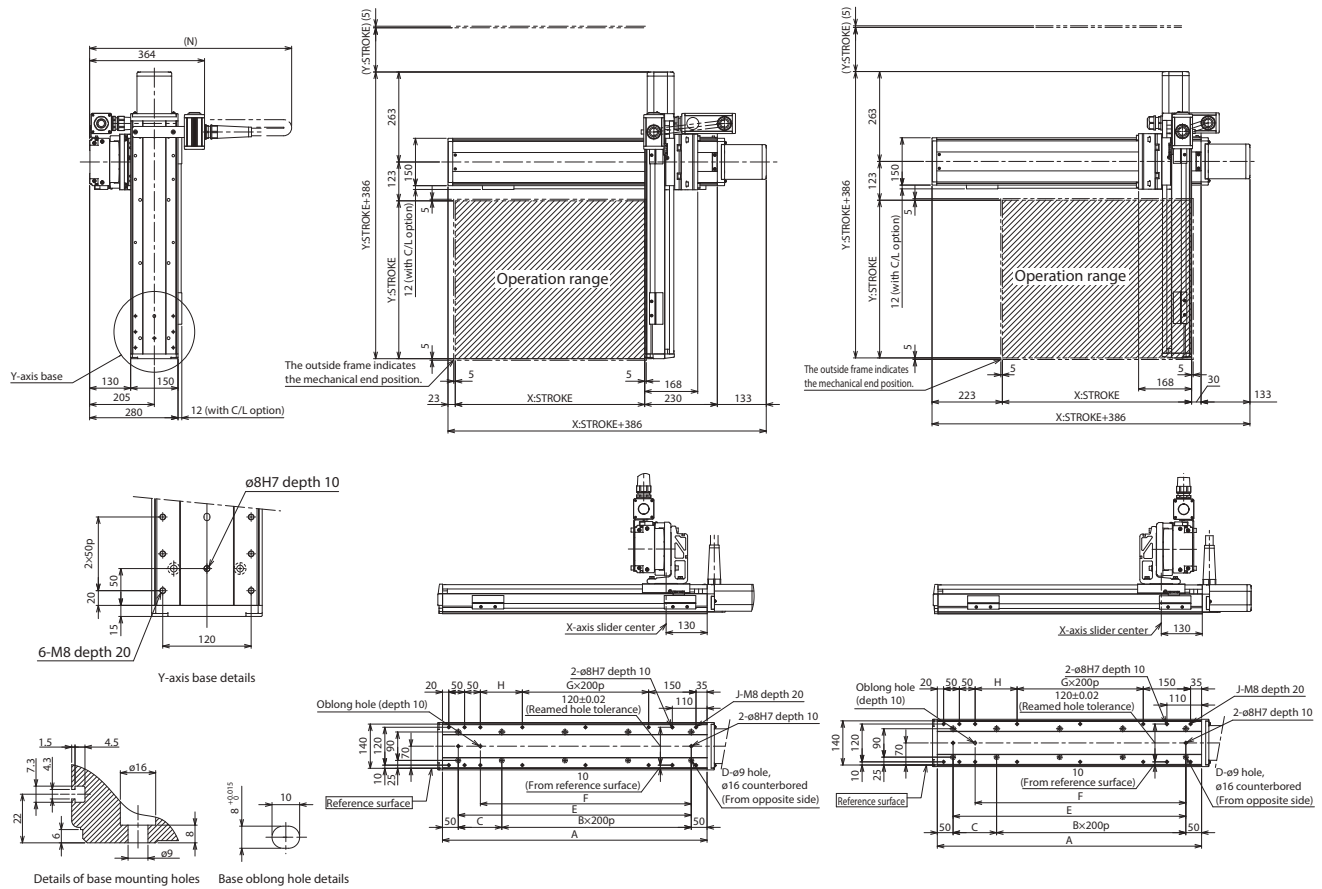
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)

(Configuration direction: 2)



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16

		N														
X-axis	Y-axis	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
100	100	600	650	650	700	700	750	750	750	800	800	850	850	900	900	950
150	150	650	650	700	700	750	750	750	800	800	850	850	900	900	950	950
200	200	650	650	700	700	750	750	750	800	800	850	850	900	900	950	950
250	250	650	700	700	750	750	750	800	800	850	850	900	900	950	950	1000
300	300	650	700	700	750	750	750	800	800	850	850	900	900	950	950	1000
350	350	700	700	750	750	750	800	800	850	850	900	900	950	950	1000	1000
400	400	700	700	750	750	750	800	800	850	850	900	900	950	950	1000	1000
450	450	700	750	750	750	800	800	850	850	900	900	950	950	1000	1000	1000
500	500	700	750	750	750	800	800	850	850	900	900	950	950	1000	1000	1000
550	550	750	750	750	800	800	850	850	900	900	950	950	1000	1000	1000	1050
600	600	750	750	750	800	800	850	850	900	900	950	950	1000	1000	1000	1050

ICSB2-ZA□H

ICSPB2-ZA□H High-Precision Specification



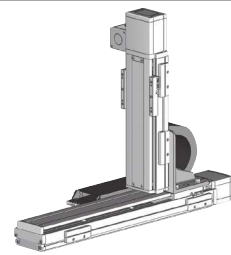
Battery-less Absolute

X-Z 2-axis

XZ (Z Upright)

High Speed Type

X: 5m (60W)
Z: 5m (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 90: 900mm (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

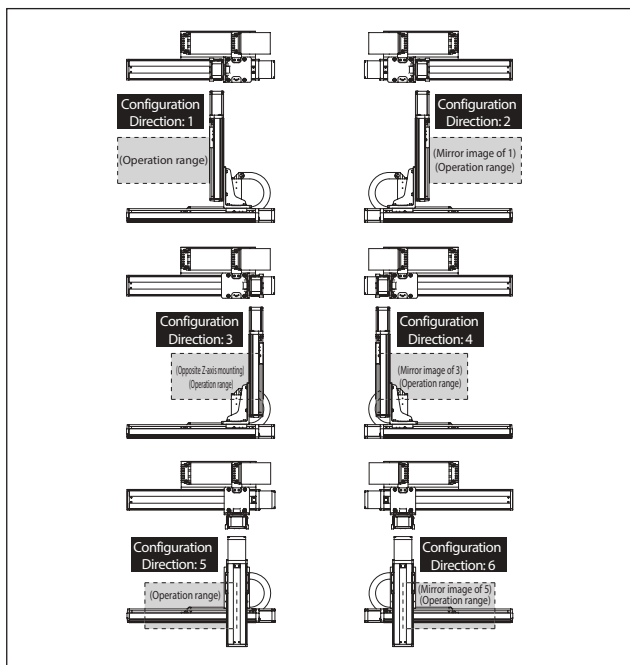
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XZ configuration direction *1	Model
1	ICSB2[ICSPB2]-ZA1H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
2	ICSB2[ICSPB2]-ZA2H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
3	ICSB2[ICSPB2]-ZA3H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
4	ICSB2[ICSPB2]-ZA4H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
5	ICSB2[ICSPB2]-ZA5H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
6	ICSB2[ICSPB2]-ZA6H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]

*1 Please refer to the following diagram under XZ Configuration Direction. Please refer to the table on the right for details of [1] through [7] in the model names above.

XZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 90: 900mm
[3]	X-axis option	Refer to Options table below.
[4]	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
[5]	Z-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Z-axis Cable Management	CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-SXM-[1]-60-16-[2]-T2-[8]-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-8-[4]-T2-[8]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [8] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~300	350~600	650~700	750~800	850~900
X-axis	960	655	515	415	
Z-axis	480				

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke				
		100	150	200	250	300
Acceleration *1	0.2	7.0	7.0	6.6	6.3	6.0
	0.3	7.0	7.0	6.6	6.3	6.0
	0.4	7.0	7.0	6.6	5.6	4.8
	0.5	5.1	4.7	4.4	4.0	3.6
	0.6	3.3	2.9	2.6	2.2	1.9

*1 When the acceleration is the same for the X/Z-axes.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	60W/16mm
Z-axis motor output/lead	60W/8mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

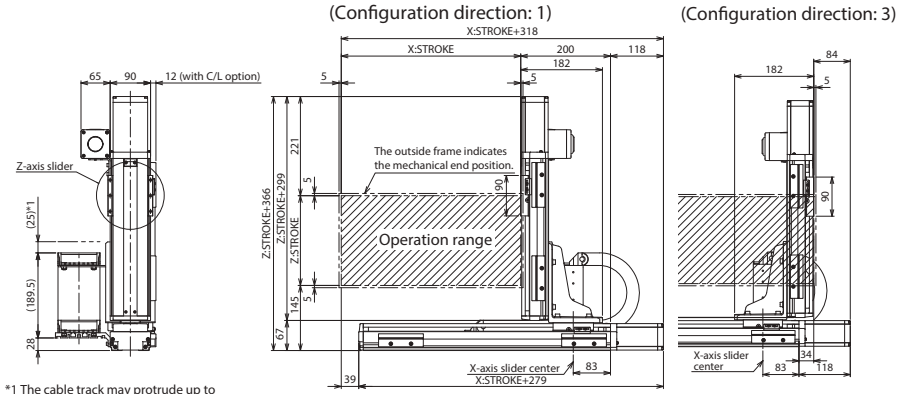
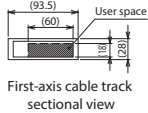
ICSB2 [ICSPB2]-ZA□H-CT (Cable track specification)

Dimensions

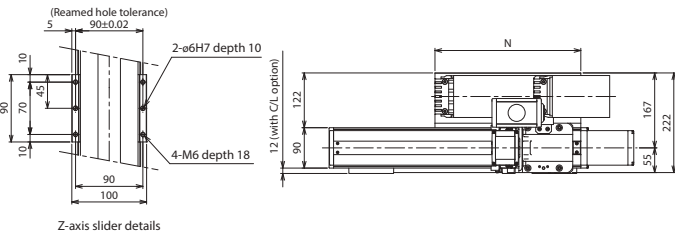
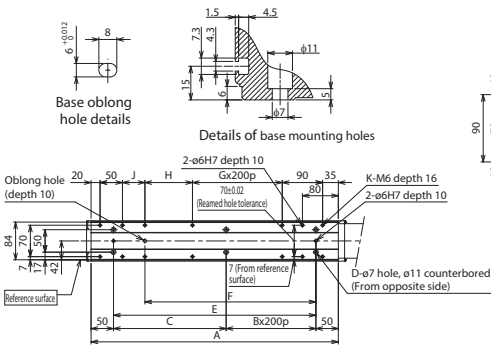
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

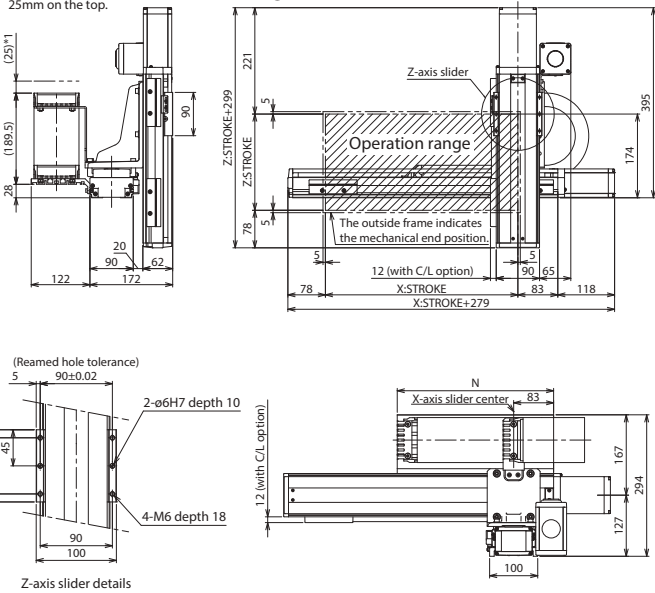
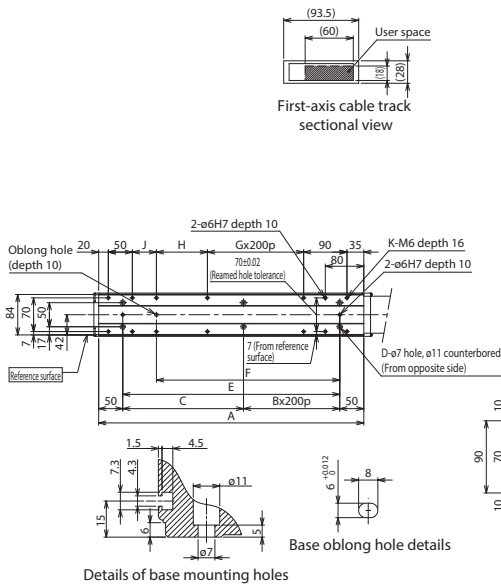


*1 The cable track may protrude up to 25mm on the top.



*1 The cable track may protrude up to 25mm on the top.

(Configuration direction: 5)



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
A	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051
B	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4
C	151	201	251	101	151	201	251	101	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12
E	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951
F	131	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3
H	56	56	106	156	206	256	106	156	206	256	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575

ICSB2-ZA□M

ICSPB2-ZA□M

High-Precision Specification



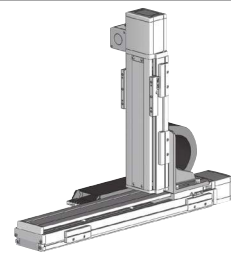
Battery-less Absolute

X-Z 2-axis

XZ (Z Upright)

Medium Speed Type

X: 5m (60W)
Z: 5m (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 90: 900mm (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

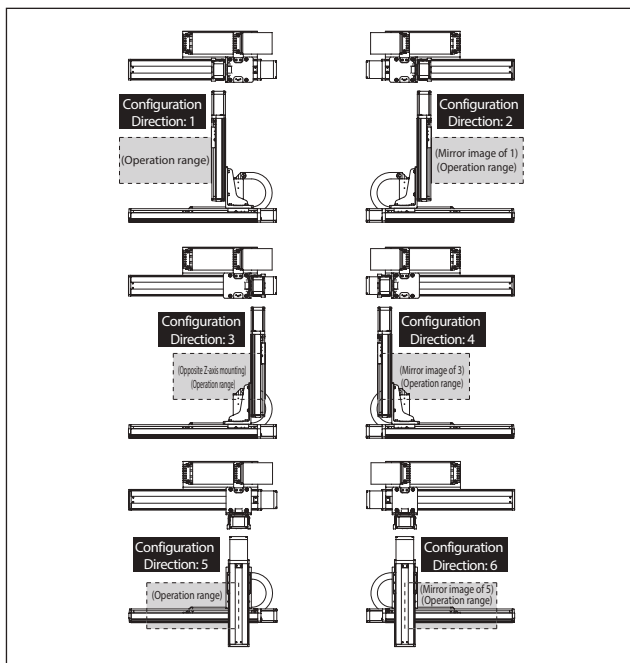
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XZ configuration direction *1	Model
1	ICSB2[ICSPB2]-ZA1M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
2	ICSB2[ICSPB2]-ZA2M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
3	ICSB2[ICSPB2]-ZA3M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
4	ICSB2[ICSPB2]-ZA4M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
5	ICSB2[ICSPB2]-ZA5M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]
6	ICSB2[ICSPB2]-ZA6M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]

*1 Please refer to the following diagram under XZ Configuration Direction. Please refer to the table on the right for details of [1] through [7] in the model names above.

XZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 90: 900mm
[3]	X-axis option	Refer to Options table below.
[4]	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
[5]	Z-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Z-axis Cable Management	CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-SXM-[1]-60-8-[2]-T2-[8]-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-4-[4]-T2-[8]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [8] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~300	350~600	650~700	750~800	850~900
X-axis	480		330	260	210
Z-axis	240				

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke					
		100	150	200	250	300	
Acceleration *1	0.2	13.0	11.7	10.6	9.5	8.7	
	0.3	10.8	9.5	8.3	7.3	6.4	
	0.4	9.2	7.8	6.7	5.7	4.8	
	0.5	7.9	6.6	5.4	4.4	3.7	
	0.6	6.8	5.5	4.4	3.5	2.7	
	0.7	5.9	4.7	3.6	2.7	2.0	

*1 The acceleration is for the X-axis. When Z-axis is fixed at 0.2G.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	60W/8mm
Z-axis motor output/lead	60W/4mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G for X-axis and 0.2G for Z-axis. When the acceleration is increased, the payload will be reduced.

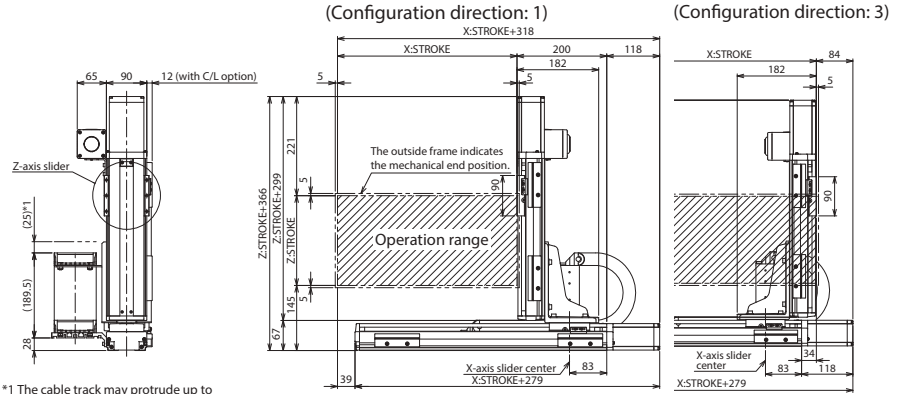
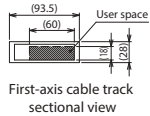
ICSB2 [ICSPB2]-ZA□M-CT (Cable track specification)

Dimensions

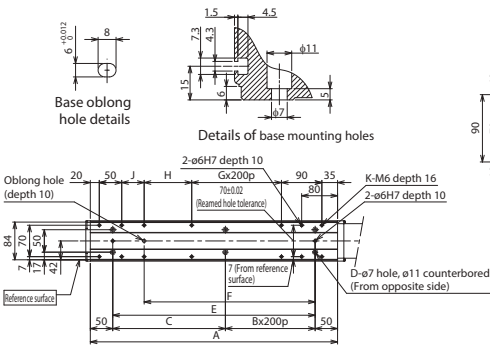
CAD drawings can be downloaded from our website.



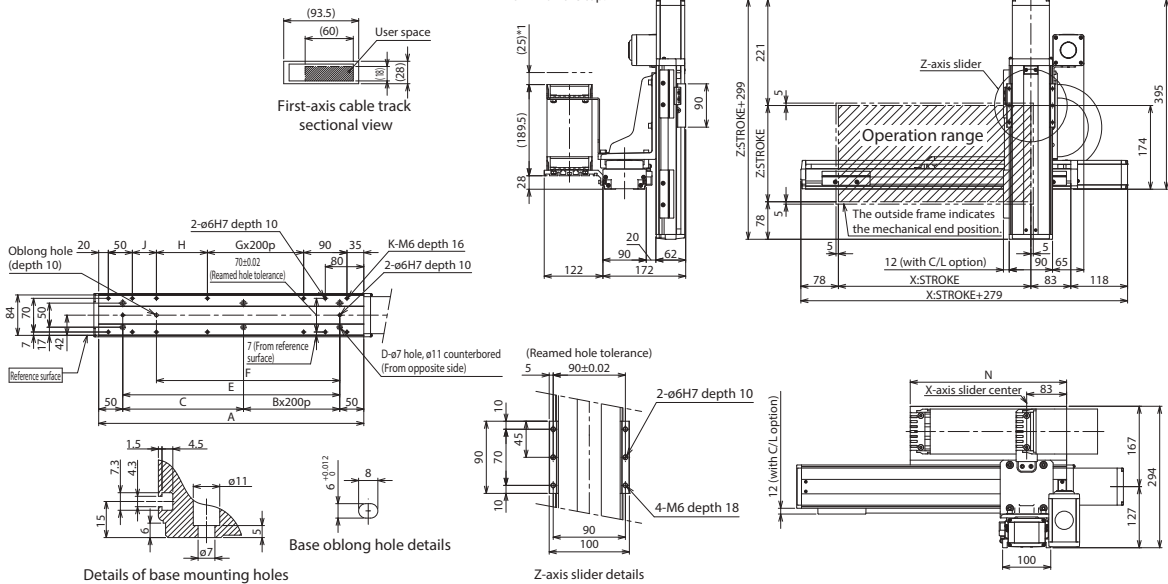
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



*1 The cable track may protrude up to 25mm on the top.



*1 The cable track may protrude up to 25mm on the top.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
A	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051
B	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4
C	151	201	251	101	151	201	251	101	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12
E	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951
F	131	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3
H	56	56	106	156	206	256	106	156	206	256	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575

ICSB2-Z1C□H

ICSPB2-Z1C□H High-Precision Specification



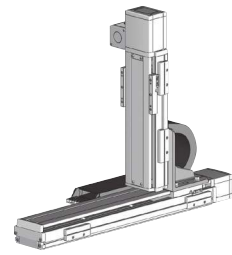
Battery-less Absolute

Y-Z 2-axis

XZ (Z Upright)

High Speed Type

X: Md (100W)
Z: Md (100W)



Model Specification Items

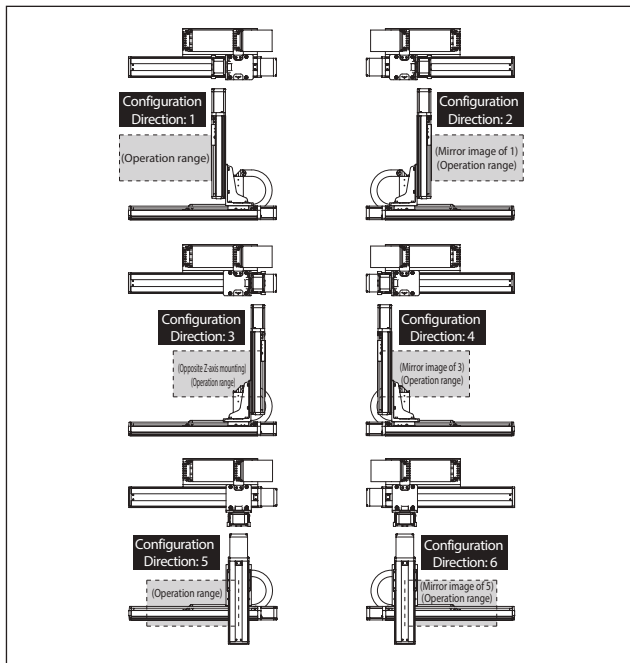
Series	Type	Encoder Type	X-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XZ configuration direction *1	Model
1	ICSB2[ICSPB2]-Z1C1H-①-②③④⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-Z1C2H-①-②③④⑤-T2-⑥-⑦
3	ICSB2[ICSPB2]-Z1C3H-①-②③④⑤-T2-⑥-⑦
4	ICSB2[ICSPB2]-Z1C4H-①-②③④⑤-T2-⑥-⑦
5	ICSB2[ICSPB2]-Z1C5H-①-②③④⑤-T2-⑥-⑦
6	ICSB2[ICSPB2]-Z1C6H-①-②③④⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm
③	X-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-100-20-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-100-10-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ③ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200		860	695	570	460
Z-axis	600			—		

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke						
		100	150	200	250	300	350	400
Acceleration *1	0.2	10.0	10.0	10.0	10.0	10.0	9.8	9.2
	0.3	10.0	10.0	10.0	10.0	10.0	9.8	9.2
	0.4	10.0	10.0	10.0	10.0	10.0	9.7	8.4
	0.5	8.0	7.6	7.1	6.4	5.9	5.3	4.7
	0.6	5.4	4.9	4.4	3.7	3.2	2.6	2.0

*1 When the acceleration is the same for the X/Z-axes.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/20mm
Z-axis motor output/lead	100W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

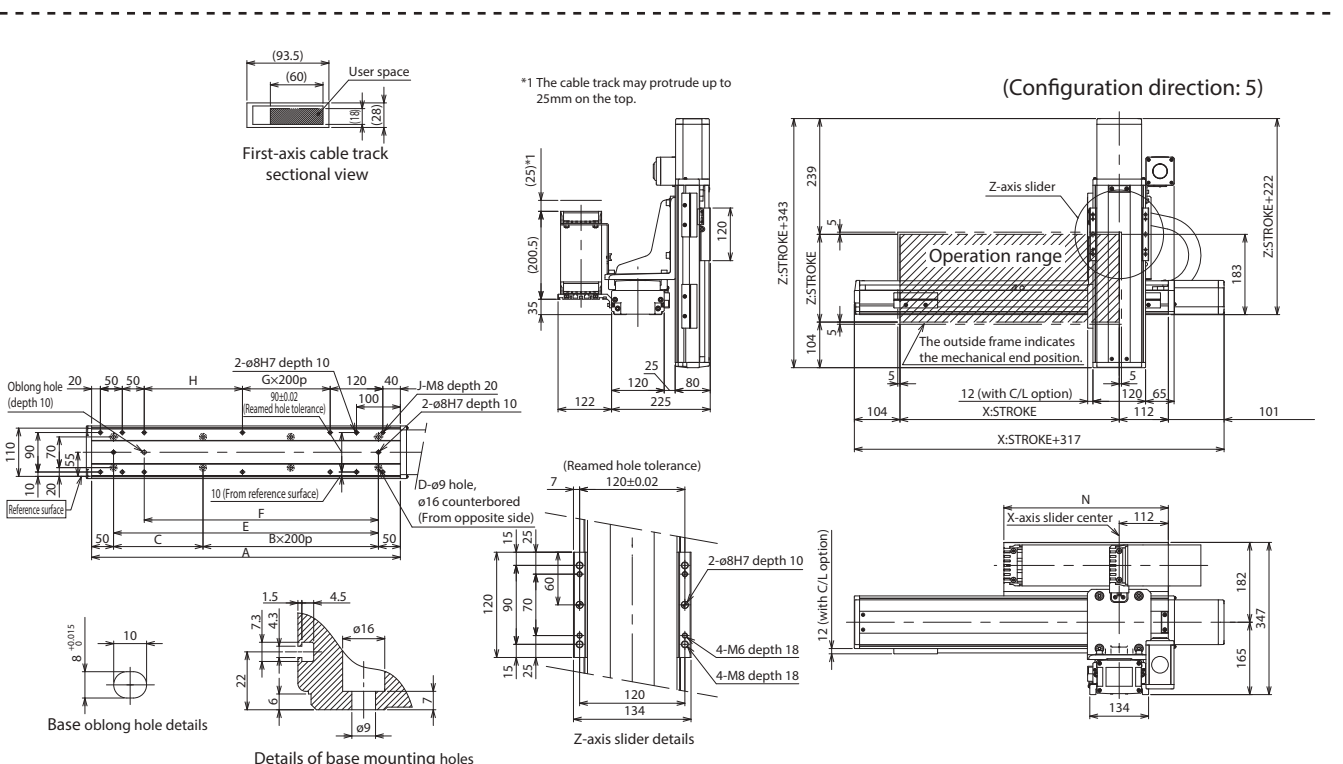
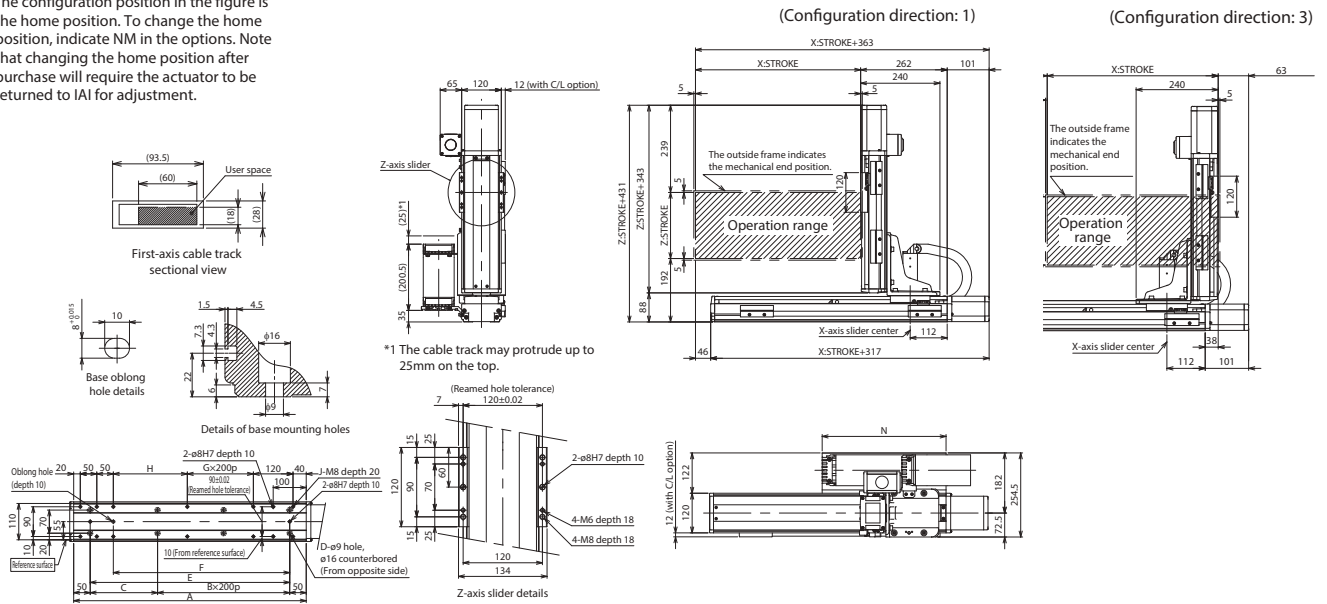
ICSB2 [ICSPB2]-Z1C□H-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB2-Z1C□M

ICSPB2-Z1C□M High-Precision Specification



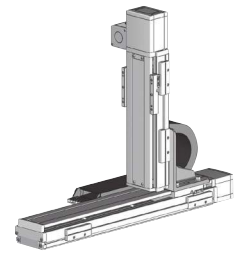
Battery-less Absolute

X-Z 2-axis

XZ (Z Upright)

Medium Speed Type

X: Md (100W)
Z: Md (100W)



Model Specification Items

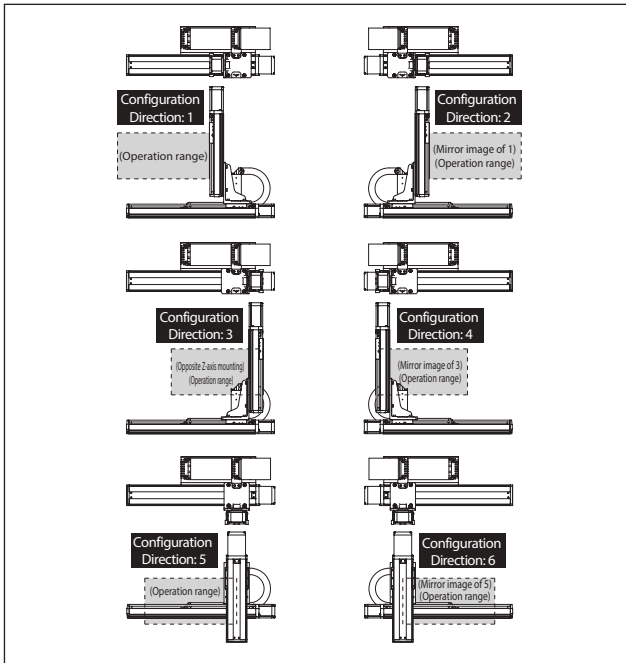
Series: ICSB2: Standard 2-axis specification, ICSPB2: High precision 2-axis specification
 Type: Refer to Model Specification table below
 Encoder Type: WA: Battery-less Absolute
 X-axis Stroke/Option: 10: 100mm, 110: 1100mm (Every 50mm)
 Z-axis Stroke/Option: 10: 100mm, 40: 400mm (Every 50mm)
 Applicable Controllers: T2: SCON, SSEL, XSEL-P/Q, XSEL-RA/SA
 Cable Length: 3L: 3m, 5L: 5m, □L: Specified length
 Z-axis Cable Management: Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XZ configuration direction *1	Model
1	ICSB2[ICSPB2]-Z1C1M- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> -T2- <u>6</u> - <u>7</u>
2	ICSB2[ICSPB2]-Z1C2M- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> -T2- <u>6</u> - <u>7</u>
3	ICSB2[ICSPB2]-Z1C3M- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> -T2- <u>6</u> - <u>7</u>
4	ICSB2[ICSPB2]-Z1C4M- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> -T2- <u>6</u> - <u>7</u>
5	ICSB2[ICSPB2]-Z1C5M- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> -T2- <u>6</u> - <u>7</u>
6	ICSB2[ICSPB2]-Z1C6M- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> -T2- <u>6</u> - <u>7</u>

*1 Please refer to the following diagram under XZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XZ Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM- <u>1</u> -100-10- <u>2</u> -T2- <u>8</u> - <u>3</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- <u>1</u> -100-5- <u>4</u> -T2- <u>8</u> - <u>5</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.
 Note that the strokes are indicated in mm (millimeters).
 * Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	600	430	345	280	230	
Z-axis	300					

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke						
		100	150	200	250	300	350	400
Acceleration *1	0.2	20.0	20.0	20.0	20.0	18.8	17.2	15.8
	0.3	20.0	19.9	17.9	16.1	14.5	12.9	12.0
	0.4	18.9	16.7	14.8	12.9	11.4	9.8	9.0
	0.5	16.4	14.2	12.3	10.5	9.0	7.6	7.0
	0.6	12.6	12.1	10.3	8.6	7.2	5.8	5.0
	0.7	9.9	9.4	8.7	7.1	5.7	4.4	3.3

*1 The acceleration is for the X-axis. When Z-axis is fixed at 0.2G.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm ? : 110: 1100mm
③	X-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm ? : 40: 400mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
 *2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
 Please refer to P.11 for more information.
 *3 Cannot be selected for High-Precision Specification.
 * To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Z-axis motor output/lead	100W/5mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
 (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
 (Note 3) Please note that a longer stroke will result in a lower max speed.
 (Note 4) The rated acceleration is 0.4G for X-axis and 0.2G for Z-axis. When the acceleration is increased, the payload will be reduced.

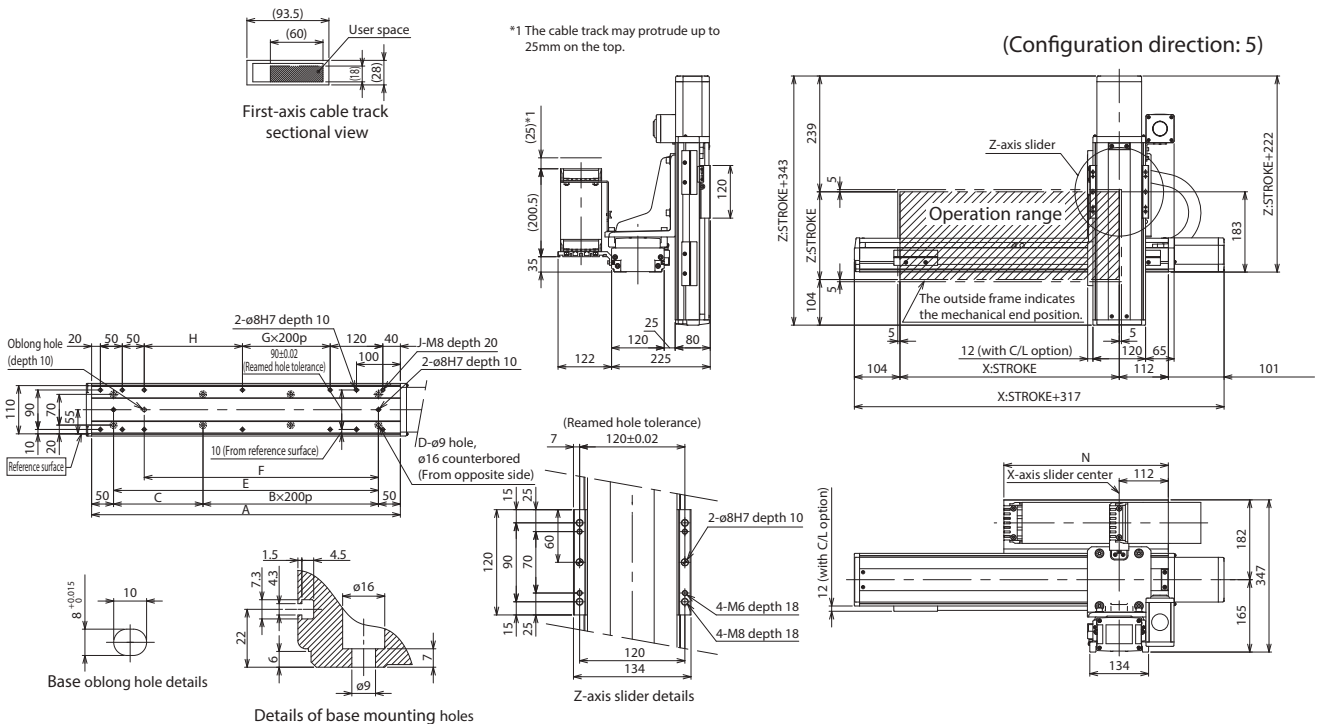
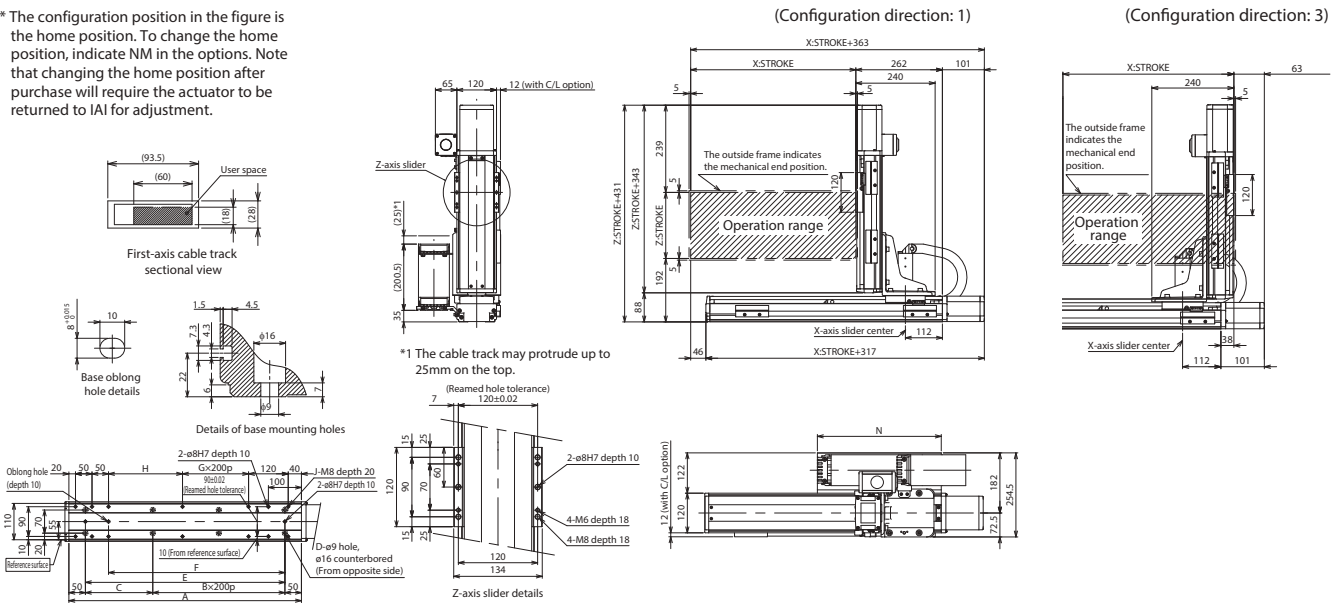
ICSB2 [ICSPB2]-Z1C□M-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB2-Z2C□H

ICSPB2-Z2C□H High-Precision Specification



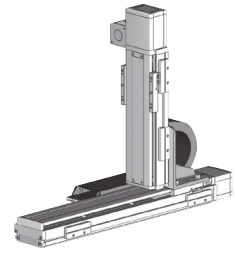
Battery-less Absolute

X-Z 2-axis

XZ (Z Upright)

High Speed Type

X: Md (200W)
Z: Md (200W)



Model Specification Items

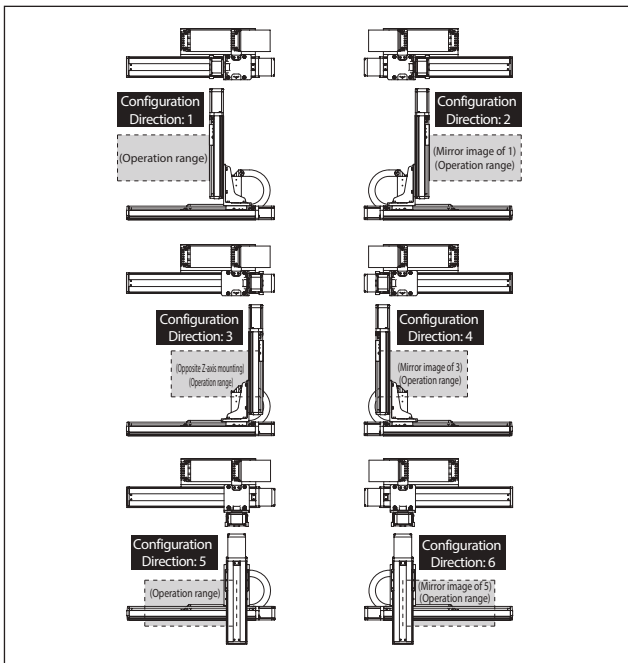
Series	Type	Encoder Type	X-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XZ configuration direction *1	Model
1	ICSB2[ICSPB2]-Z2C1H-①-②③④⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-Z2C2H-①-②③④⑤-T2-⑥-⑦
3	ICSB2[ICSPB2]-Z2C3H-①-②③④⑤-T2-⑥-⑦
4	ICSB2[ICSPB2]-Z2C4H-①-②③④⑤-T2-⑥-⑦
5	ICSB2[ICSPB2]-Z2C5H-①-②③④⑤-T2-⑥-⑦
6	ICSB2[ICSPB2]-Z2C6H-①-②③④⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XZ Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-10-③-T2-④-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑧ in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200	860	695	570	460	
Z-axis	600					

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke						
		100	150	200	250	300	350	400
Acceleration *1	0.2	20.0	20.0	20.0	19.8	18.3	16.8	15.4
	0.3	20.0	19.2	17.3	15.5	13.9	12.4	11.1
	0.4	18.3	16.0	14.1	12.3	10.7	9.3	8.0
	0.5	15.8	13.5	11.6	9.9	8.4	7.0	6.0
	0.6	13.6	11.4	9.6	7.9	6.5	5.2	4.1

*1 When the acceleration is the same for the X/Z-axes.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm
③	X-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

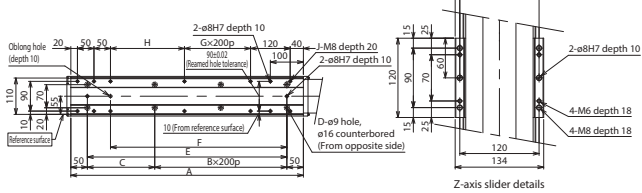
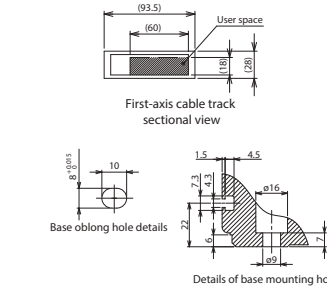
ICSB2 [ICSPB2]-Z2C□H-CT (Cable track specification)

Dimensions

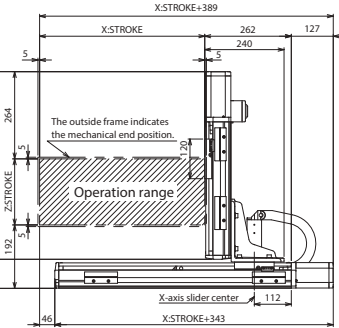
CAD drawings can be downloaded from our website.



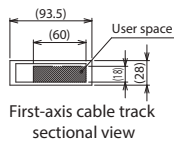
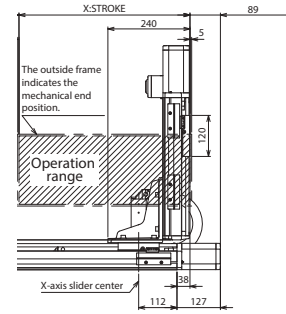
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



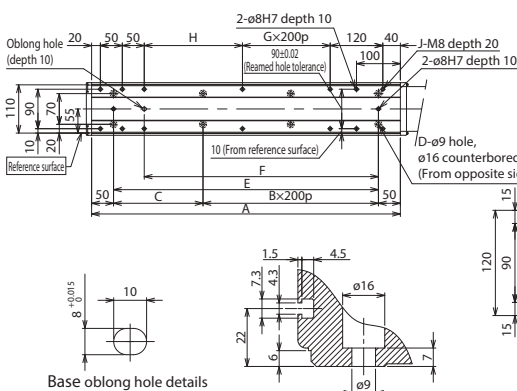
(Configuration direction: 1)



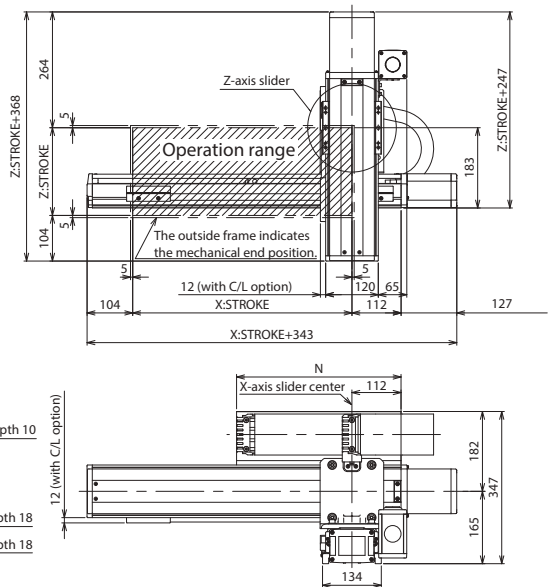
(Configuration direction: 3)



*1 The cable track may protrude up to 25mm on the top.



(Configuration direction: 5)

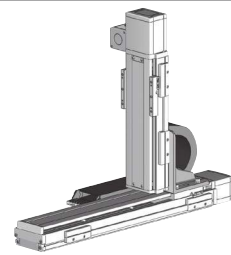


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB2-ZD□H

ICSPB2-ZD□H High-Precision Specification

±10μm Standard
±5μm High Precision
Battery-less Absolute
Y-Z 2-axis
XZ (Z Upright)
High Speed Long Type
X: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 100mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

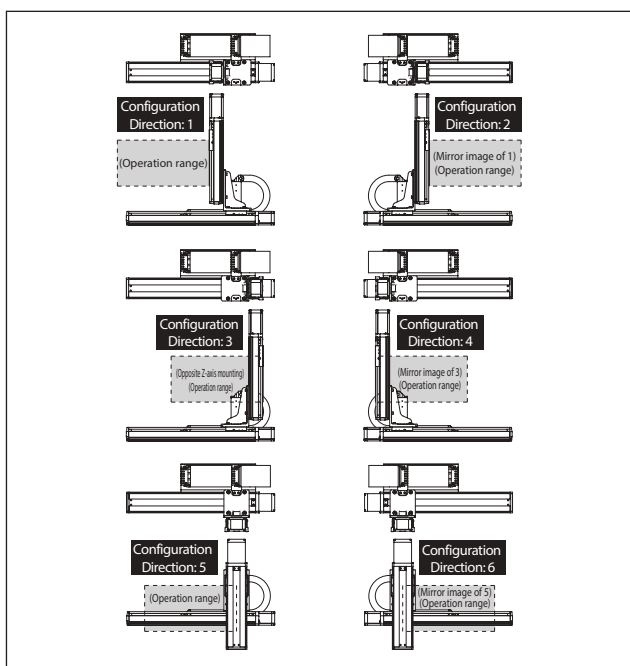
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XZ configuration direction *1	Model
1	ICSB2[ICSPB2]-ZD1H-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-ZD2H-①-②-③-④-⑤-T2-⑥-⑦
3	ICSB2[ICSPB2]-ZD3H-①-②-③-④-⑤-T2-⑥-⑦
4	ICSB2[ICSPB2]-ZD4H-①-②-③-④-⑤-T2-⑥-⑦
5	ICSB2[ICSPB2]-ZD5H-①-②-③-④-⑤-T2-⑥-⑦
6	ICSB2[ICSPB2]-ZD6H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	80: 800mm ? 200: 2000mm
③	X-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm ? 40: 400mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X-axis increases the length of the motor unit. Please contact IAI for details.
 *2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
 *3 Cannot be selected for High-Precision Specification.
 * To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-10-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
 * Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	800~1100	1200	1300	1400	1500
X-axis	—	1200	1100	1000	950	800
Z-axis	600	—	—	—	—	—

	1600	1700	1800	1900	2000
X-axis	700	600	550	500	450
Z-axis	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke						
		100	150	200	250	300	350	400
Acceleration *1	0.2	20.0	20.0	20.0	19.8	18.3	16.8	15.4
	0.3	20.0	19.2	17.3	15.5	13.9	12.4	11.1
	0.4	18.3	16.0	14.1	12.3	10.7	9.3	8.0

*1 When the acceleration is the same for the X/Z-axes.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) Please note that a longer stroke will result in a lower max speed.
- (Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

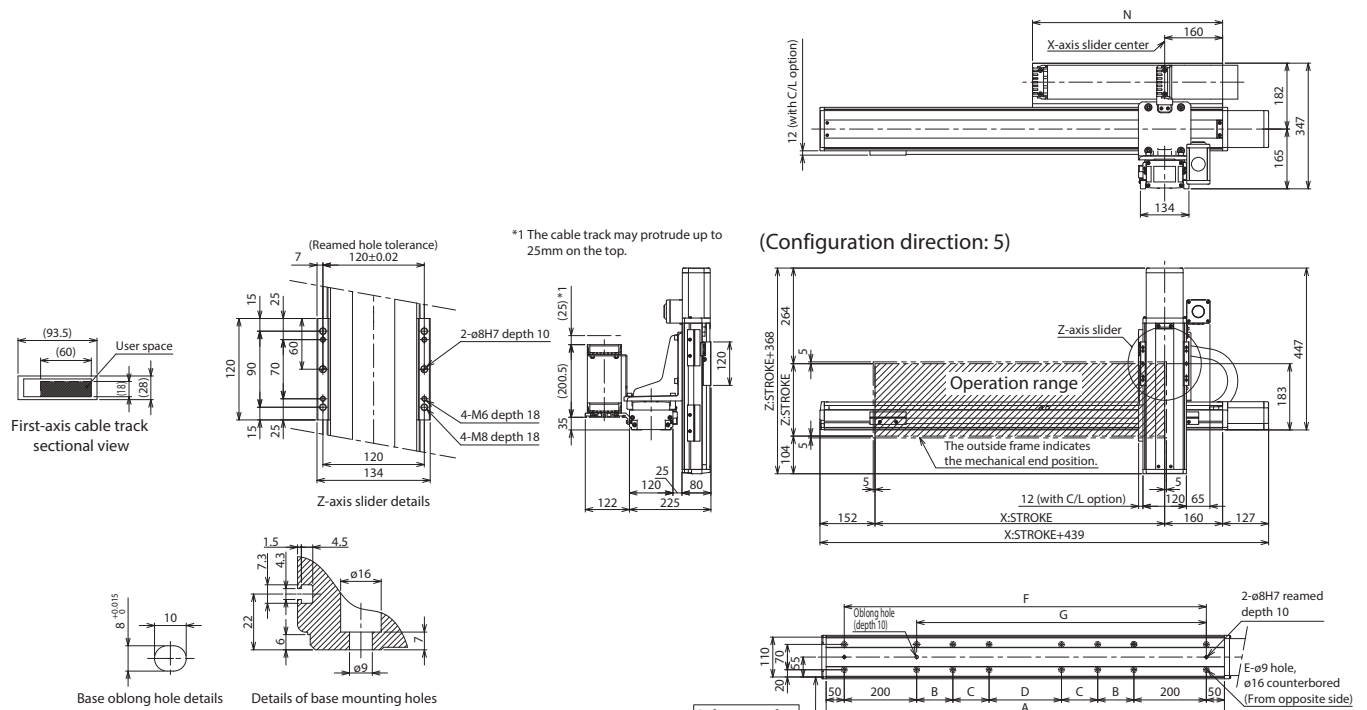
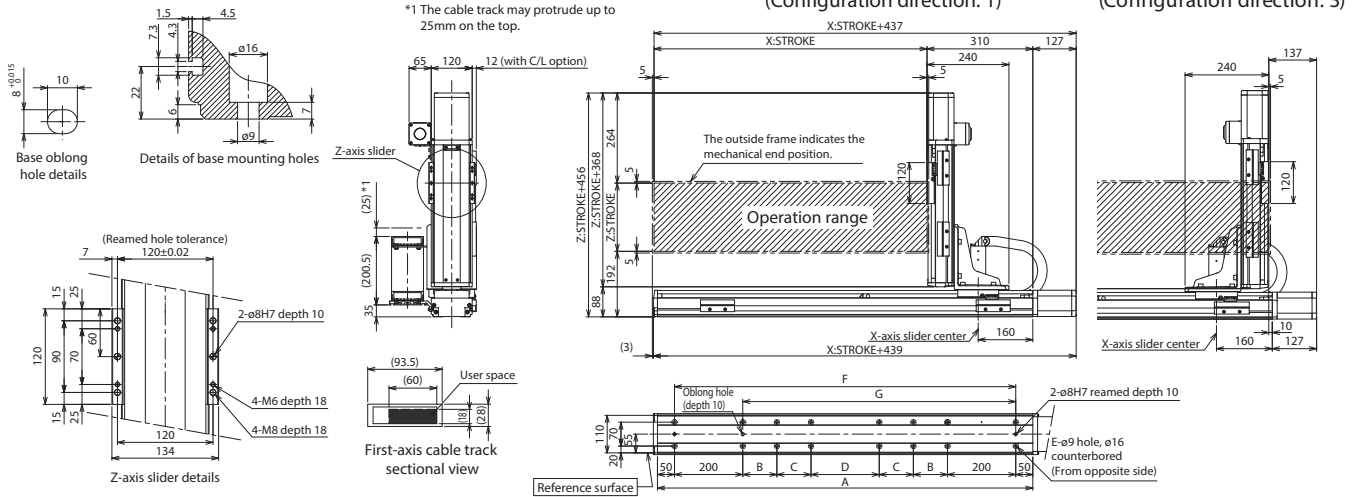
ICSB2 [ICSPB2]-ZD□H-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

ICSB2-ZG□S

ICSPB2-ZG□S High-Precision Specification

±10μm Standard

Battery-less Absolute

X-Z 2-axis

XZ (Z Upright)

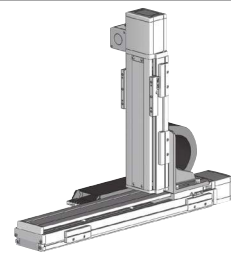
High Speed Type

X:Lg (400W)
Z:Lg (400W)

±5μm High Precision

Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

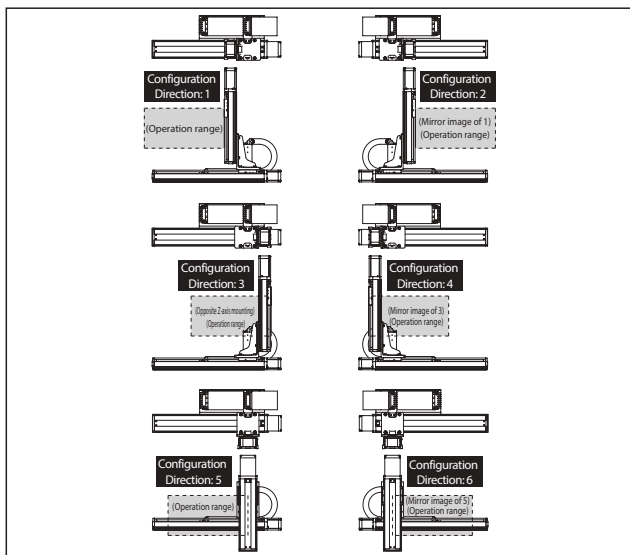


Model Specification * Items in brackets [] are for the High-Precision Specification.

XZ configuration direction *1	Model
1	ICSB2[ICSPB2]-ZG1S-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-ZG2S-①-②-③-④-⑤-T2-⑥-⑦
3	ICSB2[ICSPB2]-ZG3S-①-②-③-④-⑤-T2-⑥-⑦
4	ICSB2[ICSPB2]-ZG4S-①-②-③-④-⑤-T2-⑥-⑦
5	ICSB2[ICSPB2]-ZG5S-①-②-③-④-⑤-T2-⑥-⑦
6	ICSB2[ICSPB2]-ZG6S-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XZ Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM-①-400-40-②-T2-⑧-③	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-①-400-20-④-T2-⑧-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑧ in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	2400	1840	1530	1290	1100	880	
Z-axis	1200						

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	20.0	20.0	20.0	20.0	20.0	19.7	18.9	17.3	15.7
	0.3	20.0	20.0	20.0	19.2	17.2	15.3	13.6	12.0	10.4
	0.4	20.0	19.7	17.4	15.2	13.3	11.4	9.8	8.2	6.7
	0.5	16.4	15.6	14.2	12.1	10.2	8.5	6.9	5.4	4.0
	0.6	11.9	11.1	10.3	9.5	7.8	6.1	4.7	3.2	1.9
	0.7	8.3	7.5	6.7	5.9	5.2	4.3	2.9	1.5	0.2
	0.8	6.5	5.7	4.9	4.1	3.4	2.6	1.4	—	—
	0.9	4.7	3.9	3.1	2.3	1.6	0.8	—	—	—
	1	2.9	2.1	1.3	0.5	—	—	—	—	—

*1 When the acceleration is the same for the X/Z-axes.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm
③	X-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X-axis increases the length of the motor unit. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Z-axis motor output/lead	400W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

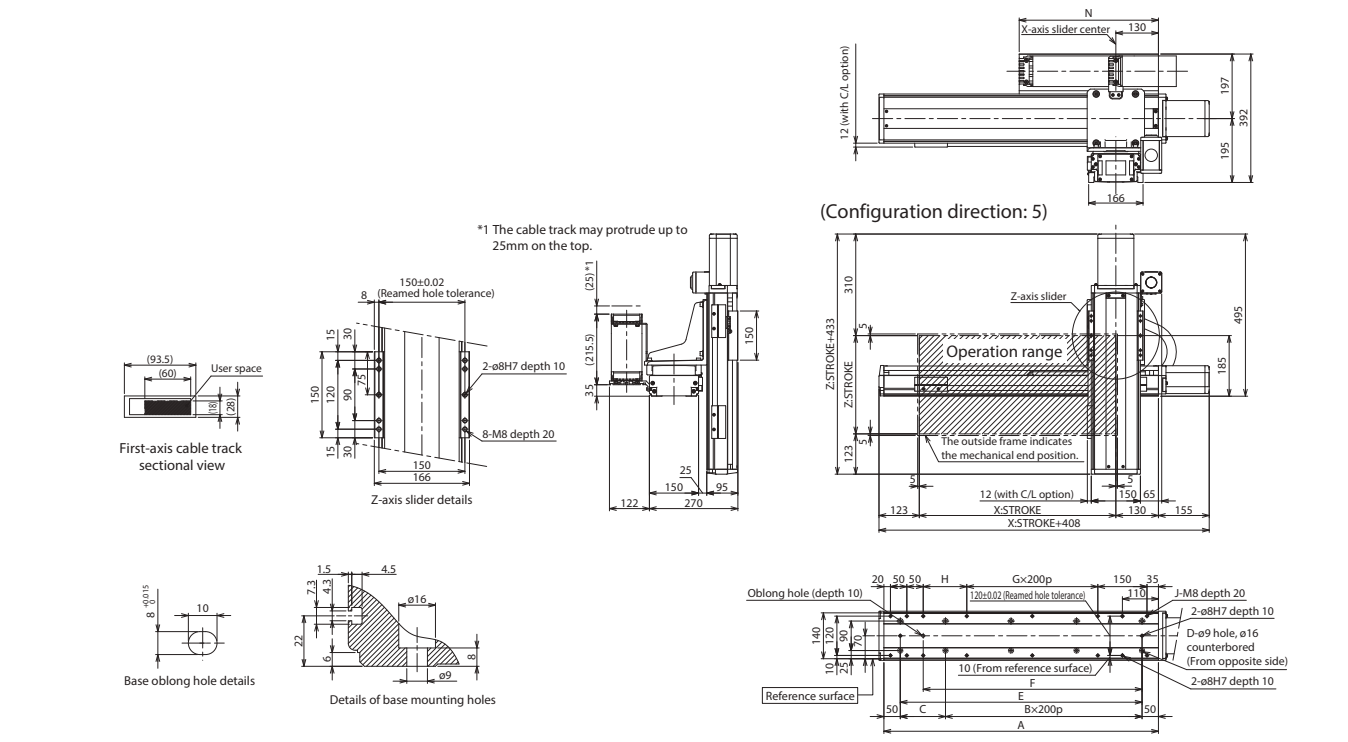
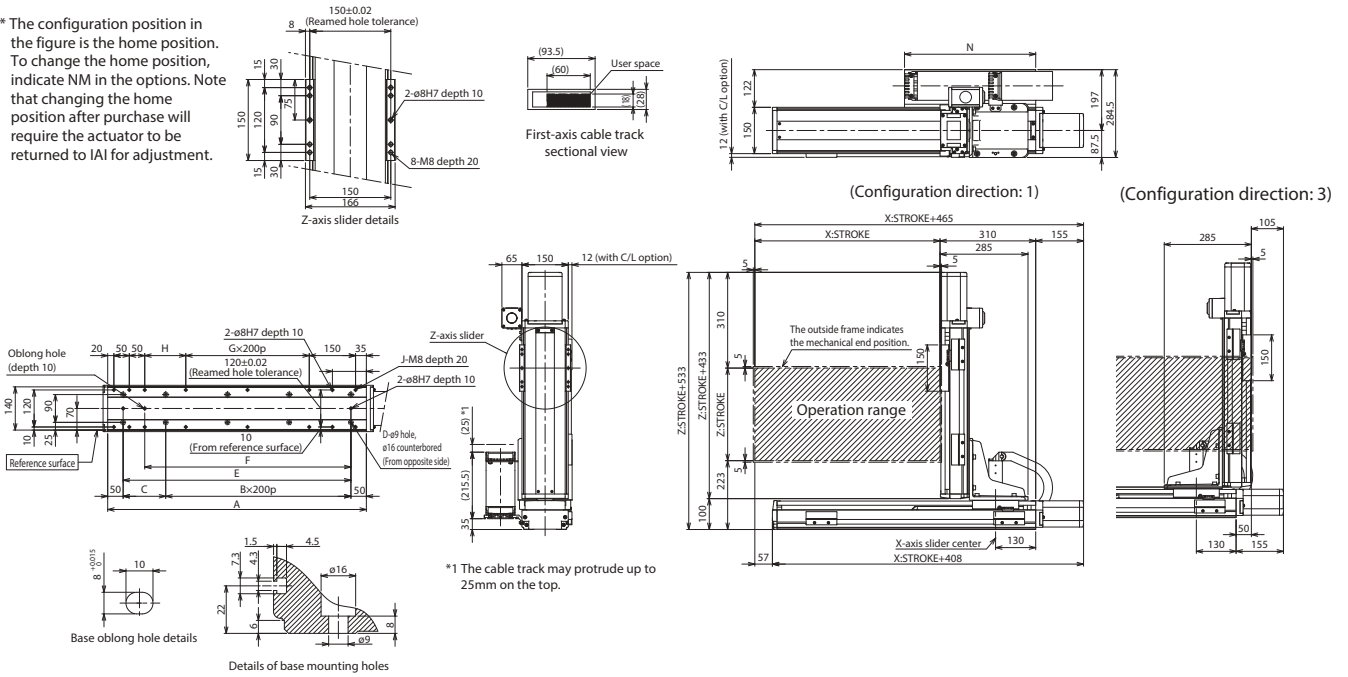
ICSB2 [ICSPB2]-ZG□S-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

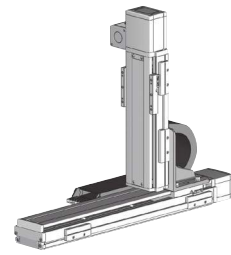


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB2-ZH□S

ICSPB2-ZH□S High-Precision Specification

±10μm Standard
±5μm High Precision
Battery-less Absolute
X-Z 2-axis
XZ (Z Upright)
High Speed Long Type
X-Lg (400W)
Z-Lg (400W)



Model Specification Items

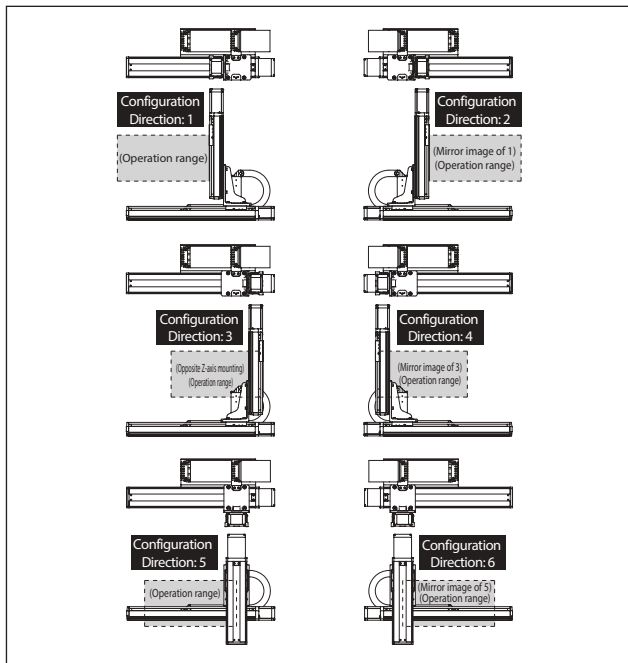
Series ICSB2: Standard 2-axis specification
 ICSPB2: High precision 2-axis specification
Type Refer to Model Specification table below
Encoder Type WA: Battery-less Absolute
X-axis Stroke/Option 100: 1000mm Absolute
 250: 2500mm (Every 100mm)
Z-axis Stroke/Option 10: 100mm Absolute
 50: 500mm (Every 50mm)
Applicable Controllers T2: sCON
 SSEL
 XSEL-P/Q
 XSEL-RA/SA
Cable Length 3L: 3m
 5L: 5m
 □L: Specified length
Z-axis Cable Management Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XZ configuration direction *1	Model
1	ICSB2[ICSPB2]-ZH1S- [1] - [2] - [3] - [4] - [5] -T2- [6] - [7]
2	ICSB2[ICSPB2]-ZH2S- [1] - [2] - [3] - [4] - [5] -T2- [6] - [7]
3	ICSB2[ICSPB2]-ZH3S- [1] - [2] - [3] - [4] - [5] -T2- [6] - [7]
4	ICSB2[ICSPB2]-ZH4S- [1] - [2] - [3] - [4] - [5] -T2- [6] - [7]
5	ICSB2[ICSPB2]-ZH5S- [1] - [2] - [3] - [4] - [5] -T2- [6] - [7]
6	ICSB2[ICSPB2]-ZH6S- [1] - [2] - [3] - [4] - [5] -T2- [6] - [7]

*1 Please refer to the following diagram under XZ Configuration Direction. Please refer to the table on the right for details of [1] through [7] in the model names above.

XZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm ? 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Z-axis stroke (Note 1)	10: 100mm ? 50: 500mm
[5]	Z-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Z-axis Cable Management	CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X-axis increases the length of the motor unit. Please contact IAI for details.
 *2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
 *3 Cannot be selected for High-Precision Specification.
 * To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXMX- [1] -400-40- [2] -T2- [3] - [4]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM- [1] -400-20- [2] -T2- [3] - [4]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.
 Note that the strokes are indicated in mm (millimeters).
 * Cable exit direction is specified with [8] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	1000~1200	1300	1400	1500	1600	1700	1800
X-axis	—	2400	2300	2000	1900	1660	1480	1300
Z-axis	1200	—	—	—	—	—	—	—

	1900	2000	2100	2200	2300	2400	2500
X-axis	1180	1080	980	880	820	740	680
Z-axis	—	—	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

Acceleration *1	Z-axis stroke								
	100	150	200	250	300	350	400	450	500
0.2	20.0	20.0	20.0	20.0	20.0	19.7	18.9	17.3	15.7
0.3	20.0	20.0	20.0	19.2	17.2	15.3	13.6	12.0	10.4
0.4	20.0	19.7	17.4	15.2	13.3	11.4	9.8	8.2	6.7

*1 When the acceleration is the same for the X/Z-axes.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Z-axis motor output/lead	400W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
 (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
 (Note 3) Please note that a longer stroke will result in a lower max speed.
 (Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

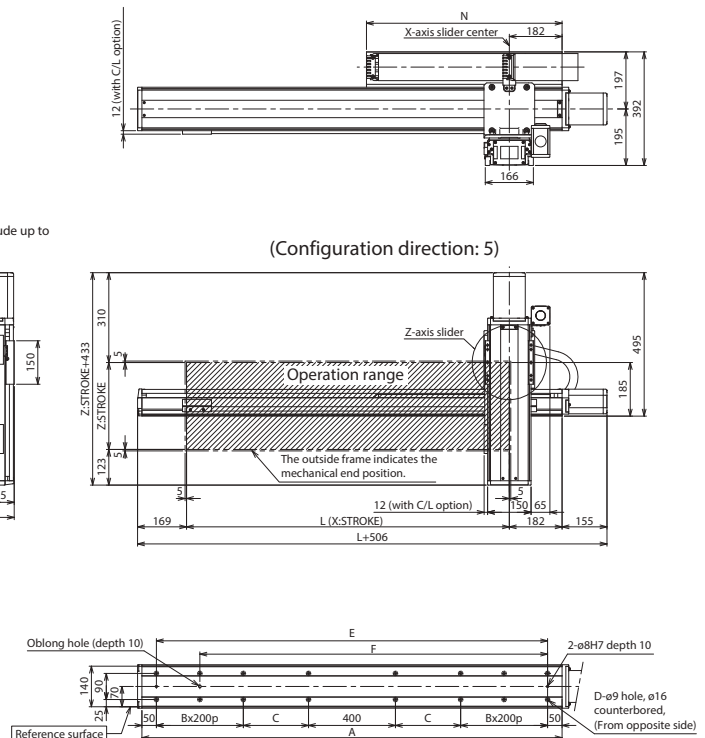
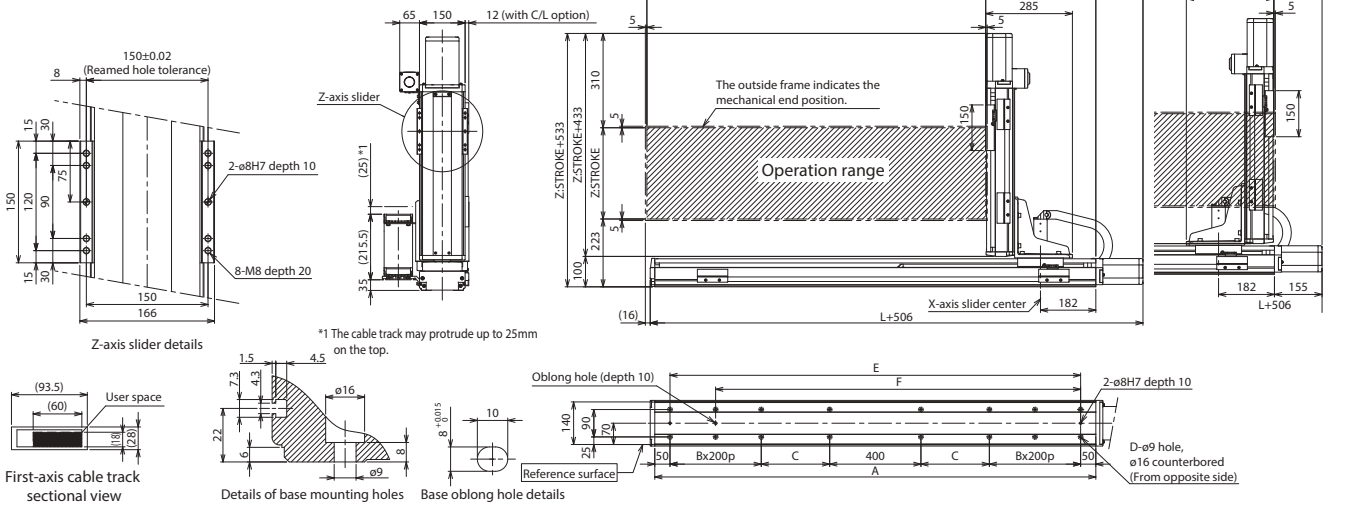
ICSB2 [ICSPB2]-ZH□S-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis nominal stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB2-YSA□H

ICSPB2-YSA□H High-Precision Specification



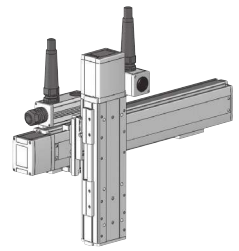
Battery-less Absolute

Y-Z 2-axis

YZS (Z Slider)

High Speed Type

Y: 5m (60W)
Z: 5m (60W)



Model Specification Items

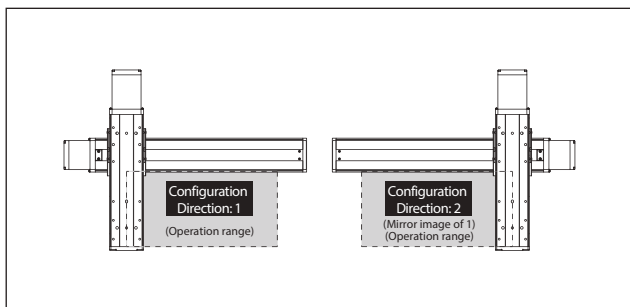
Series	Type	Encoder Type	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 50: 500mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

YZ configuration direction *1	Model
1	ICSB2[ICSPB2]-YSA1H-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-YSA2H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under YZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

YZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
③	Y-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
Y-axis	ISB[ISPB]-SXM-①-60-16-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-8-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~500
Y-axis	960	
Z-axis	480	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke						
		100	150	200	250	300	350	400
Acceleration *1	0.2	3.9	3.5	3.2	2.8	2.5	2.2	1.9
	0.3	3.9	3.5	3.2	2.8	2.5	2.2	1.9
	0.4	3.9	3.5	3.2	2.8	2.5	2.2	1.9
	0.5	3.0	2.6	2.3	1.9	1.6	1.3	1.0
	0.6	2.1	1.7	1.4	1.0	0.7	0.4	0.1
	0.7	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—
1.2	—	—	—	—	—	—	—	

*1 When the acceleration is the same for the Y/Z-axes.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
Y-axis motor output/lead	60W/16mm
Z-axis motor output/lead	60W/8mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the Y-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

ICSB2 [ICSPB2]-YSA□H-SC (Self-standing cable specification)

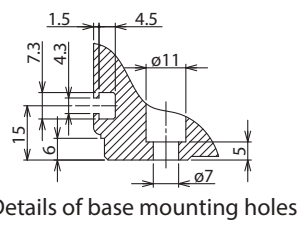
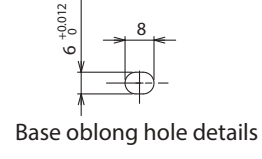
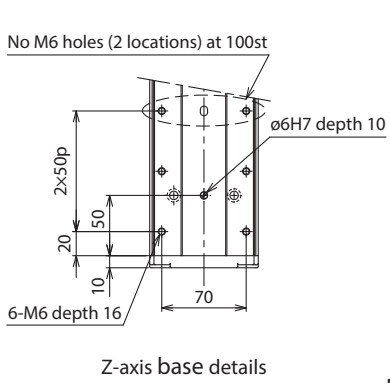
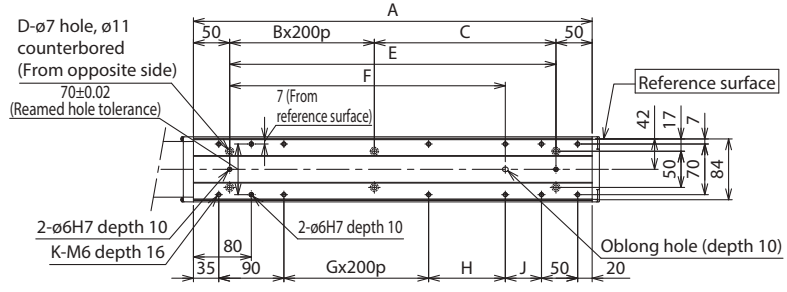
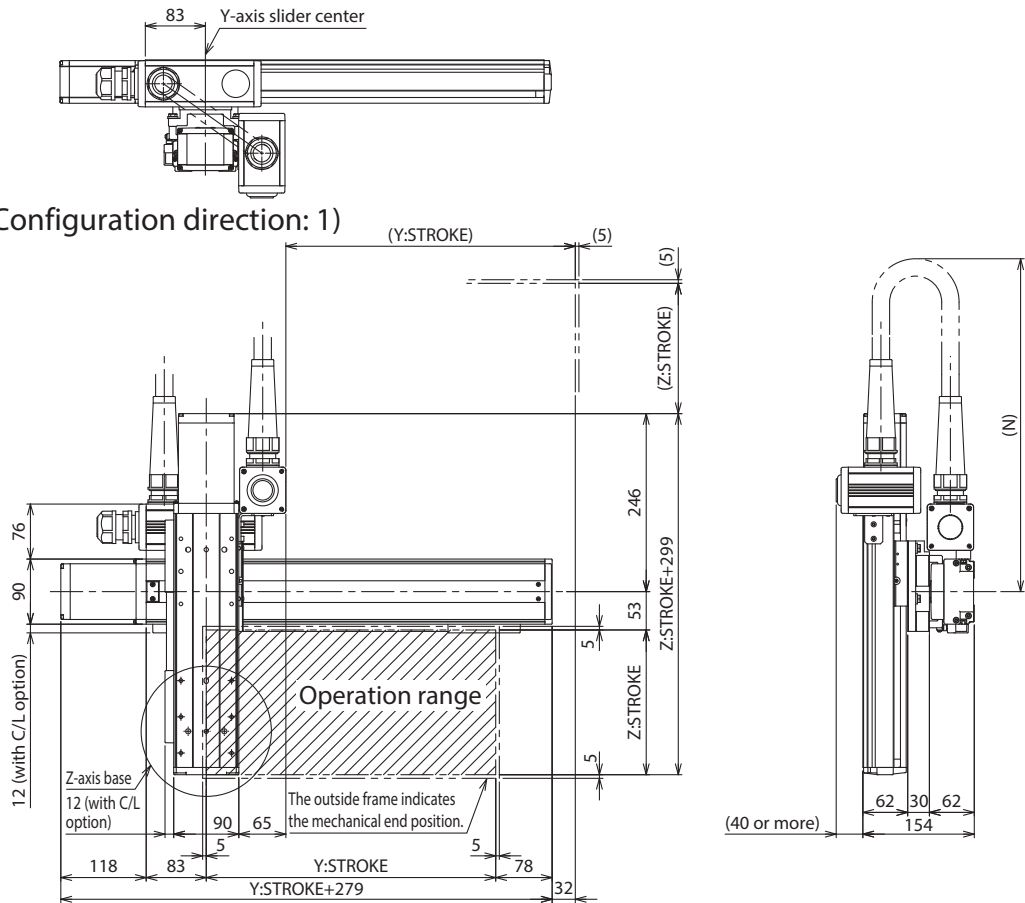
Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Y-axis stroke	100	150	200	250	300	350	400	450	500
A	251	301	351	401	451	501	551	601	651
B	0	0	0	1	1	1	1	2	2
C	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8
E	151	201	251	301	351	401	451	501	551
F	131	131	181	231	281	331	381	431	481
G	0	0	0	0	0	0	1	1	1
H	56	56	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12

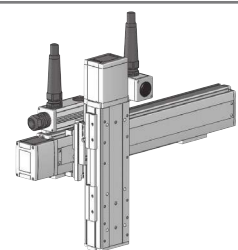
Z-axis	N									
	Y-axis	100	150	200	250	300	350	400	450	500
100	550	550	600	600	650	650	700	700	700	700
150	600	600	650	650	700	700	750	750	750	750
200	650	650	700	700	750	750	800	800	800	800
250	700	700	750	750	800	800	850	850	850	850
300	750	750	800	800	850	850	900	900	900	900
350	800	800	850	850	900	900	950	950	950	950
400	850	850	900	900	950	950	1000	1000	1000	1000

ICSB2-YSA□M

ICSPB2-YSA□M High-Precision Specification



- Battery-less Absolute
- Y-Z 2-axis
- YZS (Z Slider)
- Medium Speed Type
- Y: 5m (60W)
- Z: 5m (60W)



Model Specification Items

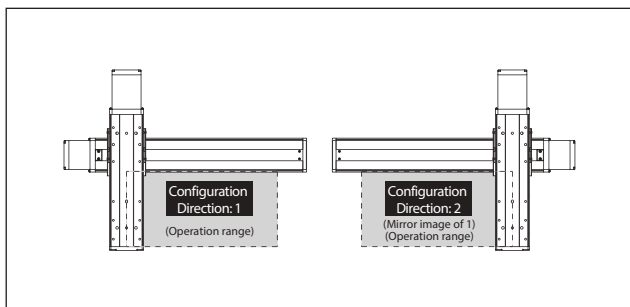
Series	Type	Encoder Type	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 50: 500mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCION SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

YZ configuration direction *1	Model
1	ICSB2[ICSPB2]-YSA1M-①-②③④⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-YSA2M-①-②③④⑤-T2-⑥-⑦

*1 Please refer to the following diagram under YZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

YZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
③	Y-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
Y-axis	ISB[ISPB]-SXM-①-60-8-②-T2-③④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-4-④-T2-③⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ③ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~500
Y-axis	480	—
Z-axis	240	—

Payload by Acceleration/Deceleration (kg) (Note 4)

	Acceleration *1	Z-axis stroke						
		100	150	200	250	300	350	400
	0.2	11.0	10.6	10.3	9.9	9.6	8.9	8.6
	0.3	11.0	10.6	10.3	9.9	9.6	8.9	8.6
	0.4	11.0	10.6	10.3	9.9	9.6	8.9	8.6
	0.5	10.7	10.4	10.0	9.6	9.3	8.9	8.6
	0.6	9.6	9.2	8.9	8.5	8.2	7.9	7.6
	0.7	6.9	6.5	6.2	5.8	5.5	5.2	4.9
	0.8	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—

*1 The acceleration is the Y-axis value. When Z-axis is fixed at 0.2G.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
Y-axis motor output/lead	60W/8mm
Z-axis motor output/lead	60W/4mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the Y-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) Please note that a longer stroke will result in a lower max speed.
- (Note 4) The rated acceleration is 0.4G for Y-axis and 0.2G for Z-axis. When the acceleration is increased, the payload will be reduced.

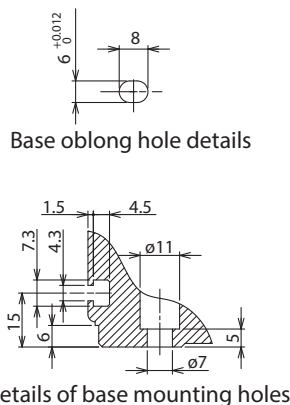
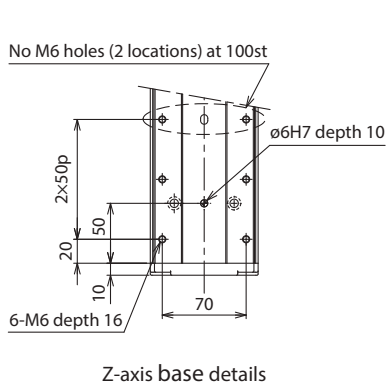
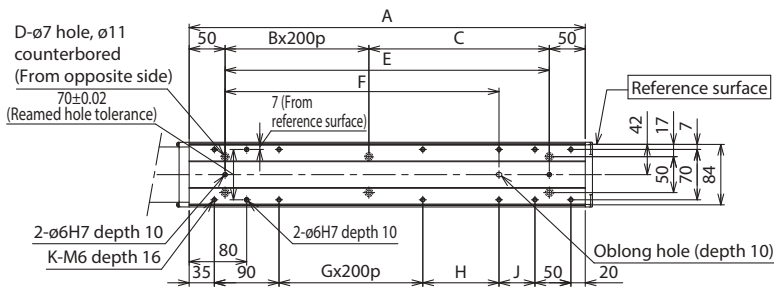
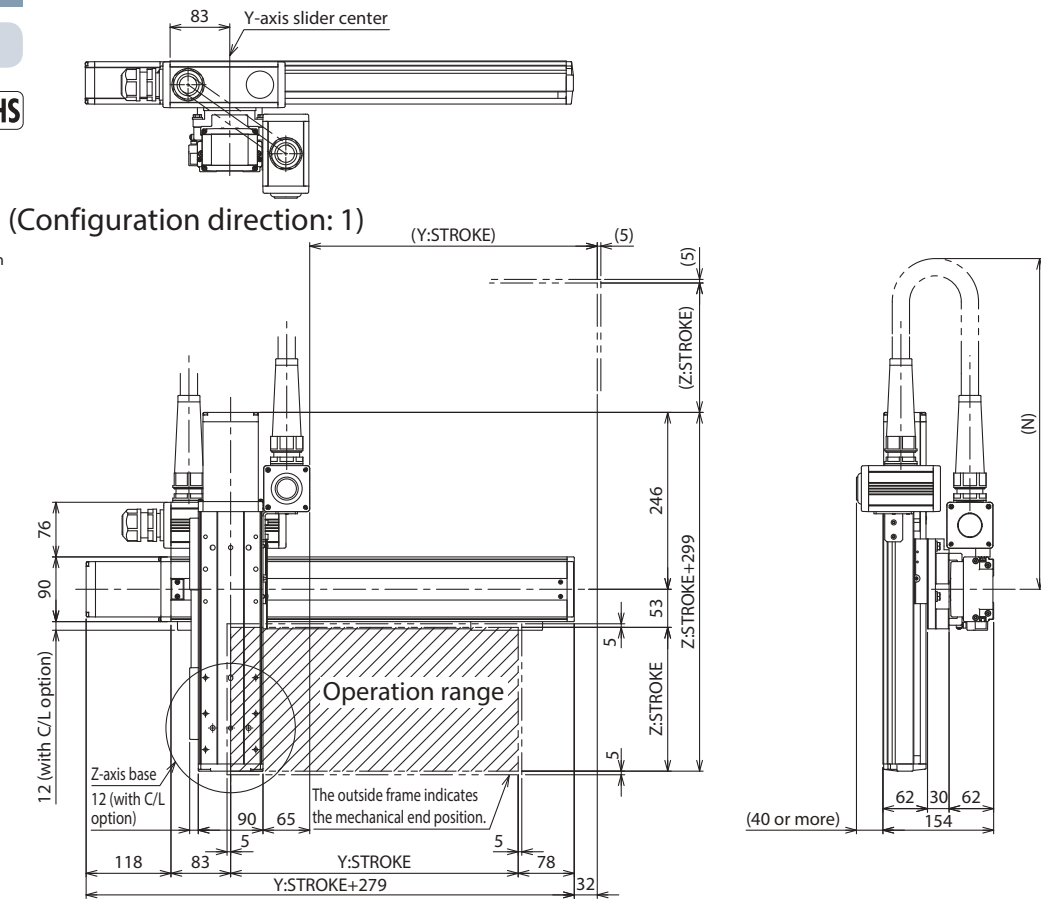
ICSB2 [ICSPB2]-YSA□M-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Y-axis stroke	100	150	200	250	300	350	400	450	500
A	251	301	351	401	451	501	551	601	651
B	0	0	0	1	1	1	1	2	2
C	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8
E	151	201	251	301	351	401	451	501	551
F	131	131	181	231	281	331	381	431	481
G	0	0	0	0	0	0	1	1	1
H	56	56	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12

Z-axis	Y-axis	N									
		100	150	200	250	300	350	400	450	500	
100		550	550	600	600	650	650	700	700	700	
150		600	600	650	650	700	700	750	750	750	
200		650	650	700	700	750	750	800	800	800	
250		700	700	750	750	800	800	850	850	850	
300		750	750	800	800	850	850	900	900	900	
350		800	800	850	850	900	900	950	950	950	
400		850	850	900	900	950	950	1000	1000	1000	

ICSB2-YSC□H

ICSPB2-YSC□H High-Precision Specification

±10μm Standard

±5μm High-Precision

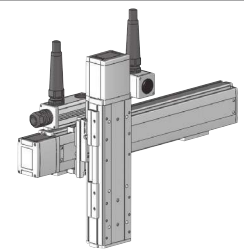
Battery-less Absolute

Y-Z 2-axis

YZS (Z Slider)

High Speed Type

Y: Md (200W)
Z: Md (200W)



Model Specification Items

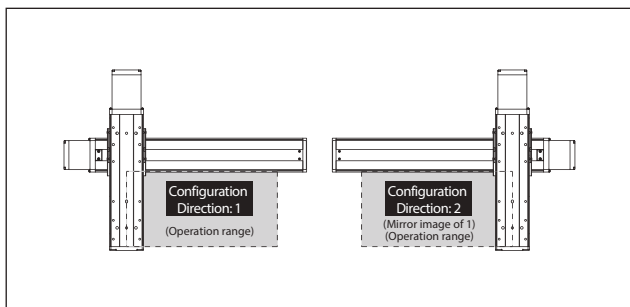
Series	Type	Encoder Type	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCION SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

YZ configuration direction *1	Model
1	ICSB2[ICSPB2]-YSC1H-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-YSC2H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under YZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

YZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
③	Y-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
Y-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-10-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~700
Y-axis	1200	
Z-axis	600	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	13.6	12.9	12.4	11.7	11.1	10.5	10.0	9.3	8.7
	0.3	13.6	12.9	12.4	11.7	11.1	10.5	10.0	9.3	8.7
	0.4	13.6	12.9	12.4	11.7	11.1	10.5	10.0	9.3	8.7
	0.5	10.7	10.1	9.5	8.8	8.3	7.7	7.1	6.5	5.9
	0.6	8.8	8.2	7.6	6.9	6.4	5.8	5.2	4.6	4.0
	0.7	—	—	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 When the acceleration is the same for the Y/Z-axes.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the Y-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

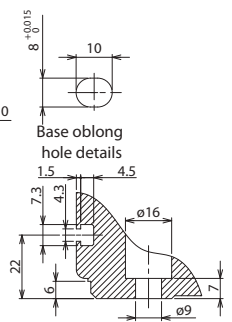
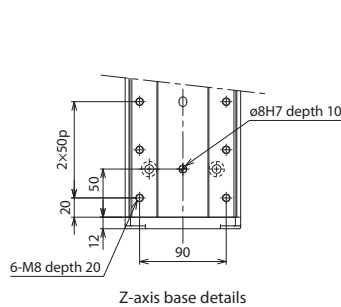
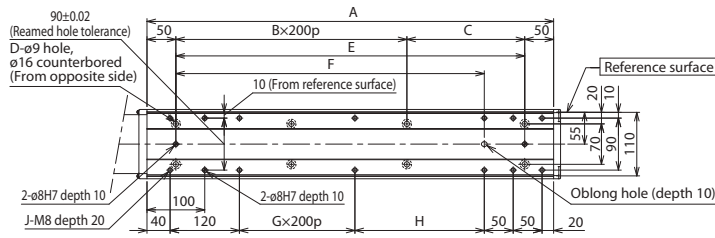
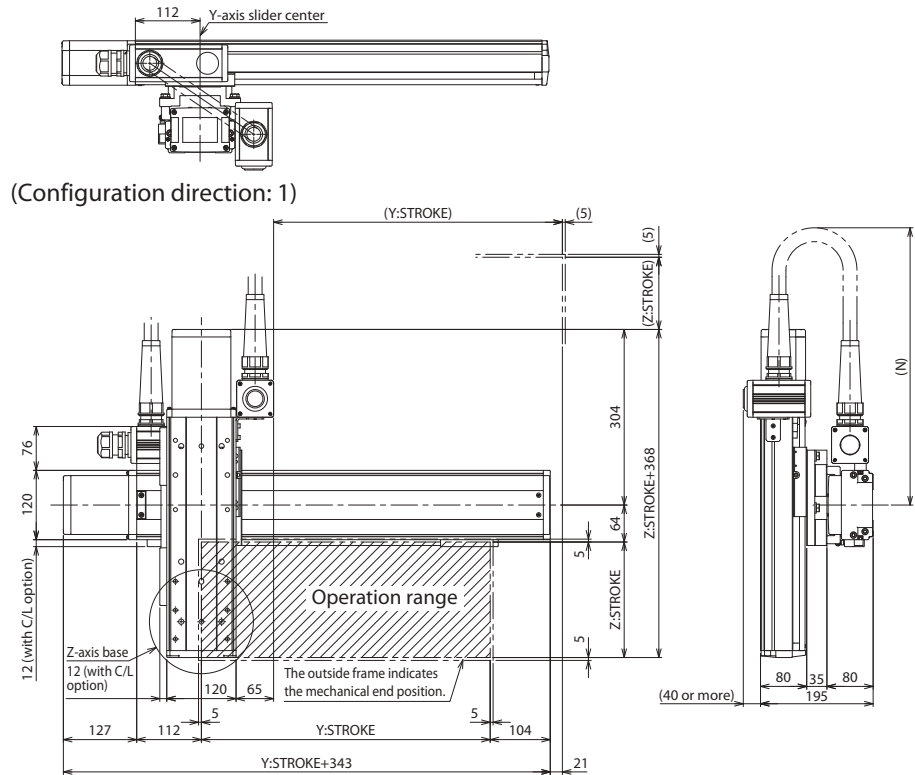
ICSB2 [ICSPB2]-YSC□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Details of base mounting holes

Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
A	304	354	404	454	504	554	604	654	704	754	804	854	904
B	0	0	1	1	1	1	2	2	2	2	3	3	3
C	204	254	304	354	404	454	504	554	604	654	704	754	804
D	4	4	6	6	6	6	8	8	8	8	10	10	10
E	204	254	304	354	404	454	504	554	604	654	704	754	804
F	134	184	234	284	334	384	434	484	534	584	634	684	734
G	0	0	0	0	0	0	1	1	1	1	2	2	2
H	24	74	124	174	224	274	324	374	424	474	524	574	624
J	10	10	10	10	10	10	12	12	12	12	14	14	14

		N												
Z-axis	Y-axis	100	150	200	250	300	350	400	450	500	550	600	650	700
100	100	600	600	650	650	700	700	750	750	800	800	800	850	850
150	150	650	650	700	700	750	750	800	800	850	850	850	900	900
200	200	700	700	750	750	800	800	850	850	900	900	900	950	950
250	250	750	750	800	800	850	850	900	900	950	950	950	1000	1000
300	300	800	800	850	850	900	900	950	950	1000	1000	1000	1050	1050
350	350	850	850	900	900	950	950	1000	1000	1050	1050	1050	1100	1100
400	400	900	900	950	950	1000	1000	1050	1050	1100	1100	1100	1150	1150
450	450	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200
500	500	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250

ICSB2-YSC□M

ICSPB2-YSC□M High-Precision Specification



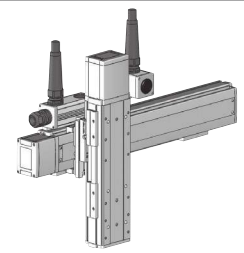
Battery-less Absolute

Y-Z 2-axis

YZS (Z Slider)

Medium Speed Type

X: Md (100W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

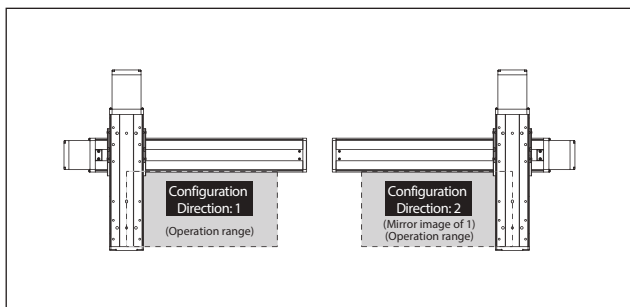
Model Specification

* Items in brackets [] are for the High-Precision Specification.

YZ configuration direction *1	Model
1	ICSB2[ICSPB2]-YSC1M-①-②③④⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-YSC2M-①-②③④⑤-T2-⑥-⑦

*1 Please refer to the following diagram under YZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

YZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
③	Y-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
Y-axis	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-100-5-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~700
Y-axis	600	
Z-axis	300	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	13.3	12.8	12.2	11.6	11.1	10.4	9.9	9.4	8.8
	0.3	13.3	12.8	12.2	11.6	11.1	10.4	9.9	9.4	8.8
	0.4	13.3	12.8	12.2	11.6	11.1	10.4	9.9	9.4	8.8
	0.5	13.3	12.8	12.2	11.6	11.1	10.4	9.9	9.4	8.8
	0.6	13.3	12.8	12.2	11.6	11.1	10.4	9.9	9.4	8.8
	0.7	10.7	10.1	9.6	9.0	8.4	7.8	7.2	6.7	6.2
	0.8	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 The acceleration is the Y-axis value. When Z-axis is fixed at 0.2G.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	100W/5mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the Y-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) Please note that a longer stroke will result in a lower max speed.
- (Note 4) The rated acceleration is 0.4G for Y-axis and 0.2G for Z-axis. When the acceleration is increased, the payload will be reduced.

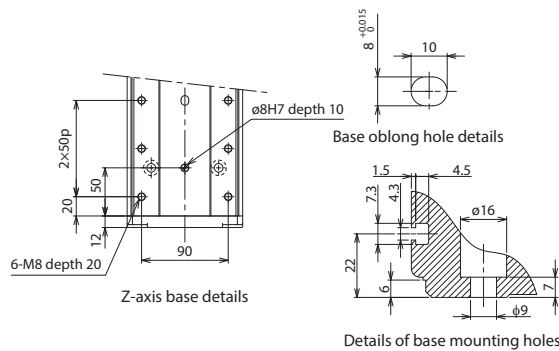
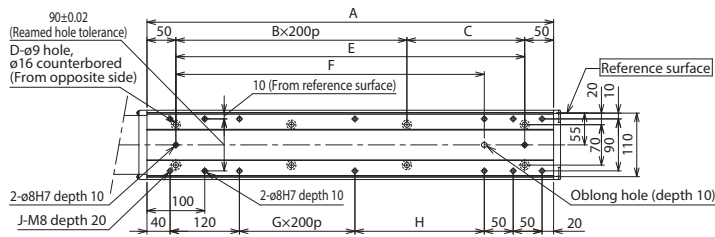
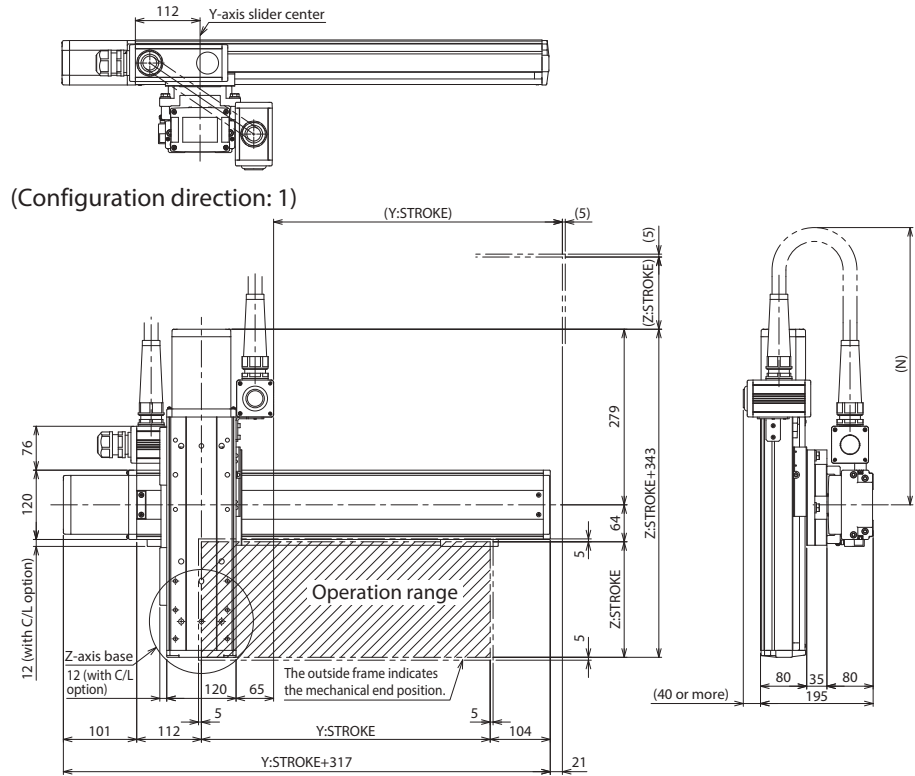
ICSB2 [ICSPB2]-YSC□M-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
A	304	354	404	454	504	554	604	654	704	754	804	854	904
B	0	0	1	1	1	1	2	2	2	2	3	3	3
C	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10
E	204	254	304	354	404	454	504	554	604	654	704	754	804
F	134	184	234	284	334	384	434	484	534	584	634	684	734
G	0	0	0	0	0	0	1	1	1	1	2	2	2
H	24	74	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14

		N												
Y-axis		100	150	200	250	300	350	400	450	500	550	600	650	700
Z-axis	100	600	600	650	650	700	700	750	750	800	800	800	850	850
	150	650	650	700	700	750	750	800	800	850	850	850	900	900
	200	700	700	750	750	800	800	850	850	900	900	900	950	950
	250	750	750	800	800	850	850	900	900	950	950	950	1000	1000
	300	800	800	850	850	900	900	950	950	1000	1000	1000	1050	1050
	350	850	850	900	900	950	950	1000	1000	1050	1050	1050	1100	1100
	400	900	900	950	950	1000	1000	1050	1050	1100	1100	1100	1150	1150
	450	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200
	500	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250

ICSB2-YSG□H

ICSPB2-YSG□H High-Precision Specification

±10μm
Standard

±5μm
High Precision

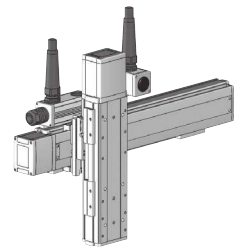
Battery-less Absolute

Y-Z 2-axis

YZS (Z Slider)

High Speed Type

Y: Lg (400W)
Z: Lg (400W)



Model Specification Items

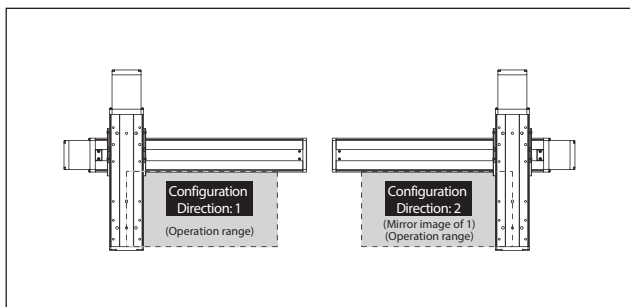
Series	Type	Encoder Type	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCION SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

YZ configuration direction *1	Model
1	ICSB2[ICSPB2]-YSG1H-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-YSG2H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under YZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

YZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
③	Y-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	SC: Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
Y-axis	ISB[ISPB]-LXM-①-400-20-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-①-400-10-②-T2-③-④	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ④ in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~700
Y-axis	1200	
Z-axis	600	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	28.8	28.0	27.2	26.4	25.7	24.8	24.1	23.3	22.5
	0.3	28.8	28.0	27.2	26.4	25.7	24.8	24.1	23.3	22.5
	0.4	28.8	28.0	27.2	26.4	25.7	24.8	24.1	23.3	22.5
	0.5	23.4	22.6	21.8	21.0	20.3	19.4	18.7	17.9	17.1
	0.6	19.8	19.0	18.2	17.4	16.7	15.8	15.1	14.3	13.5
	0.7	—	—	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 When the acceleration is the same for the Y/Z-axes.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
Y-axis motor output/lead	400W/20mm
Z-axis motor output/lead	400W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the Y-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

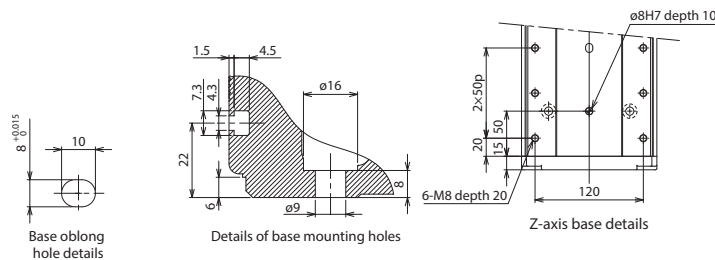
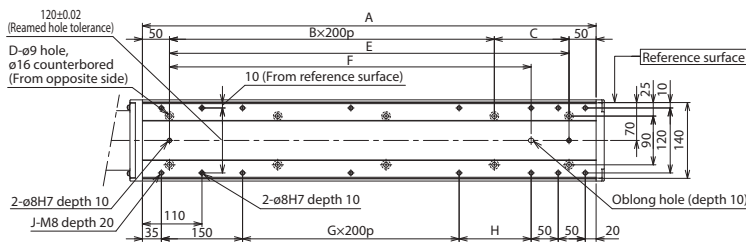
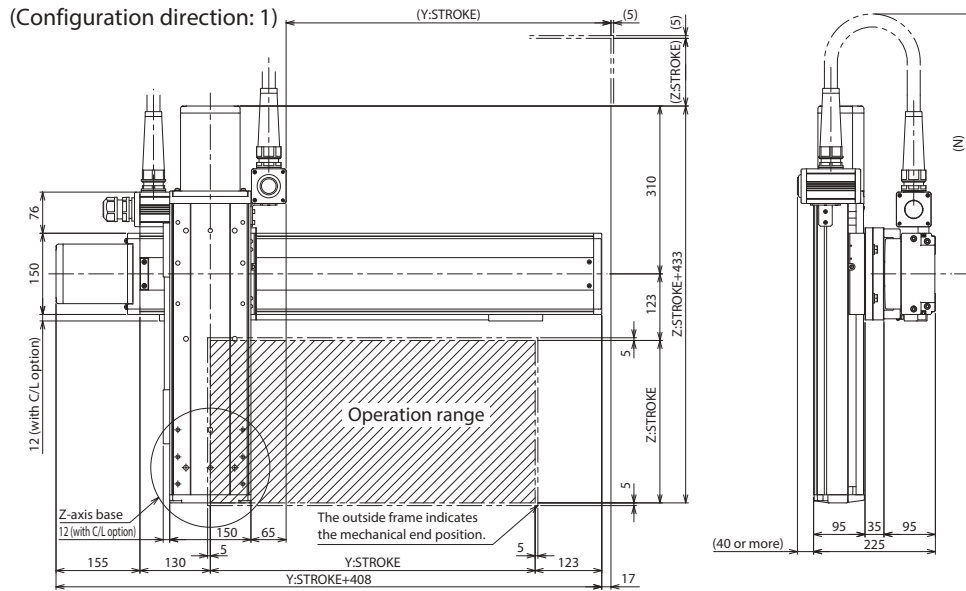
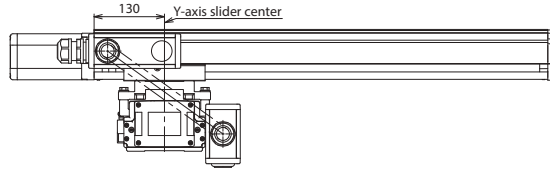
ICSB2 [ICSPB2]-YSG□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
A	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	0	1	1	1	1	2	2	2	2	3	3	3
C	238	288	338	388	438	488	538	588	638	688	738	788	838
D	4	4	6	6	6	6	8	8	8	8	10	10	10
E	238	288	338	388	438	488	538	588	638	688	738	788	838
F	168	218	268	318	368	418	468	518	568	618	668	718	768
G	0	0	0	0	0	0	1	1	1	1	2	2	2
H	33	83	133	183	233	283	333	383	433	483	533	583	633
J	10	10	10	10	10	10	12	12	12	12	14	14	14

		N												
Y-axis		100	150	200	250	300	350	400	450	500	550	600	650	700
Z-axis	100	600	600	650	650	700	700	750	750	750	800	800	850	850
	150	650	650	700	700	750	750	800	800	800	850	850	900	900
	200	700	700	750	750	800	800	850	850	850	900	900	950	950
	250	750	750	800	800	850	850	900	900	900	950	950	1000	1000
	300	800	800	850	850	900	900	950	950	950	1000	1000	1050	1050
	350	850	850	900	900	950	950	1000	1000	1000	1050	1050	1100	1100
	400	900	900	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150
450	950	950	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200	
500	1000	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200	1250	1250	

ICSB2-YBA□H

ICSPB2-YBA□H High-Precision Specification

±10μm Standard

±5μm High-Precision

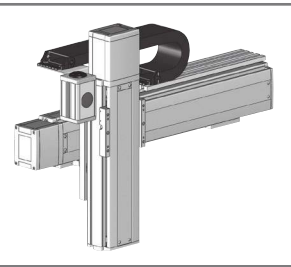
Battery-less Absolute

Y-Z 2-axis

YZB (Z Base Mount)

High Speed Type

Y: 5m (60W)
Z: 5m (60W)



Model Specification Items

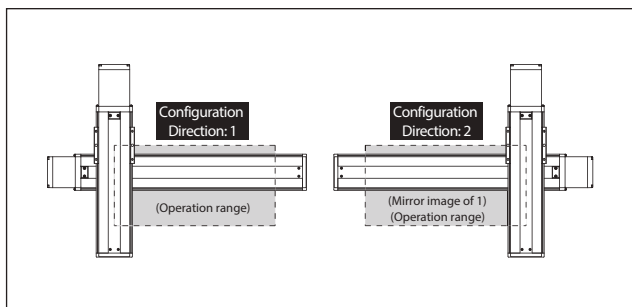
Series	Type	Encoder Type	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 90: 900mm <60: 600mm> * For self-standing cable specification	10: 100mm 40: 400mm (Every 50mm) Refer to Options table below.	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

YZ configuration direction *1	Model
1	ICSB2[ICSPB2]-YBA1H-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-YBA2H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under YZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

YZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	Y-axis stroke (Note 1)	10: 100mm 90: 900mm (60: 600mm) *1
③	Y-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	SC: Self-standing cable CT: Cable track

*1 The maximum Y-axis stroke is 600mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
Y-axis	ISB[ISPB]-SXM-①-60-16-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-8-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ③ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~600	650~700	750~800	850~900
Y-axis	960	655	515	415	—
Z-axis	480	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke						
		100	150	200	250	300	350	400
Acceleration *1	0.2	7.0	7.0	6.7	6.3	6.1	5.7	5.4
	0.3	7.0	7.0	6.7	6.3	6.1	5.7	5.4
	0.4	7.0	7.0	6.7	6.3	6.1	5.7	5.4
	0.5	5.2	4.8	4.5	4.1	3.8	3.5	3.2
	0.6	3.4	3.0	2.7	2.3	2.0	1.7	1.4
	0.7	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—

*1 When the acceleration is the same for the Y/Z-axes.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
Y-axis motor output/lead	60W/16mm
Z-axis motor output/lead	60W/8mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the Y-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

ICSB2 [ICSPB2]-YBA□H-SC (Self-standing cable specification)

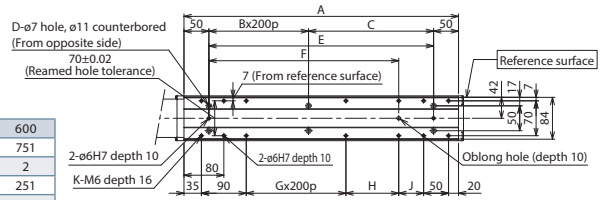
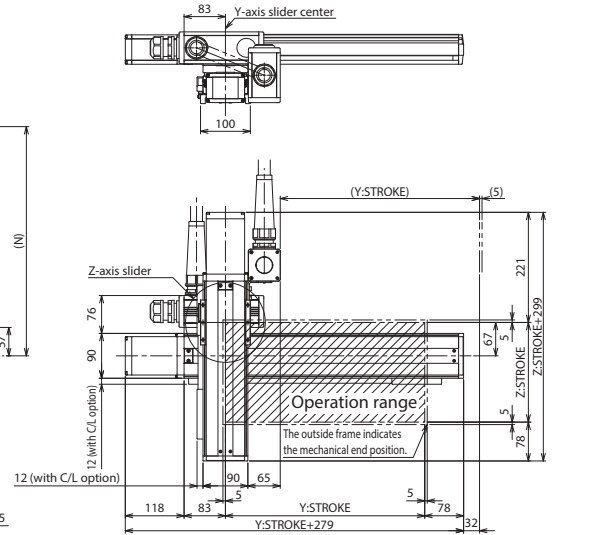
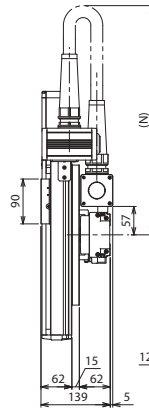
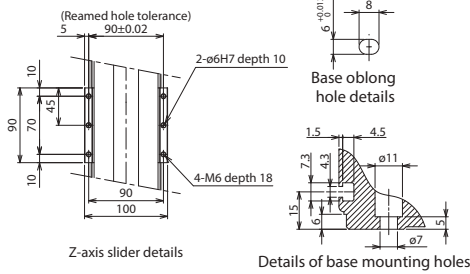
Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600
A	251	301	351	401	451	501	551	601	651	701	751
B	0	0	0	1	1	1	1	2	2	2	2
C	151	201	251	101	151	201	251	101	151	201	251
D	4	4	4	6	6	6	6	8	8	8	8
E	151	201	251	301	351	401	451	501	551	601	651
F	131	131	181	231	281	331	381	431	481	531	581
G	0	0	0	0	0	0	1	1	1	1	2
H	56	56	106	156	206	256	106	156	206	256	106
J	0	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14
N	600	600	600	600	600	600	600	650	650	700	700

ICSB2 [ICSPB2]-YBA□H-CT (Cable track specification)

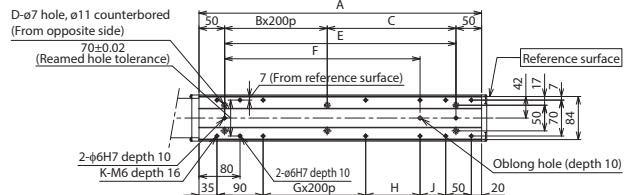
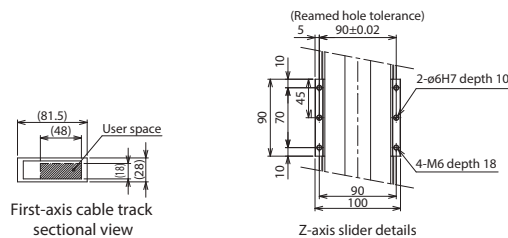
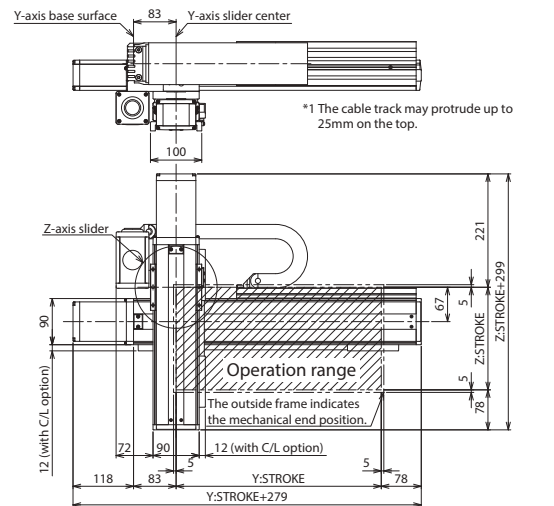
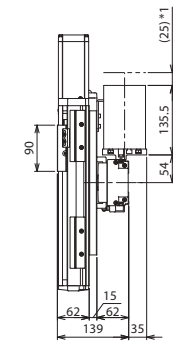
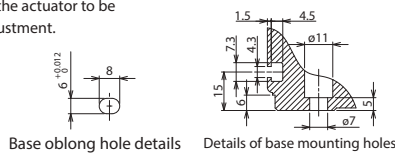
Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
A	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051
B	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4
C	151	201	251	101	151	201	251	101	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12
E	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951
F	131	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3
H	56	56	106	156	206	256	106	156	206	256	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16

ICSB2-YBA□M

ICSPB2-YBA□M High-Precision Specification

±10μm Standard

±5μm High-Precision

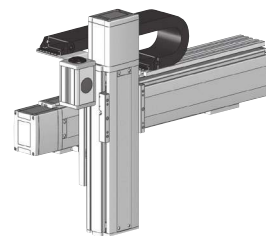
Battery-less Absolute

Y-Z 2-axis

YZB (Z Base Mount)

Medium Speed Type

Y: 5m (60W)
Z: 5m (60W)



Model Specification Items

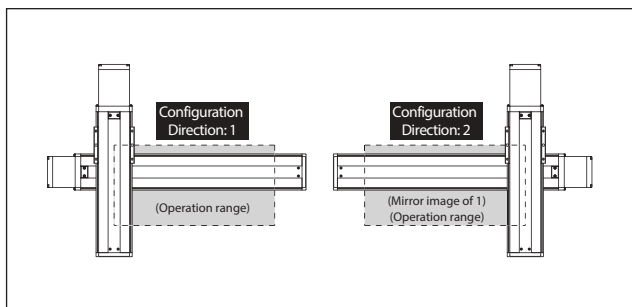
Series	Type	Encoder Type	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 90: 900mm <60: 600mm> * below. (Every 50mm) * For self-standing cable specification	10: 100mm 40: 400mm Refer to Options table below.	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

YZ configuration direction *1	Model
1	ICSB2[ICSPB2]-YBA1M-①-②③④⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-YBA2M-①-②③④⑤-T2-⑥-⑦

*1 Please refer to the following diagram under YZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

YZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	Y-axis stroke (Note 1)	10: 100mm 90: 900mm (60: 600mm) *1
③	Y-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	SC: Self-standing cable CT: Cable track

*1 The maximum Y-axis stroke is 600mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
Y-axis	ISB[ISPB]-SXM-①-60-8-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-4-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ③ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~400	450~600	650~700	750~800	850~900
Y-axis	480	330	260	210	—
Z-axis	240	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke						
		100	150	200	250	300	350	400
Acceleration *1	0.2	14.0	14.0	14.0	14.0	14.0	14.0	14.0
	0.3	14.0	14.0	14.0	14.0	14.0	14.0	14.0
	0.4	14.0	14.0	14.0	14.0	14.0	14.0	14.0
	0.5	13.7	13.4	13.0	12.6	12.4	12.0	11.7
	0.6	9.2	8.9	8.5	8.1	7.9	7.5	7.2
	0.7	6.5	6.2	5.8	5.4	5.2	4.8	4.5
	0.8	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—

*1 The acceleration is the Y-axis value. When Z-axis is fixed at 0.2G.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
Y-axis motor output/lead	60W/8mm
Z-axis motor output/lead	60W/4mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the Y-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G for Y-axis and 0.2G for Z-axis. When the acceleration is increased, the payload will be reduced.

ICSB2 [ICSPB2]-YBA□M-SC (Self-standing cable specification)

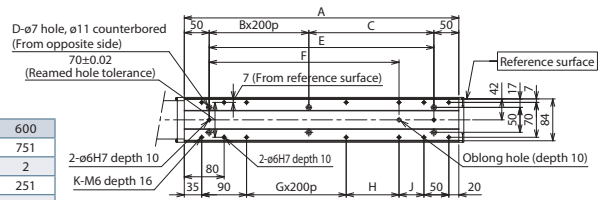
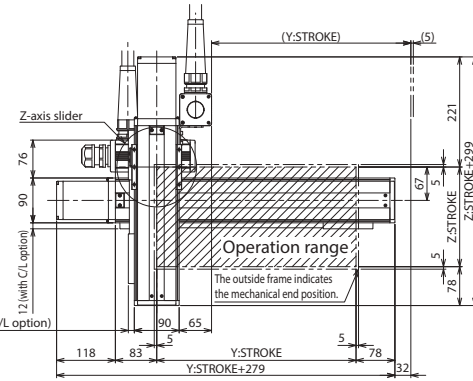
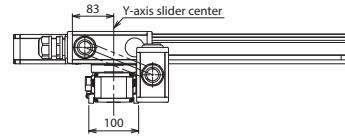
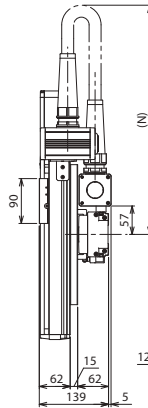
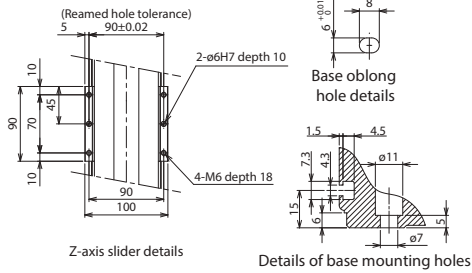
Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600
A	251	301	351	401	451	501	551	601	651	701	751
B	0	0	0	1	1	1	1	2	2	2	2
C	151	201	251	101	151	201	251	101	151	201	251
D	4	4	4	6	6	6	6	8	8	8	8
E	151	201	251	301	351	401	451	501	551	601	651
F	131	131	181	231	281	331	381	431	481	531	581
G	0	0	0	0	0	0	1	1	1	1	2
H	56	56	106	156	206	256	106	156	206	256	106
J	0	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14
N	600	600	600	600	600	600	600	650	650	700	700

ICSB2 [ICSPB2]-YBA□M-CT (Cable track specification)

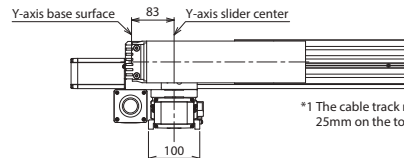
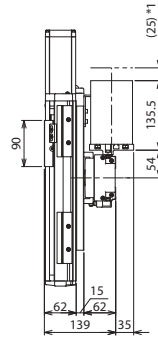
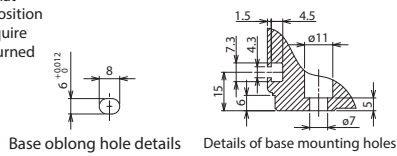
Dimensions

CAD drawings can be downloaded from our website.

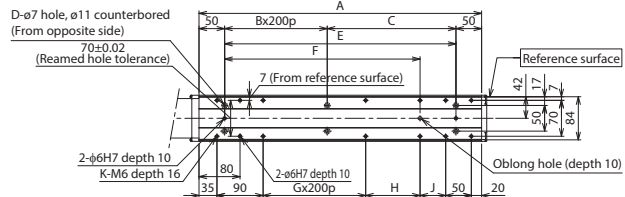
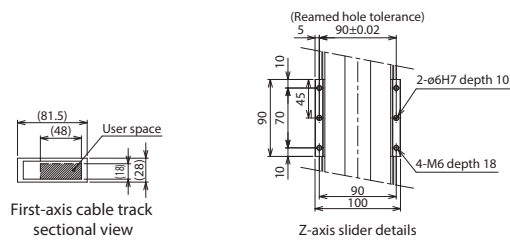
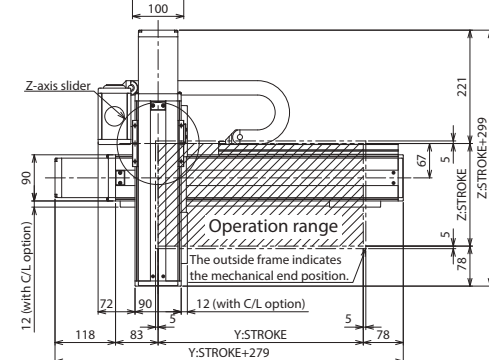


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



*1 The cable track may protrude up to 25mm on the top.



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
A	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051
B	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4
C	151	201	251	101	151	201	251	101	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12
E	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951
F	131	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3
H	56	56	106	156	206	256	106	156	206	256	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	12	14	14	14	16	16	16

ICSB2-YBC□H

ICSPB2-YBC□H High-Precision Specification



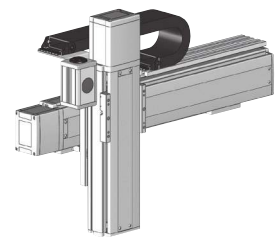
Battery-less Absolute

Y-Z 2-axis

YZB (Z Base Mount)

High Speed Type

Y: Md (200W)
Z: Md (200W)



Model Specification Items

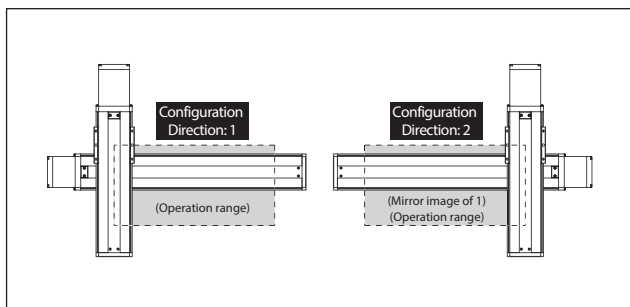
Series	Type	Encoder Type	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm <70: 700mm> * For self-standing cable specification	10: 100mm 50: 500mm Refer to Options table below.	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

YZ configuration direction *1	Model
1	ICSB2[ICSPB2]-YBC1H-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-YBC2H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under YZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

YZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	Y-axis stroke (Note 1)	10: 100mm 110: 1100mm (70: 700mm) *1
③	Y-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	SC: Self-standing cable CT: Cable track

*1 The maximum Y-axis stroke is 700mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
Y-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-10-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ③ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~700	750~800	850~900	950~1000	1050~1100
Y-axis	1200	860	695	570	460	
Z-axis	600					

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	0.3	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	0.4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	0.5	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
	0.6	15.0	15.0	15.0	15.0	14.5	14.0	13.5	12.8	12.3
	0.7	—	—	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 When the acceleration is the same for the Y/Z-axes.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the Y-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

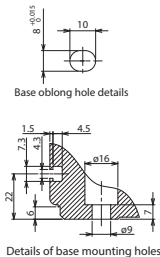
ICSB2 [ICSPB2]-YBC□H-SC (Self-standing cable specification)

Dimensions

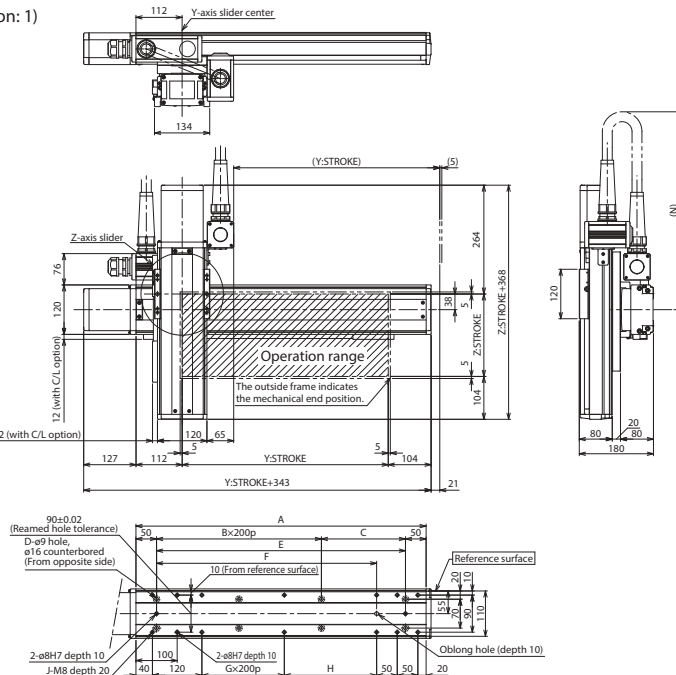
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



(Configuration direction: 1)



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
A	304	354	404	454	504	554	604	654	704	754	804	854	904
B	0	0	1	1	1	1	2	2	2	2	3	3	3
C	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10
E	204	254	304	354	404	454	504	554	604	654	704	754	804
F	134	184	234	284	334	384	434	484	534	584	634	684	734
G	0	0	0	0	0	0	1	1	1	1	2	2	2
H	24	74	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14
N	500	550	550	600	600	650	650	700	700	750	750	800	800

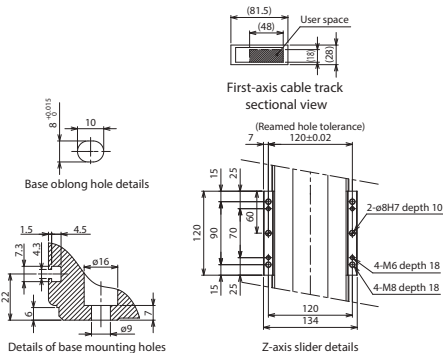
ICSB2 [ICSPB2]-YBC□H-CT (Cable track specification)

Dimensions

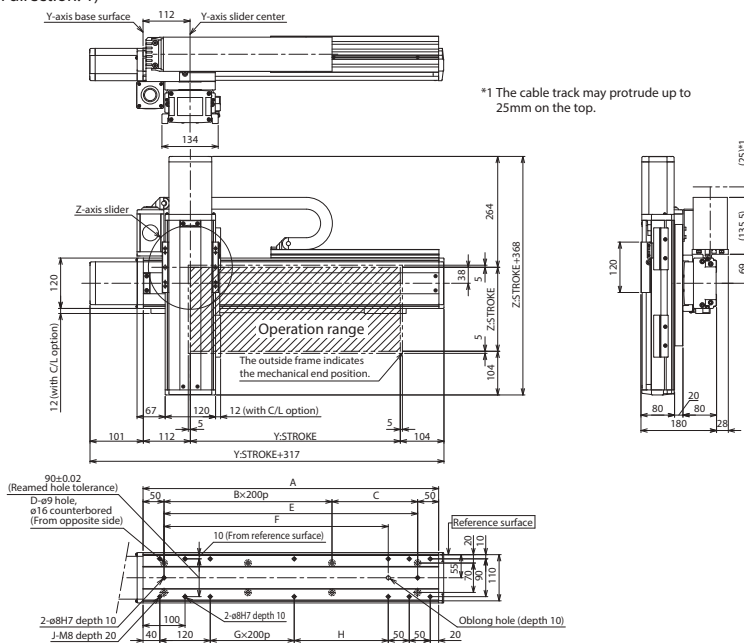
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



(Configuration direction: 1)



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18

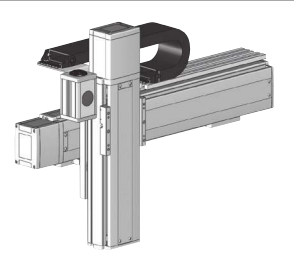
ICSB2-YBC□M

ICSPB2-YBC□M

High-Precision Specification



- Battery-less Absolute
- Y-Z 2-axis
- YZB (Z Base Mount)
- Medium Speed Type
- Y: Md (100W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm <70: 700mm> * For self-standing cable specification	10: 100mm 50: 500mm Refer to Options table below.	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

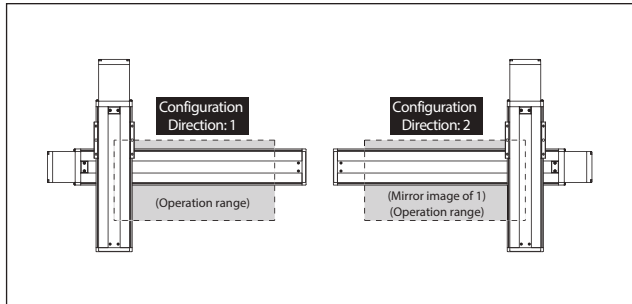
Model Specification

* Items in brackets [] are for the High-Precision Specification.

YZ configuration direction *1	Model
1	ICSB2[ICSPB2]-YBC1M-①-②③④⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-YBC2M-①-②③④⑤-T2-⑥-⑦

*1 Please refer to the following diagram under YZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

YZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	Y-axis stroke (Note 1)	10: 100mm 110: 1100mm (70: 700mm) *1
③	Y-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	SC: Self-standing cable CT: Cable track

*1 The maximum Y-axis stroke is 700mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
 *2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
 *3 Cannot be selected for High-Precision Specification.
 * Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
Y-axis	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-100-5-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
 * Cable exit direction is specified with ③ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~700	750~800	850~900	950~1000	1050~1100
Y-axis	600	430	345	280	230	
Z-axis	300					

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	0.3	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	0.4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	0.5	19.1	18.6	18.0	17.4	16.9	16.2	15.7	15.2	14.6
	0.6	12.8	12.3	11.7	11.1	10.6	9.9	9.4	8.9	8.3
	0.7	10.1	9.6	9.0	8.4	7.9	7.2	6.7	6.2	5.6
	0.8	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 The acceleration is for the Y-axis. When Z-axis is fixed at 0.2G.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	100W/5mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the Y-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G for Y-axis and 0.2G for Z-axis. When the acceleration is increased, the payload will be reduced.

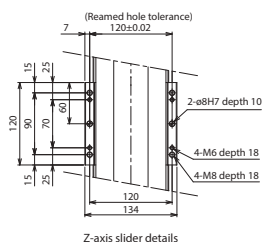
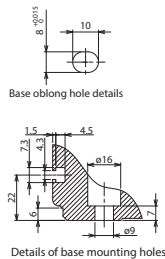
ICSB2 [ICSPB2]-YBC□M-SC (Self-standing cable specification)

Dimensions

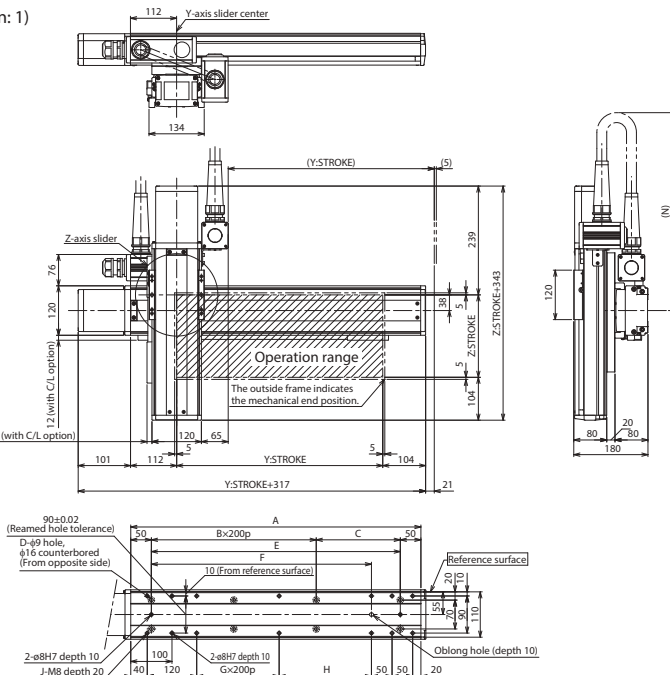
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



(Configuration direction: 1)



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
A	304	354	404	454	504	554	604	654	704	754	804	854	904
B	0	0	1	1	1	1	2	2	2	2	3	3	3
C	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10
E	204	254	304	354	404	454	504	554	604	654	704	754	804
F	134	184	234	284	334	384	434	484	534	584	634	684	734
G	0	0	0	0	0	0	1	1	1	1	2	2	2
H	24	74	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14
N	500	550	550	600	600	650	650	700	700	700	750	750	800

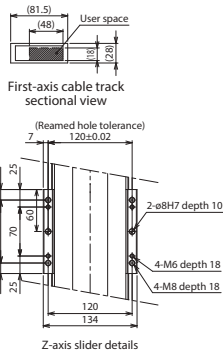
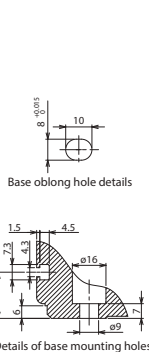
ICSB2 [ICSPB2]-YBC□M-CT (Cable track specification)

Dimensions

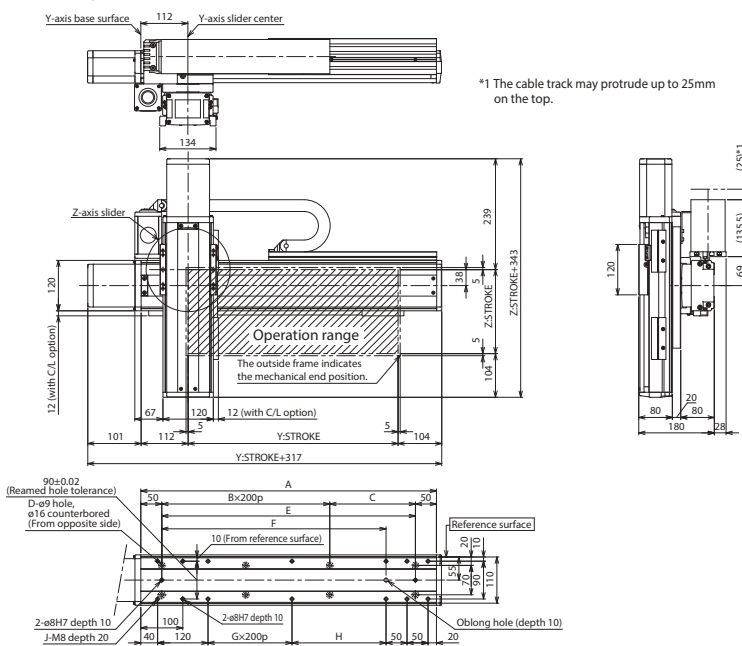
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the home position after purchase will require the actuator to be returned to IAI for adjustment.



(Configuration direction: 1)



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18

ICSB2-YBG□S

ICSPB2-YBG□S High-Precision Specification



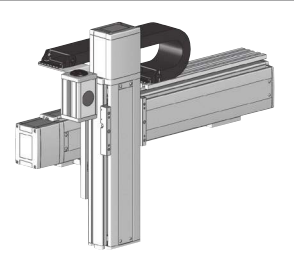
Battery-less Absolute

Y-Z 2-axis

YZB (Z Base Mount)

Ultra High-speed Type

Y: Lg (400W)
Z: Lg (400W)



Model Specification Items

Series	Type	Encoder Type	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm <70: 700mm> * For self-standing cable specification	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

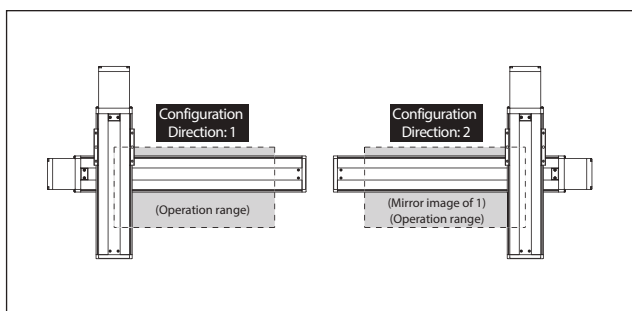
Model Specification

* Items in brackets [] are for the High-Precision Specification.

YZ configuration direction *1	Model
1	ICSB2[ICSPB2]-YBG1S-①-②-③-④-⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-YBG2S-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under YZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

YZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	Y-axis stroke (Note 1)	10: 100mm 130: 1300mm (70: 700mm) *1
③	Y-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	SC: Self-standing cable CT: Cable track

*1 The maximum Y-axis stroke is 700mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
Y-axis	ISB[ISPB]-LXM-①-400-40-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-①-400-20-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
Y-axis	2400	1840	1530	1290	1100	880	
Z-axis	1200						

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	20.0	20.0	20.0	20.0	20.0	20.0	19.7	18.9	18.0
	0.3	20.0	20.0	20.0	20.0	20.0	20.0	19.7	18.9	18.0
	0.4	20.0	20.0	20.0	20.0	20.0	20.0	19.7	18.9	18.0
	0.5	17.0	16.3	15.5	14.7	14.0	13.2	12.5	11.7	10.8
	0.6	12.6	11.8	11.0	10.2	9.5	8.7	8.0	7.2	6.3
	0.7	9.0	8.2	7.4	6.6	5.9	5.1	4.4	3.6	2.7
	0.8	7.2	6.4	5.6	4.8	4.1	3.3	2.6	1.8	0.9
	0.9	5.4	4.6	3.8	3.0	2.3	1.5	0.8	—	—
	1	3.6	2.8	2.0	1.2	0.5	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
1.2	—	—	—	—	—	—	—	—	—	

*1 When the acceleration is the same for the Y/Z-axes.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
Y-axis motor output/lead	400W/40mm
Z-axis motor output/lead	400W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the Y-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

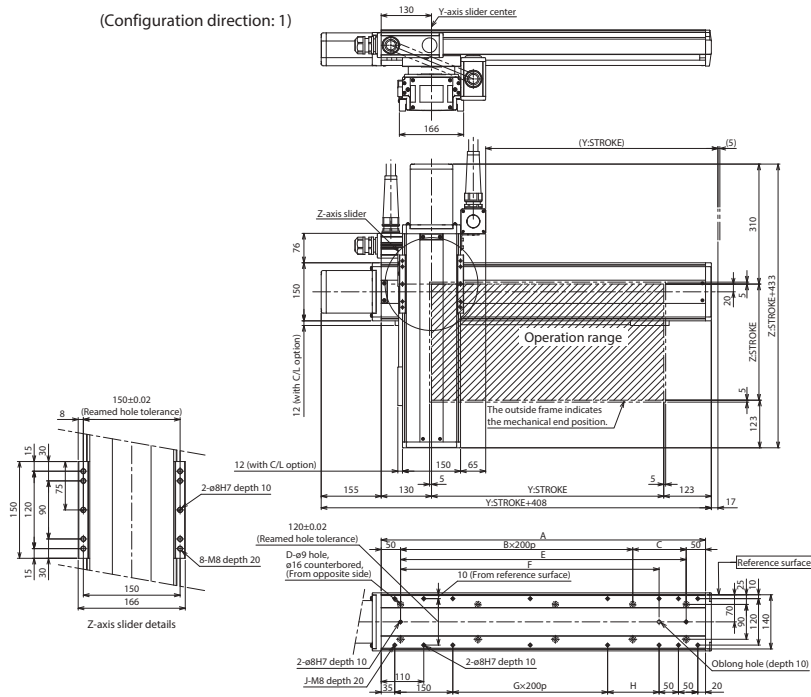
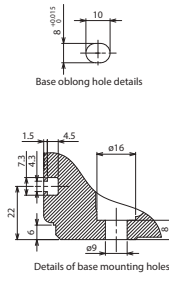
ICSB2 [ICSPB2]-YBG□S-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
A	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	0	1	1	1	1	2	2	2	2	3	3	3
C	238	288	338	388	438	488	538	588	638	688	738	788	838
D	4	4	6	6	6	6	8	8	8	8	10	10	10
E	238	288	338	388	438	488	538	588	638	688	738	788	838
F	168	218	268	318	368	418	468	518	568	618	668	718	768
G	0	0	0	0	0	0	1	1	1	1	2	2	2
H	33	83	133	183	233	283	333	383	433	483	533	583	633
J	10	10	10	10	10	10	12	12	12	12	14	14	14
N	550	550	550	600	600	650	650	700	700	750	750	750	800

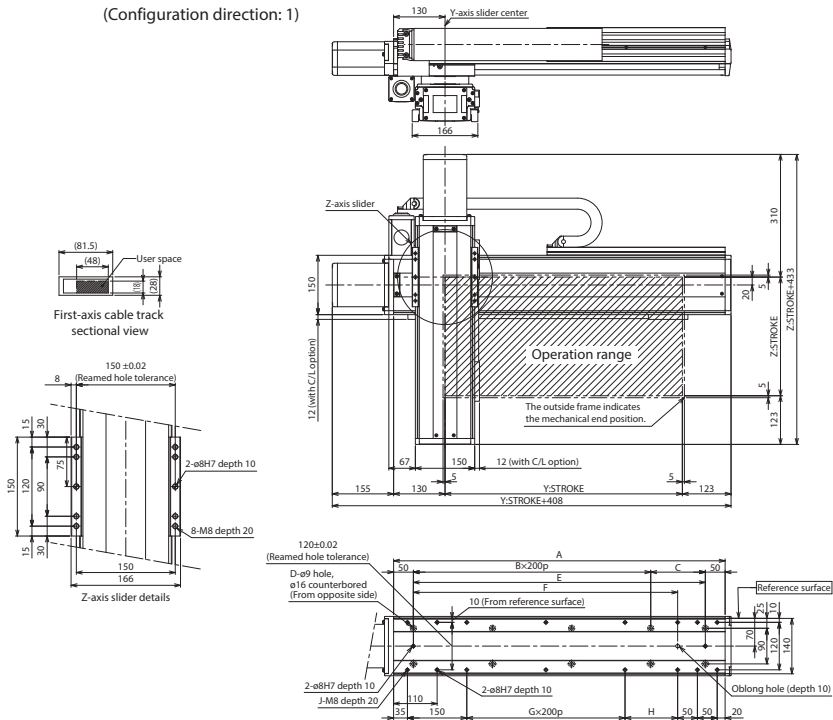
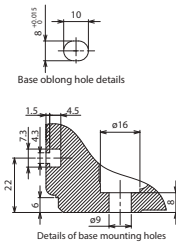
ICSB2 [ICSPB2]-YBG□S-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20

ICSB2-YBG□H

ICSPB2-YBG□H High-Precision Specification



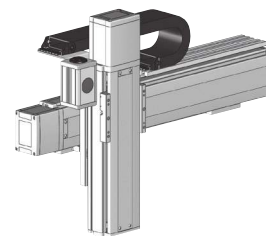
Battery-less Absolute

Y-Z 2-axis

YZB (Z Base Mount)

High Speed Type

Y: Lg (400W)
Z: Lg (400W)



Model Specification Items

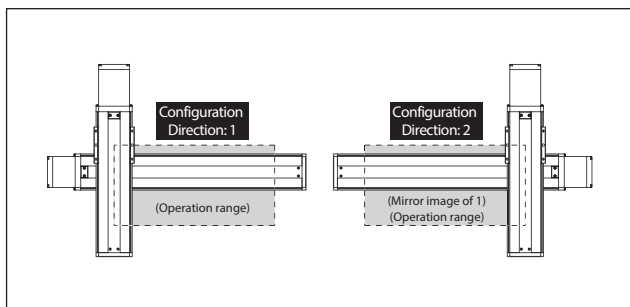
Series	Type	Encoder Type	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm <70: 700mm> * For self-standing cable specification	10: 100mm 50: 500mm Refer to Options table below.	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

YZ configuration direction *1	Model
1	ICSB2[ICSPB2]-YBG1H-①-②③④⑤-T2-⑥-⑦
2	ICSB2[ICSPB2]-YBG2H-①-②③④⑤-T2-⑥-⑦

*1 Please refer to the following diagram under YZ Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

YZ Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	Y-axis stroke (Note 1)	10: 100mm 130: 1300mm (70: 700mm) *1
③	Y-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Z-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Z-axis Cable Management	SC: Self-standing cable CT: Cable track

*1 The maximum Y-axis stroke is 700mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
Y-axis	ISB[ISPB]-LXM-①-400-20-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-①-400-10-④-T2-③-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~500	550~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
Y-axis	1200						
Z-axis	600						

Payload by Acceleration/Deceleration (kg) (Note 4)

		Z-axis stroke								
		100	150	200	250	300	350	400	450	500
Acceleration *1	0.2	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
	0.3	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
	0.4	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
	0.5	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
	0.6	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
	0.7	—	—	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 When the acceleration is the same for the Y/Z-axes.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
Y-axis motor output/lead	400W/20mm
Z-axis motor output/lead	400W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the Y-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

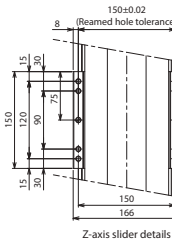
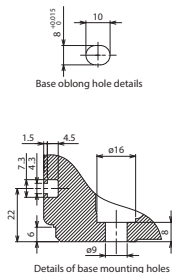
ICSB2 [ICSPB2]-YBG□H-SC (Self-standing cable specification)

Dimensions

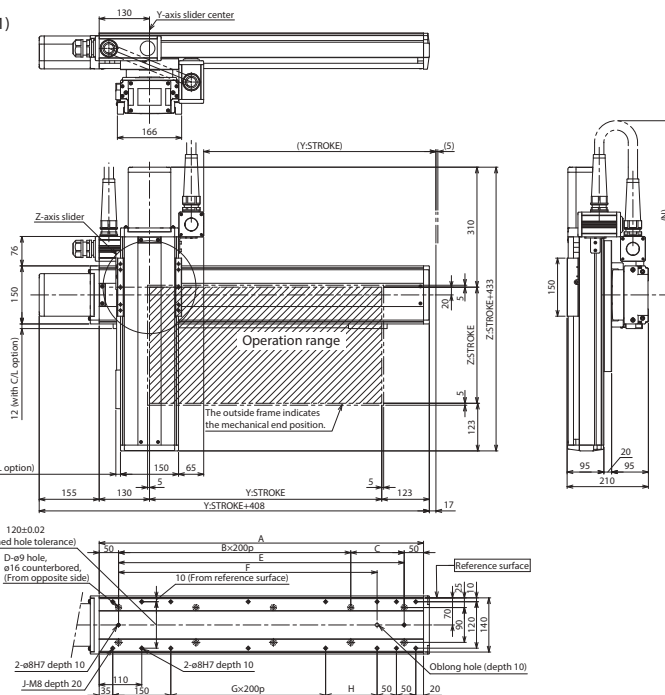
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



(Configuration direction: 1)



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
A	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	0	1	1	1	1	2	2	2	2	3	3	3
C	238	288	338	388	438	488	538	588	638	688	738	788	838
D	4	4	6	6	6	6	8	8	8	8	10	10	10
E	238	288	338	388	438	488	538	588	638	688	738	788	838
F	168	218	268	318	368	418	468	518	568	618	668	718	768
G	0	0	0	0	0	0	1	1	1	1	2	2	2
H	33	83	133	183	233	283	333	383	433	483	533	583	633
J	10	10	10	10	10	10	12	12	12	12	14	14	14
N	550	550	550	600	600	650	650	700	700	750	750	750	800

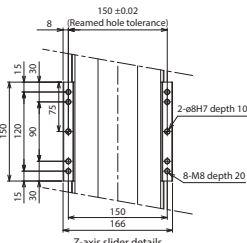
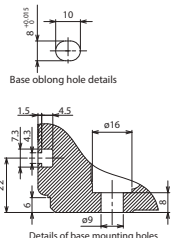
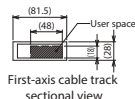
ICSB2 [ICSPB2]-YBG□H-CT (Cable track specification)

Dimensions

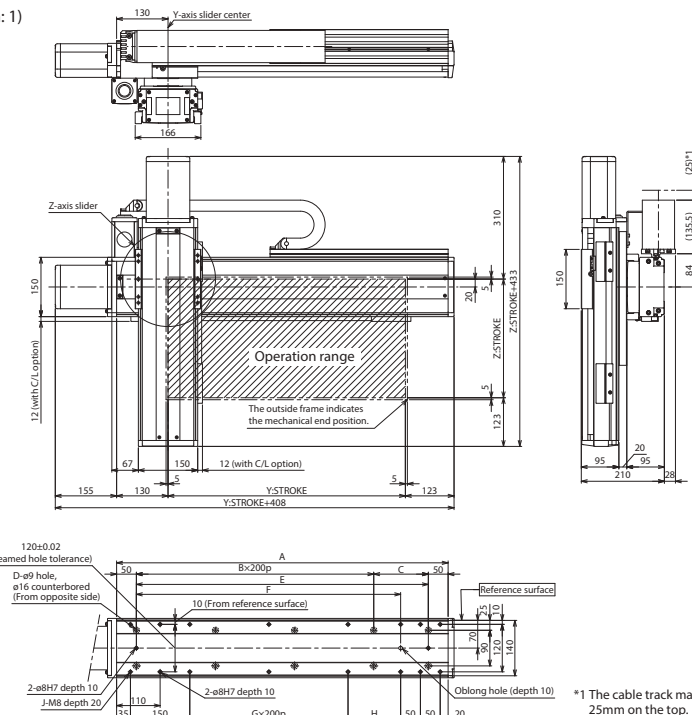
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



(Configuration direction: 1)



*1 The cable track may protrude up to 25mm on the top.

Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20

ICSB2-G1J□H

ICSPB2-G1J□H High-Precision Specification

±10μm Standard

±5μm High-Precision

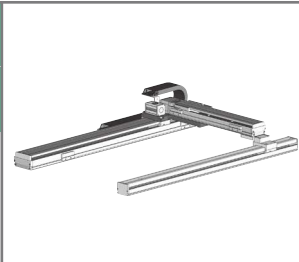
Battery-less Absolute

X-Y 2-axis

XYG (Y Horiz. Gantry)

High Speed Type

X: Lg (400W)
Y: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	50: 500mm 70: 700mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	(Option) Refer to Explanation of Model Designations below

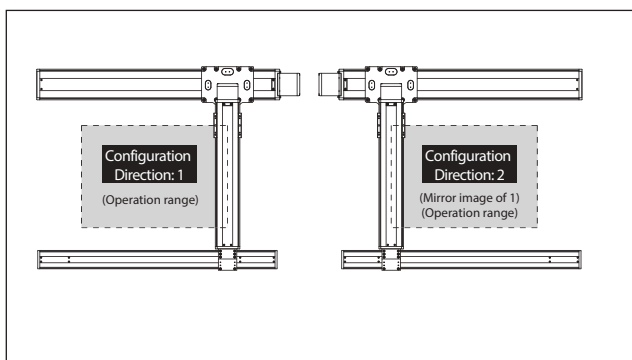
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-G1J1H-①-②-③-④-⑤-T2-⑥-⑦-⑧
2	ICSB2[ICSPB2]-G1J2H-①-②-③-④-⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②-AQ	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑥ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ② in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	500~700	1000~1200	1300	1400	1500	1600	1700	1800
X-axis	—	1200	1150	1000	950	830	740	650
Y-axis	1200	—	—	—	—	—	—	—

	1900	2000	2100	2200	2300	2400	2500
X-axis	590	540	490	440	410	370	340
Y-axis	—	—	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke				
		500	550	600	650	700
Acceleration *1	0.2	45.0	45.0	45.0	45.0	45.0
	0.3	45.0	45.0	45.0	45.0	45.0
	0.4	45.0	45.0	45.0	45.0	45.0
	0.5	—	—	—	—	—
	0.6	—	—	—	—	—
	0.7	—	—	—	—	—
	0.8	—	—	—	—	—
	0.9	—	—	—	—	—
	1	—	—	—	—	—
	1.1	—	—	—	—	—
	1.2	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	50: 500mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track
⑧	Z-axis Cable Management (Option) *2	CT: Cable track

*2 Please specify only when required.
Selectable only when the Y-axis Cable Management is "CT".
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. (The upper limit of acceleration is 0.4G.)

ICSB2 [ICSPB2]-G1J□H-CT (Cable track specification)

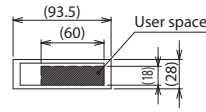
Dimensions

CAD drawings can be downloaded from our website.

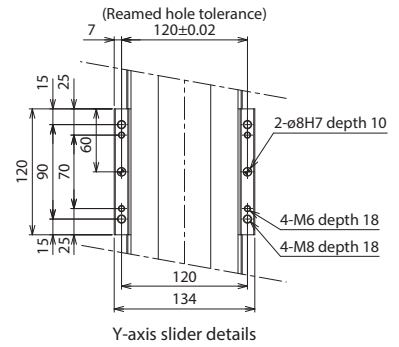


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

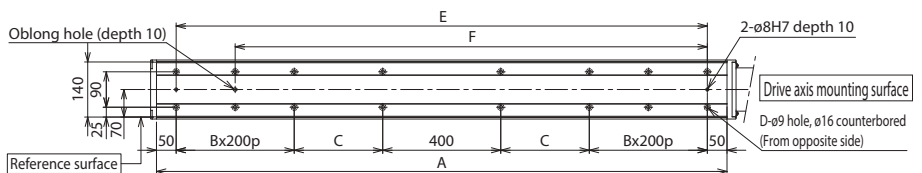
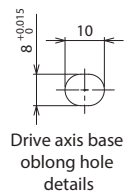
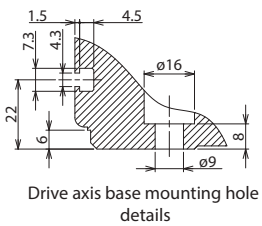
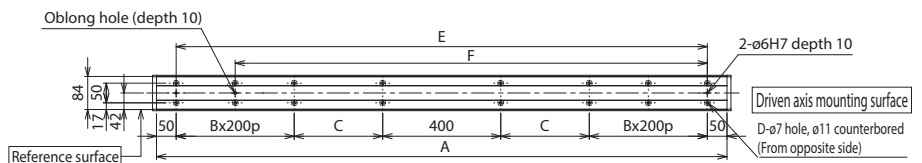
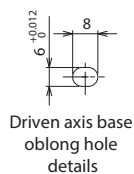
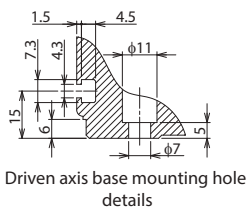
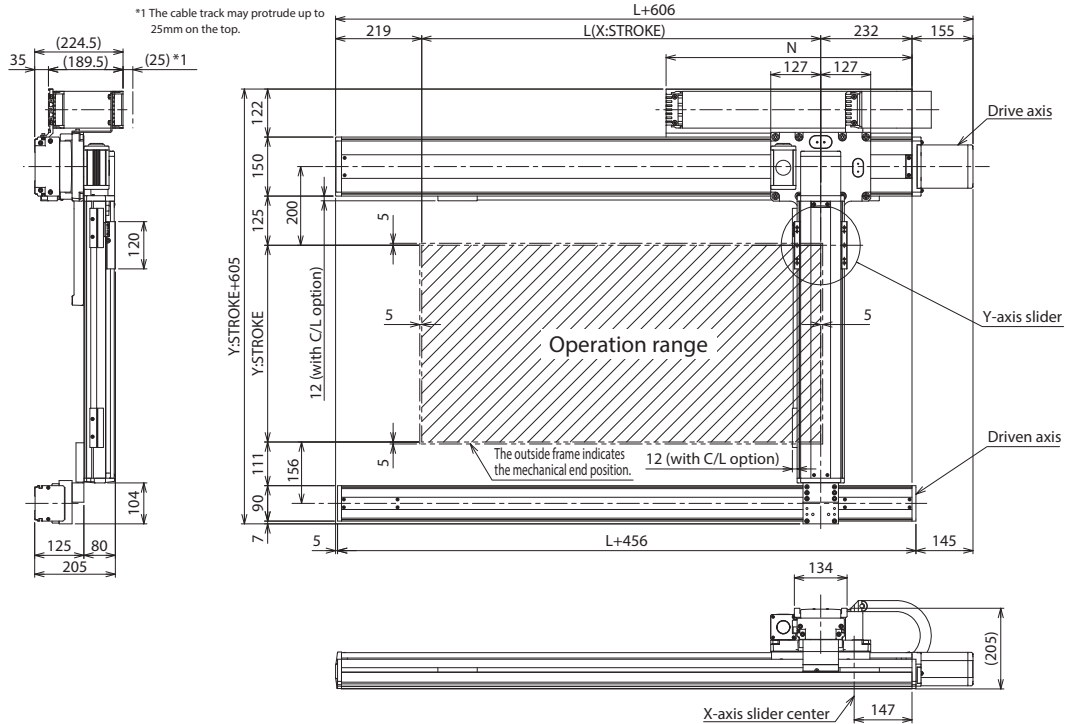
(Configuration direction: 1)



First-axis cable track sectional view



Y-axis slider details



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB2-G2J□H

ICSPB2-G2J□H High-Precision Specification



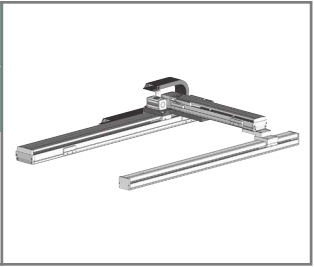
Battery-less Absolute

X-Y 2-axis

XYG (Y Horiz. Gantry)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)



Model Specification Items

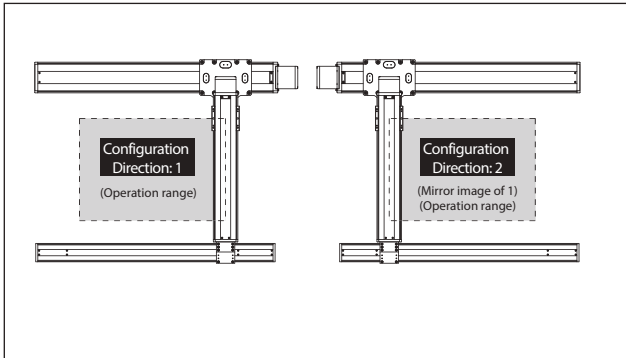
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	80: 800mm 120: 1200mm (Every 100mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-G2J1H-①-②③④⑤-T2-⑥⑦⑧
2	ICSB2[ICSPB2]-G2J2H-①-②③④⑤-T2-⑥⑦⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③④⑤	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②-AQ	—
Y-axis	ISB[ISPB]-MXMX-①-200-20-④-T2-⑤⑥⑦⑧⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑨ in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	800~900	1000~1100	1200	1300	1400	1500	1600	1700
X-axis	—	1200	1150	1000	950	830	740	
Y-axis	1200	1100						

	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	650	590	540	490	440	410	370	340
Y-axis								

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke				
		800	900	1000	1100	1200
Acceleration *1	0.2	45.0	45.0	45.0	45.0	44.9
	0.3	45.0	45.0	45.0	45.0	44.9
	0.4	45.0	43.6	38.3	33.7	29.6
	0.5	—	—	—	—	—
	0.6	—	—	—	—	—
	0.7	—	—	—	—	—
	0.8	—	—	—	—	—
	0.9	—	—	—	—	—
	1	—	—	—	—	—
	1.1	—	—	—	—	—
	1.2	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	80: 800mm 120: 1200mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track
⑧	Z-axis Cable Management (Option) *2	CT: Cable track

*2 Please specify only when required.
Selectable only when the Y-axis Cable Management is "CT".
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G. (The upper limit of acceleration is 0.4G.)

ICSB2 [ICSPB2]-G2J□H-CT (Cable track specification)

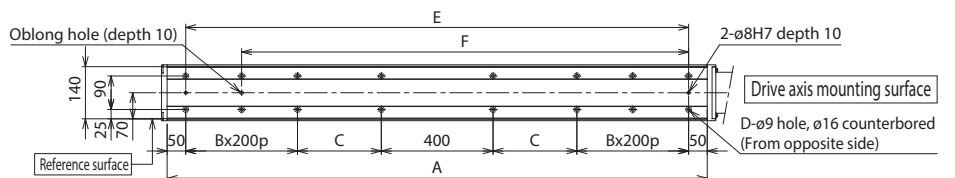
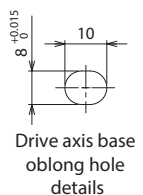
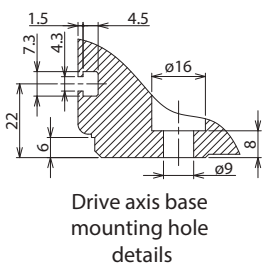
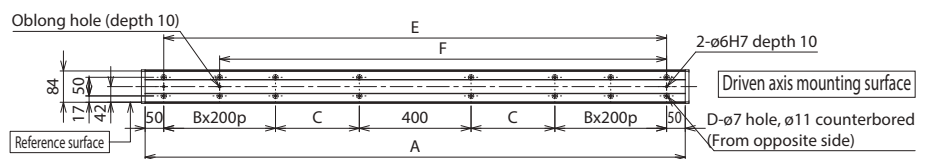
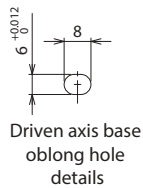
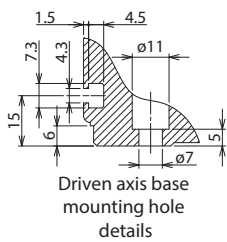
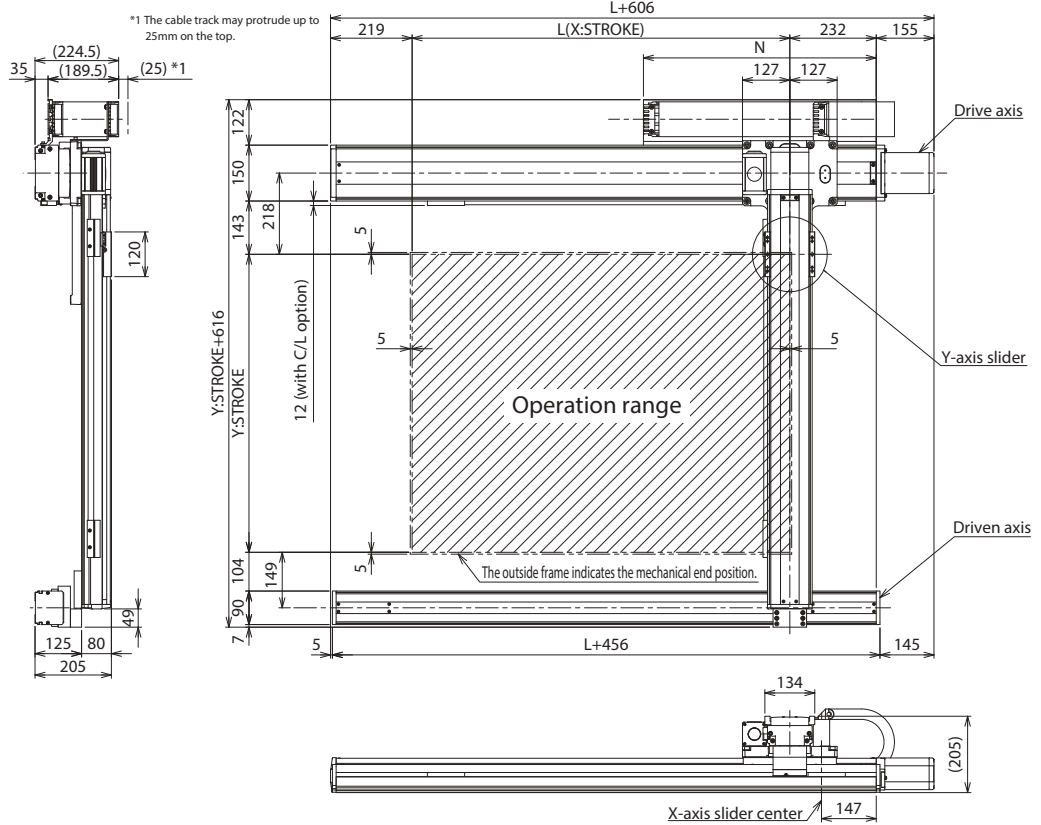
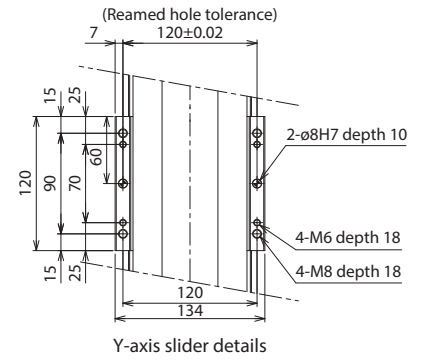
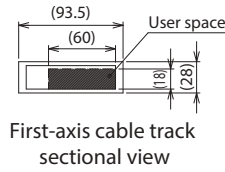
Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)

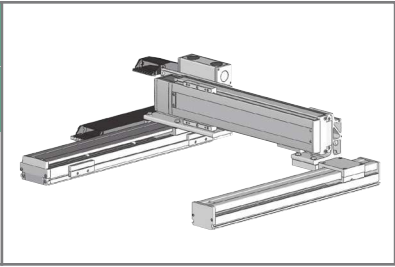


X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB2-GB□H

ICSPB2-GB□H High-Precision Specification

±10μm Standard
±5μm High Precision
Battery-less Absolute
X-Y 2-axis
XYBG (Y Side Gantry)
High Speed Type
X: Md (100W) Y: 5m (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm (100: 1000mm) * below. (Every 50mm)	30: 300mm 60: 600mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

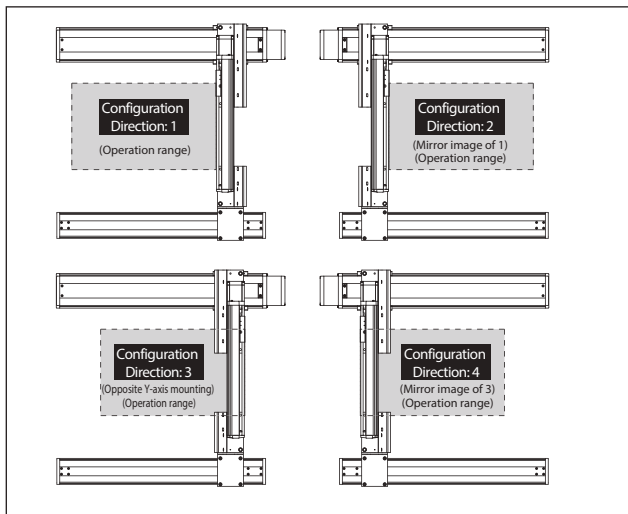
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-GB1H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-GB2H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-GB3H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-GB4H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-[1]-100-20-[2]-T2-[3]-[4]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-[2]-AQ	—
Y-axis	ISB[ISPB]-SXM-[1]-60-16-[2]-T2-[3]-[4]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [4] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [9] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~250	300~600	650~700	750~800	850~900	950~1000	1050~1100
X-axis		1200		860	695	570	460
Y-axis	—	960			—		

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke						
		300	350	400	450	500	550	600
Acceleration *1	0.2	12.9	12.5	12.3	11.9	11.6	11.2	10.9
	0.3	12.9	12.5	12.3	11.9	11.6	11.2	10.9
	0.4	12.9	12.5	12.3	11.9	11.6	11.2	10.9
	0.5	8.2	7.8	7.5	7.1	6.8	6.5	6.2
	0.6	5.3	4.9	4.7	4.3	4.0	3.6	3.3
	0.7	3.4	3.0	2.8	2.4	2.1	1.7	1.4
	0.8	1.5	1.1	0.9	0.5	—	—	—
	0.9	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 60: 600mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
[8]	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required.

Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/20mm
Y-axis motor output/lead	60W/16mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

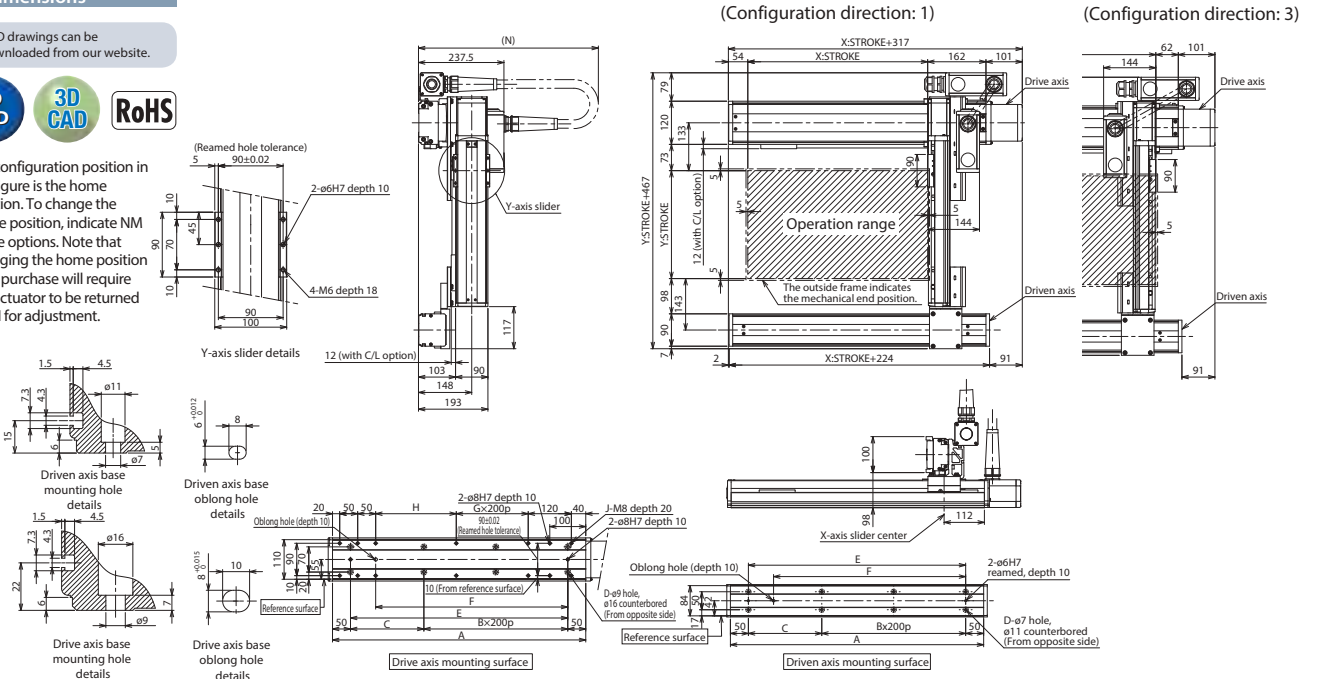
ICSB2 [ICSPB2]-GB□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	550	550	600	600	650	650	700	700	750	750	800	800	850	850	900	900	950	950	950

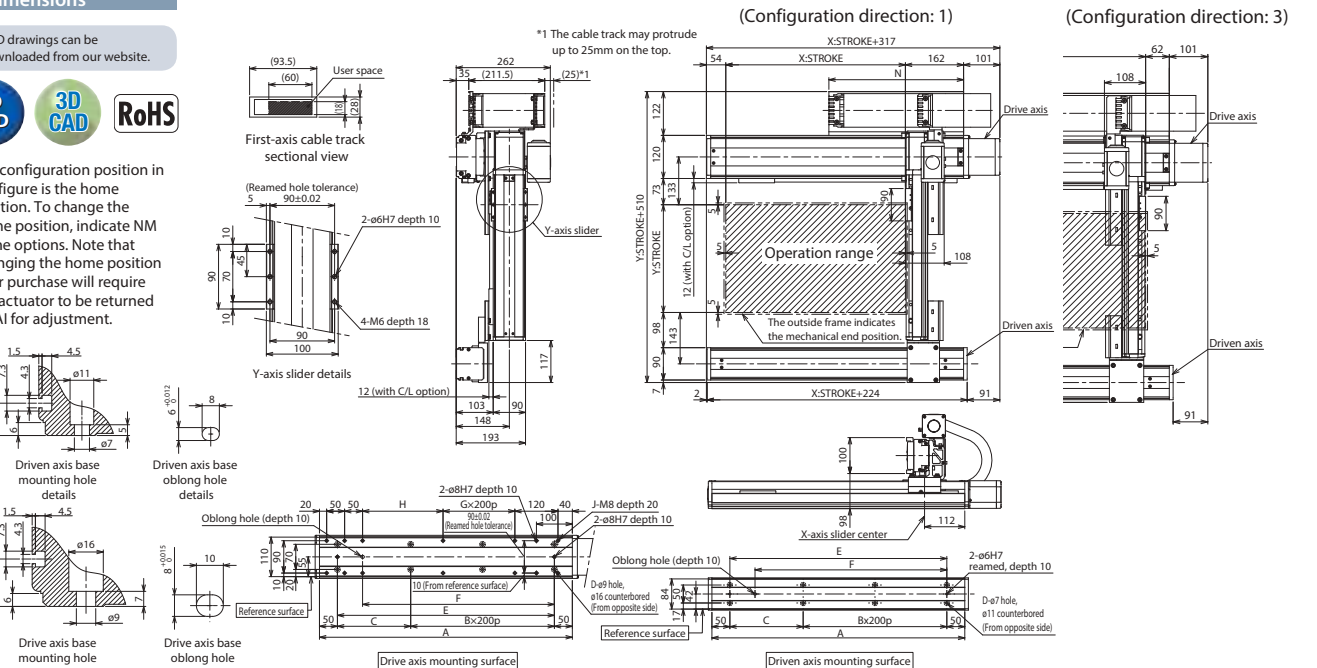
ICSB2 [ICSPB2]-GB□H-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1050	1100	
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB2-GB□M

ICSPB2-GB□M

High-Precision Specification



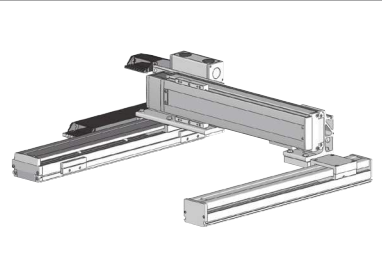
Battery-less Absolute

X-Y 2-axis

XYBG (Y Side Gantry)

Medium Speed Type

X: Md (100W)
Y: 5m (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm> * below. (Every 50mm) * For self-standing cable specification	30: 300mm 60: 600mm table. (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

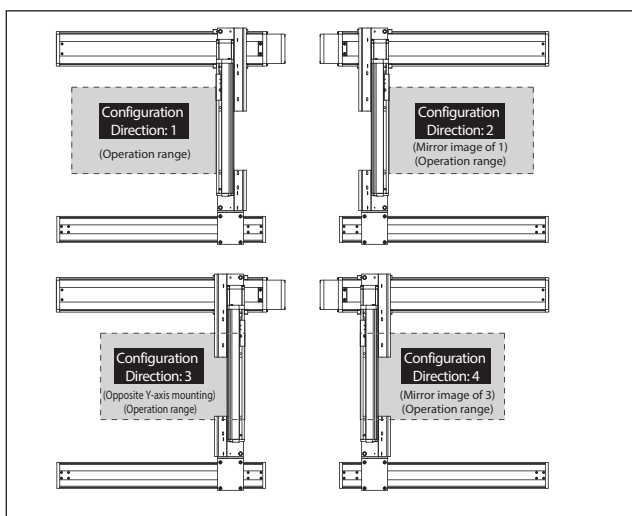
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-GB1M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-GB2M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-GB3M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-GB4M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 60: 600mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
[8]	Z-axis Cable Management (Option)	CT: Cable track *2

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required.
Selectable only when the Y-axis Cable Management is "CT".
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-[1]-100-10-[2]-T2-[9]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-[2]-AQ	—
Y-axis	ISB[ISPB]-SXM-[1]-60-8-[4]-T2-[9]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [9] in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~250	300~600	650~700	750~800	850~900	950~1000	1050~1100
X-axis		600		430	345	280	230
Y-axis	—	480			—		

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke						
		300	350	400	450	500	550	600
Acceleration *1	0.2	27.0	27.0	27.0	27.0	27.0	27.0	27.0
	0.3	27.0	27.0	27.0	27.0	27.0	27.0	27.0
	0.4	27.0	27.0	27.0	27.0	27.0	27.0	26.8
	0.5	18.5	18.2	17.9	17.6	17.3	16.9	16.7
	0.6	12.2	11.9	11.6	11.3	11.0	10.6	10.4
	0.7	9.5	9.2	8.9	8.6	8.3	7.9	7.7
	0.8	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

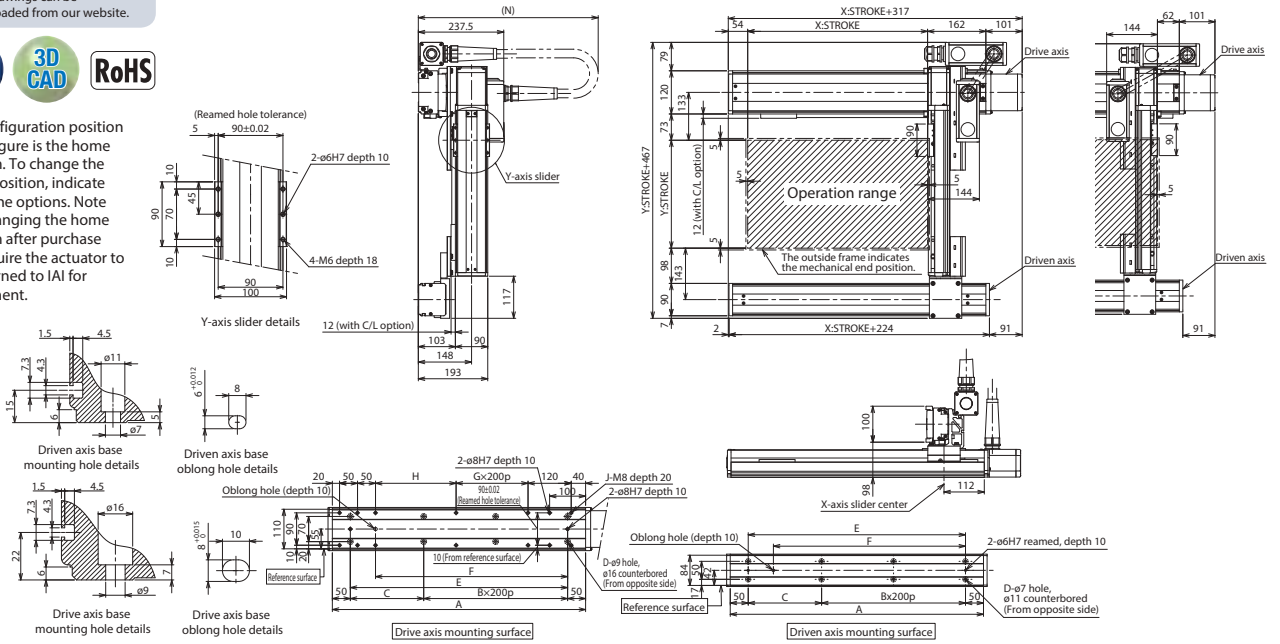
ICSB2 [ICSPB2]-GB□M-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	550	550	600	600	650	650	700	700	750	750	800	800	850	850	900	900	950	950	

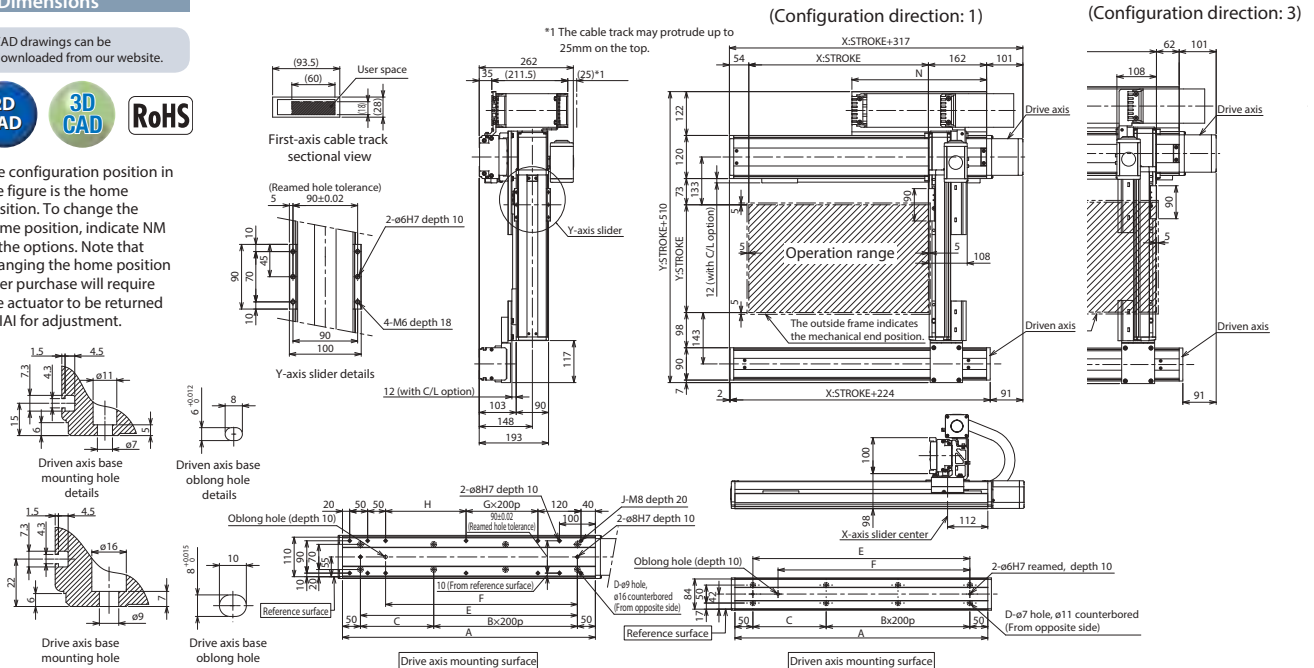
ICSB2 [ICSPB2]-GB□M-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

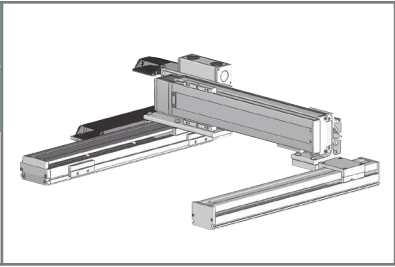


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB2-GC□H

ICSPB2-GC□H High-Precision Specification

±10µm Standard
±5µm High Precision
Battery-less Absolute
X-Y 2-axis
XYBG (Y Side Gantry)
High Speed Type
X: Md (200W)
Y: Md (100W)



Model Specification Items

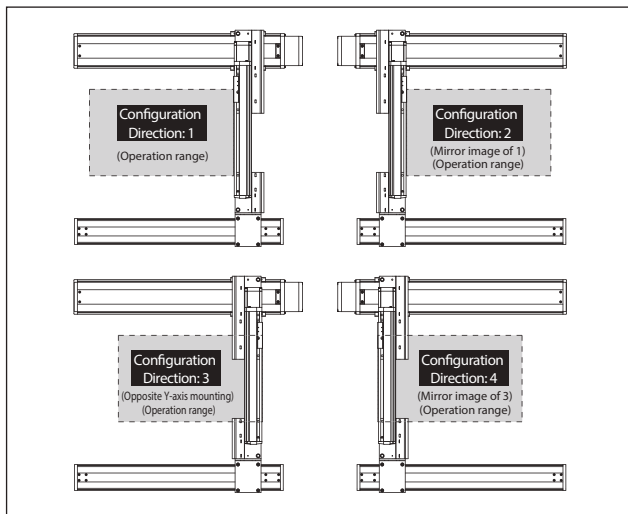
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm> * below. (Every 50mm) * For self-standing cable specification	30: 300mm 70: 700mm table below. (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: □m	Refer to Explanation of Model Designations below	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-GC1H-①-②-③-④-⑤-T2-⑥-⑦-⑧
2	ICSB2[ICSPB2]-GC2H-①-②-③-④-⑤-T2-⑥-⑦-⑧
3	ICSB2[ICSPB2]-GC3H-①-②-③-④-⑤-T2-⑥-⑦-⑧
4	ICSB2[ICSPB2]-GC4H-①-②-③-④-⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②-AQ	—
Y-axis	ISB[ISPB]-MXM-①-100-20-④-T2-⑤-⑥	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑥ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ② in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~250	300~700	750~800	850~900	950~1000	1050~1100
X-axis	1200	860	695	570	460	—
Y-axis	—	1200	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke								
		300	350	400	450	500	550	600	650	700
Acceleration *1	0.2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.6	22.0
	0.3	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.6	22.0
	0.4	23.0	23.0	23.0	23.0	23.0	21.8	19.5	17.5	15.7
	0.5	17.6	17.0	16.4	15.9	15.4	14.7	13.5	11.8	10.3
	0.6	11.3	10.7	10.1	9.6	9.1	8.4	7.9	7.3	6.6
	0.7	6.8	6.2	5.6	5.1	4.6	3.9	3.4	2.8	2.2
	0.8	4.1	3.5	2.9	2.4	1.9	1.2	0.7	—	—
	0.9	1.4	0.8	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required.

Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

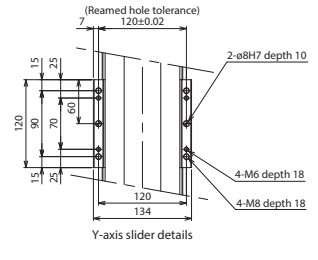
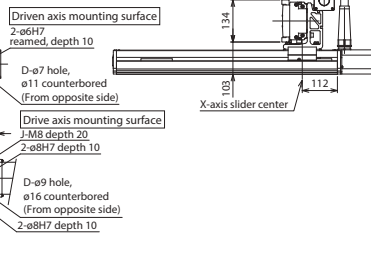
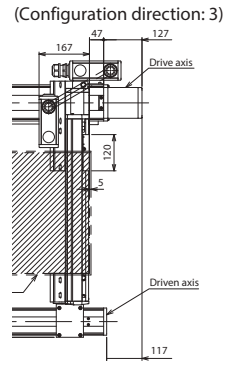
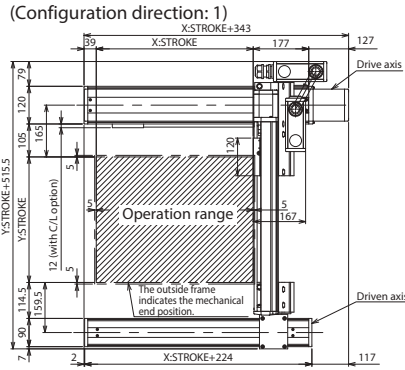
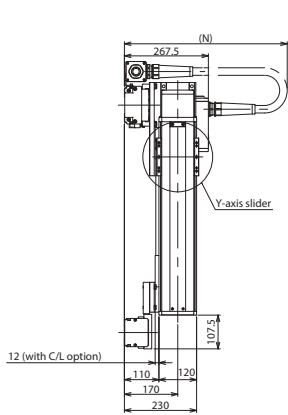
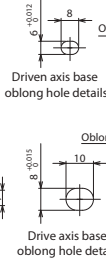
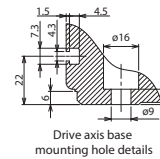
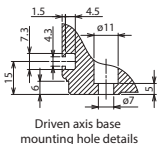
ICSB2 [ICSPB2]-GC□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	600	600	650	650	700	700	700	750	750	800	800	850	850	900	900	900	950	950	1000

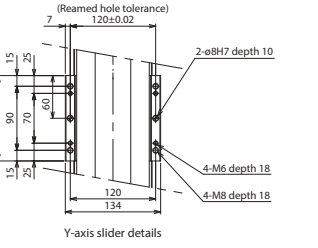
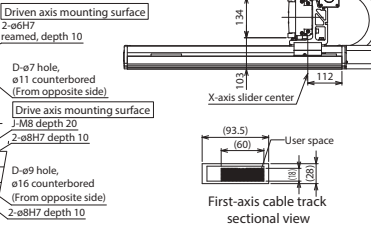
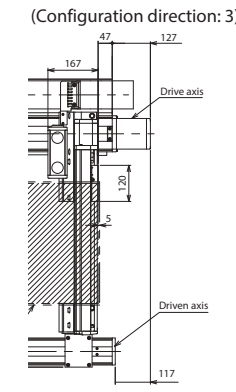
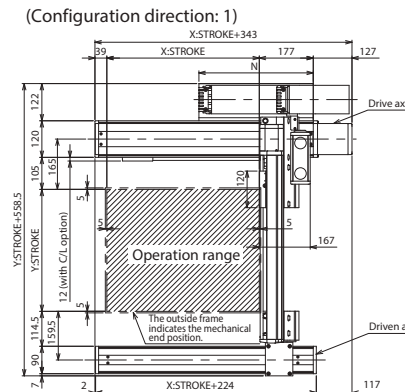
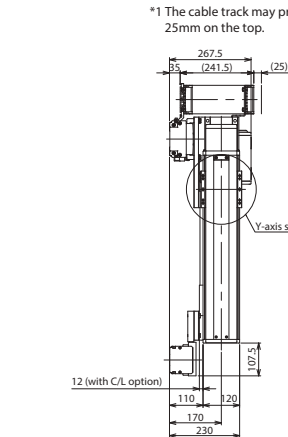
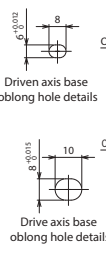
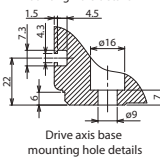
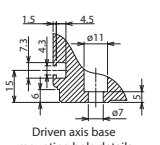
ICSB2 [ICSPB2]-GC□H-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB2-GC□M

ICSPB2-GC□M

High-Precision Specification



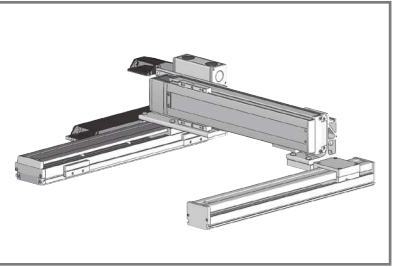
Battery-less Absolute

X-Y 2-axis

XYBG (Y Side Gantry)

Medium Speed Type

X: Md (100W)
Y: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm> * below. (Every 50mm) * For self-standing cable specification	30: 300mm 70: 700mm table below. (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

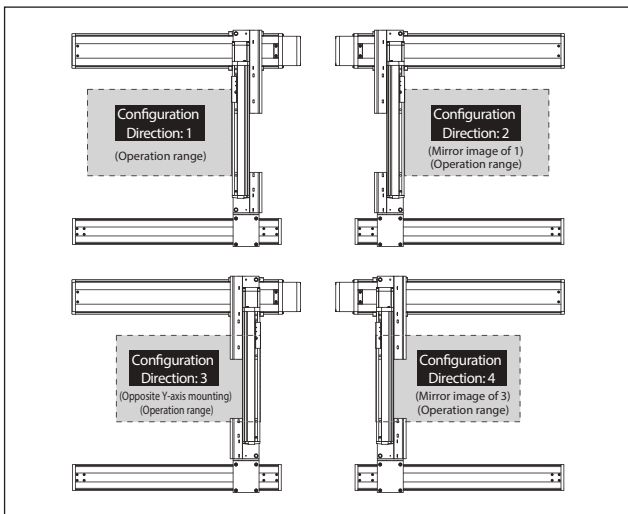
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-GC1M-①-②③④⑤-T2-⑥⑦⑧
2	ICSB2[ICSPB2]-GC2M-①-②③④⑤-T2-⑥⑦⑧
3	ICSB2[ICSPB2]-GC3M-①-②③④⑤-T2-⑥⑦⑧
4	ICSB2[ICSPB2]-GC4M-①-②③④⑤-T2-⑥⑦⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-100-10-②-T2-③④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②-AQ	—
Y-axis	ISB[ISPB]-MXM-①-100-10-③-T2-④⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ② in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~250	300~700	750~800	850~900	950~1000	1050~1100
X-axis	600	430	345	280	230	—
Y-axis	—	600	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke								
		300	350	400	450	500	550	600	650	700
Acceleration *1	0.2	26.6	26.0	25.4	24.9	24.4	23.7	23.2	22.6	22.0
	0.3	26.6	26.0	25.4	24.9	24.4	23.7	23.2	22.6	22.0
	0.4	26.6	26.0	25.4	24.9	24.3	21.8	19.5	17.5	15.7
	0.5	13.1	12.5	11.9	11.4	10.9	10.2	9.7	9.1	8.5
	0.6	6.8	6.2	5.6	5.1	4.6	3.9	3.4	2.8	2.2
	0.7	4.1	3.5	2.9	2.4	1.9	1.2	0.7	—	—
	0.8	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required.

Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis.

Make sure to indicate the standard equipped option in the model number.

When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

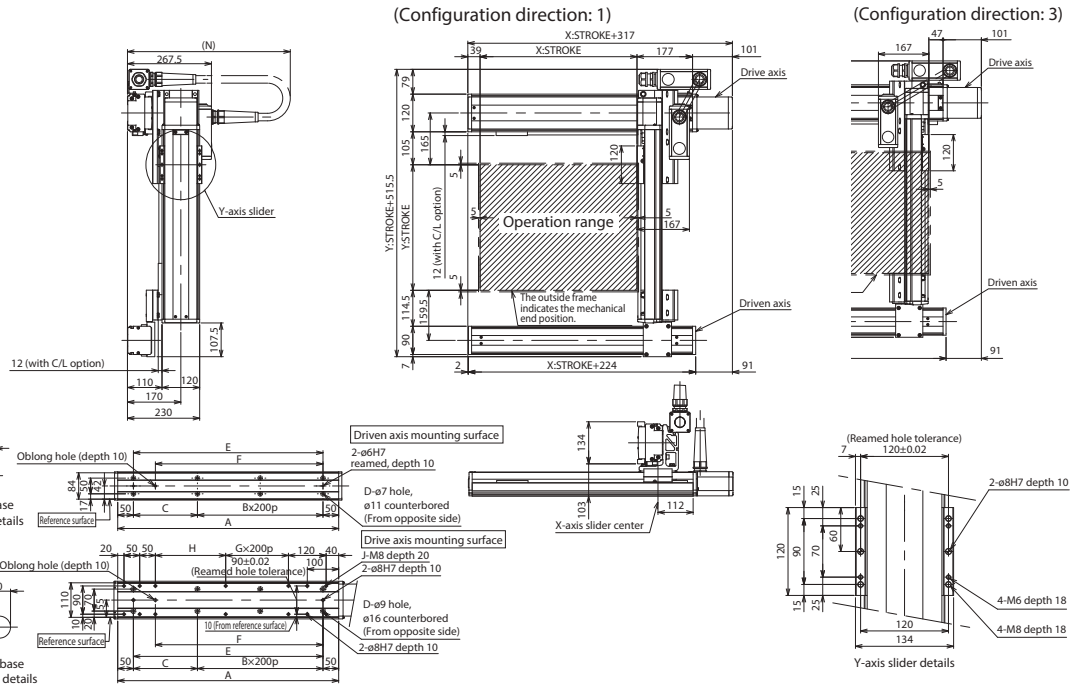
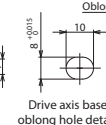
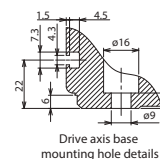
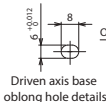
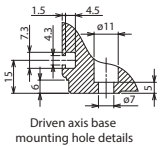
ICSB2 [ICSPB2]-GC□M-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	600	600	650	650	700	700	700	750	750	800	800	850	850	900	900	900	950	950	1000

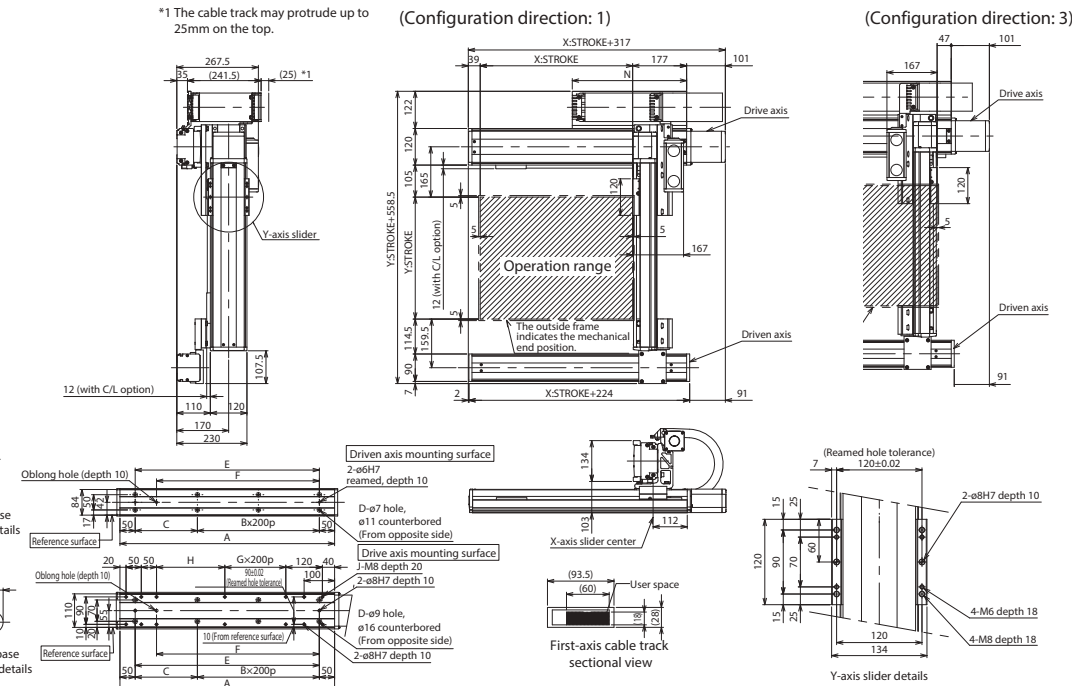
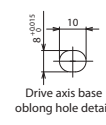
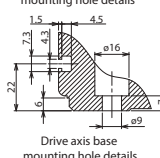
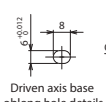
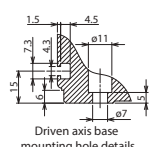
ICSB2 [ICSPB2]-GC□M-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	1	2	2	2	2	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB2-GD□H

ICSPB2-GD□H

High-Precision Specification



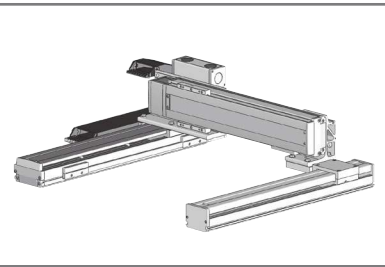
Battery-less Absolute

X-Y 2-axis

XYBG (Y Side Gantry)

High Speed Long Type

X: Md (200W)
Y: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 100mm)	30: 300mm 70: 700mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	Refer to Explanation of Model Designations below

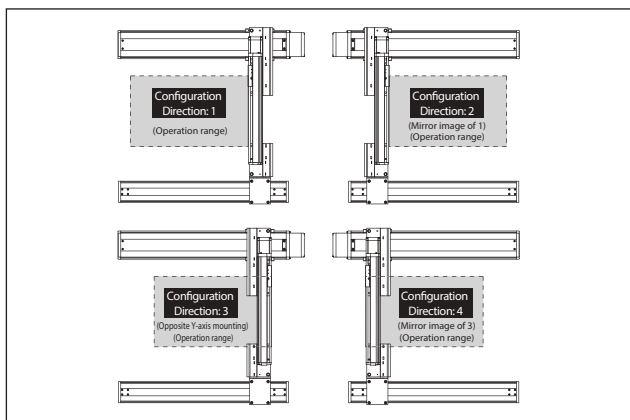
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-GD1H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-GD2H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-GD3H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-GD4H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXMX-[1]-200-20-[2]-T2-[9]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM02-N-0-0-[2]-AQ	—
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[4]-T2-[9]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [9] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	300~700	800~1100	1200	1300	1400	1500
X-axis	—	1200	1100	1000	950	800
Y-axis	1200	—	—	—	—	—

	1600	1700	1800	1900	2000
X-axis	700	600	550	500	450
Y-axis	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke								
		300	350	400	450	500	550	600	650	700
Acceleration *1	0.2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.6	22.0
	0.3	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.6	22.0
	0.4	23.0	23.0	23.0	23.0	23.0	21.8	19.5	17.5	15.7
	0.5	—	—	—	—	—	—	—	—	—
	0.6	—	—	—	—	—	—	—	—	—
	0.7	—	—	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	CT: Cable track
[8]	Z-axis Cable Management (Option) *2	CT: Cable track

*2 Please specify only when required. Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) Please note that a longer stroke will result in a lower max speed.
(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

ICSB2 [ICSPB2]-GD□H-CT (Cable track specification)

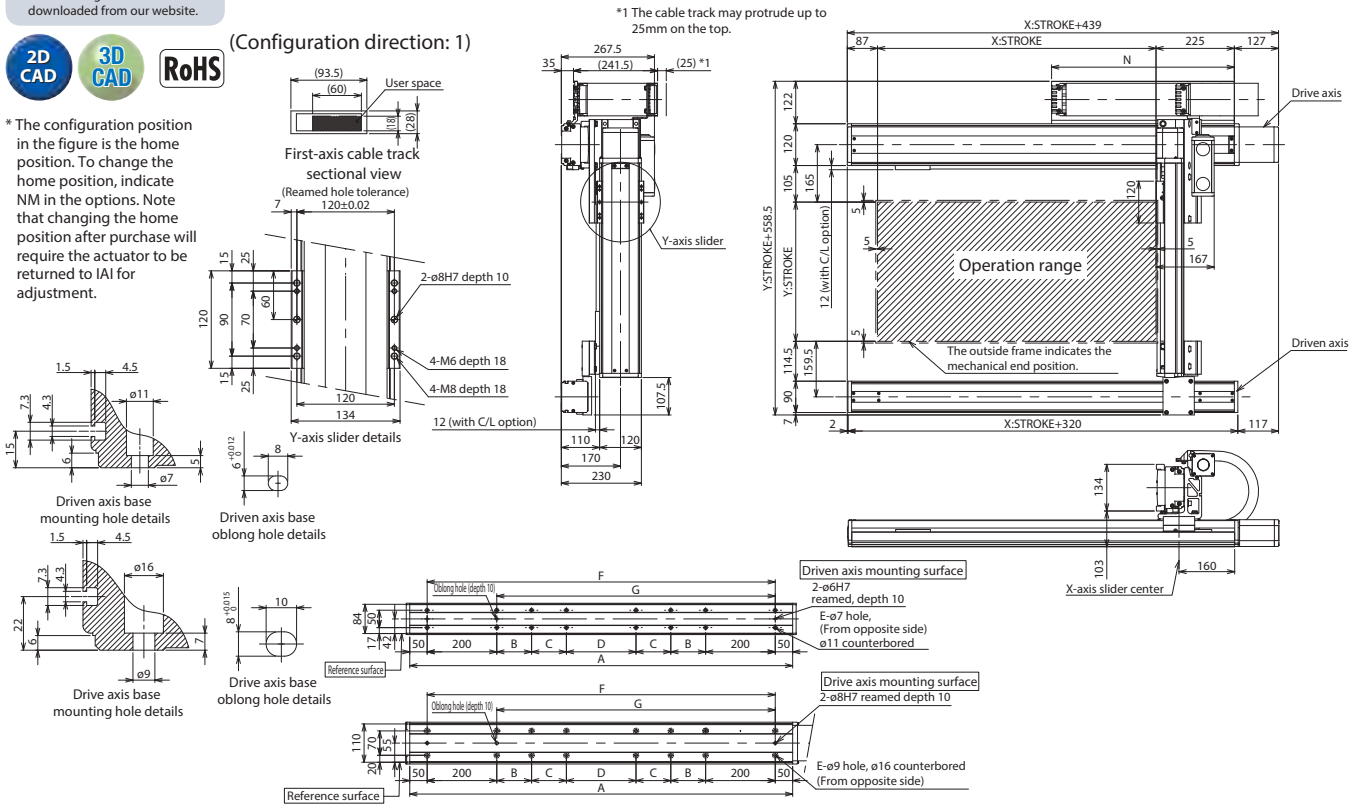
Dimensions

CAD drawings can be downloaded from our website.

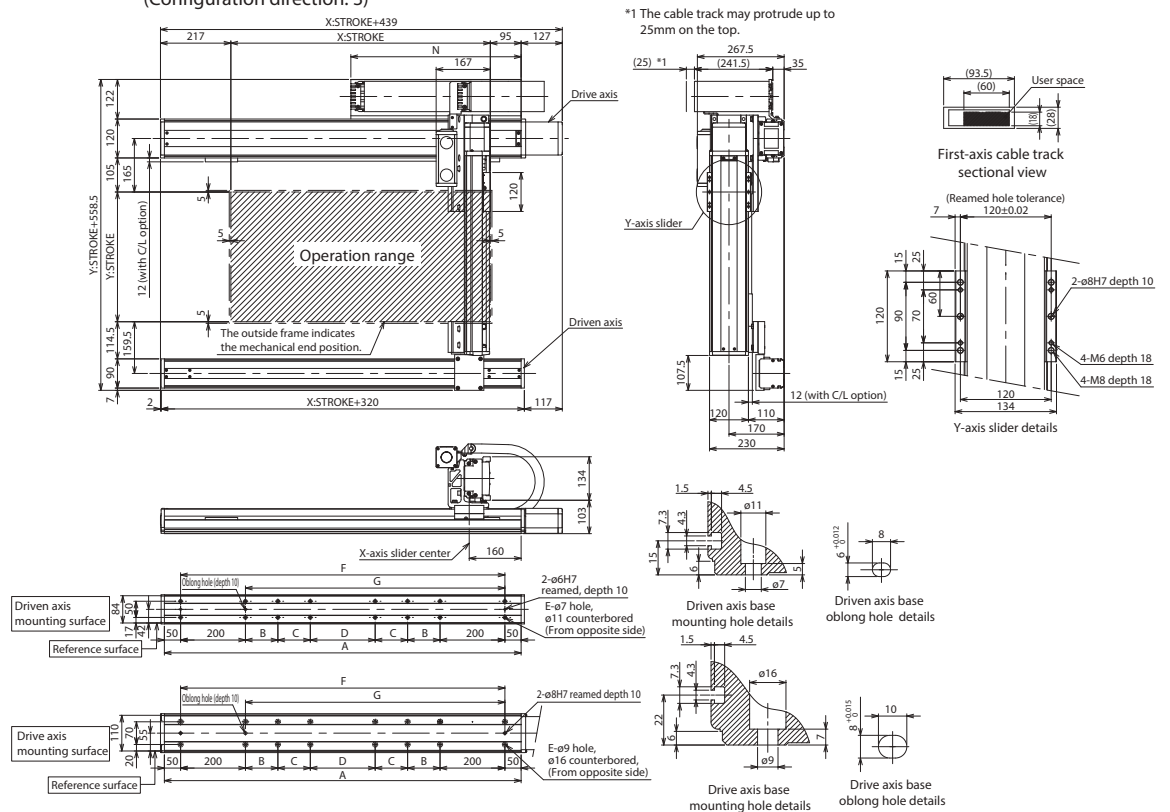


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



(Configuration direction: 3)

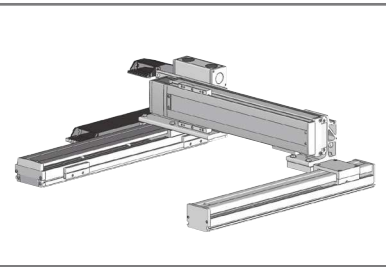


X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

ICSB2-GE□H

ICSPB2-GE□H High-Precision Specification

±10µm Standard
±5µm High-Precision
Battery-less Absolute
X-Y 2-axis
XYBG (Y Side Gantry)
High Speed Type
X:Lg (400W) Y:Mid (200W)



Model Specification Items

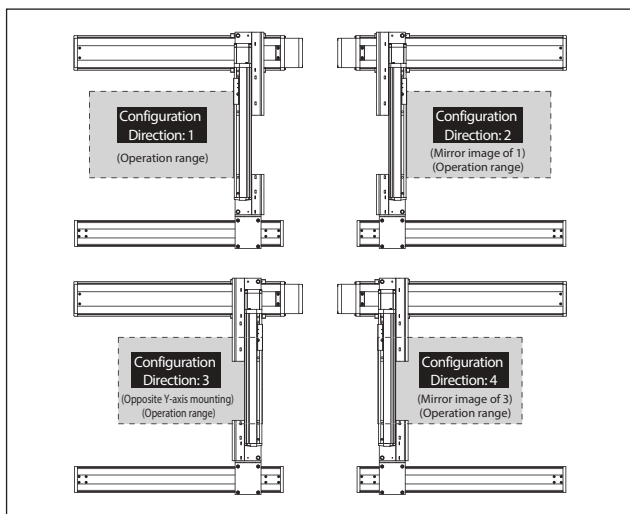
Series	GE□H	WA					T2			
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	Encoder Type WA: Battery-less Absolute	X-axis Stroke/Option 10: 100mm 130: 1300mm table <100: 1000mm> * below. (Every 50mm) * For self-standing cable specification	Y-axis Stroke/Option 30: 300mm 90: 900mm table below. (Every 50mm)	Applicable Controllers T2: SCOM SSEL XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis Cable Management Refer to Explanation of Model Designations below	Z-axis Cable Management (Option)		

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-GE1H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-GE2H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-GE3H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-GE4H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
[8]	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

*2 Please specify only when required.

Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-[1]-400-20-[2]-T2-[9]-[5]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-[2]-AQ	—
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[4]-T2-[9]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [9] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~250	300~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	—	1200	—	920	765	645	550	440
Y-axis	—	1200	860	695	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		300	350	400	450	500	550	600	650	700	750	800	850	900
Acceleration *1	0.2	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	42.8	39.7	36.9	34.3	31.9
	0.3	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	42.8	39.7	36.9	34.3	31.9
	0.4	45.0	45.0	45.0	45.0	41.5	37.8	34.6	31.7	29.1	26.7	24.5	22.5	20.7
	0.5	35.0	35.0	35.0	34.3	31.0	28.0	25.4	23.0	20.9	18.9	17.1	15.4	13.9
	0.6	28.0	28.0	28.0	26.8	24.0	21.5	19.2	17.2	15.4	13.7	12.2	10.7	9.4
	0.7	23.0	23.0	23.0	21.5	19.0	16.8	14.9	13.1	11.5	10.0	8.6	7.3	6.2
	0.8	20.0	20.0	20.0	17.4	15.3	13.3	11.6	10.0	8.6	7.2	6.0	4.8	3.7
	0.9	16.7	16.1	15.6	14.3	12.4	10.6	9.0	7.6	6.3	5.0	3.9	2.8	1.9
	1	12.2	11.6	11.1	10.4	9.9	8.4	7.0	5.7	4.5	3.3	2.3	1.3	—
	1.1	9.5	8.9	8.4	7.7	7.2	6.6	5.3	4.1	3.0	1.9	0.9	—	—
	1.2	6.8	6.2	5.7	5.0	4.5	3.9	3.3	2.8	1.7	0.7	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

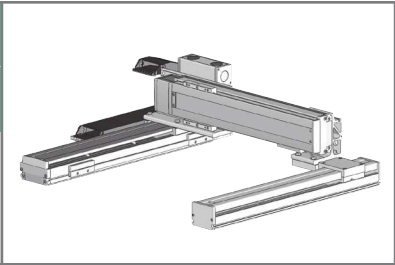
(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

ICSB2-GE□M

ICSPB2-GE□M High-Precision Specification

±10μm Standard
Battery-less Absolute
X-Y 2-axis
XYBG (Y Side Gantry)
Medium Speed Type
X:Lg (200W) Y:Md (200W)



Model Specification Items

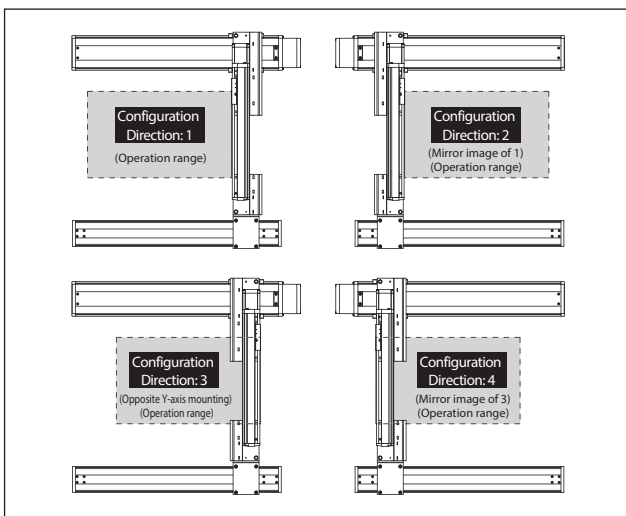
Series	GE□M	WA					T2			
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Type Refer to Model Specification table below	Encoder Type WA: Battery-less Absolute	X-axis Stroke/Option 10: 100mm 130: 1300mm <100: 1000mm> * below. (Every 50mm) * For self-standing cable specification	Y-axis Stroke/Option 30: 300mm 90: 900mm (Every 50mm) table below.	Applicable Controllers T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis Cable Management Refer to Explanation of Model Designations below	Z-axis Cable Management (Option)		

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-GE1M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-GE2M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-GE3M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-GE4M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

*2 Please specify only when required.

Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-[1]-200-10-[2]-T2-[9]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-[2]-AQ	—
Y-axis	ISB[ISPB]-MXM-[1]-200-10-[2]-T2-[9]-[3]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [9] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [9] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~250	300~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	—	600	—	460	380	320	270	220
Y-axis	—	600	430	345	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		300	350	400	450	500	550	600	650	700	750	800	850	900
Acceleration *1	0.2	60.0	60.0	60.0	60.0	58.9	54.2	50.0	46.2	42.8	39.7	36.9	34.3	31.9
	0.3	60.0	60.0	60.0	60.0	58.9	54.2	50.0	46.2	42.8	39.7	36.9	34.3	31.9
	0.4	60.0	55.8	50.3	45.6	41.5	37.8	34.6	31.7	29.1	26.7	24.5	22.5	20.7
	0.5	44.6	42.6	38.2	34.3	31.0	28.0	25.4	23.0	20.9	18.9	17.1	15.4	13.9
	0.6	31.1	30.5	30.0	26.8	24.0	21.5	19.2	17.2	15.4	13.7	12.2	10.7	9.4
	0.7	21.2	20.6	20.1	19.4	18.9	16.8	14.9	13.1	11.5	10.0	8.6	7.3	6.2
	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

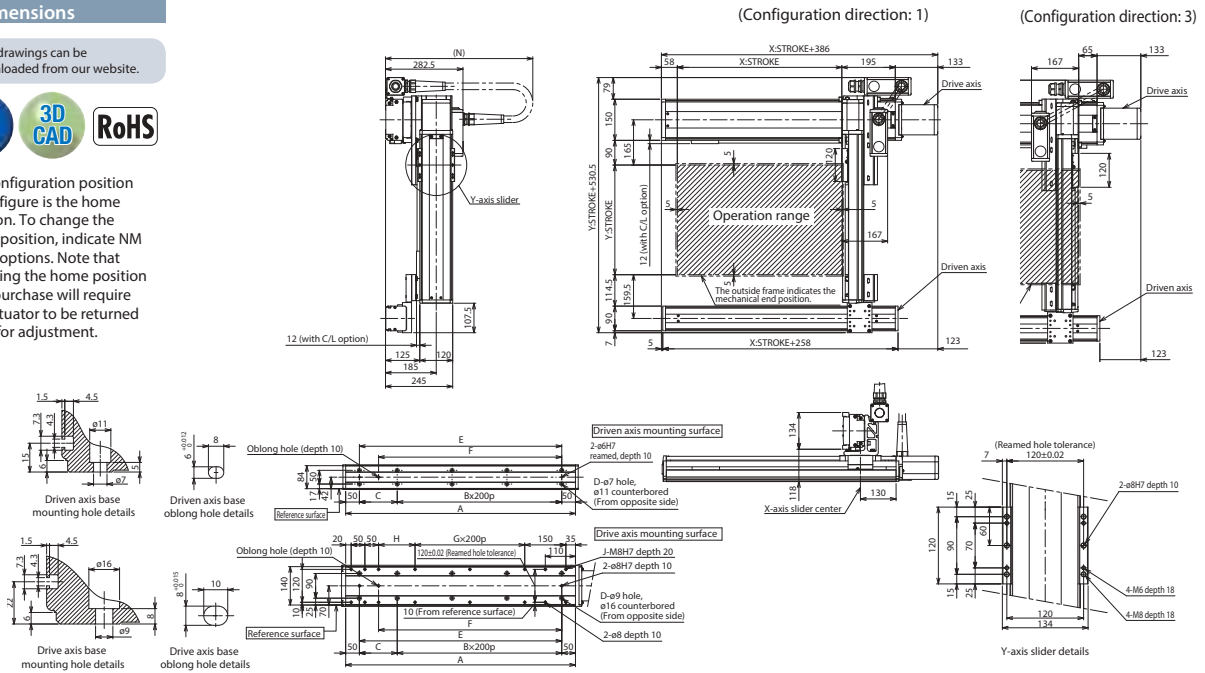
ICSB2 [ICSPB2]-GE□M-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	600	650	650	700	700	750	750	750	800	800	850	850	900	900	950	950	1000	1000	1000

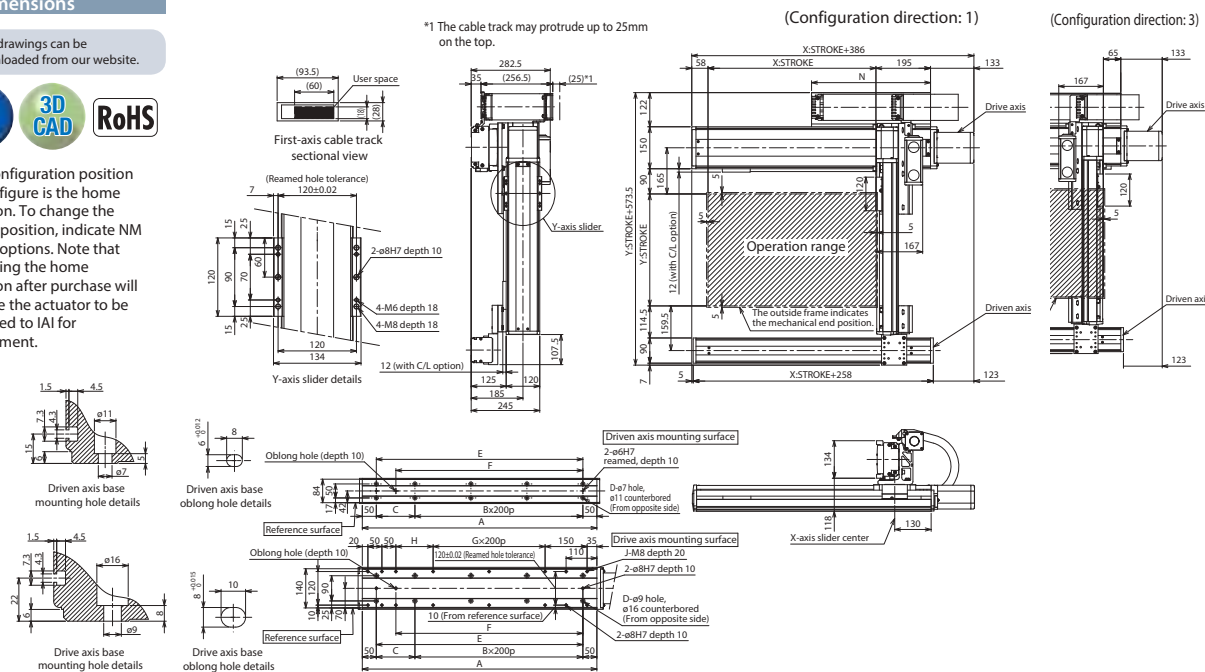
ICSB2 [ICSPB2]-GE□M-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB2-GF□H

ICSPB2-GF□H High-Precision Specification



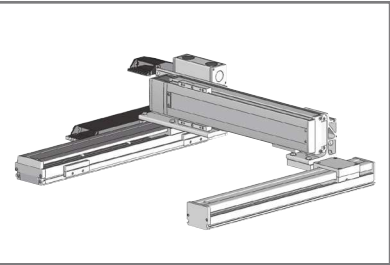
Battery-less Absolute

X-Y 2-axis

XYBG (Y Side Gantry)

High Speed Long Type

X:Lg (400W)
Y:Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	30: 300mm 90: 900mm (Every 50mm)	T2: SSCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

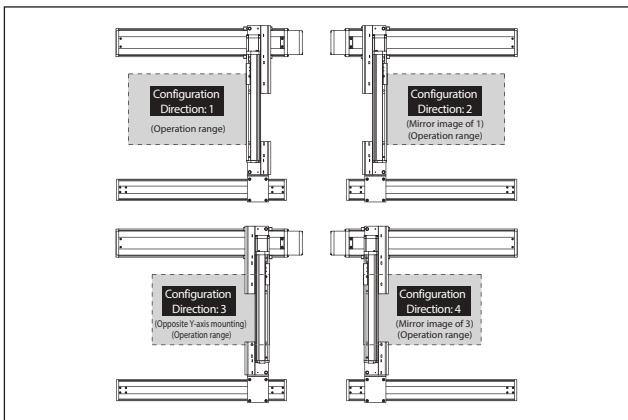
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-GF1H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-GF2H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-GF3H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-GF4H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LMXM-[1]-400-20-[2]-T2-[3]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0-[2]-AQ	—
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[4]-T2-[5]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [9] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	300~700	750~800	850~900	1000~1200	1300	1400
X-axis	—	—	—	1200	1150	1000
Y-axis	1200	860	695	—	—	—

	1500	1600	1700	1800	1900	2000
X-axis	950	830	740	650	590	540
Y-axis	—	—	—	—	—	—

	2100	2200	2300	2400	2500
X-axis	490	440	410	370	340
Y-axis	—	—	—	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		300	350	400	450	500	550	600	650	700	750	800	850	900
Acceleration *1	0.2	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	42.8	39.7	36.9	34.3	31.9
	0.3	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	42.8	39.7	36.9	34.3	31.9
	0.4	45.0	45.0	45.0	45.0	41.5	37.8	34.6	31.7	29.1	26.7	24.5	22.5	20.7
	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.6	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.7	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track
⑧	Z-axis Cable Management (Option)	CT: Cable track *2

*2 Please specify only when required. Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

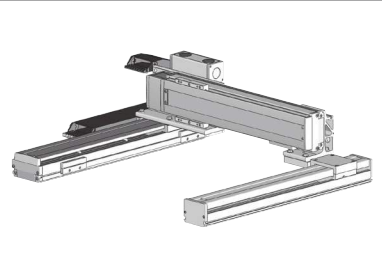
(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

ICSB2-GG□H

ICSPB2-GG□H High-Precision Specification

±10μm Standard
±5μm High-Precision
Battery-less Absolute
X-Y 2-axis
XYBG (Y Side Gantry)
High Speed Type
X:Lg (400W)
Y:Lg (200W)



Model Specification Items

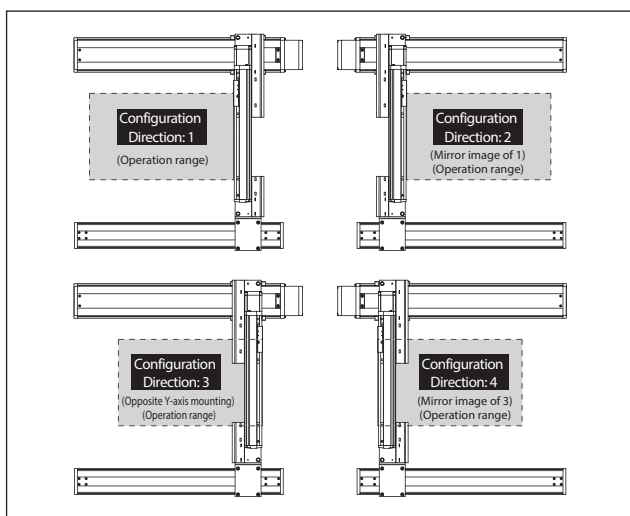
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm table <100: 1000mm> * below. (Every 50mm) * For self-standing cable specification	50: 500mm 110: 1100mm table below. (Every 50mm)	T2: SCION SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-GG1H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-GG2H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-GG3H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-GG4H-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	50: 500mm 110: 1100mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
⑧	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required.

Selectable only when the Y-axis Cable Management is "CT".
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-[1]-400-20-[2]-T2-[9]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-[2]-AQ	—
Y-axis	ISB[ISPB]-LXM-[1]-200-20-[4]-T2-[9]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [9] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~450	500~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	1200	920	765	645	550	440	—
Y-axis	—	1200	920	765	645	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Acceleration *1	0.2	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	44.1	41.2	38.5	36.0
	0.3	45.0	45.0	42.7	39.2	35.9	32.9	30.2	27.7	25.4	23.2	21.1	19.1	17.4
	0.4	34.5	31.1	28.1	25.3	22.8	20.4	18.3	16.3	14.5	12.7	11.1	9.5	8.1
	0.5	24.6	21.8	19.3	17.0	14.9	12.9	11.2	9.5	7.9	6.4	5.0	3.7	2.5
	0.6	18.0	15.5	13.4	11.4	9.6	7.9	6.4	4.9	3.6	2.3	1.0	—	—
	0.7	13.2	11.1	9.2	7.5	5.9	4.3	3.0	1.7	0.5	—	—	—	—
	0.8	9.7	7.8	6.1	4.5	3.0	1.7	—	—	—	—	—	—	—
	0.9	6.9	5.2	3.7	2.2	0.9	—	—	—	—	—	—	—	—
	1	3.5	2.7	1.7	—	—	—	—	—	—	—	—	—	—
	1.1	0.8	—	—	—	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

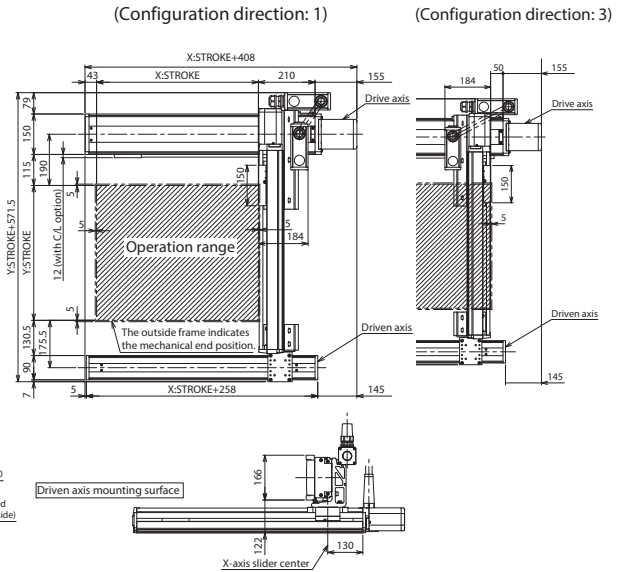
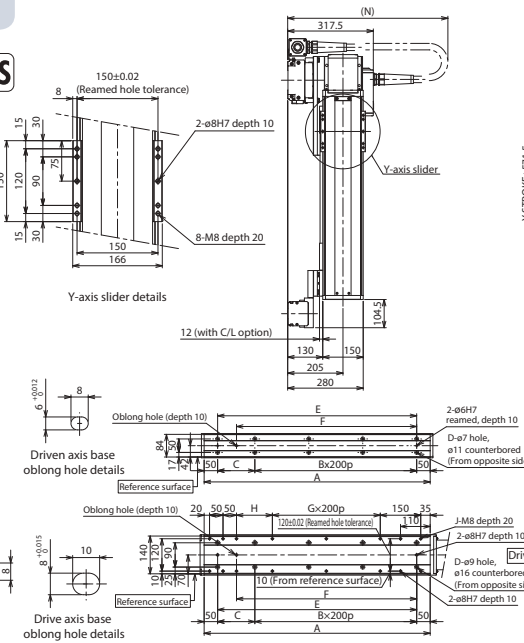
ICSB2 [ICSPB2]-GG□H-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	650	650	700	700	750	750	750	800	800	850	850	900	900	950	950	950	1000	1000	1050

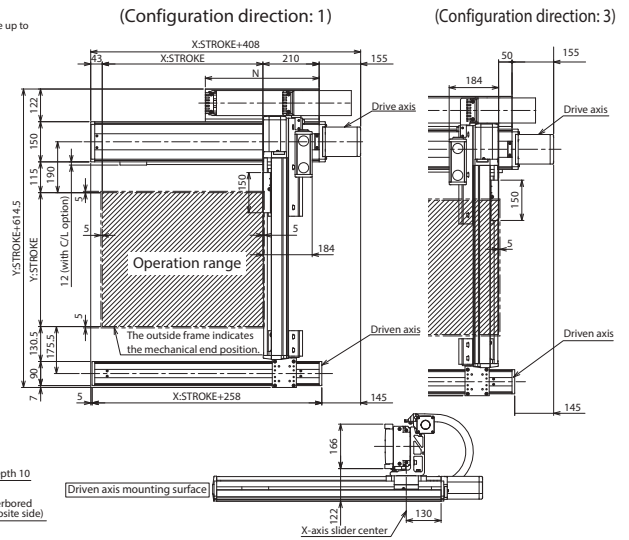
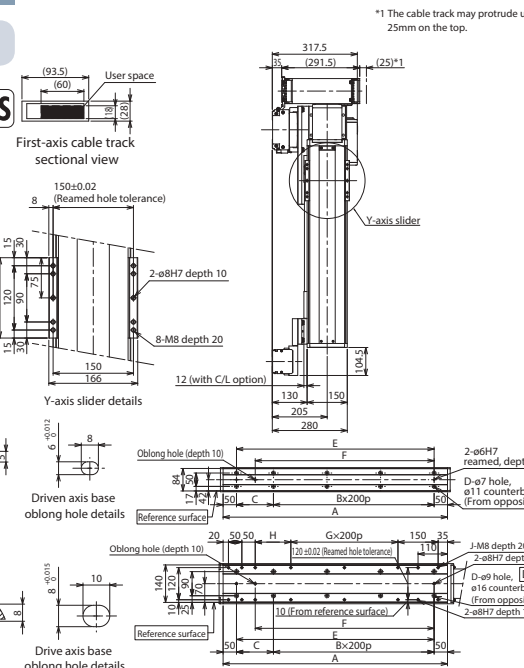
ICSB2 [ICSPB2]-GG□H-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

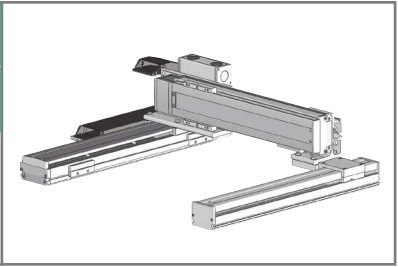


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB2-GG□M

ICSPB2-GG□M High-Precision Specification

±10μm Standard
±5μm High Precision
Battery-less Absolute
X-Y 2-axis
XYBG (Y Side Gantry)
Medium Speed Type
X:Lg (200W) Y:Lg (200W)



Model Specification Items

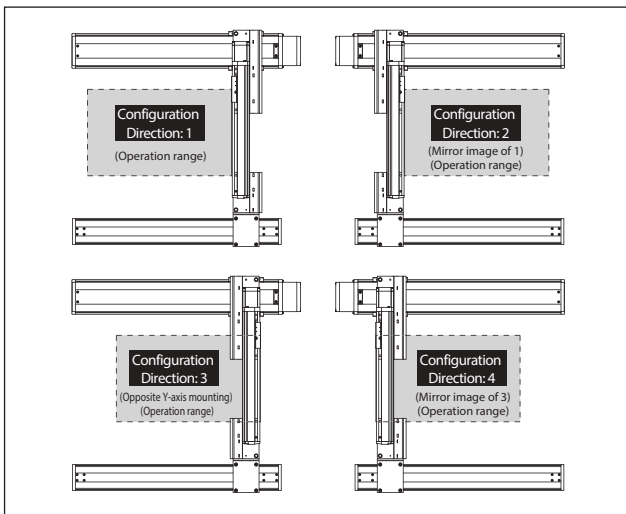
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm table <100: 1000mm> * below. (Every 50mm) * For self-standing cable specification	50: 500mm 110: 1100mm table. (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-GG1M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
2	ICSB2[ICSPB2]-GG2M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
3	ICSB2[ICSPB2]-GG3M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]
4	ICSB2[ICSPB2]-GG4M-[1]-[2]-[3]-[4]-[5]-T2-[6]-[7]-[8]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [8] in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	50: 500mm 110: 1100mm
[5]	Y-axis option	Refer to Options table below.
[6]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[7]	Y-axis Cable Management	SC: Self-standing cable CT: Cable track
[8]	Z-axis Cable Management (Option) *2	CT: Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

*2 Please specify only when required. Selectable only when the Y-axis Cable Management is "CT". For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

* Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-[1]-200-10-[2]-T2-[9]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-[2]-AQ	—
Y-axis	ISB[ISPB]-LXM-[1]-200-10-[4]-T2-[9]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [9] in the above model names. Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	100~450	500~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	600	460	460	380	320	270	220
Y-axis	—	600	460	380	320	—	—

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Acceleration *1	0.2	60.0	60.0	60.0	60.0	60.0	57.9	54.0	50.4	47.2	44.1	41.2	38.5	36.0
	0.3	51.1	46.6	42.7	39.2	35.9	32.9	30.2	27.7	25.4	23.2	21.1	19.1	17.4
	0.4	34.5	31.1	28.1	25.3	22.8	20.4	18.3	16.3	14.5	12.7	11.1	9.5	8.1
	0.5	24.6	21.8	19.3	17.0	14.9	12.9	11.2	9.5	7.9	6.4	5.0	3.7	2.5
	0.6	18.0	15.5	13.4	11.4	9.6	7.9	6.4	4.9	3.6	2.3	1.0	—	—
	0.7	13.2	11.1	9.2	7.5	5.9	4.3	3.0	1.7	0.5	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

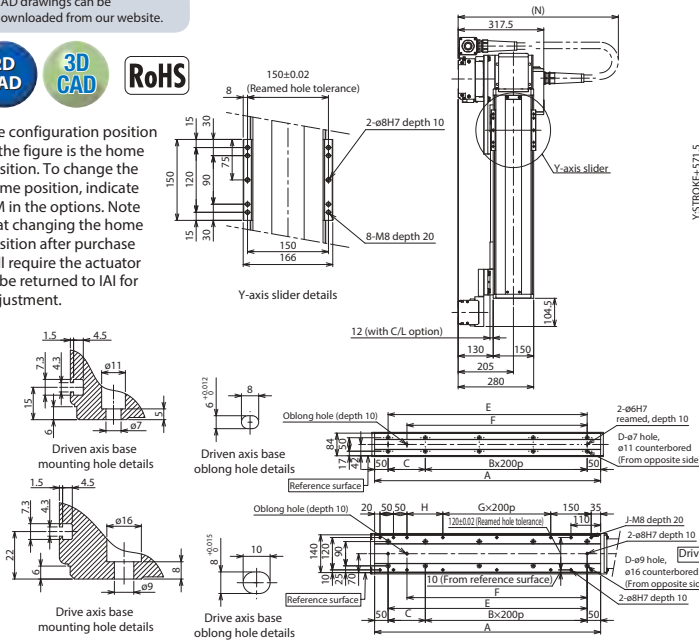
ICSB2 [ICSPB2]-GG□M-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.

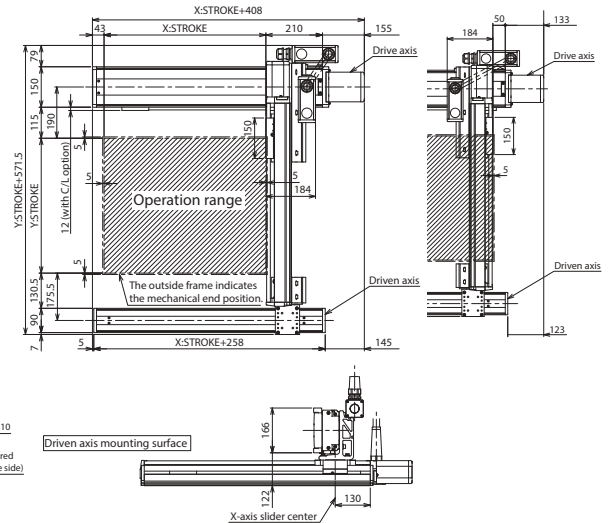


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



(Configuration direction: 1)

(Configuration direction: 3)



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
N	650	650	700	700	750	750	750	800	800	850	850	900	900	950	950	950	1000	1000	1050

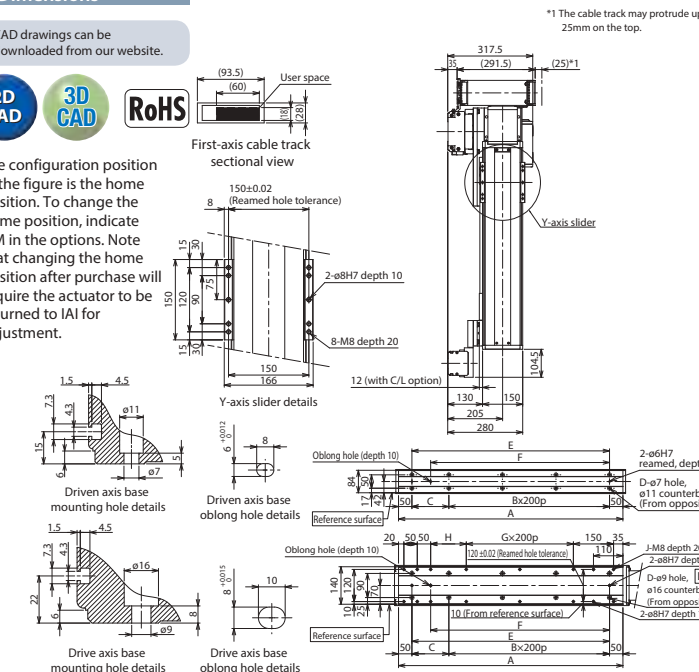
ICSB2 [ICSPB2]-GG□M-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



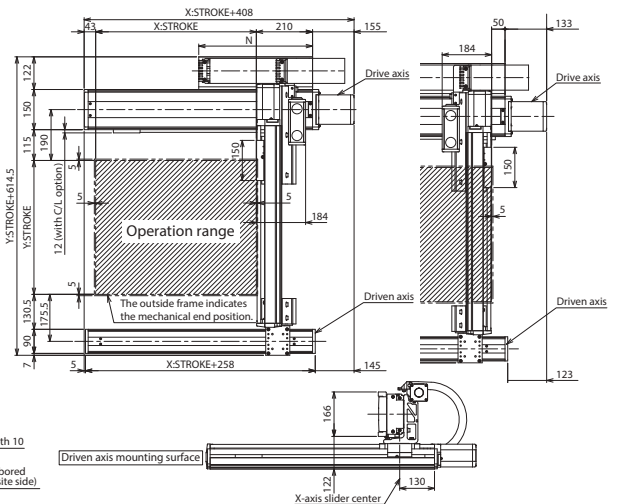
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



*1 The cable track may protrude up to 25mm on the top.

(Configuration direction: 1)

(Configuration direction: 3)



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB2-GH□H

ICSPB2-GH□H

High-Precision Specification



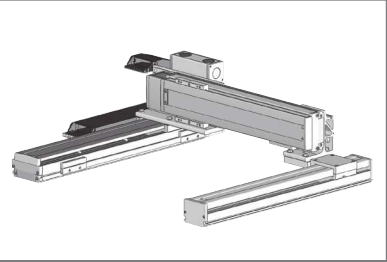
Battery-less Absolute

X-Y 2-axis

XYBG (Y Side Gantry)

High Speed Long Type

X:Lg (400W)
Y:Lg (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management (Option)
ICSB2: Standard 2-axis specification ICSPB2: High precision 2-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	50: 500mm 110: 1100mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

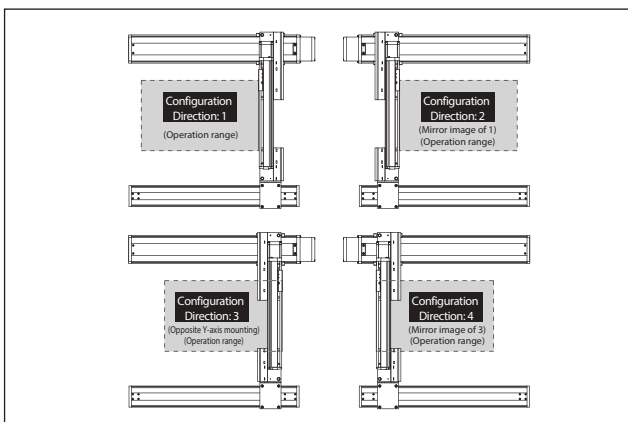
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Model
1	ICSB2[ICSPB2]-GH1H-①-②-③-④-⑤-T2-⑥-⑦-⑧
2	ICSB2[ICSPB2]-GH2H-①-②-③-④-⑤-T2-⑥-⑦-⑧
3	ICSB2[ICSPB2]-GH3H-①-②-③-④-⑤-T2-⑥-⑦-⑧
4	ICSB2[ICSPB2]-GH4H-①-②-③-④-⑤-T2-⑥-⑦-⑧

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	50: 500mm 110: 1100mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track
⑧	Z-axis Cable Management (Option)	CT: Cable track *2

*2 Please specify only when required.
Selectable only when the Y-axis Cable Management is "CT".
For external dimensions, see P.12.

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0-②-AQ	—
Y-axis	ISB[ISPB]-LXM-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑥ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑤ in the above model names.
Please refer to P.11 for the exit directions.

Maximum Speed by Stroke (mm/s) (Note 3)

	500~800	850~900	950	1000	1050	1100
X-axis	—					1200
Y-axis	1200	920	765	645		

	1200	1300	1400	1500	1600	1700	1800	1900
X-axis	1200	1150	1000	950	830	740	650	590
Y-axis	—							

	2000	2100	2200	2300	2400	2500
X-axis	540	490	440	410	370	340
Y-axis	—					

Payload by Acceleration/Deceleration (kg) (Note 4)

		Y-axis stroke												
		500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Acceleration *1	0.2	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	44.1	41.2	38.5	36.0	
	0.3	45.0	45.0	42.7	39.2	35.9	32.9	30.2	27.7	25.4	23.2	21.1	19.1	17.4
	0.4	34.5	31.1	28.1	25.3	22.8	20.4	18.3	16.3	14.5	12.7	11.1	9.5	8.1
	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.6	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.7	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.9	—	—	—	—	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.1	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.2	—	—	—	—	—	—	—	—	—	—	—	—	—

*1 The payload spec is for when the acceleration in the X axis and Y axis are equal.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) Please note that a longer stroke will result in a lower max speed.

(Note 4) The rated acceleration is 0.4G. When the acceleration is increased, the payload will be reduced.

ICSB2 [ICSPB2]-GH□H-CT (Cable track specification)

Dimensions

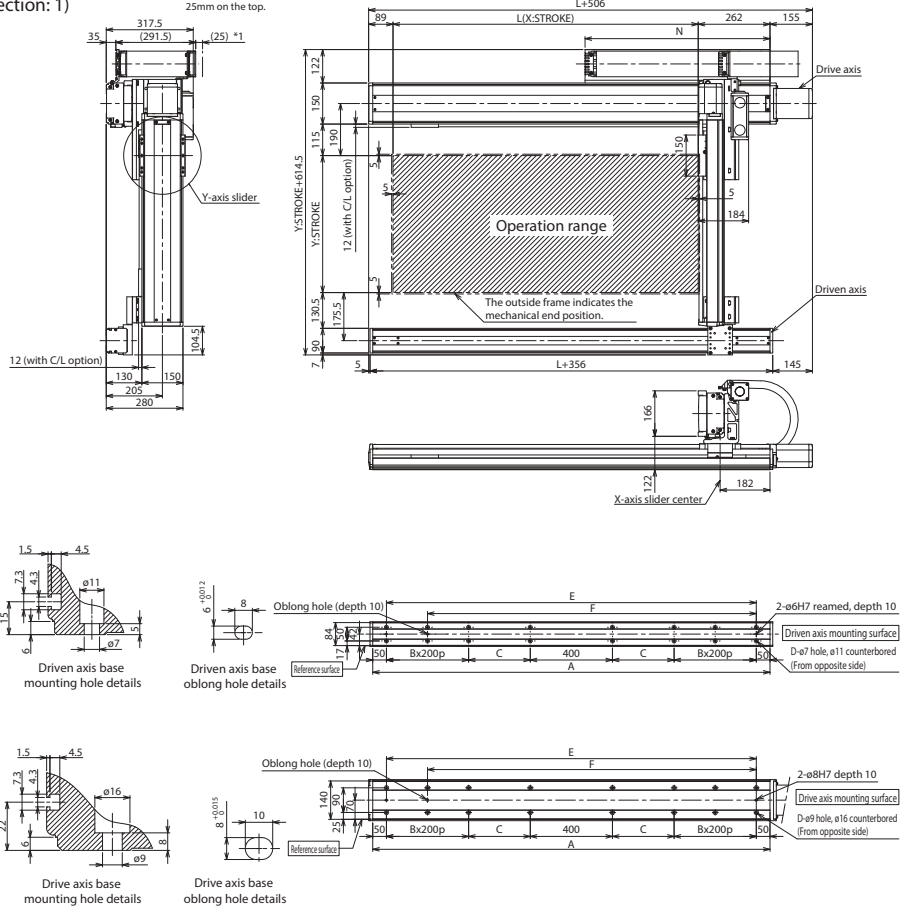
CAD drawings can be downloaded from our website.



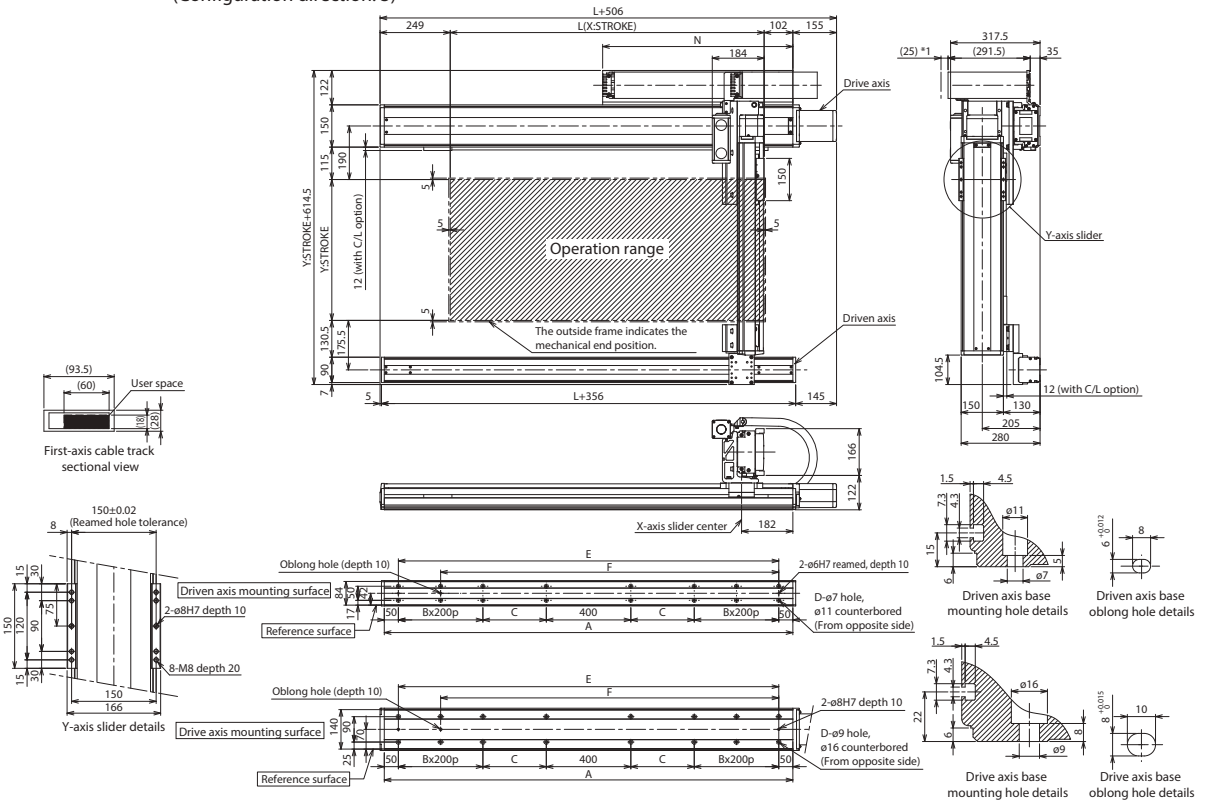
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)

*1 The cable track may protrude up to 25mm on the top.



(Configuration direction: 3)



X-axis nominal stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-BA□MB1□

ICSPB3-BA□MB1□

High-Precision Specification

±10µm

Standard

±5µm

High-Precision

Battery-less Absolute

X-Y-Z 3-axis

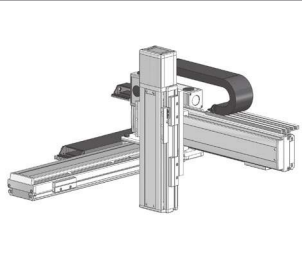
XYB+ZB (Y, Z Base Mount)

Medium Speed Type

X: 5m (60W)

Y: 5m (60W)

Z: 5m (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 90: 900mm <70: 700mm> * (Every 50mm) + For self-standing cable specification	10: 100mm 40: 400mm (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

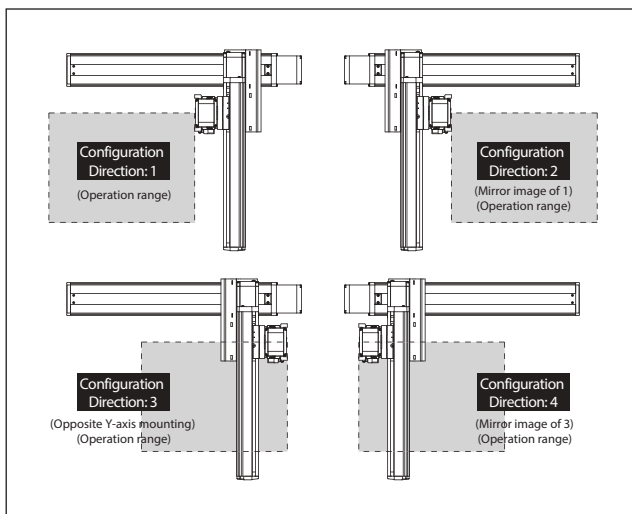
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BA1MB1H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-BA1MB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-BA1MB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	H	ICSB3[ICSPB3]-BA2MB1H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-BA2MB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-BA2MB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	H	ICSB3[ICSPB3]-BA3MB1H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-BA3MB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-BA3MB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	H	ICSB3[ICSPB3]-BA4MB1H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-BA4MB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-BA4MB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-SXM- <u>1</u> -60-8- <u>2</u> -T1- <u>3</u>	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM- <u>1</u> -60-8- <u>4</u> -T2- <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- <u>1</u> -60- <u>6</u> - <u>6</u> -T2- <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑩ in the above model names.

16: For Z-axis High Speed type

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with ⑪ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 90: 900mm (70: 700mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 700mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	60W/8mm
Y-axis motor output/lead	60W/8mm
Z-axis motor output/lead	60W/16mm (H), 8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BA□MB1H

Z-axis stroke	Y-axis stroke	
	100~400	
	100	3.5
	150	
	200	
	250	
300		

BA□MB1M

Z-axis stroke	Y-axis stroke				
	100~200	250	300	350	400
	7.0	7.0	7.0	6.6	5.1
		7.0	7.0	6.2	4.7
		7.0	7.0	5.8	4.3
		7.0	6.8	5.4	3.9
6.7		6.5	5.1	3.6	

BA□MB1L

Z-axis stroke	Y-axis stroke						
	100	150	200	250	300	350	400
	8.9	8.7	8.5	8.2	8.0	6.6	5.1
	8.5	8.3	8.1	7.8	7.6	6.2	4.7
	8.1	7.9	7.7	7.4	7.2	5.8	4.3
	7.7	7.5	7.3	7.0	6.8	5.4	3.9
7.4	7.2	7.0	6.7	6.5	5.1	3.6	

Maximum Speed by Stroke (mm/s) (Note 4)

BA□MB1H

X-axis	100~300	350~400	450~600	650~700	750~800	850~900
Y-axis	480		330		260	210
Z-axis	960	—				

BA□MB1M

X-axis	100~300	350~400	450~600	650~700	750~800	850~900
Y-axis	480		330		260	210
Z-axis	480	—				

BA□MB1L

X-axis	100~300	350~400	450~600	650~700	750~800	850~900
Y-axis	480		330		260	210
Z-axis	240	—				

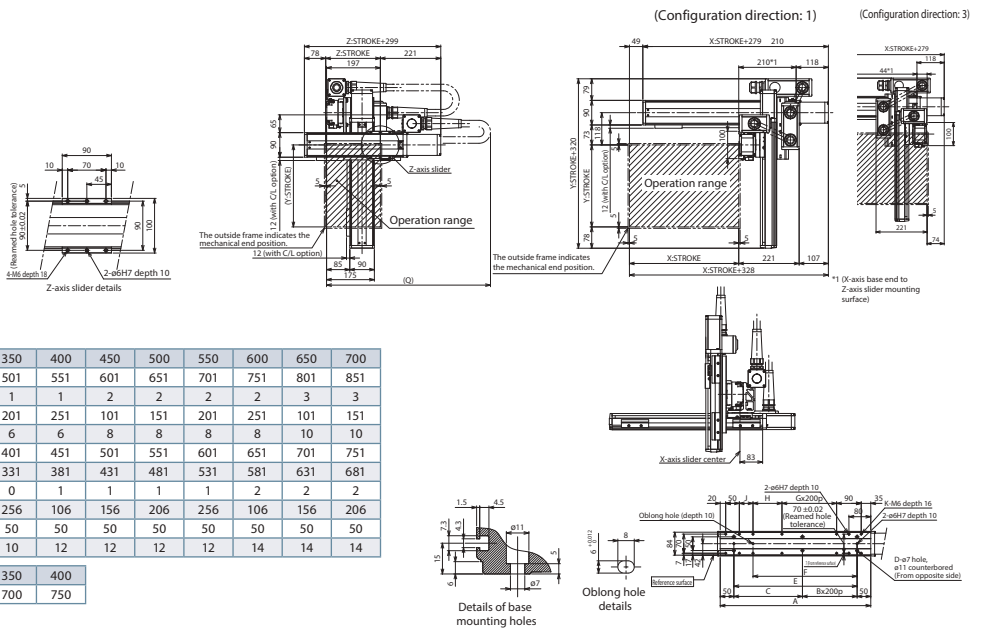
ICSB3 [ICSPB3]-BA□MB1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
A	251	301	351	401	451	501	551	601	651	701	751	801	851
B	0	0	0	1	1	1	1	2	2	2	2	3	3
C	151	201	251	101	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8	8	8	10	10
E	151	201	251	301	351	401	451	501	551	601	651	701	751
F	131	131	181	231	281	331	381	431	481	531	581	631	681
G	0	0	0	0	0	0	1	1	1	1	2	2	2
H	56	56	106	156	206	256	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14	14	14
Y-axis stroke	100	150	200	250	300	350	400						
Q	600	650	650	650	700	700	750						

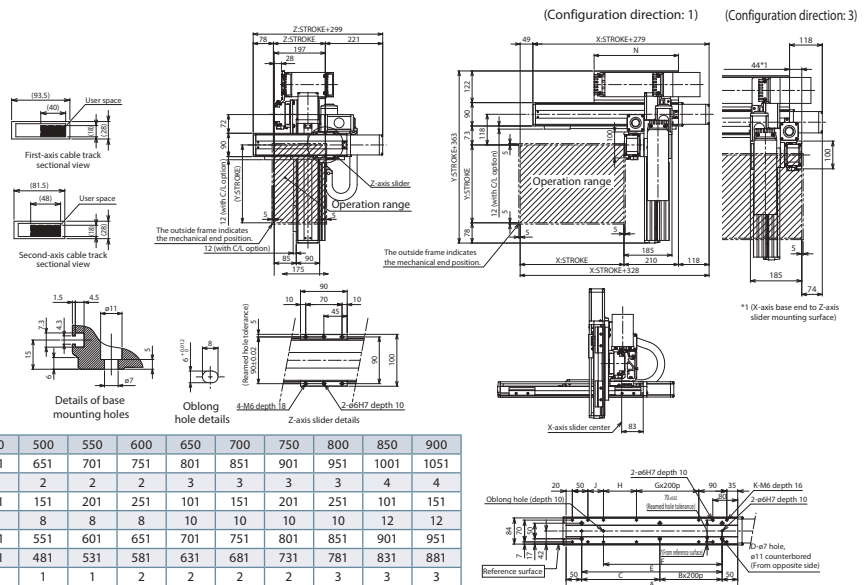
ICSB3 [ICSPB3]-BA□MB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
A	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051
B	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4
C	151	201	251	101	151	201	251	101	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12
E	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951
F	131	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3
H	56	56	106	156	206	256	106	156	206	256	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575

ICSB3-BB HB1

ICSPB3-BB HB1

High-Precision Specification



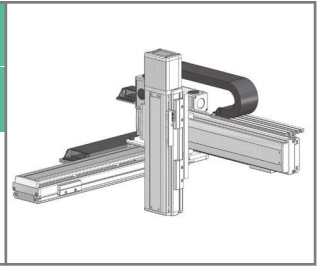
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y, Z Base Mount)

High Speed Type

X: Md (100W)
Y: 5m (60W)
Z: 5m (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm* < (Every 50mm) > For self-standing cable specification	10: 100mm 40: 400mm table (Every 50mm)	10: 100mm 30: 300mm table (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

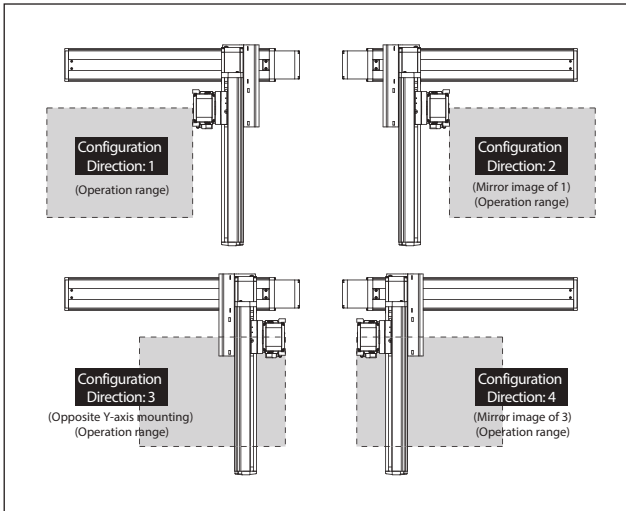
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BB1HB1H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-BB1HB1M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-BB1HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
2	H	ICSB3[ICSPB3]-BB2HB1H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-BB2HB1M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-BB2HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
3	H	ICSB3[ICSPB3]-BB3HB1H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-BB3HB1M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-BB3HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
4	H	ICSB3[ICSPB3]-BB4HB1H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-BB4HB1M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-BB4HB1L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-100-20-②-T2-③④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM-①-60-16-④-T2-⑤⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥-T2-⑦⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑩ in the above model names.
16: For Z-axis High Speed type
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with ⑪ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/20mm
Y-axis motor output/lead	60W/16mm
Z-axis motor output/lead	60W/16mm (H), 8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

■BB□HB1H

Z-axis stroke	Y-axis stroke	
	100	100~400
150	3.5	
200		
250		
300		

■BB□HB1M

Z-axis stroke	Y-axis stroke							
	100	150	200	250	300	350	400	
100	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
150	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
200	7.0	7.0	6.9	6.9	6.9	6.9	6.8	6.8
250	6.6	6.6	6.6	6.5	6.5	6.5	6.5	6.5
300	6.3	6.3	6.3	6.3	6.3	6.2	6.2	6.2

■BB□HB1L

Z-axis stroke	Y-axis stroke							
	100	150	200	250	300	350	400	
100	7.7	7.7	7.7	7.6	7.6	7.6	7.6	7.6
150	7.3	7.3	7.3	7.3	7.2	7.2	7.2	7.2
200	7.0	7.0	6.9	6.9	6.9	6.9	6.8	6.8
250	6.6	6.6	6.6	6.5	6.5	6.5	6.5	6.5
300	6.3	6.3	6.3	6.3	6.3	6.2	6.2	6.2

Maximum Speed by Stroke (mm/s) (Note 4)

■BB□HB1H

	100~300	350~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	960						
Z-axis	960						

■BB□HB1M

	100~300	350~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	960						
Z-axis	480						

■BB□HB1L

	100~300	350~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	960						
Z-axis	240						

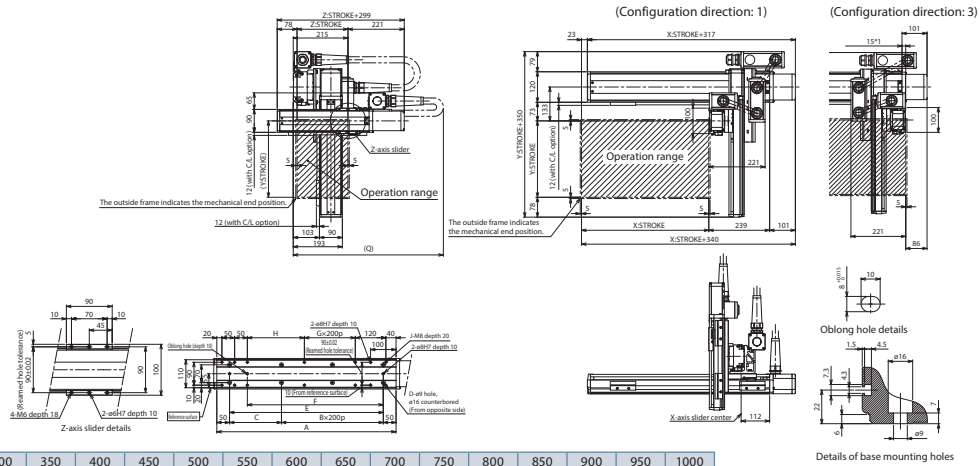
ICSB3 [ICSPB3]-BB□HB1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	
D	4	4	6	6	6	6	8	8	8	10	10	10	10	10	12	12	12	12	14	
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	
Y-axis stroke	100	150	200	250	300	350	400													
Q	600	650	650	700	700	750	750													

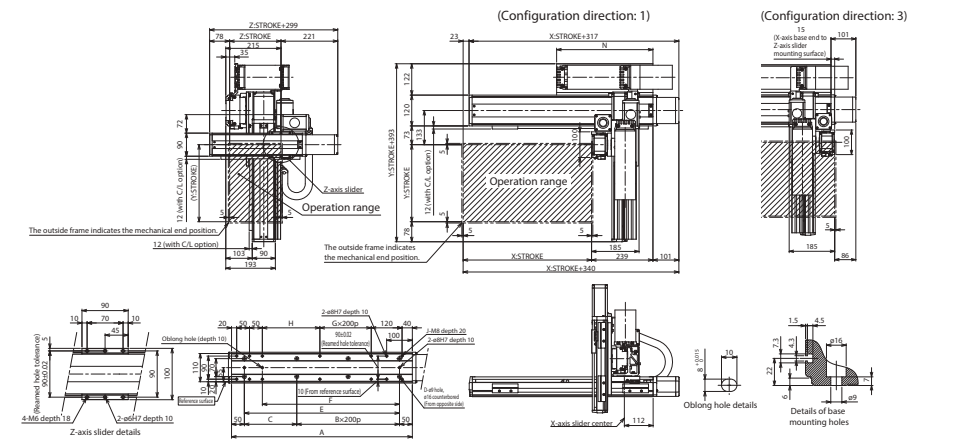
ICSB3 [ICSPB3]-BB□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	10	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-BB MB1

ICSPB3-BB MB1

High-Precision Specification



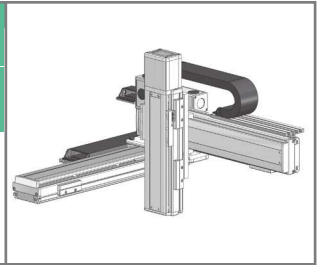
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y, Z Base Mount)

Medium Speed Type

X: Md (100W)
Y: Sm (60W)
Z: Sm (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm* (Every 50mm) + For self-standing cable specification	10: 100mm 40: 400mm table (Every 50mm) below.	10: 100mm 30: 300mm table (Every 50mm) below.	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

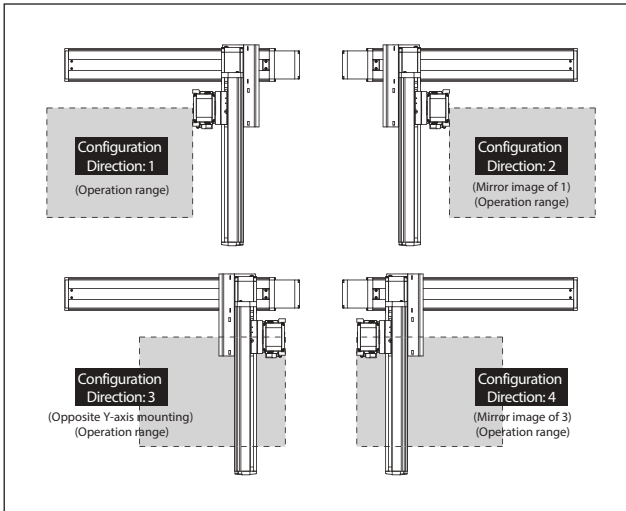
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BB1MB1H- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-BB1MB1M- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-BB1MB1L- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
2	H	ICSB3[ICSPB3]-BB2MB1H- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-BB2MB1M- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-BB2MB1L- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
3	H	ICSB3[ICSPB3]-BB3MB1H- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-BB3MB1M- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-BB3MB1L- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
4	H	ICSB3[ICSPB3]-BB4MB1H- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-BB4MB1M- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-BB4MB1L- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM- <u>1</u> -100-10- <u>2</u> -T2- <u>11</u> - <u>13</u>	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM- <u>1</u> -60-8- <u>2</u> -T2- <u>11</u> - <u>15</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- <u>1</u> -60- <u>10</u> - <u>6</u> -T2- <u>11</u> - <u>17</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑩ in the above model names.

16: For Z-axis High Speed type

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with ⑧ in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	60W/8mm
Z-axis motor output/lead	60W/16mm (H), 8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BB□MB1H

		Y-axis stroke
		100~400
Z-axis stroke	100	3.5
	150	
	200	
	250	
	300	

BB□MB1M

		Y-axis stroke
		100~400
Z-axis stroke	100	7.0
	150	
	200	
	250	
	300	

BB□MB1L

		Y-axis stroke
		100~400
Z-axis stroke	100	14.0
	150	
	200	
	250	
	300	

Maximum Speed by Stroke (mm/s) (Note 4)

BB□MB1H

	100~300	350~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	600						
Y-axis	480						
Z-axis	960						

BB□MB1M

	100~300	350~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	600						
Y-axis	480						
Z-axis	480						

BB□MB1L

	100~300	350~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	600						
Y-axis	480						
Z-axis	240						

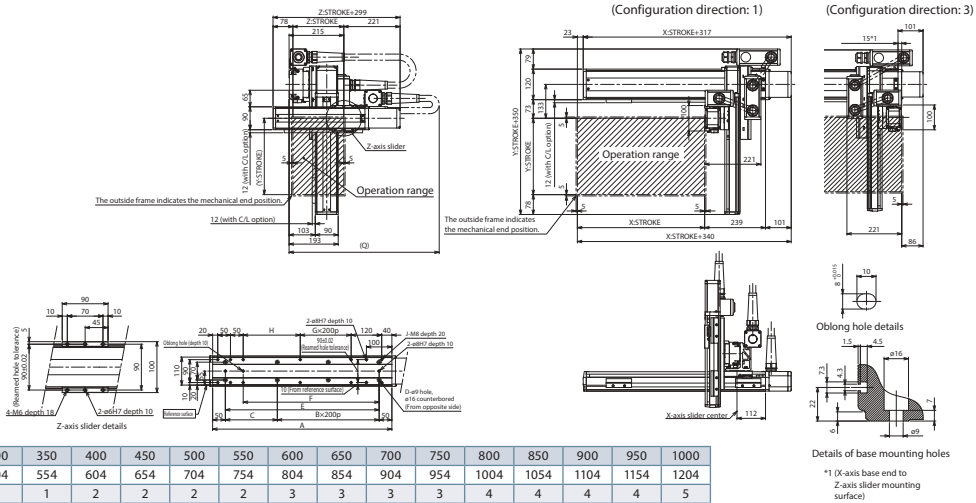
ICSB3 [ICSPB3]-BB□MB1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
Y-axis stroke	100	150	200	250	300	350	400												
Q	600	650	650	700	700	750	750												

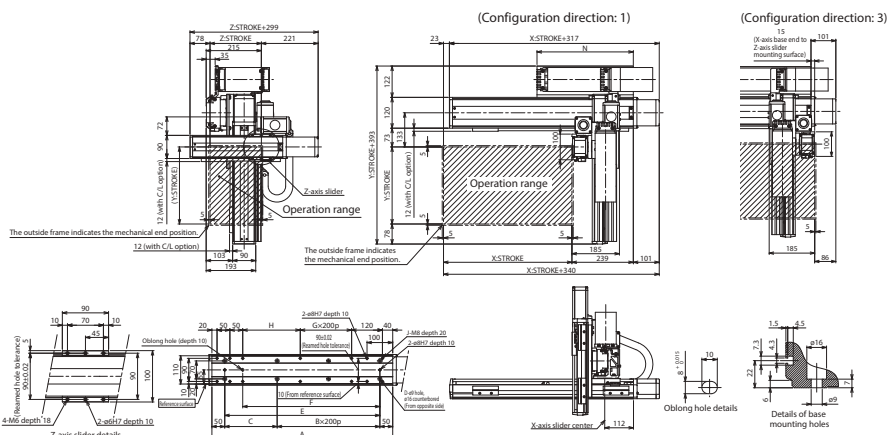
ICSB3 [ICSPB3]-BB□MB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924	974	1024
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-BC□HB1□

ICSPB3-BC□HB1□

High-Precision Specification



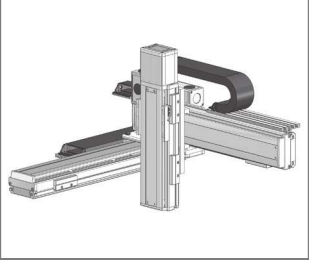
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y,Z Base Mount)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Sm (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100:1000mm> * below. (Every 50mm) * For self-standing cable specification	10: 100mm 50: 500mm table (Every 50mm)	10: 100mm 40: 400mm table (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

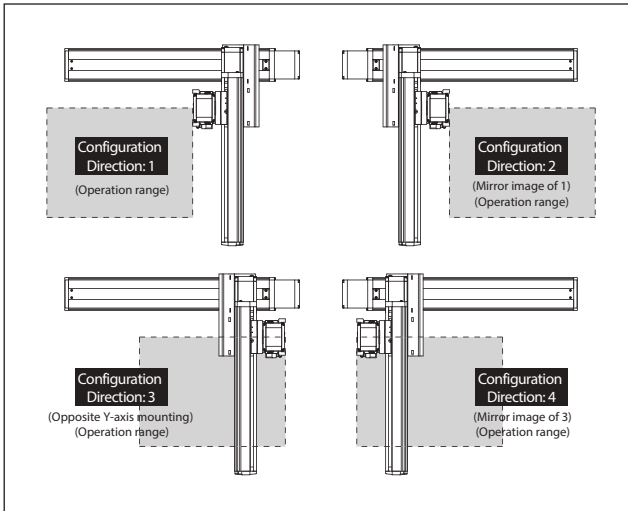
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BC1HB1H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC1HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BC1HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BC2HB1H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC2HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BC2HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BC3HB1H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC3HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BC3HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BC4HB1H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC4HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BC4HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-100-20-④-T2-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥-⑦-T2-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑩ in the above model names.

16: For Z-axis High Speed type

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with ⑪ in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/16mm (H), 8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BC□HB1H

Z-axis stroke	Y-axis stroke	
	100~500	
	100	3.5
	150	
	200	
	250	
	300	
350		
400		

BC□HB1M

Z-axis stroke	Y-axis stroke	
	100~500	
	100	7.0
	150	
	200	
	250	
	300	
350		
400		

BC□HB1L

Z-axis stroke	Y-axis stroke			
	100~400			
	100	14.0	450	500
	150		14.0	13.2
	200		14.0	12.8
	250		14.0	12.4
	300		14.0	12.0
350	13.6		11.7	
400	13.3	11.3		

Maximum Speed by Stroke (mm/s) (Note 4)

BC□HB1H

	100~400	450~500	550~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200						
Z-axis	960	—					

BC□HB1M

	100~400	450~500	550~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200						
Z-axis	480	—					

BC□HB1L

	100~400	450~500	550~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200						
Z-axis	240	—					

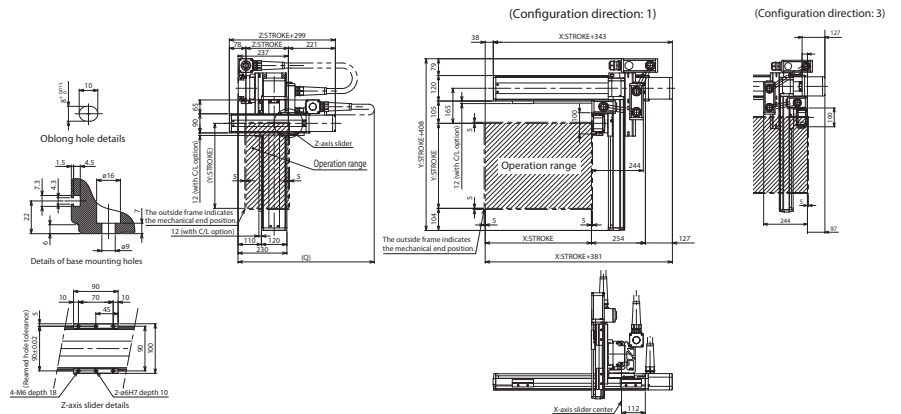
ICSB3 [ICSPB3]-BC□HB1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	
Y-axis stroke	100	150	200	250	300	350	400	450	500											
Q	650	650	700	700	750	750	800	800	850											

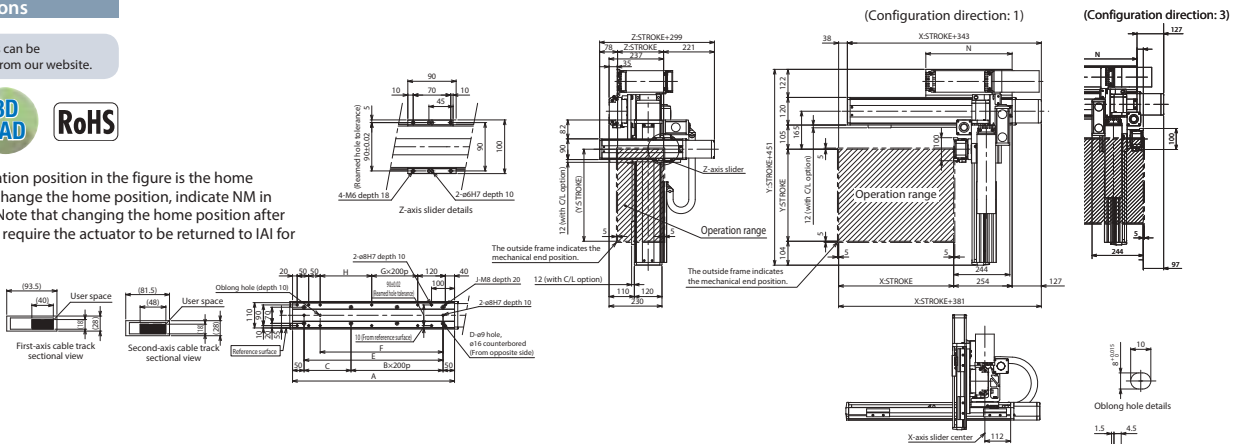
ICSB3 [ICSPB3]-BC□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-BC□HB2□

ICSPB3-BC□HB2□

High-Precision Specification



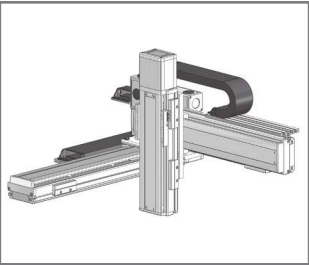
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (1, Z Base Mount)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm Refer to Options table 110: 1100mm table <100:1000mm> * below. (Every 50mm) + For self-standing cable specification	10: 100mm Refer to Options table 50: 500mm table (Every 50mm) below.	10: 100mm Refer to Options table below. 40: 400mm table (Every 50mm) below.	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

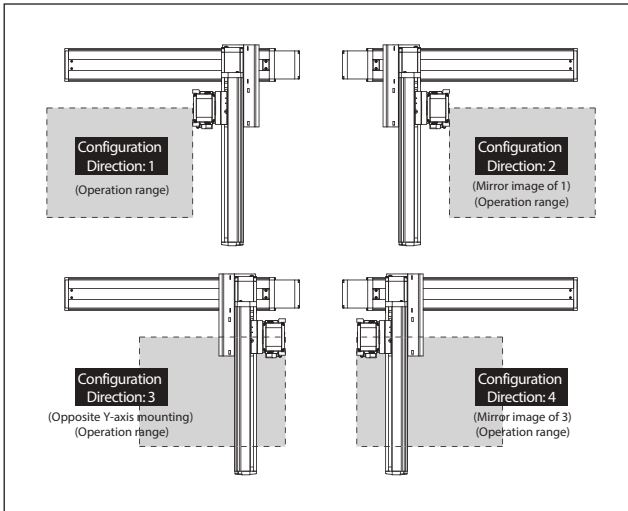
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BC1HB2H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC1HB2M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BC1HB2L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BC2HB2H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC2HB2M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BC2HB2L-①-②③④⑤⑥⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BC3HB2H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC3HB2M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BC3HB2L-①-②③④⑤⑥⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BC4HB2H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC4HB2M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BC4HB2L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-100-20-④-T2-③-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-100-⑥-T2-③-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ② in the above model names.

20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type

* Cable exit direction is specified with ④ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm ? 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm ? 50: 500mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	100W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BC□HB2H

		Y-axis stroke	
		100-500	
Z-axis stroke	100	5.0	
	150	5.0	
	200	5.0	
	250	5.0	
	300	5.0	
	400	5.0	

BC□HB2M

		Y-axis stroke								
		100	150	200	250	300	350	400	450	500
Z-axis stroke	100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.2
	150	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.6
	200	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.0
	250	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.3
	300	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	6.7
	400	9.7	9.7	9.6	9.6	9.6	9.6	9.5	7.7	5.4

BC□HB2L

		Y-axis stroke								
		100	150	200	250	300	350	400	450	500
Z-axis stroke	100	13.1	13.1	13.1	13.0	13.0	13.0	13.0	11.5	9.2
	150	12.6	12.5	12.5	12.5	12.5	12.4	12.4	10.9	8.6
	200	12.0	12.0	12.0	11.9	11.9	11.9	11.9	10.3	8.0
	250	11.4	11.4	11.3	11.3	11.3	11.3	11.3	9.6	7.3
	300	10.8	10.8	10.8	10.8	10.8	10.7	10.7	9.0	6.7
	400	9.7	9.7	9.6	9.6	9.6	9.6	9.5	7.7	5.4

Maximum Speed by Stroke (mm/s) (Note 4)

BC□HB2H

		100-400	450-500	550-700	750-800	850-900	950-1000	1050-1100
		X-axis	1200		860	695	570	460
Y-axis		1200		—				
Z-axis		1200		—				

BC□HB2L

		100-400	450-500	550-700	750-800	850-900	950-1000	1050-1100
		X-axis	1200		860	695	570	460
Y-axis		1200		—				
Z-axis		300		—				

BC□HB2M

		100-400	450-500	550-700	750-800	850-900	950-1000	1050-1100
		X-axis	1200		860	695	570	460
Y-axis		1200		—				
Z-axis		600		—				

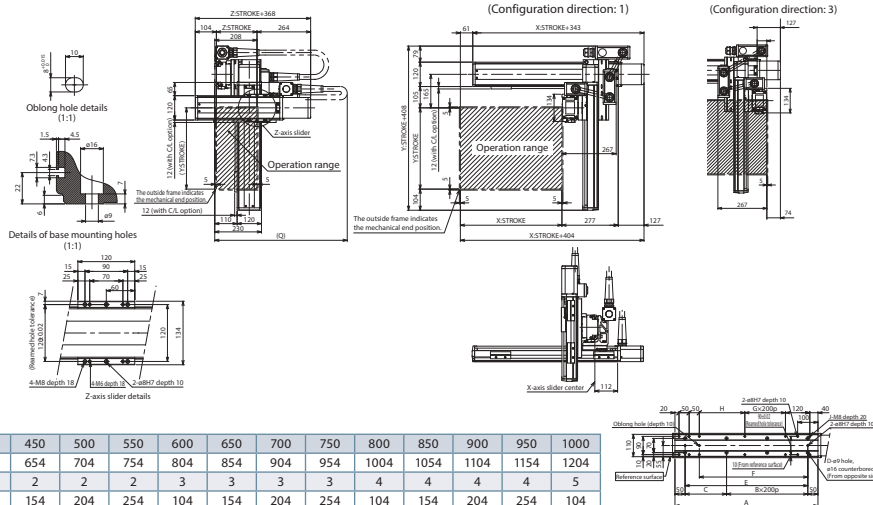
ICSB3 [ICSPB3]-BC□HB2□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
Y-axis stroke	100	150	200	250	300	350	400	450	500										
Q	650	700	700	750	750	800	800	850	850										

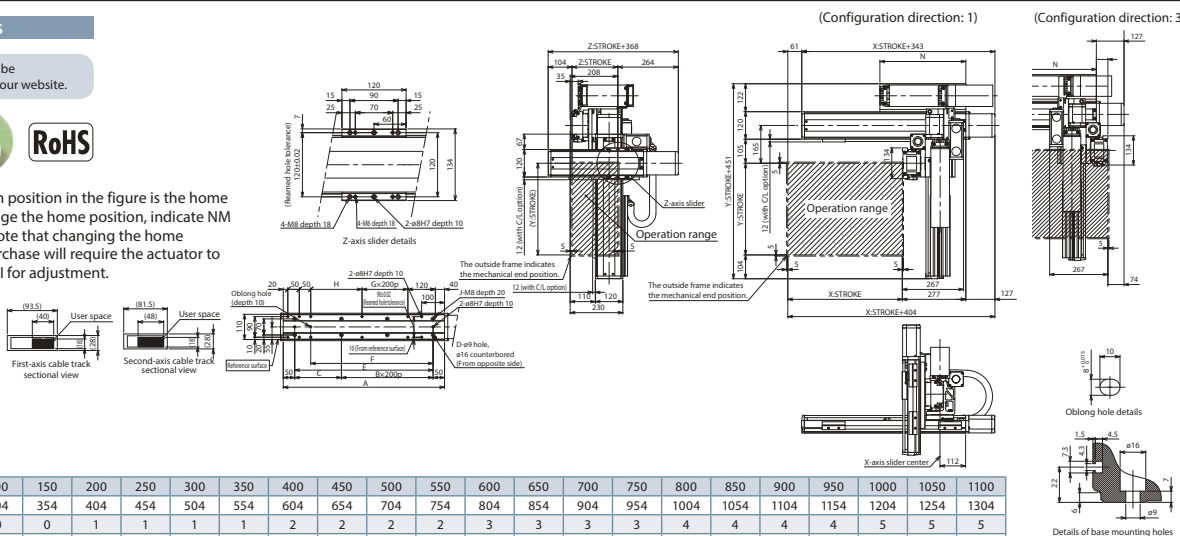
ICSB3 [ICSPB3]-BC□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-BC□HB3□

ICSPB3-BC□HB3□

High-Precision Specification



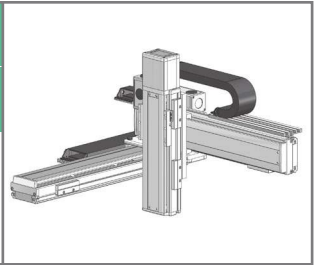
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (1, Z Base Mount)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

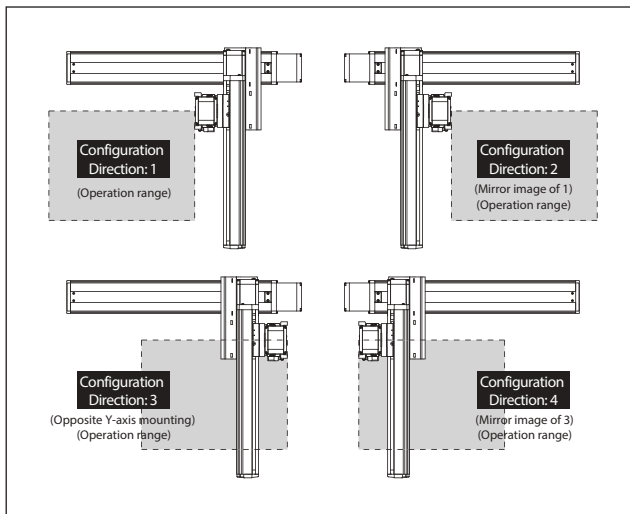
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100:1000mm> * below. (Every 50mm) + For self-standing cable specification	10: 100mm 50: 500mm table (Every 50mm)	10: 100mm 40: 400mm table (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BC1HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC1HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BC2HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC2HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BC3HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC3HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BC4HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC4HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-100-20-④-T2-③-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-⑥-⑦-T2-③-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑧] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑩] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with [⑪] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BC□HB3H

Z-axis stroke	Y-axis stroke								
	100	150	200	250	300	350	400	450	500
100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.7
150	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.0
200	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.7	7.4
250	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	6.7
300	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.4	6.1
350	9.8	9.7	9.7	9.7	9.7	9.7	9.6	7.8	5.5
400	9.2	9.2	9.2	9.2	9.1	9.1	9.1	7.2	4.9

BC□HB3M

Z-axis stroke	Y-axis stroke								
	100	150	200	250	300	350	400	450	500
100	12.6	12.6	12.6	12.6	12.6	12.5	12.5	11.0	8.7
150	12.0	12.0	12.0	11.9	11.9	11.9	11.9	10.3	8.0
200	11.5	11.5	11.4	11.4	11.4	11.4	11.3	9.7	7.4
250	10.8	10.8	10.8	10.8	10.8	10.8	10.7	9.0	6.7
300	10.3	10.3	10.3	10.2	10.2	10.2	10.2	8.4	6.1
350	9.8	9.7	9.7	9.7	9.7	9.7	9.6	7.8	5.5
400	9.2	9.2	9.2	9.2	9.1	9.1	9.1	7.2	4.9

Maximum Speed by Stroke (mm/s) (Note 4)

BC□HB3H

	100~400	450~500	550~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200						
Z-axis	1200						

BC□HB3M

	100~400	450~500	550~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200						
Z-axis	600						

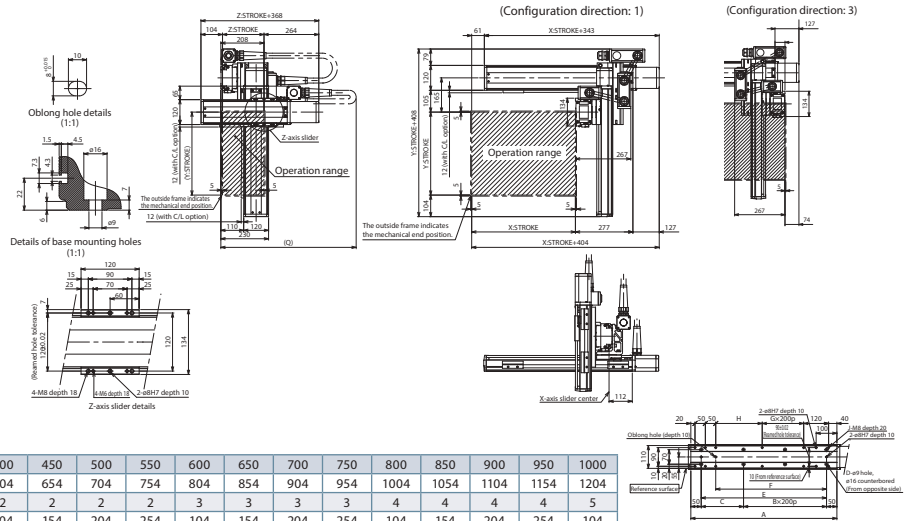
ICSB3 [ICSPB3]-BC□HB3□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
Y-axis stroke	100	150	200	250	300	350	400	450	500										
Q	650	700	700	750	750	800	800	850	850										

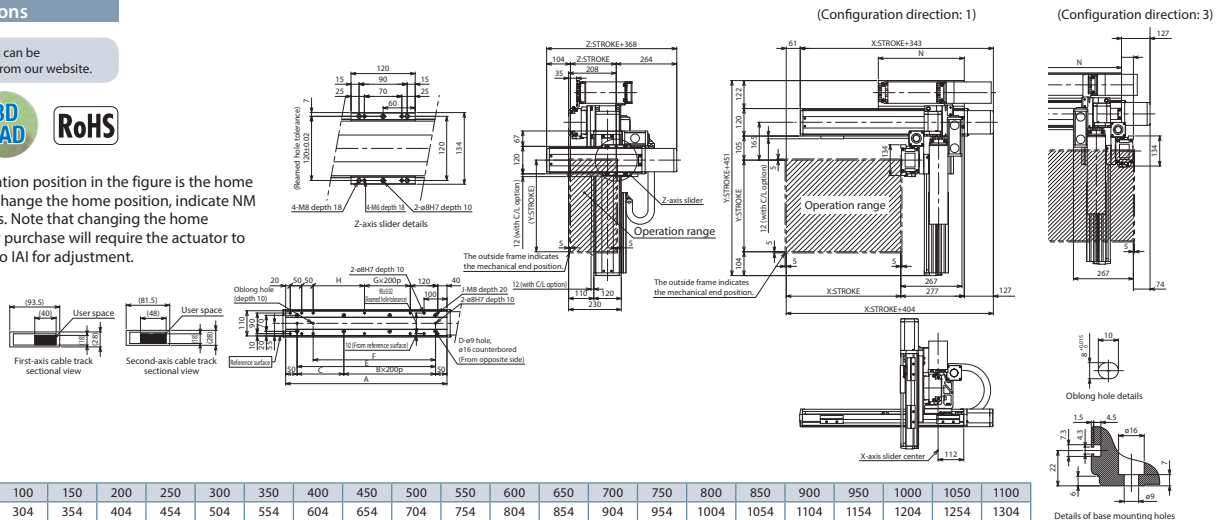
ICSB3 [ICSPB3]-BC□HB3□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-BC□MB2□

ICSPB3-BC□MB2□

High-Precision Specification



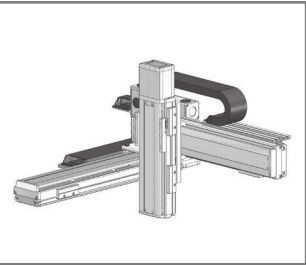
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y, Z Base Mount)

Medium Speed Type

X: Md (100W)
Y: Md (100W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100:1000mm> * below. (Every 50mm) + For self-standing cable specification	10: 100mm 50: 500mm table (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

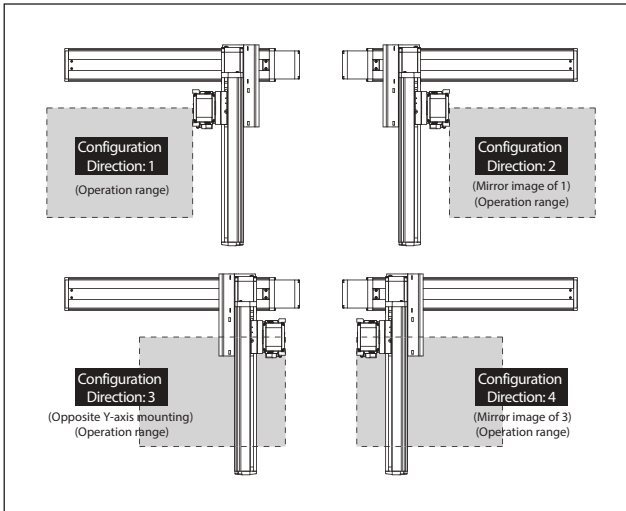
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BC1MB2H-1-2-3-4-5-6-7-T2-8-9
	M	ICSB3[ICSPB3]-BC1MB2M-1-2-3-4-5-6-7-T2-8-9
	L	ICSB3[ICSPB3]-BC1MB2L-1-2-3-4-5-6-7-T2-8-9
2	H	ICSB3[ICSPB3]-BC2MB2H-1-2-3-4-5-6-7-T2-8-9
	M	ICSB3[ICSPB3]-BC2MB2M-1-2-3-4-5-6-7-T2-8-9
	L	ICSB3[ICSPB3]-BC2MB2L-1-2-3-4-5-6-7-T2-8-9
3	H	ICSB3[ICSPB3]-BC3MB2H-1-2-3-4-5-6-7-T2-8-9
	M	ICSB3[ICSPB3]-BC3MB2M-1-2-3-4-5-6-7-T2-8-9
	L	ICSB3[ICSPB3]-BC3MB2L-1-2-3-4-5-6-7-T2-8-9
4	H	ICSB3[ICSPB3]-BC4MB2H-1-2-3-4-5-6-7-T2-8-9
	M	ICSB3[ICSPB3]-BC4MB2M-1-2-3-4-5-6-7-T2-8-9
	L	ICSB3[ICSPB3]-BC4MB2L-1-2-3-4-5-6-7-T2-8-9

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of 1 through 9 in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-1-100-10-2-T2-11-13	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-1-100-10-4-T2-11-15	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-1-100-10-6-T2-11-17	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for 1 through 9 in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with 10 in the above model names.

20: For Z-axis High Speed type

10: For Z-axis Medium Speed type

5: For Z-axis Low Speed type

* Cable exit direction is specified with 11 in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
1	Encoder type	WA: Battery-less Absolute
2	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
3	X-axis option	Refer to Options table below.
4	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
5	Y-axis option	Refer to Options table below.
6	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
7	Z-axis option	Refer to Options table below.
8	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
9	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis.

Make sure to indicate the standard equipped option in the model number.

When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	100W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.

The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BC□MB2H

Z-axis stroke	Y-axis stroke	
	100-500	5.0
100		
150		
200		
250		
300		
350		
400		

BC□MB2M

Z-axis stroke	Y-axis stroke			
	100-400	450	500	10.0
100	10.0	9.2		
150	10.0	8.6		
200	10.0	8.0		
250	9.6	7.3		
300	9.0	6.7		
350	8.3	6.0		
400	7.7	5.4		

BC□MB2L

Z-axis stroke	Y-axis stroke									
	100	150	200	250	300	350	400	450	500	5.0
100	19.0	18.7	18.3	17.9	17.6	17.2	14.2	11.5	9.2	
150	18.4	18.1	17.7	17.3	17.0	16.6	13.6	10.9	8.6	
200	17.8	17.5	17.1	16.7	16.4	16.0	13.0	10.3	8.0	
250	17.1	16.8	16.4	16.0	15.7	15.3	12.3	9.6	7.3	
300	16.5	16.2	15.8	15.4	15.1	14.7	11.7	9.0	6.7	
350	15.8	15.5	15.1	14.7	14.4	14.0	11.0	8.3	6.0	
400	15.2	14.9	14.5	14.1	13.8	13.4	10.4	7.7	5.4	

Maximum Speed by Stroke (mm/s) (Note 4)

BC□MB2H

	100-400	450-500	550-700	750-800	850-900	950-1000	1050-1100
X-axis	600		430		345	280	230
Y-axis	600		—		—		
Z-axis	1200		—		—		

BC□MB2L

	100-400	450-500	550-700	750-800	850-900	950-1000	1050-1100
X-axis	600		430		345	280	230
Y-axis	600		—		—		
Z-axis	300		—		—		

BC□MB2M

	100-400	450-500	550-700	750-800	850-900	950-1000	1050-1100
X-axis	600		430		345	280	230
Y-axis	600		—		—		
Z-axis	600		—		—		

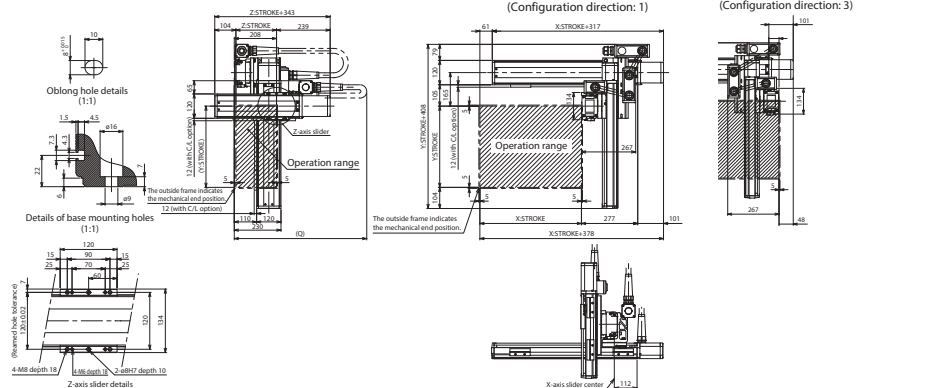
ICSB3 [ICSPB3]-BC□MB2□-SC-SC (Self-standing cable specification)

Dimensions

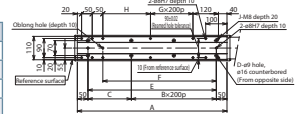
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
Y-axis stroke	100	150	200	250	300	350	400	450	500										
Q	650	700	700	750	750	800	800	850	850										



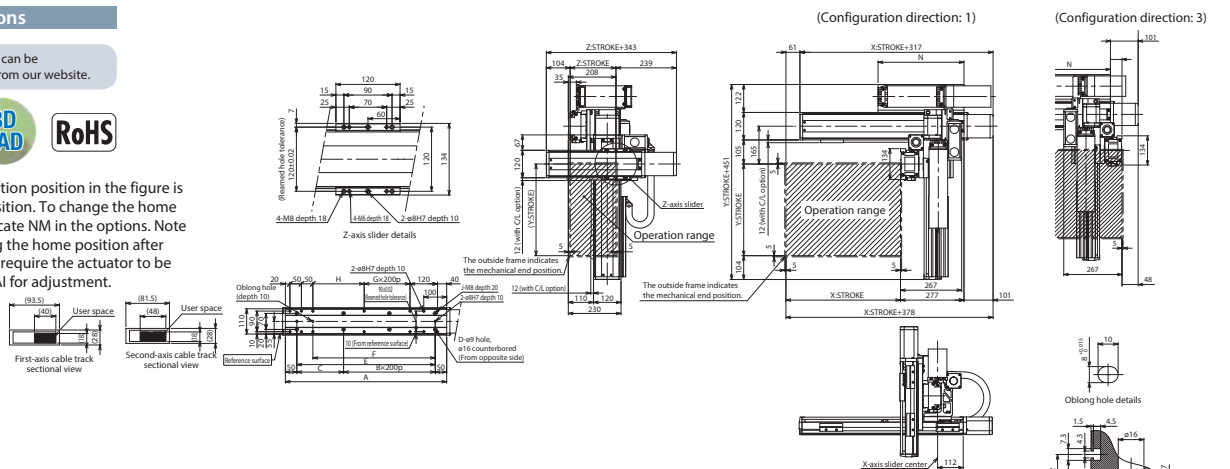
ICSB3 [ICSPB3]-BC□MB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924	974	1024
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-BC□MB3□

ICSPB3-BC□MB3□

High-Precision Specification



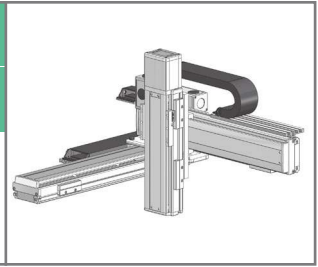
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y, Z Base Mount)

Medium Speed Type

X: Md (100W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm Refer to Options table 110: 1100mm table <100: 1000mm> * below. (Every 50mm) * For self-standing cable specification	10: 100mm Refer to Options table 50: 500mm table (Every 50mm)	10: 100mm Refer to Options table below. 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BC1MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC1MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BC2MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC2MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BC3MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC3MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BC4MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BC4MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm ? 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm ? 50: 500mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

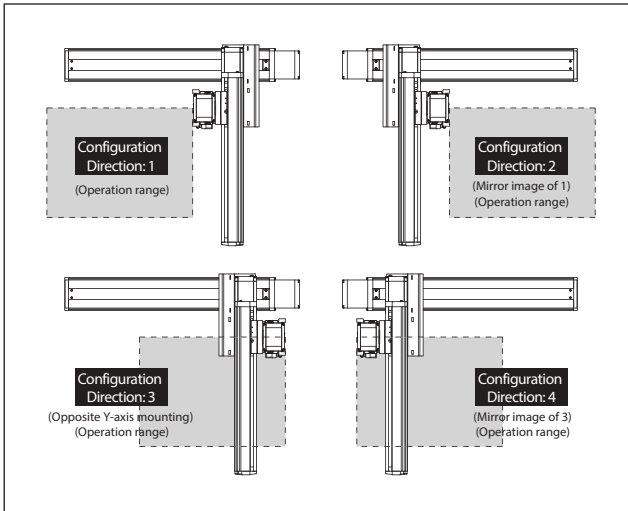
Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-100-10-④-T2-③-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-⑥-T2-③-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑦] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑩] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with [⑪] in the above model names.
Please refer to P.11 for the exit directions.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BC□MB3H

		Y-axis stroke			
		100~350	400	450	500
Z-axis stroke	100	10.0	10.0	10.0	8.7
	150		10.0	10.0	8.0
	200		10.0	9.7	7.4
	250		10.0	9.0	6.7
	300		10.0	8.4	6.1
	350		10.0	7.8	5.5
400		9.9	7.2	4.9	

BC□MB3M

		Y-axis stroke								
		100	150	200	250	300	350	400	450	500
Z-axis stroke	100	18.5	18.2	17.8	17.4	17.1	16.7	13.7	11.0	8.7
	150	17.8	17.5	17.1	16.7	16.4	16.0	13.0	10.3	8.0
	200	17.2	16.9	16.5	16.1	15.8	15.4	12.4	9.7	7.4
	250	16.5	16.2	15.8	15.4	15.1	14.7	11.7	9.0	6.7
	300	15.9	15.6	15.2	14.8	14.5	14.1	11.1	8.4	6.1
	350	15.3	15.0	14.6	14.2	13.9	13.5	10.5	7.8	5.5
	400	14.7	14.4	14.0	13.6	13.3	12.9	9.9	7.2	4.9

Maximum Speed by Stroke (mm/s) (Note 4)

BC□MB3H

	100~400	450~500	550~700	750~800	850~900	950~1000	1050~1100
X-axis	600						
Y-axis	600						
Z-axis	1200						

BC□MB3M

	100~400	450~500	500~700	750~800	850~900	950~1000	1050~1100
X-axis	600						
Y-axis	600						
Z-axis	600						

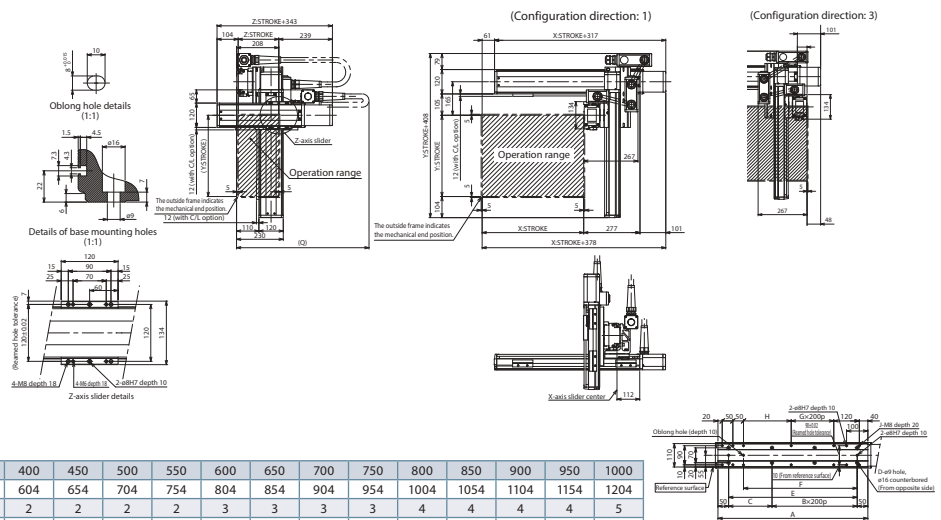
ICSB3 [ICSPB3]-BC□MB3□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
Y-axis stroke	100	150	200	250	300	350	400	450	500										
Q	650	700	700	750	750	800	800	850	850										

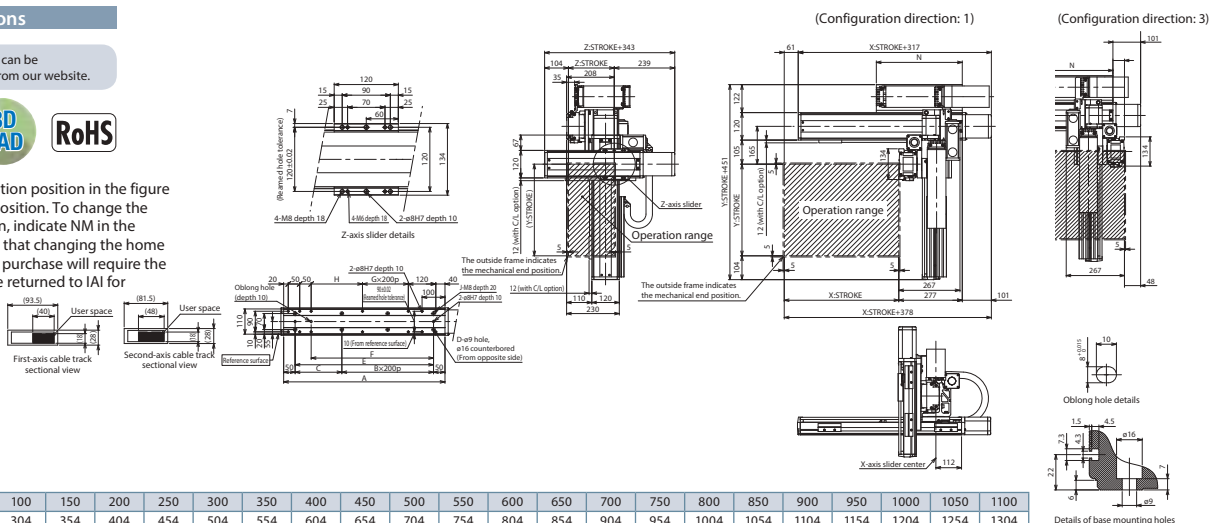
ICSB3 [ICSPB3]-BC□MB3□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-BD HB1

ICSPB3-BD HB1

High-Precision Specification

±10µm Standard

±5µm High Precision

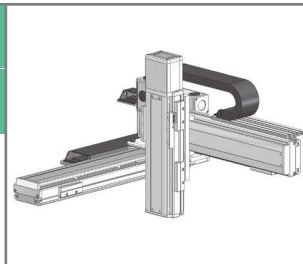
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y, Z Base Mount)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: 5m (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 100mm)	10: 100mm 50: 500mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

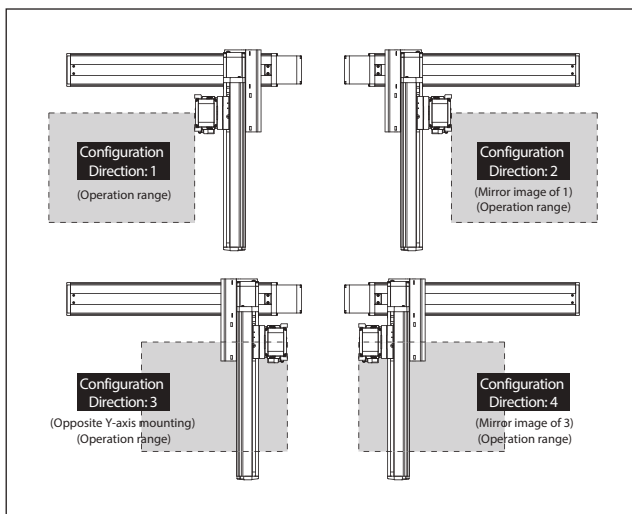
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BD1HB1H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	M	ICSB3[ICSPB3]-BD1HB1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-BD1HB1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
2	H	ICSB3[ICSPB3]-BD2HB1H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	M	ICSB3[ICSPB3]-BD2HB1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-BD2HB1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
3	H	ICSB3[ICSPB3]-BD3HB1H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	M	ICSB3[ICSPB3]-BD3HB1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-BD3HB1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
4	H	ICSB3[ICSPB3]-BD4HB1H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	M	ICSB3[ICSPB3]-BD4HB1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-BD4HB1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXMX- [1] -200-20- [2] -T2- [3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM- [1] -100-20- [4] -T2- [5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- [1] -60- [6] -T2- [7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [8] in the above model names.

16: For Z-axis High Speed type

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with [9] in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/16mm (H), 8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BD□HB1H

		Y-axis stroke 100~500	
Z-axis stroke	100	3.5	
	150		
	200		
	250		
	300		
	350		
	400		

BD□HB1M

		Y-axis stroke 100~500	
Z-axis stroke	100	7.0	
	150		
	200		
	250		
	300		
	350		
	400		

BD□HB1L

		Y-axis stroke		
		100~400	450	500
Z-axis stroke	100	14.0		
	150			
	200			
	250			
	300			
	350			
	400			

Maximum Speed by Stroke (mm/s) (Note 4)

BD□HB1H

	100~400	450~500	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—		1200	1100	1000	950	800	700	600	550	500	450
Y-axis	1200		—									
Z-axis	960	—										

BD□HB1L

	100~400	450~500	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—		1200	1100	1000	950	800	700	600	550	500	450
Y-axis	1200		—									
Z-axis	240	—										

BD□HB1M

	100~400	450~500	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—		1200	1100	1000	950	800	700	600	550	500	450
Y-axis	1200		—									
Z-axis	480	—										

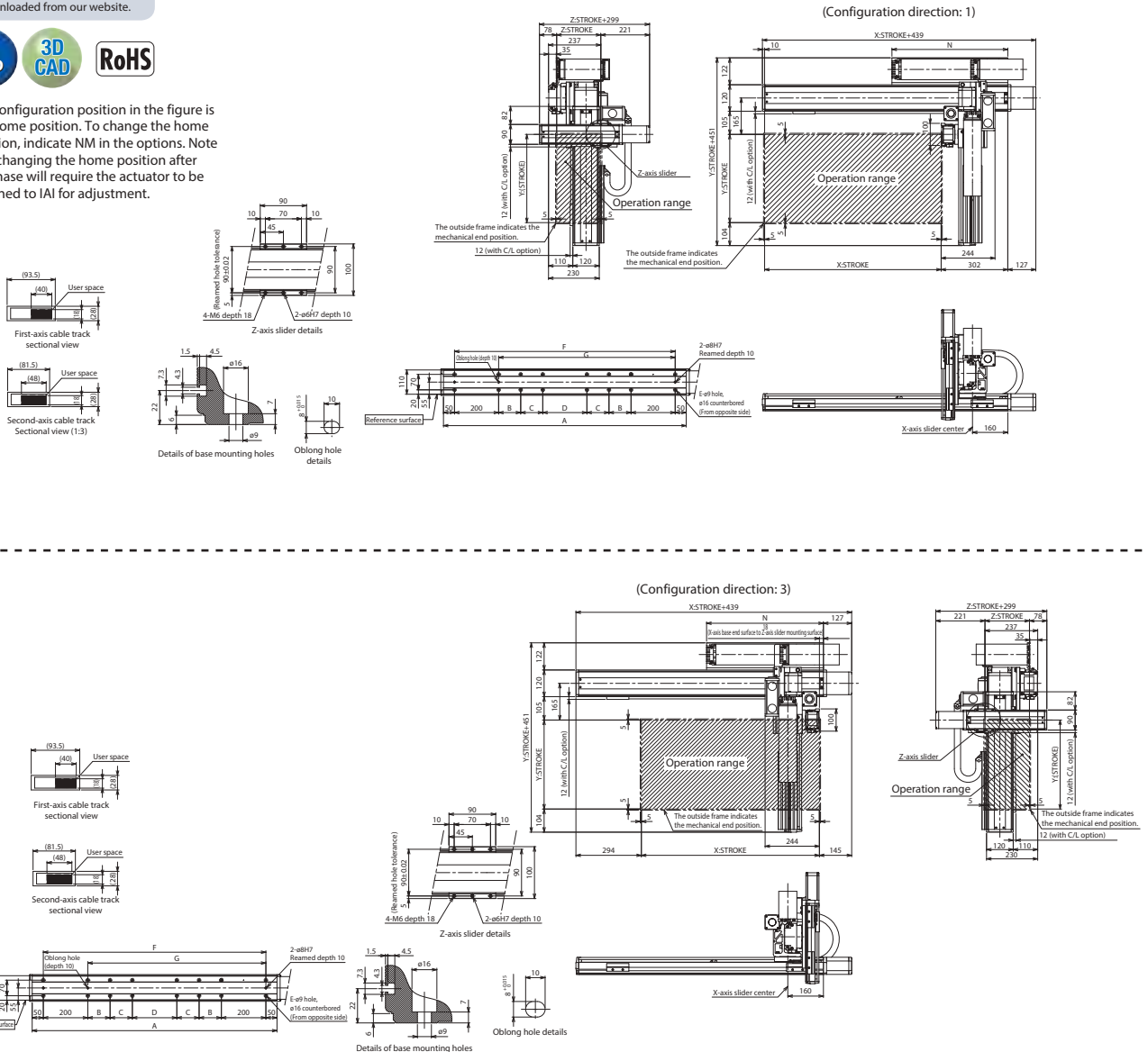
ICSB3 [ICSPB3]-BD□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

ICSB3-BD HB2

ICSPB3-BD HB2 High-Precision Specification



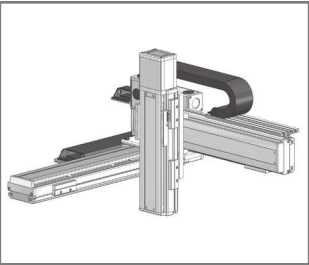
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y, Z Base Mount)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Md (100W)



Model Specification Items

Series: ICSB3: Standard 3-axis specification; ICSPB3: High precision 3-axis specification

Type: Refer to Model Specification table below

Encoder Type: WA: Battery-less Absolute

X-axis Stroke/Option: 80: 800mm; 200: 2000mm (Every 100mm)

Y-axis Stroke/Option: 10: 100mm; 50: 500mm (Every 50mm)

Z-axis Stroke/Option: 10: 100mm; 40: 400mm (Every 50mm)

Applicable Controllers: T2: SCON; XSEL; XSEL-P/Q; XSEL-RA/SA

Cable Length: 3L: 3m; 5L: 5m; □L: Specified length

Y-axis-Z-axis Cable Management: Refer to Explanation of Model Designations below

Model Specification

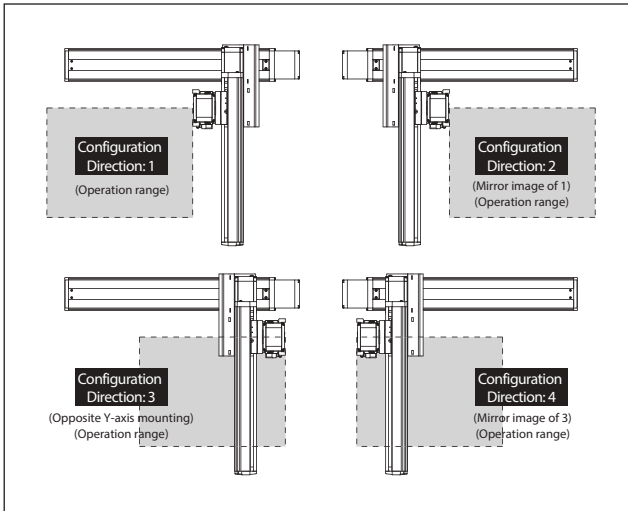
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BD1HB2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BD1HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BD1HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-BD2HB2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BD2HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BD2HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	H	ICSB3[ICSPB3]-BD3HB2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BD3HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BD3HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	H	ICSB3[ICSPB3]-BD4HB2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BD4HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BD4HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[4]-T2-[1]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-100-[6]-[6]-T2-[1]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [10] in the above model names.

20: For Z-axis High Speed type

10: For Z-axis Medium Speed type

5: For Z-axis Low Speed type

* Cable exit direction is specified with [11] in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	100W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

ICSB3-BD HB3

ICSPB3-BD HB3

High-Precision Specification

±10µm

Standard

±5µm

High Precision

Battery-less Absolute

X-Y-Z

3-axis

XYB+ZB

(Y, Z Base Mount)

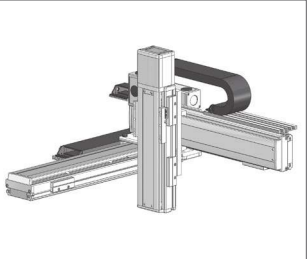
High Speed

Long Type

X: Md (200W)

Y: Md (100W)

Z: Md (200W)



Model Specification Items

Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type	Refer to Model Specification table below	Encoder Type	WA: Battery-less Absolute	X-axis Stroke/Option	80: 800mm 200: 2000mm (Every 100mm)	Y-axis Stroke/Option	10: 100mm 50: 500mm (Every 50mm)	Z-axis Stroke/Option	10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	Cable Length	3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below
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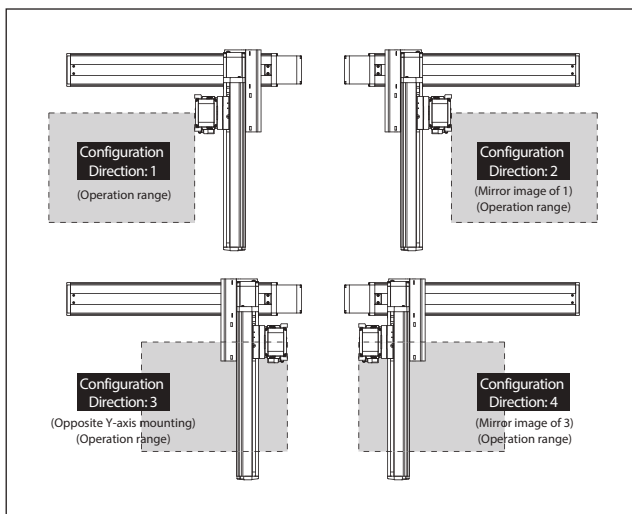
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BD1HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BD1HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-BD2HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BD2HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	H	ICSB3[ICSPB3]-BD3HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BD3HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	H	ICSB3[ICSPB3]-BD4HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BD4HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXMX-[1]-200-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[4]-T2-[1]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-[6]-[6]-T2-[1]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BD□HB3H

Z-axis stroke	Y-axis stroke									
	100	150	200	250	300	350	400	450	500	
100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.7
150	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.0
200	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.7	7.4
250	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	6.7
300	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.4	6.1
350	9.8	9.7	9.7	9.7	9.7	9.7	9.6	9.6	7.8	5.5
400	9.2	9.2	9.2	9.2	9.1	9.1	9.1	9.1	7.2	4.9

BD□HB3M

Z-axis stroke	Y-axis stroke									
	100	150	200	250	300	350	400	450	500	
100	12.6	12.6	12.6	12.6	12.6	12.5	12.5	11.0	8.7	
150	12.0	12.0	12.0	11.9	11.9	11.9	11.9	10.3	8.0	
200	11.5	11.5	11.4	11.4	11.4	11.4	11.3	9.7	7.4	
250	10.8	10.8	10.8	10.8	10.8	10.7	10.7	9.0	6.7	
300	10.3	10.3	10.3	10.2	10.2	10.2	10.2	8.4	6.1	
350	9.8	9.7	9.7	9.7	9.7	9.7	9.6	7.8	5.5	
400	9.2	9.2	9.2	9.2	9.1	9.1	9.1	7.2	4.9	

Maximum Speed by Stroke (mm/s) (Note 4)

BD□HB3H

	100~400	450~500	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—

BD□HB3M

	100~400	450~500	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—

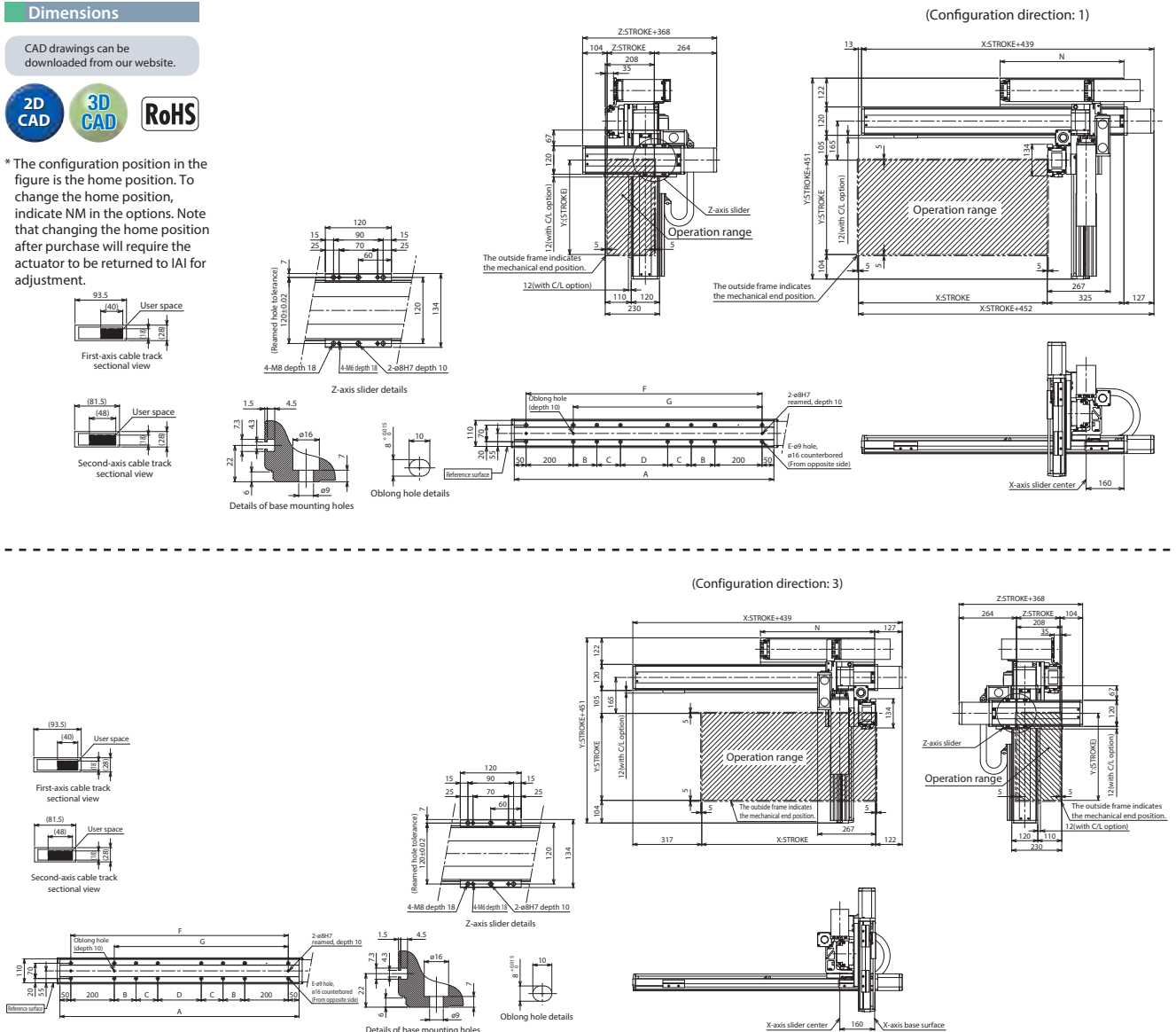
ICSB3 [ICSPB3]-BD□HB3□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	200	250	300	350	400	450	500	550	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

ICSB3-BE□HB1□

ICSPB3-BE□HB1□

High-Precision Specification

±10µm
Standard

±5µm
High Precision

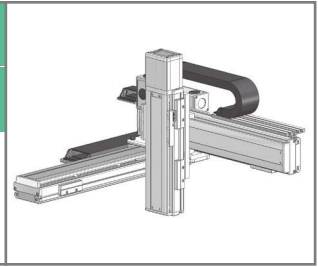
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y, Z Base Mount)

High Speed Type

X:Lg (400W)
Y:Md (200W)
Z:Sm (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm table <100: 1000mm> * below. (Every 50mm) * For self-standing cable specification	10: 100mm 70: 700mm table (Every 50mm)	10: 100mm 50: 500mm table (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

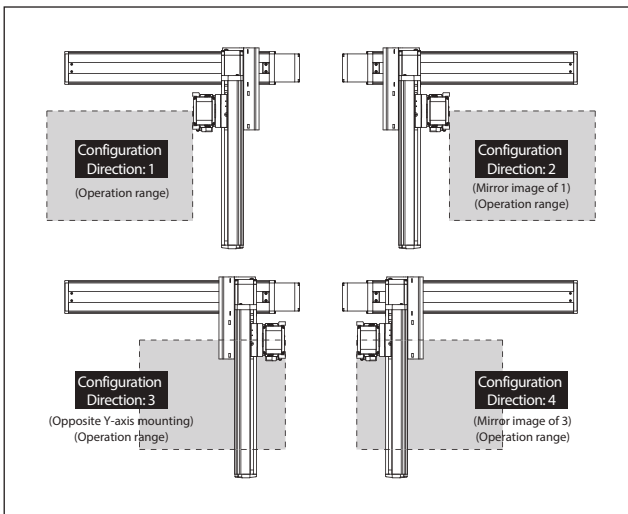
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BE1HB1H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BE1HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BE1HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BE2HB1H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BE2HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BE2HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BE3HB1H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BE3HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BE3HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BE4HB1H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BE4HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BE4HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM-①-400-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥-⑦-T2-⑧-⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑥ in the above model names.

16: For Z-axis High Speed type
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type

* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/16mm (H), 8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BE□HB1H

		Y-axis stroke	
		100~700	
Z-axis stroke	100	3.5	
	150		
	200		
	250		
	300		
	350		
	400		
	450		
	500		

BE□HB1M

		Y-axis stroke	
		100~700	
Z-axis stroke	100	7.0	
	150		
	200		
	250		
	300		
	350		
	400		
	450		
	500		

BE□HB1L

		Y-axis stroke	
		100~700	
Z-axis stroke	100	14.0	
	150		
	200		
	250		
	300		
	350		
	400		
	450		
	500		

Maximum Speed by Stroke (mm/s) (Note 4)

BE□HB1H

	100~500	550~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	1200							
Y-axis	1200							
Z-axis	960							

BE□HB1M

	100~500	550~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	1200							
Y-axis	1200							
Z-axis	480							

BE□HB1L

	100~500	550~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	1200							
Y-axis	1200							
Z-axis	240							

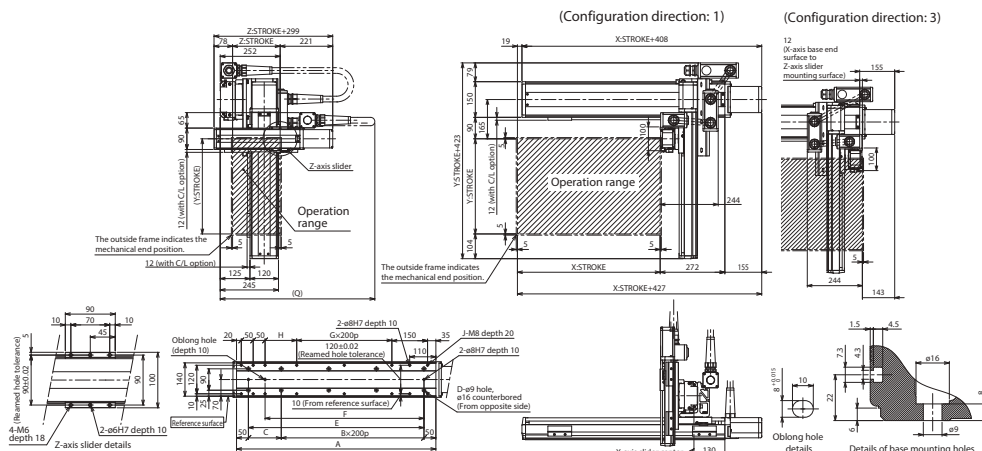
ICSB3 [ICSPB3]-BE□HB1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700						
Q	650	700	700	750	750	800	800	800	850	850	900	900	950						

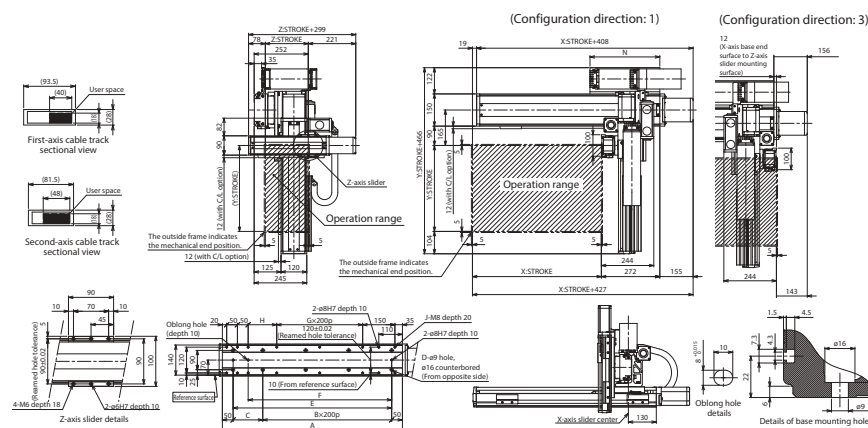
ICSB3 [ICSPB3]-BE□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-BE□HB2□

ICSPB3-BE□HB2□

High-Precision Specification



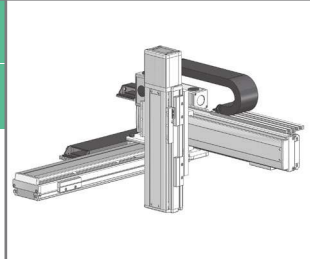
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y, Z Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm table <100: 1000mm> * below. (Every 50mm) * For self-standing cable specification	10: 100mm 70: 700mm table (Every 50mm)	10: 100mm 50: 500mm table (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

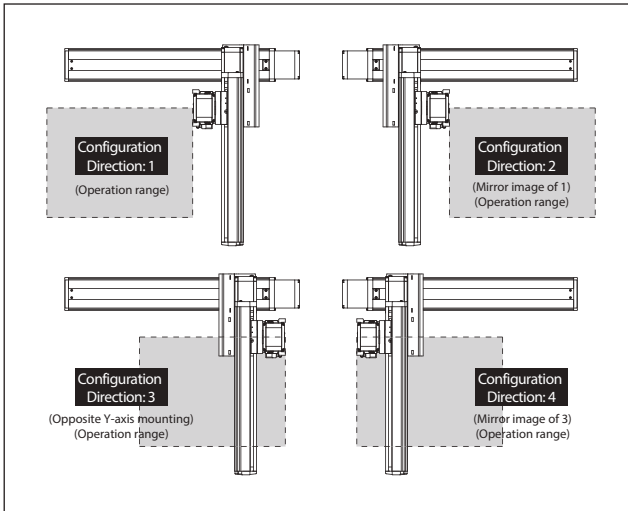
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BE1HB2H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BE1HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BE1HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BE2HB2H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BE2HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BE2HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BE3HB2H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BE3HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BE3HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BE4HB2H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BE4HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BE4HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM-①-400-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-③-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-100-⑥-⑦-T2-③-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type
* Cable exit direction is specified with ⑨ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BE□HB2H

Z-axis stroke	Y-axis stroke	
	100~700	
100	5.0	
150	5.0	
200	5.0	
250	5.0	
300	5.0	
350	5.0	
400	5.0	
450	5.0	
500	5.0	

BE□HB2M

Z-axis stroke	Y-axis stroke		
	100~600	650	700
100	10.0	10.0	10.0
150		10.0	10.0
200		10.0	10.0
250		10.0	10.0
300		10.0	9.7
350		10.0	9.0
400	10.0	8.4	
450	9.9	7.8	
500	9.3	7.2	

BE□HB2L

Z-axis stroke	Y-axis stroke					
	100~450	500	550	600	650	700
100	20.0	20.0	19.2	16.6	14.3	12.2
150		20.0	18.6	16.0	13.7	11.6
200		20.0	18.0	15.4	13.1	11.0
250		20.0	17.3	14.7	12.4	10.3
300		19.8	16.7	14.1	11.8	9.7
350		19.1	16.0	13.4	11.1	9.0
400		18.5	15.4	12.8	10.5	8.4
450		17.9	14.8	12.2	9.9	7.8
500		17.3	14.2	11.8	9.3	7.2

Maximum Speed by Stroke (mm/s) (Note 4)

BE□HB2H

	100~500	550~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	1200			920	765	645	550	440
Y-axis	1200							
Z-axis	1200							

BE□HB2L

	100~500	550~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	1200			920	765	645	550	440
Y-axis	1200							
Z-axis	300							

BE□HB2M

	100~500	550~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	1200			920	765	645	550	440
Y-axis	1200							
Z-axis	600							

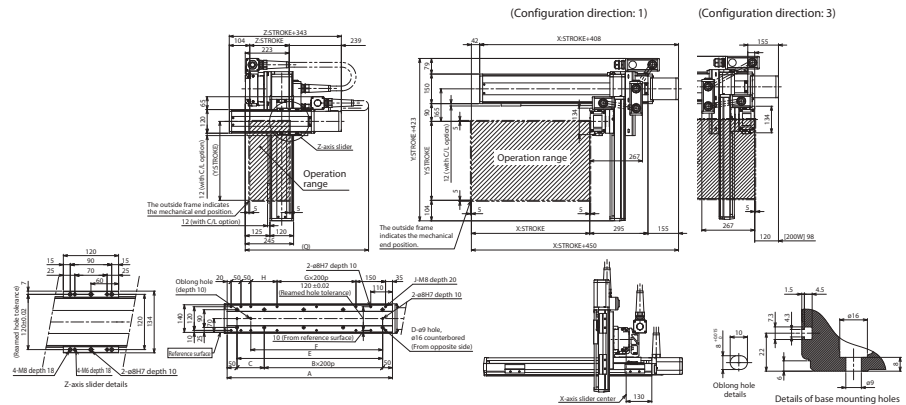
ICSB3 [ICSPB3]-BE□HB2□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
Q	700	700	750	750	800	800	800	850	850	900	900	950	950

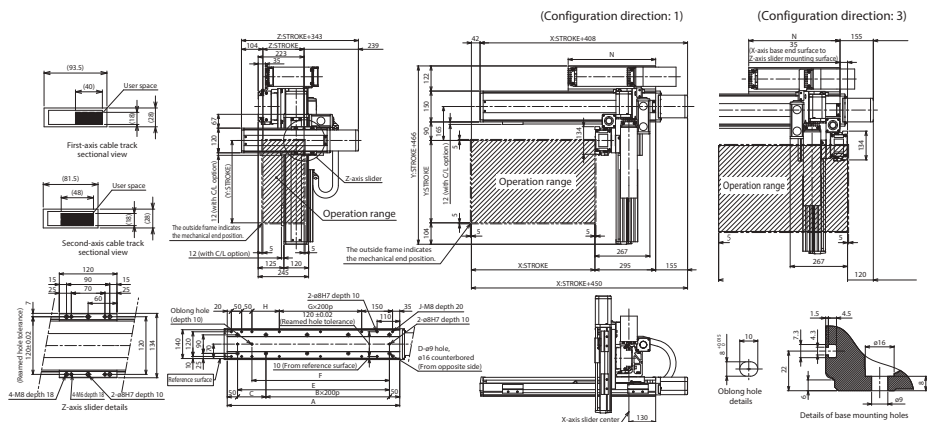
ICSB3 [ICSPB3]-BE□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1388	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-BE□HB3□

ICSPB3-BE□HB3□

High-Precision Specification



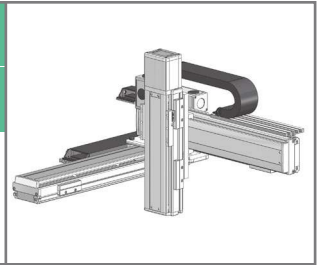
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y, Z Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm table <100: 1000mm>* (Every 50mm)	10: 100mm 70: 700mm table (Every 50mm)	10: 100mm 50: 500mm table (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

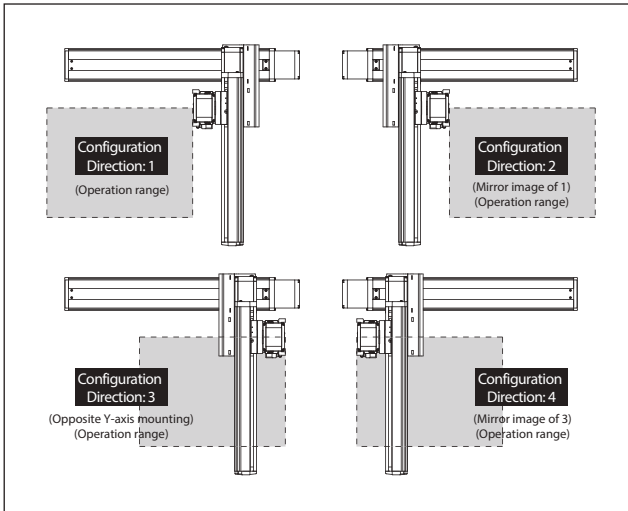
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BE1HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BE1HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-BE2HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BE2HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	H	ICSB3[ICSPB3]-BE3HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BE3HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	H	ICSB3[ICSPB3]-BE4HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BE4HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM-[1]-400-20-[2]-T2-[11]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[4]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-[10]-[6]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with [10] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
* Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

■BE□HB3H

Z-axis stroke	Y-axis stroke		
	100-600	650	700
	100	10.0	10.0
150	10.0	10.0	
200	10.0	10.0	
250	10.0	9.7	
300	10.0	9.1	
350	10.0	8.5	
400	10.0	7.9	
450	9.3	7.2	
500	8.7	6.6	

■BE□HB3M

Z-axis stroke	Y-axis stroke					
	100-450	500	550	600	650	700
	100	20.0	18.7	16.1	13.8	11.7
150	20.0	18.0	15.4	13.1	11.0	
200	20.0	17.4	14.8	12.5	10.4	
250	19.8	16.7	14.1	11.8	9.7	
300	19.2	16.1	13.5	11.2	9.1	
350	18.6	15.5	12.9	10.6	8.5	
400	18.0	14.9	12.3	10.0	7.9	
450	17.3	14.2	11.6	9.3	7.2	
500	16.7	13.6	11.0	8.7	6.6	

Maximum Speed by Stroke (mm/s) (Note 4)

■BE□HB3H

	100-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300
X-axis	1200			920	765	645	550	440
Y-axis	1200							
Z-axis	1200							

■BE□HB3M

	100-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300
X-axis	1200			920	765	645	550	440
Y-axis	1200							
Z-axis	600							

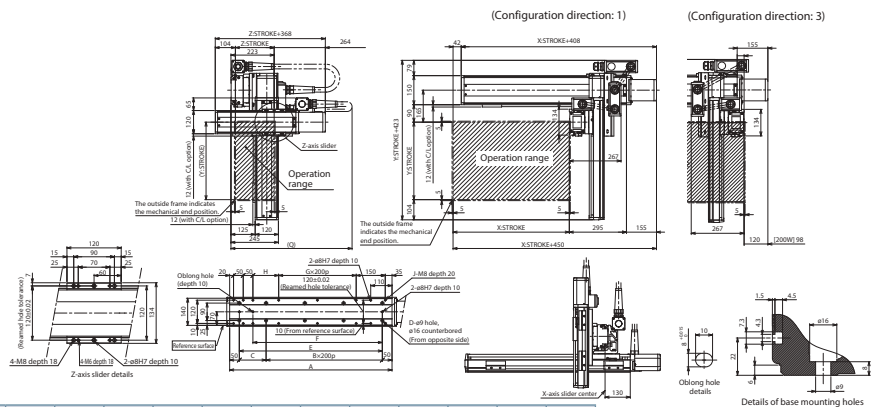
ICSB3 [ICSPB3]-BE□HB3□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
Q	700	700	750	750	800	800	800	850	850	900	900	950	950

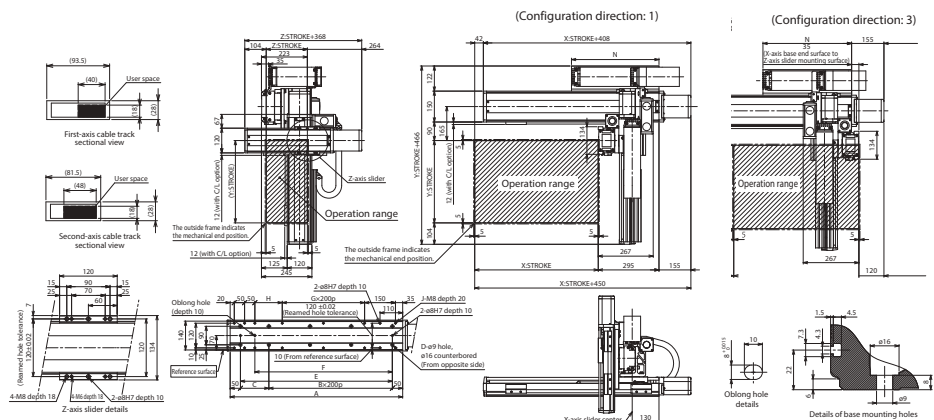
ICSB3 [ICSPB3]-BE□HB3□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1388	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	238
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-BF□HB1□

ICSPB3-BF□HB1□

High-Precision Specification



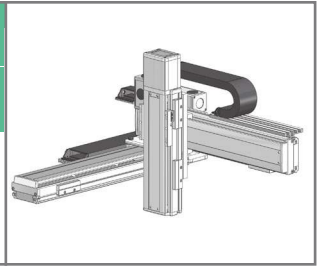
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y,Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Sm (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON XSEL XSEL-PA/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

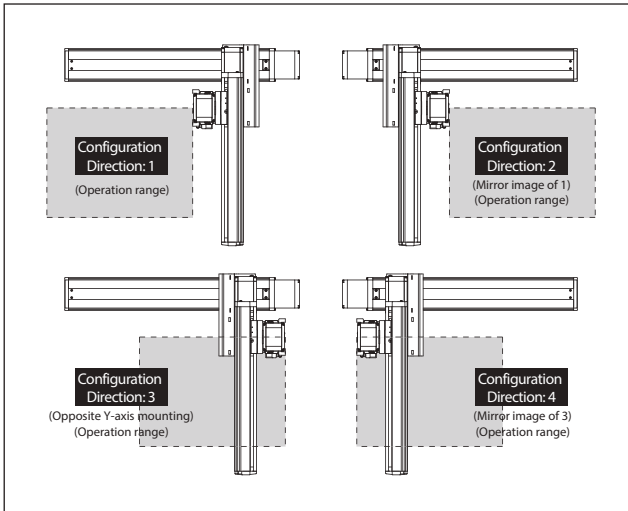
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BF1HB1H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF1HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BF1HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BF2HB1H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF2HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BF2HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BF3HB1H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF3HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BF3HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BF4HB1H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF4HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BF4HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM-X-①-400-20-②-T2-③④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-③⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥⑦-T2-⑧⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑩ in the above model names.

16: For Z-axis High Speed type

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/16mm (H), 8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

■BF□HB1H

Z-axis stroke	Y-axis stroke	3.5
	100-700	
	100	
	150	
	200	
	250	
	300	
	350	

■BF□HB1M

Z-axis stroke	Y-axis stroke	7.0
	100-700	
	100	
	150	
	200	
	250	
	300	
	350	

■BF□HB1L

Z-axis stroke	Y-axis stroke	14.0
	100-700	
	100	
	150	
	200	
	250	
	300	
	350	

Maximum Speed by Stroke (mm/s) (Note 4)

■BF□HB1H

	100-500	550-700	1000-1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	960	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■BF□HB1M

	100-500	550-700	1000-1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	480	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■BF□HB2L

	100-500	550-700	1000-1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	240	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

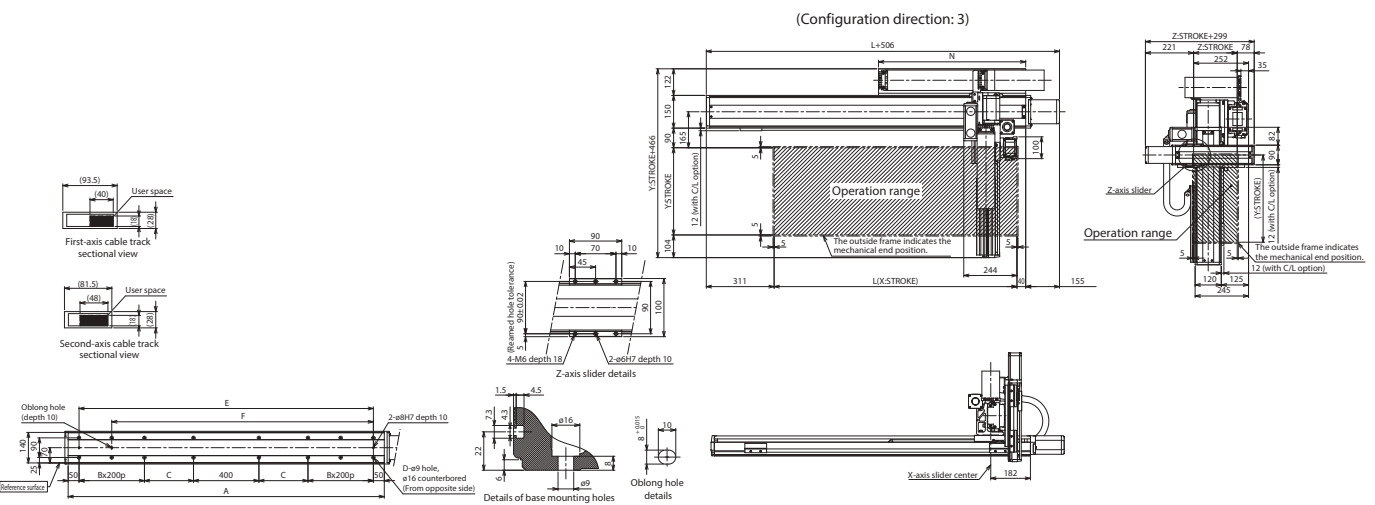
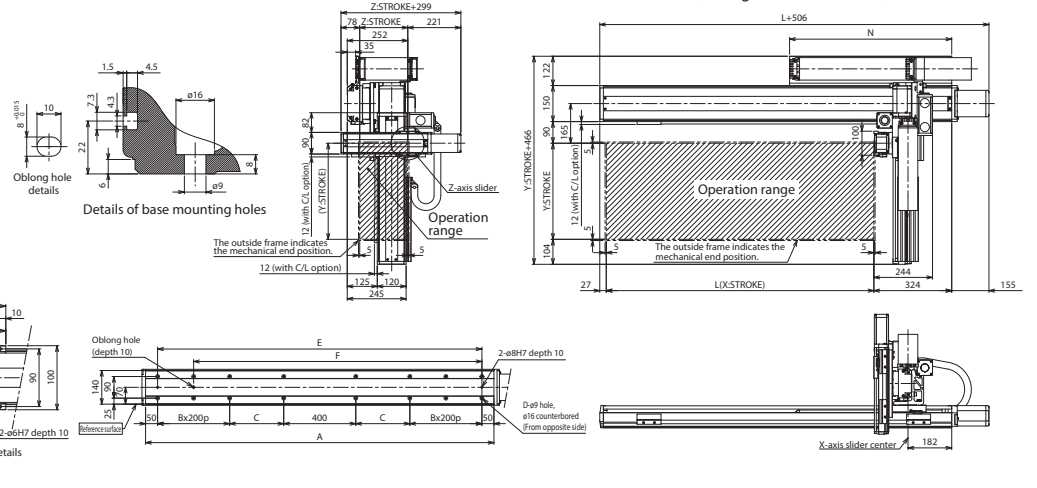
ICSB3 [ICSPB3]-BF□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-BF□HB2□

ICSPB3-BF□HB2□

High-Precision Specification



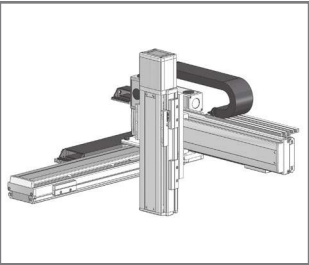
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y, Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm table (Every 100mm)	10: 100mm 70: 700mm table (Every 50mm)	10: 100mm 50: 500mm table (Every 50mm)	T2: SCON XSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

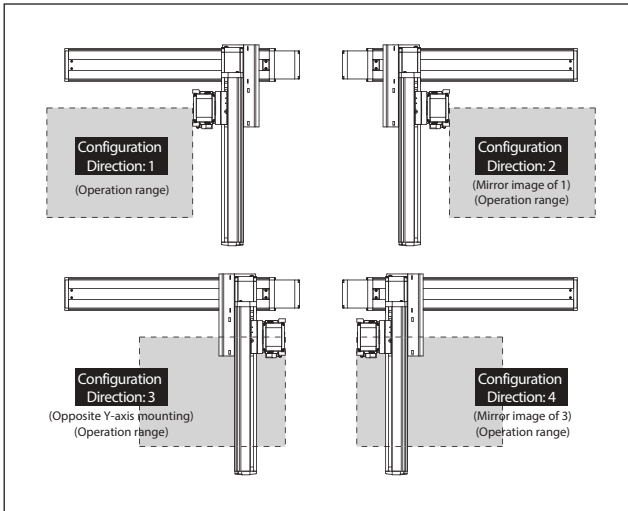
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BF1HB2H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF1HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BF1HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BF2HB2H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF2HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BF2HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BF3HB2H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF3HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BF3HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BF4HB2H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF4HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-BF4HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXMX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-③-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-100-⑥-⑦-T2-③-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type

* Cable exit direction is specified with ⑨ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BF□HB2H

		Y-axis stroke 100~700	
Z-axis stroke	100	5.0	
	150		
	200		
	250		
	300		
	350		
	400		
	500		

BF□HB2M

		Y-axis stroke			
		100~600	650	700	
Z-axis stroke	100	10.0	10.0	10.0	
	150		10.0	10.0	
	200		10.0	10.0	
	250		10.0	10.0	
	300		10.0	9.7	
	350		10.0	9.0	
	400		10.0	8.4	
	500		9.9	7.8	
		9.3	7.2		

BF□HB2L

		Y-axis stroke				
		100~450	500	600	650	700
Z-axis stroke	100	20.0	19.2	16.6	14.3	12.2
	150	20.0	18.6	16.0	13.7	11.6
	200	20.0	18.0	15.4	13.1	11.0
	250	20.0	17.3	14.7	12.4	10.3
	300	19.8	16.7	14.1	11.8	9.7
	350	19.1	16.0	13.4	11.1	9.0
	400	18.5	15.4	12.8	10.5	8.4
	450	17.9	14.8	12.2	9.9	7.8
	500	17.3	14.2	11.6	9.3	7.2

Maximum Speed by Stroke (mm/s) (Note 4)

BF□HB2H

	100~500	550~700	1000~1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—		1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	1200		—													
Z-axis	1200		—													

BF□HB2M

	100~500	550~700	1000~1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—		1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	1200		—													
Z-axis	600		—													

BF□HB2L

	100~500	550~700	1000~1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—		1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	1200		—													
Z-axis	300		—													

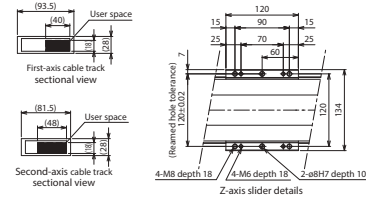
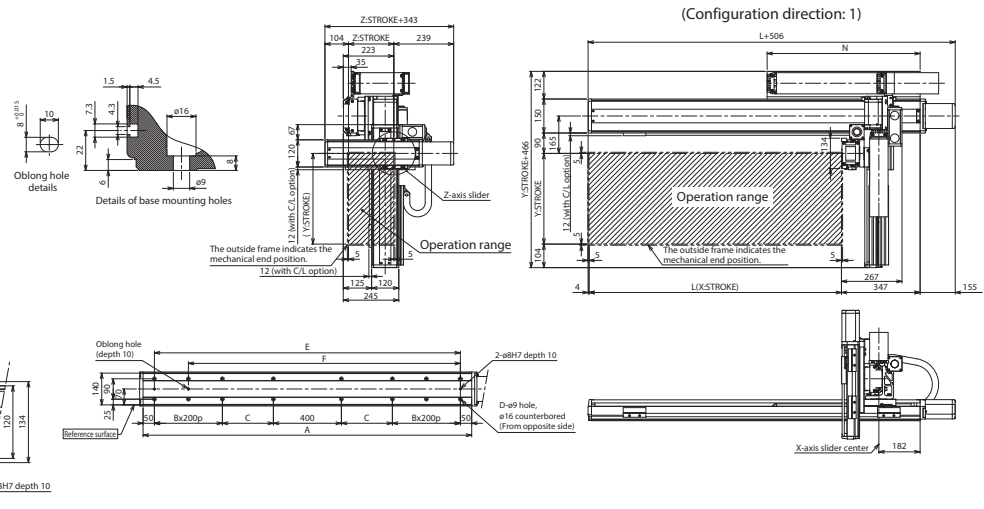
ICSB3 [ICSPB3]-BF□HB2□-CT-CT (Cable track specification)

Dimensions

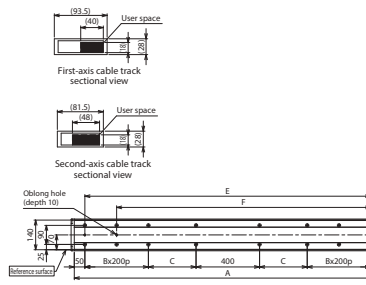
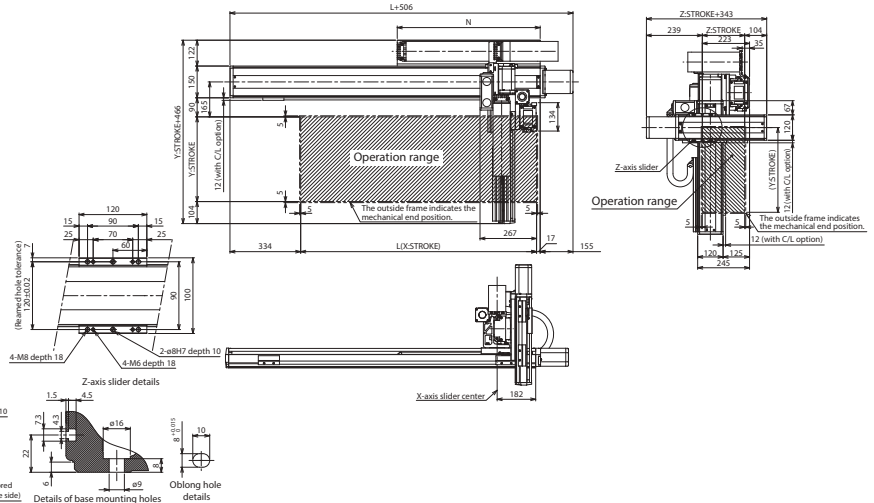
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



(Configuration direction: 3)



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-BF□HB3□

ICSPB3-BF□HB3□

High-Precision Specification



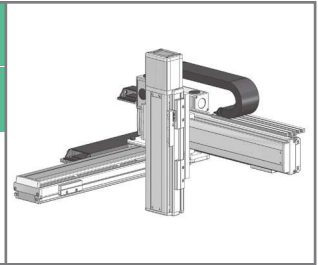
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y, Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm Refer to Options table below. 250: 2500mm (Every 100mm)	10: 100mm Refer to Options table below. 70: 700mm (Every 50mm)	10: 100mm Refer to Options table below. 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

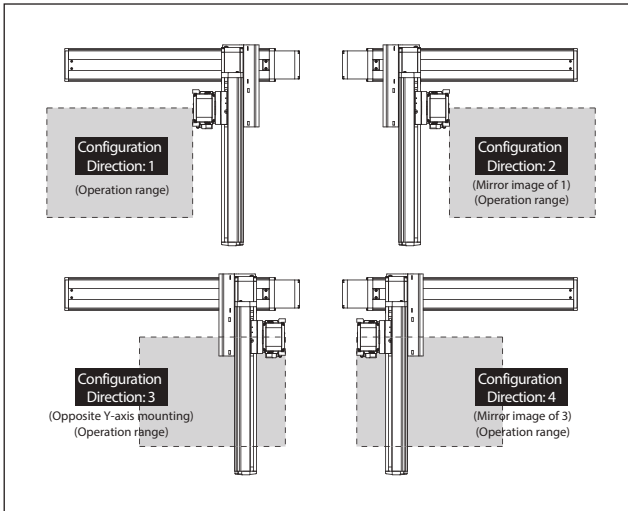
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BF1HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF1HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BF2HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF2HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BF3HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF3HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BF4HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BF4HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXMX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-③-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-⑥-T2-③-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with ⑪ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm ? 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm ? 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
* Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BF□HB3H

Z-axis stroke	Y-axis stroke		
	100~600	650	700
100	10.0	10.0	10.0
150		10.0	10.0
200		10.0	10.0
250		10.0	9.7
300		10.0	9.1
350		10.0	8.5
400		10.0	7.9
450		9.3	7.2
500		8.7	6.6

BE□HB3M

Z-axis stroke	Y-axis stroke					
	100~450	500	550	600	650	700
100	20.0	20.0	18.7	16.1	13.8	11.7
150		20.0	18.0	15.4	13.1	11.0
200		20.0	17.4	14.8	12.5	10.4
250		19.8	16.7	14.1	11.8	9.7
300		19.2	16.1	13.5	11.2	9.1
350		18.6	15.5	12.9	10.6	8.5
400		18.0	14.9	12.3	10.0	7.9
450		17.3	14.2	11.6	9.3	7.2
500		16.7	13.6	11.0	8.7	6.6

Maximum Speed by Stroke (mm/s) (Note 4)

BF□HB3H

	100~500	550~700	1000~1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

BF□HB3M

	100~500	550~700	1000~1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

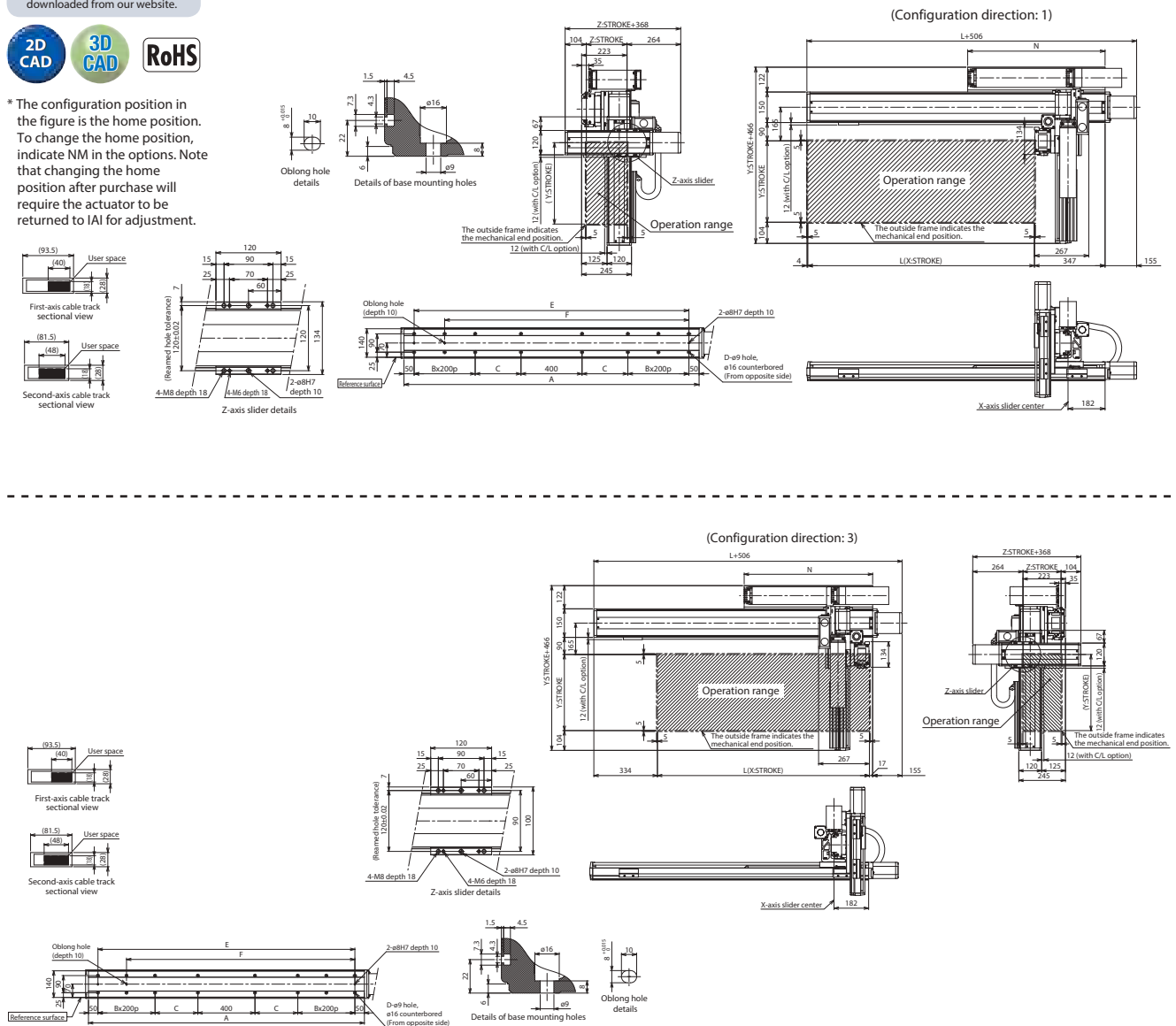
ICSB3 [ICSPB3]-BF□HB3□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-BK HB3

ICSPB3-BK HB3

High-Precision Specification

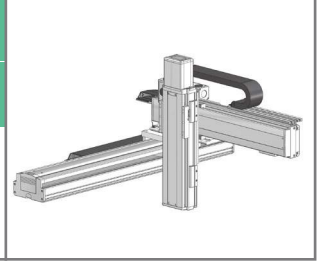


X-Y-Z 3-axis

XYB+ZB (Y,Z Base Mount)

High Speed Type

X: XL (600W)
Y: Lg (400W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	10: 100mm Refer to Options table 130: 1300mm table <100: 1000mm> * below. (Every 50mm)	10: 100mm Refer to Options table 70: 700mm table (Every 50mm)	10: 100mm Refer to Options table 50: 500mm table (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

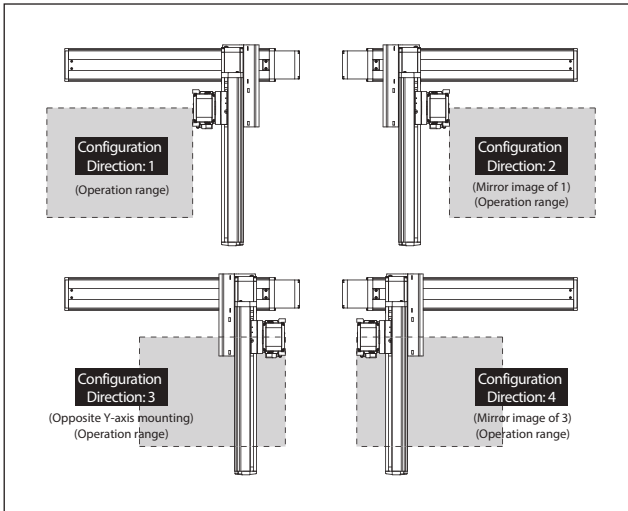
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BK1HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BK1HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BK2HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BK2HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BK3HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BK3HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BK4HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BK4HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM-①-600-40-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-①-400-40-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-②-③-T2-④-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑤] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [②] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with [③] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	10: 100mm ? 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm ? 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm, Y/Z-axis ±0.01mm [X-axis ±0.01mm, Y/Z-axis ±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/40mm
Y-axis motor output/lead	400W/40mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
(Note 3) The rated acceleration is 0.3G for X-axis and 0.4G for Y/Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

■BK□HB3H

Z-axis stroke	Y-axis stroke	
	100~700	
100	10.0	
150	10.0	
200	10.0	
250	10.0	
300	10.0	
350	10.0	
400	10.0	
450	10.0	
500	10.0	

■BK□HB3M

Z-axis stroke	Y-axis stroke								
	100~300	350	400	450	500	550	600	650	700
100	20.0	20.0	20.0	20.0	20.0	20.0	19.8	19.0	18.2
150	20.0	20.0	20.0	20.0	20.0	20.0	19.2	18.4	17.6
200	20.0	20.0	20.0	20.0	20.0	19.4	18.7	17.8	17.1
250	20.0	20.0	20.0	19.7	18.8	18.0	17.2	16.4	15.6
300	20.0	20.0	20.0	19.1	18.3	17.5	16.7	15.9	15.1
350	20.0	20.0	19.4	18.6	17.7	17.0	16.1	15.3	14.5
400	20.0	19.8	18.9	18.0	17.2	16.4	15.6	14.8	14.0
450	19.9	19.1	18.3	17.4	16.6	15.8	14.9	14.2	13.4
500	19.4	18.6	17.7	16.9	16.0	15.3	14.4	13.6	12.8

Maximum Speed by Stroke (mm/s) (Note 4)

■BK□HB3H

	100~500	550~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	2400							
Y-axis	2400							
Z-axis	1200	—						

■BK□HB3M

	100~500	550~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	2400							
Y-axis	2400							
Z-axis	600	—						

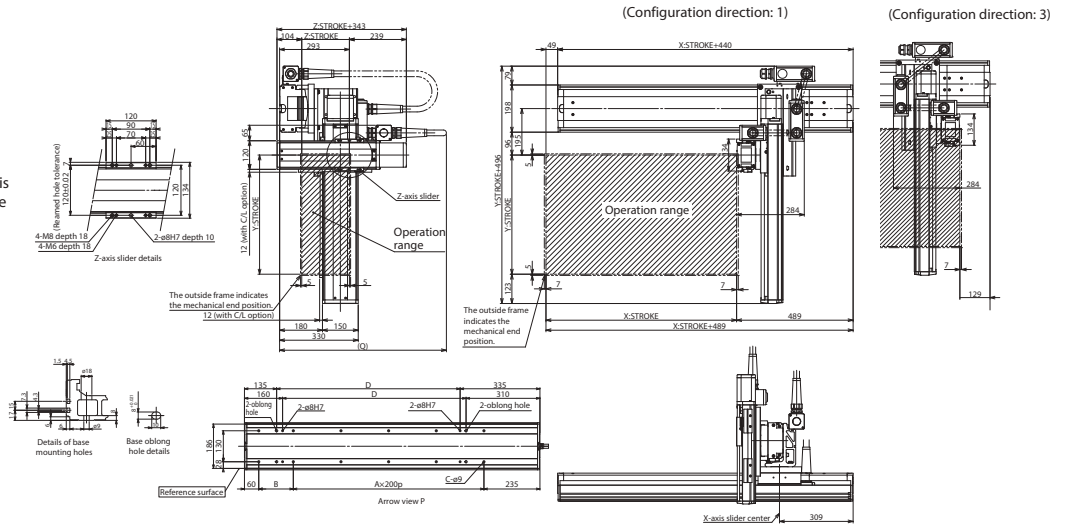
ICSB3 [ICSPB3]-BK□HB3□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	-	-	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970

Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
Q	750	800	800	850	850	900	900	900	950	950	1000	1000	1050

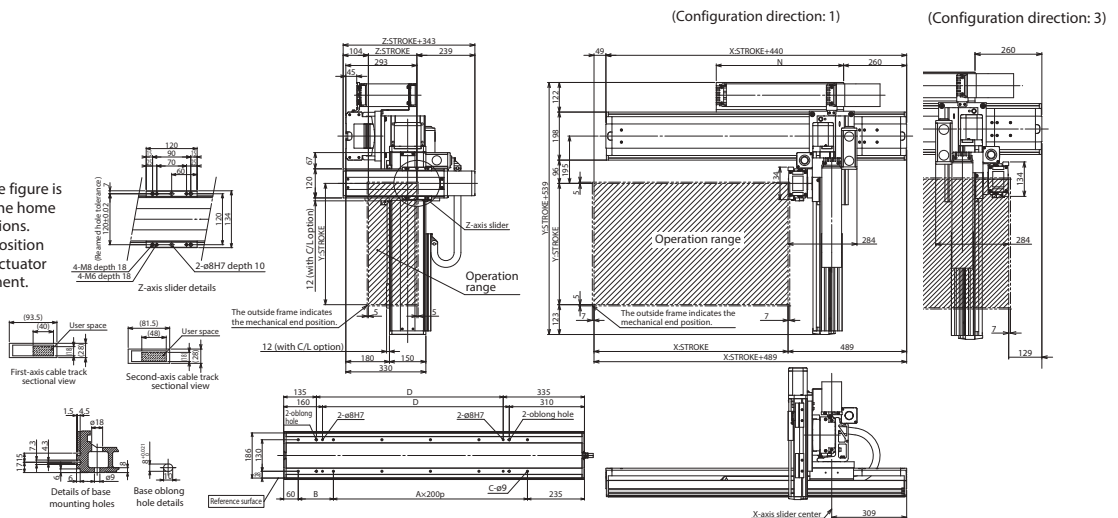
ICSB3 [ICSPB3]-BK□HB3□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-BK□HB4H

ICSPB3-BK□HB4H High-Precision Specification

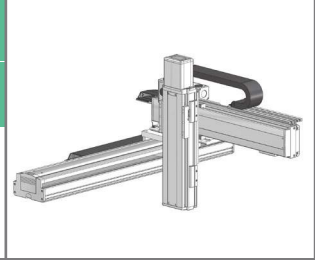


X-Y-Z
3-axis

XYB+ZB
(Y, Z Base Mount)

High
Speed
Type

X: XL (600W)
Y: Lg (400W)
Z: Lg (400W)



Model Specification Items

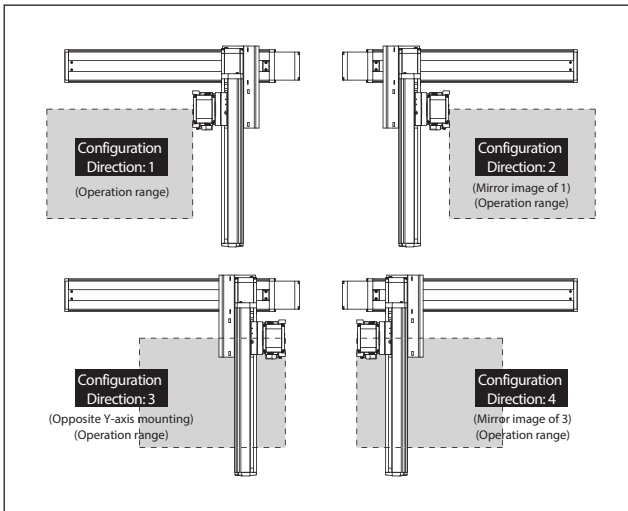
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	10: 100mm 130: 1300mm table <100: 1000mm> * For self-standing cable specification	10: 100mm 70: 700mm table (Every 50mm)	10: 100mm 50: 500mm table (Every 50mm)	T2: SC/ON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BK1HB4H-①-②③④⑤⑥⑦-T2-⑧⑨
2	H	ICSB3[ICSPB3]-BK2HB4H-①-②③④⑤⑥⑦-T2-⑧⑨
3	H	ICSB3[ICSPB3]-BK3HB4H-①-②③④⑤⑥⑦-T2-⑧⑨
4	H	ICSB3[ICSPB3]-BK4HB4H-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* Please refer to P.11 for the X-axis cable exit direction.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM-①-600-40-②-T2-③④⑤	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-①-400-40-②-T2-③④⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-①-400-20-②-T2-③④⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑤ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑩ in the above model names.
Please refer to P.11 for the exit directions.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm, Y/Z-axis ±0.01mm [X-axis ±0.01mm, Y/Z-axis ±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/40mm
Y-axis motor output/lead	400W/40mm
Z-axis motor output/lead	400W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes	Notes
⚠	(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
	(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
	(Note 3) The rated acceleration is 0.3G for X-axis and 0.4G for Y/Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
	(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

■BK□HB4H

		Y-axis stroke												
		100	150	200	250	300	350	400	450	500	550	600	650	700
Z-axis stroke	100	20.0	20.0	20.0	20.0	20.0	20.0	19.8	19.0	18.1	17.3	16.5	15.7	14.9
	150	20.0	20.0	20.0	20.0	20.0	20.0	19.8	19.0	18.2	17.3	16.5	15.7	14.9
	200	20.0	20.0	20.0	20.0	19.8	19.0	18.2	17.4	16.5	15.7	14.9	14.0	13.3
	250	20.0	20.0	20.0	19.8	19.0	18.2	17.4	16.6	15.7	14.9	14.1	13.2	12.5
	300	20.0	20.0	19.9	19.1	18.3	17.5	16.7	15.8	15.0	14.1	13.4	12.5	11.7
	350	20.0	20.0	19.1	18.3	17.5	16.7	15.9	15.0	14.2	13.3	12.6	11.7	10.9
	400	19.9	19.3	18.4	17.6	16.8	15.9	15.2	14.3	13.5	12.6	11.8	11.0	10.2
	450	19.1	18.5	17.6	16.7	16.0	15.1	14.4	13.5	12.6	11.8	11.0	10.2	9.4
500	18.3	17.6	16.8	15.9	15.2	14.3	13.5	12.7	11.8	11.0	10.2	9.4	8.6	

Maximum Speed by Stroke (mm/s) (Note 4)

■BK□HB4H

	100~500	550~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	2400			1840	1530	1290	1100	880
Y-axis	2400							
Z-axis	1200							

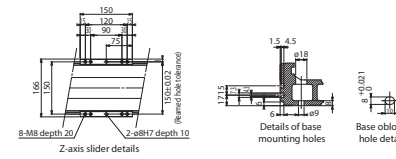
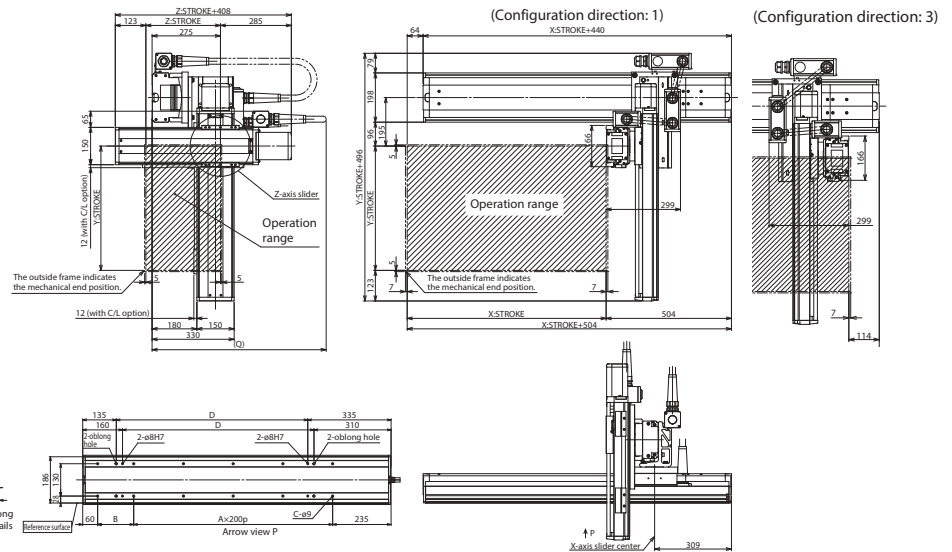
ICSB3 [ICSPB3]-BK□HB4H□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	-	-	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	4	5
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970
Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700						
Q	750	800	800	850	850	900	900	900	950	950	1000	1000	1050						

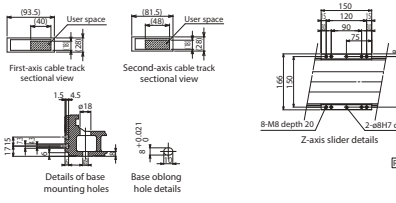
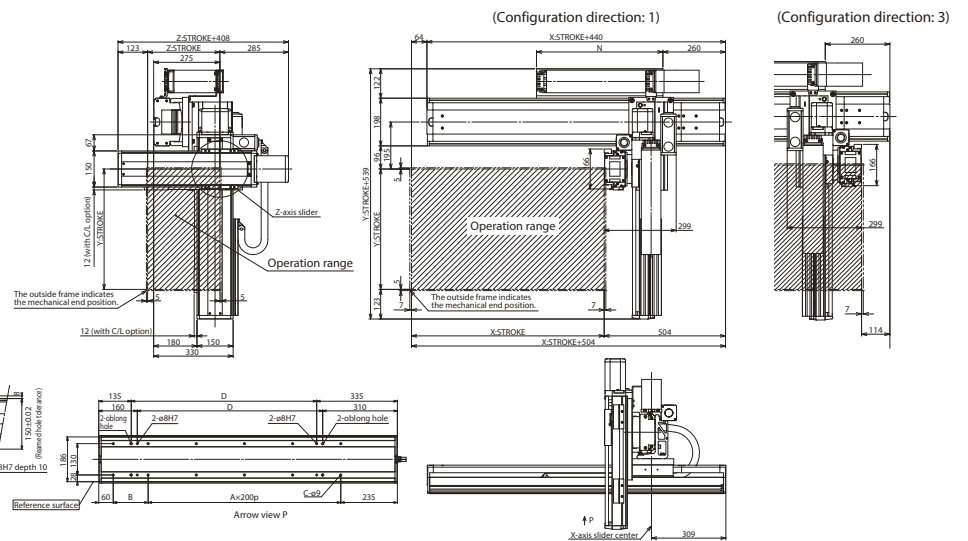
ICSB3 [ICSPB3]-BK□HB4H□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

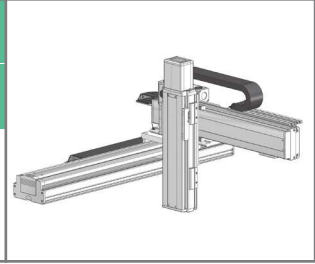


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-BK MB3M

ICSPB3-BK MB3M High-Precision Specification

X: ±20µm Y/Z: ±10µm	X-Y-Z 3-axis	XYB+ZB (Y, Z Base Mount)	Medium Speed Type	X: XL (600W) Y: Lg (400W) Z: Md (200W)
X: ±10µm Y/Z: ±5µm				



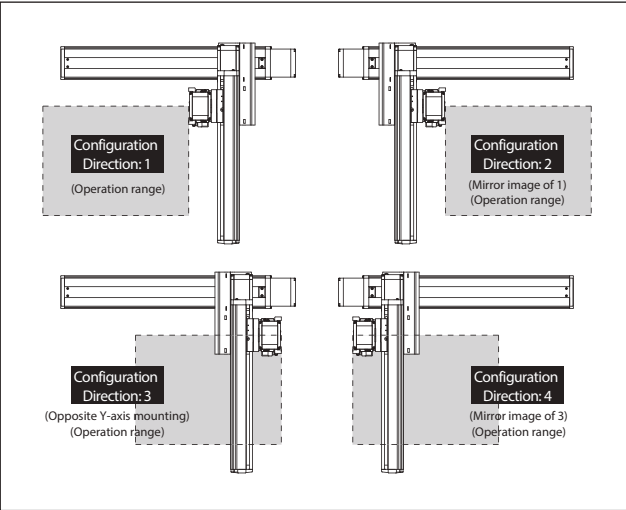
Model Specification Items	Series: ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type: Refer to Model Specification table below	Encoder Type: A: Absolute I: Incremental	X-axis Stroke/Option: 10: 100mm Refer to Options table 130: 1300mm table <100: 1000mm* below. (Every 50mm) * For self-standing cable specification	Y-axis Stroke/Option: 10: 100mm Refer to Options table 70: 700mm table (Every 50mm) below.	Z-axis Stroke/Option: 10: 100mm Refer to Options table 50: 500mm table (Every 50mm) below.	Applicable Controllers: T2: SCON XSEL XSEL-P/Q XSEL-RA/SA	Cable Length: 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management: Refer to Explanation of Model Designations below
----------------------------------	---------------------------------------------------------------------------------------------	------------------------------------------------	---------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------	------------------------------------------------------------------------------------

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BK1MB3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	M	ICSB3[ICSPB3]-BK2MB3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	M	ICSB3[ICSPB3]-BK3MB3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	M	ICSB3[ICSPB3]-BK4MB3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM- <u>1</u> -600-20- <u>2</u> -T2- <u>10</u> - <u>3</u>	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM- <u>1</u> -400-20- <u>2</u> -T2- <u>10</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- <u>1</u> -200-10- <u>6</u> -T2- <u>10</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [10] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	10: 100mm ? : 130: 1300mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm ? : 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? : 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm, Y/Z-axis ±0.01mm [X-axis ±0.01mm, Y/Z-axis ±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/20mm
Y-axis motor output/lead	400W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

<p>Notes</p>	<p>(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters). (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m. (Note 3) The rated acceleration is 0.3G for X-axis and 0.4G for Y/Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced. (Note 4) Please note that a longer stroke will result in a lower max speed.</p>
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Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BK MB3M

Z-axis stroke	Y-axis stroke	
	100-650	700
100	20.0	20.0
150		20.0
200		20.0
250		20.0
300		20.0
350		19.4
400		18.8
450		18.1
500		17.5

Maximum Speed by Stroke (mm/s) (Note 4)

BK MB3M

	100-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300
X-axis	1200			920	765	645	550	475
Y-axis	1200							
Z-axis	600							

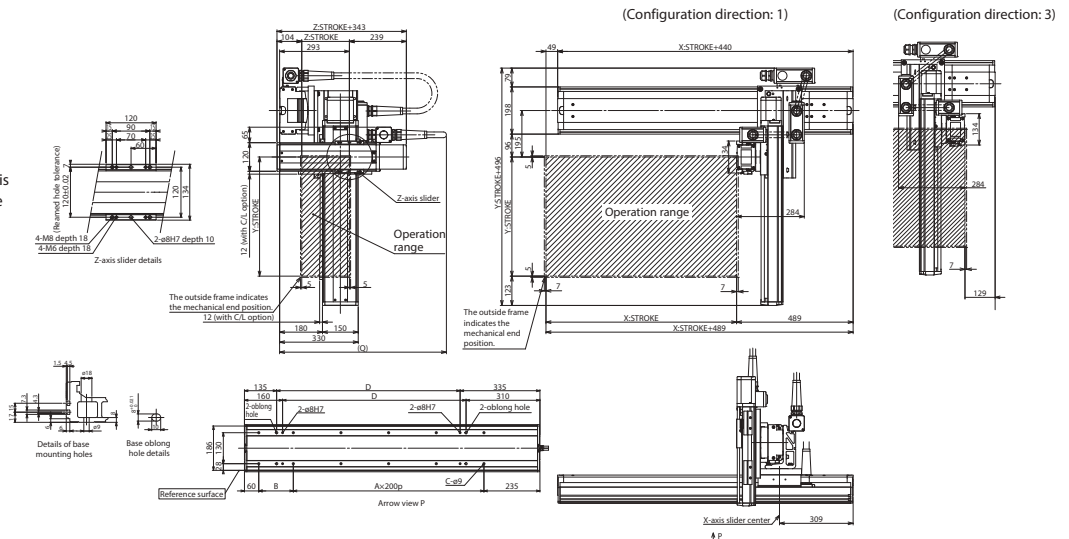
ICSB3 [ICSPB3]-BK MB3M -SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	-	-	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970
Y-axis stroke	100 <th>150</th> <th>200</th> <th>250</th> <th>300</th> <th>350</th> <th>400</th> <th>450</th> <th>500</th> <th>550</th> <th>600</th> <th>650</th> <th>700</th>	150	200	250	300	350	400	450	500	550	600	650	700						
Q	750	800	800	850	850	900	900	900	950	950	1000	1000	1050						

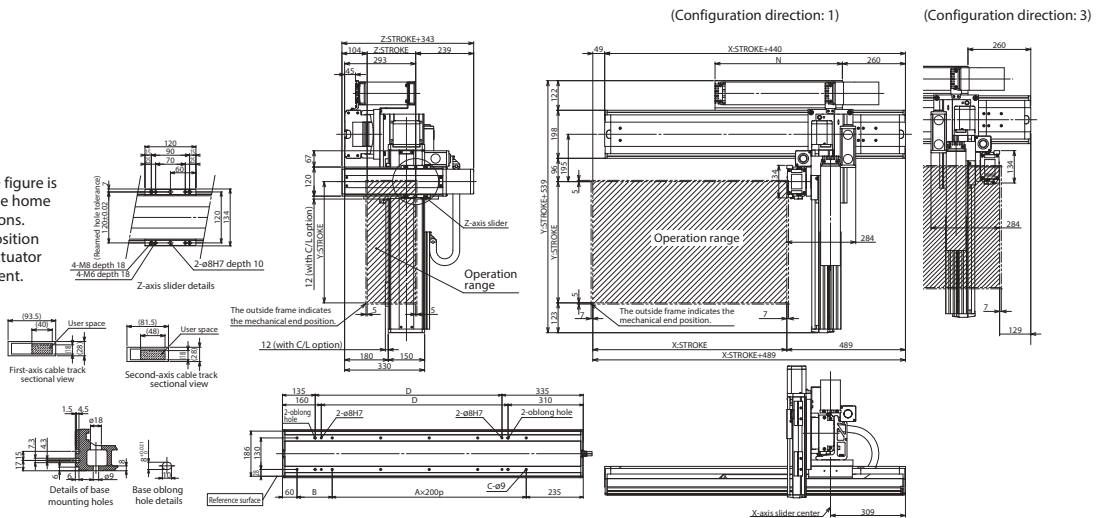
ICSB3 [ICSPB3]-BK MB3M -CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



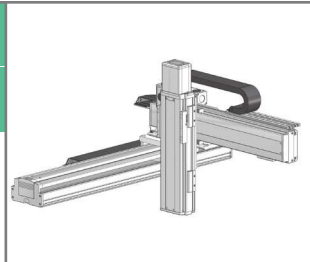
X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-BK MB4M

ICSPB3-BK MB4M High-Precision Specification

X: ±20µm
Y/Z: ±10µm
X: ±10µm
Y/Z: ±5µm

X-Y-Z 3-axis
XYB+ZB (Y,Z Base Mount)
Medium Speed Type
X: XL (600W)
Y: Lg (400W)
Z: Lg (400W)



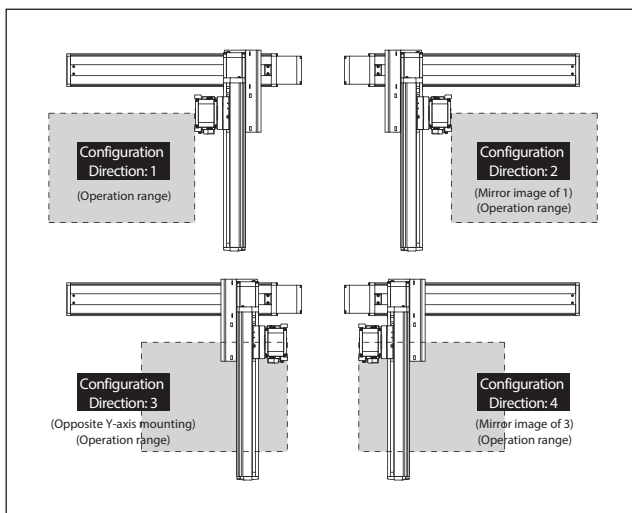
Model Specification Items	Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	10: 100mm 130: 1300mm table <100: 1000mm>* below. (Every 50mm) * For self-standing cable specification	10: 100mm 70: 700mm table (Every 50mm)	10: 100mm 50: 500mm table (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BK1MB4M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	M	ICSB3[ICSPB3]-BK2MB4M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	M	ICSB3[ICSPB3]-BK3MB4M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	M	ICSB3[ICSPB3]-BK4MB4M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
 *2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM- <u>1</u> -600-20- <u>2</u> -T2- <u>10</u> - <u>3</u>	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM- <u>1</u> -400-20- <u>4</u> -T2- <u>10</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM- <u>1</u> -400-10- <u>6</u> -T2- <u>10</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
 Note that the strokes are indicated in mm (millimeters).
 * Cable exit direction is specified with [8] in the above model names.
 Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
 *2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
 Please refer to P.11 for more information.
 * Please refer to P.11 for the X-axis cable exit direction.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm, Y/Z-axis ±0.01mm [X-axis ±0.01mm, Y/Z-axis ±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/20mm
Y-axis motor output/lead	400W/20mm
Z-axis motor output/lead	400W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

 Notes	<p>(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).</p> <p>(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.</p> <p>(Note 3) The rated acceleration is 0.3G for X-axis and 0.4G for Y/Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.</p> <p>(Note 4) Please note that a longer stroke will result in a lower max speed.</p>
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Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BK□MB4M

		Y-axis stroke												
		100	150	200	250	300	350	400	450	500	550	600	650	700
Z-axis stroke	100	36.4	35.8	35.3	34.8	34.3	33.8	33.3	32.7	32.2	28.6	24.9	21.6	18.6
	150	35.5	34.9	34.4	33.9	33.4	32.9	32.4	31.8	31.3	27.7	24.0	20.7	17.7
	200	34.6	34.0	33.5	33.0	32.5	32.0	31.5	30.9	30.4	26.8	23.1	19.8	16.8
	250	33.7	33.1	32.6	32.1	31.6	31.1	30.6	30.0	29.5	25.9	22.2	18.9	15.9
	300	32.9	32.3	31.8	31.3	30.8	30.3	29.8	29.2	28.7	25.1	21.4	18.1	15.1
	350	32.0	31.4	30.9	30.4	29.9	29.4	28.9	28.3	27.8	24.2	20.5	17.2	14.2
	400	31.2	30.6	30.1	29.6	29.1	28.6	28.1	27.5	27.0	23.4	19.7	16.4	13.4
	450	30.3	29.7	29.2	28.7	28.2	27.7	27.2	26.6	26.1	22.5	18.8	15.5	12.5
500	29.4	28.8	28.3	27.8	27.3	26.8	26.3	25.7	25.2	21.6	17.9	14.6	11.6	

Maximum Speed by Stroke (mm/s) (Note 4)

BK□MB4M

	100~500	550~700	750~800	850~900	950~1000	1050~1100	1150~1200	1250~1300
X-axis	1200							
Y-axis	1200							
Z-axis	600							

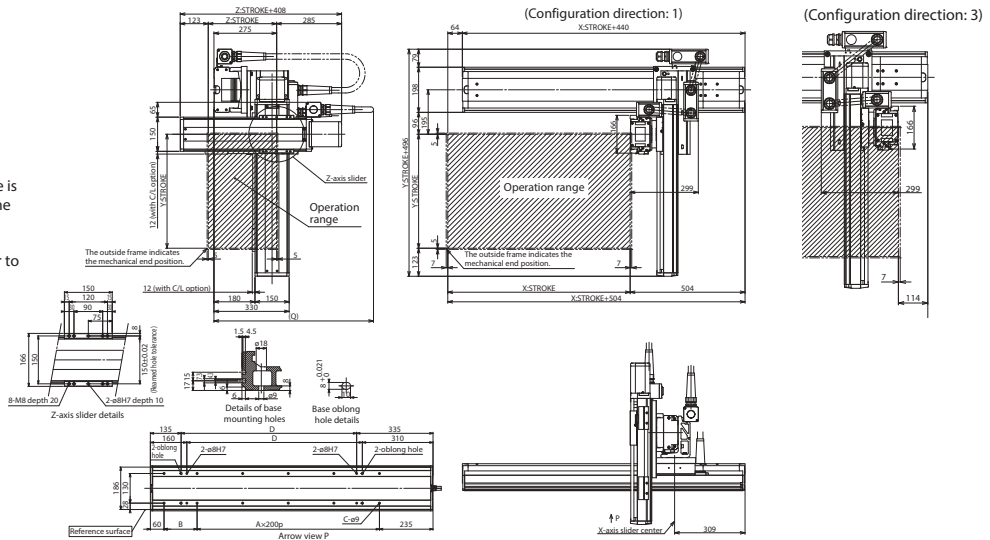
ICSB3 [ICSPB3]-BK□MB4M□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	-	-	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970
Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700						
Q	750	800	800	850	850	900	900	900	950	950	1000	1000	1050						

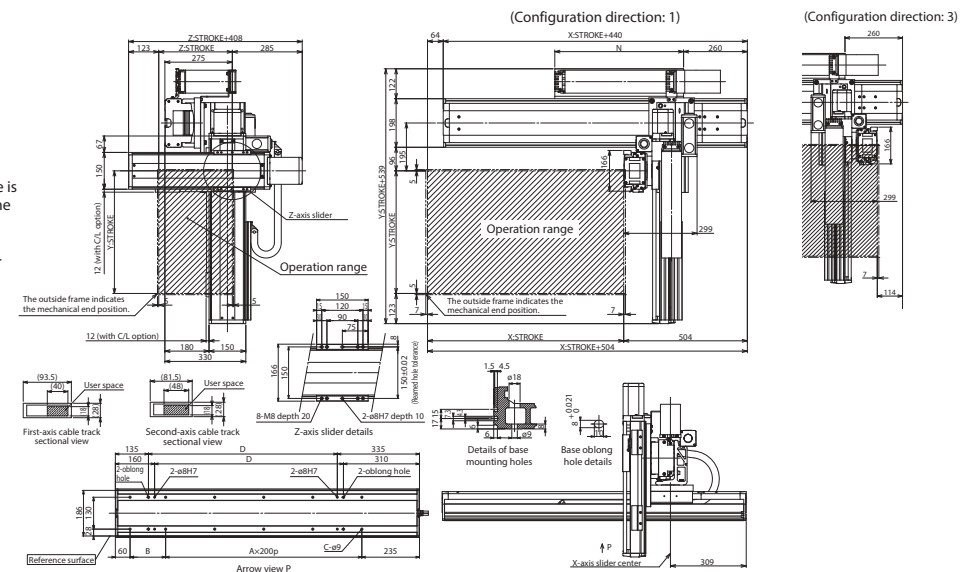
ICSB3 [ICSPB3]-BK□MB4M□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

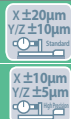


X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

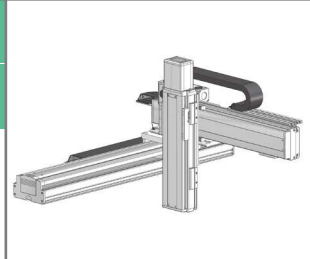
ICSB3-BL HB3

ICSPB3-BL HB3

High-Precision Specification



- X-Y-Z 3-axis
- XYB+ZB (Y, Z Base Mount)
- High Speed Long Type
- X: XL (600W)
Y: Lg (400W)
Z: Md (200W)



Model Specification Items

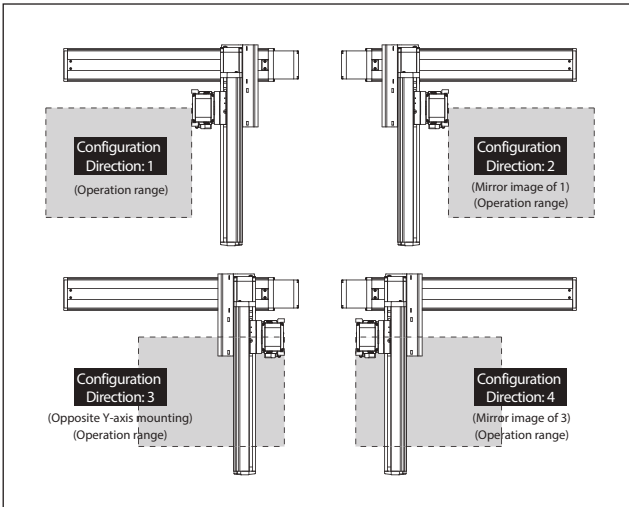
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	90: 900mm 250: 2500mm (Every 100mm)	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON XSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BL1HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BL1HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BL2HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BL2HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BL3HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BL3HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BL4HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BL4HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[SPA]-WXXM-①-600-40-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[SPB]-LXM-①-400-40-②-T2-③-④-⑤	→ Please contact IAI for more details
Z-axis	ISB[SPB]-MXM-①-200-②-③-T2-④-⑤-⑥	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑥] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑩] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with [⑪] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	90: 900mm ? 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm ? 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm, Y/Z-axis ±0.01mm [X-axis ±0.01mm, Y/Z-axis ±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/40mm
Y-axis motor output/lead	400W/40mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
(Note 3) The rated acceleration is 0.3G for X-axis and 0.4G for Y/Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BL□HB3H

Z-axis stroke	Y-axis stroke 100~700	
	100	10.0
	150	
	200	
	250	
	300	
	350	
	400	
	450	
	500	

BL□HB3M

Z-axis stroke	Y-axis stroke									
	100-300	350	400	450	500	550	600	650	700	
	100	20.0	20.0	20.0	20.0	20.0	19.8	19.0	18.2	
	150	20.0	20.0	20.0	20.0	20.0	19.2	18.4	17.6	
	200	20.0	20.0	20.0	20.0	19.4	18.7	17.8	17.1	
	250	20.0	20.0	20.0	19.7	18.8	18.0	17.2	16.4	
	300	20.0	20.0	20.0	19.1	18.3	17.5	16.7	15.9	
	350	20.0	20.0	19.4	18.6	17.7	17.0	16.1	15.3	
	400	20.0	19.8	18.9	18.0	17.2	16.4	15.6	14.8	
	450	19.9	19.1	18.3	17.4	16.6	15.8	14.9	14.2	
500	19.4	18.6	17.7	16.9	16.0	15.3	14.4	13.6		

Maximum Speed by Stroke (mm/s) (Note 4)

BL□HB3H

X-axis	100-500	550-700	900-1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
Y-axis	2400		2400	2200	1965	1725	1530	1365	1225	1110	1005	915	840	770	710	655
Z-axis	1200															

BL□HB3M

X-axis	100-500	550-700	900-1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
Y-axis	2400		2400	2200	1965	1725	1530	1365	1225	1110	1005	915	840	770	710	655
Z-axis	600															

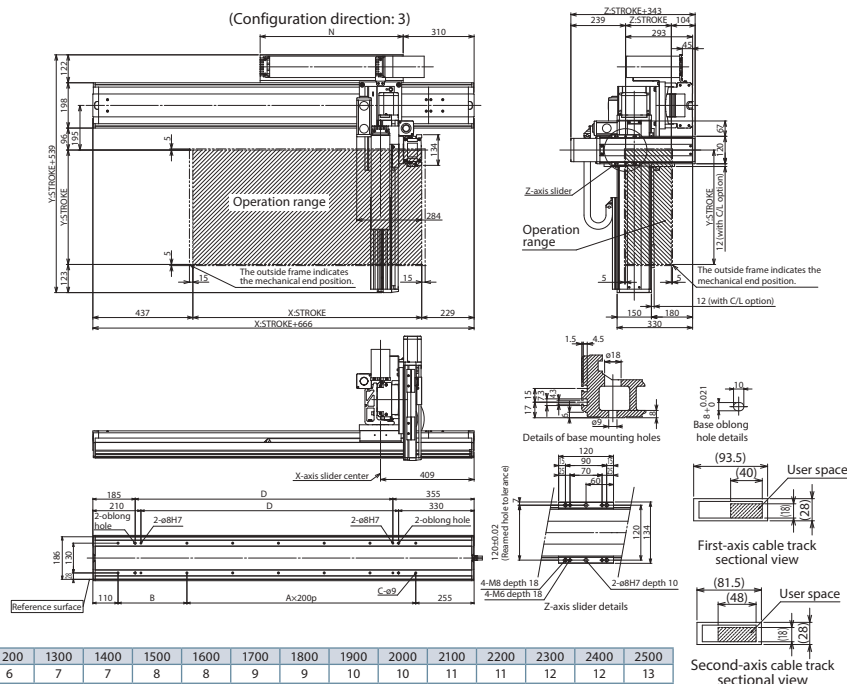
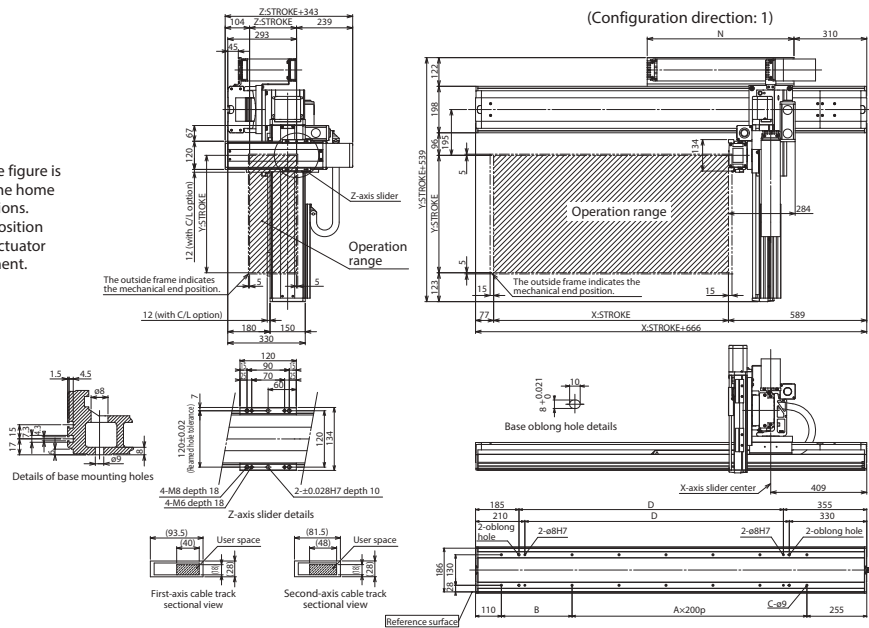
ICSB3 [ICSPB3]-BL□HB3□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



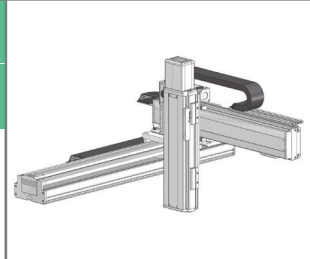
X-axis stroke	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
A	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
B	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201
C	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
D	1026	1126	1226	1326	1426	1526	1626	1726	1826	1926	2026	2126	2226	2326	2426	2526	2626
N	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-BL HB4H

ICSPB3-BL HB4H High-Precision Specification

X ±20µm
Y/Z ±10µm X-Y-Z
3-axis XYB+ZB
(Y,Z Base Mount) High
Speed
Long Type X:XL (600W)
Y:Lg (400W)
Z:Lg (400W)

X ±10µm
Y/Z ±5µm T2 Applicable
Controllers
T2: SCON
SSEL
XSEL-P/Q
XSEL-RA/SA Cable
Length
3L: 3m
5L: 5m
□L: Specified
length Y-axis - Z-axis Cable
Management



Model Specification Items

Series ICSB3: Standard 3-axis specification
ICSPB3: High precision 3-axis specification
Type Refer to Model Specification table below
Encoder Type A: Absolute
I: Incremental
X-axis Stroke/Option 90: 900mm Refer to Options table
250: 2500mm (Every 10 0mm)
Y-axis Stroke/Option 10: 100mm Refer to Options table
70: 700mm (Every 50mm)
Z-axis Stroke/Option 10: 100mm Refer to Options table
50: 500mm (Every 50mm)
Applicable Controllers T2: SCON
SSEL
XSEL-P/Q
XSEL-RA/SA
Cable Length 3L: 3m
5L: 5m
□L: Specified length
Y-axis - Z-axis Cable Management Refer to Explanation of Model Designations below

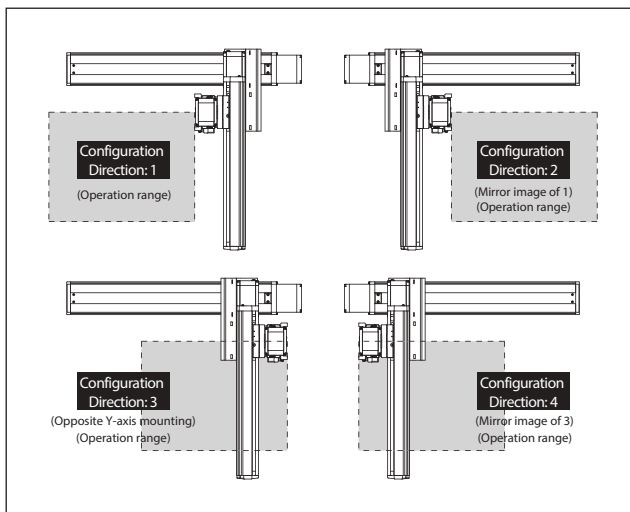
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BL1HB4H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BL2HB4H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BL3HB4H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BL4HB4H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	90: 900mm ? 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm ? 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* Please refer to P.11 for the X-axis cable exit direction.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXXM-①-600-40-②-T2-⑩-③	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-①-400-40-④-T2-⑩-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-①-400-20-⑥-T2-⑩-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑩ in the above model names.
Please refer to P.11 for the exit directions.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	X-axis ±0.02mm, Y/Z-axis ±0.01mm [X-axis ±0.01mm, Y/Z-axis ±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/40mm
Y-axis motor output/lead	400W/40mm
Z-axis motor output/lead	400W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
(Note 3) The rated acceleration is 0.3G for X-axis and 0.4G for Y/Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BL□HB4H

Z-axis stroke	Y-axis stroke												
	100	150	200	250	300	350	400	450	500	550	600	650	700
100	20.0	20.0	20.0	20.0	20.0	20.0	19.8	19.0	18.1	17.3	16.5	15.7	14.9
150	20.0	20.0	20.0	20.0	20.0	19.8	19.0	18.2	17.3	16.5	15.7	14.9	14.1
200	20.0	20.0	20.0	20.0	19.8	19.0	18.2	17.4	16.5	15.7	14.9	14.0	13.3
250	20.0	20.0	20.0	19.8	19.0	18.2	17.4	16.6	15.7	14.9	14.1	13.2	12.5
300	20.0	20.0	19.9	19.1	18.3	17.5	16.7	15.8	15.0	14.1	13.4	12.5	11.7
350	20.0	20.0	19.1	18.3	17.5	16.7	15.9	15.0	14.2	13.3	12.6	11.7	10.9
400	19.9	19.3	18.4	17.6	16.8	15.9	15.2	14.3	13.5	12.6	11.8	11.0	10.2
450	19.1	18.5	17.6	16.7	16.0	15.1	14.4	13.5	12.6	11.8	11.0	10.2	9.4
500	18.3	17.6	16.8	15.9	15.2	14.3	13.5	12.7	11.8	11.0	10.2	9.4	8.6

Maximum Speed by Stroke (mm/s) (Note 4)

BL□HB4H

	100~500	550~700	900~1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—		2400	2200	1965	1725	1530	1365	1225	1110	1005	915	840	770	710	655
Y-axis	—															
Z-axis	1200	—														

ICSB3 [ICSPB3]-BL□HB4H-CT-CT (Cable track specification)

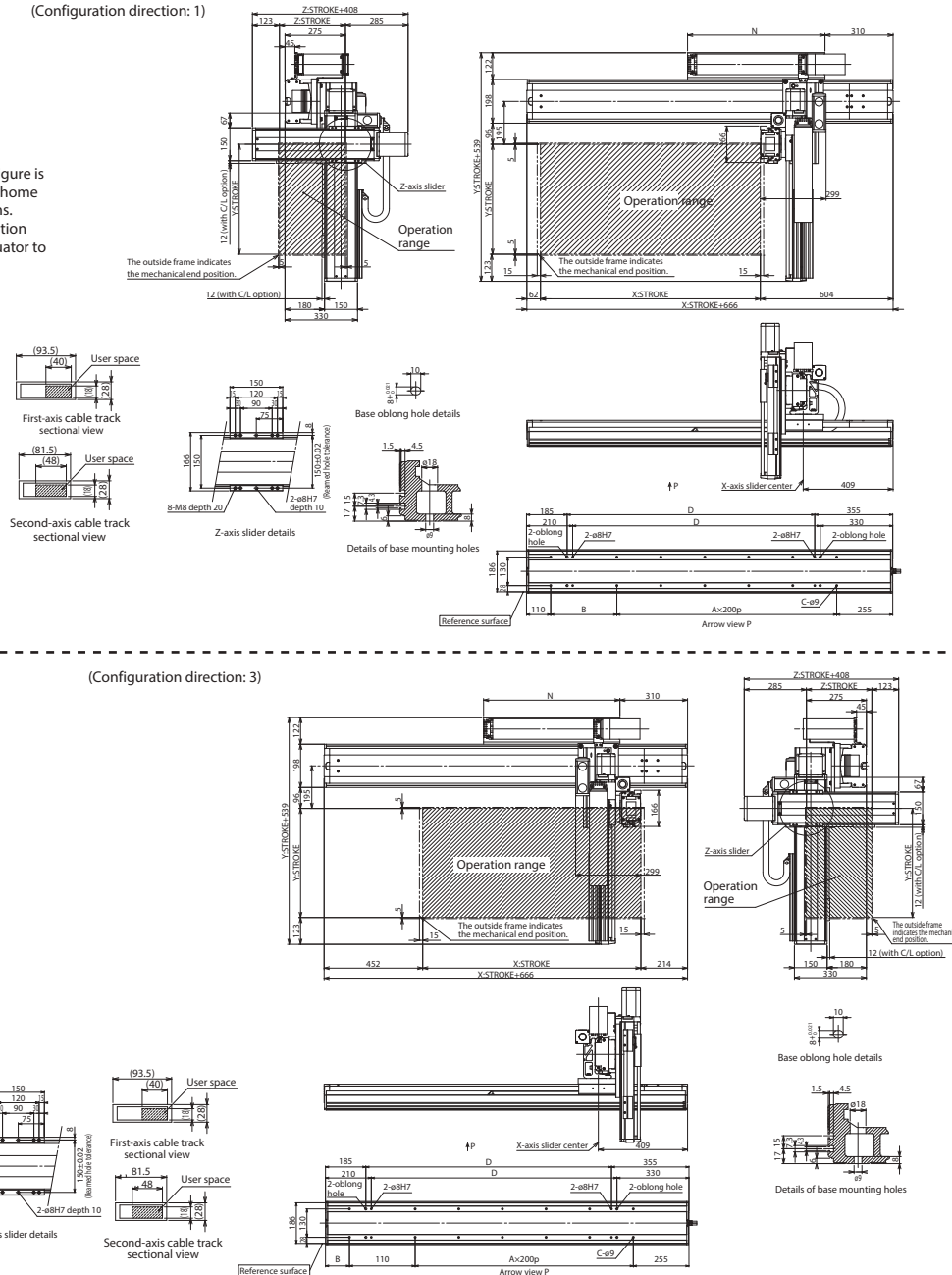
Dimensions

(Configuration direction: 1)

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

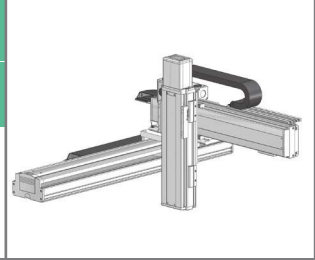


X-axis stroke	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
A	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
B	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201
C	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
D	1026	1126	1226	1326	1426	1526	1626	1726	1826	1926	2026	2126	2226	2326	2426	2526	2626
N	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-BL MB3M

ICSPB3-BL MB3M High-Precision Specification

X ±20µm Y/Z ±10µm Standard	X-Y-Z 3-axis	XYB+ZB (Y, Z Base Mount)	Medium Speed Long Type	X: XL (600W) Y: Lg (400W) Z: Md (200W)
X ±10µm Y/Z ±5µm High Precision				



Model Specification Items

Series: ICSB3: Standard 3-axis specification; ICSPB3: High precision 3-axis specification

Type: Refer to Model Specification table below

Encoder Type: A: Absolute; I: Incremental

X-axis Stroke/Option: 90: 900mm; 250: 2500mm (Every 100mm)

Y-axis Stroke/Option: 10: 100mm; 70: 700mm (Every 50mm)

Z-axis Stroke/Option: 10: 100mm; 50: 500mm (Every 50mm)

Applicable Controllers: T2: SCON; XSEL; XSEL-P/Q; XSEL-RA/SA

Cable Length: 3L: 3m; 5L: 5m; □L: Specified length

Y-axis - Z-axis Cable Management: Refer to Explanation of Model Designations below

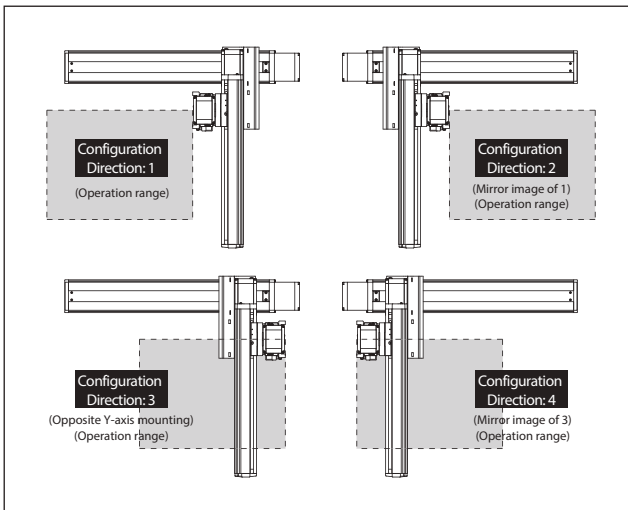
Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BL1MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-BL2MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-BL3MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-BL4MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM-[1]-600-20-[2]-T2-[10]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-400-20-[2]-T2-[10]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-10-[6]-T2-[10]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [10] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	90: 900mm ? 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm ? 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm, Y/Z-axis ±0.01mm [X-axis ±0.01mm, Y/Z-axis ±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/20mm
Y-axis motor output/lead	400W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

<p>Notes</p>	<p>(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).</p> <p>(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.</p> <p>(Note 3) The rated acceleration is 0.3G for X-axis and 0.4G for Y/Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.</p> <p>(Note 4) Please note that a longer stroke will result in a lower max speed.</p>
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Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BL MB3M

Z-axis stroke	Y-axis stroke	
	100~650	700
100	20.0	20.0
150		20.0
200		20.0
250		20.0
300		20.0
350		19.4
400		18.8
450		18.1
500		17.5

Maximum Speed by Stroke (mm/s) (Note 4)

BL MB3M

	100~500	550~700	900~1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1100	980	860	765	680	610	555	500	455	420	385	355	325
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

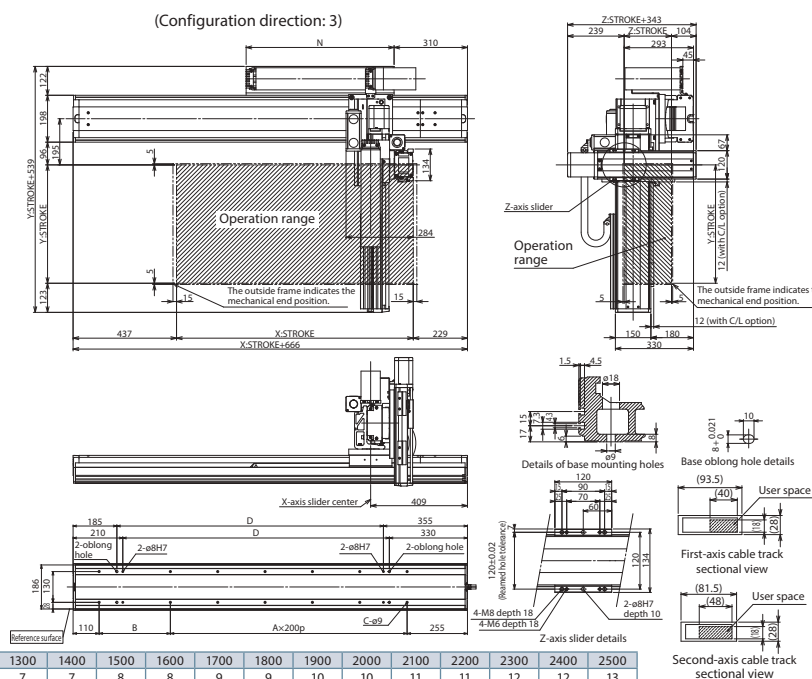
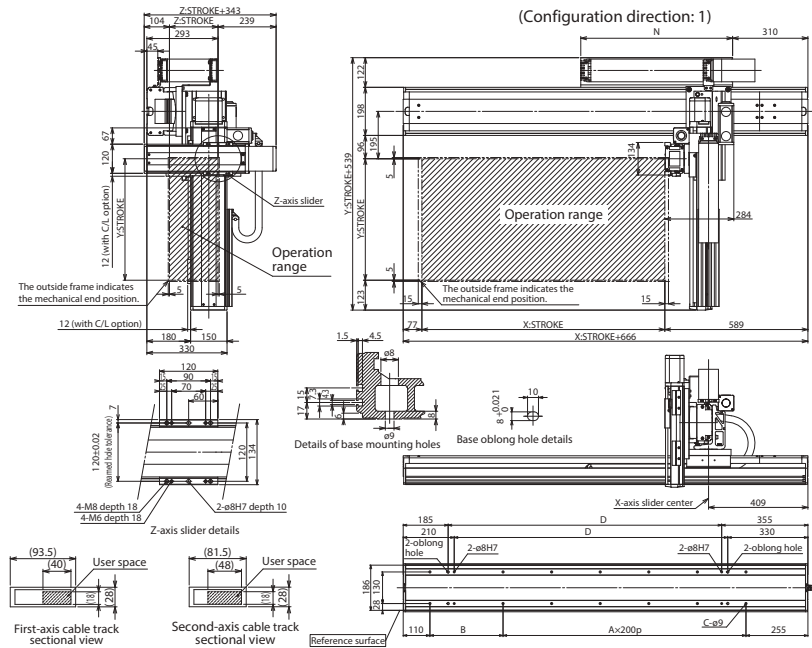
ICSB3 [ICSPB3]-BL MB3M-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
A	5	5	6	6	7	7	8	8	9	10	10	11	11	11	12	12	13
B	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201
C	14	14	16	16	18	18	20	20	22	24	24	26	26	28	28	30	30
D	1026	1126	1226	1326	1426	1526	1626	1726	1826	1926	2026	2126	2226	2326	2426	2526	2626
N	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-BL MB4M

ICSPB3-BL MB4M High-Precision Specification

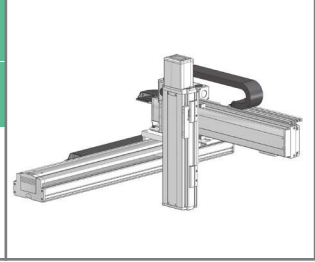


X-Y-Z 3-axis

XYB+ZB (Y,Z Base Mount)

Medium Speed Long Type

X:XL (600W)
Y:Lg (400W)
Z:Lg (400W)



Model Specification Items

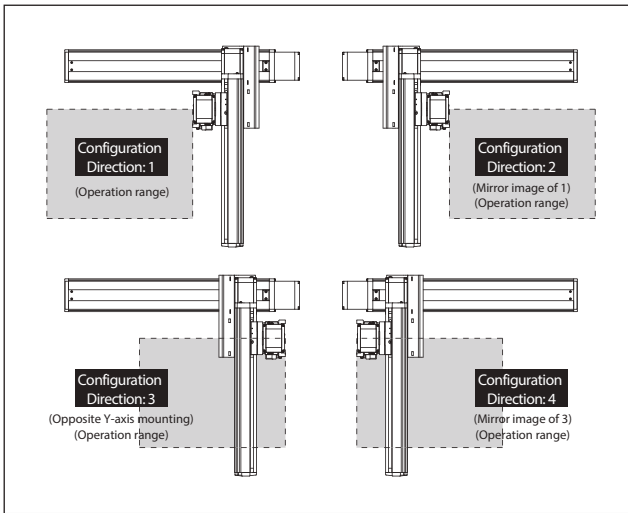
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	90: 900mm 250: 2500mm (Every 100mm)	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BL1MB4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-BL2MB4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-BL3MB4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-BL4MB4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM-[1]-600-20-[2]-T2-[10]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-400-20-[4]-T2-[10]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-[1]-400-10-[6]-T2-[10]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [10] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	90: 900mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm, Y/Z-axis ±0.01mm [X-axis ±0.01mm, Y/Z-axis ±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/20mm
Y-axis motor output/lead	400W/20mm
Z-axis motor output/lead	400W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- Notes**
- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
 - (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
 - (Note 3) The rated acceleration is 0.3G for X-axis and 0.4G for Y/Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
 - (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

BL□MB4M

		Y-axis stroke												
		100	150	200	250	300	350	400	450	500	550	600	650	700
Z-axis stroke	100	36.4	35.8	35.3	34.8	34.3	33.8	33.3	32.7	32.2	28.6	24.9	21.6	18.6
	150	35.5	34.9	34.4	33.9	33.4	32.9	32.4	31.8	31.3	27.7	24.0	20.7	17.7
	200	34.6	34.0	33.5	33.0	32.5	32.0	31.5	30.9	30.4	26.8	23.1	19.8	16.8
	250	33.7	33.1	32.6	32.1	31.6	31.1	30.6	30.0	29.5	25.9	22.2	18.9	15.9
	300	32.9	32.3	31.8	31.3	30.8	30.3	29.8	29.2	28.7	25.1	21.4	18.1	15.1
	350	32.0	31.4	30.9	30.4	29.9	29.4	28.9	28.3	27.8	24.2	20.5	17.2	14.2
	400	31.2	30.6	30.1	29.6	29.1	28.6	28.1	27.5	27.0	23.4	19.7	16.4	13.4
	450	30.3	29.7	29.2	28.7	28.2	27.7	27.2	26.6	26.1	22.5	18.8	15.5	12.5
500	29.4	28.8	28.3	27.8	27.3	26.8	26.3	25.7	25.2	21.6	17.9	14.6	11.6	

Maximum Speed by Stroke (mm/s) (Note 4)

BL□MB4M

	100~500	550~700	900~1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1100	980	860	765	680	610	555	500	455	420	385	355	325
Y-axis	1200															
Z-axis	600	—														

ICSB3 [ICSPB3]-BL□MB4M-CT-CT (Cable track specification)

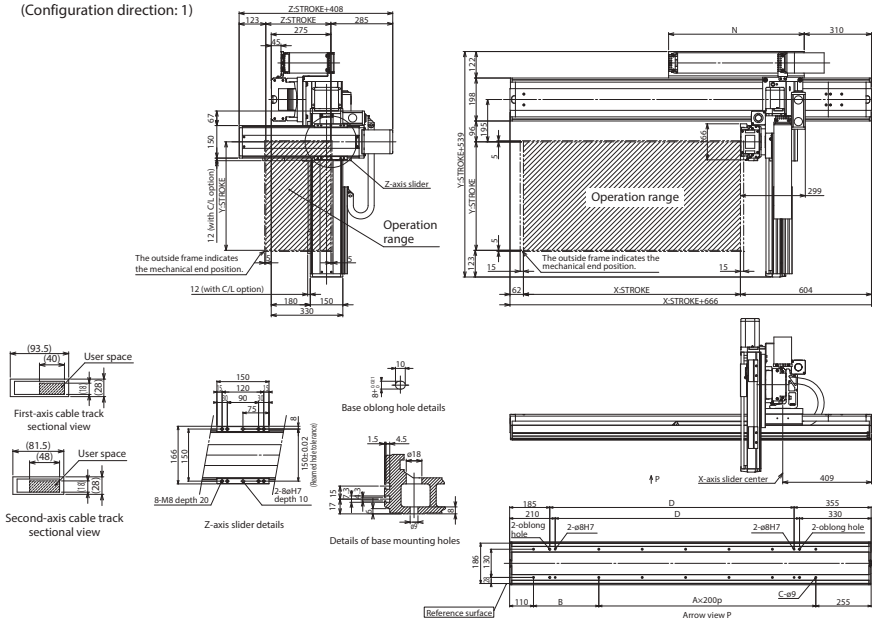
Dimensions

CAD drawings can be downloaded from our website.

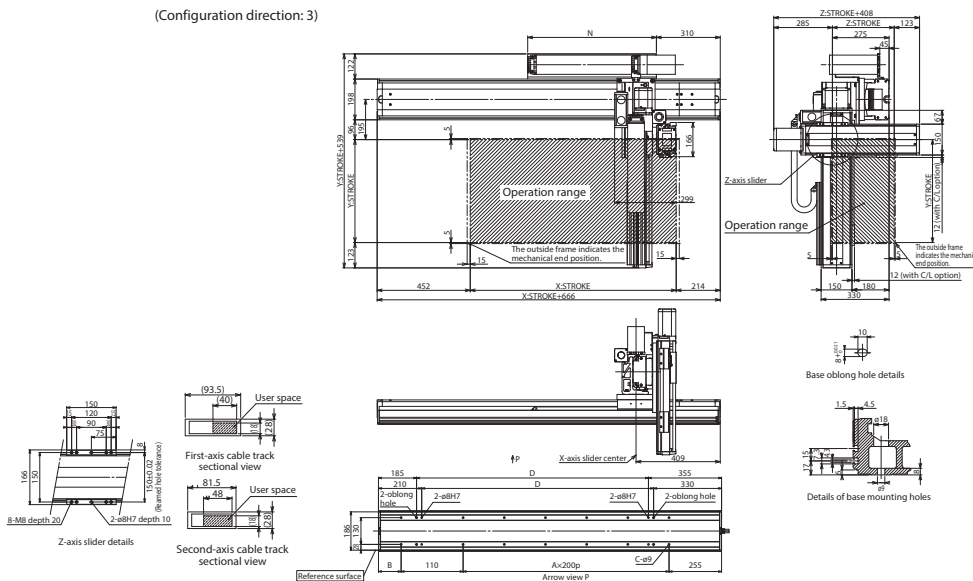


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



(Configuration direction: 3)



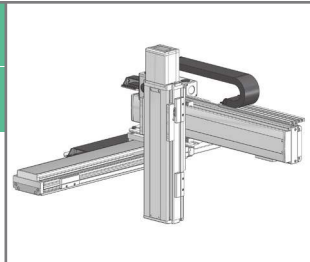
X-axis stroke	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
A	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
B	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201
C	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
D	1026	1126	1226	1326	1426	1526	1626	1726	1826	1926	2026	2126	2226	2326	2426	2526	2626
N	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-BM HB4H

ICSPB3-BM HB4H High-Precision Specification

$X \pm 5\mu m$
 $Y/Z \pm 10\mu m$
 $\pm 5\mu m$

X-Y-Z 3-axis
 XYB+ZB (Y,Z Base Mount)
 High Speed Type
 X:Lg (750W)
 Y:Lg (400W)
 Z:Lg (400W)



Model Specification Items

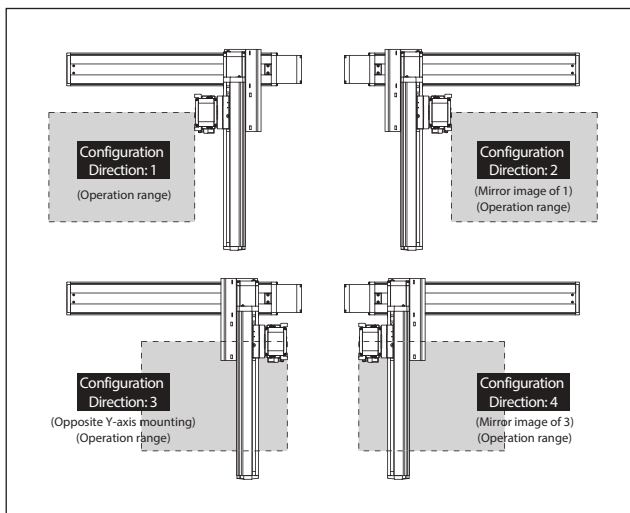
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	10: 100mm 150: 1500mm table <100: 1000mm>* below. (Every 50mm)	10: 100mm 70: 700mm table (Every 50mm)	10: 100mm 50: 500mm table (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BM1HB4H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	H	ICSB3[ICSPB3]-BM2HB4H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	H	ICSB3[ICSPB3]-BM3HB4H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	H	ICSB3[ICSPB3]-BM4HB4H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
 *2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	SSPA-LXM- <u>1</u> -750-50- <u>2</u> -T2- <u>10</u> - <u>3</u>	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM- <u>1</u> -400-40- <u>4</u> -T2- <u>10</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM- <u>1</u> -400-20- <u>6</u> -T2- <u>10</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
 Note that the strokes are indicated in mm (millimeters).
 * Cable exit direction is specified with [10] in the above model names.
 Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	10: 100mm ? 150: 1500mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm ? 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis.
 Make sure to indicate the standard equipped option in the model number.
 When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.
 *2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
 Please refer to P.11 for more information.
 * To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
 Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis $\pm 0.005\text{mm}$, Y/Z-axis $\pm 0.01\text{mm}$ [X-axis $\pm 0.005\text{mm}$, Y/Z-axis $\pm 0.005\text{mm}$]
Lost motion	X-axis $\pm 0.02\text{mm}$ or less, Y/Z-axis $\pm 0.05\text{mm}$ or less [X-axis $\pm 0.02\text{mm}$ or less, Y/Z-axis $\pm 0.02\text{mm}$ or less]
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	750W/50mm
Y-axis motor output/lead	400W/40mm
Z-axis motor output/lead	400W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

■ BM□HB4H

Z-axis stroke	Y-axis stroke												
	100	150	200	250	300	350	400	450	500	550	600	650	700
100	20.0	20.0	20.0	20.0	20.0	20.0	19.8	19.0	18.1	17.3	16.5	15.7	13.0
150	20.0	20.0	20.0	20.0	20.0	19.8	19.0	18.2	17.3	16.5	15.7	14.8	12.1
200	20.0	20.0	20.0	20.0	19.8	19.0	18.2	17.4	16.5	15.7	14.9	13.9	11.2
250	20.0	20.0	20.0	19.8	19.0	18.2	17.4	16.6	15.7	14.9	14.1	13.0	10.3
300	20.0	20.0	19.9	19.1	18.3	17.5	16.7	15.8	15.0	14.1	13.4	12.2	9.5
350	20.0	20.0	19.1	18.3	17.5	16.7	15.9	15.0	14.2	13.3	12.6	11.3	8.6
400	19.9	19.3	18.4	17.6	16.8	15.9	15.2	14.3	13.5	12.6	11.8	10.5	7.8
450	19.1	18.5	17.6	16.7	16.0	15.1	14.4	13.5	12.6	11.8	11.0	9.6	6.9
500	18.3	17.6	16.8	15.9	15.2	14.3	13.5	12.7	11.8	11.0	10.2	8.7	6.0

Maximum Speed by Stroke (mm/s) (Note 4)

■ BM□HB4H

	100~500	550~700	750~900	950~1000	1050~1100	1150~1200	1250~1300	1400	1500
X-axis	2500			2320	1950	1660	1440	1250	1100
Y-axis	2400								
Z-axis	1200								

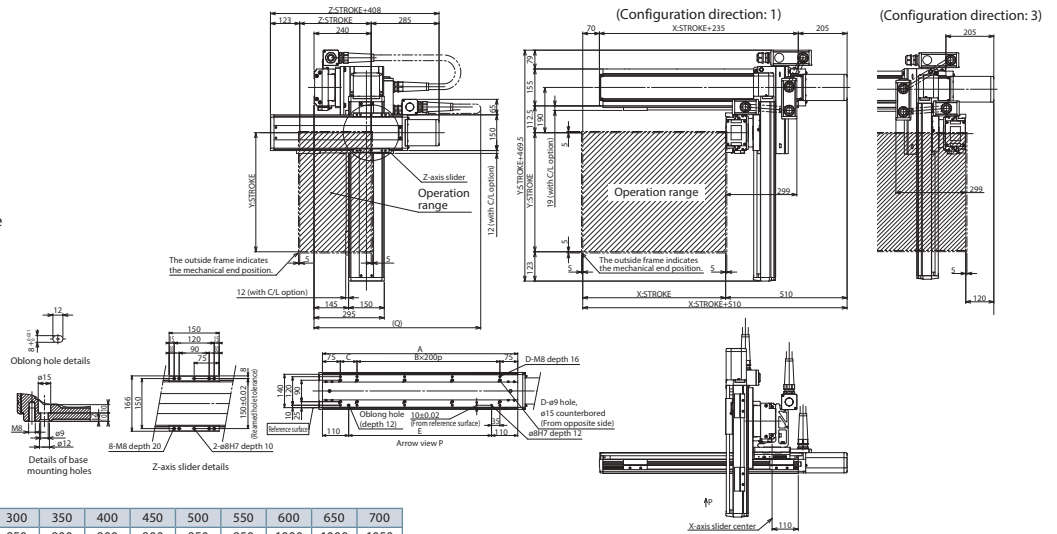
ICSB3 [ICSPB3]-BM□HB4H-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
Q	750	800	800	850	850	900	900	900	950	950	1000	1000	1050

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000

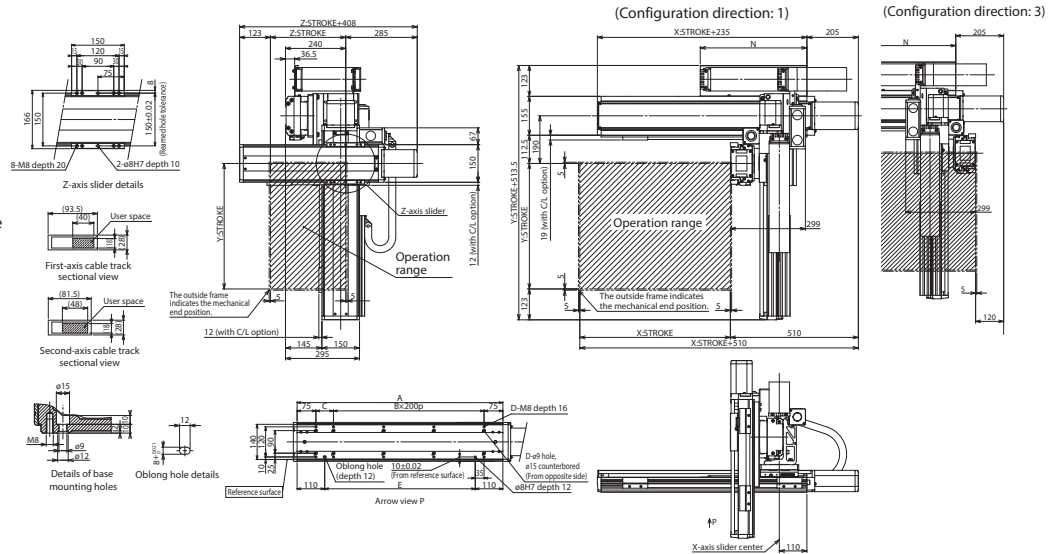
ICSB3 [ICSPB3]-BM□HB4H-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



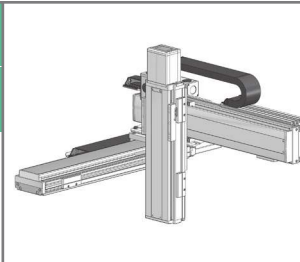
X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
A	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	1320	1370	1420	1470	1520	1570	1620	1670	1720
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	4	5	5	5	6	6	6	6	7	7	7
C	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
E	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	825	850	875

ICSB3-BM MB4M

ICSPB3-BM MB4M High-Precision Specification

$X \pm 5\mu m$
 $Y/Z \pm 10\mu m$
 $\pm 5\mu m$ High Precision

X-Y-Z 3-axis
 XYB+ZB (Y, Z Base Mount)
 Medium Speed Type
 X:Lg (750W)
 Y:Lg (400W)
 Z:Lg (400W)



Model Specification Items

Series ICSB3: Standard 3-axis specification
 ICSPB3: High precision 3-axis specification

Type Refer to Model Specification table below

Encoder Type
 A: Absolute
 I: Incremental

X-axis Stroke/Option
 10: 100mm Refer to Options table
 150: 1500mm * below.
 <100: 1000mm * below.
 (Every 50mm) * For self-standing cable specification

Y-axis Stroke/Option
 10: 100mm Refer to Options table
 70: 700mm * below.
 (Every 50mm)

Z-axis Stroke/Option
 10: 100mm Refer to Options table
 50: 500mm * below.
 (Every 50mm)

Applicable Controllers
 T2: SCON
 XSEL-P/Q
 XSEL-RA/SA

Cable Length
 3L: 3m
 5L: 5m
 □L: Specified length

Y-axis - Z-axis Cable Management
 Refer to Explanation of Model Designations below

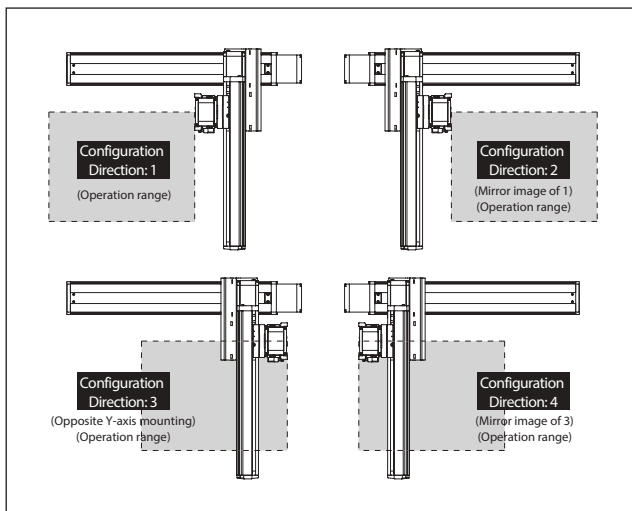
Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BM1MB4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-BM2MB4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-BM3MB4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-BM4MB4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max. speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	SSPA-LXM-[1]-750-25-[2]-T2-[10]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-400-20-[2]-T2-[10]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-[1]-400-10-[6]-T2-[10]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
 Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [10] in the above model names.
 Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	10: 100mm ? 150: 1500mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm ? 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (Standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism (Y/X-axis only)	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis $\pm 0.005\text{mm}$, Y/Z-axis $\pm 0.01\text{mm}$ [X-axis $\pm 0.005\text{mm}$, Y/Z-axis $\pm 0.005\text{mm}$]
Lost motion	X-axis $\pm 0.02\text{mm}$ or less, Y/Z-axis $\pm 0.05\text{mm}$ or less [X-axis $\pm 0.02\text{mm}$ or less, Y/Z-axis $\pm 0.02\text{mm}$ or less]
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	750W/25mm
Y-axis motor output/lead	400W/20mm
Z-axis motor output/lead	400W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes	(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters). (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m. (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced. (Note 4) Please note that a longer stroke will result in a lower max speed.
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Payload (kg) (Note 3)

* The payload is based on operation at the rated acceleration.

■BM□MB4M

		Y-axis stroke												
		100	150	200	250	300	350	400	450	500	550	600	650	700
Z-axis stroke	100	33.1	32.6	32.0	31.5	31.0	30.5	30.0	29.4	25.8	22.0	18.7	15.7	13.0
	150	32.2	31.7	31.1	30.6	30.1	29.6	29.1	28.5	24.9	21.1	17.8	14.8	12.1
	200	31.3	30.8	30.2	29.7	29.2	28.7	28.2	27.6	24.0	20.2	16.9	13.9	11.2
	250	30.4	29.9	29.3	28.8	28.3	27.8	27.3	26.7	23.1	19.3	16.0	13.0	10.3
	300	29.6	29.1	28.5	28.0	27.5	27.0	26.5	25.9	22.3	18.5	15.2	12.2	9.5
	350	28.7	28.2	27.6	27.1	26.6	26.1	25.6	25.0	21.4	17.6	14.3	11.3	8.6
	400	27.9	27.4	26.8	26.3	25.8	25.3	24.8	24.2	20.6	16.8	13.5	10.5	7.8
	500	27.0	26.5	25.9	25.4	24.9	24.4	23.9	23.3	19.7	15.9	12.6	9.6	6.9
500	26.1	25.6	25.0	24.5	24.0	23.5	23.0	22.4	18.8	15.0	11.7	8.7	6.0	

Maximum Speed by Stroke (mm/s) (Note 4)

■BM□MB4M

	100~500	550~700	750~900	950~1000	1050~1100	1150~1200	1250~1300	1400	1500
X-axis	1250								
Y-axis	1200								
Z-axis	600								

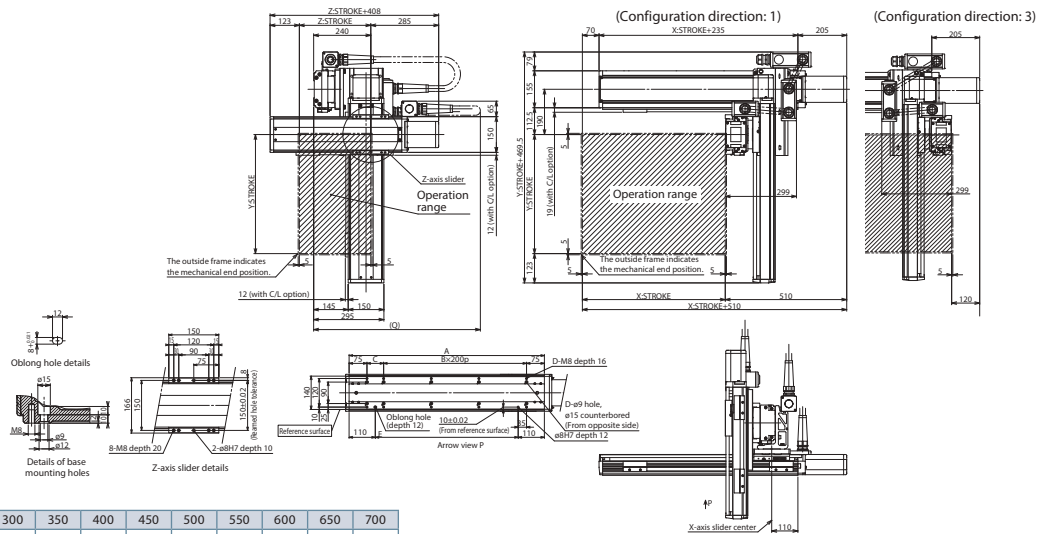
ICSB3 [ICSPB3]-BM□MB4M-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Y-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
Q	750	800	800	850	850	900	900	900	950	950	1000	1000	1050

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000

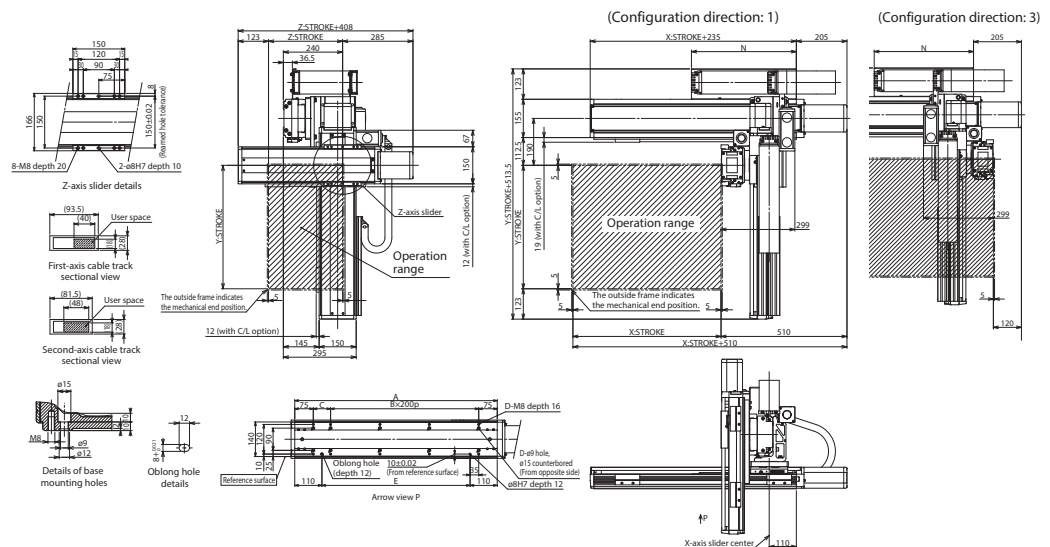
ICSB3 [ICSPB3]-BM□MB4M-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
A	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	1320	1370	1420	1470	1520	1570	1620	1670	1720
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	7	7	7	7
C	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170	220	70	120	170
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
E	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	825	850	875

ICSPA3-B1N□HB3□

High-Precision Specification

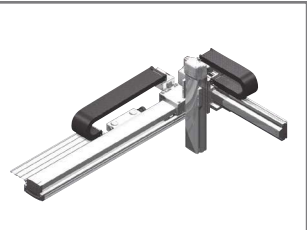


X-Y-Z 3-axis (NS+ISPA)

XYB+ZB (Y,Z Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

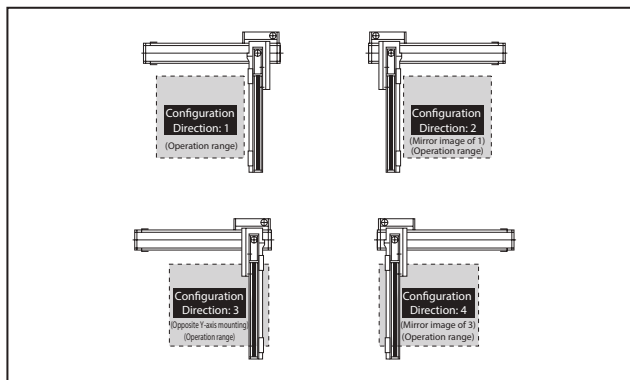
Series ICSPA3: High precision 3-axis specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 50: 500mm 220: 2200mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z-axis Stroke/Option 10: 100mm 50: 500mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Refer to Explanation of Model Designations below
--------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	----------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------------------------------------------------

Model Specification

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSPA3-B1N1HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1N1HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	H	ICSPA3-B1N2HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1N2HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
3	H	ICSPA3-B1N3HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1N3HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
4	H	ICSPA3-B1N4HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1N4HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
*2 The payload and the max. speed may vary depending on the type of Z-axis.
* Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMS-①-400-40-②-T2-③-⑩	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z-axis	ISPA-MXM-①-200-⑩-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑩ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* The following symbols are specified with ⑩ in the above model names.
NT1: For cartesian configuration directions 1 and 3
NT2: For cartesian configuration directions 2 and 4
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).
* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	50:500mm 220:2200mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20:200mm 70:700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10:100mm 50:500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L:3m 5L:5m □L:□m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01 mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm <H>, 10mm <M>

* <> indicates the Z-axis medium speed specification.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B1N□HB3H

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	9.0					
	~200	9.0		8.3	7.2	6.2	5.2
	~300	9.0	8.3	7.3	6.2	5.2	4.2
	~400	8.2	7.3	6.3	5.2	4.2	3.2
	~500	7.1	6.2	5.2	4.1	3.1	2.1

■B1N□HB3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	11.2	10.2	9.2	8.2	7.2	6.2
	~200	10.2	9.3	8.3	7.2	6.2	5.2
	~300	9.0	8.3	7.3	6.2	5.2	4.2
	~400	8.2	7.3	6.3	5.2	4.2	3.2
	~500	7.1	6.2	5.2	4.1	3.1	2.1

Maximum Speed by Stroke (mm/s)

■B1N□HB3H

	Stroke								
	100	200	300	400	500	600	700	800~2200	
X-axis	—	—	—	—	2400				—
Y-axis	—	1200						—	—
Z-axis	1200			—	—	—	—	—	

■B1N□HB3M

	Stroke								
	100	200	300	400	500	600	700	800~2200	
X-axis	—	—	—	—	2400				—
Y-axis	—	1200						—	—
Z-axis	600			—	—	—	—	—	

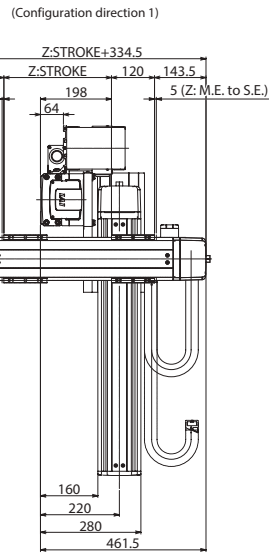
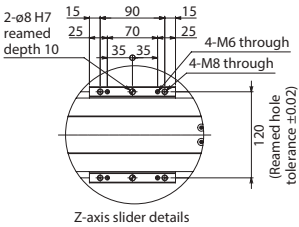
ICSPA3-B1N□HB3□-CT-CT (Cable track specification)

Dimensions

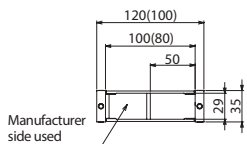
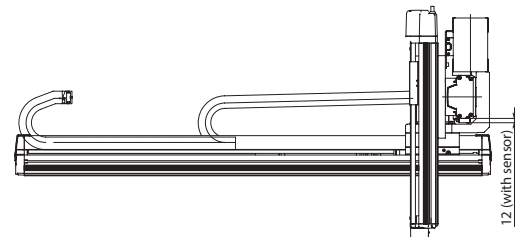
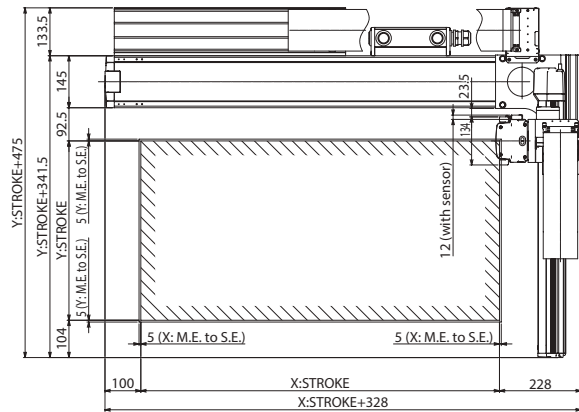
CAD drawings can be downloaded from our website.



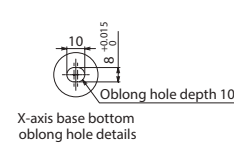
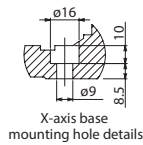
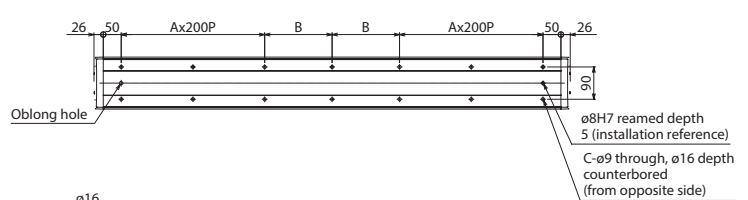
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



M.E: Mechanical end
S.E: Stroke end



Cable track sectional view
* () dimensions indicate Y-Z cable track



X stroke	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3
B	138	163	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18

X stroke	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200
A	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5
B	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588
C	18	18	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26

ICSPA3-B1N□MB3□

High-Precision Specification

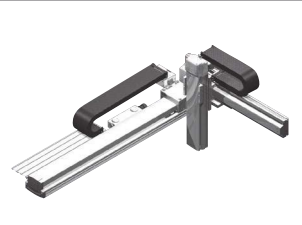


X-Y-Z 3-axis (NS+ISPA)

XYB+ZB (Y,Z Base Mount)

Medium Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

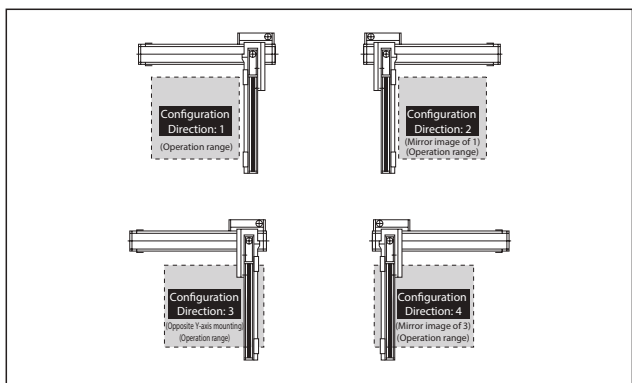
Series ICSPA3: High precision 3-axis specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 50: 500mm 220: 2200mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z-axis Stroke/Option 10: 100mm 50: 500mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Refer to Explanation of Model Designations below
--------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	----------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------------------------------------------------

Model Specification

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSPA3-B1N1MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1N1MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	H	ICSPA3-B1N2MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1N2MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
3	H	ICSPA3-B1N3MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1N3MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
4	H	ICSPA3-B1N4MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1N4MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
*2 The payload and the max. speed may vary depending on the type of Z-axis.
*3 Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMS-①-400-20-②-T2-③-⑩	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z-axis	ISPA-MXM-①-200-⑩-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑩ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* The following symbols are specified with ⑩ in the above model names.
NT1: For cartesian configuration directions 1 and 3
NT2: For cartesian configuration directions 2 and 4
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).
* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	50:500mm ? 220:2200mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20:200mm ? 70:700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10:100mm ? 50:500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L:3m 5L:5m □L:□m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01 mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm <H>, 10mm <M>

* < > indicates the Z-axis medium speed specification.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B1N□MB3H

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100						8.9
	~200						7.9
	~300						6.9
	~400						5.9
	~500	9.0				8.5	4.8

■B1N□MB3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	19.0			17.0	12.6	8.9
	~200	19.0			16.1	11.6	7.9
	~300	19.0			15.1	10.6	6.9
	~400	19.0			14.1	9.6	5.9
	~500	19.0	18.8	13.0	8.5	4.8	

Maximum Speed by Stroke (mm/s)

■B1N□MB3H

	Stroke								
	100	200	300	400	500	600	700	800~2200	
X-axis	—	—	—	—	1300				—
Y-axis	—	1200						—	—
Z-axis	1200			—	—	—	—	—	

■B1N□MB3M

	Stroke								
	100	200	300	400	500	600	700	800~2200	
X-axis	—	—	—	—	1300				—
Y-axis	—	1200						—	—
Z-axis	600			—	—	—	—	—	

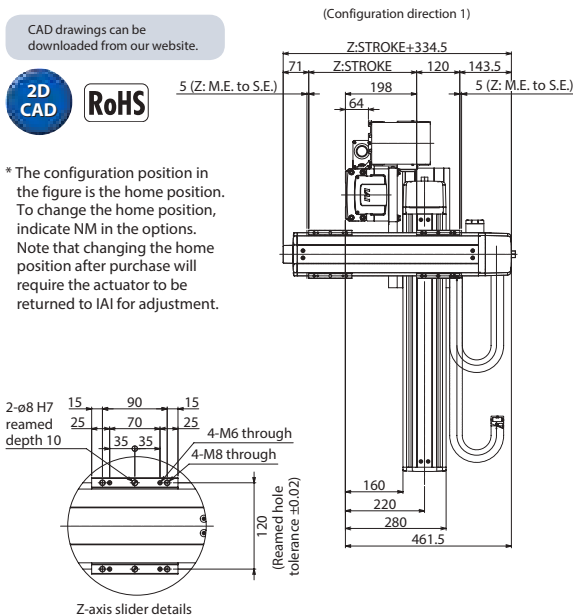
ICSPA3-B1N□MB3□-CT-CT (Cable track specification)

Dimensions

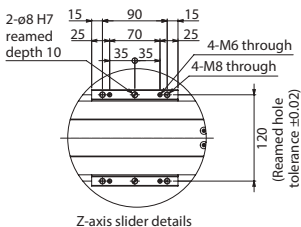
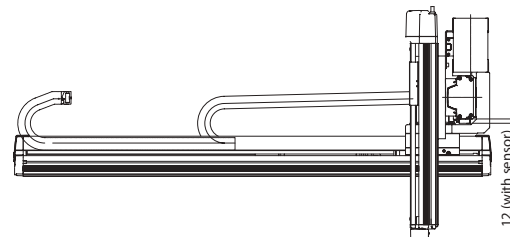
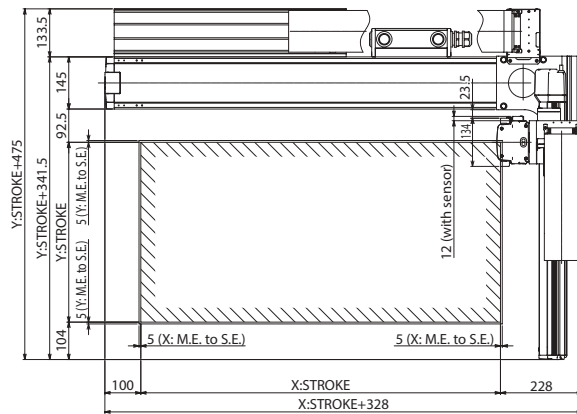
CAD drawings can be downloaded from our website.



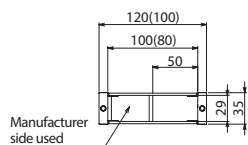
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



M.E: Mechanical end
S.E: Stroke end

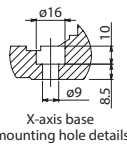
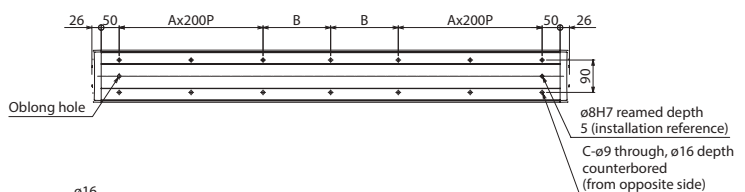


Z-axis slider details

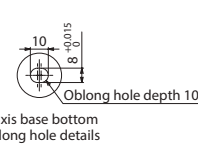


Cable track sectional view

* () dimensions indicate Y-Z cable track



X-axis base mounting hole details



X-axis base bottom oblong hole details

X stroke	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3
B	138	163	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18

X stroke	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200
A	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5
B	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588
C	18	18	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26

ICSPA3-B2N□HB3□

High-Precision Specification

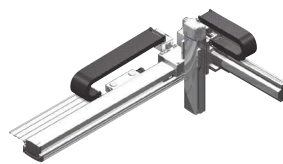


X-Y-Z 3-axis (NS+ISPA)

XYB+ZB (Y,Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

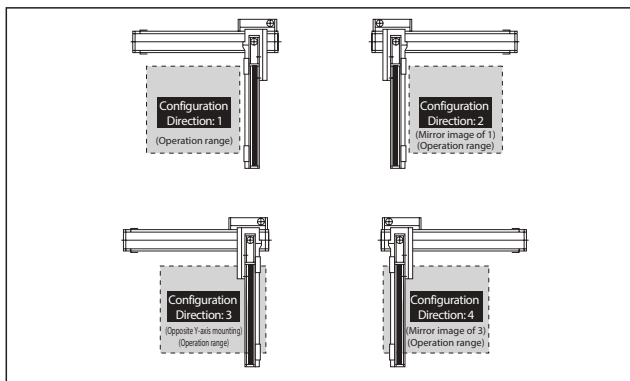
Series ICSPA3: High precision 3-axis specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 225: 2250mm 300: 3000mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z-axis Stroke/Option 10: 100mm 50: 500mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Refer to Explanation of Model Designations below
--------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	------------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------------------------------------------------

Model Specification

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSPA3-B2N1HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSPA3-B2N1HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSPA3-B2N2HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSPA3-B2N2HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	H	ICSPA3-B2N3HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSPA3-B2N3HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	H	ICSPA3-B2N4HB4H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSPA3-B2N4HB4M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
*2 The payload and the max. speed may vary depending on the type of Z-axis.
* Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMXS-①-400-40-②-T2-③-④-⑤	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-②-T2-⑤	→ Please contact IAI for more details
Z-axis	ISPA-MXM-①-200-②-③-④-T2-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑤ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* The following symbols are specified with ⑩ in the above model names.
NT1: For cartesian configuration directions 1 and 3
NT2: For cartesian configuration directions 2 and 4
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).
* Lead is specified with ⑥ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	225: 2250mm 300: 3000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm <H>, 10mm <M>

* < > indicates the Z-axis medium speed specification.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 0.3G. Y-axis is operable up to 1G, but the upper limit for the X-axis is 0.3G.

Payload (kg)

■B2N□HB3H

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	9.0					
	~200	9.0		8.3	7.2	6.2	5.2
	~300	9.0	8.3	7.3	6.2	5.2	4.2
	~400	8.2	7.3	6.3	5.2	4.2	3.2
	~500	7.1	6.2	5.2	4.1	3.1	2.1

■B2N□HB3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	11.2	10.2	9.2	8.2	7.2	6.2
	~200	10.2	9.3	8.3	7.2	6.2	5.2
	~300	9.0	8.3	7.3	6.2	5.2	4.2
	~400	8.2	7.3	6.3	5.2	4.2	3.2
	~500	7.1	6.2	5.2	4.1	3.1	2.1

Maximum Speed by Stroke (mm/s)

■B2N□HB3H

	Stroke							
	100	200	300	400	500	600	700	2250~3000
X-axis	—	—	—	—	—	—	—	2400
Y-axis	—	1200						—
Z-axis	1200			—	—	—	—	—

■B2N□HB3M

	Stroke							
	100	200	300	400	500	600	700	2250~3000
X-axis	—	—	—	—	—	—	—	2400
Y-axis	—	1200						—
Z-axis	600			—	—	—	—	—

ICSPA3-B2N□HB3□-CT-CT (Cable track specification)

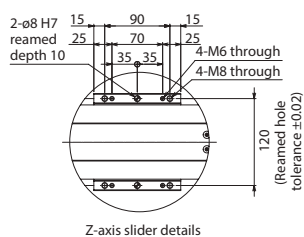
Dimensions

(Configuration direction 1)

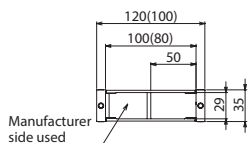
CAD drawings can be downloaded from our website.



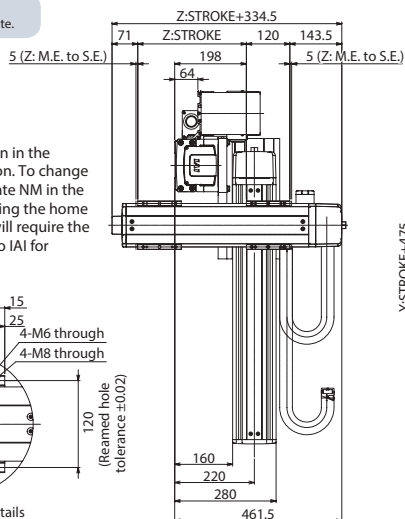
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



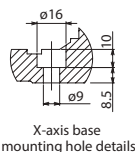
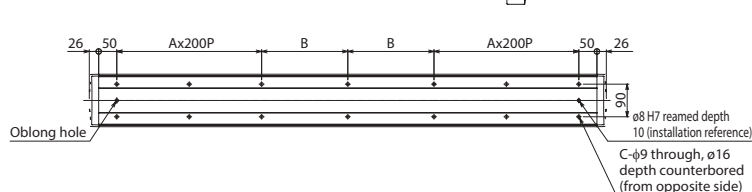
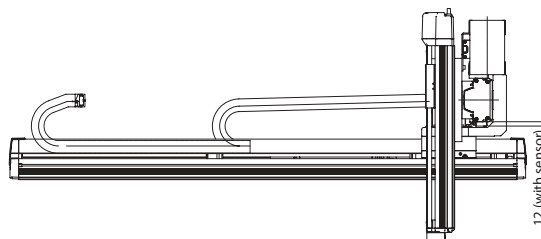
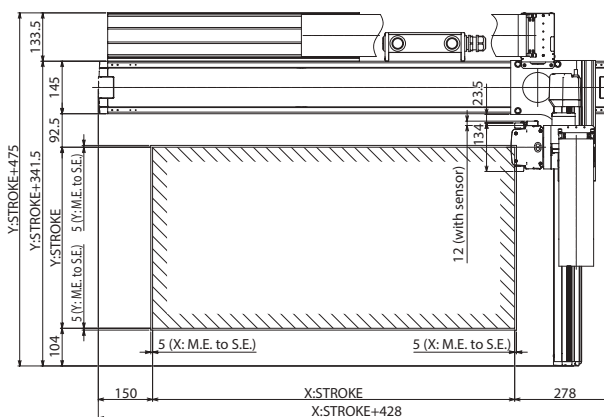
Z-axis slider details



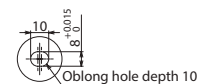
Cable track sectional view
* () dimensions indicate Y-Z cable track



M.E: Mechanical end
S.E: Stroke end



X-axis base mounting hole details



X-axis base bottom oblong hole details

X stroke	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
A	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7
B	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238
C	26	26	26	30	30	30	30	30	30	30	30	34	34	34	34	34

ICSPA3-B2N□MB3□

High-Precision

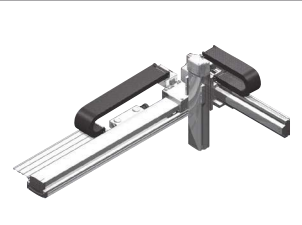


X-Y-Z 3-axis (NS+ISPA)

XYB+ZB (Y,Z Base Mount)

Medium Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

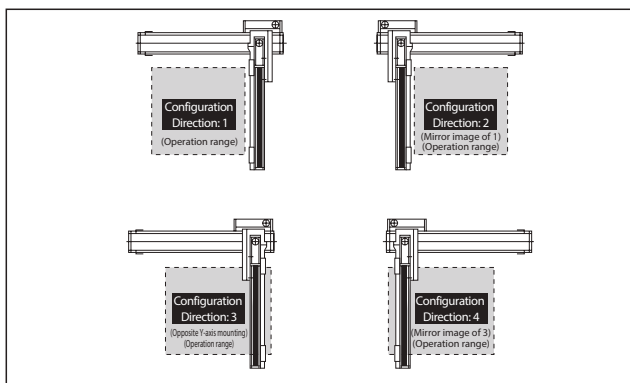
Series ICSPA3: High precision 3-axis specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 225: 2250mm 300: 3000mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z-axis Stroke/Option 10: 100mm 50: 500mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Refer to Explanation of Model Designations below
--------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	------------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------------------------------------------------

Model Specification

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSPA3-B2N1MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B2N1MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	H	ICSPA3-B2N2MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B2N2MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
3	H	ICSPA3-B2N3MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B2N3MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
4	H	ICSPA3-B2N4MB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B2N4MB3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
*2 The payload and the max. speed may vary depending on the type of Z-axis.
* Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMXS-①-400-20-②-T2-③-④⑤⑥	→ Please contact IAI for more details
Y-axis	ISPA-MYMH-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z-axis	ISPA-MXM-①-200-④⑤-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑦ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* The following symbols are specified with ⑩ in the above model names.
NT1: For cartesian configuration directions 1 and 3
NT2: For cartesian configuration directions 2 and 4
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).
* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	225: 2250mm 300: 3000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01 mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm <H>, 10mm <M>

* < > indicates the Z-axis medium speed specification.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 0.3G. Y-axis is operable up to 1G, but the upper limit for the X-axis is 0.3G.

Payload (kg)

■B2N□MB3H

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	9.0					8.9
	~ 200	9.0					7.9
	~ 300	9.0					6.9
	~ 400	9.0					5.9
	~ 500	9.0				8.5	4.8

■B2N□MB3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	19.0			17.0	12.6	8.9
	~ 200	19.0			16.1	11.6	7.9
	~ 300	19.0			15.1	10.6	6.9
	~ 400	19.0			14.1	9.6	5.9
	~ 500	19.0	18.8	13.0	8.5	4.8	

Maximum Speed by Stroke (mm/s)

■B2N□MB3H

	Stroke							
	100	200	300	400	500	600	700	2250~3000
X-axis	—	—	—	—	—	—	—	1300
Y-axis	—	1200						—
Z-axis	1200			—	—	—	—	—

■B2N□MB3M

	Stroke							
	100	200	300	400	500	600	700	2250~3000
X-axis	—	—	—	—	—	—	—	1300
Y-axis	—	1200						—
Z-axis	600			—	—	—	—	—

ICSPA3-B2N□MB3□-CT-CT (Cable track specification)

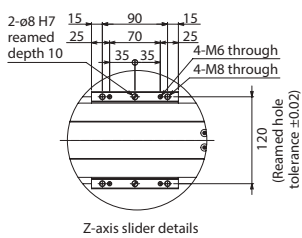
Dimensions

(Configuration direction 1)

CAD drawings can be downloaded from our website.

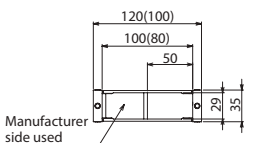
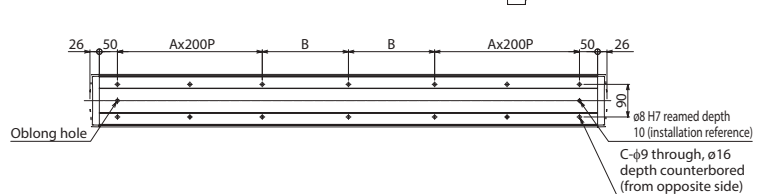
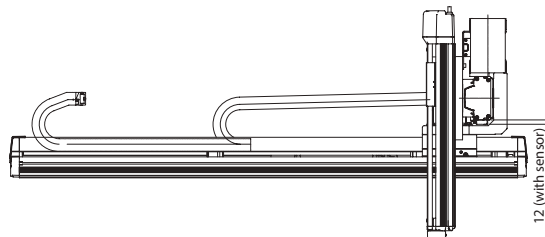
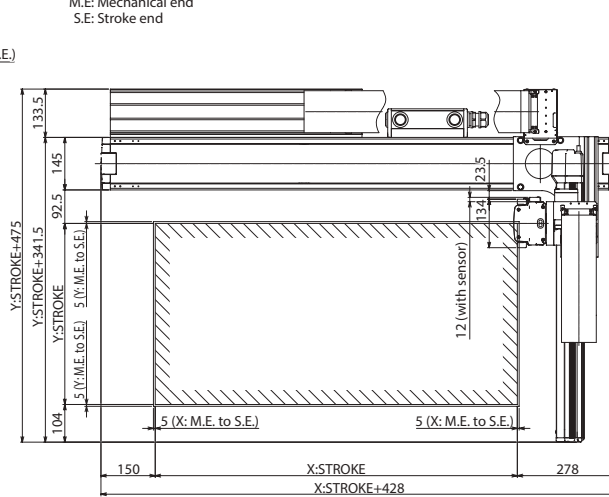


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



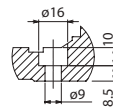
Z-axis slider details

M.E: Mechanical end
S.E: Stroke end

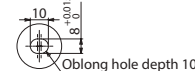


Cable track sectional view

* () dimensions indicate Y-Z cable track



X-axis base mounting hole details

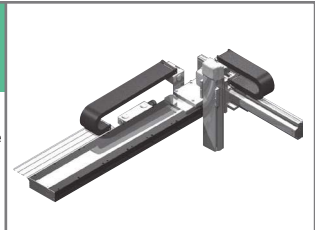


X-axis base bottom oblong hole details

X stroke	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
A	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7
B	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238
C	26	26	26	30	30	30	30	30	30	30	30	34	34	34	34	34

ICSPA3-B1L□HB3□ High-Precision Specification

X ±5µm Y/Z ±10µm High Precision	X-Y-Z 3-axis (LSA+ISPA)	XYB+ZB (Y,Z Base Mount)	High Speed Long Type	X: Lg (400W) Y: Md (200W) Z: Md (200W)
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Model Specification Items

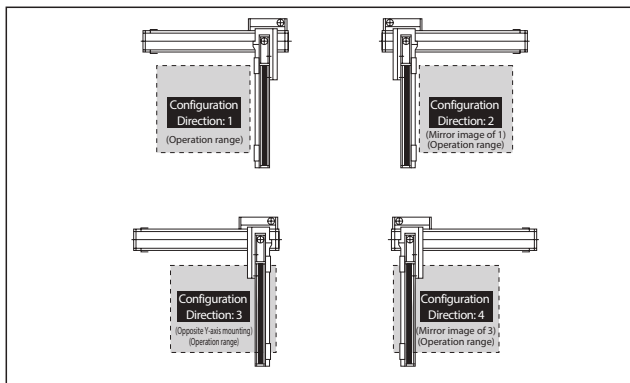
Series ICSPA3: High precision 3-axis specification	Type Refer to Model Specification table below	Encoder Type I: Incremental	X-axis Stroke/Option 105: 1050mm 415: 4155mm (Every 135mm)	Y-axis Stroke/Option 20: 200mm 40: 400mm (Every 50mm)	Z-axis Stroke/Option 10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Refer to Explanation of Model Designations below
--------------------------------------------------------------	---------------------------------------------------------	---------------------------------------	-------------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------------------------------------------------

Model Specification

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSPA3-B1L1HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1L1HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	H	ICSPA3-B1L2HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1L2HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
3	H	ICSPA3-B1L3HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1L3HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨
4	H	ICSPA3-B1L4HB3H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSPA3-B1L4HB3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
 *2 The payload and the max. speed may vary depending on the type of Z-axis.
 * Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	LSA-W21SS-①-400-②-T2-③-⑩	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z-axis	ISPA-MXM-①-200-⑦⑧-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑩ in the above model names.
 Note that the strokes are indicated in mm (millimeters).
 * The following symbols are specified with ⑩ in the above model names.
 NT1: For cartesian configuration directions 1 and 3
 NT2: For cartesian configuration directions 2 and 4
 Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).
 * Lead is specified with ⑩ in the above model names.
 20: For Z-axis High Speed type
 10: For Z-axis Medium Speed type

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	I: Incremental
②	X-axis stroke (Note 1)	105: 1050mm 415: 4155mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
 Make sure to indicate the standard equipped option in the model number.
 When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (Equipped as standard on Y/Z-axis only)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor (Y/Z-axis only) *2	C/CL	See P.369
Home limit switch (equipped as standard on X-axis) *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only)	NM	See P.369

*1 Brake option for Y-axis increases the length of the non-motor side.
 *2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
 Please refer to P.11 for more information.

Common Specifications

Drive system	X-axis : Linear servo motor Y/Z-axis : Ball screw, equivalent to rolled C5
Positioning repeatability	X-axis : ±0.005mm Y/Z-axis : ±0.01mm
Lost motion	0.02mm or less
Guide	X-axis : Linear guide Y/Z-axis : Base integrated guide
Base	X-axis : Aluminum with black alumite treatment Y/Z-axis : Aluminum with white alumite treatment
X-axis motor output/lead	400W or equivalent/(none)
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm <H>, 10mm <M>

* < > indicates the Z-axis medium speed specification.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 1G for X-axis and 0.3G for Y/Z-axis. Although the Y-axis is operable up to 1G, increasing the acceleration will reduce the payload. (Please inquire regarding the payload at increased acceleration)

Payload (kg)

■B1L□HB3H

		Y-axis stroke				
		200	250	300	350	400
Z-axis stroke	100	9.0			7.2	5.0
	~ 200	9.0	8.9	6.3	4.0	
	~ 300	9.0	7.9	5.3	3.0	
	~ 400	8.2	6.9	4.3	2.0	

■B1L□HB3M

		Y-axis stroke				
		200	250	300	350	400
Z-axis stroke	100	11.2	9.0	7.2	5.0	
	~ 200	10.2	8.9	6.3	4.0	
	~ 300	9.2	7.9	5.3	3.0	
	~ 400	8.2	6.9	4.3	2.0	

Maximum Speed by Stroke (mm/s)

■B1L□HB3H

	Stroke				
	100	200	300	400	1050~4155
X-axis	—	—	—	—	2500
Y-axis	—	1200			—
Z-axis	1200				—

■B1L□HB3M

	Stroke				
	100	200	300	400	1050~4155
X-axis	—	—	—	—	2500
Y-axis	—	1200			—
Z-axis	600				—

ICSPA3-B1L□HB3□-CT-CT (Cable track specification)

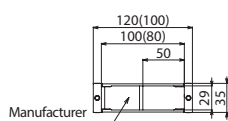
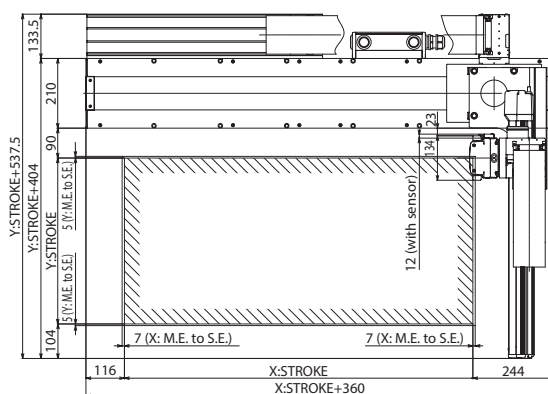
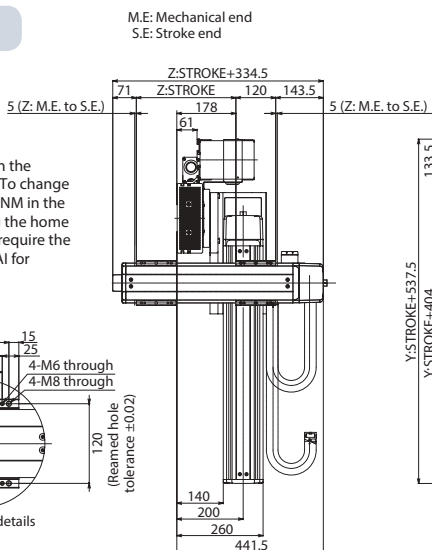
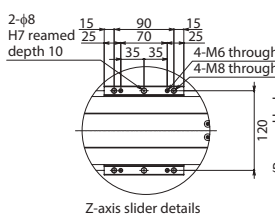
Dimensions

(Configuration direction 1)

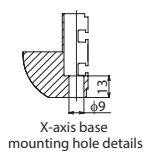
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



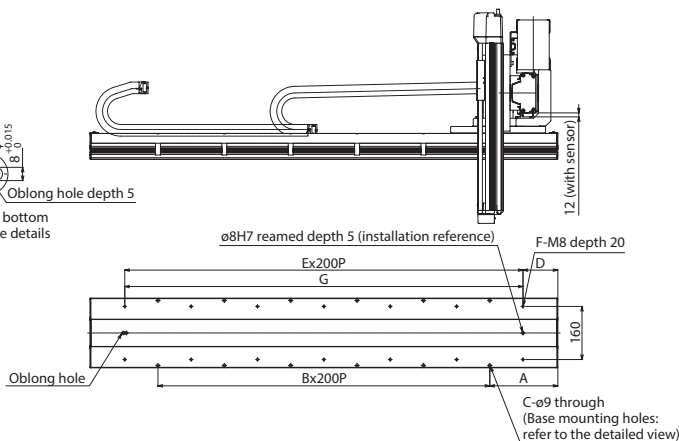
Cable track sectional view
* () dimensions indicate Y-Z cable track



X-axis base mounting hole details



X-axis base bottom oblong hole details



X stroke	1050	1185	1320	1455	1590	1725	1860	1995	2130	2265	2400	2535
A	205	72.5	140	207.5	75	142.5	210	77.5	145	212.5	80	147.5
B	5	7	7	7	9	9	9	11	11	11	13	13
C	12	16	16	16	20	20	20	24	24	24	28	28
D	105	172.5	40	107.5	175	42.5	110	177.5	45	112.5	180	47.5
E	6	6	8	8	8	10	10	10	12	12	12	14
F	14	14	18	18	18	22	22	22	26	26	26	30
G	1200	1200	1600	1600	1600	2000	2000	2000	2400	2400	2400	2800

X stroke	2670	2805	2940	3075	3210	3345	3480	3615	3750	3885	4020	4155
A	215	82.5	150	217.5	85	152.5	220	87.5	155	222.5	90	157.5
B	13	15	15	15	17	17	17	19	19	19	21	21
C	28	32	32	32	36	36	36	40	40	40	44	44
D	115	182.5	50	117.5	185	52.5	120	187.5	55	122.5	190	57.5
E	14	14	16	16	16	18	18	18	20	20	20	22
F	30	30	34	34	34	38	38	38	42	42	42	46
G	2800	2800	3200	3200	3200	3600	3600	3600	4000	4000	4000	4400

ICSB3-BA□MS1□

ICSPB3-BA□MS1□

High-Precision Specification

±10µm Standard

±5µm High-Precision

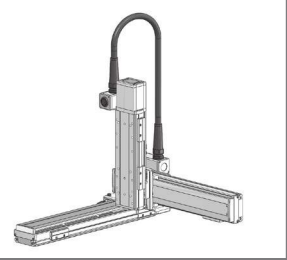
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

Medium Speed Type

X: Md (60W)
Y: Sml (60W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

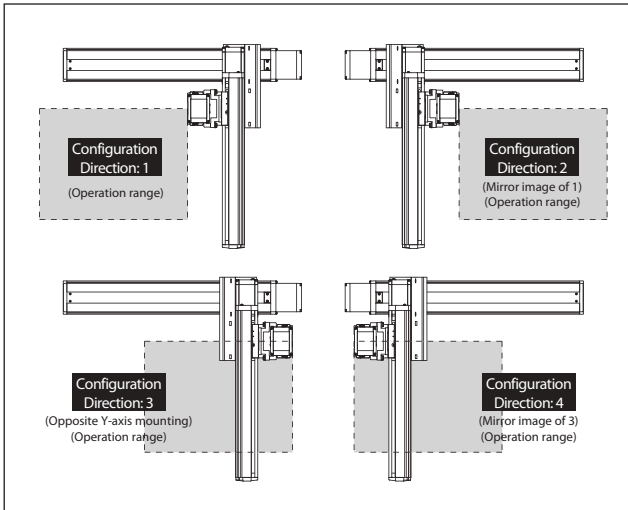
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BA1MS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BA1MS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨
2	M	ICSB3[ICSPB3]-BA2MS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BA2MS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨
3	M	ICSB3[ICSPB3]-BA3MS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BA3MS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨
4	M	ICSB3[ICSPB3]-BA4MS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BA4MS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-SXM-①-60-8-②-T2-⑩⑪⑫	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM-①-60-8-②-T2-⑩⑪⑫	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑩⑪⑫-T2-⑩⑪⑫	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑫] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑩] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [⑩] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 70: 700mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	60W/8mm
Y-axis motor output/lead	60W/8mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■BA□MS1M

		Y-axis stroke 100~400
Z-axis stroke	100	4.3
	150	3.9
	200	3.5
	250	3.1
	300	2.8

■BA□MS1L

		Y-axis stroke						
		100	150	200	250	300	350	400
Z-axis stroke	100	11.3	11.3	11.3	11.2	8.9	7.0	5.5
	150	10.3	10.1	9.8	9.6	8.5	6.6	5.1
	200	9.0	8.8	8.5	8.3	8.1	6.2	4.7
	250	7.9	7.7	7.5	7.3	7.1	5.8	4.3
	300	7.0	6.8	6.6	6.4	6.3	5.5	4.0

Maximum Speed by Stroke (mm/s) (Note 4)

■BA□MS1M

	100~300	350~400	450~600	650~700
X-axis	480			
Y-axis	480	—		
Z-axis	480	—		

■BA□MS1L

	100~300	350~400	450~600	650~700
X-axis	480			
Y-axis	480	—		
Z-axis	240	—		

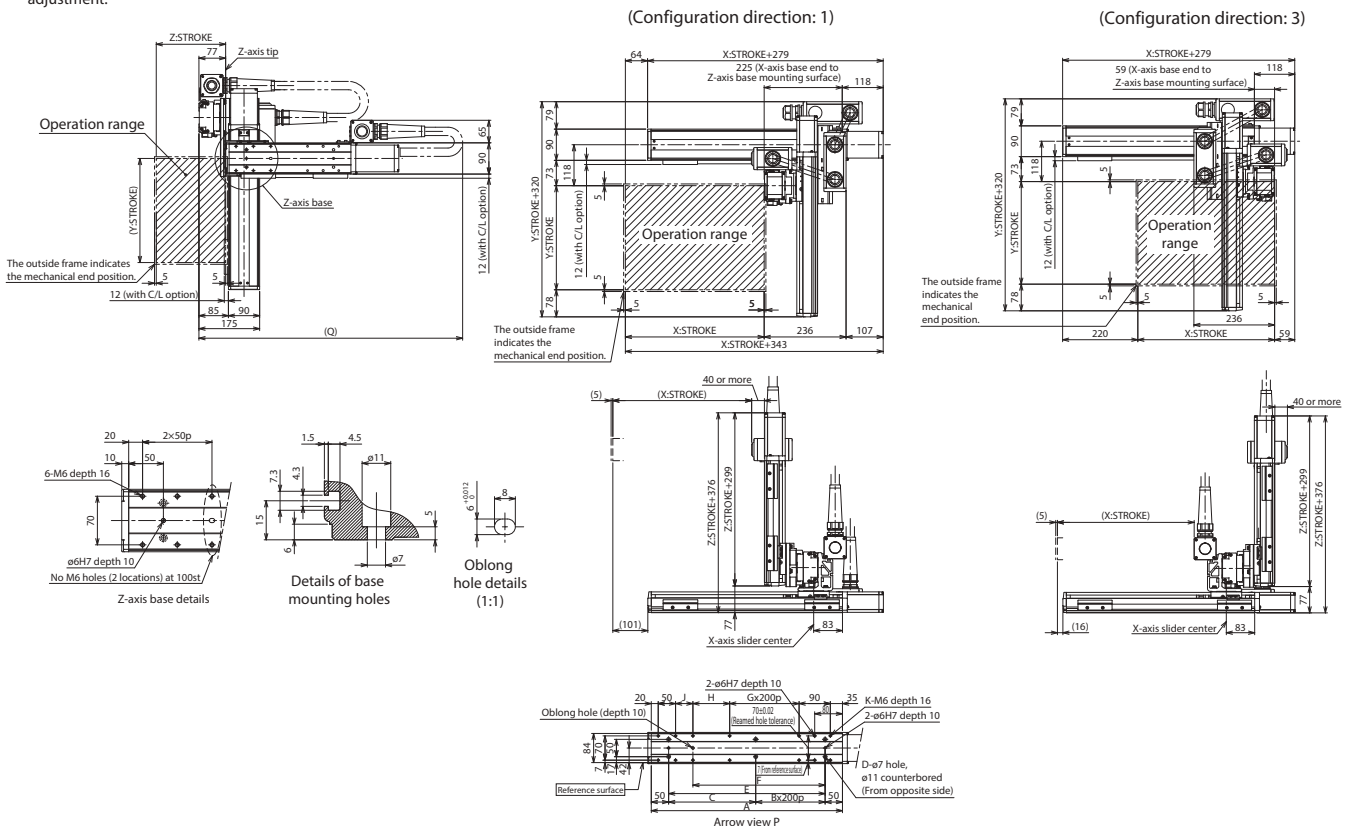
ICSB3 [ICSPB3]-BA□MS1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700
A	251	301	351	401	451	501	551	601	651	701	751	801	851
B	0	0	0	1	1	1	1	2	2	2	2	3	3
C	151	201	251	101	151	201	251	101	151	201	251	101	151
D	4	4	4	6	6	6	6	8	8	8	8	10	10
E	151	201	251	301	351	401	451	501	551	601	651	701	751
F	131	131	181	231	281	331	381	431	481	531	581	631	681
G	0	0	0	0	0	0	1	1	1	1	2	2	2
H	56	56	106	156	206	256	106	156	206	256	106	156	206
J	0	50	50	50	50	50	50	50	50	50	50	50	50
K	8	10	10	10	10	10	12	12	12	12	14	14	14

Q dimension

Z-axis	Y-axis							
	100	150	200	250	300	350	400	
100	650	700	700	750	750	750	800	
150	700	750	750	800	800	800	850	
200	750	800	800	850	850	850	900	
250	800	850	850	900	900	900	950	
300	850	900	900	950	950	950	1000	

ICSB3-BB□HS1□

ICSPB3-BB□HS1□

High-Precision Specification



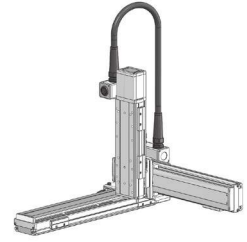
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

High Speed Type

X: Md (100W)
Y: Sml (60W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

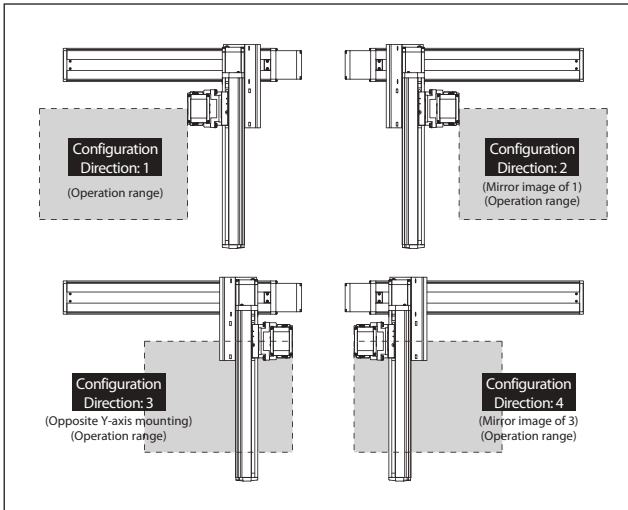
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BB1HS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BB1HS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨
2	M	ICSB3[ICSPB3]-BB2HS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BB2HS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨
3	M	ICSB3[ICSPB3]-BB3HS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BB3HS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨
4	M	ICSB3[ICSPB3]-BB4HS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BB4HS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-①-100-20-②-T2-③④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM-①-60-16-④-T2-⑤⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥-T2-⑦⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑧] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑩] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [⑪] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/20mm
Y-axis motor output/lead	60W/16mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■BB□HS1M

Z-axis stroke	Y-axis stroke	
	100~400	
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	

■BB□HS1L

Z-axis stroke	Y-axis stroke						
	100	150	200	250	300	350	400
100	8.1	8.0	8.0	8.0	8.0	7.9	7.9
150	7.7	7.7	7.7	7.6	7.6	7.6	7.6
200	7.3	7.3	7.3	7.3	7.2	7.2	7.2
250	7.0	7.0	6.9	6.9	6.9	6.9	6.8
300	6.7	6.7	6.7	6.6	6.6	6.6	6.6

Maximum Speed by Stroke (mm/s) (Note 4)

■BB□HS1M

	100~300	350~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	960					
Z-axis	480					

■BB□HS1L

	100~300	350~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	960					
Z-axis	240					

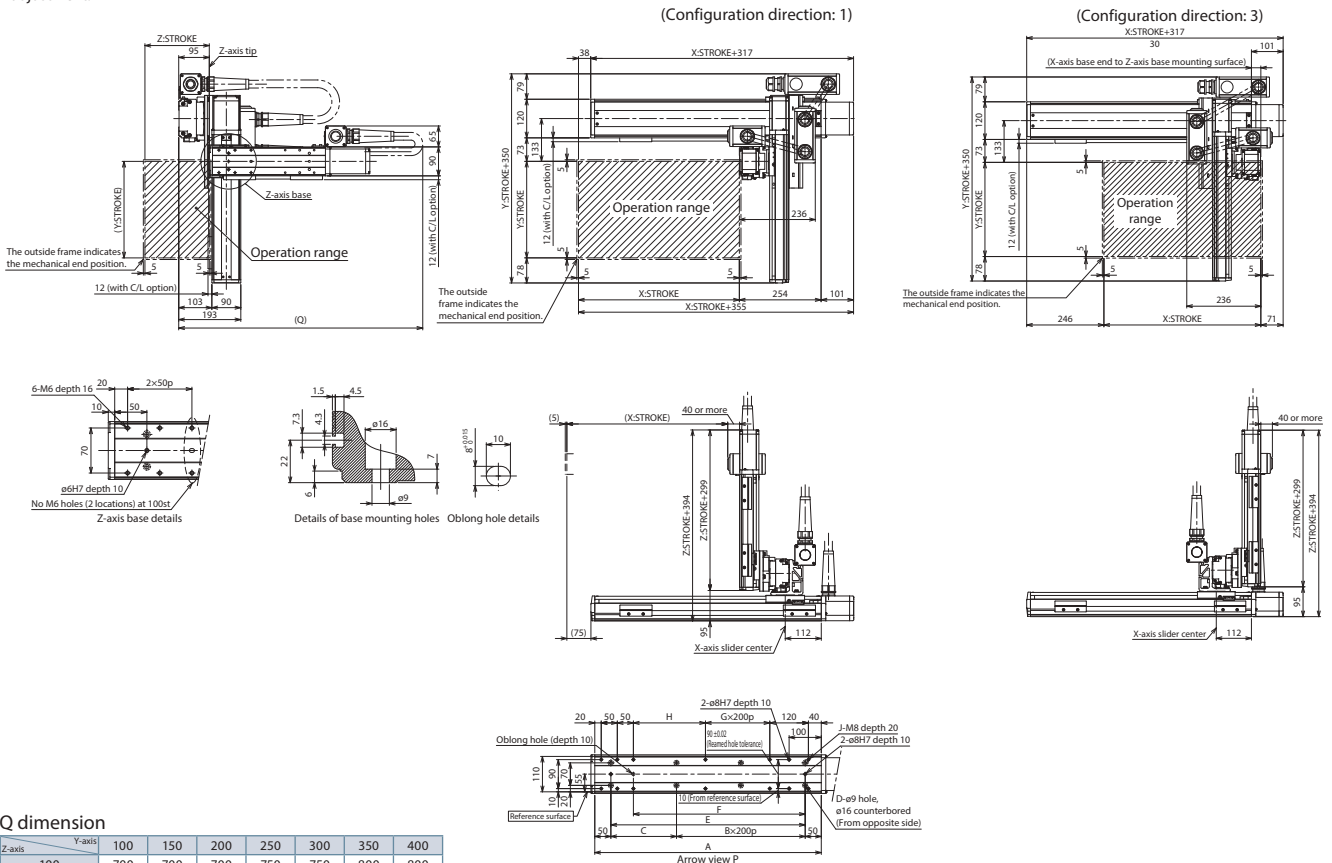
ICSB3 [ICSPB3]-BB□HS1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	100	150	200	250	300	350	400
100	700	700	700	750	750	800	800	800
150	750	750	750	800	800	850	850	850
200	800	800	800	850	850	900	900	900
250	850	850	850	900	900	950	950	950
300	900	900	900	950	950	1000	1000	1000

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-BB□MS1□

ICSPB3-BB□MS1□ High-Precision Specification

±10µm Standard

±5µm High-Precision

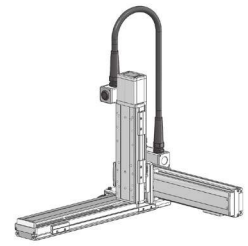
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

Medium Speed Type

X: Md (100W)
Y: Sml (60W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	10: 100mm Refer to Options table below. 40: 400mm (Every 50mm)	10: 100mm Refer to Options table below. 30: 300mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

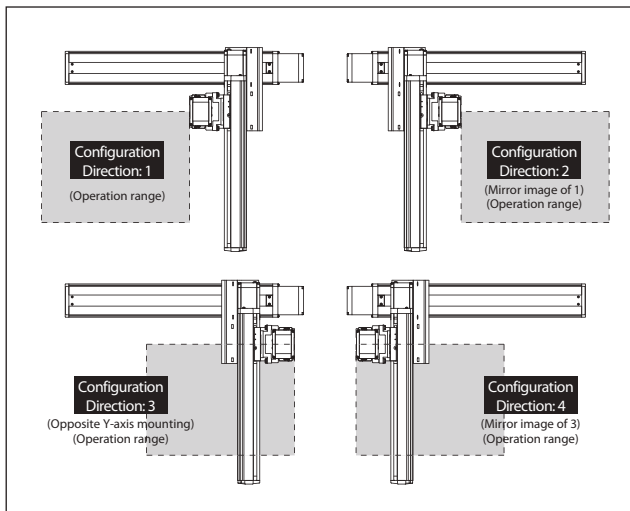
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BB1MS1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]
	L	ICSB3[ICSPB3]-BB1MS1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]
2	M	ICSB3[ICSPB3]-BB2MS1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]
	L	ICSB3[ICSPB3]-BB2MS1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]
3	M	ICSB3[ICSPB3]-BB3MS1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]
	L	ICSB3[ICSPB3]-BB3MS1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]
4	M	ICSB3[ICSPB3]-BB4MS1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]
	L	ICSB3[ICSPB3]-BB4MS1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM- [1] -100-10- [2] -T2- [11] - [3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM- [1] -60-8- [2] -T2- [11] - [5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- [1] -60- [10] - [6] -T2- [11] - [7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 40: 400mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	60W/8mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■BB□MS1M

Z-axis stroke	Y-axis stroke 100~400	
	100	150
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	

■BB□MS1L

Z-axis stroke	Y-axis stroke 100~400	
	100	150
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	

Maximum Speed by Stroke (mm/s) (Note 4)

■BB□MS1M

	100~300	350~400	450~700	750~800	850~900	950~1000
X-axis	600					
Y-axis	480					
Z-axis	480					

■BB□MS1L

	100~300	350~400	450~700	750~800	850~900	950~1000
X-axis	600					
Y-axis	480					
Z-axis	240	—				

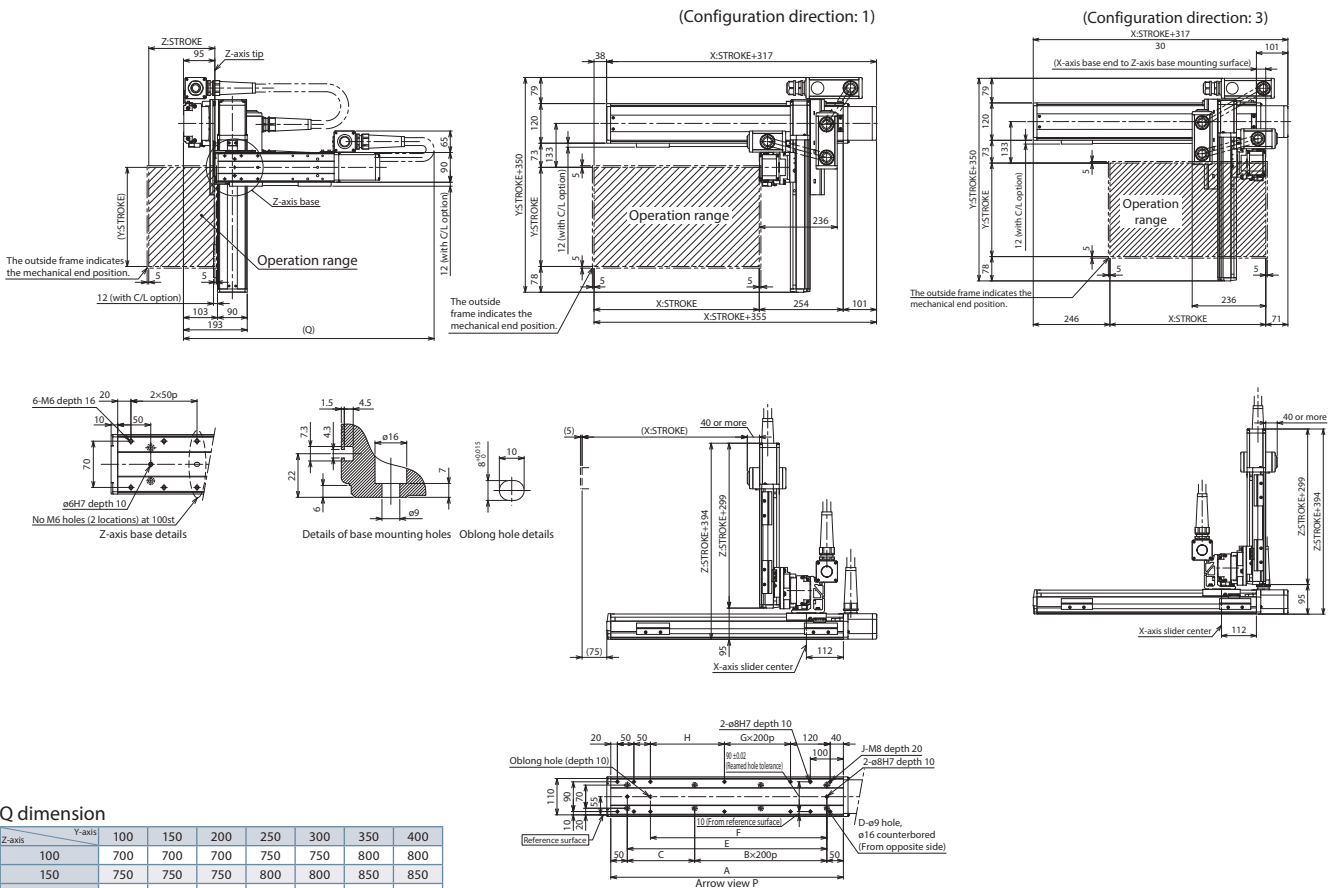
ICSB3 [ICSPB3]-BB□MS1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	100	150	200	250	300	350	400
100	700	700	700	750	750	800	800	800
150	750	750	750	800	800	850	850	850
200	800	800	800	850	850	900	900	900
250	850	850	850	900	900	950	950	950
300	900	900	900	950	950	1000	1000	1000

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	2	2	2	2	3	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-BC□HS1□

ICSPB3-BC□HS1□

High-Precision Specification



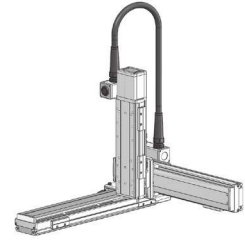
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCOM SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

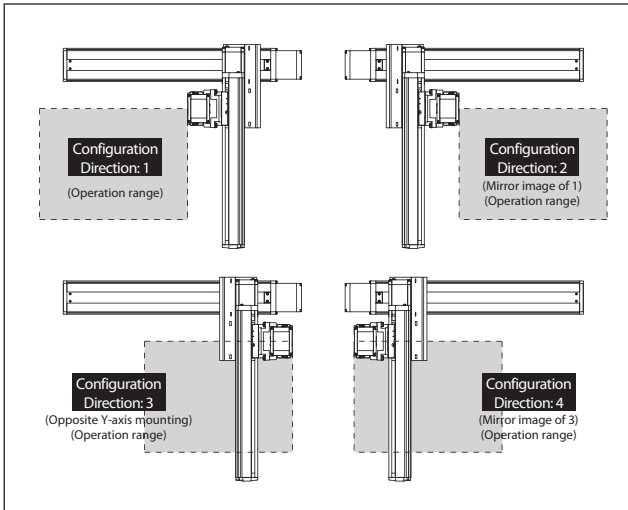
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BC1HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BC1HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-BC2HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BC2HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-BC3HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BC3HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-BC4HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BC4HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[3]-[4]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[4]-T2-[3]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-[6]-[6]-T2-[3]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [6] in the above model names.

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with [1] in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 A non-motor end specification is not selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■BC□HS1M

Z-axis stroke	Y-axis stroke	
	100~400	
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

■BC□HS1L

Z-axis stroke	Y-axis stroke	
	100~400	
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

■BC□HS1M

	100~400	450~500	550~700	750~800	850~900	950~1000
X-axis	1200			860	695	570
Y-axis	1200					
Z-axis	480					

■BC□HS1L

	100~400	450~500	550~700	750~800	850~900	950~1000
X-axis	1200			860	695	570
Y-axis	1200					
Z-axis	240					

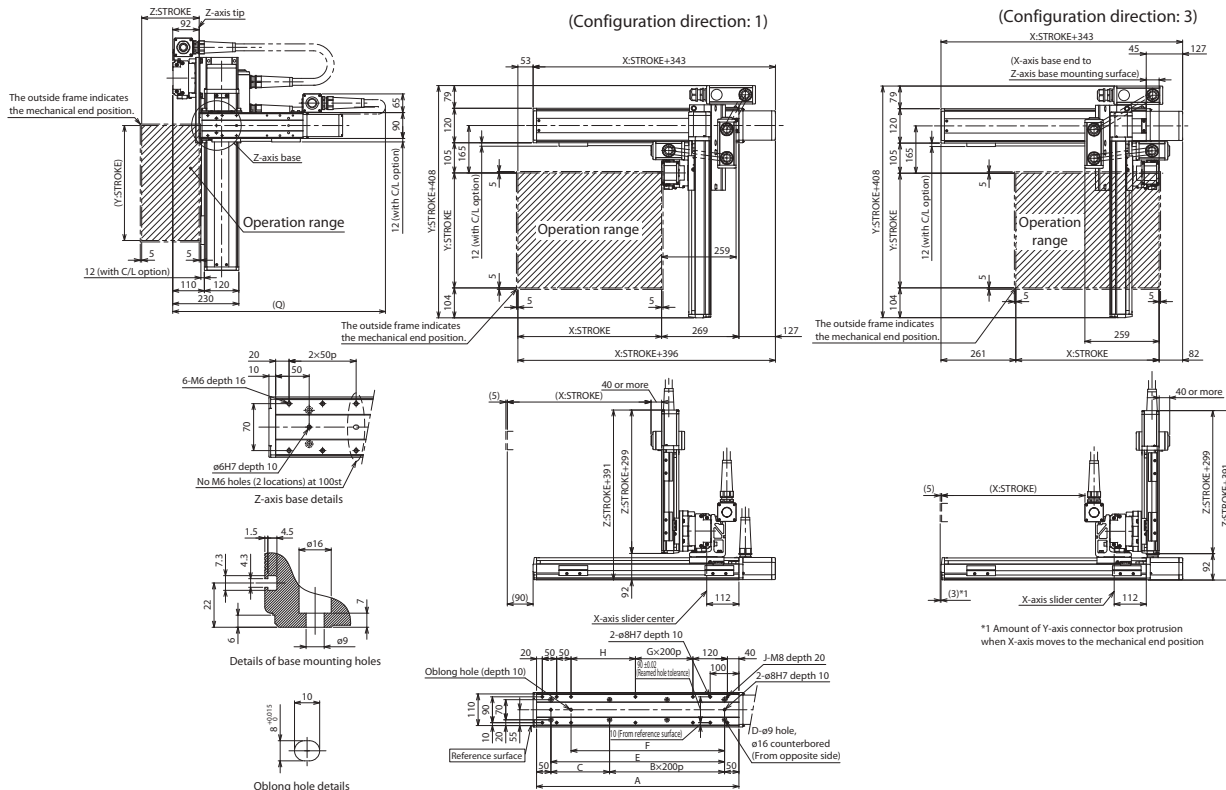
ICSB3 [ICSPB3]-BC□HS1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis									
	100	150	200	250	300	350	400	450	500	500
100	700	700	750	750	800	800	800	850	850	850
150	750	750	800	800	850	850	850	900	900	900
200	800	800	850	850	900	900	900	950	950	950
250	850	850	900	900	950	950	950	1000	1000	1000
300	900	900	950	950	1000	1000	1000	1050	1050	1050
350	950	950	1000	1000	1050	1050	1050	1100	1100	1100
400	1000	1000	1050	1050	1100	1100	1100	1150	1150	1150

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-BC□HS3M

ICSPB3-BC□HS3M High-Precision Specification



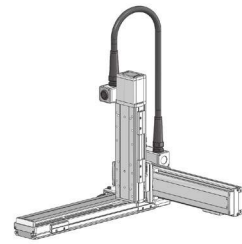
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

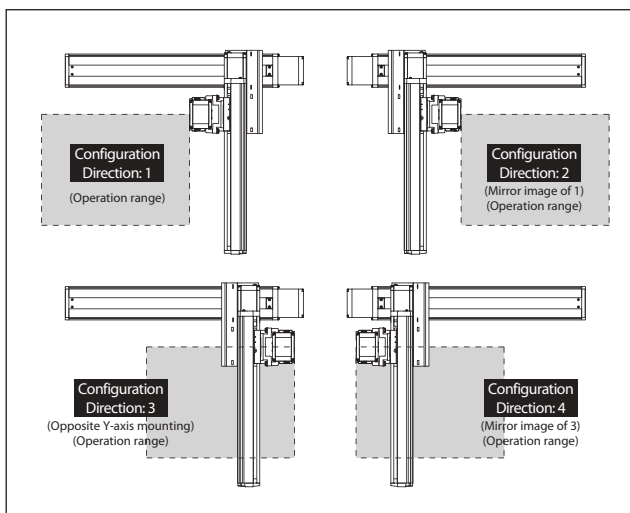
Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type	Refer to Model Specification table below	Encoder Type	WA: Battery-less Absolute	X-axis Stroke/Option	10: 100mm 100: 1000mm (Every 50mm)	Y-axis Stroke/Option	10: 100mm 50: 500mm (Every 50mm)	Z-axis Stroke/Option	10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	Cable Length	3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below
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Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BC1HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-BC2HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-BC3HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-BC4HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[10]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[4]-T2-[10]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-10-[6]-T2-[10]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [10] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes	Notes
(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).	(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.	(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

BC HS3M

Z-axis stroke	Y-axis stroke									
	100	150	200	250	300	350	400	450	500	
100	13.2	13.2	13.1	13.1	13.1	13.1	13.1	11.6	9.3	
150	12.6	12.5	12.5	12.5	12.5	12.4	12.4	10.9	8.6	
200	12.0	12.0	12.0	11.9	11.9	11.9	11.9	10.3	8.0	
250	11.4	11.4	11.3	11.3	11.3	11.3	11.3	9.6	7.3	
300	10.8	10.8	10.8	10.8	10.8	10.7	10.7	9.0	6.7	
350	10.3	10.3	10.3	10.2	10.2	10.2	10.2	8.4	6.1	
400	9.8	9.7	9.7	9.7	9.7	9.7	9.6	7.8	5.5	

Maximum Speed by Stroke (mm/s) (Note 4)

BC HS3M

	100~400	450~500	550~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	1200					
Z-axis	600					

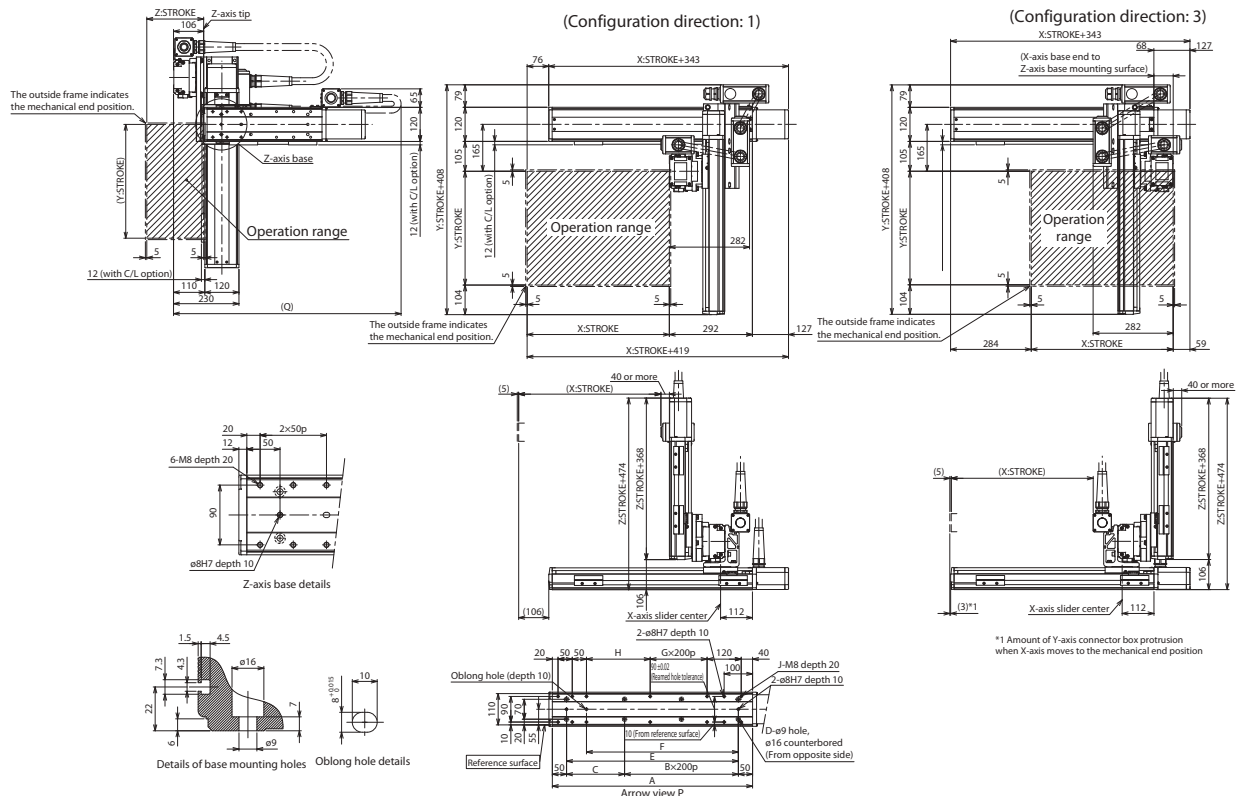
ICSB3 [ICSPB3]-BC HS3M SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis									
	100	150	200	250	300	350	400	450	500	
100	750	750	800	800	850	850	900	900	950	
150	800	800	850	850	900	900	950	950	1000	
200	850	850	900	900	950	950	1000	1000	1050	
250	900	900	950	950	1000	1000	1050	1050	1100	
300	950	950	1000	1000	1050	1050	1100	1100	1150	
350	1000	1000	1050	1050	1100	1100	1150	1150	1200	
400	1050	1050	1100	1100	1150	1150	1200	1200	1250	

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-BC□MS3M

ICSPB3-BC□MS3M High-Precision Specification

±10µm Standard

±5µm High-Precision

Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

Medium Speed Type

X: Md (100W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

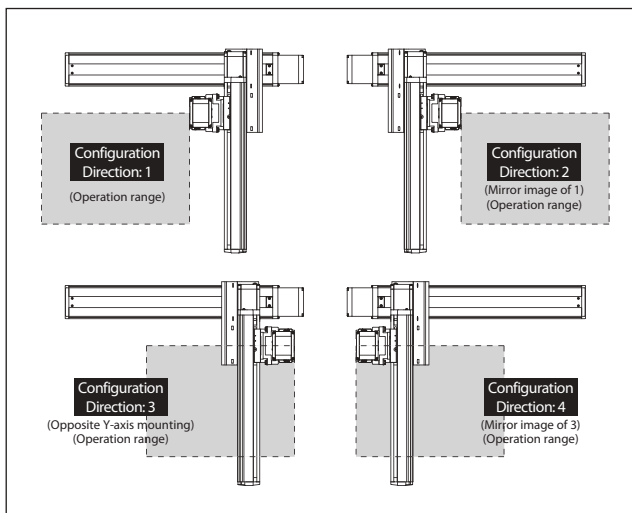
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BC1MS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-BC2MS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-BC3MS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-BC4MS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-[1]-100-10-[2]-T2-[10]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-[1]-100-10-[4]-T2-[10]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-10-[6]-T2-[10]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [8] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

<p>Notes</p>	(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
	(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
	(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
	(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

BC□MS3M

Z-axis stroke	Y-axis stroke		
	100~400	450	500
100	14.3	11.6	9.3
150	13.6	10.9	8.6
200	13.0	10.3	8.0
250	12.3	9.6	7.3
300	11.7	9.0	6.7
350	11.1	8.4	6.1
400	10.5	7.8	5.5

Maximum Speed by Stroke (mm/s) (Note 4)

BC□MS3M

	100~400	450~500	550~700	750~800	850~900	950~1000
X-axis	600					
Y-axis	600					
Z-axis	600					

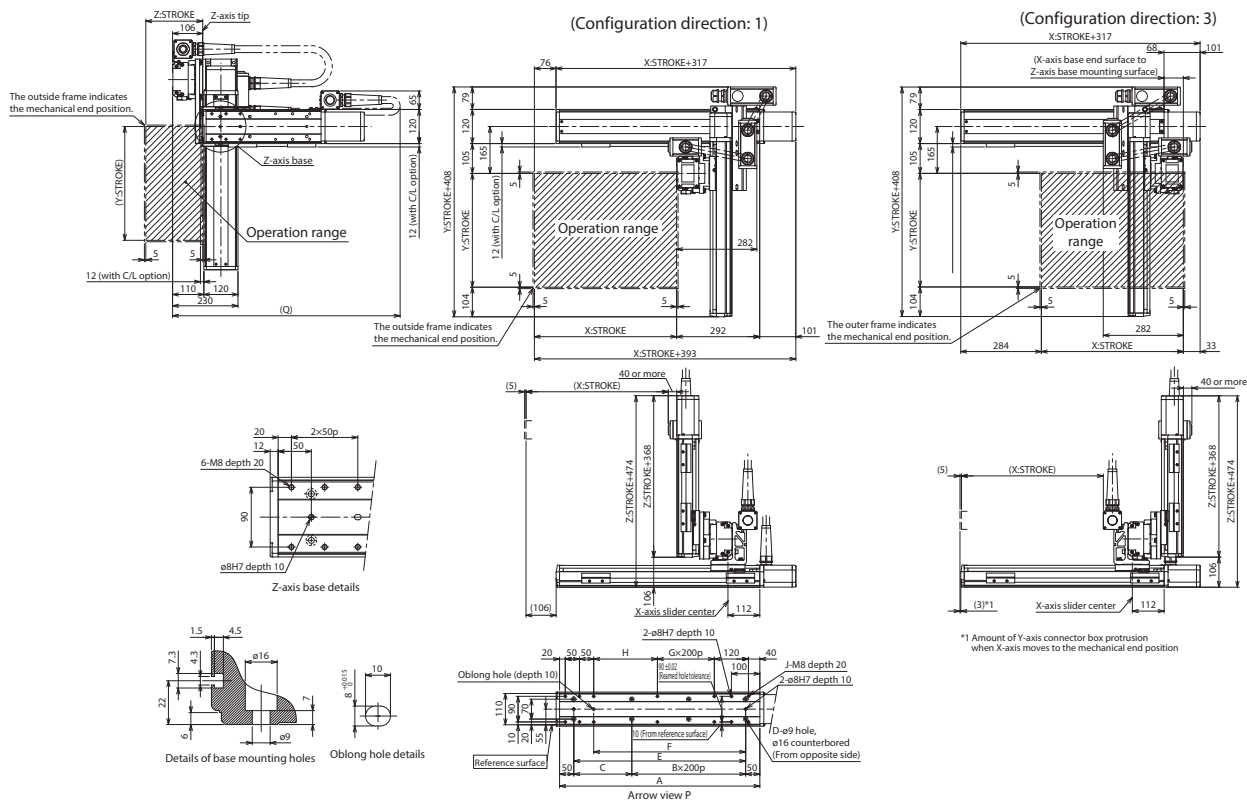
ICSB3 [ICSPB3]-BC□MS3M□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis									
	100	150	200	250	300	350	400	450	500	
100	750	750	800	800	850	850	900	900	950	
150	800	800	850	850	900	900	950	950	1000	
200	850	850	900	900	950	950	1000	1000	1050	
250	900	900	950	950	1000	1000	1050	1050	1100	
300	950	950	1000	1000	1050	1050	1100	1100	1150	
350	1000	1000	1050	1050	1100	1100	1150	1150	1200	
400	1050	1050	1100	1100	1150	1150	1200	1200	1250	

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-BD□HS1□

ICSPB3-BD□HS1□

High-Precision Specification



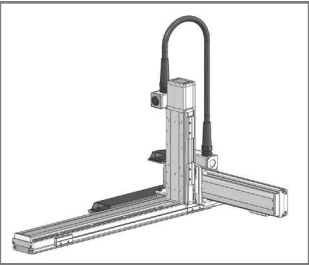
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 100mm)	10: 100mm 50: 500mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

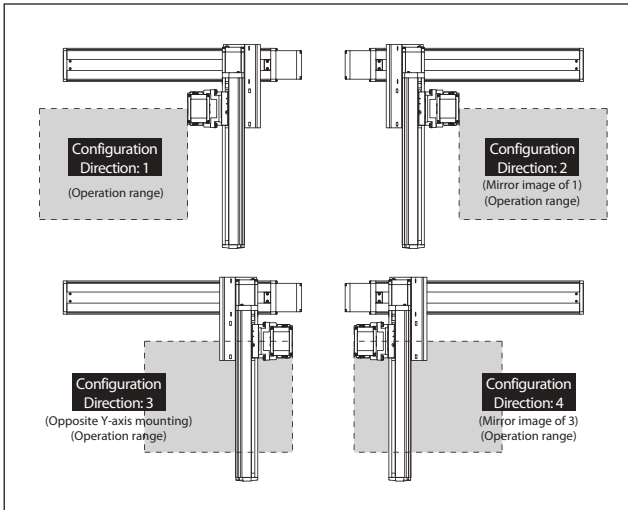
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BD1HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BD1HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-BD2HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BD2HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-BD3HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BD3HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-BD4HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	L	ICSB3[ICSPB3]-BD4HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[4]-T2-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-[6]-T2-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [8] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [9] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■BD□HS1M

Z-axis stroke	Y-axis stroke	
	100-500	100-500
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

■BD□HS1L

Z-axis stroke	Y-axis stroke	
	100-500	100-500
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

■BD□HS1M

	100-400	450-500	800-1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—
Z-axis	480	—	—	—	—	—	—	—	—	—	—	—

■BD□HS1L

	100-400	450-500	800-1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—
Z-axis	240	—	—	—	—	—	—	—	—	—	—	—

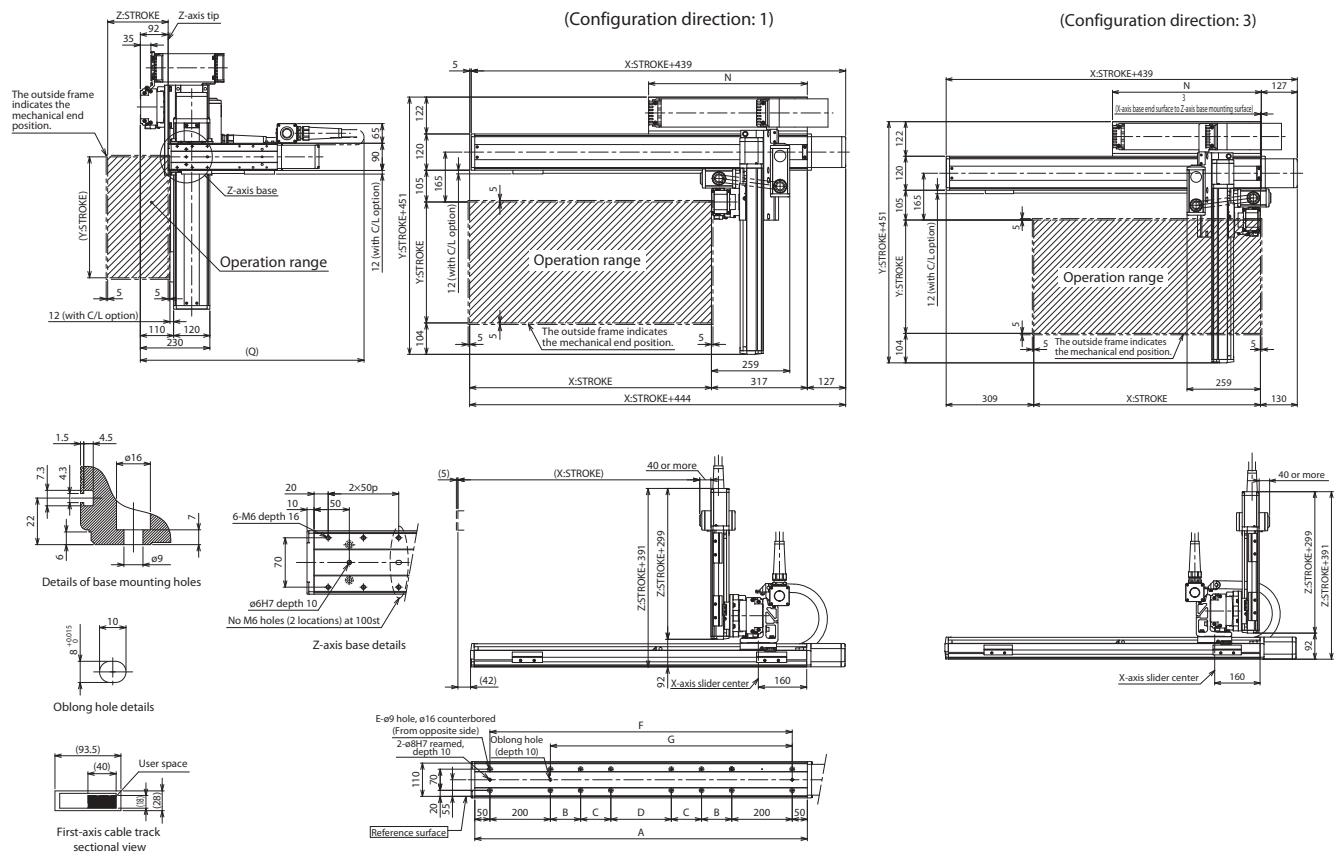
ICSB3 [ICSPB3]-BC□MS3M□-CT-SC (Cable track - Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	16	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

Q dimension

Z-axis	Y-axis													
	100	150	200	250	300	350	400	450	500	700	800	850	900	1000
100	700	700	750	750	800	800	800	850	850	850	850	900	900	900
150	750	750	800	800	850	850	850	850	850	850	850	900	900	900
200	800	800	850	850	900	900	900	900	900	900	900	950	950	950
250	850	850	900	900	950	950	950	950	950	950	950	1000	1000	1000
300	900	900	950	950	1000	1000	1000	1000	1000	1000	1000	1050	1050	1050
350	950	950	1000	1000	1050	1050	1050	1050	1050	1050	1050	1100	1100	1100
400	1000	1000	1050	1050	1100	1100	1100	1100	1100	1100	1100	1150	1150	1150

ICSB3-BD HS3M

ICSPB3-BD HS3M High-Precision Specification

±10µm Standard

±5µm High Precision

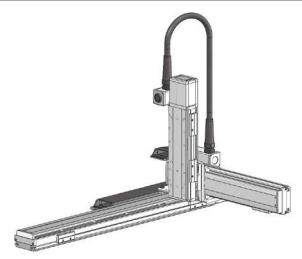
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type	Refer to Model Specification table below	Encoder Type	WA: Battery-less Absolute	X-axis Stroke/Option	80: 800mm 200: 2000mm (Every 100mm)	Y-axis Stroke/Option	10: 100mm 50: 500mm (Every 50mm)	Z-axis Stroke/Option	10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers	T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length	3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below
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Model Specification

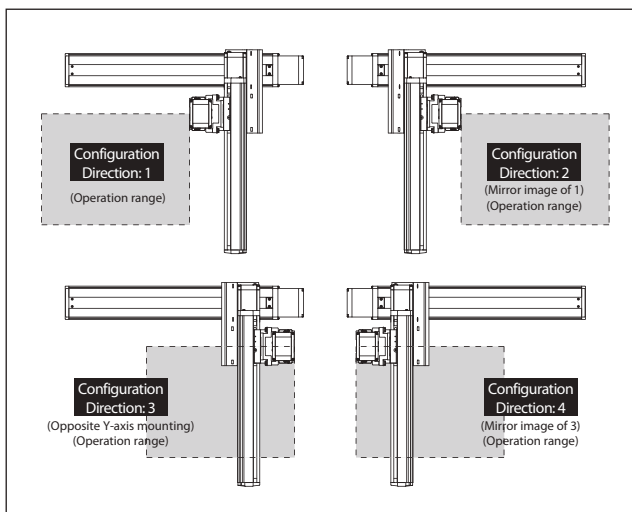
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BD1HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-BD2HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-BD3HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-BD4HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[10]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[4]-T2-[10]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-10-[6]-T2-[10]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [10] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM).

To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.

The maximum length is 15m.

(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.

When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

BD□HS3M

		Y-axis stroke								
		100	150	200	250	300	350	400	450	500
Z-axis stroke	100	13.2	13.2	13.1	13.1	13.1	13.1	13.1	11.6	9.3
	150	12.6	12.5	12.5	12.5	12.5	12.4	12.4	10.9	8.6
	200	12.0	12.0	12.0	11.9	11.9	11.9	11.9	10.3	8.0
	250	11.4	11.4	11.3	11.3	11.3	11.3	11.3	9.6	7.3
	300	10.8	10.8	10.8	10.8	10.8	10.7	10.7	9.0	6.7
	350	10.3	10.3	10.3	10.2	10.2	10.2	10.2	8.4	6.1
400	9.8	9.7	9.7	9.7	9.7	9.7	9.6	7.8	5.5	

Maximum Speed by Stroke (mm/s) (Note 4)

BD□HS3M

	100~400	450~500	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—

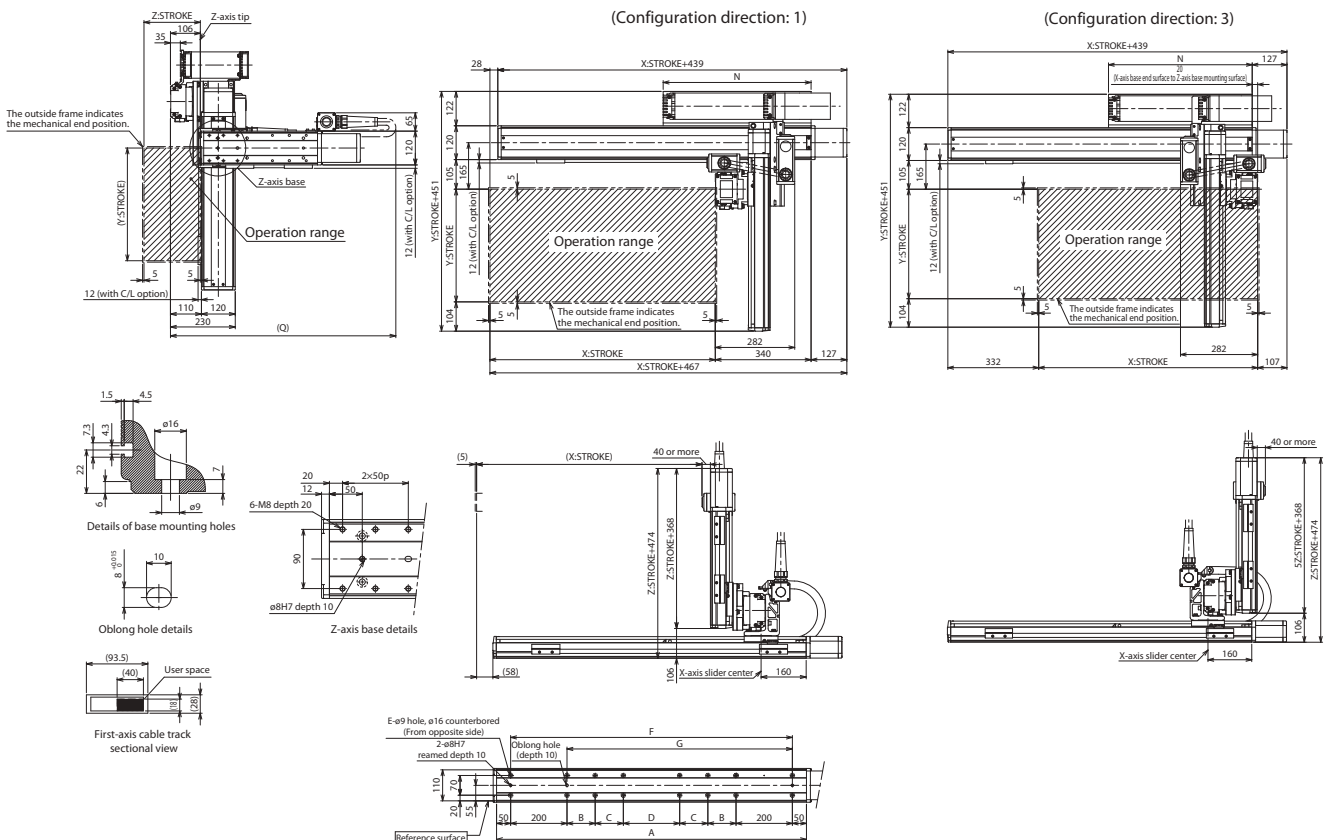
ICSB3 [ICSPB3]-BD□HS3M□-CT-SC (Cable track - Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	16	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

Q dimension

Z-axis	Y-axis											
	100	150	200	250	300	350	400	450	500	550	600	650
100	750	750	800	800	850	850	900	900	950	950	1000	1000
150	800	800	850	850	900	900	950	950	1000	1000	1050	1050
200	850	850	900	900	950	950	1000	1000	1050	1050	1100	1100
250	900	900	950	950	1000	1000	1050	1050	1100	1100	1150	1150
300	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200
350	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250
400	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300

ICSB3-BE□HS1□

ICSPB3-BE□HS1□

High-Precision Specification

±10µm
Standard

±5µm
High-Precision

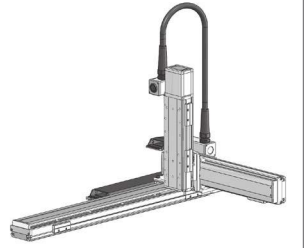
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: SmI (60W)



Model Specification Items

Series: ICSB3: Standard 3-axis specification, ICSPB3: High precision 3-axis specification

Type: Refer to Model Specification table below

Encoder Type: WA: Battery-less Absolute

X-axis Stroke/Option: 10: 100mm, 100: 1000mm (Every 50mm)

Y-axis Stroke/Option: 10: 100mm, 70: 700mm (Every 50mm)

Z-axis Stroke/Option: 10: 100mm, 40: 400mm (Every 50mm)

Applicable Controllers: T2: SCON, XSEL-P/Q, XSEL-RA/SA

Cable Length: 3L: 3m, 5L: 5m, □L: Specified length

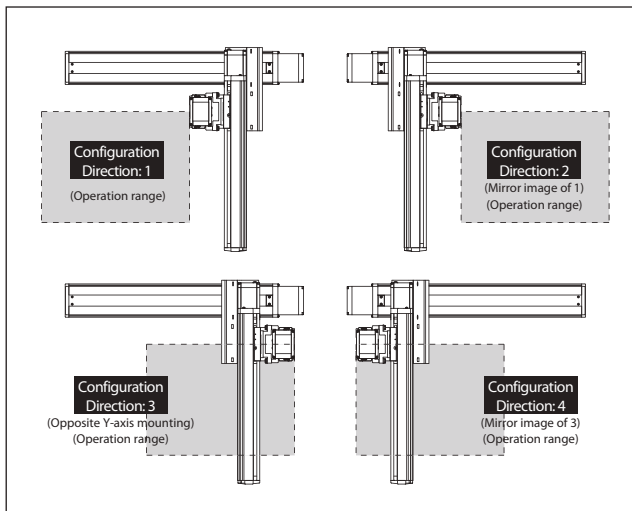
Y-axis - Z-axis Cable Management: Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BE1HS1M- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
	L	ICSB3[ICSPB3]-BE1HS1L- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
2	M	ICSB3[ICSPB3]-BE2HS1M- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
	L	ICSB3[ICSPB3]-BE2HS1L- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
3	M	ICSB3[ICSPB3]-BE3HS1M- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
	L	ICSB3[ICSPB3]-BE3HS1L- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
4	M	ICSB3[ICSPB3]-BE4HS1M- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
	L	ICSB3[ICSPB3]-BE4HS1L- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
 *2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM- 1 -400-20- 2 -T2- 11 - 3	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM- 1 -200-20- 4 -T2- 11 - 5	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- 1 -60- 10 - 6 -T2- 11 - 7	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
 Note that the strokes are indicated in mm (millimeters).
 * Lead is specified with [10] in the above model names.
 8: For Z-axis Medium Speed type
 4: For Z-axis Low Speed type
 * Cable exit direction is specified with [11] in the above model names.
 Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm ? : 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm ? : 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? : 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
 Make sure to indicate the standard equipment option in the model number.
 When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
 *2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
 Please refer to P.11 for more information.
 *3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
 Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
 *4 Cannot be selected for High-Precision Specification.
 * To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
 Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
 (Note 2) The cable length is the length between the X-axis connector box and the controller.
 The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
 The maximum length is 15m.
 (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
 (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■ BE□HS1M

Z-axis stroke	Y-axis stroke	
	100~700	
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

■ BE□HS1L

Z-axis stroke	Y-axis stroke	
	100~700	
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

■ BE□HS1M

	100~400	450~700	750~800	850~900	950~1000
X-axis	1200				
Y-axis	1200				
Z-axis	480				

■ BE□HS1L

	100~400	450~700	750~800	850~900	950~1000
X-axis	1200				
Y-axis	1200				
Z-axis	240				

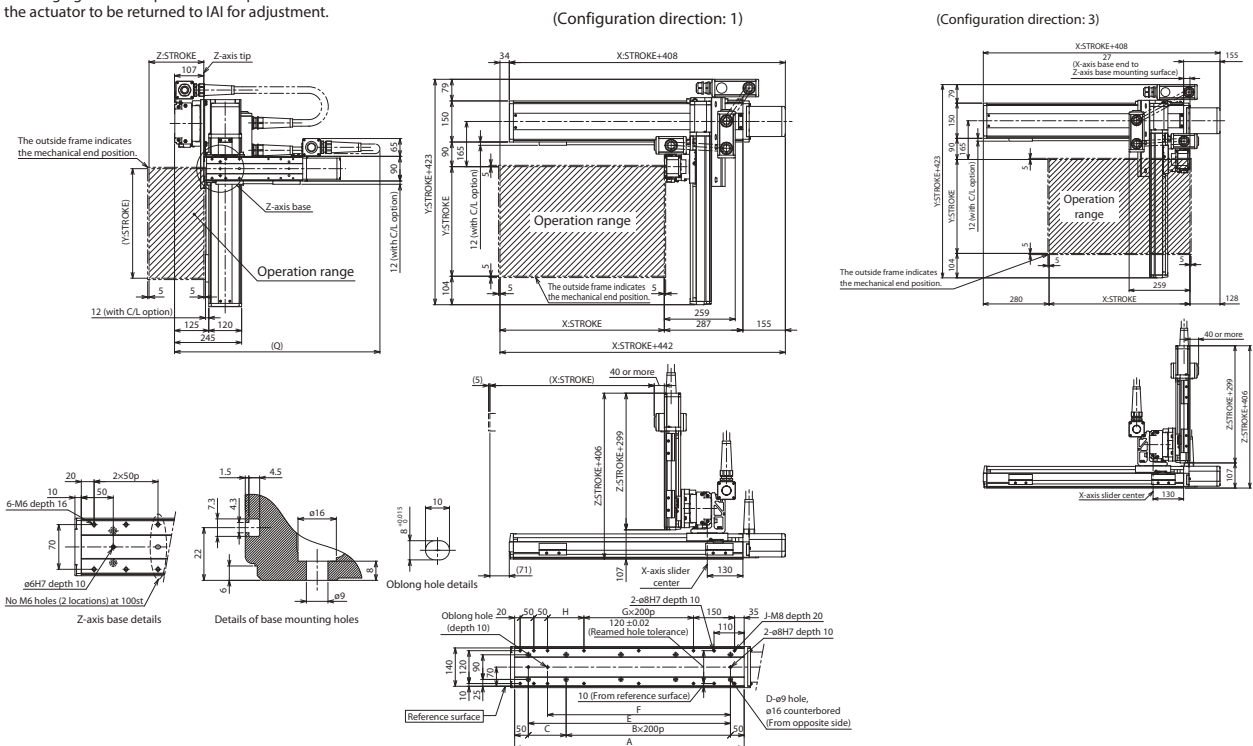
ICSB3 [ICSPB3]-BE□HS1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis												
	100	150	200	250	300	350	400	450	500	550	600	650	700
100	700	750	750	750	800	800	850	850	900	900	950	950	950
150	750	800	800	800	850	850	900	900	950	950	1000	1000	1000
200	800	850	850	850	900	900	950	950	1000	1000	1050	1050	1050
250	850	900	900	900	950	950	1000	1000	1050	1050	1100	1100	1100
300	900	950	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1150
350	950	1000	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1200
400	1000	1050	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	1250

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-BE□HS3M

ICSPB3-BE□HS3M High-Precision Specification

±10µm Standard

±5µm High-Precision

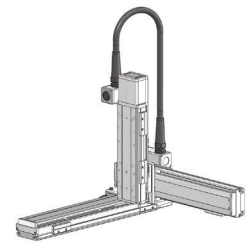
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	BE□HS3M	Type	WA	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification		Refer to Model Specification table below	WA: Battery-less Absolute	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

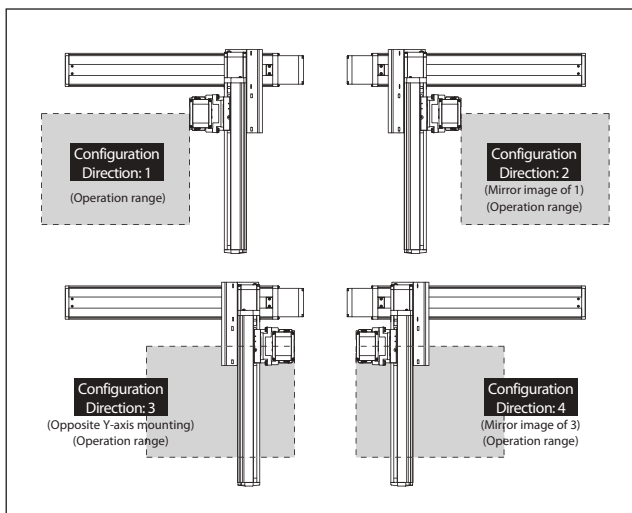
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BE1HS3M-①-②③④⑤⑥⑦BNM-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-BE2HS3M-①-②③④⑤⑥⑦BNM-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-BE3HS3M-①-②③④⑤⑥⑦BNM-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-BE4HS3M-①-②③④⑤⑥⑦BNM-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXM-①-400-20-②-T2-③④⑤	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-③⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-10-⑥-T2-③④⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.

When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

BE□HS3M

Z-axis stroke	Y-axis stroke		
	100~650	700	
	100	14.3	12.3
150	13.6	11.6	
200	13.0	11.0	
250	12.3	10.3	
300	11.7	9.7	
350	11.1	9.1	
400	10.5	8.5	

Maximum Speed by Stroke (mm/s) (Note 4)

BE□HS3M

	100~400	450~700	750~800	850~900	950~1000
X-axis	1200		920		765
Y-axis	1200				
Z-axis	600				

ICSB3 [ICSPB3]-BE□HS3M□-SC-SC (Self-standing cable specification)

Dimensions

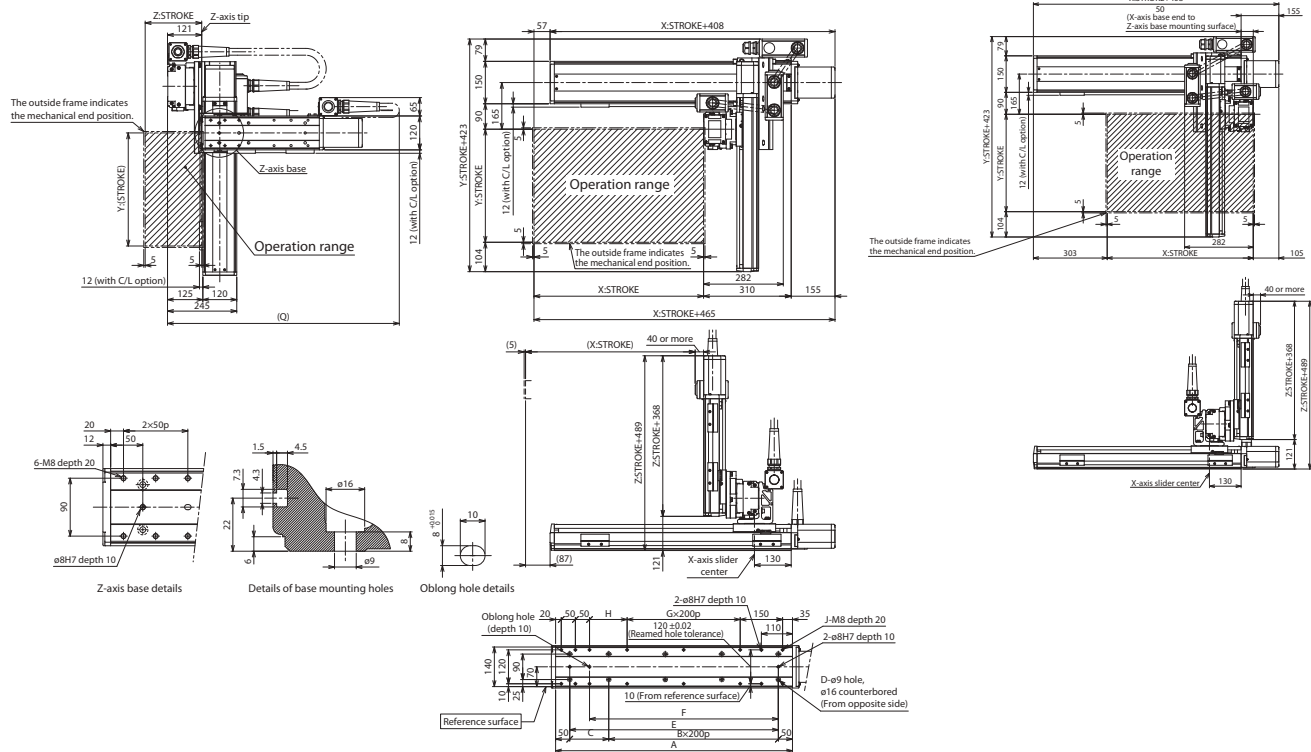
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)

(Configuration direction: 3)



Q dimension

Z-axis	Y-axis												
	100	150	200	250	300	350	400	450	500	550	600	650	700
100	750	800	800	850	850	900	900	900	950	950	1000	1000	1050
150	800	850	850	900	900	900	950	950	1000	1000	1050	1050	1100
200	850	900	900	950	950	1000	1000	1000	1050	1050	1100	1100	1150
250	900	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150	1200
300	950	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200	1250
350	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200	1250	1250	1300
400	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250	1300	1300	1350

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-BF□HS1□

ICSPB3-BF□HS1□ High-Precision Specification



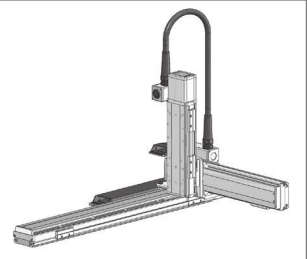
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: 5ml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

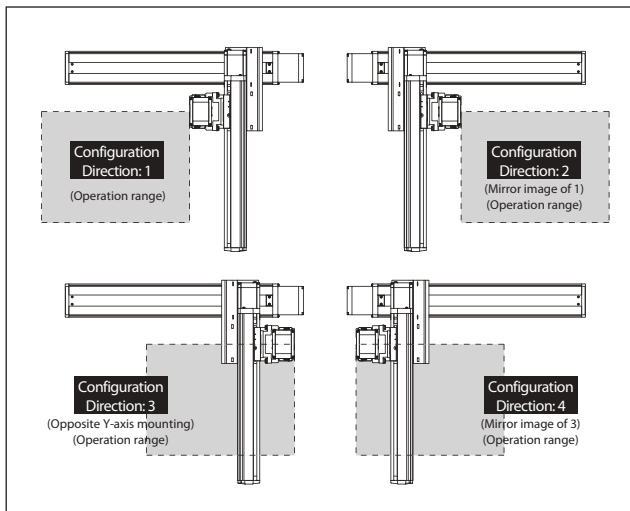
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BF1HS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BF1HS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨
2	M	ICSB3[ICSPB3]-BF2HS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BF2HS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨
3	M	ICSB3[ICSPB3]-BF3HS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BF3HS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨
4	M	ICSB3[ICSPB3]-BF4HS1M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
	L	ICSB3[ICSPB3]-BF4HS1L-①-②③④⑤⑥⑦BNM-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXMX-①-400-20-②-T2-③④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-③⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥⑦-T2-③⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑦] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑧] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [⑨] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

BF□HS1M

Z-axis stroke	Y-axis stroke	
	100~700	
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

BF□HS1L

Z-axis stroke	Y-axis stroke	
	100~700	
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

BF□HS1M

	100~400	450~700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—		1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	1200		—													
Z-axis	480		—													

BF□HS1L

	100~400	450~700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—		1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	1200		—													
Z-axis	240		—													

ICSB3 [ICSPB3]-BF□HS1□-CT-SC (Cable track - Self-standing cable specification)

Dimensions

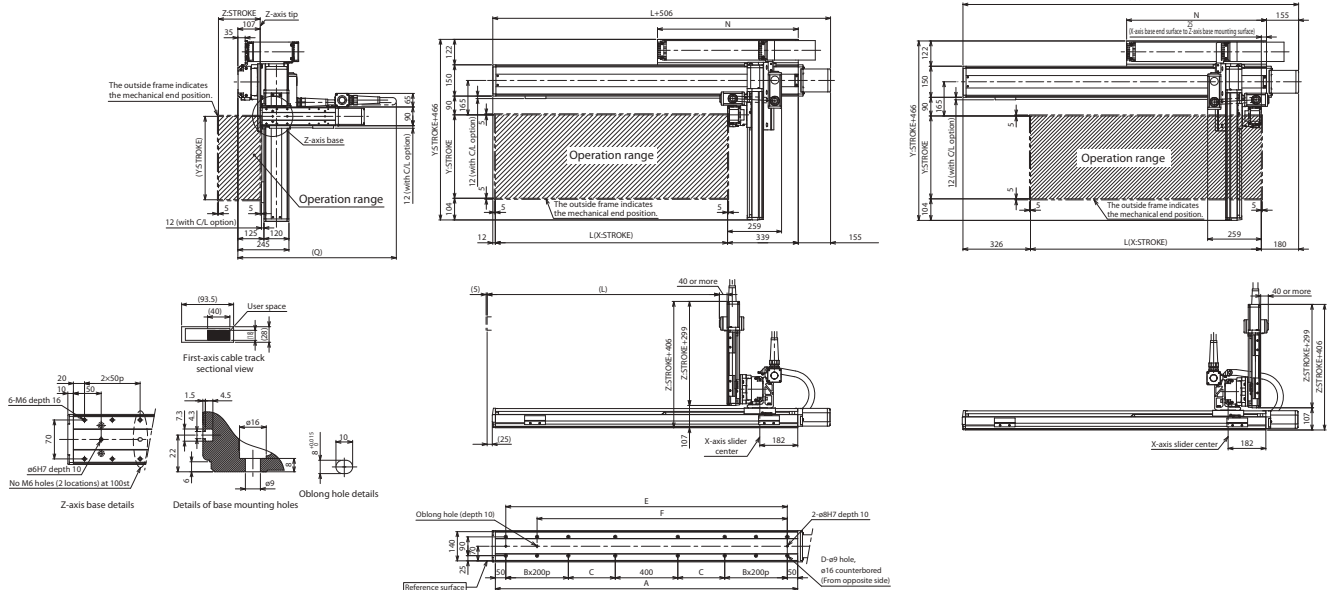
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)

(Configuration direction: 3)



Q dimension

Z-axis	Y-axis																
	100	150	200	250	300	350	400	450	500	550	600	650	700				
100	700	750	750	750	800	800	850	850	900	900	950	950	950	950	950	950	950
150	750	800	800	800	850	850	900	900	950	950	1000	1000	1000	1000	1000	1000	1000
200	800	850	850	850	900	900	950	950	1000	1000	1050	1050	1050	1050	1050	1050	1050
250	850	900	900	900	950	950	1000	1000	1050	1050	1100	1100	1100	1100	1100	1100	1100
300	900	950	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1150	1150	1150	1150	1150
350	950	1000	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1200	1200	1200	1200	1200
400	1000	1050	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	1250	1250	1250	1250	1250

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-BF□HS3M

ICSPB3-BF□HS3M High-Precision Specification



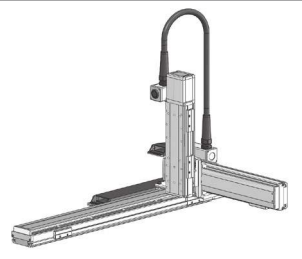
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm table (Every 100mm)	10: 100mm 70: 700mm table (Every 50mm)	10: 100mm 40: 400mm table (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

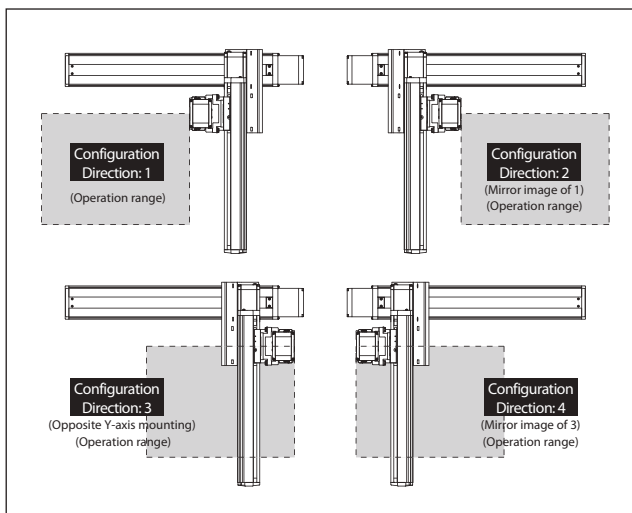
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BF1HS3M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
2	M	ICSB3[ICSPB3]-BF2HS3M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
3	M	ICSB3[ICSPB3]-BF3HS3M-①-②③④⑤⑥⑦BNM-T2-⑧⑨
4	M	ICSB3[ICSPB3]-BF4HS3M-①-②③④⑤⑥⑦BNM-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXXM-①-400-20-②-T2-③④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXXM-①-200-20-④-T2-⑤⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXXM-①-200-10-⑥-T2-⑦⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑩ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM).
To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

BF□HS3M

Z-axis stroke	Y-axis stroke	
	100~650	700
100	14.3	12.3
150	13.6	11.6
200	13.0	11.0
250	12.3	10.3
300	11.7	9.7
350	11.1	9.1
400	10.5	8.5

Maximum Speed by Stroke (mm/s) (Note 4)

BF□HS3M

	100~400	450~700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

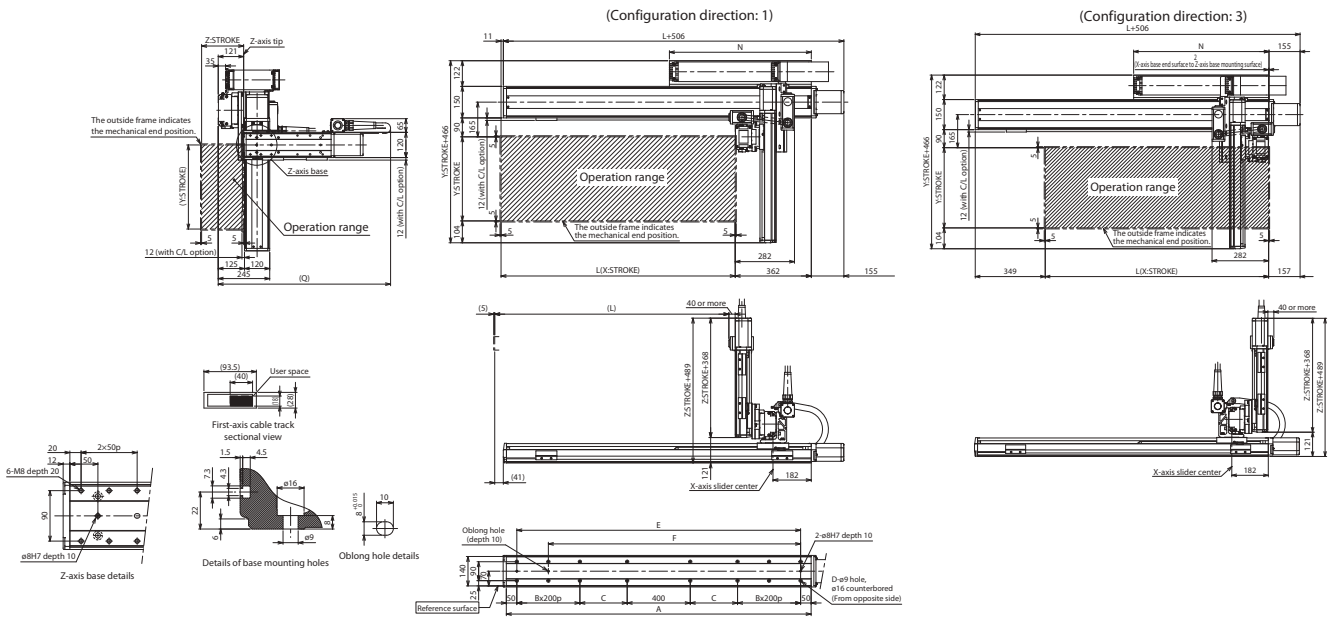
ICSB3 [ICSPB3]-BF□HS3M-CT-SC (Cable track - Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis															
	100	150	200	250	300	350	400	450	500	550	600	650	700			
100	750	800	800	850	850	900	900	900	950	950	1000	1000	1050	1000	1000	1050
150	800	850	850	900	900	950	950	950	1000	1000	1050	1050	1100	1050	1050	1100
200	850	900	900	950	950	1000	1000	1000	1050	1050	1100	1100	1150	1100	1100	1150
250	900	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150	1200	1150	1150	1200
300	950	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200	1250	1200	1200	1250
350	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200	1250	1250	1300	1250	1250	1300
400	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250	1300	1300	1350	1300	1300	1350

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-BK□HS4□

ICSPB3-BK□HS4□ High-Precision Specification

X ± 20µm
Y/Z ± 10µm
X-Y-Z
3-axis
XYB+ZS
(Y Base Mount
Z Slider)
High
Speed
Type
X: XL (600W)
Y: Lg (400W)
Z: Lg (400W)



Model Specification Items

Series ICSB3: Standard 3-axis specification
ICSPB3: High precision 3-axis specification
Type Refer to Model Specification table below
Encoder Type A: Absolute
I: Incremental
X-axis Stroke/Option 10: 100mm Refer to Options table below.
100: 1000mm (Every 50mm)
Y-axis Stroke/Option 10: 100mm Refer to Options table below.
70: 700mm (Every 50mm)
Z-axis Stroke/Option 10: 100mm Refer to Options table below.
50: 500mm (Every 50mm)
Applicable Controllers T2: SC/N
SSEL
XSEL-P/Q
XSEL-RA/SA
Cable Length 3L: 3m
5L: 5m
□L: Specified length
Y-axis - Z-axis Cable Management Refer to Explanation of Model Designations below

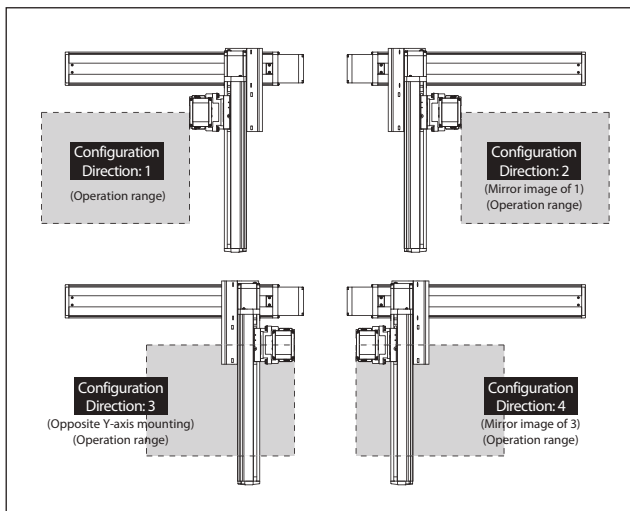
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BK1HS4H- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
	M	ICSB3[ICSPB3]-BK1HS4M- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
2	H	ICSB3[ICSPB3]-BK2HS4H- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
	M	ICSB3[ICSPB3]-BK2HS4M- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
3	H	ICSB3[ICSPB3]-BK3HS4H- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
	M	ICSB3[ICSPB3]-BK3HS4M- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
4	H	ICSB3[ICSPB3]-BK4HS4H- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9
	M	ICSB3[ICSPB3]-BK4HS4M- 1 - 2 - 3 - 4 - 5 - 6 - 7 BNM-T2- 8 - 9

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM- 1 -600-40- 2 -T2- 11 - 13	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM- 1 -400-40- 3 -T2- 11 - 15	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM- 1 -400- 10 - 6 -T2- 11 - 17	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [17] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [15] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with [17] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	10: 100mm ? : 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm ? : 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? : 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm, Y/Z-axis ±0.01mm [X-axis ±0.01mm, Y/Z-axis ±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/40mm
Y-axis motor output/lead	400W/40mm
Z-axis motor output/lead	400W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■BK□HS4H

Z-axis stroke	Y-axis stroke	
	100~700	100~700
100	12.0	
150	11.1	
200	10.2	
250	9.3	
300	8.5	
350	7.6	
400	6.8	
450	5.9	
500	5.0	

■BK□HS4M

Z-axis stroke	Y-axis stroke													
	100	150	200	250	300	350	400	450	500	550	600	650	700	
100	25.1	24.4	23.5	22.7	21.9	21.1	20.3	19.4	18.6	17.7	17.0	16.1	15.3	
150	24.3	23.6	22.7	21.9	21.1	20.3	19.5	18.6	17.8	16.9	16.2	15.3	14.5	
200	23.4	22.8	21.9	21.1	20.3	19.4	18.7	17.8	17.0	16.1	15.3	14.5	13.7	
250	22.6	22.0	21.1	20.3	19.5	18.6	17.9	17.0	16.2	15.3	14.5	13.7	12.9	
300	21.9	21.2	20.4	19.5	18.8	17.9	17.1	16.3	15.4	14.6	13.8	13.0	12.2	
350	21.1	20.4	19.6	18.7	18.0	17.1	16.3	15.5	14.6	13.8	13.0	12.2	11.4	
400	20.4	19.7	18.9	18.0	17.2	16.4	15.6	14.8	13.9	13.1	12.3	11.4	10.7	
450	19.6	18.9	18.0	17.2	16.4	15.6	14.8	14.0	13.1	12.2	11.5	10.6	9.9	
500	18.8	18.1	17.2	16.4	15.6	14.8	14.0	13.1	12.3	11.4	10.7	9.8	9.0	

Maximum Speed by Stroke (mm/s) (Note 4)

■BK□HS4H

	100~500	550~700	750~800	850~900	950~1000
X-axis	2400			1840	1530
Y-axis	2400				
Z-axis	1200				

■BK□HS4M

	100~500	550~700	750~800	850~900	950~1000
X-axis	2400			1840	1530
Y-axis	2400				
Z-axis	600				

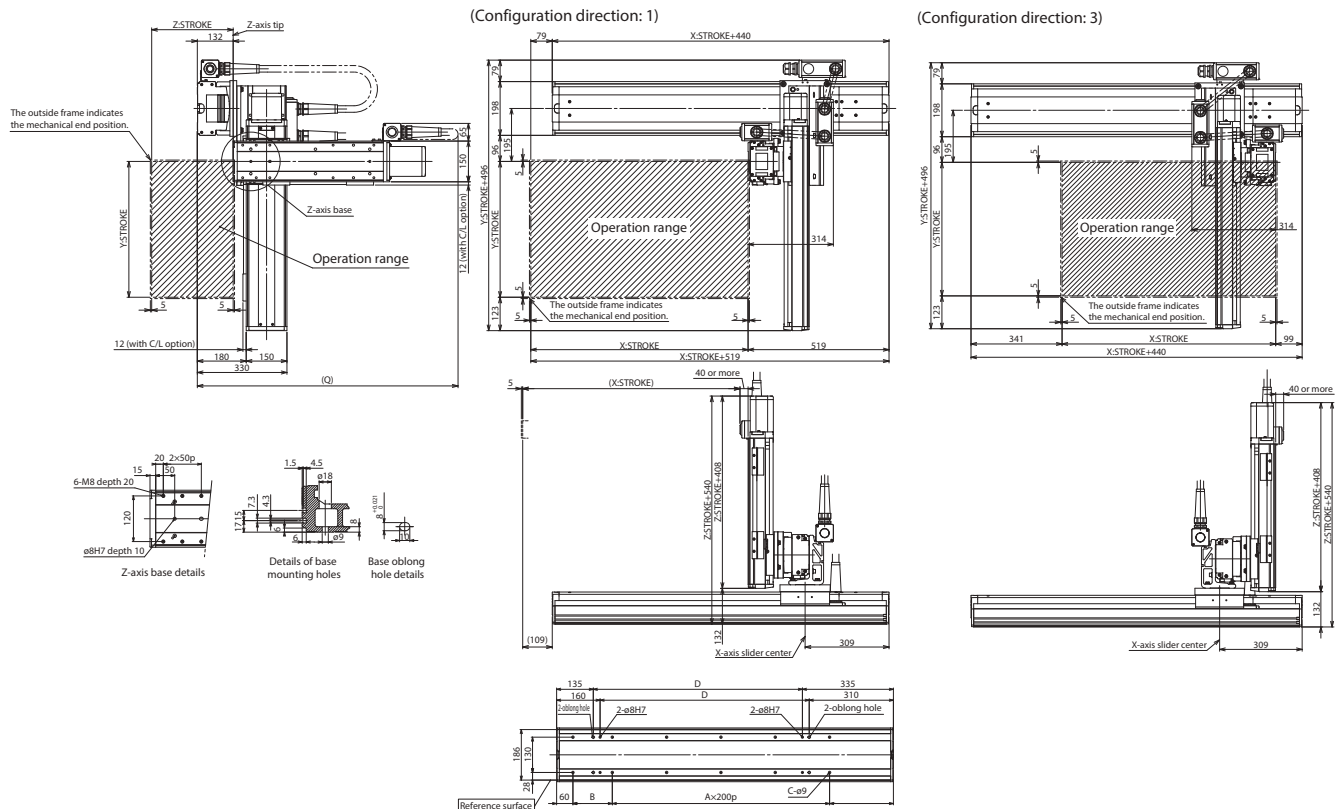
ICSB3 [ICSPB3]-BK□HS4□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	100	150	200	250	300	350	400	450	500	550	600	650	700
100	850	850	850	900	900	950	950	1000	1000	1000	1050	1050	1100	1100
150	900	900	900	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150
200	950	950	950	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200
250	1000	1000	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200	1250	1250
300	1050	1050	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250	1300	1300
350	1100	1100	1100	1150	1150	1200	1200	1250	1250	1250	1300	1300	1350	1350
400	1150	1150	1150	1200	1200	1250	1250	1300	1300	1300	1350	1350	1400	1400
450	1200	1200	1200	1250	1250	1300	1300	1350	1350	1350	1400	1400	1450	1450
500	1250	1250	1250	1300	1300	1350	1350	1400	1400	1400	1450	1450	1500	1500

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970

ICSB3-BK□MS4□

ICSPB3-BK□MS4□ High-Precision Specification



X-Y-Z

3-axis

XYB+ZS

(Y Base Mount Z Slider)

Medium

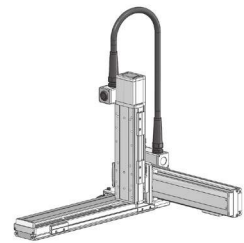
Speed

Type

X: XL (600W)

Y: Lg (400W)

Z: Lg (400W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	10: 100mm 100: 1000mm (Every 50mm)	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

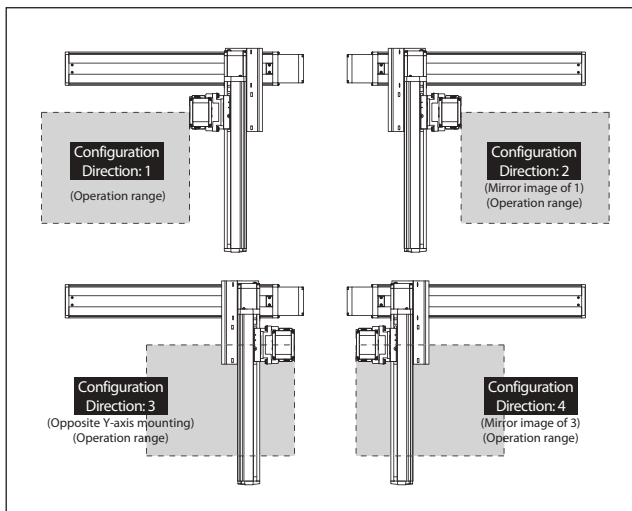
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BK1MS4H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BK1MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-BK2MS4H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BK2MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
3	H	ICSB3[ICSPB3]-BK3MS4H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BK3MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
4	H	ICSB3[ICSPB3]-BK4MS4H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BK4MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXM-[1]-600-20-[2]-T2-[11]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-400-20-[2]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-[1]-400-[10]-[6]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	10: 100mm ? : 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm ? : 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? : 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm, Y/Z-axis ±0.01mm [X-axis ±0.01mm, Y/Z-axis ±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/20mm
Y-axis motor output/lead	400W/20mm
Z-axis motor output/lead	400W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■BK□MS4H

Z-axis stroke	Y-axis stroke	
	100~700	
100	12.0	
150	11.1	
200	10.2	
250	9.3	
300	8.5	
350	7.6	
400	6.8	
450	5.9	
500	5.0	

■BK□MS4M

Z-axis stroke	Y-axis stroke								
	100~300	350	400	450	500	550	600	650	700
100	32.0	32.0	32.0	32.0	32.0	29.1	25.4	22.1	19.1
150	31.1	31.1	31.1	31.1	31.1	28.2	24.5	21.2	18.2
200	30.2	30.2	30.2	30.2	30.2	27.3	23.6	20.3	17.3
250	29.3	29.3	29.3	29.3	29.3	26.4	22.7	19.4	16.4
300	28.5	28.5	28.5	28.5	28.5	25.6	21.9	18.6	15.6
350	27.6	27.6	27.6	27.6	27.6	24.7	21.0	17.7	14.7
400	26.8	26.4	26.0	25.5	25.1	23.9	20.2	16.9	13.9
450	23.5	23.5	23.5	23.5	23.2	22.8	19.3	16.0	13.0
500	19.2	19.2	19.2	19.2	19.2	19.2	18.4	15.1	12.1

Maximum Speed by Stroke (mm/s) (Note 4)

■BK□MS4H

	100~400	450~700	750~800	850~900	950~1000
X-axis	1200				
Y-axis	1200				
Z-axis	1200				

■BK□MS4M

	100~400	450~700	750~800	850~900	950~1000
X-axis	1200				
Y-axis	1200				
Z-axis	600				

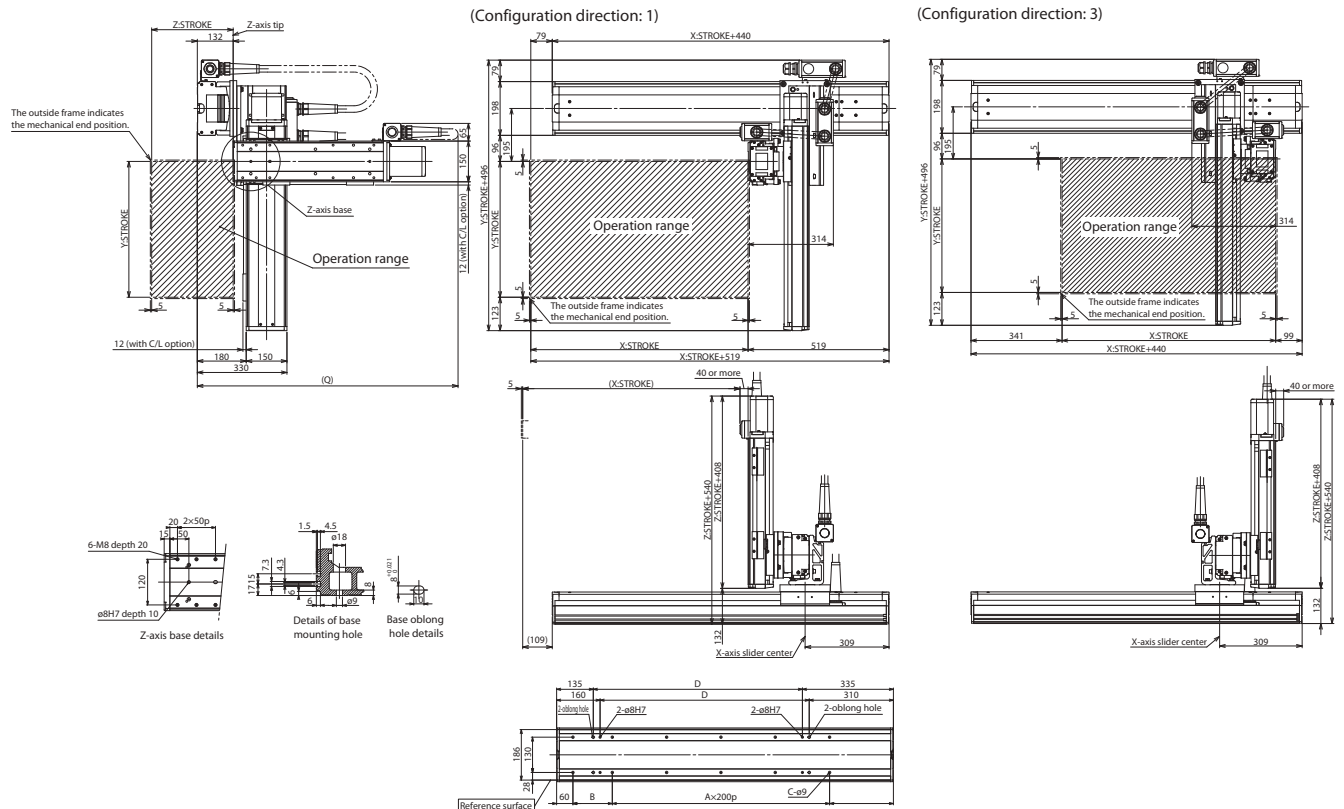
ICSB3 [ICSPB3]-BK□MS4□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

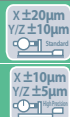
Z-axis	Y-axis	100	150	200	250	300	350	400	450	500	550	600	650	700
100	850	850	850	900	900	950	950	1000	1000	1000	1050	1050	1100	1100
150	900	900	900	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150
200	950	950	950	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200
250	1000	1000	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200	1250	1250
300	1050	1050	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250	1300	1300
350	1100	1100	1100	1150	1150	1200	1200	1250	1250	1250	1300	1300	1350	1350
400	1150	1150	1150	1200	1200	1250	1250	1300	1300	1300	1350	1350	1400	1400
450	1200	1200	1200	1250	1250	1300	1300	1350	1350	1350	1400	1400	1450	1450
500	1250	1250	1250	1300	1300	1350	1350	1400	1400	1400	1450	1450	1500	1500

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
B	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145	195	245	295	145
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
D	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970

ICSB3-BL□HS4□

ICSPB3-BL□HS4□

High-Precision Specification

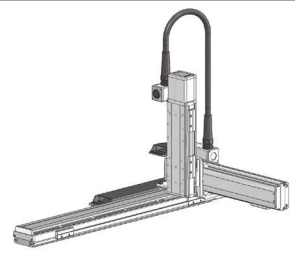


X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

High Speed Long Type

X: XL (600W)
Y: Lg (400W)
Z: Lg (400W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	90: 900mm 250: 2500mm (Every 100mm)	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

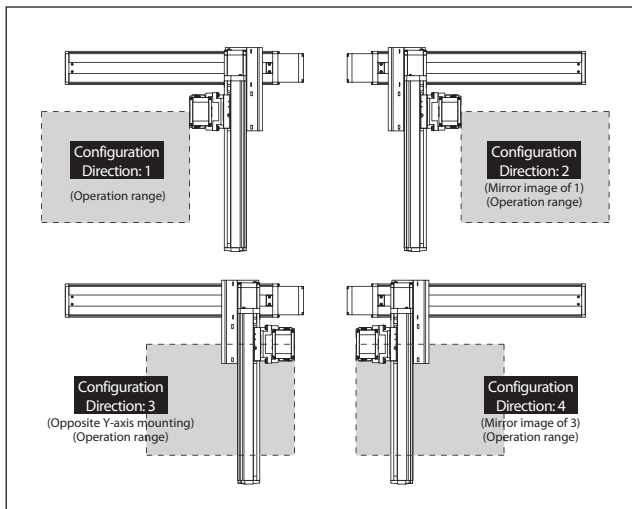
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BL1HS4H-①-②③-④⑤-⑥⑦BNN-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BL1HS4M-①-②③-④⑤-⑥⑦BNN-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-BL2HS4H-①-②③④⑤-⑥⑦BNN-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BL2HS4M-①-②③④⑤-⑥⑦BNN-T2-⑧-⑨
3	H	ICSB3[ICSPB3]-BL3HS4H-①-②③④⑤⑥-⑦BNN-T2-⑧-⑨
	M	ICSB3[ICSPB3]-BL3HS4M-①-②③④⑤⑥-⑦BNN-T2-⑧-⑨
4	H	ICSB3[ICSPB3]-BL4HS4H-①-②③④⑤⑥⑦-⑧BNN-T2-⑨
	M	ICSB3[ICSPB3]-BL4HS4M-①-②③④⑤⑥⑦-⑧BNN-T2-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXXM-①-600-40-②-T2-③-④	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-①-400-40-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-①-400-②-③-T2-④-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑤] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [②] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with [③] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	90: 900mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	X-axis ±0.02mm, Y/Z-axis ±0.01mm [X-axis ±0.01mm, Y/Z-axis ±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/40mm
Y-axis motor output/lead	400W/40mm
Z-axis motor output/lead	400W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

BL□HS4H

Z-axis stroke	Y-axis stroke	
	100~700	100~700
100	12.0	
150	11.1	
200	10.2	
250	9.3	
300	8.5	
350	7.6	
400	6.8	
450	5.9	
500	5.0	

BL□HS4M

Z-axis stroke	Y-axis stroke												
	100	150	200	250	300	350	400	450	500	550	600	650	700
100	25.1	24.4	23.5	22.7	21.9	21.1	20.3	19.4	18.6	17.7	17.0	16.1	15.3
150	24.3	23.6	22.7	21.9	21.1	20.3	19.5	18.6	17.8	16.9	16.2	15.3	14.5
200	23.4	22.8	21.9	21.1	20.3	19.4	18.7	17.8	17.0	16.1	15.3	14.5	13.7
250	22.6	22.0	21.1	20.3	19.5	18.6	17.9	17.0	16.2	15.3	14.5	13.7	12.9
300	21.9	21.2	20.4	19.5	18.8	17.9	17.1	16.3	15.4	14.6	13.8	13.0	12.2
350	21.1	20.4	19.6	18.7	18.0	17.1	16.3	15.5	14.6	13.8	13.0	12.2	11.4
400	20.4	19.7	18.9	18.0	17.2	16.4	15.6	14.8	13.9	13.1	12.3	11.4	10.7
450	19.6	18.9	18.0	17.2	16.4	15.6	14.8	14.0	13.1	12.2	11.5	10.6	9.9
500	18.8	18.1	17.2	16.4	15.6	14.8	14.0	13.1	12.3	11.4	10.7	9.8	9.0

Maximum Speed by Stroke (mm/s) (Note 4)

BL□HS4H

	100~500	550~700	900~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
X-axis	—			2400	2200	1965	1725	1530	1365	1225	1110	1005	915	840	770	710	655
Y-axis	2400																
Z-axis	1200	—															

BL□HS4M

	100~500	550~700	900~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
X-axis	—			2400	2200	1965	1725	1530	1365	1225	1110	1005	915	840	770	710	655
Y-axis	2400																
Z-axis	600	—															

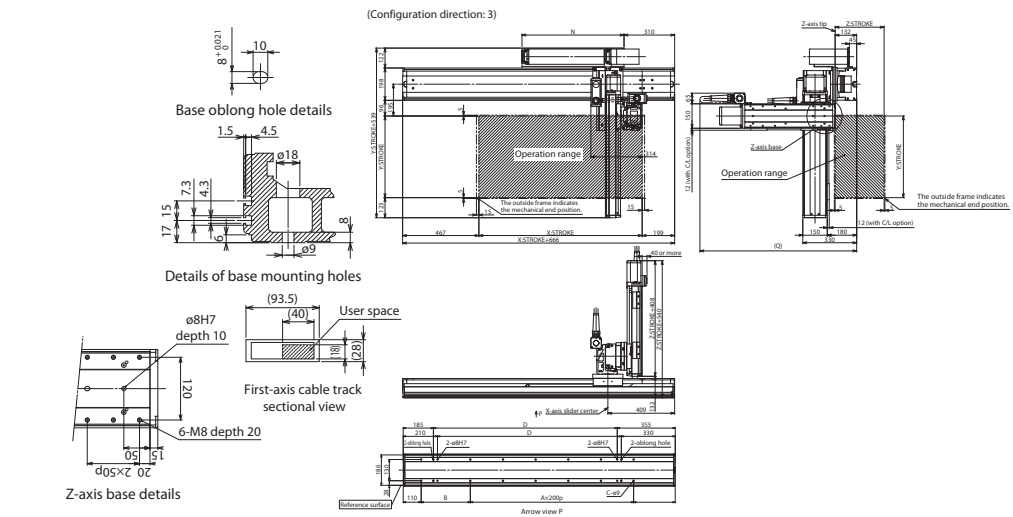
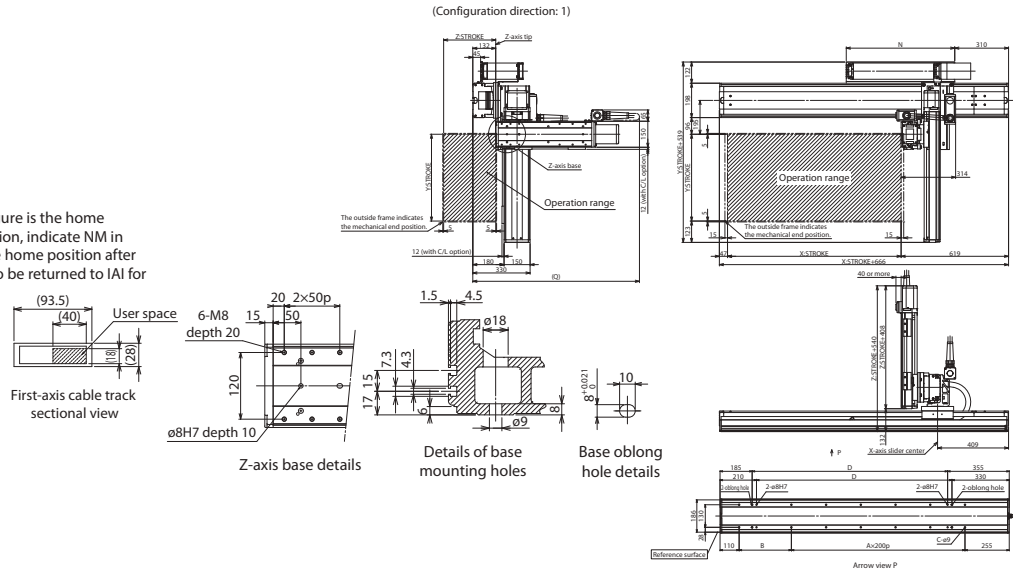
ICSB3 [ICSPB3]-BL□HS4□-CT-SC (Cable track - Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis													
	100	150	200	250	300	350	400	450	500	550	600	650	700	
100	850	850	850	900	900	950	950	1000	1000	1050	1050	1100	1100	
150	900	900	900	950	950	1000	1000	1050	1050	1100	1100	1150	1150	
200	950	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	
250	1000	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	
300	1050	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300	
350	1100	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350	
400	1150	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400	
450	1200	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400	1450	1450	
500	1250	1250	1250	1300	1300	1350	1350	1400	1400	1450	1450	1500	1500	

X-axis stroke	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
A	5	5	6	6	7	7	8	8	8	9	9	10	10	11	11	12	12	13
B	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301
C	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
D	1026	1126	1226	1326	1426	1526	1626	1726	1826	1926	2026	2126	2226	2326	2426	2526	2626	2626
N	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1375

ICSB3-BL MS4

ICSPB3-BL MS4

High-Precision Specification

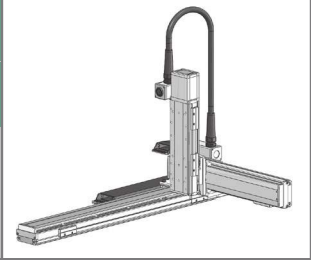


X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

Medium Speed Long Type

X: XL (600W)
Y: Lg (400W)
Z: Lg (400W)



Model Specification Items

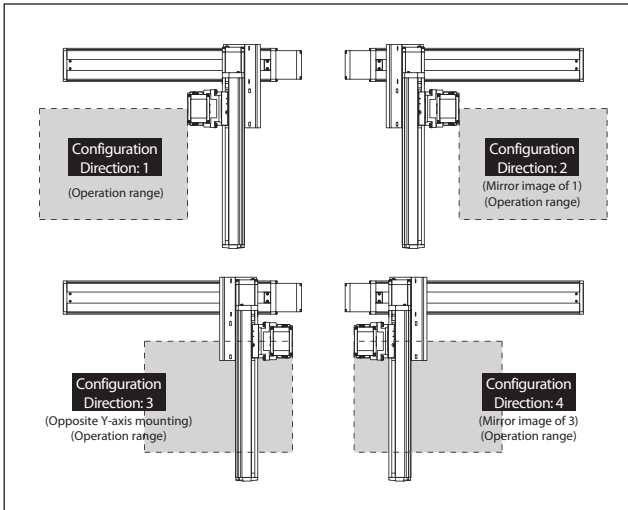
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	90:900mm 250:2500mm table (Every 100mm)	10:100mm Refer to Options table below. 70:700mm Refer to Options table below.	10:100mm Refer to Options table below. 50:500mm Refer to Options table below.	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BL1MS4H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BL1MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-BL2MS4H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BL2MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
3	H	ICSB3[ICSPB3]-BL3MS4H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BL3MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
4	H	ICSB3[ICSPB3]-BL4MS4H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
	M	ICSB3[ICSPB3]-BL4MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-WXXM-[1]-600-20-[2]-T2-[11]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-400-20-[4]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-[1]-400-[6]-[8]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with [12] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	90: 900mm ? 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm ? 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction *	A1/A3	See P.11, P.369
AQ seal (equipped as standard on Y/Z-axis)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only)	RT	See P.370

*1 Brake option for Y-axis increases the length of the motor unit. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
* Please refer to P.11 for the X-axis cable exit direction.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.02mm [±0.01mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	600W/20mm
Y-axis motor output/lead	400W/20mm
Z-axis motor output/lead	400W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■BL□MS4H

Z-axis stroke	Y-axis stroke	
	100~700	
100	12.0	
150	11.1	
200	10.2	
250	9.3	
300	8.5	
350	7.6	
400	6.8	
450	5.9	
500	5.0	

■BL□MS4M

Z-axis stroke	Y-axis stroke								
	100~300	350	400	450	500	550	600	650	700
100	32.0	32.0	32.0	32.0	32.0	29.1	25.4	22.1	19.1
150	31.1	31.1	31.1	31.1	31.1	28.2	24.5	21.2	18.2
200	30.2	30.2	30.2	30.2	30.2	27.3	23.6	20.3	17.3
250	29.3	29.3	29.3	29.3	29.3	26.4	22.7	19.4	16.4
300	28.5	28.5	28.5	28.5	28.5	25.6	21.9	18.6	15.6
350	27.6	27.6	27.6	27.6	27.6	24.7	21.0	17.7	14.7
400	26.8	26.4	26.0	25.5	25.1	23.9	20.2	16.9	13.9
450	23.5	23.5	23.5	23.5	23.2	22.8	19.3	16.0	13.0
500	19.2	19.2	19.2	19.2	19.2	18.4	15.1	12.1	

Maximum Speed by Stroke (mm/s) (Note 4)

■BL□MS4H

	100~500	550~700	900~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1100	980	860	765	680	610	555	500	455	420	385	355	325
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■BL□MS4M

	100~500	550~700	900~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1100	980	860	765	680	610	555	500	455	420	385	355	325
Y-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

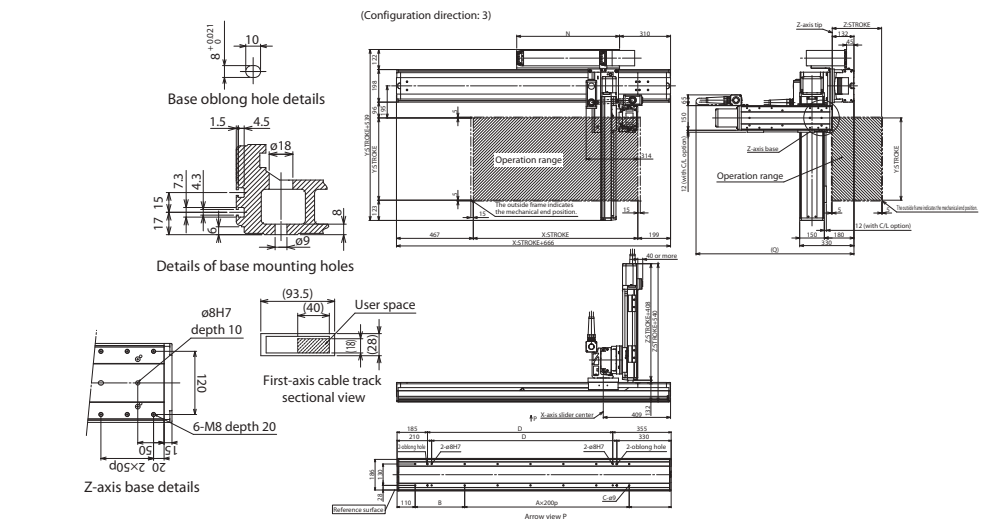
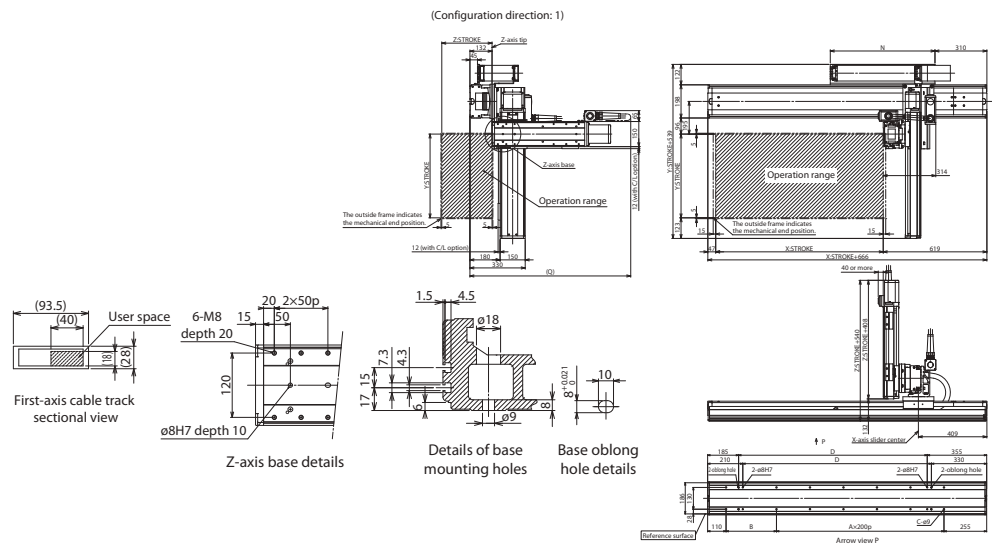
ICSB3 [ICSPB3]-BL□MS4□-CT-SC (Cable track - Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis \ Y-axis	100	150	200	250	300	350	400	450	500	550	600	650	700
100	850	850	850	900	900	950	950	1000	1000	1050	1050	1100	1100
150	900	900	900	950	950	1000	1000	1050	1050	1100	1100	1150	1150
200	950	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200
250	1000	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250
300	1050	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300
350	1100	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350
400	1150	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400
450	1200	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400	1450	1450
500	1250	1250	1250	1300	1300	1350	1350	1400	1400	1450	1450	1500	1500

X-axis stroke	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
A	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
B	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201
C	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30
D	1026	1126	1226	1326	1426	1526	1626	1726	1826	1926	2026	2126	2226	2326	2426	2526	2626
N	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-BM□HS4H

ICSPB3-BM□HS4H High-Precision Specification

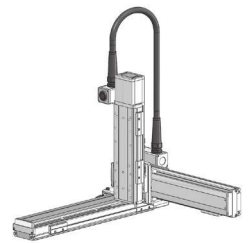


X-Y-Z 3-axis

XYB+ZS (Y Base Mount Z Slider)

High Speed Type

X: Lg (750W)
Y: Lg (400W)
Z: Lg (400W)



Model Specification Items

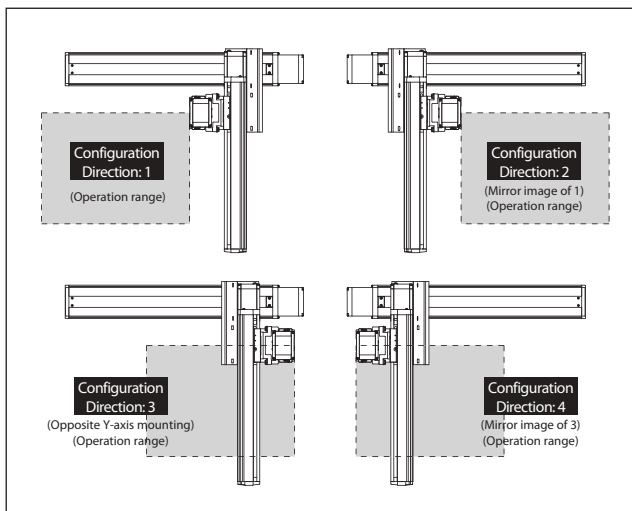
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	10: 100mm 100: 1000mm (Every 50mm)	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-BM1HS4H- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]
2	H	ICSB3[ICSPB3]-BM2HS4H- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]
3	H	ICSB3[ICSPB3]-BM3HS4H- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]
4	H	ICSB3[ICSPB3]-BM4HS4H- [1] - [2] - [3] - [4] - [5] - [6] - [7] BNM-T2- [8] - [9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	SSPA-LXM- [1] -750-50- [2] -T2- [10] - [3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM- [1] -400-40- [4] -T2- [10] - [5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM- [1] -400-20- [6] - [6] -T2- [10] - [7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [10] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	750W/50mm
Y-axis motor output/lead	400W/40mm
Z-axis motor output/lead	400W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■BM□HS4H

Z-axis stroke	Y-axis stroke	
	100-700	100-700
100	12.0	
150	11.1	
200	10.2	
250	9.3	
300	8.5	
350	7.6	
400	6.8	
450	5.9	
500	5.0	

Maximum Speed by Stroke (mm/s) (Note 4)

■BM□HS4H

	100-500	550-700	750-900	950-1000
X-axis	2500			2320
Y-axis	2400			
Z-axis	1200			

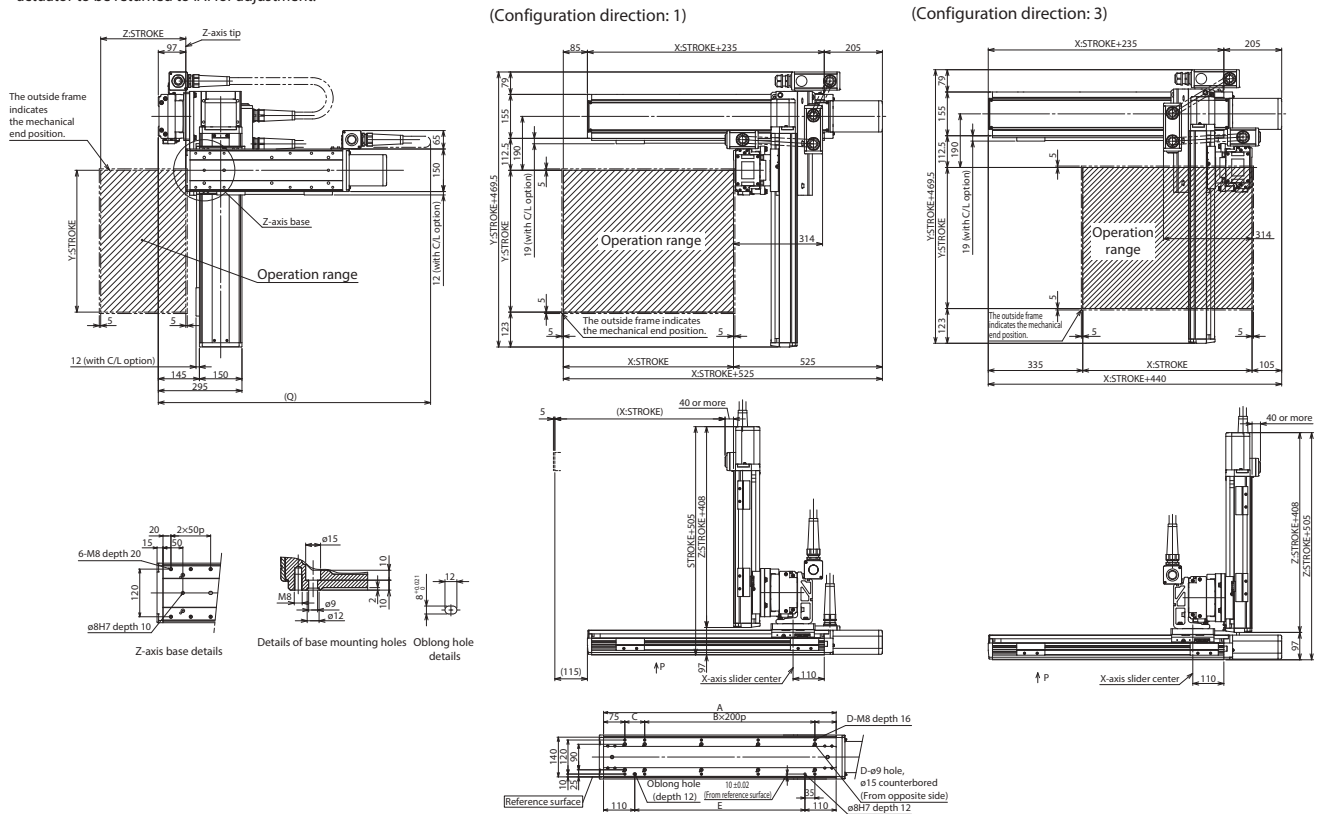
ICSB3 [ICSPB3]-BM□HS4H-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	100	150	200	250	300	350	400	450	500	550	600	650	700
100	800	800	850	850	900	900	950	950	950	950	1000	1000	1050	1050
150	850	850	900	900	950	950	1000	1000	1000	1000	1050	1050	1100	1100
200	900	900	950	950	1000	1000	1050	1050	1050	1050	1100	1100	1150	1150
250	950	950	1000	1000	1050	1050	1100	1100	1100	1100	1150	1150	1200	1200
300	1000	1000	1050	1050	1100	1100	1150	1150	1150	1150	1200	1200	1250	1250
350	1050	1050	1100	1100	1150	1150	1200	1200	1200	1200	1250	1250	1300	1300
400	1100	1100	1150	1150	1200	1200	1250	1250	1250	1250	1300	1300	1350	1350
450	1150	1150	1200	1200	1250	1250	1300	1300	1300	1300	1350	1350	1400	1400
500	1200	1200	1250	1250	1300	1300	1350	1350	1350	1350	1400	1400	1450	1450

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000

ICSB3-BM MS4M

ICSPB3-BM MS4M High-Precision Specification

±10µm
Standard

X-Y-Z
3-axis

XYB+ZS
(Y Base Mount
Z Slider)

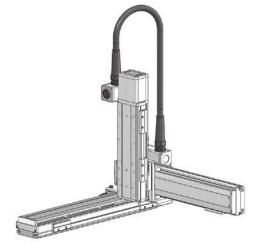
Medium
Speed
Type

X: Lg (750W)
Y: Lg (400W)
Z: Lg (400W)

±5µm
High-Precision

Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	10: 100mm 100: 1000mm (Every 50mm)	10: 100mm 70: 700mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

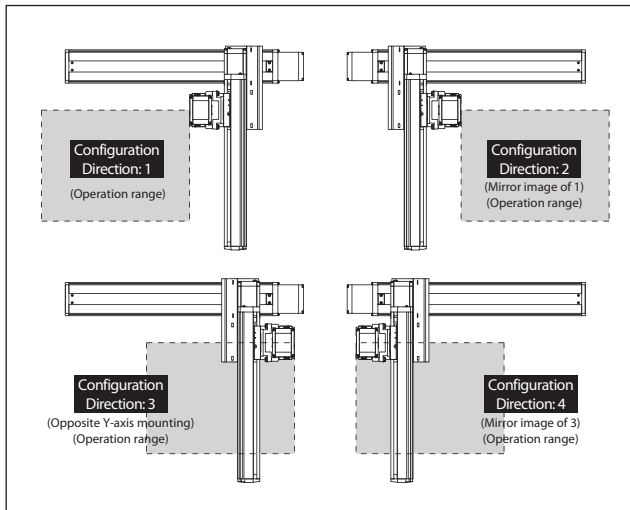


Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-BM1MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-BM2MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-BM3MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-BM4MS4M-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	SSPA-LXM-[1]-750-25-[2]-T2-[10]-[3]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-LXM-[1]-400-20-[4]-T2-[10]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-[1]-400-10-[6]-T2-[10]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [8] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10: 100mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	750W/25mm
Y-axis motor output/lead	400W/20mm
Z-axis motor output/lead	400W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■BM□MS4M

Z-axis stroke	Y-axis stroke												
	100	150	200	250	300	350	400	450	500	550	600	650	700
100	32.0	32.0	32.0	32.0	32.0	32.0	32.0	30.6	26.3	22.5	19.2	16.2	13.5
150	31.1	31.1	31.1	31.1	31.1	31.1	31.1	29.7	25.4	21.6	18.3	15.3	12.6
200	30.2	30.2	30.2	30.2	30.2	30.2	30.2	28.8	24.5	20.7	17.4	14.4	11.7
250	29.3	29.3	29.3	29.3	29.3	29.3	29.2	27.9	23.6	19.8	16.5	13.5	10.8
300	28.5	28.5	28.5	28.0	27.5	27.1	26.6	26.1	22.8	19.0	15.7	12.7	10.0
350	27.0	26.5	26.0	25.6	25.2	24.7	24.3	23.8	21.9	18.1	14.8	11.8	9.1
400	24.8	24.4	24.0	23.5	23.1	22.7	22.3	21.9	21.1	17.3	14.0	11.0	8.3
450	22.9	22.4	22.0	21.6	21.2	20.8	20.5	20.1	19.6	16.4	13.1	10.1	7.4
500	19.2	19.2	19.2	19.2	19.2	19.2	18.8	18.4	18.0	15.5	12.2	9.2	6.5

Maximum Speed by Stroke (mm/s) (Note 4)

■BM□MS4M

	100~500	550~700	750~900	950~1000
X-axis	1250			
Y-axis	1200			
Z-axis	600			

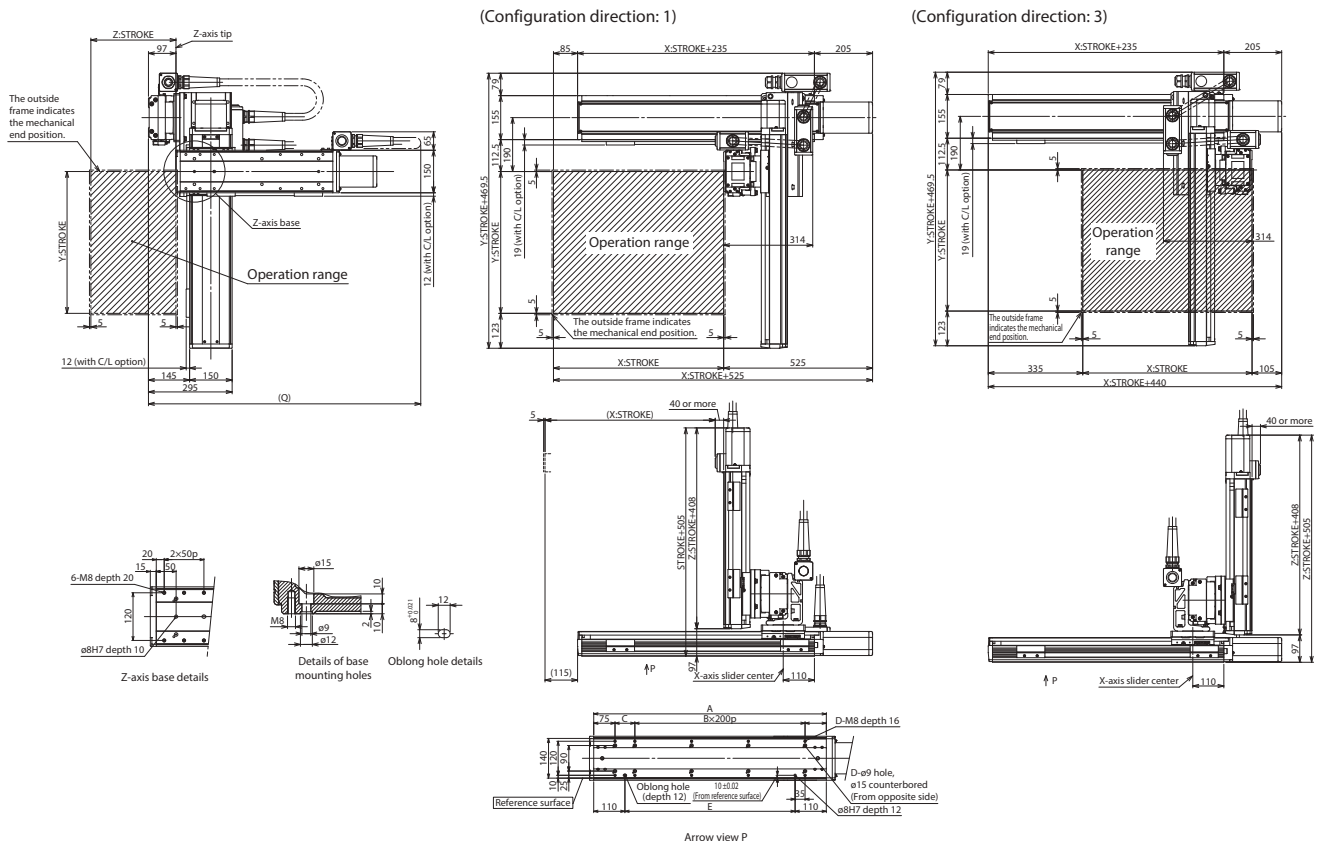
ICSB3 [ICSPB3]-BM□MS4M-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	100	150	200	250	300	350	400	450	500	550	600	650	700
100	800	800	850	850	900	900	950	950	950	1000	1000	1050	1050	
150	850	850	900	900	950	950	1000	1000	1000	1050	1050	1100	1100	
200	900	900	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150	
250	950	950	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200	
300	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	1250	
350	1050	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250	1300	1300	
400	1100	1100	1150	1150	1200	1200	1250	1250	1250	1300	1300	1350	1350	
450	1150	1150	1200	1200	1250	1250	1300	1300	1300	1350	1350	1400	1400	
500	1200	1200	1250	1250	1300	1300	1350	1350	1350	1400	1400	1450	1450	

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000

ICSPA3-B1N□HS3M

High-Precision Specification

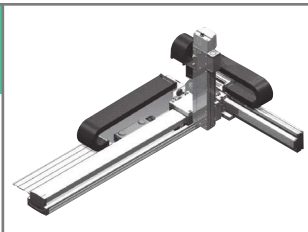


X-Y-Z 3-axis (NS+ISPA)

XYB+ZS (Y Base Mount Z Slider)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

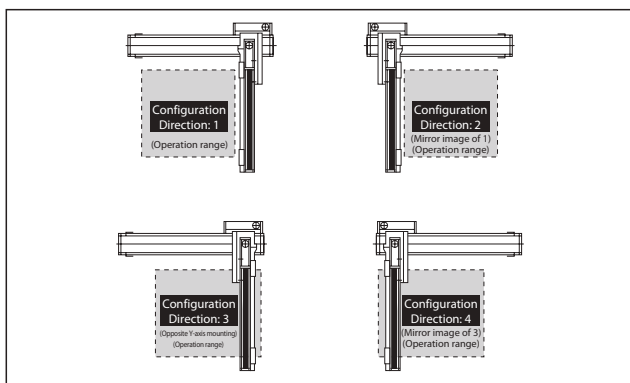
Series ICSPA3: High precision 3-axis specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 50: 500mm 220: 2200mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z-axis Stroke/Option 10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Explanation of Model Designations below
--------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	----------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	------------------------------------------------------------------------------------

Model Specification

XY configuration direction *1	Model
1	ICSPA3-B1N1HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	ICSPA3-B1N2HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
3	ICSPA3-B1N3HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
4	ICSPA3-B1N4HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMS-①-400-40-②-T2-③-④⑤	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* The following symbols are specified with ⑩ in the above model names.
NT1: For cartesian configuration directions 1 and 3
NT2: For cartesian configuration directions 2 and 4
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	50:500mm 220:2200mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20:200mm 70:700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10:100mm 40:400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L:3m 5L:5m □L:□m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only (standard Z-axis setting))	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01 mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
(Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B1N□HS3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	11.5	10.5	9.5	8.4	7.5	6.5
	~200	10.5	9.5	8.5	7.4	6.5	5.5
	~300	9.5	8.5	7.5	6.4	5.5	4.5
	~400	8.4	7.4	6.5	5.4	4.4	3.4

Maximum Speed by Stroke (mm/s)

■B1N□HS3M

	Stroke								
	100	200	300	400	500	600	700	800~2200	
X-axis	—	—	—	—	2400				—
Y-axis	—	1200						—	—
Z-axis	600			—	—	—	—	—	

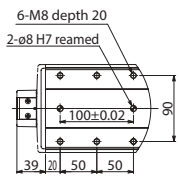
ICSPA3-B1N□HS3M□-CT-CT (Cable track specification)

Dimensions

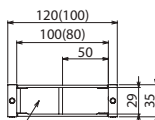
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

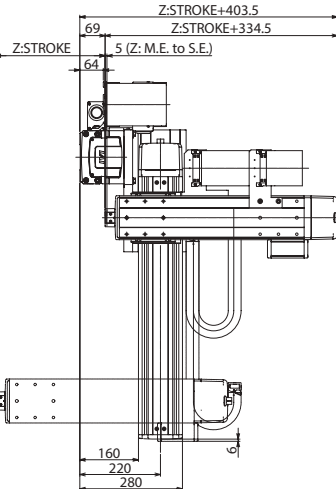


Z-axis base details

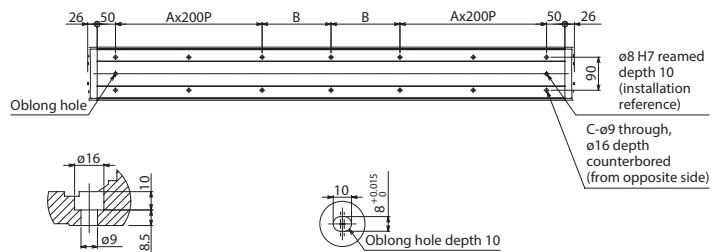
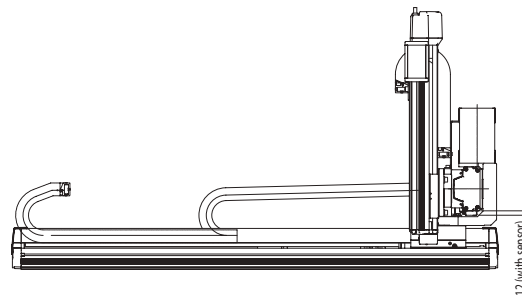
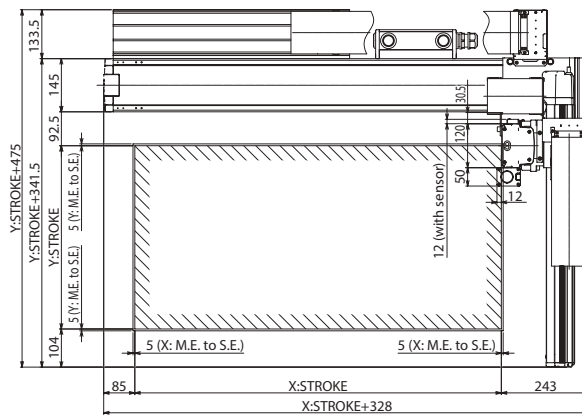


Cable track sectional view
* () dimensions indicate Y-Z cable track

(Configuration direction 1)



M.E: Mechanical end
S.E: Stroke end



X-axis base mounting hole details

X-axis base bottom oblong hole details

X stroke	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3
B	138	163	188	213	238	263	288	113	138	163	188	213	238	263	288	313	138	163
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18

X stroke	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200
A	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5
B	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188
C	18	18	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26

ICSPA3-B1N□MS3M High-Precision Specification

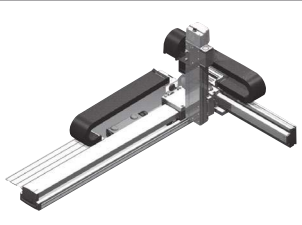


X-Y-Z 3-axis (NS+ISPA)

XYB+ZS (Y Base Mount Z Slider)

Medium Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



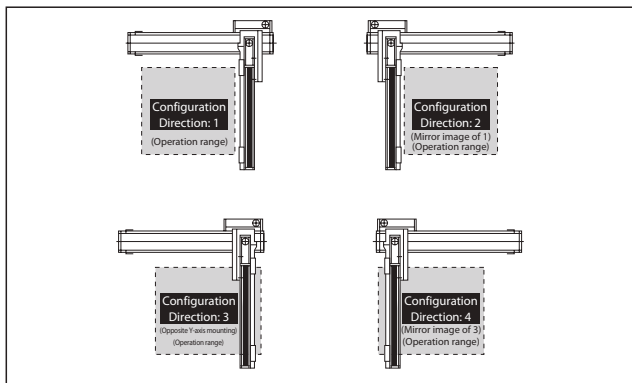
Model Specification Items Series ICSPA3: High precision 3-axis specification	ICSPA3-B1N□MS3M Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 50: 500mm 220: 2200mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z-axis Stroke/Option 10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Explanation of Model Designations below

Model Specification

XY configuration direction *1	Model
1	ICSPA3-B1N1MS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	ICSPA3-B1N2MS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
3	ICSPA3-B1N3MS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
4	ICSPA3-B1N4MS3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMS-①-400-20-②-T2-③-⑩	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑩ in the above model names.
 Note that the strokes are indicated in mm (millimeters).
 * The following symbols are specified with ⑩ in the above model names.
 NT1: For cartesian configuration directions 1 and 3
 NT2: For cartesian configuration directions 2 and 4
 Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	50:500mm 220:2200mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20:200mm 70:700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10:100mm 40:400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L:3m 5L:5m □L:□m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only (standard Z-axis setting))	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
 *2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
 *3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01 mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.

(Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B1N □MS3M

		Y-axis stroke				
		200	300	400	500	600
Z-axis stroke	100					9.1
	~200					8.1
	~300					7.1
	~400					6.1

Maximum Speed by Stroke (mm/s)

■B1N □MS3M

	Stroke							
	100	200	300	400	500	600	700	800~2200
X-axis	—	—	—	—	1300			
Y-axis	—	1200						—
Z-axis	600			—	—	—	—	—

ICSPA3-B1N □MS3M-CT-CT (Cable track specification)

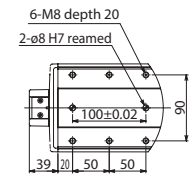
Dimensions

CAD drawings can be downloaded from our website.

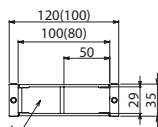


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction 1)

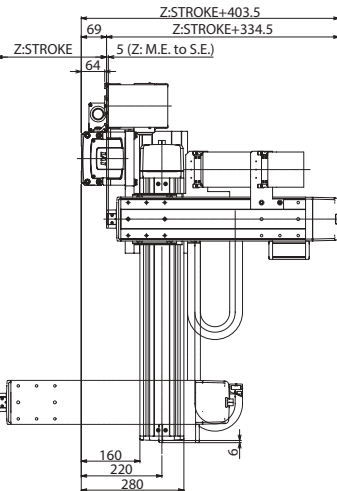


Z-axis base details

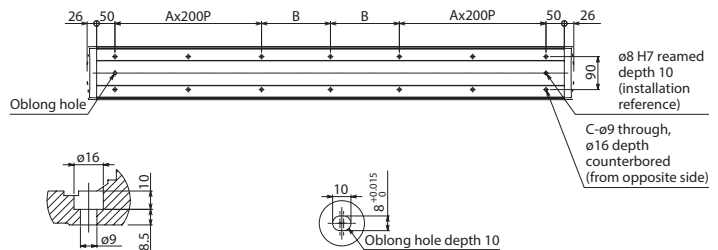
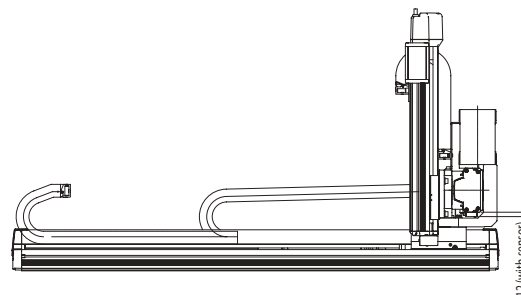
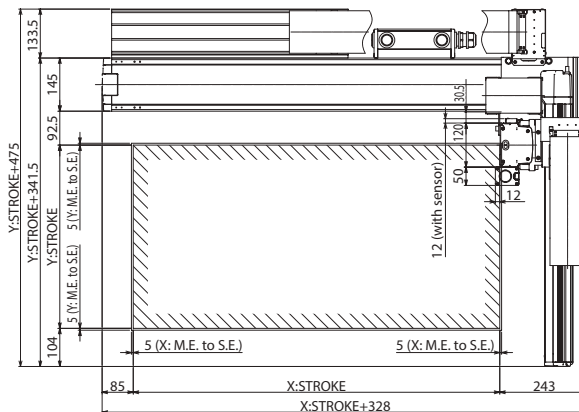


Cable track sectional view

* () dimensions indicate Y-Z cable track



M.E: Mechanical end
S.E: Stroke end



X-axis base mounting hole details

X-axis base bottom oblong hole details

X stroke	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3
B	138	163	188	213	238	263	288	113	138	163	188	213	238	263	288	313	138	163
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18

X stroke	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200
A	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5
B	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188
C	18	18	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26

ICSPA3-B2N□HS3M High-Precision Specification

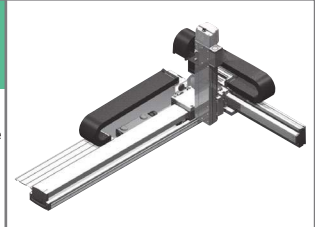


X-Y-Z 3-axis (NS+ISPA)

XYB+ZS (Y Base Mount Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

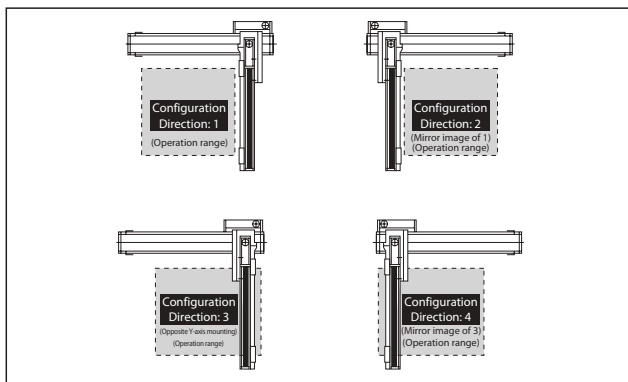
Series ICSPA3: High precision 3-axis specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 225: 2250mm 300: 3000mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z-axis Stroke/Option 10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Explanation of Model Designations below
--------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	------------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	------------------------------------------------------------------------------------

Model Specification

XY configuration direction *1	Model
1	ICSPA3-B2N1HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	ICSPA3-B2N2HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
3	ICSPA3-B2N3HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
4	ICSPA3-B2N4HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMXS-①-400-40-②-T2-③-⑩	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑩ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* The following symbols are specified with ⑩ in the above model names.
NT1: For cartesian configuration directions 1 and 3
NT2: For cartesian configuration directions 2 and 4
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	225: 2250mm 300: 3000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only (standard Z-axis setting))	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01 mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
(Note 3) The rated acceleration is 0.3G. Y-axis is operable up to 1G, but the upper limit for the X-axis is 0.3G.

Payload (kg)

■B2N □HS3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	11.5	10.5	9.5	8.4	7.5	6.5
	~200	10.5	9.5	8.5	7.4	6.5	5.5
	~300	9.5	8.5	7.5	6.4	5.5	4.5
	~400	8.4	7.4	6.5	5.4	4.4	3.4

Maximum Speed by Stroke (mm/s)

■B2N □HS3M

	Stroke							
	100	200	300	400	500	600	700	2250~3000
X-axis	—	—	—	—	—	—	—	2400
Y-axis	—	1200						—
Z-axis	600			—	—	—	—	—

ICSPA3-B2N □HS3M □-CT-CT (Cable track specification)

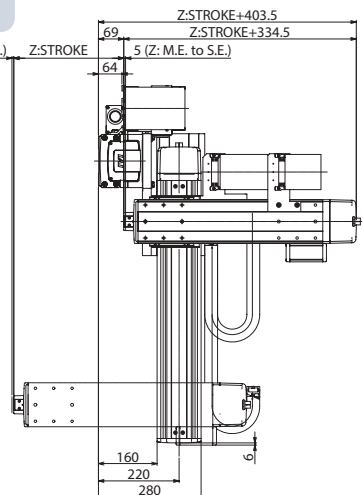
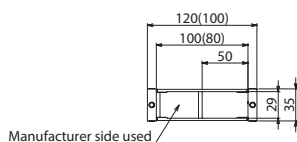
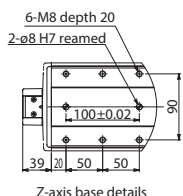
Dimensions

(Configuration direction 1)

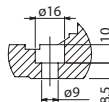
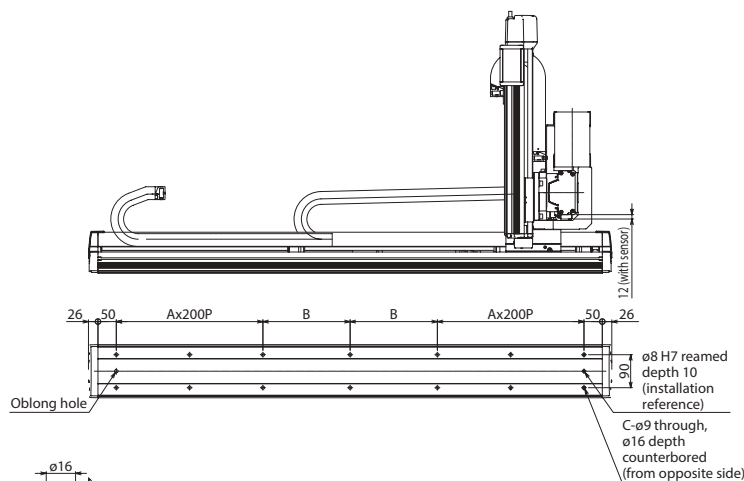
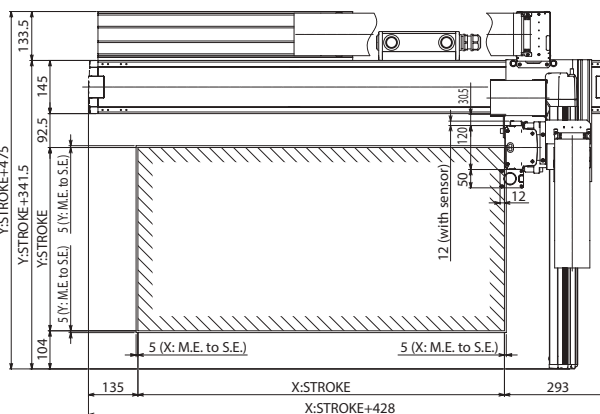
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



M.E: Mechanical end
S.E: Stroke end



X stroke	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
A	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7
B	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238
C	26	26	26	30	30	30	30	30	30	30	30	34	34	34	34	34

ICSPA3-B2N□MS3M

High-Precision Specification

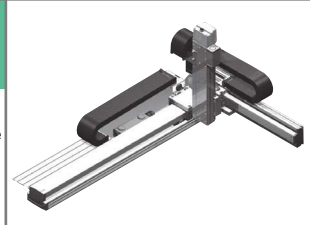


X-Y-Z 3-axis (NS+ISPA)

XYB+ZS (Y Base Mount Z Slider)

Medium Speed Long Type

X: Lg (400W)
Y: Mg (200W)
Z: Md (200W)



Model Specification Items

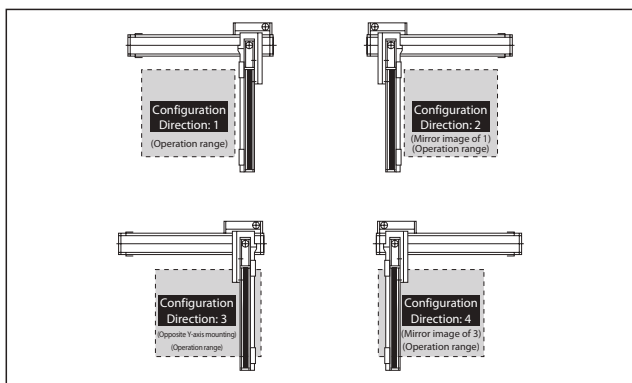
Series ICSPA3: High precision 3-axis specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 225: 2250mm 300: 3000mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z-axis Stroke/Option 10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/Q SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Explanation of Model Designations below
--------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	------------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------------------------	-----------------------------------------------------------------	------------------------------------------------------------------------------------

Model Specification

XY configuration direction *1	Model
1	ICSPA3-B2N1MS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	ICSPA3-B2N2MS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
3	ICSPA3-B2N3MS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
4	ICSPA3-B2N4MS3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMXS-①-400-20-②-T2-③-⑩	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑩ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* The following symbols are specified with ⑩ in the above model names.

NT1: For cartesian configuration directions 1 and 3

NT2: For cartesian configuration directions 2 and 4

Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	225: 2250mm 300: 3000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (Y/Z-axis only (standard Z-axis setting))	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
- (Note 3) The rated acceleration is 0.3G. Y-axis is operable up to 1G, but the upper limit for the X-axis is 0.3G. (Please inquire regarding the payload at increased Y-axis acceleration)

Payload (kg)

■B2N □MS3M

		Y-axis stroke				
		200	300	400	500	600
Z-axis stroke	100					9.1
	~ 200	13.0				8.1
	~ 300	11.7				7.1
	~ 400	10.7				6.1

Maximum Speed by Stroke (mm/s)

■B2N □MS3M

	Stroke							
	100	200	300	400	500	600	700	2250~3000
X-axis	—	—	—	—	—	—	—	1300
Y-axis	—	1200						—
Z-axis	600			—	—	—	—	—

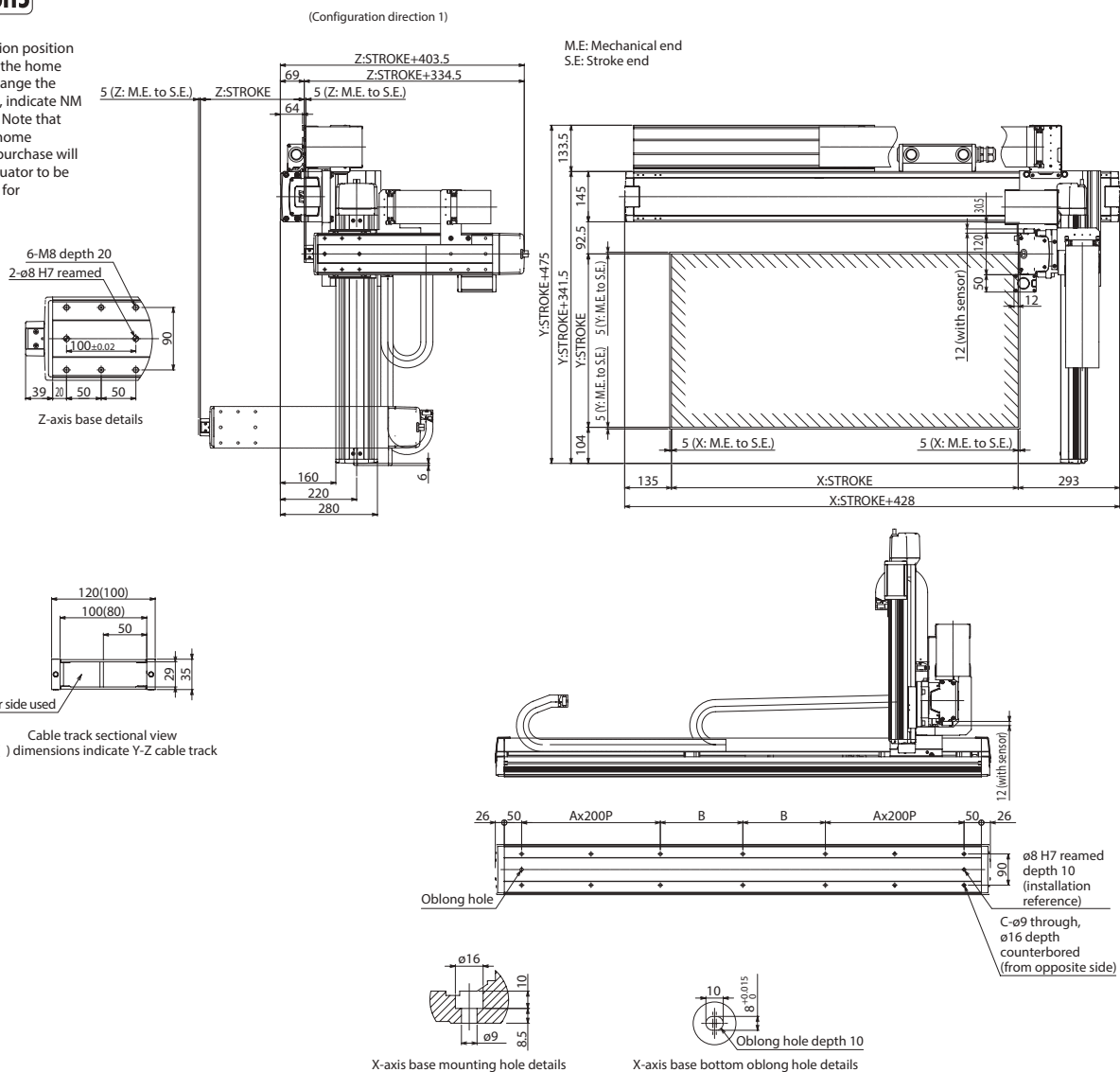
ICSPA3-B2N □MS3M-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



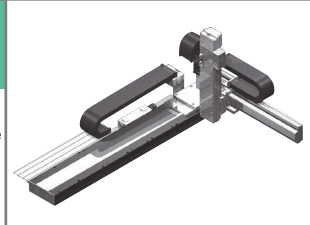
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X stroke	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
A	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7
B	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238
C	26	26	26	30	30	30	30	30	30	30	30	34	34	34	34	34

ICSPA3-B1L□HS3M High-Precision Specification

X ±5μm Y/Z ±10μm High-precision	X-Y-Z 3-axis (LSA+ISPA)	XYB+ZS (Y Base Mount Z Slider)	High Speed Long Type	X: Lg (400W) Y: Md (200W) Z: Md (200W)
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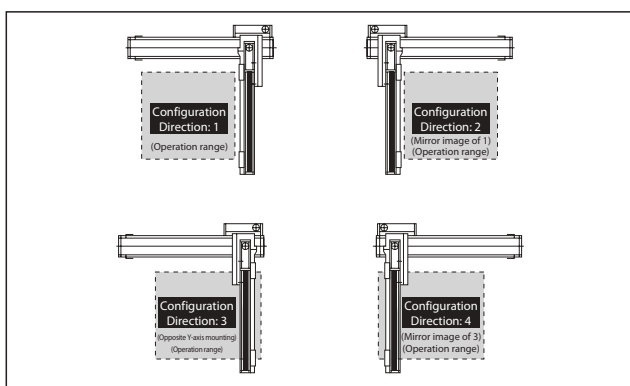
Model Specification Items Series ICSPA3: High precision 3-axis specification Type Refer to Model Specification table below Encoder Type I: Incremental X-axis Stroke/Option 10S: 1050mm 41S: 4155mm (Every 135mm) Y-axis Stroke/Option 20: 200mm 40: 400mm (Every 50mm) Z-axis Stroke/Option 10: 100mm 30: 300mm (Every 50mm) Refer to Options table below. Refer to Options table below. Refer to Options table below.	T2 Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA Cable Length 3L: 3m 5L: 5m □L: Specified length Y-axis - Z-axis Cable Management Explanation of Model Designations below
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Model Specification

XY configuration direction *1	Model
1	ICSPA3-B1L1HS3M-①-②③④⑤⑥⑦-T2-⑧
2	ICSPA3-B1L2HS3M-①-②③④⑤⑥⑦-T2-⑧
3	ICSPA3-B1L3HS3M-①-②③④⑤⑥⑦-T2-⑧
4	ICSPA3-B1L4HS3M-①-②③④⑤⑥⑦-T2-⑧

*1 Please refer to the following diagram under XY Configuration Direction.
Please refer to the table on the right for details of ① through ⑧ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	LSA-W215S-①-400-②-T2-③④-⑩	→ Please contact IAI for more details
Y-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑩ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* The following symbols are specified with ⑩ in the above model names.

NT1: For cartesian configuration directions 1 and 3

NT2: For cartesian configuration directions 2 and 4

Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1 or NT2).

Explanation of Model Designations

No.	Description	Notation
①	X-axis stroke (Note 1)	10S:1050mm 41S:4155mm
②	Y-axis stroke (Note 1)	20:200mm 40:400mm
③	X-axis option	Refer to Options table below.
④	Z-axis stroke (Note 1)	10:100mm 30:300mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L:3m 5L:5m □L:□m
⑦	Z-axis option	Refer to Options table below.
⑧	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (equipped as standard on Y/Z-axis only)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor (Y/Z-axis only) *2	C/CL	See P.369
Home limit switch (equipped as standard on X-axis) *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only (standard Z-axis setting))	NM	See P.369

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

Common Specifications

Drive system	X-axis : Linear servo motor
	Y/Z-axis : Ball screw, equivalent to rolled C5
Positioning repeatability	X-axis : ±0.005mm
	Y/Z-axis : ±0.01mm
Lost motion	0.02mm or less
Guide	X-axis : Linear guide
	Y/Z-axis : Base integrated guide
Base	X-axis : Aluminum with black alumite treatment
	Y/Z-axis : Aluminum with white alumite treatment
X-axis motor output/lead	400W or equivalent/(none)
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

* < > indicates the Z-axis medium speed specification.

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
- (Note 3) The rated acceleration is 1G for X-axis and 0.3G for Y/Z-axis.
Although the Y-axis is operable up to 1G, increasing the acceleration will reduce the payload. (Please inquire regarding the payload at increased acceleration)

Payload (kg)

■B1L □HS3M

		Y-axis stroke				
		200	250	300	350	400
Z-axis stroke	100	11.5	10.2	7.6	5.3	
	~200	10.5	9.2	6.6	4.3	
	~300	9.5	8.2	5.5	3.3	

Maximum Speed by Stroke (mm/s)

■B1L □HS3M

	Stroke				
	100	200	300	400	1050~4155
X-axis	—	—	—	—	2500
Y-axis	—	1200			—
Z-axis	600		—	—	—

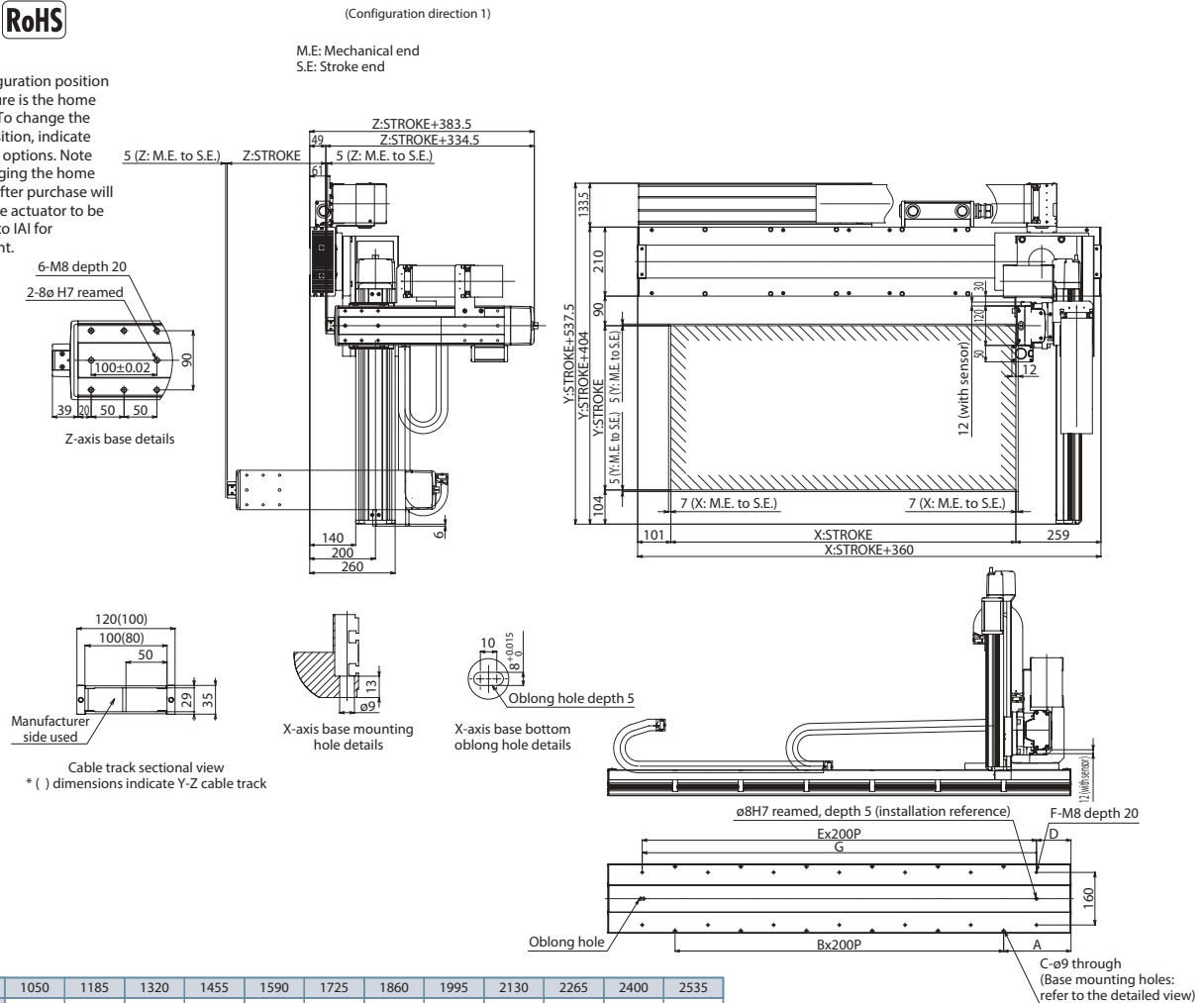
ICSPA3-B2N □MS3M-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X stroke	1050	1185	1320	1455	1590	1725	1860	1995	2130	2265	2400	2535
A	205	72.5	140	207.5	75	142.5	210	77.5	145	212.5	80	147.5
B	5	7	7	7	9	9	9	11	11	11	13	13
C	12	16	16	16	20	20	20	24	24	24	28	28
D	105	172.5	40	107.5	175	42.5	110	177.5	45	112.5	180	47.5
E	6	6	8	8	8	10	10	10	12	12	12	14
F	14	14	18	18	18	22	22	22	26	26	26	30
G	1200	1200	1600	1600	1600	2000	2000	2000	2400	2400	2400	2800

X stroke	2670	2805	2940	3075	3210	3345	3480	3615	3750	3885	4020	4155
A	215	82.5	150	217.5	85	152.5	220	87.5	155	222.5	90	157.5
B	13	15	15	15	17	17	17	19	19	19	21	21
C	28	32	32	32	36	36	36	40	40	40	44	44
D	115	182.5	50	117.5	185	52.5	120	187.5	55	122.5	190	57.5
E	14	14	16	16	16	18	18	18	20	20	20	22
F	30	30	34	34	34	38	38	38	42	42	42	46
G	2800	2800	3200	3200	3200	3600	3600	3600	4000	4000	4000	4400

ICSB3-Z3C□HS1H

ICSPB3-Z3C□HS1H

High-Precision Specification

±10μm Standard

±5μm High-Precision

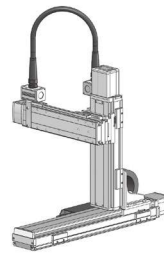
Battery-less Absolute

X-Y-Z 3-axis

XZ+YS (Y Slider Z Upright)

High Speed Type

X: Md (200W)
Z: Md (200W)
Y: Sm (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Z-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis - Y-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	12: 120mm 107: 1070mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-PA/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

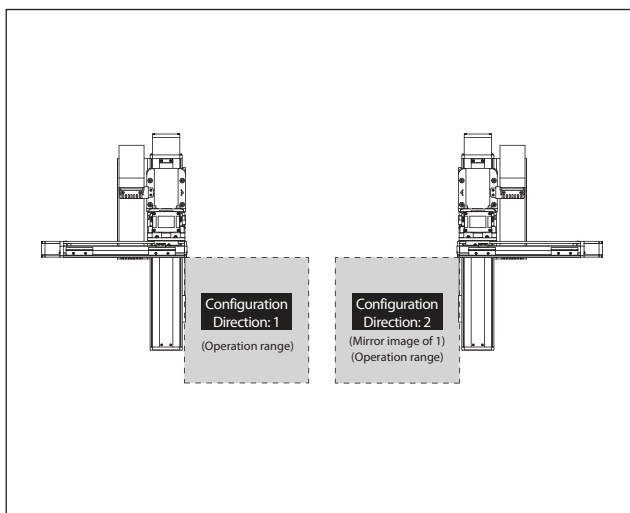
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-Z3C1HS1H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-Z3C2HS1H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	12: 120mm 107: 1070mm
[3]	X-axis option	Refer to Options table below.
[4]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[5]	Z-axis option	Refer to Options table below.
[6]	Y-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Y-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Z-axis - Y-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Y-axis setting)	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only) *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Y-axis is non-motor end (NM). To reverse the home position of the Y-axis, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-MXL-[1]-200-20-[2]-T2-[10]-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-10-[4]-T2-[10]-[5]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-SXM-[1]-60-16-[6]-T2-[10]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [10] in the above model names. Please refer to P.11 for the exit directions.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm
Y-axis motor output/lead	60W/16mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

<p>Notes</p>	(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
	(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
	(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
	(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

Z3C□HS1H

Y-axis stroke	Z-axis stroke	
	100~400	
100	9.5	
150	9.2	
200	8.8	
250	8.5	
300	8.2	
350	7.8	
400	7.6	

Maximum Speed by Stroke (mm/s) (Note 4)

Z3C□HS1H

	120~670	720~770	820~870	920~970	1020~1070
X-axis	1200	860	695	570	460
Z-axis	600				
Y-axis	960				

ICSB3 [ICSPB3]-Z3C□HS1H-CT-SC (Cable track - Self-standing cable specification)

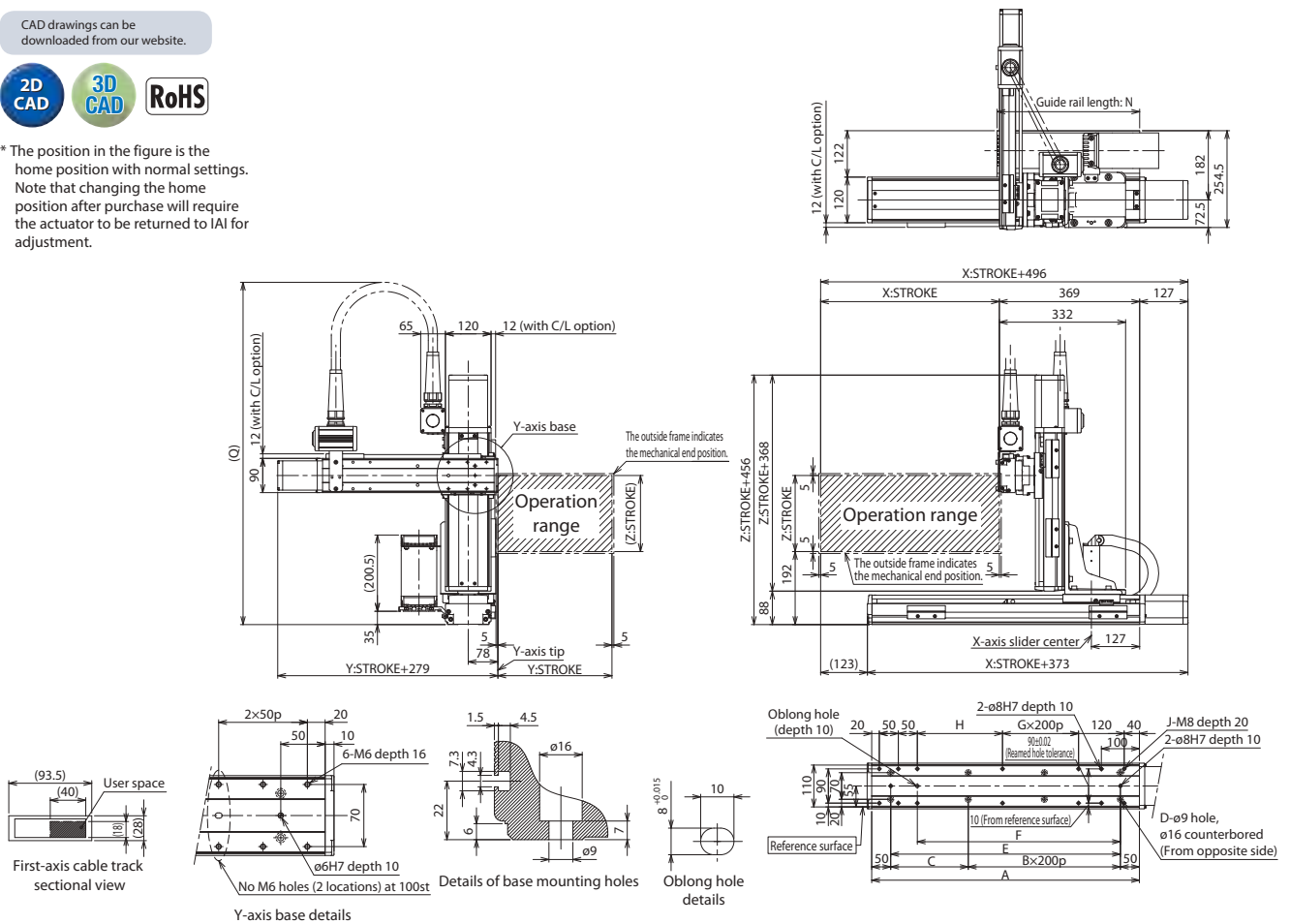
Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Q dimension

Z-axis	Y-axis	100	150	200	250	300	350	400
100	900	900	950	950	1000	1000	1000	1000
150	1000	1000	1050	1050	1100	1100	1100	1100
200	1100	1100	1150	1150	1200	1200	1200	1200
250	1200	1200	1250	1250	1300	1300	1300	1300
300	1300	1300	1350	1350	1400	1400	1400	1400
350	1400	1400	1450	1450	1500	1500	1500	1500
400	1500	1500	1550	1550	1600	1600	1600	1600

X-axis stroke	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070
A	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-Z3G□HS2H

ICSPB3-Z3G□HS2H

High-Precision Specification

±10µm Standard

±5µm High-Precision

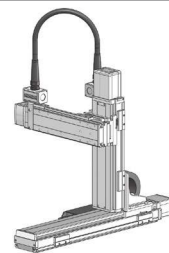
Battery-less Absolute

X-Y-Z 3-axis

XZ+YS (Y Slider Z Upright)

High Speed Type

X: Lg (200W)
Z: Lg (400W)
Y: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Z-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Z-axis - Y-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	12: 120mm 127: 1270mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-PA/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

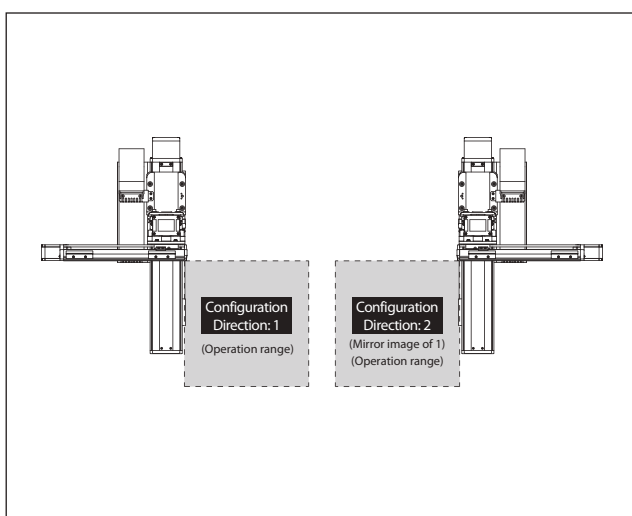
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-Z3G1HS2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-Z3G2HS2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]BNM-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	12: 120mm 127: 1270mm
[3]	X-axis option	Refer to Options table below.
[4]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[5]	Z-axis option	Refer to Options table below.
[6]	Y-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Y-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Z-axis - Y-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Y-axis setting)	NM	See P.369
Guide with ball-retaining mechanism (Y/Z-axis only) *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Y-axis is non-motor end (NM). To reverse the home position of the Y-axis, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISB[ISPB]-LXL-[1]-200-20-[2]-T2-[10]-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-LXM-[1]-400-10-[2]-T2-[10]-[5]	→ Please contact IAI for more details
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[6]-T2-[10]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names. Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [10] in the above model names. Please refer to P.11 for the exit directions.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Z-axis motor output/lead	400W/10mm
Y-axis motor output/lead	100W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

Z3G□HS2H

		Z-axis stroke								
		100	150	200	250	300	350	400	450	500
Y-axis stroke	100			16.5				15.4	13.7	12.0
	150			15.9				14.8	13.1	11.4
	200			15.4				14.2	12.5	10.8
	250			14.8				13.5	11.8	10.1
	300			14.2				12.9	11.2	9.5
	350			13.6				12.2	10.5	8.8
	400			12.2				11.6	9.9	8.2
	450			11.0					9.3	7.6
	500			10.1					8.7	7.0

Maximum Speed by Stroke (mm/s) (Note 4)

Z3G□HS2H

X-axis	120-770	820-870	920-970	1020-1070	1120-1170	1220-1270	
	1200	920	765	645	550	440	

	100-500
Z-axis	600
Y-axis	1200

ICSB3 [ICSPB3]-Z3G□HS2H-CT-SC (Cable track - Self-standing cable specification)

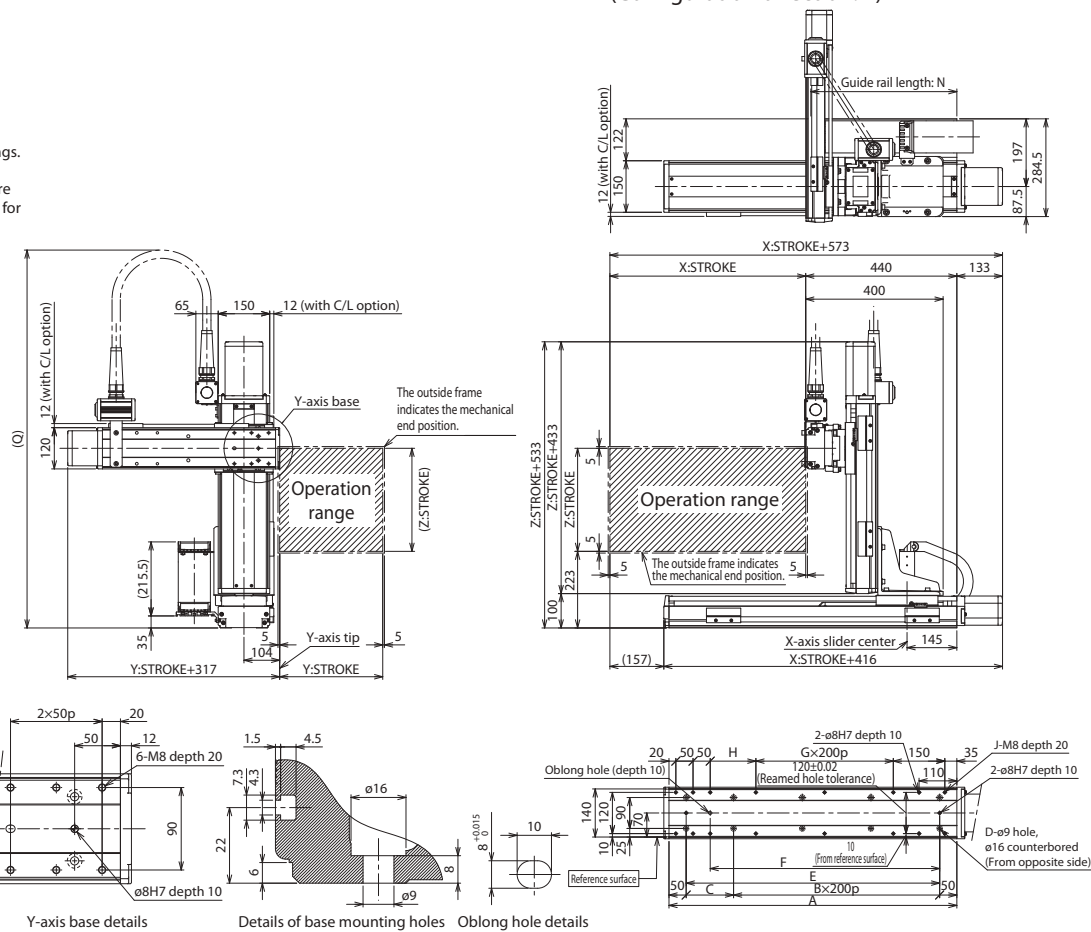
Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Q dimension

Z-axis	Y-axis									
	100	150	200	250	300	350	400	450	500	
100	950	1000	1000	1000	1050	1050	1100	1100	1150	
150	1050	1100	1100	1100	1150	1150	1200	1200	1250	
200	1150	1200	1200	1200	1250	1250	1300	1300	1350	
250	1250	1300	1300	1300	1350	1350	1400	1400	1450	
300	1350	1400	1400	1400	1450	1450	1500	1500	1550	
350	1450	1500	1500	1500	1550	1550	1600	1600	1650	
400	1550	1600	1600	1600	1650	1650	1700	1700	1750	
450	1650	1700	1700	1700	1750	1750	1800	1800	1850	
500	1750	1800	1800	1800	1850	1850	1900	1900	1950	

X-axis stroke	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270
A	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238
D	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233
J	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-G1J□HB1□

ICSPB3-G1J□HB1□

High-Precision Specification



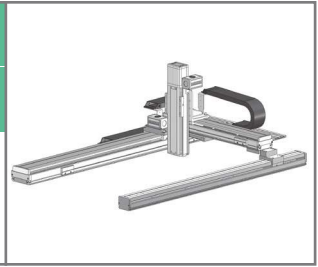
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Sm (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	50: 500mm 70: 700mm (Every 100mm)	10: 100mm 60: 600mm (Every 50mm)	T2: SCON XSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

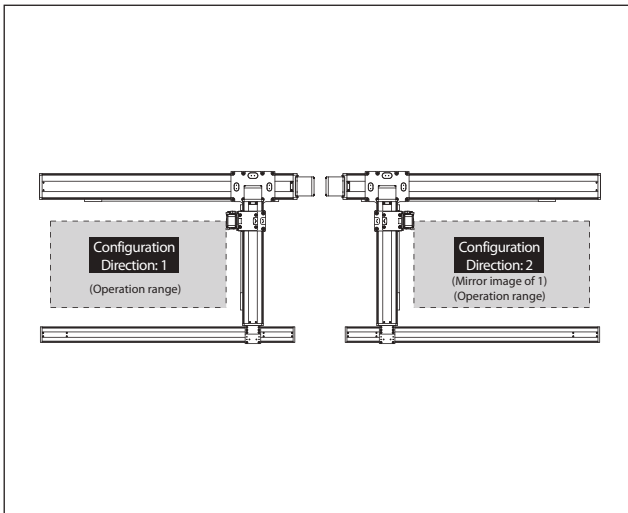
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G1J1HB1H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-G1J1HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G1J1HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-G1J2HB1H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-G1J2HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G1J2HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥-⑦-T2-⑧-⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑩ in the above model names.

16: For Z-axis High Speed type

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with ⑪ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	50: 500mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 60: 600mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/16mm (H), 8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

G1J□HB1H

Z-axis stroke	Y-axis stroke
	500~700
100	3.5
150	
200	
250	
300	
350	
400	
450	
500	
550	
600	

G1J□HB1L

Z-axis stroke	Y-axis stroke
	500~700
100	14.0
150	
200	
250	
300	
350	
400	
450	
500	
550	
600	

G1J□HB1M

Z-axis stroke	Y-axis stroke
	500~700
100	7.0
150	
200	
250	
300	
350	
400	
450	
500	
550	
600	

Maximum Speed by Stroke (mm/s) (Note 4)

G1J□HB1H

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	—	960	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

G1J□HB1M

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	—	480	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

G1J□HB1L

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	—	240	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

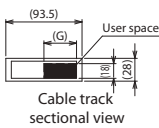
ICSB3 [ICSPB3]-G1J□HB1□-CT-CT (Cable track specification)

Dimensions

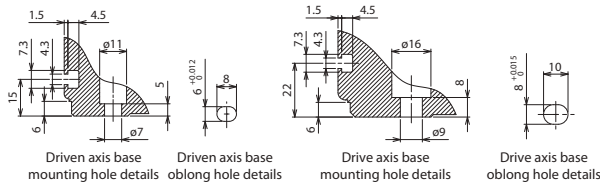
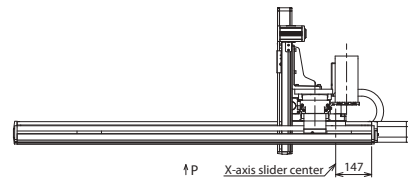
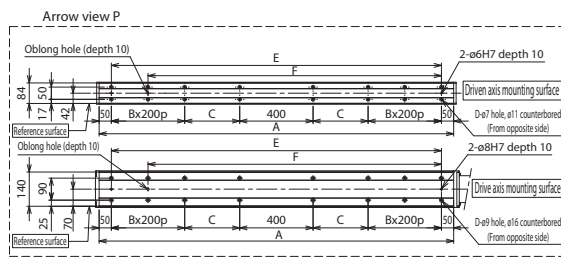
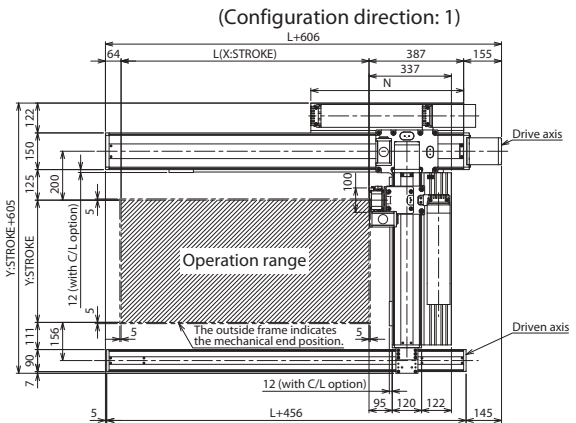
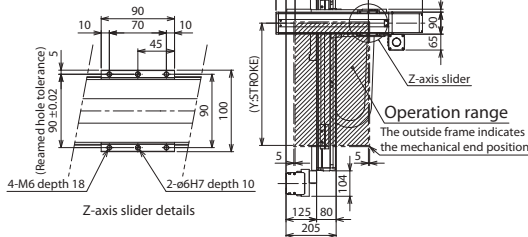
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Cable track location	G
First axis	40
Second axis	60



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G1J□HB2□

ICSPB3-G1J□HB2□

High-Precision Specification



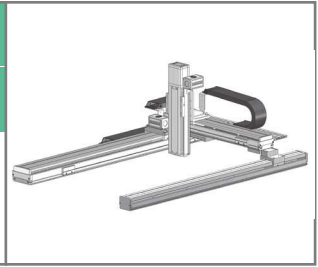
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	50: 500mm 70: 700mm (Every 100mm)	10: 100mm 60: 600mm (Every 50mm)	T2: SCON XSEL-PA/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

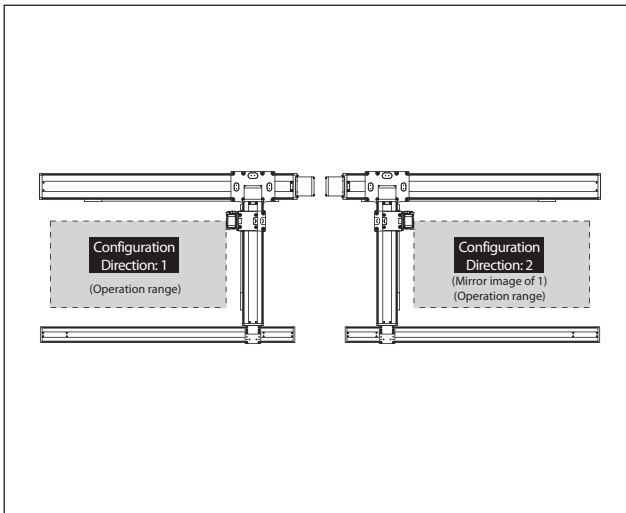
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G1J1HB2H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-G1J1HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G1J1HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-G1J2HB2H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-G1J2HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G1J2HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-③-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-③-100-⑦-⑧-T2-⑨-⑩	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑩ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type
* Cable exit direction is specified with ① in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	50: 500mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 60: 600mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■ **G1J□HB2H**

Z-axis stroke	Y-axis stroke 500~700	
	100	5.0
150		
200		
250		
300		
350		
400		
450		
500		
550		
600		

■ **G1J□HB2L**

Z-axis stroke	Y-axis stroke 500~700	
	100	20.0
150		
200		
250		
300		
350		
400		
450		19.5
500		19.0
550		18.5
600		18.0

■ **G1J□HB2M**

Z-axis stroke	Y-axis stroke 500~700	
	100	10.0
150		
200		
250		
300		
350		
400		
450		
500		
550		
600		

Maximum Speed by Stroke (mm/s) (Note 4)

■ **G1J□HB2H**

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■ **G1J□HB2M**

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■ **G1J□HB2L**

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

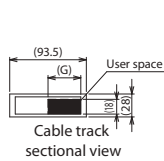
ICSB3 [ICSPB3]-G1J□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.

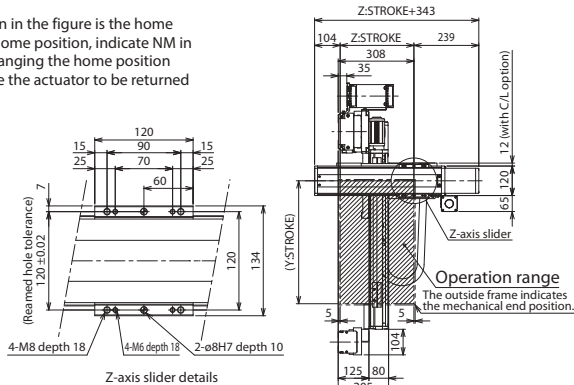


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

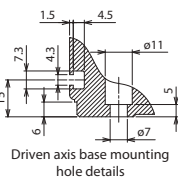
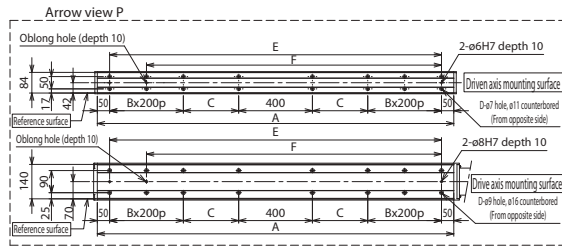
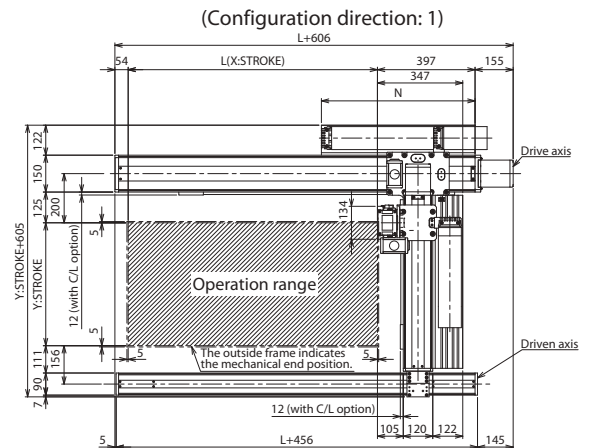


Cable track sectional view

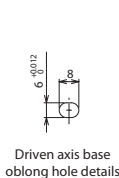
Cable track location	G
First axis	40
Second axis	60



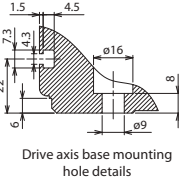
Z-axis slider details



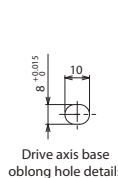
Driven axis base mounting hole details



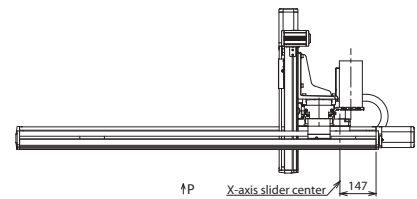
Driven axis base oblong hole details



Drive axis base mounting hole details



Drive axis base oblong hole details



X-axis slider center

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G1J□HB3□

ICSPB3-G1J□HB3□



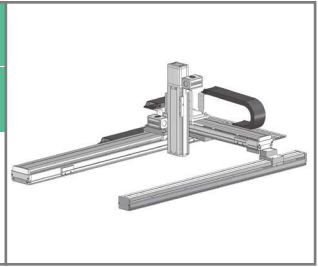
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lq (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	50: 500mm 70: 700mm (Every 100mm)	10: 100mm 60: 600mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

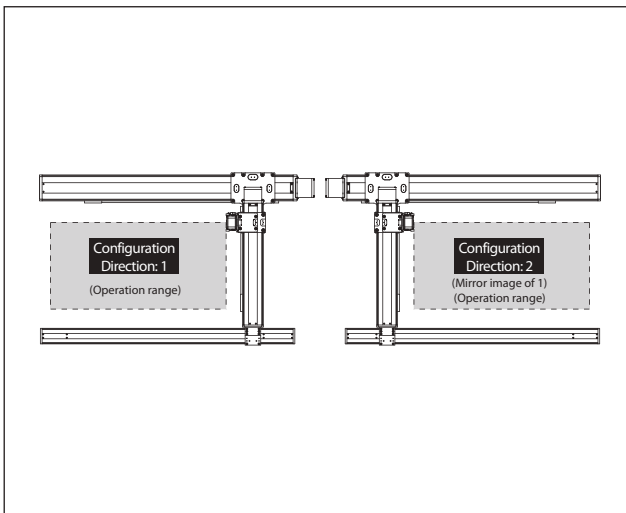
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G1J1HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-G1J1HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-G1J2HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-G1J2HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-⑩-⑥-T2-⑦-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
* Cable exit direction is specified with ③ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	50: 500mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 60: 600mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

G1J□HB3H

Z-axis stroke	Y-axis stroke	
	500~700	
100	10.0	
150	10.0	
200	10.0	
250	10.0	
300	10.0	
350	10.0	
400	10.0	
450	10.0	
500	10.0	
550	10.0	
600	10.0	

G1J□HB3M

Z-axis stroke	Y-axis stroke	
	500~700	
100	20.0	
150	20.0	
200	20.0	
250	20.0	
300	20.0	
350	20.0	
400	20.0	
450	19.5	
500	19.0	
550	18.5	
600	18.0	

Maximum Speed by Stroke (mm/s) (Note 4)

G1J□HB3H

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200		—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200			—	—	—	—	—	—	—	—	—	—	—	—	—	—

G1J□HB3M

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200		—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600			—	—	—	—	—	—	—	—	—	—	—	—	—	—

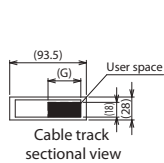
ICSB3 [ICSPB3]-G1J□HB3□-CT-CT (Cable track specification)

Dimensions

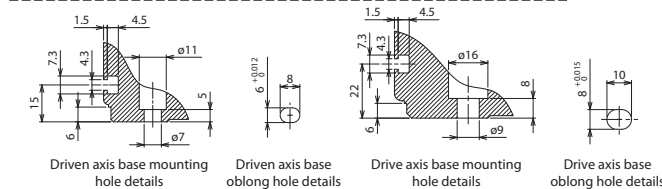
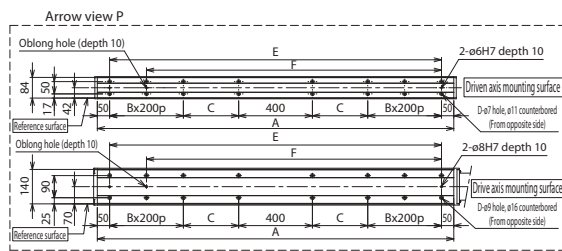
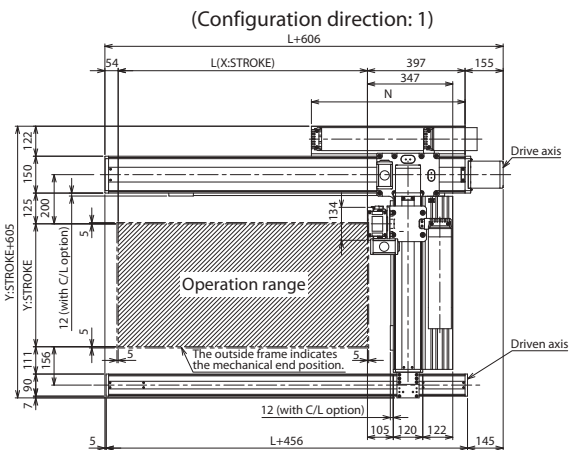
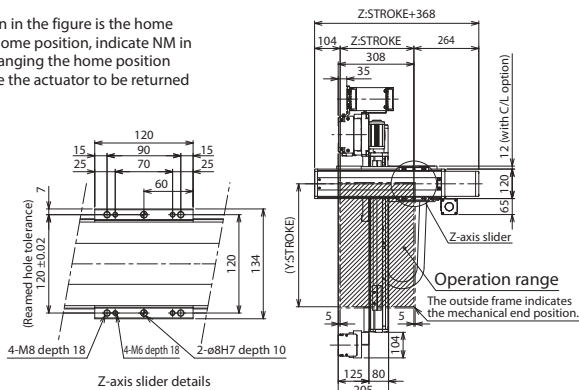
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Cable track location	G
First axis	40
Second axis	60



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HB1□

ICSPB3-G2J□HB1□

High-Precision Specification

±10μm Standard
±5μm High-Precision

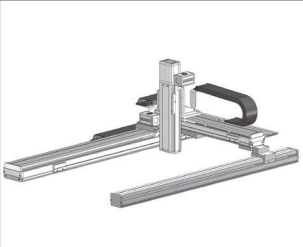
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Sm (60W)



Model Specification Items

Series: ICSB3: Standard 3-axis specification, ICSPB3: High precision 3-axis specification

Type: Refer to Model Specification table below

Encoder Type: WA: Battery-less Absolute

X-axis Stroke/Option: 100: 1000mm, 250: 2500mm (Every 100mm)

Y-axis Stroke/Option: 80: 800mm, 120: 1200mm (Every 50mm)

Z-axis Stroke/Option: 10: 100mm, 60: 600mm (Every 50mm)

Applicable Controllers: T2: SCON, SSEL, XSEL-P/Q, XSEL-RA/SA

Cable Length: 3L: 3m, 5L: 5m, □L: Specified length

Y-axis - Z-axis Cable Management: Refer to Explanation of Model Designations below

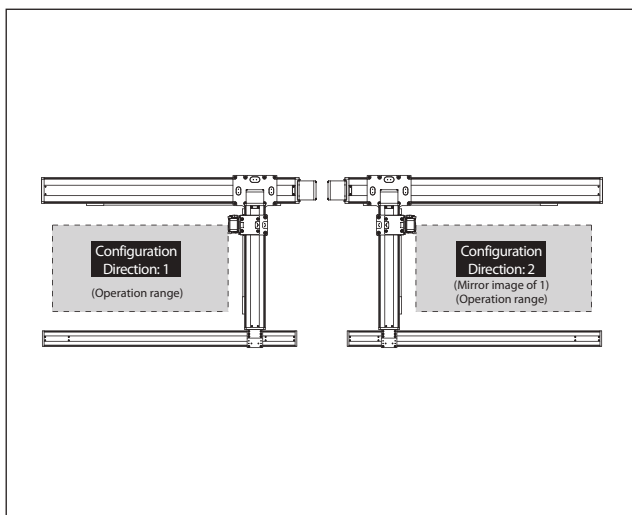
Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G2J1HB1H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G2J1HB1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-G2J1HB1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-G2J2HB1H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G2J2HB1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-G2J2HB1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-[1]-400-20-[2]-T2-[11]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXMX-[1]-200-20-[4]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-[10]-[6]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [10] in the above model names.
16: For Z-axis High Speed type
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type

* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm ? 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	80: 800mm ? 120: 1200mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? 60: 600mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/16mm (H), 8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■G2J□HB1H		■G2J□HB1M		■G2J□HB1L	
Y-axis stroke 800~1,200		Y-axis stroke 800~1,200		Y-axis stroke 800~1,200	
Z-axis stroke	3.5	Z-axis stroke	7.0	Z-axis stroke	14.0
100					
150					
200					
250					
300					
350					
400					
450					
500					
550					
600					

Maximum Speed by Stroke (mm/s) (Note 4)

■G2J□HB1H		100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	370	340	340
Y-axis	—	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	960	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■G2J□HB1M		100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	370	340	340
Y-axis	—	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	480	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■G2J□HB1L		100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	370	340	340
Y-axis	—	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	240	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

ICSB3 [ICSPB3]-G2J□HB1□-CT-CT (Cable track specification)

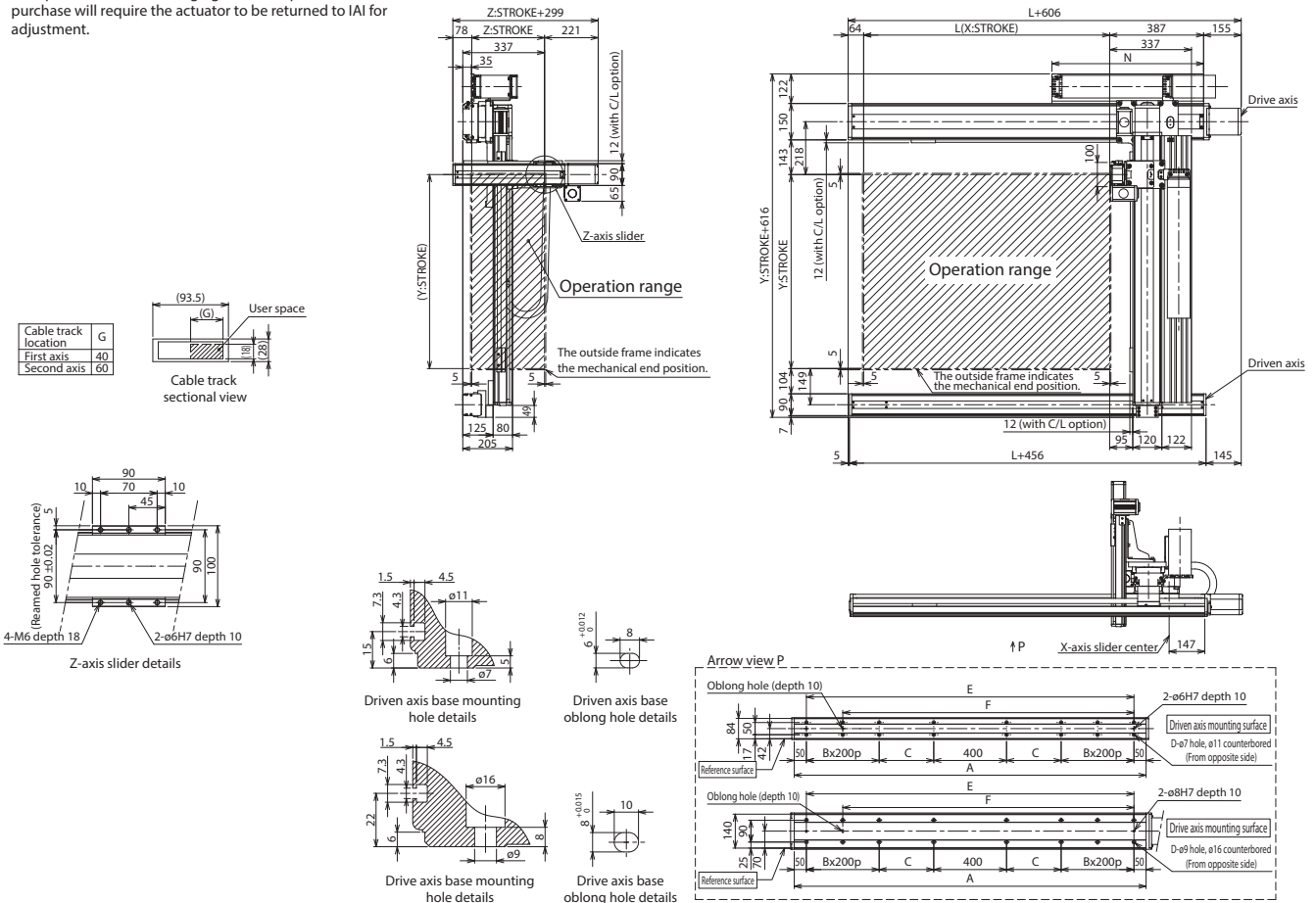
Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HB2□

ICSPB3-G2J□HB2□

High-Precision Specification

±10μm Standard
±5μm High Precision


Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

Series: ICSB3: Standard 3-axis specification, ICSPB3: High precision 3-axis specification

Type: Refer to Model Specification table below

Encoder Type: WA: Battery-less Absolute

X-axis Stroke/Option: 100: 1000mm, 250: 2500mm (Every 100mm)

Y-axis Stroke/Option: 80: 800mm, 120: 1200mm (Every 100mm)

Z-axis Stroke/Option: 10: 100mm, 60: 600mm (Every 50mm)

Applicable Controllers: T2: SCON, SSEL, XSEL-P/Q, XSEL-RA/SA

Cable Length: 3L: 3m, 5L: 5m, □L: Specified length

Y-axis-Z-axis Cable Management: Refer to Explanation of Model Designations below

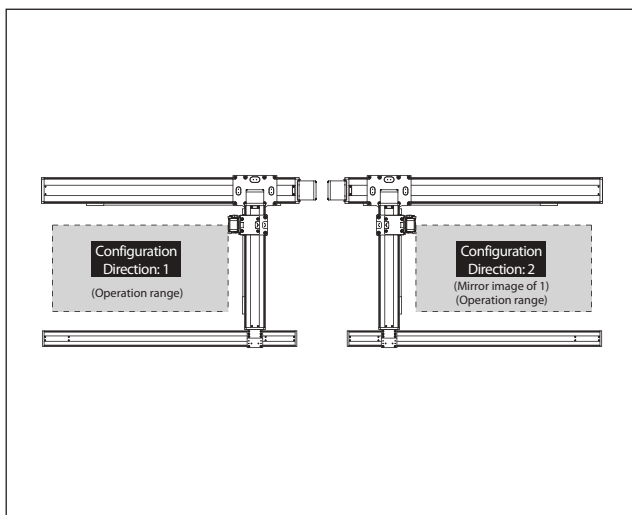
Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G2J1HB2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G2J1HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-G2J1HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-G2J2HB2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G2J2HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-G2J2HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-[1]-400-20-[2]-T2-[11]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXMX-[1]-200-20-[4]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-100-[6]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names. Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [10] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type

* Cable exit direction is specified with [11] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm ? 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	80: 800mm ? 120: 1200mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? 60: 600mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
* Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■G2J□HB2H

Z-axis stroke	Y-axis stroke	
	800~1,200	1200
100	5.0	
150		
200		
250		
300		
350		
400		
450		
500		
550		
600		

■G2J□HB2M

Z-axis stroke	Y-axis stroke	
	800~1,200	1200
100	10.0	
150		
200		
250		
300		
350		
400		
450		
500		
550		
600		

■G2J□HB2L

Z-axis stroke	Y-axis stroke	
	800~1100	1200
100	20.0	20.0
150		20.0
200		20.0
250		19.5
300		18.9
350		18.2
400		17.6
450		17.0
500		16.4
550		15.7
600		15.1

Maximum Speed by Stroke (mm/s) (Note 4)

■G2J□HB2H

	100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1100	1150	1000	950	830	740	650	590	490	540	490	440	370	340
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■G2J□HB2M

	100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1100	1150	1000	950	830	740	650	590	490	540	490	440	370	340
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■G2J□HB2L

	100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1100	1150	1000	950	830	740	650	590	490	540	490	440	370	340
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

ICSB3 [ICSPB3]-G2J□HB2-CT-CT□ (Cable track specification)

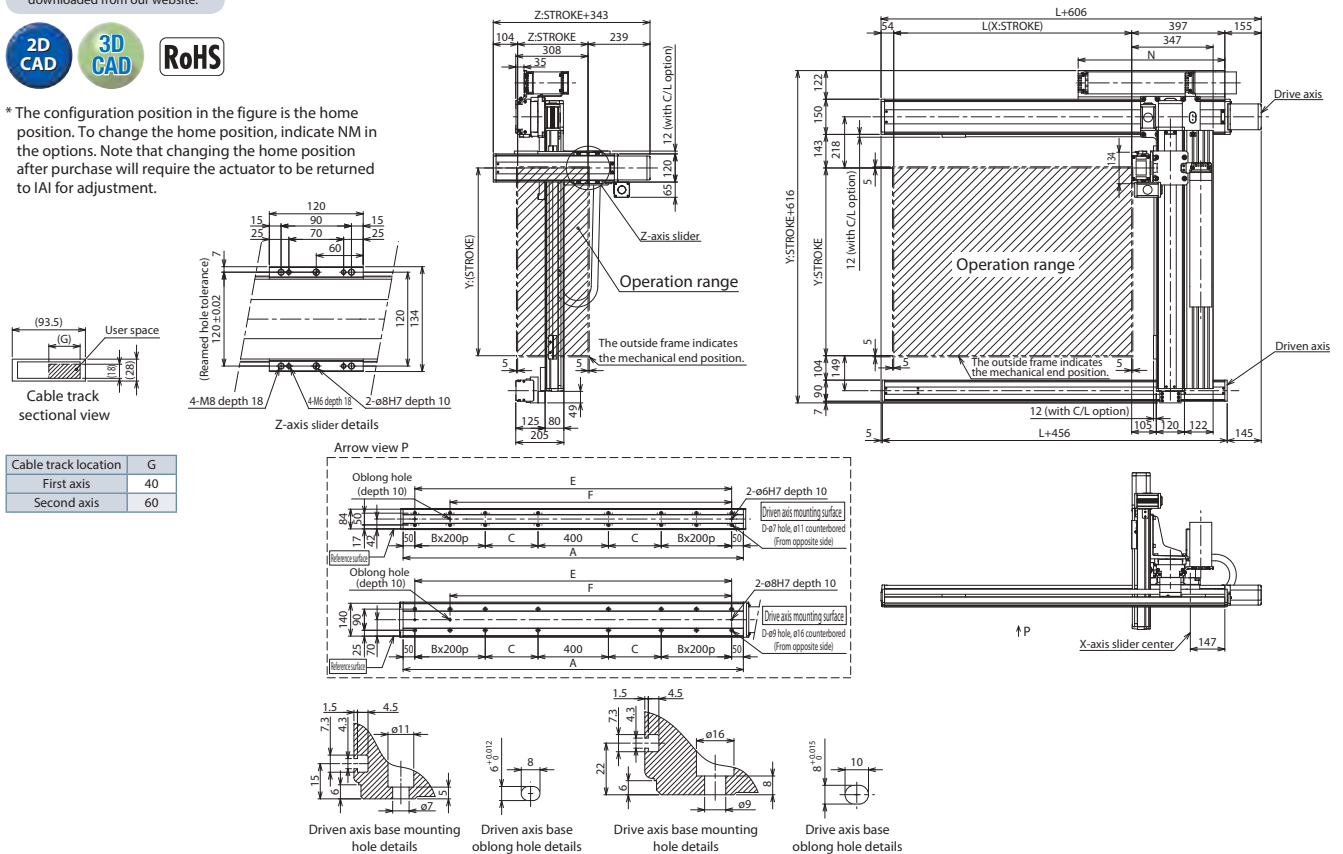
Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Cable track location	G
First axis	40
Second axis	60

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HB3□

ICSPB3-G2J□HB3□

High-Precision Specification

±10μm Standard
±5μm High-Precision

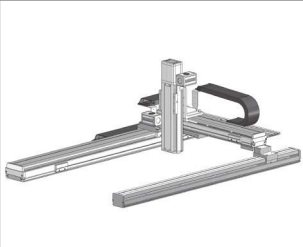
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series: ICSB3: Standard 3-axis specification; ICSPB3: High precision 3-axis specification

Type: Refer to Model Specification table below

Encoder Type: WA: Battery-less Absolute

X-axis Stroke/Option: 100: 1000mm; 250: 2500mm (Every 100mm)

Y-axis Stroke/Option: 80: 800mm; 120: 1200mm (Every 50mm)

Z-axis Stroke/Option: 10: 100mm; 60: 600mm (Every 50mm)

Applicable Controllers: T2: SCON; SSEL; XSEL-P/Q; XSEL-RA/SA

Cable Length: 3L: 3m; 5L: 5m; □L: Specified length

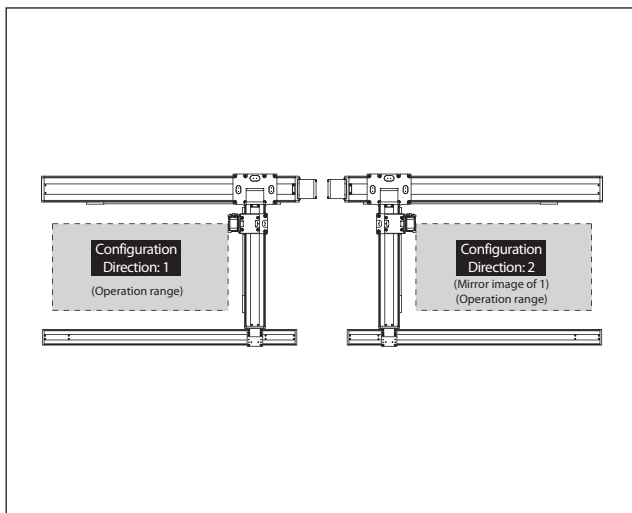
Y-axis-Z-axis Cable Management: Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G2J1HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G2J1HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-G2J2HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G2J2HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-[1]-400-20-[2]-T2-[11]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXMX-[1]-200-20-[4]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-[10]-[6]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names. Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names. 20: For Z-axis High Speed type; 10: For Z-axis Medium Speed type
* Cable exit direction is specified with [11] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm ? 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	80: 800mm ? 120: 1200mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? 60: 600mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■G2J□HB3H

Z-axis stroke	Y-axis stroke	
	800~1,200	
100	10.0	
150		
200		
250		
300		
350		
400		
450		
500		
550		
600		

■G2J□HB3M

Z-axis stroke	Y-axis stroke			
	800~1000	1100	1200	
100	20.0	20.0	20.0	
150		20.0	20.0	
200		20.0	19.6	
250		20.0	18.9	
300		20.0	18.3	
350		19.7	17.7	
400		19.1	17.1	
450		19.5	18.4	16.4
500		19.0	17.8	15.8
550		18.5	17.1	15.1
600		18.0	16.5	14.5

Maximum Speed by Stroke (mm/s) (Note 4)

■G2J□HB3H

	100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	370	340	—
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■G2J□HB3M

	100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	370	340	—
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

ICSB3 [ICSPB3]-G2J□HB3□-CT-CT (Cable track specification)

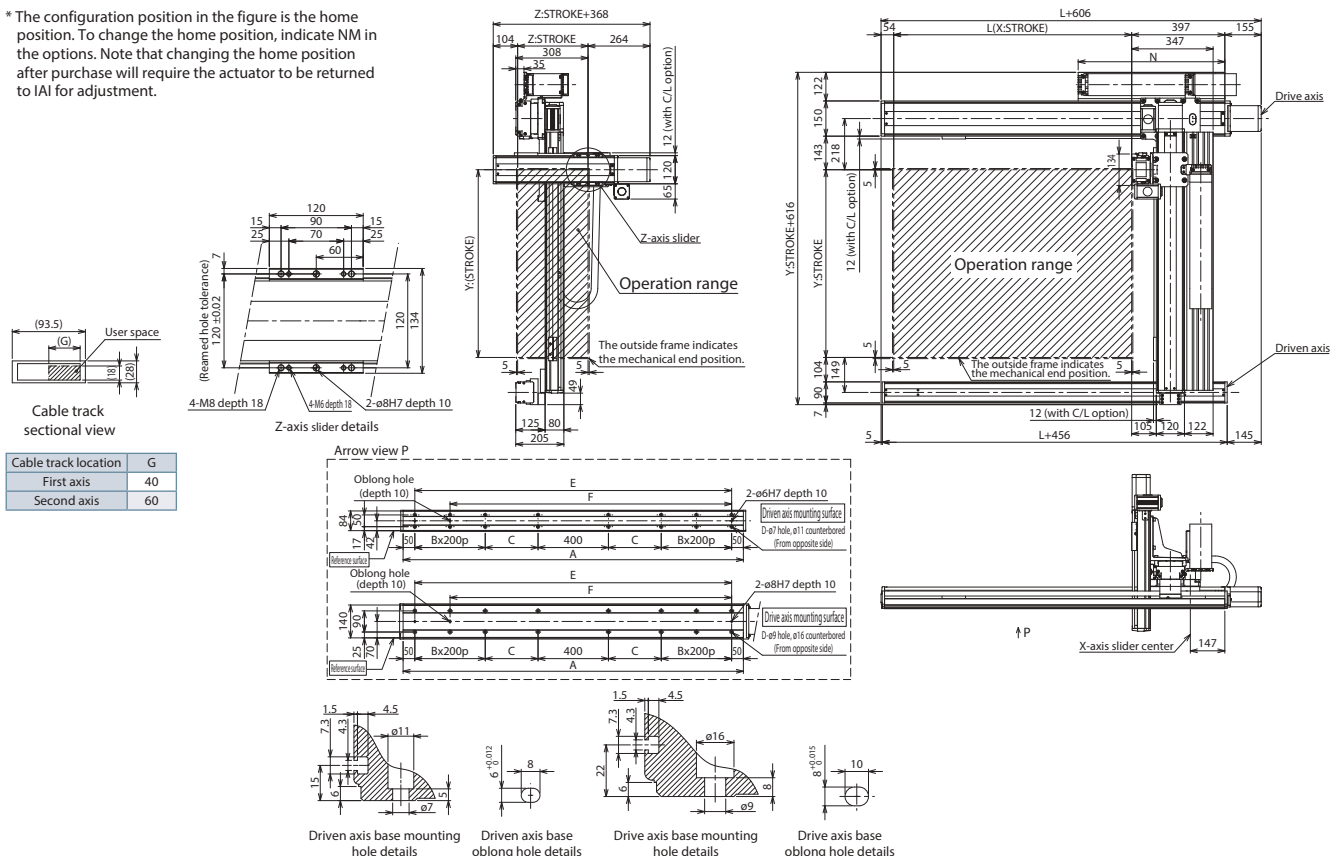
Dimensions

CAD drawings can be downloaded from our website.



(Configuration direction: 1)

* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G1J□HS1□

ICSPB3-G1J□HS1□ High-Precision Specification

±10µm Standard

±5µm High-Precision

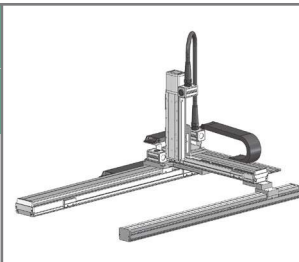
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz. Gantry Z Slider)

High Speed Long Type

X:Lg (400W)
Y:Md (200W)
Z:Sm (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	50: 500mm 70: 700mm (Every 100mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

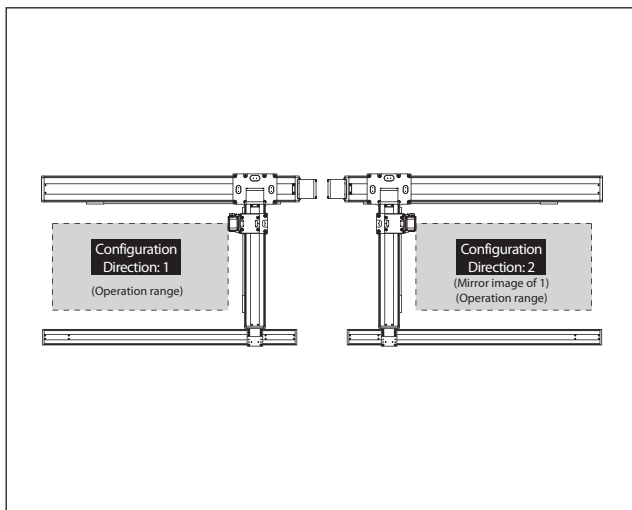
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-G1J1HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-G1J1HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-G1J2HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-G1J2HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-[1]-400-20-[2]-T2-[11]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[4]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-[10]-[6]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [10] in the above model names.

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with [11] in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	50: 500mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■G1J□HS1M

Z-axis stroke	Y-axis stroke	
	500~700	
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

■G1J□HS1L

Z-axis stroke	Y-axis stroke	
	500~700	
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

■G1J□HS1M

	100~400	500~700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	480	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■G1J□HS1L

	100~400	500~700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	240	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

ICSB3 [ICSPB3]-G1J□HS1□-CT-CTSC (Cable track - Cable track + Self-standing cable specification)

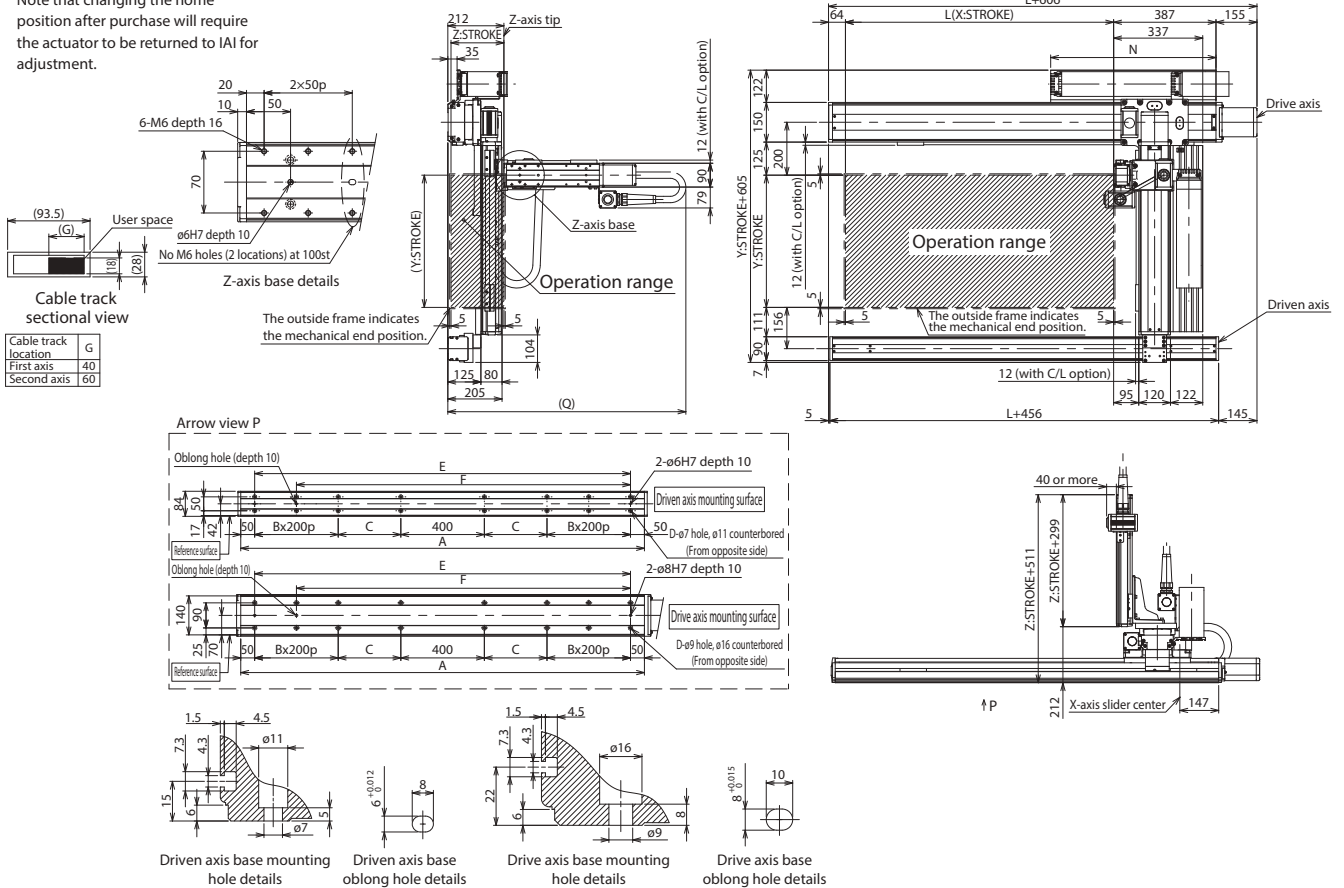
Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Q dimension

Z-axis stroke	100	150	200	250	300	350	400	450	500
Q	900	950	1000	1050	1100	1150	1200	1250	1300

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G1J□HS2L

ICSPB3-G1J□HS2L High-Precision Specification

±10μm
Standard

±5μm
High Precision

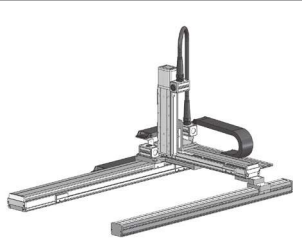
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz. Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	50: 500mm 70: 700mm (Every 100mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

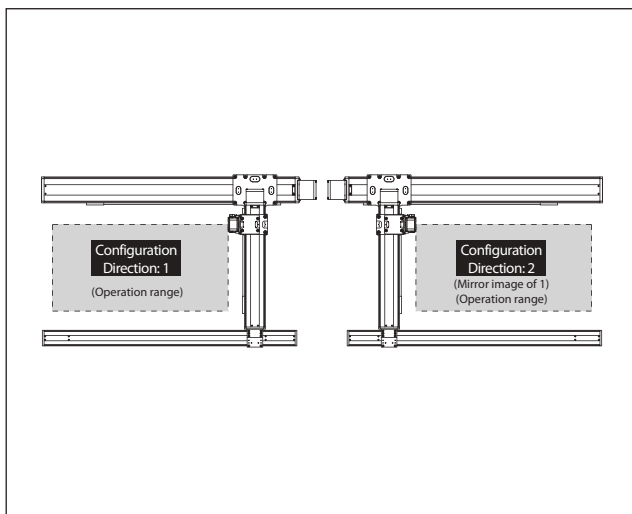
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	L	ICSB3[ICSPB3]-G1J1HS2L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
2	L	ICSB3[ICSPB3]-G1J2HS2L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX- [1] -400-20- [2] -T2- [10] - [3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0- [2]	—
Y-axis	ISB[ISPB]-MXM- [1] -200-20- [4] -T2- [10] - [5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- [1] -100-5- [6] -T2- [10] - [7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [10] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	50: 500mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/5mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

ICSB3-G1J□HS3M

ICSPB3-G1J□HS3M High-Precision Specification

±10µm
Standard

±5µm
High-Precision

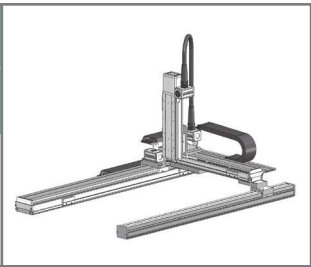
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz. Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	50: 500mm 70: 700mm (Every 100mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

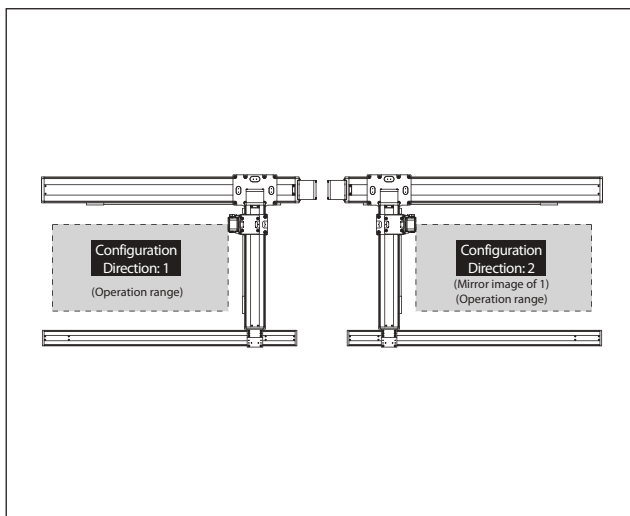
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-G1J1HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-G1J2HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-[1]-400-20-[2]-T2-[10]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[4]-T2-[10]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-10-[6]-T2-[10]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [9] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	50: 500mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

G1J□HS3M

Z-axis stroke	Y-axis stroke	
	500~700	
100	14.3	
150	13.6	
200	13.0	
250	12.3	
300	11.7	
350	11.1	
400	10.5	
450	9.8	
500	9.2	

Maximum Speed by Stroke (mm/s) (Note 4)

G1J□HS3M

	100~500	500~700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—		1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—		1200	—												
Z-axis	600		—													

ICSB3 [ICSPB3]-G1J□HS3M-CT-CTSC (Cable track - Cable track + Self-standing cable specification)

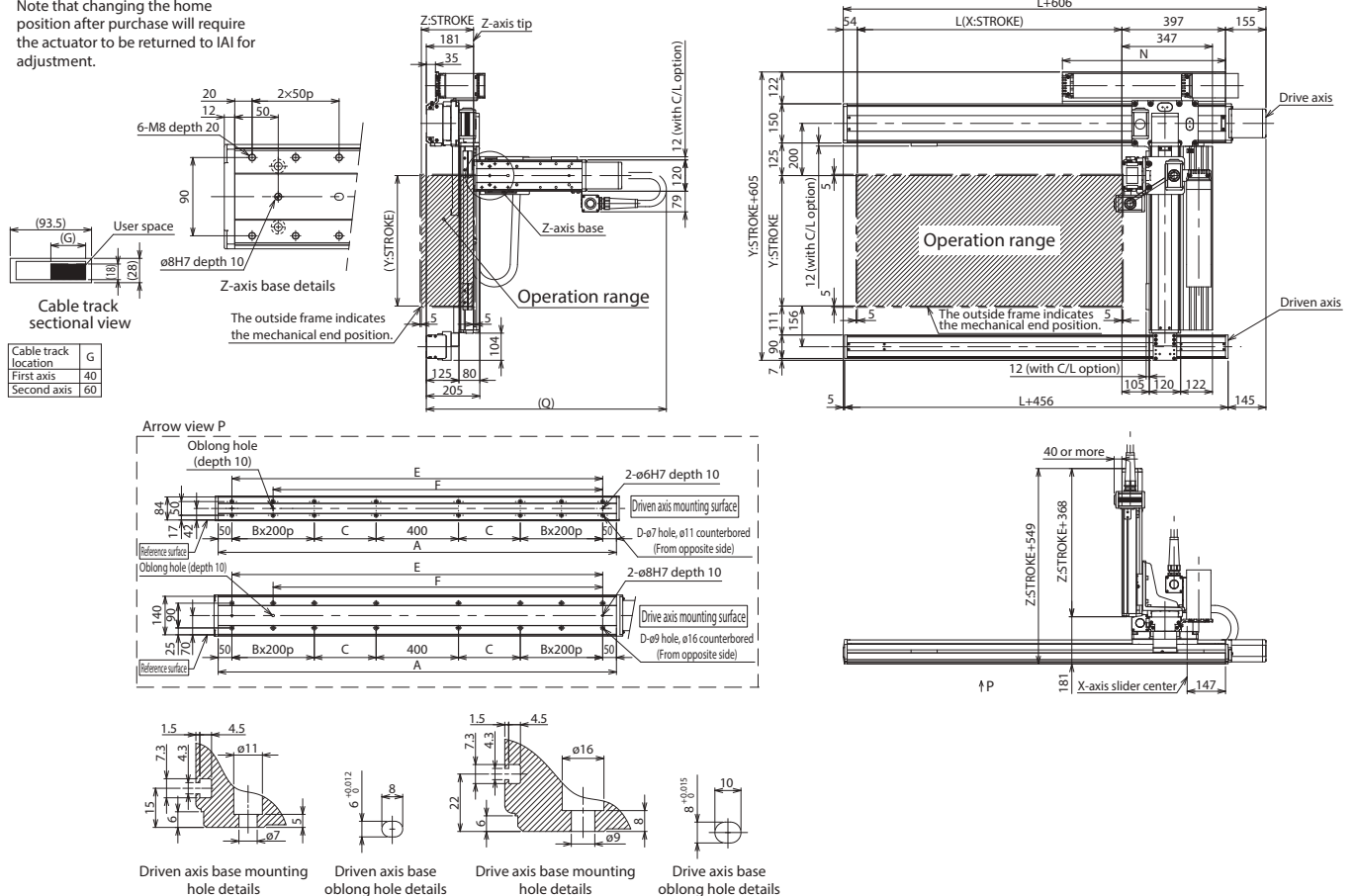
Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Q dimension

Z-axis stroke	100	150	200	250	300	350	400	450	500
Q	900	950	1000	1050	1100	1150	1200	1250	1300

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HS1□

ICSPB3-G2J□HS1□

High-Precision Specification

±10µm Standard

±5µm High Precision

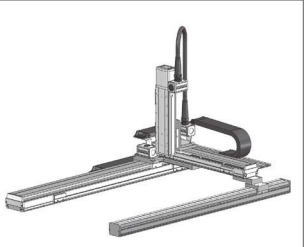
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz. Gantry Z Slider)

High Speed Long Type

X:Lg (400W)
Y: Md (200W)
Z: 5m (60W)



Model Specification Items

Series: ICSB3: Standard 3-axis specification; ICSPB3: High precision 3-axis specification

Type: Refer to Model Specification table below

Encoder Type: WA: Battery-less Absolute

X-axis Stroke/Option: 100: 1000mm; 250: 2500mm (Every 100mm)

Y-axis Stroke/Option: 80: 800mm; 120: 1200mm (Every 100mm)

Z-axis Stroke/Option: 10: 100mm; 40: 400mm (Every 50mm)

Applicable Controllers: T2: SCON; SSEL; XSEL-P/Q; XSEL-RA/SA

Cable Length: 3L: 3m; 5L: 5m; □L: Specified length

Y-axis - Z-axis Cable Management: Refer to Explanation of Model Designations below

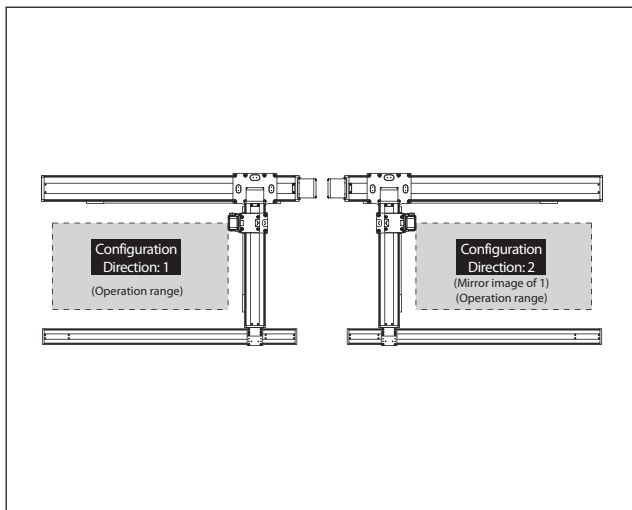
Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-G2J1HS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G2J1HS1L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-G2J2HS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G2J2HS1L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm ? : 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	80: 800mm ? : 120: 1200mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? : 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, 369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-⑩-③	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXMX-①-200-20-④-T2-⑩-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑩-⑥-T2-⑩-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names. Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑩ in the above model names.

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

		Y-axis stroke	
		800~1,200	
Z-axis stroke	100	4.3	
	150	3.9	
	200	3.5	
	250	3.1	
	300	2.8	
	350	2.4	
	400	2.1	

		Y-axis stroke	
		800~1,200	
Z-axis stroke	100	11.3	
	150	10.9	
	200	10.5	
	250	10.1	
	300	9.8	
	350	9.4	
	400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

	100~400	800~900	1000~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1100	1150	1000	950	830	740	650	590	490	540	490	440	370	340
Y-axis	—	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	480	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

G2J□HS1L

	100~400	800~900	1000~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1100	1150	1000	950	830	740	650	590	490	540	490	440	370	340
Y-axis	—	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	240	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

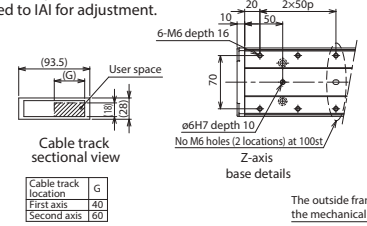
ICSB3 [ICSPB3]-G2J□HS1□-CT-CTSC (Cable track - Self-standing cable specification)

Dimensions

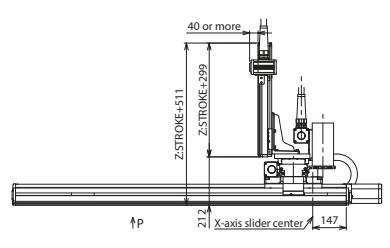
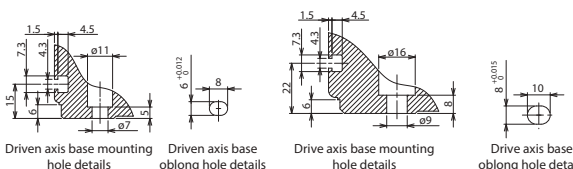
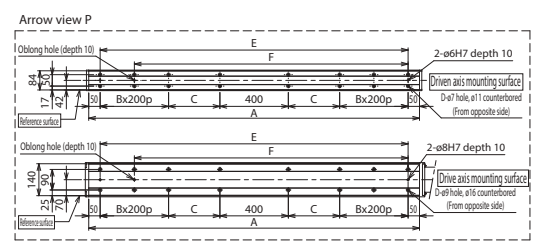
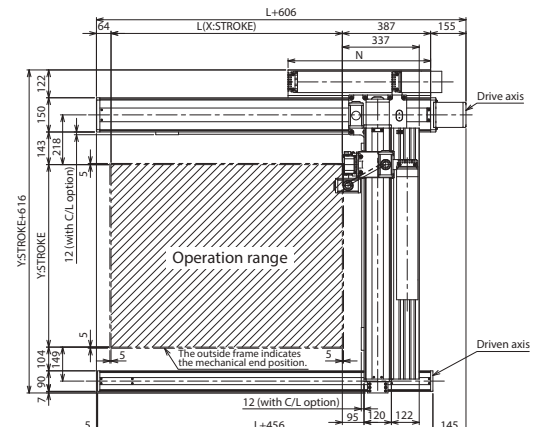
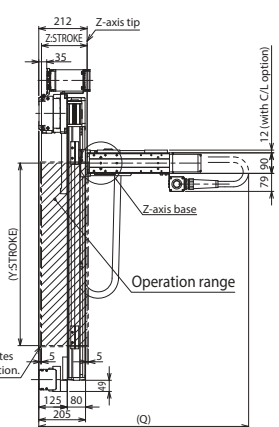
CAD drawings can be downloaded from our website.

2D CAD 3D CAD RoHS

* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



(Configuration direction: 1)



Q dimension

Z-axis stroke	100	150	200	250	300	350	400	450	1250
Q	900	950	1000	1050	1100	1150	1200	500	1300

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HS2L

ICSPB3-G2J□HS2L High-Precision Specification

±10µm Standard

±5µm High-Precision

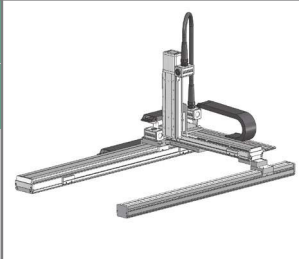
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	80: 800mm 120: 1200mm (Every 100mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

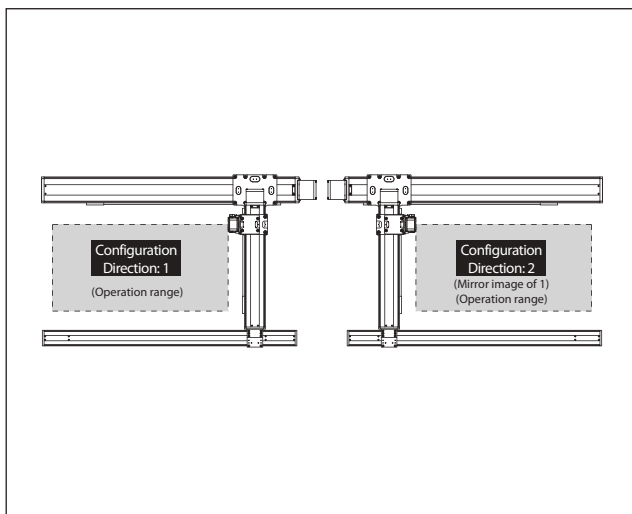
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	L	ICSB3[ICSPB3]-G2J1HS2L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	L	ICSB3[ICSPB3]-G2J2HS2L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX- <u>1</u> -400-20- <u>2</u> -T2- <u>10</u> - <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-MXMX- <u>1</u> -200-20- <u>4</u> -T2- <u>10</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- <u>1</u> -100-5- <u>6</u> -T2- <u>10</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [9] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [10] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	80: 800mm 120: 1200mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, 369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM).

To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/5mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

G2J□HS2L

Z-axis stroke	Y-axis stroke 800~1,200	
	100	150
100	14.8	
150	14.2	
200	13.6	
250	12.9	
300	12.3	
350	11.6	
400	11.0	
450	10.4	
500	9.8	

Maximum Speed by Stroke (mm/s) (Note 4)

G2J□HS2L

	100~500	800~900	1000~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	—	1150	1000	950	830	740	650	590	490	540	490	440	370	340
Y-axis	—	1200	—	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

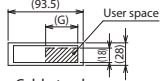
ICSB3 [ICSPB3]-G2J□HS2L-CT-CTSC (Cable track - Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



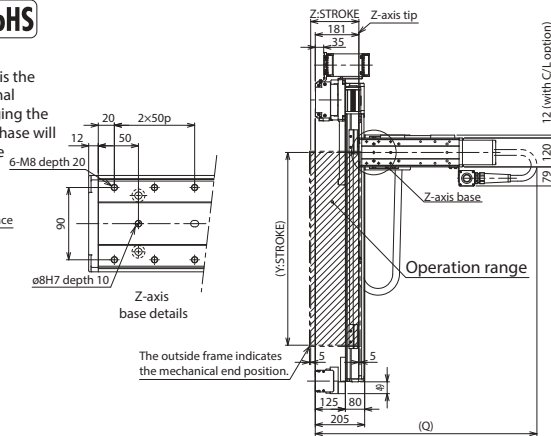
* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



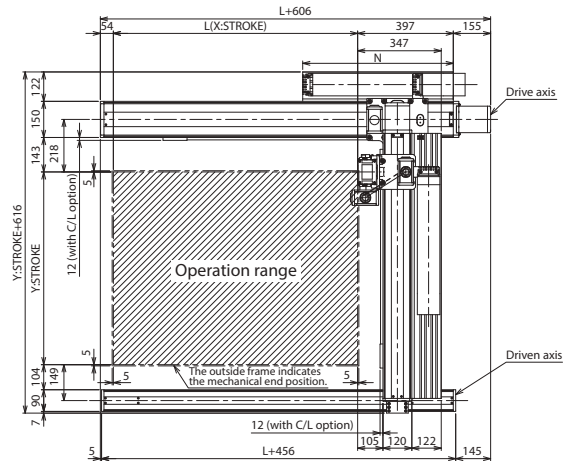
Cable track sectional view

Cable track location	G
First axis	40
Second axis	60

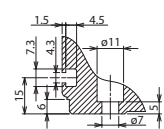
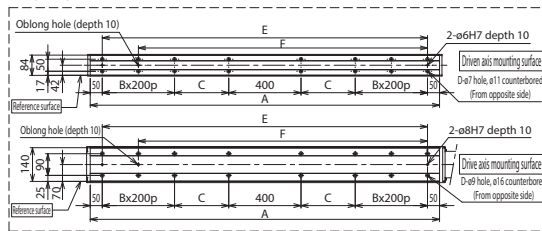
(Configuration direction: 1)



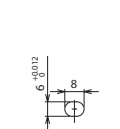
The outside frame indicates the mechanical end position.



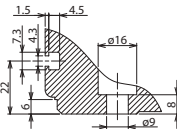
Arrow view P



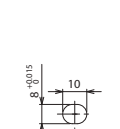
Drive axis base mounting hole details



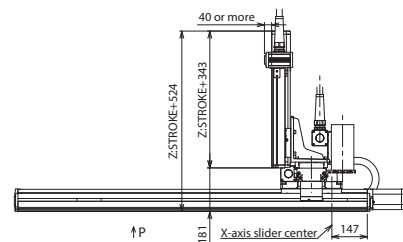
Drive axis base oblong hole details



Drive axis base mounting hole details



Drive axis base oblong hole details



Q dimension

Z-axis stroke	100	150	200	250	300	350	400	450	500
Q	900	950	1000	1050	1100	1150	1200	1250	1300

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HS3M

ICSPB3-G2J□HS3M

High-Precision Specification

±10µm
Standard

±5µm
High-Precision

Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz. Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	80: 800mm 120: 1200mm (Every 100mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON XSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

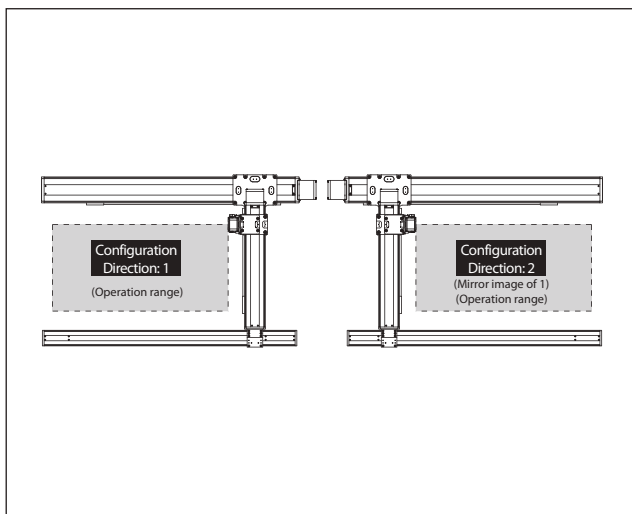
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-G2J1HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-G2J2HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXMX-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-10-⑥-T2-⑦-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	80: 800mm 120: 1200mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, 369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM).

To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

G2J□HS3M

		Y-axis stroke
		800~1,200
Z-axis stroke	100	14.3
	150	13.6
	200	13.0
	250	12.3
	300	11.7
	350	11.1
	400	10.5
	450	9.8
	500	9.2

Maximum Speed by Stroke (mm/s) (Note 4)

G2J□HS3M

	100~500	800~900	1000~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	—	1150	1000	950	830	740	650	590	490	540	490	440	370	340
Y-axis	—	1200	—	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

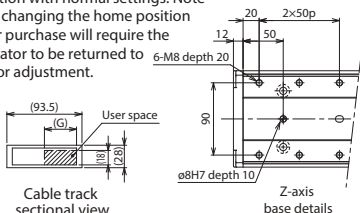
ICSB3 [ICSPB3]-G2J□HS3M-CT-CTSC (Cable track - Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



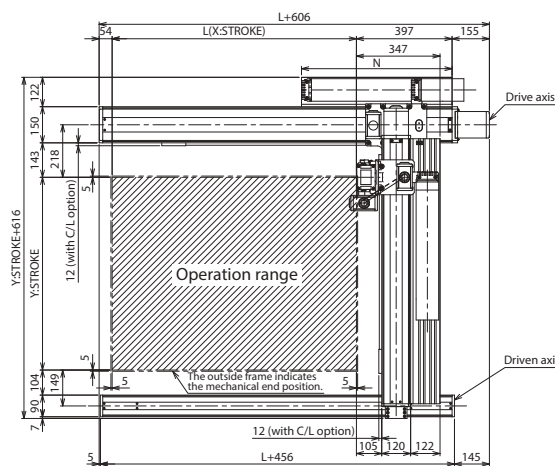
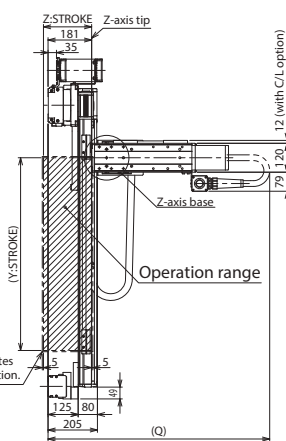
* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



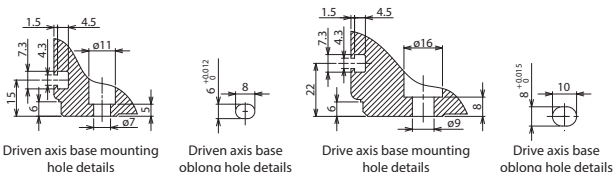
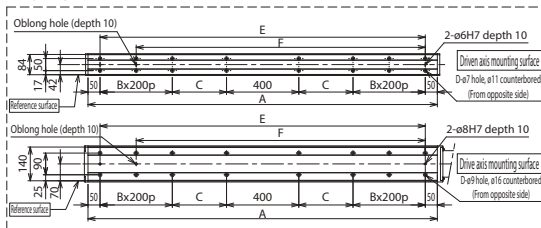
Cable track sectional view

Cable track location	G
First axis	40
Second axis	60

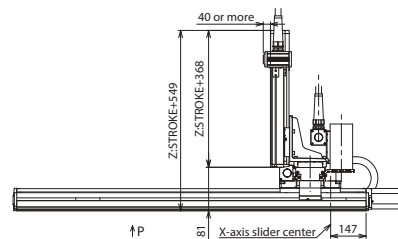
(Configuration direction: 1)



Arrow view P



Drive axis base mounting hole details, Drive axis base oblong hole details, Drive axis base mounting hole details, Drive axis base oblong hole details



Q dimension

Z-axis stroke	100	150	200	250	300	350	400	450	500
Q	900	950	1000	1050	1100	1150	1200	1250	1300

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-GB□HB1□

ICSPB3-GB□HB1□

High-Precision Specification

±10μm Standard

±5μm High-Precision

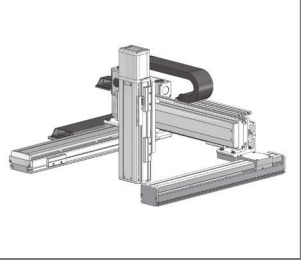
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Md (100W)
Y: Sml (60W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm> * For self-standing cable specification	30: 300mm table 60: 600mm table (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

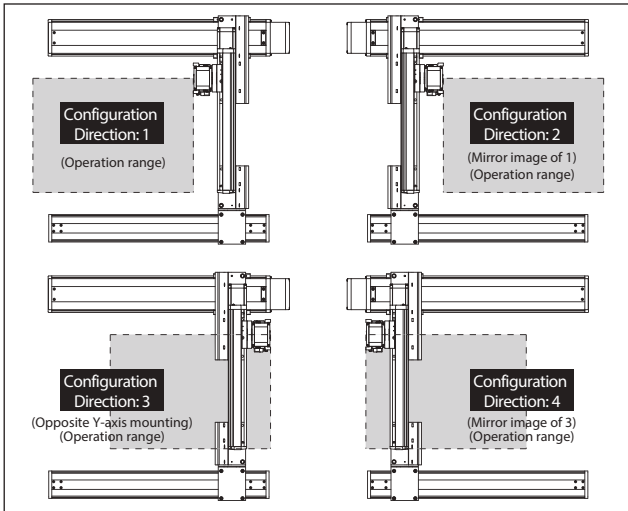
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GB1HB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB1HB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	M	ICSB3[ICSPB3]-GB2HB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB2HB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	M	ICSB3[ICSPB3]-GB3HB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB3HB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	M	ICSB3[ICSPB3]-GB4HB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB4HB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- <u>1</u> -100-20- <u>2</u> -T2- <u>11</u> - <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-SXM- <u>1</u> -60-16- <u>4</u> -T2- <u>11</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- <u>1</u> -60- <u>10</u> - <u>6</u> -T2- <u>11</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 60: 600mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/20mm
Y-axis motor output/lead	60W/16mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GB□HB1M

Z-axis stroke	Y-axis stroke				
	300-400	450	500	550	600
100	7.0	7.0	7.0	6.6	5.1
150		7.0	7.0	6.2	4.7
200		7.0	7.0	5.8	4.3
250		7.0	6.8	5.4	3.9
300		6.7	6.5	5.1	3.6

■GB□HB1L

Z-axis stroke	Y-axis stroke						
	300	350	400	450	500	550	600
100	7.6	7.6	7.3	6.9	6.6	6.1	5.8
150	7.2	7.2	6.9	6.5	6.2	5.8	5.5
200	6.9	6.9	6.6	6.1	5.8	5.4	5.1
250	6.5	6.5	6.2	5.8	5.5	5.1	4.8
300	6.3	6.2	5.9	5.5	5.2	4.8	4.5

Maximum Speed by Stroke (mm/s) (Note 4)

■GB□HB1M

	100-300	300-600	650-700	750-800	850-900	950-1000	1050-1100
X-axis	1200						
Y-axis	960						
Z-axis	480						

■GB□HB1L

	100-300	300-600	650-700	750-800	850-900	950-1000	1050-1100
X-axis	1200						
Y-axis	960						
Z-axis	240						

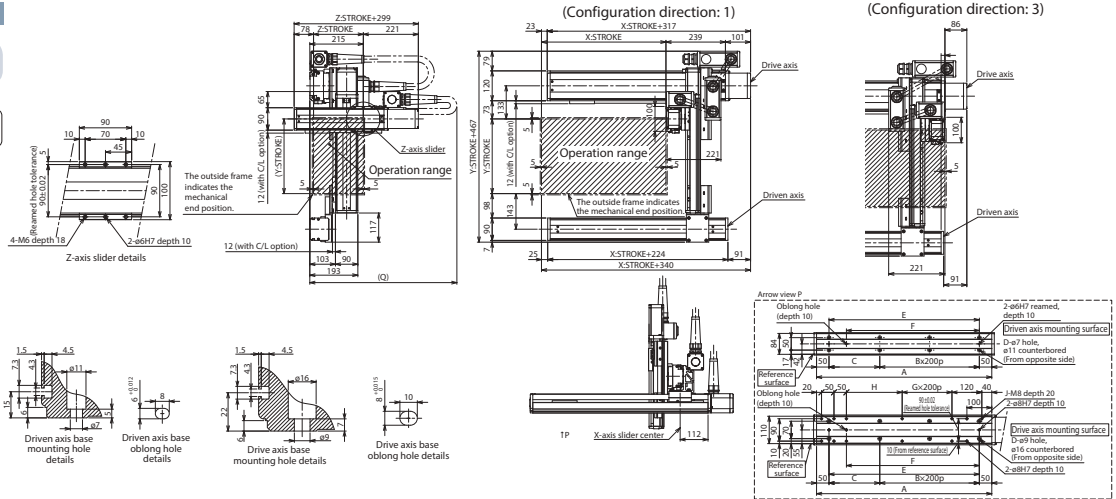
ICSB3 [ICSPB3]-GB□HB1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600
Q	700	750	750	800	800	850	850

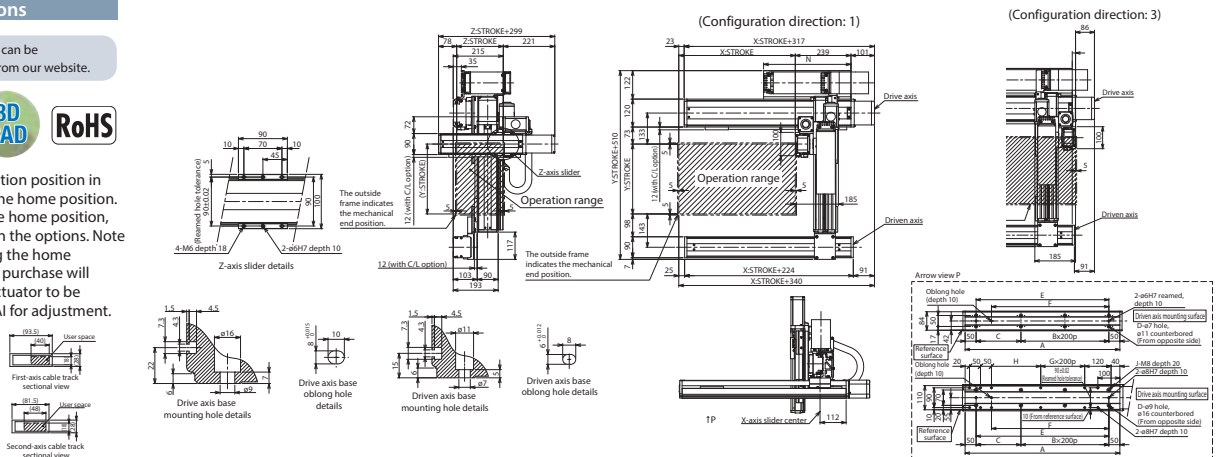
ICSB3 [ICSPB3]-GB□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GB□MB1□

ICSPB3-GB□MB1□

High-Precision Specification

±10µm Standard

±5µm High-Precision

Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

Medium Speed Type

X: Md (100W)
Y: Sml (60W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm> * For self-standing cable specification	30: 300mm 60: 600mm table (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

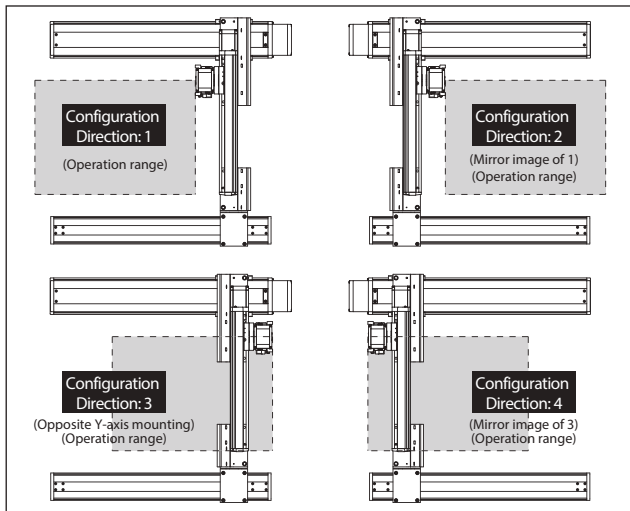
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GB1MB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB1MB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GB2MB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB2MB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GB3MB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB3MB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GB4MB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB4MB1L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-SXM-①-60-8-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑩-⑥-T2-⑦-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑧] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑩] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [⑩] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 60: 600mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	60W/8mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GB□MB1M

		Y-axis stroke 300-600
Z-axis stroke	100	7.0
	150	
	200	
	250	
	300	

■GB□MB1L

		Y-axis stroke 300-600
Z-axis stroke	100	14.0
	150	
	200	
	250	
	300	

Maximum Speed by Stroke (mm/s) (Note 4)

■GB□MB1M

	100-300	300-600	650-700	750-800	850-900	950-1000	1050-1100
X-axis		600		430	345	280	230
Y-axis	—	480			—		
Z-axis	480				—		

■GB□MB1L

	100-300	300-600	650-700	750-800	850-900	950-1000	1050-1100
X-axis		600		430	230	280	230
Y-axis	—	480			—		
Z-axis	240				—		

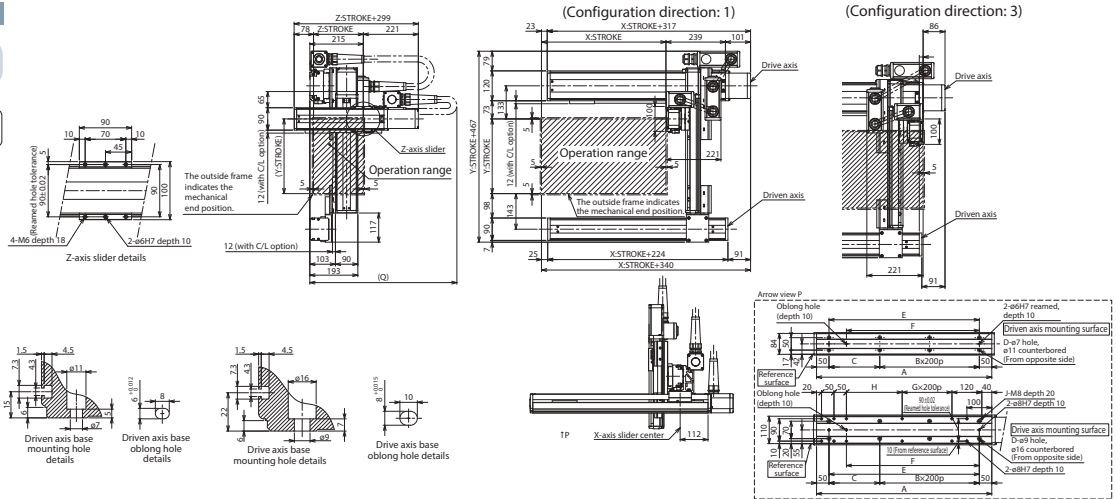
ICSB3 [ICSPB3]-GB□MB1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600
Q	700	750	750	800	800	850	850

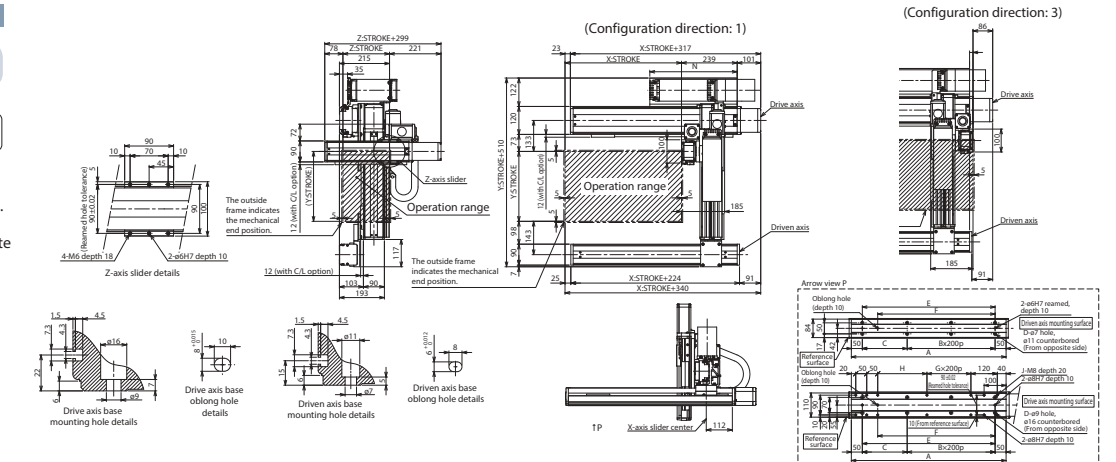
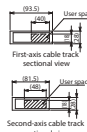
ICSB3 [ICSPB3]-GB□MB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GC□HB1□

ICSPB3-GC□HB1□ High-Precision Specification

±10μm Standard

±5μm High-Precision

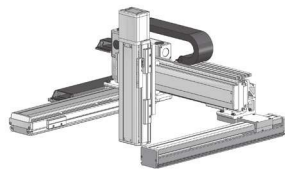
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Mj (200W)
Y: Mj (100W)
Z: SmI (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm> * below. (Every 50mm)	30: 300mm 70: 700mm table (Every 50mm)	10: 100mm 40: 400mm table (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

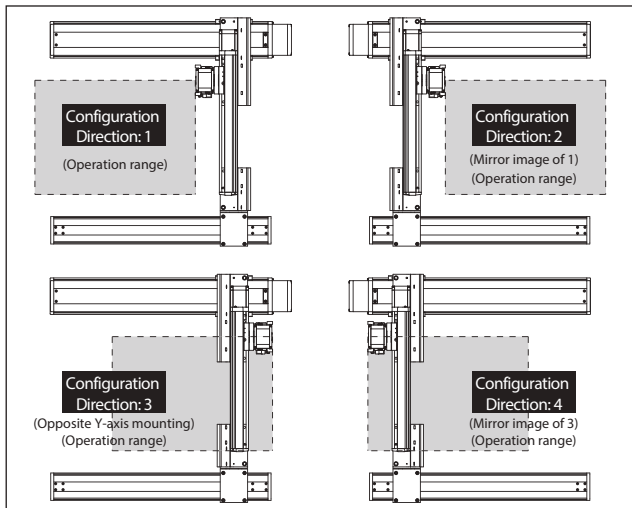
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GC1HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC1HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GC2HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC2HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GC3HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC3HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GC4HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC4HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-20-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑤-⑥-T2-③-④	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑨] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑤] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [⑩] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GC□HB1M

		Y-axis stroke 300~700
Z-axis stroke	100	7.0
	150	
	200	
	250	
	300	
	350	
	400	

GC□HB1L

		Y-axis stroke 300~650	700
Z-axis stroke	100	14.0	14.0
	150		14.0
	200		14.0
	250		14.0
	300		14.0
	350		13.9
	400		13.6

Maximum Speed by Stroke (mm/s) (Note 4)

GC□HB1M

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200						
Z-axis	480						

GC□HB1L

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200						
Z-axis	240						

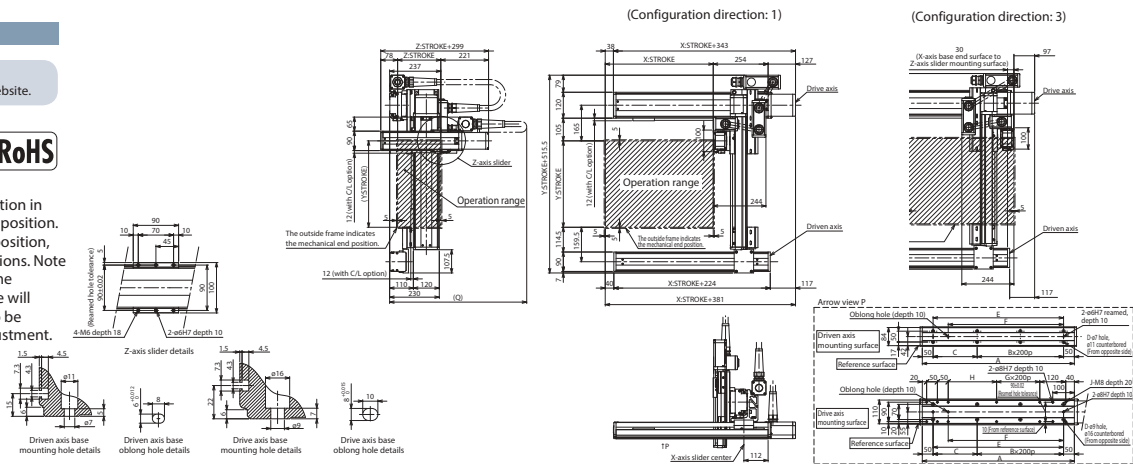
ICSB3 [ICSPB3]-GC□HB1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
Y-axis stroke	300	350	400	450	500	550	600	650	700										
Q	750	750	800	800	850	850	850	900	900										

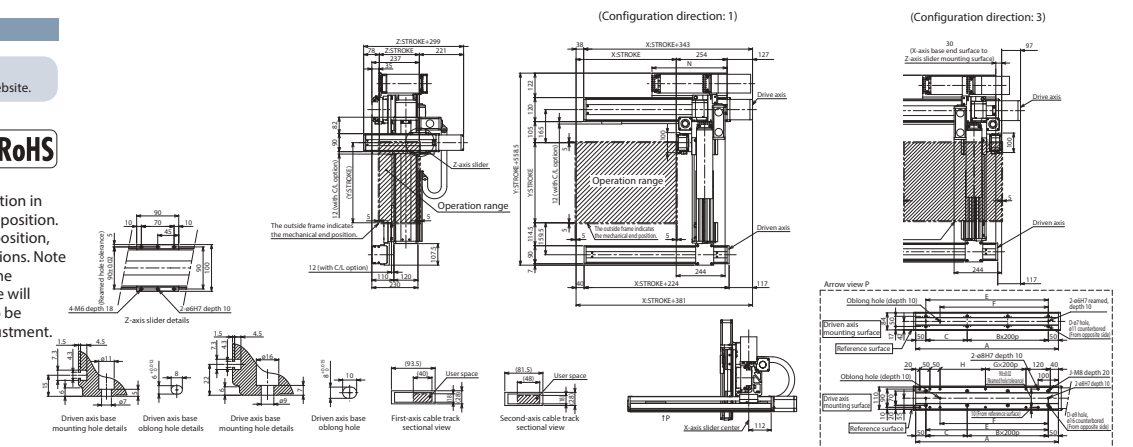
ICSB3 [ICSPB3]-GC□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GC□HB2□

ICSPB3-GC□HB2□

High-Precision Specification

±10μm

Standard

±5μm

High-Precision

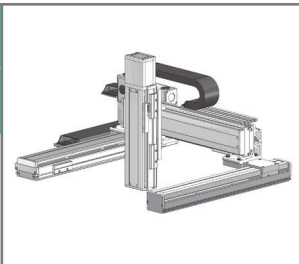
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm> (Every 50mm) * For self-standing cable specification	30: 300mm 70: 700mm table (Every 50mm)	10: 100mm 40: 400mm table (Every 50mm)	T2: SCION SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

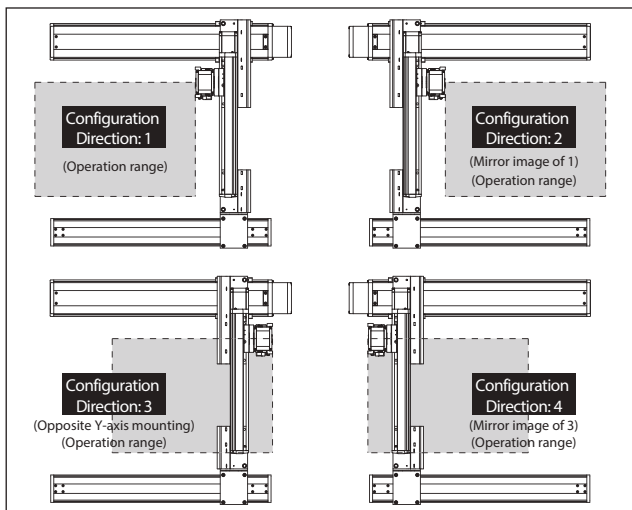
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GC1HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC1HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GC2HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC2HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GC3HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC3HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GC4HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC4HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-20-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-100-⑤-⑥-T2-③-④-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑦] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑤] in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type
* Cable exit direction is specified with [⑧] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	100W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GC□HB2M

		Y-axis stroke								
		300	350	400	450	500	550	600	650	700
Z-axis stroke	100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	150	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	200	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	250	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.9
	300	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3
	350	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.6
400	9.6	9.6	9.5	9.5	9.5	9.5	9.5	9.4	8.0	

■GC□HB2L

		Y-axis stroke								
		300	350	400	450	500	550	600	650	700
Z-axis stroke	100	13.0	13.0	13.0	12.9	12.9	12.9	12.9	12.8	11.8
	150	12.5	12.4	12.4	12.4	12.4	12.4	12.4	12.3	11.2
	200	11.9	11.9	11.9	11.9	11.8	11.8	11.8	11.8	10.6
	250	11.3	11.3	11.3	11.2	11.2	11.2	11.2	11.1	9.9
	300	10.8	10.7	10.7	10.7	10.7	10.6	10.6	10.6	9.3
	350	10.1	10.1	10.1	10.1	10.0	10.0	10.0	10.0	8.6
400	9.6	9.6	9.5	9.5	9.5	9.5	9.5	9.4	8.0	

Maximum Speed by Stroke (mm/s) (Note 4)

■GC□HB2M

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200			860	695	570	460
Y-axis	—		1200				
Z-axis	600						

■GC□HB2L

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200			860	695	570	460
Y-axis	—		1200				
Z-axis	300						

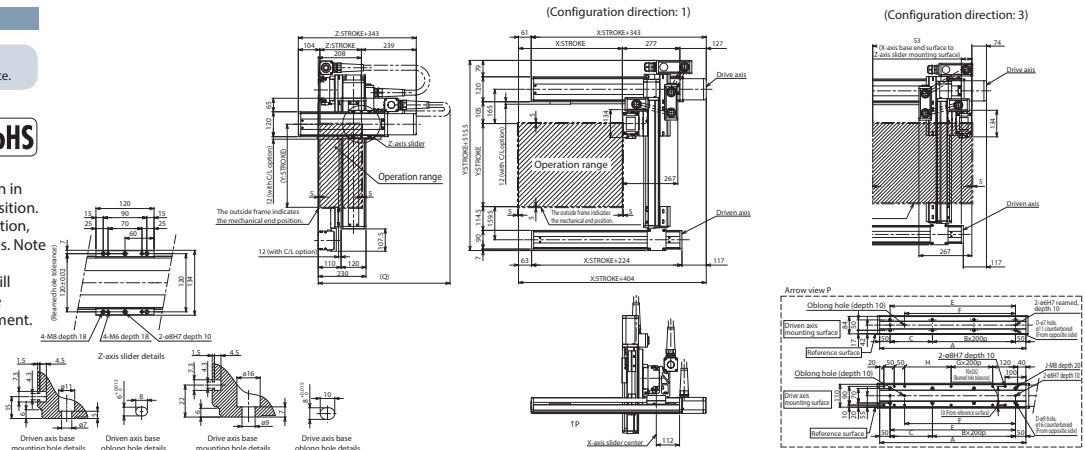
ICSB3 [ICSPB3]-GC□HB2□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600	650	700
Q	750	800	800	850	850	850	900	900	950

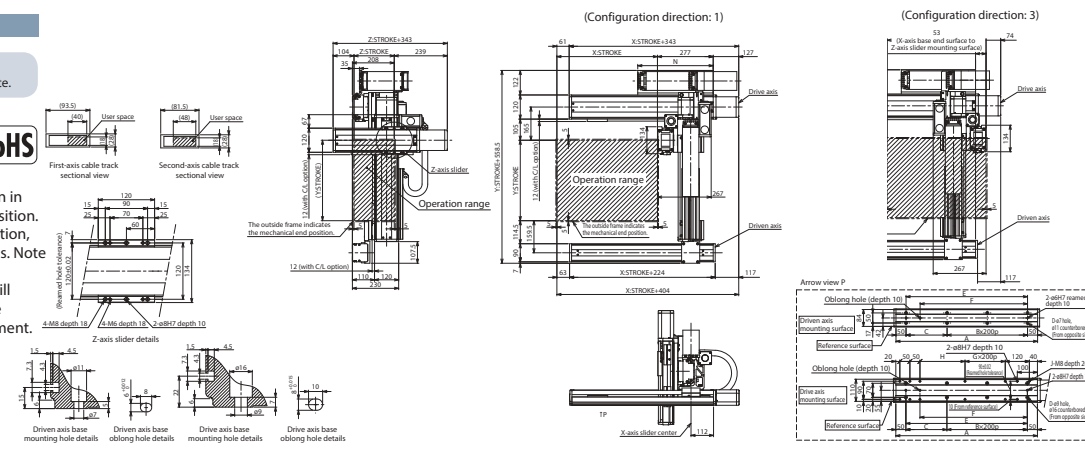
ICSB3 [ICSPB3]-GC□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GC□HB3H

ICSPB3-GC□HB3H High-Precision Specification

±10μm Standard

±5μm High-Precision

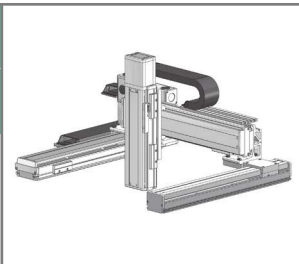
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

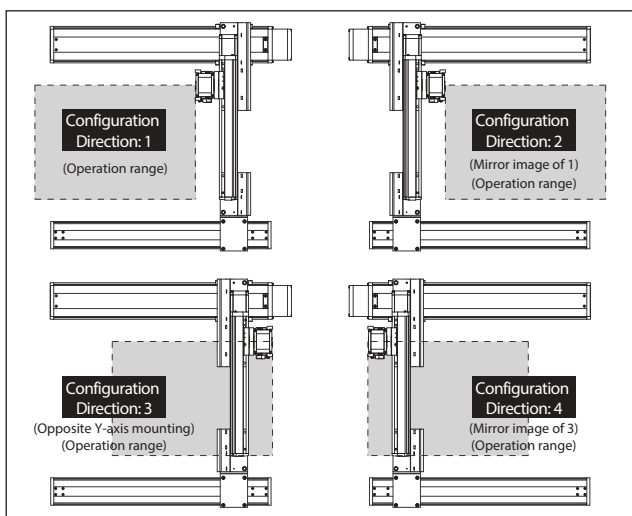
Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type	Refer to Model Specification table below	Encoder Type	WA: Battery-less Absolute	X-axis Stroke/Option	10: 100mm 110: 1100mm <100: 1000mm> (Every 50mm) * For self-standing cable specification	Y-axis Stroke/Option	30: 300mm 70: 700mm (Every 50mm)	Z-axis Stroke/Option	10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	Cable Length	3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below
--------	-------------------------------------------------------------------------------------	------	------------------------------------------	--------------	---------------------------	----------------------	------------------------------------------------------------------------------------------------	----------------------	----------------------------------------	----------------------	----------------------------------------	------------------------	--------------------------------------------	--------------	------------------------------------------	----------------------------------	--------------------------------------------------

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	H	ICSB3[ICSPB3]-GC1HB3H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
2	H	ICSB3[ICSPB3]-GC2HB3H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
3	H	ICSB3[ICSPB3]-GC3HB3H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
4	H	ICSB3[ICSPB3]-GC4HB3H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- [1] -200-20- [2] -T2- [10] - [3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0- [2]	—
Y-axis	ISB[ISPB]-MXM- [1] -100-20- [4] -T2- [10] - [5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- [1] -200-20- [6] -T2- [10] - [7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [10] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm (±0.005mm)
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.

When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GC□HB3H

Z-axis stroke	Y-axis stroke									
	300	350	400	450	500	550	600	650	700	
100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
150	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
200	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
250	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3
300	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.7
350	9.7	9.7	9.6	9.6	9.6	9.6	9.5	9.5	9.5	8.1
400	9.1	9.1	9.1	9.1	9.0	9.0	9.0	9.0	9.0	7.5

Maximum Speed by Stroke (mm/s) (Note 4)

GC□HB3H

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200			860	695	570	460
Y-axis	—		1200				
Z-axis	1200						

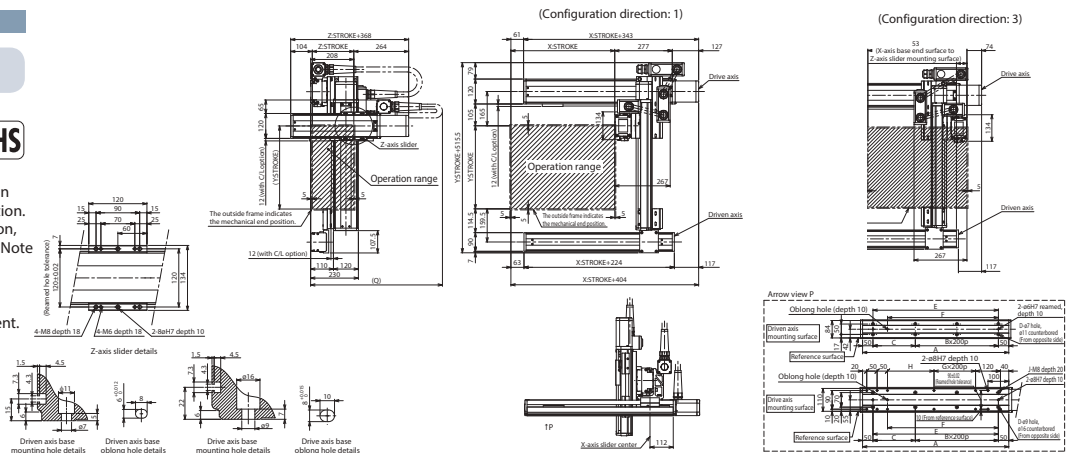
ICSB3 [ICSPB3]-GC□HB3H-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600	650	700
Q	750	800	800	850	850	850	900	900	950

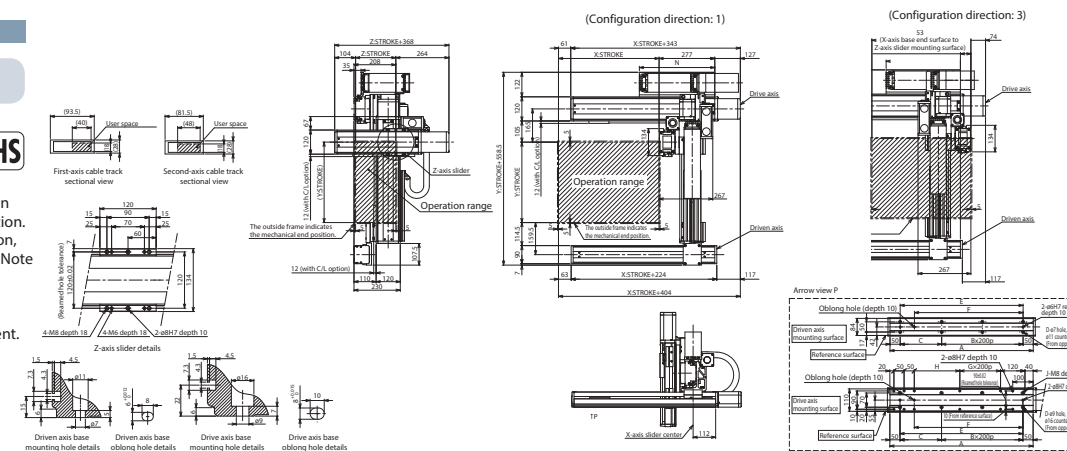
ICSB3 [ICSPB3]-GC□HB3H-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GC□MB2L

ICSPB3-GC□MB2L High-Precision Specification



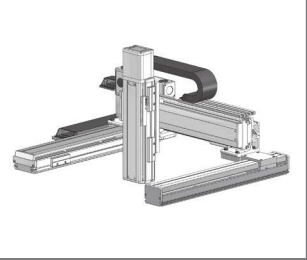
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

Medium Speed Type

X: Md (100W)
Y: Md (100W)
Z: Md (100W)



Model Specification Items

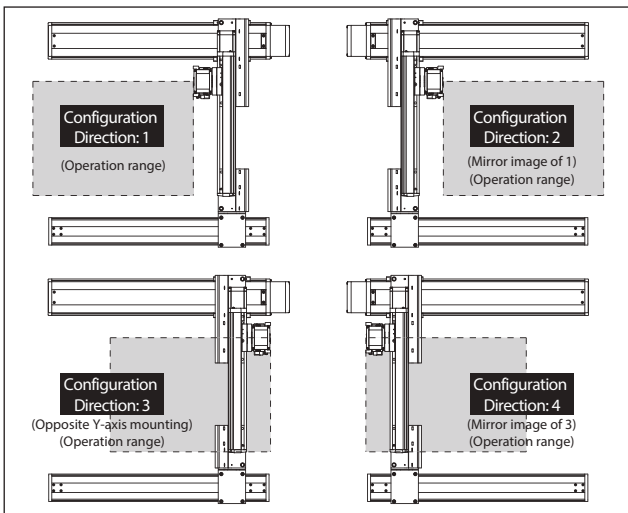
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm> * below. (Every 50mm)	30: 300mm 70: 700mm table (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	L	ICSB3[ICSPB3]-GC1MB2L-①-②③④⑤⑥⑦-T2-⑧⑨
2	L	ICSB3[ICSPB3]-GC2MB2L-①-②③④⑤⑥⑦-T2-⑧⑨
3	L	ICSB3[ICSPB3]-GC3MB2L-①-②③④⑤⑥⑦-T2-⑧⑨
4	L	ICSB3[ICSPB3]-GC4MB2L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-100-10-②-T2-⑩③	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-10-②-T2-⑩⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-100-5-⑥-T2-⑩⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑩ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	100W/5mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GC□MB2L

Z-axis stroke	Y-axis stroke								
	300	350	400	450	500	550	600	650	700
100	17.6	17.2	16.8	16.5	16.1	15.5	14.9	13.9	11.8
150	17.0	16.6	16.2	15.9	15.5	14.9	14.4	13.3	11.2
200	16.4	16.0	15.6	15.3	14.9	14.4	13.8	12.7	10.6
250	15.7	15.3	14.9	14.6	14.2	13.8	13.2	12.0	9.9
300	15.1	14.7	14.3	14.0	13.6	13.2	12.7	11.4	9.3
350	14.4	14.0	13.6	13.3	12.9	12.5	12.0	10.7	8.6
400	13.8	13.4	13.0	12.7	12.3	11.9	11.5	10.1	8.0

Maximum Speed by Stroke (mm/s) (Note 4)

■GC□MB2L

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	600			430	345	280	230
Y-axis	600						
Z-axis	300						

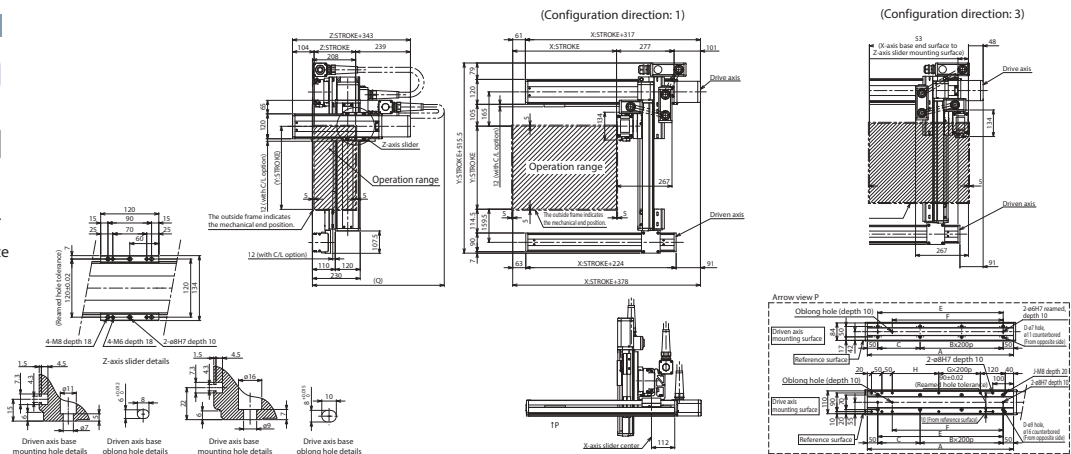
ICSB3 [ICSPB3]-GC□MB2L-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600	650	700
Q	750	800	800	850	850	850	900	900	950

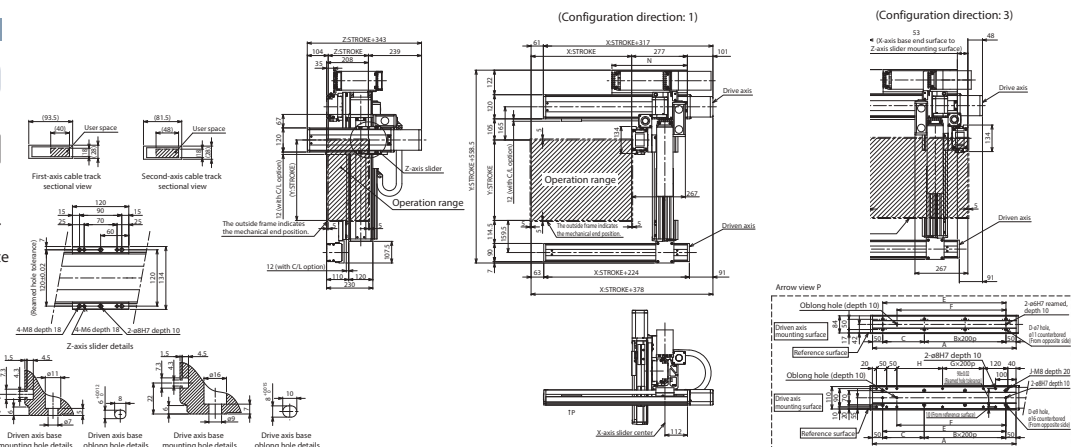
ICSB3 [ICSPB3]-GC□MB2L-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GC□MB3M

ICSPB3-GC□MB3M

High-Precision Specification



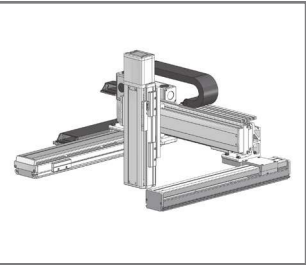
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

Medium Speed Type

X: Md (100W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

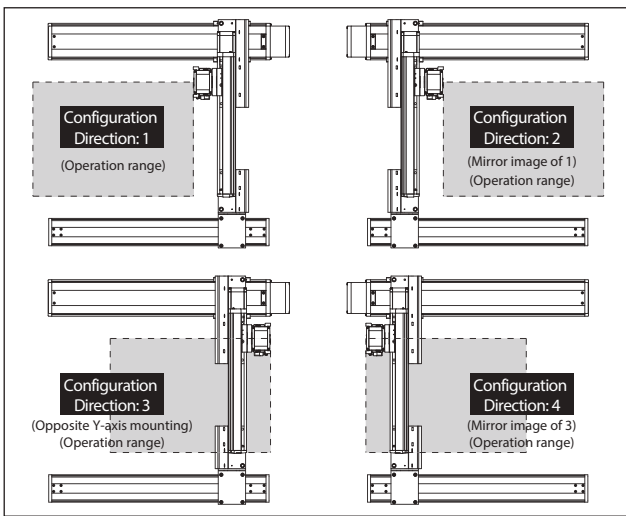
Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type	Refer to Model Specification table below	Encoder Type	WA: Battery-less Absolute	X-axis Stroke/Option	10: 100mm 110: 1100mm table <100: 1000mm> * below. (Every 50mm)	Y-axis Stroke/Option	30: 300mm 70: 700mm table (Every 50mm)	Z-axis Stroke/Option	10: 100mm 40: 400mm Refer to Options table below.	Applicable Controllers	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	Cable Length	3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below
--------	-------------------------------------------------------------------------------------	------	------------------------------------------	--------------	---------------------------	----------------------	--------------------------------------------------------------------------	----------------------	----------------------------------------------	----------------------	---------------------------------------------------------	------------------------	--------------------------------------------	--------------	------------------------------------------	----------------------------------	--------------------------------------------------

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	M	ICSB3[ICSPB3]-GC1MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GC2MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GC3MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GC4MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-[1]-100-10-[2]-T2-[10]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-100-10-[2]-T2-[10]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-10-[6]-T2-[10]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [10] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GC□MB3M

Z-axis stroke	Y-axis stroke								
	300	350	400	450	500	550	600	650	700
100	17.1	16.7	16.3	16.0	15.6	15.0	14.5	13.4	11.3
150	16.4	16.0	15.6	15.3	14.9	14.4	13.8	12.7	10.6
200	15.8	15.4	15.0	14.7	14.3	13.9	13.3	12.1	10.0
250	15.1	14.7	14.3	14.0	13.6	13.2	12.7	11.4	9.3
300	14.5	14.1	13.7	13.4	13.0	12.6	12.1	10.8	8.7
350	13.9	13.5	13.1	12.8	12.4	12.0	11.6	10.2	8.1
400	13.3	12.9	12.5	12.2	11.8	11.4	11.0	9.6	7.5

Maximum Speed by Stroke (mm/s) (Note 4)

GC□MB3M

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	600			430	345	280	230
Y-axis	600						
Z-axis	600						

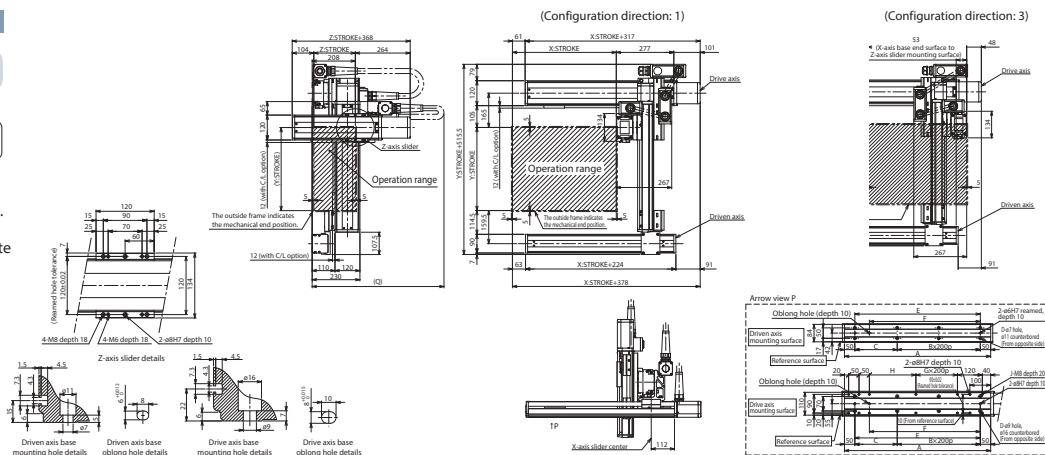
ICSB3 [ICSPB3]-GC□MB3M-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600	650	700
Q	750	800	800	850	850	850	900	900	950

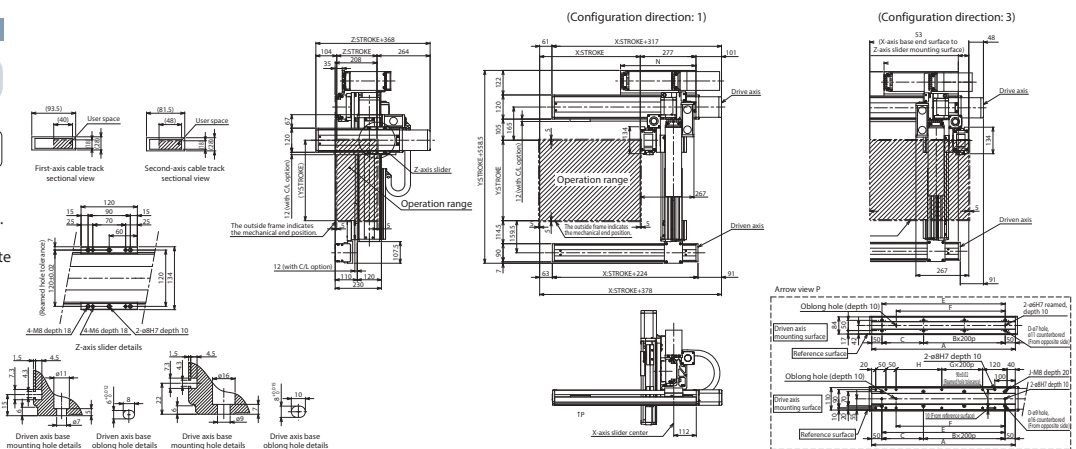
ICSB3 [ICSPB3]-GC□MB3M-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GD HB1

ICSPB3-GD HB1

High-Precision Specification



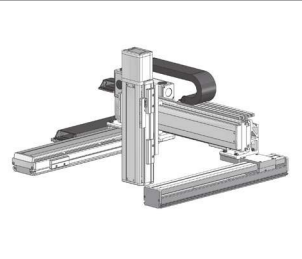
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 50mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

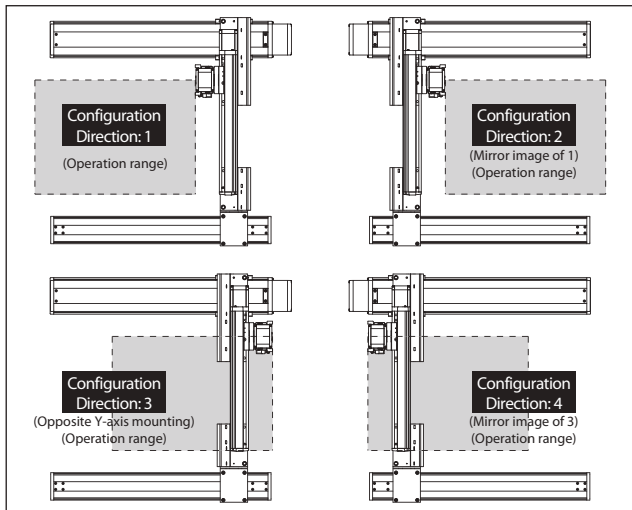
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GD1HB1M- [1] - [2] [3] - [4] [5] - [6] [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GD1HB1L- [1] - [2] [3] - [4] [5] - [6] [7] -T2- [8] - [9]
2	M	ICSB3[ICSPB3]-GD2HB1M- [1] - [2] [3] - [4] [5] - [6] [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GD2HB1L- [1] - [2] [3] - [4] [5] - [6] [7] -T2- [8] - [9]
3	M	ICSB3[ICSPB3]-GD3HB1M- [1] - [2] [3] - [4] [5] - [6] [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GD3HB1L- [1] - [2] [3] - [4] [5] - [6] [7] -T2- [8] - [9]
4	M	ICSB3[ICSPB3]-GD4HB1M- [1] - [2] [3] - [4] [5] - [6] [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GD4HB1L- [1] - [2] [3] - [4] [5] - [6] [7] -T2- [8] - [9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- [1] -200-20- [2] -T2- [11] - [3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM02-N-0-0- [2]	—
Y-axis	ISB[ISPB]-MXM- [1] -100-20- [4] -T2- [11] - [5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- [1] -60- [10] - [6] -T2- [11] - [7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GD□HB1M

		Y-axis stroke 300~700
Z-axis stroke	100	7.0
	150	
	200	
	250	
	300	
	350	
	400	

GD□HB1L

		Y-axis stroke	
		300~650	700
Z-axis stroke	100	14.0	14.0
	150		14.0
	200		14.0
	250		14.0
	300		14.0
	350		13.9
	400		13.6

Maximum Speed by Stroke (mm/s) (Note 4)

GD□HB1M

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—
Z-axis	—	480	—	—	—	—	—	—	—	—	—	—	—

GD□HB1L

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—
Z-axis	—	240	—	—	—	—	—	—	—	—	—	—	—

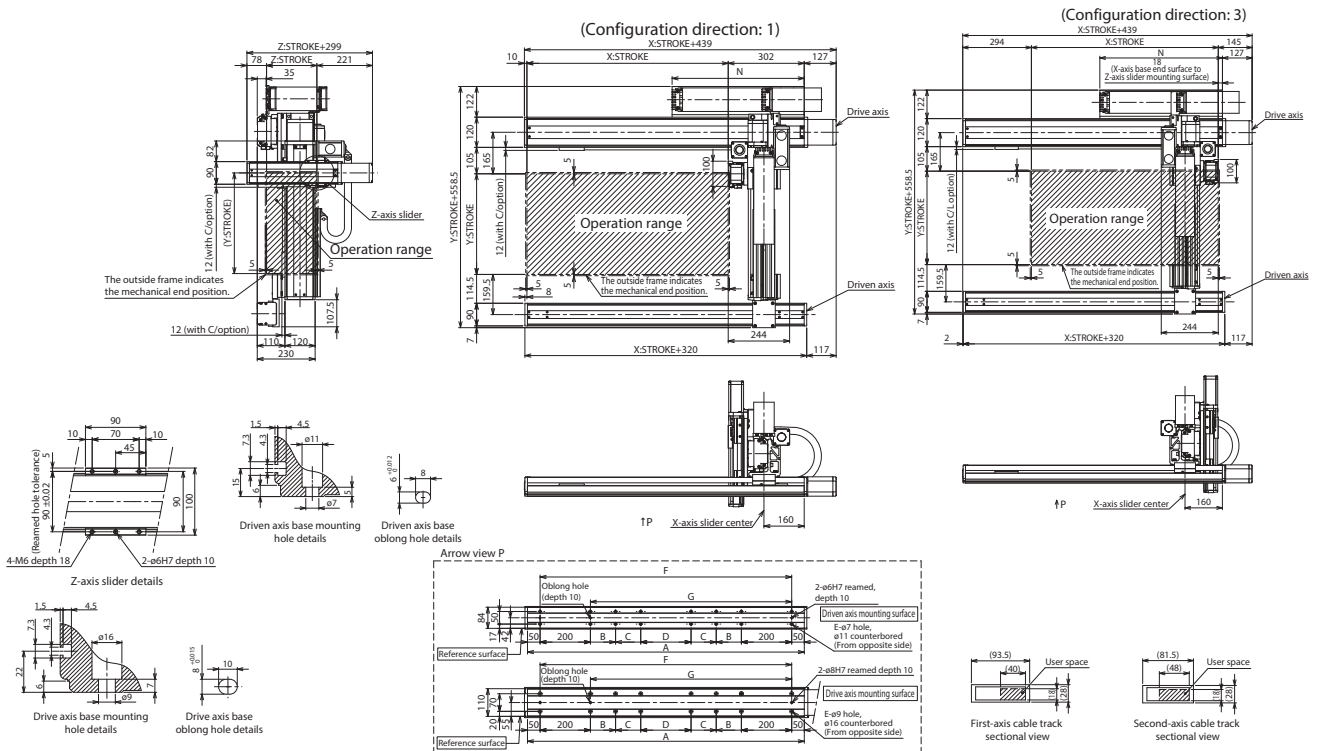
ICSB3 [ICSPB3]-GD□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

ICSB3-GD HB2

ICSPB3-GD HB2

High-Precision Specification



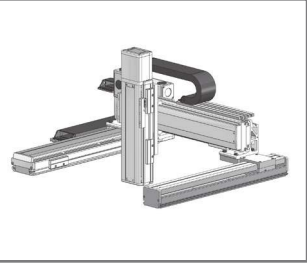
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 100mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

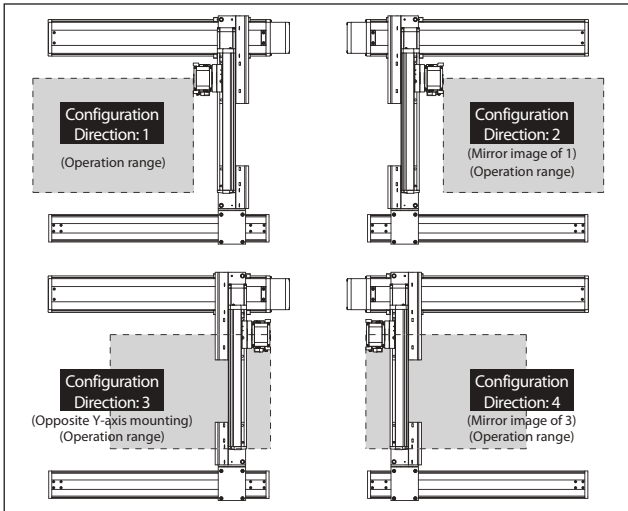
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GD1HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD1HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GD2HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD2HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GD3HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD3HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GD4HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD4HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXMX-[1]-200-20-[2]-T2-[11]-[5]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM02-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[4]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-100-[10]-[6]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [11] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type
* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	100W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GD□HB2M

Z-axis stroke	Y-axis stroke								
	300	350	400	450	500	550	600	650	700
100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
150	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
200	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
250	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.9
300	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3
350	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.6
400	9.6	9.6	9.5	9.5	9.5	9.5	9.5	9.4	8.0

GD□HB2L

Z-axis stroke	Y-axis stroke								
	300	350	400	450	500	550	600	650	700
100	13.0	13.0	13.0	12.9	12.9	12.9	12.9	12.8	11.8
150	12.5	12.4	12.4	12.4	12.4	12.4	12.3	12.3	11.2
200	11.9	11.9	11.9	11.9	11.8	11.8	11.8	11.8	10.6
250	11.3	11.3	11.3	11.2	11.2	11.2	11.2	11.1	9.9
300	10.8	10.7	10.7	10.7	10.7	10.6	10.6	10.6	9.3
350	10.1	10.1	10.1	10.1	10.0	10.0	10.0	10.0	8.6
400	9.6	9.6	9.5	9.5	9.5	9.5	9.5	9.4	8.0

Maximum Speed by Stroke (mm/s) (Note 4)

GD□HB2M

	100-300	300-400	450-700	800-1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—

GD□HB2L

	100-300	300-400	450-700	800-1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—
Z-axis	300	—	—	—	—	—	—	—	—	—	—	—	—

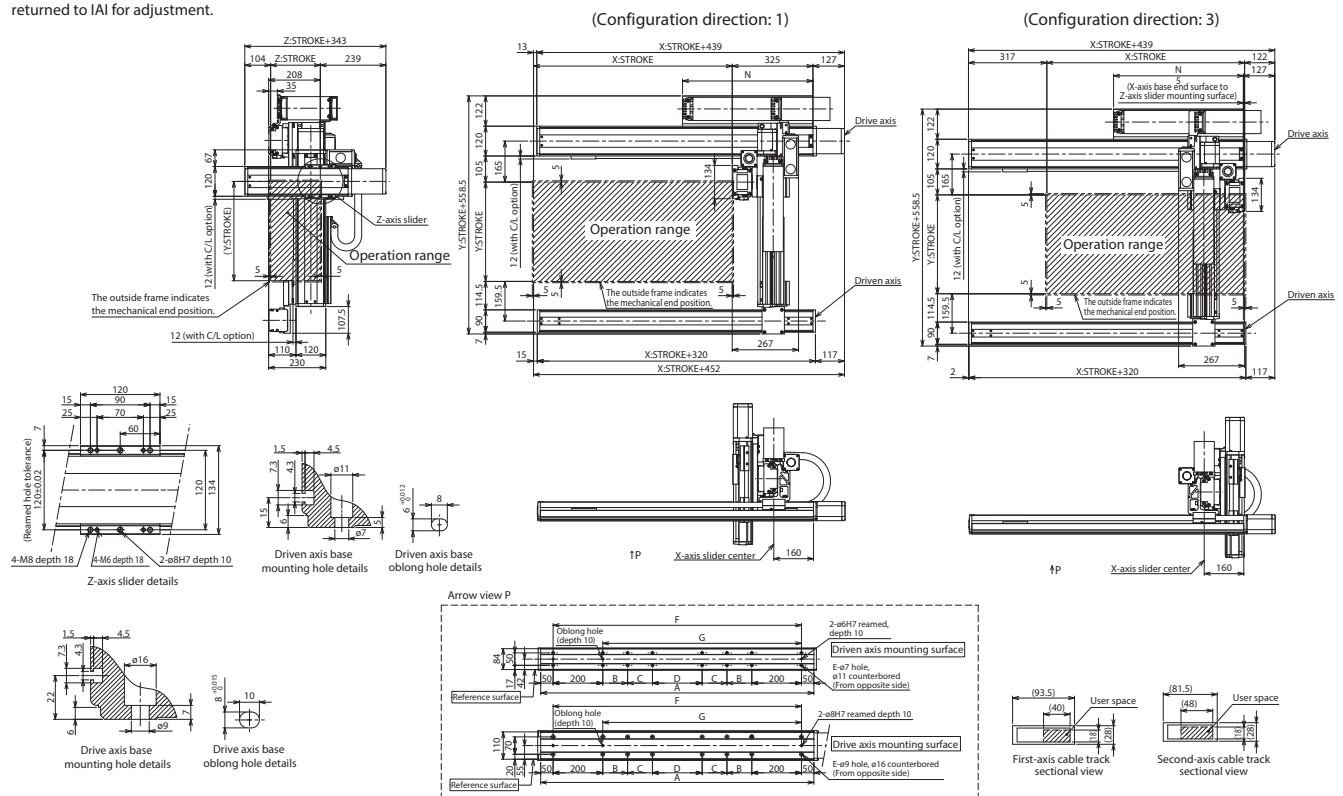
ICSB3 [ICSPB3]-GD□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

ICSB3-GD HB3H

ICSPB3-GD HB3H High-Precision Specification

±10µm

Standard

±5µm

High Precision

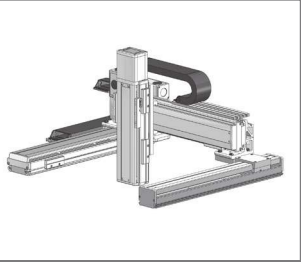
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

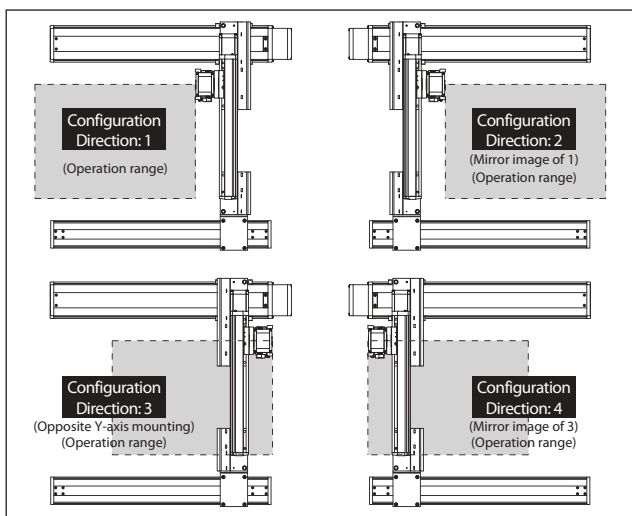
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	H	ICSB3[ICSPB3]-GD1HB3H- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
2	H	ICSB3[ICSPB3]-GD2HB3H- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
3	H	ICSB3[ICSPB3]-GD3HB3H- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
4	H	ICSB3[ICSPB3]-GD4HB3H- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- <u>1</u> -200-20- <u>2</u> -T2- <u>10</u> - <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM02-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-MXM- <u>1</u> -100-20- <u>4</u> -T2- <u>10</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- <u>1</u> -200-20- <u>6</u> -T2- <u>10</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GD□HB3H

Z-axis stroke	Y-axis stroke									
	300	350	400	450	500	550	600	650	700	
100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
150	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
200	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
250	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3
300	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.7
350	9.7	9.7	9.6	9.6	9.6	9.6	9.5	9.5	9.5	8.1
400	9.1	9.1	9.1	9.1	9.0	9.0	9.0	9.0	9.0	7.5

Maximum Speed by Stroke (mm/s) (Note 4)

GD□HB3H

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—

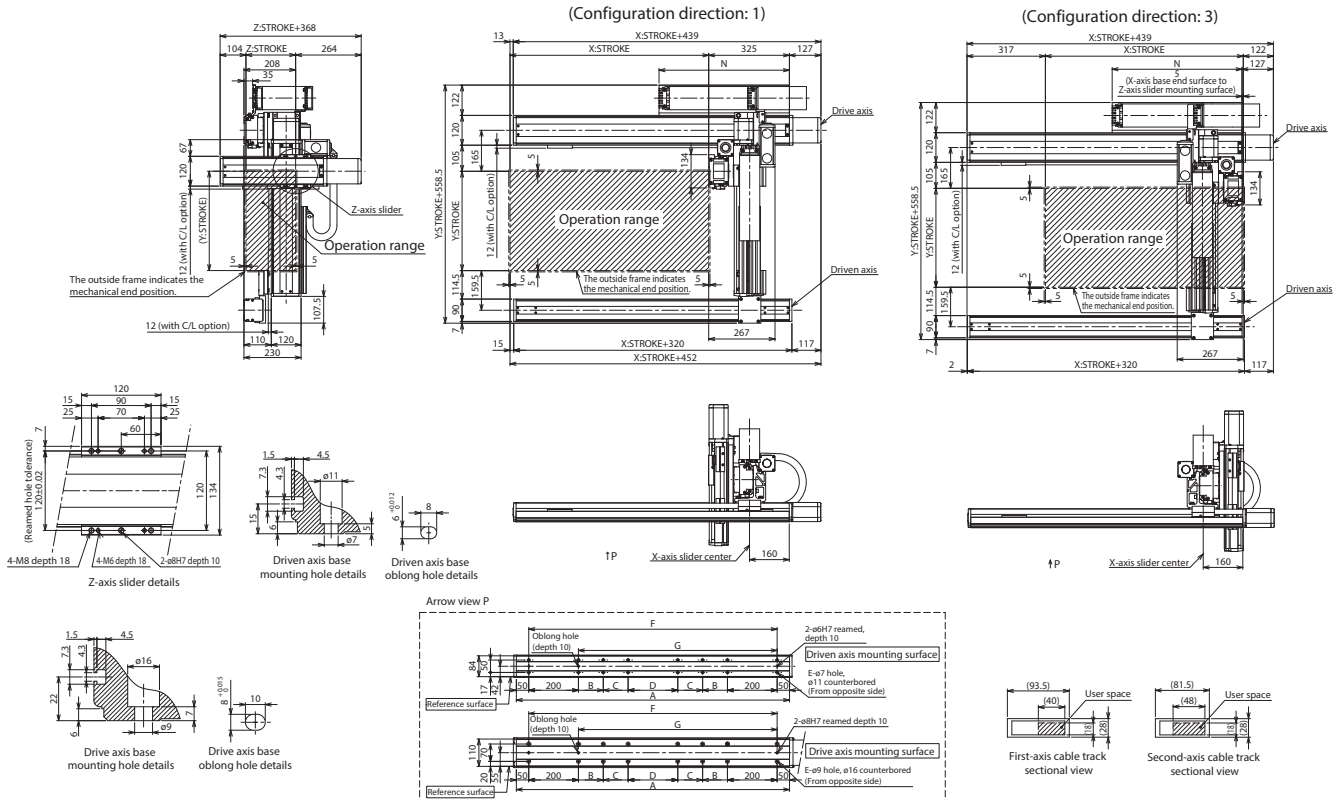
ICSB3 [ICSPB3]-GD□HB3H-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

ICSB3-GE□HB1L

ICSPB3-GE□HB1L

High-Precision Specification



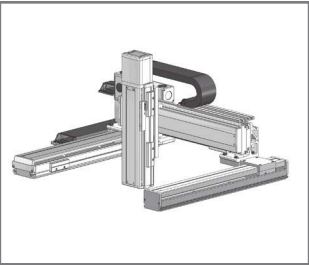
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: SmI (60W)



Model Specification Items

Series	GE□HB1L	Type	WA	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification		Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm <100: 1000mm> (Every 50mm)	Refer to Options table (Every 50mm)	30: 300mm 90: 900mm (Every 50mm)	Refer to Options table (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

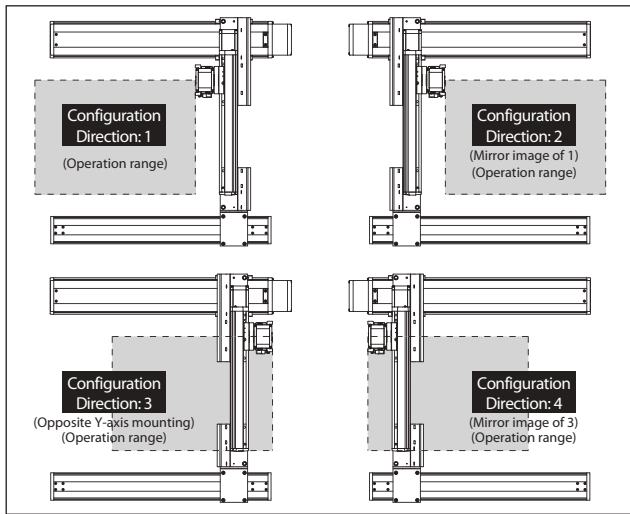
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	L	ICSB3[ICSPB3]-GE1HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
2	L	ICSB3[ICSPB3]-GE2HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
3	L	ICSB3[ICSPB3]-GE3HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
4	L	ICSB3[ICSPB3]-GE4HB1L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm ? : 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm ? : 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? : 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-①-400-20-②-T2-⑩-③	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑩-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-4-⑥-⑦-T2-⑩-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/4mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

		Y-axis stroke 300-900
Z-axis stroke	100	14.0
	150	
	200	
	250	
	300	
	350	
	400	
	450	
	500	

Maximum Speed by Stroke (mm/s) (Note 4)

	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1,200	1250-1300
X-axis		1200			920	765	645	550	440
Y-axis	—	1200		860	695				
Z-axis	240								

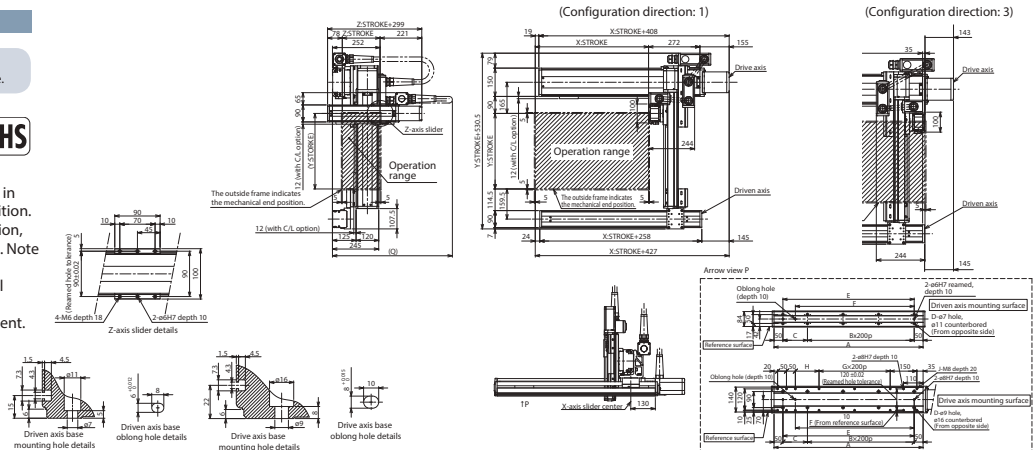
ICSB3 [ICSPB3]-GE□HB1L-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



*The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600	650	700	750	800	850	900
Q	700	800	800	800	850	850	900	900	950	950	1000	1000	1000

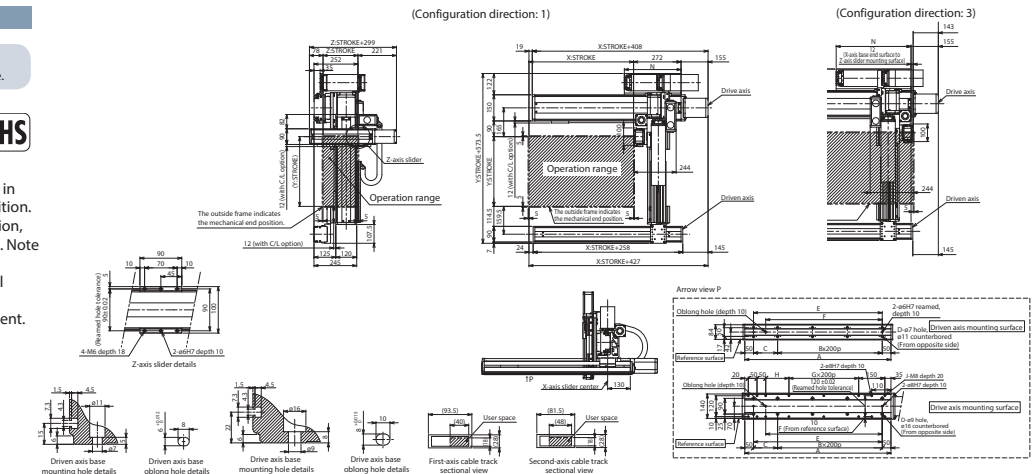
ICSB3 [ICSPB3]-GE□HB1L-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



*The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-GE□HB2□

ICSPB3-GE□HB2□ High-Precision Specification

±10μm Standard

±5μm High-Precision

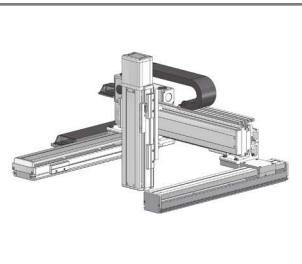
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm table <100: 1000mm> (Every 50mm) * For self-standing cable specification	30: 300mm 90: 900mm table (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

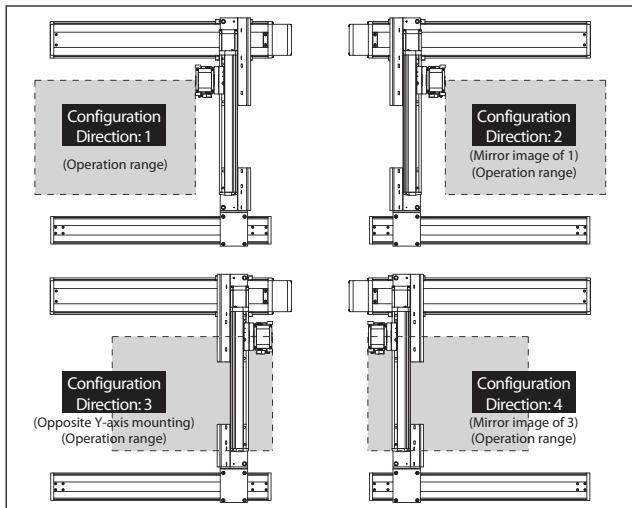
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GE1HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE1HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GE2HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE2HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GE3HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE3HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GE4HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE4HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-[1]-400-20-[2]-T2-[10]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[4]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-100-[10]-[6]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [10] in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type

* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GE□HB2M

Z-axis stroke	Y-axis stroke 300-900	
	100	10.0
	150	
	200	
	250	
	300	
	350	
	400	
	450	
	500	

GE□HB2L

Z-axis stroke	Y-axis stroke				
	300-700				
	100	750	800	850	900
	150	20.0	20.0	18.9	16.8
	200	20.0	20.0	18.3	16.2
	250	20.0	20.0	17.7	15.6
	300	20.0	19.4	17.0	14.9
	350	20.0	18.8	16.4	14.3
	400	20.0	18.1	15.7	13.6
	450	20.0	17.5	15.1	13.0
500	19.4	16.9	14.5	12.4	
	18.8	16.3	13.9	11.8	

Maximum Speed by Stroke (mm/s) (Note 4)

GE□HB2M

	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300
X-axis	1200				920	765	645	550	440
Y-axis	1200		860	695	—				
Z-axis	600		—						

GE□HB2L

	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300
X-axis	1200				920	765	645	550	440
Y-axis	1200		860	695	—				
Z-axis	300		—						

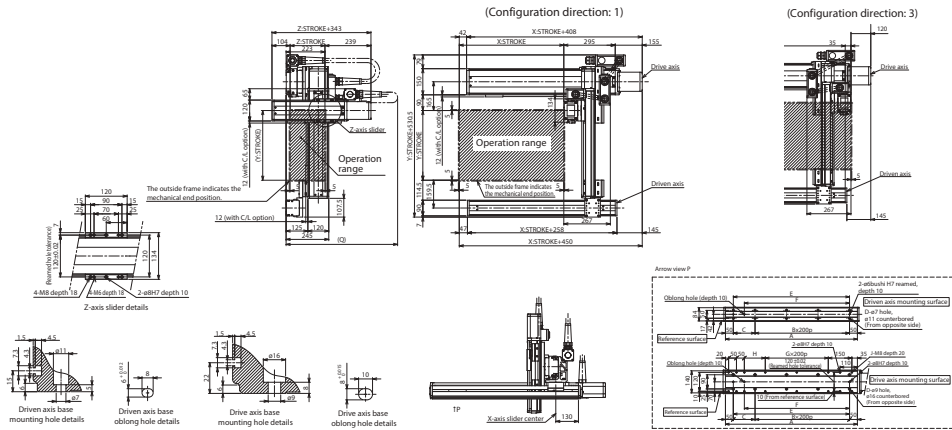
ICSB3 [ICSPB3]-GE□HB2□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	2	2	2	2	3	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
Y-axis stroke	300	350	400	450	500	550	600	650	700	750	800	850	900						
Q	800	800	800	850	850	900	900	950	950	1000	1000	1000	1050						

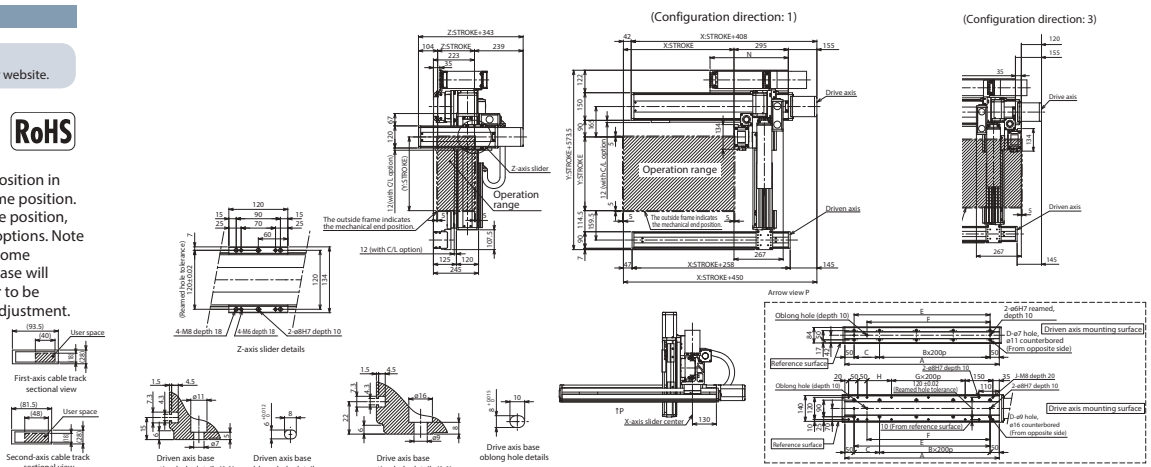
ICSB3 [ICSPB3]-GE□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	
D	4	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	
G	0	0	0	0	0	0	1	1	1	2	2	2	2	3	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-GE□HB3□

ICSPB3-GE□HB3□

High-Precision Specification

±10µm Standard

±5µm High-Precision

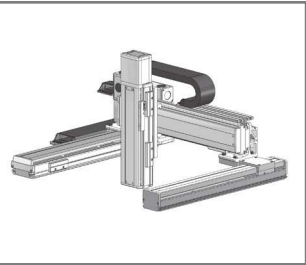
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	GE□HB3□	Type	WA	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification		Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm table <100: 1000mm> (Every 50mm)	30: 300mm 90: 900mm table (Every 50mm)	10: 100mm 50: 500mm table (Every 50mm)	Refer to Options table below	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

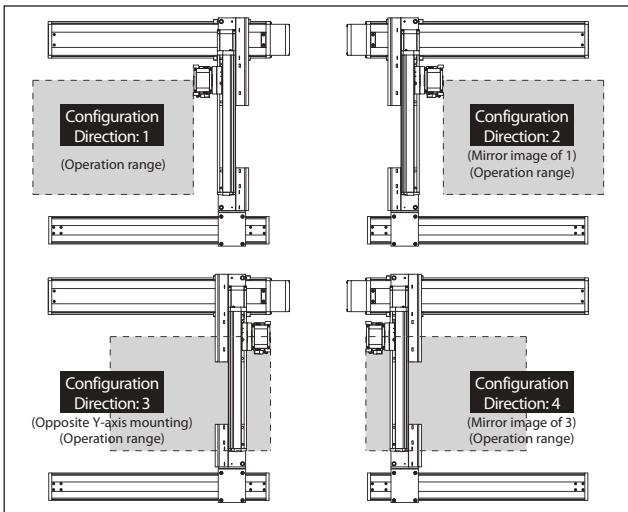
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-GE1HB3H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-GE1HB3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GE1HB3L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	H	ICSB3[ICSPB3]-GE2HB3H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-GE2HB3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GE2HB3L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	H	ICSB3[ICSPB3]-GE3HB3H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-GE3HB3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GE3HB3L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	H	ICSB3[ICSPB3]-GE4HB3H- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	M	ICSB3[ICSPB3]-GE4HB3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GE4HB3L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM- <u>1</u> -400-20- <u>2</u> -T2- <u>11</u> - <u>13</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-MXM- <u>1</u> -200-20- <u>3</u> -T2- <u>11</u> - <u>13</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- <u>1</u> -200- <u>10</u> - <u>6</u> -T2- <u>11</u> - <u>17</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [10] in the above model names.

20: For Z-axis High Speed type

10: For Z-axis Medium Speed type

5: For Z-axis Low Speed type

* Cable exit direction is specified with [11] in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1,000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■ GE□HB3H

Z-axis stroke	Y-axis stroke	
	300-900	
	100	10.0
	150	
	200	
	250	
	300	
	350	
	400	
	450	
500		

■ GE□HB3M

Z-axis stroke	Y-axis stroke					
	300-700					
	100	20.0	750	800	850	900
	150		20.0	20.0	17.7	15.6
	200		20.0	19.5	17.1	15.0
	250		20.0	18.8	16.4	14.3
	300		20.0	18.2	15.8	13.7
	350		20.0	17.6	15.2	13.1
	400		19.5	17.0	14.6	12.5
	450		18.8	16.3	13.9	11.8
500	18.2		15.7	13.3	11.2	

■ GE□HB3L

Z-axis stroke	Y-axis stroke													
	300-900													
	100	31.8	31.4	31.1	30.7	30.3	29.9	29.5	29.1	26.1	23.3	20.8	18.4	16.3
	150	31.1	30.7	30.4	30.0	29.6	29.2	28.8	28.4	25.4	22.6	20.1	17.7	15.6
	200	30.5	30.1	29.8	29.4	29.0	28.6	28.2	27.8	24.8	22.0	19.5	17.1	15.0
	250	29.8	29.4	29.1	28.7	28.3	27.9	27.5	27.1	24.1	21.3	18.8	16.4	14.3
	300	29.2	28.8	28.5	28.1	27.7	27.3	26.9	26.5	23.5	20.7	18.2	15.8	13.7
	350	28.6	28.2	27.9	27.5	27.1	26.7	26.3	25.9	22.9	20.1	17.6	15.2	13.1
	400	28.0	27.6	27.3	26.9	26.5	26.1	25.7	25.3	22.3	19.5	17.0	14.6	12.5
	450	27.3	26.9	26.6	26.2	25.8	25.4	25.0	24.6	21.6	18.8	16.3	13.9	11.8
500	26.7	26.3	26.0	25.6	25.2	24.8	24.4	24.0	21.0	18.2	15.7	13.3	11.2	

Maximum Speed by Stroke (mm/s) (Note 4)

■ GE□HB3H

X-axis	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300
	1200		1200		860	695	—		
	—		1200		860	695	—		
	1200								

■ GE□HB3M

X-axis	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300
	1200		1200		860	695	—		
	—		1200		860	695	—		
	600								

■ GE□HB3L

X-axis	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300
	1200		1200		860	695	—		
	—		1200		860	695	—		
	300								

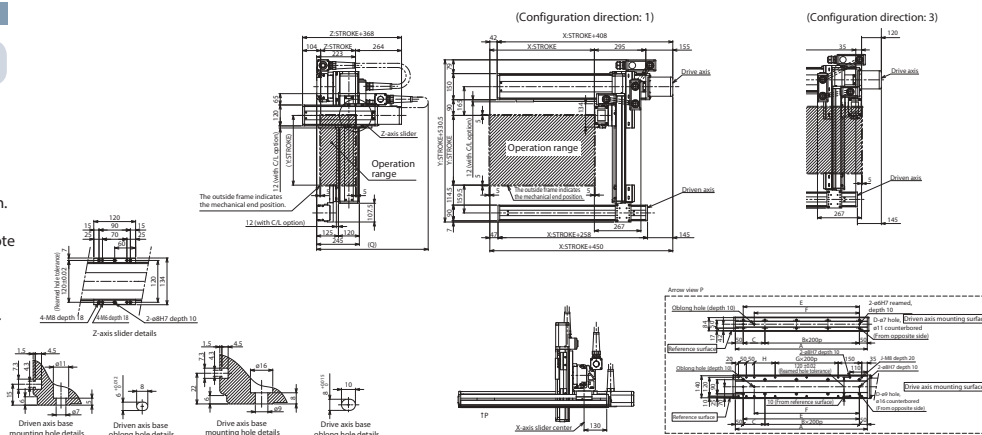
ICSB3 [ICSPB3]-GE□HB3□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
Y-axis stroke	300	350	400	450	500	550	600	650	700	750	800	850	900						
Q	800	800	800	850	850	900	900	950	950	1000	1000	1000	1050						

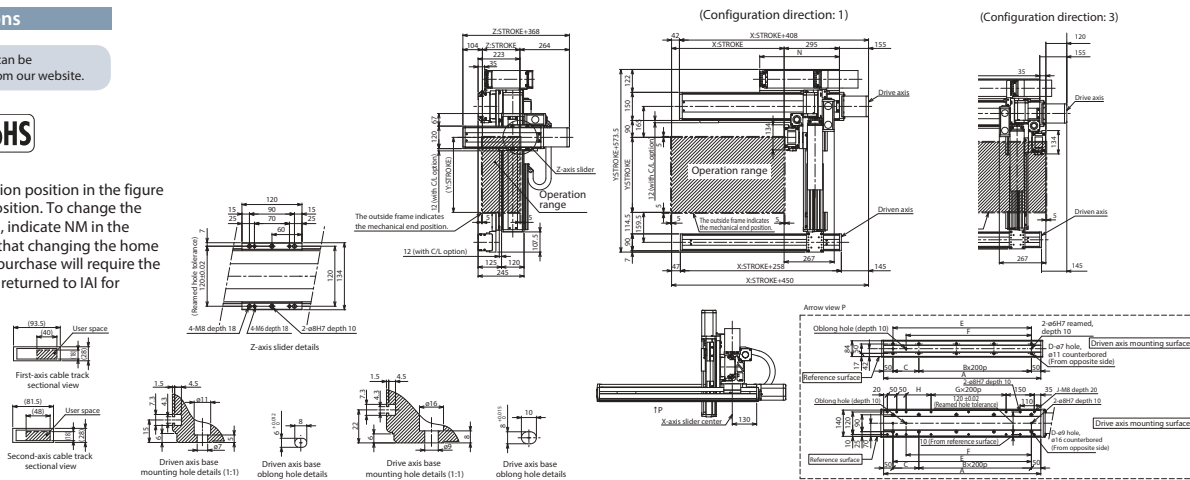
ICSB3 [ICSPB3]-GE□HB3□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-GF□HB1L

ICSPB3-GF□HB1L

High-Precision Specification

±10µm

Standard

±5µm

High-Precision

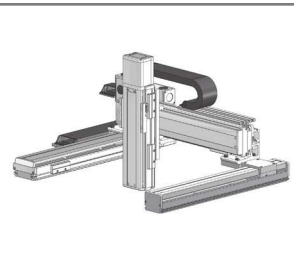
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: SmI (60W)



Model Specification Items

Series	GF□HB1L	Type	WA	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification		Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

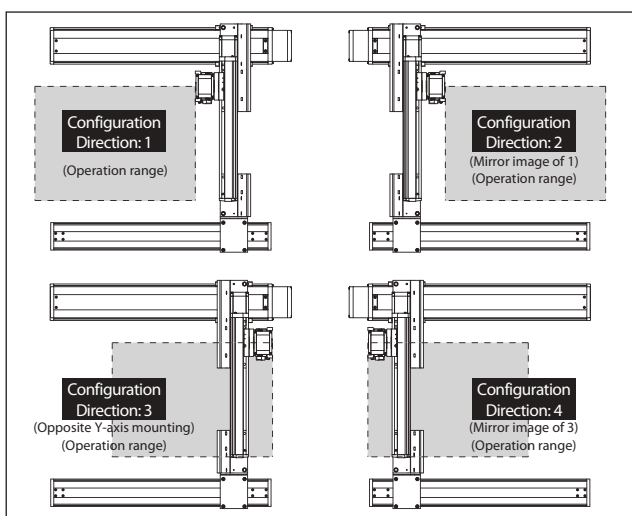
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	L	ICSB3[ICSPB3]-GF1HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
2	L	ICSB3[ICSPB3]-GF2HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
3	L	ICSB3[ICSPB3]-GF3HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
4	L	ICSB3[ICSPB3]-GF4HB1L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXXM-①-400-20-②-T2-⑩③	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑩⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-4-⑥-T2-⑩⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/4mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GF□HB1L

Z-axis stroke	Y-axis stroke 300-900	
	100	150
100	14.0	
150		
200		
250		
300		
350		
400		
450		
500		

Maximum Speed by Stroke (mm/s) (Note 4)

GF□HB1L

	100-300	300-500	550-700	750-800	850-900	1,000-1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—					1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	860		695	—													
Z-axis	240		—																

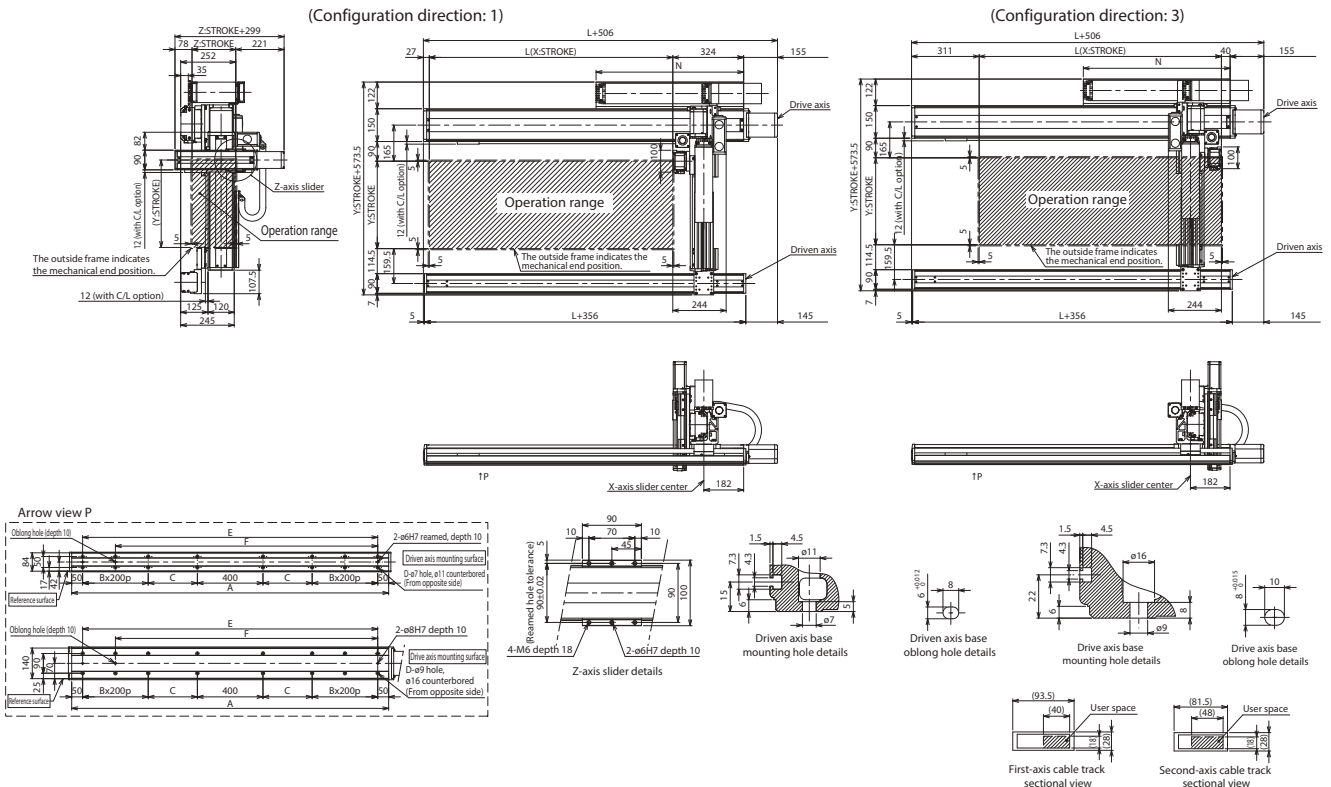
ICSB3 [ICSPB3]-GF□HB1L-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-GF□HB2□

ICSPB3-GF□HB2□

High-Precision Specification



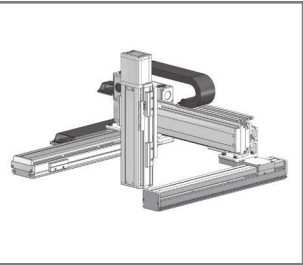
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 50mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

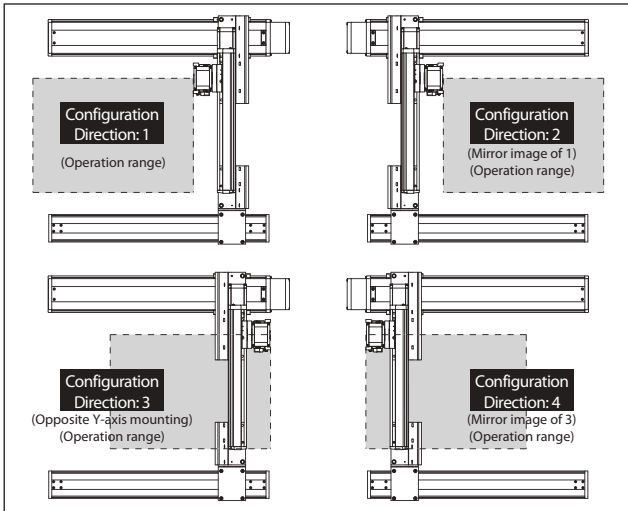
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GF1HB2M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GF1HB2L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	M	ICSB3[ICSPB3]-GF2HB2M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GF2HB2L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	M	ICSB3[ICSPB3]-GF3HB2M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GF3HB2L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	M	ICSB3[ICSPB3]-GF4HB2M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GF4HB2L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM <u>1</u> -400-20- <u>2</u> -T2- <u>11</u> - <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-MXM- <u>1</u> -200-20- <u>4</u> -T2- <u>11</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- <u>1</u> -100- <u>10</u> - <u>6</u> -T2- <u>11</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type
* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GF□HB2M

Z-axis stroke	Y-axis stroke 300~900	
	100	20.0
100	20.0	
150	20.0	
200	20.0	
250	20.0	
300	20.0	
350	20.0	
400	20.0	
450	19.4	
500	18.8	

GF□HB2L

Z-axis stroke	Y-axis stroke	300~700	750	800	850	900
		100	20.0	20.0	18.9	16.8
150	20.0	20.0	18.3	16.2		
200	20.0	20.0	17.7	15.6		
250	20.0	19.4	17.0	14.9		
300	20.0	18.8	16.4	14.3		
350	20.0	18.1	15.7	13.6		
400	20.0	17.5	15.1	13.0		
450	19.4	16.9	14.5	12.4		
500	18.8	16.3	13.9	11.8		

Maximum Speed by Stroke (mm/s) (Note 4)

GF□HB2M

	100~300	300~500	550~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis						1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis		1200		860	695														
Z-axis	600																		

GF□HB2L

	100~300	300~500	550~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis						1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis		1200		860	695														
Z-axis	300																		

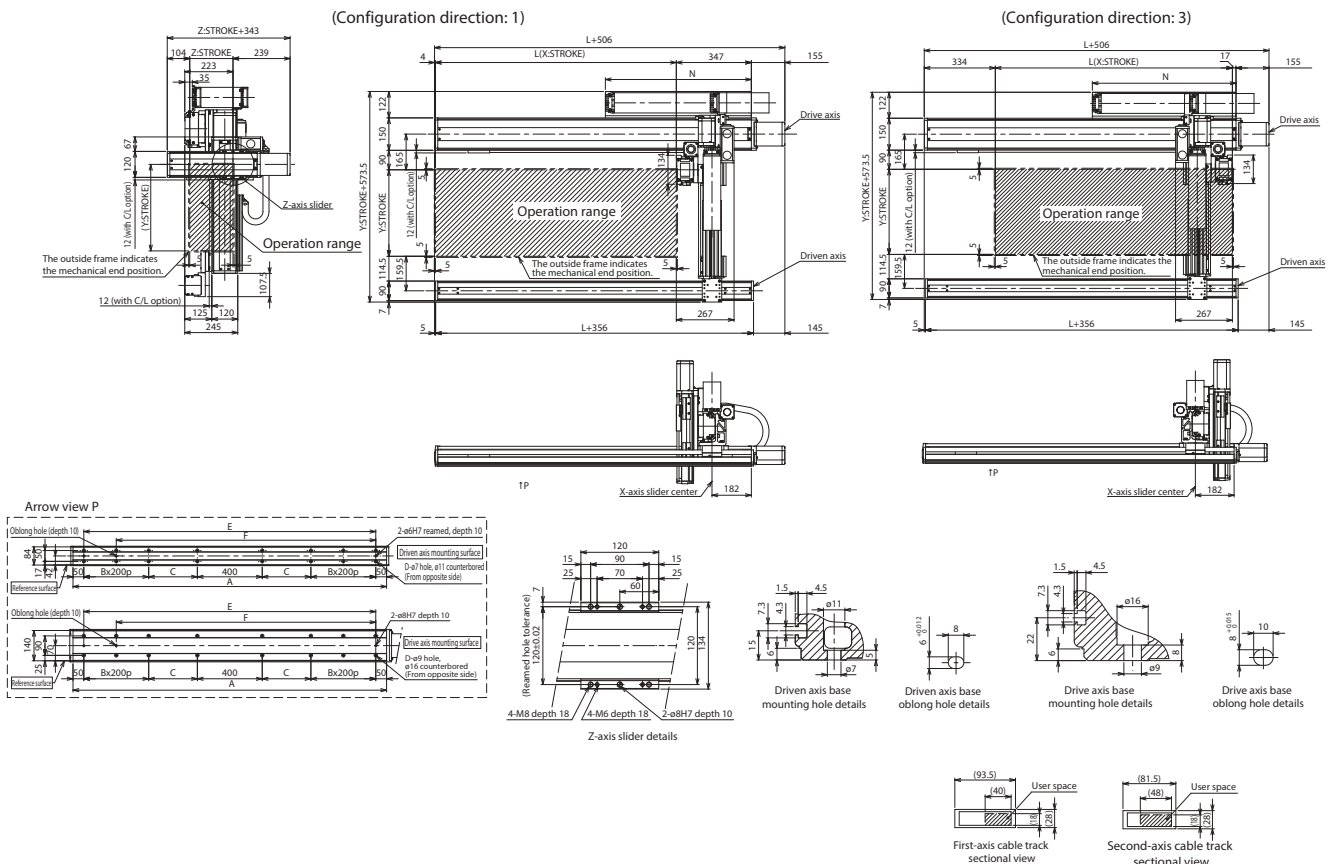
ICSB3 [ICSPB3]-GF□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-GF□HB3□

ICSPB3-GF□HB3□

High-Precision Specification



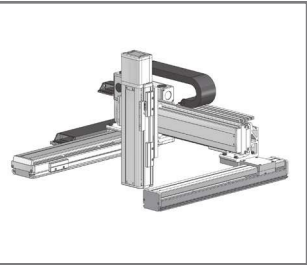
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

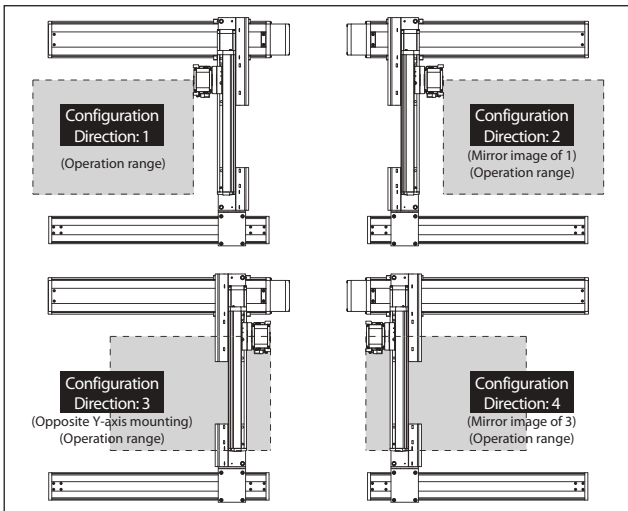
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-GF1HB3H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-GF1HB3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF1HB3L-①-②③④⑤⑥⑦-T2-⑧⑨
2	H	ICSB3[ICSPB3]-GF2HB3H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-GF2HB3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF2HB3L-①-②③④⑤⑥⑦-T2-⑧⑨
3	H	ICSB3[ICSPB3]-GF3HB3H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-GF3HB3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF3HB3L-①-②③④⑤⑥⑦-T2-⑧⑨
4	H	ICSB3[ICSPB3]-GF4HB3H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-GF4HB3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF4HB3L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXXM-①-400-20-②-T2-③④⑤	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-③⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-⑥⑦-T2-③⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑤ in the above model names.

20: For Z-axis High Speed type

10: For Z-axis Medium Speed type

5: For Z-axis Low Speed type

* Cable exit direction is specified with ⑩ in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis.

Make sure to indicate the standard equipped option in the model number.

When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification	NM	See P.369
Guide with ball-retaining mechanism *3	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.

The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GF□HB3H

Z-axis stroke	Y-axis stroke	
	300~900	
100	10.0	
150	10.0	
200	10.0	
250	10.0	
300	10.0	
350	10.0	
400	10.0	
450	10.0	
500	10.0	

GF□HB3M

Z-axis stroke	Y-axis stroke	Y-axis stroke				
		300~700	750	800	850	900
100	20.0	20.0	20.0	18.4	16.3	
150		20.0	20.0	17.7	15.6	
200		20.0	19.5	17.1	15.0	
250		20.0	18.8	16.4	14.3	
300		20.0	18.2	15.8	13.7	
350		20.0	17.6	15.2	13.1	
400		19.5	17.0	14.6	12.5	
450		18.8	16.3	13.9	11.8	
500		18.2	15.7	13.3	11.2	

GF□HB3L

Z-axis stroke	Y-axis stroke	Y-axis stroke												
		300	350	400	450	500	550	600	650	700	750	800	850	900
100	20.0	31.8	31.4	31.1	30.7	30.3	29.9	29.5	29.1	26.1	23.3	20.0	18.4	16.3
150		31.1	30.7	30.4	30.0	29.6	29.2	28.8	28.4	25.4	22.6	20.1	17.7	15.6
200		30.5	30.1	29.8	29.4	29.0	28.6	28.2	27.8	24.8	22.0	19.5	17.1	15.0
250		29.8	29.4	29.1	28.7	28.3	27.9	27.5	27.1	24.1	21.3	18.8	16.4	14.3
300		29.2	28.8	28.5	28.1	27.7	27.3	26.9	26.5	23.5	20.7	18.2	15.8	13.7
350		28.6	28.2	27.9	27.5	27.1	26.7	26.3	25.9	22.9	20.1	17.6	15.2	13.1
400		28.0	27.6	27.3	26.9	26.5	26.1	25.7	25.3	22.3	19.5	17.0	14.6	12.5
450		27.3	26.9	26.6	26.2	25.8	25.4	25.0	24.6	21.6	18.8	16.3	13.9	11.8
500		26.7	26.3	26.0	25.6	25.2	24.8	24.4	24.0	21.0	18.2	15.7	13.3	11.2

Maximum Speed by Stroke (mm/s) (Note 4)

GF□HB3H

	100~300	300~500	550~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
X-axis	—	—	—	—	—	1200	1150	1000	950	830	740	650	590	—	—	—	—	—	—	—
Y-axis	—	1200	—	860	695	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

GF□HB3M

	100~300	300~500	550~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
X-axis	—	—	—	—	—	1200	1150	1000	950	830	740	650	590	—	—	—	—	—	—	—
Y-axis	—	1200	—	860	695	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

GF□HB3L

	100~300	300~500	550~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
X-axis	—	—	—	—	—	1200	1150	1000	950	830	740	650	590	—	—	—	—	—	—	—
Y-axis	—	1200	—	860	695	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

ICSB3 [ICSPB3]-GF□HB3□-CT-CT (Cable track specification)

Dimensions

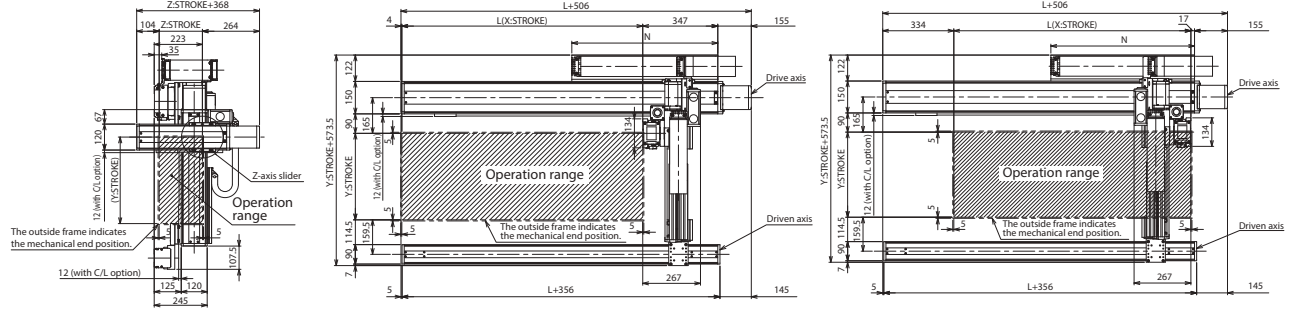
CAD drawings can be downloaded from our website.



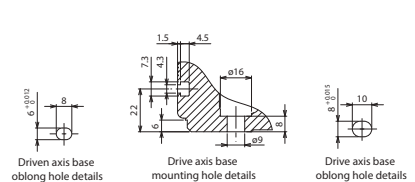
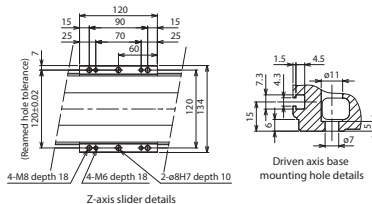
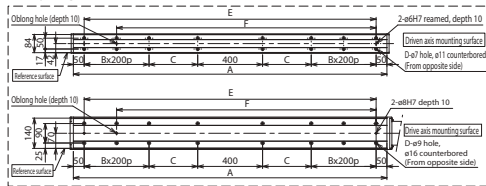
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)

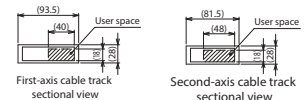
(Configuration direction: 3)



Arrow view P



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375



ICSB3-GB□HS1□

ICSPB3-GB□HS1□

High-Precision Specification

±10µm Standard

±5µm High-Precision

Battery-less Absolute

X-Y-Z 3-axis

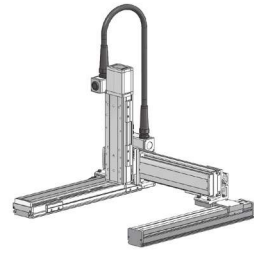
XYBG+ZS (Y Side Gantry Z Slider)

High Speed Type

X: Md (100W)

Y: Sml (60W)

Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 60: 600mm (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

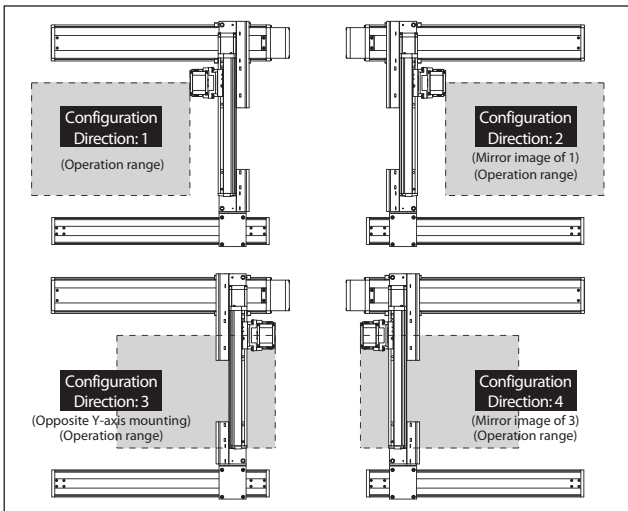
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GB1HS1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GB1HS1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
2	M	ICSB3[ICSPB3]-GB2HS1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GB2HS1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
3	M	ICSB3[ICSPB3]-GB3HS1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GB3HS1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
4	M	ICSB3[ICSPB3]-GB4HS1M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GB4HS1L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- [1] -100-20- [2] -T2- [11] - [3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0- [2]	—
Y-axis	ISB[ISPB]-SXM- [1] -60-16- [4] -T2- [11] - [5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- [1] -60- [10] - [6] -T2- [11] - [7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [10] in the above model names.

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with [11] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 60: 600mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM).

To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/20mm
Y-axis motor output/lead	60W/16mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GB□HS1M

Z-axis stroke	Y-axis stroke 300-600	
	100	150
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	

■GB□HS1L

Z-axis stroke	Y-axis stroke						
	300	350	400	450	500	550	600
100	8.0	7.9	7.6	7.2	6.9	6.5	6.2
150	7.6	7.6	7.3	6.9	6.6	6.1	5.8
200	7.2	7.2	6.9	6.5	6.2	5.8	5.5
250	6.9	6.9	6.6	6.1	5.8	5.4	5.1
300	6.6	6.6	6.3	5.9	5.6	5.2	4.8

Maximum Speed by Stroke (mm/s) (Note 4)

■GB□HS1M

	100-300	300-600	650-700	750-800	850-900	950-1000
X-axis	1200			860	695	570
Y-axis	—	960		—		
Z-axis	480			—		

■GB□HS1L

	100-300	300-600	650-700	750-800	850-900	950-1000
X-axis	1200			860	695	570
Y-axis	—	960		—		
Z-axis	240			—		

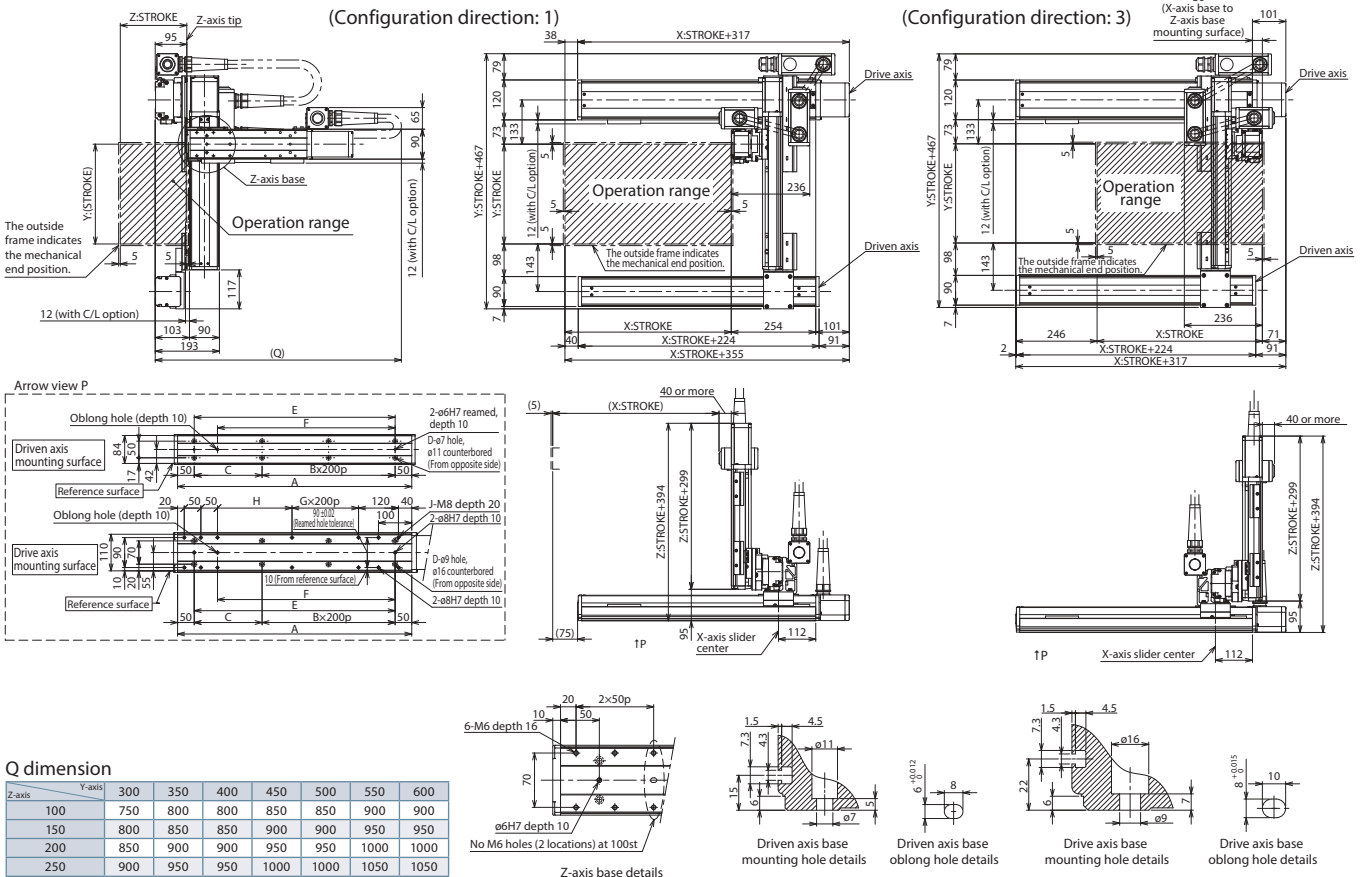
ICSB3 [ICSPB3]-GB□HS1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	2	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GB□MS1□

ICSPB3-GB□MS1□

High-Precision Specification

±10µm Standard

±5µm High-Precision

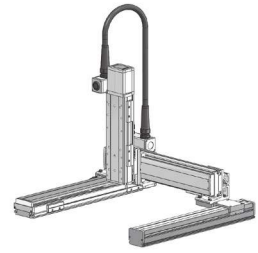
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

Medium Speed Type

X: Md (100W)
Y: Sml (60W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 60: 600mm (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCOM SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

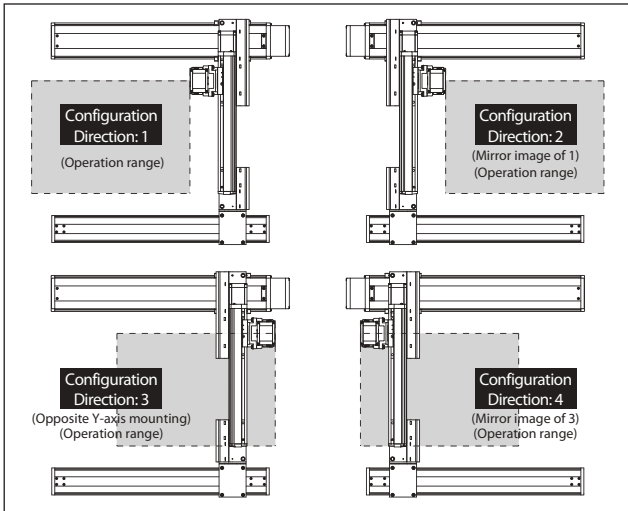
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GB1MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB1MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GB2MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB2MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GB3MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB3MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GB4MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB4MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-100-10-②-T2-③④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-SXM-①-60-8-④-T2-⑤⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥-⑥-T2-⑦⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑧] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑥] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [⑧] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 60: 600mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	60W/8mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GB□MS1M

		Y-axis stroke 300-600
Z-axis stroke	100	4.3
	150	3.9
	200	3.5
	250	3.1
	300	2.8

■GB□MS1L

		Y-axis stroke 300-600
Z-axis stroke	100	11.3
	150	10.9
	200	10.5
	250	10.1
	300	9.8

Maximum Speed by Stroke (mm/s) (Note 4)

■GB□MS1M

	100-300	300-600	650-700	750-800	850-900	950-1000
X-axis	600			430	345	280
Y-axis	—	480				
Z-axis	480					

■GB□MS1L

	100-300	300-600	650-700	750-800	850-900	950-1000
X-axis	600			430	345	280
Y-axis	—	480				
Z-axis	240					

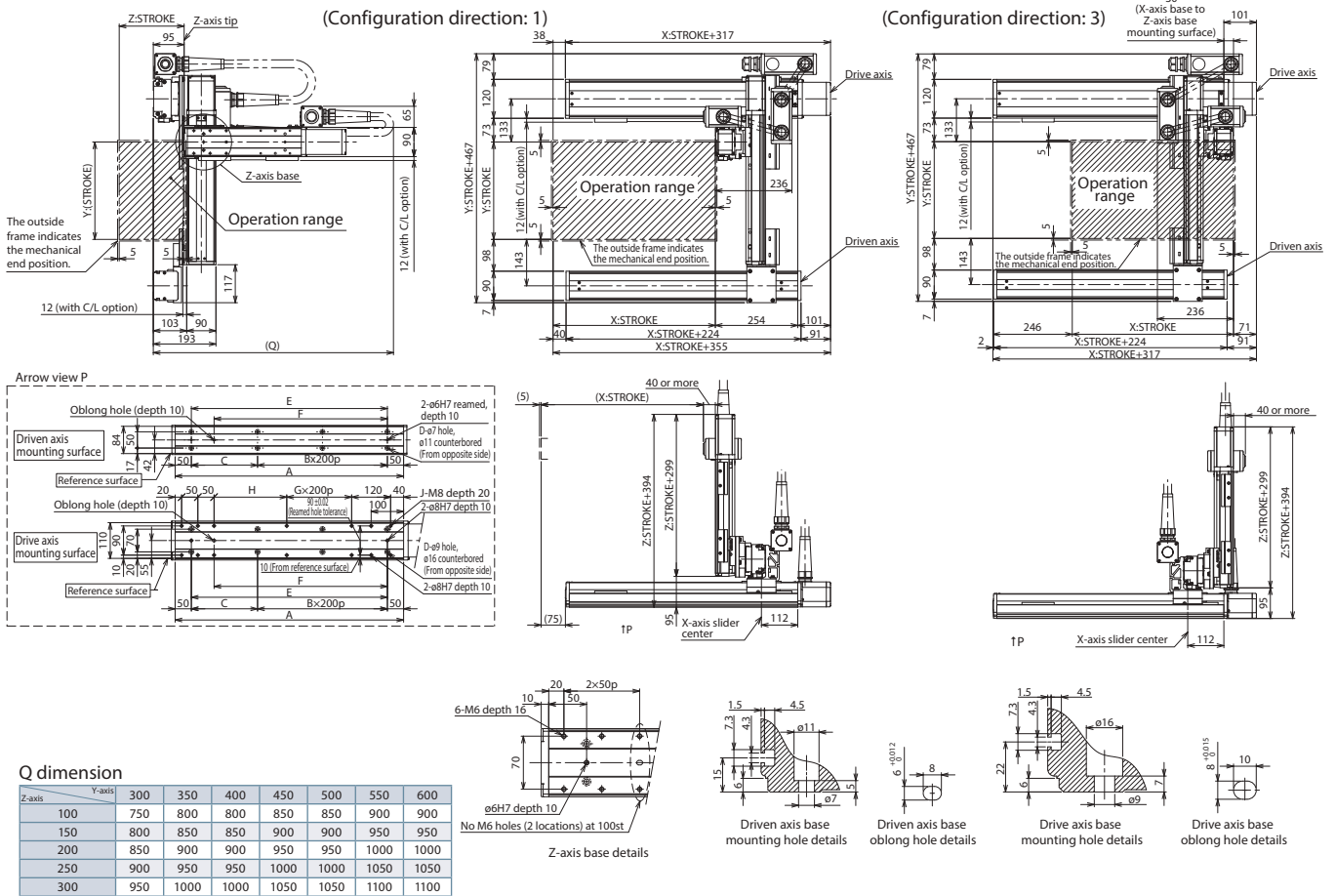
ICSB3 [ICSPB3]-GB□MS1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GC□HS1□

ICSPB3-GC□HS1□

High-Precision Specification

±10µm Standard

±5µm High-Precision

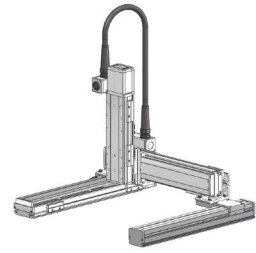
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Sml (60W)



Model Specification Items

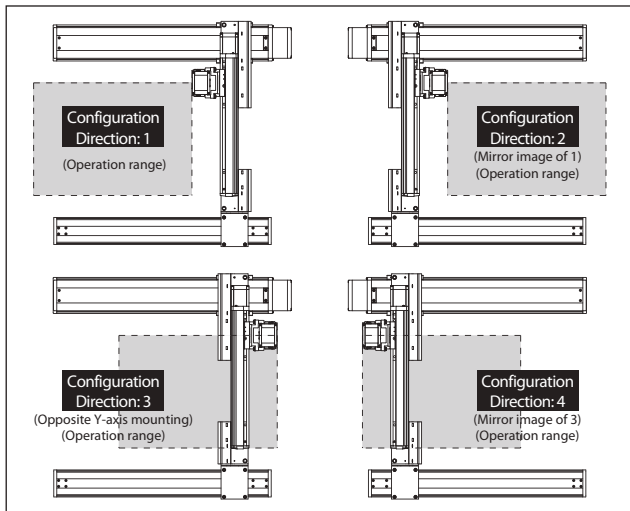
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GC1HS1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GC1HS1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	M	ICSB3[ICSPB3]-GC2HS1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GC2HS1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	M	ICSB3[ICSPB3]-GC3HS1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GC3HS1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	M	ICSB3[ICSPB3]-GC4HS1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GC4HS1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- <u>1</u> -200-20- <u>2</u> -T2- <u>11</u> - <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-MXM- <u>1</u> -100-20- <u>4</u> -T2- <u>11</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- <u>1</u> -60- <u>10</u> - <u>6</u> -T2- <u>11</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GC□HS1M

Z-axis stroke	Y-axis stroke 300~700	
	100	150
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

■GC□HS1L

Z-axis stroke	Y-axis stroke 300~700	
	100	150
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

■GC□HS1M

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	1200					
Z-axis	480					

■GC□HS1L

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	1200					
Z-axis	240					

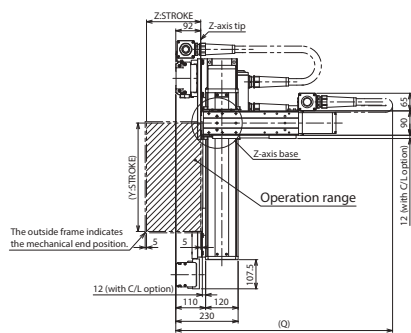
ICSB3 [ICSPB3]-GC□HS1-SC-SC□ (Self-standing cable specification)

Dimensions

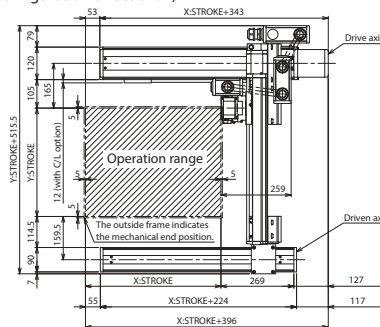
CAD drawings can be downloaded from our website.



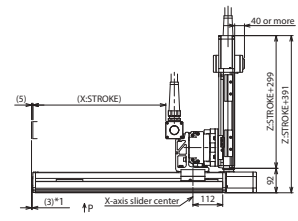
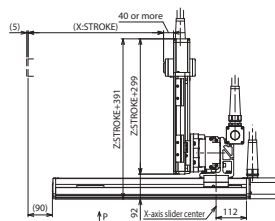
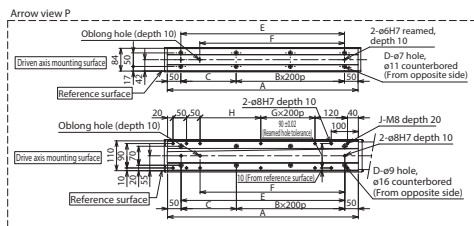
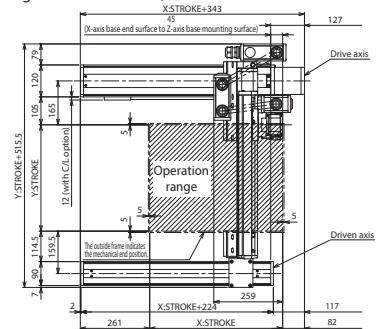
* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



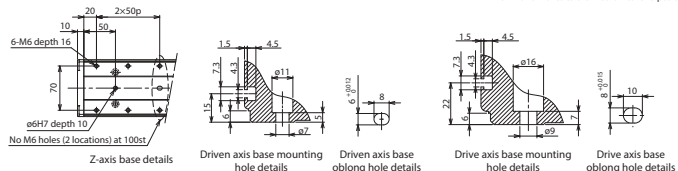
(Configuration direction: 1)



(Configuration direction: 3)



*1 Amount of Y-axis connector box protrusion when X-axis moves to the mechanical end position



Q dimension

Z-axis	Y-axis									
	300	350	400	450	500	550	600	650	700	
100	800	800	800	850	850	900	900	950	950	
150	850	850	850	900	900	950	950	1000	1000	
200	900	900	900	950	950	1000	1000	1050	1050	
250	950	950	950	1000	1000	1050	1050	1100	1100	
300	1000	1000	1000	1050	1050	1100	1100	1150	1150	
350	1050	1050	1050	1100	1100	1150	1150	1200	1200	
400	1100	1100	1100	1150	1150	1200	1200	1250	1250	

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
D	4	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GC□HS3M

ICSPB3-GC□HS3M

High-Precision Specification



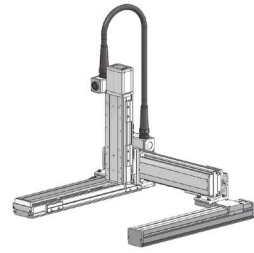
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

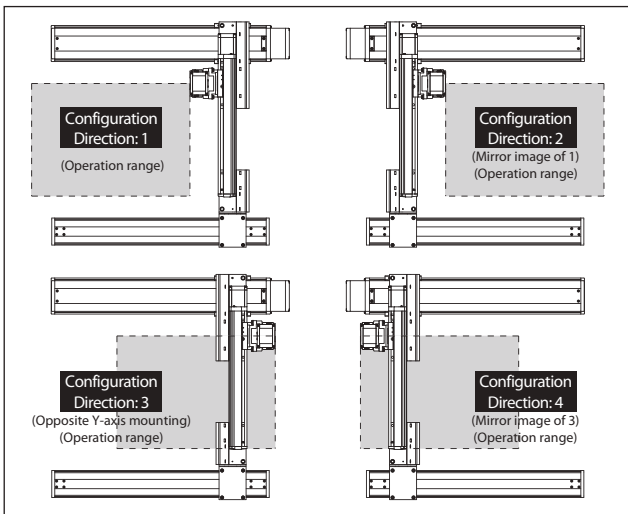
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	M	ICSB3[ICSPB3]-GC1HS3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	M	ICSB3[ICSPB3]-GC2HS3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	M	ICSB3[ICSPB3]-GC3HS3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	M	ICSB3[ICSPB3]-GC4HS3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- <u>1</u> -200-20- <u>2</u> -T2- <u>10</u> - <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-MXM- <u>1</u> -100-20- <u>4</u> -T2- <u>10</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- <u>1</u> -200-10- <u>6</u> -T2- <u>10</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [10] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM).

To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 A different can be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■ GC□HS3M

Z-axis stroke	Y-axis stroke								
	300	350	400	450	500	550	600	650	700
100	13.1	13.1	13.1	13.0	13.0	13.0	13.0	12.9	11.9
150	12.5	12.4	12.4	12.4	12.4	12.4	12.3	12.3	11.2
200	11.9	11.9	11.9	11.9	11.8	11.8	11.8	11.8	10.6
250	11.3	11.3	11.3	11.2	11.2	11.2	11.2	11.1	9.9
300	10.8	10.7	10.7	10.7	10.7	10.6	10.6	10.6	9.3
350	10.2	10.2	10.2	10.1	10.1	10.1	10.1	10.1	8.7
400	9.7	9.7	9.6	9.6	9.6	9.6	9.5	9.3	8.1

Maximum Speed by Stroke (mm/s) (Note 4)

■ GC□HS3M

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	1200					
Z-axis	600					

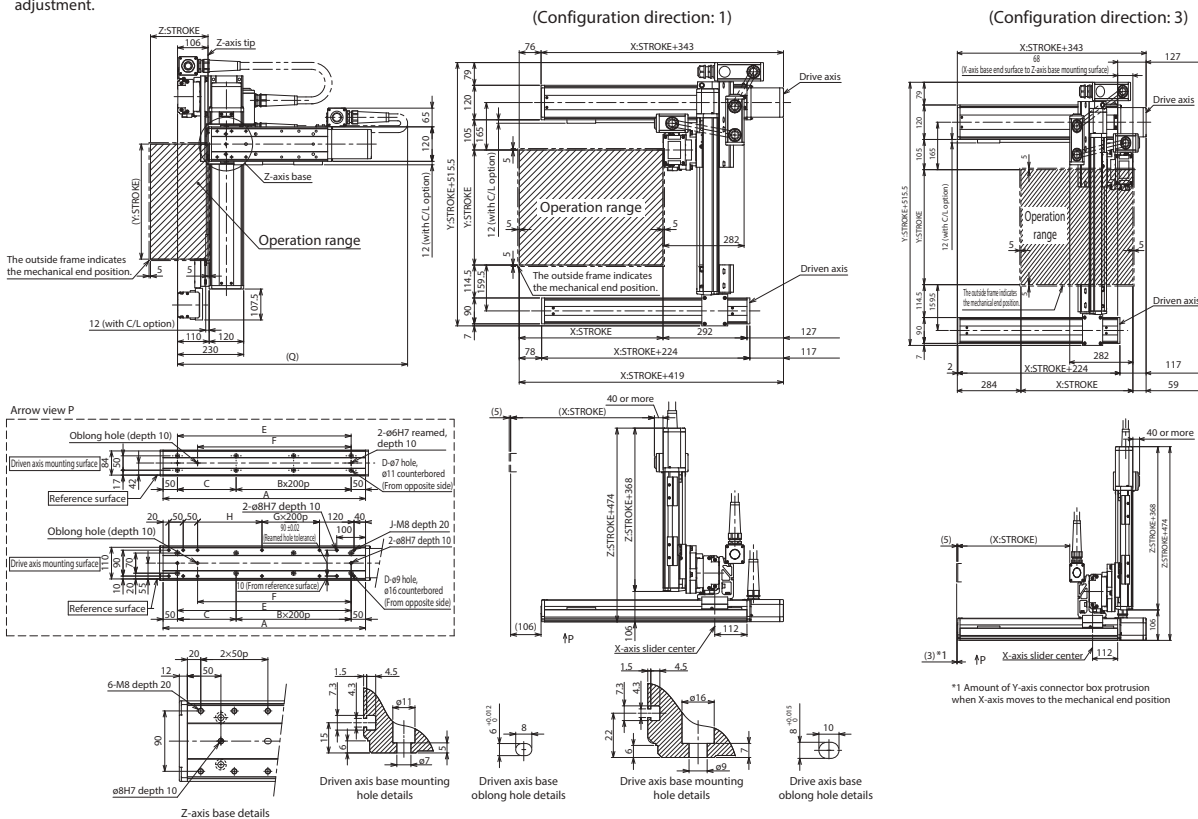
ICSB3 [ICSPB3]-GC□HS3M-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis								
	300	350	400	450	500	550	600	650	700
100	850	850	900	900	950	950	1000	1000	1000
150	900	900	950	950	1000	1000	1050	1050	1050
200	950	950	1000	1000	1050	1050	1100	1100	1100
250	1000	1000	1050	1050	1100	1100	1150	1150	1150
300	1050	1050	1100	1100	1150	1150	1200	1200	1200
350	1100	1100	1150	1150	1200	1200	1250	1250	1250
400	1150	1150	1200	1200	1250	1250	1300	1300	1300

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	2	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GC□MS1□

ICSPB3-GC□MS1□

High-Precision Specification

±10µm Standard

±5µm High Precision

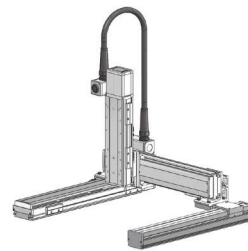
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

Medium Speed Type

X: Md (100W)
Y: Md (100W)
Z: Sm (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

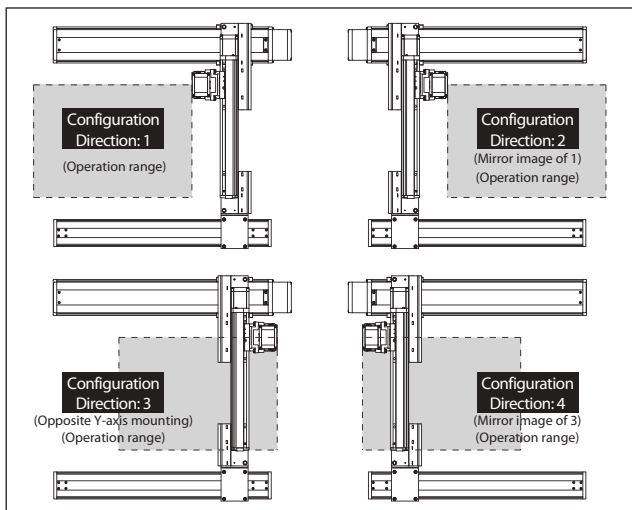
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GC1MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC1MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GC2MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC2MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GC3MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC3MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GC4MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC4MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑤⑥-T2-③-④	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑤ in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with ④ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GC□MS1M

Z-axis stroke	Y-axis stroke 300~700	
	100	150
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

■GC□MS1L

Z-axis stroke	Y-axis stroke 300~700	
	100	150
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

■GC□MS1M

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	600					
Y-axis	—	600	—			
Z-axis	480	—				

■GC□MS1L

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	600					
Y-axis	—	600	—			
Z-axis	240	—				

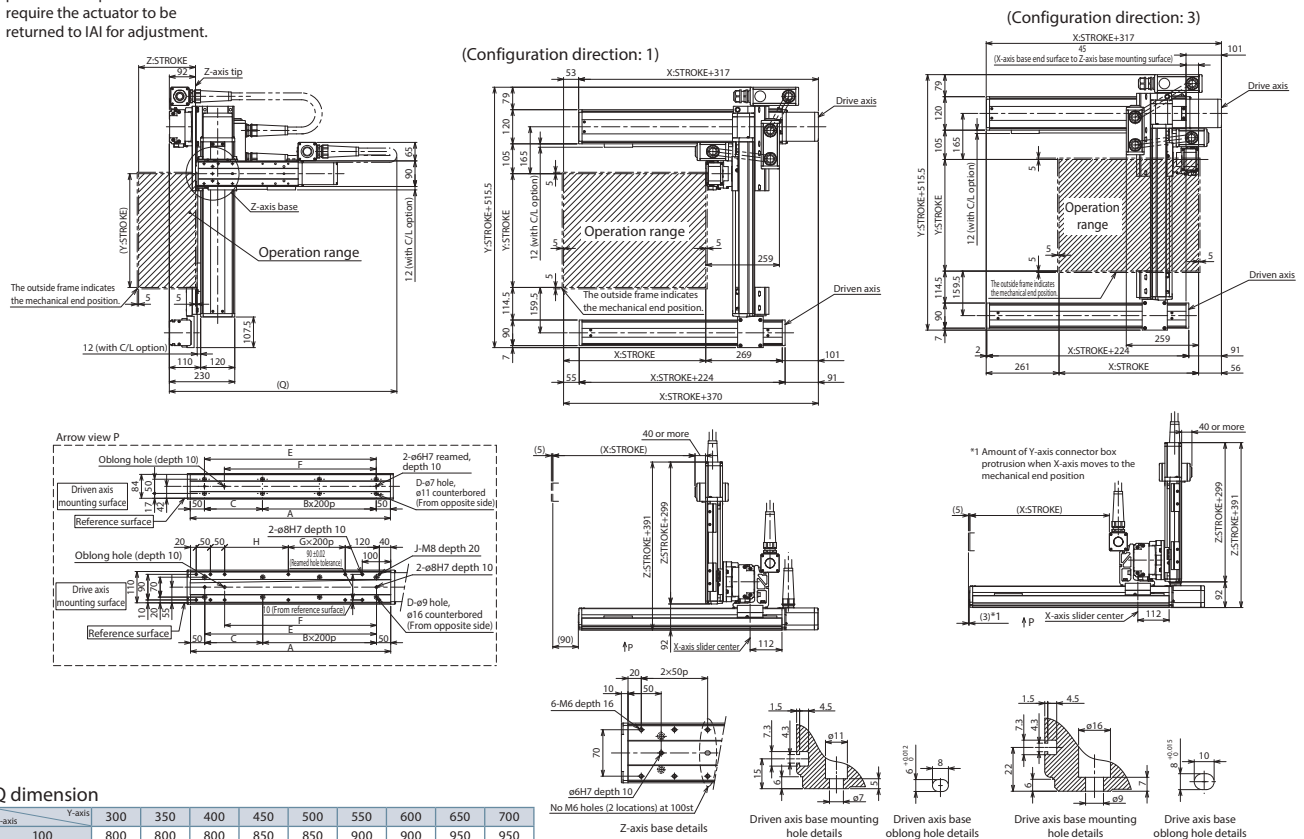
ICSB3 [ICSPB3]-GC□MS1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700
100	800	800	800	850	850	900	900	950	950	950
150	850	850	850	900	900	950	950	1000	1000	1000
200	900	900	900	950	950	1000	1000	1050	1050	1050
250	950	950	950	1000	1000	1050	1050	1100	1100	1100
300	1000	1000	1000	1050	1050	1100	1100	1150	1150	1150
350	1050	1050	1050	1100	1100	1150	1150	1200	1200	1200
400	1100	1100	1100	1150	1150	1200	1200	1250	1250	1250

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GC□MS3M

ICSPB3-GC□MS3M High-Precision Specification

±10µm Standard

±5µm High-Precision

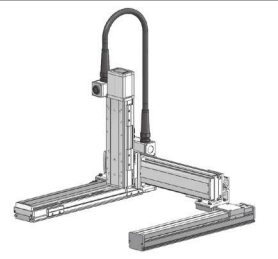
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

Medium Speed Type

X: Md (100W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type	Refer to Model Specification table below	Encoder Type	WA: Battery-less Absolute	X-axis Stroke/Option	10: 100mm 100: 1000mm (Every 50mm)	Y-axis Stroke/Option	30: 300mm 70: 700mm (Every 50mm)	Z-axis Stroke/Option	10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	Cable Length	3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below
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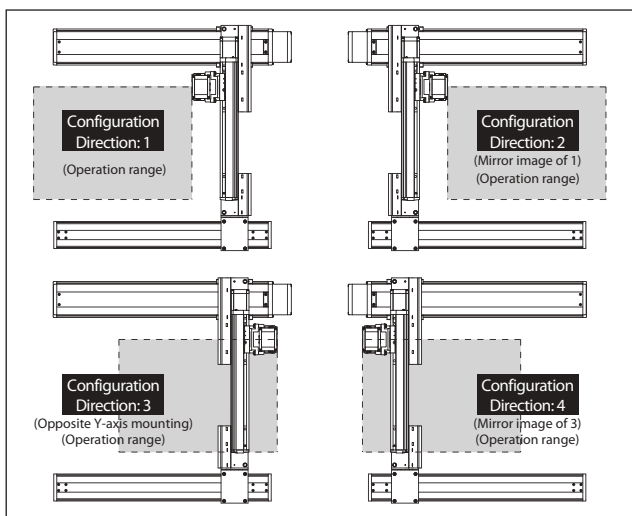
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY Configuration direction *1	Z-axis speed type	Model
1	M	ICSB3[ICSPB3]-GC1MS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GC2MS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GC3MS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GC4MS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-10-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-10-⑥-T2-⑦-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm ? : 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm ? : 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? : 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GC□MS3M

Z-axis stroke	Y-axis stroke						
	300~400	450	500	550	600	650	700
100	14.3	14.3	14.3	14.3	14.3	14.0	11.9
150	13.6	13.6	13.6	13.6	13.6	13.3	11.2
200	13.0	13.0	13.0	13.0	13.0	12.7	10.6
250	12.3	12.3	12.3	12.3	12.3	12.0	9.9
300	11.7	11.7	11.7	11.7	11.7	11.4	9.3
350	11.1	11.1	11.1	10.9	10.9	10.3	8.7
400	10.5	10.4	10.1	9.8	9.6	9.3	8.1

Maximum Speed by Stroke (mm/s) (Note 4)

■GC□MS3M

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	600			430	345	280
Y-axis	—	600		—		
Z-axis	600			—		

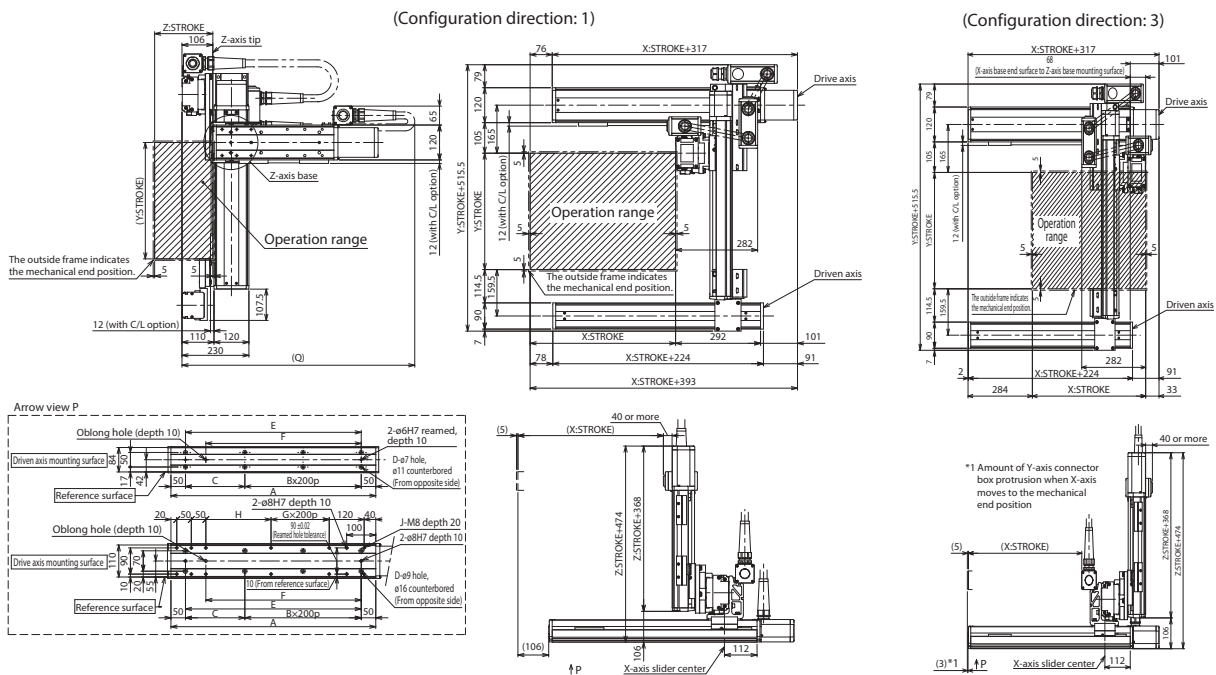
ICSB3 [ICSPB3]-GC□MS3M-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.

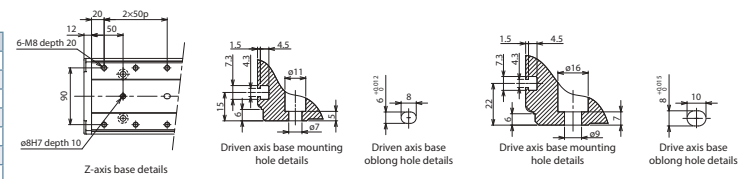


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis								
	300	350	400	450	500	550	600	650	700
100	850	850	900	900	950	950	1000	1000	1000
150	900	900	950	950	1000	1000	1050	1050	1050
200	950	950	1000	1000	1050	1050	1100	1100	1100
250	1000	1000	1050	1050	1100	1100	1150	1150	1150
300	1050	1050	1100	1100	1150	1150	1200	1200	1200
350	1100	1100	1150	1150	1200	1200	1250	1250	1250
400	1150	1150	1200	1200	1250	1250	1300	1300	1300



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GD HS1

ICSPB3-GD HS1 High-Precision Specification



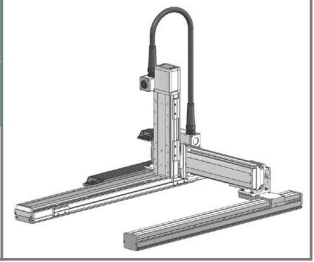
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Sm (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 100mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

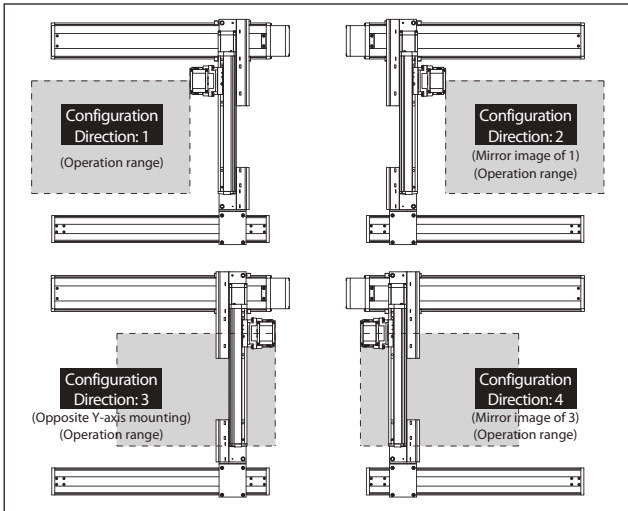
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GD1HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD1HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GD2HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD2HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GD3HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD3HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GD4HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD4HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXMX-[1]-200-20-[2]-T2-[11]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM02-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[2]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-[3]-[6]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GD□HS1M

Z-axis stroke	Y-axis stroke	
	300~700	
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

GD□HS1L

Z-axis stroke	Y-axis stroke	
	300~700	
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

GD□HS1M

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—			1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—			1200	—								
Z-axis	480			—									

GD□HS1L

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—			1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—			1200	—								
Z-axis	240			—									

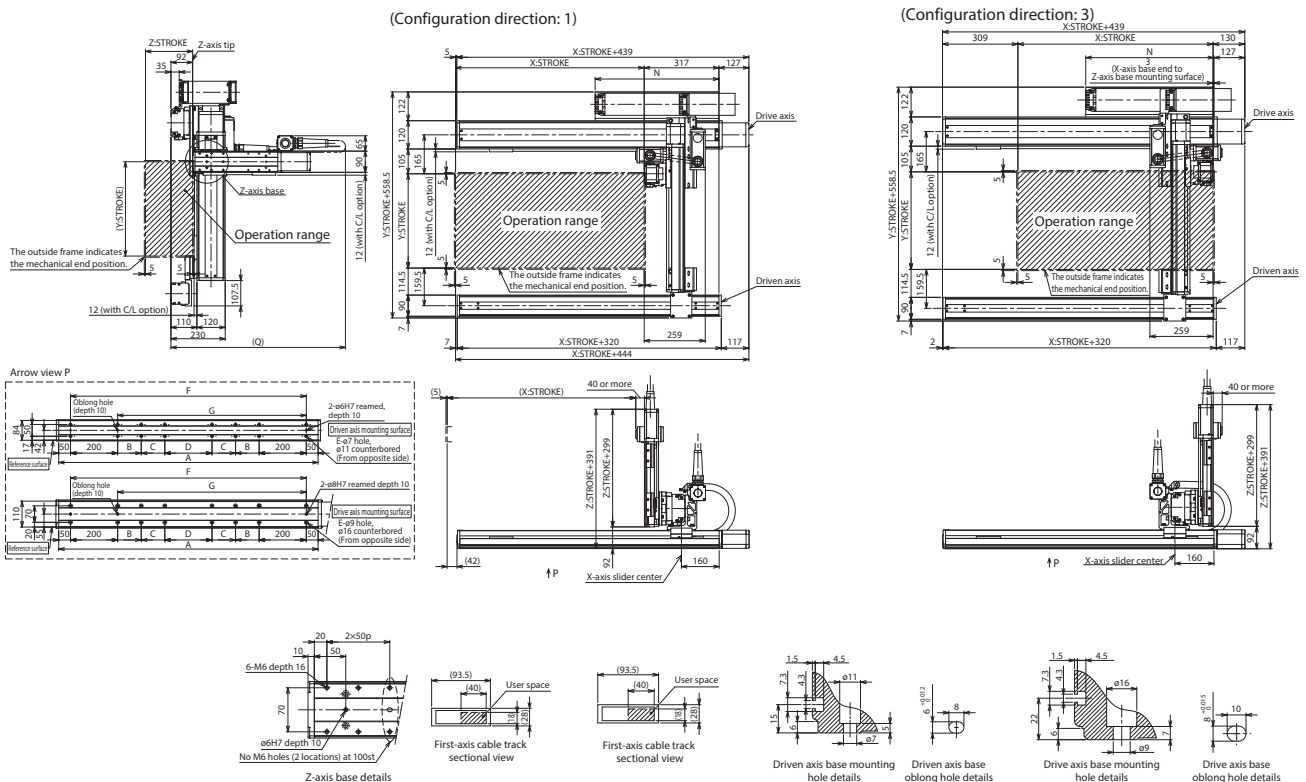
ICSB3 [ICSPB3]-GD□HS1□-CT-SC (Cable track - Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

Q dimension

Z-axis	Y-axis												
	300	350	400	450	500	550	600	650	700	750	800	850	900
100	800	800	800	850	850	900	900	950	1000	1000	1000	1050	1050
150	850	850	850	900	900	950	950	1000	1000	1000	1050	1050	1050
200	900	900	900	950	950	1000	1000	1050	1050	1050	1100	1100	1100
250	950	950	950	1000	1000	1050	1050	1100	1100	1100	1150	1150	1150
300	1000	1000	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200	1200
350	1050	1050	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250	1250
400	1100	1100	1100	1150	1150	1200	1200	1250	1250	1250	1300	1300	1300

ICSB3-GD HS3M

ICSPB3-GD HS3M High-Precision Specification

±10µm Standard

±5µm High Precision

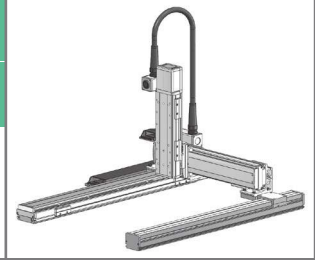
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

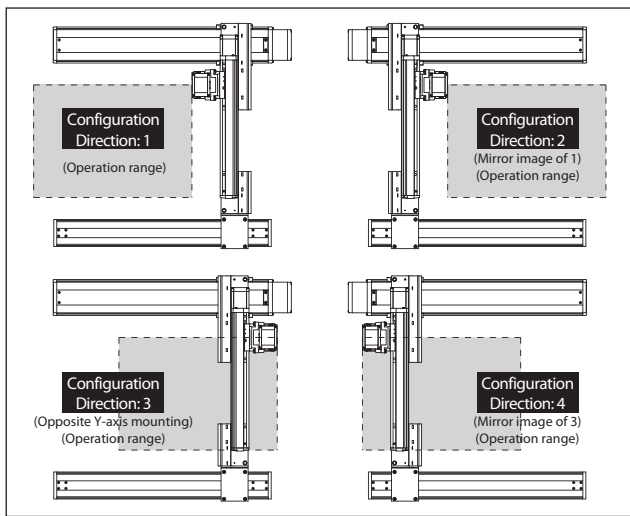
Series	GD HS3M	Type	WA	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification		Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 100mm)	Refer to Options table below.	30: 300mm 70: 700mm (Every 50mm)	Refer to Options table below.	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	M	ICSB3[ICSPB3]-GD1HS3M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
2	M	ICSB3[ICSPB3]-GD2HS3M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
3	M	ICSB3[ICSPB3]-GD3HS3M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
4	M	ICSB3[ICSPB3]-GD4HS3M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- [1] -200-20- [2] -T2- [3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM02-N-0-0- [2]	—
Y-axis	ISB[ISPB]-MXM- [1] -100-20- [4] -T2- [5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- [1] -200-10- [6] -T2- [6] - [7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [8] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm ? 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm ? 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GD□HS3M

Z-axis stroke	Y-axis stroke									
	300	350	400	450	500	550	600	650	700	
100	13.1	13.1	13.1	13.0	13.0	13.0	13.0	12.9	11.9	
150	12.5	12.4	12.4	12.4	12.4	12.4	12.3	12.3	11.2	
200	11.9	11.9	11.9	11.9	11.8	11.8	11.8	11.8	10.6	
250	11.3	11.3	11.3	11.2	11.2	11.2	11.2	11.1	9.9	
300	10.8	10.7	10.7	10.7	10.7	10.6	10.6	10.6	9.3	
350	10.2	10.2	10.2	10.1	10.1	10.1	10.1	10.1	8.7	
400	9.7	9.7	9.6	9.6	9.6	9.6	9.5	9.3	8.1	

Maximum Speed by Stroke (mm/s) (Note 4)

GD□HS3M

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	-	-	-	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	-	1200	-	-	-	-	-	-	-	-	-	-	-
Z-axis	600	-	-	-	-	-	-	-	-	-	-	-	-

ICSB3 [ICSPB3]-GD□HS3M-CT-SC (Cable track - Self-standing cable specification)

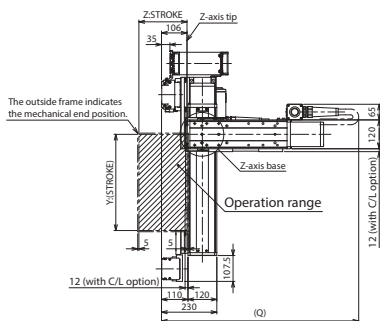
Dimensions

CAD drawings can be downloaded from our website.

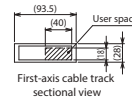
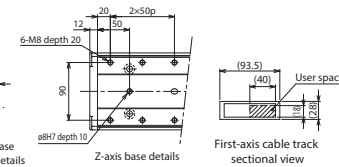
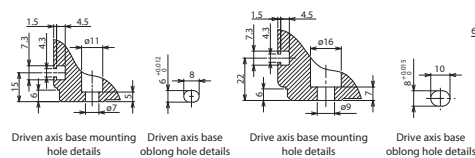
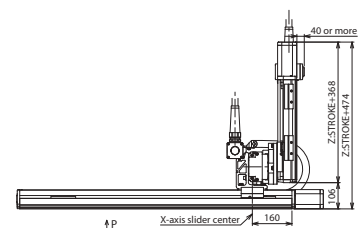
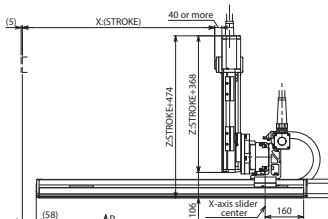
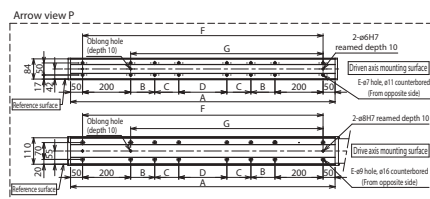
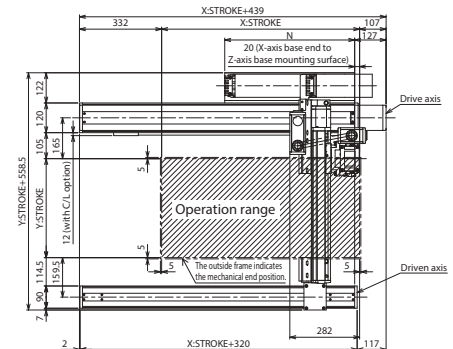


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



(Configuration direction: 3)



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700
100	850	850	900	900	950	950	1000	1000	1000	1000
150	900	900	950	950	1000	1000	1000	1050	1050	1050
200	950	950	1000	1000	1050	1050	1100	1100	1100	1100
250	1000	1000	1050	1050	1100	1100	1100	1150	1150	1150
300	1050	1050	1100	1100	1150	1150	1200	1200	1200	1200
350	1100	1100	1150	1150	1200	1200	1250	1250	1250	1250
400	1150	1150	1200	1200	1250	1250	1300	1300	1300	1300

ICSB3-GE□HS1□

ICSPB3-GE□HS1□

High-Precision Specification



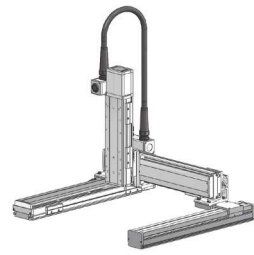
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

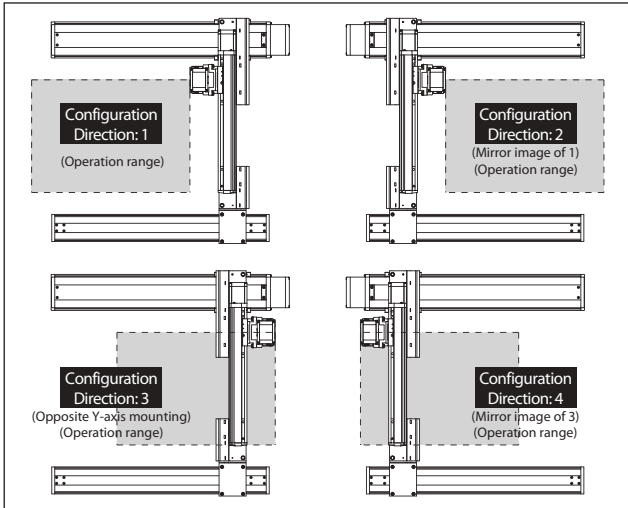
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GE1HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE1HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GE2HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE2HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GE3HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE3HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GE4HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE4HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-[1]-400-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-[10]-[6]-T2-[1]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm ? : 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm ? : 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? : 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

Z-axis stroke	Y-axis stroke	
	300~900	
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

Z-axis stroke	Y-axis stroke	
	300~900	
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis		1200			920	765
Y-axis	—	1200	860		695	—
Z-axis	480			—		

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis		1200			920	765
Y-axis	—	1200	860		695	—
Z-axis	240			—		

ICSB3 [ICSPB3]-GE□HS1□-SC-SC (Self-standing cable specification)

Dimensions

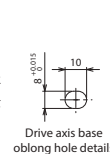
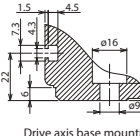
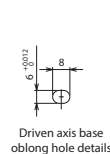
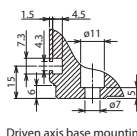
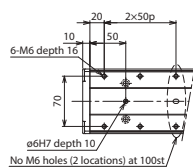
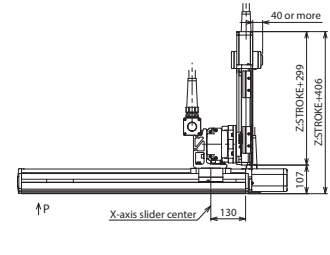
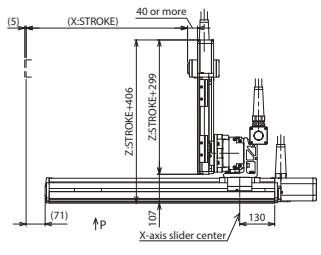
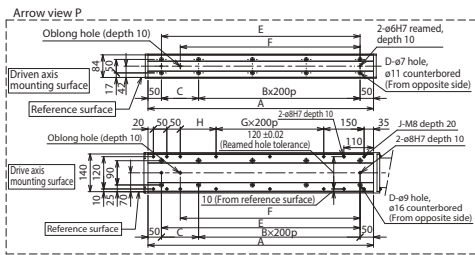
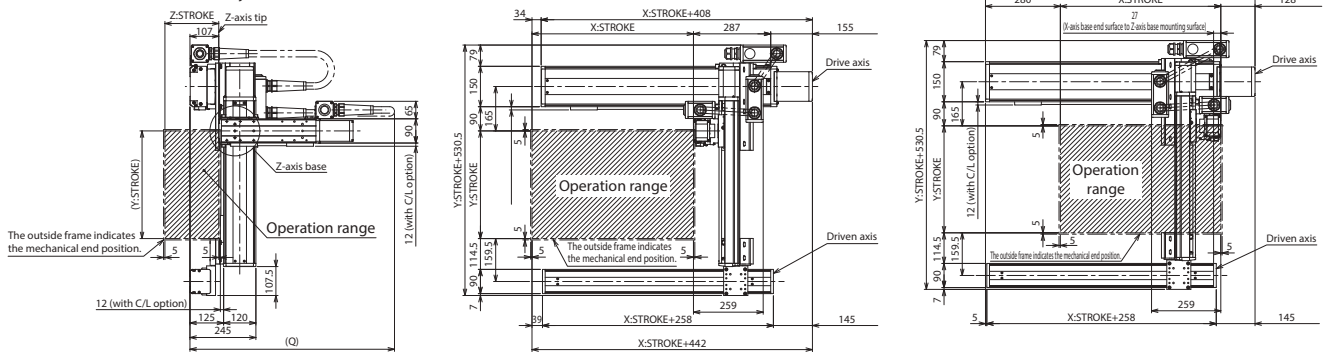
CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)

(Configuration direction: 3)



Q dimension

Z-axis	Y-axis															
	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
100	800	800	850	850	900	900	950	950	950	1000	1000	1050	1050	1100	1100	1100
150	850	850	900	900	950	950	1000	1000	1000	1050	1050	1100	1100	1150	1150	1150
200	900	900	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150	1200	1200	1200
250	950	950	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200	1250	1250	1250
300	1000	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200	1250	1250	1300	1300	1300
350	1050	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250	1300	1300	1350	1350	1350
400	1100	1100	1150	1150	1200	1200	1250	1250	1250	1300	1300	1350	1350	1400	1400	1400

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	5	5	5	5	6	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	4	4	4	4	5	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20

ICSB3-GE□HS3□

ICSPB3-GE□HS3□

High-Precision Specification

±10μm Standard

±5μm High-Precision

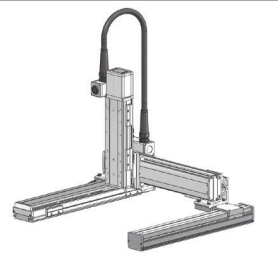
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

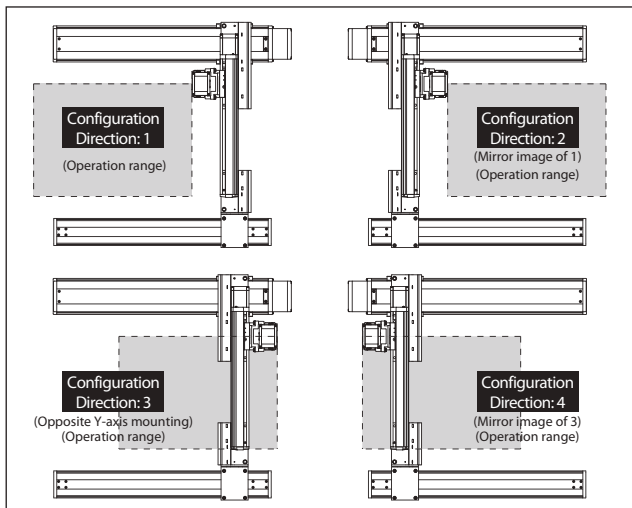
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GE1HS3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GE1HS3L-①-②③④⑤⑥⑦-T2-⑧⑨
2	M	ICSB3[ICSPB3]-GE2HS3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GE2HS3L-①-②③④⑤⑥⑦-T2-⑧⑨
3	M	ICSB3[ICSPB3]-GE3HS3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GE3HS3L-①-②③④⑤⑥⑦-T2-⑧⑨
4	M	ICSB3[ICSPB3]-GE4HS3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GE4HS3L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-①-400-20-②-T2-③④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-⑤⑥-T2-③④	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑦] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [⑤] in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type

* Cable exit direction is specified with [④] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

Z-axis stroke	Y-axis stroke	
	300~900	300~900
100	14.3	
150	13.6	
200	13.0	
250	12.3	
300	11.7	
350	11.1	
400	10.5	

Z-axis stroke	Y-axis stroke												
	300	350	400	450	500	550	600	650	700	750	800	850	900
100	32.9	32.9	32.9	32.8	32.8	32.8	32.8	29.7	26.7	23.9	21.4	19.0	16.9
150	32.3	32.2	32.2	32.2	32.2	32.2	32.1	29.0	26.0	23.2	20.7	18.3	16.2
200	31.7	31.7	31.7	31.7	31.5	31.1	30.7	28.4	25.4	22.6	20.1	17.7	15.6
250	29.7	29.4	29.0	28.7	28.3	27.9	27.6	27.3	24.7	21.9	19.4	17.0	14.9
300	27.0	26.7	26.4	26.0	25.7	25.4	25.1	24.8	24.1	21.3	18.8	16.4	14.3
350	24.7	24.4	24.1	23.8	23.5	23.2	22.9	22.6	22.3	20.7	18.2	15.8	13.7
400	22.6	22.4	22.1	21.8	21.5	21.2	21.0	20.7	20.4	20.1	17.6	15.2	13.1

Maximum Speed by Stroke (mm/s) (Note 4)

GE□HS3M	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	—	1200	860	695	—	—
Z-axis	600					

GE□HS3L	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	—	1200	860	695	—	—
Z-axis	300					

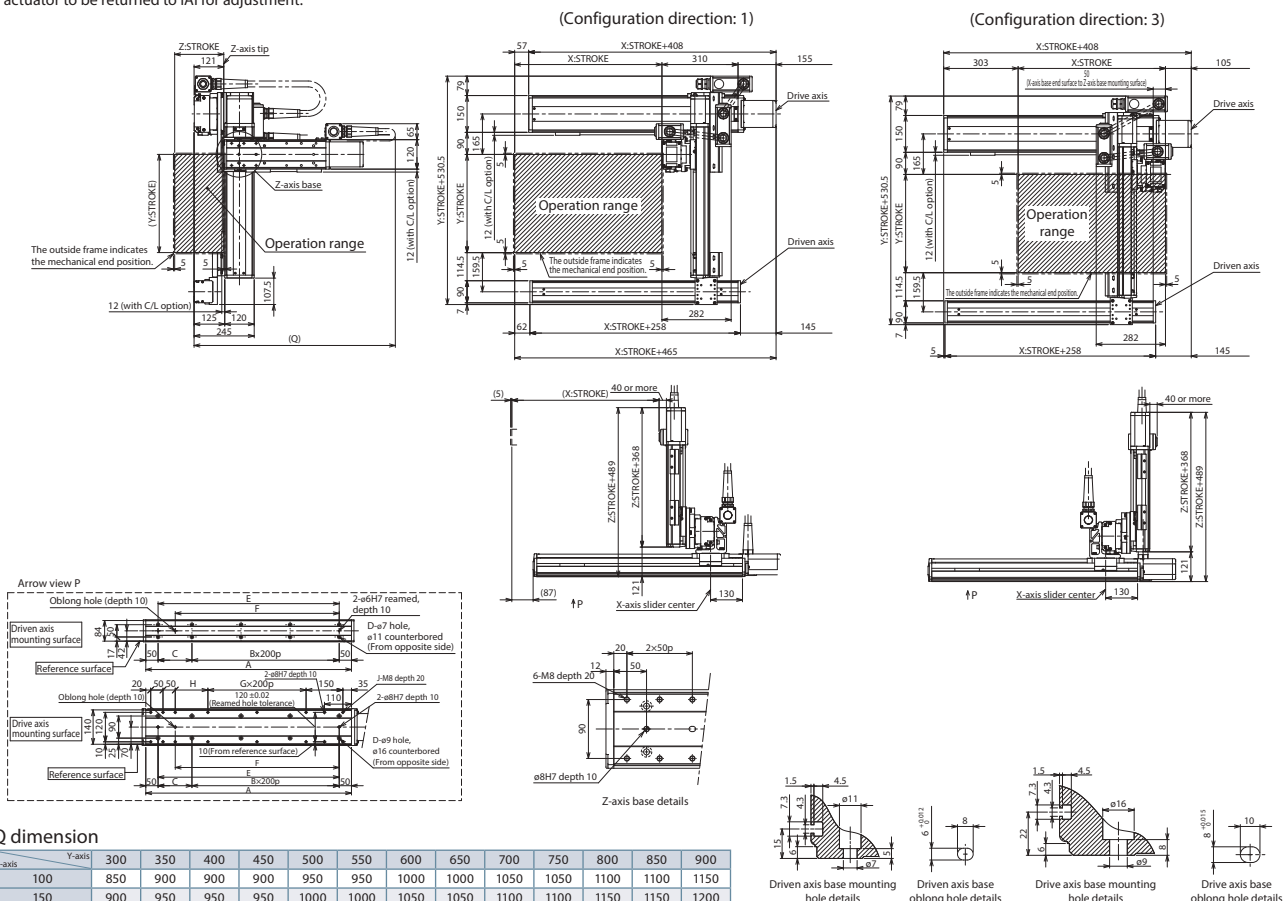
ICSB3 [ICSPB3]-GE□HS3□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700	750	800	850	900
100	850	900	900	900	950	950	1000	1000	1000	1050	1050	1100	1100	1150
150	900	950	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150	1200
200	950	1000	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200	1250
250	1000	1050	1050	1050	1100	1100	1150	1150	1150	1200	1200	1250	1250	1300
300	1050	1100	1100	1100	1150	1150	1200	1200	1200	1250	1250	1300	1300	1350
350	1100	1150	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400
400	1150	1200	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400	1450	1450

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GE□MS1□

ICSPB3-GE□MS1□ High-Precision Specification

±10µm Standard

±5µm High-Precision

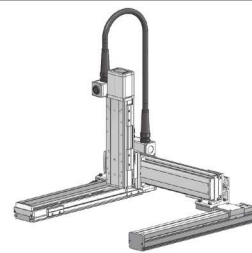
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

Medium Speed Type

X: Lg (200W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification
Type	Refer to Model Specification table below
Encoder Type	WA: Battery-less Absolute
X-axis Stroke/Option	10: 100mm 100: 1000mm (Every 50mm)
Y-axis Stroke/Option	30: 300mm 90: 900mm (Every 50mm)
Z-axis Stroke/Option	10: 100mm 40: 400mm (Every 50mm)
Applicable Controllers	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA
Cable Length	3L: 3m 5L: 5m □L: Specified length
Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below

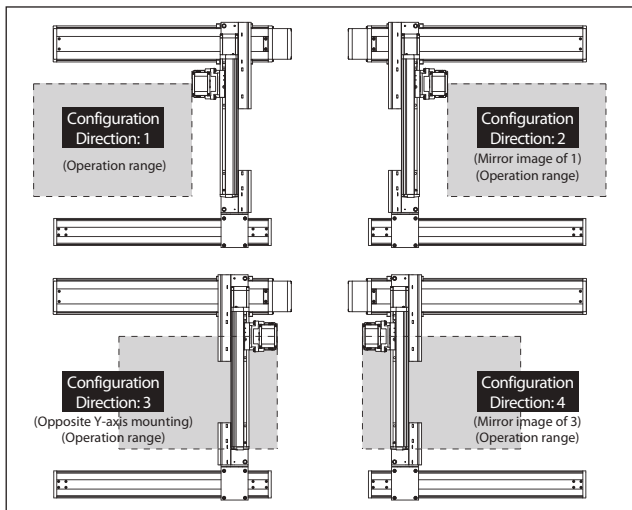
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GE1MS1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GE1MS1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	M	ICSB3[ICSPB3]-GE2MS1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GE2MS1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	M	ICSB3[ICSPB3]-GE3MS1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GE3MS1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	M	ICSB3[ICSPB3]-GE4MS1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GE4MS1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM- <u>1</u> -200-10- <u>2</u> -T2- <u>1</u> - <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-MXM- <u>1</u> -200-10- <u>2</u> -T2- <u>1</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- <u>1</u> -60- <u>10</u> - <u>6</u> -T2- <u>1</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [5] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [1] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/10mm
Y-axis motor output/lead	200W/10mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GE□MS1M

Z-axis stroke	Y-axis stroke 300~900	
	100	300~900
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

GE□MS1L

Z-axis stroke	Y-axis stroke 300~900	
	100	300~900
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

GE□MS1M

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis		600			460	380
Y-axis	—	600		430	345	—
Z-axis	480					

GE□MS1L

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis		600			460	380
Y-axis	—	600		430	345	—
Z-axis	240					

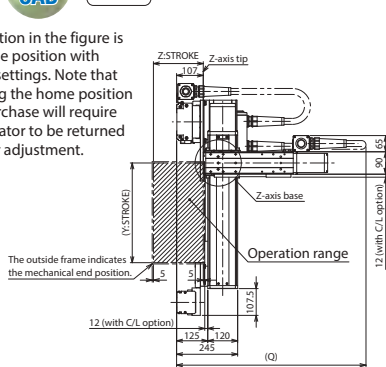
ICSB3 [ICSPB3]-GE□MS1□-SC-SC (Self-standing cable specification)

Dimensions

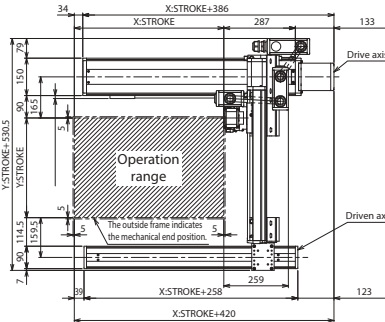
CAD drawings can be downloaded from our website.



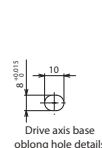
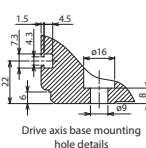
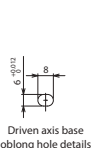
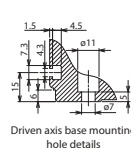
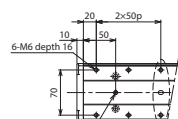
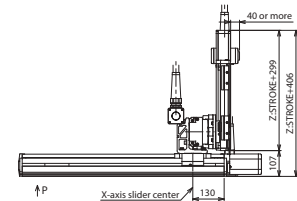
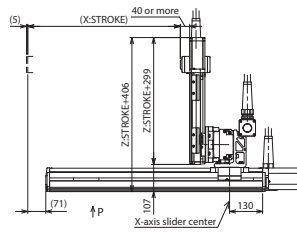
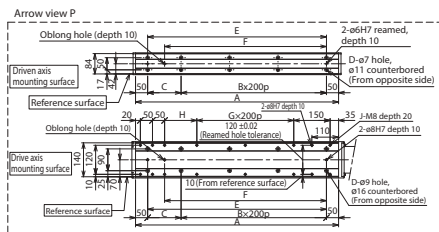
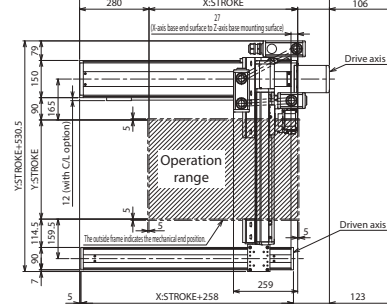
* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



(Configuration direction: 1)



(Configuration direction: 3)



Q dimension

Z-axis	Y-axis															
	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
100	800	800	850	850	900	900	950	950	950	1000	1000	1050	1050	1050	1050	1050
150	850	850	900	900	950	950	1000	1000	1000	1050	1050	1100	1100	1100	1100	1100
200	900	900	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150	1150	1150	1150
250	950	950	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200	1200	1200	1200
300	1000	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200	1250	1250	1250	1250	1250
350	1050	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250	1300	1300	1300	1300	1300
400	1100	1100	1150	1150	1200	1200	1250	1250	1250	1300	1300	1350	1350	1350	1350	1350

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20

ICSB3-GE□MS3L

ICSPB3-GE□MS3L High-Precision Specification



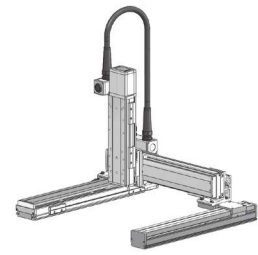
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

Medium Speed Type

X: Lg (200W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	GE□MS3L	WA	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation Designations below	

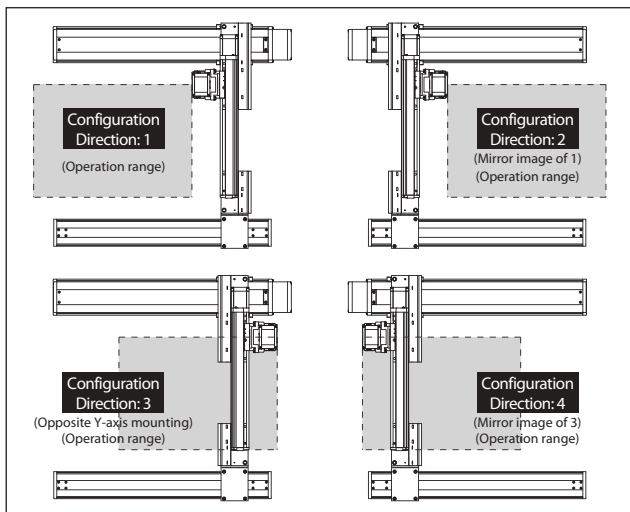
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	L	ICSB3[ICSPB3]-GE1MS3L-①-②③-④⑤⑥⑦-T2-⑧-⑨
2	L	ICSB3[ICSPB3]-GE2MS3L-①-②③④-⑤⑥⑦-T2-⑧-⑨
3	L	ICSB3[ICSPB3]-GE3MS3L-①-②③④⑤⑥⑦-T2-⑧-⑨
4	L	ICSB3[ICSPB3]-GE4MS3L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-①-200-10-②-T2-⑩-③	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-10-④-T2-⑩-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-5-⑥-T2-⑩-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm ? : 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm ? : 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? : 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM).

To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/10mm
Y-axis motor output/lead	200W/10mm
Z-axis motor output/lead	200W/5mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GE□MS3L

Z-axis stroke	Y-axis stroke												
	300	350	400	450	500	550	600	650	700	750	800	850	900
100	34.3	34.3	34.3	34.3	34.3	34.3	33.1	29.7	26.7	23.9	21.4	19.0	16.9
150	33.6	33.6	33.6	33.6	33.6	33.6	32.4	29.0	26.0	23.2	20.7	18.3	16.2
200	33.0	33.0	33.0	33.0	33.0	33.0	31.8	28.4	25.4	22.6	20.1	17.7	15.6
250	32.3	32.3	32.3	32.1	31.8	31.4	31.0	27.7	24.7	21.9	19.4	17.0	14.9
300	30.1	29.8	29.5	29.1	28.8	28.4	28.1	27.1	24.1	21.3	18.8	16.4	14.3
350	27.5	27.2	26.9	26.5	26.2	25.9	25.6	25.3	23.5	20.7	18.2	15.8	13.7
400	25.2	24.9	24.7	24.3	24.1	23.7	23.5	23.2	22.9	20.1	17.6	15.2	13.1

Maximum Speed by Stroke (mm/s) (Note 4)

GE□MS3L

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis		600			460	380
Y-axis	—		600	430	345	—
Z-axis	300					

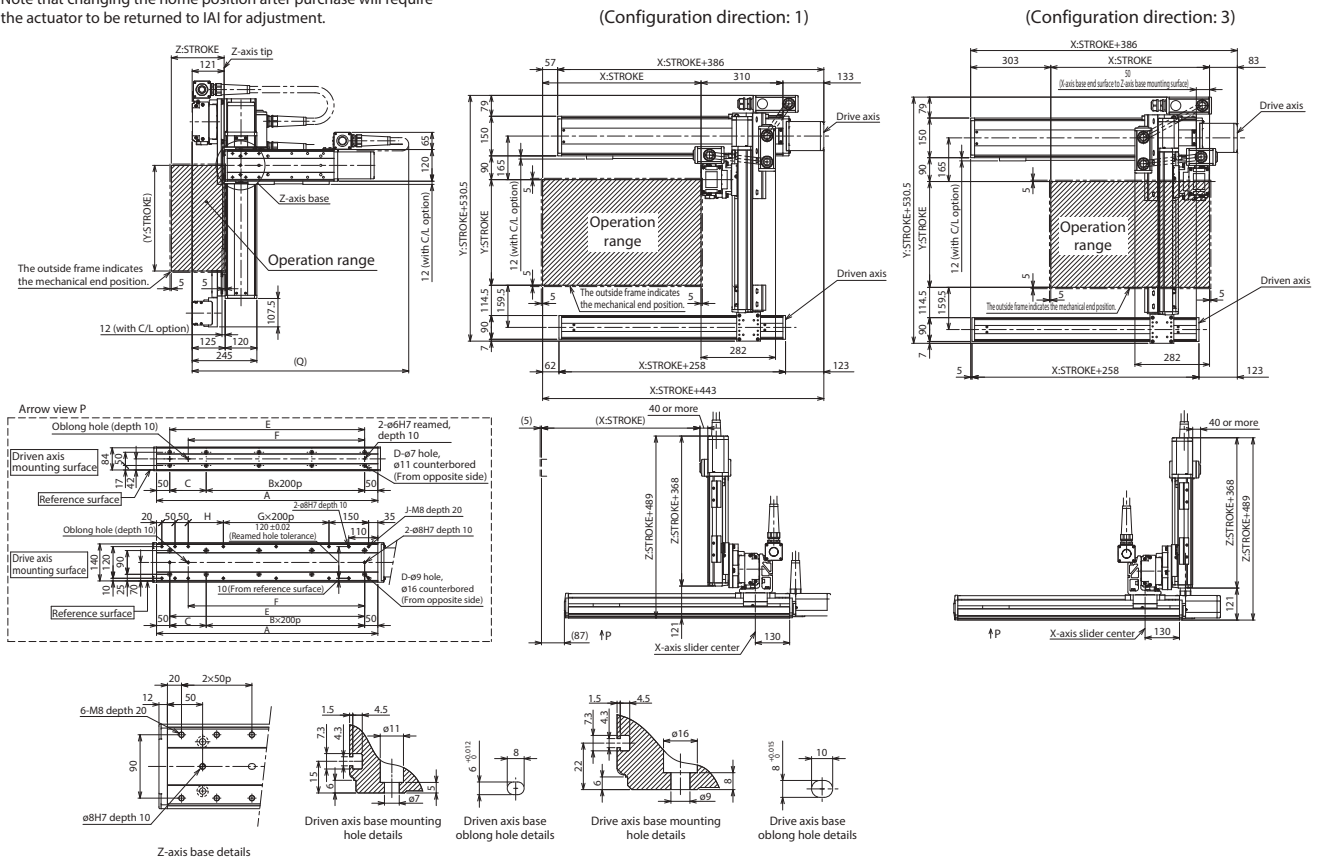
ICSB3 [ICSPB3]-GE□MS3L-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700	750	800	850	900
100		850	900	900	900	950	950	1000	1000	1050	1050	1100	1100	1150
150		900	950	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1200
200		950	1000	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1250
250		1000	1050	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	1300
300		1050	1100	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300	1350
350		1100	1150	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350	1400
400		1150	1200	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400	1450

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	0	1	1	1	1	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	12	14	14	14	14	16	16	16	18

ICSB3-GF□HS1□

ICSPB3-GF□HS1□

High-Precision Specification

±10µm Standard

±5µm High-Precision

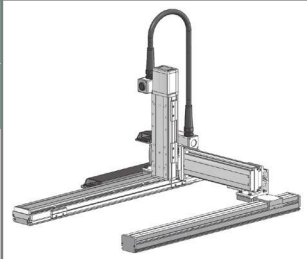
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

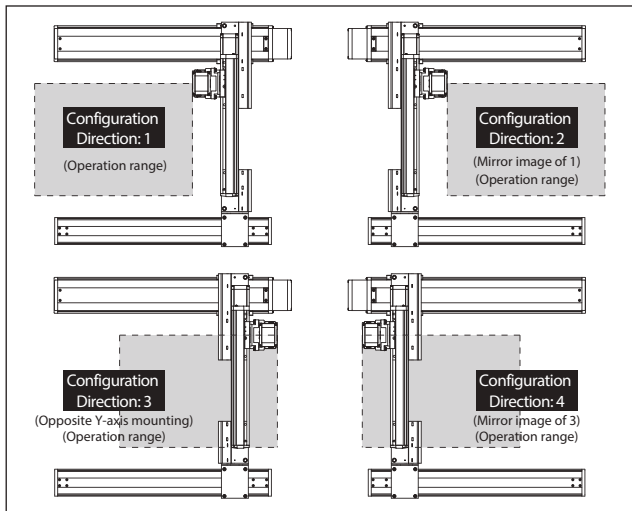
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GF1HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GF1HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GF2HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GF2HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GF3HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GF3HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GF4HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GF4HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXXM-[1]-400-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-[10]-[6]-T2-[1]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [10] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [10] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GF□HS1M

Z-axis stroke	Y-axis stroke	
	300~900	
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

GF□HS1L

Z-axis stroke	Y-axis stroke	
	300~900	
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

GF□HS1M

	100~300	300~400	450~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis						1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis		1200		860	695														
Z-axis	480																		

GF□HS1L

	100~300	300~400	450~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis						1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis		1200		860	695														
Z-axis	240																		

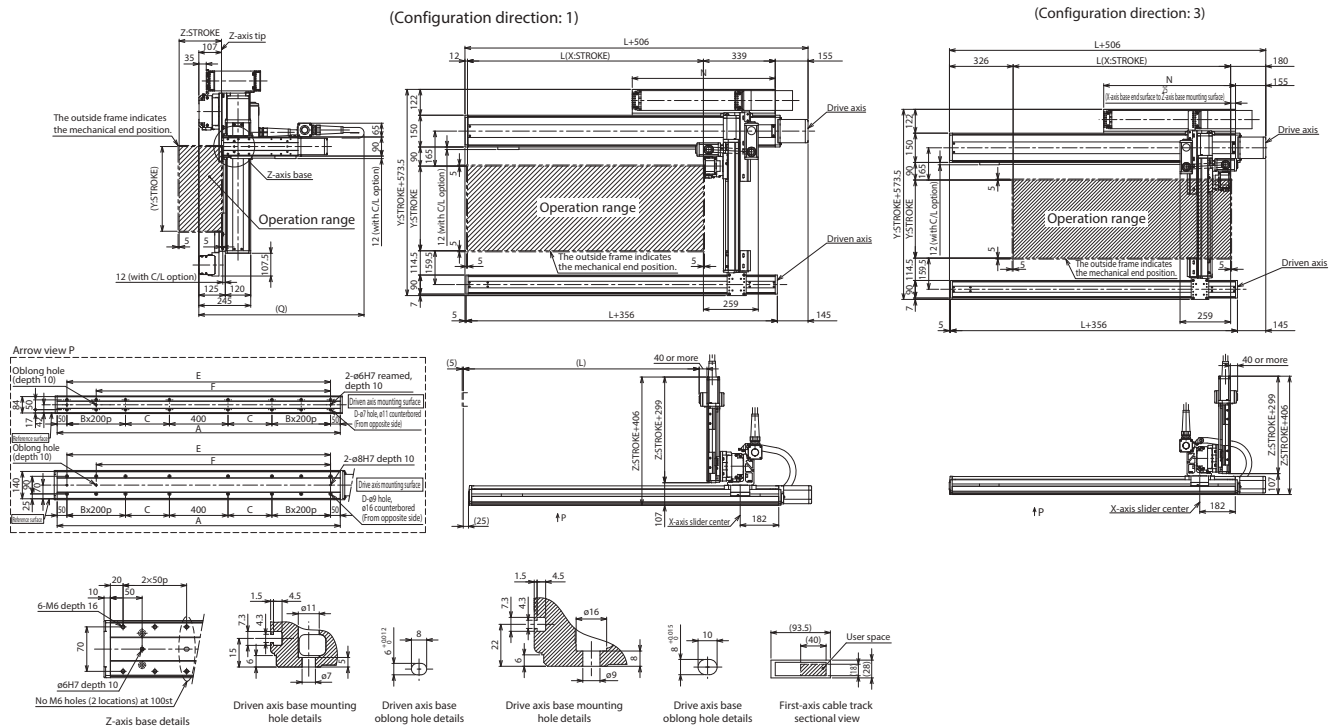
ICSB3 [ICSPB3]-GF□HS1□-CT-SC (Self-standing cable + Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700	750	800	850	900
100	800	800	850	850	900	900	900	950	950	950	1000	1000	1050	1050
150	850	850	900	900	950	950	950	1000	1000	1000	1050	1050	1100	1100
200	900	900	950	950	1000	1000	1000	1050	1050	1050	1100	1100	1150	1150
250	950	950	1000	1000	1050	1050	1050	1100	1100	1100	1150	1150	1200	1200
300	1000	1000	1050	1050	1100	1100	1100	1150	1150	1150	1200	1200	1250	1250
350	1050	1050	1100	1100	1150	1150	1150	1200	1200	1200	1250	1250	1300	1300
400	1100	1100	1150	1150	1200	1200	1200	1250	1250	1250	1300	1300	1350	1350

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2424	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-GF□HS3□

ICSPB3-GF□HS3□

High-Precision Specification

±10µm
Standard

±5µm
High Precision

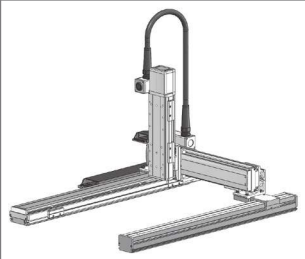
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

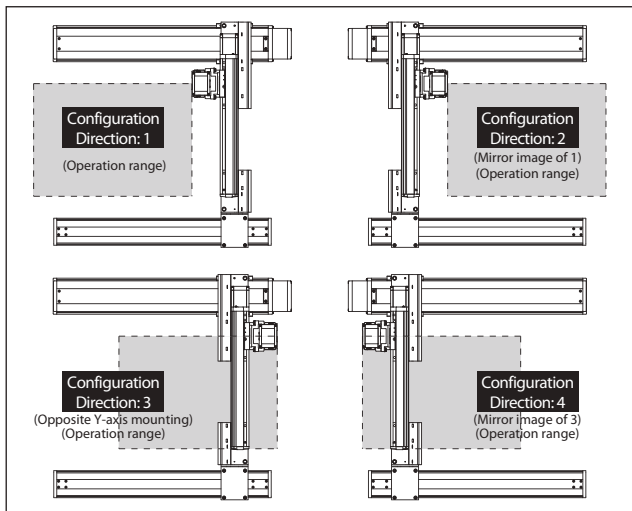
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GF1HS3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF1HS3L-①-②③④⑤⑥⑦-T2-⑧⑨
2	M	ICSB3[ICSPB3]-GF2HS3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF2HS3L-①-②③④⑤⑥⑦-T2-⑧⑨
3	M	ICSB3[ICSPB3]-GF3HS3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF3HS3L-①-②③④⑤⑥⑦-T2-⑧⑨
4	M	ICSB3[ICSPB3]-GF4HS3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF4HS3L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-X-①-400-20-②-T2-③④⑤	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-③⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-⑥⑦-T2-③⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑩ in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type

* Cable exit direction is specified with ⑪ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.369
AQ seal (standard equipment)	AQ	See P.369
Brake (equipped as standard on Z-axis) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.369
Guide with ball-retaining mechanism *4	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GF□HS3M

Z-axis stroke	Y-axis stroke	
	300~900	
100	14.3	
150	13.6	
200	13.0	
250	12.3	
300	11.7	
350	11.1	
400	10.5	

GF□HS3L

Z-axis stroke	Y-axis stroke													
	300	350	400	450	500	550	600	650	700	750	800	850	900	
100	32.9	32.9	32.9	32.8	32.8	32.8	32.8	29.7	26.7	23.9	21.4	19.0	16.9	
150	32.3	32.2	32.2	32.2	32.2	32.2	32.1	29.0	26.0	23.2	20.7	18.3	16.2	
200	31.7	31.7	31.7	31.7	31.5	31.1	30.7	28.4	25.4	22.6	20.1	17.7	15.6	
250	29.7	29.4	29.0	28.7	28.3	27.9	27.6	27.3	24.7	21.9	19.4	17.0	14.9	
300	27.0	26.7	26.4	26.0	25.7	25.4	25.1	24.8	24.1	21.3	18.8	16.4	14.3	
350	24.7	24.4	24.1	23.8	23.5	23.2	22.9	22.6	22.3	20.7	18.2	15.8	13.7	
400	22.6	22.4	22.1	21.8	21.5	21.2	21.0	20.7	20.4	20.1	17.6	15.2	13.1	

Maximum Speed by Stroke (mm/s) (Note 4)

GF□HS3M

	100~300	300~400	450~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis						1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis		1200		860	695														
Z-axis	600																		

GF□HS3L

	100~300	300~400	450~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis						1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis		1200		860	695														
Z-axis	300																		

ICSB3 [ICSPB3]-GF□HS3□-CT-SC (Cable track - Self-standing cable specification)

Dimensions

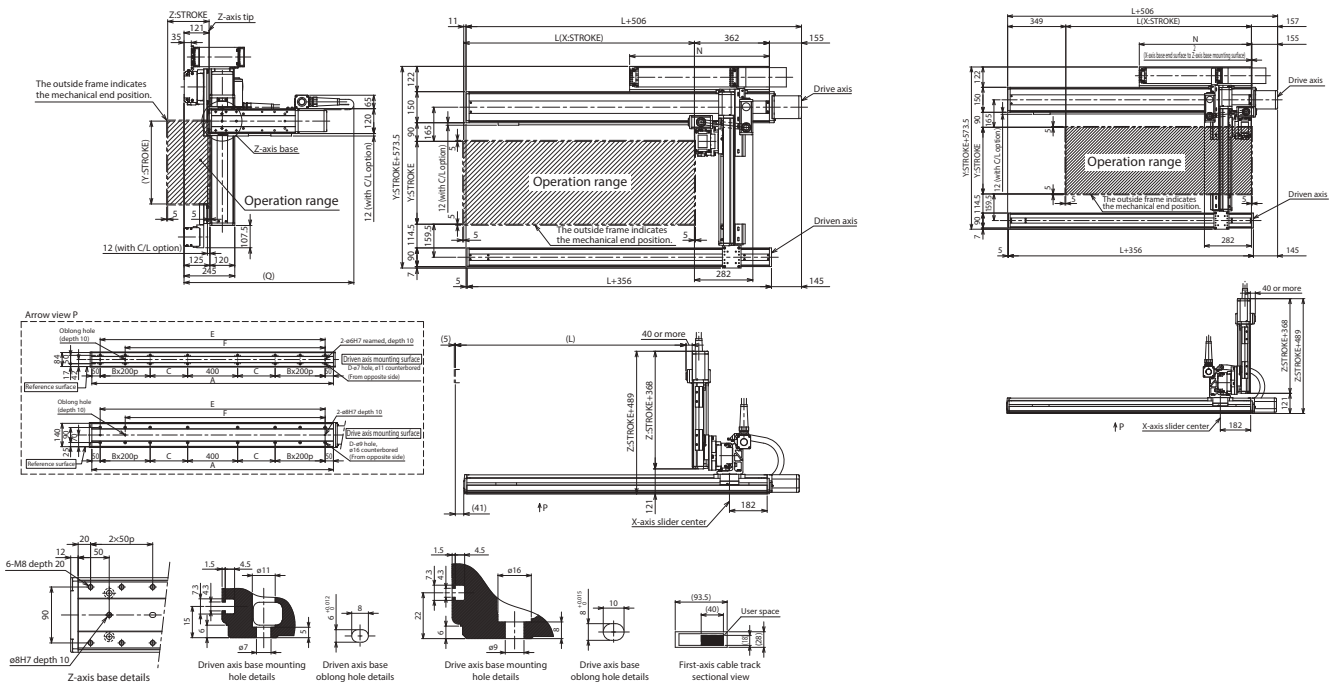
CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)

(Configuration direction: 3)



Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700	750	800	850	900
100	850	900	900	900	950	950	1000	1000	1050	1050	1100	1100	1150	1150
150	900	950	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200
200	950	1000	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250
250	1000	1050	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300
300	1050	1100	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350
350	1100	1150	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400
400	1150	1200	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400	1450	1450

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2424	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSA4-BB□HZRS

ICSPA4-BB□HZRS High-Precision Specification



X-Y-Z/Rot 4-axis

XYB+ZRB (Y,ZR Base Mount)

Medium Speed Type

X: Md (100W)
Y: 5ml (60W)
Z/Rot: 5ml (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Rotational Axis Operation Range	Options	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management
ICSA4: Standard 4-axis specification ICSPA4: High precision 4-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	20: 200mm 80: 800mm Refer to Options table (Every 100mm) below.	10: 100mm 40: 400mm Refer to Options table (Every 100mm) below.	15: 150mm Refer to Options table below.	36: 360deg. Refer to Options table below.		T2: XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

Model Specification

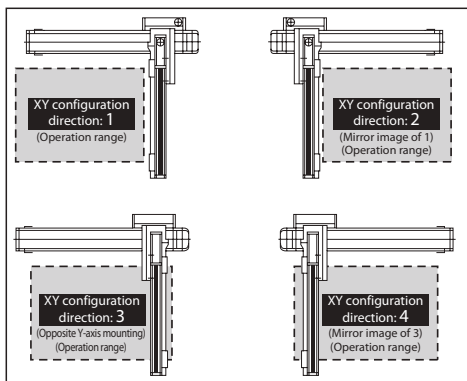
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	H	ICSA4[ICSPA4]-BB1HZRS-[1]-[2]-[3]-[4]-[5]-[6]-[7]-[8]-[9]-T2-[10]-[11]-[12]
2	H	ICSA4[ICSPA4]-BB2HZRS-[1]-[2]-[3]-[4]-[5]-[6]-[7]-[8]-[9]-T2-[10]-[11]-[12]
3	H	ICSA4[ICSPA4]-BB3HZRS-[1]-[2]-[3]-[4]-[5]-[6]-[7]-[8]-[9]-T2-[10]-[11]-[12]
4	H	ICSA4[ICSPA4]-BB4HZRS-[1]-[2]-[3]-[4]-[5]-[6]-[7]-[8]-[9]-T2-[10]-[11]-[12]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the top right for details of [1] through [12] in the model names above.

* The following adjustment jig is required for the absolute specification. (sold separately)
Absolute reset adjustment jig (Model: JG-ZRS)

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[SPA]-MXM-[1]-100-20-[2]-T2-[3]	→ Please contact IAI for more details
Y-axis	ISA[SPA]-SYM-[1]-60-16-[4]-T2-[5]	→ Please contact IAI for more details
Z-axis/rotational axis	ZR-S-[1]-100-16-150-T2-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.02mm[±0.01mm]
Lost motion	0.05mm or less [0.02mm or less]
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/20mm
Y-axis motor output/lead	60W/16mm
Z-axis motor output/lead	100W/16mm
Rotational axis motor output	100W
Rotational axis allowable inertia moment (Note 3)	0.015kg·m ²
Rotational axis allowable torque	1.9N·m

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	A: Absolute I: Incremental
[2]	X-axis stroke (Note 1)	20:200mm 80:800mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	10:100mm 40:400mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	15:150mm
[7]	Z-axis option	Refer to Options table below.
[8]	Rotational axis operation range	36: 360deg.
[9]	Rotational axis option	Refer to Options table below.
[10]	Cable length (Note 2)	3L:3m 5L:5m □L: Specified Length
[11]	Y-axis Cable Management *1	CTM : Cable track M size CTL : Cable track L size CTXL : Cable track XL size
[12]	Z-axis Cable Management *1	CT : Cable track CTM : Cable track M size CTL : Cable track L size CTXL : Cable track XL size

*1 Please refer to P.10 for the cable track dimensions.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (X/Y-axis only)	AQ	See P.369
Brake (equipped as standard on Z-axis/rotational axis) *1	B	See P.369
Creep sensor (X/Y-axis only) *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (X/Y-axis only)	NM	See P.369
Guide with ball-retaining mechanism (X/Y-axis only)	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the non-motor side. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information. Also, when the Z-axis/rotational axis encoder type is I (incremental), the rotational axis will be equipped with a home limit switch as standard. It is not required when the encoder type is A (absolute).



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) Values may decrease depending on usage conditions.
- (Note 4) The rated acceleration is 0.3G. When the acceleration is increased, the payload will be reduced.
- (Note 5) Please note that a longer stroke will result in a lower max speed. Also, reduce the speed and acceleration for travel with the vertical axis lowered.

Payload (kg) (Note 4)

■BB□HZRS

		Y-axis stroke			
		100	200	300	400
Z-axis stroke	150	Rated: 1.0kg (at 0.3G acceleration/deceleration) Max: 3.0kg (at 0.1G acceleration/deceleration)			

Maximum Speed by Stroke (mm/s) (Note 5)

■BB□HZRS

		Stroke							
		100	200	300	400	500	600	700	800
X-axis	—	1200						860	
Y-axis		960			—	—	—	—	—

Z-axis	Stroke: 150mm 1005mm/s
Rotational axis	Stroke: ±360deg 2200deg/s

ICSA4 [ICSPA4]-BB□HZRS-CT□-CT□ (Cable track specification)

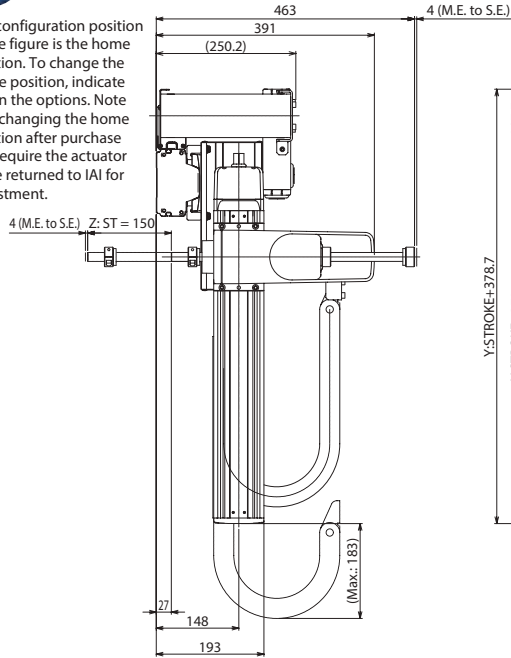
Dimensions

(Configuration direction 1)

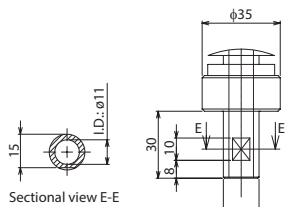
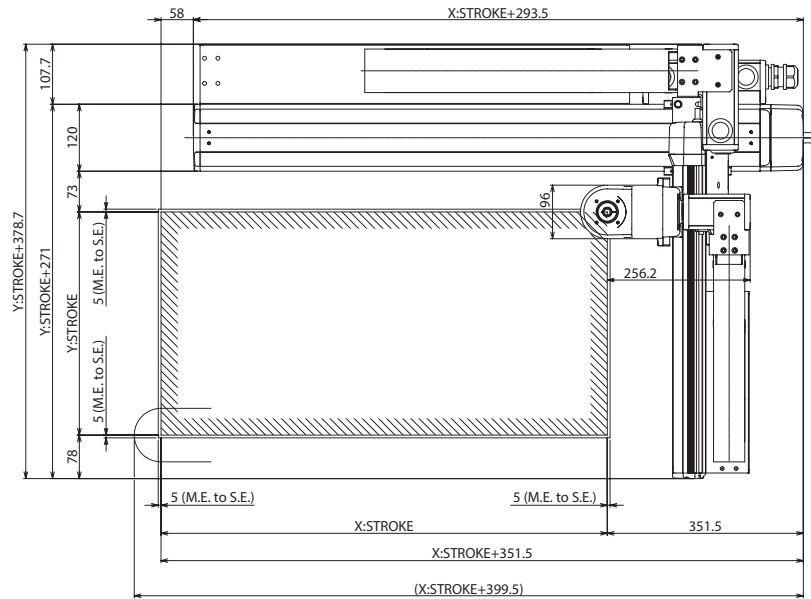
CAD drawings can be downloaded from our website.



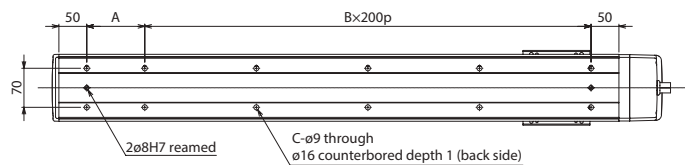
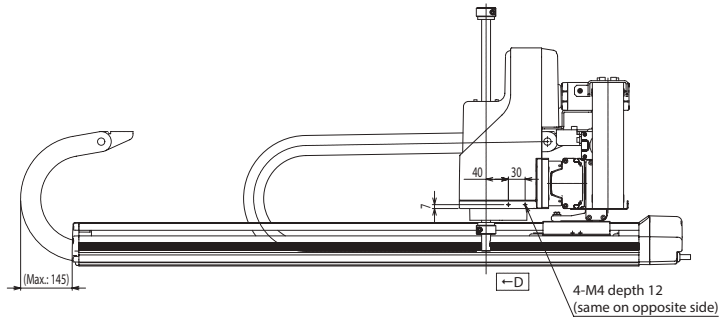
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



* The following cable track dimensions are for CTM for Y-axis and CT for ZR-axis. (CT cannot be used for Y-axis)



Arrow D: Tip details

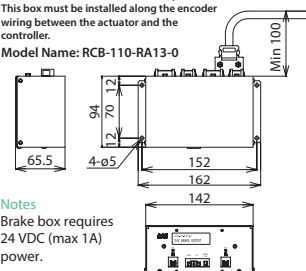


X stroke:	200	300	400	500	600	700	800
A	104	204	104	204	104	204	104
B	1	1	2	2	3	3	4
C	6	6	8	8	10	10	12

Brake box (accessory)

This box must be installed along the encoder wiring between the actuator and the controller.

Model Name: RCB-110-RA13-0



Notes
Brake box requires 24 VDC (max 1A) power.

ICSA4-BE□HZRM

ICSPA4-BE□HZRM High-Precision Specification

±20µm Standard

±10µm High Precision

X-Y-Z/Rot 4-axis

XYB+ZRB (Y, ZR Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z/Rot: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Rotational Axis Operation Range	Options	Applicable Controllers	Cable Length	Y-axis Cable Management	Z-axis Cable Management
ICSA4: Standard 4-axis specification ICSPA4: High precision 4-axis specification	Refer to Model Specification table below	A: Absolute I: Incremental	30:300mm 100:1000mm (Every 100mm) below.	20:200mm 70:700mm (Every 100mm) below.	20:200mm Refer to Options table below.	36:360deg.	Refer to Options table below.	T2: XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	Refer to Explanation of Model Designations below

Model Specification

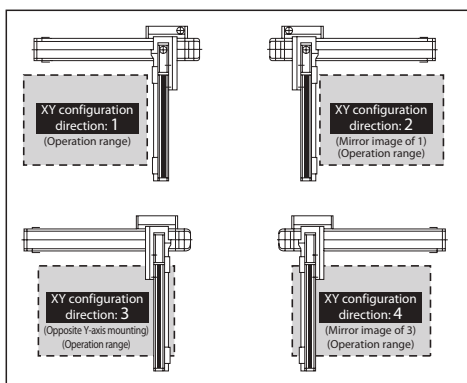
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	H	ICSA4[(ICSPA4)-BE1HZRM-①-②③④⑤⑥⑦⑧⑨-T2-⑩⑪⑫]
2	H	ICSA4[(ICSPA4)-BE2HZRM-①-②③④⑤⑥⑦⑧⑨-T2-⑩⑪⑫]
3	H	ICSA4[(ICSPA4)-BE3HZRM-①-②③④⑤⑥⑦⑧⑨-T2-⑩⑪⑫]
4	H	ICSA4[(ICSPA4)-BE4HZRM-①-②③④⑤⑥⑦⑧⑨-T2-⑩⑪⑫]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the top right for details of ① through ⑫ in the model names above.

* The following adjustment jig is required for the absolute specification. (sold separately)
Absolute reset adjustment jig (Model: JG-ZRM)

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	30:300mm 100:1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20:200mm 70:700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	20:200mm
⑦	Z-axis option	Refer to Options table below.
⑧	Rotational axis operation range	36:360deg.
⑨	Rotational axis option	Refer to Options table below.
⑩	Cable length (Note 2)	3L:3m 5L:5m □L: Specified Length
⑪	Y-axis Cable Management *1	CTM : Cable track M size CTL : Cable track L size CTXL: Cable track XL size
⑫	Z-axis Cable Management *1	CT : Cable track CTM : Cable track M size CTL : Cable track L size CTXL: Cable track XL size

*1 Please refer to P.10 for the cable track dimensions.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis	ISA[ISPA]-LXM-①-400-20-②-T2-③	→ Please contact IAI for more details
Y-axis	ISA[ISPA]-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z-axis/rotational axis	ZR-M-①-200-20-200-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑦ in the above model names.
Note that the strokes are indicated in mm (millimeters).

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.02mm[±0.01mm]
Lost motion	0.05mm or less [0.02mm or less]
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm
Rotational axis motor output	200W
Rotational axis allowable inertia moment (Note 3)	0.03kg·m ²
Rotational axis allowable torque	3.8N·m

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (X/Y-axis only)	AQ	See P.369
Brake (equipped as standard on Z-axis/rotational axis) *1	B	See P.369
Creep sensor (X/Y-axis only) *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (X/Y-axis only)	NM	See P.369
Guide with ball-retaining mechanism (X/Y-axis only)	RT	See P.370

*1 Brake option for X and/or Y axes increases the length of the non-motor side. Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

Also, when the Z-axis/rotational axis encoder type is I (incremental), the rotational axis will be equipped with a home limit switch as standard. It is not required when the encoder type is A (absolute).



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) Values may decrease depending on usage conditions.
- (Note 4) The rated acceleration is 0.3G. When the acceleration is increased, the payload will be reduced.
- (Note 5) Please note that a longer stroke will result in a lower max speed. Also, reduce the speed and acceleration for travel with the vertical axis lowered.

Payload (kg) (Note 4)

■ BE□HZRM

Z-axis stroke	Y-axis stroke					
	200	300	400	500	600	700
200	Rated: 2.0kg (at 0.3G acceleration/deceleration) Max: 6.0kg (at 0.1G acceleration/deceleration)					

Maximum Speed by Stroke (mm/s) (Note 5)

■ BE□HZRM

	Stroke										
	100	200	300	400	500	600	700	800	900	1000	
X-axis	—	—	1200					—	—	920	765
Y-axis	1200					—					—

Stroke: 200mm	
Z-axis	1256mm/s

Stroke: ±360deg	
Rotational axis	2200deg/s

ICSA4 [ICSPA4]-BE□HZRM-CT□-CT□ (Cable track specification)

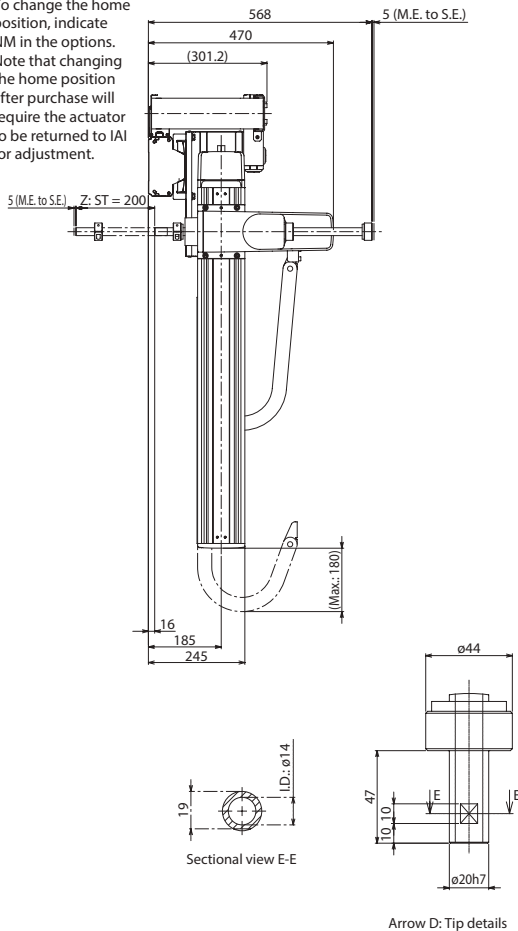
Dimensions

* The drawings below show XY configuration direction 1.

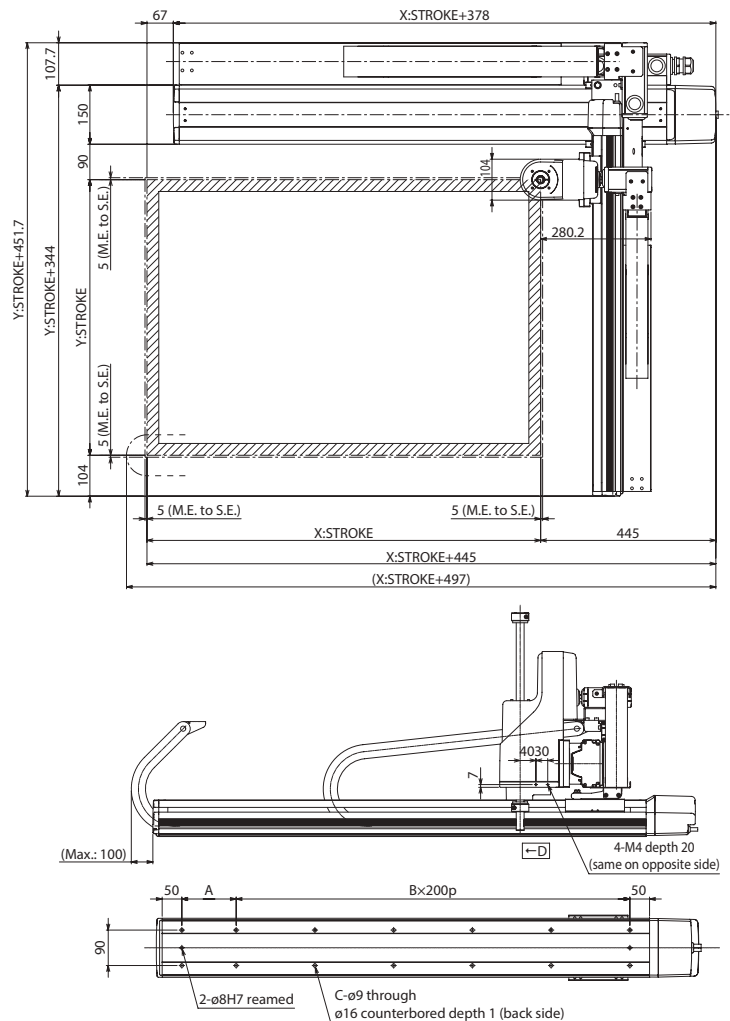
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



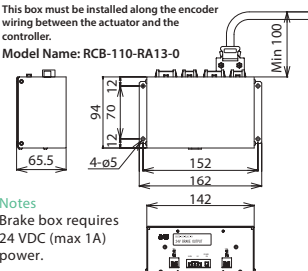
* The following cable track dimensions are for CTM for Y-axis and CT for ZR-axis. (CT cannot be used for Y-axis)



■ Brake box (accessory)

This box must be installed along the encoder wiring between the actuator and the controller.

Model Name: RCB-110-RA13-0



Notes
Brake box requires 24 VDC (max 1A) power.

X stroke:	300	400	500	600	700	800	900	1000
A	238	138	238	138	238	138	238	138
B	1	2	2	3	3	4	4	5
C	6	8	8	10	10	12	12	14

ICSPA4-B3N1H

High-Precision Specification

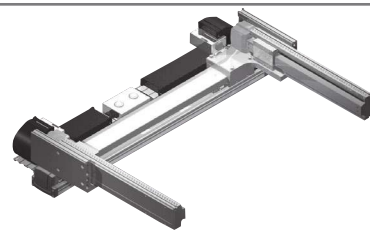
±10µm High Precision

XY+XY 4-axis (NS+ISPA)

XMYB (X Multi-Slider Y Base Mount)

High Speed Type

X:Lg (400W) Y:Md (200W)



Model Specification Items

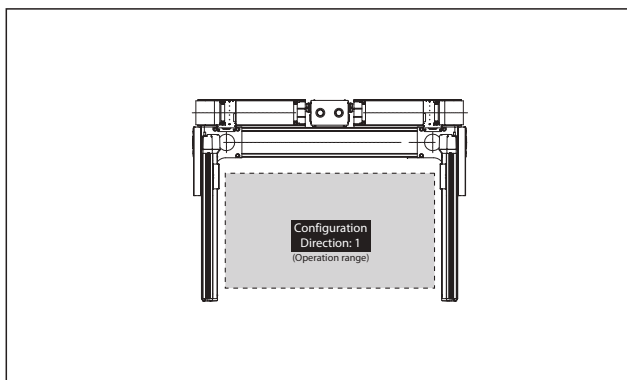
ICSPA4	B3N1H							T2		
Series ICSPA4: High precision 4-axis (2-axis + 2-axis) specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 25: 250mm 225: 2250mm (Every 50mm)	Y1/Y2-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis Cable Management CT: Cable Track			

Model Specification

XY configuration direction *1	Model
1	ICSPA4-B3N1H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-40-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑤ in the above model names.
Note that the strokes are indicated in mm (millimeters).
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Maximum Speed by Stroke (mm/s)

	200	250	300	400	500	600	700	800~2250	
X-axis	—	2400							
Y1-axis, Y2-axis	1200							—	—

Payload by Acceleration/Deceleration (kg) (Note 3)

		Y-axis stroke						
		200	300	400	500	600	700	
Acceleration	0.3	21.2	20.3	19.4	18.4	17.5	16.6	
	0.4	12.2	11.3	10.4	9.4	8.5	7.6	
	0.5	7.7	6.8	5.9	4.9	4.0	3.1	
	0.6	3.2	2.3	1.4	—	—	—	
	0.7	—	—	—	—	—	—	
	0.8	—	—	—	—	—	—	
	0.9	—	—	—	—	—	—	
	1.0	—	—	—	—	—	—	

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track

* The above shows details of ① through ⑦ for the model names on the left.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y-axis only) *1	B	See P.369
Creep sensor *2	C	See P.369
Home limit switch *2	L	See P.369
Non-motor end specification (Y-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes	(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
	(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
	(Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

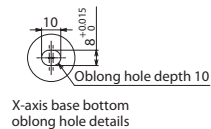
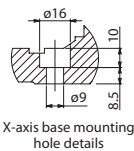
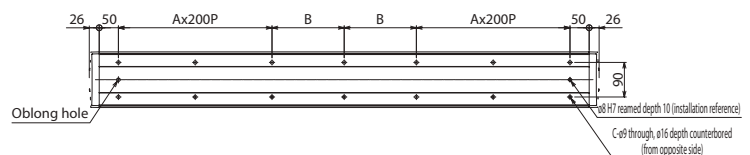
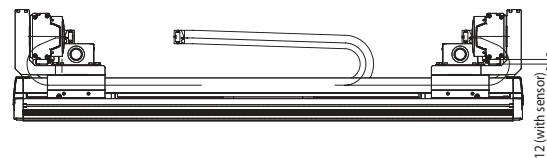
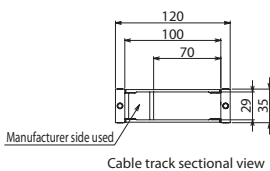
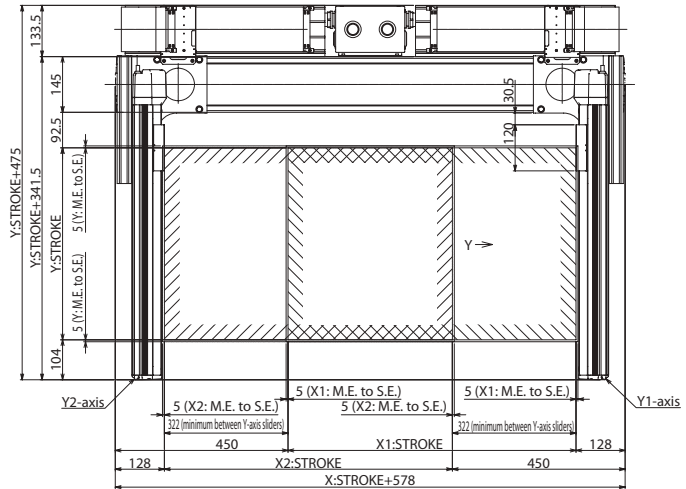
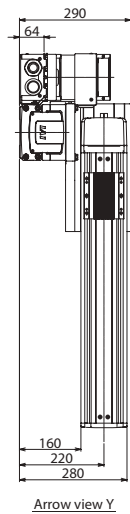
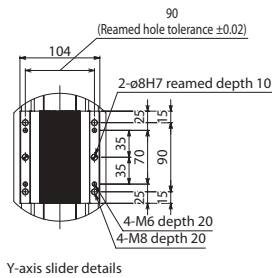
ICSPA4-B3N1H-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3
B	138	163	188	213	238	263	288	113	138	163	188	213	238	263	288	313	138	163	188	213
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

ICSPA4-B3N1M

High-Precision Specification

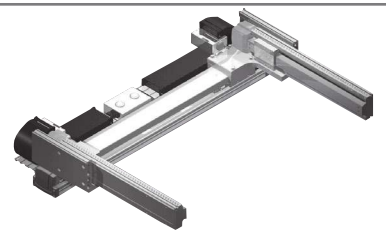
±10µm High Precision

XY+XY 4-axis (NS+ISPA)

XMYB (X Multi-Slider Y Base Mount)

Medium Speed Type

X:Lg (400W) Y:Md (200W)



Model Specification Items

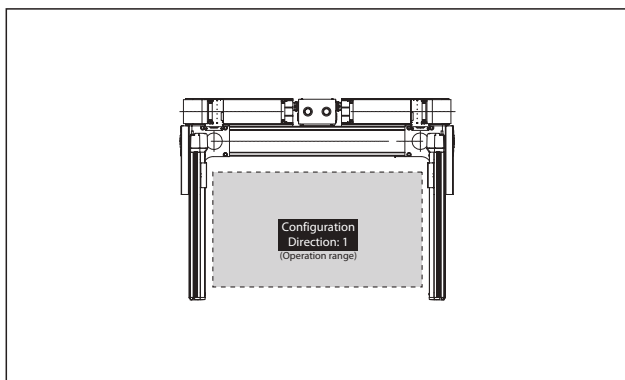
Series ICSPA4: High precision 4-axis (2-axis + 2-axis) specification	Type Refer to Model Specification table below	Encoder Type A : Absolute I : Incremental	X-axis Stroke/Option 25: 250mm 225: 2250mm (Every 50mm)	Y1/Y2-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis Cable Management CT: Cable Track
--------------------------------------------------------------------------------	---------------------------------------------------------	--------------------------------------------------------	----------------------------------------------------------------------	------------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------

Model Specification

XY configuration direction *1	Model
1	ICSPA4-B3N1M-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-20-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑤ in the above model names.
Note that the strokes are indicated in mm (millimeters).
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Maximum Speed by Stroke (mm/s)

	200	250	300	400	500	600	700	800~2250	
X-axis	—	1300							
Y1-axis, Y2-axis	1200							—	—

Payload by Acceleration/Deceleration (kg) (Note 3)

		Y-axis stroke					
		200	300	400	500	600	700
Acceleration	0.3	40.0	40.0	33.0	27.3	22.9	19.3
	0.4	30.0	30.0	30.0	27.3	22.9	19.3
	0.5	21.6	21.6	21.6	21.6	21.6	19.3
	0.6	18.0	18.0	18.0	18.0	17.5	16.6
	0.7	15.3	14.9	14.0	13.0	12.1	11.2
	0.8	12.2	11.3	10.4	9.4	8.5	7.6
	0.9	9.5	8.6	7.7	6.7	5.8	4.9
	1.0	6.8	5.9	5.0	—	—	—

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track

* The above shows details of ① through ⑦ for the model names on the left.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y-axis only) *1	B	See P.369
Creep sensor *2	C	See P.369
Home limit switch *2	L	See P.369
Non-motor end specification (Y-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01 mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
(Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

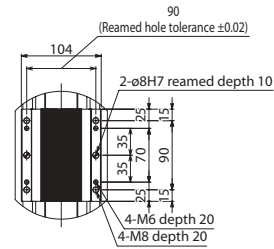
ICSPA4-B3N1M-CT (Cable track specification)

Dimensions

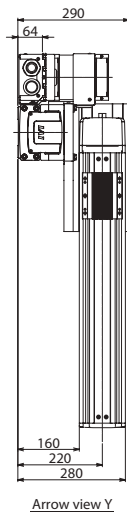
CAD drawings can be downloaded from our website.



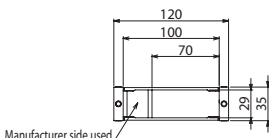
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



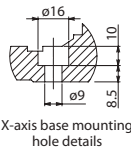
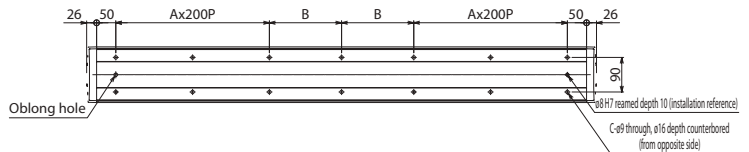
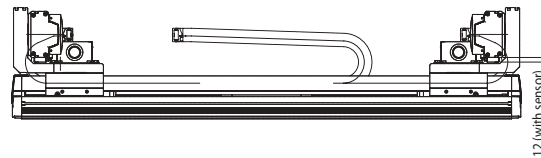
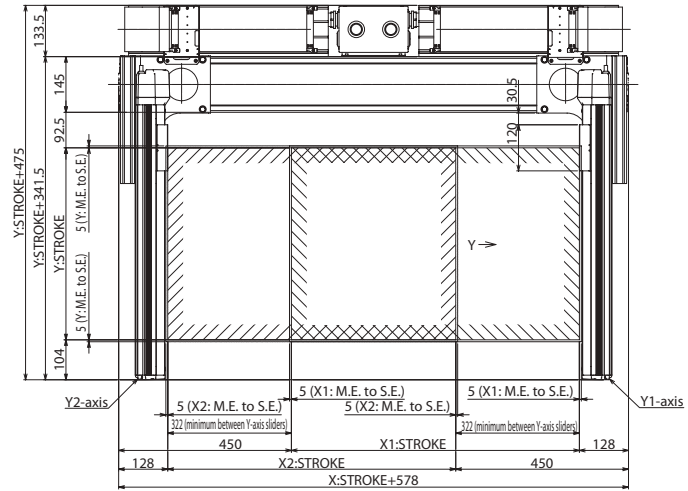
Y-axis slider details



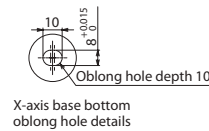
Arrow view Y



Cable track sectional view



X-axis base mounting hole details



X-axis base bottom oblong hole details

X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3
B	138	163	188	213	238	263	288	113	138	163	188	213	238	263	288	313	138	163	188	213
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

ICSPA4-B2L1H

High-Precision Specification

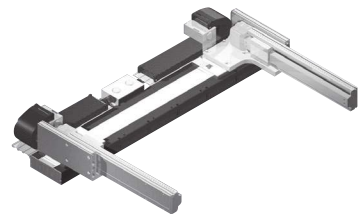
X ±5μm
Y ±10μm

XY+XY
4-axis
(LSA+ISPA)

XMYB
(X Multi-Slider
Y Base Mount)

High
Speed
Type

X-Lg (400W)
Y-Md (200W)



Model Specification Items

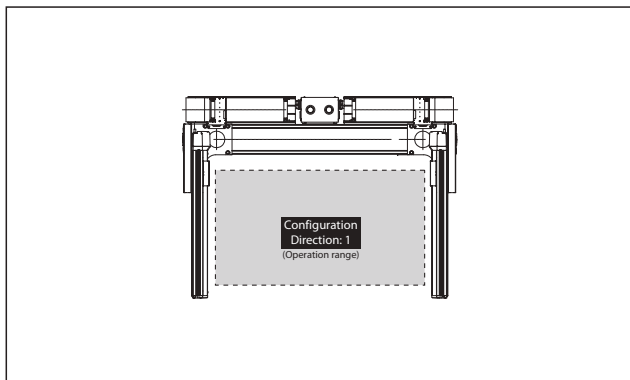
ICSPA4	B2L1H	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis Cable Management
Series ICSPA4: High precision 4-axis (2-axis + 2-axis) specification	Type Refer to Model Specification table below	I: Incremental	73: 730mm ‡ 383: 3835mm (Every 135mm)	20: 200mm ‡ 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA	3L: 3m 5L: 5m □L: Specified length	CT: Cable Track

Model Specification

XY configuration direction *1	Model
1	ICSPA4-B2L1H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	LSA-W21SM-①-400-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑤ in the above model names.
Note that the strokes are indicated in mm (millimeters).
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Maximum Speed by Stroke (mm/s)

	200	300	400	730-3835
X-axis	—	—	—	2500
Y-axis	1200			—

Payload by Acceleration/Deceleration (kg) (Note 3)

		Y-axis stroke				
		200	250	300	350	400
Acceleration	X-axis 1.0G	21.2	20.0	20.0	17.4	15.2
	Y-axis 0.3G					

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	I: Incremental
②	X-axis stroke (Note 1)	73: 730mm ‡ 383: 3835mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm ‡ 40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track

* The above shows details of ① through ⑦ for the model names on the left.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (equipped as standard on Y-axis only)	AQ	See P.369
Brake (Y-axis only) *1	B	See P.369
Creep sensor (Y-axis only) *2	C	See P.369
Home limit switch (equipped as standard on X-axis) *2	L	See P.369
Non-motor end specification (Y-axis only)	NM	See P.369

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

Common Specifications

Drive system	X-axis: Linear servo motor Y-axis: Ball screw, equivalent to rolled C5
Positioning repeatability	X-axis: ±0.005mm Y-axis: ±0.01mm
Lost motion	0.02mm or less
Guide	X-axis: Linear guide Y-axis: Base integrated guide
Base	X-axis: Aluminum with black alumite treatment Y-axis: Aluminum with white alumite treatment
X-axis motor output/lead	400W or equivalent/(none)
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
(Note 3) The rated acceleration is 1G for X-axis and 0.3G for Y-axis. Although the Y-axis is operable up to 1G, increasing the acceleration will reduce the payload.

ICSPA4-B2L□H-CT (Cable track specification)

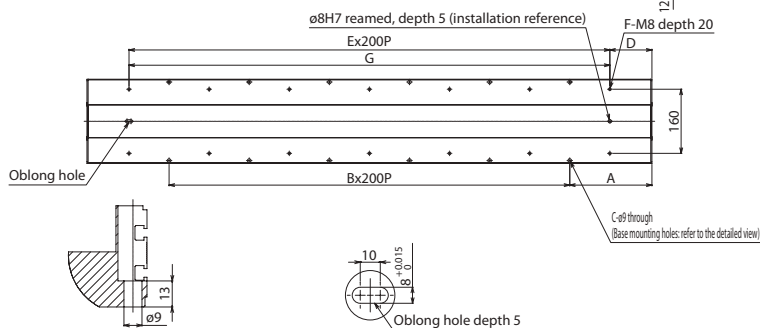
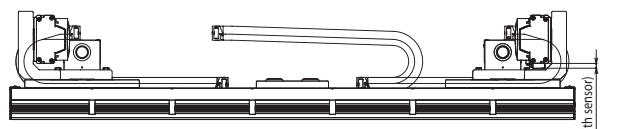
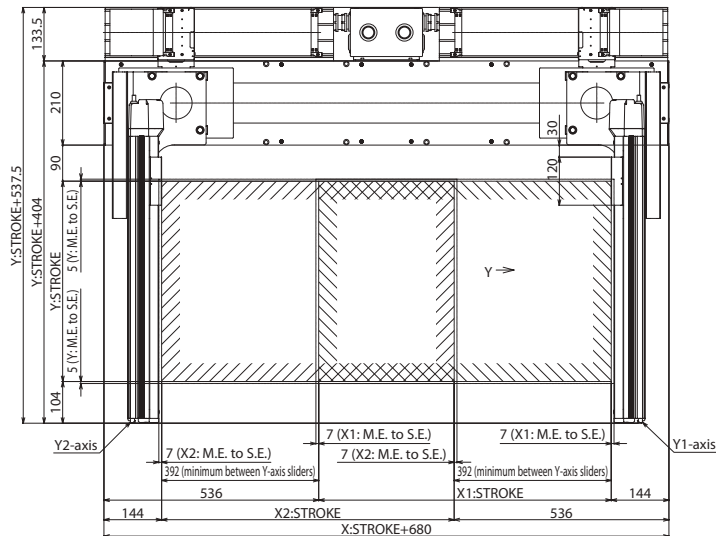
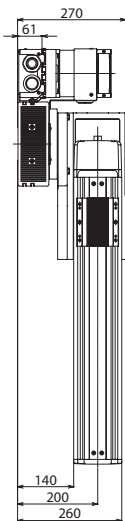
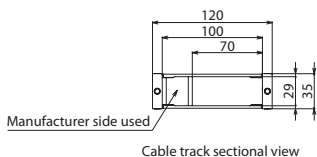
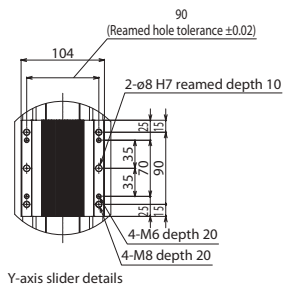
Dimensions

CAD drawings can be downloaded from our website.

M.E: Mechanical end
S.E: Stroke end



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis base mounting hole details

X-axis base bottom oblong hole details

X stroke	730	865	1000	1135	1270	1405	1540	1675	1810	1945	2080	2215
A	205	72.5	140	207.5	75	142.5	210	77.5	145	212.5	80	147.5
B	5	7	7	7	9	9	9	11	11	11	13	13
C	12	16	16	16	20	20	20	24	24	24	28	28
D	105	172.5	40	107.5	175	42.5	110	177.5	45	112.5	180	47.5
E	6	6	8	8	8	10	10	10	12	12	12	14
F	14	14	18	18	18	22	22	22	26	26	26	30
G	1200	1200	1600	1600	1600	2000	2000	2000	2400	2400	2400	2800

X stroke	2350	2485	2620	2755	2890	3025	3160	3295	3430	3565	3700	3835
A	215	82.5	150	217.5	85	152.5	220	87.5	155	222.5	90	157.5
B	13	15	15	15	17	17	17	19	19	19	21	21
C	28	32	32	32	36	36	36	40	40	40	44	44
D	115	182.5	50	117.5	185	52.5	120	187.5	55	122.5	190	57.5
E	14	14	16	16	16	18	18	18	20	20	20	22
F	30	30	34	34	34	38	38	38	42	42	42	46
G	2800	2800	3200	3200	3200	3600	3600	3600	4000	4000	4000	4400

ICSPA6-B3N1HB3

High-Precision Specification

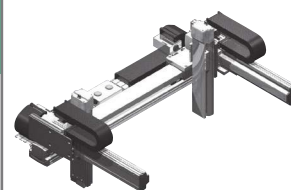


XYZ+XYZ
6-axis
(NS+ISPA)

XMYB+ZB
(X: Multi-Slider
Y: Side Base
Z: Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

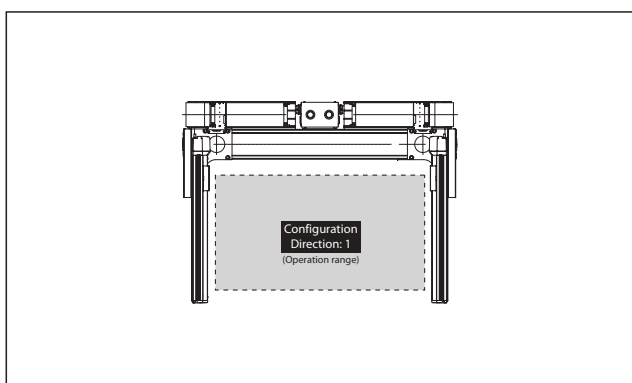
Series ICSPA6: High precision 6-axis (3-axis + 3-axis) specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 25: 250mm 225: 2250mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z1/Z2-axis Stroke/Option 10: 100mm 50: 500mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Explanation of Model Designations below
--------------------------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	----------------------------------------------------------------------	--------------------------------------------------------------------	------------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	------------------------------------------------------------------------------------

Model Specification

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSPA6-B3N1HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSPA6-B3N1HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
*2 The payload and the max speed may vary depending on the type of Z-axis.
Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-40-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-②-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-②-T2-⑤	→ Please contact IAI for more details
Z1-axis	ISPA-MXM-①-200-⑩-⑥-T2-⑦	→ Please contact IAI for more details
Z2-axis	ISPA-MXM-①-200-⑩-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipment option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm <H>, 10mm <M>

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
(Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■ **B3N1HB3H**

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	9.0					
	~200	9.0		8.3	7.2	6.2	5.2
	~300	9.0	8.3	7.3	6.2	5.2	4.2
	~400	8.2	7.3	6.3	5.2	4.2	3.2
	~500	7.1	6.2	5.2	4.1	3.1	2.1

■ **B3N1HB3M**

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	11.2	10.2	9.2	8.2	7.2	6.2
	~200	10.2	9.3	8.3	7.2	6.2	5.2
	~300	9.0	8.3	7.3	6.2	5.2	4.2
	~400	8.2	7.3	6.3	5.2	4.2	3.2
	~500	7.1	6.2	5.2	4.1	3.1	2.1

Maximum Speed by Stroke (mm/s)

■ **B3N1HB3H**

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	2400							—
Y-axis	—	1200						—	—	
Z-axis	1200			—	—	—	—	—	—	

■ **B3N1HB3M**

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	2400							—
Y-axis	—	1200						—	—	
Z-axis	600			—	—	—	—	—	—	

ICSPA6-B3N1HB3□-CT-CT (Cable track specification)

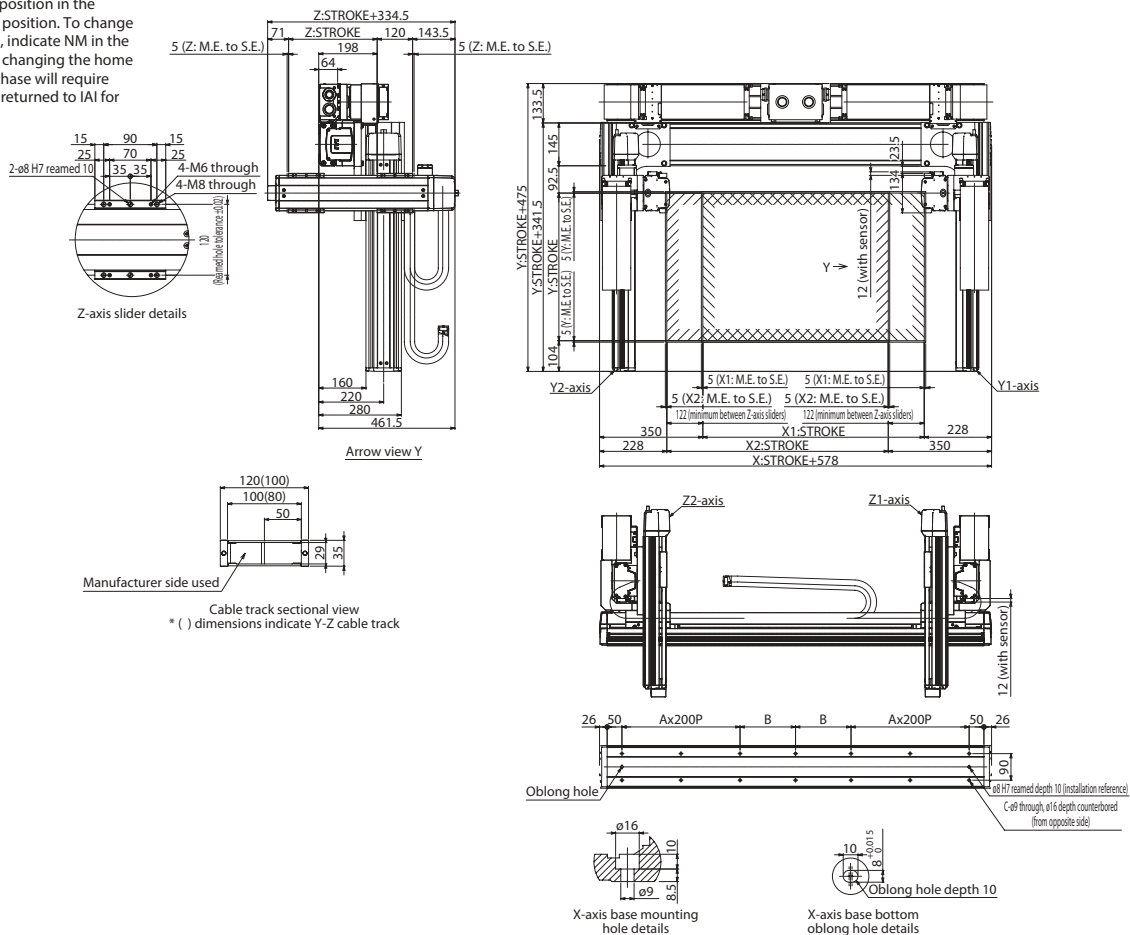
Dimensions

CAD drawings can be downloaded from our website.

M.E: Mechanical end
S.E: Stroke end



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3
B	138	163	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613	638	663	688	713	738
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

ICSPA6-B3N1MB3

High-Precision Specification

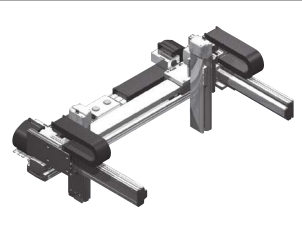


XYZ+XYZ
6-axis
(NS+ISPA)

XMYB+ZB
(X: Multi-Slider
Y: Side Base
Z: Base Mount)

Medium
Speed
Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

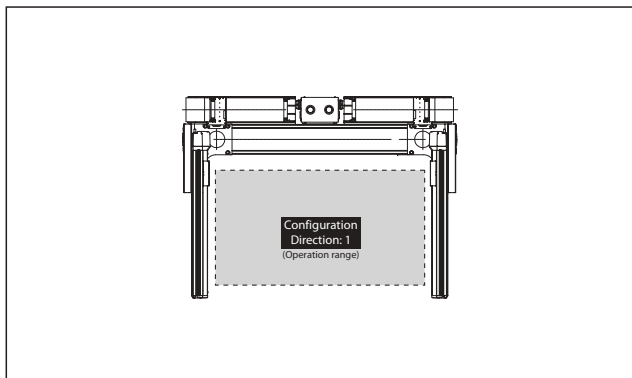
Series ICSPA6: High precision 6-axis (3-axis + 3-axis) specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 25: 250mm 225: 2250mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z1/Z2-axis Stroke/Option 10: 100mm 50: 500mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Explanation of Model Designations below
--------------------------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	----------------------------------------------------------------------	--------------------------------------------------------------------	------------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	------------------------------------------------------------------------------------

Model Specification

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSPA6-B3N1MB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSPA6-B3N1MB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
*2 The payload and the max speed may vary depending on the type of Z-axis.
Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-20-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z1-axis	ISPA-MXM-①-200-⑩-⑥-T2-⑦	→ Please contact IAI for more details
Z2-axis	ISPA-MXM-①-200-⑩-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑦ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm <H>, 10mm <M>

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

<p>Notes</p>	(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
	(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
	(Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B3N1MB3H

		Y-axis stroke				
		200	300	400	500	600
Z-axis stroke	100					8.9
	~ 200					7.9
	~ 300					6.9
	~ 400					5.9
	~ 500					4.8

■B3N1MB3M

		Y-axis stroke				
		200	300	400	500	600
Z-axis stroke	100			17.0	12.6	8.9
	~ 200			16.1	11.6	7.9
	~ 300			15.1	10.6	6.9
	~ 400			14.1	9.6	5.9
	~ 500	19.0	18.8	13.0	8.5	4.8

Maximum Speed by Stroke (mm/s)

■B3N1MB3H

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	1300						—	—
Y-axis	—	1200						—	—	
Z-axis	1200			—	—	—	—	—	—	

■B3N1MB3M

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	1300						—	—
Y-axis	—	1200						—	—	
Z-axis	600			—	—	—	—	—	—	

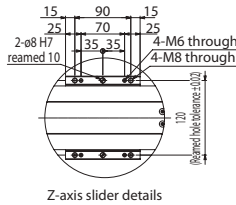
ICSPA6-B3N1MB3□-CT-CT (Cable track specification)

Dimensions

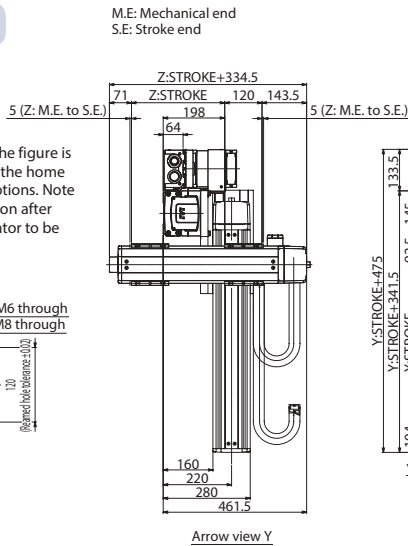
CAD drawings can be downloaded from our website.



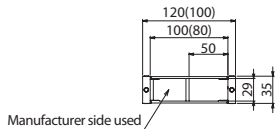
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



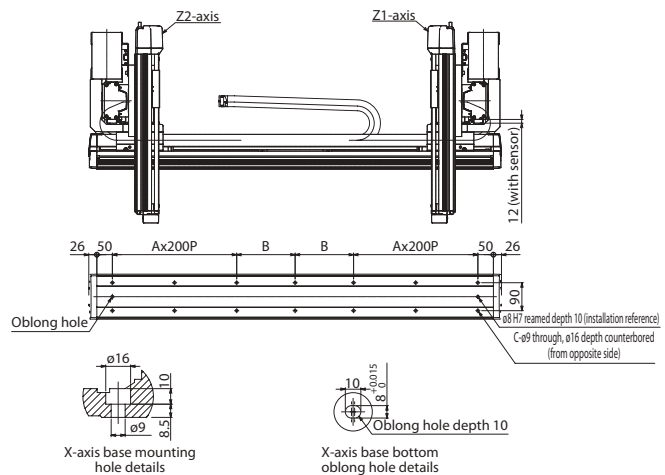
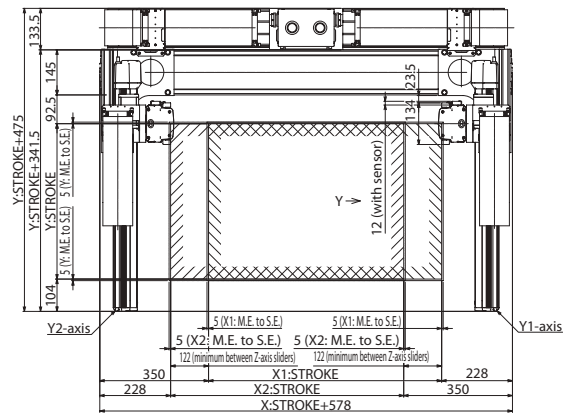
Z-axis slider details



Arrow view Y



Cable track sectional view
* () dimensions indicate Y-Z cable track



X-axis base mounting hole details

X-axis base bottom oblong hole details

X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3
B	138	163	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613	638	663	688	713	738
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

ICSPA6-B2L1HB3

High-Precision Specification

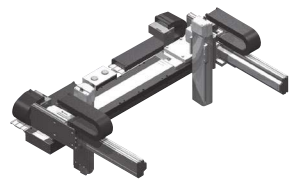
X: ±5µm
Y: ±10µm

XYZ+XYZ
6-axis
(LSA+HSPA)

XMYB+ZB
(X: Multi-Slider
Y: Side Base
Z: Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series ICSPA3: High precision 3-axis specification	Type Refer to Model Specification table below	Encoder Type I: Incremental	X-axis Stroke/Option 73: 730mm 383: 3835mm (Every 135mm)	Y-axis Stroke/Option 20: 200mm 40: 400mm (Every 50mm)	Z-axis Stroke/Option 10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Explanation of Model Designations below
--------------------------------------------------------------	---------------------------------------------------------	---------------------------------------	-----------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	------------------------------------------------------------------------------------

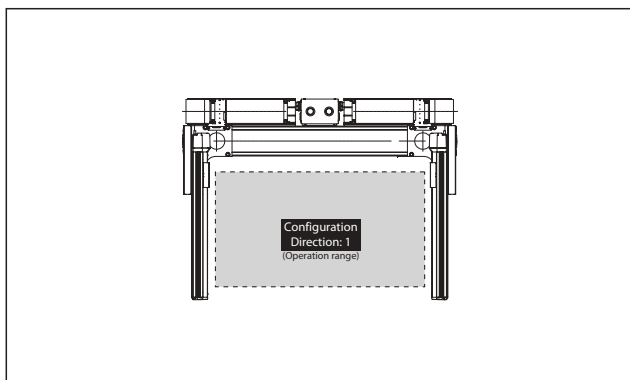
Model Specification

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSPA6-B2L1HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSPA6-B2L1HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
*2 The payload and the max speed may vary depending on the type of Z-axis.

Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	LSA-W21SM-①-400-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z1-axis	ISPA-MXM-①-200-⑩-⑥-T2-⑦	→ Please contact IAI for more details
Z2-axis	ISPA-MXM-①-200-⑩-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type

Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	I: Incremental
②	X-axis stroke (Note 1)	73: 730mm
		383: 3835mm
③	X-axis Option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm
		40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm
		40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m
		5L: 5m
		□L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification (Y/Z-axis only)	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

Common Specifications

Drive system	X-axis : Linear servo motor
	Y/Z-axis : Ball screw, equivalent to rolled C5
Positioning repeatability	X-axis : ±0.005mm
	Y/Z-axis : ±0.01mm
Lost motion	0.02mm or less
Guide	X-axis : Linear guide
	Y/Z-axis : Base integrated guide
Base	X-axis : Aluminum with black alumite treatment
	Y/Z-axis : Aluminum with white alumite treatment
X-axis motor output/lead	400W or equivalent/(none)
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm <H>, 10mm <M>

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
- (Note 3) The rated acceleration is 1G for X-axis and 0.3G for Y/Z-axis.
Although the Y-axis is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B2L1HB3H

		Y-axis stroke				
		200	250	300	350	400
Z-axis stroke	100	9.0			7.2	5.0
	~ 200	9.0	8.9	6.3	4.0	
	~ 300	9.0	7.9	5.3	3.0	
	~ 400	8.2	6.9	4.3	2.0	

■B2L1HB3M

		Y-axis stroke				
		200	250	300	350	400
Z-axis stroke	100	11.2	9.0	7.2	5.0	
	~ 200	10.2	8.9	6.3	4.0	
	~ 300	9.2	7.9	5.3	3.0	
	~ 400	8.2	6.9	4.3	2.0	

Maximum Speed by Stroke (mm/s)

■B2L1HB3H

	Stroke				
	100	200	300	400	730~3835
X-axis	—	—	—	—	2500
Y-axis	—	1200			—
Z-axis	1200				—

■B2L1HB3M

	Stroke				
	100	200	300	400	730~3835
X-axis	—	—	—	—	2500
Y-axis	—	1200			—
Z-axis	600				—

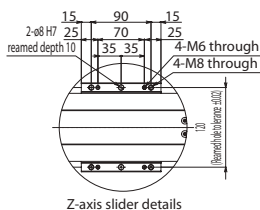
ICSPA6-B2L1HB3□-CT-CT (Cable track specification)

Dimensions

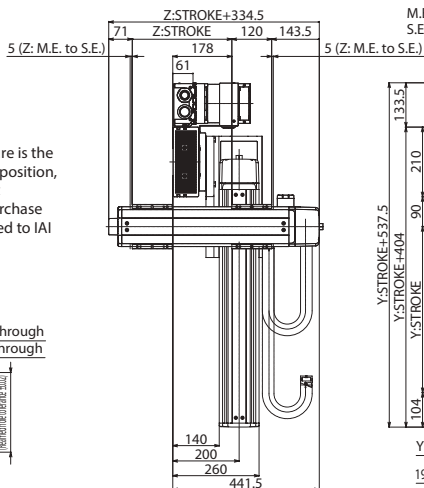
CAD drawings can be downloaded from our website.



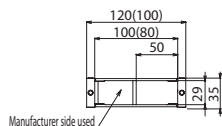
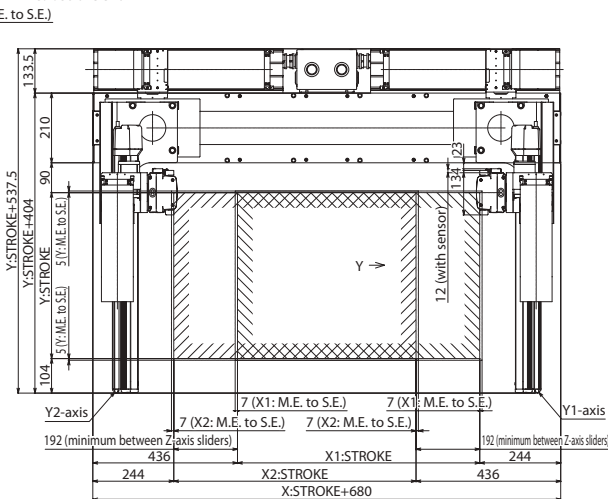
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



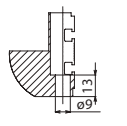
Z-axis slider details



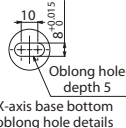
M.E: Mechanical end
S.E: Stroke end



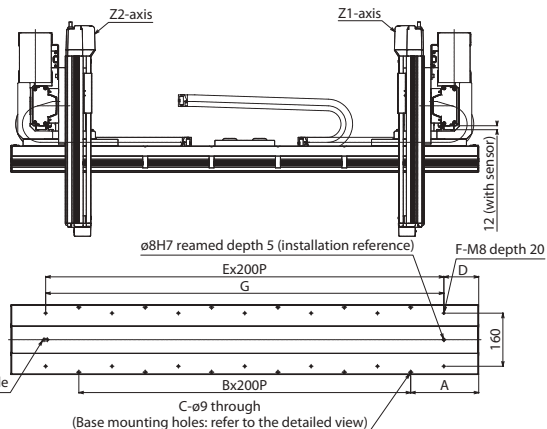
Cable track sectional view
* () dimensions indicate Y-Z cable track



X-axis base mounting hole details



Oblong hole depth 5
X-axis base bottom oblong hole details



X stroke	730	865	1000	1135	1270	1405	1540	1675	1810	1945	2080	2215
A	205	72.5	140	207.5	75	142.5	210	77.5	145	212.5	80	147.5
B	5	7	7	7	9	9	9	11	11	11	13	13
C	12	16	16	16	20	20	20	24	24	24	28	28
D	105	172.5	40	107.5	175	42.5	110	177.5	45	112.5	180	47.5
E	6	6	8	8	8	10	10	10	12	12	12	14
F	14	14	18	18	18	22	22	22	26	26	26	30
G	1200	1200	1600	1600	1600	2000	2000	2000	2400	2400	2400	2800

X stroke	2350	2485	2620	2755	2890	3025	3160	3295	3430	3565	3700	3835
A	215	82.5	150	217.5	85	152.5	220	87.5	155	222.5	90	157.5
B	13	15	15	15	17	17	17	19	19	19	21	21
C	28	32	32	32	36	36	36	40	40	40	44	44
D	115	182.5	50	117.5	185	52.5	120	187.5	55	122.5	190	57.5
E	14	14	16	16	16	18	18	18	20	20	20	22
F	30	30	34	34	34	38	38	38	42	42	42	46
G	2800	2800	3200	3200	3200	3600	3600	3600	4000	4000	4000	4400

ICSPA6-B3N1HS3M High-Precision Specification

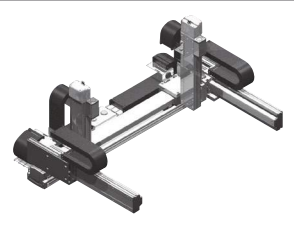


XYZ+XYZ
6-axis
(NS+ISPA)

XMYB+ZS
(Multi-Slider
Y-Side-Base Mount
Z-Slide)

High
Speed
Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

ICSPA6—B3N1HS3M

Series
ICSPA6: High precision 6-axis (3-axis + 3-axis) specification

Type
Refer to Model Specification table below

Encoder Type
A: Absolute
I: Incremental

X-axis Stroke/Option
25: 250mm
225: 2250mm (Every 50mm)

Y-axis Stroke/Option
20: 200mm
70: 700mm (Every 50mm)

Z1/Z2-axis Stroke/Option
10: 100mm
40: 400mm (Every 50mm)

Applicable Controllers
T2: SCON
XSEL-P/Q
XSEL-RA/SA

Cable Length
3L: 3m
5L: 5m
□L: Specified length

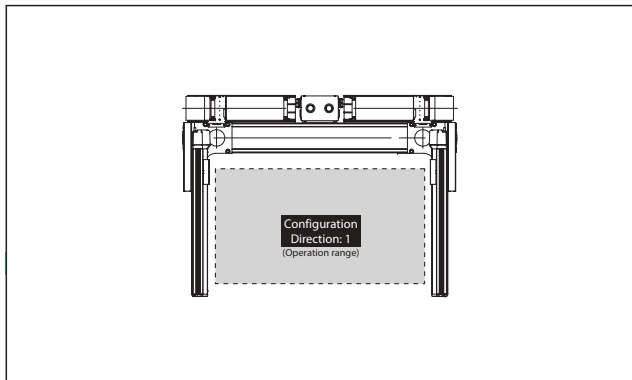
Y-axis - Z-axis Cable Management
Explanation of Model Designations below

Model Specification

XY configuration direction *1	Z-axis speed type	Model
1	M	ICSPA6-B3N1HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-40-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z1-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details
Z2-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑦ in the above model names.
Note that the strokes are indicated in mm (millimeters).
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification *3 (Y/Z-axis only (standard Z-axis setting))	NM	See P.369
Guide with ball-retaining mechanism	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
(Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B3N1HS3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	11.5	10.5	9.5	8.4	7.5	6.5
	~200	10.5	9.5	8.5	7.4	6.5	5.5
	~300	9.5	8.5	7.5	6.4	5.5	4.5
	~400	8.4	7.4	6.5	5.4	4.4	3.4

Maximum Speed by Stroke (mm/s)

■B3N1HS3M

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	2400							—
Y-axis	—	1200							—	—
Z-axis	600			—	—	—	—	—	—	

ICSPA6-B3N1HS3M-CT-CT (Cable track specification)

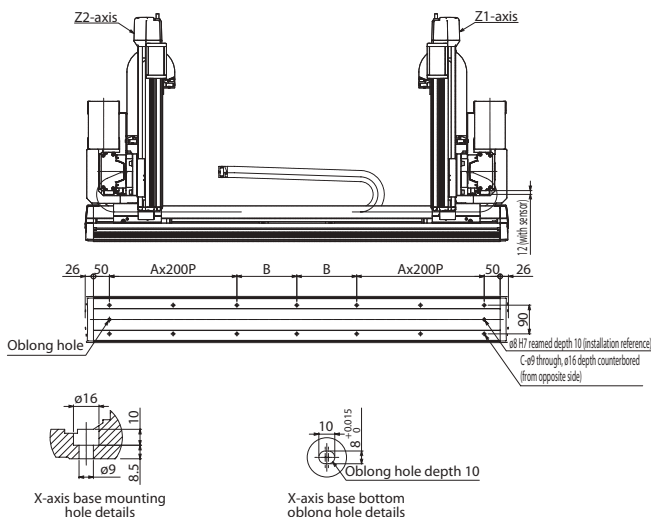
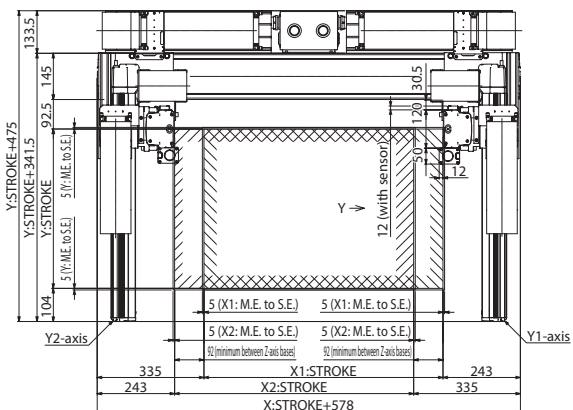
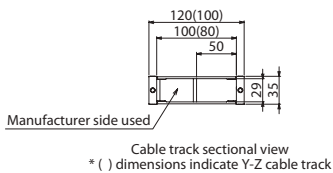
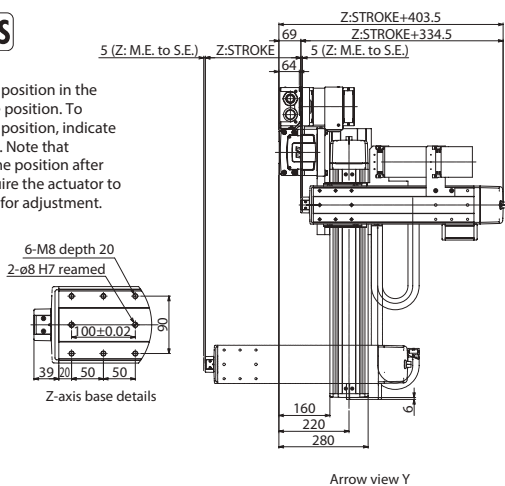
Dimensions

CAD drawings can be downloaded from our website.

M.E: Mechanical end
S.E: Stroke end



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3
B	138	163	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613	638	663	688	713	738
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

ICSPA6-B3N1MS3M High-Precision Specification

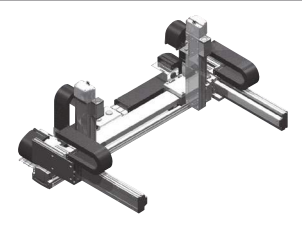


XYZ+XYZ 6-axis (NS+ISPA)

XMYB+ZS 4 Multi Slider Y Side Base Mount Z Slider

Medium Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

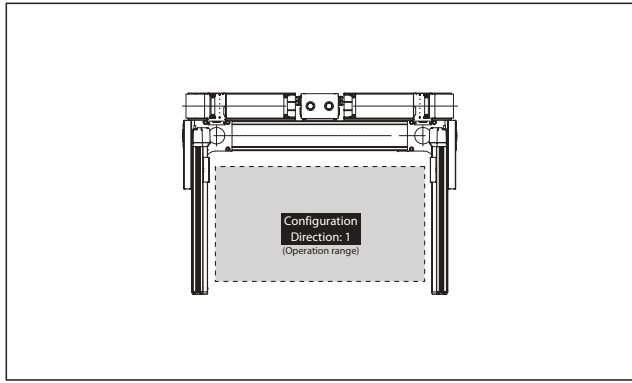
Series ICSPA6: High precision 6-axis (3-axis + 3-axis) specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 25: 250mm 225: 2250mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z1/Z2-axis Stroke/Option 10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Explanation of Model Designations below
--------------------------------------------------------------------------------	---------------------------------------------------------	------------------------------------------------------	----------------------------------------------------------------------	--------------------------------------------------------------------	------------------------------------------------------------------------	---------------------------------------------------------------------	-----------------------------------------------------------------	------------------------------------------------------------------------------------

Model Specification

XY configuration direction *1	Z-axis speed type	Model
1	M	ICSPA6-B3N1MS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2	C/CL	See P.369
Home limit switch *2	L/LL	See P.369
Non-motor end specification * (Y/Z-axis only (standard Z-axis setting))	NM	See P.369
Guide with ball-retaining mechanism (equipped as standard on X-axis)	RT	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-20-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z1-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details
Z2-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑦ in the above model names.
Note that the strokes are indicated in mm (millimeters).
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes	Content
⚠	(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
	(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
	(Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B3N1MS3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100						9.1
	~200						8.1
	~300						7.1
	~400						6.1

Maximum Speed by Stroke (mm/s)

■B3N1MS3M

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	1300							—
Y-axis	—	1200							—	—
Z-axis	600			—	—	—	—	—	—	

ICSPA6-B3N1MS3M-CT-CT (Cable track specification)

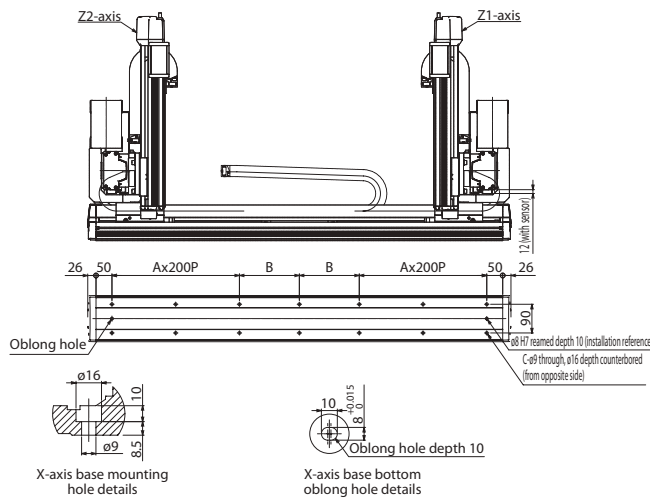
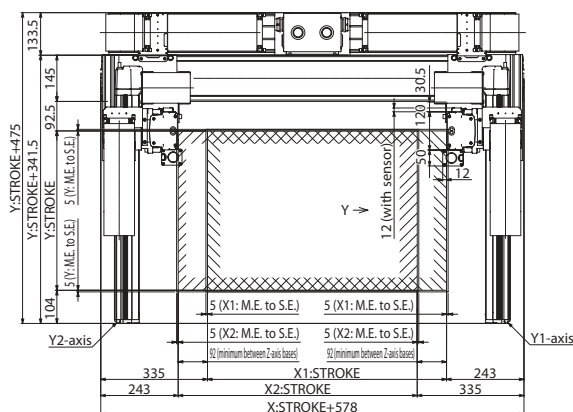
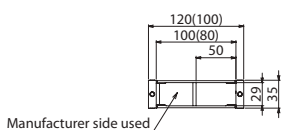
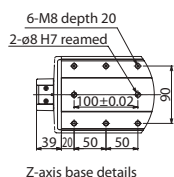
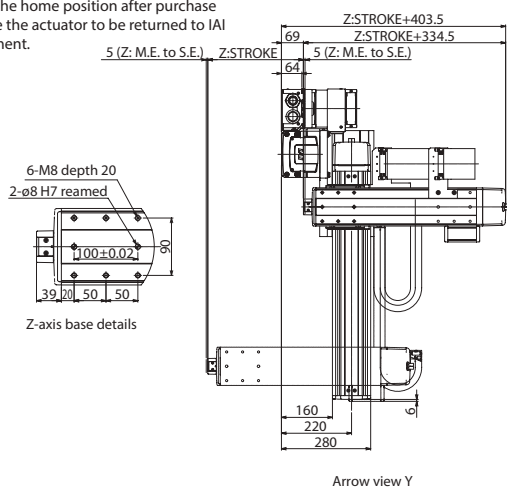
Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

M.E: Mechanical end
S.E: Stroke end



X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3
B	138	163	188	213	238	263	288	113	138	163	188	213	238	263	288	313	138	163	188	213
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

ICSPA6-B2L1HS3M

High-Precision Specification

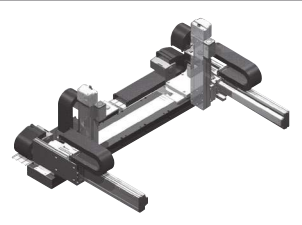
X ± 5µm
Y/Z ± 10µm
High Precision

XYZ+XYZ
6-axis
(LSA+ISPA)

XMYB+ZS
(X Multi-Slider
Y Side Base Mount
Z Slider)

High Speed Type

X: Lg (400W)
Y: Mg (200W)
Z: Md (200W)



Model Specification Items

ICSPA6-B2L1HS3M

Series
ICSPA3: High precision 3-axis specification

Type

Refer to Model Specification table below

Encoder Type

I: Incremental

X-axis Stroke/Option
73: 730mm
383: 3835mm (Every 135mm)

Y-axis Stroke/Option
20: 200mm
40: 400mm (Every 50mm)

Z-axis Stroke/Option
10: 100mm
30: 300mm (Every 50mm)

Refer to Options table below.

Refer to Options table below.

Refer to Options table below.

Refer to Options table below.

Refer to Options table below.

Refer to Options table below.

Refer to Options table below.

Refer to Options table below.

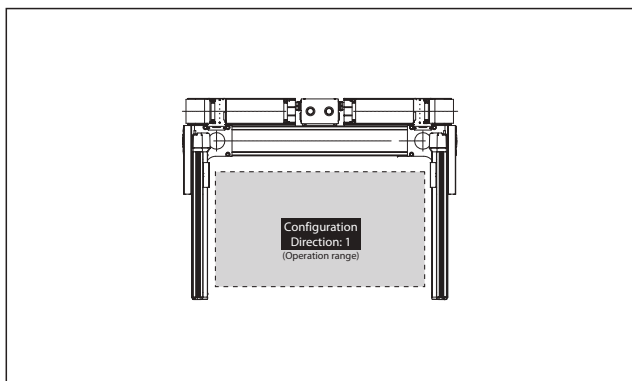
Refer to Options table below.

Model Specification

XY configuration direction *1	Z-axis speed type	Model
1	M	ICSPA6-B2L1HS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	LSA-W21SM-①-400-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z1-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details
Z2-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Explanation of Model Designations

No.	Description	Notation
①	encoder type	I: Incremental
②	X-axis stroke (Note 1)	73: 730mm 383: 3835mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 40: 400mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (equipped as standard on Y/Z-axis only)	AQ	See P.369
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.369
Creep sensor *2 (Y/Z-axis only)	C/CL	See P.369
Home limit switch *2 (equipped as standard on X-axis)	L/LL	See P.369
Non-motor end specification *3 (Y/Z-axis only (standard Z-axis setting))	NM	See P.370

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

Common Specifications

Drive system	X-axis : Linear servo motor Y/Z-axis : Ball screw, equivalent to rolled C5
Positioning repeatability	X-axis : ±0.005mm Y/Z-axis : ±0.01mm
Lost motion	0.02mm or less
Guide	X-axis : Linear guide Y/Z-axis : Base integrated guide
Base	X-axis : Aluminum with black alumite treatment Y/Z-axis : Aluminum with white alumite treatment
X-axis motor output/lead	400W or equivalent/(none)
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
(Note 3) The rated acceleration is 1G for X-axis and 0.3G for Y/Z-axis. Although the Y-axis is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B2L1HS3M

		Y-axis stroke				
		200	250	300	350	400
Z-axis stroke	100	11.5	10.2	7.6	5.3	
	~200	10.5	9.2	6.6	4.3	
	~300	9.5	8.2	5.5	3.3	

Maximum Speed by Stroke (mm/s)

■B2L1HS3M

	Stroke				
	100	200	300	400	730~3835
X-axis	—	—	—	—	2500
Y-axis	—	1200			—
Z-axis	600		—	—	—

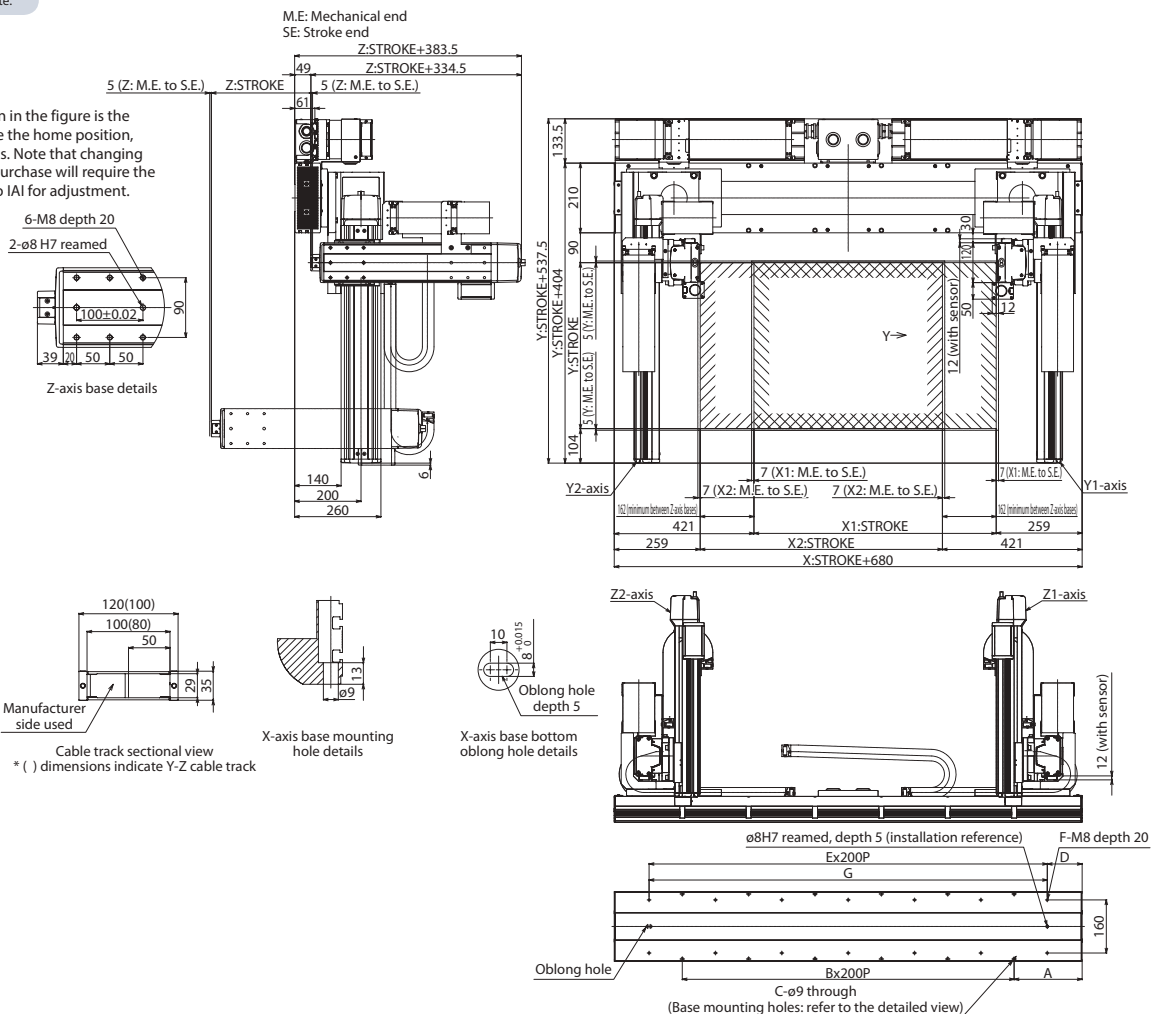
ICSPA6-B2L1HS3M-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X stroke	730	865	1000	1135	1270	1405	1540	1675	1810	1945	2080	2215
A	205	72.5	140	207.5	75	142.5	210	77.5	145	212.5	80	147.5
B	5	7	7	7	9	9	9	11	11	11	13	13
C	12	16	16	16	20	20	20	24	24	24	28	28
D	105	172.5	40	107.5	175	42.5	110	177.5	45	112.5	180	47.5
E	6	6	8	8	8	10	10	10	12	12	12	14
F	14	14	18	18	18	22	22	22	26	26	26	30
G	1200	1200	1600	1600	1600	2000	2000	2000	2400	2400	2400	2800

X stroke	2350	2485	2620	2755	2890	3025	3160	3295	3430	3565	3700	3835
A	215	82.5	150	217.5	85	152.5	220	87.5	155	222.5	90	157.5
B	13	15	15	15	17	17	17	19	19	19	21	21
C	28	32	32	32	36	36	36	40	40	40	44	44
D	115	182.5	50	117.5	185	52.5	120	187.5	55	122.5	190	57.5
E	14	14	16	16	16	18	18	18	20	20	20	22
F	30	30	34	34	34	38	38	38	42	42	42	46
G	2800	2800	3200	3200	3200	3600	3600	3600	4000	4000	4000	4400

Cartesian Robot Options

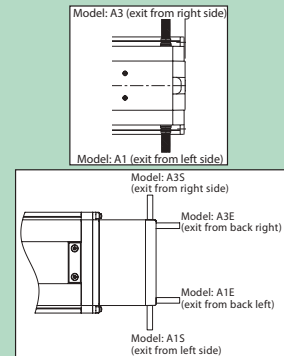
Cable exit direction

Model A1/A3

Description Specify when changing the actuator cable exit direction.

Model A1S/A1E/A3S/A3E

Description The exit direction of the actuator cable can be selected from back left, side left, back right and side right.
* It is required to select an exit direction.



AQ seal

Model AQ

Description AQ seal is a lubricant unit that uses a lubricating member made of lubricating oil solidified with resin. Because it is a porous member that contains a large amount of lubricating oil, the oil seeps out on the surface through capillary action. Lubricating oil is supplied by pressing the AQ seal on the surface of the guide and ball screw (steel ball rolling surface), enabling long-term use without maintenance in a synergistic effect by the combined use of the grease.

Brake

Model B

Description When used vertically, this works as a holding mechanism that prevents the Z-axis slider from falling and damaging any attached fittings when the power or servo is turned off. As the Z-axis is designed to be used vertically, a brake will be equipped as a standard feature. For axes other than the Z-axis, please use the brake option as required.

Creep sensor

Model C / CL

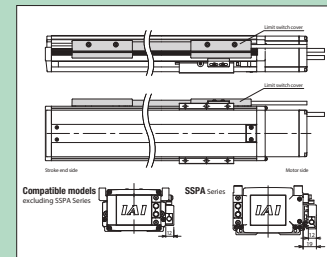
Description A sensor for performing homing at high speed. As homing is normally done by pressing the slider against the stopper on the motor side stroke end and reversing it, the homing speed is kept to 10~20mm/s. Therefore, types with long stroke take time until homing is completed. In order to shorten this, the proximity sensor is used to return the slider at high speed halfway through, then drop the speed to normal homing return speed just before home. The mounting position of the sensor is by default on the right side of the actuator body as viewed from the motor side (C) and the left side for the opposite type (CL). The mounting position of the sensor is determined by the axis configuration direction. Please refer to P.11 for more information.

Home limit switch

Model L / LL

Description When performing home return, the standard type determines the home position by pushing against the mechanical end and reversing. This option allows reverse motion to be triggered by a sensor. Use when changing or adjusting the reversing position during home return or confirming that the home position has been reached. The mounting position of the limit switch and cover is by default on the right side of the actuator body as viewed from the motor side (L) and the left side for the opposite type (LL). The mounting position of the sensor is determined by the axis configuration direction. Please refer to P.11 for more information.

* IS(S)P-W has a limit switch equipped as standard. Also, as the limit switch is built into the body, there is no cover on the body side.



Non-motor end specification

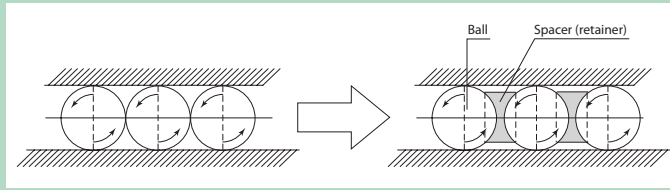
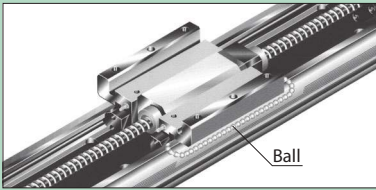
Model NM

Description The normal home position is set to the motor side, but this is the option to set the home position on the other side in order to accommodate variations in equipment layout, etc. (Please note that changing the home position after the actuators are shipped may require the products to be sent back to IAI for re-setting.)

Guide with ball-retaining mechanism

Model **RT**

Description A spacer (retainer) is placed between steel balls of the guide in order to reduce noise and extend the service life. It eliminates metallic noise due to balls colliding with each other, reducing harsh noise. It reduces wear caused by friction of balls, extending the life of the guide. It eliminates the interference between balls, making the movement smoother and improving the operating capability of the slider.
 * It cannot be used with ISB/ISPB-SXL/MXL/LXL or ISA/ISPA-WXM/WXMX.



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