

ICSB3-GC□MS3M

ICSPB3-GC□MS3M High-Precision Specification

±10μm Standard

±5μm High-Precision

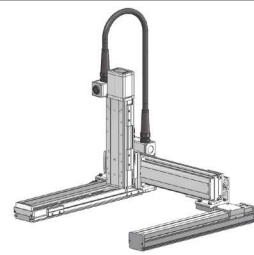
Battery-less Absolute

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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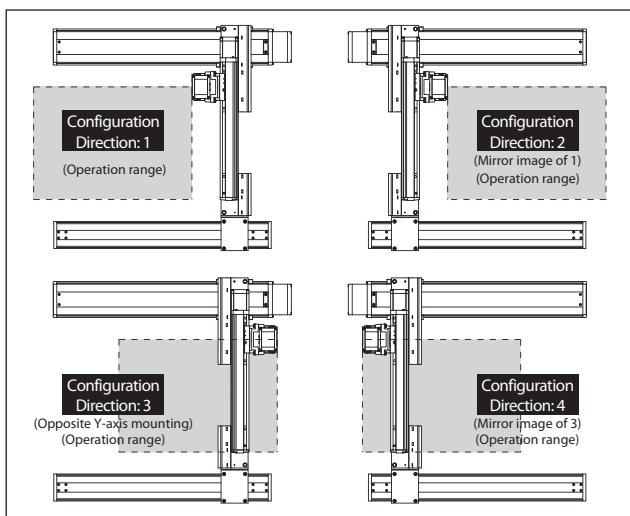
Model Specification

* 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)

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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)

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	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	600			430	345	280
Y-axis	—	600		—		
Z-axis	600			—		

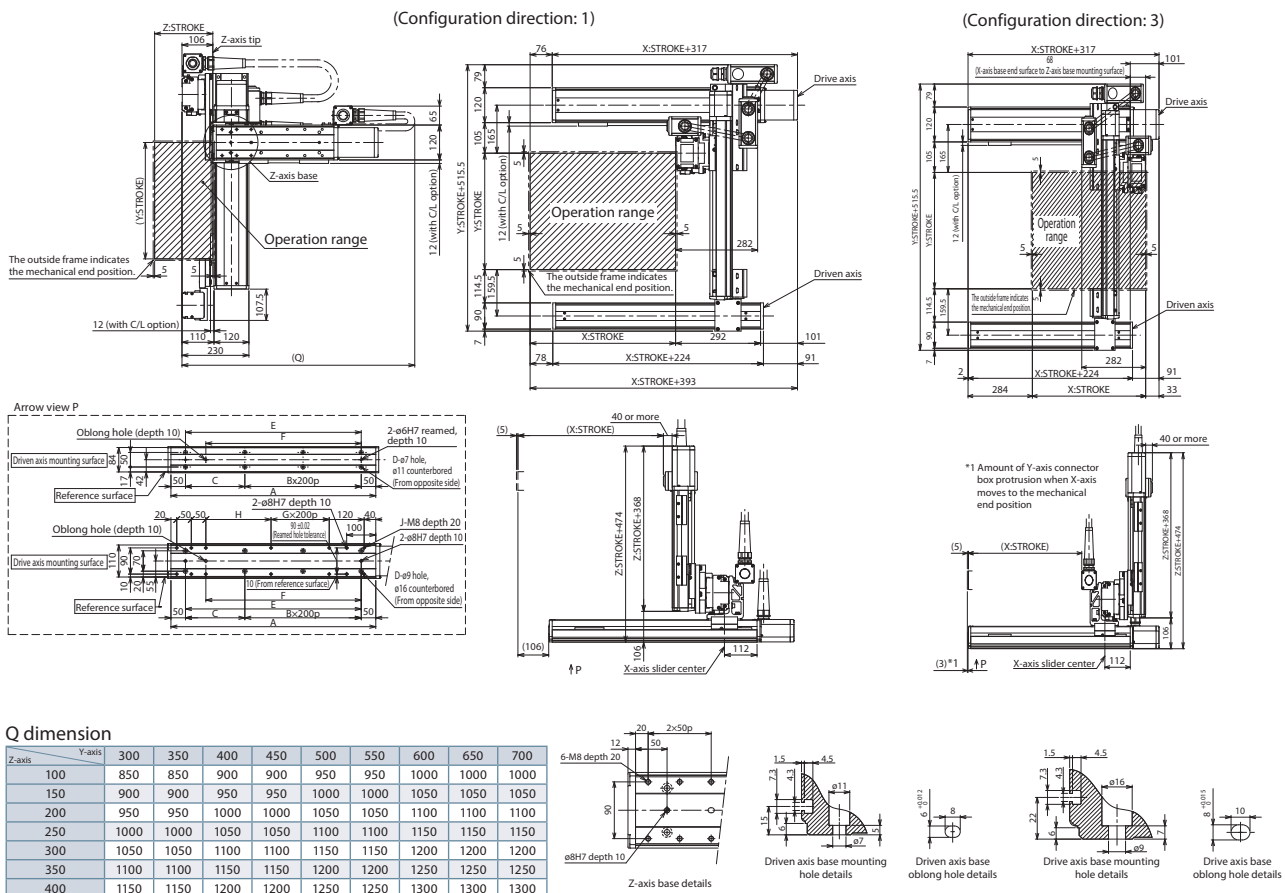
ICSB3 [ICSPB3]-GC□MS3M-SC-SC (Self-standing cable specification)

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