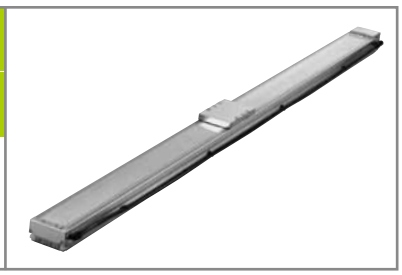
ISDBCR-MX-200

Single-axis robot for cleanroom/Medium, mid-support type/Actuator width: 120mm/200 W Straight shape

ISPDBCR-MX-200

Single-axis robot for cleanroom/Medium, mid-support type/Actuator width: 120mm/200W Straight shape **High precision specification**



Model Specification Items: □ — MX — □ — 200 — □ — □ — □ — □ — □ — □

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDBCR: Standard specification ISPDBCR: High precision specification		A: Absolute specification I: Incremental specification	200: 200W	30 :30mm 20:20mm	800: 800mm 〃 2000: 2000mm (in 100mm increments)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	N : None S : 3m M: 5m X□□: Specified length	Refer to the options table below.

* Refer to P. 10 for the details of items comprising the model number.

Model Number/Specification

*1.0G=9800mm/sec²

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 100mm increments (mm)	Speed (mm/s)	Acceleration (Note 1)		Payload (Note 1)				Rated thrust (N)	Suction flow rate (Nℓ/min)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)			
						Rated	Maximum	Rated	Maximum	Rated acceleration	Maximum acceleration	Rated acceleration	Maximum acceleration		
ISDBCR[ISPDBCR]-MX-①-200-30-②-③-④-⑤	Absolute Incremental	200	30	800~2000	1~1800	0.4	Designed exclusively for horizontal use			30		Designed exclusively for horizontal use		113.9	180
ISDBCR[ISPDBCR]-MX-①-200-20-②-③-④-⑤			20		1~1200	0.4				45				170.9	120

*In the above model numbers, ① indicates the encoder type, ② indicates the stroke, ③ indicates the applicable controller, ④ indicates the cable length, and ⑤ indicates the option(s).

Option

Name	Model number	Reference page	Name	Model number	Reference page
Cable exit from the left	A1S	→P11	Home limit switch	L	→P11
Cable exit from the rear left	A1E	→P11	Home limit switch on the opposite side	LL	→P11
Cable exit from the right	A3S	→P11	Master axis specification	LM	→P12
Cable exit from the rear right	A3E	→P11	Master axis specification (sensor on the opposite side)	LLM	→P12
AQ seal (standard feature)	AQ	→P11	Non-motor side specification	NM	→P12
Brake	B	→P11	Guide with ball retention mechanism	RT	→P12
Creep sensor	C	→P11	Slave axis specification	S	→P12
Creep sensor on the opposite side	CL	→P11	High straightness, precision specification	ST	→P13
			Suction tube joint on the opposite side	VR	→P12

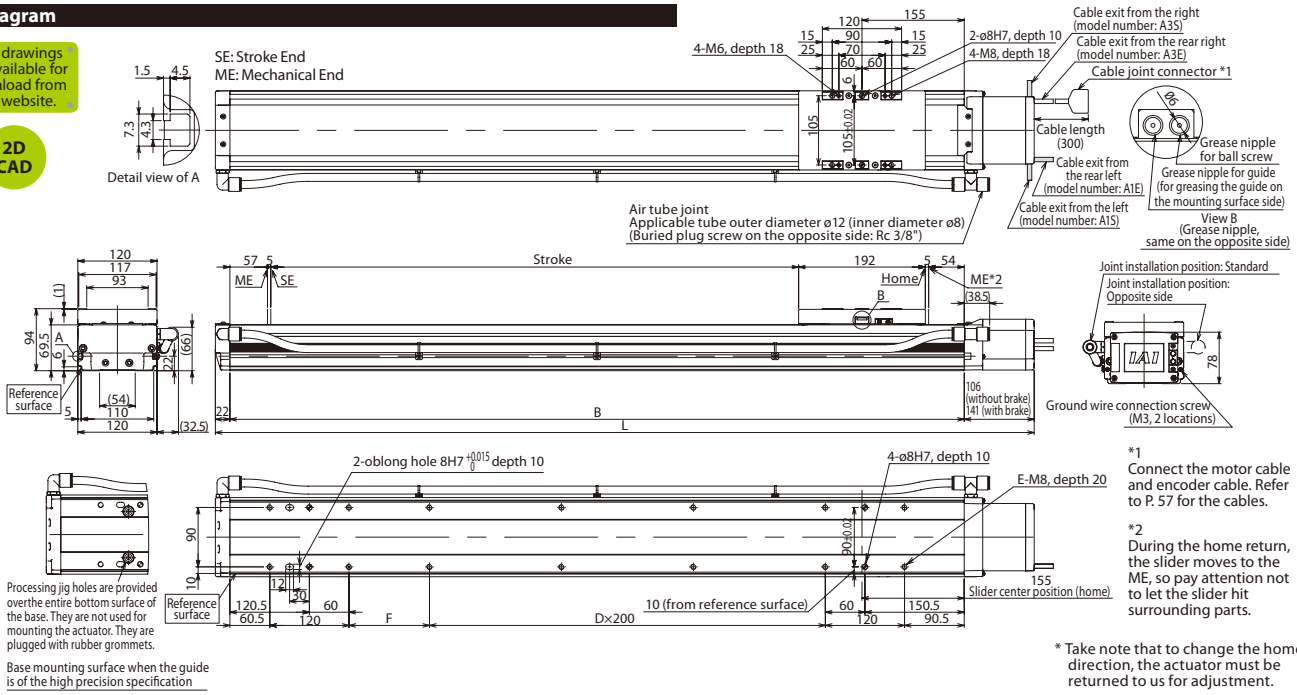
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.005mm]
Drive method (Note 3)	Ball screw ø16mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 69.6N•m Mb: 99.0N•m Mc: 161.7N•m
Overhang load length	Ma direction: 600mm max. Mb, Mc directions: 600mm max.
Dynamic straightness (Note 6)	0.02mm/m max.
Base	Material: Aluminum, with white alumite treatment
Applicable controller	T1: XSEL-J/K T2: XSEL-P/Q, SSEL, SCON
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Grease	Low dust-raising grease (for ball screw and guide)
Cleanliness degree	Class 10 (0.1μm per 1cf)
Suction tube joint	Quick connect joint, applicable tube outer diameter ø12mm

Diagram

CAD drawings are available for download from our website.

2D CAD



*1
Connect the motor cable and encoder cable. Refer to P. 57 for the cables.

*2
During the home return, the slider moves to the ME, so pay attention not to let the slider hit surrounding parts.

* Take note that to change the home direction, the actuator must be returned to us for adjustment.

■ Dimensions, Mass and Maximum Speed by Stroke

*If the brake is equipped, the mass increases by 0.5kg. *The maximum speed (mm/s) varies depending on the stroke.

Stroke		800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
L	without brake	1241	1341	1441	1541	1641	1741	1841	1941	2041	2141	2241	2341	2441
	with brake	1276	1376	1476	1576	1676	1776	1876	1976	2076	2176	2276	2376	2476
B		1113	1213	1313	1413	1513	1613	1713	1813	1913	2013	2113	2213	2313
D		3	3	4	4	5	5	6	6	7	7	8	8	9
E		14	14	16	16	18	18	20	20	22	22	24	24	26
F		122	222	122	222	122	222	122	222	122	222	122	222	122
Mass (kg)		18.5	19.8	21.0	22.3	23.6	24.9	26.2	27.4	28.7	30.0	31.3	32.5	33.8
Maximum speed (mm/s)	Lead 30	1800				1650	1500	1425	1200	1050	900	825	750	675
	Lead 20	1200				1100	1000	950	800	700	600	550	500	450

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Connectable encoder type	Operating method	Power-supply voltage	Reference page
X-SEL-P/Q	6 axes	Absolute/ incremental	Program	Single/three-phase 200 VAC	→P56
X-SEL-J/K	4 axes			Single-phase 100/200 VAC	→P56
SSEL	2 axes				→P56
SCON	1 axis		Positioner pulse train control		→P56

CAUTION

(Note 1) Refer to P. 9 for the relationship of acceleration and payload.
(Notes 2, 3, 4) The values in [ ] apply to the ISPDBCR series. Other specification values apply commonly to the ISDBCR and ISPDBCR.
(Note 5) When the traveling life is 10,000km.
(Note 6) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 7) The maximum cable length is 30m. Specify a desired length in meters.
(Example. X08 = 8m)