

ISDBCR-M-100

Single-axis robot for cleanroom/Medium/Actuator width:
120mm/100W Straight shape

ISPDBCR-M-100

Single-axis robot for cleanroom/Medium/Actuator width:
120mm/100W Straight shape **High precision specification**



Model Specification Items

Series	M	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
ISDBCR: Standard specification ISPDBCR: High precision specification	100	A: Absolute specification I: Incremental specification	100: 100W	30: 30mm 20: 20mm 10: 10mm 5: 5mm	100: 100mm ?: 1100: 1100mm (in 50mm 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

Model number	Encoder type	Motor output (W)	Lead (mm)	Stroke in 50mm 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]-M-①-100-30-②-③-④-⑤	Absolute Incremental	100	30	100~1100	1~1800	0.4	1.0	0.4	1.0	15	4	2	1.2	56.6	180
ISDBCR[ISPDBCR]-M-①-100-20-②-③-④-⑤			20		1~1200	0.4	1.0	0.4	1.0	23	8	4	2.5	84.9	120
ISDBCR[ISPDBCR]-M-①-100-10-②-③-④-⑤			10		1~600	0.4	0.7	0.4	0.6	45	20	10	7	169.8	50
ISDBCR[ISPDBCR]-M-①-100-5-②-③-④-⑤			5		1~300	0.2	0.5	0.2	0.4	85	45	20	15	339.7	20

*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).
**If the guide with ball retention mechanism (RT) is used, the vertical payload decreases by 0.5kg. (Please also refer to P.9).

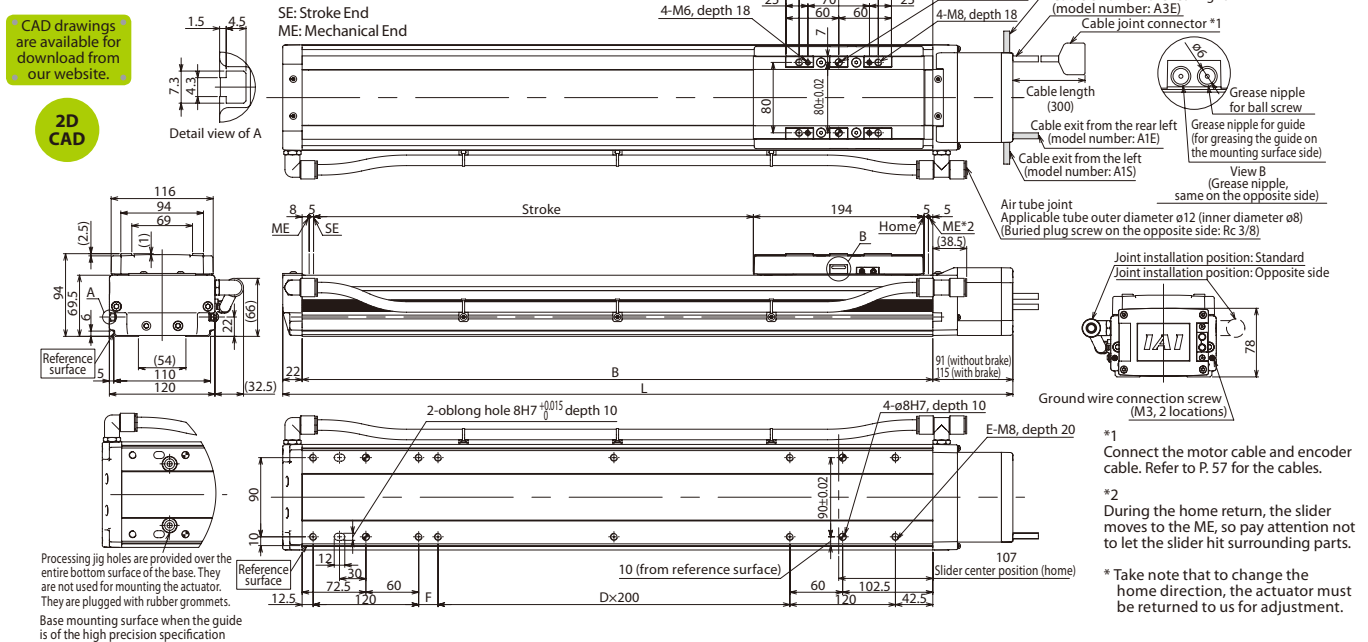
Option

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



Dimensions, Mass and Maximum Speed by Stroke

Stroke	L											B											D											E											F																																																																																																																																				
	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100																																																																								
without brake	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330	1380	1430	317	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217	1267	1317	0	0	0	0	1	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4	4	4	5	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	14	16	16	16	16	18	22	72	122	172	22	72	122	172	22	72	122	172	22	72	122	172	22	72	122	172	22	72	122	172	22	7.6	8.2	8.8	9.5	10.1	10.7	11.3	12.0	12.6	13.2	13.9	14.5	15.1	15.7	16.4	17.0	17.6	18.2	18.9	19.5	20.1	1800	1200	600	300	1630	1440	1280	1150	1035	935	850	780	715	660	1085	960	855	765	690	625	570	520	475	440	545	480	430	380	345	310	285	260	240	220	270	240	215	190	170	155	140	130	120	110

*If the brake is equipped, the mass increases by 0.3kg. *The maximum speed (mm/s) varies depending on the stroke.

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				→P56
SSEL	2 axes				→P56
SCON	1 axis				→P56



(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) The value of dynamic straightness is when the high straightness, precision specification (option) is specified.
(Note 6) The maximum cable length is 30m. Specify a desired length in meters.
(Note 7) (Example. X08 = 8m)