

ISDBCR-LX-400

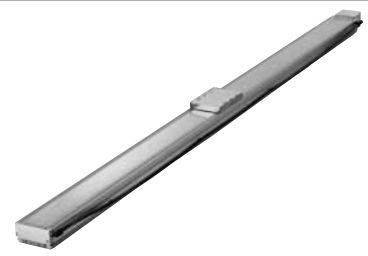
Single-axis robot for cleanroom/Large, mid-support type/Actuator width: 150mm/400W Straight shape

ISPDBCR-LX-400

Single-axis robot for cleanroom/Large, mid-support type/Actuator width: 150mm/400W Straight shape **High precision specification**

Model Specification Items

Series	LX	Encoder type	400	Lead	Stroke	Applicable controller	Cable length	Options
ISDBCR: Standard specification ISPDBCR: High precision specification		A: Absolute specification I: Incremental specification	400: 400W	40: 40mm 20: 20mm	1000: 1000mm 2500: 2500mm (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

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]-LX-①-400-40-②-③-④-⑤	Absolute	400	40	1000~2500	1~1800	0.4		Designed exclusively for horizontal use		40		Designed exclusively for horizontal use	169.6	180	
ISDBCR[ISPDBCR]-LX-①-400-20-②-③-④-⑤	Incremental		20		1~1200	0.4				90			339.1	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

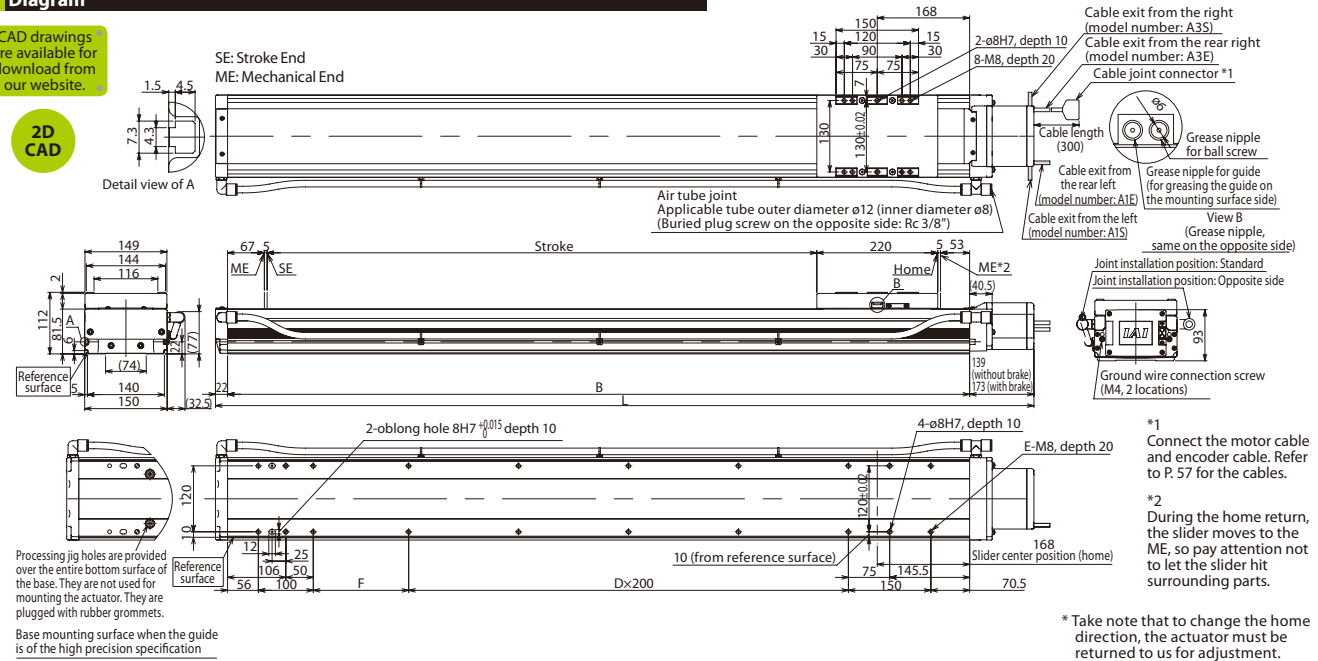
Common Specifications

Positioning repeatability (Note 2)	±0.01mm [±0.005mm]
Drive method (Note 3)	Ball screw ø20mm, rolled C10 [equivalent to rolled C5]
Lost Motion (Note 4)	0.05mm [0.02mm] max.
Dynamic allowable load moment (Note 5)	Ma: 104.9N·m Mb: 149.9N·m Mc: 248.9N·m
Overhang load length	Ma direction: 750mm max. Mb, Mc directions: 750mm 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



Dimensions, Mass and Maximum Speed by Stroke

Stroke	L										B					D					E					F																			
	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	4	5	6	7	8	9	10	11	12	16	18	20	22	24	26	28	30	32	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	
without brake	1511	1611	1711	1811	1911	2011	2111	2211	2311	2411	2511	2611	2711	2811	2911	3011	4	5	6	7	8	9	10	11	12	16	18	20	22	24	26	28	30	32	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	
with brake	1545	1645	1745	1845	1945	2045	2145	2245	2345	2445	2545	2645	2745	2845	2945	3045	4	5	6	7	8	9	10	11	12	16	18	20	22	24	26	28	30	32	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	173.5	73.5	
Mass (kg)	30.2	31.9	33.6	35.4	37.1	38.8	40.6	42.3	44.0	45.8	47.5	49.2	51.0	52.7	54.4	56.2																													
Maximum speed (mm/s)	1800																1660	1480	1300	1180	1080	980	880	820	740	680																			
	1200																1150	1000	950	830	740	650	590	540	490	440	410	370	340																

*If the brake is equipped, the mass increases by 0.5kg. *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 200VAC	→P56
X-SEL-J/K	4 axes			Single-phase 100/200VAC	→P56
SSEL	2 axes			Single-phase 200VAC	→P56
SCON	1 axis			Positioner pulse train control	→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) 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)