

ISA-MZM-100 Single-Axis Robot: Medium Vertical-Axis Long Slider Type, Actuator Width 120mm, 100W, Straight Shape
ISPA-MZM-100 Single-Axis Robot: Medium Vertical-Axis Long Slider Type, Actuator Width 120mm, 100W, Straight Shape High-Precision Specification



Type	Medium vertical-axis (120-mm wide) long slider type	Stroke	100 ~ 1000mm	Vertical application only (with standard brake)	19kg
Model specification items: Series Type Encoder type Motor output Lead Stroke Applicable controller Cable length Options ISA[ISPA] - MZM - A - 100 - 10 - 1000 - T1 - S - B-L					

* Refer to page 11 for the details of model specification items.

Models/Specifications

Model	Encoder type	Motor output (W)	Lead (mm)	Stroke (mm) In increments of 50mm (Note 1)	Speed (Note 2) (mm/s)	Acceleration (Note 3)			Load capacity (Note 3)			Rated thrust (N)
						Horizontal (kg)	Vertical (kg)	Rated	Maximum	Horizontal (kg)	Vertical (kg)	
ISA [ISPA] -MZM-A-100-10-***-T1-△-B-□	Absolute	100	10	100 ~ 1000	1 ~ 500	Vertical application only	0.3	0.5	Vertical application only	9	7	169.5
ISA [ISPA] -MZM-A-100-5-***-T1-△-B-□			5		1 ~ 250					0.15	0.3	19
ISA [ISPA] -MZM-I-100-10-***-T1-△-B-□	Incremental		10		1 ~ 500		0.3	0.5		9	7	169.5
ISA [ISPA] -MZM-I-100-5-***-T1-△-B-□			5		1 ~ 250		0.15	0.3		19	15	340.1

* In the above model names, *** indicates the stroke, △ the cable length and □ the applicable options.

*1.0G=9800mm/sec²

Options

Name	Code	Page	Name	Code	Page
AQ seal	AQ	P13	Master-axis designation	LM	P14
Brake	B	P13	Master-axis designation (sensor on opposite side)	LLM	P14
Creep sensor	C	P13	Reverse homing specification	NM	P14
Creep sensor on opposite side	CL	P13	Guide with ball-retaining mechanism	RT	P14
Home limit switch	L	P14	Slave-axis designation	S	P14
Home limit switch on opposite side	LL	P14			

* The MZM type comes standard with a brake (B).

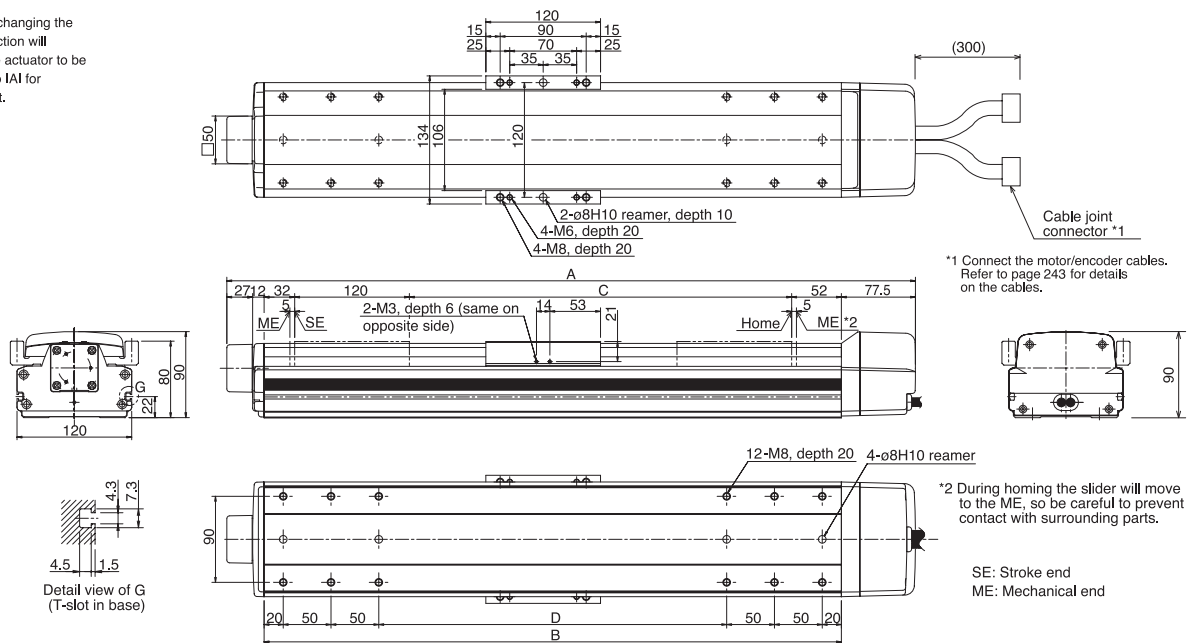
Common Specifications

* Refer to page 10 for the details of common specification items.

Positioning repeatability (Note 4)	±0.02mm [±0.01mm]
Drive system (Note 5)	Ball screw ø16mm, rolled C10 [equivalent to rolled C5]
Lost motion (Note 6)	0.05mm or less [0.02mm or less]
Guide	integrated with base
Allowable static moment	Refer to page 242
Allowable dynamic moment	Ma: 69.6N•m Mb: 99.0N•m Mc: 81.3N•m
Brake	Comes standard with a dry, single-plate, non-excitation type electromagnetic brake
Base	Material: Aluminum, with white alumite treatment
Cable length (Note 7)	N: None, S: 3m, M: 5m, X□□: Specified length
Ambient operating temperature/humidity	0 to 40°C, 85%RH max. (non-condensing)

Dimensions

* Note that changing the home direction will require the actuator to be returned to IAI for adjustment.



*1 Connect the motor/encoder cables. Refer to page 243 for details on the cables.

*2 During homing the slider will move to the ME, so be careful to prevent contact with surrounding parts.

SE: Stroke end
ME: Mechanical end

Dimensions, Weight and Maximum Speed by Stroke

Stroke	100	(150)	200	(250)	300	(350)	400	(450)	500	(550)	600	700	800	900	1000
A	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	Use the base of the MXM type for 700 and longer strokes. Refer to the drawing on page 18 for the mounting dimensions.			
B	304	354	404	454	504	554	604	654	704	754	804				
C	100	150	200	250	300	350	400	450	500	550	600				
D	64	114	164	214	264	314	364	414	464	514	564				
Weight (kg)	7.1	7.6	8.1	8.6	9.1	9.6	10.1	10.7	11.2	11.7	12.2	13.2	14.2	15.2	16.2
Maximum speed (mm/s)	Lead 10											480	380	310	255
	Lead 5											220	175	145	120

Applicable Controller Specifications

Applicable controller	Maximum number of controlled axes	Compatible encoder type	Program operation	Positioner operation	Pulse-train control	Supply voltage	Page
X-SEL	4 axes	Absolute/Incremental	○	△	×	AC100/200V	
E-Con	1 axis	Absolute/Incremental	×	○	×	AC100/200V	
P-Driver	1 axis	Incremental	×	×	○	AC100/200V	



(Note 1) The strokes that are set in increments of 50 mm are semi-standard settings.
 (Note 2) A longer stroke will result in a lower maximum speed to prevent the ball screw from reaching a dangerous speed. (Refer to the above table for the maximum speed at a given stroke.)
 (Note 3) Refer to page 40 for the relationship of acceleration and load capacity. (Notes 4, 5, 6) The figures in brackets apply to the ISPA Series. Other specification values apply to both the ISA and ISPA Series.
 (Note 7) The maximum cable length is 30 m. Specify the desired length in meters (e.g., X08 = 8 m).

* Refer to page 9 for other points to note.

* The MZM type comes standard with a brake, so use a controller of brake specification.