

# ISP-WXMX-600

Single-Axis Robot: Super-Large X-Axis Mid-Support Type, Actuator Width 198mm, 600W, Straight Shape High-Precision Specification



Type	Super-large X-axis (198-mm wide) mid-support type	Stroke	900 ~ 2500mm	Load capacity	120kg (horizontal)
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Model specification items: Series Type Encoder type Motor output Lead Stroke Applicable controller Cable length Options

ISP - WXMX - I - 600 - 40 - 2500 - T1 - S - C - 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 100mm	Speed (Note 1) (mm/s)	Acceleration (Note 2)				Load capacity (Note 2)				Rated thrust (N)
						Horizontal (G)		Vertical (G)		Horizontal (kg)		Vertical (kg)		
						Rated	Maximum	Rated	Maximum	Rated	Maximum	Rated	Maximum	
ISP-WXMX-A-600-40-***-T1-△-□	Absolute	600	40	900 ~ 2500	1 ~ 2000	0.3	Horizontal application only	60	Horizontal application only	255				
ISP-WXMX-A-600-20-***-T1-△-□			20		1 ~ 1000	0.3		120		510				
ISP-WXMX-I-600-40-***-T1-△-□	Incremental	600	40	900 ~ 2500	1 ~ 2000	0.3	Horizontal application only	60	Horizontal application only	255				
ISP-WXMX-I-600-20-***-T1-△-□			20		1 ~ 1000	0.3		120		510				

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

\*1.0G=9800mm/sec<sup>2</sup>

## Options

Name	Code	Page	Name	Code	Page
AQ seal	AQ	→ P13	Master-axis designation	LM	→ P14
Brake	B	→ P13	Reverse homing specification	NM	→ P14
Creep sensor	C	→ P13	Slave-axis designation	S	→ P14
Home limit switch	L	→ P13			

\* The WXM type comes standard with a home limit switch (L).

## Common Specifications

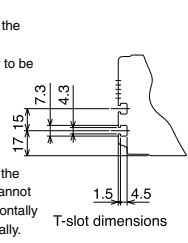
\* Refer to page 10 for the details of common specification items.

Positioning repeatability	±0.01mm
Drive system	Ball screw ø20mm, rolled C5
Backlash	0.02mm or less
Guide	Integrated with base
Allowable load moment	Ma: 139.2N • m Mb: 199.9N • m Mc: 391N • m
Overhung load length	Ma direction: 900mm or less, Mb/Mc directions: 900mm or less
Base	Material: Aluminum with white alumite treatment
Cable length (Note 3)	N: No cable, S: 3m, M: 5m, X □ □ : Length specification

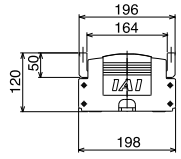
## Dimensions

\* The external dimensions are the same with or without brake.

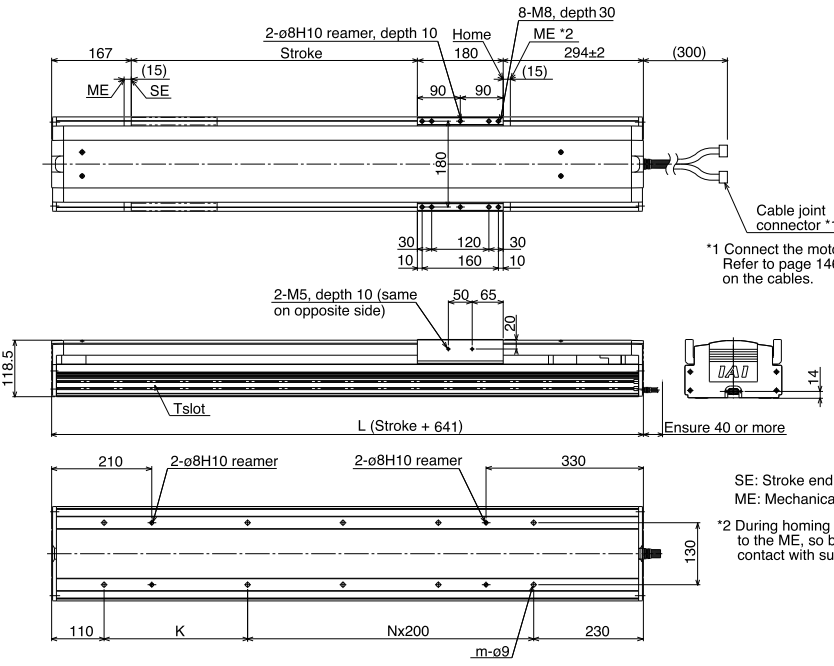
\* Note that changing the home direction will require the actuator to be returned to IAI for adjustment.



\* Due to its structure the mid-support type cannot be positioned horizontally on its side or vertically.



Detail view of mounting hole



\*1 Connect the motor/encoder cables. Refer to page 146 for details on the cables.

SE: Stroke end  
ME: Mechanical end  
\*2 During homing the slider will move to the ME, so be careful to prevent contact with surrounding parts.

## Dimensions, Weight and Maximum Speed by Stroke

Stroke	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
L	1541	1641	1741	1841	1941	2041	2141	2241	2341	2441	2541	2641	2741	2841	2941	3041	3141	
K	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	301	201	
N	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	
m	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	
Weight (kg)	37.5	39.5	41.5	43.5	45.5	47.4	49.4	51.4	53.4	55.4	57.3	59.3	61.3	63.3	65.2	67.2	69.2	
Maximum speed (mm/s)	Lead 40						1965	1725	1530	1365	1225	1110	1005	915	840	770	710	655
	Lead 20						980	860	765	680	610	555	500	455	420	385	355	325

## 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	→ P241
E-Con	1 axis	Absolute/incremental	×	○	×	AC100/200V	→ P227
P-Driver	1 axis	Incremental	×	×	○	AC100/200V	→ P234



(Note 1) 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 2) Refer to page 40 for the relationship of acceleration and load capacity.  
(Note 3) The maximum cable length is 30 m. Specify the desired length in meters (e.g., X08 = 8 m).

\* The WXM type comes standard with a home limit switch, so use a controller of limit switch specification.

\* Refer to page 9 for other points to note.