Mini Slider type

Mini Rod type

Mini Table type

Mini Linear Servo type

Controller

Compact

Wide

Flat

Coupling

Side-mounted

RCP3-SA2AR

ROBO Cylinder Mini Slider Type Side-Mounted Motor Type Actuator Width 58mm Pulse Motor
Lead Screw Specification

■ Model Description

RCP3 — **SA2AR** — **I** — **20P** — ☐ — ☐ — ☐ — ☐ — ☐

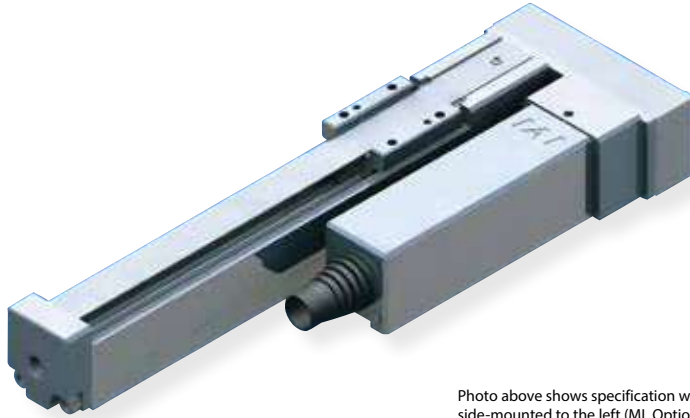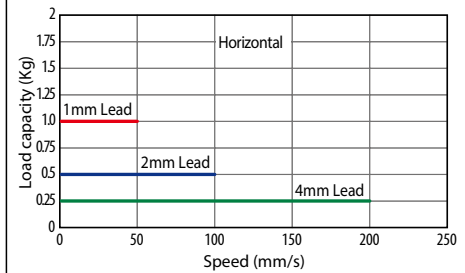| Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible controllers	Cable length	Option
		I: Incremental specification * Model number is "I" when used with simple absolute unit.	20P: Pulse motor 20☐size	4S: Lead screw 4mm 2S: Lead screw 2mm 1S: Lead screw 1mm	25: 25mm 〜 100: 100mm (every 25mm)	P3: PCON MSEL P5: RCON RSEL	N: None P: 1 m S: 3 m M: 5 m X☐☐: Length Designation	See options table below. * Be sure to specify which side the motor is to be mounted (ML/MR)

* See page 14 for details on the model descriptions.

Photo above shows specification with motor side-mounted to the left (ML Option).

P O I N T
Notes on selection

(1) The payload is the value when operated at 0.2G acceleration. The acceleration upper limit is the value indicated above.
(2) Cannot be used in the horizontal orientation with the slider facing to the side or in the vertical orientation.
(3) Service life decreases significantly if used in a dusty environment.

■ Correlation Diagrams of Speed and Load Capacity

With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.

■ Actuator Specifications Table

■ Leads and Payloads

Model	Feed screw	Lead (mm)	Maximum payload Horizontal (kg)	Maximum payload Vertical (kg)	Positioning repeatability (mm)	Stroke (mm)
RCP3-SA2AR-I-20P-4S-①-②-③-④	Lead screw	4	0.25	—	±0.05	25 to 100 (every 25mm)
RCP3-SA2AR-I-20P-2S-①-②-③-④		2	0.5	—		
RCP3-SA2AR-I-20P-1S-①-②-③-④		1	1	—		

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

■ Stroke and Maximum Speed

Lead \ Stroke	25 (mm)	50~100 (mm)
Lead screw 4	180	200
2	100	
1	50	

(unit: mm/s)

① Stroke list

① Stroke (mm)	Standard price
25	—
50	—
75	—
100	—

③ Cable Length

Type	Cable symbol	Standard price
Standard type (Robot cable)	**P** (1m)	—
	S (3m)	—
	M (5m)	—
Special length	**X06** (6m) ~ **X10** (10m)	—
	X11 (11m) ~ **X15** (15m)	—
	X16 (16m) ~ **X20** (20m)	—

* The standard cable for the RCP3 is the robot cable.

④ Options

Title	Option code	See page	Standard price
Specification with motor side-mounted to the left	**ML**	—	—
Specification with motor side-mounted to the right	**MR**	—	—
Reversed-home specification	**NM**	—	—

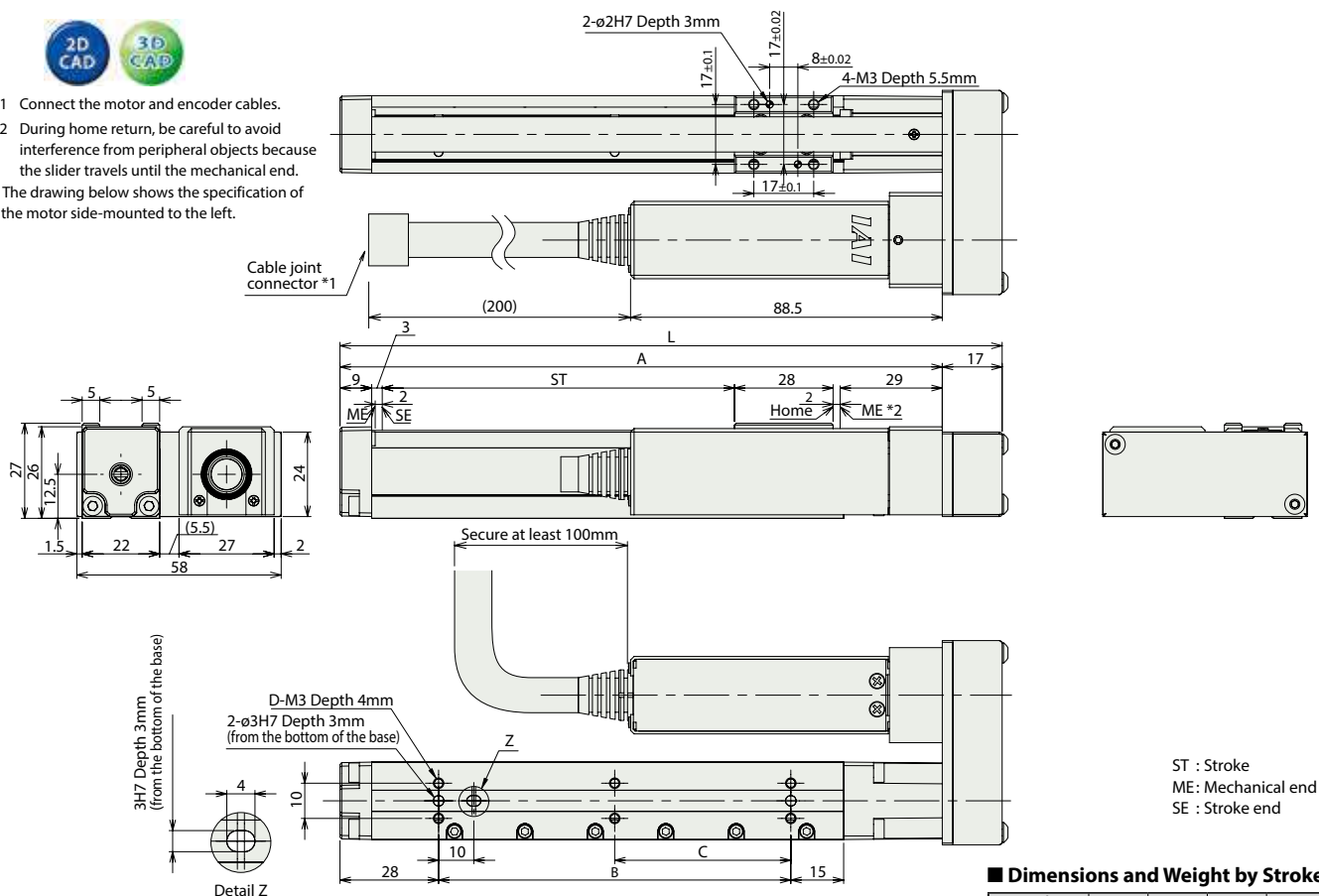### ■ Actuator Specifications

Item	Description
Drive System	Lead screw, ø4mm, rolled C10
Lost motion	0.3mm or less (initial value)
Base	Material: Aluminum, white alumite treated
Guide	Slide guide
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	10 million cycles

RCP3 ROBO Cylinder

Mini Slider type

Mini Rod type

Mini Table type

Mini Linear Servo type

Controller

Compact

Wide

Flat

Coupling

Side-mounted

Dimensional Drawings

● CAD drawings can be downloaded from the website. www.intelligentactuator.com

2D CAD   3D CAD

*1 Connect the motor and encoder cables.
*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
* The drawing below shows the specification of the motor side-mounted to the left.

2-ø2H7 Depth 3mm
17±0.02
8±0.02
4-M3 Depth 5.5mm
17±0.1
17±0.1

Cable joint connector *1

(200)   88.5

3   L   17
A
9   ST   28   29
ME   SE   2   Home   2   ME *2

Secure at least 100mm

D-M3 Depth 4mm
2-ø3H7 Depth 3mm
(from the bottom of the base)
Z

3H7 Depth 3mm (from the bottom of the base)
4
10
Detail Z

28   10   B   C   15

ST : Stroke
ME: Mechanical end
SE : Stroke end

■ Dimensions and Weight by Stroke

Stroke	25	50	75	100
L	113	138	163	188
A	96	121	146	171
B	25	50	75	100
C	0	0	0	50
D	4	4	4	6
Mass (kg)	0.28	0.3	0.32	0.33

Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method														Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network option *1												
							DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	●	●	●	-	●	-	-	-	●	●	●	-	-	30000	Please contact IAI for more information.
PCON-CB/CGB		1	24VDC	● * Option	● * Option	-	●	●	●	●	●	●	●	●	●	●	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB		1		● * Option	● * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	
RCON		16 (ML3,SSN,ECM=8)		-	-	-	●	●	●	●	-	●	●	●	●	●	●	●	128 (No position data for ML3, SSN, ECM),	
RSEL		8		-	-	●	●	●	●	●	-	-	-	●	●	●	-	-	36000	

*1 For network abbreviations such as DV and CC, please contact IAI.

More controller info is available in the General Controller Catalog PDF.

* This is for the single-axis PSEL
* ①indicates the power-supply voltage type (1: 100 V/2: 100 to 240 V).