

# RCP3-SA2AR

ROBO Cylinder Mini Slider Type Motor Unit Reverse-mounted Type Actuator Width 58mm Pulse Motor Lead Screw Specification

■ Model Description		<b>RCP3</b>	—	<b>SA2AR</b>	—	<b>I</b>	—	<b>20P</b>	—		—		—		—		—	
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	45: Lead screw 4mm 25: Lead screw 2mm 15: Lead screw 1mm	25: 25mm 100: 150mm (every 25mm)	P1: PCON RPCON PSEL P3: PSEP	N: None P: 1m S: 3m M: 5m X□□: Length Designation	Following options Refer to price table										

\*See page 11 for details on the model descriptions.

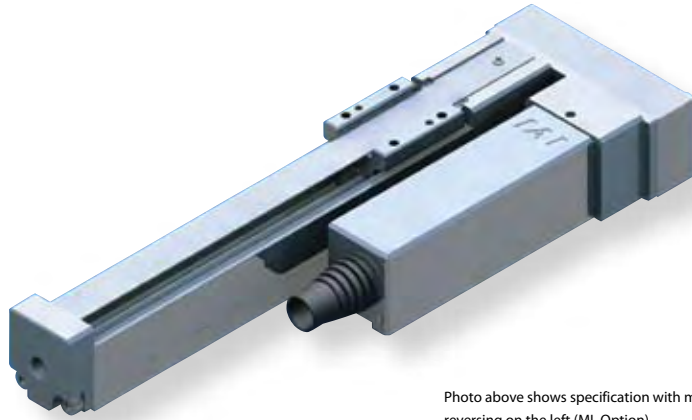
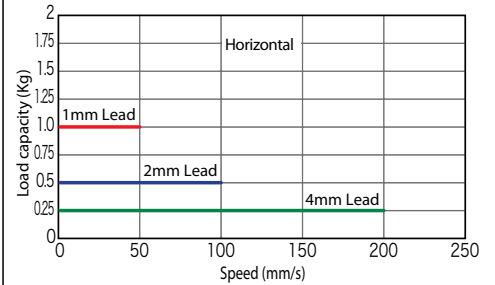


Photo above shows specification with motor reversing on the left (ML Option).

■ 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.



	(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.

## Actuator Specification Table

### Leads and Payloads

Model	Feed screw	Lead (mm)	Maximum payload		Positioning Repeatability (mm)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
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	Maximum Speed	
		25 (mm)	50 to 100 (mm)
Lead screw	4	180	200
	2	100	
	1	50	

(Unit = mm/s)

### (1) Price list (by stroke)

(1) Stroke (mm)	Type code	
	SA2AR	
	Encoder type	
	Incremental	
	Feed screw	
	Lead Screw	
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) to X10 (10m)	—
	X11 (11m) to X15 (15m)	—
	X16 (16m) to X20 (20m)	—

\* The standard cable for the RCP3 is the robot cable.  
\* See page 113 for maintenance cables.

### (4) Option price list (standard price)

Title	Option code	See page	Standard price
Specification with motor reversing on the left	ML	—	—
Specification with motor reversing on the right	MR	—	—
Reversed-home specification	NM	—	—

### Actuator Specification

Item	Description
Drive System	Lead screw, φ4mm, rolled C10
Backlash	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 (No condensation)
Service life	10 million cycles

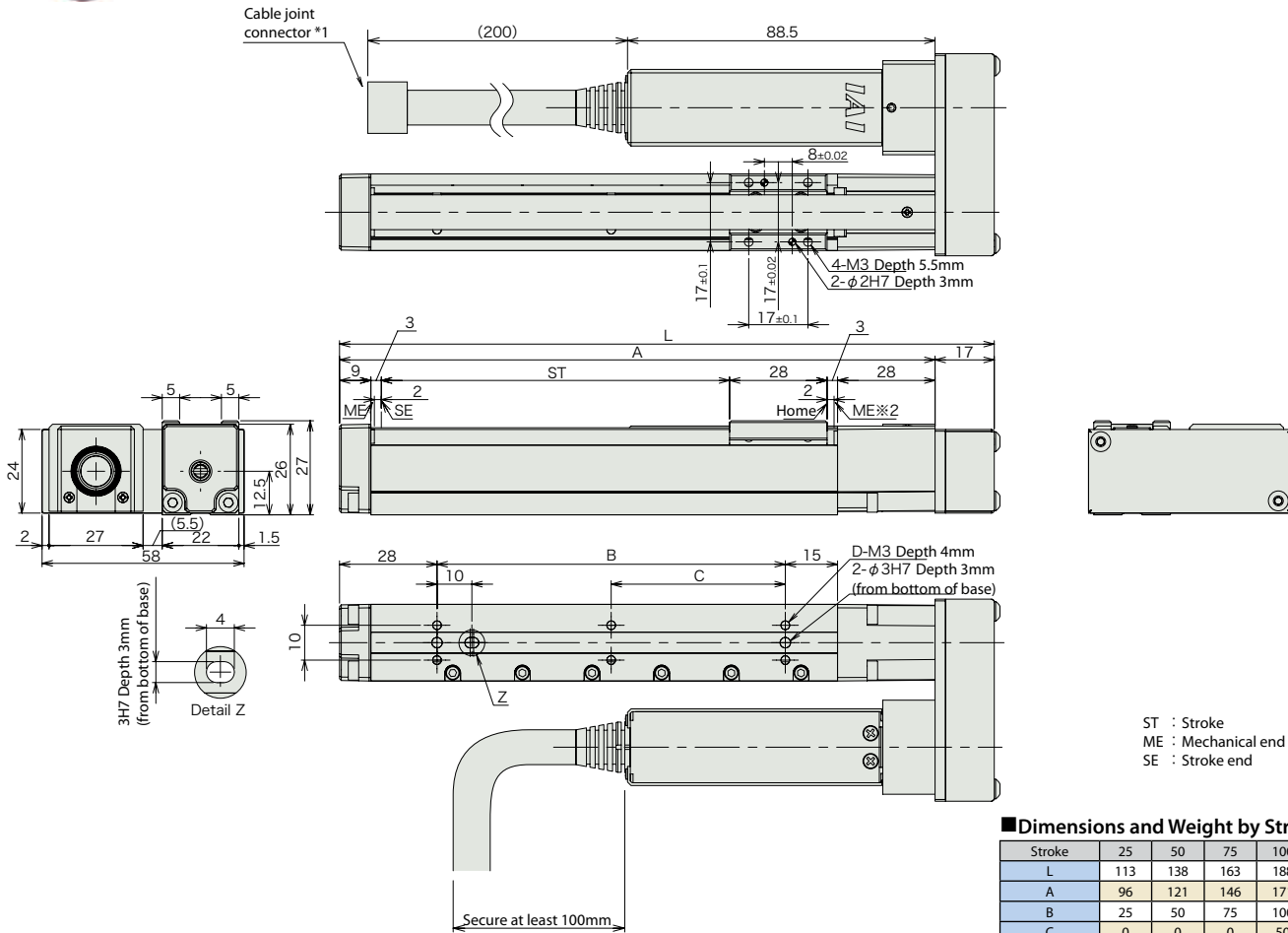
Dimensional Drawings

CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)



\*The drawing below shows the right reverse-mounted motor specification.

- \*1 Connect the motor and encoder cables. See page 113 for cable details.
- \*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.



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

Compatible Controllers

RCP3 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference Page
Solenoid valve type		PSEP-C-20PI-NP-2-0	Simple controller capable of operating with the same signal as the solenoid valve Supports the use of both the single solenoid and the double solenoid types Simple Absolute type makes the return to home unnecessary.	3 points	DC24V	See P109.	-	→P101
		PSEP-CW-20PI-NP-2-0					-	
Positioner type		PCON-□-20PI-NP-2-0 (Note 1)	Up to 512-points of positioning possible Simple absolute unit (sold separately) By attaching, the return to home becomes unnecessary.	512 points			-	See the ROBO Cylinder general catalog.
Program type		PSEL-C-1-20PI-NP-2-0	Programmable type Capable of operating up to 2 axes Simple absolute unit (sold separately) By attaching, the return to home becomes unnecessary.	1500 points			-	

(Note 1) PCON can be used with C/CG/CY/PL/PO/SE types. Also, ROBONET can be used.

- Mini Slider type
- Mini Rod type
- Mini Table type
- Mini Linear Servo type
- Controller
- Compact
- Wide
- Flat
- Coupling
- Reverse-mounted

# RCP3-SA2BR

ROBO Cylinder Mini Slider Type Motor Unit Reverse-mounted Type Actuator Width 59.5mm Pulse Motor Lead Screw Specification

**Model Description** **RCP3 - SA2BR - 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	65: Lead screw 4mm 45: Lead screw 2mm 25: Lead screw 1mm	25: 25mm 100: 150mm (every 25mm)	P1: PCON RPCON PSEL P3: PSEP	N: None P: 1m S: 3m M: 5m X□□: Length Designation	Following options Refer to price table		

\*See page 11 for details on the model descriptions.

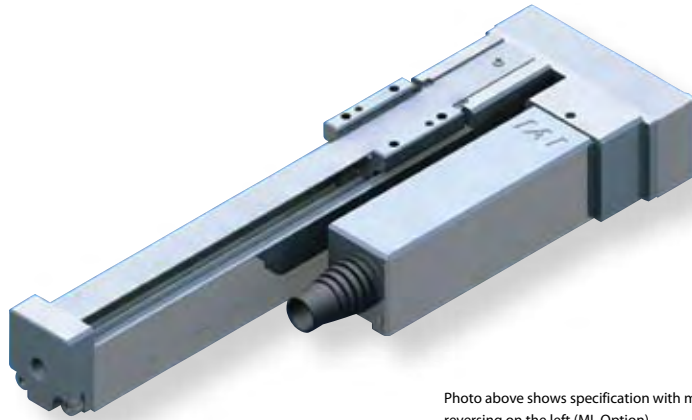
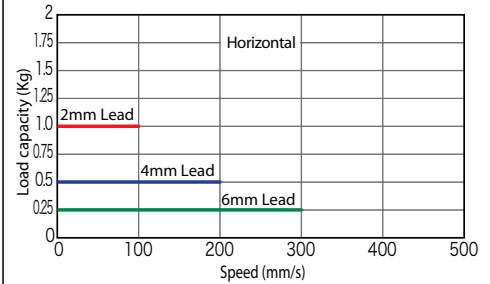


Photo above shows specification with motor reversing on the left (ML Option).

### 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.



**POINT**  
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.

### Actuator Specification Table

#### Leads and Payloads

Model	Feed screw	Lead (mm)	Maximum payload		Positioning Repeatability (mm)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCP3-SA2BR-I-20P-6S-①-②-③-④	Lead screw	6	0.25	-	±0.05	25 to 150 (every 25mm)
RCP3-SA2BR-I-20P-4S-①-②-③-④		4	0.5	-		
RCP3-SA2BR-I-20P-2S-①-②-③-④		2	1	-		

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

#### Stroke and Maximum Speed

Stroke / Lead	Stroke	25 (mm)	50 (mm)	75 to 150 (mm)
	6	180	280	300
4	180	200		
2	100			

(Unit = mm/s)

#### (1) Price list (by stroke)

(1) Stroke (mm)	Type code
	Encoder type
	Incremental
	Feed screw
	Lead Screw
25	-
50	-
75	-
100	-
125	-
150	-

#### (3) Cable length

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

\* The standard cable for the RCP3 is the robot cable.  
\* See page 113 for maintenance cables.

#### (4) Option price list (standard price)

Title	Option code	See page	Standard price
Specification with motor reversing on the left	<b>ML</b>	-	-
Specification with motor reversing on the right	<b>MR</b>	-	-
Reversed-home specification	<b>NM</b>	-	-

#### Actuator Specification

Item	Description
Drive System	Lead screw, φ6mm, rolled C10
Backlash	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 (No condensation)
Service life	10 million cycles

Dimensional Drawings

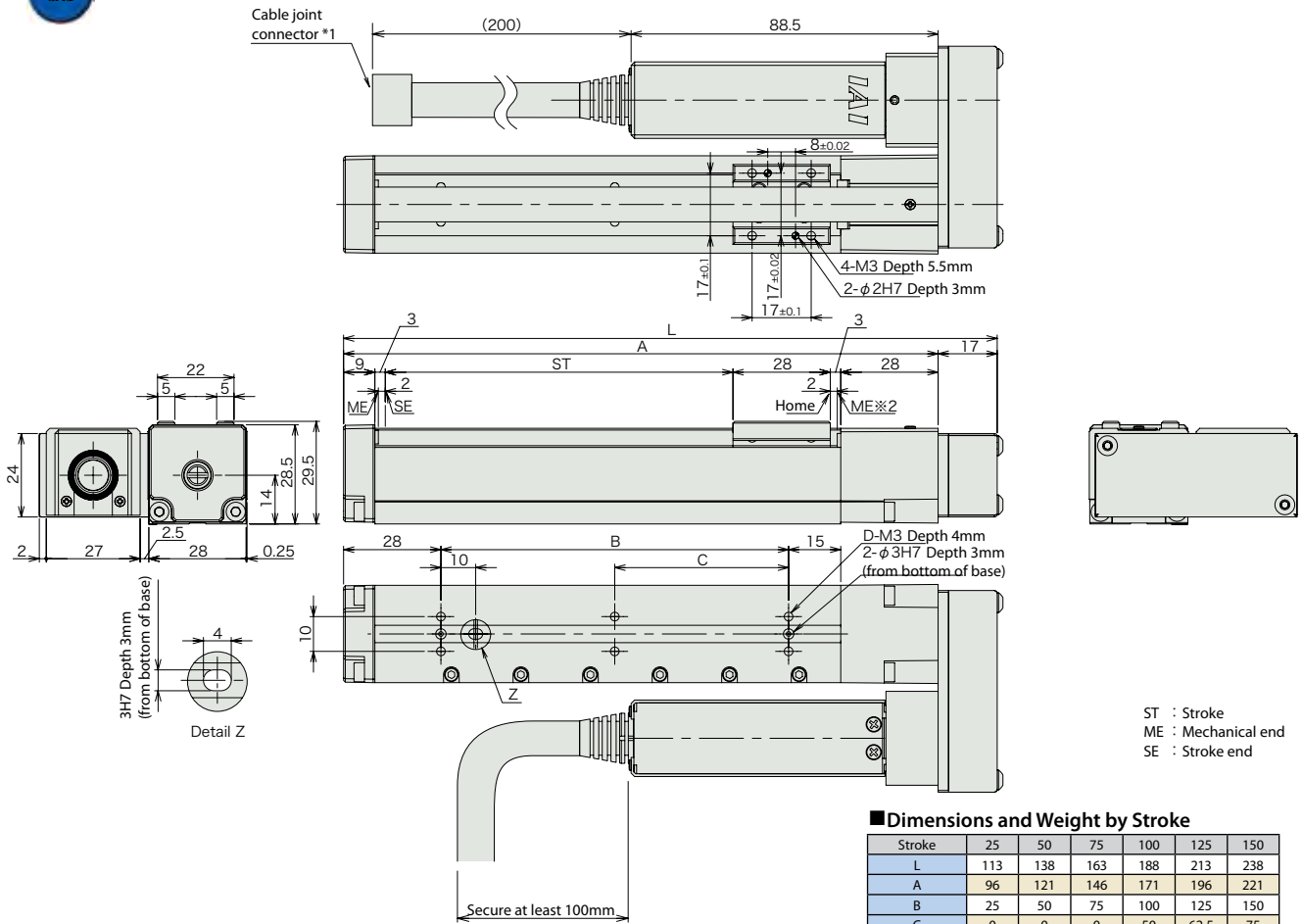
CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)



\*The drawing below shows the right reverse-mounted motor specification (MR option).

\*1 Connect the motor and encoder cables. See page 113 for cable details.

\*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.



ST : Stroke  
ME : Mechanical end  
SE : Stroke end

■ Dimensions and Weight by Stroke

Stroke	25	50	75	100	125	150
L	113	138	163	188	213	238
A	96	121	146	171	196	221
B	25	50	75	100	125	150
C	0	0	0	50	62.5	75
D	4	4	4	6	6	6
Mass (kg)	0.32	0.34	0.37	0.39	0.42	0.46

Compatible Controllers

RCP3 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference Page
Solenoid valve type		PSEP-C-20PI-NP-2-0	Simple controller capable of operating with the same signal as the solenoid valve Supports the use of both the single solenoid and the double solenoid types Simple Absolute type makes the return to home unnecessary.	3 points	DC24V	See P109.	-	→P101
		PSEP-CW-20PI-NP-2-0					-	
Positioner type		PCON-□-20PI-NP-2-0 (Note 1)	Up to 512-points of positioning possible Simple absolute unit (sold separately) By attaching, the return to home becomes unnecessary.	512 points			-	See the ROBO Cylinder general catalog.
Program type		PSEL-C-1-20PI-NP-2-0	Programmable type Capable of operating up to 2 axes Simple absolute unit (sold separately) By attaching, the return to the home becomes unnecessary.	1500 points			-	

(Note 1) PCON can be used with C/CG/CY/PL/PO/SE types. Also, ROBONET can be used.

Mini Slider type  
Mini Rod type  
Mini Table type  
Mini Linear Servo type  
Controller  
Compact  
Wide  
Flat  
Coupling  
Reverse-mounted