

RCP3-SA2AC

ROBO Cylinder Mini Slider Type Motor Unit Coupling Type Actuator Width 22mm Pulse Motor Lead Screw Specification

Model Description **RCP3** – **SA2AC** – **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

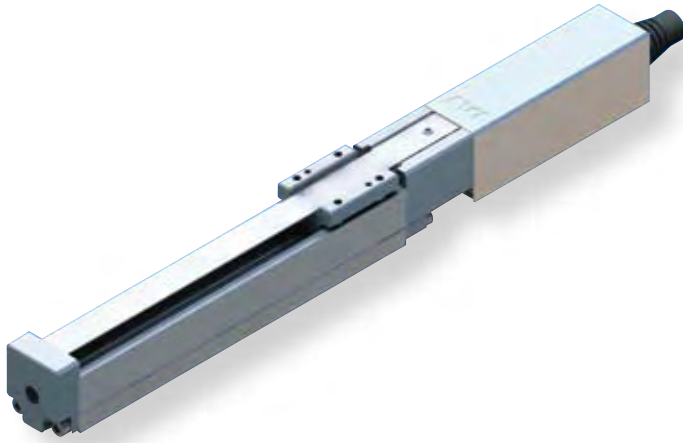
25: 25mm
 100: 100mm (every 25mm)

P1: PCON
 RPCON
 PSEL
 P3: PSEP

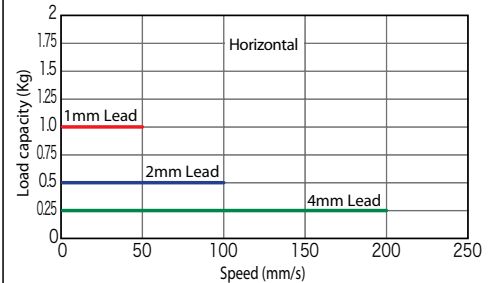
N: None
 P: 1m
 S: 3m
 M: 5m
 X□□: Length Designation

Following options Refer to price table

*See page 11 for details on the model descriptions.



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-SA2AC-I-20P-4S-①-②-③-④	Lead screw	4	0.25	—	±0.05	25 to 100 (every 25mm)
RCP3-SA2AC-I-20P-2S-①-②-③-④		2	0.5	—		
RCP3-SA2AC-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	
	SA2AC	Encoder type
25	—	Incremental
		Feed screw
50	—	Lead Screw
		—
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 20 (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
Reversed-home specification	NM	—	—

Actuator Specification

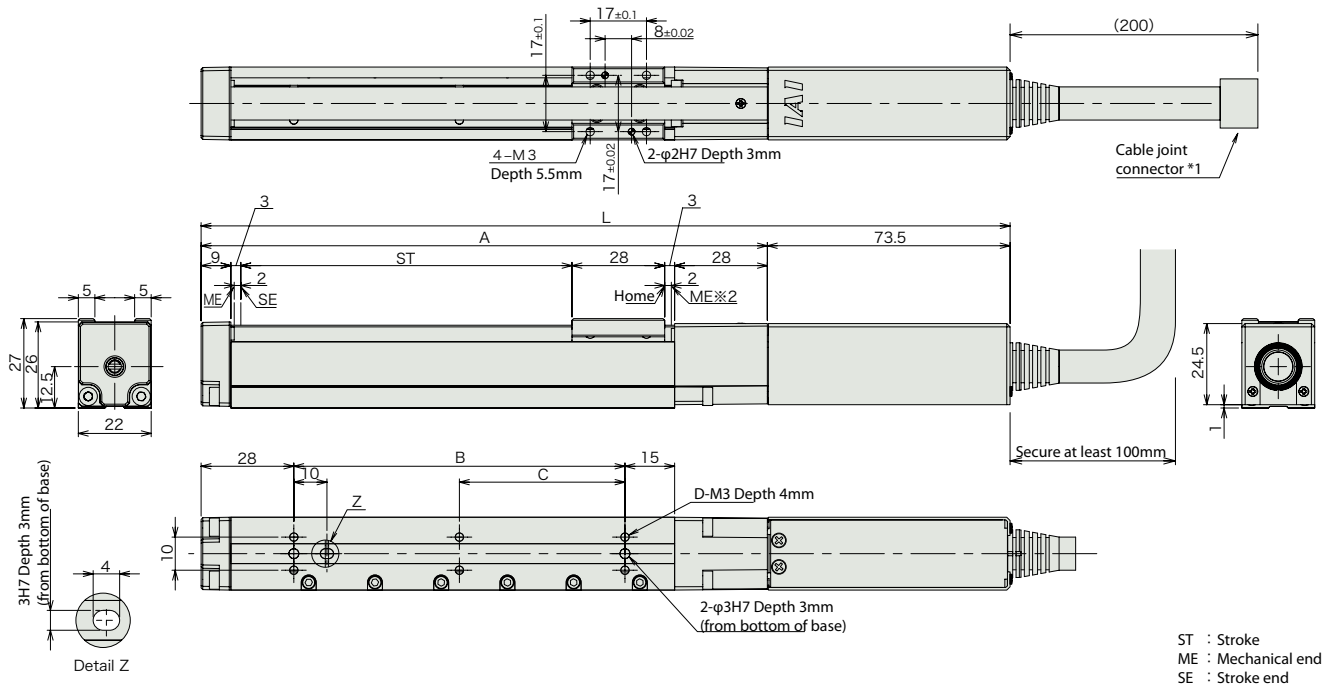
Item	Description
Drive System	Lead screw, φ4mm, rolled C10
Backlash	0.3mm or less (initial value)
Base	Material: Aluminum, white alumite treated
Guide	Slide guide
Ambient operating temperature, humidity	0 to 40 °C, 85% RH or less (No condensation)
Service life	10 million cycles

Dimensional Drawings

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



- *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	169.5	194.5	219.5	244.5
A	96	121	146	171
B	25	50	75	100
C	0	0	0	50
D	4	4	4	6
Mass (kg)	0.25	0.27	0.29	0.3

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

RCP3-SA2BC

ROBO Cylinder Mini Slider Type Motor Unit Coupling Type Actuator Width 28mm Pulse Motor Lead Screw Specification

Model Description **RCP3** – **SA2BC** – **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
 6S: Lead screw 6mm
 4S: Lead screw 4mm
 2S: Lead screw 2mm

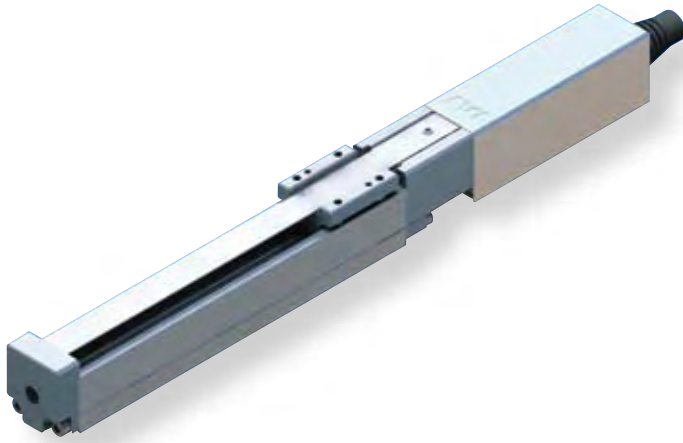
25: 25mm
 150: 150mm (every 25mm)

P1: PCON
 RPCON
 PSEL
 P3: PSEP

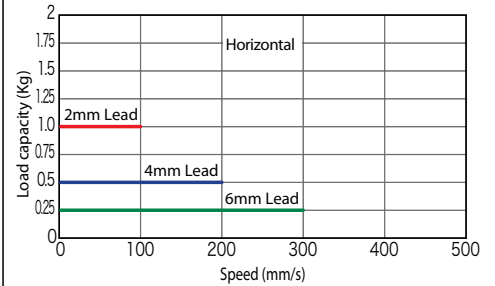
N: None
 P: 1m
 S: 3m
 M: 5m
 X□□: Length Designation

Following options Refer to price table

*See page 11 for details on the model descriptions.



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-SA2BC-I-20P-6S-①-②-③-④	Lead screw	6	0.25	–	±0.05	25 to 150 (every 25mm)
RCP3-SA2BC-I-20P-4S-①-②-③-④		4	0.5	–		
RCP3-SA2BC-I-20P-2S-①-②-③-④		2	1	–		

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

Stroke and Maximum Speed

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

(Unit = mm/s)

(1) Price list (by stroke)

(1) Stroke (mm)	Type code
	SA2BC
	Encoder type
	Incremental
	Feed screw
Lead Screw	
25	–
50	–
75	–
100	–
125	–
150	–

(4) Option price list (standard price)

Title	Option code	See page	Standard price
Reversed-home specification	NM	–	–

(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.

Actuator Specification

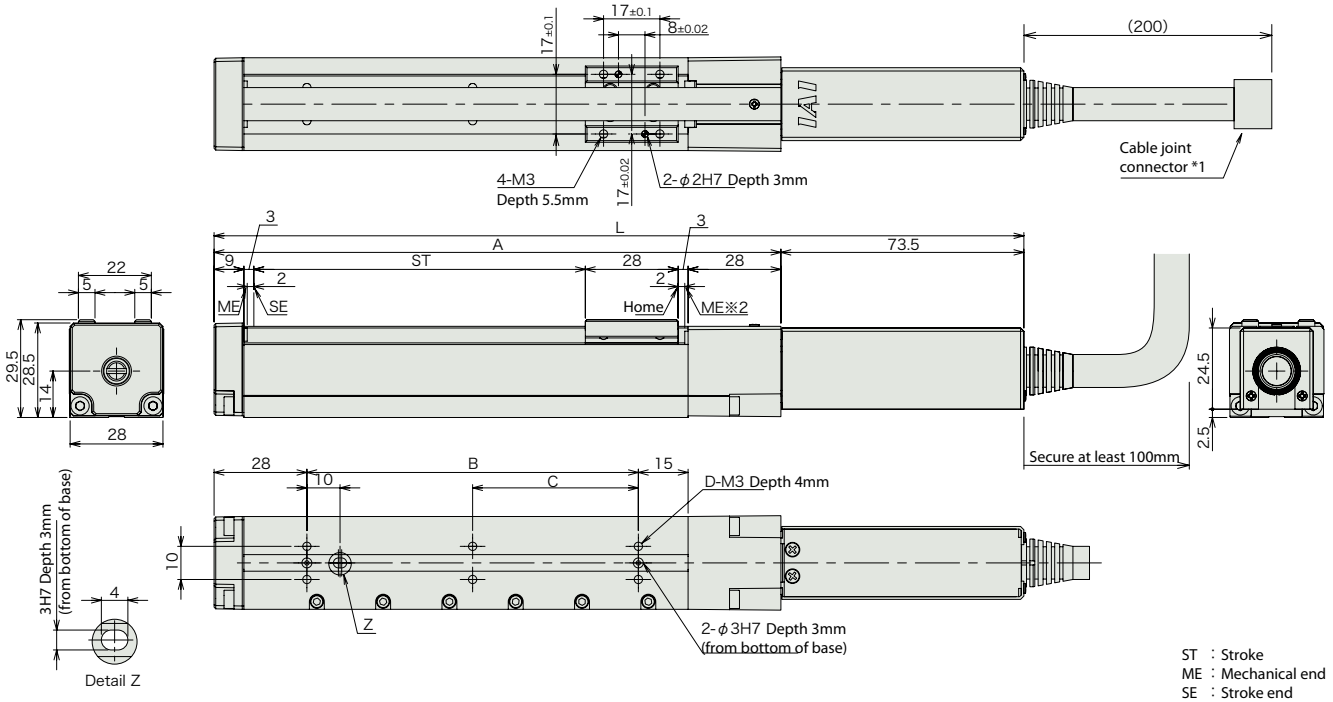
Item	Description
Drive System	Lead screw, φ6mm, rolled C10
Backlash	0.3mm or less (initial value)
Base	Material: Aluminum, white alumite treated
Guide	Slide guide
Ambient operating temperature, humidity	0 to 40 °C, 85% RH or less (No condensation)
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ST : Stroke
ME : Mechanical end
SE : Stroke end

Dimensions and Weight by Stroke

Stroke	25	50	75	100	125	150
L	169.5	194.5	219.5	244.5	269.5	294.5
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)	0.3	0.32	0.35	0.37	0.4	0.42

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			-	

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Mini Linear Servo type
Controller
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Reverse-mounted