Slider Type
Mini
Standard
Controllers Integrated
Rod Type
Mini
Standard
Controllers Integrated
Table/ Arm/ Flat Type
Mini
Standard
Gripper/ Rotary Type
Linear Servo Type
Clean-room Type
Splash-Proof Type
Pulse Motor
Servo Motor (24V)
Servo Motor (200V)
Linear Servo Motor

RCP3-SA2BR

ROBO Cylinder, Mini Slider Type, Side-mounted Motor, 28mm Width, Pulse Motor, Lead Screw

Model Specification Items

RCP3	SA2BR	I	20P	☐	☐	☐	☐	☐
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental * The Simple absolute encoder is also considered type "I".	20P: Pulse motor, 20□ size	6S : lead screw 6mm 4S : lead screw 4mm 2S : lead screw 2mm	25: 25mm ≀ 150: 150mm (25mm pitch increments)	P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP	N: None P: 1m S: 3m M:5m X□□: Custom length	See options below. *Be sure to specify which side the motor is to be mounted (ML/MR)

* See page Pre-47 for details on the model descriptions.

CE RoHS

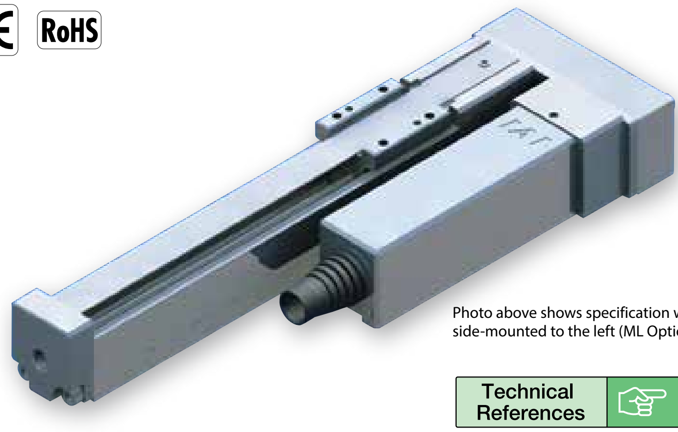


Photo above shows specification with motor side-mounted to the left (ML Option).

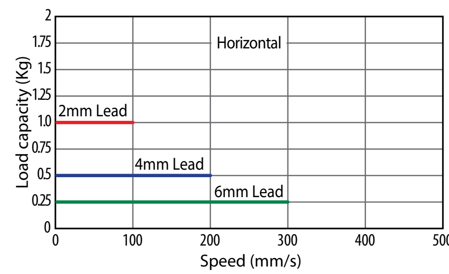
Technical References Appendix P.5

POINT Notes on selection

(1) The load capacity is based on operation at an acceleration of 0.2G. This value is the upper limit for the acceleration.
(2) The actuator cannot be used on its side or in a vertical orientation.
(3) If used in a dusty environment, the service life will decrease significantly.
(4) This model uses a lead screw, therefore please ensure that your usage is appropriate for its characteristics. (See page Pre-52.)
(5) See page A-71 for details on push motion.

■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



Actuator Specifications

■ Leads and Payloads

Model number	Feed screw	Lead (mm)	Max. Load Capacity Horizontal (kg)	Max. Load Capacity Vertical (kg)	Positioning Repeatability (mm)	Stroke (mm)
RCP3-SA2BR-I-20P-6S-①-②-③-④	Lead screw	6	0.25	—	±0.05	25~150 (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	—		

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options *See page A-71 for details on push motion.

■ Stroke and Maximum Speed

	Lead \ Stroke	25 (mm)	50 (mm)	75~150 (mm)
Lead screw	6	180	280	300
	4	180	200	
	2	100		

(Unit: mm/s)

①Stroke

①Stroke (mm)	Standard price
25	—
50	—
75	—
100	—
125	—
150	—

③Cable Length

Type	Cable symbol	Standard price
Standard (Robot Cables)	**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.
* See page A-59 for cables for maintenance.

④ Options

Name	Option code	See page	Standard price
Left-mounted motor (standard)	**ML**	→ A-52	—
Right-mounted motor	**MR**	→ A-52	—
Non-motor end specification	**NM**	→ A-52	—

Actuator Specifications

Item	Description
Drive System	Lead screw, ø6mm, rolled C10
Lost Motion	0.3mm or less (initial value)
Base	Material: Aluminum, white alumite treated
Guide (*)	Slide guide
Ambient Operating Temp./Humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service Life	10 million cycles

* Offset load not supported.

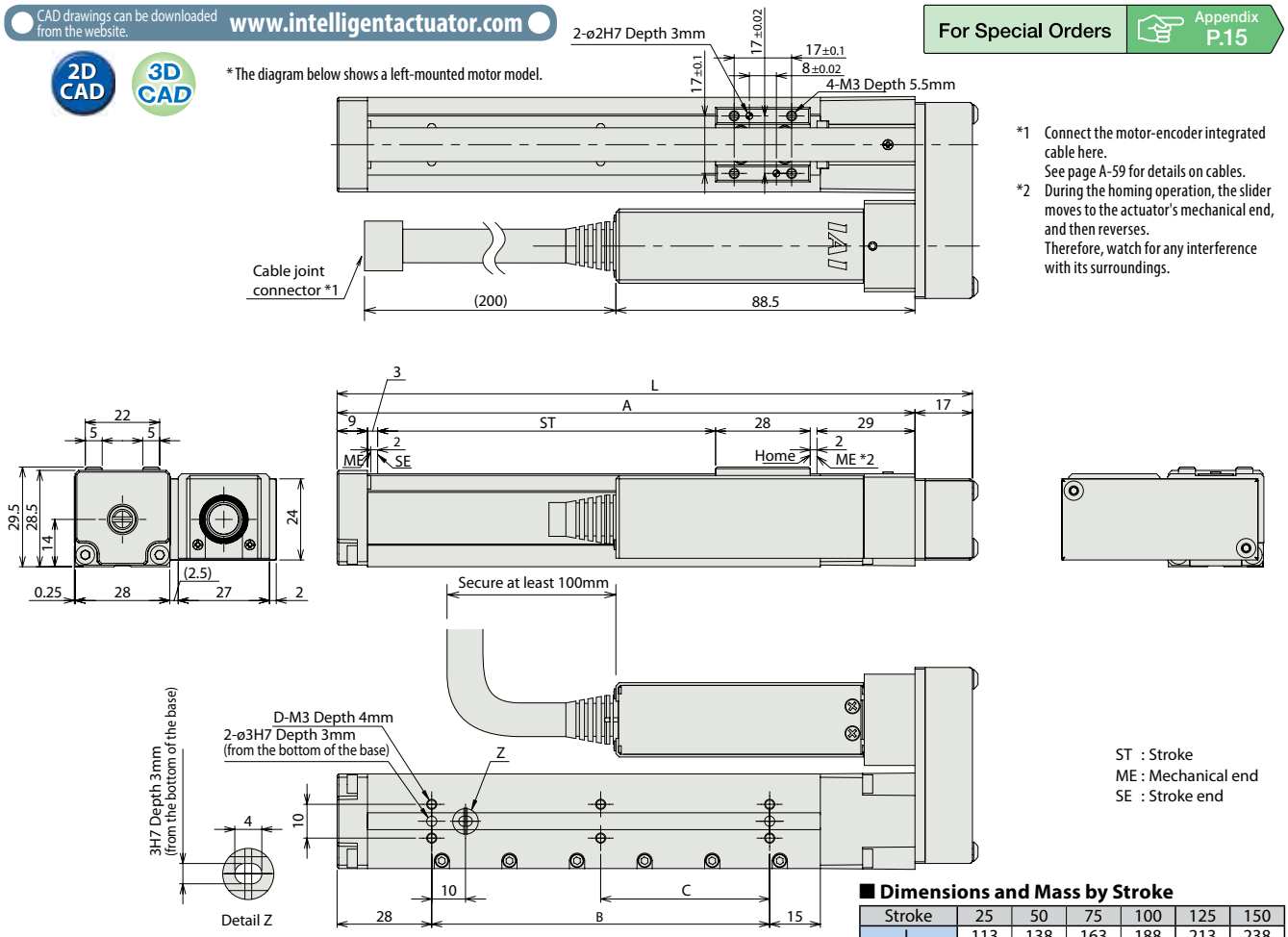
Dimensional Drawings

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

2D CAD 3D CAD

For Special Orders Appendix P.15

* The diagram below shows a left-mounted motor model.



*1 Connect the motor-encoder integrated cable here.
See page A-59 for details on cables.

*2 During the homing operation, the slider moves to the actuator's mechanical end, and then reverses.
Therefore, watch for any interference with its surroundings.

ST : Stroke
ME : Mechanical end
SE : Stroke end

Dimensions and Mass 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
Weight (kg)	0.32	0.34	0.37	0.39	0.42	0.46

②Applicable Controllers

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

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type		PMEC-C-20PI-Ⓘ-2-Ⓘⅰ	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537
		PSEP-C-20PI-Ⓘ-2-0	Simple controller operable with the same signal as a solenoid valve		DC24V	Refer to P555	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-Ⓘⅲ-~-Ⓘ-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to P572	—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-Ⓘⅲ-~-Ⓘⅳ-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				
Positioner type High-output specification		PCON-CA-20PI-Ⓘ-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points		Refer to P618	—	→ P607
Pulse-train type High-output specification		PCON-CA-20PI-PL☐-2-0	Equipped with a high-output driver Pulse-train input type	(—)			—	
Field network type High-output specification		PCON-CA-20PI-Ⓘⅳ-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			—	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-20PI-Ⓘ-2-0	Pulse train input type with differential line driver support	(—)		Refer to P628	—	→ P623
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-Ⓘ-2-0	Pulse train input type with open collector support				—	
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated Serial Communication	64 points			—	
Program Control Type		PSEL-CS-1-20PI-Ⓘ-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	—	→ P665

* This is for the single-axis PSEL. * Ⓘ indicates I/O type (NP/PN). * Ⓘⅲ indicates power supply voltage (1: 100V / 2: 100~240V).
* Ⓘⅲ indicates number of axes (1 to 8). * Ⓘⅳ indicates field network specification symbol. * ☐ indicates N (NPN specification) or P (PNP specification) symbol.