

# RCP6(S)-SA6R

±10μm  
Standard

Simple  
Dust-  
proof

Battery-  
less  
Absolute

Motor  
Unit  
Type

Side-mounted  
Motor

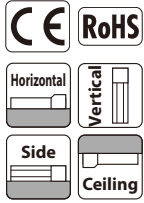
Body Width  
**58\***  
mm

**24v**  
Stepper  
Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	<b>SA6R</b>	<b>WA</b>	<b>42P</b>						
	RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	42P: Stepper Motor 42□ Size	20:20mm 12:12mm 6: 6mm 3: 3mm	50: 50mm ? 800: 800mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.  * Please make sure to specify either ML or MR when ordering the side-mounted motor type.

\* RCP6 does not include a controller. RCP6S includes a built-in controller.  
\* Please refer to P.10 for more information about the model specification items.

\* Body width does not include the width of the side-mounted motor.



\*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



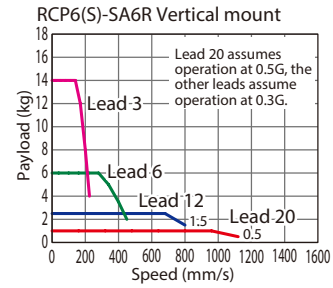
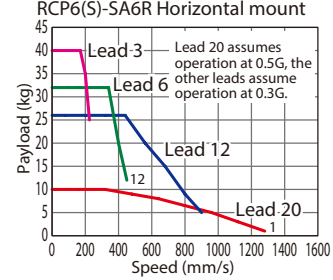
The figure above is the motor side-mounted to the left (ML).

POINT  
Selection Notes

- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
- (2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
- (3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
- (4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.130 for more information.

## Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.



## Actuator Specifications

### Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload		Stroke (mm)
			Horizontal (kg)	Vertical (kg)	
RCP6(S)-SA6R-WA-42P-20-①-②-③-④	20	High-output Enabled	15	1	50~800 (The increment of stroke is 50mm)
RCP6(S)-SA6R-WA-42P-12-①-②-③-④	12	High-output Enabled	28	2.5	
RCP6(S)-SA6R-WA-42P-6-①-②-③-④	6	High-output Enabled	32	6	
RCP6(S)-SA6R-WA-42P-3-①-②-③-④	3	High-output Enabled	40	14	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

### Stroke and Max. Speed

Lead (mm)	Connected Controller	Max. Speed (Unit: mm/s)								
		50~400 (Every 50mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	High-output Enabled	1,280		1,130	970	840	735	650	575	
12	High-output Enabled	900 <800>	885 <800>	735	620	535	460	405	355	315
6	High-output Enabled	450	435	365	305	265	230	200	175	155
3	High-output Enabled	225	215	180	150	130	115	100	85	75

Values in brackets < > are for vertical use.

### ① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	450	○	○
100	○	○	500	○	○
150	○	○	550	○	○
200	○	○	600	○	○
250	○	○	650	○	○
300	○	○	700	○	○
350	○	○	750	○	○
400	○	○	800	○	○

### ③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	P (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	X06 (6m) ~X10 (10m)	○	○
	X11 (11m) ~X15 (15m)	○	○
	X16 (16m) ~X20 (20m)	○	○
	R01 (1m) ~R03 (3m)	○	○
Robot Cable	R04 (4m) ~R05 (5m)	○	○
	R06 (6m) ~R10 (10m)	○	○
	R11 (11m) ~R15 (15m)	○	○
	R16 (16m) ~R20 (20m)	○	○

\* Please refer to P.144 for more information regarding the maintenance cables.

### ④ Options

Name	Option Code	Reference Page
Brake	<b>B</b>	See P.105
Cable exit direction (Outside)	<b>CJO</b>	See P.105
Motor side-mounted to the left	<b>ML</b>	See P.109
Motor side-mounted to the right	<b>MR</b>	See P.109
Non-motor end specification	<b>NM</b>	See P.110

# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

## Actuator Specifications

Item	Description
Drive system	Ball screw φ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 48.5N·m, Mb: 69.3N·m, Mc: 103N·m
Dynamic allowable moment (*)	Ma: 11.6N·m, Mb: 16.6N·m, Mc: 24.6N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

\* Reference for overhang load length: Ma: 220mm or less, Mb, Mc: 220mm or less

(\*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

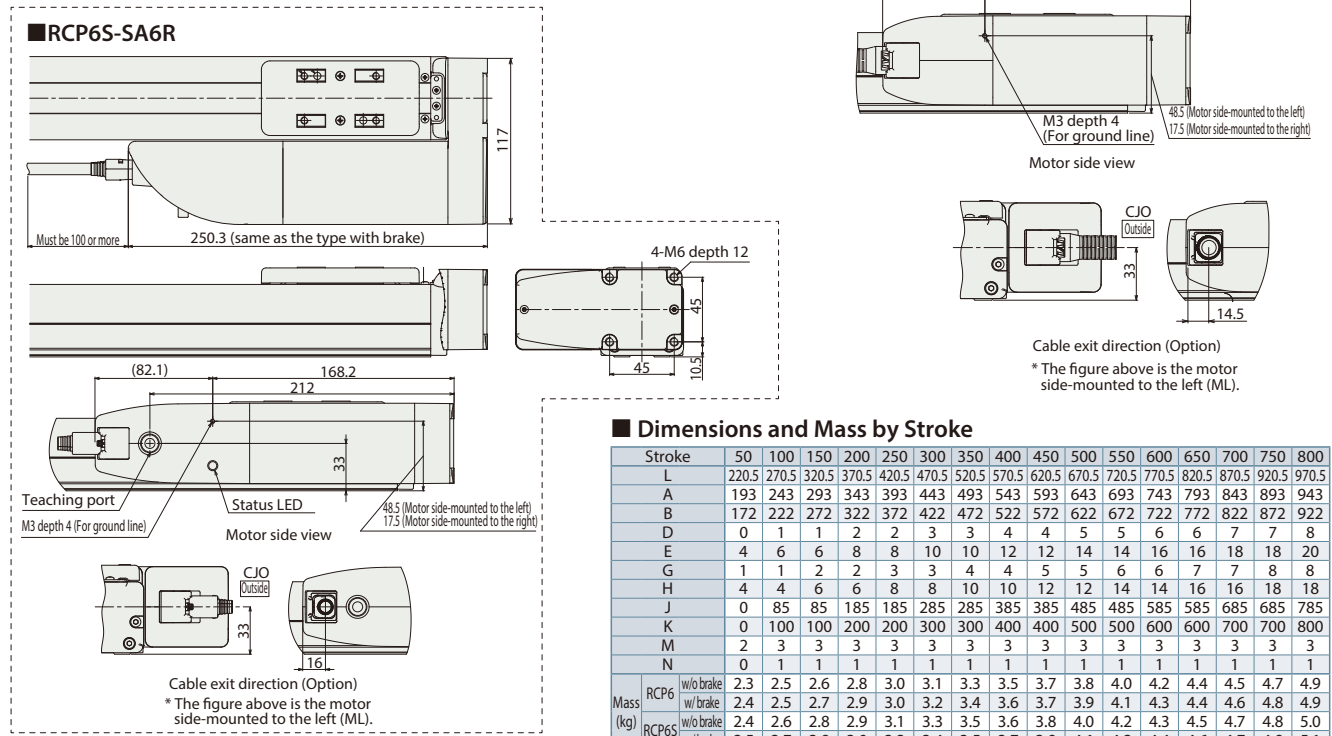
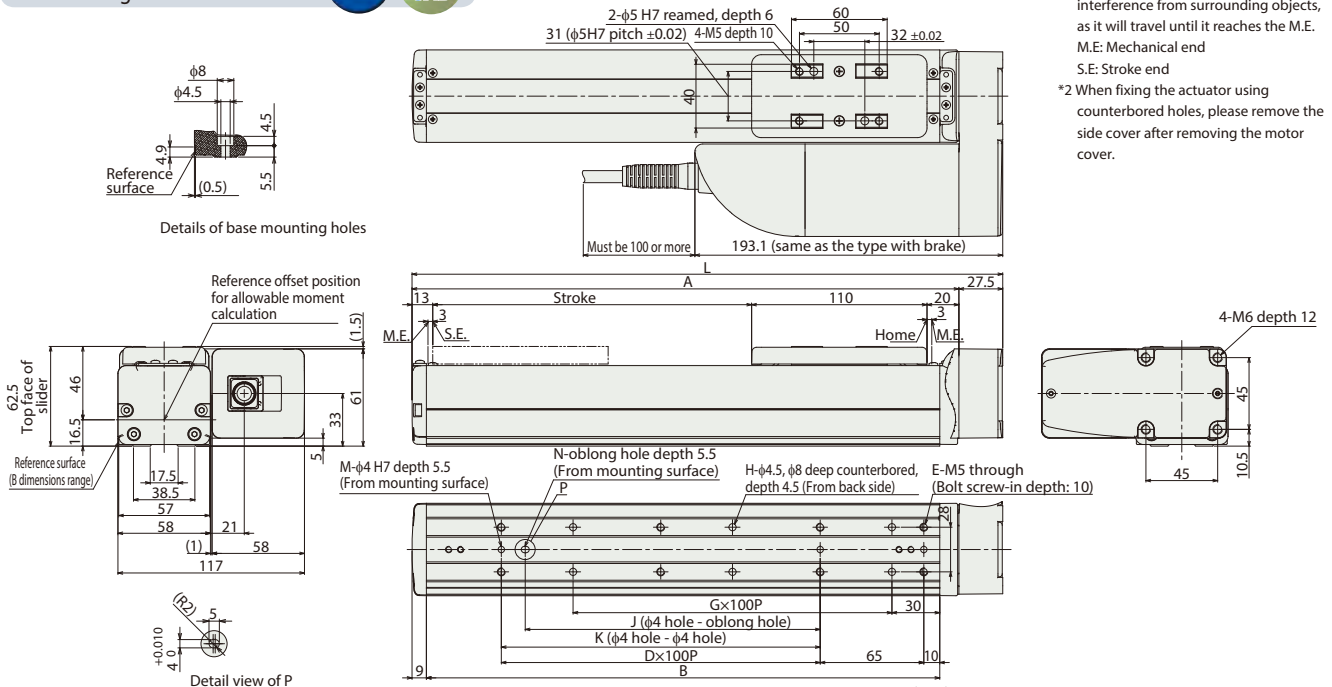
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

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



\*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.  
M.E: Mechanical end  
S.E: Stroke end  
\*2 When fixing the actuator using counterbored holes, please remove the side cover after removing the motor cover.



② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. \* Please refer to P.147 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network *Option		
PCON-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet CC-Link EtherCAT EtherNet/IP CompoNet	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●	Note: The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please see the MSEL-PC/PG catalog.

\* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.