

RCP6(S)-SA8R



±10µm
Standard



Simple
Dust-proof



Battery-less
Absolute



Motor
Unit
Type



Side-mounted
Motor



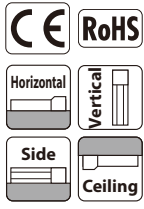
Body Width
85*
mm



24v
Stepper
Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	SA8R	WA	56SP						
	RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	56SP: High-thrust Stepper Motor 56□ Size	30: 30mm 20: 20mm 10: 10mm 5: 5mm	50: 50mm 1100: 1,100mm (50mm increments)	[RCP6] P4: PCON- CFB/CGFB [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.



*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.

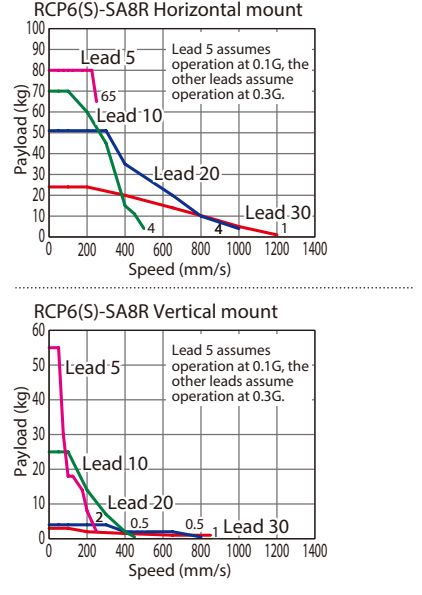


The figure above is the motor side-mounted to the left (ML).

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.

Correlation Diagrams of Speed and Payload



Actuator Specifications

Lead and Payload

Model Number	Lead (mm)	Max. Payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP6(S)-SA8R-WA-56SP-30-①-②-③-④	30	26	3	50~1,100 (The increment of stroke is 50mm)
RCP6(S)-SA8R-WA-56SP-20-①-②-③-④	20	55	4	
RCP6(S)-SA8R-WA-56SP-10-①-②-③-④	10	70	25	
RCP6(S)-SA8R-WA-56SP-5-①-②-③-④	5	80	55	

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	50~650 (Every 50mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1,000 (mm)	1,050 (mm)	1,100 (mm)
30	1,200 <850>		1,155 <850>	1,040 <850>	940 <850>	855 <850>	780	715	660	
20	1,000 <800>	950 <800>	860 <800>	770	695	630	570	520	480	440
10	500 <450>	480 <450>	430	385	345	310	285	260	235	220
5	250 <225>	240 <225>	215	190	175	155	145	130	120	110

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	600	○	○
100	○	○	650	○	○
150	○	○	700	○	○
200	○	○	750	○	○
250	○	○	800	○	○
300	○	○	850	○	○
350	○	○	900	○	○
400	○	○	950	○	○
450	○	○	1000	○	○
500	○	○	1050	○	○
550	○	○	1100	○	○

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	See P.105
Cable exit direction (Outside)	CJO	See P.105
Motor side-mounted to the left	ML	See P.109
Motor side-mounted to the right	MR	See P.109
Non-motor end specification	NM	See P.110
Slider spacer	SS	See P.111

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

Actuator Specifications

Item	Description
Drive system	Ball screw φ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 219N·m, Mb: 219N·m, Mc: 414N·m
Dynamic allowable moment (*)	Ma: 77.0N·m, Mb: 77.0N·m, Mc: 146N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

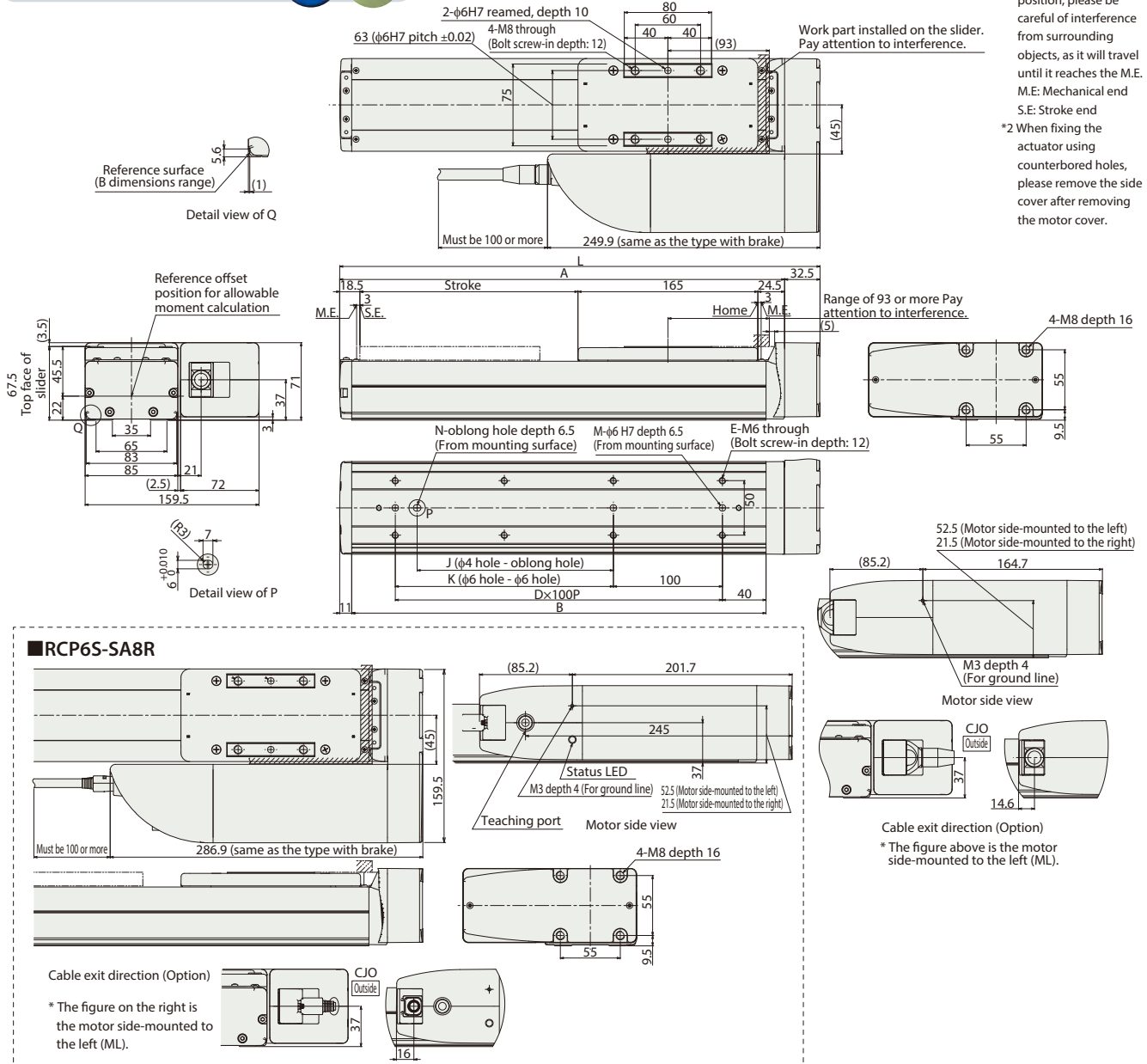
* Reference for overhang load length: Ma: 400mm or less, Mb, Mc: 400mm or less
(*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment 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.



■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1,050	1,100	
L	290.5	340.5	390.5	440.5	490.5	540.5	590.5	640.5	690.5	740.5	790.5	840.5	890.5	940.5	990.5	1,040.5	1,090.5	1,140.5	1,190.5	1,240.5	1,290.5	1,340.5	
A	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1,008	1,058	1,108	1,158	1,208	1,258	1,308	
B	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1,030	1,080	1,130	1,180	1,230	1,280	
D	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	
E	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	
J	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1,080	
K	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1,000	1,000	1,100	
M	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
N	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mass (kg)	RCP6	4.8	5.1	5.4	5.7	5.9	6.2	6.5	6.8	7.1	7.4	7.6	7.9	8.2	8.5	8.8	9.0	9.3	9.6	9.9	10.2	10.5	10.7
	w/o brake	5.0	5.3	5.5	5.8	6.1	6.4	6.7	6.9	7.2	7.5	7.8	8.1	8.4	8.6	8.9	9.2	9.5	9.8	10.1	10.3	10.6	10.9
	RCP6S	4.9	5.2	5.5	5.8	6.1	6.3	6.6	6.9	7.2	7.5	7.8	8.0	8.3	8.6	8.9	9.2	9.4	9.7	10.0	10.3	10.6	10.9
	w/ brake	5.1	5.4	5.7	5.9	6.2	6.5	6.8	7.1	7.3	7.6	7.9	8.2	8.5	8.8	9.0	9.3	9.6	9.9	10.2	10.5	10.7	11.0

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	Positioner	Pulse train	Program	Control method		Maximum number of positioning points	Reference page	
							Network *Option				
PCON-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet CC-Link PROFINET	CompoNet MECHATROLINK EtherCAT	EtherNet/IP EtherCAT	512 (768 for network spec.)	Please see P.131