

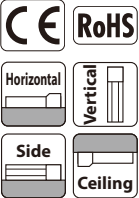
RCP6(S)-RRA4C

Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 40 mm
24v Stepper Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6: Separate Controller RCP6S: Built-in Controller	RRA4C	WA	35P	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	60: 60mm 410: 410mm (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.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.11 for more information about the model specification items.

Radial Load OK



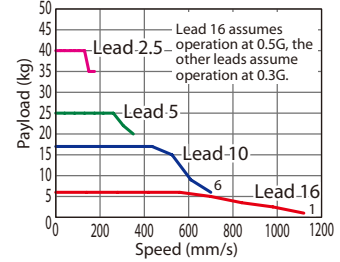
*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



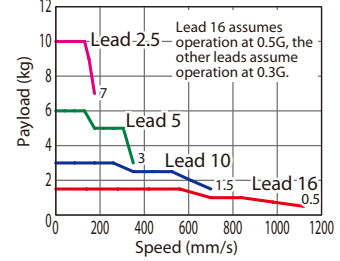
- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
 - The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
 - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
 - 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

High-output enabled with PCON/MCON/MSEL connected.
RCP6(S)-RRA4C Horizontal mount



RCP6(S)-RRA4C Vertical mount



Actuator Specifications

Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload		Stroke (mm)
			Horizontal (kg) (Note 1)	Vertical (kg)	
RCP6(S)-RRA4C-WA-35P-16-①-②-③-④	16	High-output Enabled	7	1.5	60~410 (The increment of stroke is 50mm)
RCP6(S)-RRA4C-WA-35P-10-①-②-③-④	10	High-output Enabled	18	3	
RCP6(S)-RRA4C-WA-35P-5-①-②-③-④	5	High-output Enabled	28	6	
RCP6(S)-RRA4C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	

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

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	60~360 (Every 50mm)	410 (mm)
16	High-output Enabled	1,120	1,080
10	High-output Enabled	700	685
5	High-output Enabled	350	340
2.5	High-output Enabled	175	170

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
60	○	○	260	○	○
110	○	○	310	○	○
160	○	○	360	○	○
210	○	○	410	○	○

④ Options

Name	Option Code	Reference Page
Brake	B	See P.105
Cable exit direction (Top)	CJT	See P.105
Cable exit direction (Right)	CJR	See P.105
Cable exit direction (Left)	CJL	See P.105
Cable exit direction (Bottom)	CJB	See P.105
Flange	FL	See P.106
Tip adapter (Flange)	FFA	See P.105
Tip adapter (Internal thread)	NFA	See P.109
Tip adapter (Keyway)	KFA	See P.108
Non-motor end specification	NM	See P.110

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

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.

Actuator Specifications

Item	Description
Drive system	Ball screw φ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	φ20mm Aluminum
Rod non-rotation precision*	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

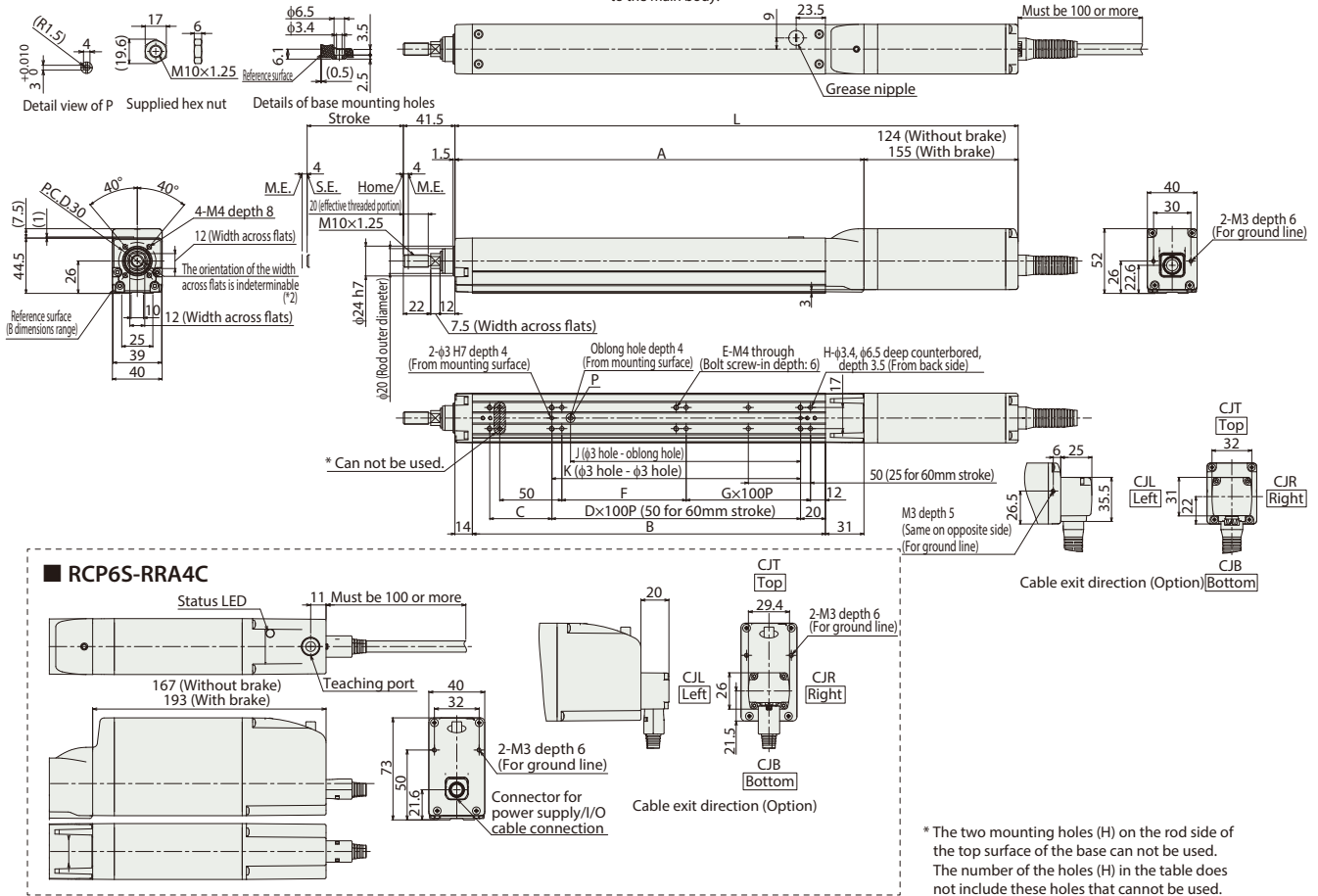
* Rod's angular displacement in rotational direction with no load applied to the rod.

Dimensions

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



- *1 When the rod 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 The direction of width across flats varies depending on the product.
- *3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.

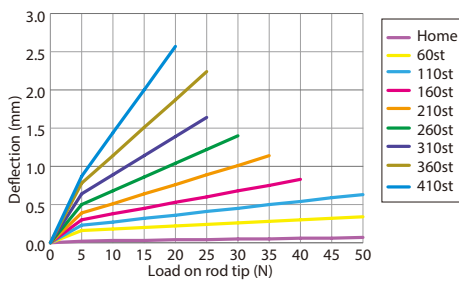


* The two mounting holes (H) on the rod side of the top surface of the base can not be used. The number of the holes (H) in the table does not include these holes that cannot be used.

■ Dimensions and Mass by Stroke

L	Stroke	Stroke									
		60	110	160	210	260	310	360	410		
RCP6	w/o brake	303	353	403	453	503	553	603	653		
	w/ brake	334	384	434	484	534	584	634	684		
RCP6S	w/o brake	346	396	446	496	546	596	646	696		
	w/ brake	372	422	472	522	572	622	672	722		
A		179	229	279	329	379	429	479	529		
B		134	184	234	284	334	384	434	484		
C		50	50	100	50	100	50	100	50		
D		0	1	1	2	2	3	3	4		
E		6	6	6	8	8	10	10	12		
F		50	100	50	100	50	100	50	100		
G		0	0	1	1	2	2	3	3		
H		6	6	8	8	10	10	12	12		
J		35	85	85	185	185	285	285	385		
K		50	100	100	200	200	300	300	400		
Allowable static load on rod tip (N)		63.4	50.7	42.1	36	31.3	27.6	24.6	22.2		
Allowable dynamic Load offset 0mm		2.9	2.3	1.8	1.5	1.3	1.1	1.0	0.8		
load on rod tip (kg) Load offset 100mm		1.8	1.6	1.4	1.2	1.0	0.9	0.8	0.7		
Allowable static torque on rod tip (N·m)		6.4	5.1	4.3	3.7	3.2	2.9	2.6	2.3		
Allowable dynamic torque on rod tip (N·m)		1.7	1.5	1.3	1.1	1.0	0.9	0.7	0.7		
Mass (kg)	RCP6	w/o brake	1.2	1.4	1.5	1.6	1.7	1.9	2.0	2.1	
		w/ brake	1.4	1.5	1.7	1.8	1.9	2.0	2.2	2.3	
	RCP6S	w/o brake	1.4	1.6	1.7	1.8	1.9	2.1	2.2	2.3	
		w/ brake	1.6	1.7	1.8	2.0	2.1	2.2	2.3	2.5	

■ Rod Deflection of RCP6(S)-RRA4C (Reference Values)



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	-		512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.					
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.