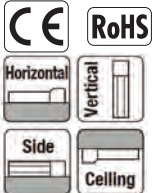


RCP5-RA6R ROBO Cylinder, Rod Type, Side-mounted Motor Type, Actuator Width 58mm, 24V Pulse Motor

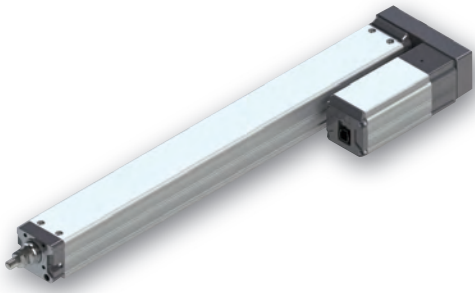
Model	RCP5	RA6R	WA	42P					
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
Items			WA: Battery-less absolute specification	42P: Pulse motor, size 42□	20: 20mm 12: 12mm 6: 6mm 3: 3mm	65: 65mm 415: 415mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	Please refer to the options table below.

*Controller is not included.

Radial Load Applicable



* Depending on the model, there may be some limitations to using the vertical mount position. Please refer to P.59 for details.

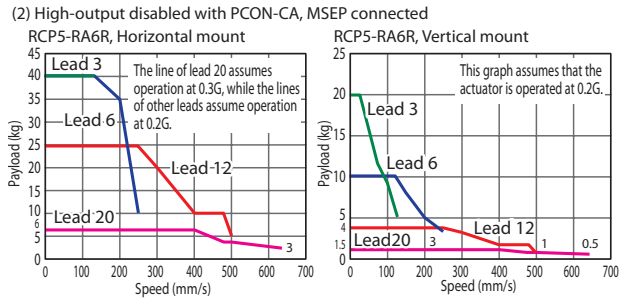
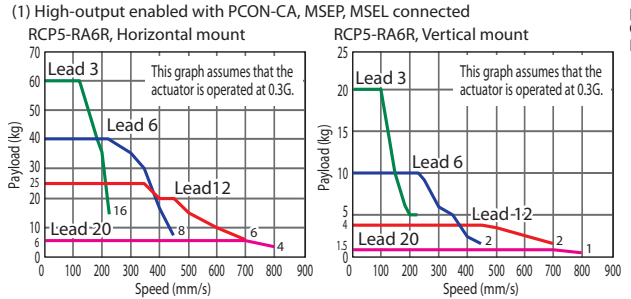


The figure above is the motor side-mounted to the left (ML).

POINT
Note on selection

- The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- Please refer to P. 59 for push-motion operation.
- The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P. 65 and after for the allowable load mass.

Correlation Diagrams of Speed and Payload



Actuator Specifications

Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload		Maximum push force (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCP5-RA6R-WA-42P-20-①-P3-②-③	20	High-output enabled	6	1.5	56	65~415 (Every 50mm)
		High-output disabled				
RCP5-RA6R-WA-42P-12-①-P3-②-③	12	High-output enabled	25	4	93	
		High-output disabled				
RCP5-RA6R-WA-42P-6-①-P3-②-③	6	High-output enabled	40	10	185	
		High-output disabled				
RCP5-RA6R-WA-42P-3-①-P3-②-③	3	High-output enabled	60	20	370	
		High-output disabled	40			

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

Stroke and Maximum Speed

(Unit: mm/s)

Lead (mm)	Connected controller	65~365 (Every 50mm)		415 (mm)
		65~365 (Every 50mm)	415 (mm)	
20	High-output enabled	800		
	High-output disabled	640		
12	High-output enabled	700		
	High-output disabled	500		
6	High-output enabled	450		
	High-output disabled	250		
3	High-output enabled	225	220	
	High-output disabled	125		

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
65	-	265	-
115	-	315	-
165	-	365	-
215	-	415	-

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Outside)	CJO	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Flange	FL	→P. 12	-
Tip adapter (Flange)	FFA	→P. 12	-
Tip adapter (Internal thread)	NFA	→P. 13	-
Tip adapter (Keyway)	KFA	→P. 13	-
Motor side-mounted to the left (Standard)	ML	→P. 11	-
Motor side-mounted to the right	MR	→P. 11	-
Non-motor end specification	NM	→P. 11	-

Depending on the stroke, some rod attachment options are not available. Also, when selecting the shorter strokes, please be careful of nearby objects. Some interference may occur. Please refer to P. 14.

② Cable Length

Type	Cable code	Standard price
Standard type	P (1m)	-
	S (3m)	-
	M (5m)	-
Special 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. 89 for maintenance cables.

Actuator Specifications

Item	Description
Drive system	Ball screw Ø10mm, rolled C10
Positioning repeatability (*1)	±0.02mm [±0.03mm]
Lost motion	0.1mm or less
Rod	Ø25mm Aluminum
Rod non-rotation precision (*2)	0 deg.
Allowable load and torque on rod tip	Refer to table in the page on the right, refer to P. 65
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*1) The values in brackets [] are for Lead 20.

(*2) Rod's angular displacement in rotational direction with no applied load is shown.

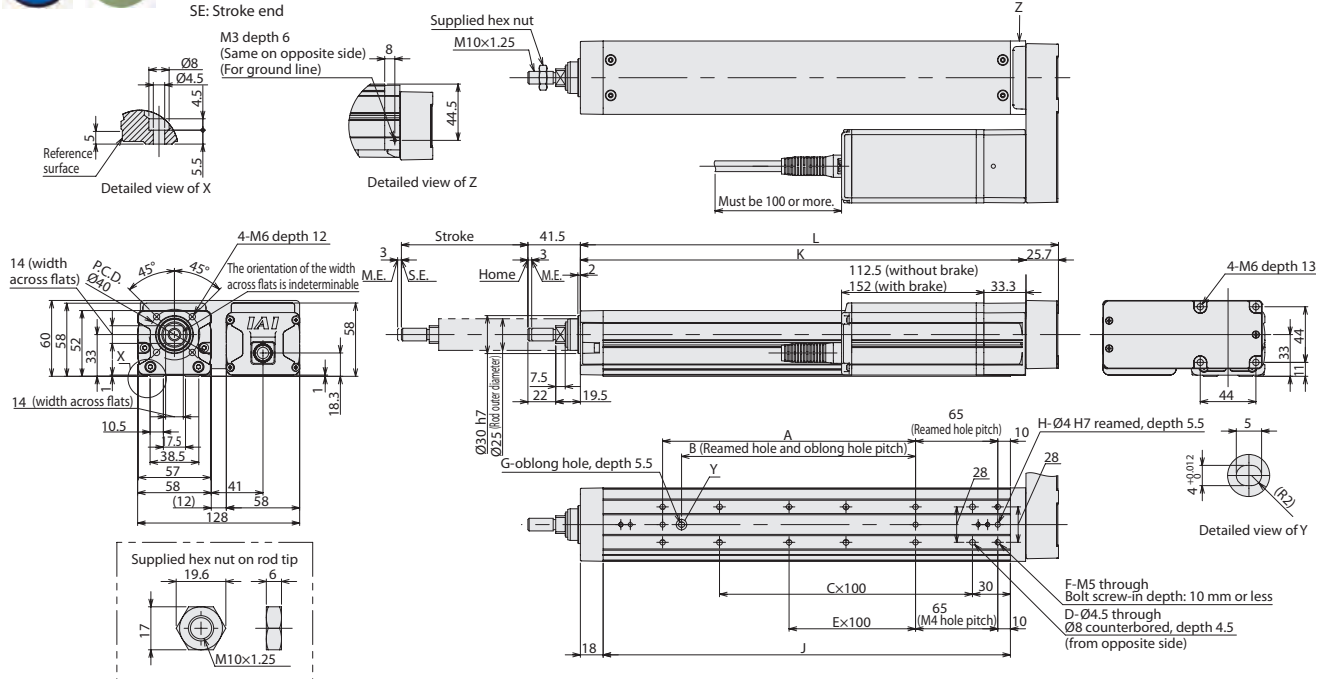
Dimensions

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

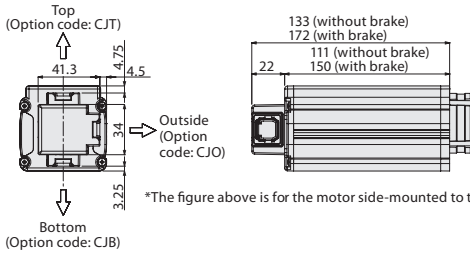


- *1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
- *2 The direction of width across flats varies depending on the product.
- *3 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.

ME: Mechanical end
SE: Stroke end

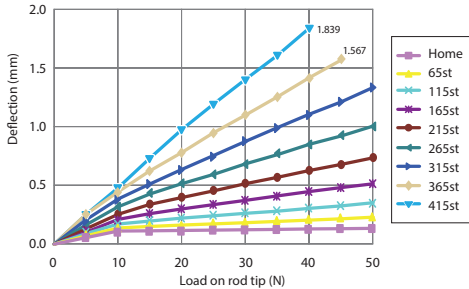


■ Cable Exit Direction (Option)



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

■ Rod Deflection of RCP5-RA6R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke	65	115	165	215	265	315	365	415
L	228	278	328	378	428	478	528	578
A	0	100	100	200	200	300	300	400
B	0	85	85	185	185	285	285	385
C	1	1	2	2	3	3	4	4
D	4	4	6	6	8	8	10	10
E	0	0	0	1	1	2	2	3
F	4	6	6	8	8	10	10	12
G	0	1	1	1	1	1	1	1
H	2	3	3	3	3	3	3	3
J	172	222	272	322	372	422	472	522
K	202.3	252.3	302.3	352.3	402.3	452.3	502.3	552.3
Allowable static load on rod tip (N)	113.8	92.6	78.0	67.3	59.0	52.5	47.2	42.8
Allowable dynamic load on rod tip (N)	Load offset 0mm	45.7	36.3	29.8	25.1	21.6	18.8	16.6
	Load offset 100mm	32.1	28.3	24.6	21.5	18.9	16.7	14.9
Allowable static torque on rod tip (N-m)	11.5	9.4	7.9	6.8	6.0	5.4	4.9	4.5
Allowable dynamic torque on rod tip (N-m)	3.2	2.8	2.5	2.1	1.9	1.7	1.5	1.3
Mass (kg)	Without brake	2.2	2.4	2.6	2.8	3.0	3.3	3.5
	With brake	2.4	2.6	2.8	3.0	3.2	3.5	3.7

Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.