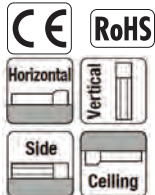


RCP5-RA6C ROBO Cylinder, Rod Type, Motor Unit Coupled, Actuator Width 58mm, 24V Pulse Motor

Model	RCP5	RA6C	WA	42P			P3		
Specification Items	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
			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-CA MSEP MSEL	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

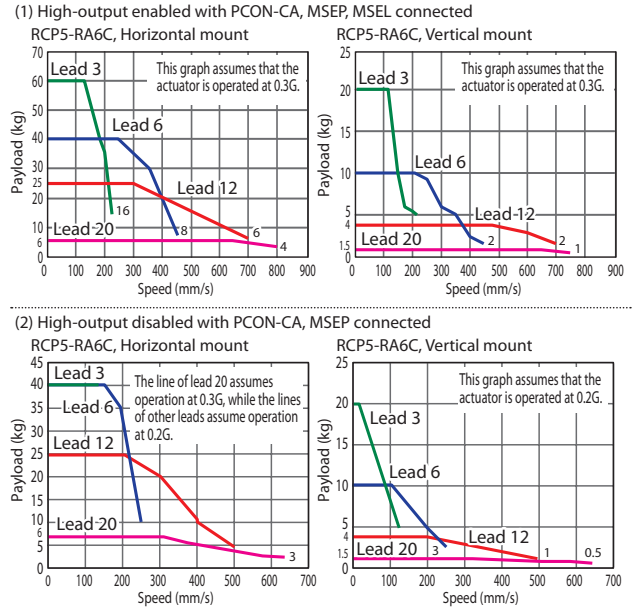


* Depending on the model, there may be some limitations to using the vertical mount position. Please refer to P.59 for details.



- POINT**
Note on selection
- (1) 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.
 - (2) Please refer to P. 59 for push-motion operation.
 - (3) 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-RA6C-WA-42P-20-①-P3-②-③	20	High-output enabled	6	1.5	56	65~415 (Every 50mm)
		High-output disabled				
RCP5-RA6C-WA-42P-12-①-P3-②-③	12	High-output enabled	25	4	93	
		High-output disabled				
RCP5-RA6C-WA-42P-6-①-P3-②-③	6	High-output enabled	40	10	185	
		High-output disabled				
RCP5-RA6C-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

Lead (mm)	Connected controller	Maximum speed (Unit: mm/s)	
		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	-

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.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→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	-
Non-motor end specification	NM	→P. 11	-

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.

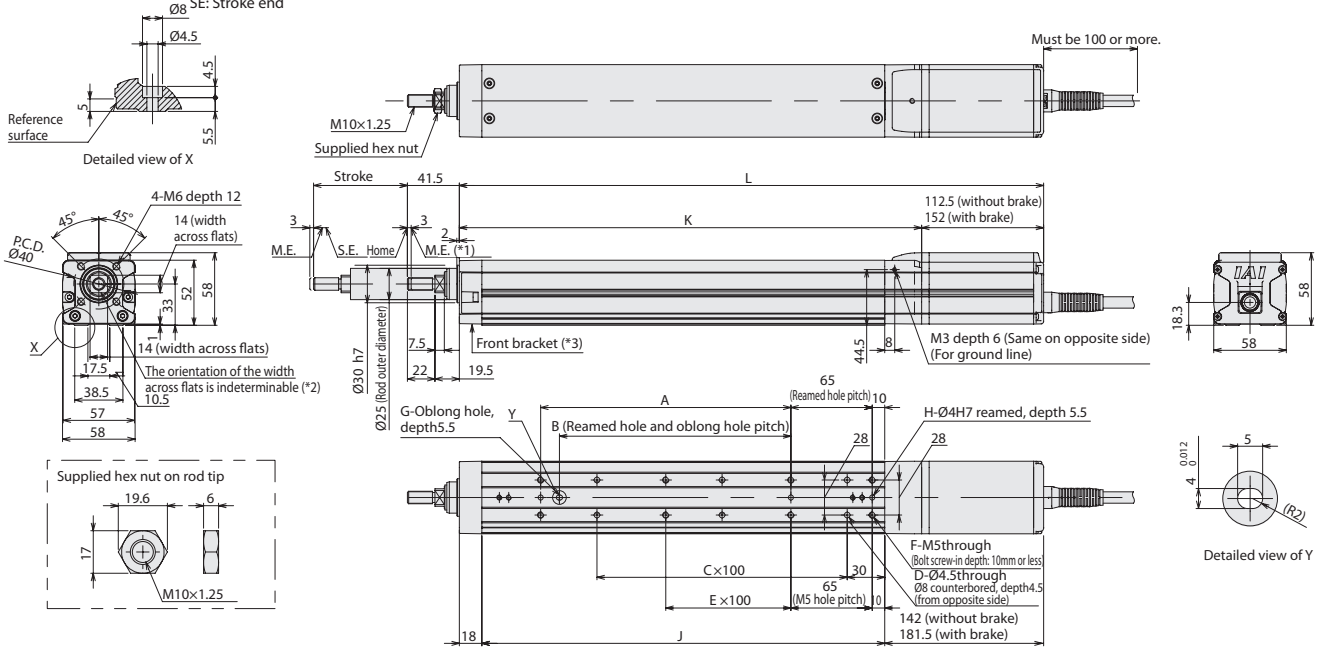
(*2) Rod's angular displacement in rotational direction with no applied load is shown.

Dimensions

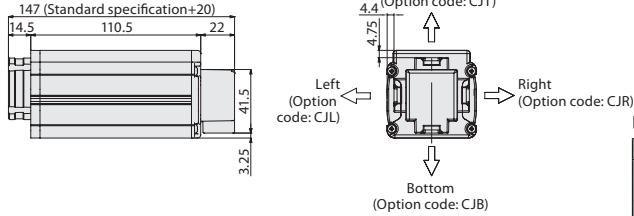
CAD drawings can be downloaded from our website. www.intelligentactuator.com



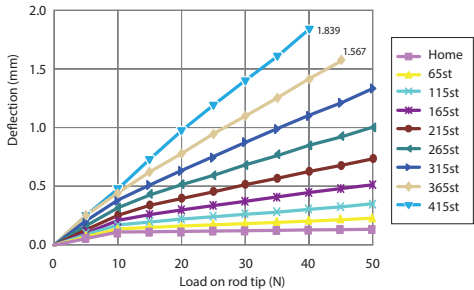
- *1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
 - *2 The direction of width across flats varies depending on the product.
 - *3 If the actuator is installed using the front housing and flange,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



Cable Exit Direction (Option)



Rod Deflection of RCP5-RA6C (Reference Values)



Dimensions and Mass by Stroke

Stroke	Dimensions (mm)										
	L	A	B	C	D	E	F	G	H	J	K
65	Without brake	332	85	1	4	0	4	0	2	172	219.5
	With brake	371.5	85	1	4	0	4	0	2	222	269.5
115	Without brake	382	85	2	6	100	6	1	3	272	319.5
	With brake	421.5	85	2	6	100	6	1	3	272	369.5
165	Without brake	432	185	2	6	200	8	1	3	322	369.5
	With brake	471.5	185	2	6	200	8	1	3	322	419.5
215	Without brake	482	185	3	8	300	8	1	3	372	469.5
	With brake	521.5	185	3	8	300	8	1	3	422	519.5
265	Without brake	532	285	3	10	400	10	1	3	422	569.5
	With brake	571.5	285	3	10	400	10	1	3	472	619.5
315	Without brake	582	285	4	10	500	10	1	3	472	669.5
	With brake	621.5	285	4	10	500	10	1	3	522	719.5
365	Without brake	632	385	4	12	600	12	1	3	522	769.5
	With brake	671.5	385	4	12	600	12	1	3	572	819.5
415	Without brake	682	385	4	12	700	12	1	3	572	869.5
	With brake	721.5	385	4	12	700	12	1	3	622	919.5
Allowable static load on rod tip (N)	Without brake	113.8	92.6	78.0	67.3	59.0	52.5	47.2	42.8		
	With brake	45.7	36.3	29.8	25.1	21.6	18.8	16.6	14.7		
Allowable dynamic load on rod tip (N)	Without brake	32.1	28.3	24.6	21.5	18.9	16.7	14.9	13.4		
	With brake	11.5	9.4	7.9	6.8	6.0	5.4	4.9	4.5		
Allowable static torque on rod tip (N-m)	Without brake	3.2	2.8	2.5	2.1	1.9	1.7	1.5	1.3		
	With brake	1.8	2.0	2.2	2.4	2.6	2.9	3.1	3.3		
Mass (kg)	Without brake	2.0	2.2	2.4	2.6	2.8	3.1	3.3	3.5		
	With brake										

Applicable Controllers

The RCP5 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Model number	Max. number of controlled axes	Maximum number of positioning points	Input power	Standard price	Reference page
Positioner type (High-output specification)		PCON-CA-42PWAI-①-2-0	1	512 points	DC24V	-	→P. 69
Pulse train type (High-output specification)		PCON-CA-42PWAI-PL⑤-2-0					
Network type (High-output specification)		PCON-CA-42PWAI-③④-0-0					
Solenoid valve multi-axis type (PIO specification)		MSEL-⑥⑦⑧⑨⑩⑪⑫⑬⑭⑮⑯⑰⑱⑲⑳㉑㉒㉓㉔㉕㉖㉗㉘㉙㉚㉛㉜㉝㉞㉟㊱㊲㊳㊴㊵㊶㊷㊸㊹㊺㊻㊼㊽㊾㊿-①-2-0	C: 8 (4 when high-output enabled) LC: 6 (3 when high-output enabled)	3 points	Single-phase AC 100V~230V	-	→P. 77
Solenoid valve multi-axis type (Network specification)		MSEL-⑥⑦⑧⑨⑩⑪⑫⑬⑭⑮⑯⑰⑱⑲⑳㉑㉒㉓㉔㉕㉖㉗㉘㉙㉚㉛㉜㉝㉞㉟㊱㊲㊳㊴㊵㊶㊷㊸㊹㊺㊻㊼㊽㊾㊿-①-0-0					
Program control multi-axis type		MSEL-PC-1-42PWAI-①-2-4	4	30,000 points	Single-phase AC 100V~230V	-	→P. 87
Program control multi-axis type (w/network board)		MSEL-PC-1-42PWAI-③④-0-4					
Program control multi-axis type (Safety category compliant spec.)		MSEL-PG-1-42PWAI-①-2-4					
Program control multi-axis type (Safety category compliant spec. w/network board)		MSEL-PG-1-42PWAI-③④-0-4					

*Above MSEL models are for single-axis specification
 *① I/O type (NP/PN)
 *③④ Field network specification code
 *⑥⑦⑧⑨⑩⑪⑫⑬⑭⑮⑯⑰⑱⑲⑳㉑㉒㉓㉔㉕㉖㉗㉘㉙㉚㉛㉜㉝㉞㉟㊱㊲㊳㊴㊵㊶㊷㊸㊹㊺㊻㊼㊽㊾㊿ Number of axes
 *⑥⑦ N (NPN specification) or P (PNP specification) code
 *The high output enabled operation is only available when the "High-output setting specs" is selected in the MSEL-C/LC.