W-RA6C

P3

RCP4W - RA6C -— Type

* See page Pre-47 for details on the model descriptions

42P П — Encoder type — Motor type I: Incremental

42P: Pulse motor,

12:12mm 6: 6mm 42SP: High-thrust 3: 3mm pulse motor, size 42 □

Stroke Applicable controller 50: 50mm

(50mm pitch increments)

P3: PCON-CA 400: 400mm

N: None P: 1m S: 3m See Options below. * If the high-thrust M:5m X□□:Custom length R□□:Robot cable

Cable length — Options

pulse motor is selected, the actuator comes standard with option B (Brake).

(Built-in Guide Mechanism)



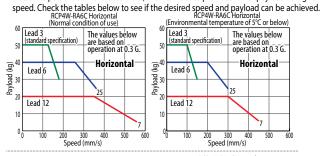
(1) The maximum payload is the value when operated horizontally and vertically at 0.3G and 0.5G, respectively. Note that raising the acceleration causes the payload to drop. (Refer to page A-108 for the maximum payload by acceleration.)

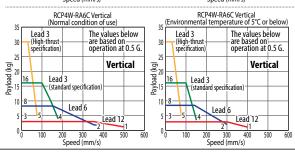
References

- (2) The horizontal payload is calculated by assuming that an external guide is also
- (3) The high-thrust specification is designed exclusively for vertical operation. It comes standard with a brake.

■ Speed vs. Load Capacity

Due to its pulse motor characteristics, the RCP4 series provides lower payload at higher





Lead

Actuator Specifications

■ Lead and Payload

Model number			Maximum pa Horizontal (kg)	Vertical (kg)	Maximum push force (N)	Positioning repeatabili- ty (mm)	Stroke (mm)
C	RCP4W-RA6C-I-42P-12-①-P3-②-③	12	20	3	93		50 to 400
Standard	RCP4W-RA6C-I-42P-6-①-P3-②-③	6	40	8	185		
	RCP4W-RA6C-I-42P-3-①-P3-②-③		50	16	370	±0.02	(Every 50mm)
High-thrust specification	RCP4W-RA6C-I-42SP-3-①-P3-②-③-B	3	_	30	590		,

■ Stroke and Maximum Speed (Unit: mm/s)

100 ~ 400 (Every 50mm) 560 <500> [450 <400>

500 [450 <400> 12 6 360 [300] 3 180 [150] 3 <70> [<70>]

50 (mm)

*The values in < > apply when the actuator is used vertically.
*The values in [] apply when the actuator is used at an
environmental temperature of 5°C or below.

U Stroke					
Charles (sees)	Standard price				
Stroke (mm)	Standard specification	High-thrust specification			
50	_	_			
100	_	_			
150	_	_			
200	_	_			
250	_	_			
300	_	_			
350	_	_			
400	_	_			

Code explanation ① Stroke ② Cable length ③ Options

© Options			
	1		a
Name	Option code		Standard price
Cable exit from the left side face	A1	→ A-41	_
Cable exit from the right side face	А3	→ A-41	_
Cable exit from the top face	AT	→ A-41	_
Brake	В	→ A-42	_
With flange	FL	→ A-45	_

FT

→ A-48

→ A-52

②Cable Length

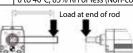
Туре	Cable symbol	Standard Price
	P (1m)	_
Standard	S (3m)	_
	M (5m)	_
	X06 (6m) ~ X10 (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_
	R01 (1m) ~ R03 (3m)	_
	R04 (4m) ~ R05 (5m)	_
Robot Cable	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

* See page A-59 for cables for maintenance.

Actuator Specifications

ltem	Description				
Drive method	Ball screw ø10mm, rolled C10				
Positioning repeatability	±0.02mm				
Lost motion	0.1mm or less				
Rod	ø22 stainless steel pipe				
Rod non-rotation accuracy	±0.1 degrees				
Allowable load/allowable torque at end of rod	Refer to the page on the right.				
Load offset distance at end of rod	100mm or less				
Protective structure	IP67				
Ambient operating temperature/ humidity	0 to 40°C, 85% RH or less (Non-condensing)				

Offset distance at end of rod (100mm or less)



With foot bracket

Non-motor side specification

www.intelligentactuator.com

For Special Orders



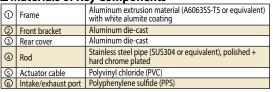
Cable joint connector *1

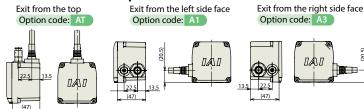


- Connect the motor-encoder integrated cable here.
- The rod moves to the ME during home return, so pay attention to possible contact with surrounding structures and objects.
- *3 The orientation of the bolt varies from one product to another.
- When installing the actuator using the front housing or flange, make sure the actuator does not receive any external force.

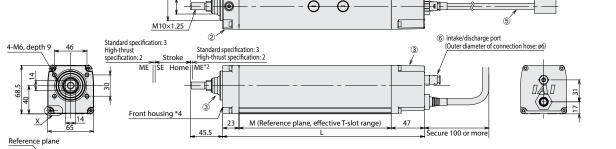
<Cable Exit Direction Option> ■ Materials of Key Components

7.5 (Width across flats) *3

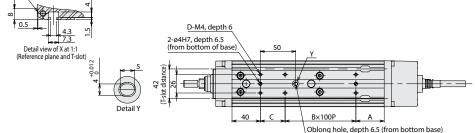


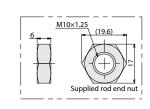


(2m)

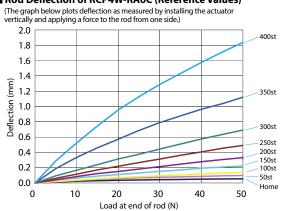


(1)





■ Rod Deflection of RCP4W-RA6C (Reference Values)



■ Dimensions and Weight by Stroke

	- Difficultions and treight by buroke								
	Stroke	50	100	150	200	250	300	350	400
- 1	Without brake	285	335	385	435	485	535	585	635
	With brake (*)	346	396	446	496	546	596	646	696
۸	Without brake	40	40	40	40	40	40	40	40
Α	With brake (*)	101	101	101	101	101	101	101	101
B C D		1	1	2	2	3	3	4	4
		35	85	35	85	35	85	35	85
		6	6	8	8	10	10	12	12
М	Without brake	215	265	315	365	415	465	515	565
IVI	With brake	276	326	376	426	476	526	576	626
Allowabl	e static load at end of rod (N)	65.6	51.2	41.7	34.9	29.8	25.7	22.4	19.7
Allowable	dynamic Load offset 0 mm	32.4	23.6	18.1	14.4	11.6	9.5	7.7	6.2
load at en	d of rod (N) Load offset 100 mm	25.6	19.7	15.7	12.7	10.4	8.6	7.1	5.7
Allowable static torque at end of rod (N·m)		6.6	5.2	4.3	3.7	3.2	2.8	2.6	2.3
Allowable dynamic torque at end of rod (N•m)		2.6	2.0	1.6	1.3	1.0	0.9	0.7	0.6
Weight	Without brake	3.1	3.5	3.8	4.2	4.6	5.0	5.4	5.8
(kg)	With brake	3.6	4.0	4.4	4.8	5.2	5.6	6.0	6.4

(*) The dimensions of the high-thrust specification include the brake.

Applicable Controllers

RCP4W Series actuators can be operated with the controllers indicated below. Select the type according to your intended application.											
Name	ne External Model number Features				Input power	Power supply capacity	Standard price	Reference page			
Positioner type		PCON-CA-42OI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points			_				
Pulse-train type		PCON-CA-42OI-PL-□-2-0	Equipped with a high-output driver Pulse-train input type	_	DC24V	Refer to P618	_	→ P607			
Field network type		PCON-CA-42OI-①-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			_				

* ① indicates I/O type (NP/PN). * 🗆 indicates N (NPN specification) or P (PNP specification) symbol * ① indicates field network specification symbol. * O indicates P (Standard specification) or SP (High-thrust specification) symbol.

RCP4W-RA6C **502**