

RCP2CR-SA6C

Cleanroom ROBO Cylinder Slider Coupling Type 58mm Width Pulse motor
Aluminum Base

■ Configuration: **RCP2CR-SA6C-I-42P** — [] — [] — [] — [] — []

Series — Type — Encoder — Motor — Lead — Stroke — Compatible Controllers — Cable Length — Option

I: Incremental
* The simple absolute encoder is also considered type "I".

42P: Pulse motor 42 size

12: 12mm
6: 6mm
3: 3mm

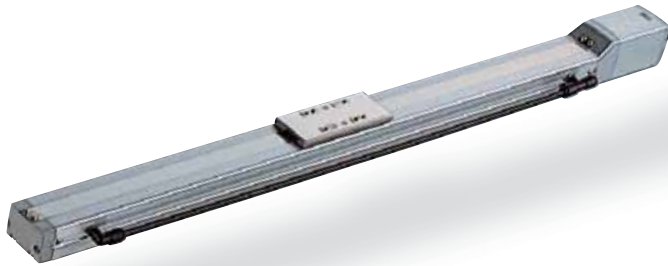
50: 50mm
800: 800mm (50mm pitch increments)

P1: PCON
RCON
PSEL
P3: PMEC
PSEP

N: None
P: 1m
S: 3m
M: 5m
X []: Custom
R []: Robot cable

BE: Brake (Cable exiting from end)
BL: Brake (Cable exiting from left)
BR: Brake (Cable exiting from right)
NM: Reversed-home
VR: Intake port on opposite side

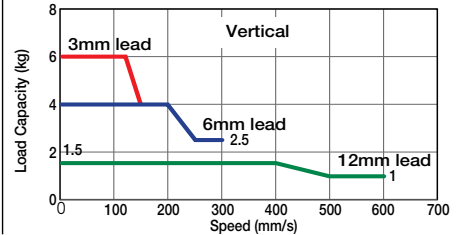
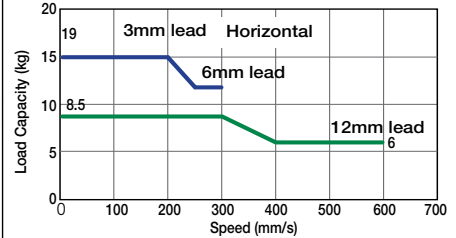
* See page Pre-35 for an explanation of the naming convention.



Technical References P. A-5

- POINT** Notes on Selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - Since the RCP2 series use the pulse motor, the load capacity decreases at high speeds. In the Speed vs. Load Capacity graph on the right, see if your desired speed and load capacity are supported.
 - The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). The maximum acceleration is 0.7G (0.3G when used vertically), however, note that the load capacity decreases at high accelerations. For more information, see the table of load capacity by acceleration, on page A-53.
 - The cleanliness class 10 is for horizontal usage. Please note that the actuator may not support C10 when used on its side or in vertical orientation.

■ Speed vs. Load Capacity
Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead (mm)	Max. Load Capacity (Note 1)		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2CR-SA6C-I-42P-12-①-②-③-④	12	~ 8.5	~ 1.5	50 ~ 800 (50mm increments)
RCP2CR-SA6C-I-42P-6-①-②-③-④	6	~ 15	~ 4	
RCP2CR-SA6C-I-42P-3-①-②-③-④	3	~ 19	~ 6	

Legend: ① Stroke ② Compatible controller ③ Cable length ④ Options

Stroke, Max. Speed, and Suction Volume

Stroke (mm)	Max. Speed (mm/s)						Suction Volume (Nl/min)
	50 ~ 550 (50mm increments)	600	650	700	750	800	
12	600	540	460	400	360	300	50
6	300	270	230	200	180	150	30
3	150	135	115	100	90	75	15

(Unit: mm/s)

① Stroke List

Stroke (mm)	Standard Price
50	-
100	-
150	-
200	-
250	-
300	-
350	-
400	-
450	-
500	-
550	-
600	-
650	-
700	-
750	-
800	-

④ Option List

Name	Option Code	See Page	Standard Price
Brake (Cable exiting from end)	BE	→ A-25	-
Brake (Cable exiting from left)	BL	→ A-25	-
Brake (Cable exiting from right)	BR	→ A-25	-
Reversed-home	NM	→ A-33	-
Intake port on opposite side	VR	→ A-38	-

③ Cable List

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

* See page A-39 for cables for maintenance.

Actuator Specifications

Item	Description
Drive System	Ball screw ø10mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Allowable Static Moment	Ma: 38.3N·m Mb: 54.7N·m Mc: 81.0N·m
Allowable Dynamic Moment (*)	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang Load Length	Ma direction: 220mm or less Mb, Mc direction: 220mm or less
Grease Type	Low dust generation grease (both ball screw and guide)
Cleanliness	Class 10 (0.1µm)
Ambient Operating Temp./Humidity	0 ~ 40°C, 85% RH or less (non-condensing)

(*) Based on a 5,000km service life.

Directions of Allowable Load Moments



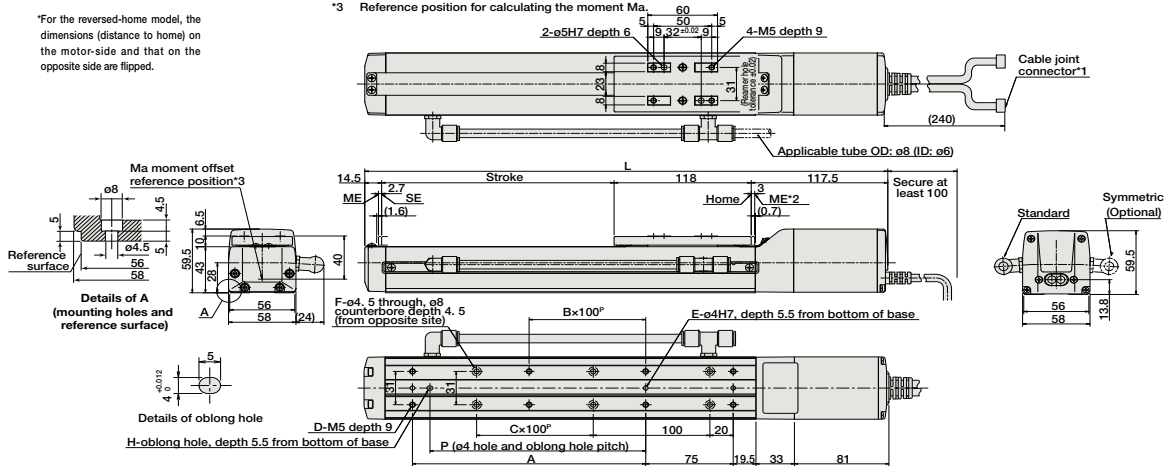
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Dimensions

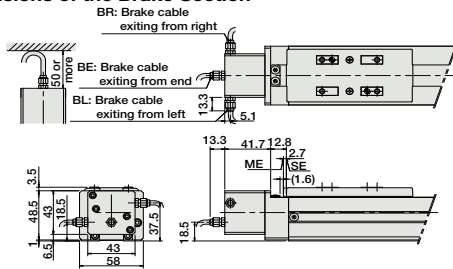
For Special Orders P. A-9

- *1 The motor-encoder cable is connected here. See page A-39 for details on cables.
- *2 When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.
ME: Mechanical end
SE: Stroke end
- *3 Reference position for calculating the moment Ma.
The values enclosed in "()" are reference dimensions.

*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.



Dimensions of the Brake Section



* The length L of a brake-equipped actuator is longer than that of a standard model (see the table) by 40mm (53.3mm with the cable exit out its end); add 0.4kg to weight.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
A	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
B	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
C	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
D	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
H	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
Weight (kg)	2.0	2.2	2.3	2.4	2.6	2.7	2.9	3.0	3.1	3.3	3.4	3.6	3.7	3.8	4.0	4.1

② Compatible Controllers

The RCP2CR series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-①	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	See P481	-	→ P477
		PSEP-C-42PI-NP-2-0-H	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.					→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-42PI-NP-2-0-H						
Positioner Type		PCON-C-42PI-NP-2-0-H	Positioning is possible for up to 512 points	512 points				
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0-H						
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0-H	Pulse train input type with differential line driver support	(-)	DC24V	2A max.		→ P625
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0-H	Pulse train input type with open collector support					
Serial Communication Type		PCON-SE-42PI-N-0-0-H	Dedicated to serial communication	64 points				
Field Network Type		RPCON-42P-H	Dedicated to field network	768 points				→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0-H	Programmed operation is possible Operation is possible on up to 2 axes	1500 points				→ P557

* This is for the single-axis PSEL.
* ① is a placeholder for the power supply voltage (1: 100V, 2: 100~240V).

- Slider Type
- Mini
- Standard
- Controllers Integrated
- Rod Type
- Mini
- Standard
- Controllers Integrated
- Table/Arm /Flat Type
- Mini
- Standard
- Gripper/ Rotary Type
- Linear Servo Type
- Cleanroom Type
- Splash-Proof
- Controllers
- PMEC /AMEC
- PSEP /ASEP
- ROBO NET
- ERC2
- PCON
- ACON
- SCON
- PSEL
- ASEL
- SSEL
- XSEL
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor