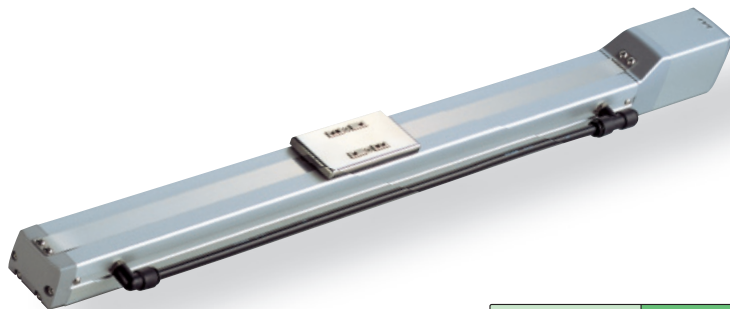


RCP2CR-SA5C

Cleanroom ROBO Cylinder, Slider Type, Actuator Width 52mm, Pulse Motor, Straight Type

Model Description	RCP2CR	SA5C	I	42P			P1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	
		I: Incremental specification	42: Pulse motor 42□Size	12: 12mm 6: 6mm 3: 3mm	50:50mm To 500:500mm (Set steps every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	BE: Brake (cable exiting the end) BL: Brake (cable exiting the left) BR: Brake (cable exiting the right) NM: Reversed-home specification VR: Vacuum joint on opposite side	

See preceding section for model descriptions.

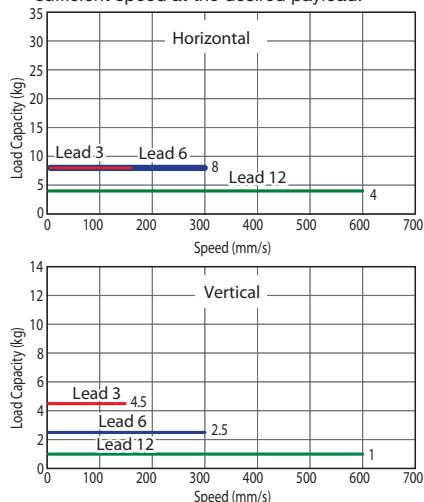


Technical Reference P. 451

- POINT** Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the diagram of speed and load capacity on the right to check the load capacity at the speed you desire.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 3). The above values are maximum acceleration.
 - The Mc Moment is 7.8N·m when exceeding 350 strokes.
 - Class 10 cleanliness is based on the horizontal specification.

Speed vs. Payload Graph

A characteristic of the RCP2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



Actuator Specification Table

Leads and Payloads

(Note 1) Please note that the maximum payload decreases when the speed increases.

Stroke, Maximum Speed and Suction Volume

Model	Lead (mm)	Max. payload (Note 1)		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2CR-SA5C-I-42P-12-①-P1-②-③	12	4	1	50 to 500 (every 50mm)
RCP2CR-SA5C-I-42P-6-①-P1-②-③	6	8	2.5	
RCP2CR-SA5C-I-42P-3-①-P1-②-③	3	8	4.5	

Stroke Lead	50 to 500 (every 50mm)	Suction Volume (Nl/min)
12	600	50
6	300	30
3	150	15

Legend: ① Stroke ② Cable length ③ Options

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code
	SA5C
	Encoder type
	Incremental
50	—
100	—
150	—
200	—
250	—
300	—
350	—
400	—
450	—
500	—

② Cable Length Price List

Type	Cable symbol	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) to X10 (10m)	—
	X11 (11m) to X15 (15m)	—
	X16 (16m) to X20 (20m)	—
Robot cable	R01 (1m) to R03 (3m)	—
	R04 (4m) to R05 (5m)	—
	R06 (6m) to R10 (10m)	—
	R11 (11m) to R15 (15m)	—
	R16 (16m) to R20 (20m)	—

*Please see P374 for information on the maintenance cable.

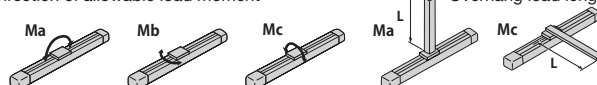
③ Option Price List

Title	Option code	See page	Standard price
Brake (cable exiting the end)	BE	P437	—
Brake (cable exiting the left)	BL	P437	—
Brake (cable exiting the right)	BR	P437	—
Reversed-home specification	NM	P442	—
Vacuum joint on opposite side	VR	P446	—

Actuator Specification

Item	Description
Drive System	Ball screw φ10mm rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction 150mm or less Mb-Mc direction 150mm or less
Grease	Low-dust-raising grease (both ball screw and guide)
Cleanliness class	Class 10 (0.1μm)
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

Direction of allowable load moment



Dimensional Drawings

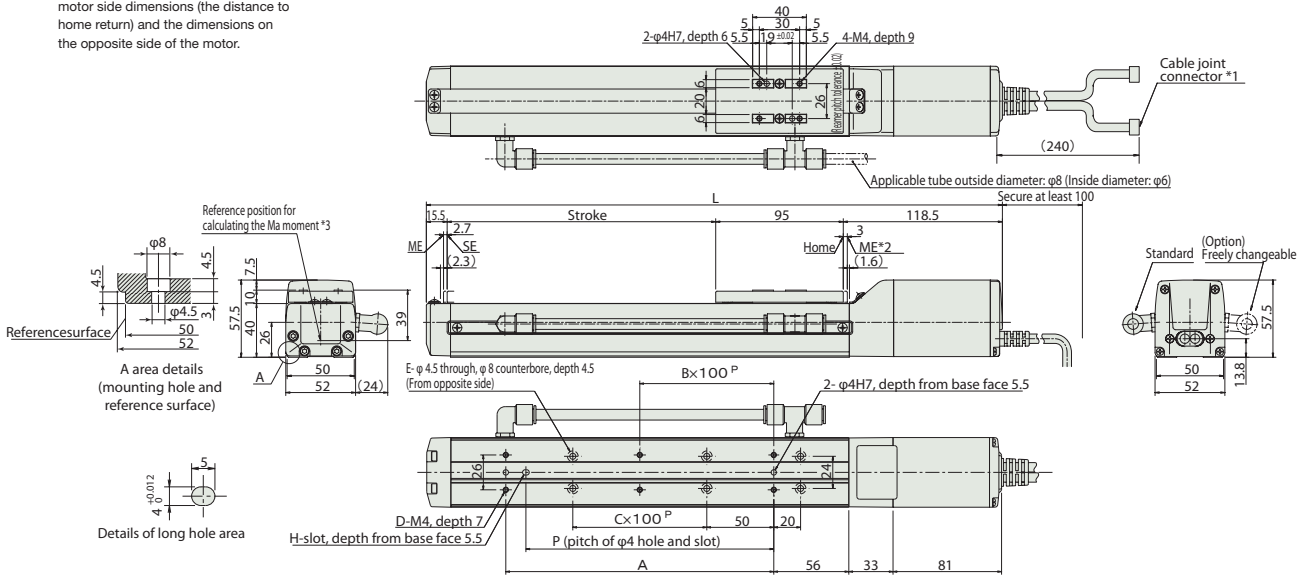
CAD drawings can be downloaded from the website. www.intelligentactuator.com



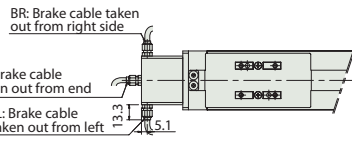
*The dimensions for the reverse home return specification varies between the motor side dimensions (the distance to home return) and the dimensions on the opposite side of the motor.

- *1 Connect the motor and encoder cables. See P374 for details on the cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: mechanical end
SE: stroke end
Dimensions in () are for reference.
- *3 Reference position for calculating Ma moment.

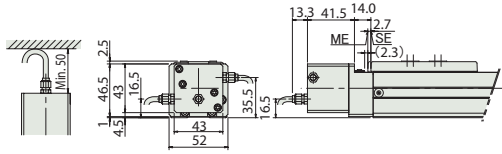
Information on special orders P. 454



Brake area dimensions



*Models with brake have their overall length (L) extended by 40mm (see table at right).



Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	279	329	379	429	479	529	579	629	679	729
A	73	100	100	200	200	300	300	400	400	500
B	0	0	0	1	1	2	2	3	3	4
C	0	0	1	1	2	2	3	3	4	4
D	4	4	4	6	6	8	8	10	10	12
E	4	4	6	6	8	8	10	10	12	12
H	0	1	1	1	1	1	1	1	1	1
P	0	85	85	185	185	285	285	385	385	485
Weight (kg)	1.7	1.8	1.9	2.0	2.1	2.3	2.4	2.5	2.6	2.7

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0						
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points				
Pulse series input type (Differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)				
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type					
Serial communication type		PCON-SE-42PI-0-0	Serial communications Special type	64 points				
Field network type		RPCON-42P	Field network Dedicated type	768 points				
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	-	P395		

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in Direct
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W