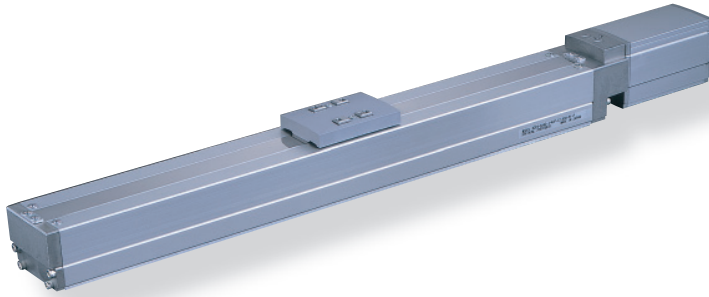


# RCP3-SA6C

ROBO Cylinder, Slider Type, Actuator Dimensions 60mm, Pulse Motor, Coupling Specification

Model Description	<b>RCP3</b> — <b>SA6C</b> — <b>I</b> — <b>42P</b> — <span style="border: 1px solid black; padding: 2px;">  </span> — <span style="border: 1px solid black; padding: 2px;">  </span> — <b>P1</b> — <span style="border: 1px solid black; padding: 2px;">  </span> — <span style="border: 1px solid black; padding: 2px;">  </span>							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification	42P: Pulse motor 42□Size	12: 12mm 6: 6mm 3: 3mm	50:50mm ~ 600:600mm (Set pitch every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X□: Length designation	B: Brake-equipped NCO: No cover specification NM: Reverse-home specification		

See preceding section for model descriptions.

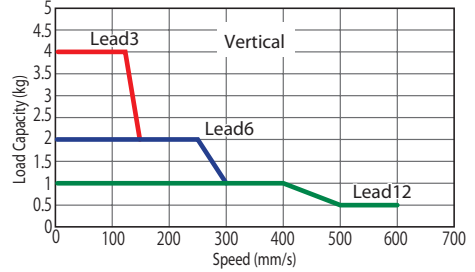
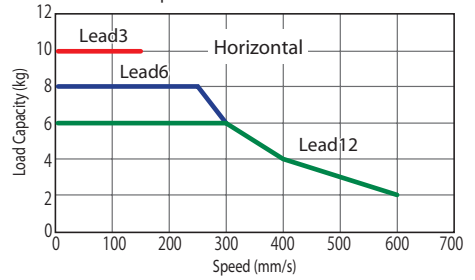


Technical Reference P.451

- POINT** Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the desirable maximum speed in the Actuator Specification Table below.
  - Since the RCP3 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
  - 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.

### Speed vs. Payload Graph

Since the RCP3 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



### Actuator Specification Table

#### Leads and Payloads

Model	Lead (mm)	Maximum payload		Maximum pushing force (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP3-SA6C-I-42P-12-①-P1-②-③	12	Up to 6	Up to 1	47	50 to 600 (every 50mm)
RCP3-SA6C-I-42P-6-①-P1-②-③	6	Up to 8	Up to 2	95	
RCP3-SA6C-I-42P-3-①-P1-②-③	3	10	Up to 4	189	

#### Stroke and Maximum Speed

Stroke / Lead	50 to 550 (every 50mm)	600 (mm)
	12	600
6	300	270
3	150	135

(Unit = mm/s)

Legend ① Stroke ② Cable Length ③ Option

#### ① Price List by Stroke (Standard Price)

① Stroke (mm)	Type code SA6C	
	Encoder type Incremental	
	Actuator Cover	
	With cover (Standard)	No cover (Option)
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—
550	—	—
600	—	—

#### ③ Option Price List (Standard Price)

Title	Option code	See page	Standard price
Brake-equipped	<b>B</b>	P437	—
No cover	<b>NCO</b>	P28	See above
Reversed-home specification	<b>NM</b>	P442	No charge

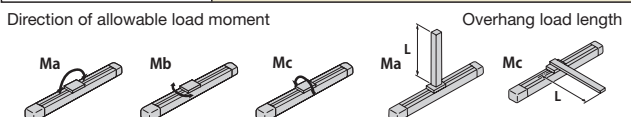
#### ② Cable Length Price List (Standard Price)

Type	Cable symbol	Standard price
Standard type (Robot cable)	<b>P</b> (1m)	—
	<b>S</b> (3m)	—
	<b>M</b> (5m)	—
Special length	<b>X06</b> (6m) — <b>X10</b> (10m)	—
	<b>X11</b> (11m) — <b>X15</b> (15m)	—
	<b>X16</b> (16m) — <b>X20</b> (20m)	—

\*See P374 about maintenance cables.

#### Actuator Specification

Item	Description
Drive System	Ball screw φ 10mm rolled C10
Positioning Repeatability	±0.05mm
Backlash	0.1mm or less
Base	Material: Aluminum Mb Special alumite treatment
Allowable load moment	Ma & 4.31N·m Mb: 6.17N·m Mc: 10.98N·m
Overhang load length	150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

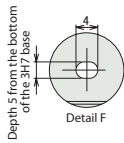
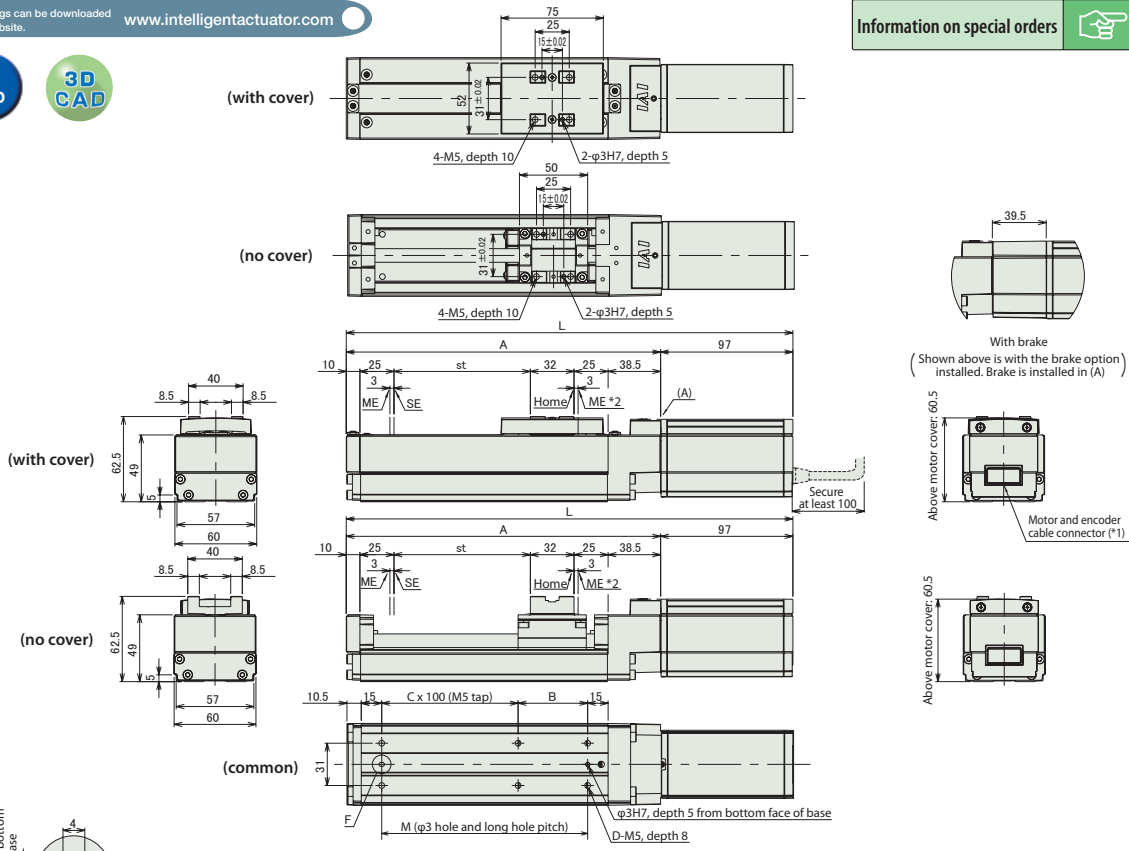


Dimensional Drawings

CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)



Information on special orders P.454



■ Dimensions and Weight by Stroke \*Adding a brake increases weight by 0.4kg.

Stroke	Stroke												
	50	100	150	200	250	300	350	400	450	500	550	600	
L	No brake	277.5	327.5	377.5	427.5	477.5	527.5	577.5	627.5	677.5	727.5	777.5	827.5
	Brake-equipped	317	367	417	467	517	567	617	667	717	767	817	867
A	180.5	230.5	280.5	330.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5	730.5	
B	101	51	101	51	101	51	101	51	101	51	101	51	
C	0	1	1	2	2	3	3	4	4	5	5	6	
D	4	6	6	8	8	10	10	12	12	14	14	16	
M	101	151	201	251	301	351	401	451	501	551	601	651	
Weight (kg)	With cover	1.6	1.8	2	2.1	2.3	2.5	2.7	2.8	3	3.2	3.3	3.5
	No cover	1.5	1.7	1.8	2	2.1	2.3	2.4	2.6	2.7	2.8	3	3.1

- (\*1) Connect the motor-encoder cable (integrated). (See P374 for cable details)
  - (\*2) Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
- ME: mechanical end  
SE: stroke end

Compatible Controllers

The RCP3 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-N-0-0	Serial communications Special Type	64 points								
Field network type		RPCON-42P	field network Dedicated type	768 points							P343	
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points								P395

\*PSEL is for single axis specification.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Build-in (Direct)
- Reversed-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