

RoboCylinder  
PowerCon **RCP4 Series**  
**PCON-CA**



*Newest additions to the series!*



Side-Mounted Motor Type



Cleanroom Type

*Catalogue Rod Type*



High Speed  
High power  
**RCP4**

# PowerCon Realizing

## 1.5 Times the Speed and Double the Payload

The PowerCon 150 series boosts the performance of RoboCylinder  
 The **side-mounted motor specification** and **cleanroom specification**

- ▶ Improved dynamic performance (the speed is up to 1.5 times and payload is up to twice)  
 \*Specific values vary depending on the model.
- ▶ New functions designed to enhance maintainability enable preventative maintenance,
- ▶ The takt time minimization function lets you set optimal operating conditions with greater

**Find the RCP4-RA3 series at the back of this catalogue**



RCP4-RA5C

### RCP4 Series Variations

Model type	Series	Shape	Type	External view	Actuator size (width)	Stroke	Ball screw lead (mm)	Maximum Speed (mm/s)	Maximum payload (kg)		Page
									Horizontal	Vertical	
Straight motor specification	RCP4	Rod type	RA5C		52mm	50~400	8				p.21
							4	245	45	25	
							20	800	6	1.5	
							12	700	25	4	
							6	450	40	10	
							3	225	60	20	
			RA6C		61mm	50~500	24	800	20	3	p.23
							16	700	50	8	
							8	420	60	18	
							4	210	80	28	

\*The maximum horizontal payload for the rod type is for when an external guide is used in combination.

### Controller

Series	Type	Page
<b>PCON</b>	<b>CA</b>	<b>p.40</b>

# 150% the Output, Achievable with Standard Controllers

standard motorized cylinders to amazing new heights.

(ISO class 4) have been added to the power controller RCP4 series.

IAI's conventional models\*) significantly boosts the productivity of your system.

so less time is needed for maintenance.  
ease.

**Find the RCP4-RA3 series at  
the back of this catalogue**



RCP4-RA6C

**NEW**  
Rod  
Side-mounted motor  
specification



RCP4-RA5R  
RCP4-RA6R

Model type	Series	Shape	Type	External view	Actuator size (width)	Stroke	Ball screw lead (mm)	Maximum Speed (mm/s)	Maximum payload (kg)		Page								
									Horizontal	Vertical									
<b>NEW</b> Side-mounted motor specification	<b>RCP4</b>								1										
									<b>NEW</b> Rod type	<b>RA5R</b>			52mm	50~400	20	800	6	1.5	P.25
															12	700	25	4	
															6	450	40	10	
															3	225	60	20	
									<b>NEW</b> Rod type	<b>RA6R</b>			61mm	50~500	24	800	20	3	P.27
															16	560	50	8	
															8	420	60	18	
															4	175	80	28	

## Features

# Shorter Takt Time Significantly Boosts

### New Functions of RCP4 Actuator

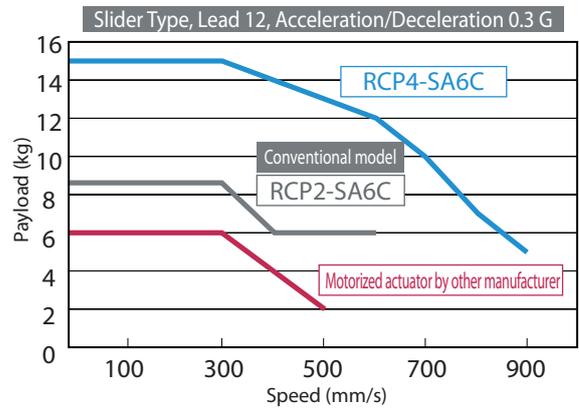
## 1 1.5 times higher maximum speed and double the payload when combined with a PowerCon 150

When the new controller (PowerCon 150) equipped with our newly developed high-output driver (patent pending) is used, the maximum speed increases significantly by up to 1.5 times the levels achievable with IAI's conventional models, while the payload is greater by up to twice (\*). In addition to these amazing improvements in specifications, the maximum speed does not drop as much even when the payload increases due to increased torque with the high speed motor, meaning that dynamic performance equivalent to that of a higher-class model can be achieved at lower cost.

(\*) The specific rates of improvement vary depending on the model.



PowerCon 150 PCON-CA

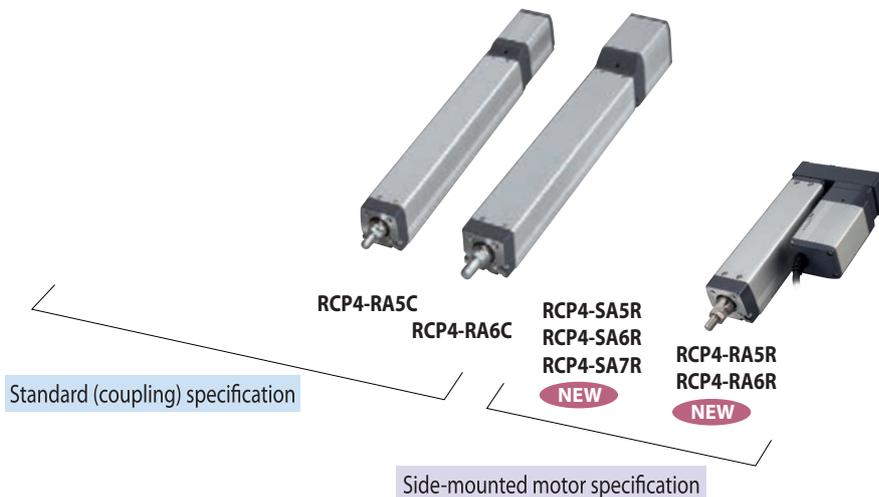


Correlation Diagram of Speed and Payload

## 2 Extended lineup with the latest additions: the side-mounted motor specification and the cleanroom specification

Three slider types (SA5/SA6/SA7) and two rod types (RA5/RA6) are now available in the side-mounted motor specification characterized by a significantly shorter overall length for space-saving design. Three slider types are also available in the cleanroom specification conforming to ISO cleanliness class 4.

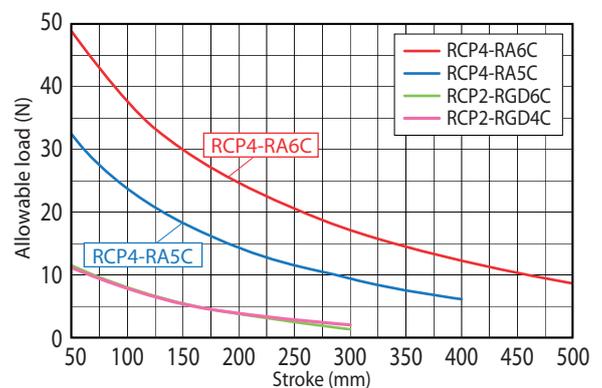
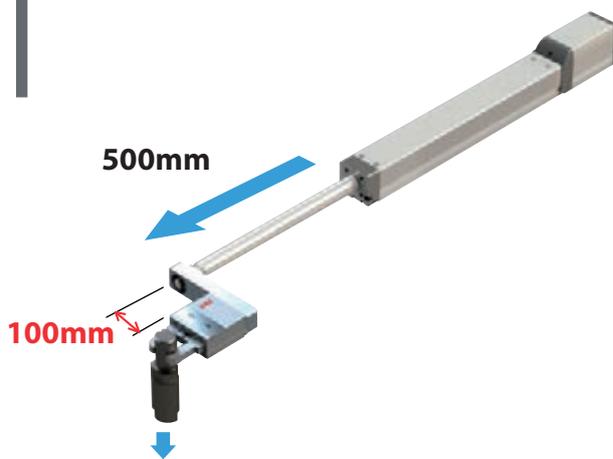
**Find the RCP4-RA3 series at the back of this catalogue**



# the Productivity of Your System

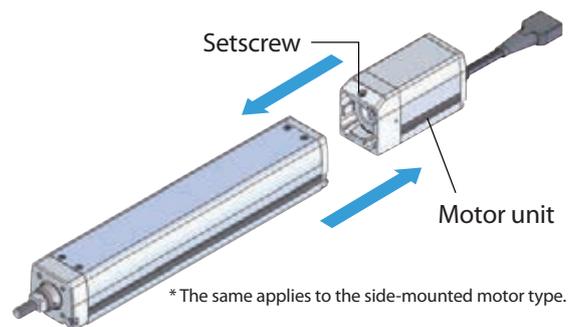
## 3 The rod type <Radial Cylinder> with a built-in guide mechanism can carry radial loads over a long stroke (500mm).

The rod type <Radial Cylinder> has a built-in guide mechanism in the actuator to carry radial loads on the rod over a long stroke of up to 500 mm. The actuator can also support a radial load at a position offset from the center of the rod.



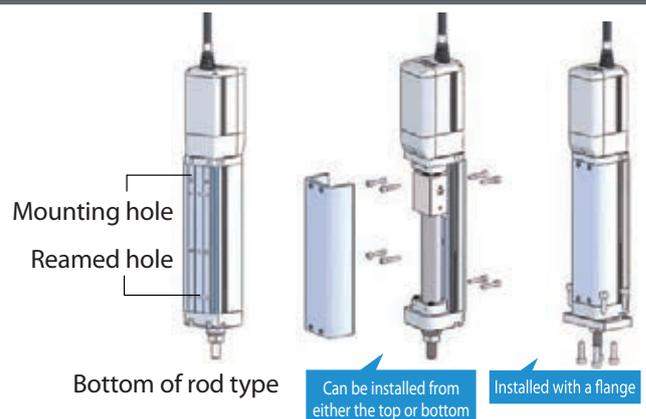
## 4 Easy replacement of the motor with removal of only one setscrew

The motor has been unitized for easy replacement. The actuator and motor unit can be separated and replaced by removing only one setscrew, so the time required for maintenance becomes significantly shorter.



## 5 Slider types have mounting holes compatible with the RCP2

Slider types have mounting holes that are compatible with RCP2 actuators, meaning that you can replace your current RCP2 actuator with a RCP4 with ease. Also, the mounting holes provided on rod types are the same as those provided on slider types, instead of T-slots found on the RCP2, and reamed holes are also provided to significantly improve installation repeatability.



## Features

# New Functions to Enhance Maintainability

### New Functions of PowerCon 150 PCON-CA

## 6 Keep track of the production volume and utilization ratio with the total movement counter function

The total number of times the actuator has moved is counted and recorded in the controller, and a signal is output to an external device once the pre-defined count is exceeded. This function can be used to keep track of the production volume, utilization ratio, etc.

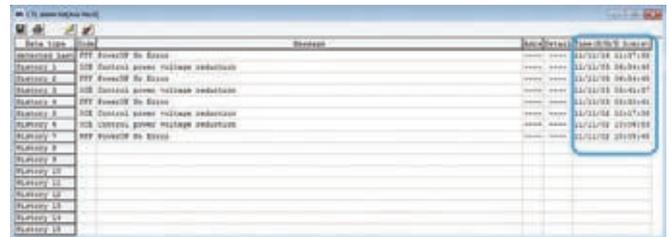


## 7 Know when to perform maintenance with the total travel counter function

The total distance travelled by the actuator is counted and recorded in the controller, and a signal is output to an external device once the pre-defined count is exceeded. By using this function, you know when to add grease or perform periodic maintenance.

## 8 Retain alarm generation times with the calendar function

The calendar function (clock function) lets you add timestamps to the history of alarms, etc. This information is useful in troubleshooting, etc.



## 9 The smart tuning function lets you set up the operation conditions of your equipment optimally with ease

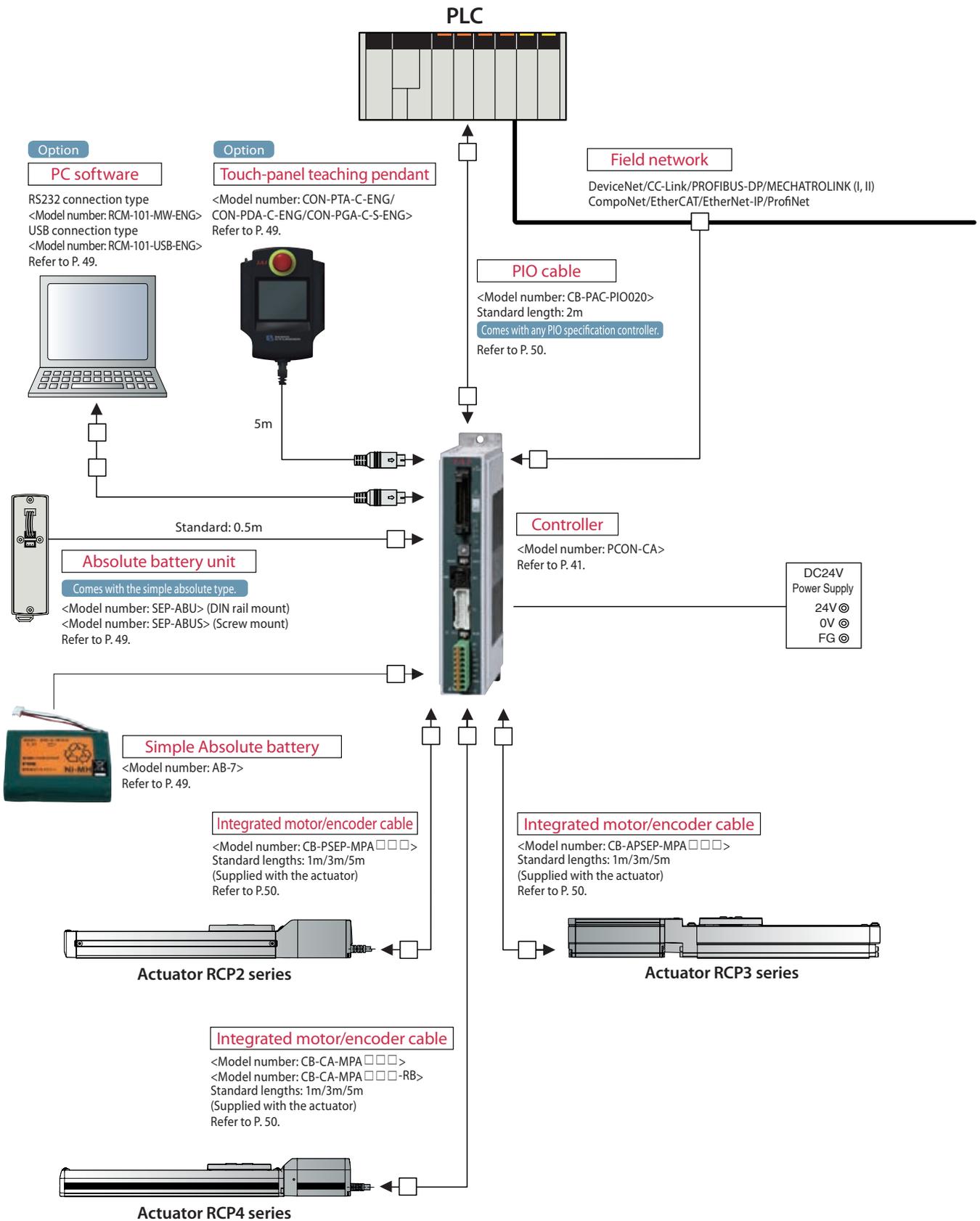
The smart tuning function is a new feature introduced to the RoboCylinder PC software (version 8.03.00.00 or later) and touch panel teaching pendant (model number: CON-PTA). When the actuator is connected to a controller supporting the smart tuning function, all the user needs is to enter the actuator type, transfer load, etc., and the optimal acceleration/deceleration and speed will be set automatically according to the load.

- 1. Setting the acceleration/deceleration from the speed**  
Enter a desired speed in the position data table, and the maximum settable acceleration/deceleration will be set automatically according to the pre-defined load-speed combinations.
- 2. Setting the acceleration/deceleration and speed from the travel**  
Specify the position data number associated with desired start/end positions of movement and set a desired travel distance, and the combination of acceleration/deceleration and speed that gives the shortest travel time will be set automatically.

## 10 Three controller operation types to choose from

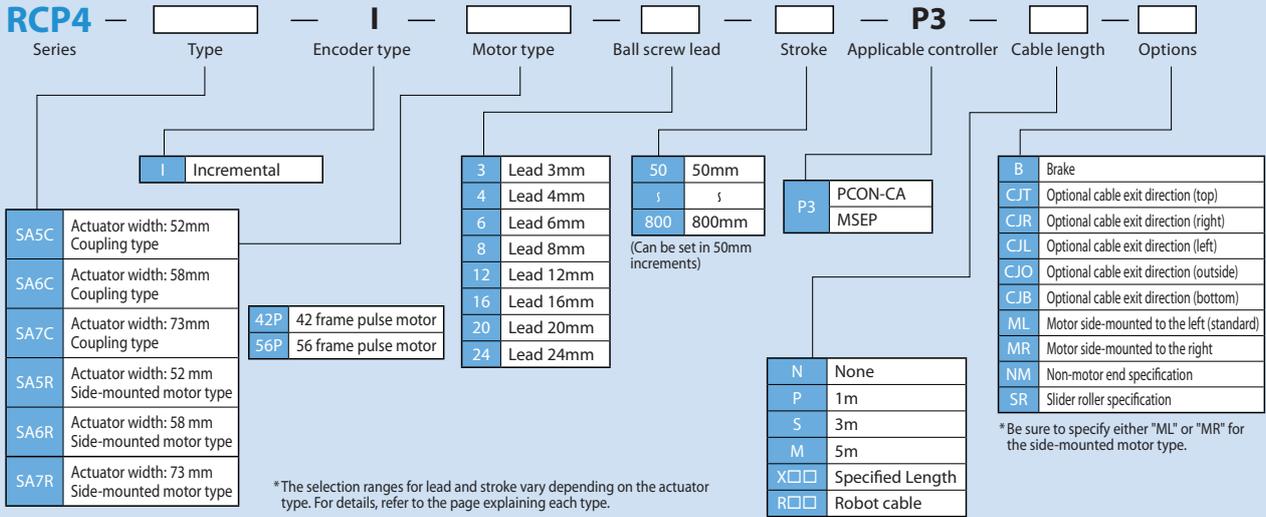
- 1. Positioner type** that operates the actuator via ON/OFF of PIOs
- 2. Pulse-train type** that operates the actuator by sending pulses from the positioning unit
- 3. Field network type** that operates the actuator by sending position data via the network

# System Configuration

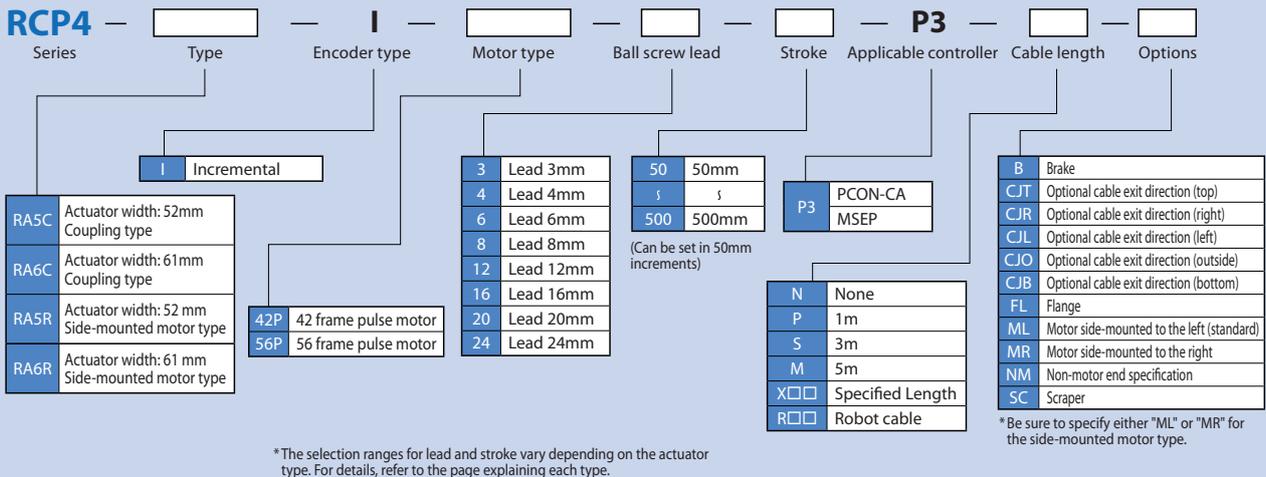


# Model Specification Items

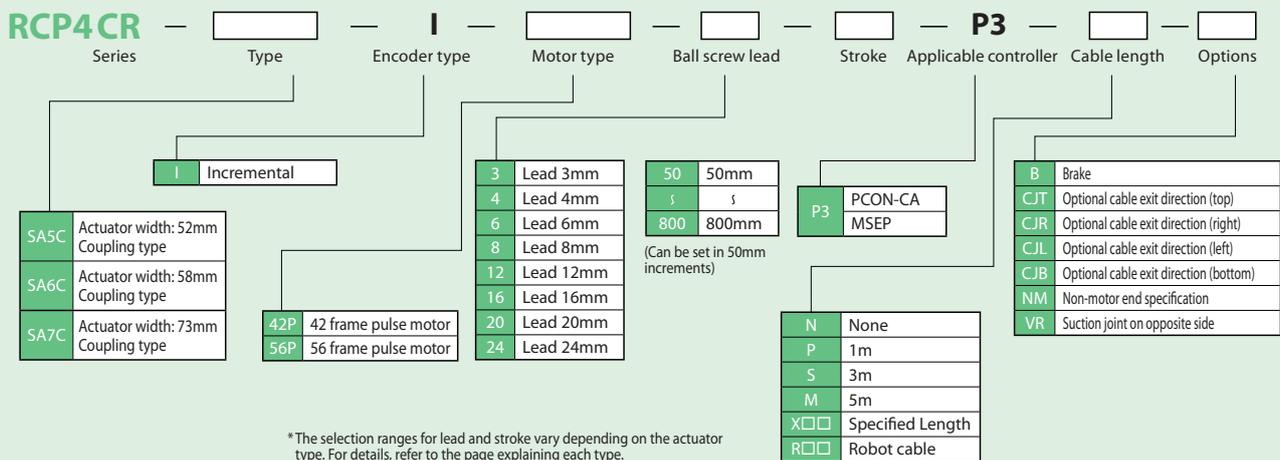
## <Slider type>



## <Rod type>



## <Cleanroom type>



# Actuator Options

**Brake**  
Option code: **B**

## All models

Description

A mechanism to hold the slider in place when the actuator is used vertically, so that it will not drop and damage the work part, etc., when the power or servo is turned off.

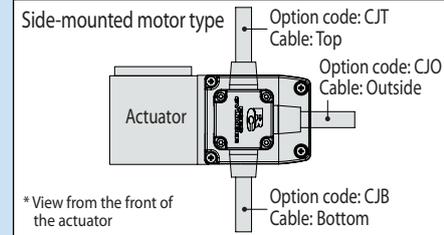
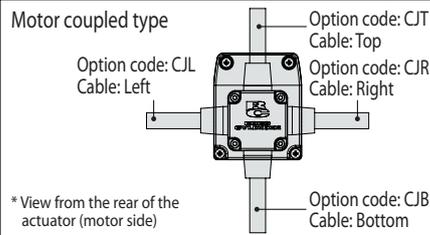
**Optional cable exit direction**  
Option code: **CJT**  
**CJR**  
**CJL**  
**CJB**  
**CJO**

Applicable models

## All models

Description

The actuator cable exit direction from the motor cover of the actuator is changed.



**Motor side-mounted direction**  
Option code: **ML/MR**

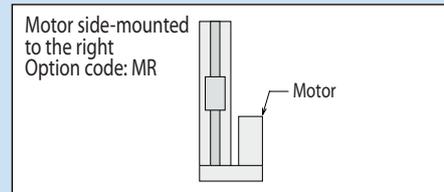
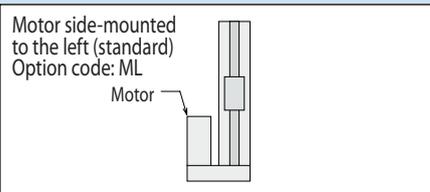
\* Be sure to specify either "ML" or "MR" for the side-mounted motor type.

Applicable models

## RCP4-SA5R/SA6R/SA7R/RA5R/RA6R

Description

The motor side-mounted direction can be specified. ML and MR represent the left and right, respectively, as viewed from the motor side of the actuator.



**Non-motor end specification**  
Option code: **NM**

Applicable models

## All models

Description

Select this option if you want to change the home position of the actuator slider or rod from the normal position (motor end) to the front end.

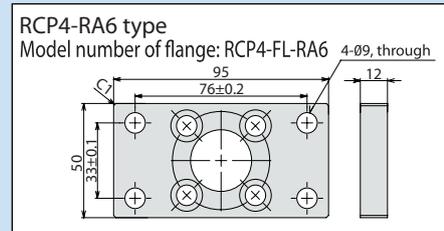
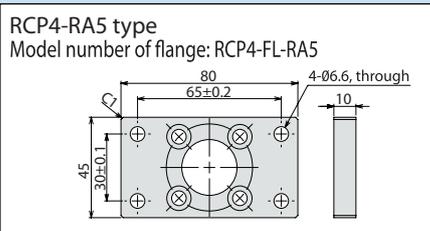
**Flange**  
Option code: **FL**

Applicable models

## RCP4-RA5C/RA6C/RA5R/RA6R

Description

A bracket used to secure a rod actuator from the actuator side. The flange can be purchased separately later on.



**Scraper**  
Option code: **SC**

Applicable models

## RCP4-RA5C/RA6C/RA5R/RA6R

Description

When a rod actuator is used, select this option if you want to prevent dust attached to the rod from entering the actuator.

**Slider roller specification**  
Option code: **SR**

Applicable models

## RCP4-SA5C/SA6C/SA7C/SA5R/SA6R/SA7R

Description

The slider of the standard slider type specification is changed to the same roller structure of the cleanroom specification. When the slider roller specification is selected, the appearance and dimensions of the slider cover become the same as those of the cleanroom specification.

**Vacuum joint on opposite side**  
Option code: **VR**

Applicable models

## RCP4CR-SA5C/SA6C/SA7C

Description

The standard specification is that the vacuum joint is installed on the left side of the actuator as viewed from the motor side. This option changes the vacuum joint position to the right side (opposite side).

# RCP4-RA5C

RoboCylinder, Rod Type, Motor Unit Coupled, Actuator Width 52mm, 24-V Pulse Motor

Model Specification Items	<b>RCP4</b> — <b>RA5C</b> — <b>I</b> — <b>42P</b> — □ — □ — <b>P3</b> — □ — □
	Series — Type — Encoder type — Motor type — Lead — Stroke — Applicable controller — Cable length — Options
	I: Incremental specification    42P: Pulse motor, size 42□    20:20 mm 12:12 mm    6: 6 mm    3: 3 mm
	50: 50mm 400: 400mm (every 50mm)
	P3: PCON-CA MSEP-C
	N: None P: 1 m S: 3 m M: 5 m X□: Specified length R□: Robot cable
	Refer to the options table below.

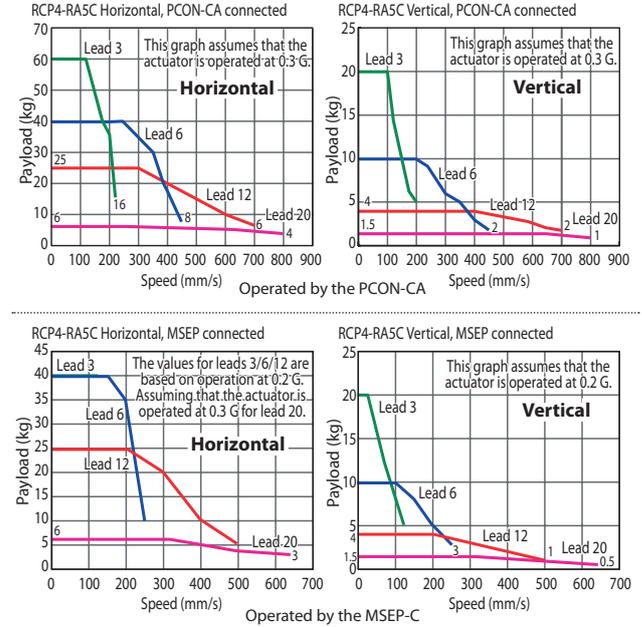
## Built-in guide mechanism



- POINT**  
Notes on selection
- The maximum payload is the value when operated at 0.3G (0.2G with some models) acceleration. The upper limit of acceleration is 1 G (\*). Note that raising the acceleration causes the payload to drop.  
(\*) The specific value varies depending on the connected controller and actuator lead. For details, refer to "Selection References" on P. 37 to 40.
  - Take note that the maximum payload and maximum speed vary depending on the controller connected to the RCP4. (Refer to the actuator specifications below.)
  - All horizontal payloads are values when an external guide is used.

## Correlation Diagrams of Speed and Payload

\* The values of the horizontal specification assume that an external guide is used.



## Actuator Specifications

### Leads and Payloads

Model number	Lead (mm)	Connected controller	Maximum payload		Max. push force (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCP4-RA5C-I-42P-20-①-P3-②-③	20	PCON-CA	6	1.5	56	50~400 (every 50mm)
		MSEP-C	6	1.5 (*)		
RCP4-RA5C-I-42P-12-①-P3-②-③	12	PCON-CA	25	4	93	
		MSEP-C	25 (*)	4 (*)		
RCP4-RA5C-I-42P-6-①-P3-②-③	6	PCON-CA	40	10	185	
		MSEP-C	40 (*)	10 (*)		
RCP4-RA5C-I-42P-3-①-P3-②-③	3	PCON-CA	60	20	370	
		MSEP-C	40 (*)	20 (*)		

Code explanation ① Stroke ② Cable length ③ Options (\*) When operated at 0.2 G

### Stroke and Maximum Speed

Lead (mm)	Connected controller	50~400 (every 50mm)
20	PCON-CA	800
	MSEP-C	640
12	PCON-CA	700
	MSEP-C	500
6	PCON-CA	450
	MSEP-C	250
3	PCON-CA	225
	MSEP-C	125

(unit: mm/s)

## Cable Length

Type	Cable symbol
Standard type	P (1m)
	S (3m)
	M (5m)
Special length	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)

## Options

Name	Option code	See page
Brake	B	P8
Optional cable exit direction (top)	CJT	P8
Optional cable exit direction (right)	CJR	P8
Optional cable exit direction (left)	CJL	P8
Optional cable exit direction (bottom)	CJB	P8
Flange bracket	FL	P8
Non-motor end specification	NM	P8
Scraper	SC	P8

## Actuator Specifications

Item	Description
Drive system	Ball screw $\phi$ 10 mm, rolled C10
Positioning repeatability (*1)	$\pm 0.02$ mm [ $\pm 0.03$ mm]
Lost motion	0.1mm or less
Rod	$\phi$ 22mm stainless steel pipe
Rod non-rotation precision	$\pm 0.1$ deg
Allowable rod load mass	Refer to P. 22 and P. 36
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(\*1) The value at lead 20 is shown in [ ].

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





# RCP4-RA6C

RoboCylinder, Rod Type, Motor Unit Coupled, Actuator Width 61 mm, 24-V Pulse Motor

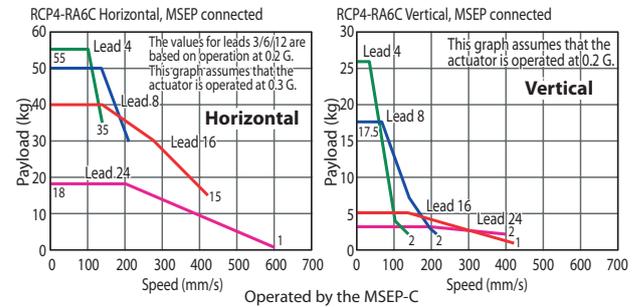
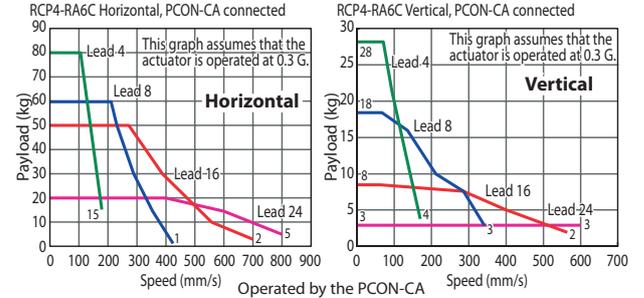
Model Specification Items	<b>RCP4</b> — <b>RA6C</b> — <b>I</b> — <b>56P</b> — <input type="checkbox"/> — <input type="checkbox"/> — <b>P3</b> — <input type="checkbox"/> — <input type="checkbox"/>	Series — Type — Encoder type — Motor type — Lead — Stroke — Applicable controller — Cable length — Options
	I: Incremental specification 56P: Pulse motor, size 56□ 24: 24mm 16: 16mm 8: 8mm 4: 4mm 50: 50mm 500: 500mm (every 50mm) P3: PCON-CA MSEP-C N: None P: 1 m S: 3 m M: 5 m X□□: Specified length R□□: Robot cable	Refer to the options table below.

## Built-in guide mechanism



## Correlation Diagrams of Speed and Payload

\* The values of the horizontal specification assume that an external guide is used.



- POINT**  
Notes on selection
- The maximum payload is the value when operated at 0.3G (0.2G with some models) acceleration. The upper limit of acceleration is 1 G (\*). Note that raising the acceleration causes the payload to drop.  
(\* The specific value varies depending on the connected controller and actuator lead. For details, refer to "Selection References" on P. 37 to 40.
  - Take note that the maximum payload and maximum speed vary depending on the controller connected to the RCP4. (Refer to the actuator specifications below.)
  - All horizontal payloads are values when an external guide is used.

## Actuator Specifications

### Leads and Payloads

Model number	Lead (mm)	Connected controller	Maximum payload		Max. push force (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCP4-RA6C-I-56P-24-①-P3-②-③	24	PCON-CA	20	3	182	50~500 (every 50mm)
		MSEP-C	18	3 (*)		
RCP4-RA6C-I-56P-16-①-P3-②-③	16	PCON-CA	50	8	273	
		MSEP-C	40 (*)	5 (*)		
RCP4-RA6C-I-56P-8-①-P3-②-③	8	PCON-CA	60	18	547	
		MSEP-C	50 (*)	17.5 (*)		
RCP4-RA6C-I-56P-4-①-P3-②-③	4	PCON-CA	80	28	1094	
		MSEP-C	55 (*)	26 (*)		

Code explanation ① Stroke ② Cable length ③ Options (\*) When operated at 0.2 G

### Stroke and Maximum Speed

Lead (mm)	Connected controller	50~500 (every 50mm)
24	PCON-CA	800<600>
	MSEP-C	600<400>
16	PCON-CA	700<560>
	MSEP-C	420
8	PCON-CA	420
	MSEP-C	210
4	PCON-CA	210
	MSEP-C	140

The values in <> apply when the actuator is used vertically. (unit: mm/s)

## Cable Length

Type	Cable symbol
Standard type	P (1m)
	S (3m)
	M (5m)
Special length	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)

## Options

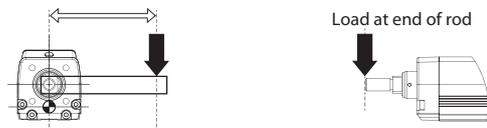
Name	Option code	See page
Brake	B	P8
Optional cable exit direction (top)	CJT	P8
Optional cable exit direction (right)	CJR	P8
Optional cable exit direction (left)	CJL	P8
Optional cable exit direction (bottom)	CJB	P8
Flange bracket	FL	P8
Non-motor end specification	NM	P8
Scraper	SC	P8

## Actuator Specifications

Item	Description
Drive system	Ball screw $\phi$ 12 mm, rolled C10
Positioning repeatability (*1)	$\pm 0.02$ mm [ $\pm 0.03$ mm]
Lost motion	0.1mm or less
Rod	$\phi$ 25mm stainless steel pipe
Rod non-rotation precision	$\pm 0.1$ deg
Allowable rod load mass	Refer to P. 24 and P. 36
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(\*1) The value at lead 24 is shown in [ ].

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





# RCP4-RA5R

RoboCylinder, Rod Type, Side-mounted Motor Type, Actuator Width 52mm, 24-V Pulse Motor

Model Specification Items	<b>RCP4</b>	<b>RA5R</b>	<b>I</b>	<b>42P</b>	<input type="checkbox"/>	<input type="checkbox"/>	<b>P3</b>	<input type="checkbox"/>	<input type="checkbox"/>
	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
			I: Incremental specification	42P: Pulse motor, size 42□	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm 400: 400mm (every 50mm)	P3: PCON-CA MSEP-C	N: None P: 1 m S: 3 m M: 5 m X□□: Specified length R□□: Robot cable	Refer to the options table below. * Be sure to specify either "ML" or "MR" as the motor side-mounted direction.

## Built-in guide mechanism

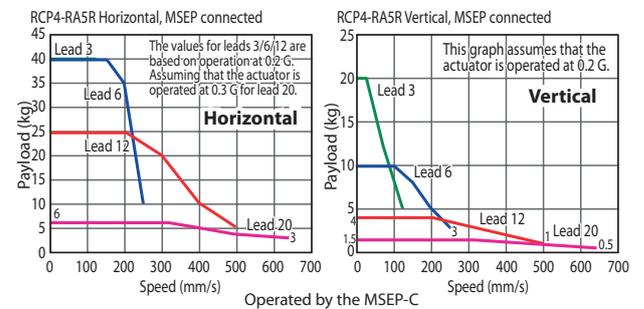
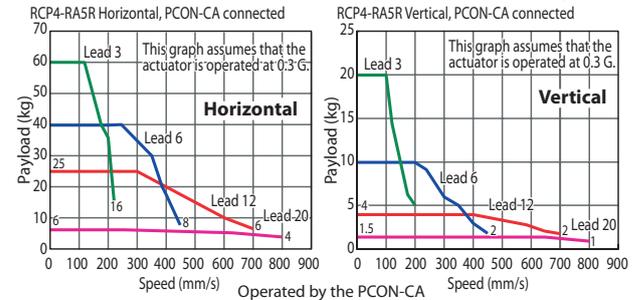


The "Motor side-mounted to the left (ML)" option is selected for the actuator shown above.

- POINT**  
Notes on selection
- The maximum payload is the value when operated at 0.3G (0.2G with some models) acceleration. The upper limit of acceleration is 1 G (\*). Note that raising the acceleration causes the payload to drop.  
(\* The specific value varies depending on the connected controller and actuator lead. For details, refer to "Selection References" on P. 37 to 40.)
  - Take note that the maximum payload and maximum speed vary depending on the controller connected to the RCP4. (Refer to the actuator specifications below.)
  - All horizontal payloads are values when an external guide is used.

## Correlation Diagrams of Speed and Payload

\* The values of the horizontal specification assume that an external guide is used.



## Actuator Specifications

### Leads and Payloads

Model number	Lead (mm)	Connected controller	Maximum payload		Max. push force (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCP4-RA5R-I-42P-20-①-P3-②-③	20	PCON-CA	6	1.5	56	50~400 (every 50mm)
		MSEP-C	6	1.5 (*)		
RCP4-RA5R-I-42P-12-①-P3-②-③	12	PCON-CA	25	4	93	
		MSEP-C	25 (*)	4 (*)		
RCP4-RA5R-I-42P-6-①-P3-②-③	6	PCON-CA	40	10	185	
		MSEP-C	40 (*)	10 (*)		
RCP4-RA5R-I-42P-3-①-P3-②-③	3	PCON-CA	60	20	370	
		MSEP-C	40 (*)	20 (*)		

Code explanation ① Stroke ② Cable length ③ Options (\*) When operated at 0.2 G

### Stroke and Maximum Speed

Lead (mm)	Connected controller	50~400 (every 50mm)
20	PCON-CA	800
	MSEP-C	640
12	PCON-CA	700
	MSEP-C	500
6	PCON-CA	450
	MSEP-C	250
3	PCON-CA	225
	MSEP-C	125

(unit: mm/s)

## Cable Length

Type	Cable symbol
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)

## Options

Name	Option code	See page
Brake	B	P8
Optional cable exit direction (top)	CJT	P8
Optional cable exit direction (outside)	CJO	P8
Optional cable exit direction (bottom)	CJB	P8
Flange bracket	FL	P8
Motor side-mounted to the left (standard)	ML	P8
Motor side-mounted to the right	MR	P8
Non-motor end specification	NM	P8
Scraper	SC	P8

## Actuator Specifications

Item	Description
Drive system	Ball screw $\phi$ 10 mm, rolled C10
Positioning repeatability (*1)	$\pm 0.02$ mm [ $\pm 0.03$ mm]
Lost motion	0.1 mm or less
Rod	$\phi$ 22mm stainless steel pipe
Rod non-rotation precision	$\pm 0.1$ deg
Allowable rod load mass	Refer to P. 26 and P. 36
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(\*1) The value at lead 20 is shown in [ ].

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





# RCP4-RA6R

RoboCylinder, Rod Type, Side-mounted Motor Type, Actuator Width 61 mm, 24-V Pulse Motor

Model Specification Items	<b>RCP4</b>	<b>RA6R</b>	<b>I</b>	<b>56P</b>	<input type="checkbox"/>	<input type="checkbox"/>	<b>P3</b>	<input type="checkbox"/>	<input type="checkbox"/>
	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
			I: Incremental specification	56P: Pulse motor, size 56□	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm 500: 500mm (every 50mm)	P3: PCON-CA MSEP-C	N: None P: 1 m S: 3 m M: 5 m X□□: Specified length R□□: Robot cable	Refer to the options table below. * Be sure to specify either "ML" or "MR" as the motor side-mounted direction.

## Built-in guide mechanism

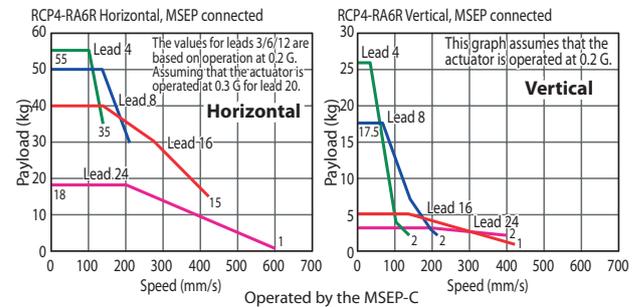
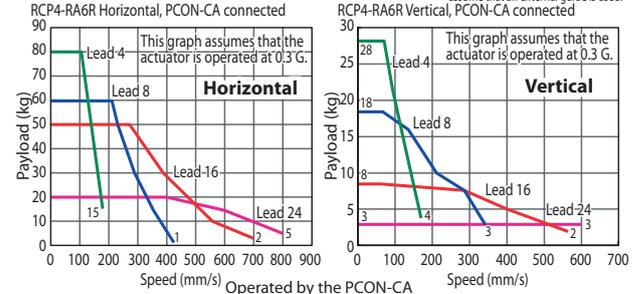


The "Motor side-mounted to the left (ML)" option is selected for the actuator shown above.

- POINT**  
Notes on selection
- The maximum payload is the value when operated at 0.3G (0.2G with some models) acceleration. The upper limit of acceleration is 1 G (\*). Note that raising the acceleration causes the payload to drop.  
(\*): The specific value varies depending on the connected controller and actuator lead. For details, refer to "Selection References" on P. 37 to 40.
  - Take note that the maximum payload and maximum speed vary depending on the controller connected to the RCP4. (Refer to the actuator specifications below.)
  - All horizontal payloads are values when an external guide is used.

## Correlation Diagrams of Speed and Payload

\* The values of the horizontal specification assume that an external guide is used.



## Actuator Specifications

### Leads and Payloads

Model number	Lead (mm)	Connected controller	Maximum payload		Max. push force (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCP4-RA6R-I-56P-24-①-P3-②-③	24	PCON-CA	20	3	182	50~500 (every 50mm)
		MSEP-C	18	3 (*)		
RCP4-RA6R-I-56P-16-①-P3-②-③	16	PCON-CA	50	8	273	
		MSEP-C	40 (*)	5 (*)		
RCP4-RA6R-I-56P-8-①-P3-②-③	8	PCON-CA	60	18	547	
		MSEP-C	50 (*)	17.5 (*)		
RCP4-RA6R-I-56P-4-①-P3-②-③	4	PCON-CA	80	28	1094	
		MSEP-C	55 (*)	26 (*)		

Code explanation ① Stroke ② Cable length ③ Options (\*) When operated at 0.2 G

### Stroke and Maximum Speed

Lead (mm)	Connected controller	50~500 (every 50mm)
24	PCON-CA	800<600>
	MSEP-C	600<400>
16	PCON-CA	560
	MSEP-C	420
8	PCON-CA	420<350>
	MSEP-C	210
4	PCON-CA	175
	MSEP-C	140

The values in <> apply when the actuator is used vertically. (unit: mm/s)

## Cable Length

Type	Cable symbol
Standard type	P (1m)
	S (3m)
	M (5m)
Special length	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)

## Options

Name	Option code	See page
Brake	B	P8
Optional cable exit direction (top)	CJT	P8
Optional cable exit direction (outside)	CJO	P8
Optional cable exit direction (bottom)	CJB	P8
Flange bracket	FL	P8
Motor side-mounted to the left (standard)	ML	P8
Motor side-mounted to the right	MR	P8
Non-motor end specification	NM	P8
Scraper	SC	P8

## Actuator Specifications

Item	Description
Drive system	Ball screw $\phi$ 12 mm, rolled C10
Positioning repeatability (*1)	$\pm 0.02$ mm [ $\pm 0.03$ mm]
Lost motion	0.1 mm or less
Rod	$\phi$ 25mm stainless steel pipe
Rod non-rotation precision	$\pm 0.1$ deg
Allowable rod load mass	Refer to P. 28 and P. 36
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(\*1) The value at lead 24 is shown in [ ].

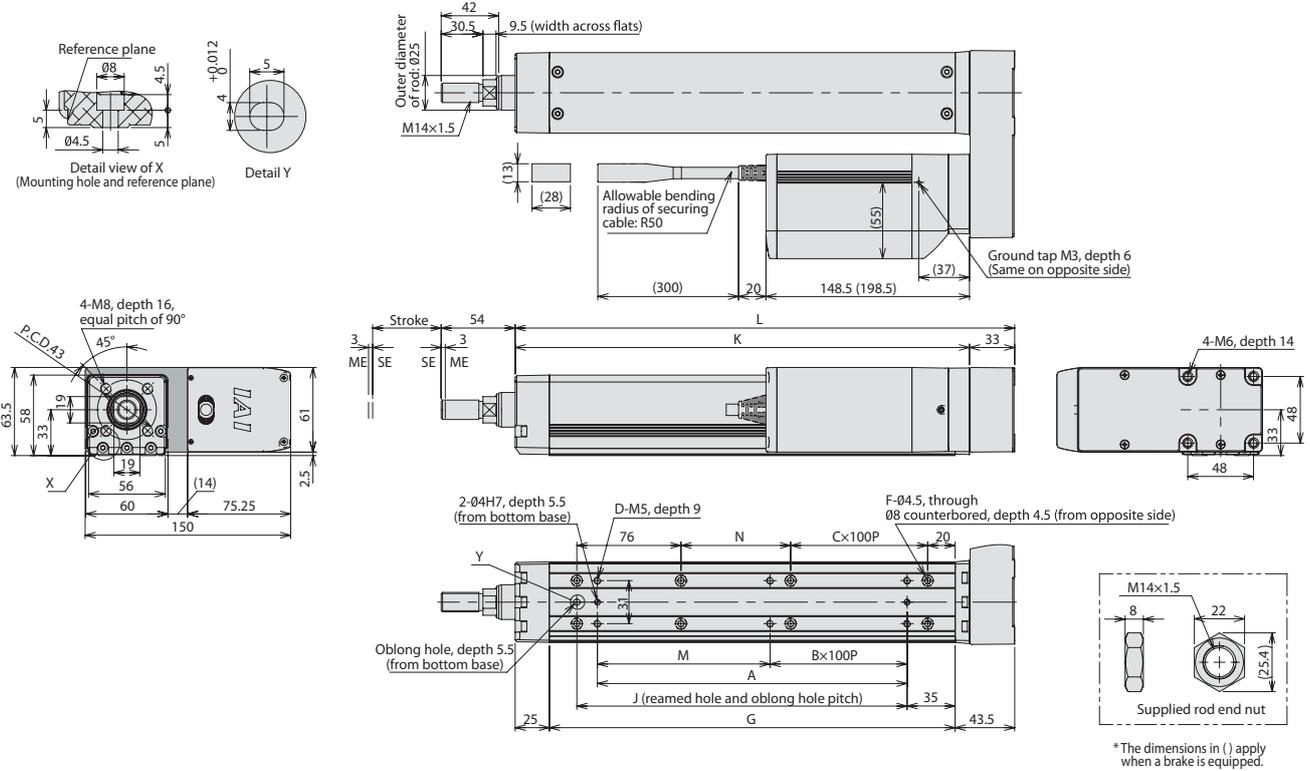
Offset distance at end of rod (100mm or less)



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



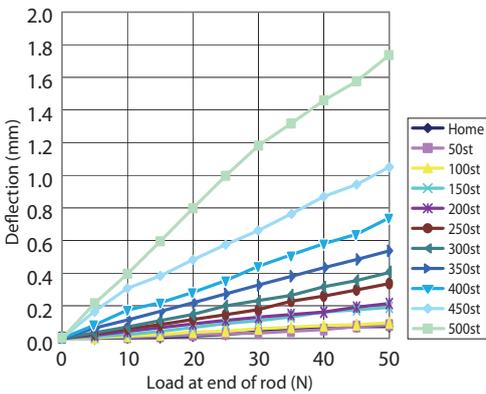
- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- \*3 The direction of width across flats varies depending on the product.
- \*4 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.  
(For details, refer to "Notes on Installing Rod Actuators" on P. 35.)



\* The dimensions in ( ) apply when a brake is equipped.

**■ Rod Deflection of RCP4-RA6R (Reference Values)**

(The graph below plots deflection as measured by installing the actuator vertically and applying a radial force to the rod from one side.)



**■ Dimensions and Mass by Stroke**

Stroke	50	100	150	200	250	300	350	400	450	500		
L	214.5	264.5	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5		
A	76	126	176	226	276	326	376	426	476	526		
B	0	0	1	1	2	2	3	3	4	4		
C	0	0	0	1	1	2	2	3	3	4		
D	4	4	6	6	8	8	10	10	12	12		
F	6	6	6	8	8	10	10	12	12	14		
G	146	196	246	296	346	396	446	496	546	596		
J	91	141	191	241	291	341	391	441	491	541		
K	181.5	231.5	281.5	331.5	381.5	431.5	481.5	531.5	581.5	631.5		
M	76	126	176	226	276	326	376	426	476	526		
N	30	80	130	80	130	80	130	80	130	80		
Allowable static load at end of rod (N)	112.7	91.5	76.7	65.7	57.2	50.4	44.8	40.2	36.2	32.7		
Allowable dynamic load at end of rod (N)	49.0	37.4	29.9	24.5	20.4	17.1	14.5	12.3	10.3	8.6		
Load offset 0mm	38.7	31.0	25.5	21.4	18.1	15.4	13.2	11.2	9.5	8.0		
Load offset 100mm	11.4	9.3	7.9	6.8	6.0	5.4	4.9	4.5	4.1	3.8		
Allowable static torque at end of rod (N·m)	3.9	3.1	2.5	2.1	1.8	1.5	1.3	1.1	1.0	0.8		
Mass (kg)	Without brake		3.9	4.2	4.5	4.8	5.1	5.5	5.8	6.1	6.4	6.8
	With brake		4.4	4.7	5.0	5.3	5.6	6.0	6.3	6.6	6.9	7.3

**Applicable Controller**

RCP4 series actuators can be operated with the controller indicated below. Select the type according to your intended application.

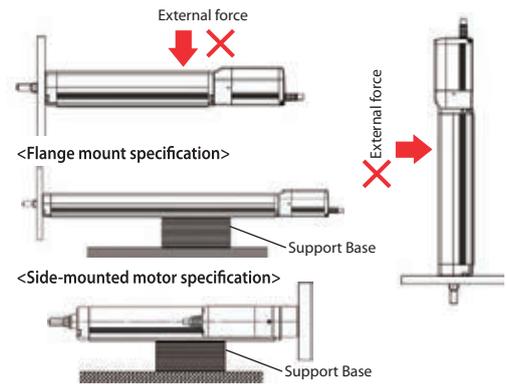
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Reference page
Positioner type		PCON-CA-56PI-NP-□-0-□	Equipped with a high-output driver	512 points	DC24V	Refer to P. 48	Refer to P. 41
Pulse-train type		PCON-CA-56PI-PN-□-0-□	Positioner type based on PIO control				
Field network type		PCON-CA-56PI-PLN-□-0-□	Equipped with a high-output driver	768 points	DC24V	Refer to the MSEP catalog.	Refer to the MSEP catalog.
Positioner multi-axis specification PIO type		PCON-CA-56PI-PLP-□-0-□	Pulse-train input type				
Positioner multi-axis specification Network type		PCON-CA-56PI-△-0-0-□	Equipped with a high-output driver	3 points	DC24V	Refer to the MSEP catalog.	Refer to the MSEP catalog.
Positioner multi-axis specification PIO type		MSEP-C-□-~-NP-□-0-□	Positioner type based on PIO control, allowing up to 8 axes to be connected (high-output driver not supported)				
Positioner multi-axis specification Network type	MSEP-C-□-~-PN-□-0-□	Field network-ready positioner type, allowing up to 8 axes to be connected (high-output driver not supported)	256 points				

\* In the model numbers shown above, △ indicates the field network specification (DV, CC, PR, CN, ML, EC, EP or PT).

## Notes on Installing Rod Actuators

When installing the actuator using the front housing or with a flange (optional), make sure the actuator will not receive external forces. (External forces may cause malfunction or damaged parts.) If the actuator will receive external forces or when the actuator is combined with a Cartesian robot, etc., use the mounting holes on the actuator base to secure the actuator.

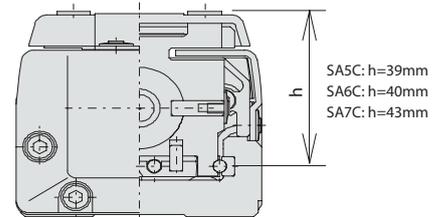
Even when the actuator does not receive any external force, provide a support base to support the actuator, as shown in the figure on the right, if the actuator is installed horizontally and secured using a flange or through the bracket mounting holes of the side-mounted motor specification.



## Selection Guideline (Correlation Diagram of Push Force and Current-limiting Value)

In push-motion operation, the push force can be used by changing the current-limiting value of the controller over a range of 20% to 70%. The maximum push-force varies depending on the model, so check the required push force from the table below and select an appropriate type meeting the purpose of use.

When performing push-motion operation using a slider actuator, limit the push current so that the reactive force moment generated by the push force will not exceed 80% of the rated moment ( $M_a$ ,  $M_b$ ) specified in the catalog. To help with the moment calculations, the application position of the guide moment is shown in the figure below. Calculate the necessary moment by considering the offset of the push force application position.

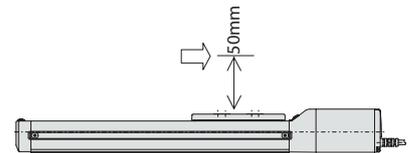


Note that if an excessive force exceeding the rated moment is applied, the guide may be damaged and the life may become shorter. Accordingly, include a sufficient safety factor when deciding on the push force.

Calculation example:

If push-motion operation is performed with a RCP4-SA7C by applying 100 N at the position shown to the right, the moment received by the guide, or  $M_a$ , is calculated as  $(43 + 50) \times 100 = 9300 \text{ (N}\cdot\text{mm)} = 9.3 \text{ (N}\cdot\text{m)}$ .

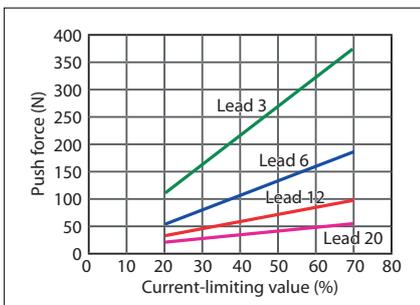
Since the rated moment  $M_a$  of the SA7C is 13.9 (N·m),  $13.9 \times 0.8 = 11.12 > 9.3$ , suggesting that this selection is acceptable. If a  $M_b$  moment generates due to push-motion operation, calculate the moment from the overhang and confirm, in the same way, that the calculated moment is within 80% of the rated moment.



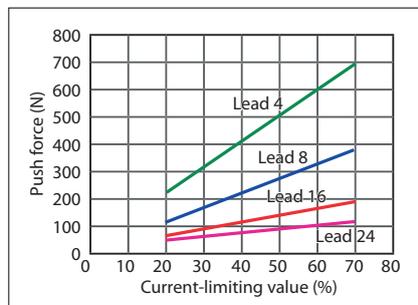
### Correlation Diagrams of Push Force and Current-limiting value

The table below is only a reference, and the graphs may vary slightly from the actual values.

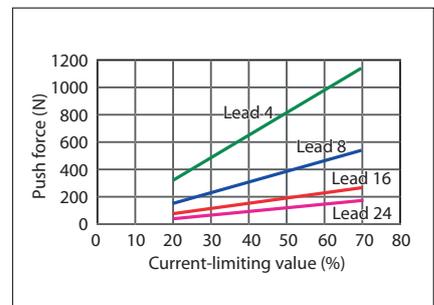
#### SA5C/SA6C/RA5C type



#### SA7C type



#### RA6C type



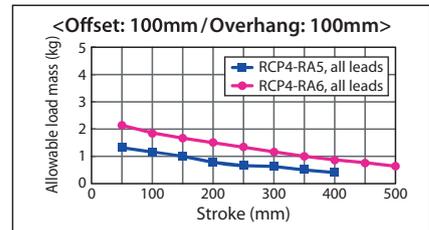
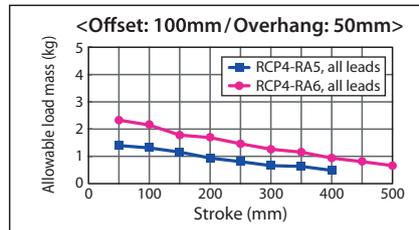
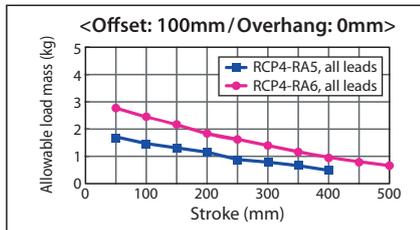
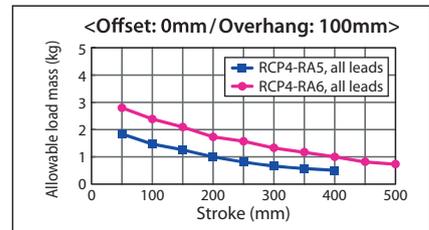
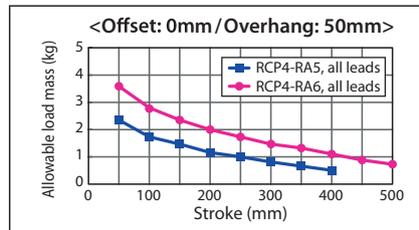
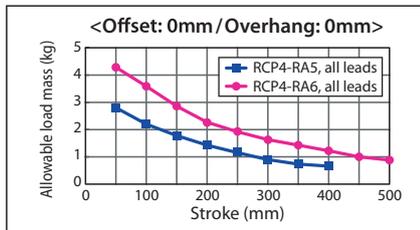
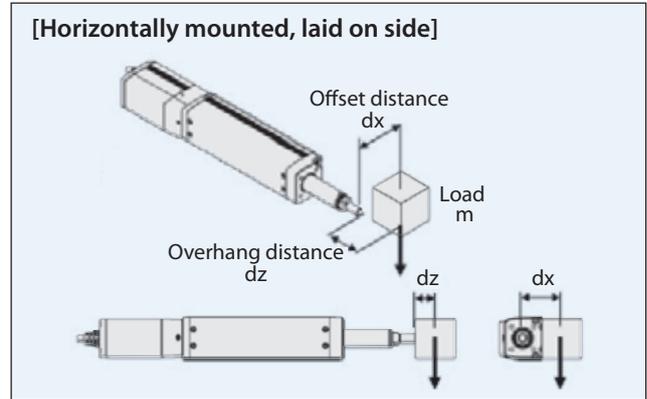
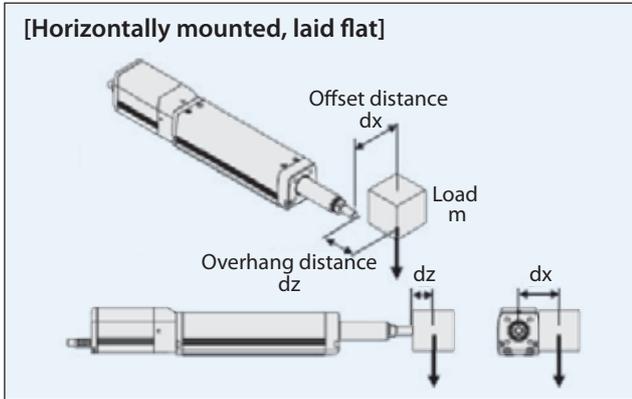
#### Notes on Use

- The relationship of push force and current-limiting value is only a reference, and the graphs may vary slightly from the actual values.
- If the current-limiting value is less than 20%, the push force may vary. Make sure the current-limiting value remains 20% or more.
- The graphs assume a traveling speed of 20 mm/s during push-motion operation.

## Selection References (Guide for Selecting Allowable Load for Radial Cylinder)

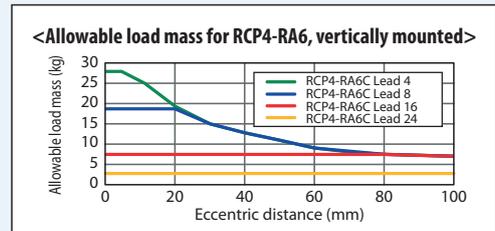
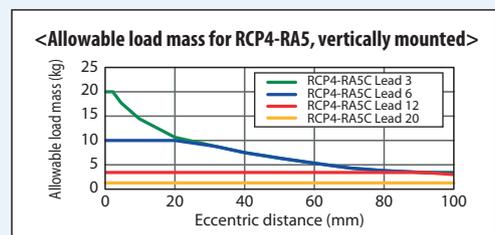
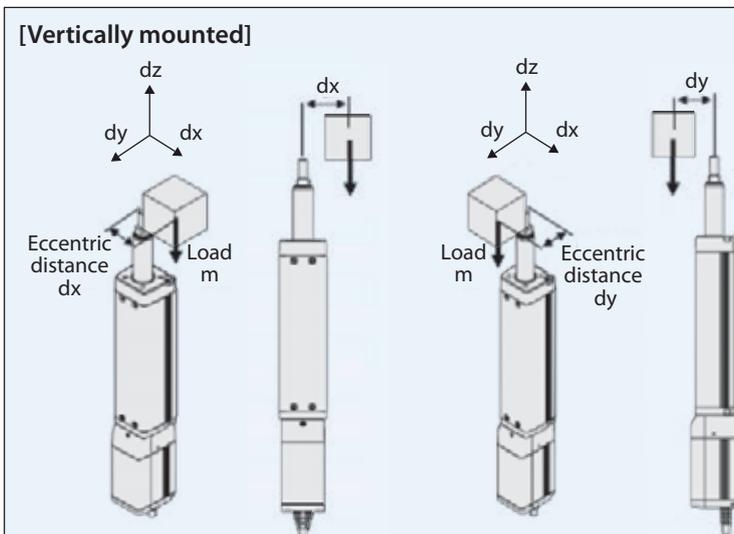
The radial cylinder has a built-in guide, so loads up to a certain level can be applied to the rod without using an external guide. Refer to the graphs below for the allowable load mass. If the allowable load will be exceeded under the required operating conditions, add an external guide.

### ■ Allowable load mass for RCP4-RA5□/6□, horizontally mounted



Allowable load calculation conditions  
Load mass corresponding to a guide traveling life of 5000 km, considering moments generated by acceleration/deceleration. (Acceleration: 1 G / Speed: 500 mm/s)

### ■ Allowable load mass for RCP4-RA5□/6□, vertically mounted



Allowable load calculation conditions  
Load mass corresponding to a guide traveling life of 5000 km, considering moments generated by acceleration/deceleration. (Acceleration: 0.5 G / Speed: 500 mm/s)

# Selection Guideline (Table of RCP4 Payload by Speed/Acceleration)

The tables on P. 37 to P. 40 show payloads by acceleration and speed. Since the payload drops as the acceleration and speed increase, select from the tables and use a model that meets the required conditions. The applicable payload table varies depending on the actuator model and connected controller, so select and check the table for the model you will be using.



**1 RCP4 motor coupling specification + PCON-CA** \*The same tables apply when the RCP4CR is used.

**RCP4-RA5C, Lead 20**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	6	6	6	5	5	1.5	1.5	1.5
160	6	6	6	5	5	1.5	1.5	1.5
320	6	6	6	5	3	1.5	1.5	1.5
480	6	6	6	5	3	1.5	1.5	1.5
640	6	4	3	2		1.5	1.5	
800		4	3				1	1

(Unit: kg)

**RCP4-RA5C, Lead 12**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	25	25	18	16	12	4	4	4
100	25	25	18	16	12	4	4	4
200	25	25	18	16	10	4	4	4
300	25	25	18	12	8	4	4	4
400	20	20	14	10	6	4	4	4
500	15	15	8	6	4	4	3.5	3
600	10	10	6	3	2	4	3	2
700		6	2				2	1

(Unit: kg)

**RCP4-RA5C, Lead 6**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	40	40	35	30	25	10	10	10
50	40	40	35	30	25	10	10	10
100	40	40	35	30	25	10	10	10
150	40	40	35	25	25	10	10	10
200	40	40	30	25	20	10	10	10
250	40	40	27.5	22.5	18	10	9	8
300	40	35	25	20	14	6	6	6
350	40	30	14	12	10	5	5	5
400	30	18	10	6	5	4	3	3
450	25	8	3			2	2	1

(Unit: kg)

**RCP4-RA5C, Lead 3**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	60	60	50	45	40	20	20	20
25	60	60	50	45	40	20	20	20
50	60	60	50	45	40	20	20	20
75	60	60	50	45	40	20	20	20
100	60	60	50	45	40	20	20	20
125	60	60	50	40	30	18	14	10
150	60	50	40	30	25	14	10	6
175	60	40	35	25	20	12	6	5
200	60	35	30	20	14	8	5	4.5
225	40	16	16	10	6	5	5	4

(Unit: kg)

**RCP4-RA6C, Lead 24**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	20	20	18	15	12	3	3	3
200	20	20	18	15	12	3	3	3
400	20	20	18	15	10	3	3	3
600	15	14	9	7	4	3	3	2
800		5	1	1				

(Unit: kg)

**RCP4-RA6C, Lead 16**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	50	50	40	35	30	8	8	8
140	50	50	40	35	30	8	8	8
280	50	50	35	25	20	8	7	7
420	50	25	18	14	10	6	4.5	4
560	12	10	5	3	2	4	2	1
700	3	2						

(Unit: kg)

**RCP4-RA6C, Lead 8**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	60	60	50	45	40	18	18	18
70	60	60	50	45	40	18	18	18
140	60	60	50	45	40	16	16	12
210	60	60	40	31	26	10	10	9
280	60	34	22	15	11	8	7	6
350	60	14	5	1		3	3	2
420	15	1				2		

(Unit: kg)

**RCP4-RA6C, Lead 4**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	80	80	70	65	60	28	28	28
35	80	80	70	65	60	28	28	28
70	80	80	70	65	60	28	28	28
105	80	80	60	50	40	22	20	18
140	80	50	30	20	15	16	12	10
175	50	15				9	4	
210	20					2		

(Unit: kg)

**2 RCP4 motor coupled specification + MSEP-C** \*The same tables apply when the RCP4CR is used.



**RCP4-RA5C, Lead 20**

Orientation	Horizontal					Vertical	
	Acceleration (G)						
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3
0	6					1.5	
160	6					1.5	
320	6					1.5	
480	4					1	
640	3					0.5	

(Unit: kg)

**RCP4-RA5C, Lead 12**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3	
0	25					4		
100	25					4		
200	25					4		
300	20					3		
400	10					2		
500	5					1		

(Unit: kg)

**RCP4-RA5C, Lead 6**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3	
0	40					10		
50	40					10		
100	40					10		
150	40					8		
200	35					5		
250	10					3		

(Unit: kg)

**RCP4-RA5C, Lead 3**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3	
0	40					20		
25	40					20		
50	40					16		
75	40					12		
100	40					9		
125	40					5		

(Unit: kg)

**RCP4-RA6C, Lead 24**

Orientation	Horizontal					Vertical	
	Acceleration (G)						
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3
0	18					3	
200	18					3	
400	10					2	
600	1						

(Unit: kg)

**RCP4-RA6C, Lead 16**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3	
0	40					5		
140	40					5		
280	30					3		
420	15					1		

(Unit: kg)

**RCP4-RA6C, Lead 8**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3	
0	50					17.5		
70	50					17.5		
140	50					7		
210	30					2		

(Unit: kg)

**RCP4-RA6C, Lead 4**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3	
0	55					26		
35	55					26		
70	55					15		
105	55					4		
140	35					2		

(Unit: kg)

**Find the RCP4-RA3 series at the back of this catalogue**

# Selection Guideline (Table of RCP4 Payload by Speed/Acceleration)

## 3 RCP4 side-mounted motor specification + PCON-CA



**RCP4-RA5R, Lead 20**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	6	6	6	5	5	1.5	1.5	1.5
160	6	6	6	5	5	1.5	1.5	1.5
320	6	6	6	5	3	1.5	1.5	1.5
480	6	6	6	5	3	1.5	1.5	1.5
640	6	4	3	2		1.5	1.5	
800		4	3				1	1

(Unit: kg)

**RCP4-RA5R, Lead 12**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	25	25	18	16	12	4	4	4
100	25	25	18	16	12	4	4	4
200	25	25	18	16	10	4	4	4
300	25	25	18	12	8	4	4	4
400	20	20	14	10	6	4	4	4
500	15	15	8	6	4	4	3.5	3
600	10	10	6	3	2	4	3	2
700		6	2				2	1

(Unit: kg)

**RCP4-RA5R, Lead 6**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	40	40	35	30	25	10	10	10
50	40	40	35	30	25	10	10	10
100	40	40	35	30	25	10	10	10
150	40	40	35	25	25	10	10	10
200	40	40	30	25	20	10	10	10
250	40	40	27.5	22.5	18	10	9	8
300	40	35	25	20	14	6	6	6
350	40	30	14	12	10	5	5	5
400	30	18	10	6	5	4	3	3
450	25	8	3			2	2	1

(Unit: kg)

**RCP4-RA5R, Lead 3**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	60	60	50	45	40	20	20	20
25	60	60	50	45	40	20	20	20
50	60	60	50	45	40	20	20	20
75	60	60	50	45	40	20	20	20
100	60	60	50	45	40	20	20	20
125	60	60	50	40	30	18	14	10
150	60	50	40	30	25	14	10	6
175	60	40	35	25	20	12	6	5
200	60	35	30	20	14	8	5	4.5
225	40	16	16	10	6	5	5	4

(Unit: kg)

**RCP4-RA6R, Lead 24**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	20	20	18	15	12	3	3	3
200	20	20	18	15	12	3	3	3
400	20	20	18	15	10	3	3	3
600	15	14	9	7	4	3	3	2
800		3	1					

(Unit: kg)

**RCP4-RA6R, Lead 16**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	50	50	40	35	30	8	8	8
140	50	50	40	35	30	8	8	8
280	50	50	35	25	20	8	7	7
420	50	25	18	14	10	4.5	4.5	4
560	12	10	5	3	2	2	1	1

(Unit: kg)

**RCP4-RA6R, Lead 8**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	60	60	50	45	40	18	18	18
70	60	60	50	45	40	18	18	18
140	60	60	50	45	40	16	16	12
210	60	60	40	31	26	10	10	9
280	60	26	16	10	8	8	5	3
350	30	3				3	1	
420	2							

(Unit: kg)

**RCP4-RA6R, Lead 4**

Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	80	80	70	65	60	28	28	28
35	80	80	70	65	60	28	28	28
70	80	80	70	65	60	28	28	28
105	80	80	60	50	40	22	20	18
140	80	50	10	6	6	13	8	3
175	40	5				4		

(Unit: kg)

**Find the RCP4-RA3 series at the back of this catalogue**

4 RCP4 side-mounted motor specification + MSEP-C



**RCP4-RA5R, Lead 20**

Orientation	Horizontal						Vertical	
	Acceleration (G)							
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2		
0	6						1.5	
160	6						1.5	
320	6						1.5	
480	4						1	
640	3						0.5	

(Unit: kg)

**RCP4-RA5R, Lead 12**

Orientation	Horizontal						Vertical		
	Acceleration (G)								
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3		
0	25						4		
100	25						4		
200	25						4		
300	20						3		
400	10						2		
500	5						1		

(Unit: kg)

**RCP4-RA5R, Lead 6**

Orientation	Horizontal						Vertical	
	Acceleration (G)							
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3	
0	40						10	
50	40						10	
100	40						10	
150	40						8	
200	35						5	
250	10						3	

(Unit: kg)

**RCP4-RA5R, Lead 3**

Orientation	Horizontal						Vertical		
	Acceleration (G)								
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3		
0	40						20		
25	40						20		
50	40						16		
75	40						12		
100	40						9		
125	40						5		

(Unit: kg)

**RCP4-RA6R, Lead 24**

Orientation	Horizontal						Vertical	
	Acceleration (G)							
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2		
0	18						3	
200	18						3	
400	10						2	
600	1							

(Unit: kg)

**RCP4-RA6R, Lead 16**

Orientation	Horizontal						Vertical		
	Acceleration (G)								
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3		
0	40						5		
140	40						5		
280	30						3		
420	6						0.5		

(Unit: kg)

**RCP4-RA6R, Lead 8**

Orientation	Horizontal						Vertical	
	Acceleration (G)							
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3	
0	50						17.5	
70	50						17.5	
140	50						7	
210	30						2	

(Unit: kg)

**RCP4-RA6R, Lead 4**

Orientation	Horizontal						Vertical		
	Acceleration (G)								
Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3		
0	55						26		
35	55						26		
70	55						15		
105	55						4		
140	5						0.5		

(Unit: kg)

**Find the RCP4-RA3 series at the back of this catalogue**

# PCON-CA

Positioner / Field network / Pulse-train Type Controller with High-output Driver for RCP4 <PowerCon 150>



## 1

### Built-in high-output driver designed exclusively for RCP4 generates greater torque at high speed

The newly developed high-output driver (patent pending) achieves significantly improved specifications compared to conventional models (RCP2 series), with the acceleration/deceleration higher by 1.4 times, maximum speed by 1.5 times, and payload twice as large.

(\*) The rates of improvement vary depending on the type.

Acceleration/ deceleration	RCP2	0.7G	1.4 times
	RCP4	1.0G	
Maximum speed	RCP2	1000mm/s	1.5 times
	RCP4	1440mm/s	
Payload	RCP2	6kg	2 times
	RCP4	12kg	

## 2

### DeviceNet, CC-Link, PROFIBUS-DP, CompoNet, MECHATROLINK (I, II), EtherCAT, EtherNet/IP, PROFINET are supported

Features include wire-saving design, as well as the abilities to support direct numerical specification, position number specification, current position read, etc.

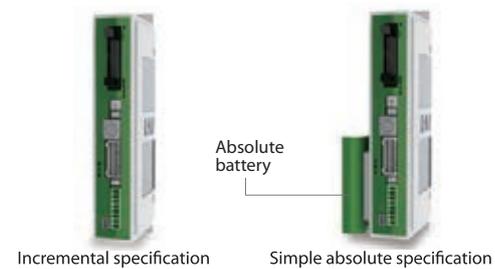


## 3

### Incremental specification and simple absolute specification to choose from

You can choose one of the two types: the incremental specification and the simple absolute specification. The simple absolute specification is available in three types, including the specification having only the absolute battery attached on the side face of the actuator, specification equipped with the absolute battery unit where screw stopper/DIN rail mounting is possible, and controller-only specification without absolute battery.

(Note) All pulse-train PowerCon controllers are of the incremental specification.

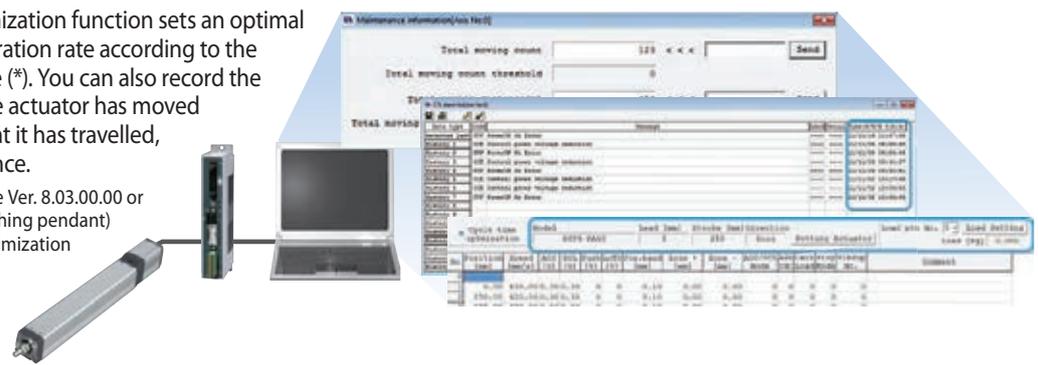


## 4

### Smart tuning function, maintenance information, calendar function

The takt time minimization function sets an optimal acceleration/deceleration rate according to the load that is available (\*). You can also record the number of times the actuator has moved and the distance that it has travelled, for use in maintenance.

(\*) You need PC software Ver. 8.03.00.00 or later or a CON-PTA (teaching pendant) to use the takt time minimization function.



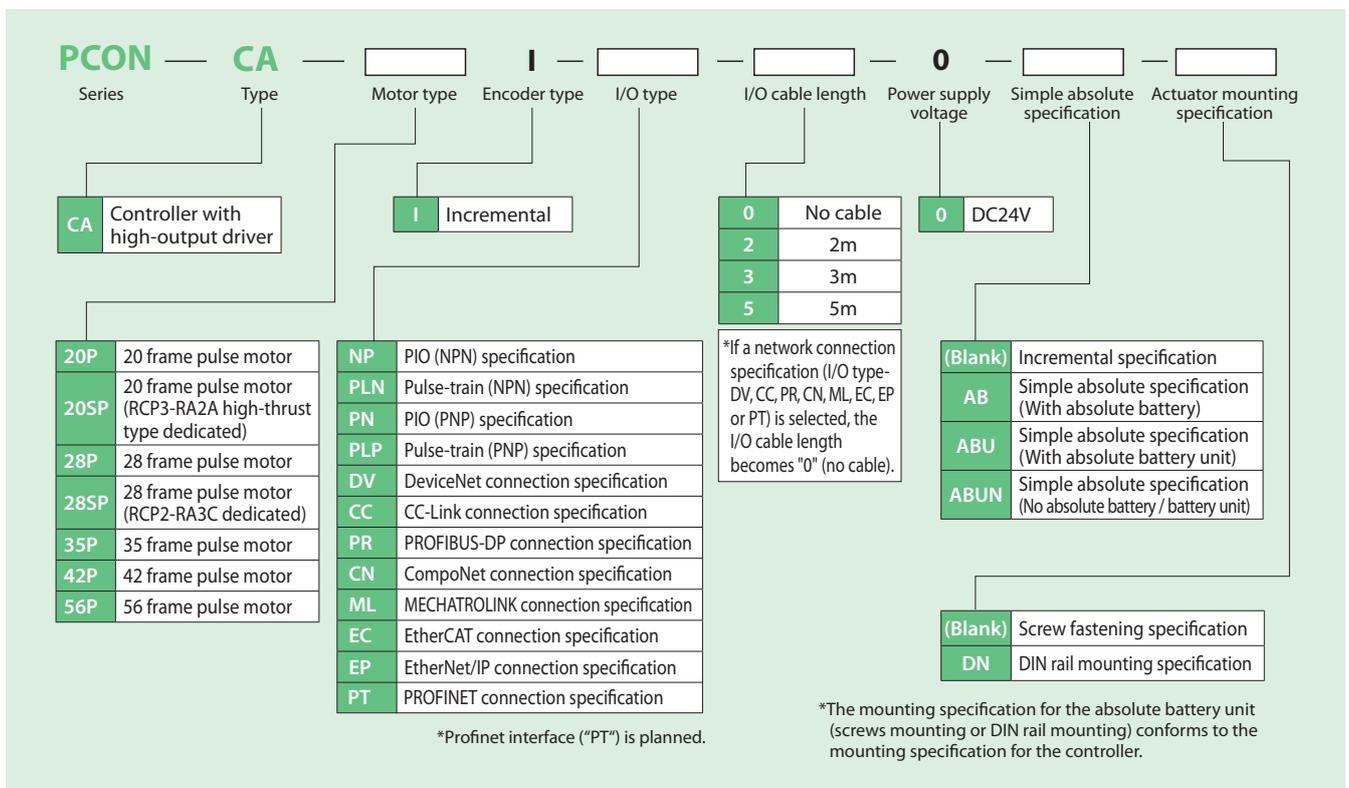
List of Models

RoboCylinder Position Controller PowerCon 150 <PCON-CA>

External view										
I/O type		Positioner type	Pulse-train type	Field network type (*)						
I/O type model number		NP/PN	PLN/PLP	DV	CC	PR	CN	ML	EC	EP
Incremental specification		○	○	○	○	○	○	○	○	○
Simple absolute specification	With absolute battery	○	—	○	○	○	○	○	○	○
	With absolute battery unit	○	—	○	○	○	○	○	○	○
	No absolute battery	○	—	○	○	○	○	○	○	○

(\*) PROFINET connection specification is planned.

Model Number

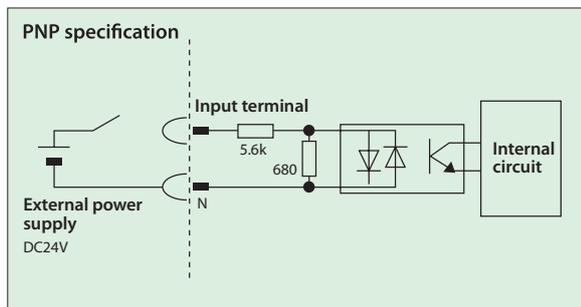
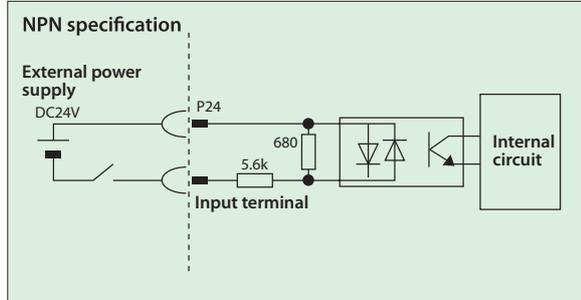


**Note:** The PCON-CA controller can achieve high-speed, high-payload operations only when combined with RCP4 actuators. RCP2/RCP3 actuators also work with the PCON-CA controller, but only according to their original actuator specifications.

## PIO I/O Interface

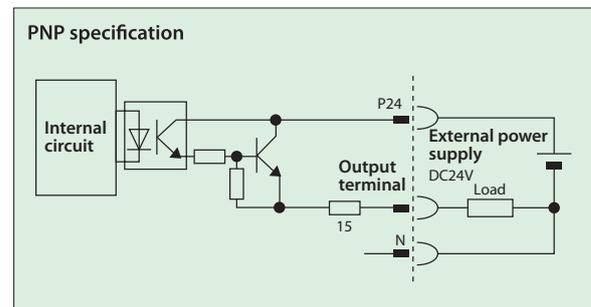
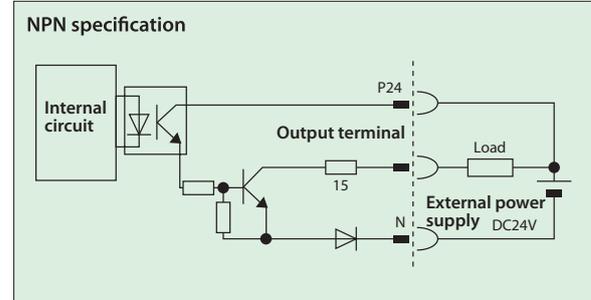
### Input Part External Input Specifications

Item	Specification
Input voltage	24 VDC $\pm$ 10%
Input current	5mA, 1 circuit
ON/OFF voltage	ON voltage: 18 VDC min. OFF voltage: 6 VDC max.



### Output Part External Output Specifications

Item	Specification
Load voltage	24 VDC
Maximum load current	50mA, 1 circuit
Leak current	2mA max. per point



## Types of PIO Patterns (Control Patterns)

**This controller supports seven types of control methods. Select in Parameter No. 25, "PIO pattern selection" the PIO pattern that best suits your purpose of use.**

Type	Set value of Parameter No. 25	Mode	Overview
PIO pattern 0	0 (factory setting)	Positioning mode (standard type)	<ul style="list-style-type: none"> <li>Number of positioning points: 64 points</li> <li>Position number command: Binary Coded Decimal (BCD)</li> <li>Zone signal output<sup>*1</sup>: 1 point</li> <li>Position zone signal output<sup>*2</sup>: 1 point</li> </ul>
PIO pattern 1	1	Teaching mode (teaching type)	<ul style="list-style-type: none"> <li>Number of positioning points: 64 points</li> <li>Position number command: Binary Coded Decimal (BCD)</li> <li>Position zone signal output<sup>*2</sup>: 1 point • Jog (inching) operation using PIO signals is supported.</li> <li>Current position data can be written to the position table using PIO signals.</li> </ul>
PIO pattern 2	2	256-point mode (256 positioning points)	<ul style="list-style-type: none"> <li>Number of positioning points: 256 points</li> <li>Position number command: Binary Coded Decimal (BCD)</li> <li>Position zone signal output<sup>*2</sup>: 1 point</li> </ul>
PIO pattern 3	3	512-point mode (512 positioning points)	<ul style="list-style-type: none"> <li>Number of positioning points: 512 points</li> <li>Position number command: Binary Coded Decimal (BCD)</li> <li>No zone signal output</li> </ul>
PIO pattern 4	4	Solenoid valve mode 1 (7-point type)	<ul style="list-style-type: none"> <li>Number of positioning points: 7 points</li> <li>Position number command: Individual number signal ON</li> <li>Zone signal output<sup>*1</sup>: 1 point</li> <li>Position zone signal output<sup>*2</sup>: 1 point</li> </ul>
PIO pattern 5	5	Solenoid valve mode 2 (3-point type)	<ul style="list-style-type: none"> <li>Number of positioning points: 3 points</li> <li>Position number command: Individual number signal ON</li> <li>Completion signal: A signal equivalent to a LS (limit switch) signal can be output.</li> <li>Zone signal output<sup>*1</sup>: 1 point</li> <li>Position zone signal output<sup>*2</sup>: 1 point</li> </ul>
PIO pattern 6 (Note)	6	Pulse-train control mode	<ul style="list-style-type: none"> <li>Differential pulse input (200 kpps max.)</li> <li>Home return function</li> <li>Zone signal output<sup>*1</sup>: 2 points</li> <li>No feedback pulse output</li> </ul>

\*1 Zone signal output: A desired zone is set by Parameter Nos. 1 and 2 or 23 and 24, and the set zone always remains effective once home return has completed.

\*2 Position zone signal output: This function is available as part of a position number. A desired zone is set in the position table and becomes effective only when the corresponding position is specified, but not with commands specifying other positions.

(Note) Pulse Train Control Model is available only if the pulse train control type is indicated (from PCON-CA-\*-PLN and PLP) at the time of purchase.

PIO Patterns and Signal Assignments

The table below lists the signal assignments for the I/O flat cable under different PIO patterns. Connect an external device (such as a PLC) according to this table.

Pin number	Category	PIO function	Parameter No. 25, "PIO pattern selection"					
			0	1	2	3	4	5
			Positioning mode	Teaching mode	256-point mode	512-point mode	Solenoid valve mode 1	Solenoid valve mode 2
		Number of positioning points	64 points	64 points	256 points	512 points	7 points	3 points
	Input	Home return signal	○	○	○	○	○	—
		Jog signal	—	○	—	—	—	—
		Teaching signal (writing of current position)	—	○	—	—	—	—
		Brake release	○	—	○	○	○	○
	Output	Moving signal	○	○	—	—	—	—
		Zone signal	○	△ (Note 1)	△ (Note 1)	—	○	○
		Position zone signal	○	○	○	—	○	○
1A	24V	P24						
2A	24V	P24						
3A	Pulse input	—						
4A		—						
5A	Input	IN0	PC1	PC1	PC1	PC1	ST0	ST0
6A		IN1	PC2	PC2	PC2	PC2	ST1	ST1(JOG+)
7A		IN2	PC4	PC4	PC4	PC4	ST2	ST2(-)
8A		IN3	PC8	PC8	PC8	PC8	ST3	—
9A		IN4	PC16	PC16	PC16	PC16	ST4	—
10A		IN5	PC32	PC32	PC32	PC32	ST5	—
11A		IN6	—	MODE	PC64	PC64	ST6	—
12A		IN7	—	JISL	PC128	PC128	—	—
13A		IN8	—	JOG+	—	PC256	—	—
14A		IN9	BKRL	JOG-	BKRL	BKRL	BKRL	BKRL
15A		IN10	RMOD	RMOD	RMOD	RMOD	RMOD	RMOD
16A		IN11	HOME	HOME	HOME	HOME	HOME	—
17A		IN12	*STP	*STP	*STP	*STP	*STP	—
18A		IN13	CSTR	CSTR/PWRT	CSTR	CSTR	—	—
19A		IN14	RES	RES	RES	RES	RES	RES
20A	IN15	SON	SON	SON	SON	SON	SON	
1B	Output	OUT0	PM1(ALM1)	PM1(ALM1)	PM1(ALM1)	PM1(ALM1)	PE0	LSO
2B		OUT1	PM2(ALM2)	PM2(ALM2)	PM2(ALM2)	PM2(ALM2)	PE1	LS1(TRQS)
3B		OUT2	PM4(ALM4)	PM4(ALM4)	PM4(ALM4)	PM4(ALM4)	PE2	LS2 (Note 2)
4B		OUT3	PM8(ALM8)	PM8(ALM8)	PM8(ALM8)	PM8(ALM8)	PE3	—
5B		OUT4	PM16	PM16	PM16	PM16	PE4	—
6B		OUT5	PM32	PM32	PM32	PM32	PE5	—
7B		OUT6	MOVE	MOVE	PM64	PM64	PE6	—
8B		OUT7	ZONE1	MODES	PM128	PM128	ZONE1	ZONE1
9B		OUT8	PZONE/ZONE2	PZONE/ZONE1	PZONE/ZONE1	PM256	PZONE/ZONE2	PZONE/ZONE2
10B		OUT9	RMDS	RMDS	RMDS	RMDS	RMDS	RMDS
11B		OUT10	HEND	HEND	HEND	HEND	HEND	HEND
12B		OUT11	PEND	PEND/WEND	PEND	PEND	PEND	—
13B		OUT12	SV	SV	SV	SV	SV	SV
14B		OUT13	*EMGS	*EMGS	*EMGS	*EMGS	*EMGS	*EMGS
15B		OUT14	*ALM	*ALM	*ALM	*ALM	*ALM	*ALM
16B	OUT15	LOAD/TRQS *ALML	*ALML	LOAD/TRQS *ALML	LOAD/TRQS *ALML	LOAD/TRQS *ALML	*ALML	
17B	Pulse input	—						
18B		—						
19B	0V	N						
20B	0V	N						

(Note) In the table above, asterisk \* symbol accompanying each code indicates a negative logic signal. PM1 to PM8 are alarm binary code output signals that are used when an alarm generates.

(Note 1) In all PIO patterns other than 3, this signal can be switched with PZONE by setting Parameter No. 149 accordingly.

(Note 2) The setting will not become effective until the origin return is completed.

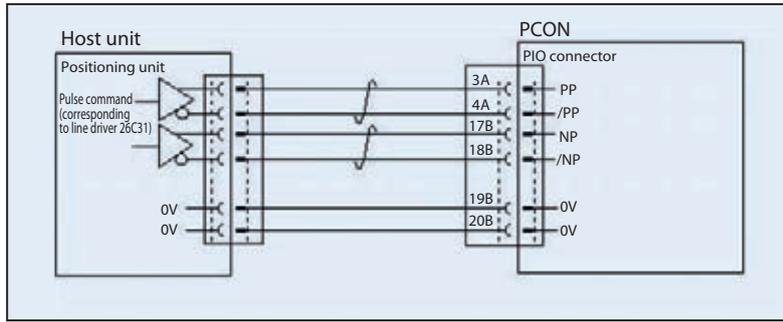
**Reference) Negative logic signal**

Signals denoted by \* are negative logic signals. Negative logic input signals are processed when turned OFF. Negative logic output signals normally remain ON while the power is supplied, and turn OFF when the signal is output.

Note: The names of the signals above inside () are functions before the unit returns home.

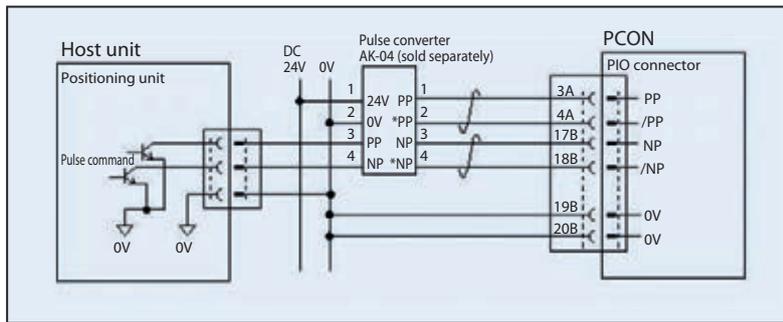
**Pulse-train Control Circuit**

■ **Host Unit = Differential Type**



■ **Host Unit = Open Collector Type**

The AK-04 (optional) is needed to input pulses.



**Caution:** Use the same power supply for open collector input/output to/from the host and for the AK-04.

**Command Pulse Input Patterns**

	Command pulse-train pattern	Input terminal	Forward	Reverse	
Negative logic	Forward pulse-train	PP-/PP			
	Reverse pulse-train	NP-/NP			
	A forward pulse-train indicates the amount of motor rotation in the forward direction, while a reverse pulse-train indicates the amount of motor rotation in the reverse direction.				
	Pulse-train	PP-/PP			
	Sign	NP-/NP	Low	High	
	The command pulses indicate the amount of motor rotation, while the sign indicates the rotating direction.				
Positive logic	Forward pulse train	PP-/PP			
	Reverse pulse-train	NP-/NP			
	Pulse-train	PP-/PP			
	Sign	NP-/NP	High	Low	
	Phase A/B pulse-train	PP-/PP			
		NP-/NP			
Command phases A and B having a 90° phase difference (multiplier is 4) indicate the amount of rotation and the rotating direction.					

## I/O Signals in Pulse-train Control Mode

The table below lists the signal assignments for the flat cable in the pulse-train control mode. Connect an external device (such as PLC) according to this table.

Pin number	Category	I/O number	Signal abbreviation	Signal name	Parameter No. 25, "PIO pattern 6"
1A	24V		P24	Power supply	I/O power supply +24 V
2A	24V		P24	Power supply	I/O power supply +24 V
3A	Pulse input		PP	Differential pulse-train input (+)	Differential pulses are input from the host. Up to 200 kpps can be input.
4A			/PP	Differential pulse-train input (-)	
5A	Input	IN0	SON	Servo ON	The servo is ON while this signal is ON, and OFF while the signal is OFF.
6A		IN1	RES	Reset	Present alarms are reset when this signal is turned ON.
7A		IN2	HOME	Home return	Home return operation is performed when this signal is turned ON.
8A		IN3	TL	Torque limit selection	When this signal is turned ON, the motor torque is limited to the value set by the parameter.
9A		IN4	CSTP	Forced stop	The actuator is forcibly stopped when this signal has remained ON for 16 ms or more. The actuator decelerates to a stop at the torque set in the controller and the servo turns OFF.
10A		IN5	DCLR	Deviation counter clear	This signal clears the deviation counter.
11A		IN6	BKRL	Forced brake release	The brake is forcibly released.
12A		IN7	RMOD	Operation mode switching	The operation mode can be switched when the MODE switch on the controller is set to AUTO. (AUTO when this signal is OFF, and to MANU when the signal is ON.)
13A		IN8	NC	—	Not used
14A		IN9	NC	—	Not used
15A		IN10	NC	—	Not used
16A		IN11	NC	—	Not used
17A		IN12	NC	—	Not used
18A		IN13	NC	—	Not used
19A		IN14	NC	—	Not used
20A	IN15	NC	—	Not used	
1B	Output	OUT0	PWR	System ready	This signal turns ON when the controller becomes ready after the main power has been turned on.
2B		OUT1	SV	Servo ON status	This signal turns ON when the servo is ON.
3B		OUT2	INP	Positioning complete	This signal turns ON when the amount of remaining travel pulses in the deviation counter falls within the in-position band.
4B		OUT3	HEND	Home return complete	This signal turns ON upon completion of home return.
5B		OUT4	TLR	Torque limited	This signal turns ON upon reaching the torque limit while the torque is limited.
6B		OUT5	*ALM	Controller alarm status	This signal turns ON when the controller is normal, and turns OFF when an alarm generates.
7B		OUT6	*EMGS	Emergency stop status	This signal turns ON when the emergency stop of the controller is cancelled, and turns OFF when an emergency stop is actuated.
8B		OUT7	RMDS	Operation mode status	The operation mode status is output. This signal turns ON when the controller is in the manual mode.
9B		OUT8	ALM1	Alarm code output signal	An alarm code is output when an alarm generates. For details, refer to the operation manual.
10B		OUT9	ALM2		
11B		OUT10	ALM4		
12B		OUT11	ALM8		
13B		OUT12	*ALML	Minor failure alarm	This signal is output when a message-level alarm generates.
14B		OUT13	NC	—	Not used
15B		OUT14	ZONE1	Zone signal 1	This signal turns ON when the current position of the actuator falls within the parameter-set range.
16B	OUT15	ZONE2	Zone signal 2		
17B	Pulse input		NP	Differential pulse-train input (+)	Differential pulses are input from the host. Up to 200 kpps can be input.
18B			/NP	Differential pulse-train input (-)	
19B	0V		N	Power supply	I/O power supply 0 V
20B	0V		N	Power supply	I/O power supply 0 V

Note) \* indicates a negative logic signal. Negative logic signals are normally ON while the power is supplied, and turn OFF when the signal is output.

**(Note) The number of encoder pulses is 800 with all RCP4 series models. For details, refer to the operation manual.**

## Field Network Specification: Explanation of Operation Modes

If the PCON-CA is controlled via a field network, you can select one of the following five modes to operate the actuator. Take note that the required data areas on the PLC side vary depending on the mode.

### ■ Explanation of Modes

	Mode	Description
0	Remote I/O mode	In this mode, the actuator is operated by controlling the ON/OFF of bits via the network, just like with the PIO specification. The number of positioning points and functions vary with each of the operation patterns (PIO patterns) that can be set by the controller's parameter.
1	Position/simple direct numerical mode	The target position is specified by directly entering a value, while other operating conditions (speed, acceleration, etc.) are set by specifying the desired position number corresponding to the desired operating conditions already input to the position data table.
2	Half direct numerical mode	The actuator is operated by specifying the speed, acceleration/deceleration and push current, in addition to the target position, by directly entering values.
3	Full direct numerical mode	The actuator is operated by specifying the target position, speed, acceleration/deceleration, push current control value, etc., by directly entering values. The current position, current speed, command current, etc., can also be read.
4	Remote I/O mode 2	Same as the above remote I/O mode, plus the current position read function and command current read function.

### ■ Required Data Size for Each Network

		DeviceNet	CC-Link	PROFIBUS-DP	CompoNet	EtherCAT	EtherNet/IP	PROFINET
0	Remote I/O mode	1CH	1 station	2 bytes	2 bytes	2 bytes	2 bytes	2 bytes
1	Position/simple direct numerical mode	4CH	1 station	8 bytes	8 bytes	8 bytes	8 bytes	8 bytes
2	Half direct numerical mode	8CH	2 stations	16 bytes	16 bytes	16 bytes	16 bytes	16 bytes
3	Full direct numerical mode	16CH	4 stations	32 bytes	32 bytes	32 bytes	32 bytes	32 bytes
4	Remote I/O mode 2	6CH	1 station	12 bytes	12 bytes	12 bytes	12 bytes	12 bytes

\* No required data size is set for MECHATROLINK I and II.

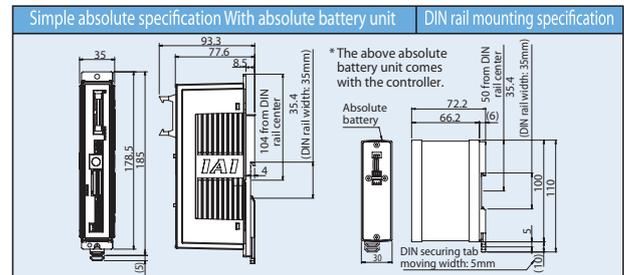
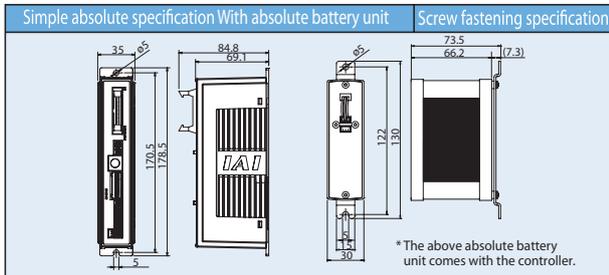
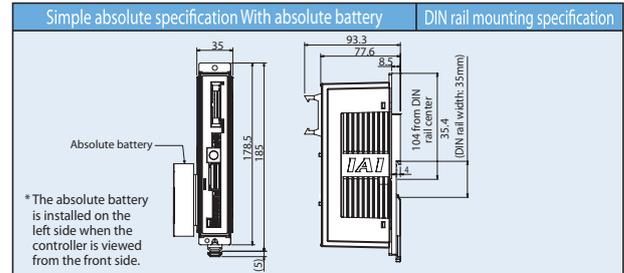
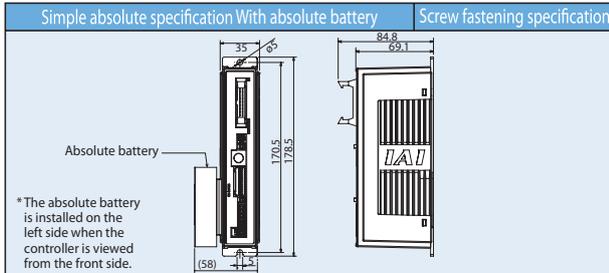
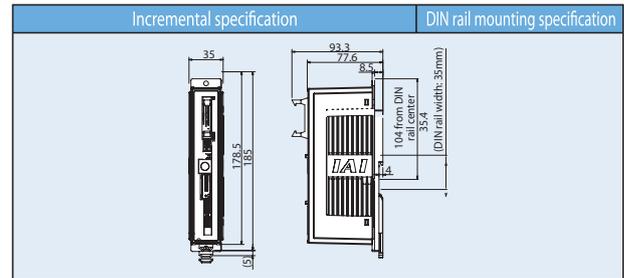
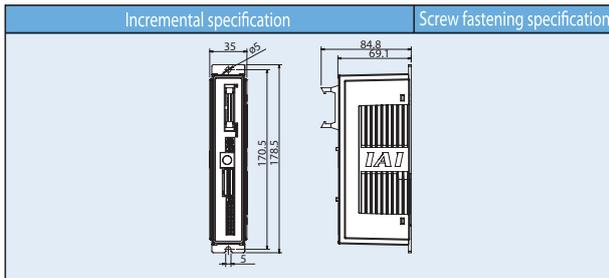
### ■ List of Functions by Operation Mode

	Remote I/O mode	Position/simple direct numerical mode	Half direct numerical mode	Full direct numerical mode	Remote I/O mode 2
Number of positioning points	512 points	768 points	Not limited	Not limited	512 points
Operation by direct position data specification	—	○	○	○	—
Direct speed/acceleration specification	—	—	○	○	—
Push-motion operation	○	○	○	○	○
Current position read	—	○	○	○	○
Current speed read	—	—	○	○	—
Operation by position number specification	○	○	—	—	○
Completed position number read	○	○	—	—	○

\* ○ indicates that the operation is supported, and "—" indicates that it is not supported.

(Note 1) Take note that the MECHATROLINK specification does not support the full direct numerical mode.

External Dimensions



Specification Table

Item			Description
Number of controlled axes			1 axis
Power supply voltage			24VDC ± 10%
Load capacity (Current consumption of controlled axes included) (Note 1)	RCP2 RCP3	Motor type	20P, 28P, 20SP, 28SP 35P, 42P, 56P
		Motor type	60P, 86P
	RCP4	Motor type	42P, 56P
Power supply for electromagnetic brake (for actuators with brake)			24VDC ± 10%, 0.15A (max.)
Rush current (Note 1)			8.3A
Momentary power failure resistance			500µs max.
Applicable encoder			Incremental encoder of 800 pulses/rev in resolution
Actuator cable length			20m max.
External interface	PIO specification		Dedicated 24-VDC signal input/output (NPN or PNP selected) --- Up to 16 input points, up to 16 output points / Cable length: 10m max.
	Field network specification		DeviceNet, CC-Link, PROFIBUS, CompoNET, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET
Data setting/input method			PC software, touch-panel teaching pendant
Data retention memory			Position data and parameters are saved in the non-volatile memory (The memory can be written an unlimited number of times.)
Operation modes			Positioner mode / Pulse-train control mode (Selectable by parameter setting)
Number of positions in positioner mode			Up to 512 points for the positioner type, up to 768 points for the network type (Note) The number of positioning points varies depending on the PIO pattern selected.
Pulse-train interface	Input pulse		Differential method (line driver method): 200kpps max. / Cable length: 10m max. Open collector method: Not supported * If the host uses open-collector output, convert the open-collector pulses to differential pulses using the AK-04 (available as an option).
	Command pulse magnification (electronic gear ratio: A/B)		1/50 < A/B < 50/1 Setting range of A and B (set by parameters): 1 to 4096
	Feedback pulse output		None
Isolation resistance			500-VDC 10 MΩ or more
Electric shock protection mechanism			Class I basic isolation
Mass (Note 3)	Incremental specification		Screw fastening type: 250g or less    DIN rail mounting type: 285g or less
	Simple absolute specification (190g of battery weight included)		Screw fastening type: 450g or less    DIN rail mounting type: 485g or less
Cooling method			Natural air cooling
Environment	Ambient operating temperature		0 to 40°C
	Ambient operating humidity		85%RH or less (non-condensing)
	Operating ambience		Not exposed to corrosive gases
	Protection degree		IP20

(Note 1) The value increases by 0.3 A for the field network specification.

(Note 2) After the power is turned on, rush current will flow for approx. 5msec (at 40°C). Take note that the rush current varies depending on the impedance of the power-supply line.

(Note 3) The value increases by 30g for the field network specification.

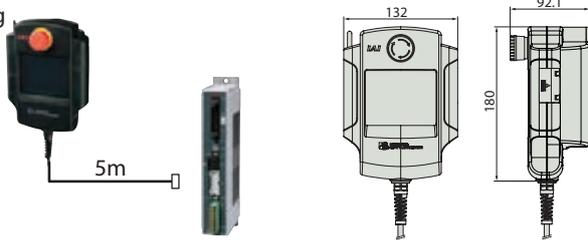
**Option**

**Teaching pendant**

■ **Summary** Teaching device for positioning input, test operation, and monitoring.

■ **Model** **CON-PTA-C-ENG** (Touch panel teaching pendant)

■ **Setting**



■ **Specification**

Item	CON-PTA-C-ENG
Data input	○
Actuator motion	○
Operating ambient temperature/humidity	Temperature 0 to 40°C, humidity 85% RH or less
Operating environment	Free from corrosive gas and especially, considerably dusty condition
Protection degree	IP40
Weight	Approximately 570g
Cable length	5m
Display	65536 color White LED back light

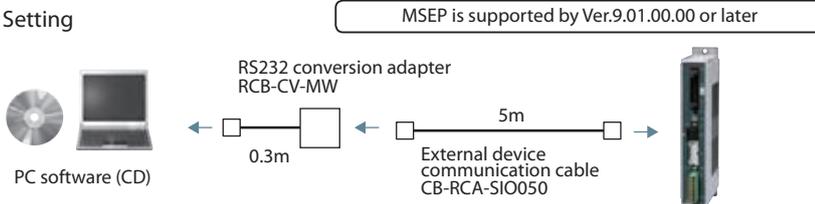
**PC software (Windows only)**

\* For the 8-axis controller MSEP with field network specification, the PC software is required.

■ **Summary** A startup support software for inputting positions, performing test runs, and monitoring. With enhancements for adjustment functions, the startup time is shortened.

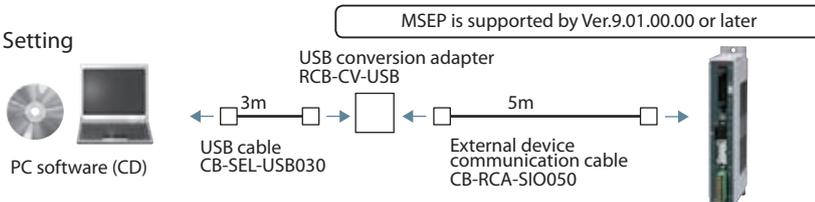
■ **Model** **RCM-101-MW-ENG** (External device communication cable + RS232 conversion unit)

■ **Setting**



■ **Model** **RCM-101-USB-ENG** (External device communication cable + USB converter adaptor + USB cable)

■ **Setting**



**Absolute Battery Unit**

■ **Summary** Battery unit that comes with a simple absolute controller, used to back up the current controller position.

■ **Model** **SEP-ABU(-W)\*** (DIN rail mounting specification)

**SEP-ABUS(-W)\*** (screw fastening specification)

\* SEP-ABU-W/SEP-ABUS-W: Dust-proof type

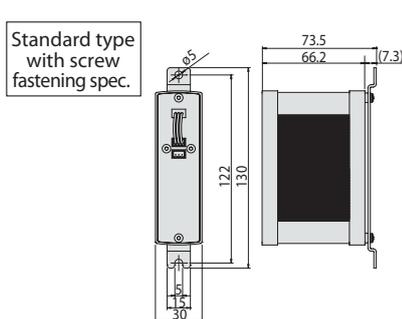
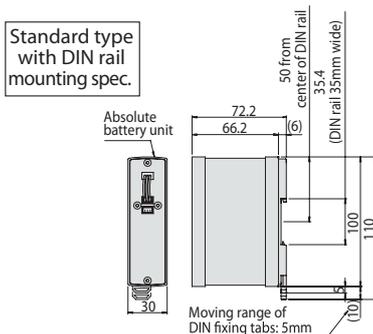
■ **Specifications**

Item	Specification
Ambient operating temperature, humidity	0 to 40°C (desirably around 20°C), 95% RH or below (non-condensing)
Operating ambience	Free from corrosive gases
Absolute battery	Model number: AB-7 (Ni-MH battery / Life: Approx. 3 years)
Controller/absolute battery unit link cable	Model number: CB-APSEP-AB005 (Length: 0.5m)
Mass	Standard type: Approx. 230g / Dust-proof type (IP53): Approx. 260g

**Replacement battery**

■ **Summary** The replacement battery for the absolute data backup battery box.

■ **Model** **AB-7**

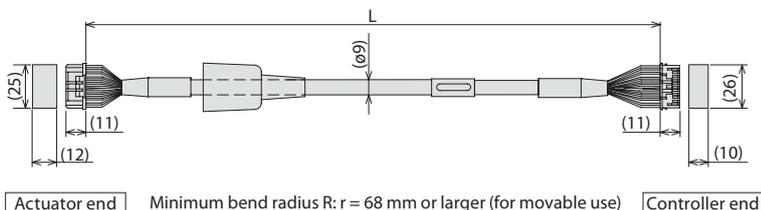


## Service parts

### Integrated Motor-Encoder Cable/ Motor-Encoder Robot Cable for RCP4

Model number **CB-CA-MPA**□□□□/□□□□**-RB**

\* Please indicate cable length (L) in □□□, maximum 20m. e.g.) 080=8m



Actuator end Minimum bend radius R: r = 68 mm or larger (for movable use) Controller end

\* Robot cables are cables resistant to flexing forces. If the cable must be guided in a cable track, use a robot cable.

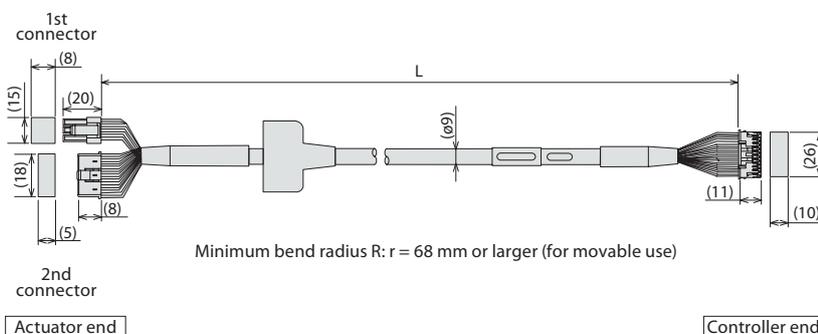
Actuator end 1-1827863-1 (AMP)			Controller end PADP-24V-1-S (JST)		
Pin No.	Signal name	Color	Pin No.	Signal name	Color
A1	0A/U	Blue(Black)	1	0A/U	Blue(Black)
B1	VMM/V	Orange(White)	2	VMM/V	Orange(White)
A2	0_A/W	Green(Brown)	5	0_A/W	Green(Brown)
B2	0B/-	Brown(Green)	3	0B/-	Brown(Green)
A3	VMM/-	Gray(Yellow)	4	VMM/-	Gray(Yellow)
B3	0_B/-	Red(Red)	6	0_B/-	Red(Red)
A4	LS+/BK+	Black(Orange)	7	LS+/BK+	Black(Orange)
B4	LS-/BK-	Yellow(Gray)	8	LS-/BK-	Yellow(Gray)
A6	-/A+	Blue(White)	11	-/A+	Blue(White)
B6	-/A-	Orange(Yellow)	12	-/A-	Orange(Yellow)
A7	A+/B+	Green(Red)	13	A+/B+	Green(Red)
B7	A-/B-	Brown(Green)	14	A-/B-	Brown(Green)
A8	B+/Z+	Gray(Black)	15	B+/Z+	Gray(Black)
B8	B-/Z-	Red(Brown)	16	B-/Z-	Red(Brown)
A5	BK+/LS+	Blue(Black)	9	BK+/LS+	Blue(Black)
B5	BK-/LS-	Orange(Brown)	10	BK-/LS-	Orange(Brown)
A9	LS_GND	Green(Green)	20	LS_GND	Green(Green)
B9	VPS	Brown(Red)	18	VPS	Brown(Red)
A10	VCC	Gray(White)	17	VCC	Gray(White)
B10	GND	Red(Yellow)	19	GND	Red(Yellow)
A11	-	-	21	-	-
B11	FG	Black(-)	22	-	-
			23	-	-
			24	FG	Black(-)

\* Colors of robot cables are shown in ( ).

### Integrated Motor-Encoder Cable for RCP2

Model number **CB-PSEP-MPA**□□□□ \* The default specification of this cable is robot cable.

\* Please indicate cable length (L) in □□□, maximum 20m. e.g.) 080=8m



Actuator end

Controller end

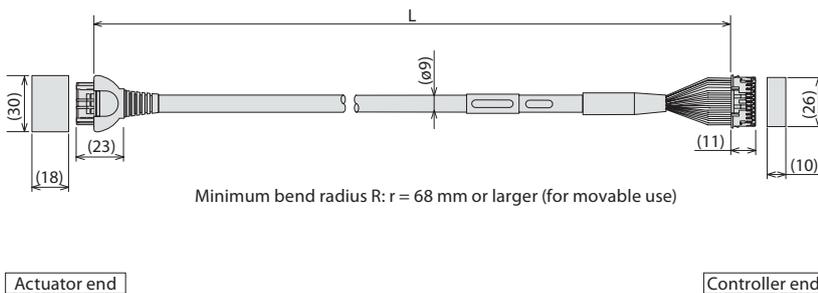
Minimum bend radius R: r = 68 mm or larger (for movable use)

Actuator end Pin number	Signal name	Controller end Pin number
1	Black (0A)	1
2	White (VMM)	2
4	Red (0B)	3
5	Green (VMM)	4
3	Brown (0A)	5
6	Yellow (0B)	6
16	Orange (BK+)	9
17	Gray (BK-)	10
5	NC	11
6	NC	12
13	Black (LS+)	7
14	Brown (LS-)	8
1	White (A+)	13
2	Yellow (A-)	14
3	Red (B+)	15
4	Green (B-)	16
10	White (identification tape) (VCC)	17
11	Yellow (identification tape) (VPS)	18
9	Red (identification tape) (GND)	19
12	Green (identification tape) (spare)	20
15	NC	21
7	NC	22
8	NC	23
18	Shield (FG)	24

### Integrated Motor-Encoder Cable for RCP3

Model number **CB-APSEP-MPA**□□□□ \* The default specification of this cable is robot cable.

\* Please indicate cable length (L) in □□□, maximum 20m. e.g.) 080=8m



Actuator end

Controller end

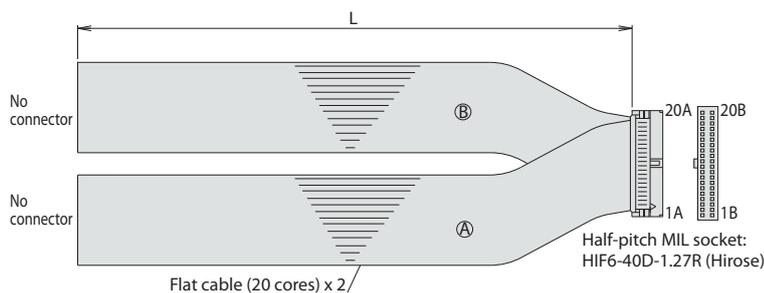
Minimum bend radius R: r = 68 mm or larger (for movable use)

Actuator end Pin number	Signal name	Controller end Pin number
A1	[PCON] (ACON)	1
B2	Black (0A) (U)	2
A2	White (VMM) (V)	5
B2	Brown (0A) (W)	3
A3	Green (0B) (-)	4
B3	Yellow (VMM) (+)	7
A4	Orange (LS+) (BK+)	8
B4	Gray (LS-) (BK-)	11
A6	White (-) (A+)	12
B6	Yellow (-) (A-)	13
A7	Red (A+) (B+)	14
B7	Green (A-) (B-)	15
A8	Black (B+) (Z+)	16
B8	Black (B-) (Z-)	17
A5	Black (identification tape) (BK+) (LS+)	9
A5	Brown (identification tape) (BK-) (LS-)	10
B5	Green (identification tape) (GND) (LS)	20
A9	Red (identification tape) (VPS) (VPS)	18
B9	White (identification tape) (VCC) (VCC)	17
A9	Yellow (identification tape) (GND) (GND)	19
A10	NC	21
B10	Shield (FG) (FG)	24
A11	NC	22
B11	NC	23

### I/O Flat Cable

Model number **CB-PAC-PIO**□□□□

\* Please indicate cable length (L) in □□□, maximum 10m. e.g.) 080=8m



No connector

No connector

Flat cable (20 cores) x 2

Half-pitch MIL socket:  
HIF6-40D-1.27R (Hirose)

HIF6-40D-1.27R

No.	Signal name	Cable color	Wiring	No.	Signal name	Cable color	Wiring
1A	24V	Brown-1		1B	OUT0	Brown-3	
2A	24V	Red-1		2B	OUT1	Red-3	
3A	Pulse	Orange-1		3B	OUT2	Orange-3	
4A	input	Yellow-1		4B	OUT3	Yellow-3	
5A	IN0	Green-1		5B	OUT4	Green-3	
6A	IN1	Blue-1		6B	OUT5	Blue-3	
7A	IN2	Purple-1		7B	OUT6	Purple-3	
8A	IN3	Gray-1		8B	OUT7	Gray-3	
9A	IN4	White-1		9B	OUT8	White-3	
10A	IN5	Black-1		10B	OUT9	Black-3	
11A	IN6	Brown-2		11B	OUT10	Brown-4	
12A	IN7	Red-2		12B	OUT11	Red-4	
13A	IN8	Orange-2		13B	OUT12	Orange-4	
14A	IN9	Yellow-2		14B	OUT13	Yellow-4	
15A	IN10	Green-2		15B	OUT14	Green-4	
16A	IN11	Blue-2		16B	OUT15	Blue-4	
17A	IN12	Purple-2		17B	Pulse	Purple-4	
18A	IN13	Gray-2		18B	input	Gray-4	
19A	IN14	White-2		19B	OV	White-4	
20A	IN15	Black-2		20B	OV	Black-4	

Flat cable (A)  
(crimped)

Flat cable (B)  
(crimped)  
AWG 28

# IAI

Quality and Innovation

Slider Type

Rod Type

# ROBO Cylinder® RCP4-SA3/RA3

**ROBO  
CYLINDER**



**RCP4**  
series

[www.intelligentactuator.com](http://www.intelligentactuator.com)



## RCP5 Series

Battery-less Absolute Encoder Installed as Standard

Series	Specification	Feature	Type	External view	Actuator width	Stroke (mm)	Ball screw lead (mm)	Maximum speed (mm/s)	Maximum payload (kg)	
									Horizontal	Vertical
RCP5	Motor Straight Specification	Slider Type	SA4C		40mm	50 ~ 500	16	1260	4	1
							10	785	10	2.25
							5	390	12	4.5
							2.5	195	12	9
			SA6C		50 ~ 800	20	1440<1280>	10	1	
						12	900	15	2.5	
						6	450	25	6	
			SA7C		50 ~ 800	3	225	25	16	
						24	1200	20	3	
		16				980<840>	40	8		
		8				490	45	16		
		4				245<210>	45	25		
		16				1120<840>	6	1.5		
		Rod Type (Radial Cylinder)	RA4C	40mm	60 ~ 410	10	700	15	2.5	
						5	350	28	5	
						2.5	175	40	10	
			RA6C	58mm	65 ~ 415	20	800	6	1.5	
						12	700	25	4	
	6					450	40	10		
	RA7C		73mm	70 ~ 520	3	225	60	20		
					24	800<600>	20	3		
					16	700<560>	50	8		
	RA8C	88mm	50 ~ 700	8	420	60	18			
				4	210	80	28			
20				600<450>	30	5				
RA10C	108mm	50 ~ 800	10	300<250>	60	40				
			5	150	100	70				
			10	250<167>	80	80				
Side-mounted Motor Specification	Rod Type (Radial Cylinder)	88mm	50 ~ 700	5	125	150	100			
				2.5	63	300	150			
				20	400	30	5			
	RA8R	88mm	50 ~ 700	10	200	60	40			
				5	100	100	70			
				10	200<140>	80	80			
RA10R	108mm	50 ~ 800	5	100	150	100				
			2.5	50	300	150				
			2.5	50	300	150				

●Refer to the individual catalog for the RCP5 Series.

## RCP4-SA3/RA3 Applicable Controllers

Name	External view	Model number	Features	Max. number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner type		PCON-CA-28P①-NP-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points	24V DC	Refer to ROBO Cylinder General Catalog	—	Refer to ROBO Cylinder General Catalog
Pulse-train type		PCON-CA-28P①-PN-2-0		—				
Field network type		PCON-CA-28P①-①-0-0	Equipped with a high-output driver Applicable for 7 types of principal field networks	768 points				
Positioner Multiple Axes Specification PIO type	MSEP-①-①-~ -NP-2-0	Positioner type with PIO control available to connect 8 axes at maximum	3 points					
	MSEP-①-①-~ -PN-2-0		—					
Positioner Multiple Axes Specification network type	MSEP-①-①-~ -①-0-0	Positioner type applicable for field network available to connect 8 axes at maximum	256 points					

\*The encoder type comes in ①. Incremental Type is "WAI" and Simple Absolute is "SA". \*Either Type C or LC comes in ②. 6 axes are available to connect at the maximum if LC.

\*The number of axes (1 to 8) comes in ③. \*The symbol (DV, CC, PR, CN, EC or EP) for the field network types comes in ④.

# RCP4-RA3C

ROBO Cylinder, Rod Type, Motor Unit Coupled, Actuator Width 32m, Pulse Motor 24V

Model Specification Items	<b>RCP4</b>	<b>RA3C</b>	<b>I</b>	<b>28P</b>	<input type="checkbox"/>	<input type="checkbox"/>	<b>P3</b>	<input type="checkbox"/>	<input type="checkbox"/>
	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
			I : Incremental specification	28P : Pulse motor, size 28 <input type="checkbox"/>	16 : 16mm 10 : 10mm 5 : 5mm 2.5 : 2.5mm	25 : 25mm 300 : 300mm (every 25 mm)	P3 : PCON-CA MSEP-C/LC	N : None P : 1m S : 3m M : 5m X <input type="checkbox"/> : Specified length R <input type="checkbox"/> : Robot cable	Refer to the option list below.

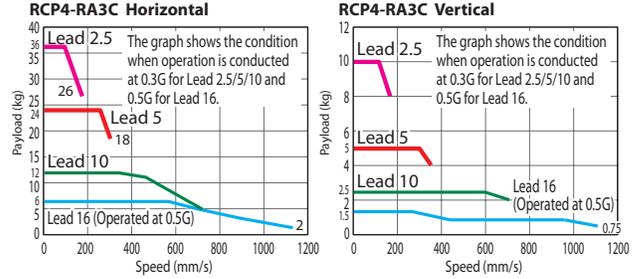
## Built-in guide mechanism



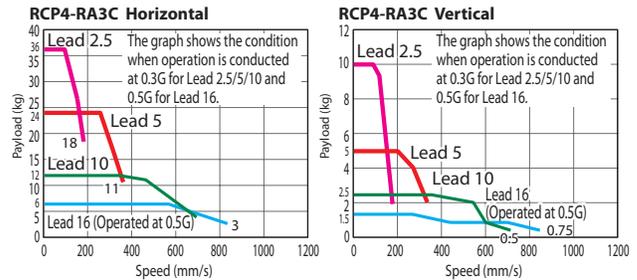
- Even though the payload described in the actuator specifications is the maximum value, it may vary depending on the acceleration. Refer to "Tables for Payload by Acceleration and Speed" on pg. 6 for details.
- Refer to "Relative Graph for Pressing Force and Current Limit" at the back of the catalog for the pressing operation.

## Correlation Diagrams of Speed and Payload

### ① High output enabled PCON-CA-MSEP-C/LC connected



### ② High output disabled PCON-CA-MSEP-C/LC connected



## Actuator Specifications Table

### Leads and Payloads

Model number	Lead (mm)	Maximum payload		Maximum push force (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP4-RA3C-I-28P-16-①-P3-②-③	16	6	1.5	36	25 ~ 300 (every 25 mm)
RCP4-RA3C-I-28P-10-①-P3-②-③	10	12	2.5	57	
RCP4-RA3C-I-28P-5-①-P3-②-③	5	24	5	114	
RCP4-RA3C-I-28P-2.5-①-P3-②-③	2.5	36	10	229	

Legend ① Stroke ② Cable length ③ Options

### Stroke and Max. Speed (unit: mm/s)

Lead (mm)	High-Output Setting	25 ~ 300 (every 25 mm)
16	Enabled	1120
	Disabled	840
10	Enabled	700
	Disabled	525
5	Enabled	350
	Disabled	262
2.5	Enabled	175
	Disabled	131

### ① Stroke List (Standard price)

Stroke (mm)	Standard price	Stroke (mm)	Standard price
25	—	175	—
50	—	200	—
75	—	225	—
100	—	250	—
125	—	275	—
150	—	300	—

### ② Cable Length (Standard price)

Type	Cable symbol	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)	—
	R21 (21m) ~ R25 (25m)	—

### ③ Option List (Standard price)

Name	Option code	Reference page	Standard price
Brake	B	Refer to ROBO	—
Home-Position Check Sensor (top)	HS	Cylinder General	—
Non-motor end specification	NM	Catalog	Free

## Actuator Specifications

Item	Description
Drive system	Ball screw Ø8mm rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	Ø16mm Aluminum
Rod non-rotation precision(*1)	±0 deg
Allowable rod load mass	Refer to reference at the back
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

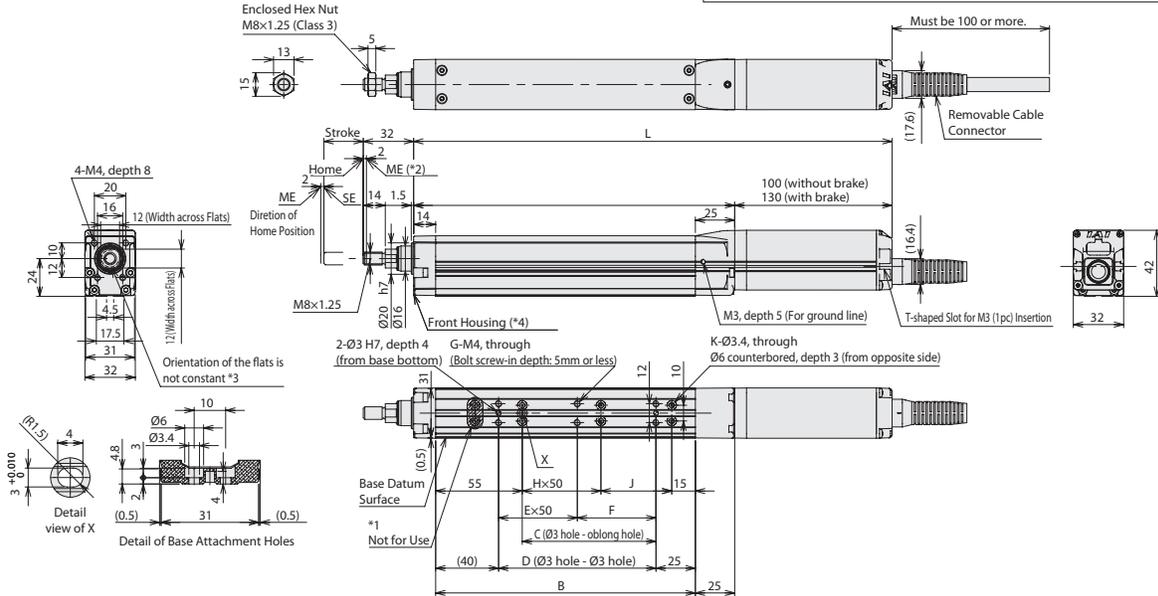
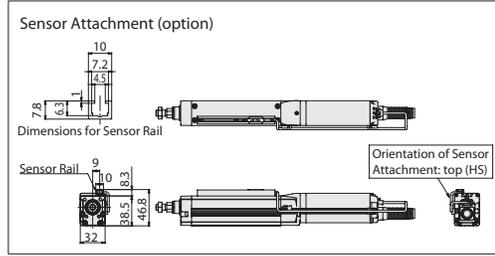
(\*1) Accuracy of rod displacement in rotating direction when no load is received.

Dimensional Drawings

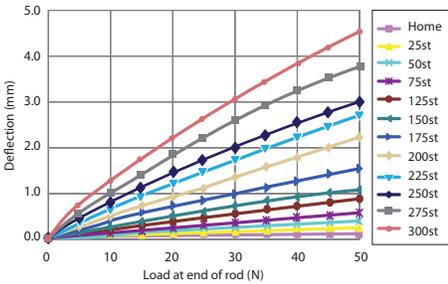
CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)



- \*1 The two counterbored mounting holes on the bottom of the base near the rod end are not available to use.
- \*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.  
ME : Mechanical end  
SE : Stroke end
- \*3 The orientation of the bolt varies depending on the product.
- \*4 Do not attempt to apply external force on the main body when installing the body using the front housing.  
Refer to the instruction manual for details.



■ Rod Deflection (reference)



■ Dimensions and Mass by Stroke

Stroke		25	50	75	100	125	150	175	200	225	250	275	300		
L	without brake	229	254	279	304	329	354	379	404	429	454	479	504		
	with brake	259	284	309	334	359	384	409	434	459	484	509	534		
A		129	154	179	204	229	254	279	304	329	354	379	404		
B		90	115	140	165	190	215	240	265	290	315	340	365		
C		10	35	60	85	110	135	160	185	210	235	260	285		
D		25	50	75	100	125	150	175	200	225	250	275	300		
E		0	0	0	1	1	2	2	3	3	4	4	5		
F		25	50	75	50	75	50	75	50	75	50	75	50		
G		4	4	4	6	6	8	8	10	10	12	12	14		
H		0	0	0	1	1	2	2	3	3	4	4	5		
J		20	45	70	45	70	45	70	45	70	45	70	45		
K		4	4	4	6	6	8	8	10	10	12	12	14		
Allowable static load at end of rod(N)		38.8	33.5	29.5	26.3	23.7	21.6	19.8	18.2	16.9	15.7	14.7	13.8		
Allowable dynamic load at end of rod (N)		Load offset 0mm		19.4	16.6	14.2	12.2	10.7	9.5	8.5	7.7	7.0	6.4	5.8	5.4
		Load offset 100mm		9.1	9.4	8.9	8.3	7.7	7.1	6.6	6.1	5.6	5.2	4.9	4.5
Allowable static torque at end of rod (N·m)		3.9	3.4	3.0	2.7	2.4	2.2	2.0	1.9	1.7	1.6	1.5	1.4		
Allowable dynamic torque at end of rod (N·m)		0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5		
Mass (kg)	without brake	0.59	0.64	0.69	0.73	0.78	0.83	0.88	0.93	0.98	1.02	1.07	1.12		
	with brake	0.68	0.73	0.78	0.82	0.87	0.92	0.97	1.02	1.07	1.11	1.16	1.21		

Tables for Payload by Acceleration and Speed

High output enabled Lead 16

Orientation	Horizontal			Vertical				
	Acceleration							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	6	6	6	5	3.5	1.5	1.5	1.5
140	6	6	6	5	3.5	1.5	1.5	1.5
280	6	6	6	5	3.5	1.5	1.5	1.5
420	6	6	6	5	3.5	1	1	1
560		6	6	5	3.5			
700		5.5	5	4	2.5			
840		4.5	3.5	3	2			
980			2.5	2	1.5			
1120				2	1.5			0.75

High output enabled Lead 10

Orientation	Horizontal			Vertical				
	Acceleration							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	12	12	11	9	6	2.5	2.5	2.5
85	12	12	11	9	6	2.5	2.5	2.5
175	12	12	11	9	6	2.5	2.5	2.5
260	12	12	11	9	6	2.5	2.5	2.5
350	12	12	11	9	6	2.5	2.5	2.5
435	12	11	9	7	6	2.5	2.5	2.5
525	12	9	7	5.5	4	2.5	2.5	2.5
610		7	5	4	3			
700		5	3.5	2.5	2			1.5

High output enabled Lead 5

Orientation	Horizontal			Vertical				
	Acceleration							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	24	24	22	18	12	5	5	5
40	24	24	22	18	12	5	5	5
85	24	24	22	18	12	5	5	5
130	24	24	22	18	12	5	5	5
175	24	24	22	18	12	5	5	5
215	24	24	22	18	12	5	5	5
260	24	22	20	16	10	5	5	5
305	22	20	18	14	7	5	5	4.5
350	20	18	16	12	5	5	4	3.5

High output enabled Lead 2.5

Orientation	Horizontal			Vertical				
	Acceleration							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	36	36	36	30	20	10	10	10
20	36	36	36	30	20	10	10	10
40	36	36	36	30	20	10	10	10
65	36	36	36	30	20	10	10	10
85	36	36	36	30	20	10	10	10
105	36	36	33	26	20	10	10	10
130	36	33	28	22	16	10	10	9
150	33	30	24	18	14	10	9	8
175	30	26	20	14	10	9	8	7

High output disabled Lead 16

Orientation	Horizontal			Vertical				
	Acceleration							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	6	6	6	5	3.5	1.5	1.5	1.5
140	6	6	6	5	3.5	1.5	1.5	1.5
280	6	6	6	5	3.5	1.5	1.5	1.5
420	6	6	6	5	3.5	1	1	1
560		6	5.5	4.5	3			
700		5	4.5	3.5	2			
840		4	3	2.5	1.5			0.75
980								
1120								

High output disabled Lead 10

Orientation	Horizontal			Vertical				
	Acceleration							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	12	12	11	9	6	2.5	2.5	2.5
85	12	12	11	9	6	2.5	2.5	2.5
175	12	12	11	9	6	2.5	2.5	2.5
260	12	12	11	9	6	2.5	2.5	2.5
350	12	12	10	8	5.5	2.5	2.5	2.5
435	12	11	8	6	5	2.25	2.25	2.25
525	11	8	6	4	3	2	2	2
610		6	4	3	2			
700		3	2.5	1.5	1			0.5

High output disabled Lead 5

Orientation	Horizontal			Vertical				
	Acceleration							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	24	24	22	18	12	5	5	5
40	24	24	22	18	12	5	5	5
85	24	24	22	18	12	5	5	5
130	24	24	22	18	12	5	5	5
175	24	24	22	18	12	5	5	5
215	24	24	20	16	10	5	5	5
260	24	20	16	12	7.5	4.5	4.5	4
305	20	16	12	10	5	3	3	3
350	16	11	7	6	3	2	2	2

High output disabled Lead 2.5

Orientation	Horizontal			Vertical				
	Acceleration							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	36	36	36	30	20	10	10	10
20	36	36	36	30	20	10	10	10
40	36	36	36	30	20	10	10	10
65	36	36	36	30	20	10	10	10
85	36	36	36	30	20	10	10	10
105	36	36	30	22	18	10	10	10
130	36	30	24	18	14	9	9	8
150	32	26	20	14	12	5	5	5
175	28	18	16	12	8	2	2	2

Note) MSEP-C/LC is available for high output only if "High-Output Specification" is selected in the options.

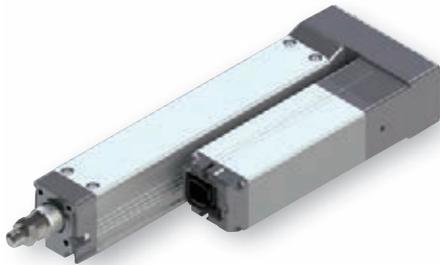
# RCP4-RA3R

RoboCylinder, Rod Type, Side-mounted Motor Type, Actuator Width 32mm, 24-V Pulse Motor

Model Specification Items	<b>RCP4</b>	<b>RA3R</b>	<b>I</b>	<b>28P</b>	<input type="checkbox"/>	<input type="checkbox"/>	<b>P3</b>	<input type="checkbox"/>	<input type="checkbox"/>
	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
			I : Incremental specification	28P : Pulse motor, size 28 □	16 : 16mm 10 : 10mm 5 : 5mm 2.5 : 2.5mm	25 : 25mm 300 : 300mm (every 25 mm)	P3 : PCON-CA MSEP MSEL	N : None P : 1m S : 3m M : 5m X □ : Specified length R □ : Robot cable	Refer to the option list below.



Radial Load OK

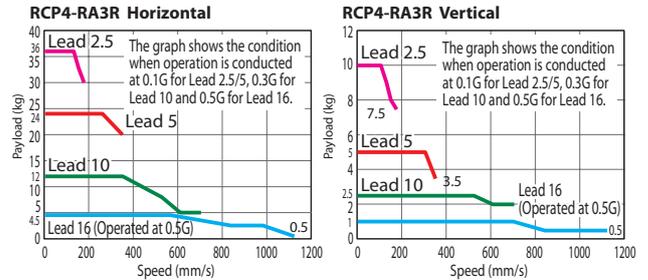


Pictured: Left-mounted motor model (ML).

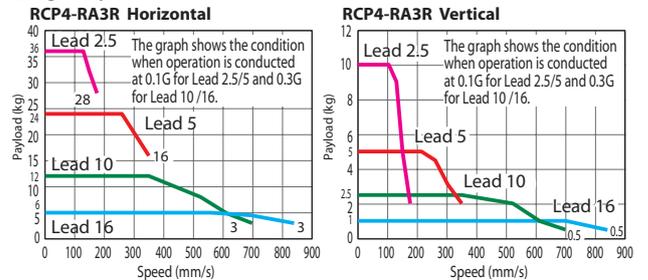
- POINT**  
Note on selection
- Even though the payload described in the actuator specifications is the maximum value, it may vary depending on the acceleration. Refer to "Tables for Payload by Acceleration and Speed" on pg. 6-2 for details.
  - Refer to "Relative Graph for Pressing Force and Current Limit" on pg. 10 of RCP4-SA3/RA3 straight motor type catalogue for the pressing operation.

### Correlation Diagrams of Speed and Payload

#### ① High output enabled (PowerCon) - PCON-CA-MSEP-MSEL connected



#### ② High output disabled (standard) - PCON-CA-MSEP connected



### Actuator Specifications

#### Leads and Payloads

Model number	Lead (mm)	Maximum payload		Maximum push force (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP4-RA3R-I-28P-16-①-P3-②-③	16	5	1	36	25 ~ 300 (every 25mm)
RCP4-RA3R-I-28P-10-①-P3-②-③	10	12	2.5	57	
RCP4-RA3R-I-28P-5-①-P3-②-③	5	24	5	114	
RCP4-RA3R-I-28P-2.5-①-P3-②-③	2.5	36	10	229	

Legend ① Stroke ② Cable length ③ Options

#### Stroke and Max. Speed (unit: mm/s)

Lead (mm)	High-Output Setting	25 ~ 300 (every 25mm)
16	Enabled	1120
	Disabled	840
10	Enabled	700
	Disabled	350
5	Enabled	350
	Disabled	175

### Cable Length

Type	Cable symbol
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)

### Options

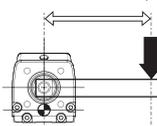
Name	Option code	Reference page	
Brake	B		—
Left-mounted motor	ML	Refer to RoboCylinder General Catalog	—
Right-mounted motor	MR		—
Home-position check sensor (top)	HS		—
Non-motor end specification	NM		—
Back-mounting plate	RP		—

### Actuator Specifications

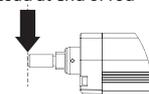
Item	Description
Drive system	Ball screw Ø8mm rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	Ø16mm Aluminum
Rod non-rotation precision(*1)	±0 deg
Allowable rod load mass	Refer to reference at the back
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(\*1) Accuracy of rod displacement in rotating direction when no load is received.

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



Load at end of rod





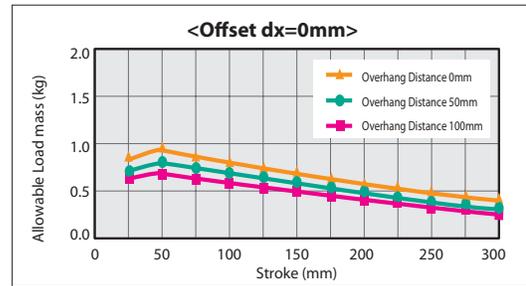
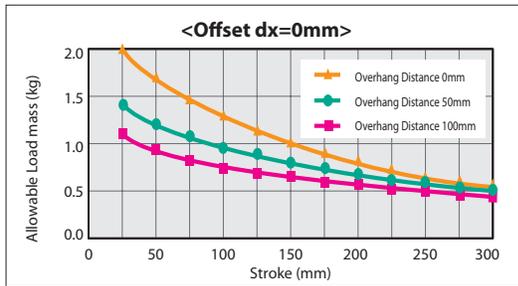
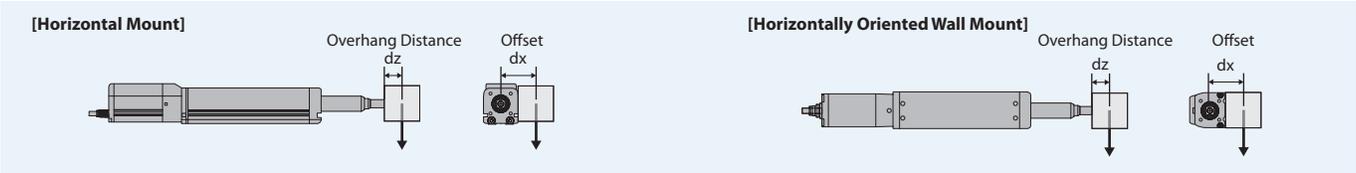
**Criteria for Selection**

● **Document for Selection of Radial Cylinder Allowable Load**

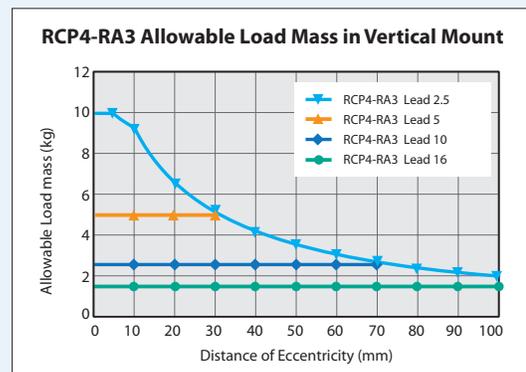
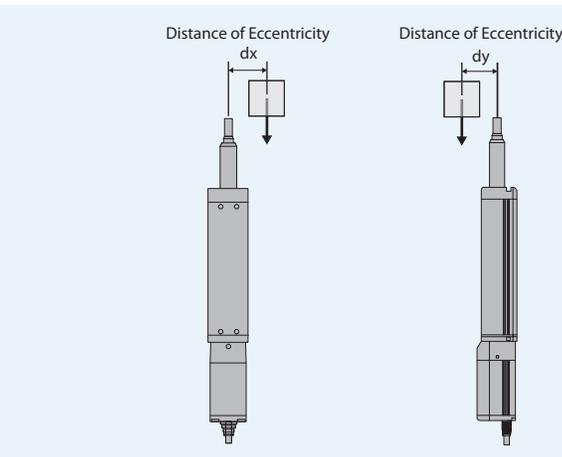
Because the Radial Cylinder is equipped with a built-in guide structure, a certain amount of load can be applied to the rod even without an external guide. Refer to the graphs below for the allowable load mass.

Please note that it is necessary to apply an external guide feature when the operational condition exceeds the allowable load.

■ **Allowable Load Mass in Horizontal Mount**



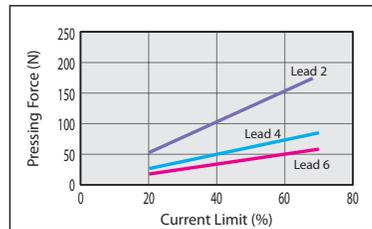
■ **Allowable Load Mass in Vertical Mount**



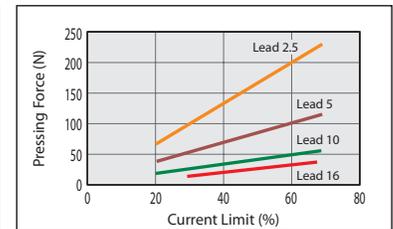
● **Relative Graph for Pressing Force and Current Limit**

The pressing force in the pressing operation can be changed with the current limit (20% to 70%) on the controller. It is necessary to control the pressing force so the reaction moment generated by the pressing force in the pressing operation would not exceed 80% of the rated moment (Ma, Mb) specified in the catalog when pressing operation is conducted with the Slider Type. Refer to the instruction manual for the details of how to select.

■ **RCP4-SA3 Type**



■ **RCP4-RA3 Type**



**Maintenance Parts**

Model number	CB-CAN-MPA□□□	Integrated Motor-Encoder Cable	for RCP4-SA3/RA3
	CB-CAN-MPA□□□-RB	Integrated Motor-Encoder Robot Cable	

\* Please indicate cable length (L) in □□□, maximum 20m. e.g.) 080 = 8m

\*Refer to the RCP5 individual catalog for details.

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www.intelligentactuator.com

The information contained in this product brochure may change without prior notice due to product improvements.

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