Cleanroom ROBO Cylinder, 2-finger Gripper, Small Slider Type, 74mm Width, Pulse Motor

**Dust-proof ROBO Cylinder, 2-finger Gripper,** Small Slider Type, 74mm Width, Pulse Motor

■ Model Specification Items

RCP2W

RCP2CR: Cleanroom

RCP2W: Dust-proof

Type

**20P** Encoder

I: Incremental 20P: Pulse motor

Motor

20□size

1 Deceleration . Ratio 1: Deceleration ratio

10 Opening/ **Closing Stroke** 10: 10mm finger)

P1: PCON-PL/PO/SE PSEL P3: PCON-CA

Applicable Controllers

N: None S: 3m M: 5m XDD: PMEC/PSEP MSEP Custom B□□ · Bobot cable

**Cable Length Options** 

FB:Flange bracket SB:Shaft bracket VL:L-shaped vacuum joint specification

RoHS



\* The figure above shows the Cleanroom Type. There is no air vacuum joint equipped on the Dust-proof Type.

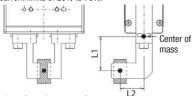
> (1) The maximum opening/closing speed indicates the operating speed on one side. The relative operating speed is twice this value.



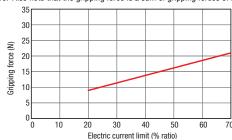
- (2) The maximum gripping force is the sum of the gripping forces of both fingers, at a gripping point where there is no offset or overhang distance. The work part weight that can be actually moved depends on the friction coefficient between the gripper fingers and the work part, as well as on the shape of the work part. As a rough guide, a work part's weight should not exceed 1/10 to 1/20 of the gripping force.
  - \* The gripping point 0 should be the center of mass in the drawing.
- (3) Refer to "How to Select Gripper" at the end of the ROBO Cylinder General Catalog for how to select a gripper.
- (4) The rated acceleration while moving is 0.3G.

# **■**Correlation Diagram of Gripping Force and Electric Current Limit

By pressing motion, the gripping (pushing) force can be adjusted freely within the range of electric current limits of 20% to 70%.



- \* Keep L1 within 50mm from the center of mass.
- \* The gripping force in the graph below assumes that L1 and L2 in the figure above are zero. Also note that the gripping force is a sum of gripping forces of both fingers.



- \* The gripping force graph above shows reference numbers. Please allow margins up to ±15%.
- \* Please note that, when gripping (pushing), the speed is fixed at 5mm/s.

# Actuator Specifications

### ■Max. Gripping Force and Stroke

Model Number	Deceleration Ratio	Max. Gripping Force	Stroke (mm)
RCP2CR-GRS-I-20P-1-10-①-②-③	1	21 (10.5 per finger)	10 (5 per finger)
RCP2W-GRS-I-20P-1-10-①-②-③			

## ■ Stroke and Max. Opening/Closing Speed / Suction Amount

Stroke Deceleration Ratio	10 (mm)	Suction Amount (*)
1	33.3mm/s (Per finger)	10Nℓ/min

\* For Cleanroom Type

Legend: Applicable controllers Cable length Options

Stroke		
Stroke (mm)	Specification	Standard Price
10	Cleanroom	_
1 10	Dust proof	

# 2 Cable Length

		Standard Price			
Туре	Cable Code	Applicable Controller Code			
		P3	P1		
	<b>P</b> (1m)	_	_		
Standard Type	<b>S</b> (3m)	_	_		
	M (5m)	_	_		
	X06 (6m) ~ X10 (10m)	_	_		
Special Length	X11 (11m) ~ X15 (15m)	_	_		
	X16 (16m) ~ X20 (20m)	_	_		
	R01 (1m) ~ R03 (3m)	_	Robot cable is		
Robot Cable	R04 (4m) ~ R05 (5m)	_			
	R06 (6m) ~ R10 (10m)	_			
	R11 (11m) ~ R15 (15m)	_	standard for P1		
	R16 (16m) ~ R20 (20m)	_			

### 3 Options

Name	Option Code	Standard Price
Flange Bracket	FB	_
Shaft Bracket	SB	_
L-shaped Vacuum Joint Specification (Cleanroom Only)	VL	_

### <Option Code>

- FB...Bracket only: RCP2-FB-GRS
- SB...Bracket only: RCP2-SB-GRS
- \* Check the size of the bracket in the option explanation at the end of the ROBO Cylinder General Cataloo.

### Actuator Specifications

Item	Description				
Series	Cleanroom Dust-proof				
Drive System	Timing belt + trapezoidal screw (1.5 lead)				
Positioning Repeatability	±0.01mm				
Backlash	0.15mm or less per finger (constantly pressed out by a spring)				
Lost Motion	0.1mm or less per finger				
Allowable Static Load Moment	Ma: 6.3N•m Mb: 6.3N•m Mc: 7.0N•m				
Guide	Cross roller guide				
Cleanliness	Class 10 (0.1µm)	_			
IP Code	— IP50				
Weight	0.42kg				
Operating Environment	Temperature 0~40°C Humidity 20~85% BH or less (non-condensing)				

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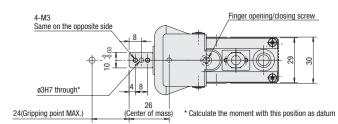
- \*The opening side of the slider is the home position.

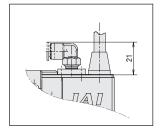
  \* Shown below is a drawing for the Cleanroom Type. There is no air vacuum joint equipped on the Dust-proof Type.

  \* The actuator pigtail is not a robot cable.

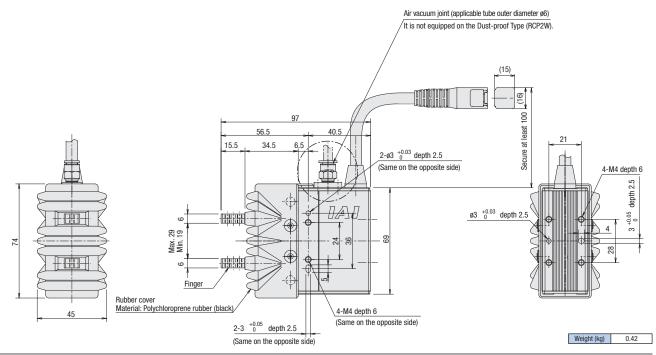
Note

\* Utilize ø3H7 through hole for positioning of fingers.





L-shaped vacuum joint specification



# Applicable Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model Number	Features	Max. Pos. Points	Input Voltage	Power Supply Capacity	Standard Price
Solenoid Valve Multi-axis Type (PIO Specification)		MSEP	Positioner type based on PIO control, allowing up to 8 axes to be connected	3 points			
Solenoid Valve Multi-axis Type (Network Specification)		MSEP	Field network ready positioner type, allowing up to 8 axes to be connected	256 points			-
Positioner Type High-output Specification		PCON-CA-20P(V)-(1)-2-0	Equipped with high-output driver Positioner type based on PIO control	512 points			-
Pulse Train Type High-output Specification		PCON-CA-20PWAI-PL□-2-0	Equipped with high-output driver Pulse train input type	-		0 0000	-
Network Type High-output Specification		PCON-CA-20P(V)-(W)-0-0	Equipped with a high-output driver Supports 8 major field networks	768 points	DC24V	See ROBO Cylinder General Catalog	-
Pulse Train Type (Differential Line Driver Specification)		PCON-PL-20PI-①-2-0	Pulse train input type with differential line driver support			GOTOTAL CALABOS	-
Pulse Train Type (Open Collector Specification)		PCON-PO-20PI-①-2-0	Pulse train input type with open collector support	_			-
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated serial communication	64 points			-
Program Control Type		PSEL-CS-1-20PI-①-2-0	Program operation is possible for up to 2 axes	1500 points			-

- \* This is for the single-axis PSEL.
- \* (i) indicates I/O type (NP/PN).
- $^\star$  ( ) indicates C/LC type. Up to 6 axes can be connected if LC is selected.
- $^{\star}$   $\square$  indicates N (NPN specification) or P (PNP specification) code.

- \* (III) indicates number of axes (1~8). \* (IV) indicates field network specification code.
- \*  $\bigcirc$  indicates encoder type. Enter WAI for incremental specification and SA for simple absolute specification.