RCP2CR-GRM

Cleanroom ROBO Cylinder, 2-finger Gripper, Medium Slider Type, 79mm Width, Pulse Motor

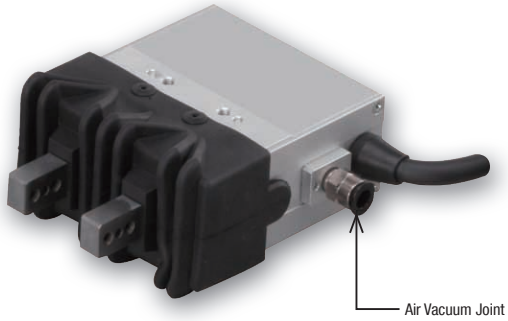
RCP2W-GRM

Dust-proof ROBO Cylinder, 2-finger Gripper, Medium Slider Type, 79mm Width, Pulse Motor

■ **Model Specification Items**

RCP2CR / RCP2W — GRM — I — 28P — 1 — 14 — ☐ — ☐ — ☐
Series	**Type**	**Encoder**	**Motor**	**Deceleration Ratio**	**Opening/ Closing Stroke**	**Applicable Controllers**	**Cable Length**	**Options**
RCP2CR: Cleanroom RCP2W : Dust-proof		I: Incremental	28P: Pulse motor 28☐size	1: Deceleration ratio 1/1	14: 14mm (7mm per finger)	P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP	N: None P: 1m S: 3m M: 5m X☐☐: Custom R☐☐: Robot cable	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.

POINT Note on selection

(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.

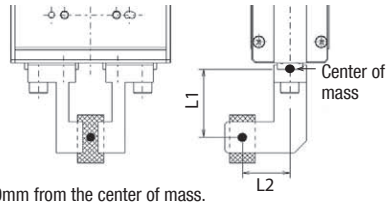
* The gripping point 0 should be the center of mass in the drawing.

(3) Refer to "How to Select Gripper" at the end of the ROBO Cylinder General Catalog for how to select a gripper.

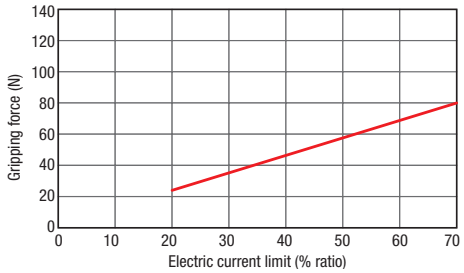
(4) The rated acceleration while moving is 0.3G.

■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 80mm 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 (N)	Stroke (mm)
RCP2CR-GRM-I-28P-1-14-①-②-③	1	80 (40 per finger)	14 (7 per finger)
RCP2W-GRM-I-28P-1-14-①-②-③			

Legend: ① Applicable controllers ② Cable length ③ Options

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

Deceleration Ratio \ Stroke	10 (mm)	Suction Amount (*)
1	36.7mm/s (Per finger)	10Nℓ/min

* For Cleanroom Type

Stroke

Stroke (mm)	Specification	Standard Price
14	Cleanroom	—
	Dust-proof	—

② Cable Length

Type	Cable Code	Standard Price	
		Applicable Controller Code	
		P3	P1
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)	—	Robot cable is standard for P1
	R04 (4m) ~ **R05** (5m)	—	
	R06 (6m) ~ **R10** (10m)	—	
	R11 (11m) ~ **R15** (15m)	—	
	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-GRM
SB…Bracket only: RCP2-SB-GRM
* Check the size of the bracket in the option explanation at the end of the ROBO Cylinder General Catalog.

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: 8.3N•m	
Guide	Cross roller guide	
Cleanliness	Class 10 (0.1μm)	—
IP Code	—	IP50
Weight	0.62kg	
Operating Environment	Temperature 0~40°C Humidity 20~85% RH or less (non-condensing)	

Dimensions

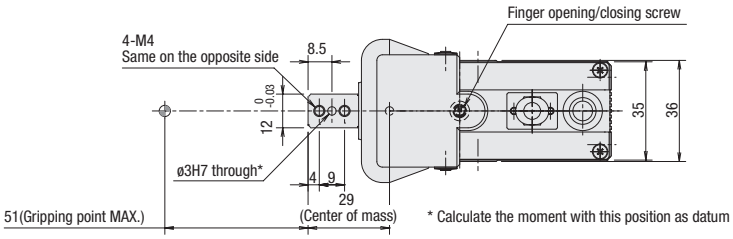
CAD drawings can be downloaded from the website. www.intelligentactuator.com

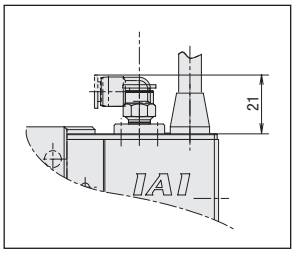
2D CAD 3D CAD

* 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.

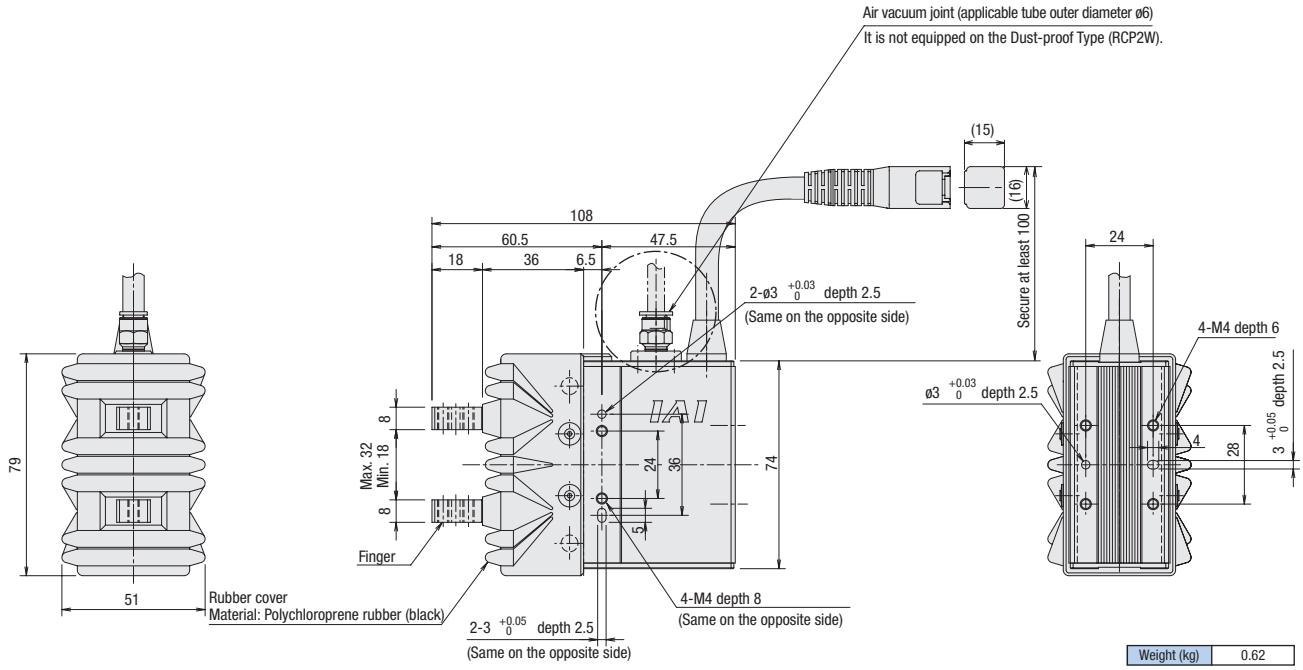
Note

* Utilize ø3H7 through hole for positioning of fingers.





L-shaped vacuum joint specification



Weight (kg)	0.62

① 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-Ⅱ-Ⅲ-~-①-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected	3 points	DC24V	See ROBO Cylinder General Catalog	–
Solenoid Valve Multi-axis Type (Network Specification)		MSEP-Ⅱ-Ⅲ-~-Ⓜ-0-0	Field network ready positioner type, allowing up to 8 axes to be connected	256 points			
Positioner Type High-output Specification		PCON-CA-28PⓋ-①-2-0	Equipped with high-output driver Positioner type based on PIO control	512 points			–
Pulse Train Type High-output Specification		PCON-CA-28PWAI-PL□-2-0	Equipped with high-output driver Pulse train input type	–			–
Network Type High-output Specification		PCON-CA-28PⓋ-Ⓝ-0-0	Equipped with a high-output driver Supports 8 major field networks	768 points			–
Pulse Train Type (Differential Line Driver Specification)		PCON-PL-28PI-①-2-0	Pulse train input type with differential line driver support	–			–
Pulse Train Type (Open Collector Specification)		PCON-PO-28PI-①-2-0	Pulse train input type with open collector support				–
Serial Communication Type		PCON-SE-28PI-N-0-0	Dedicated serial communication	64 points			–
Program Control Type		PSEL-CS-1-28PI-①-2-0	Program operation is possible for up to 2 axes	1500 points			–

* This is for the single-axis PSEL.
* ① indicates I/O type (NP/PN).
* Ⅱ indicates C/LC type. Up to 6 axes can be connected if LC is selected.
* □ indicates N (NPN specification) or P (PNP specification) code.
* Ⅲ indicates number of axes (1~8).
* Ⓝ indicates field network specification code.
* Ⓥ indicates encoder type. Enter WAI for incremental specification and SA for simple absolute specification.