

RCP2-GRLS

ROBO Cylinder, 2-Finger Gripper, Mini Lever Type, Actuator Width 42mm, Pulse Motor

Model Specification Items	RCP2 — GRLS — I — 20P — 30 — 180 —	□	□	□
	Series — Type — Encoder type — Motor type — Deceleration Ratio — Stroke — Applicable controller — Cable length — Options	I: Incremental * The Simple absolute encoder is also considered type "I".	20P: Pulse motor, 20□ size	30: 1/30 deceleration ratio
		P1: PCON-PL/PO/SE PSEL	P3: PCON-CA PMEC/PSEP MSEP	N: None P: 1m S: 3m M: 5m X□□: Custom Length
				NM: Non-motor end FB: Flange bracket SB: Shaft bracket

* See page Pre-47 for details on the model descriptions.



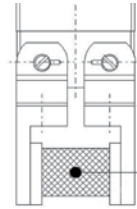
Technical References Appendix P.5



- (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 piece weight that can be actually moved depends on the friction coefficient between the gripper fingers and the work piece, as well as on the shape of the work piece. As a rough guide, a work piece's weight should not exceed 1/10 to 1/20 of the gripping force. (See page A-86 for details.)
- (3) The rated acceleration while moving is 0.3G.

Gripping Force vs. Current Limit

The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.

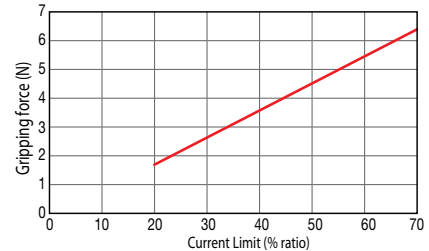


* The gripping force of the graph below is measured on the top face of the lever. The actual gripping force drops in inverse proportion to the distance from the opening/closing fulcrum. Calculate the effective gripping force using the formula below.

* Operate with the L distance up to 40mm.

$$\text{Effective gripping force (GRLS)} = F \times 15.5 / (L + 15.5)$$

* In the graph below, the gripping force value is the 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 5 degrees/s.

Actuator Specifications

Lead and Payload

Model number	Deceleration Ratio	Maximum Gripping Force (N)	Stroke (deg)
RCP2-GRLS-I-20P-30-180-①-②-③	30	6.4 (3.2 per side)	180 (90 per side)

Code explanation ① Applicable Controller ② Cable length ③ Options

Stroke and Max. Opening/Closing Speed

Deceleration ratio	Stroke	180 (deg)
	30	600 (per side)

(Unit: degree/s)

Stroke

Stroke (deg)	Standard price
180	—

② Cable Length

Type	Cable symbol	Standard price
Standard (Robot Cables)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) ~ X10 (10m)	—
	X11 (11m) ~ X15 (15m)	—
	X16 (16m) ~ X20 (20m)	—

* The standard cable is the motor-encoder integrated robot cable.

* See page A-59 for cables for maintenance.

③ Options

Name	Option code	See page	Standard price
Non-motor end specification	NM	→ A-52	—
Flange bracket	FB	→ A-43	—
Shaft bracket	SB	→ A-55	—

Actuator Specifications

Item	Description
Drive System	Worm gear + helical gear
Positioning repeatability	±0.01deg.
Backlash	1 degree or less per side (constantly pressed out by a spring)
Lost motion	1 degree or less
Guide	—
Allowable static load moment	—
Weight	0.2kg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

