

RCP2-GRHB

ROBO Cylinder, 2-Finger Gripper, Large High-force Type, Actuator Width 131 mm, 24V Pulse Motor

| | | | | |
|---------------------------|--|----------------|----------------------------------|--|
| Model Specification Items | RCP2 — GRHB — I — 42P — 2 — 40 — | | | |
| | Series — Type — Encoder type — Motor type — Deceleration Ratio — Stroke — Applicable controller — Cable length — Options | I: Incremental | 42P: Pulse motor, 42□ size | 2: Feed screw lead 2 |
| | | | P1: PCON-PL/PO/SE PSEL | N: None P: 1m S: 3m M: 5m X□□: Custom Length |
| | | | P3: PCON-CA PMEC/PSEP MSEP | See Options below. |

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



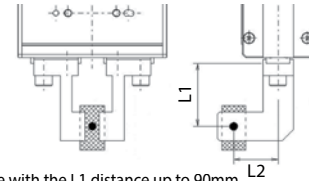
Technical References Appendix P.5



- (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

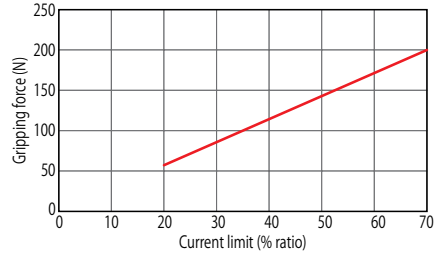
The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.



* Operate with the L1 distance up to 90mm.

* The gripping force value in the graph below is when both L1 and L2 are at 0 mm. (For gripping force reference per L1 distance, see page A-87.)

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 5mm/s.

Actuator Specifications

Lead and Payload

| Model number | Deceleration Ratio | Maximum Gripping Force (N) | Stroke (mm) |
|----------------------------|--------------------|----------------------------|------------------|
| RCP2-GRHB-I-42P-2-40-①-②-③ | 2 | 200 (100 per side) | 40 (20 per side) |

Code explanation ① Applicable Controller ② Cable length ③ Options

Stroke and Max. Opening/Closing Speed

| Stroke | 40 (mm) |
|--------------------|----------------|
| Deceleration ratio | 2 |
| | 100 (per side) |

(Unit: mm/s)

Stroke

| Stroke (mm) | Standard price |
|-------------|----------------|
| 40 | — |

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 |
|-------------------------------|-------------|----------|----------------|
| Cable exit direction (top) | CJT | → A-42 | — |
| Cable exit direction (right) | CJR | → A-42 | — |
| Cable exit direction (left) | CJL | → A-42 | — |
| Cable exit direction (bottom) | CJB | → A-42 | — |
| Flange Bracket | FB | → A-43 | — |
| Shaft bracket | SB | → A-55 | — |

Actuator Specifications

| Item | Description |
|---|---|
| Drive System | Timing belt + trapezoidal screw (2 lead) |
| Positioning repeatability | ±0.01mm |
| Backlash | 0.2mm or less per side (constantly pressed out by a spring) |
| Lost motion | 0.15mm or less per side |
| Guide | Linear guide |
| Allowable static load moment (*) | Ma: 15.7 N·m, Mb: 26.4 N·m, Mc: 59.8 N·m |
| Weight | 1.5kg |
| Ambient operating temperature, humidity | 0 to 40°C, 85% RH or less (Non-condensing) |

(*) Based on a 5,000km service life.

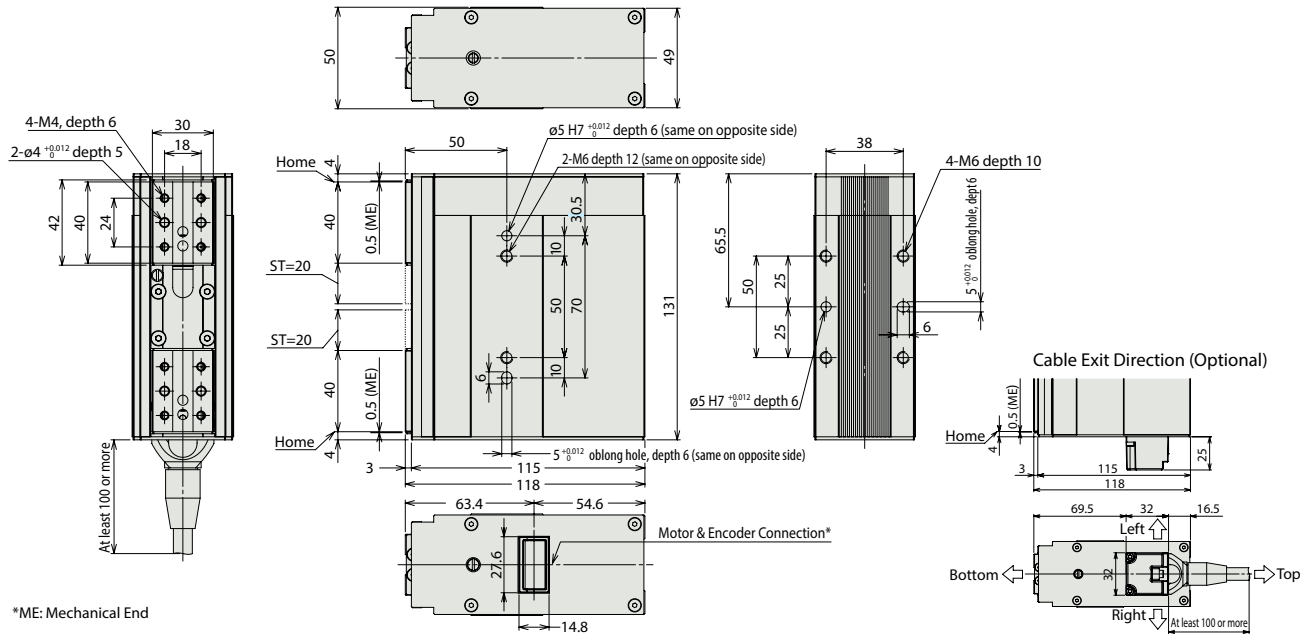
Dimensional Drawings

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

For Special Orders Appendix P.15



* Connect the motor-encoder integrated cable here. (See page A-59 for details on cables.)



*ME: Mechanical End

Weight (kg) 1.5

① Applicable Controllers

RCP2 series actuators can be operated with the controllers 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 | Standard price | Reference page | | | | | | | | | | |
|--|---------------|----------------------|---|--------------------------------------|-------------|-----------------------|----------------|----------------|---------------|---|--------|---------------|---|--------|-------|---------------|---|--------|
| Solenoid Valve Type | | PMEC-C-42PI-①-2-② | Easy-to-use controller, even for beginners | 3 points | DC24V | Refer to P541 | — | → P537 | | | | | | | | | | |
| | | PSEP-C-42PI-①-2-0 | Simple controller operable with the same signal as a solenoid valve | | | | | → P547 | | | | | | | | | | |
| Solenoid valve multi-axis type PIO specification | | MSEP-C-③-④-①-2-0 | Positioner type based on PIO control, allowing up to 8 axes to be connected | 256 points | | | | DC24V | Refer to P572 | — | → P563 | | | | | | | |
| Solenoid valve multi-axis type Network specification | | MSEP-C-③-④-④-0-0 | Field network-ready positioner type, allowing up to 8 axes to be connected | | | | | | | | → P607 | | | | | | | |
| Positioner type High-output specification | | PCON-CA-42PI-①-2-0 | Equipped with a high-output driver Positioner type based on PIO control | 512 points | | | | | | | DC24V | Refer to P618 | — | → P623 | | | | |
| Pulse-train type High-output specification | | PCON-CA-42PI-PL□-2-0 | Equipped with a high-output driver Pulse-train input type | (—) | | | | | | | | | | | | | | |
| Field network type High-output specification | | PCON-CA-42PI-④-0-0 | Equipped with a high-output driver Supporting 7 major field networks | 768 points | | | | | | | | | | | | | | |
| Pulse Train Input Type (Differential Line Driver) | | PCON-PL-42PI-①-2-0 | Pulse train input type with differential line driver support | (—) | | | | | | | | | | | DC24V | Refer to P628 | — | → P665 |
| Pulse Train Input Type (Open Collector) | | PCON-PO-42PI-①-2-0 | Pulse train input type with open collector support | | | | | | | | | | | | | | | |
| Serial Communication Type | | PCON-SE-42PI-N-0-0 | Dedicated Serial Communication | 64 points | | | | | | | | | | | | | | |
| Program Control Type | | PSEL-CS-1-42PI-①-2-0 | Programmed operation is possible. Can operate up to 2 axes | 1,500 points | DC24V | Refer to P671 | — | | | | | | | | | | | |

* This is for the single-axis PSEL. * ① indicates I/O type (NP/PN). * ② indicates power supply voltage (1: 100V / 2: 100~240V). * ③ indicates number of axes (1 to 8). * ④ indicates field network specification symbol. * □ indicates N (NPN specification) or P (PNP specification) symbol.