

RCP2-RA2C

ROBO Cylinder Rod Type 25mm Width Pulse Motor Straight Type

■ Configuration: **RCP2** — **RA2C** — **I** — **20P** — — — — —

Series — Type — Encoder — Motor — Lead — Stroke — Compatible Controllers — Cable Length — Option

I: Incremental
* The Simple absolute encoder is also considered type "I".

20P: Pulse motor 20 □ size

1 : 1mm

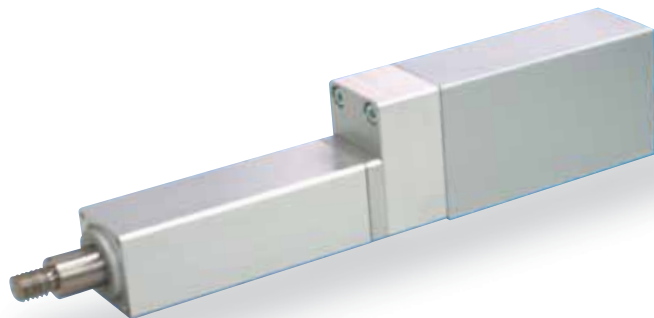
25: 25mm
100: 100mm (25mm pitch increments)

P1: PCON
RPCON
PSEL
P3: PMEC
PSEP

N : None
P : 1m
S : 3m
M : 5m
X □ : Custom Length
R □ : Robot cable

FL : Flange
FT : Foot bracket

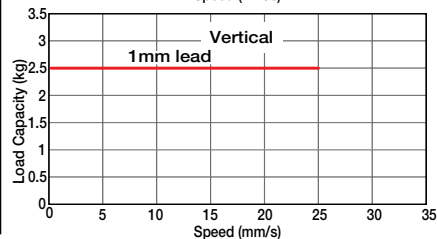
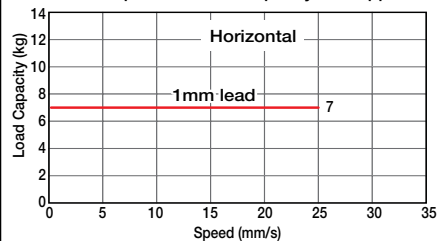
* See page Pre-35 for an explanation of the naming convention.



Technical References P. A-5

- POINT** Notes on Selection
- (1) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
 - (2) The load capacity is based on operation at an acceleration of 0.05G. In addition, the horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.

■ Speed vs. Load Capacity
Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



| Actuator Specifications | | | | | | Stroke and Maximum Speed | |
|---------------------------|-----------|--------------------|---------------|--------------------------------|----------------------------|----------------------------|----------------------------|
| ■ Lead and Load Capacity | | | | | | ■ Stroke and Maximum Speed | |
| Model | Lead (mm) | Max. Load Capacity | | Maximum Push Force (N)(Note 1) | Stroke (mm) | Stroke Lead | 25 ~ 100 (25mm increments) |
| | | Horizontal (kg) | Vertical (kg) | | | | |
| RCP2-RA2C-I-20P-1-①-②-③-④ | 1 | 7 | 2.5 | 100 | 25 ~ 100 (25mm increments) | 1 | 25 |

Legend: ① Stroke ② Compatible controller ③ Cable length ④ Options (Note 1) See page A-69 for the pushing force graphs. (Unit: mm/s)

① Stroke List

| Stroke (mm) | Standard Price |
|-------------|----------------|
| 25 | - |
| 50 | - |
| 75 | - |
| 100 | - |

③ Cable List

| Type | Cable Symbol | Standard Price |
|-----------------|-----------------------|----------------|
| Standard | P (1m) | - |
| | S (3m) | - |
| | M (5m) | - |
| Special Lengths | 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) | - |
| | | |

* See page A-39 for cables for maintenance.

④ Option List

| Name | Option Code | See Page | Standard Price |
|--------------|-------------|----------|----------------|
| Flange | FL | → A-27 | - |
| Foot bracket | FT | → A-29 | - |

Actuator Specifications

| Item | Description |
|----------------------------------|---|
| Drive System | Ball screw ø6mm C10 grade |
| Positioning Repeatability | ±0.02mm |
| Lost Motion | 0.1mm or less |
| Rod Diameter | ø12mm |
| Non-rotating accuracy of rod | ±2.1 deg |
| Ambient Operating Temp./Humidity | 0~40°C, 85% RH or less (non-condensing) |

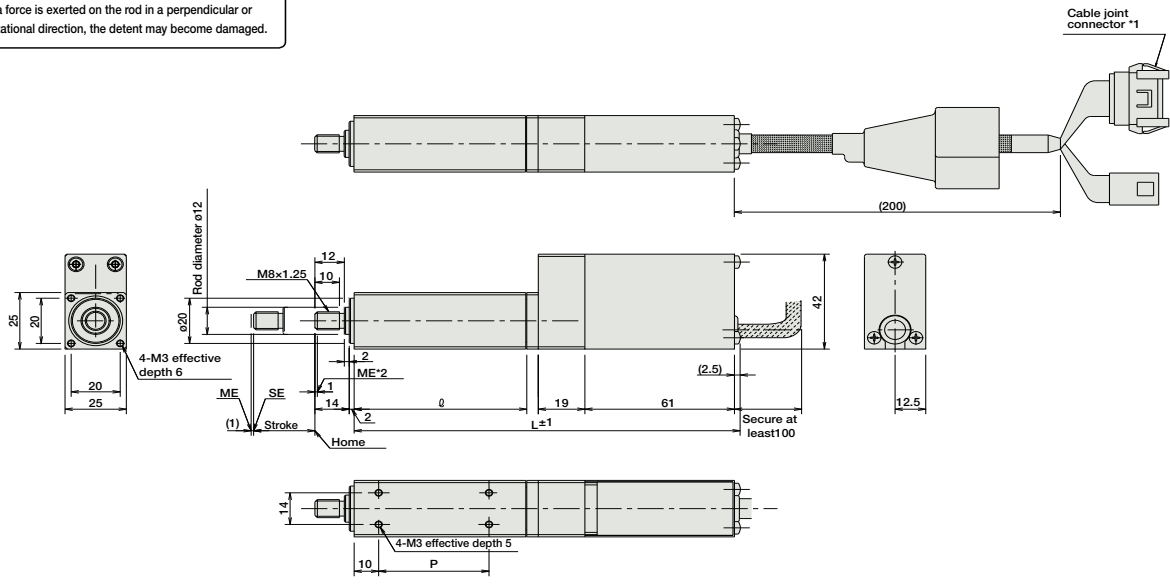
Dimensions

For Special Orders P. A-9

* The RA2C is not available in reversed-home configuration, due to its construction.

- *1. The motor-encoder cable is connected here. See page A-39 for details on cables.
- *2. When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.
ME: Mechanical end
SE: Stroke end

Note:
Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.



■ Dimensions/Weight by Stroke

| Stroke | 25 | 50 | 75 | 100 |
|-------------|-------|-------|-------|-------|
| R | 70 | 95 | 120 | 145 |
| L | 157.5 | 182.5 | 207.5 | 232.5 |
| P | 45 | 70 | 95 | 120 |
| Weight (kg) | 0.4 | 0.5 | 0.6 | 0.7 |

② Compatible Controllers

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

| Name | External View | Model | Description | Max. Positioning Points | Input Voltage | Power Supply Capacity | Standard Price | See Page |
|---|----------------------------------|----------------------|---|--|------------------|-----------------------|----------------|---|
| Solenoid Valve Type | | PMEC-C-20PI-NP-2-① | Easy-to-use controller, even for beginners | 3 points | AC100V AC200V | See P481 | - | → P477 |
| | Splash-Proof Solenoid Valve Type | | PSEP-C-20PI-NP-2-0 | | | | | Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type. |
| Positioner Type | | | PCON-C-20PI-NP-2-0 | Positioning is possible for up to 512 points | 512 points | - | - | |
| Safety-Compliant Positioner Type | | PCON-CG-20PI-NP-2-0 | - | | | | | |
| Pulse Train Input Type (Differential Line Driver) | | PCON-PL-20PI-NP-2-0 | Pulse train input type with differential line driver support | (-) | DC24V | 2A max. | - | → P525 |
| Pulse Train Input Type (Open Collector) | | PCON-PO-20PI-NP-2-0 | Pulse train input type with open collector support | | | | | - |
| Serial Communication Type | | PCON-SE-20PI-N-0-0 | Dedicated to serial communication | 64 points | - | - | - | |
| Field Network Type | | RPCON-20P | Dedicated to field network | 768 points | - | - | - | → P503 |
| Program Control Type | | PSEL-C-1-20PI-NP-2-0 | Programmed operation is possible Operation is possible on up to 2 axes | 1500 points | - | - | - | → P557 |

* This is for the single-axis PSEL.
* ① is a placeholder for the power supply voltage (1: 100V, or 2: 100~240V).

- Slider Type
- Mini
- Standard
- Controllers Integrated
- Rod Type
- Mini
- Standard
- Controllers Integrated
- Table/Arm /Flat Type
- Mini
- Standard
- Gripper/ Rotary Type
- Linear Servo Type
- Cleanroom Type
- Splash Proof
- Controllers
- PMEC /AMEC
- PSEP /ASEP
- ROBO NET
- ERC2
- PCON
- ACON
- SCON
- PSEL
- ASEL
- SSEL
- XSEL
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor