

# RCP2CR-RTC/RTCL

Cleanroom ROBO Cylinder, Rotary, Medium Flat Type,  
88 mm Body Width, Pulse Motor

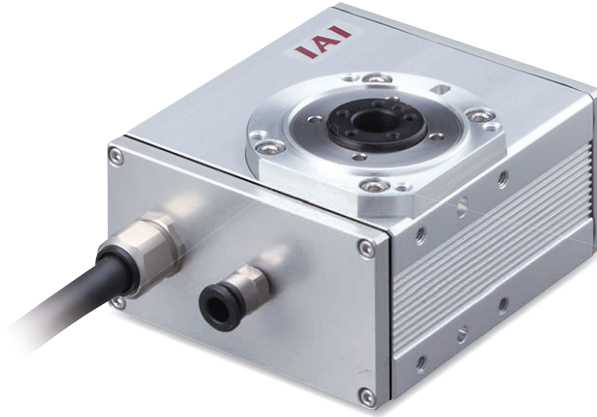
# RCP2W-RTC/RTCL

Dust-proof/Splash-proof ROBO Cylinder, Rotary, Medium Flat Type,  
88 mm Body Width, Pulse Motor

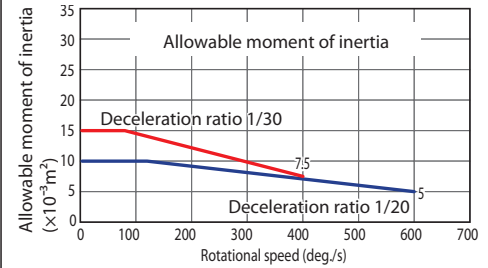
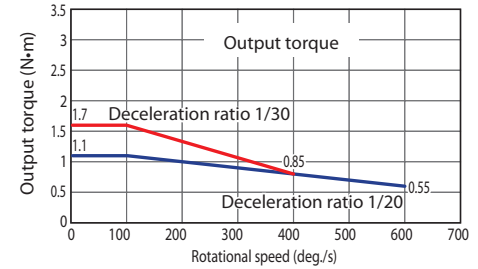
| Model               | RCP2CR | RCP2W | Type                                                                         | Encoder                                                                      | Motor                        | Deceleration Ratio                                         | Operating Range                                             | Applicable Controllers                                                | Cable Length                                                          | Options                                                                      |
|---------------------|--------|-------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------|
| Specification Items |        |       | RTC: 330-degree rotation specification<br>RTCL: Multi-rotation specification | I: Incremental<br>* The Simple absolute encoder is also considered type "I." | 28P: Pulse motor<br>28□ size | 20: Deceleration ratio 1/20<br>30: Deceleration ratio 1/30 | 330: 330 degrees (RTC only)<br>360: 360 degrees (RTCL only) | P1: PCON-CY/PL/PO/SE<br>PSEL<br>P3: PCON-CA<br>PMEC/PSEP<br>MSEP/MSEL | N: None<br>P: 1m<br>S: 3m<br>M: 5m<br>X□□: Custom<br>R□□: Robot cable | NM: Reverse rotation specification<br>SA: Shaft adapter<br>TA: Table adapter |



\*Can be installed with above orientations.



## Correlation Graph of Speed, Output Torque and Allowable Moment of Inertia



- (1) The output torque gets lower as the rotation speed gets faster. Check the output torque graph on the right to see if the necessary speed for the application is possible.
- (2) The allowable moment of inertia on the rotated work piece will differ depending on the rotation speed. Check the allowable moment of inertia graph on the right to see if the necessary moment of inertia for the application is in the allowable range.
- (3) The rated acceleration while moving is 0.3 G.
- (4) Note that PMEC/PSEP Controllers are not capable of infinite rotation operation when used with multi-rotation actuators.

## Actuator Specifications

| Model                             | Deceleration Ratio | Maximum Torque (N·m) | Allowable Moment of Inertia (kg·m) | Operating Range (deg.) |
|-----------------------------------|--------------------|----------------------|------------------------------------|------------------------|
| RCP2 ① -RTC-I-28P-20-330-② -③ -④  | 1/20               | 1.1                  | 0.01                               | 330                    |
| RCP2 ① -RTC-I-28P-30-330-② -③ -④  | 1/30               | 1.7                  | 0.015                              | 330                    |
| RCP2 ① -RTCL-I-28P-20-360-② -③ -④ | 1/20               | 1.1                  | 0.01                               | 360                    |
| RCP2 ① -RTCL-I-28P-30-360-② -③ -④ | 1/30               | 1.7                  | 0.015                              | 360                    |

Legend: ① Series ② Applicable controllers ③ Cable length ④ Options

## Deceleration ratio and Max. speed

| Operating Range    | 330/360 (deg.) |
|--------------------|----------------|
| Deceleration Ratio |                |
| 1/20               | 600            |
| 1/30               | 400            |

(Unit: deg./s)

## Type

| Type | Operating Range (deg.) | Standard Price |
|------|------------------------|----------------|
| RTC  | 330                    | —              |
| RTCL | 360                    | —              |

## ③ Cable Length

| Type                       | Cable Code              | Standard Price |
|----------------------------|-------------------------|----------------|
| Applicable Controller Code |                         |                |
|                            | P3                      | P1             |
| Standard Type              | P (1 m)                 | —              |
|                            | S (3 m)                 | —              |
|                            | M (5 m)                 | —              |
| Special Length             | X06 (6 m) ~ X10 (10 m)  | —              |
|                            | X11 (11 m) ~ X15 (15 m) | —              |
|                            | X16 (16 m) ~ X20 (20 m) | —              |
| Robot Cable                | R01 (1 m) ~ R03 (3 m)   | —              |
|                            | R04 (4 m) ~ R05 (5 m)   | —              |
|                            | R06 (6 m) ~ R10 (10 m)  | —              |
|                            | R11 (11 m) ~ R15 (15 m) | —              |
|                            | R16 (16 m) ~ R20 (20 m) | —              |

Robot cable is standard for P1

## ④ Options

| Name                           | Option Code | Reference         | Standard Price |
|--------------------------------|-------------|-------------------|----------------|
| Reverse Rotation Specification | NM          | See ROBO Cylinder | —              |
| Shaft Adapter                  | SA          | General Catalog   | —              |
| Table Adapter                  | TA          | General Catalog   | —              |

## Actuator Specifications

| Item                                   | Description                                               |                         |
|----------------------------------------|-----------------------------------------------------------|-------------------------|
|                                        | Cleanroom                                                 | Dust-proof/Splash-proof |
| Drive System                           | Hypoid gear                                               |                         |
| Positioning Repeatability              | ±0.01 deg.                                                |                         |
| Home-return Accuracy                   | ±0.01 deg. or less (RTC)/±0.05 deg. or less (RTCL)        |                         |
| Lost Motion                            | ±0.1 deg.                                                 |                         |
| Allowable Thrust Load                  | 50 N                                                      |                         |
| Allowable Load Moment                  | 3.9 N·m                                                   |                         |
| Ambient Operating Temperature/Humidity | 0~40°C, 85% RH or less (non-condensing)                   |                         |
| Cleanliness                            | Class 10 (0.1 μm)                                         | —                       |
| Pipe Joint for Vacuuming               | Quick connect joint, applicable tube outer diameter ø6 mm | —                       |
| Air Vacuum Volume                      | 15 Nl/min                                                 | —                       |
| IP Code                                | —                                                         | IP54 or equivalent      |
| Pipe Joint for Air Purge               | Quick connect joint, applicable tube outer diameter ø6 mm | —                       |
| Air Purge Flow Volume                  | —                                                         | 20 Nl/min               |
| Weight                                 | 1.04 kg                                                   |                         |

