

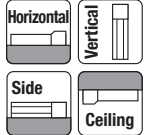
# RCP2CR-RTCB/RTCBL

Cleanroom ROBO Cylinder, Rotary, Large Flat Type,  
124 mm Body Width, Pulse Motor

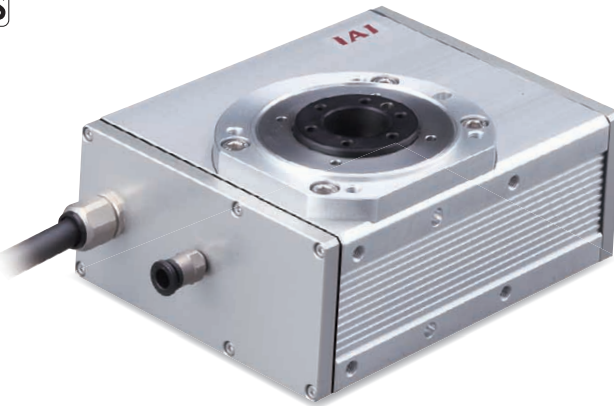
# RCP2W-RTCB/RTCBL

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

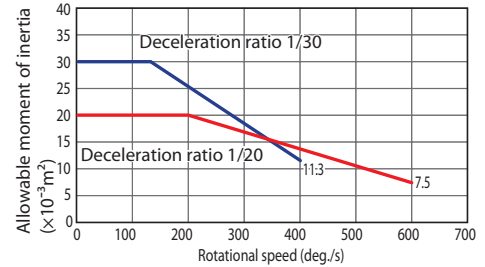
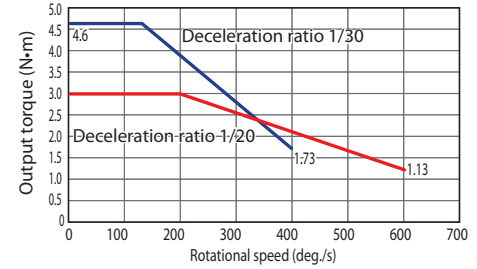
| Model Specification Items | RCP2CR<br>RCP2W | Type   | Encoder  | Motor                        | Deceleration Ratio   | Operating Range   | Applicable Controllers  | Cable Length  | Options  |
|---------------------------|-----------------|--|--|------------------------------|--|---|---|---|--|
|                           |                 | RTCB: 330-degree rotation specification<br>RTCBL: Multi-rotation specification | I: Incremental<br>* The Simple absolute encoder is also considered type "I." | 35P: Pulse motor<br>35□ size | 20: Deceleration ratio 1/20<br>30: Deceleration ratio 1/30 | 330: 330 degrees (RTCB only)<br>360: 360 degrees (RTCBL 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



- POINT**  
Note on selection
- 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.
  - 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.
  - The rated acceleration while moving is 0.3 G.
  - 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 -RTCB-I-35P-20-330-②-③-④  | 1/20               | 3.0                  | 0.02                               | 330                    |
| RCP2 ① -RTCB-I-35P-30-330-②-③-④  | 1/30               | 4.6                  | 0.03                               |                        |
| RCP2 ① -RTCBL-I-35P-20-360-②-③-④ | 1/20               | 3.0                  | 0.02                               | 360                    |
| RCP2 ① -RTCBL-I-35P-30-360-②-③-④ | 1/30               | 4.6                  | 0.03                               |                        |

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

### Deceleration ratio and Max. speed

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

(Unit: deg./s)

### Type

| Type  | Operating Range (deg.) | Standard Price |
|-------|------------------------|----------------|
| RTCB  | 330                    | -              |
| RTCBL | 360                    | -              |

### ③ Cable Length

| Type           | Cable Code              | Standard Price |                                |
|----------------|-------------------------|----------------|--------------------------------|
|                |                         | 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)   | -              | Robot cable is standard for P1 |
|                | R04 (4 m) ~ R05 (5 m)   | -              |                                |
|                | R06 (6 m) ~ R10 (10 m)  | -              |                                |
|                | R11 (11 m) ~ R15 (15 m) | -              |                                |
|                | R16 (16 m) ~ R20 (20 m) | -              |                                |

### 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   | -              |

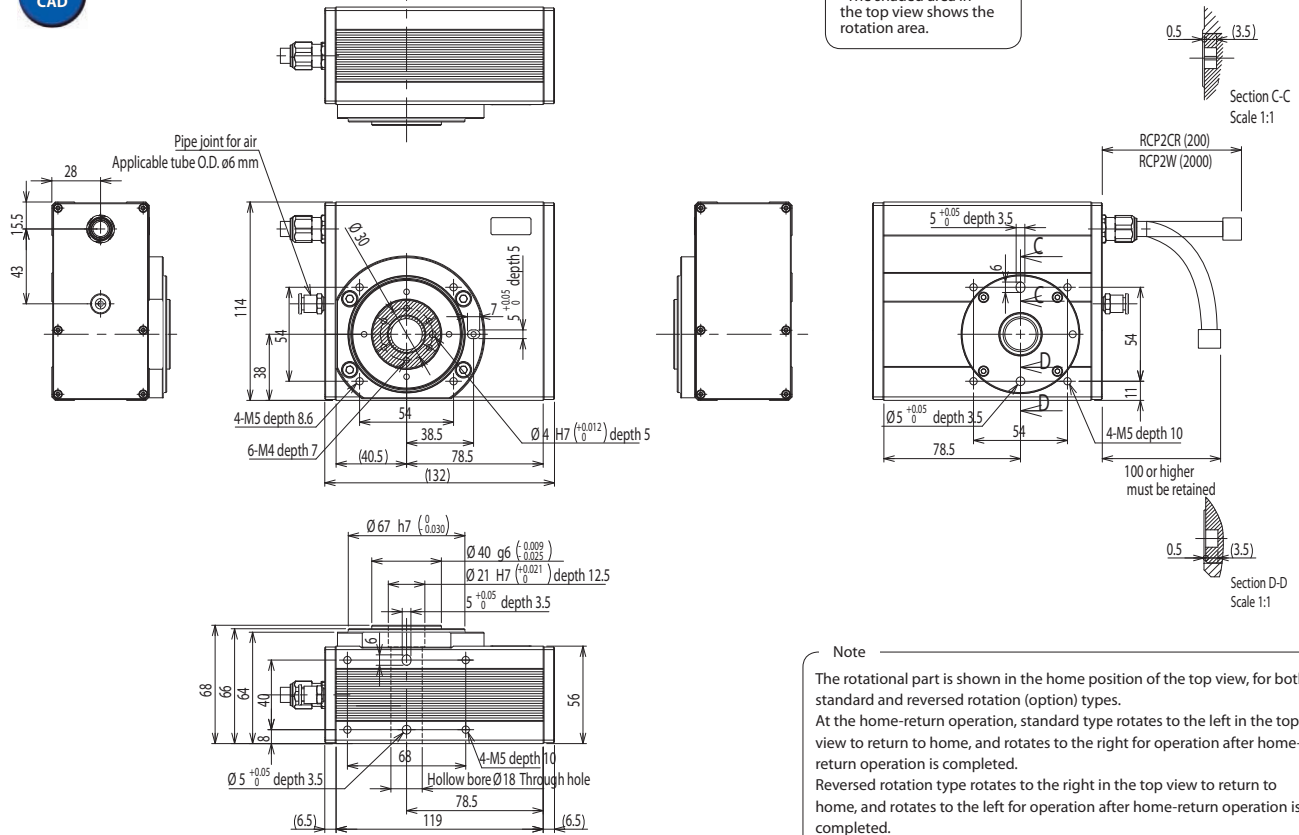
### Actuator Specifications

| Item                                   | Description   |                         |
|--|---|-------------------------|
|  | Cleanroom   | Dust-proof/Splash-proof |
| Drive System                           | Hypoid gear   |                         |
| Positioning Repeatability              | ±0.01 deg.  |                         |
| Home-return Accuracy                   | ±0.01 deg. or less (RTCB)/±0.03 deg. or less (RTCBL)      |                         |
| Lost Motion                            | ±0.1 deg.   |                         |
| Allowable Thrust Load                  | 200 N   |                         |
| Allowable Load Moment                  | 17.7 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                      | 20 NI/min   | -                       |
| IP Code                                | -   | IP54 or equivalent      |
| Pipe Joint for Air Purge               | Quick connect joint, applicable tube outer diameter ø6 mm | -                       |
| Air Purge Flow Volume                  | -   | 40 NI/min               |
| Weight                                 | 2.4 kg  |                         |

## Dimensions

CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)

2D  
CAD



## ② Applicable Controllers

The RCP2CR/RCP2W series actuators can operate with the controllers below. Select the controller according to your usage.

| Name   | External View                | Model Number  | Max. Number of Controlled Axes | Max. Pos. Points | Input Voltage                     | Standard Price |
|--|------------------------------|---|--------------------------------|------------------|-----------------------------------|----------------|
| Solenoid Valve Multi-axis Type (PIO Specification)                               |                              | MSEP- $\text{V}$ - $\text{II}$ - $\sim$ - $\text{I}$ -2-0   | C:8<br>LC:6                    | 3 points         | DC24V                             | -              |
| Solenoid Valve Multi-axis Type (Network Specification)                           |                              | MSEP- $\text{V}$ - $\text{II}$ - $\sim$ - $\text{III}$ -0-0 |                                | 256 points       |                                   |                |
| Positioner Type High-output Specification  |                              | PCON-CA-35P $\text{V}$ - $\text{I}$ -2-0                    | 1                              | 512 points       |                                   | -              |
| Pulse Train Type High-output Specification                                       |                              | PCON-CA-35PWA1-PL $\text{V}$ -2-0                           |                                | -                |                                   | -              |
| Network Type High-output Specification   |                              | PCON-CA-35P $\text{V}$ - $\text{III}$ -0-0                  |                                | 768 points       |                                   | -              |
| Program Control Type   |                              | PSEL-CS-1-35PI- $\text{I}$ -2-0                             | 2                              | 1500 points      |                                   | -              |
| Program Control Multi-axis Type PIO Specification                                |                              | MSEL-PC-1-35P $\text{V}$ - $\text{I}$ -2-4                  | 4                              | 30000 points     | Single-phase AC<br>100V ~<br>230V | -              |
| Program Control Multi-axis Type Network Specification                            |                              | MSEL-PC-1-35P $\text{V}$ - $\text{III}$ -0-4                |                                |                  |                                   |                |
| Program Control Multi-axis Type Safety Category Compliant Specification          |                              | MSEL-PG-1-35P $\text{V}$ - $\text{I}$ -2-4                  |                                |                  |                                   |                |
| Program Control Multi-axis Type Safety Category Compliant Spec. w/ Network Board |                              | MSEL-PG-1-35P $\text{V}$ - $\text{III}$ -0-4                |                                |                  |                                   |                |
| Other Connectable Devices  | PSEP, PMEC, PCON-CY/PL/PO/SE |   |                                |                  |                                   |                |

\*For the single-axis PSEL and MSEL. \* $\text{I}$  I/O type (NP/PN) \* $\text{II}$  Number of axes \* $\text{III}$  Field network specification code

\* $\text{V}$  Encoder type WAI: Incremental/SA: Simple absolute. However, WAI and SA cannot be used together for MSEL. \* $\text{C}$  (standard type) or LC (PLC function equipped type)

\* $\text{N}$  (NPN specification)/P (PNP specification) code