

# RCA-RGD3D

ROBO Cylinder Rod Type with Double Guide ø32mm Diameter 24V Servo Motor Built-In Model

■ Configuration: **RCA** — **RGD3D** — **I** — **20** —  —  —  —  —

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

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

20: 20W Servo Motor

Lead: 10 : 10mm  
5 : 5mm  
2.5 : 2.5mm

Stroke: 50 : 50mm  
)  
200 : 200mm (50mm pitch increments)

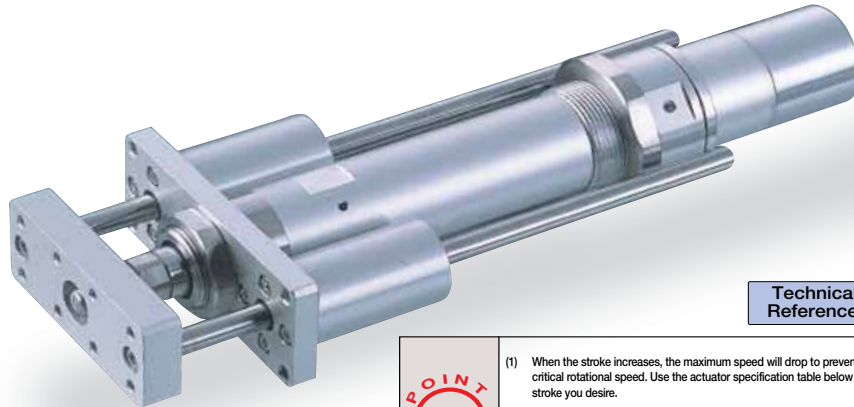
Compatible Controllers: A1 : ACON, RACON, ASEL, A3 : AMEC, ASEP

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

Option: See Options below

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

Power-saving



Technical References P. A-5

- POINT**  
Notes on Selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
  - (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm-lead model). This is the upper limit of the acceleration.
  - (3) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-83) for the allowable weight using the supplied guide alone.

| Actuator Specifications    |                  |           |                            |               |             |
|----------------------------|------------------|-----------|----------------------------|---------------|-------------|
| ■ Lead and Load Capacity   |                  |           | ■ Stroke and Maximum Speed |               |             |
| Model                      | Motor Output (W) | Lead (mm) | Max. Load Capacity         |               | Stroke (mm) |
|                            |                  |           | Horizontal (kg)            | Vertical (kg) |             |
| RCA-RGD3D-I-20-10-①-②-③-④  | 20               | 10        | 4                          | 1.2           | 36.2        |
| RCA-RGD3D-I-20-5-①-②-③-④   |                  | 5         | 9                          | 2.7           | 72.4        |
| RCA-RGD3D-I-20-2.5-①-②-③-④ |                  | 2.5       | 18                         | 6.2           | 144.8       |

Legend ① Stroke ② Compatible controllers ③ Cable length ④ Options

① Stroke List

| Stroke (mm) | Standard Price |
|-------------|----------------|
| 50          | -              |
| 100         | -              |
| 150         | -              |
| 200         | -              |

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 |
|-------------------------|-------------|----------|----------------|
| Foot bracket            | FT          | → A-29   | -              |
| Home sensor             | HS          | → A-32   | -              |
| Power-saving            | LA          | → A-32   | -              |
| Reversed-home           | NM          | → A-33   | -              |
| Trunnion bracket (back) | TRR         | → A-38   | -              |

\* The home sensor (HS) cannot be used on the reversed-home models.

Actuator Specifications

| Item                             | Description   |
|----------------------------------|---|
| Drive System                     | Ball screw ø8mm C10 grade                               |
| Positioning Repeatability        | ±0.02mm   |
| Lost Motion                      | 0.1mm or less   |
| Guide                            | Double guide (guide rod diameter ø10mm, Ball bush type) |
| Rod Diameter                     | ø16mm   |
| Non-rotating accuracy of rod     | ±0.05 deg   |
| Ambient Operating Temp./Humidity | 0~40°C, 85% RH or less (non-condensing)                 |

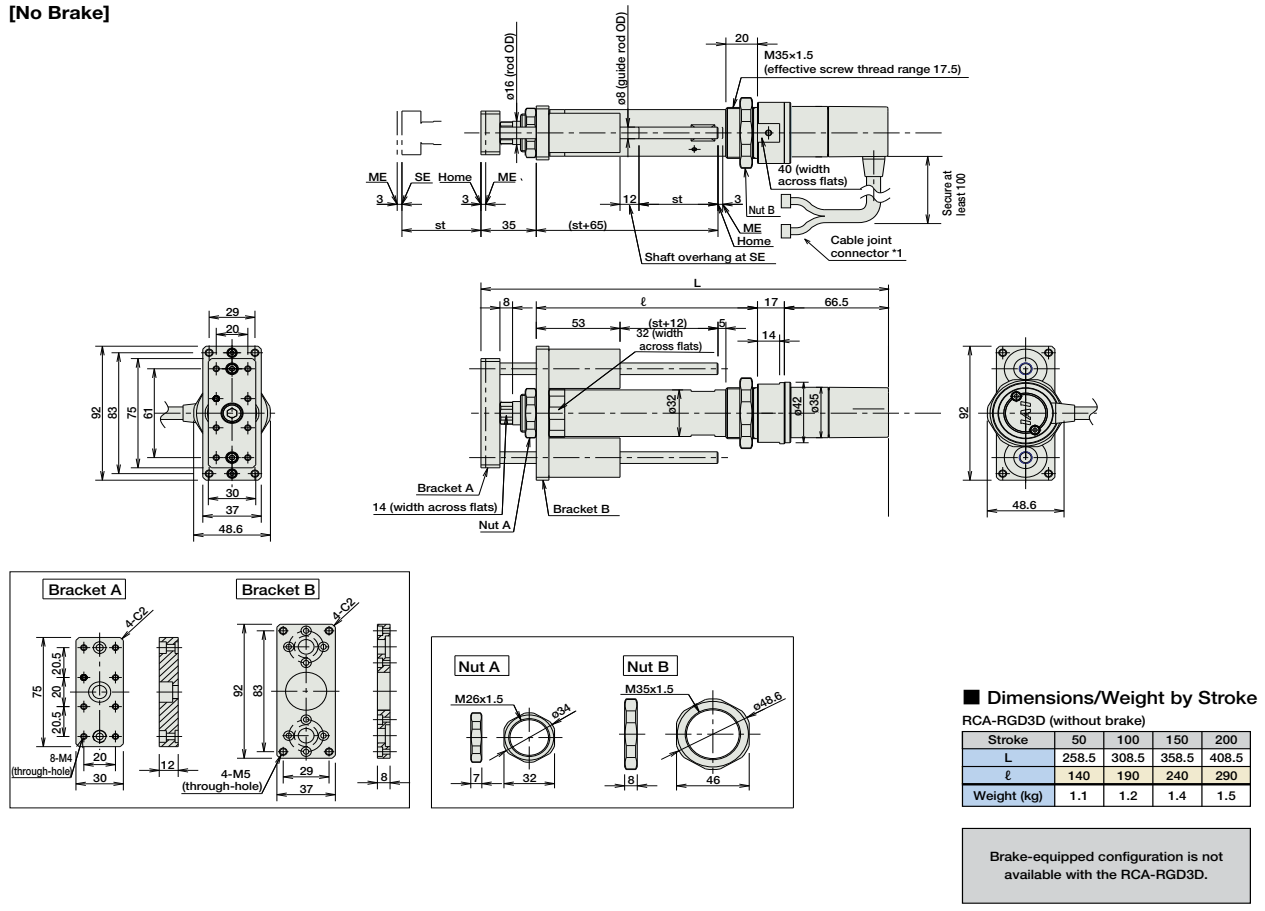
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Dimensions

For Special Orders P. A-9

- \*1 A 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

[No Brake]



② Compatible controller

The RCA 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                               |               | AMEC-C-20SI①-NP-2-1   | Easy-to-use controller, even for beginners  | 3 points                | DC24V         | 1.7A rated<br>5.1A peak | -              | → P477   |
|   |               | ASEP-C-20SI①-NP-2-0   | Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type. |                         |               |                         | -              | → P487   |
| Splash-Proof Solenoid Valve Type                  |               | ASEP-CW-20SI①-NP-2-0  |   | -                       |               |                         |                |          |
| Positioner Type                                   |               | ACON-C-20SI①-NP-2-0   | Positioning is possible for up to 512 points  | 512 points              |               |                         | -              |          |
| Safety-Compliant Positioner Type                  |               | ACON-CG-20SI①-NP-2-0  |   |                         |               |                         | -              |          |
| Pulse Train Input Type (Differential Line Driver) |               | ACON-PL-20SI①-NP-2-0  | Pulse train input type with differential line driver support  | (-)                     |               |                         | -              | → P535   |
| Pulse Train Input Type (Open Collector)           |               | ACON-PO-20SI①-NP-2-0  | Pulse train input type with open collector support  |                         |               |                         | -              |          |
| Serial Communication Type                         |               | ACON-SE-20SI①-N-0-0   | Dedicated to serial communication   | 64 points               |               |                         | -              |          |
| Field Network Type                                |               | RACON-20S①            | Dedicated to field network  | 768 points              | -             | → P503                  |                |          |
| Program Control Type                              |               | ASEL-C-1-20SI①-NP-2-0 | Programmed operation is possible. Operation is possible on up to 2 axes   | 1500 points             | -             | → P567                  |                |          |

\* This is for the single-axis ASEL.  
① is a placeholder for the code "LA" if the power-saving option is specified.

- 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