

# RCA-RGS3C

ROBO Cylinder Rod Type with Single Guide ø32mm Diameter 24V Servo Motor Coupled

■ Configuration: **RCA** — **RGS3C** — **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)

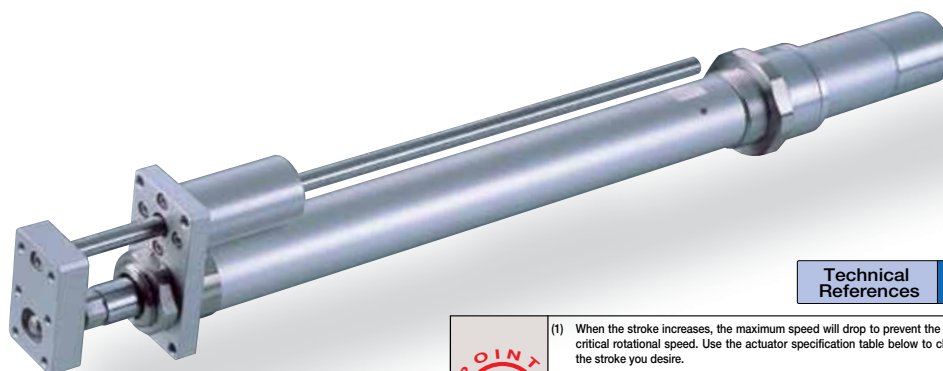
Compatible Controllers: A1 : ACON  
RACON  
ASEL  
A3 : AMEC  
ASEP

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.

**For High Acceleration/Deceleration** **Power-saving**  
(Except the 2.5mm-lead model)



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 values are based on 0.3G acceleration for the standard and power-saving models (0.2G for 2.5mm-lead), and 1G acceleration for the high-acceleration models (2.5mm-lead model excluded).  
(The values in the table below are the upper limits, even if the acceleration/deceleration is decreased.)
  - (3) The values for the horizontal load capacity reflect the use of an external guide.  
See the technical resources (page A-81) for the allowable weight using the supplied guide alone.

### Actuator Specifications

#### Lead and Load Capacity

Model	Motor Output (W)	Lead (mm)	Max. Load Capacity		Rated Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGS3C-I-20-10-①-②-③-④	20	10	4.0	1.2	36.2	50~200 (50mm increments)
RCA-RGS3C-I-20-5-①-②-③-④		5	9.0	2.7	72.4	
RCA-RGS3C-I-20-2.5-①-②-③-④		2.5	18.0	6.2	144.8	

Legend ① Stroke ② Compatible controllers ③ Cable length ④ Options

#### Stroke and Maximum Speed

Lead	Stroke	
	50 ~ 200 (50mm increments)	
10	500	
5	250	
2.5	125	

(Unit: mm/s)

#### 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
Brake	B	→ A-25	-
Foot bracket	FT	→ A-29	-
High-acceleration/deceleration (*1)	HA	→ A-32	-
Home sensor (*2)	HS	→ A-32	-
Power-saving (*3)	LA	→ A-32	-
Reversed-home	NM	→ A-33	-
Trunnion bracket (back)	TRR	→ A-38	-

(\*1) The high-acceleration/deceleration option is not available for 2.5mm-lead model.  
(\*2) The home sensor (HS) cannot be used on the reversed-home models.  
(\*3) The high acceleration/deceleration option and the power-saving option cannot be used simultaneously.

#### Actuator Specifications

Item	Description
Drive System	Ball screw ø8mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Single guide (guide rod diameter ø12mm, 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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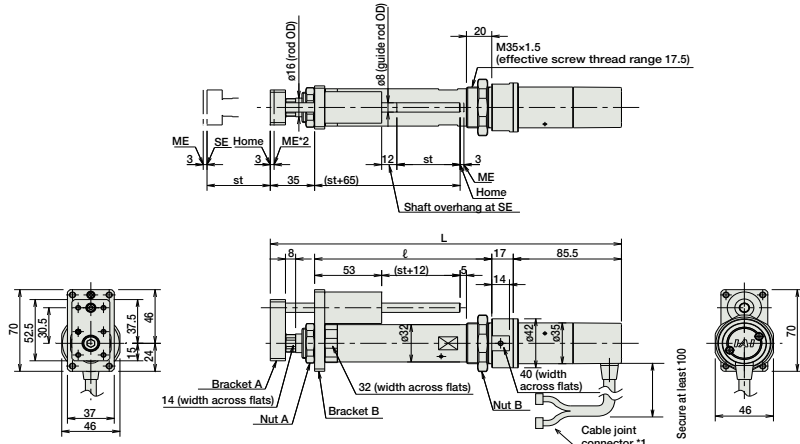
RCA-RGS3C

Dimensions

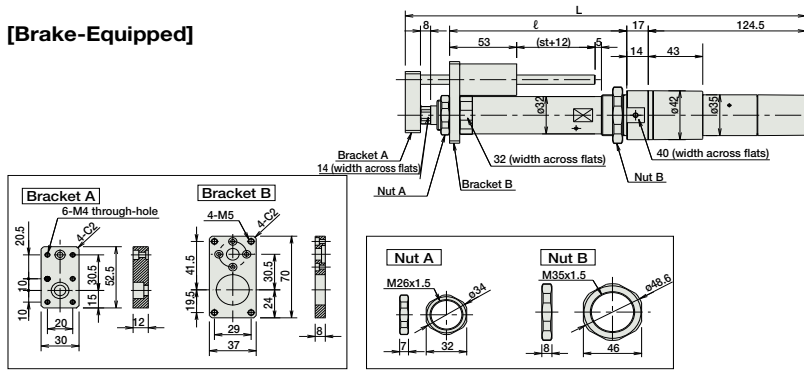
For Special Order P. A-9

- \*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]



[Brake-Equipped]



Dimensions/Weight by Stroke

RCA-RGS3C (without brake)				
Stroke	50	100	150	200
L	277.5	327.5	377.5	427.5
ℓ	140	190	240	290
Weight (kg)	0.9	1.1	1.2	1.3

RCA-RGS3C (with brake)				
Stroke	50	100	150	200
L	316.5	366.5	416.5	466.5
ℓ	140	190	240	290
Weight (kg)	1.1	1.3	1.4	1.5

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		MEC-C-20SI ① -NP-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	-	→ P477
Splash-Proof Solenoid Valve Type		ASEP-C-20SI ① -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
Positioner Type		ACON-C-20SI ① -NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	1.7A rated 5.1A peak	-	→ P535
Safety-Compliant Positioner Type		ACON-CG-20SI ① -NP-2-0						
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20SI ① -NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	1.7A rated 5.1A peak	-	→ P535
Pulse Train Input Type (Open Collector)		ACON-PO-20SI ① -NP-2-0	Pulse train input type with open collector support					
Serial Communication Type		ACON-SE-20SI ① -N-0-0	Dedicated to serial communication	64 points	DC24V	1.7A rated 5.1A peak	-	→ P503
Field Network Type		RACON-20S ①	Dedicated to field network	768 points				
Program Control Type		ASEL-C-1-20SI ① -NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points	DC24V	1.7A rated 5.1A peak	-	→ P567

\* This is for the single-axis ASEL.  
 \* ① is a placeholder for the code "HA" or "LA" if the high acceleration/deceleration option or 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