RCA-RGD3D

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

Model Specification Items

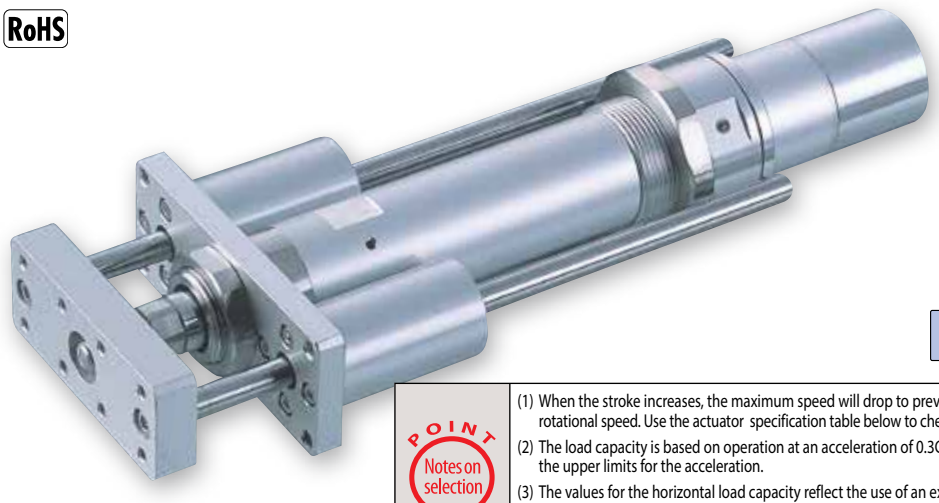
RCA	—	RGD3D	—	I	—	20	—	□	—	□	—	□	—	□	—	□
Series		Type		Encoder type		Motor type		Lead		Stroke		Applicable controller		Cable length		Options

- Encoder type: I: Incremental; * The Simple absolute encoder is also considered type "I".
- Motor type: 20: 20W Servo motor
- Lead: 10: 10mm; 5: 5mm; 2.5: 2.5mm
- Stroke: 50: 50mm ~ 200: 200mm (50mm pitch increments)
- Applicable controller: A1: ACON, ASEL, A3: AMEC, ASEP, MSEP
- Cable length: N: None; P: 1m; S: 3m; M: 5m; X□□: Custom Length; R□□: Robot Cable
- Options: See Options below.

* See page Pre-47 for details on the model descriptions.

CE RoHS

Power-saving



Technical References → Appendix P.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 2.5mm-lead model). These values are the upper limits for the acceleration.
(3) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-112) for the allowable weight using the supplied guide alone.
(4) See page A-71 for details on push motion.

Actuator Specifications

■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Load Capacity Horizontal (kg)	Max. Load Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-RGD3D-I-20-10-①-②-③-④	20	10	4	1.2	36.2	50~200 (every 50mm)
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	

■ Stroke and Maximum Speed

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

(Unit: mm/s)

Code explanation ①Stroke ②Applicable controller ③Cable length ④Options *See page A-71 for details on push motion.

①Stroke

①Stroke (mm)	Standard price
50	—
100	—
150	—
200	—

③Cable Length

Type	Cable symbol	Standard Price
Standard	**P** (1m)	—
	S (3m)	—
	M (5m)	—
Special length	**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-59 for cables for maintenance.

④Options

Name	Option code	See page	Standard price
Foot bracket	**FT**	→ A-49	—
Home sensor	**HS**	→ A-50	—
Power-saving	**LA**	→ A-52	—
Non-motor end specification	**NM**	→ A-52	—
Trunnion bracket (back)	**TRR**	→ A-58	—

*The home sensor (HS) cannot be used on the non-motor end models.

Actuator Specifications

Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Double guide (guide rod diameter ø8mm, Ball bush type)
Rod diameter	ø16mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

Dimensional Drawings

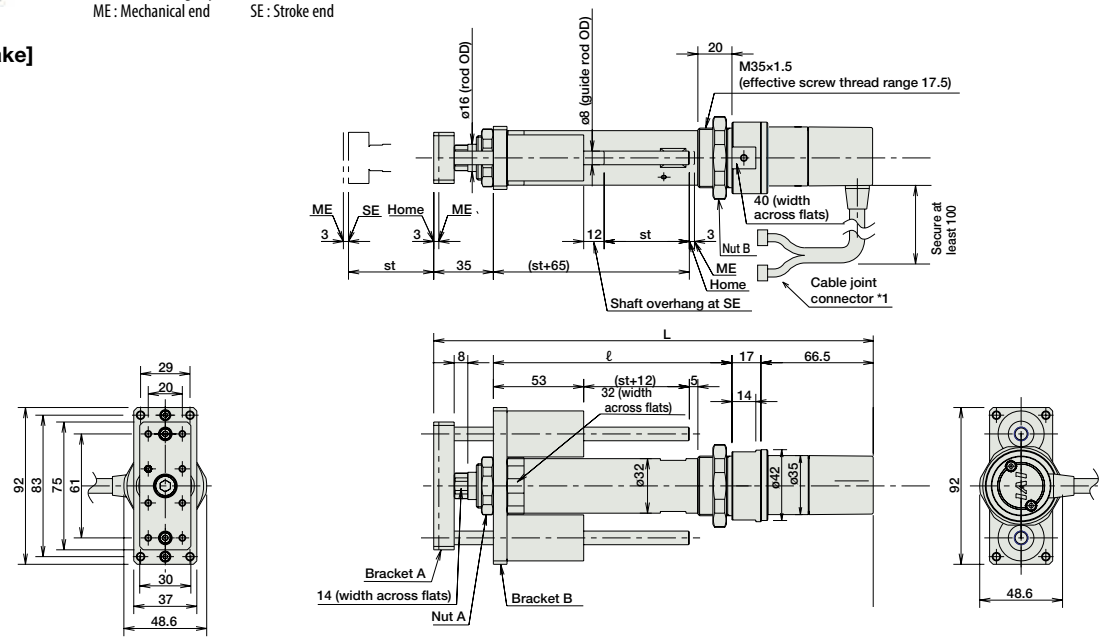
CAD drawings can be downloaded from the website. www.intelligentactuator.com

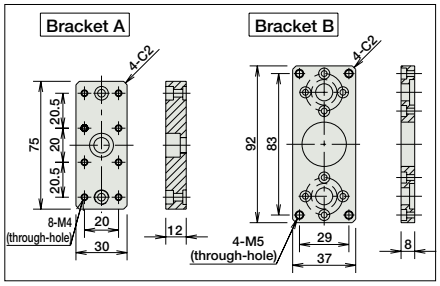
For Special Orders Appendix P.15

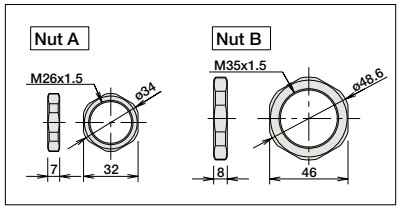
2D CAD

(*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
(*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
ME : Mechanical end SE : Stroke end

[No Brake]







■ Dimensions and Weight by Stroke

RCA-RGD3D (without brake)

Stroke	50	100	150	200
L	258.5	308.5	358.5	408.5
ℓ	140	190	240	290
Weight (kg)	1.1	1.2	1.4	1.5

RCA-RGD3D models are not equipped with a brake.

②Applicable Controllers

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. * ACON-CY also can be used.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type		AMEC-C-20SI①-②-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	—	→ P537
		ASEP-C-20SI①-②-2-0	Simple controller operable with the same signal as a solenoid valve		DC24V	(Standard) 1.7A rated 5.1A max. (Power-saving) 1.7A rated 3.4A max.	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-③-~~-②-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected				—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-③-~~-Ⅳ-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				
Positioner type		ACON-C-20SI①-②-2-0	Positioning is possible for up to 512 points	512 points			—	→ P631
Safety-Compliant Positioner Type		ACON-CG-20SI①-②-2-0					—	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20SI①-②-2-0	Pulse train input type with differential line driver support	(—)			—	
Pulse Train Input Type (Open Collector)		ACON-PO-20SI①-②-2-0	Pulse train input type with open collector support				—	
Serial Communication Type		ACON-SE-20SI①-N-0-0	Dedicated Serial Communication	64 points			—	
Program Control Type		ASEL-CS-1-20SI①-②-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			—	→ P675

* This is for the single-axis ASEL. * Enter the code "LA" in ① when the power-saving specification is specified. * ② indicates I/O type (NP/PN).
* ③ indicates number of axes (1 to 8). * Ⅳ indicates field network specification symbol.