Slider Type
Mini
Standard
Controllers Integrated
Rod Type
Mini
Standard
Controllers Integrated
Table/Arm/Flat Type
Mini
Standard
Gripper/Rotary Type
Linear Servo Type
Clean-room Type
Splash-Proof Type

RCA-RGD3R

Robo Cylinder, Rod Type with Double Guide, ø32mm Diameter, 24V Servo Motor, Side-mounted Motor

Model Specification Items	RCA	—RGD3R—	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
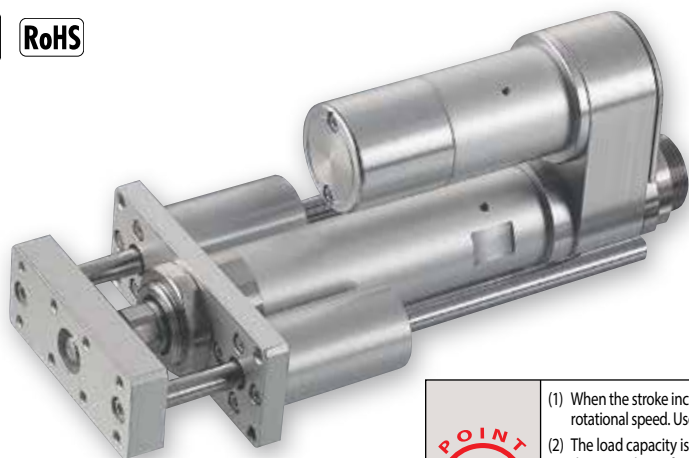
Power-saving

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 assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod. 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-RGD3R-I-20-10-①-②-③-④	20	10	4.0	1.2	36.2	50~200 (every 50mm)
RCA-RGD3R-I-20-5-①-②-③-④		5	9.0	2.7	72.4	
RCA-RGD3R-I-20-2.5-①-②-③-④		2.5	18.0	6.2	144.8	

■ Stroke and Maximum Speed

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

(Unit: mm/s)

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

① Stroke

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

③ Cable 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.

④ Options

Name	Option code	See page	Standard price
Brake	B	→ A-42	—
Foot bracket	FT	→ A-49	—
Flange bracket (back)	FLR	→ A-46	—
Home sensor	HS	→ A-50	—
Power-saving	LA	→ A-52	—
Non-motor end specification	NM	→ A-52	—
Clevis bracket	QR	→ A-53	—
Back-mounting plate	RP	→ A-54	—

*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
Base	Material: Aluminum, white alumite treated
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)

Pulse Motor
Servo Motor (24V)
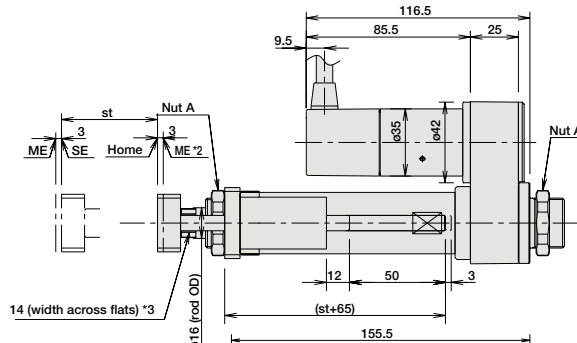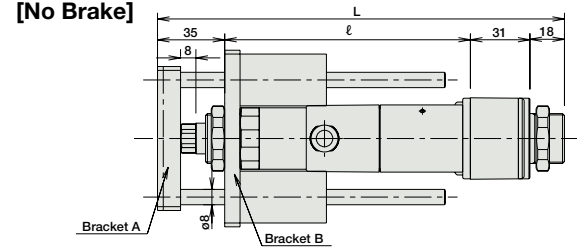Servo Motor (200V)
Linear Servo Motor

Dimensional Drawings

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

2D CAD 3D CAD

For Special Orders ☞ Appendix P.15
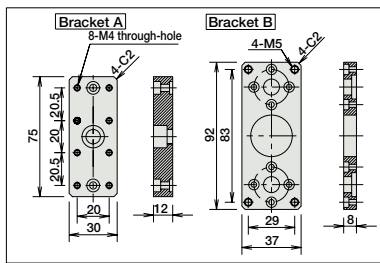
[No Brake]

Nut A
M26x1.5
ø34
7 32
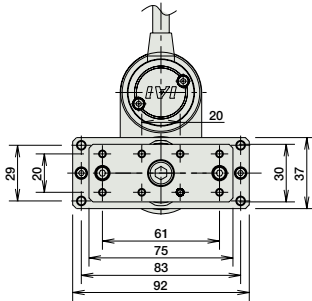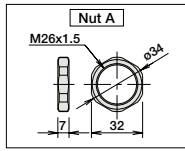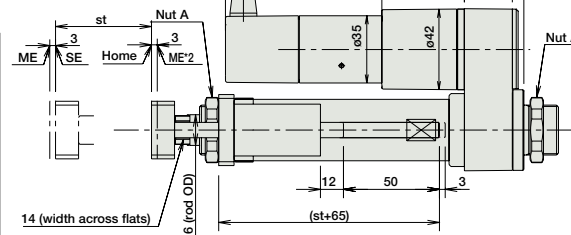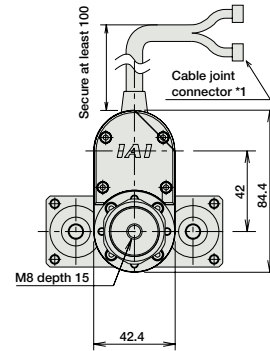
(*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
(*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
ME : Mechanical end   SE : Stroke end
(*3) The orientation of the bolt varies depending on the product.

L
35 ℓ 31 18
8

Bracket A Bracket B
ø8

20
29 20 30 37
61
75
83
92

116.5
85.5 25
9.5
st Nut A
3 3
ME SE Home ME *2
ø35 ø42
Nut A
12 50 3
14 (width across flats) *3
ø16 (rod OD)
(st+65)

Secure at least 100
Cable joint connector *1
42 84.4
M8 depth 15
42.4

[Brake-Equipped]

Bracket A
8-M4 through-hole
4-C2
75 20 20.5 20.5
20 30 12

Bracket B
4-M5 4-C2
92 83
20 29 8
37

155.5
124.5 25
43
st Nut A
3 3
ME SE Home ME*2
ø35 ø42
Nut A
12 50 3
14 (width across flats)
ø16 (rod OD)
(st+65)

■ Dimensions and Weight by Stroke

RCA-RGD3R (without brake)

Stroke	50	100	150	200
L	212	262	312	362
ℓ	128	178	228	278
Weight (kg)	1.2	1.3	1.5	1.6

RCA-RGD3R (with brake)

Stroke	50	100	150	200
L	212	262	312	362
ℓ	128	178	228	278
Weight (kg)	1.4	1.5	1.7	1.8

② Applicable 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-20SI①-⑪-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	—	→ P537
Solenoid Valve Type		ASEP-C-20SI①-⑪-2-0	Simple controller operable with the same signal as a solenoid valve	3 points	DC24V		—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-⑩-~~-⑪-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected				—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-⑩-~~-⑭-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			—	→ P563
Positioner type		ACON-C-20SI①-⑪-2-0	Positioning is possible for up to 512 points	512 points		(Standard) 1.7A rated 5.1A max. (Power-saving) 1.7A rated 3.4A max.	—	→ P631
Safety-Compliant Positioner Type		ACON-CG-20SI①-⑪-2-0	Positioning is possible for up to 512 points	512 points			—	→ P631
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20SI①-⑪-2-0	Pulse train input type with differential line driver support	(—)			—	→ P631
Pulse Train Input Type (Open Collector)		ACON-PO-20SI①-⑪-2-0	Pulse train input type with open collector support	(—)			—	→ P631
Serial Communication Type		ACON-SE-20SI①-N-0-0	Dedicated Serial Communication	64 points			—	→ P631
Program Control Type		ASEL-CS-1-20SI①-⑪-2-0	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.   * ⑪ indicates I/O type (NP/PN).
* ⑩ indicates number of axes (1 to 8). * ⑭ indicates field network specification symbol.

Slider Type
Mini
Standard
Controllers Integrated
Rod Type
Mini
Standard
Controllers Integrated
Table/Arm/Flat Type
Mini
Standard
Gripper/Rotary Type
Linear Servo Type
Clean-room Type
Splash-Proof Type
Pulse Motor
Servo Motor (24V)
Servo Motor (200V)
Linear Servo Motor