

RCA-RGD4R

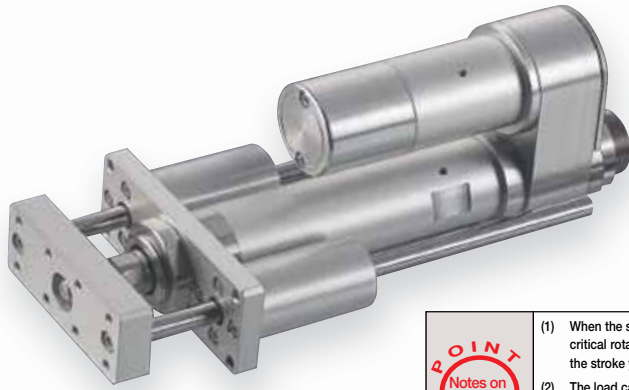
ROBO Cylinder Rod Type with Double Guide ø37mm Diameter 24V Servo Motor Side-Mounted Motor

■ Configuration: **RCA** — **RGD4R** — [] — [] — [] — [] — [] — [] — []

Series	Type	Encoder	Motor	Lead	Stroke	Compatible Controllers	Cable Length	Option
I : Incremental A : Absolute	20 : 20W Servo Motor 30 : 30W Servo Motor	12 : 12mm 6 : 6mm 3 : 3mm	50 : 50mm 300 : 300mm (50mm pitch increments)	A1 : ACON RACON ASEL A3 : AMEC ASEP	N : None P : 1m S : 3m M : 5m X [] : Custom R [] : Robot cable	See Options below		

* The absolute models are only compatible with ASEL
Simple absolute encoders are considered incremental
* See page Pre-35 for an explanation of the naming convention.

Power-saving



Technical References P. A-5

- POINT**
Notes on Selection
- 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.
 - The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model). This is the upper limit of the acceleration.
 - 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-83) for the allowable weight using the supplied guide alone.

Actuator Specifications						Stroke and Maximum Speed		
■ Lead and Load Capacity						50 ~ 300 (50mm increments)		
Model	Motor Output (W)	Lead (mm)	Max. Load Capacity		Rated Thrust (N)	Stroke (mm)		
			Horizontal (kg)	Vertical (kg)				
RCA-RGD4R-①-20-12-②-③-④-⑤	20	12	3.0	0.5	18.9	50 ~ 300 (50mm increments)	12	600
RCA-RGD4R-①-20-6-②-③-④-⑤		6	6.0	1.5	37.7		6	300
RCA-RGD4R-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4		3	150
RCA-RGD4R-①-30-12-②-③-④-⑤	30	12	4.0	1.0	28.3		(Unit: mm/s)	
RCA-RGD4R-①-30-6-②-③-④-⑤		6	9.0	2.5	56.6			
RCA-RGD4R-①-30-3-②-③-④-⑤		3	18.0	6.0	113.1			

Legend ① Encoder ② Stroke ③ Compatible controller ④ Control length ⑤ Options

Encoder & Stroke List				
② Stroke (mm)	Standard Price			
	① Encoder			
	Incremental		Absolute	
	Motor Output (W)		Motor Output (W)	
	20W	30W	20W	30W
50	-	-	-	-
100	-	-	-	-
150	-	-	-	-
200	-	-	-	-
250	-	-	-	-
300	-	-	-	-

④ 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.

⑤ Option List			
Name	Option Code	See Page	Standard Price
Brake	B	→ A-25	-
Foot bracket	FT	→ A-29	-
Flange bracket (back)	FLR	→ A-28	-
Home sensor	HS	→ A-32	-
Power-saving	LA	→ A-32	-
Reversed-home	NM	→ A-33	-
Clevis Bracket	QR	→ A-34	-
Back-mounting plate	RP	→ A-35	-

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

Actuator Specifications	
Item	Description
Drive System	Ball screw ø10mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum (white alumite treated)
Rod Diameter	ø20mm
Non-rotating accuracy of rod	±0.05 deg
Ambient Operating Temp./Humidity	0 ~ 40°C, 85% RH or less (non-condensing)

Dimensions

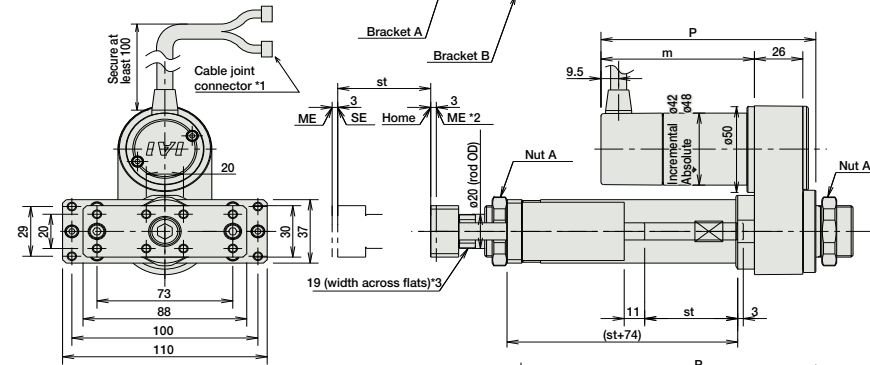
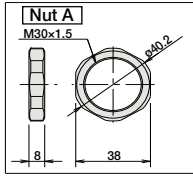
CAD drawings can be downloaded from IAI website. www.intelligentactuator.com



- *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
- *3 The orientation of the bolt will vary depending on the product.

For Special Orders P. A-9

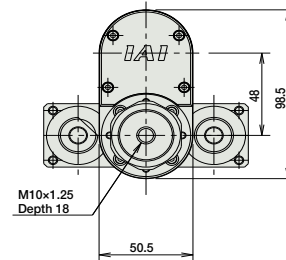
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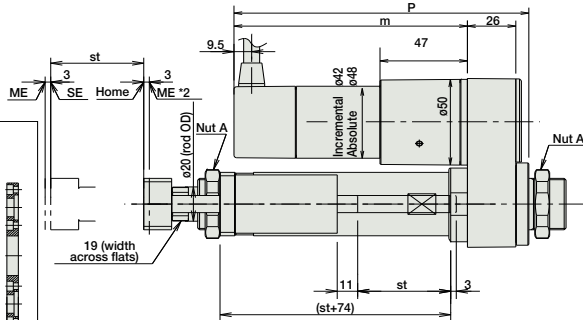
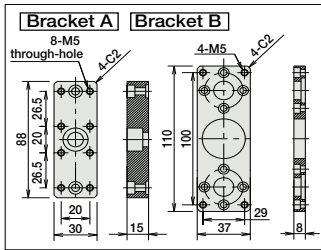
Dimensions/Weight by Stroke

RCA-RGD4R (without brake)

Stroke	50	100	150	200	250	300
L	20W Incr.	227	277	327	377	427
	20W Absol.	227	277	327	377	427
L	30W Incr.	227	277	327	377	427
	30W Absol.	227	277	327	377	427
ℓ	133	188	233	288	333	383
m	20W Incr.	67.5				
	20W Absol.	80.5				
	30W Incr.	82.5				
P	20W Incr.	100.5				
	20W Absol.	113.5				
	30W Incr.	115.5				
Weight (kg)	1.9	2.2	2.3	2.6	2.7	3.0



[Brake-Equipped]



RCA-RGD4R (with brake)

Stroke	50	100	150	200	250	300
L	20W Incr.	227	277	327	377	427
	20W Absol.	227	277	327	377	427
L	30W Incr.	227	277	327	377	427
	30W Absol.	227	277	327	377	427
ℓ	133	188	233	288	333	383
m	20W Incr.	110.5				
	20W Absol.	123.5				
	30W Incr.	125.5				
P	20W Incr.	138.5				
	20W Absol.	143.5				
	30W Incr.	156.5				
Weight (kg)	2.1	2.4	2.5	2.8	2.9	3.2

③ Compatible Controllers

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-20①②-NP-2-1 AMEC-C-30①②-NP-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	-	→ P477
		ASEP-C-20①②-NP-2-0 ASEP-C-30①②-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.					
Splash-Proof Solenoid Valve Type		ASEP-CW-20①②-NP-2-0 ASEP-CW-30①②-NP-2-0						→ P487
Positioner Type		ACON-C-20①②-NP-2-0 ACON-C-30①②-NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	20W 1.3A rated 4.4A peak	-	→ P535
Safety-Compliant Positioner Type		ACON-CG-20①②-NP-2-0 ACON-CG-30①②-NP-2-0						
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20①②-NP-2-0 ACON-PL-30①②-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	30W 1.3A rated 4.4A peak	-	→ P535
Pulse Train Input Type (Open Collector)		ACON-PO-20①②-NP-2-0 ACON-PO-30①②-NP-2-0	Pulse train input type with open collector support					
Serial Communication Type		ACON-SE-20①②-N-0-0 ACON-SE-30①②-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RACON-20② RACON-30②	Dedicated to field network	768 points				→ P503
Program Control Type		ASEL-C-1-20①②-NP-2-0 ASEL-C-1-30①②-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 encoder type (I: incremental / A: absolute).
 * ② 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
- 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