

# RCA-RGS4C

ROBO Cylinder Rod Type with Single Guide ø37mm Diameter 24V Servo Motor Coupled

■ Configuration: **RCA** — **RGS4C** — [ ] — [ ] — [ ] — [ ] — [ ] — [ ] — [ ] — [ ]

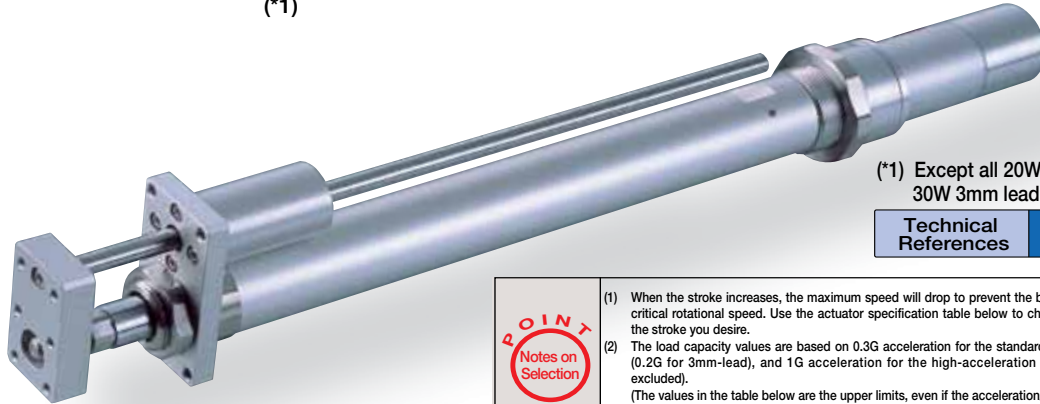
Series	Type	Encoder	Motor	Lead	Stroke	Compatible Controllers	Cable Length	Option
I : Incremental A : Absolute	20 : 20W Servo Motor 30 : 30W Servo Motor	12 : 12mm 6 : 6mm 3 : 3mm	50 : 50mm 300 : 300mm (50mm pitch increments)	A1 : ACON RACON ASEL A3 : AMEC ASEP	N : None P : 1m S : 3m M : 5m X [ ] : Custom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

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

**For High Acceleration/Deceleration**

**Power-saving**

(\*1)



(\*1) Except all 20W models and 30W 3mm lead models

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 values are based on 0.3G acceleration for the standard and power-saving models (0.2G for 3mm-lead), and 1G acceleration for the high-acceleration models (3mm-lead model excluded).  
(The values in the table below are the upper limits, even if the acceleration/deceleration is decreased.)
- 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-RGS4C-①-20-12-②-③-④-⑤	20	12	3.0	0.5	18.9	50~300 (50mm increments)
RCA-RGS4C-①-20-6-②-③-④-⑤		6	6.0	1.5	37.7	
RCA-RGS4C-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4	
RCA-RGS4C-①-30-12-②-③-④-⑤	30	12	4.0	1.0	28.3	
RCA-RGS4C-①-30-6-②-③-④-⑤		6	9.0	2.5	56.6	
RCA-RGS4C-①-30-3-②-③-④-⑤		3	18.0	6.0	113.1	

■ Stroke and Maximum Speed

Stroke / Lead	50 ~ 300 (50mm increments)	
	Stroke	50 ~ 300 (50mm increments)
12		600
6		300
3		150

(Unit: mm/s)

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	-
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	-

Actuator Specifications

Item	Description
Drive System	Ball screw ø10mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Single guide (guide rod diameter ø10mm, Ball bush type)
Rod Diameter	ø20mm
Non-rotating accuracy of rod	±0.05 deg
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

(\*1) The high-acceleration/deceleration option is not available for all 20W models and 30W model with 3mm lead.  
(\*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.

Dimensions

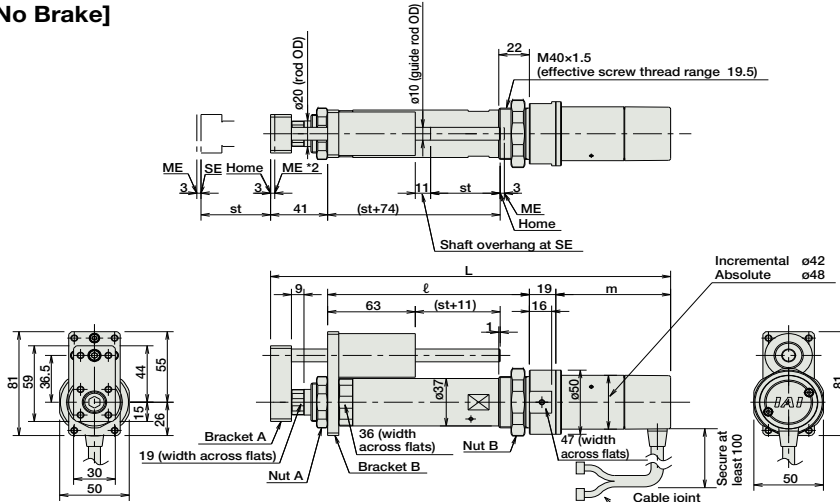
CAD drawings can be downloaded from IAI website. [www.intelligentactuator.com](http://www.intelligentactuator.com)

For Special Order P. A-9

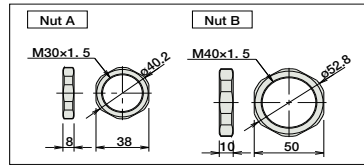
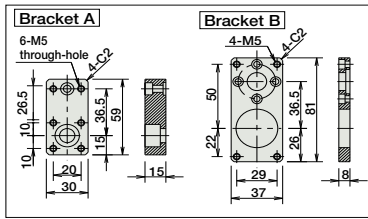
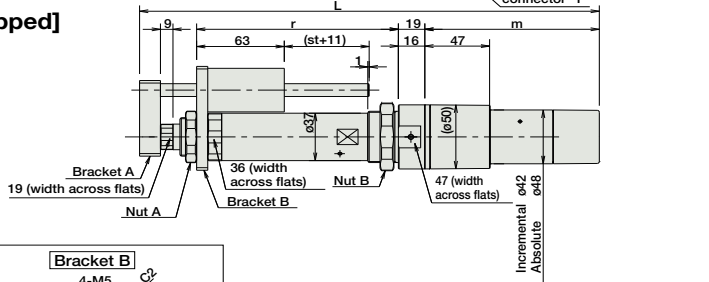


- \*1 A motor-encoder cable is connected here. See page A-39 for details on cables.
- \*2 When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.  
ME: Mechanical end SE: Stroke end

[No Brake]



[Brake-Equipped]



■ Dimensions/Weight by Stroke

RCA-RGS4C (without brake)

Stroke		50	100	150	200	250	300	
L	20W	Increm. 272.5	322.5	372.5	422.5	472.5	522.5	
		Absol. 285.5	335.5	385.5	435.5	485.5	535.5	
	30W	Increm. 287.5	337.5	387.5	437.5	487.5	537.5	
	Absol. 300.5	350.5	400.5	450.5	500.5	550.5		
ℓ		145	195	245	295	345	395	
m	20W	Increm. 67.5						
		Absol. 80.5						
	30W	Increm. 82.5						
	Absol. 95.5							
Weight (kg)		1.5	1.6	1.8	2.0	2.2	2.4	

RCA-RGS4C (with brake)

Stroke		50	100	150	200	250	300	
L	20W	Increm. 315.5	365.5	415.5	465.5	515.5	565.5	
		Absol. 328.5	378.5	428.5	478.5	528.5	578.5	
	30W	Increm. 330.5	380.5	430.5	480.5	530.5	580.5	
	Absol. 343.5	393.5	443.5	493.5	543.5	593.5		
ℓ		145	195	245	295	345	395	
m	20W	Increm. 110.5						
		Absol. 123.5						
	30W	Increm. 125.5						
	Absol. 138.5							
Weight (kg)		1.7	1.8	2.0	2.2	2.4	2.6	

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-201 ② -NP-2-1 AMEC-C-301 ② -NP-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	-	→ P477
		ASEP-C-201 ② -NP-2-0 ASEP-C-301 ② -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-201 ② -NP-2-0 ASEP-CW-301 ② -NP-2-0						→ P487
Positioner Type		ACON-C-201 ② -NP-2-0 ACON-C-301 ② -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-201 ② -NP-2-0 ACON-CG-301 ② -NP-2-0						
Pulse Train Input Type (Differential Line Driver)		ACON-PL-201 ② -NP-2-0 ACON-PL-301 ② -NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	30W 1.3A rated 4.4A peak	-	→ P567
Pulse Train Input Type (Open Collector)		ACON-PO-201 ② -NP-2-0 ACON-PO-301 ② -NP-2-0	Pulse train input type with open collector support					
Serial Communication Type		ACON-SE-201 ② -N-0-0 ACON-SE-301 ② -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-1-20 ①② -NP-2-0 ASEL-C-1-30 ①② -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 "HA" or "LA" if the high acceleration/deceleration option or the power-saving option is specified.