RCA-RGS4C

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

Model Specification Items: **RCA** — **RGS4C** — [ ] Encoder type — [ ] Motor type — [ ] Lead — [ ] Stroke — [ ] Applicable controller — [ ] Cable length — [ ] Options

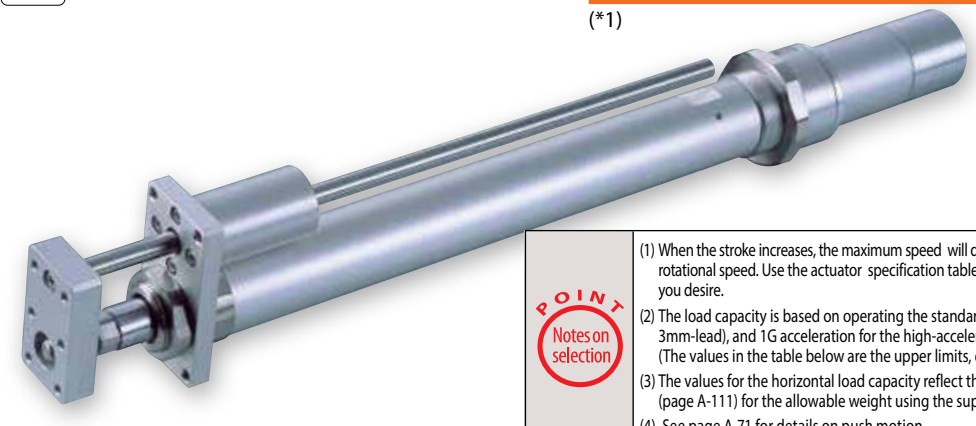
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
RCA	RGS4C	I: Incremental A: Absolute * Absolute encoder models can only use ASEL. When the actuator is used with the simple absolute encoder, the model is considered an incremental model.	20: 20W Servo motor 30: 30W Servo motor	12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 300: 300mm (50mm pitch increments)	A1: ACON ASEL A3: AMEC ASEP MSEP	N: None P: 1m S: 3m M: 5m X□□: Custom Length R□□: Robot Cable	See Options below.

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

CE RoHS

For High Acceleration/Deceleration **Power-saving**

(*1)



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

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 operating the standard and power-saving models at 0.3G (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.)

(3) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-111) 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-RGS4C-①-20-12-②-③-④-⑤	20	12	3.0	0.5	18.9	50~300 (every 50mm)
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

Lead \ Stroke	50~300 (every 50mm)
12	600
6	300
3	150

(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options *See page A-71 for details on push motion.

② Stroke

②Stroke (mm)	Standard price ①Encoder Type Incremental Motor Output (W) 20W	Incremental 30W	Absolute Motor Output (W) 20W	Absolute 30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

④ 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.

⑤ Options

Name	Option code	See page	Standard price
Brake	**B**	→ A-42	—
Foot bracket	**FT**	→ A-49	—
High-acceleration/deceleration (*1)	**HA**	→ A-50	—
Home sensor (*2)	**HS**	→ A-50	—
Power-saving (*3)	**LA**	→ A-52	—
Non-motor end specification	**NM**	→ A-52	—
Trunnion bracket (back)	**TRR**	→ A-58	—

(*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 non-motor end models.
(*3) The high-acceleration/deceleration option and the power-saving option cannot be used simultaneously.

Actuator Specifications

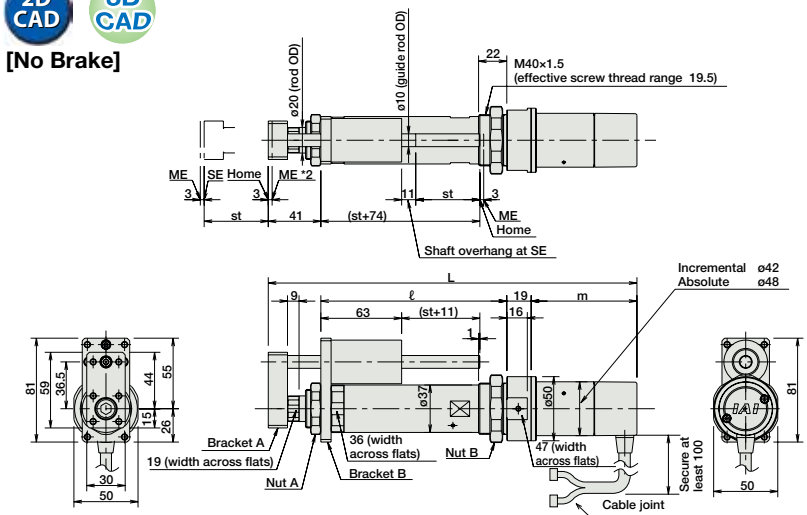
Item	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Single guide (guide rod diameter ø10mm, Ball bush type)
Rod diameter	ø20mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

Dimensional Drawings

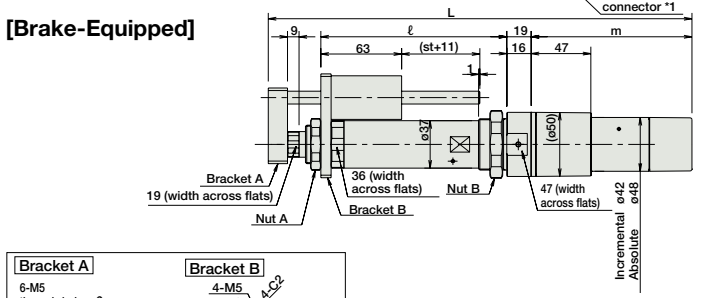
CAD drawings can be downloaded from the website. www.intelligentactuator.com

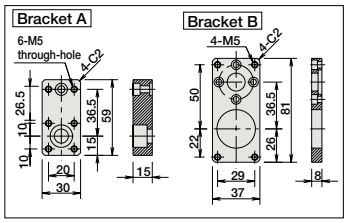
2D CAD 3D CAD

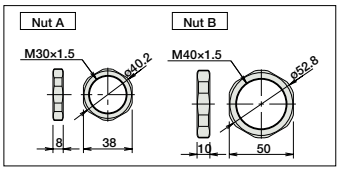
[No Brake]



[Brake-Equipped]







For Special Orders — Appendix P.15

(*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

■ Dimensions and 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

③Applicable 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-20Ⅰ-Ⅱ-Ⅲ-2-1 AMEC-C-30Ⅰ-Ⅱ-Ⅲ-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	—	→ P537
		ASEP-C-20Ⅰ-Ⅱ-Ⅲ-2-0 ASEP-C-30Ⅰ-Ⅱ-Ⅲ-2-0	Simple controller operable with the same signal as a solenoid valve		DC24V	(Standard) 20W 1.3A rated 4.4A max. 30W 1.3A rated 4.4A max. (Power-saving) 20W 1.3A rated 2.5A max. 30W 1.3A rated 2.2A max.	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-Ⅳ-~~-Ⅲ-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-Ⅳ-~~-Ⅴ-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				
Positioner type		ACON-C-20Ⅰ-Ⅱ-Ⅲ-2-0 ACON-C-30Ⅰ-Ⅱ-Ⅲ-2-0	Positioning is possible for up to 512 points	512 points			—	→ P631
Safety-Compliant Positioner Type		ACON-CG-20Ⅰ-Ⅱ-Ⅲ-2-0 ACON-CG-30Ⅰ-Ⅱ-Ⅲ-2-0					—	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20Ⅰ-Ⅱ-Ⅲ-2-0 ACON-PL-30Ⅰ-Ⅱ-Ⅲ-2-0	Pulse train input type with differential line driver support	(—)			—	
Pulse Train Input Type (Open Collector)		ACON-PO-20Ⅰ-Ⅱ-Ⅲ-2-0 ACON-PO-30Ⅰ-Ⅱ-Ⅲ-2-0	Pulse train input type with open collector support				—	
Serial Communication Type		ACON-SE-20Ⅰ-Ⅱ-N-0-0 ACON-SE-30Ⅰ-Ⅱ-N-0-0	Dedicated Serial Communication	64 points			—	
Program Control Type		ASEL-CS-1-20Ⓘ-Ⅱ-Ⅲ-2-0 ASEL-CS-1-30Ⓘ-Ⅱ-Ⅲ-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			—	→ P675

* This is for the single-axis ASEL. * Ⓘ indicates encoder type (I: incremental, A: absolute) * Enter the code "HA" or "LA" in Ⅲ when the high-acceleration/deceleration option or the power-saving option is specified. * Ⅲ indicates I/O type (NP/PN). * Ⅳ indicates number of axes (1 to 8). * Ⅴ indicates field network specification symbol.