

RCS2-RA5C

Robo Cylinder, Rod Type, Actuator Width 55mm, 200V Servo Motor, Coupled

Model Specification Items	RCS2 — RA5C	—	—	—	—	—	—	—	—	—
	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options	
	I: Incremental A: Absolute	60: 60W Servo motor 100: 100W Servo motor		16: 16mm 8: 8mm 4: 4mm	50: 50mm 300: 300mm (50mm pitch increments)	T1: XSEL-J/K T2: SCON MSCON SSEL XSEL-P/Q XSEL-R/S	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 compliance is optional.



For High Acceleration/Deceleration

(*1)

(*1) Except all 60W models and 100W 4mm lead models

Technical References Appendix P.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 of the standard model at 0.3G (0.2G for 4mm-lead), and the high acceleration/deceleration model at 1G (0.2G for 4mm-lead). (Even when the acceleration/deceleration is dropped, the maximum load capacity values shown in the table below are the upper limits.)
 - 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 page A-71 for details on push motion.

Actuator Specifications

Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Load Capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RA5C-①-60-16-②-③-④-⑤	60	16	12.0	2.0	63.8	50~300 (every 50mm)
RCS2-RA5C-①-60-8-②-③-④-⑤		8	25.0	5.0	127.5	
RCS2-RA5C-①-60-4-②-③-④-⑤		4	50.0	11.5	255.1	
RCS2-RA5C-①-100-16-②-③-④-⑤	100	16	15.0	3.5	105.8	
RCS2-RA5C-①-100-8-②-③-④-⑤		8	30.0	9.0	212.7	
RCS2-RA5C-①-100-4-②-③-④-⑤		4	60.0	18.0	424.3	

Stroke and Maximum Speed

Stroke / Lead	50~250 (every 50mm)	300 (mm)
16	800	755
8	400	377
4	200	188

(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.

① Encoder Type/② Stroke

② Stroke (mm)	Standard price			
	① Encoder Type			
	Incremental		Absolute	
	Motor Output (W)		Motor Output (W)	
	60W	100W	60W	100W
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
Connector cable exit direction	A2	→ A-41	—
Brake	B	→ A-42	—
CE compliance	CE	→ A-42	—
Flange bracket	FL	→ A-45	—
Foot bracket	FT	→ A-49	—
High-acceleration/deceleration (*1)	HA	→ A-50	—

(*1) The high-acceleration/deceleration option is not available for all 60W models and 100W model with 4mm lead.

Actuator Specifications

Item	Description
Drive System	Ball screw, ø12mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø30mm
Non-rotating accuracy of rod	±0.7 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

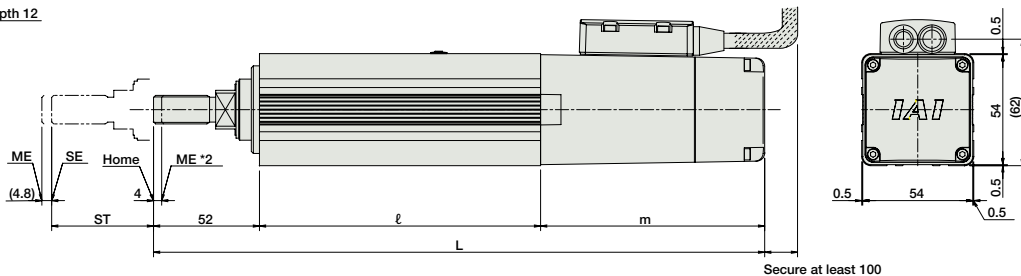
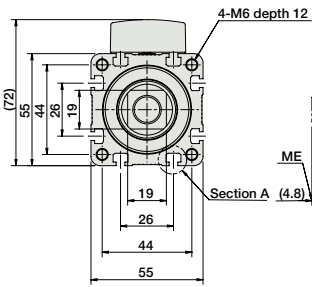
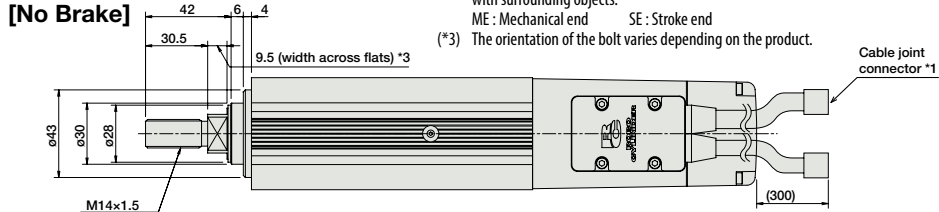
For Special Orders Appendix P.15



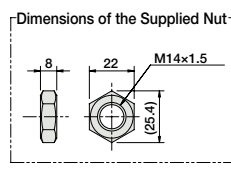
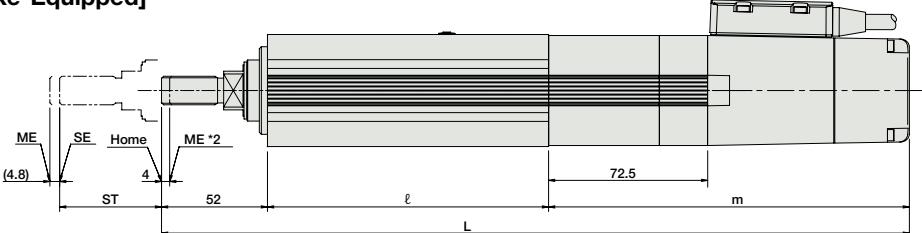
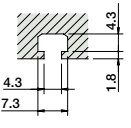
*The RA5C is not available in non-motor end configuration, due to its construction.

- (*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.

Note:
Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.



[Brake-Equipped]



■ Dimensions and Weight by Stroke

RCS2-RA5C (without brake)

	Stroke	50	100	150	200	250	300
L	60W	282	332	382	432	482	532
	100W	300	350	400	450	500	550
	ℓ	138	188	238	288	338	388
m	60W	92					
	100W	110					
	Weight (kg)	1.9	2.2	2.5	2.8	3.1	3.4

RCS2-RA5C (with brake)

	Stroke	50	100	150	200	250	300
L	60W	354.5	404.5	454.5	504.5	554.5	604.5
	100W	372.5	422.5	472.5	522.5	572.5	622.5
	ℓ	138	188	238	288	338	388
m	60W	164.5					
	100W	182.5					
	Weight (kg)	2.2	2.5	2.8	3.1	3.4	3.7

③ Applicable Controllers

RCS2-series actuators can be operated with the following controllers. Select an appropriate controller type according to your application.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page	
Positioner mode		SCON-CA-60①-NP-2-② SCON-CA-100①-NP-2-②	Up to 512 positioning points are supported.	512 points	Single-phase 100VAC Single-phase 200VAC 3-phase 200VAC (XSEL-P/Q/R/S ONLY)	314 VA max. *Power supply capacity will vary depending on the controller, so please refer to the instruction manual for details.	—	→ P643	
Solenoid valve mode			Actuators can be operated through the same control used for solenoid valves.	7 points					
Field network type			Movement by numerical specification is supported.	768 points					
Pulse-train input control type			Dedicated pulse-train input type	(—)					
Positioner multi-axis, network type		MSCON-C-1-60①-④-0-② MSCON-C-1-100①-④-0-②	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	—	—	→ P655		
Program control type, 1 to 2 axes		SSEL-CS-1-60①-NP-2-② SSEL-CS-1-100①-NP-2-②	Program operation is supported. Up to 2 axes can be operated.	20,000 points				—	→ P685
Program control type, 1 to 8 axes		XSEL-③-1-60①-N1-EEE-2-④ XSEL-③-1-100①-N1-EEE-2-④	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected					

* This is for the single-axis MSCON, SSEL, and XSEL.
 * ① indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).
 * ② indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V / 3: Three-phase 200V).
 * ③ indicates the encoder type (I: Incremental / A: Absolute).
 * ④ indicates the XSEL type (J / K / P / Q / R / S).
 * ⑤ 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