RCS2-RA5C ROBO Cylinder Rod Type 55mm Width 200V Servo Motor Coupled

■ Configuration: **RCS2** — **RA5C** — □ — □ — □ — □ — □ — □ — □ — □

Series	Type	Encoder	Motor	Lead	Stroke	Compatible Controllers	Cable Length	Option
		I : Incremental A: Absloute	60 : 60W Servo Motor 100 : 100W Servo Motor	16 : 16mm 8 : 8mm 4 : 4mm	50 : 50mm 〵 300 : 300mm (50mm pitch increments)	T1 : XSEL-J/K T2 : SCON SSEL XSEL-P/Q	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.

For High Acceleration/Deceleration

(*1)

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

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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 values are based on 0.3G acceleration for the standard model (0.2G for 4mm-lead), and 1G acceleration for the high-acceleration/deceleration models (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.)

(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.

Actuator Specifications

■ Lead and Load Capacity

Model	Motor Output (W)	Lead (mm)	Max. Load Capacity Horizontal (kg)	Max. Load Capacity Vertical (kg)	Rated Thrust (N)	Stroke (mm)
RCS2-RA5C-①-60-16-②-③-④-⑤	60	16	12.0	2.0	63.8	50 ～ 300 (50mm increments)
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	

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

■ Stroke and Maximum Speed

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

(Unit: mm/s)

Encoder & Stroke List

② Stroke (mm)	Standard Price ① Encoder Type: Incremental, Motor power output 60W	Incremental, Motor power output 100W	Absolute, Motor power output 60W	Absolute, Motor power output 100W
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
Connector cable exit direction	A2	→ A-25	–
Brake	B	→ A-25	–
Flange	FL	→ A-27	–
Foot bracket	FT	→ A-29	–
High-acceleration/deceleration (*1)	HA	→ A-32	–

(*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 C10 grade
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 Temp./Humidity	0 ～ 40°C, 85% RH or less (non-condensing)

Dimensions

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

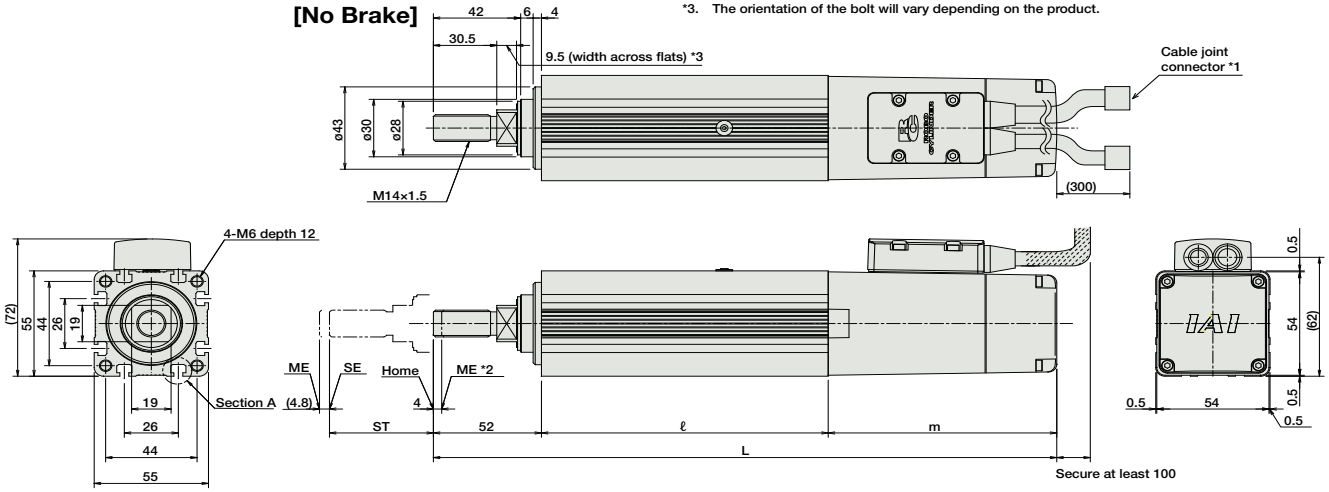
For Special Orders P. A-9

2D CAD 3D CAD

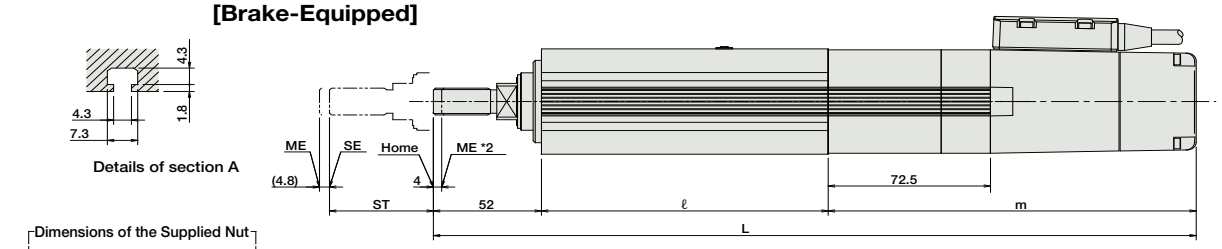
* The RA5C is not available in reversed-home configuration, due to its construction.

*1. The 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.

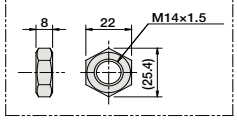
[No Brake]



[Brake-Equipped]



Dimensions of the Supplied Nut



■ Dimensions/Weight by Stroke

RCS2-RA5C (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 Compatible Controllers

The RCS2 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
Positioner Mode		SCON-C-60①-NP-2-③ SCON-C-100①②-NP-2-③	Positioning is possible for up to 512 points	512 points	Single-Phase AC 100V Single-Phase AC 200V Three-phase AC 200V (XSEL-P/Q only)	360VA max. * When operating a 150W single-Axes model	-	→ P547
Solenoid Valve Mode			Operable with same controls as solenoid valve.	7 points				
Serial Communication Type			Dedicated to serial communication	64 points				
Pulse Train Input Control Type			Dedicated to Pulse Train Input	(–)				
Program Control 1-2 Axes Type		SSEL-C-1-60①-NP-2-③ SSEL-C-1-100 ①②-NP-2-③	Programmed operation is possible Operation is possible on up to 2 axes	20000 points			-	→ P577
Program Control 1-6 Axes Type		XSEL-④-1-60 ①-N1-EEE-2-⑤ XSEL-④-1-100 ①②-N1-EEE-2-⑤	Programmed operation is possible Operation is possible on up to 6 axes	20000 points			-	→ P587

* For SSEL and XSEL, only applicable to the single-Axes model.
* ① is a placeholder for the encoder type (I: incremental / A: absolute).
* ② is a placeholder for the code "HA" if the high-acceleration/deceleration option is specified.
* ③ is a placeholder for the power supply voltage (1: 100V, 2: single-phase 200V).
* ④ is a placeholder for the XSEL type name ("J", "K", "P", "Q").
* ⑤ is a placeholder for the power supply voltage (1: 100V, 2: single-phase 200V, or 3: three-phase 200V).