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

RCS2 ROBO Cylinder

RCS2-RGD5C
Robo Cylinder, Rod Type with Double Guide, Actuator Width 55mm, 200V Servo Motor, Coupled

Model Specification Items

RCS2 — RGD5C — ☐ — ☐ — ☐ — ☐ — ☐ — ☐ — ☐

Series — Type — Encoder type — Motor type — Lead — Stroke — Applicable controller — Cable length — Options

I : Incremental	60 : 60W Servo motor
A: Absolute	100 : 100W Servo motor

Lead
16 : 16mm
8 : 8mm
4 : 4mm

Stroke
50: 50mm
~
300: 300mm
(50mm pitch increments)

Applicable controller
T1: XSEL-J/K
T2: SCON
MSCON
SSEL
XSEL-P/Q
XSEL-R/S

Cable length
N: None
P: 1m
S: 3m
M:5m
X☐☐: Custom Length
R☐☐: Robot Cable

Options
See options below.

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

C E   RoHS
*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

(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 4mm-lead), and 1G acceleration for the high-acceleration models (4mm-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 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-112) 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)
RCS2-RGD5C-①-60-16-②-③-④-⑤	60	16	12.0	1.3	63.8	50~300 (every 50mm)
RCS2-RGD5C-①-60-8-②-③-④-⑤		8	25.0	4.3	127.5	
RCS2-RGD5C-①-60-4-②-③-④-⑤		4	50.0	10.8	255.1	
RCS2-RGD5C-①-100-16-②-③-④-⑤	100	16	15.0	2.8	105.8	
RCS2-RGD5C-①-100-8-②-③-④-⑤		8	30.0	8.3	212.7	
RCS2-RGD5C-①-100-4-②-③-④-⑤		4	60.0	17.3	424.3	

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

■ Stroke and Maximum Speed

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

(Unit: mm/s)

■ ①Encoder Type/②Stroke

②Stroke (mm)	Standard price ①Encoder Type Incremental Motor Output (W) 60W	Standard price ①Encoder Type Incremental Motor Output (W) 100W	Standard price ①Encoder Type Absolute Motor Output (W) 60W	Standard price ①Encoder Type Absolute Motor Output (W) 100W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

■ ④Cable 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.

■ ⑤Options

Name	Option code	See page	Standard price
Connector cable exit direction	A2	→ A-41	—
Brake	B	→ A-42	—
CE compliance	CE	→ A-42	—
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
Guide	Double guide (guide rod diameter ø12mm, ball bush type)
Rod diameter	ø30mm
Non-rotating accuracy of rod	±0.08 deg
Ambient operating temperature, humidity	0 to 40℃, 85% RH or less (Non-condensing)

■ Dimensional Drawings

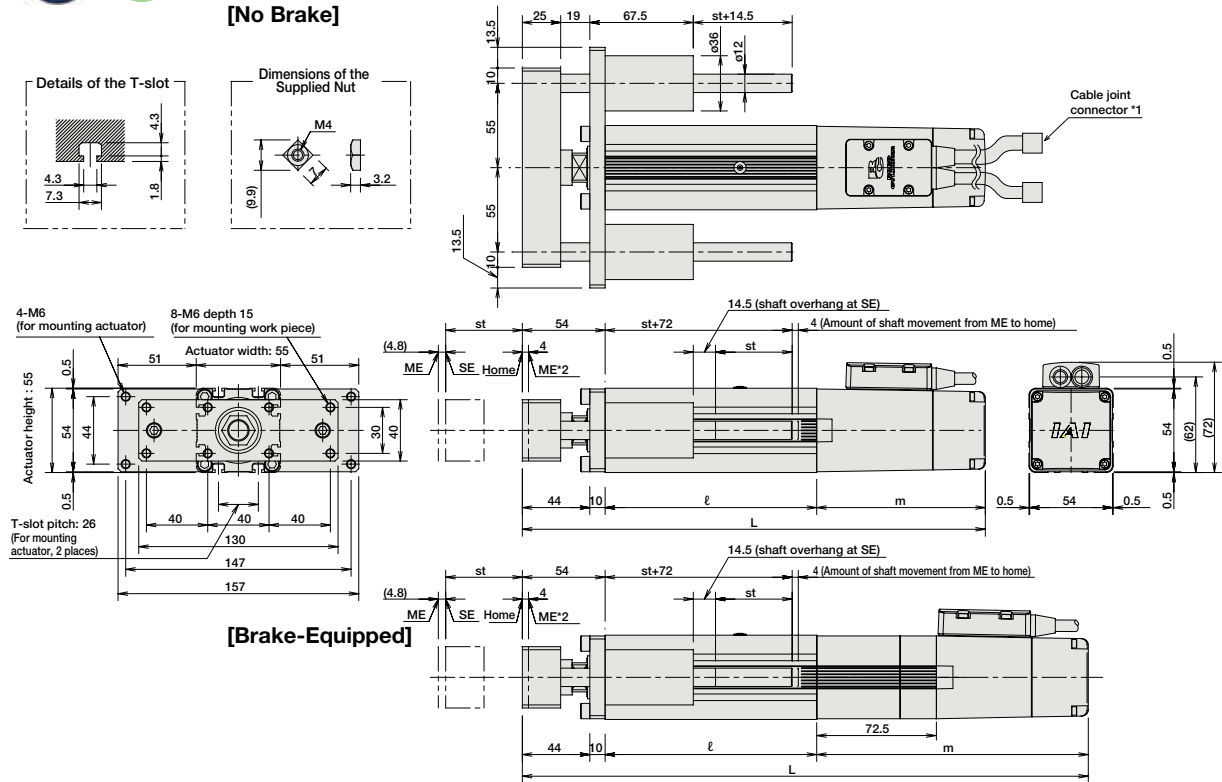CAD drawings can be downloaded from the website. **www.intelligentactuator.com**

2D CAD **3D CAD**

*The RGD5C 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

[No Brake]

Details of the T-slot

Dimensions of the Supplied Nut

Cable joint connector *1

4-M6 (for mounting actuator)
8-M6 depth 15 (for mounting work piece)

Actuator width: 55
Actuator height : 55

T-slot pitch: 26 (For mounting actuator, 2 places)

14.5 (shaft overhang at SE)
4 (Amount of shaft movement from ME to home)

ME SE Home ME*2

[Brake-Equipped]

14.5 (shaft overhang at SE)
4 (Amount of shaft movement from ME to home)

ME SE Home ME*2

■ Dimensions and Weight by Stroke

RCS2-RGD5C (without brake)

Stroke		50	100	150	200	250	300
L	60W	284	334	384	434	484	524
	100W	302	352	402	452	502	552
ℓ		138	188	238	288	338	388
m	60W	92					
	100W	110					
Weight (kg)		2.7	3.0	3.4	3.8	4.2	5.5

RCS2-RGD5C (with brake)

Stroke		50	100	150	200	250	300
L	60W	356.5	406.5	456.5	506.5	556.5	606.5
	100W	374.5	424.5	474.5	524.5	574.5	624.5
ℓ		138	188	238	288	338	388
m	60W	164.5					
	100W	182.5					
Weight (kg)		3.0	3.3	3.7	4.1	4.5	5.8

■ 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-2-⑪ SCON-CA-100①-NP-2-⑪	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-ⓥ-0-⑪ MSCON-C-1-100①-ⓥ-0-⑪	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-2-⑪ SSEL-CS-1-100①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points			—	→ P685
Program control type, 1 to 8 axes		XSEL-⑪-1-60①-N1-EEE-2-Ⅳ XSEL-⑪-1-100①-N1-EEE-2-Ⅳ	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			—	→ P695

* This is for the single-axis MSCON, SSEL, and XSEL.
* ⑪ indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).
* Ⅳ indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).
* ① indicates the encoder type (I: Incremental / A: Absolute).
* ⑪ indicates the XSEL type (J / K / P / Q / R / S).
* ⓥ 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