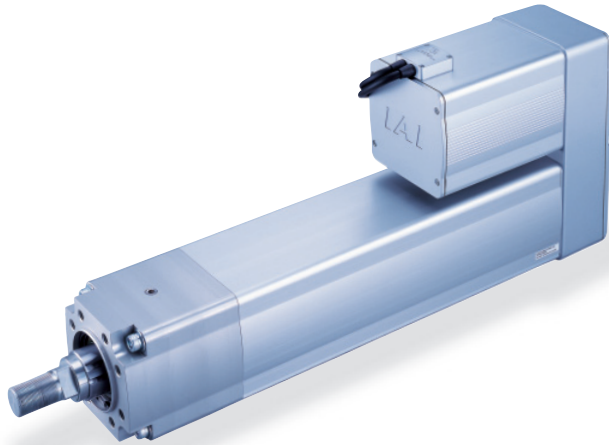


RCS2-RA13R

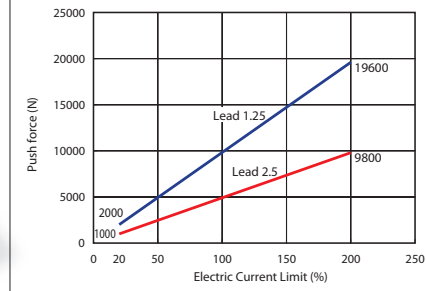
ROBO Cylinder, Super-high Thrust Rod Type, Actuator Dimensions 130mm, 200-V Servo Motor, Reverse-mounted Motor Specification

Model Description	RCS2 — RA13R	<input type="checkbox"/>	750	<input type="checkbox"/>	<input type="checkbox"/>	T2	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification A: Absolute specification	750: Servo motor 750	2.5: 2.5mm 1.25: 1.25mm	50:50mm To 200:200mm (Set steps every 50mm)	T2:SCON	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing List		

See preceding section for model descriptions.



Pushing Force vs. Current Limitation Graph



Note:

- The relationship between pushing force and current limitation is a guide and there may be some error in the actual value.
- Since the pushing force may bottom out if the current limitation is low, use a current limitation of 20% or more.
- The movement speed during pushing operation is fixed at 10mm/s. The graph is when pushing at 10mm/s. Please note that pushing force will drop when the speed changes.
- Depending on the operating conditions, pushing force may decrease as the motor temperature increases.

Technical Reference P. 451

- POINT**
Notes on selection
- When performing a pushing operation, the continuous service time is determined by the pushing force that is set. In addition, during normal operation, the continuous operating thrust must be set below the rated thrust, taking the load and duty into consideration. See a selection of materials (P494) for details.
 - The load capacity is the value when operated at 0.01G acceleration. The above values are maximum acceleration.
 - The horizontal load capacity is the value when external guides are used and no external force is exerted from outside the direction the rod moves.
 - When brake-equipped (option), a brake box (see Accessories P188) is necessary in addition to the actuator body and controller.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Maximum acceleration (G)	Maximum payload		Rated thrust (N)	Continuous push force (N)	Maximum pushing force (N)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)				
RCS2-RA13R-①-750-2.5-②-T2-③-④	750	2.5	0.02	400	200	5106	3567	9800	50 to 200 (every 50mm)
RCS2-RA13R-①-750-1.25-②-T2-③-④		1.25	0.01	500	300	10211	7141	19600	

Legend: ① Encoder type ② Stroke ③ Cable length ④ Option

Stroke and Maximum Speed

Lead (mm)	Stroke (mm)			
	50	100	150	200
2.5	85	120		125
1.25	62			

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RA13R			
	① Encoder type			
	Incremental		Absolute	
	1t type (lead 2.5)	2t type (lead 1.25)	1t type (lead 2.5)	2t type (lead 1.25)
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—

③ Cable Length Price List

Type	Cable symbol	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) to X10 (10m)	—
	X11 (11m) to X15 (15m)	—
	X16 (16m) to X20 (20m)	—
	R01 (1m) to R03 (3m)	—
Robot cable	R04 (4m) to R05 (5m)	—
	R06 (6m) to R10 (10m)	—
	R11 (11m) to R15 (15m)	—
	R16 (16m) to R20 (20m)	—

*See P394 for maintenance cables.

④ Option Price List

Title	Option code	See page	Standard price
Brake (with brake box)	B	P188	—
Brake (without brake box)	BN	P188	—
Top reverse-mounted motor	MT1/MT2/MT3	P188	—
Right reverse-mounted motor	MR1/MR2	P188	—
Left reverse-mounted motor	ML1/ML3	P188	—
Flange	FL	P439	—
Foot bracket	FT	P441	—

Actuator Specification

Item	Description
Drive System	Ball screw φ32mm, rolled C10
Positioning repeatability	±0.01mm
Backlash	0.2mm or less
Rod diameter	φ50mm (Ball spline)
Allowable load moment	120N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km or 10,000,000 pushes (*1)

(*1) Pushing repetitions are when operated at maximum pushing force and 1mm pushing movement.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- C Coupling
- D Built-in (Direct)
- R Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

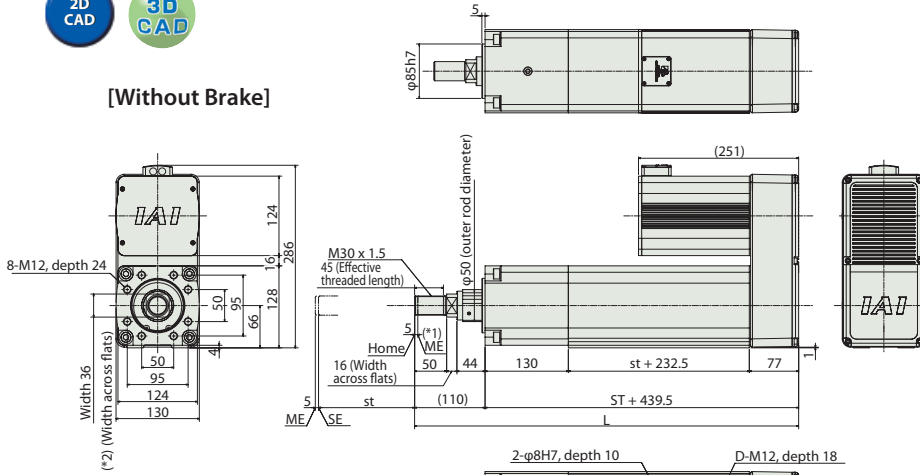
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reverse-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

Dimensional Drawings

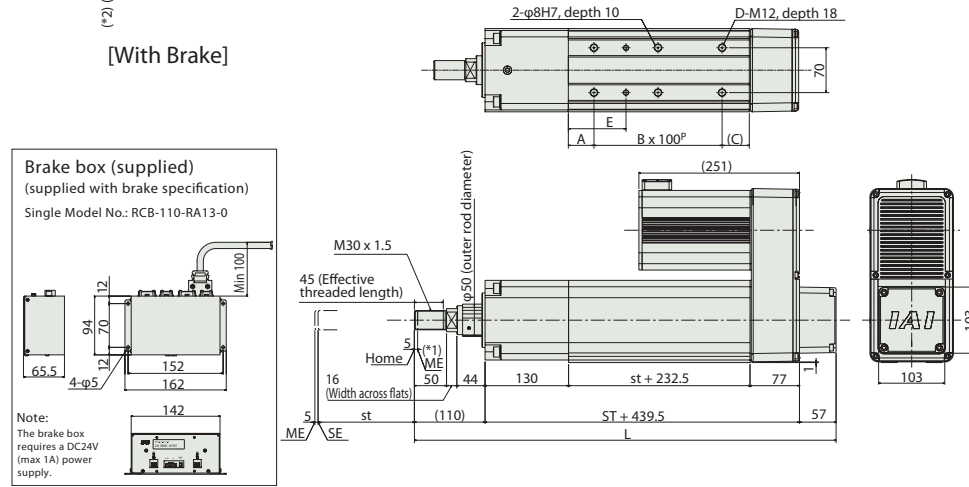
CAD drawings can be downloaded from the website. www.intelligentactuator.com



[Without Brake]



[With Brake]



Information on special orders

P. 454

- *1. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
- *2. The 2D width orientation differs with product.

SE: stroke end
ME: mechanical end

Caution

The with brake specification (option-B) always includes a brake box. Select option-BN when ordering the brake-equipped specification if you only want the actuator unit.

■ Dimensions and Weight by Stroke

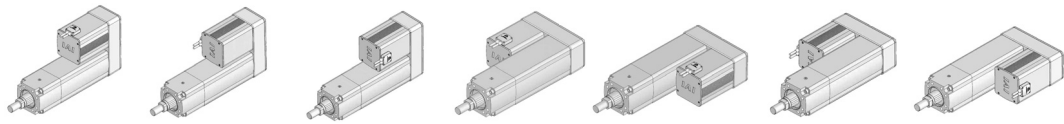
RCS2-RA13R (without brake)				
Stroke	50	100	150	200
L	599.5	649.5	699.5	749.5
A	40	65	40	65
B	2	2	3	3
C	42.5	67.5	42.5	67.5
D	6	6	8	8
E	90	115	90	115
Weight (kg)	33	34	35	36

RCS2-RA13R (with brake)				
Stroke	50	100	150	200
L	656.5	706.5	756.5	806.5
A	40	65	40	65
B	2	2	3	3
C	42.5	67.5	42.5	67.5
D	6	6	8	8
E	90	115	90	115
Weight (kg)	35	36	37	38

Reverse-mounted Motor Orientation/Cable Exit Position (Options)

Note:

Be sure to enter the code for the motor reverse-mount orientation/cable exit location in the form.



Option code	MR1	MR2	MR3	MR1	MR1	MR2	ML3
Motor reverse-mount orientation	Top (Standard)	Top	Top	Right side	Left side	Right side	Left side
Cable exit location	Top (Standard)	Right side	Left side	Top	Top	Right side	Left side

Compatible Controllers

The RCS2 Series actuators can be operated with the following controller.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-750①-NP-2-②	Up to 512-point positioning possible	512 points	Single-phase AC 200V	Maximum 1569VA *1-axis specification When operating at 750W	—	P385
Solenoid valve mode			Same as solenoid valve Controlled operation enabled	7 points				
Serial communication type			Serial communications Special type	64 points				
Pulse train input control type			Pulse train input type Special type	(—)				

*① Indicates the encoder type (I: Incremental/A: Absolute).
*② Indicates the power supply voltage type (1: 100V/2: single-phase 200V).