

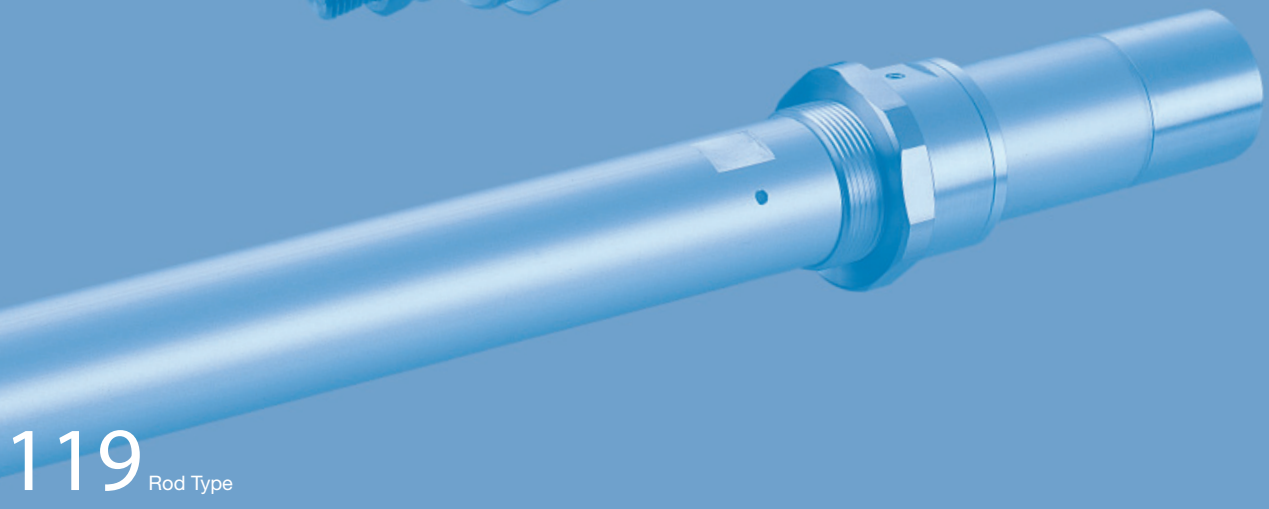
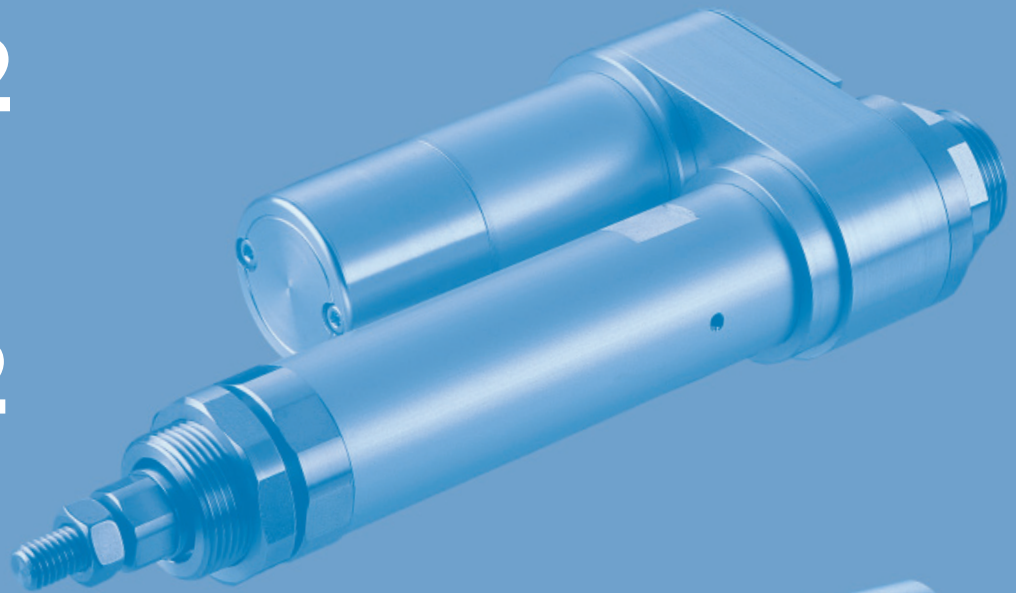


Rod Type

RCP2

RCA

RCS2



RCP2 <i>series</i> Pulse Motor Type	Standard type	Coupling type	Width 25mm	RCP2-RA2C	121
			Width 35mm	RCP2-RA3C	123
			Width 45mm	RCP2-RA4C	125
			Width 64mm	RCP2-RA6C	127
			Width 100mm	RCP2-RA10C	129
	Single guide type	Coupling type	Width 45mm	RCP2-RGS4C	131
			Width 64mm	RCP2-RGS6C	133
			Double guide type	Coupling type	Width 35mm
	Width 45mm	RCP2-RGD4C			137
	Width 64mm	RCP2-RGD6C			139

RCA <i>series</i> 24V Servo Motor Type	Standard type	Coupling type	φ32mm	RCA-RA3C	141	
			φ37mm	RCA-RA4C	143	
		Built-in type		φ32mm	RCA-RA3D	145
				φ37mm	RCA-RA4D	147
		Motor reversing type		φ32mm	RCA-RA3R	149
				φ37mm	RCA-RA4R	151
	Single guide type			Coupling type	φ32mm	RCA-RGS3C
		φ37mm	RCA-RGS4C		155	
	Double guide type	Built-in type		φ32mm	RCA-RGS3D	157
				φ37mm	RCA-RGS4D	159
		Coupling type		φ32mm	RCA-RGD3C	161
				φ37mm	RCA-RGD4C	163
		Built-in type		φ32mm	RCA-RGD3D	165
				φ37mm	RCA-RGD4D	167
	Motor reversing type		φ32mm	RCA-RGD3R	169	
φ37mm			RCA-RGD4R	171		

RCS2 <i>series</i> 200V Servo Motor Type	Standard type	Coupling type	φ37mm	RCS2-RA4C	173		
			Width 55mm	RCS2-RA5C	175		
			Built-in type		φ37mm	RCS2-RA4D	177
		Width 75mm			RCS2-RA7AD	179	
		Width 75mm			RCS2-RA7BD	181	
		Motor reversing type		φ37mm	RCS2-RA4R	183	
				Width 55mm	RCS2-RA5R	185	
				Width 130mm	RCS2-RA13R	187	
		Single guide type	Coupling type		φ37mm	RCS2-RGS4C	189
	Width 55mm				RCS2-RGS5C	191	
	Built-in type					φ37mm	RCS2-RGS4D
			Width 75mm	RCS2-RGS7AD		195	
			Width 75mm	RCS2-RGS7BD		197	
	Double type		Coupling type		φ37mm	RCS2-RGD4C	199
					Width 55mm	RCS2-RGD5C	201
			Built-in type		φ37mm	RCS2-RGD4D	203
					Width 75mm	RCS2-RGD7AD	205
		Motor reversing type		Width 75mm	RCS2-RGD7BD	207	
φ37mm				RCS2-RGD4R	209		

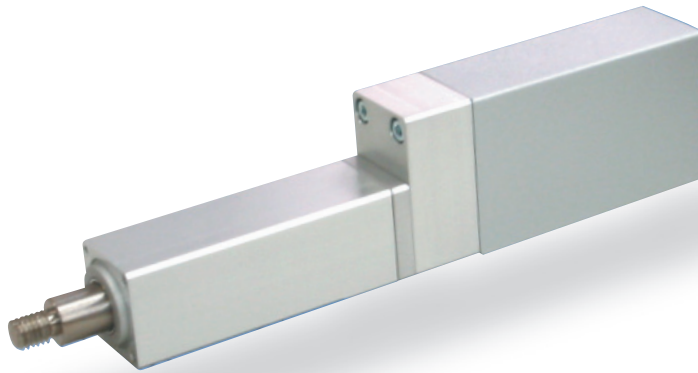
Controller-Integrated Type
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reverse-mounted
Pulse Motor 20 P
Pulse Motor 28 P
Pulse Motor 35 P
Pulse Motor 42 P
Pulse Motor 56 P
Pulse Motor 86 P
Servo Motor 10 W
Servo Motor 20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

RCP2-RA2C

ROBO Cylinder, Rod Type, Actuator Width 25mm, Pulse Motor, Straight Type

Model Description	RCP2 — RA2C — I — 20P — — — P1 — — 							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	20: Pulse motor 20□ Size	1: 1mm	25:25mm To 100:100mm (Set steps every 25mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	FL: Flange FT: Foot bracket

See preceding section for model descriptions.

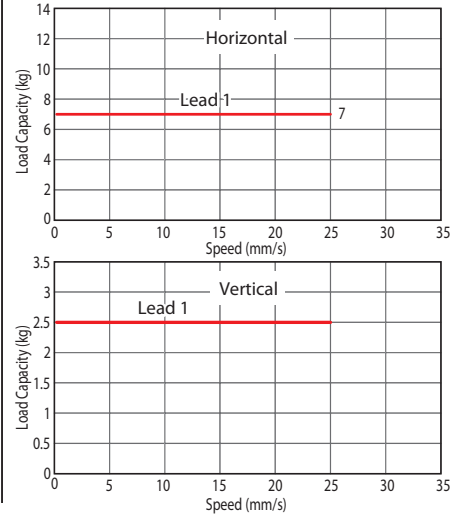


Technical Reference P. 451

- POINT**
Notes on selection
- (1) The RCP2 series uses a pulse motor, so the payload decreases at high speeds. See the Diagram Showing Correlation Between Speed and Payload on the right.
 - (2) This value is when the unit is operated at an acceleration of 0.05G. 0.05G is the upper limit for acceleration. Also, the horizontal payload is when combined with an external guide. Please note that if external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

Speed vs. Payload Graph

A characteristic of the RCP2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



Actuator Specification Table

Leads and Payloads

(Note 1) Please note that the maximum payload decreases when the speed increases.

Model	Lead (mm)	Max. payload		Max. push force (N) (Note 1)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2-RA2C-I-20P-1-①-P1-②-③	1	7	2.5	100	25 to 100 (every 25mm)

Legend: ① Stroke ② Cable length ③ Options

(Note 1) See P492 for the graph of push force.

(Unit = mm/s)

Stroke and Maximum Speed

Lead	Stroke	25 to 100 (every 25mm)
	1	25

① Pricing List By Stroke

① Stroke (mm)	Type code
	Encoder type
25	RA2C Incremental
50	—
75	—
100	—

② 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)	—

*Please see P374 for information on the maintenance cable.

③ Option Price List

Title	Option code	See page	Standard price
Flange	FL	P438	—
Foot bracket	FT	P440	—

Actuator Specification

Item	Description
Drive method	Ball screw ϕ 6mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Rod diameter	ϕ 12mm
Non-rotation accuracy of the rod	\pm 2.1 degrees
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

Information on special orders

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2D CAD

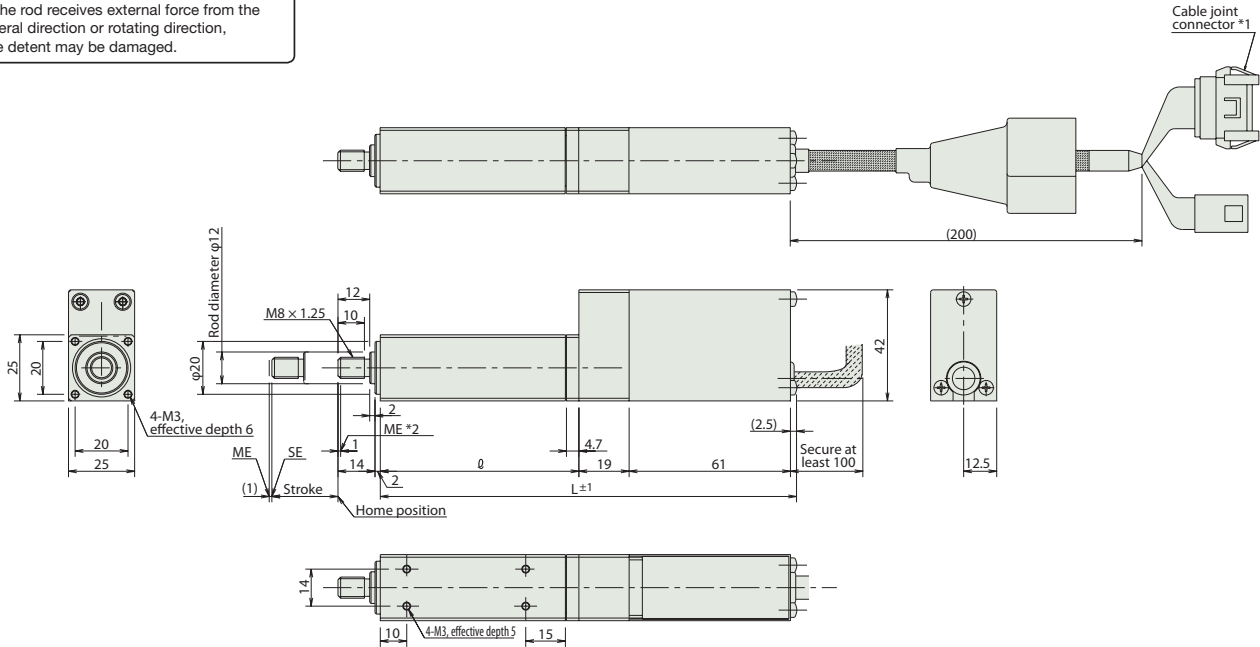
3D CAD

*In this case, the dimensions on the motor side (distance to home) and the dimensions on the reverse motor side are reversed.

Caution

Do not apply external force on the rod in any direction other than the moving direction of the rod.
If the rod receives external force from the lateral direction or rotating direction, the detent may be damaged.

1. Connect the motor cable and encoder cable. For details on cables, see P374.
2. Please note that during home return, the rod moves to the ME, so watch out for interference with surrounding objects.
ME: mechanical end
SE: stroke end



■ Dimensions and Weight by Stroke

Stroke	25	50	75	100
ϕ	75	100	125	150
L	157.5	182.5	207.5	232.5
Weight (kg)	0.4	0.5	0.6	0.7

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		PCON-C-20PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-20PI-NP-2-0								
Solenoid valve type		PCON-CY-20PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Solenoid valve type		PCON-PL-20PI-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-20PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-20PI-N-0-0	Serial communications Special type	64 points						
Field network type		RPCON-20P	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-20PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

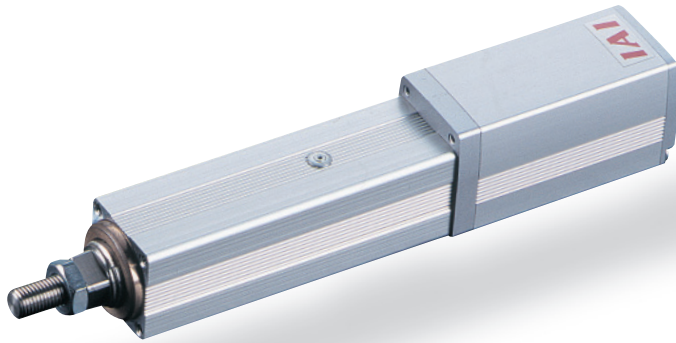
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat Type
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo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

RCP2-RA3C

ROBO Cylinder, Rod Type, Actuator Width 35mm, Pulse Motor, Straight Type

Model Description	RCP2 — RA3C — I — 28P — — — P1 — — 							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification	28: Pulse motor 28□ Size	5: 5mm 2.5: 2.5mm	50:50mm To 200:200mm (Set steps every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	FL: Flange FT: Foot Bracket NM: Reversed-home Specification		

See preceding section for model descriptions.

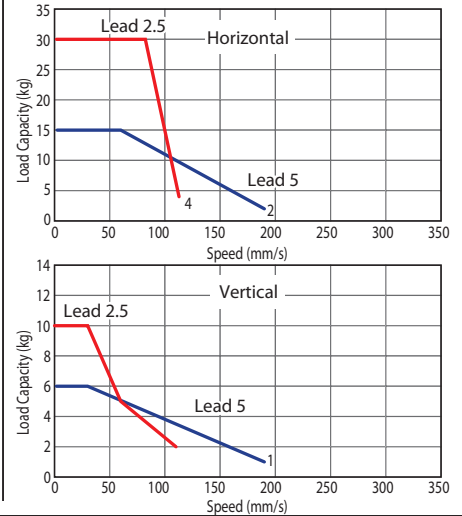


Technical Reference P. 451

- POINT** Notes on selection
- (1) If the stroke is long, the maximum speed will decrease because of the relationship with the critical rotations of the ball screw. See the actuator specification table below for the desired maximum stroke speed.
 - (2) The RCP2 series uses a pulse motor, so the payload decreases at high speeds. See the Diagram Showing Correlation Between Speed and Payload on the right.
 - (3) This is the value when operating at an acceleration of 0.2G. 0.2G is the upper limit for acceleration. Also, the horizontal payload is when combined with an external guide. Please note that if external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

Speed vs. Payload Graph

A characteristic of the RCP2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



Actuator Specification Table

Leads and Payloads

(Note 1) Please note that the maximum payload decreases when the speed increases.

Model	Lead (mm)	Max. payload (Note 1)		Max. push force (N) (Note 1)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2-RA3C-I-28P-5-①-P1-②-③	5	To 15	To 6	73.5	50 to 200 (every 50mm)
RCP2-RA3C-I-28P-2.5-①-P1-②-③	2.5	To 30	To 10	156.8	

Legend: ① Stroke ② Cable length ③ Options

(Note 2) See P492 for the graph of push force.

Stroke and Maximum Speed

Lead	Stroke	50 to 200 (every 50mm)
	5	
2.5		114

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RA3C	Encoder type
	Incremental	
50	—	—
100	—	—
150	—	—
200	—	—

② 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)	—

*Please see P374 for information on the maintenance cable.

③ Option Price List

Title	Option code	See page	Standard price
Flange	FL	P438	—
Foot bracket	FT	P440	—
Reversed-home	NM	P442	—

Actuator Specification

Item	Description
Drive method	Ball screw ϕ 8mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Rod diameter	ϕ 22mm
Non-rotation accuracy of the rod	\pm 1.5 degrees
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

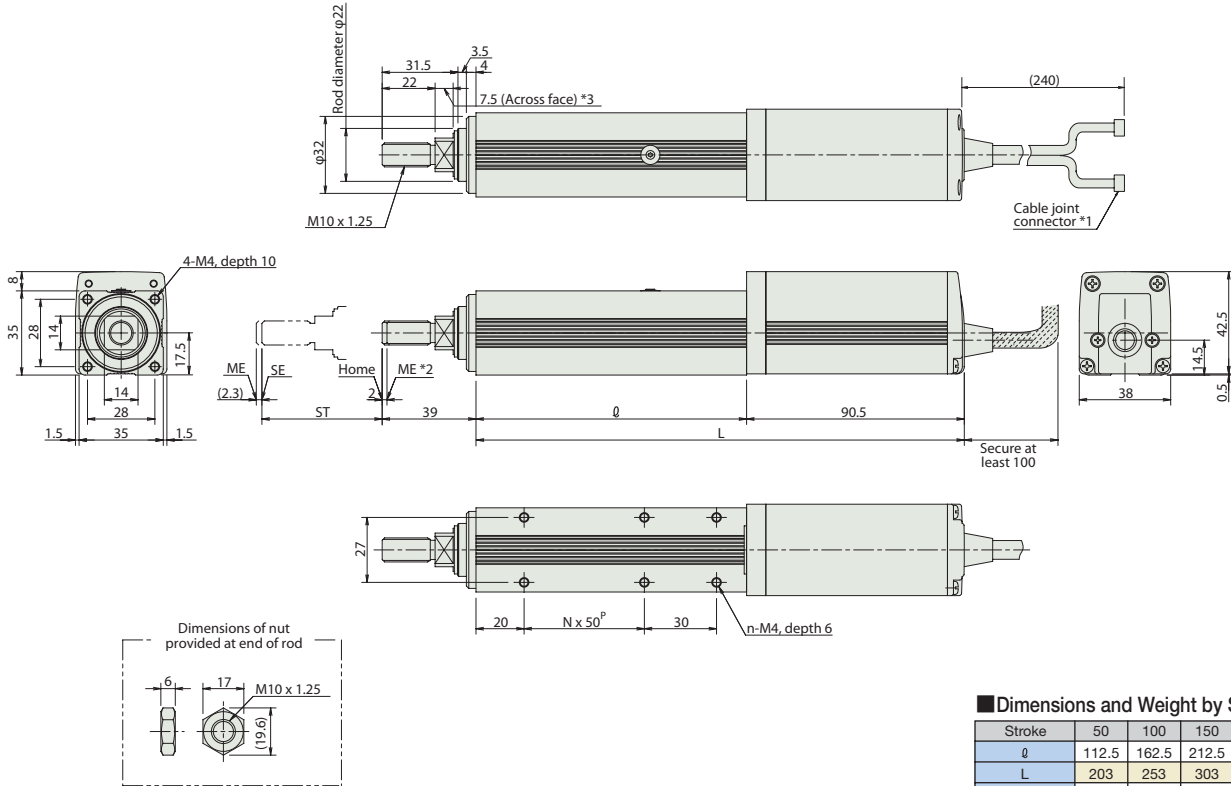
Caution

Do not apply external force on the rod in any direction other than the moving direction of the rod.
If the rod receives external force from the lateral direction or rotating direction, the detent may be damaged.

Information on special orders

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1. Connect the motor cable and encoder cable. For details on cables, see P374.
2. Please note that during home return, the rod moves to the ME, so watch out for interference with surrounding objects.
ME: mechanical end
SE: stroke end
3. The direction that the bolt width surface moves differs by product.



■ Dimensions and Weight by Stroke

Stroke	50	100	150	200
ϕ	112.5	162.5	212.5	262.5
L	203	253	303	353
N	1	2	3	4
n	6	8	10	12
Weight (kg)	0.8	0.95	1.1	1.25

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		PCON-C-28SPI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-28SPI-NP-2-0								
Solenoid valve type		PCON-CY-28SPI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Solenoid valve type		PCON-PL-28SPI-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-28SPI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-28SPI-N-0-0	Serial communications Special type	64 points						
Field network type		RPCON-28SP	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-28SPI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

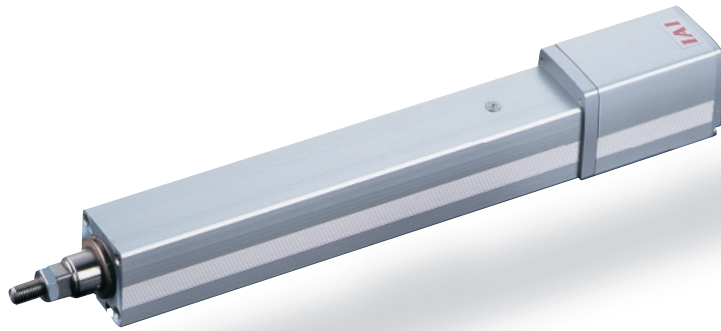
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reverse-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W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

RCP2-RA4C

ROBO Cylinder, Rod Type, Actuator Width 45mm, Pulse Motor, Straight Type

Model Description	RCP2 — RA4C — I — 42P — [] — [] — P1 — [] — []							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification	42: Pulse motor 42□ Size	10: 10mm To 5: 5mm 2.5: 2.5mm	50:50mm To 300:300mm (Set steps every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	B: Brake FL: Flange FT: Foot Bracket NM: Reversed-home Specification		

See preceding section for model descriptions.

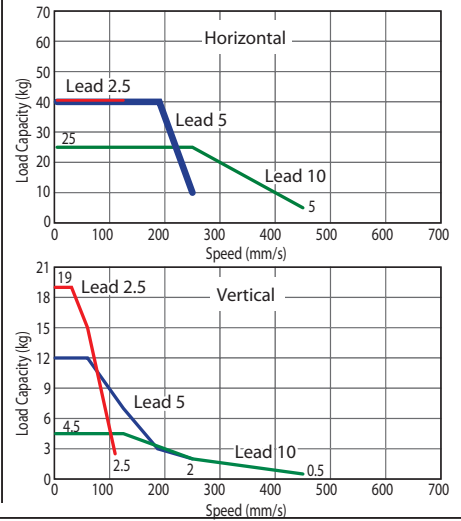


Technical Reference P. 451

- POINT** Notes on selection
- (1) If the stroke is long, the maximum speed will decrease because of the relationship with the critical rotations of the ball screw. See the actuator specification table below for the desired maximum stroke speed.
 - (2) The RCP2 series uses a pulse motor, so the payload decreases at high speeds. See the Diagram Showing Correlation Between Speed and Payload on the right.
 - (3) This is the value when operating at an acceleration of 0.2G. 0.2G is the upper limit for acceleration. Also, the horizontal payload is when combined with an external guide. Please note that if external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

Speed vs. Payload Graph

A characteristic of the RCP2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



Actuator Specification Table

(Note 1) Please note that the maximum payload decreases when the speed increases.

Model	Lead (mm)	Max. payload (Note 1)		Max. push force (N) (Note 1)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2-RA4C-I-42P-10-①-P1-②-③	10	To 25	To 4.5	150	50 to 300 (every 50mm)
RCP2-RA4C-I-42P-5-①-P1-②-③	5	To 40	To 12	284	
RCP2-RA4C-I-42P-2.5-①-P1-②-③	2.5	40	To 19	358	

Legend: ① Stroke ② Cable length ③ Options (Note 2) See P492 for the graph of push force. *Information inside <> is for vertical use. (Unit = mm/s)

Stroke and Maximum Speed

Stroke (mm)	50 to 200 (every 50mm)			250 (mm)	300 (mm)
	Lead	2.5	5	10	10.5
10	458	458	350		
5	250	237	175		
2.5	125	<114>	<114>	87	

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RA4C	Encoder type
50	—	Incremental
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

② 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)	—

*Please see P374 for information on the maintenance cable.

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Flange	FL	P438	—
Foot bracket	FT	P440	—
Reversed-home specification	NM	P442	—

Actuator Specification

Item	Description
Drive method	Ball screw ϕ 8mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Rod diameter	ϕ 22mm
Non-rotation accuracy of the rod	\pm 1.5 degrees
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

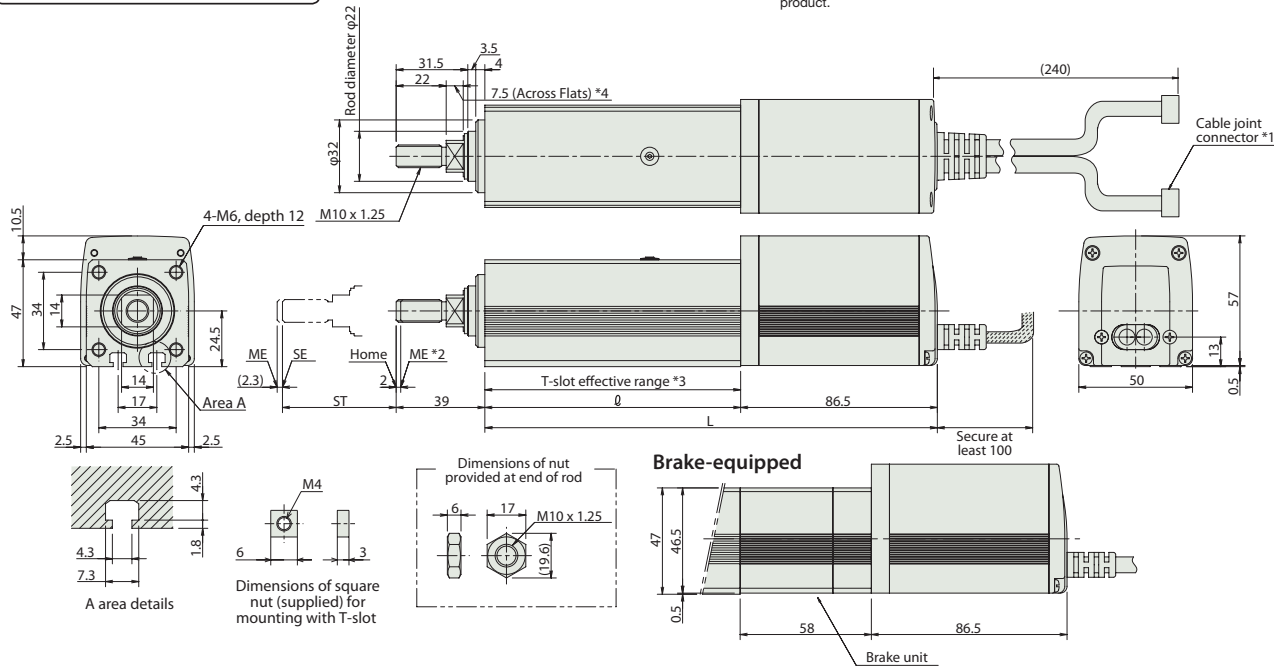
Caution

Do not apply external force on the rod in any direction other than the moving direction of the rod.
If the rod receives external force from the lateral direction or rotating direction, the detent may be damaged.

Information on special orders

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1. Connect the motor cable and encoder cable. For details on cables, see P374.
2. During home return, the rod moves to the ME, so watch out for interference with items near the unit.
ME: mechanical end
SE: stroke end
Dimensions inside () are reference dimensions.
3. Please note that there is no T-groove on the bottom of the brake unit.
4. The direction of the bolt width surface differs by product.



*The brake specification has an overall length that The overall length is 72.5mm longer, and the mass is 0.9kg heavier.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
0	112.5	162.5	212.5	262.5	312.5	362.5
L	199	249	299	349	399	449
Weight (kg)	1.35	1.6	1.85	2.1	2.35	2.6

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

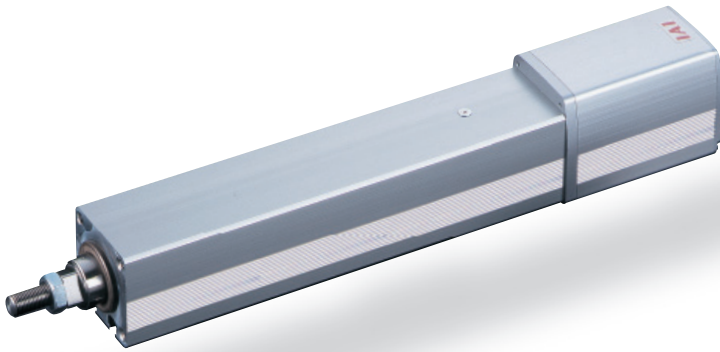
Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page			
Positioner type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365			
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0									
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points							
Solenoid valve type		PCON-PL-42PI-NP-2-0	Compatible with differential line driver Pulse train input type	(-)							
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type								
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special type	64 points							
Field network type		RPCON-42P	Field network Dedicated type	768 points							P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points							

RCP2-RA6C

ROBO Cylinder, Rod Type, Actuator Width 64mm, Pulse Motor, Straight Type

Model Description	RCP2 — RA6C — I — 56P — — — P1 — — 							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification	56: Pulse motor 56□ Size	16: 16mm To 8: 8mm 4: 4mm	50:50mm To 300:300mm (Set steps every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	B: Brake FL: Flange FT: Foot Bracket NM: Reversed-home Specification		

See preceding section for model descriptions.

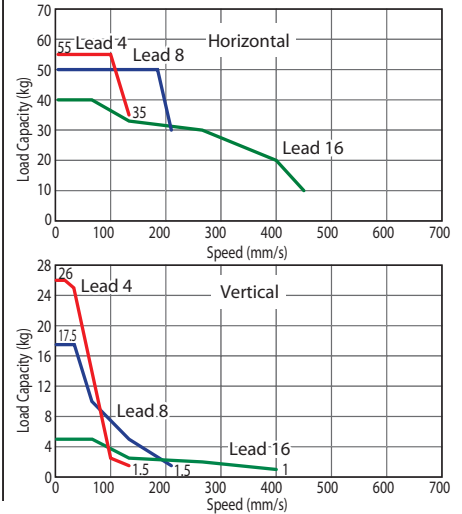


Technical Reference P. 451

- POINT** Notes on selection
- (1) If the stroke is long, the maximum speed will decrease because of the relationship with the critical rotations of the ball screw. See the actuator specification table below for the desired maximum stroke speed.
 - (2) The RCP2 series uses a pulse motor, so the payload decreases at high speeds. See the Diagram Showing Correlation Between Speed and Payload on the right.
 - (3) This is the value when operating at an acceleration of 0.2G. 0.2G is the upper limit for acceleration. Also, the horizontal payload is when combined with an external guide. Please note that if external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

Speed vs. Payload Graph

A characteristic of the RCP2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



Actuator Specification Table

(Note 1) Please note that the maximum payload decreases when the speed increases.

Model	Lead (mm)	Max. payload (Note 1)		Max. push force (N) (Note 1)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2-RA6C-I-56P-16-①-P1-②-③	16	To 40	To 5	240	50 to 300 (every 50mm)
RCP2-RA6C-I-56P-8-①-P1-②-③	8	To 50	To 17.5	470	
RCP2-RA6C-I-56P-4-①-P1-②-③	4	To 55	To 26	800	

Legend: ① Stroke ② Cable length ③ Options

(Note 2) See P492 for the graph of push force. *Information inside <> is for vertical use. (Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RA6C	Encoder type
	Incremental	
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

② 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)	—
	R20 (20m)	—

*Please see P374 for information on the maintenance cable.

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Flange	FL	P438	—
Foot bracket	FT	P440	—
Reversed-home specification	NM	P442	—

Actuator Specification

Item	Description
Drive method	Ball screw φ12mm rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Rod diameter	φ30mm
Non-rotation accuracy of the rod	±1.0 degrees
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

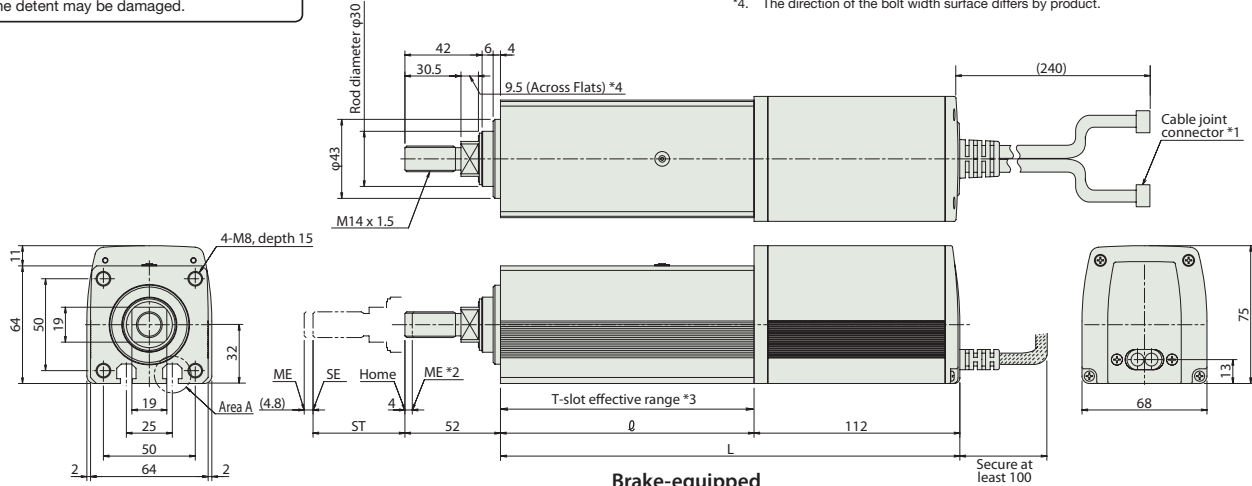
Caution

Do not apply external force on the rod in any direction other than the moving direction of the rod.
If the rod receives external force from the lateral direction or rotating direction, the detent may be damaged.

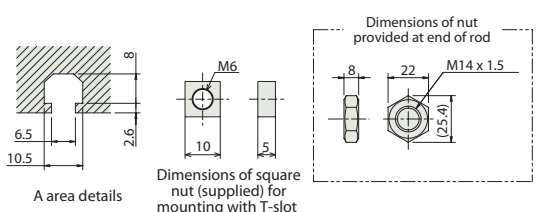
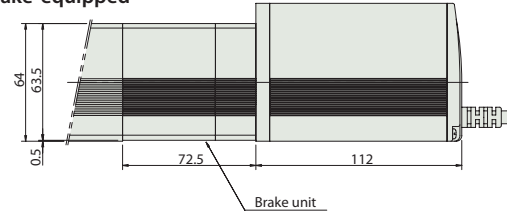
Information on special orders

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1. Connect the motor and encoder cables. See P374 for details on cables.
2. During home return, the rod moves to the ME, so watch out for interference with items near the unit.
ME: mechanical end
SE: stroke end
Dimensions inside () are reference dimensions.
3. Please note that there is no T-groove on the bottom of the brake unit.
4. The direction of the bolt width surface differs by product.



Brake-equipped



**The brake specification has an overall length that The overall length is 72.5mm longer, and the mass is 0.9kg heavier.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
ϕ	138	188	238	288	338	388
L	250	300	350	400	450	500
Weight (kg)	3.1	3.6	4.1	4.6	5.1	5.6

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		PCON-C-56PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-56PI-NP-2-0								
Solenoid valve type		PCON-CY-56PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Solenoid valve type		PCON-PL-56PI-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-56PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-56PI-N-0-0	Serial communications Special type	64 points						
Field network type		RPCON-56P	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-56PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

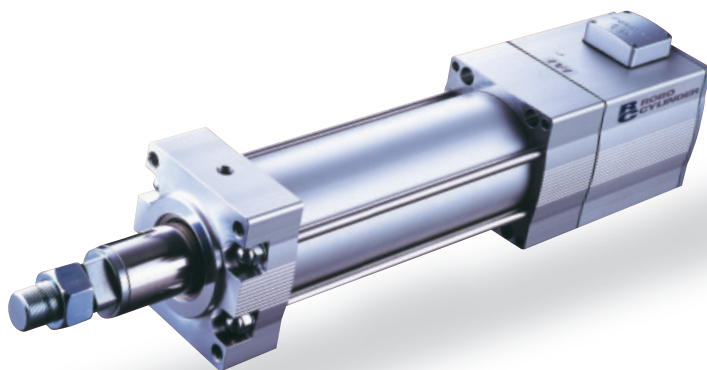
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reverse-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor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

RCP2-RA10C

ROBO Cylinder, High-Thrust Rod Type, Actuator Width 100mm, Pulse Motor, Straight Type

Model Description	RCP2 — RA10C	I	86P			P2		
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	86: Pulse motor 86□ Size	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm To 300:300mm (Set steps every 50mm)	P2: PCON-CF RCP2-CF	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	A1 to A3: Change connector cable outlet direction B: Brake FL: Flange FT: Foot Bracket

See preceding section for model descriptions.

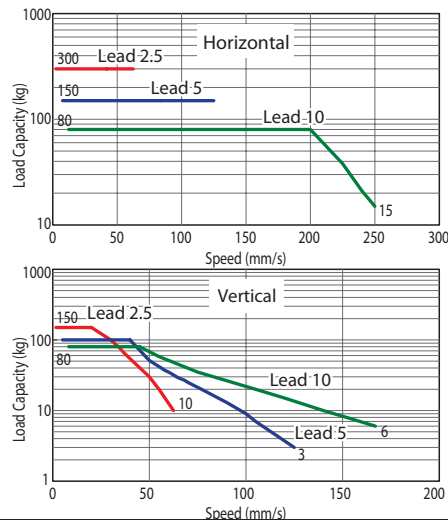


Technical Reference P. 451

- POINT**
Notes on selection
- The minimum speed is set for each lead. (Lead 10: 10mm/s, Lead 5: 5mm/s, Lead 2.5: 1mm/s) Please note that vibration may occur if the unit is operated at a speed under the minimum speed.
 - The RCP2 series uses a pulse motor, so the payload decreases at high speeds. See the Diagram Showing Correlation Between Speed and Payload on the right.
 - The payloads for each lead are as follows: Lead 10: 0.04G, Lead 5: 0.02G, Lead 2.5: 0.01G. The above values are the upper limits for acceleration. Also, the horizontal payload is when combined with an external guide. Please note that if external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

Speed vs. Payload Graph

A characteristic of the RCP2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



Actuator Specification Table

Leads and Payloads

(Note 1) Please note that the maximum payload decreases when the speed increases.

Model	Lead (mm)	Max. payload (Note 1)		Max. push force (N) (Note 1)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2-RA10C-I-86P-10-①-P2-②-③	10	To 80	To 80	1500	50 to 300 (every 50mm)
RCP2-RA10C-I-86P-5-①-P2-②-③	5	150	To 100	3000	
RCP2-RA10C-I-86P-2.5-①-P2-②-③	2.5	300	To 150	6000	

Legend: ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Lead	Stroke	50 to 300 (every 50mm)
		10
5		125
2.5		63

*Information inside <> is for vertical use. (Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RA10C	Encoder type
	Incremental	
50		—
100		—
150		—
200		—
250		—
300		—

② 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)	—

*Please see P374 for information on the maintenance cable.

③ Option Price List

Title	Option code	See page	Standard price
Change the cable connector outlet direction	A1 to A3	P437	—
Brake	B	P437	—
Flange	FL	P438	—
Foot bracket	FT	P440	—

Actuator Specification

Item	Description
Drive method	Ball screw rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Rod diameter	φ40mm
Non-rotation accuracy of the rod	±1.0 degrees
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Dimensional Drawings

CAD drawings can be downloaded from the website.

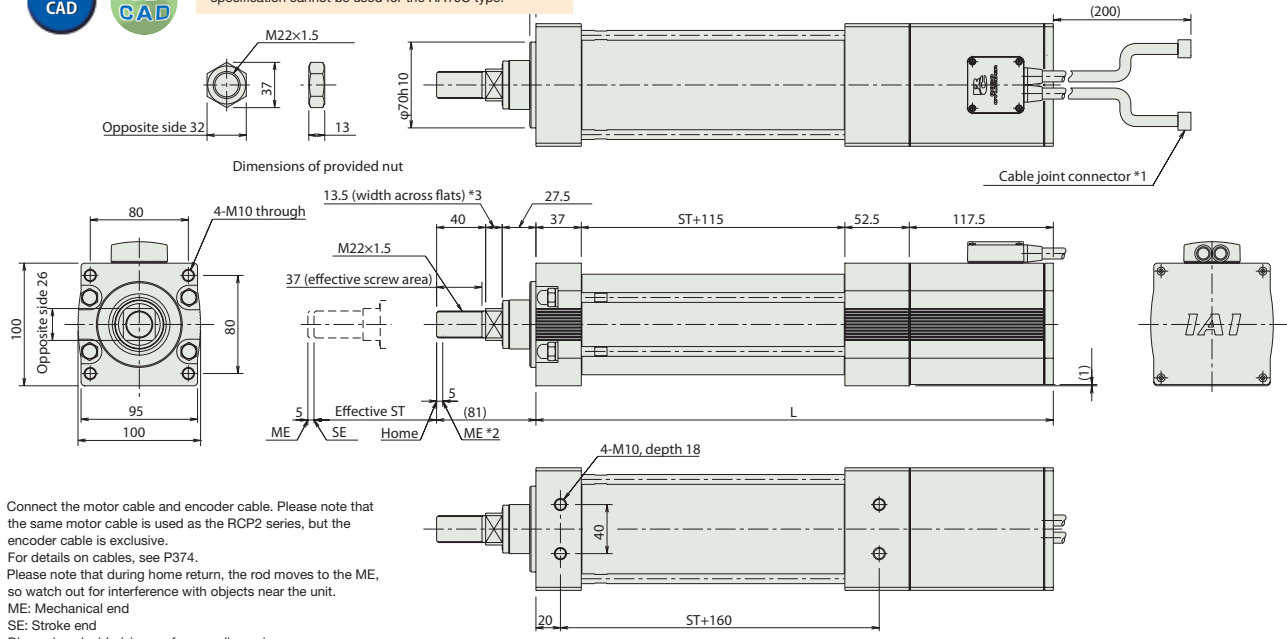
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Information on special orders

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*Please note that for structural reasons, the reversed-home specification cannot be used for the RA10C type.



1. Connect the motor cable and encoder cable. Please note that the same motor cable is used as the RCP2 series, but the encoder cable is exclusive. For details on cables, see P374.
2. Please note that during home return, the rod moves to the ME, so watch out for interference with objects near the unit. ME: Mechanical end SE: Stroke end Dimensions inside () are reference dimensions.
3. The direction of the bolt width surface differs by product.

Caution

Do not apply external force on the rod in any direction other than the moving direction of the rod. If the rod receives external force from the lateral direction or rotating direction, the detent may be damaged.

**The brake specification has an overall length that is 45.5mm longer than and a mass that is 1.5kg heavier than the standard specification.

Dimensions and Weight by Stroke

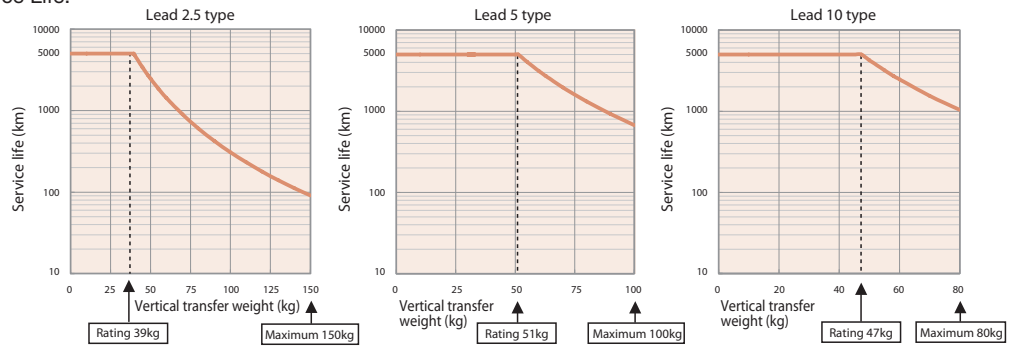
Stroke	50	100	150	200	250	300
L	372	422	472	522	572	622
Weight (kg)	9	9.5	10	10.5	11	11.5

Diagram Showing Correlation Between Vertical Transport Mass and Service Life

The service life of the ROBO Cylinder rod type is 5,000km, but the maximum thrust of the RCP2-RA10C is larger than the other types, so the service life varies widely based on the payload and push force used. When selecting a type based on the Diagram Showing Correlation Between Speed and Payload or the Diagram Showing Correlation Between Push Force and Electric Current Limitations, check the service life in the Diagram Showing Correlation Between Payload and Service Life and the Diagram Showing Correlation Between Push Force and Service Life.

Note:

The rated numbers are the maximum values based on a service life of 5,000km. The maximum numbers are the maximum values at which the unit can be operated. Please note that if the unit is operated at numbers exceeding the rated numbers, the service life will decrease as shown in the graph below.



Compatible Controllers

The following exclusive controller is used for the RCP2-RA10C type.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner Type		PCON-CF-86PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 6A	—	P365

Note: Please note that the encoder cable differs from the PCON-C/CG/CY/PL/PO/SE controller in that it is a CF type only.

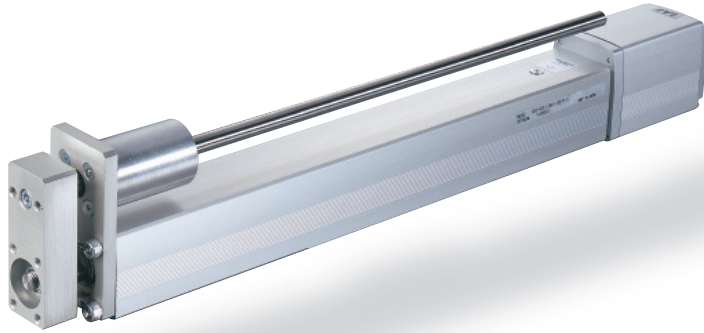
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat Type
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo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

RCP2-RGS4C

ROBO Cylinder, Single-guide Rod Type, Actuator Width 45mm, Pulse Motor, Straight Type

Model Description	RCP2 — RGS4C — I — 42P — — — P1 — — 							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification	42: Pulse motor 42□ Size	10: 10mm To 5: 5mm 2.5: 2.5mm	50:50mm To 300:300mm (Set steps every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	B: Brake FT: Foot Bracket NM: Reversed-home Specification		

See preceding section for model descriptions.

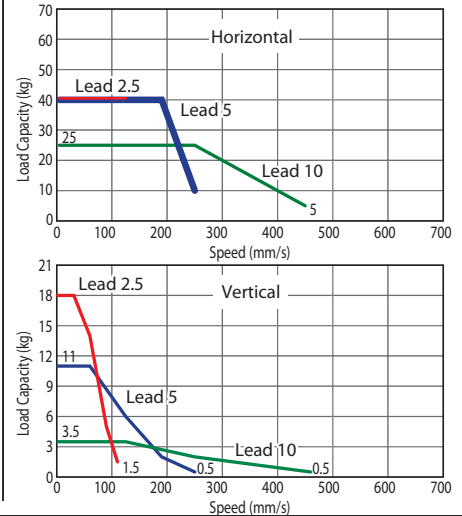


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- POINT** Notes on selection
- (1) If the stroke is long, the maximum speed will decrease because of the relationship with the critical rotations of the ball screw. See the actuator specification table below for the desired maximum stroke speed.
 - (2) The RCP2 series uses a pulse motor, so the payload decreases at high speeds. See the Diagram Showing Correlation Between Speed and Payload on the right.
 - (3) This is the value when operating at an acceleration of 0.2G. 0.2G is the upper limit for acceleration. Also, the horizontal payload is when combined with an external guide. Please note that if external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

Speed vs. Payload Graph

A characteristic of the RCP2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



Actuator Specification Table

Leads and Payloads

(Note 1) Please note that the maximum payload decreases when the speed increases.

Model	Lead (mm)	Max. payload (Note 1)		Max. push force (N) (Note 1)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2-RGS4C-I-42P-10-①-P1-②-③	10	To 25	To 3.5	150	50 to 300 (every 50mm)
RCP2-RGS4C-I-42P-5-①-P1-②-③	5	To 40	To 11	284	
RCP2-RGS4C-I-42P-2.5-①-P1-②-③	2.5	40	To 18	358	

Legend: ① Stroke ② Cable length ③ Options

(Note 2) See P492 for the graph of push force.

Stroke and Maximum Speed

Stroke	50 to 200 (every 50mm)			250 (mm)	300 (mm)
	Lead	50 to 200 (every 50mm)	250 (mm)	300 (mm)	300 (mm)
10		458	458	350	
5		250	237	175	
2.5		125 <114>	118 <114>	87	

*Information inside <> is for vertical use. (Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGS4C	Encoder type
		Incremental
50		—
100		—
150		—
200		—
250		—
300		—

② 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)	—

*Please see P374 for information on the maintenance cable.

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Reversed-home specification	NM	P442	—

Actuator Specification

Item	Description
Drive method	Ball screw ϕ 8mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Guide	Single guide Guide rod diameter ϕ 10mm Ball bush type
Rod diameter	ϕ 22mm
Non-rotation accuracy of the rod	\pm 0.05 degrees
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Dimensional Drawings

CAD drawings can be downloaded from the website.

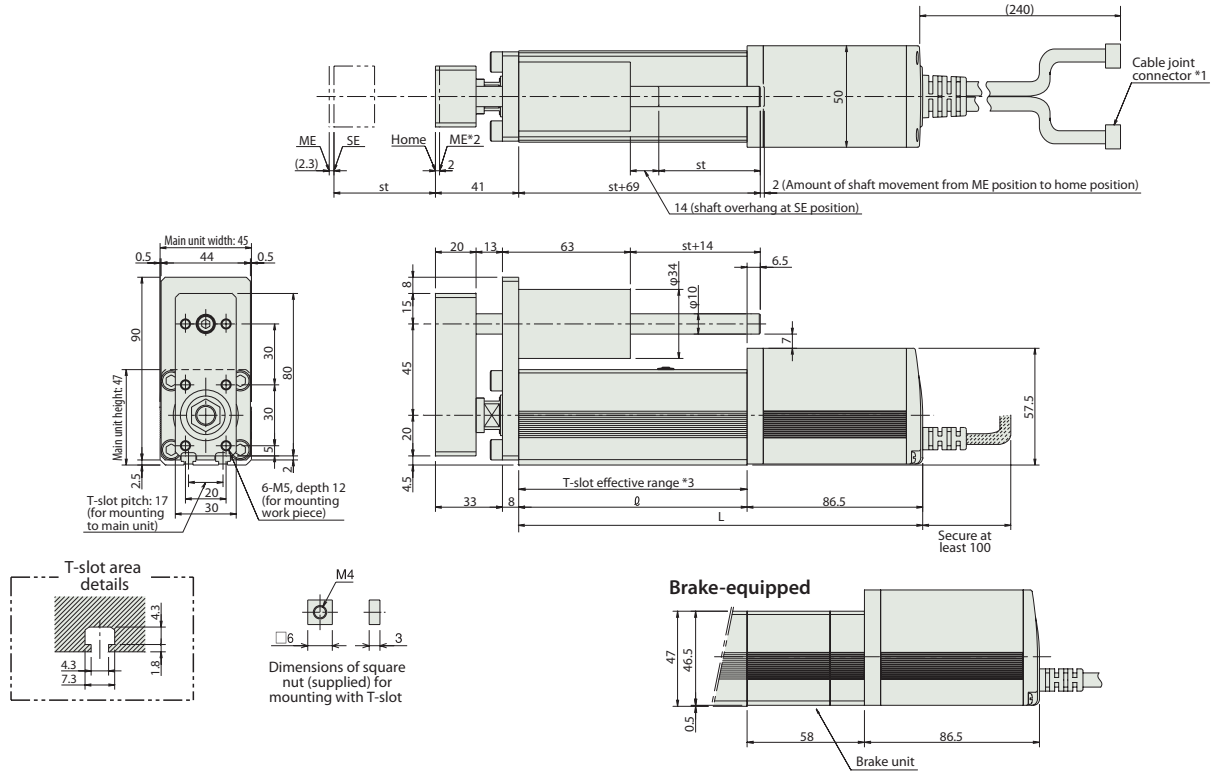
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Information on special orders

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- *1. Connect the motor and encoder cables. For details on cables, see P374.
- *2. During home return, the rod moves to the ME, so watch out for interference with items near the unit.
ME: mechanical end
SE: stroke end
Dimensions inside () are reference dimensions.
- *3. Please note that there is no T-groove on the bottom of the brake unit.



*The brake specification has an overall length that is 58mm longer than and a mass that is 0.4kg heavier than the standard specification.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
Ø	112.5	162.5	212.5	262.5	312.5	362.5
L	199	249	299	349	399	449
Weight (kg)	1.8	2.1	2.4	2.7	2.9	3.2

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0								
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Solenoid valve type		PCON-PL-42PI-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special type	64 points						
Field network type		RPCON-42P	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

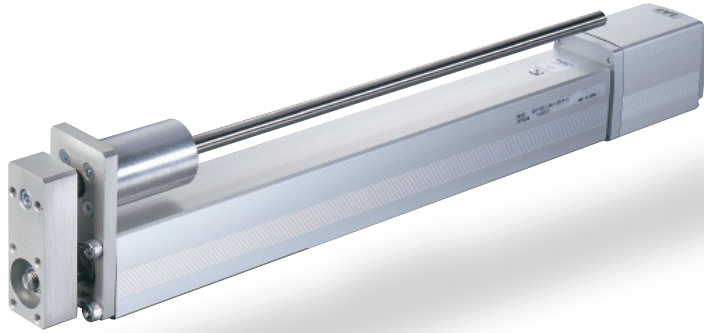
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor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

RCP2-RGS6C

ROBO Cylinder, Rod Type, Actuator Width 25mm, Pulse Motor, Straight Type

Model Description	RCP2 — RGS6C — I — 56P — — — P1 — — 							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification	56: Pulse motor 56□ Size	16: 16mm 8: 8mm 4: 4mm	50:50mm To 300:300mm (Set steps every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	B: Brake FT: Foot Bracket NM: Reversed-home Specification		

See preceding section for model descriptions.

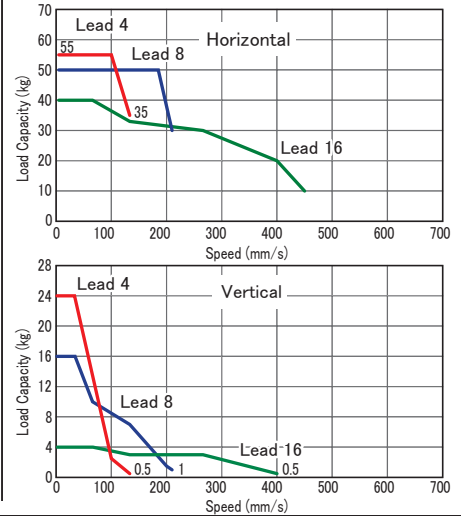


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- POINT**
Notes on selection
- (1) If the stroke is long, the maximum speed will decrease because of the relationship with the critical rotations of the ball screw. See the actuator specification table below for the desired maximum stroke speed.
 - (2) The RCP2 series uses a pulse motor, so the payload decreases at high speeds. See the Diagram Showing Correlation Between Speed and Payload on the right.
 - (3) This is the value when operating at an acceleration of 0.2G. 0.2G is the upper limit for acceleration. Also, the horizontal payload is when combined with an external guide. Please note that if external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

Speed vs. Payload Graph

A characteristic of the RCP2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



Actuator Specification Table

Leads and Payloads

(Note 1) Please note that the maximum payload decreases when the speed increases.

Model	Lead (mm)	Max. payload (Note 1)		Max. push force (N) (Note 1)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2-RGS6C-I-56P-16-①-P1-②-③	16	To 40	To 4	240	50 to 300 (every 50mm)
RCP2-RGS6C-I-56P-8-①-P1-②-③	8	To 50	To 16	470	
RCP2-RGS6C-I-56P-4-①-P1-②-③	4	To 55	To 24	800	

Legend: ① Stroke ② Cable length ③ Options

(Note 2) See P492 for the graph of push force.

Stroke and Maximum Speed

Lead	Stroke	50 to 300 (every 50mm)
		16
8		210
4		130

*Information inside <> is for vertical use. (Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGS6C	Encoder type
		Incremental
50		—
100		—
150		—
200		—
250		—
300		—

② 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)	—

*Please see P374 for information on the maintenance cable.

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Reversed-home specification	NM	P442	—

Actuator Specification

Item	Description
Drive method	Ball screw ϕ 12mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Guide	Single guide Guide rod diameter ϕ 12mm Ball bush type
Rod diameter	ϕ 30mm
Non-rotation accuracy of the rod	\pm 0.05 degrees
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Dimensional Drawings

CAD drawings can be downloaded from the website.

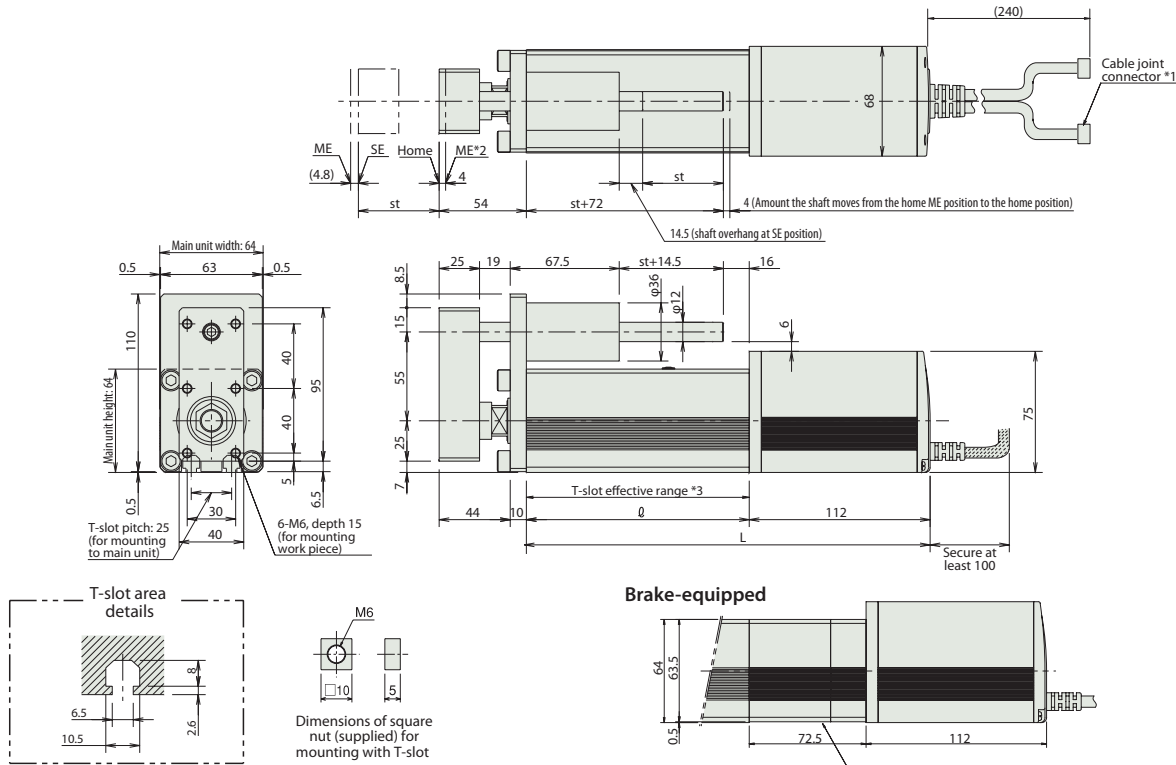
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Information on special orders

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- *1. Connect the motor and encoder cables. For details on cables, see P374.
- *2. During home return, the rod moves to the ME, so watch out for interference with items near the unit.
ME: mechanical end
SE: stroke end
Dimensions inside () are reference dimensions.
- *3. Please note that there is no T-groove on the bottom of the brake unit.



*The brake specification has an overall length that is 58mm longer than and a mass that is 0.4kg heavier than the standard specification.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
0	138	188	238	288	338	388
L	250	300	350	400	450	500
Weight (kg)	3.6	4.4	5.0	5.5	6.1	6.6

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		PCON-C-56PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-56PI-NP-2-0								
Solenoid valve type		PCON-CY-56PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Solenoid valve type		PCON-PL-56PI-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-56PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-56PI-N-0-0	Serial communications Special type	64 points						
Field network type		RPCON-56P	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-56PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

RCP2-RGD3C

ROBO Cylinder, Double-guide Rod Type, Actuator Width 35mm, Pulse Motor, Straight Type

Model Description	RCP2 — RGD3C —	I —	28P —	<input type="checkbox"/> —	<input type="checkbox"/> —	P1 —	<input type="checkbox"/> —	<input type="checkbox"/>
	Series — Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	28: Pulse motor 28□ Size	5: 5mm 2.5: 2.5mm	50:50mm To 200:200mm (Set steps every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	FT: Foot Bracket NM: Reversed-home Specification

See preceding section for model descriptions.

*The photo is RGD4C.

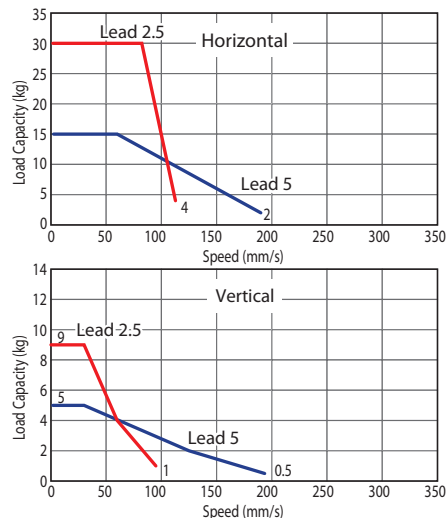


Technical Reference P. 451

- POINT**
Notes on selection
- (1) If the stroke is long, the maximum speed will decrease because of the relationship with the critical rotations of the ball screw. See the actuator specification table below for the desired maximum stroke speed.
 - (2) The RCP2 series uses a pulse motor, so the payload decreases at high speeds. See the Diagram Showing Correlation Between Speed and Payload on the right.
 - (3) This is the value when operating at an acceleration of 0.2G. 0.2G is the upper limit for acceleration. Also, the horizontal payload is when combined with an external guide. Please note that if external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

Speed vs. Payload Graph

A characteristic of the RCP2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



Actuator Specification Table

Leads and Payloads

(Note 1) Please note that the maximum payload decreases when the speed increases.

Model	Lead (mm)	Max. payload (Note 1)		Max. push force (N) (Note 1)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2-RGD3C-I-28P-5-①-P1-②-③	5	To 15	To 5	73.5	50 to 200 (every 50mm)
RCP2-RGD3C-I-28P-2.5-①-P1-②-③	2.5	To 30	To 9	156.8	

Legend: ① Stroke ② Cable length ③ Options

(Note 2) See P492 for the graph of push force.

(Unit = mm/s)

Stroke and Maximum Speed

Lead	Stroke	50 to 200 (every 50mm)
		5
2.5		114<93>

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGD3C	Encoder type
	Incremental	
50	—	—
100	—	—
150	—	—
200	—	—

② 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)	—

*Please see P374 for information on the maintenance cable.

③ Option Price List

Title	Option code	See page	Standard price
Foot bracket	FL	P440	—
Reversed-home specification	NM	P442	—

Actuator Specification

Item	Description
Drive method	Ball screw ϕ 8mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Guide	Single guide Guide rod diameter ϕ 10mm Ball bush type
Rod diameter	ϕ 22mm
Non-rotation accuracy of the rod	\pm 0.05 degrees
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

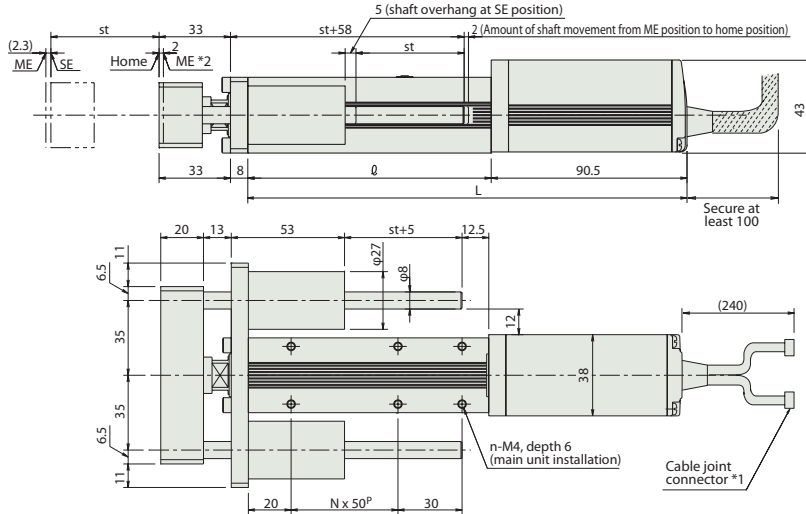
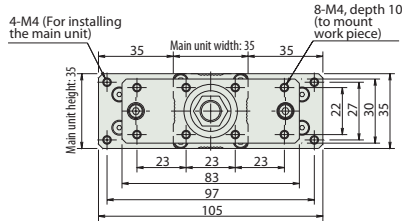
2D CAD

3D CAD

Information on special orders

P. 454

1. Connect the motor and encoder cables. See P374 for details on cables.
2. During home return, the rod moves to the ME, so watch out for interference with items near the unit.
ME: mechanical end
SE: stroke end
Dimensions inside () are reference dimensions.



Dimensions and Weight by Stroke

Stroke	50	100	150	200
L	112.5	162.5	212.5	262.5
N	1	2	3	4
n	6	8	10	12
Weight (kg)	1.1	1.3	1.4	1.6

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page			
Positioner type		PCON-C-28SPI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365			
Safety category compatible Positioner type		PCON-CG-28SPI-NP-2-0									
Solenoid valve type		PCON-CY-28SPI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points							
Solenoid valve type		PCON-PL-28SPI-NP-2-0	Compatible with differential line driver Pulse train input type	(-)							
Pulse series input type (Open collector specification)		PCON-PO-28SPI-NP-2-0	Open collector compatible Pulse series input type								
Serial communication type		PCON-SE-28SPI-N-0-0	Serial communications Special type	64 points							
Field network type		RPCON-28SP	Field network Dedicated type	768 points							P343
Program control type		PSEL-C-1-28SPI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points							

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

RCP2-RGD4C

ROBO Cylinder, Double-guide Rod Type, Actuator Width 45mm, Pulse Motor, Straight Type

Model Description	RCP2 — RGD4C —	I —	42P —	□ —	□ —	P1 —	□ —	□ —
	Series — Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
	I: Incremental specification	42: Pulse motor 42□ Size	10: 10mm To 50:50mm 5: 5mm 2.5: 2.5mm	50:50mm To 300:300mm (Set steps every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	B: Brake FT: Foot Bracket NM: Reversed-home Specification	

See preceding section for model descriptions.

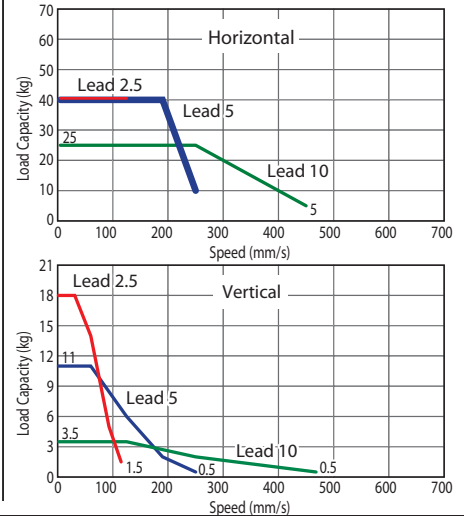


Technical Reference P. 451

- POINT** Notes on selection
- (1) If the stroke is long, the maximum speed will decrease because of the relationship with the critical rotations of the ball screw. See the actuator specification table below for the desired maximum stroke speed.
 - (2) The RCP2 series uses a pulse motor, so the payload decreases at high speeds. See the Diagram Showing Correlation Between Speed and Payload on the right.
 - (3) This is the value when operating at an acceleration of 0.2G. 0.2G is the upper limit for acceleration. Also, the horizontal payload is when combined with an external guide. Please note that if external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

Speed vs. Payload Graph

A characteristic of the RCP2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



Actuator Specification Table

Leads and Payloads

(Note 1) Please note that the maximum payload decreases when the speed increases.

Model	Lead (mm)	Max. payload (Note 1)		Max. push force (N) (Note 1)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2-RGD4C-I-42P-10-①-P1-②-③	10	To 25	To 3.5	150	50 to 300 (every 50mm)
RCP2-RGD4C-I-42P-5-①-P1-②-③	5	To 40	To 11	284	
RCP2-RGD4C-I-42P-2.5-①-P1-②-③	2.5	To 40	To 18	258	

Legend: ① Stroke ② Cable length ③ Options

(Note 2) See P492 for the graph of push force.

Stroke and Maximum Speed

Stroke (mm)	50 to 200 (every 50mm)			250 (mm)	300 (mm)
	Lead	250	175	125 <114>	118 <114>
10	458	458	350		
5	250	237	175		
2.5	125 <114>	118 <114>	87		

*Information inside <> is for vertical use. (Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGD4C	Encoder type
		Incremental
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

② 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)	—

*Please see P374 for information on the maintenance cable.

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Reversed-home specification	NM	P442	—

Actuator Specification

Item	Description
Drive method	Ball screw ϕ 8mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Guide	Single guide Guide rod diameter ϕ 10mm Ball bush type
Rod diameter	ϕ 22mm
Non-rotation accuracy of the rod	\pm 0.05 degrees
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Dimensional Drawings

CAD drawings can be downloaded from the website.

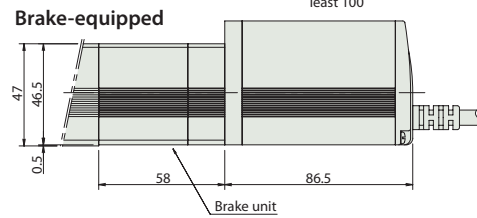
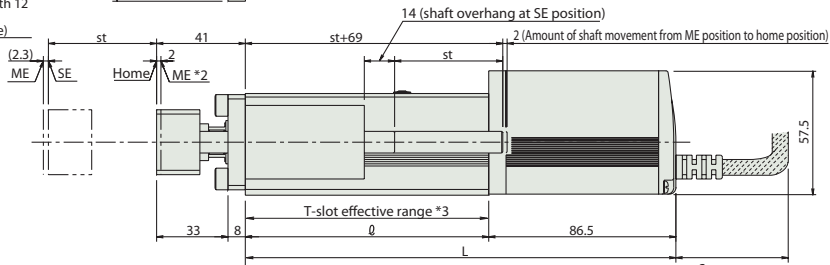
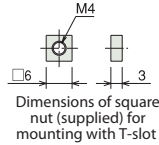
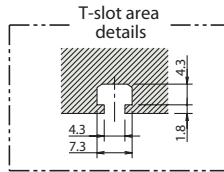
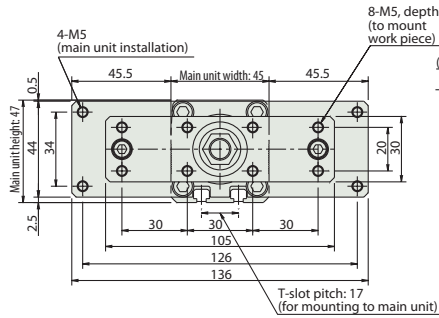
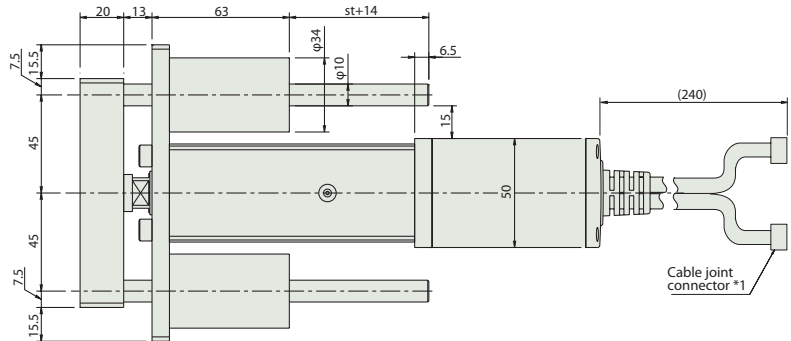
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Information on special orders

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- *1. Connect the motor and encoder cables. See P374 for details on cables.
- *2. During home return, the rod moves to the ME, so watch out for interference with items near the unit.
ME: mechanical end
SE: stroke end
Dimensions inside () are reference dimensions.
- *3. Please note that there is no T-groove on the bottom of the brake unit.



*The brake specification has an overall length that is 58mm longer than and a mass that is 0.4kg heavier than the standard specification.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
∅	112.5	162.5	212.5	262.5	312.5	362.5
L	199	249	299	349	399	449
Weight (kg)	2.2	2.5	2.8	3.1	3.4	3.7

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0								
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Solenoid valve type		PCON-PL-42PI-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special type	64 points						
Field network type		RPCON-42P	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

RCP2-RGD6C

ROBO Cylinder, Double-guide Rod Type, Actuator Width 64mm, Pulse Motor, Straight Type

Model Description	RCP2 — RGD6C —	I —	56P —	<input type="checkbox"/>	<input type="checkbox"/>	P1 —	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	56: Pulse motor 56□ Size	16: 16mm 8: 8mm 4: 4mm	50:50mm To 300:300mm (Set steps every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	B: Brake FT: Foot Bracket NM: Reversed-home Specification

See preceding section for model descriptions.

*The photo is RGD4C.



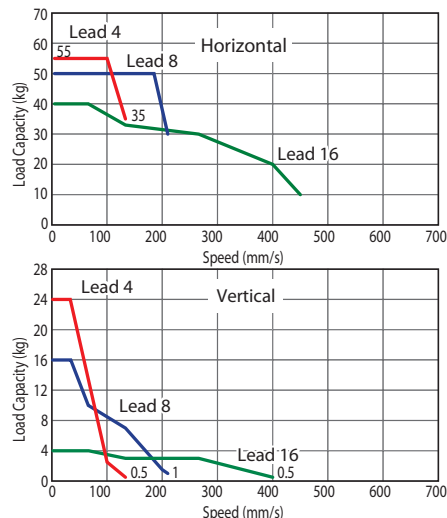
Technical Reference P. 451



- (1) If the stroke is long, the maximum speed will decrease because of the relationship with the critical rotations of the ball screw. See the actuator specification table below for the desired maximum stroke speed.
- (2) The RCP2 series uses a pulse motor, so the payload decreases at high speeds. See the Diagram Showing Correlation Between Speed and Payload on the right.
- (3) This is the value when operating at an acceleration of 0.2G. 0.2G is the upper limit for acceleration. Also, the horizontal payload is when combined with an external guide. Please note that if external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

Speed vs. Payload Graph

A characteristic of the RCP2 Series pulse motor is that the payload decreases as the speed increases. Use the table below to confirm that there is sufficient speed at the desired payload.



Actuator Specification Table

Leads and Payloads

(Note 1) Please note that the maximum payload decreases when the speed increases.

Model	Lead (mm)	Max. payload (Note 1)		Max. push force (N) (Note 1)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2-RGD6C-I-56P-16-①-P1-②-③	16	To 40	To 4	240	50 to 300 (every 50mm)
RCP2-RGD6C-I-56P-8-①-P1-②-③	8	To 50	To 16	470	
RCP2-RGD6C-I-56P-4-①-P1-②-③	4	To 55	To 24	800	

Legend: ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Lead	Stroke	50 to 300 (every 50mm)
		16
8		210
4		130

*Information inside <> is for vertical use. (Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGD6C	Encoder type
		Incremental
50		—
100		—
150		—
200		—
250		—
300		—

② 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)	—

*Please see P374 for information on the maintenance cable.

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Reversed-home specification	NM	P442	—

Actuator Specification

Item	Description
Drive method	Ball screw φ 12mm rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single guide Guide rod diameter φ 12mm Ball bush type
Rod diameter	φ 22mm
Non-rotation accuracy of the rod	±0.05 degrees
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

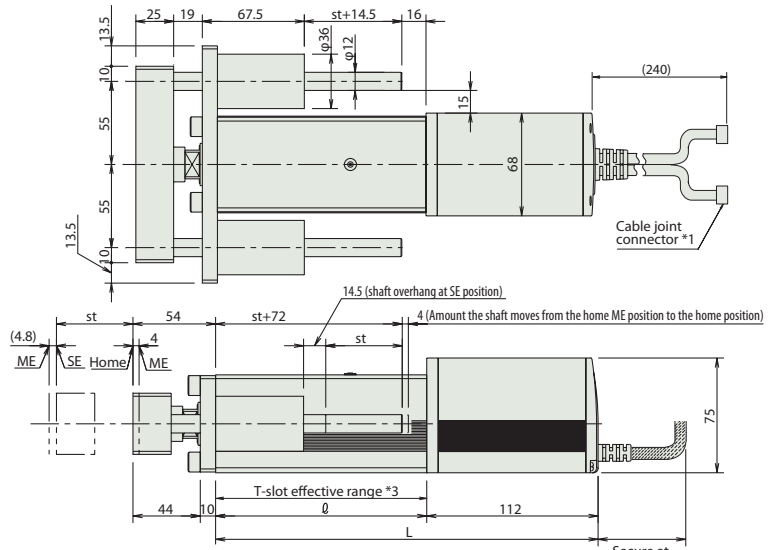
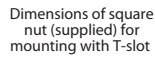
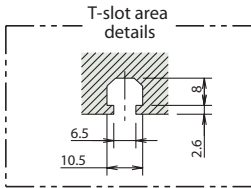
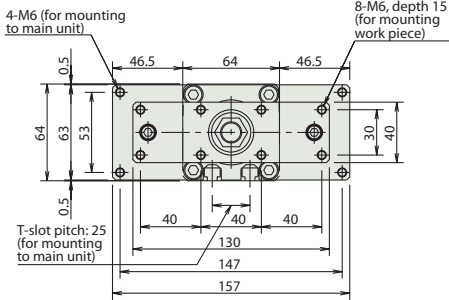
Information on special orders

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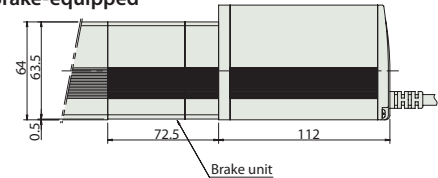
2D CAD

3D CAD

1. Connect the motor and encoder cables. See P374 for details on cables.
2. During home return, the rod moves to the ME, so watch out for interference with items near the unit.
ME: mechanical end
SE: stroke end
Dimensions inside () are reference dimensions.
3. Please note that there is no T-groove on the bottom of the brake unit.



Brake-equipped



*The specification with brakes has an overall length that is 72.5mm longer and a mass that is 0.9kg heavier than the standard specification.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
0	138	188	238	288	338	388
L	250	300	350	400	450	500
Weight (kg)	4.4	5.0	5.5	6.1	6.7	7.3

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		PCON-C-56PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-56PI-NP-2-0								
Solenoid valve type		PCON-CY-56PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Solenoid valve type		PCON-PL-56PI-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-56PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-56PI-N-0-0	Serial communications Special type	64 points						
Field network type		RPCON-56P	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-56PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

RCA-RA3C

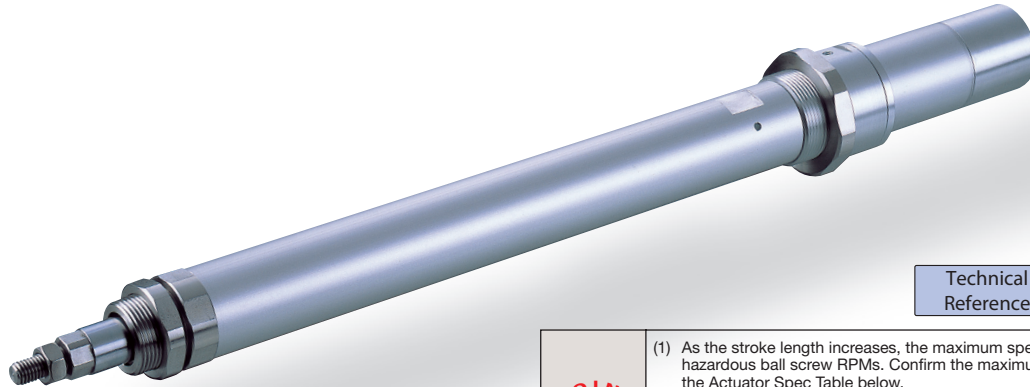
ROBO Cylinder, Rod Type, Actuator Dimensions 32mm, 24V Servo Motor, Coupling Specification

Model Description	RCA — RA3C — I — 20 — [] — [] — A1 — [] — []							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm To 200:200mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table

See preceding section for model descriptions.

High-acceleration/
deceleration
(Excluding lead 2.5)

Power saving



Technical Reference P. 451

- POINT**
Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - (2) The payload is the value when operated at 0.3G acceleration (0.2G at lead 2.5) at normal specifications/power saving or at 1G in high-acceleration/deceleration applications (except at lead 2.5). (The values in the table below are the maximum payload, even if acceleration/deceleration drops)
 - (3) The horizontal payload is the value when external guides are used and no external force is exerted from outside the direction of travel of the rod.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA3C-I-20-10-①-A1-②-③	20	10	4.0	1.5	36.2	50 to 200 (Every 50mm)
RCA-RA3C-I-20-5-①-A1-②-③		5	9.0	3.0	72.4	
RCA-RA3C-I-20-2.5-①-A1-②-③		2.5	18.0	6.5	144.8	

Legend: ① Stroke ② Cable length ③ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 200 (Every 50mm)
	10	500
5	250	250
2.5	125	125

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RA3C	
	Encoder type	
	Incremental	
	I	
50	—	—
100	—	—
150	—	—
200	—	—

④ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Flange bracket (Front)	FL	P438	—
Flange bracket (Rear)	FLR	P439	—
High-acceleration/deceleration (*1)	HA	P442	—
Home check sensor (*2)	HS	P442	—
Power saving (*3)	LA	P442	—
Kunckle joint	NJ	P443	—
Reversed-home specification	NM	P442	—
Trunion bracket (Front)	TRF	P446	—
Trunion bracket (Rear)	TRR	P446	—

(*1) Lead 2.5 cannot be used in high-acceleration/deceleration applications.
 (*2) Home check sensors (HS) cannot be used in reversed-home specifications.
 (*3) High-acceleration/deceleration applications and power saving applications cannot be used together.

② 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 P384 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ8mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material Aluminum White alumite treated
Rod diameter	φ16mm
Non-rotation accuracy of the rod	±1.0 degrees
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

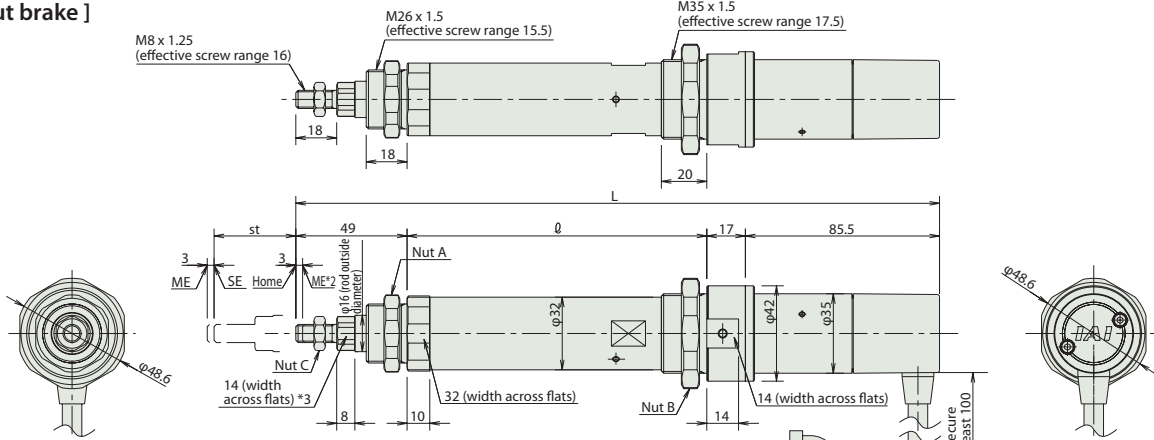
Information on special orders

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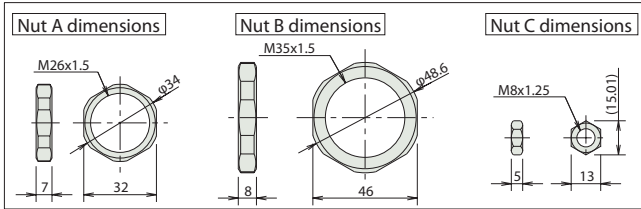
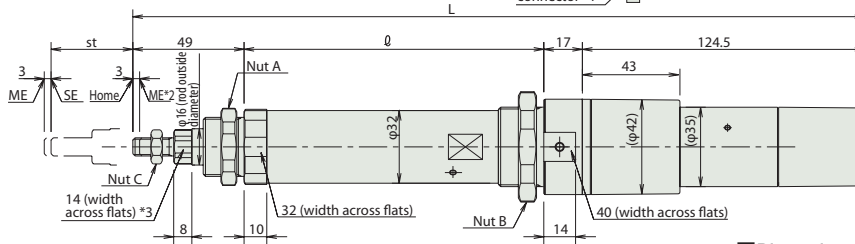
- *1. Connect the motor-encoder cable. See P384 for cable details.
- *2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.

- *3. The orientation of the width across flats differs with the product.

[Without brake]



[Brake specification]



■ Dimensions and Weight by Stroke

RCA-RA3C (without brake)				
Stroke	50	100	150	200
L	283.5	333.5	383.5	433.5
φ	132	182	232	282
Weight (kg)	0.7	0.8	0.9	1.0
RCA-RA3C (with brake)				
Stroke	50	100	150	200
L	322.5	372.5	422.5	472.5
φ	132	182	232	282
Weight (kg)	0.9	1.0	1.1	1.2

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		ACON-C-20SI①-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Rating 1.7A Peak 5.1A	—	P375		
Safety category compatible Positioner type		ACON-C-20SI①-NP-2-0								
Solenoid valve type		ACON-CY-20SI①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		ACON-PL-20SI①-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		ACON-PO-20SI①-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		ACON-SE-20SI①-N-0-0	Serial communications Special Type	64 points						
Field network type		RACON-20S①	Field network Dedicated type	768 points					—	P343
Program control type		ASEL-C-1-20SI①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					—	P405

*ASEL is for 1-axis specifications.

① For entering the code when designating high-acceleration/deceleration applications or power saving applications (HA/LA).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

RCA-RA4C

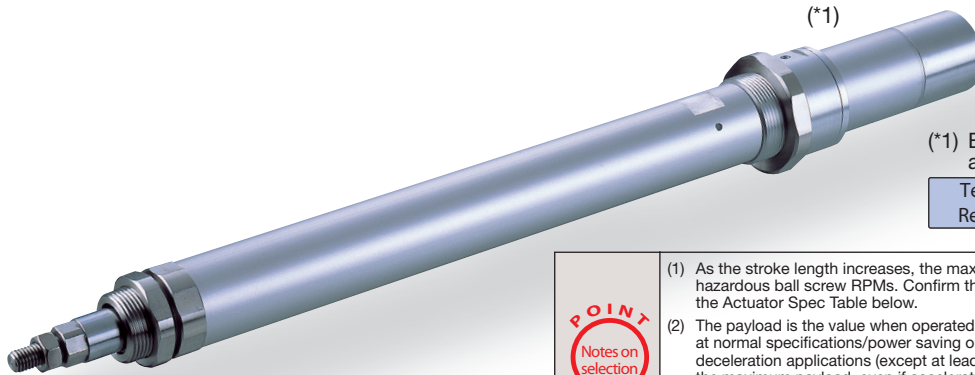
ROBO Cylinder, Rod Type, Actuator Dimensions 37mm, 24V Servo Motor, Coupling Specification

Model Description	RCA — RA4C —							A1 —		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	
			I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table	

See preceding section for model descriptions.

High-acceleration/
deceleration

Power saving



(*1)

(*1) Excluding all 20W models and and 30W lead3

Technical Reference P. 451

- POINT**
Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - (2) The payload is the value when operated at 0.3G acceleration (0.2G at lead 3) at normal specifications/power saving or at 1G in high-acceleration/deceleration applications (except at lead 3). (The values in the table below are the maximum payload, even if acceleration/deceleration drops)
 - (3) The horizontal payload is the value when external guides are used and no external force is exerted from outside the direction of travel of the rod.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA4C-①-20-12-②-A1-③-④	20	12	3.0	1.0	18.9	50 to 300 (Every 50mm)
RCA-RA4C-①-20-6-②-A1-③-④		6	6.0	2.0	37.7	
RCA-RA4C-①-20-3-②-A1-③-④		3	12.0	4.0	75.4	
RCA-RA4C-①-20-12-②-A1-③-④	30	12	4.0	1.5	28.3	
RCA-RA4C-①-20-6-②-A1-③-④		6	9.0	3.0	56.6	
RCA-RA4C-①-20-3-②-A1-③-④		3	18.0	6.5	113.1	

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

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder type and ② Stroke

② Stroke (mm)	Type code			
	RA4C			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	R04 (4m) to R05 (5m)	—
	R06 (6m) to R10 (10m)	—
	R11 (11m) to R15 (15m)	—
	R16 (16m) to R20 (20m)	—

*See P384 for maintenance cables.

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Flange bracket (Front)	FL	P438	—
Flange bracket (Rear)	FLR	P439	—
High-acceleration/deceleration (*1)	HA	P442	—
Home check sensor (*2)	HS	P442	—
Power saving (*3)	LA	P442	—
Kunckle joint	NJ	P443	—
Reversed-home specification	NM	P442	—
Trunion bracket (Front)	TRF	P446	—
Trunion bracket (Rear)	TRR	P446	—

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material Aluminum White alumite treated
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±1.0 degrees
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

(*1) None of the 20W or 30W-lead 3 models can be used in high-acceleration/deceleration applications.
(*2) Home check sensors (HS) cannot be used in reversed-home specifications.
(*3) High-acceleration/deceleration applications and power saving applications cannot be used together.

Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com



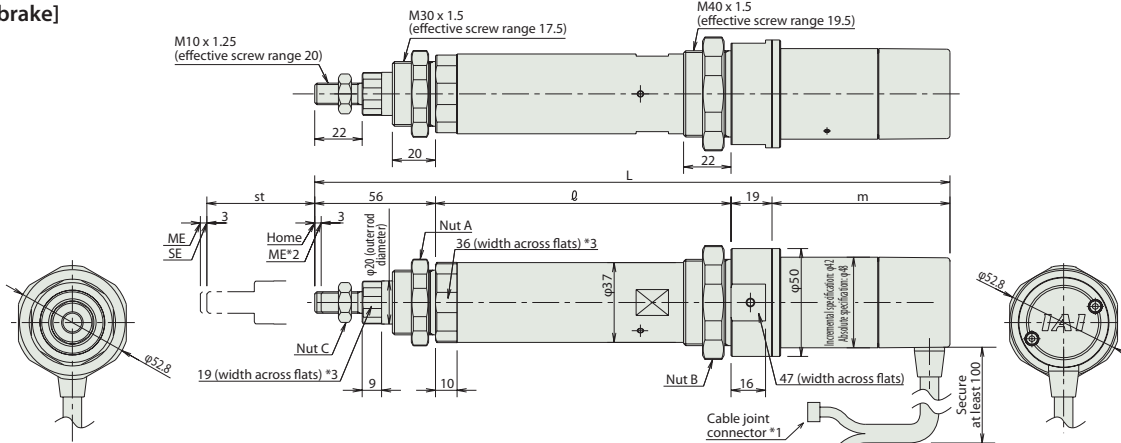
Information on special orders

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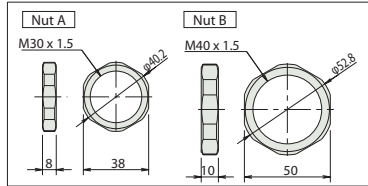
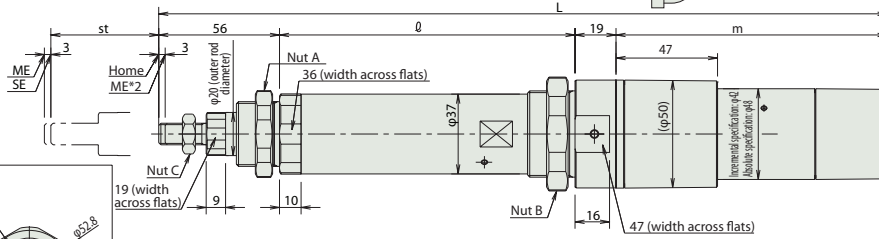
- *1. Connect the motor-encoder cable. See P384 for cable details.
- *2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end

- *3. The orientation of the width across flats differs with the product.

[Without brake]



[Brake specification]



■ Dimensions and Weight by Stroke

RCA-RA4C (without brake)

Stroke	L						
	50	100	150	200	250	300	
20W	Incremental	279.5	329.5	379.5	429.5	479.5	529.5
	Absolute	292.5	342.5	392.5	442.5	492.5	542.5
30W	Incremental	294.5	344.5	394.5	444.5	494.5	544.5
	Absolute	307.5	357.5	407.5	457.5	507.5	557.5
∅	137	187	237	287	337	387	
m	Incremental	67.5					
	Absolute	80.5					
30W	Incremental	82.5					
	Absolute	95.5					
Weight (kg)	1.1	1.2	1.4	1.5	1.7	1.8	

RCA-RA4C (with brake)

Stroke	L						
	50	100	150	200	250	300	
20W	Incremental	322.5	372.5	422.5	472.5	522.5	572.5
	Absolute	335.5	385.5	435.5	485.5	535.5	585.5
30W	Incremental	337.5	387.5	437.5	487.5	537.5	587.5
	Absolute	350.5	400.5	450.5	500.5	550.5	600.5
∅	137	187	237	287	337	387	
m	Incremental	110.5					
	Absolute	123.5					
30W	Incremental	125.5					
	Absolute	138.5					
Weight (kg)	1.3	1.4	1.6	1.7	1.9	2.0	

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner type		ACON-C-20I②-NP-2-0 ACON-C-30I②-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	20W Rated 1.3A Peak 5.1A	-	P375
Safety category compatible Positioner type		ACON-CG-20I②-NP-2-0 ACON-CG-30I②-NP-2-0						
Solenoid valve type		ACON-CY-20I②-NP-2-0 ACON-CY-30I②-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points				
Pulse series input type (Differential line driver specification)		ACON-PL-20I②-NP-2-0 ACON-PL-30I②-NP-2-0	Compatible with differential line driver Pulse train input type	(-)				
Pulse series input type (Open collector specification)		ACON-PO-20I②-NP-2-0 ACON-PO-30I②-NP-2-0	Open collector compatible Pulse series input type	(-)				
Serial communication type		ACON-SE-20I②-N-0-0 ACON-SE-30I②-N-0-0	Serial communications Special Type	64 points				
Field network type		RACON-20② RACON-30②	Field network Dedicated type	768 points				
Program control type		ASEL-C-1-20①②-NP-2-0 ASEL-C-1-30①②-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points				

*ASEL is for 1-axis specifications.
 *① For entering the encoder type (I: incremental/A: absolute).
 *② For entering the code when designating high-acceleration/deceleration applications or power saving applications (HA/LA).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

RCA-RA3D

ROBO Cylinder, Rod Type, Actuator Dimensions 32mm, 24V Servo Motor, Built-in (Direct) Motor Specification

Model Description	RCA	RA3D	I	20			A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
			I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm To 200:200mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table

See preceding section for model descriptions.

Power saving



Technical Reference P. 451

- POINT**
Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - The payload is the value when operated at 0.3G acceleration (0.2G at lead 2.5) at normal specifications/power saving or at 1G in high-acceleration/deceleration applications (except at lead 2.5). (The values in the table below are the maximum payload, even if acceleration/deceleration drops)
 - The horizontal payload is the value when external guides are used and no external force is exerted from outside the direction of travel of the rod.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA3D-I-20-10-①-A1-②-③	20	10	4.0	1.5	36.2	50 to 200 (Every 50mm)
RCA-RA3D-I-20-5-①-A1-②-③		5	9.0	3.0	72.4	
RCA-RA3D-I-20-2.5-①-A1-②-③		2.5	18.0	6.5	144.8	

Legend: ① Stroke ② Cable length ③ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 200 (Every 50mm)
	10	500
5	250	250
2.5	125	125

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RA3D	
	Encoder type	
	Incremental	
	I	
50		—
100		—
150		—
200		—

④ Option Price List

Title	Option code	See page	Standard price
Foot bracket	FT	P440	—
Flange bracket (Front)	FL	P438	—
Flange bracket (Rear)	FLR	P439	—
Home check sensor	HS	P442	—
Power saving	LA	P442	—
Kunckle joint	NJ	P443	—
Reversed-home specification	NM	P442	—
Trunion bracket (Front)	TRF	P446	—
Trunion bracket (Rear)	TRR	P446	—

*The home check sensor cannot be used with the reversed-home specification

② 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 P384 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ8mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material Aluminum White alumite treated
Rod diameter	φ16mm
Non-rotation accuracy of the rod	±1.0 degrees
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

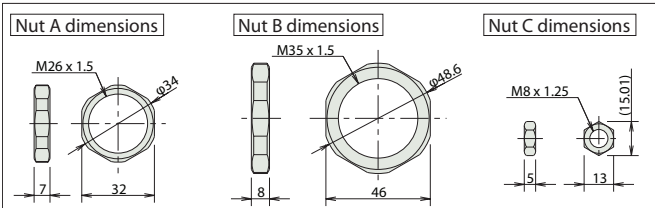
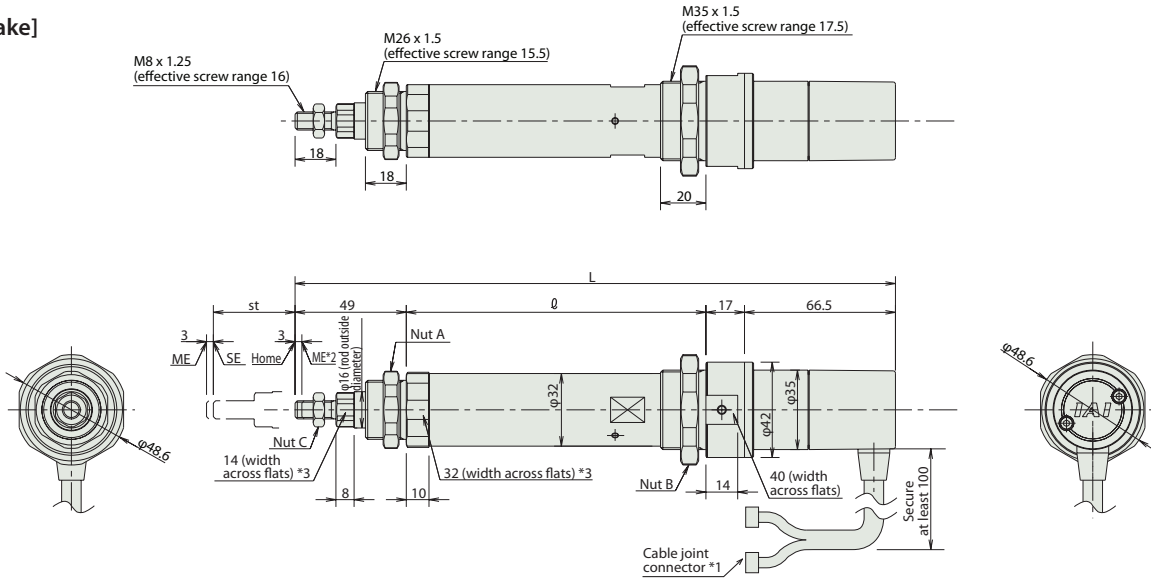
Information on special orders

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- *1. Connect the motor-encoder cable. See P384 for cable details.
- *2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end

*3. The orientation of the width across flats differs with the product.

[Without brake]



Dimensions and Weight by Stroke

RCA-RA3D (without brake)

Stroke	50	100	150	200
L	264.5	314.5	364.5	414.5
Ø	132	182	232	282
Weight (kg)	0.7	0.8	0.9	1.0

The RCA-RA3D type is not available with a brake.

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		ACON-C-20SI①-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Rating 1.7A Peak 5.1A	—	P375		
Safety category compatible Positioner type		ACON-CG-20SI①-NP-2-0								
Solenoid valve type		ACON-CY-20SI①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		ACON-PL-20SI①-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		ACON-PO-20SI①-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		ACON-SE-20SI①-N-0-0	Serial communications Special Type	64 points						
Field network type		RACON-20S①	Field network Dedicated type	768 points					—	P343
Program control type		ASEL-C-1-20SI①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					—	P405

*ASEL is for 1-axis specifications.

① For entering the code when designating power saving applications (LA).

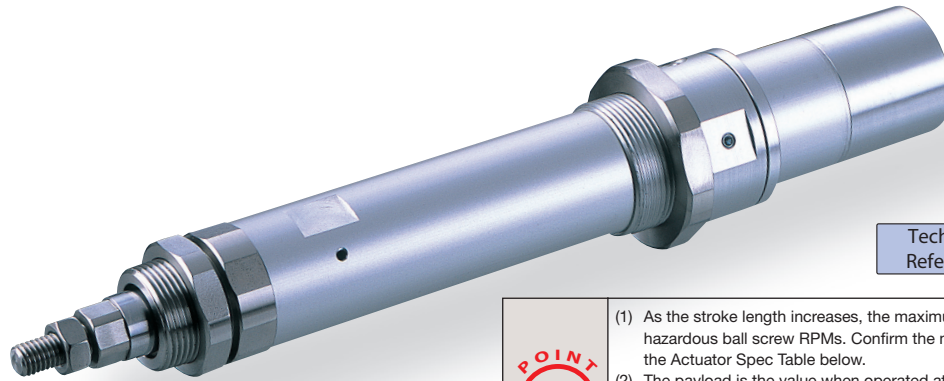
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor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

RCA-RA4D

ROBO Cylinder, Rod Type, Actuator Dimensions 37mm, 24V Servo Motor, Built-in (Direct) Motor Specification

Model Description	RCA — RA4D —							A1 —		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	
			I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table	

See preceding section for model descriptions.



Power saving

Technical Reference P. 451

- POINT**
Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - (2) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation at lead 3). The above value is the maximum acceleration.
 - (3) The horizontal payload is the value when external guides are used and no external force is exerted from outside the direction of travel of the rod.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA4D-①-20-12-②-A1-③-④	20	12	3.0	1.0	18.9	50 to 300 (Every 50mm)
RCA-RA4D-①-20-6-②-A1-③-④		6	6.0	2.0	37.7	
RCA-RA4D-①-20-3-②-A1-③-④		3	12.0	4.0	75.4	
RCA-RA4D-①-20-12-②-A1-③-④	30	12	4.0	1.5	28.3	
RCA-RA4D-①-20-6-②-A1-③-④		6	9.0	3.0	56.6	
RCA-RA4D-①-20-3-②-A1-③-④		3	18.0	6.5	113.1	

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

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder type and ② Stroke

② Stroke (mm)	Type code RA4D			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	R04 (4m) to R05 (5m)	—
	R06 (6m) to R10 (10m)	—
	R11 (11m) to R15 (15m)	—
	R16 (16m) to R20 (20m)	—

*See P384 for maintenance cables.

③ Option Price List

Title	Option code	See page	Standard price
Foot bracket	FT	P440	—
Flange bracket (Front)	FL	P438	—
Flange bracket (Rear)	FLR	P439	—
Home check sensor	HS	P442	—
Power saving	LA	P442	—
Kunckle joint	NJ	P443	—
Reversed-home specification	NM	P442	—
Trunion bracket (Front)	TRF	P446	—
Trunion bracket (Rear)	TRR	P446	—

*The home check sensor cannot be used with the reversed-home specification

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material Aluminum White alumite treated
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±1.0 degrees
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

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

2D CAD

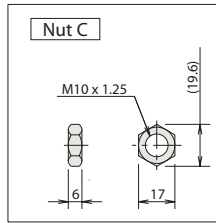
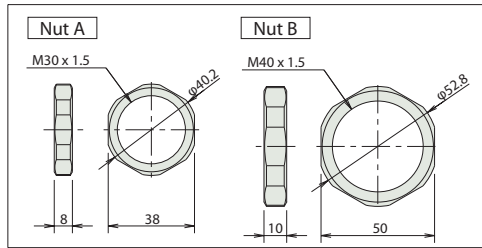
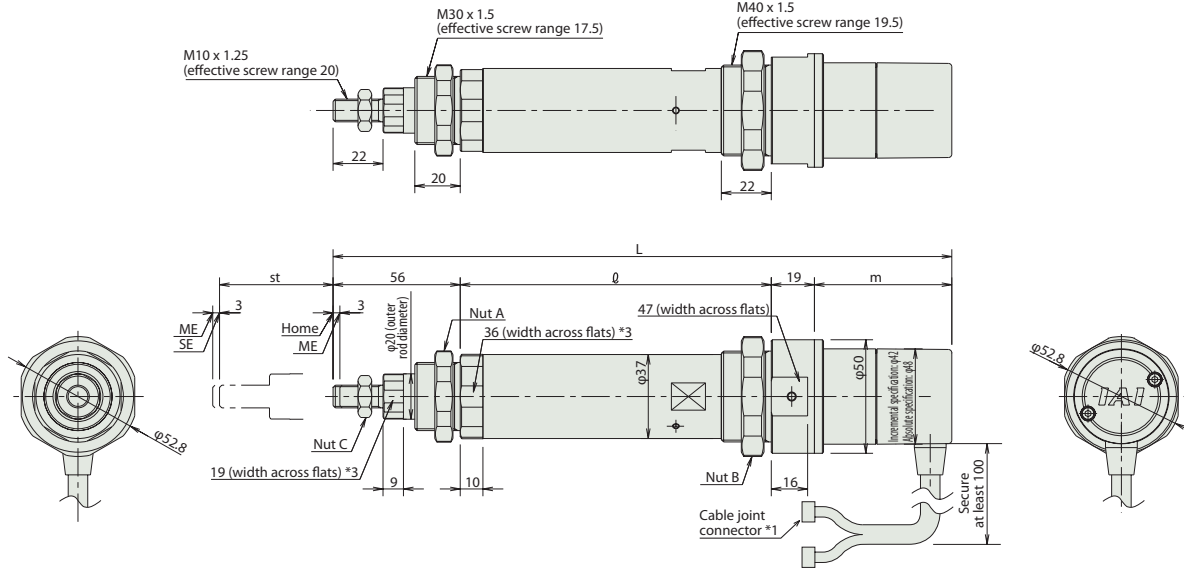
- *1. Connect the motor-encoder cable. See P384 for cable details.
- *2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end

Information on special orders

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- *3. The orientation of the width across flats differs with the product.

[Without brake]



Dimensions and Weight by Stroke

RCA-RA4D (without brake)

Stroke		50	100	150	200	250	300	
L	20W	Incremental	257.5	307.5	357.5	407.5	457.5	507.5
		Absolute	270.5	320.5	370.5	420.5	470.5	520.5
	30W	Incremental	272.5	322.5	372.5	422.5	472.5	522.5
		Absolute	285.5	335.5	385.5	435.5	485.5	535.5
ø		137	187	237	287	337	387	
m	20W	Incremental	45.5					
		Absolute	58.5					
	30W	Incremental	60.5					
		Absolute	73.5					
Weight (kg)		1.0	1.2	1.3	1.5	1.6	1.8	

The RCA-RA4D type is not available with a brake.

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page				
Positioner type		ACON-C-20I②-NP-2-0 ACON-C-30I②-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	20W Rated 1.3A Peak 5.1A	-	P375				
Safety category compatible Positioner type		ACON-CG-20I②-NP-2-0 ACON-CG-30I②-NP-2-0										
Solenoid valve type		ACON-CY-20I②-NP-2-0 ACON-CY-30I②-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points								
Pulse series input type (Differential line driver specification)		ACON-PL-20I②-NP-2-0 ACON-PL-30I②-NP-2-0	Compatible with differential line driver Pulse train input type	(-)								
Pulse series input type (Open collector specification)		ACON-PO-20I②-NP-2-0 ACON-PO-30I②-NP-2-0	Open collector compatible Pulse series input type									
Serial communication type		ACON-SE-20I②-N-0-0 ACON-SE-30I②-N-0-0	Serial communications Special Type	64 points								
Field network type		RACON-20② RACON-30②	Field network Dedicated type	768 points							P343	
Program control type		ASEL-C-1-20①②-NP-2-0 ASEL-C-1-30①②-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points								P405

*ASEL is for 1-axis specifications.

*① For entering the encoder type (I: incremental/A: absolute).

*② For entering the code when designating high-acceleration/deceleration applications or power saving applications (HA/LA).

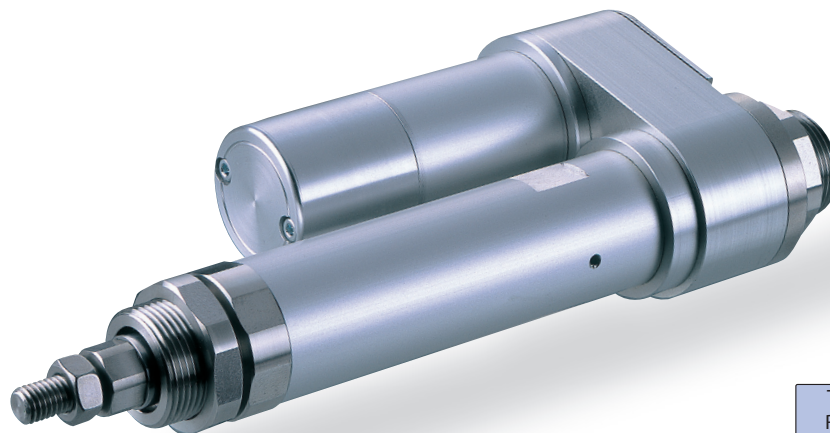
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in Direct
Reverse-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor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

RCA-RA3R

ROBO Cylinder, Rod Type, Actuator Dimensions 32mm, 24V Servo Motor, Reverse-mounted Motor Specification

Model Description	RCA	RA3R	I	20			A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
			I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm To 200:200mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table

See preceding section for model descriptions.



Power saving

Technical Reference P. 451



- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
- (2) The payload is the value when operated at 0.3G acceleration (0.2G at lead 2.5) at normal specifications/power saving or at 1G in high-acceleration/deceleration applications (except at lead 2.5). (The values in the table below are the maximum payload, even if acceleration/deceleration drops)
- (3) The horizontal payload is the value when external guides are used and no external force is exerted from outside the direction of travel of the rod.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA3R-I-20-10-①-A1-②-③	20	10	4.0	1.5	36.2	50 to 200 (Every 50mm)
RCA-RA3R-I-20-5-①-A1-②-③		5	9.0	3.0	72.4	
RCA-RA3R-I-20-2.5-①-A1-②-③		2.5	18.0	6.5	144.8	

Legend: ① Stroke ② Cable length ③ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 200 (Every 50mm)
	10	500
5	250	250
2.5	125	125

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RA3R	
	Encoder type	
	Incremental	
	I	
50		—
100		—
150		—
200		—

④ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Flange bracket (Front)	FL	P438	—
Flange bracket (Rear)	FLR	P439	—
Home check sensor	HS	P442	—
Power saving	LA	P442	—
Kunckle joint	NJ	P443	—
Reversed-home specification	NM	P442	—
Clevis bracket	QR	P443	—
Rear mounting plate	RP	P444	—
Trunion bracket (Front)	TRF	P446	—

*The home check sensor cannot be used with the reversed-home specification

② 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 P384 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ8mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material Aluminum White alumite treated
Rod diameter	φ16mm
Non-rotation accuracy of the rod	±1.0 degrees
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

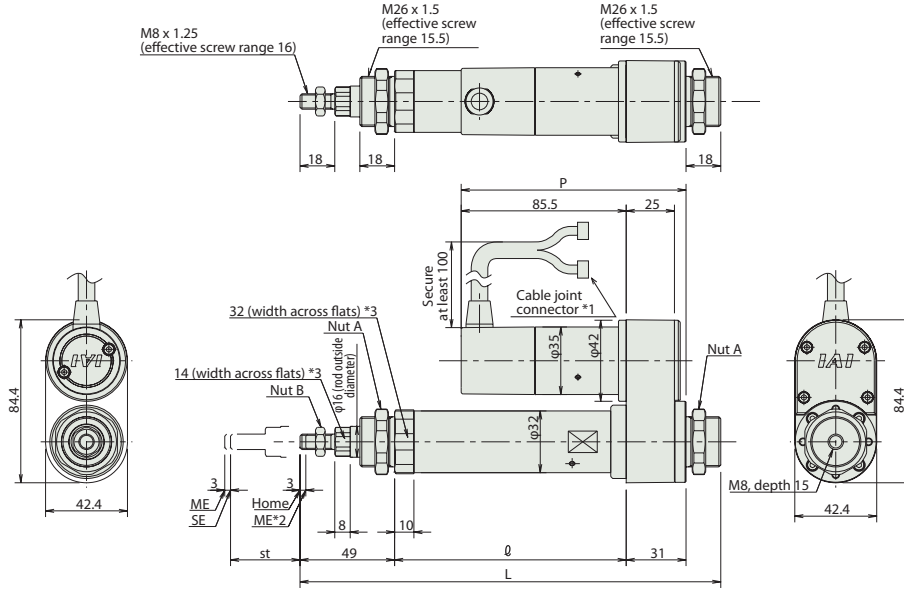
Information on special orders

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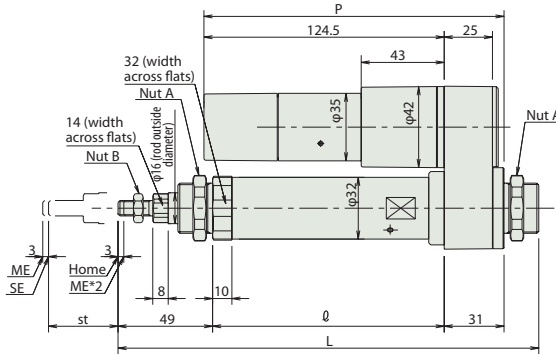
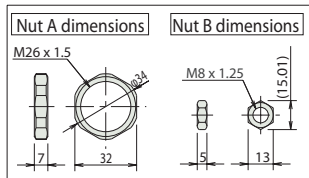
- *1. Connect the motor-encoder cable. See P384 for cable details.
- *2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end

*3. The orientation of the width across flats differs with the product.

[Without brake]



[Brake specification]



Dimensions and Weight by Stroke

RCA-RA3R (without brake)				
Stroke	50	100	150	200
L	218	268	318	368
φ	120	170	220	270
P	116.5			
Weight (kg)	0.8	0.9	1.0	1.1

RCA-RA3R (with brake)				
Stroke	50	100	150	200
L	218	268	318	368
φ	120	170	220	270
P	155.5			
Weight (kg)	1.0	1.1	1.2	1.3

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page				
Positioner type		ACON-C-20SI①-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Rating 1.7A Peak 5.1A	-	P375				
Safety category compatible Positioner type		ACON-CG-20SI①-NP-2-0										
Solenoid valve type		ACON-CY-20SI①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points								
Pulse series input type (Differential line driver specification)		ACON-PL-20SI①-NP-2-0	Compatible with differential line driver Pulse train input type	(-)								
Pulse series input type (Open collector specification)		ACON-PO-20SI①-NP-2-0	Open collector compatible Pulse series input type									
Serial communication type		ACON-SE-20SI①-N-0-0	Serial communications Special Type	64 points								
Field network type		RACON-20S①	Field network Dedicated type	768 points								P343
Program control type		ASEL-C-1-20SI①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points								P405

*ASEL is for 1-axis specifications.

① For entering the code when designating power saving applications (LA).

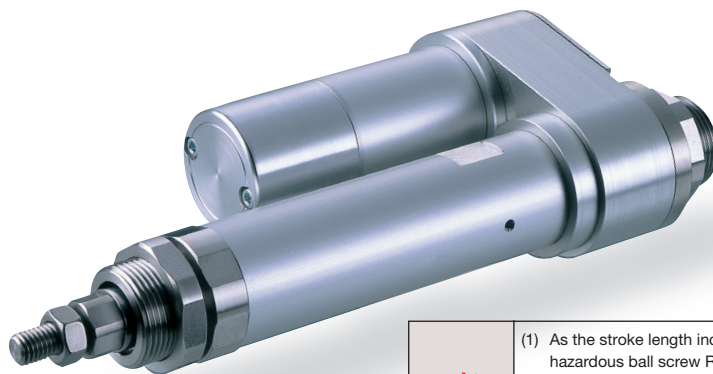
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reverse-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor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

RCA-RA4R

ROBO Cylinder, Rod Type, Actuator Dimensions 37mm, 24V Servo Motor, Reverse-mounted Motor Specification

Model Description	RCA	RA4R						A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	
			I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table	

See preceding section for model descriptions.



Power saving

Technical Reference P. 451



- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
- (2) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation at lead 3). The above value is the maximum acceleration.
- (3) The horizontal payload is the value when external guides are used and no external force is exerted from outside the direction of travel of the rod.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA4R-①-20-12-②-A1-③-④	20	12	3.0	1.0	18.9	50 to 300 (Every 50mm)
RCA-RA4R-①-20-6-②-A1-③-④		6	6.0	2.0	37.7	
RCA-RA4R-①-20-3-②-A1-③-④		3	12.0	4.0	75.4	
RCA-RA4R-①-30-12-②-A1-③-④	30	12	4.0	1.5	28.3	
RCA-RA4R-①-30-6-②-A1-③-④		6	9.0	3.0	56.6	
RCA-RA4R-①-30-3-②-A1-③-④		3	18.0	6.5	113.1	

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

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	Stroke	50 to 300 (Every 50mm)
12		600
6		300
3		150

(Unit = mm/s)

① Pricing List By Encoder type and ② Stroke

② Stroke (mm)	Type code			
	RA4R			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	R04 (4m) to R05 (5m)	—
	R06 (6m) to R10 (10m)	—
	R11 (11m) to R15 (15m)	—
	R16 (16m) to R20 (20m)	—

*See P384 for maintenance cables.

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Flange bracket (Front)	FL	P438	—
Flange bracket (Rear)	FLR	P439	—
Home check sensor	HS	P442	—
Power saving	LA	P442	—
Kunckle joint	NJ	P443	—
Reversed-home specification	NM	P442	—
Clevis bracket	QR	P443	—
Rear mounting plate	RP	P444	—
Trunion bracket (Front)	TRF	P446	—

*The home check sensor cannot be used with the reversed-home specification

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material Aluminum White alumite treated
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±1.0 degrees
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

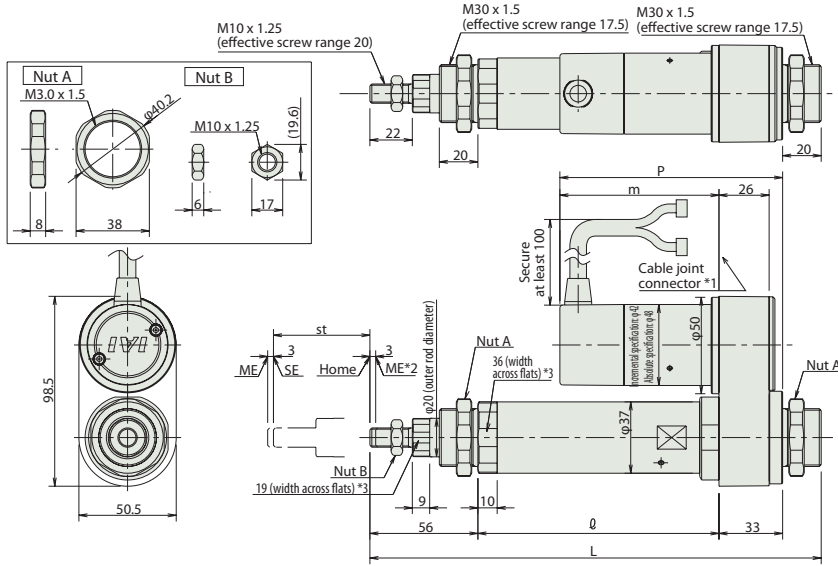
3D CAD

1. Connect the motor-encoder cable. See P384 for cable details.
2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
ME: mechanical end SE: stroke end
3. The orientation of the width across flats differs with the product.

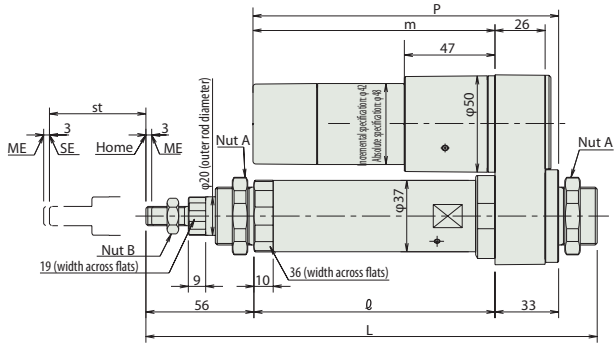
Information on special orders

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[Without brake]



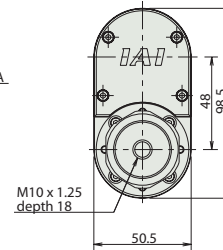
[Brake specification]



■ Dimensions and Weight by Stroke

RCA-RA4R (without brake)

Stroke		50	100	150	200	250	300	
L	20W	Incremental	234	284	334	384	434	484
		Absolute	234	284	334	384	434	484
	30W	Incremental	234	284	334	384	434	484
		Absolute	234	284	334	384	434	484
Ø		125	175	225	275	325	375	
m	20W	Incremental	67.5					
		Absolute	80.5					
	30W	Incremental	82.5					
		Absolute	95.5					
P	20W	Incremental	100.5					
		Absolute	113.5					
	30W	Incremental	115.5					
		Absolute	128.5					
Weight (kg)		1.2	1.4	1.5	1.7	1.8	2.0	



RCA-RA4R (with brake)

Stroke		50	100	150	200	250	300	
L	20W	Incremental	234	284	334	384	434	484
		Absolute	234	284	334	384	434	484
	30W	Incremental	234	284	334	384	434	484
		Absolute	234	284	334	384	434	484
Ø		125	175	225	275	325	375	
m	20W	Incremental	110.5					
		Absolute	123.5					
	30W	Incremental	125.5					
		Absolute	138.5					
P	20W	Incremental	143.5					
		Absolute	156.5					
	30W	Incremental	158.5					
		Absolute	171.5					
Weight (kg)		1.4	1.6	1.7	1.9	2.0	2.2	

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page			
Positioner type		ACON-C-20I②-NP-2-0 ACON-C-30I②-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	20W Rated 1.3A Peak 5.1A 30W Rated 1.3A Peak 5.1A	-	P375			
Safety category compatible Positioner type		ACON-CG-20I②-NP-2-0 ACON-CG-30I②-NP-2-0									
Solenoid valve type		ACON-CY-20I②-NP-2-0 ACON-CY-30I②-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points							
Pulse series input type (Differential line driver specification)		ACON-PL-20I②-NP-2-0 ACON-PL-30I②-NP-2-0	Compatible with differential line driver Pulse train input type	(-)							
Pulse series input type (Open collector specification)		ACON-PO-20I②-NP-2-0 ACON-PO-30I②-NP-2-0	Open collector compatible Pulse series input type								
Serial communication type		ACON-SE-20I②-N-0-0 ACON-SE-30I②-N-0-0	Serial communications Special Type	64 points							
Field network type		RACON-20② RACON-30②	Field network Dedicated type	768 points						P343	
Program control type		ASEL-C-1-20①②-NP-2-0 ASEL-C-1-30①②-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points							P405

*ASEL is for 1-axis specifications.
 *① For entering the encoder type (I: incremental/A: absolute).
 *② For entering the code when designating high-acceleration/deceleration applications or power saving applications (LA).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

RCA-RGS3C

ROBO Cylinder, Single-guide Rod Type, Actuator Dimensions 32mm, 24V Servo Motor, Coupling Specification

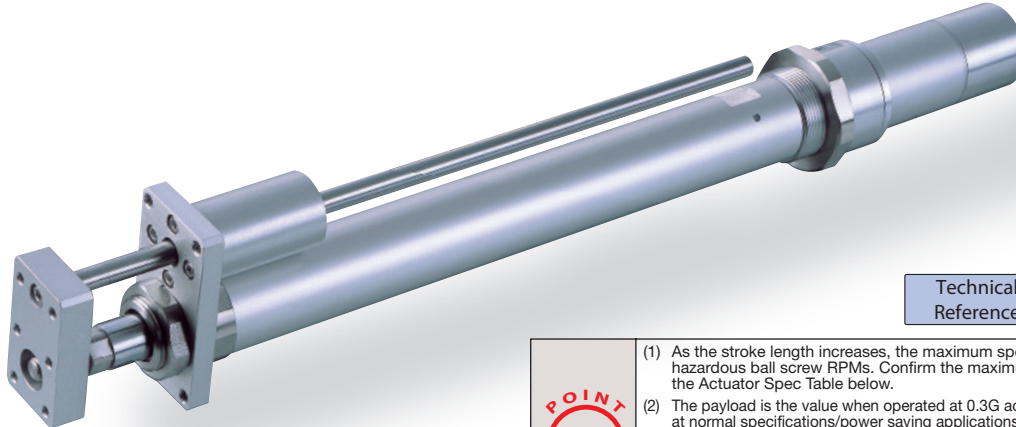
Model Description	RCA	-RGS3C	-I	-20			A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
			I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm To 200:200mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table

See preceding section for model descriptions.

High-acceleration/
deceleration

Power saving

(Except for 2.5mm lead)



Technical Reference

P. 451

- POINT**
Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - (2) The payload is the value when operated at 0.3G acceleration (0.2G at lead 2.5) at normal specifications/power saving applications or at 1G in high-acceleration/deceleration applications (except at lead 2.5). (The values in the table below are the maximum payload, even if acceleration/deceleration drops)
 - (3) Horizontal payload is the value when used together with external guides. Refer to technical materials (P500) for weights with which accessory guide units can be used.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGS3C-I-20-10-①-A1-②-③	20	10	4.0	1.2	36.2	50 to 200 (Every 50mm)
RCA-RGS3C-I-20-5-①-A1-②-③		5	9.0	2.7	72.4	
RCA-RGS3C-I-20-2.5-①-A1-②-③		2.5	18.0	6.2	144.8	

Legend: ① Stroke ② Cable length ③ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 200 (Every 50mm)
	10	500
5	250	250
2.5	125	125

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGS3C	Encoder type
	Incremental	
	I	
50	—	
100	—	
150	—	
200	—	

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
High-acceleration/deceleration (*1)	HA	P442	—
Home check sensor (*2)	HS	P442	—
Power saving (*3)	LA	P442	—
Reversed-home specification	NM	P442	—
Trunion (Rear)	TRR	P446	—

(*1) Lead 2.5 cannot be used in high-acceleration/deceleration applications.

(*2) Home check sensors (HS) cannot be used in reversed-home specifications.

(*3) High-acceleration/deceleration applications and power saving applications cannot be used together.

② 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 P384 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ8mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-rod guide type, rod diameter φ8mm ball-bushing
Rod diameter	φ16mm
Non-rotation accuracy of the rod	±0.05 degrees
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

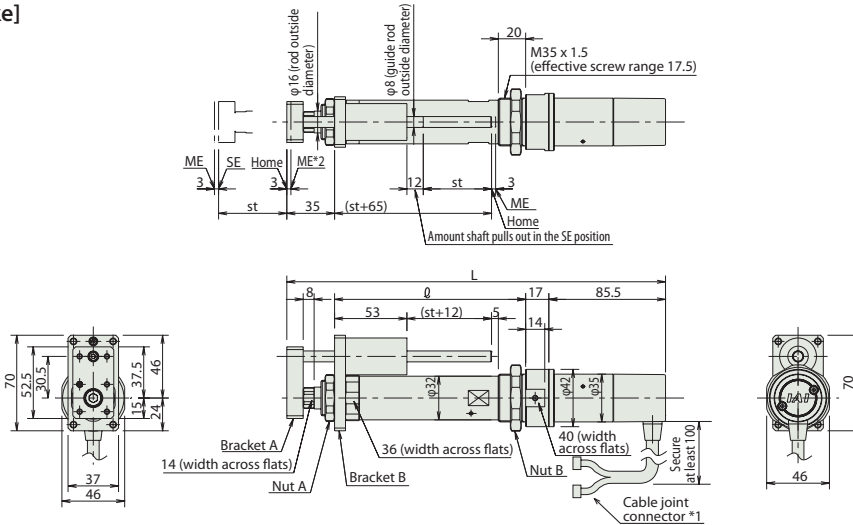


1. Connect the motor-encoder cable. See P384 for cable details.
2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end

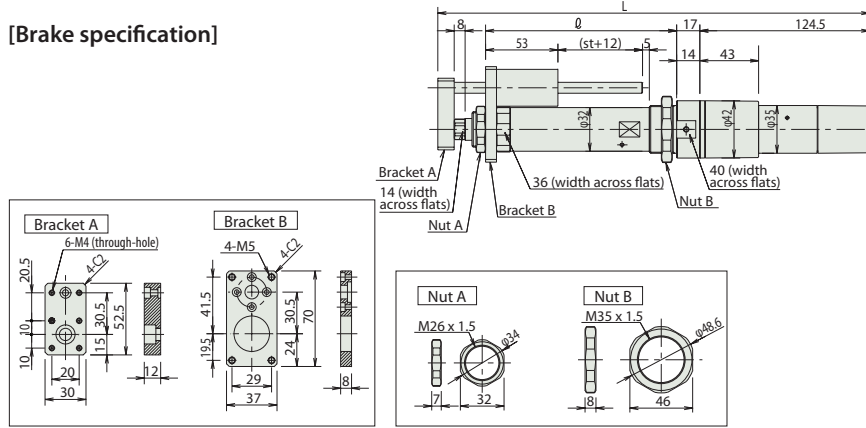
Information on special orders

P. 454

[Without brake]



[Brake specification]



■ Dimensions and Weight by Stroke

RCA-RGS3C (without brake)				
Stroke	50	100	150	200
L	277.5	327.5	377.5	427.5
φ	140	190	240	290
Weight (kg)	0.9	1.1	1.2	1.3

RCA-RGS3C (with brake)				
Stroke	50	100	150	200
L	316.5	366.5	416.5	466.5
φ	140	190	240	290
Weight (kg)	1.1	1.3	1.4	1.5

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		ACON-C-20SI①-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Rating 1.7A Peak 5.1A	-	P375		
Safety category compatible Positioner type		ACON-CG-20SI①-NP-2-0								
Solenoid valve type		ACON-CY-20SI①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		ACON-PL-20SI①-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		ACON-PO-20SI①-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		ACON-SE-20SI①-N-0-0	Serial communications Special type	64 points						
Field network type		RACON-20S①	Field network Dedicated type	768 points					-	P343
Program control type		ASEL-C-1-20SI①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P405

*ASEL is for 1-axis specifications.

① For entering the code when designating high-acceleration/deceleration applications or power saving applications (HA/LA).

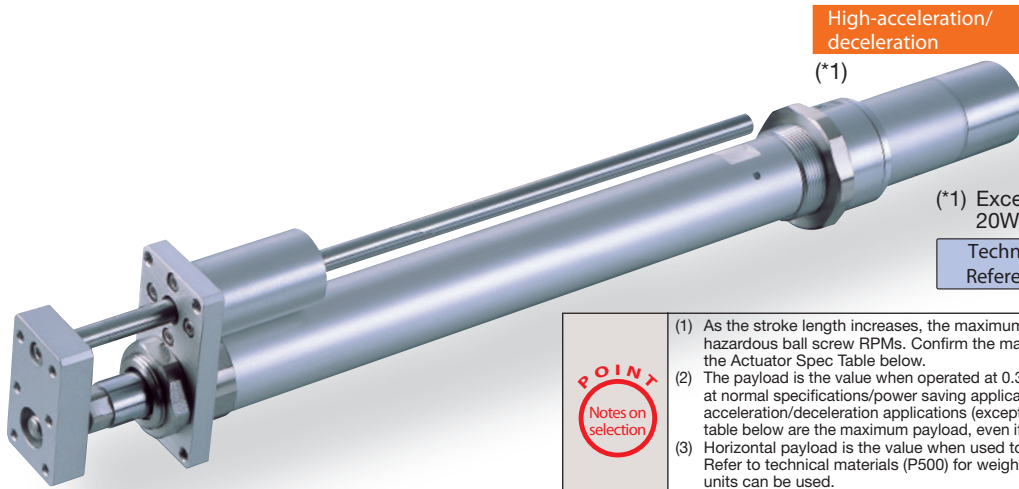
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor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

RCA-RGS4C

ROBO Cylinder, Single-guide Rod Type, Actuator Dimensions 37mm, 24V Servo Motor, Coupling Specification

Model Description	RCA	RGS4C						A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	
			I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation	Options below See Pricing Table	R: Robot cable

See preceding section for model descriptions.



High-acceleration/
deceleration

Power saving

(*1)

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

Technical Reference P. 451

- POINT**
Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - (2) The payload is the value when operated at 0.3G acceleration (0.2G at lead 3) at normal specifications/power saving applications or at 1G in high-acceleration/deceleration applications (except at lead 3). (The values in the table below are the maximum payload, even if acceleration/deceleration drops)
 - (3) Horizontal payload is the value when used together with external guides. Refer to technical materials (P500) for weights with which accessory guide units can be used.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGS4C-①-20-12-②-A1-③-④	20	12	3.0	0.5	18.9	50 to 300 (Every 50mm)
RCA-RGS4C-①-20-6-②-A1-③-④		6	6.0	1.5	37.7	
RCA-RGS4C-①-20-3-②-A1-③-④		3	12.0	3.5	75.4	
RCA-RGS4C-①-30-12-②-A1-③-④	30	12	4.0	1.0	28.3	
RCA-RGS4C-①-30-6-②-A1-③-④		6	9.0	2.5	56.6	
RCA-RGS4C-①-30-3-②-A1-③-④		3	18.0	6.0	113.1	

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

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RGS4C			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

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)	—
	R16 (16m) to R20 (20m)	—

*See P384 for maintenance cables.

④ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
High-acceleration/deceleration (*1)	HA	P442	—
Home check sensor (*2)	HS	P442	—
Power saving (*3)	LA	P442	—
Reversed-home specification	NM	P442	—
Trunion (Rear)	TRR	P446	—

(*1) None of the 20W or 30W-lead 3 models can be used in high-acceleration/deceleration applications.
 (*2) Home check sensors (HS) cannot be used in reversed-home specifications.
 (*3) High-acceleration/deceleration applications and power saving applications cannot be used together.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-rod guide type, rod diameter φ10mm ball-bushing
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±0.05 degrees
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

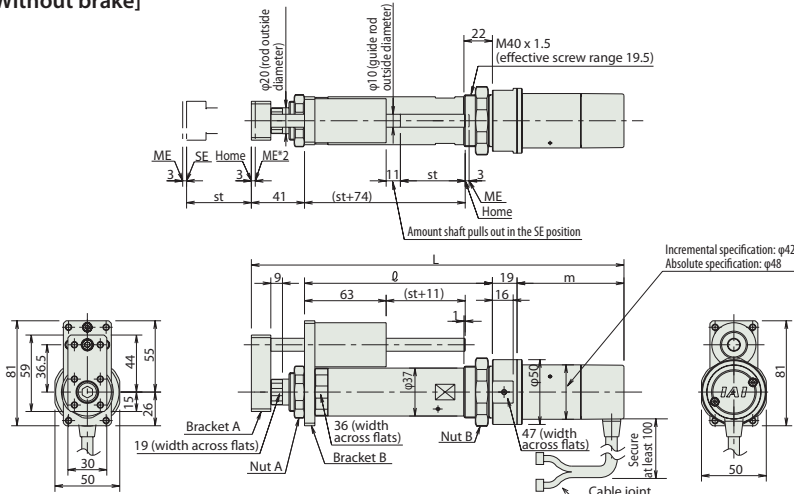


1. Connect the motor-encoder cable. See P384 for cable details.
2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
ME: mechanical end SE: stroke end

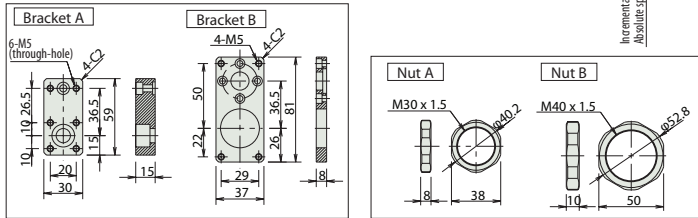
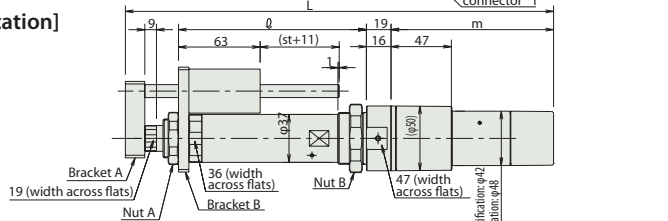
Information on special orders

P. 454

[Without brake]



[Brake specification]



Dimensions and Weight by Stroke

RCA-RGS4C (without brake)

Stroke		50	100	150	200	250	300
L	20W	Incremental 272.5	322.5	372.5	422.5	472.5	522.5
	Absolute 285.5	335.5	385.5	435.5	485.5	535.5	
30W	Incremental 287.5	337.5	387.5	437.5	487.5	537.5	
	Absolute 300.5	350.5	400.5	450.5	500.5	550.5	
φ		145	195	245	295	345	395
m	20W	Incremental 67.5					
	Absolute 80.5						
30W	Incremental 82.5						
	Absolute 95.5						
Weight (kg)		1.5	1.6	1.8	2.0	2.2	2.4

RCA-RGS3C (with brake)

Stroke		50	100	150	200	250	300
L	20W	Incremental 315.5	365.5	415.5	465.5	515.5	565.5
	Absolute 328.5	378.5	428.5	478.5	528.5	578.5	
30W	Incremental 330.5	380.5	430.5	480.5	530.5	580.5	
	Absolute 343.5	393.5	443.5	493.5	543.5	593.5	
φ		145	195	245	295	345	395
m	20W	Incremental 110.5					
	Absolute 123.5						
30W	Incremental 125.5						
	Absolute 138.5						
Weight (kg)		1.7	1.8	2.0	2.2	2.4	2.6

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page			
Positioner type		ACON-C-20I②-NP-2-0 ACON-C-30I②-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	20W Rated 1.3A Peak 5.1A	-	P375			
Safety category compatible Positioner type		ACON-CG-20I②-NP-2-0 ACON-CG-30I②-NP-2-0									
Solenoid valve type		ACON-CY-20I②-NP-2-0 ACON-CY-30I②-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points							
Pulse series input type (Differential line driver specification)		ACON-PL-20I②-NP-2-0 ACON-PL-30I②-NP-2-0	Compatible with differential line driver Pulse train input type	(-)							
Pulse series input type (Open collector specification)		ACON-PO-20I②-NP-2-0 ACON-PO-30I②-NP-2-0	Open collector compatible Pulse series input type	(-)							
Serial communication type		ACON-SE-20I②-N-0-0 ACON-SE-30I②-N-0-0	Serial communications Special type	64 points							
Field network type		RACON-20② RACON-30②	Field network Dedicated type	768 points						-	P343
Program control type		ASEL-C-1-20①②-NP-2-0 ASEL-C-1-30①②-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points						-	P405

*ASEL is for 1-axis specifications.

*① For entering the encoder type (I: incremental/A: absolute).

*② For entering the code when designating high-acceleration applications or power saving applications (HA/LA).

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

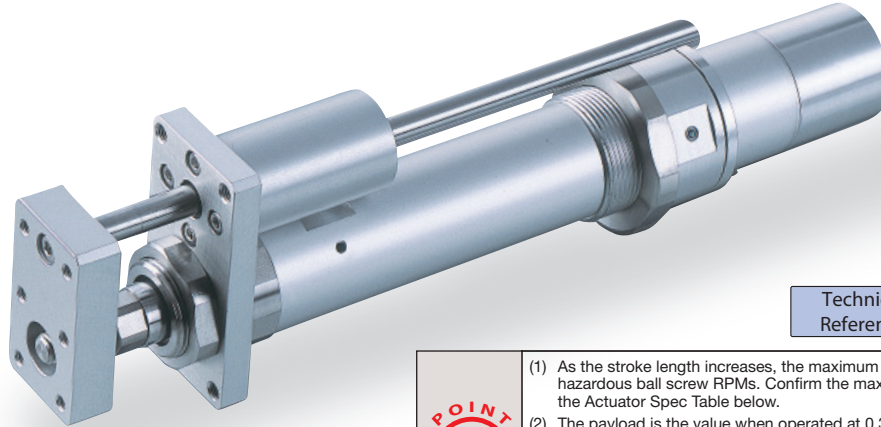
RCA-RGS3D

ROBO Cylinder, Single-guide Rod Type, Actuator Dimensions 32mm, 24V Servo Motor, Built-in Specification

Model Description	RCA	-RGS3D-	I	-20-			A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
			I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm To 200:200mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m	Options below See Pricing Table

See preceding section for model descriptions.

Power saving



Technical Reference P. 451

- POINT**
Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation at lead 2.5). The above value is the maximum acceleration.
 - Horizontal payload is the value when used together with external guides. Refer to technical materials (P500) for weights with which accessory guide units can be used.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGS3D-I-20-10-①-A1-②-③	20	10	4.0	1.2	36.2	50 to 200 (Every 50mm)
RCA-RGS3D-I-20-5-①-A1-②-③		5	9.0	2.7	72.4	
RCA-RGS3D-I-20-2.5-①-A1-②-③		2.5	18.0	6.2	144.8	

Legend: ① Stroke ② Cable length ③ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 200 (Every 50mm)
	10	500
5	250	250
2.5	125	125

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGS3D	
	Encoder type	
	Incremental	
	I	
50		—
100		—
150		—
200		—

③ Option Price List

Title	Option code	See page	Standard price
Foot bracket	FT	P440	—
Home check sensor	HS	P442	—
Power saving	LA	P442	—
Reversed-home specification	NM	P442	—
Trunion (Rear)	TRR	P446	—

*The home check sensor cannot be used with the reversed-home specification.

② 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 P384 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ8mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-rod guide type, rod diameter φ8mm ball-bushing
Rod diameter	φ16mm
Non-rotation accuracy of the rod	±0.05 degrees
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

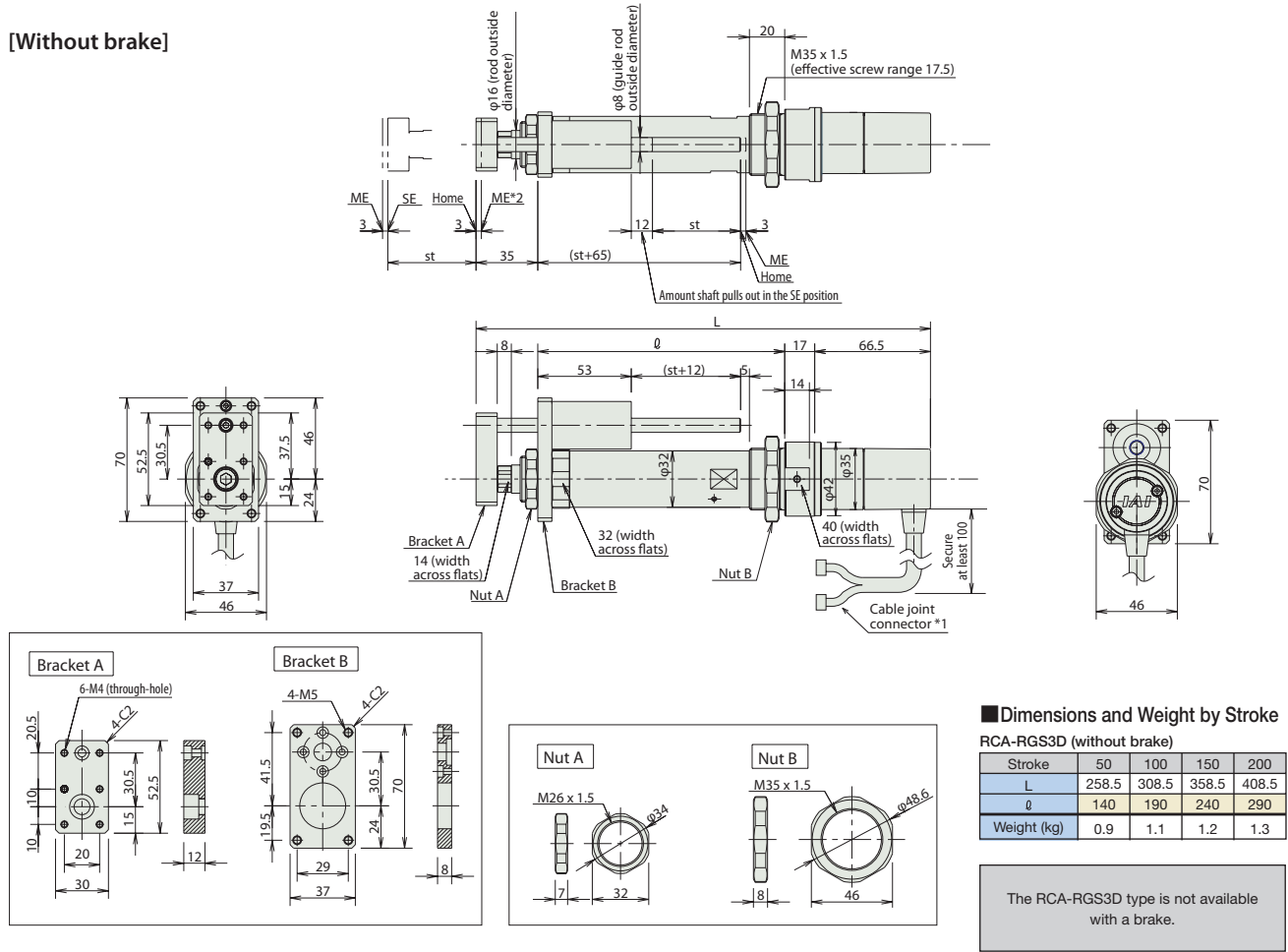
Information on special orders

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2D CAD

- *1. Connect the motor-encoder cable. See P384 for cable details.
- *2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end

[Without brake]



Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		ACON-C-20SI①-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Rating 1.7A Peak 5.1A	-	P375		
Safety category compatible Positioner type		ACON-CG-20SI①-NP-2-0								
Solenoid valve type		ACON-CY-20SI①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		ACON-PL-20SI①-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		ACON-PO-20SI①-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		ACON-SE-20SI①-N-0-0	Serial communications Special type	64 points						
Field network type		RACON-20S①	Field network Dedicated type	768 points					-	P343
Program control type		ASEL-C-1-20SI①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P405

*ASEL is for 1-axis specifications.

① For entering the code when designating power saving applications (LA).

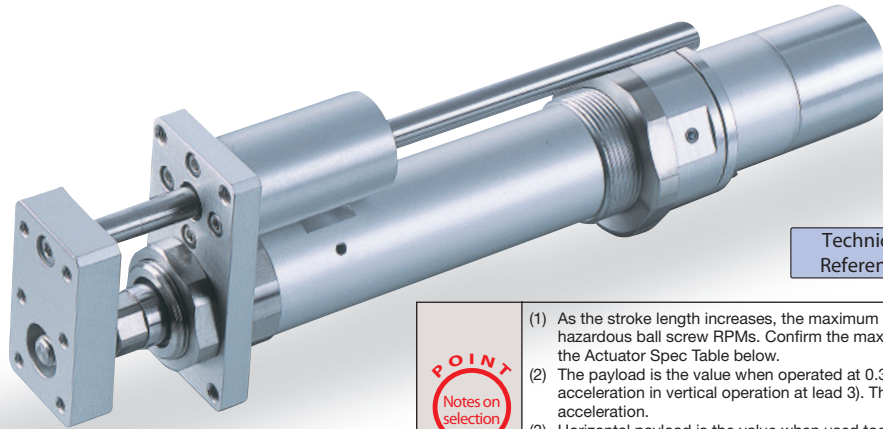
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor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

RCA-RGS4D

ROBO Cylinder, Single-guide Rod Type, Actuator Dimensions 37mm, 24V Servo Motor, Built-in Specification

Model Description	RCA	RGS4D						A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	
			I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table	

See preceding section for model descriptions.



Power saving

Technical Reference P. 451



- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
- The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation at lead 3). The above value is the maximum acceleration.
- Horizontal payload is the value when used together with external guides. Refer to technical materials (P500) for weights with which accessory guide units can be used.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGS4D-①-20-12-②-A1-③-④	20	12	3.0	0.5	18.9	50 to 300 (Every 50mm)
RCA-RGS4D-①-20-6-②-A1-③-④		6	6.0	1.5	37.7	
RCA-RGS4D-①-20-3-②-A1-③-④		3	12.0	3.5	75.4	
RCA-RGS4D-①-30-12-②-A1-③-④	30	12	4.0	1.0	28.3	
RCA-RGS4D-①-30-6-②-A1-③-④		6	9.0	2.5	56.6	
RCA-RGS4D-①-30-3-②-A1-③-④		3	18.0	6.0	113.1	

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

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RGS4D			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

④ Option Price List

Title	Option code	See page	Standard price
Foot bracket	FT	P440	—
Home check sensor	HS	P442	—
Power saving	LA	P442	—
Reversed-home specification	NM	P442	—
Trunion (Rear)	TRR	P446	—

*The home check sensor cannot be used with the reversed-home specification.

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 P384 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-rod guide type, rod diameter φ10mm ball-bushing
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±0.05 degrees
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

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

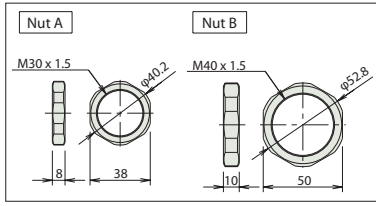
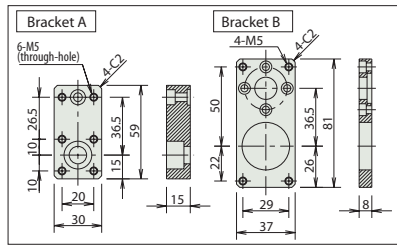
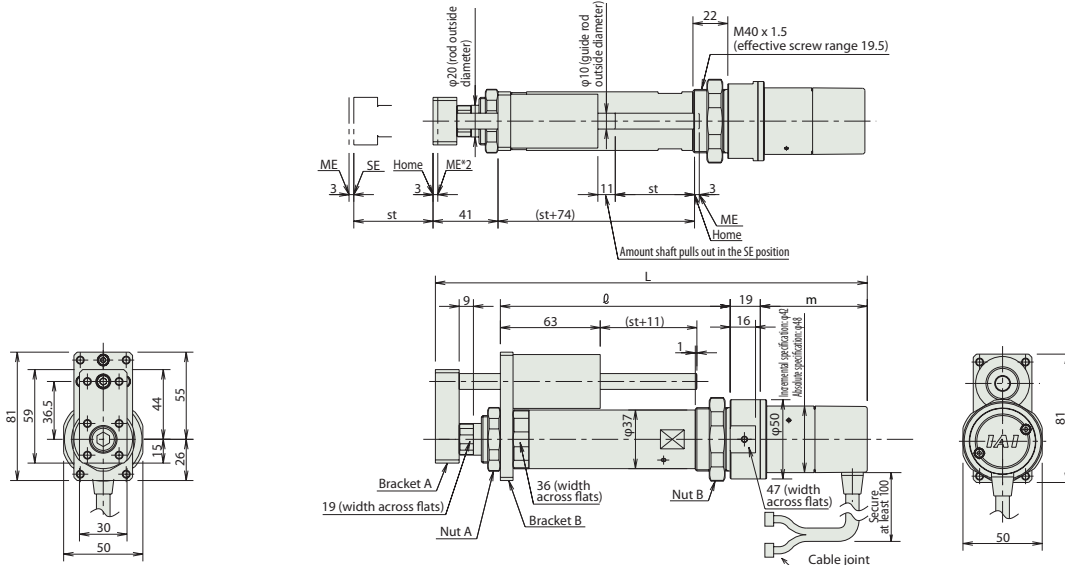
Information on special orders

P. 454

2D CAD

- *1. Connect the motor-encoder cable. See P384 for cable details.
- *2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end

[Without brake]



Dimensions and Weight by Stroke

RCA-RGS4D (without brake)		Stroke	50	100	150	200	250	300
L	20W	Incremental	250.5	300.5	350.5	400.5	450.5	500.5
		Absolute	263.5	313.5	363.5	413.5	463.5	513.5
	30W	Incremental	265.5	315.5	365.5	415.5	465.5	515.5
		Absolute	278.5	328.5	378.5	428.5	478.5	528.5
		Ø	145	195	245	295	345	395
m	20W	Incremental	45.5					
		Absolute	58.5					
	30W	Incremental	60.5					
		Absolute	73.5					
Weight (kg)			1.3	1.5	1.7	1.9	2.1	2.3

The RCA-RGS4D type is not available with a brake.

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page				
Positioner type		ACON-C-20I②-NP-2-0 ACON-C-30I②-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	20W Rated 1.3A Peak 5.1A	-	P375				
Safety category compatible Positioner type		ACON-CG-20I②-NP-2-0 ACON-CG-30I②-NP-2-0										
Solenoid valve type		ACON-CY-20I②-NP-2-0 ACON-CY-30I②-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points								
Pulse series input type (Differential line driver specification)			ACON-PL-20I②-NP-2-0 ACON-PL-30I②-NP-2-0	Compatible with differential line driver Pulse train input type					(-)			
Pulse series input type (Open collector specification)	ACON-PO-20I②-NP-2-0 ACON-PO-30I②-NP-2-0		Open collector compatible Pulse series input type									
Serial communication type		ACON-SE-20I②-N-0-0 ACON-SE-30I②-N-0-0	Serial communications Special type	64 points								
Field network type		RACON-20② RACON-30②	Field network Dedicated type	768 points					P343			
Program control type		ASEL-C-1-20①②-NP-2-0 ASEL-C-1-30①②-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points								P405

*ASEL is for 1-axis specifications.
 *① For entering the encoder type (I: incremental/A: absolute).
 *② For entering the code when designating power saving applications (LA).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

RCA-RGD3C

ROBO Cylinder, Double-guide Rod Type, Actuator Dimensions 32mm, 24V Servo Motor, Coupling Specification

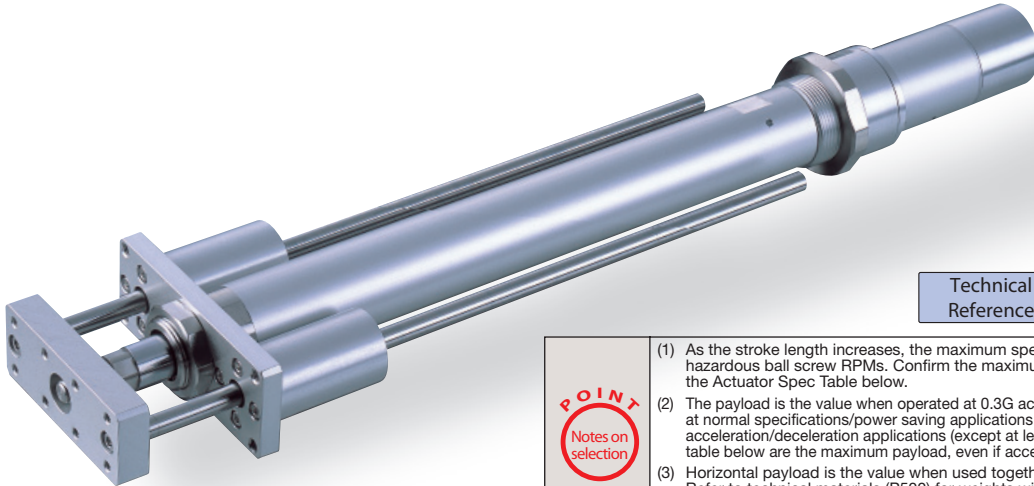
Model Description	RCA	RGD3C	I	20			A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
			I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm To 200:200mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table

See preceding section for model descriptions.

High-acceleration/
deceleration

Power saving

(Except for 2.5mm lead)



Technical Reference P. 451

- POINT**
Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - The payload is the value when operated at 0.3G acceleration (0.2G at lead 2.5) at normal specifications/power saving applications or at 1G in high-acceleration/deceleration applications (except at lead 2.5). (The values in the table below are the maximum payload, even if acceleration/deceleration drops)
 - Horizontal payload is the value when used together with external guides. Refer to technical materials (P500) for weights with which accessory guide units can be used.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGD3C-I-20-10-①-A1-②-③	20	10	4.0	1.2	36.2	50 to 200 (Every 50mm)
RCA-RGD3C-I-20-5-①-A1-②-③		5	9.0	2.7	72.4	
RCA-RGD3C-I-20-2.5-①-A1-②-③		2.5	18.0	6.2	144.8	

Legend: ① Stroke ② Cable length ③ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 200 (Every 50mm)
	10	500
5	250	250
2.5	125	125

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGD3C	Encoder type
	Incremental	
	I	
50		—
100		—
150		—
200		—

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
High-acceleration/deceleration (*1)	HA	P442	—
Home check sensor (*2)	HS	P442	—
Power saving (*3)	LA	P442	—
Reversed-home specification	NM	P442	—
Trunion (Rear)	TRR	P446	—

(*1) Lead 2.5 cannot be used in high-acceleration/deceleration applications.

(*2) Home check sensors (HS) cannot be used in reversed-home specifications.

(*3) High-acceleration/deceleration applications and power saving applications cannot be used together.

② 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 P384 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ8mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-rod guide type, rod diameter φ8mm ball-bushing
Rod diameter	φ16mm
Non-rotation accuracy of the rod	±0.05 degrees
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

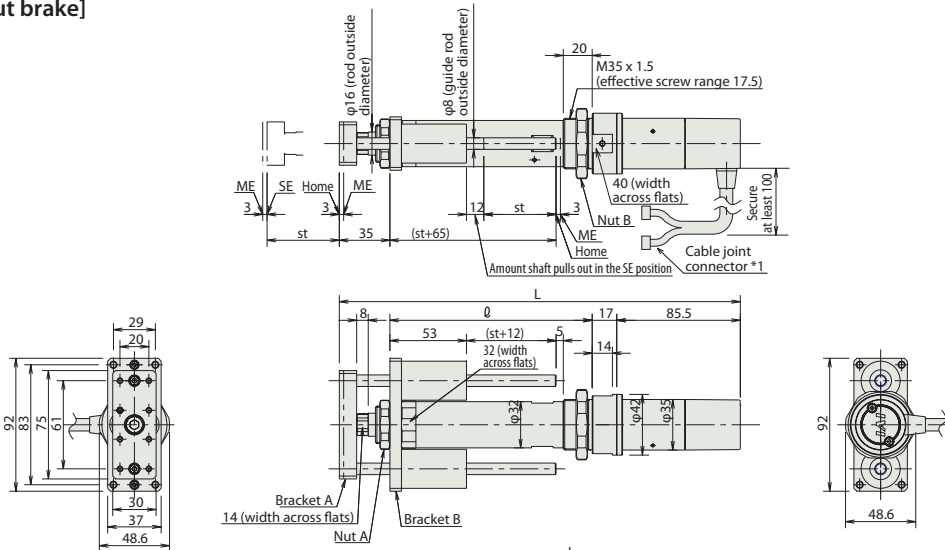
Information on special orders

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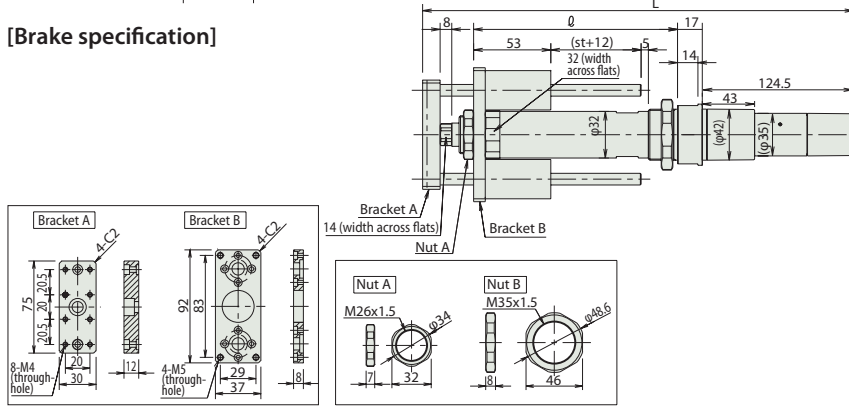


1. Connect the motor-encoder cable. See P384 for cable details.
2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end

[Without brake]



[Brake specification]



■ Dimensions and Weight by Stroke

RCA-RGD3C (without brake)				
Stroke	50	100	150	200
L	277.5	327.5	377.5	427.5
φ	140	190	240	290
Weight (kg)	1.1	1.2	1.4	1.5

RCA-RGD3C (with brake)				
Stroke	50	100	150	200
L	316.5	366.5	416.5	466.5
φ	140	190	240	290
Weight (kg)	1.3	1.4	1.6	1.7

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page			
Positioner type		ACON-C-20SI①-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Rating 1.7A Peak 5.1A	-	P375			
Safety category compatible Positioner type		ACON-CG-20SI①-NP-2-0									
Solenoid valve type		ACON-CY-20SI①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points							
Pulse series input type (Differential line driver specification)		ACON-PL-20SI①-NP-2-0	Compatible with differential line driver Pulse train input type	(-)							
Pulse series input type (Open collector specification)		ACON-PO-20SI①-NP-2-0	Open collector compatible Pulse series input type								
Serial communication type		ACON-SE-20SI①-N-0-0	Serial communications Special type	64 points							
Field network type		RACON-20S①	Field network Dedicated type	768 points							P343
Program control type		ASEL-C-1-20SI①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points							P405

*ASEL is for 1-axis specifications.

① For entering the code when designating high-acceleration/deceleration applications or power saving applications (HA/LA).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Fat
- 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

RCA-RGD4C

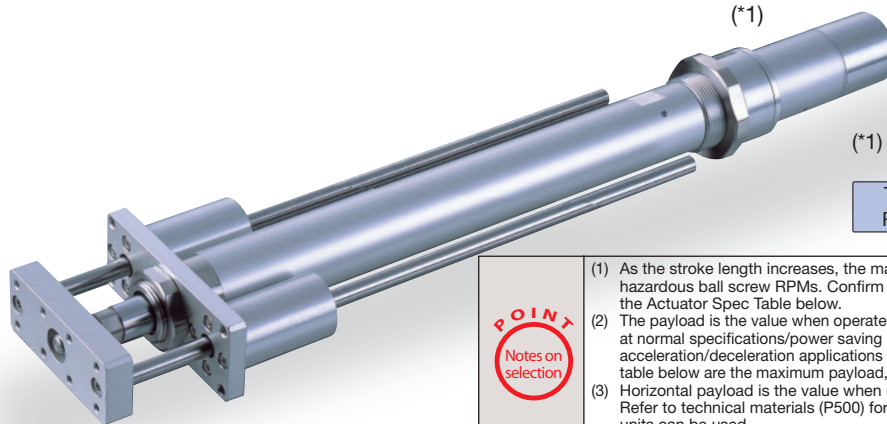
ROBO Cylinder, Double-guide Rod Type, Actuator Dimensions 37mm, 24V Servo Motor, Coupling Specification

Model Description	RCA	RGD4C						A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	
			I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation	Options below See Pricing Table	R: Robot cable

See preceding section for model descriptions.

High-acceleration/
deceleration

Power saving



(*1) Excluding all 20W models and and 30W lead3

Technical Reference P. 451



- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
- (2) The payload is the value when operated at 0.3G acceleration (0.2G at lead 3) at normal specifications/power saving applications or at 1G in high-acceleration/deceleration applications (except at lead 3). (The values in the table below are the maximum payload, even if acceleration/deceleration drops)
- (3) Horizontal payload is the value when used together with external guides. Refer to technical materials (P500) for weights with which accessory guide units can be used.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGD4C-①-20-12-②-A1-③-④	20	12	3.0	0.5	18.9	50 to 300 (Every 50mm)
RCA-RGD4C-①-20-6-②-A1-③-④		6	6.0	1.5	37.7	
RCA-RGD4C-①-20-3-②-A1-③-④		3	12.0	3.5	75.4	
RCA-RGD4C-①-30-12-②-A1-③-④	30	12	4.0	1.0	28.3	
RCA-RGD4C-①-30-6-②-A1-③-④		6	9.0	2.5	56.6	
RCA-RGD4C-①-30-3-②-A1-③-④		3	18.0	6.0	113.1	

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

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RGD4C			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	R04 (4m) to R05 (5m)	—
	R06 (6m) to R10 (10m)	—
	R11 (11m) to R15 (15m)	—
	R16 (16m) to R20 (20m)	—

*See P384 for maintenance cables.

④ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
High-acceleration/deceleration (*1)	HA	P442	—
Home check sensor (*2)	HS	P442	—
Power saving (*3)	LA	P442	—
Reversed-home specification	NM	P442	—
Trunion (Rear)	TRR	P446	—

(*1) None of the 20W or 30W-lead 3 models can be used in high-acceleration/deceleration applications.
 (*2) Home check sensors (HS) cannot be used in reversed-home specifications.
 (*3) High-acceleration/deceleration applications and power saving applications cannot be used together.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-rod guide type, rod diameter φ10mm ball-bushing
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±0.05 degrees
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

Information on special orders

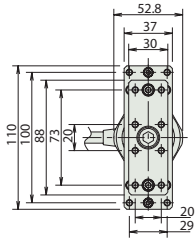
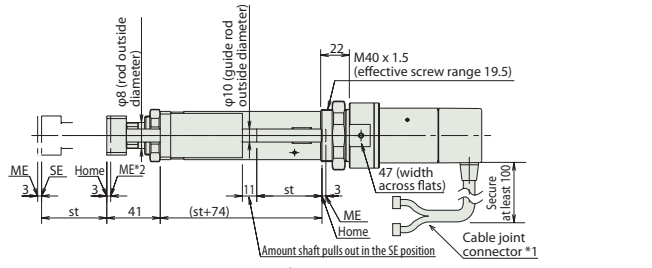
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2D CAD

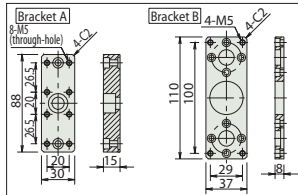
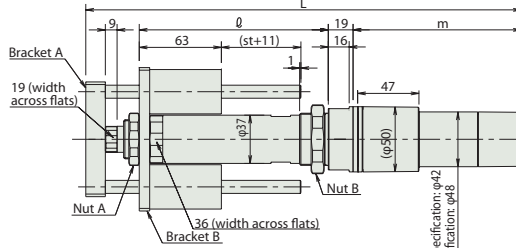
3D CAD

1. Connect the motor-encoder cable. See P384 for cable details.
2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end

[Without brake]



[Brake specification]



Dimensions and Weight by Stroke

RCA-RGD4C (without brake)

Stroke		50	100	150	200	250	300	
L	20W	Incremental	272.5	322.5	372.5	422.5	472.5	522.5
		Absolute	285.5	335.5	385.5	435.5	485.5	535.5
	30W	Incremental	287.5	337.5	387.5	437.5	487.5	537.5
		Absolute	300.5	350.5	400.5	450.5	500.5	550.5
φ		145	195	245	295	345	395	
m	20W	Incremental	67.5					
		Absolute	80.5					
	30W	Incremental	82.5					
		Absolute	95.5					
Weight (kg)		1.8	2.0	2.2	2.4	2.6	2.8	

RCA-RGD4C (with brake)

Stroke		50	100	150	200	250	300	
L	20W	Incremental	315.5	365.5	415.5	465.5	515.5	565.5
		Absolute	328.5	378.5	428.5	478.5	528.5	578.5
	30W	Incremental	330.5	380.5	430.5	480.5	530.5	580.5
		Absolute	343.5	393.5	443.5	493.5	543.5	593.5
φ		145	195	245	295	345	395	
m	20W	Incremental	110.5					
		Absolute	123.5					
	30W	Incremental	125.5					
		Absolute	138.5					
Weight (kg)		2.0	2.2	2.4	2.6	2.8	3.0	

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page	
Positioner type		ACON-C-20I②-NP-2-0 ACON-C-30I②-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	20W Rated 1.3A Peak 5.1A	-	P375	
Safety category compatible Positioner type		ACON-CG-20I②-NP-2-0 ACON-CG-30I②-NP-2-0							-
Solenoid valve type		ACON-CY-20I②-NP-2-0 ACON-CY-30I②-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points			-		
Pulse series input type (Differential line driver specification)		ACON-PL-20I②-NP-2-0 ACON-PL-30I②-NP-2-0	Compatible with differential line driver Pulse train input type	(-)			-		
Pulse series input type (Open collector specification)		ACON-PO-20I②-NP-2-0 ACON-PO-30I②-NP-2-0	Open collector compatible Pulse series input type	-			-		
Serial communication type		ACON-SE-20I②-N-0-0 ACON-SE-30I②-N-0-0	Serial communications Special type	64 points			-		
Field network type		RACON-20② RACON-30②	Field network Dedicated type	768 points			-		P343
Program control type		ASEL-C-1-20①②-NP-2-0 ASEL-C-1-30①②-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points			-		P405

*ASEL is for 1-axis specifications.
① For entering the encoder type (I: incremental/A: absolute).
② For entering the code when designating high-acceleration applications or power saving applications (HA/LA).

Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
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

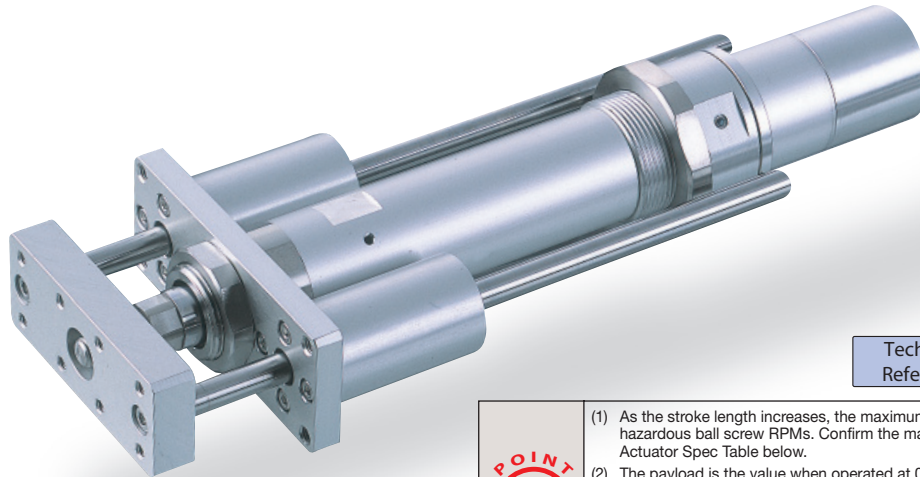
RCA-RGD3D

ROBO Cylinder, Double-guide Rod Type, Actuator Dimensions 32mm, 24V Servo Motor, Built-in Specification

Model Description	RCA	RGD3D	I	20			A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
			I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm To 200:200mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table

See preceding section for model descriptions.

Power saving



Technical Reference P. 451

- POINT**
Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - (2) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation at lead 2.5). The above value is the maximum acceleration.
 - (3) Horizontal payload is the value when used together with external guides. Refer to technical materials (P500) for weights with which accessory guide units can be used.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGD3D-I-20-10-①-A1-②-③	20	10	4.0	1.2	36.2	50 to 200 (Every 50mm)
RCA-RGD3D-I-20-5-①-A1-②-③		5	9.0	2.7	72.4	
RCA-RGD3D-I-20-2.5-①-A1-②-③		2.5	18.0	6.2	144.8	

Legend: ① Stroke ② Cable length ③ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 200 (Every 50mm)
	10	500
5	250	250
2.5	125	125

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGD3D	
	Encoder type	
	Incremental	
	I	
50		—
100		—
150		—
200		—

③ Option Price List

Title	Option code	See page	Standard price
Foot bracket	FT	P440	—
Home check sensor	HS	P442	—
Power saving	LA	P442	—
Reversed-home specification	NM	P442	—
Trunion (Rear)	TRR	P446	—

*The home check sensor cannot be used with the reversed-home specification.

② 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 P384 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ8mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-rod guide type, rod diameter φ8mm ball-bushing
Rod diameter	φ16mm
Non-rotation accuracy of the rod	±0.05 degrees
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

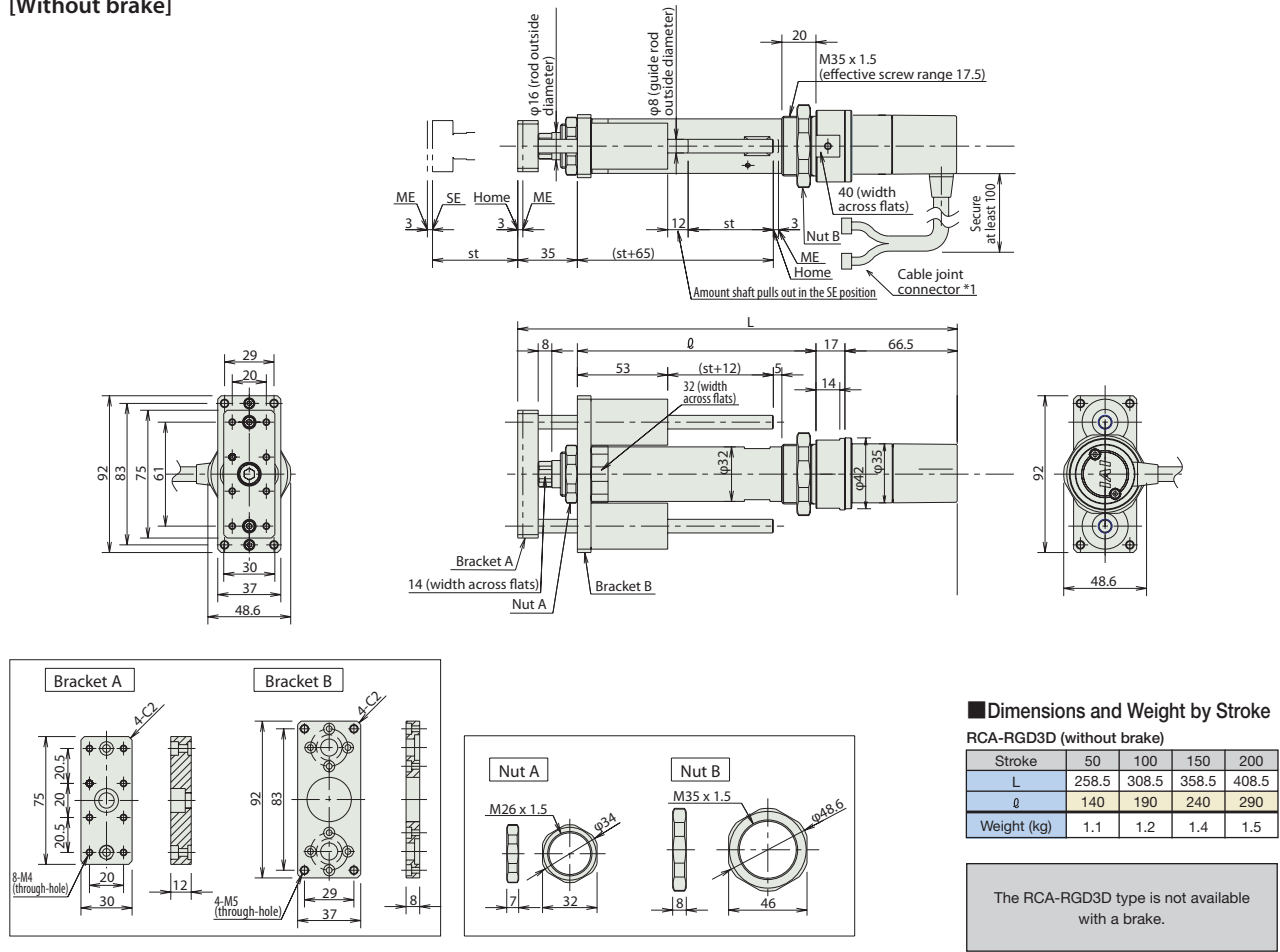
Information on special orders

P. 454

2D CAD

1. Connect the motor-encoder cable. See P384 for cable details.
2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end

[Without brake]



Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		ACON-C-20SI①-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Rating 1.7A Peak 5.1A	-	P375		
Safety category compatible Positioner type		ACON-CG-20SI①-NP-2-0								
Solenoid valve type		ACON-CY-20SI①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		ACON-PL-20SI①-NP-2-0	Compatible with differential line driver Pulse train input type	(-)						
Pulse series input type (Open collector specification)		ACON-PO-20SI①-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		ACON-SE-20SI①-N-0-0	Serial communications Special type	64 points						
Field network type		RACON-20S①	Field network Dedicated type	768 points					-	P343
Program control type		ASEL-C-1-20SI①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P405

*ASEL is for 1-axis specifications.
① For entering the code when designating power saving applications (LA).

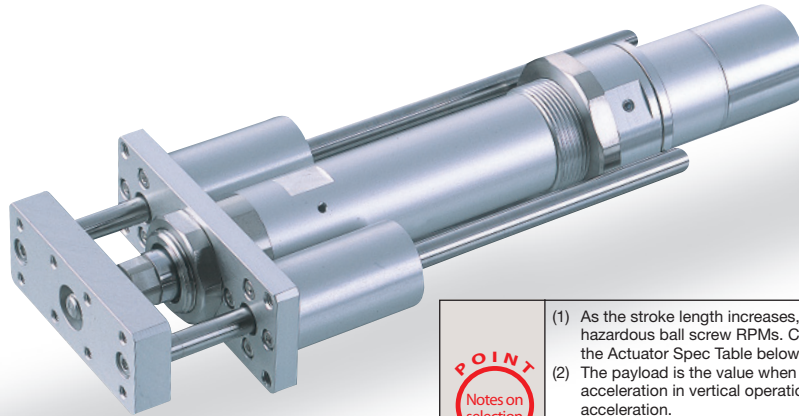
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor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

RCA-RGD4D

ROBO Cylinder, Double-guide Rod Type, Actuator Dimensions 37mm, 24V Servo Motor, Built-in Specification

Model Description	RCA	RGD4D						A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	
			I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table	

See preceding section for model descriptions.



Power saving

Technical Reference P. 451

- POINT**
Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation at lead 3). The above value is the maximum acceleration.
 - Horizontal payload is the value when used together with external guides. Refer to technical materials (P500) for weights with which accessory guide units can be used.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGD4D-①-20-12-②-A1-③-④	20	12	3.0	0.5	18.9	50 to 300 (Every 50mm)
RCA-RGD4D-①-20-6-②-A1-③-④		6	6.0	1.5	37.7	
RCA-RGD4D-①-20-3-②-A1-③-④		3	12.0	3.5	75.4	
RCA-RGD4D-①-30-12-②-A1-③-④	30	12	4.0	1.0	28.3	
RCA-RGD4D-①-30-6-②-A1-③-④		6	9.0	2.5	56.6	
RCA-RGD4D-①-30-3-②-A1-③-④		3	18.0	6.0	113.1	

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

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RGD4D			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

④ Option Price List

Title	Option code	See page	Standard price
Foot bracket	FT	P440	—
Home check sensor	HS	P442	—
Power saving	LA	P442	—
Reversed-home specification	NM	P442	—
Trunion (Rear)	TRR	P446	—

*The home check sensor cannot be used with the reversed-home specification.

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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	R04 (4m) to R05 (5m)	—
	R06 (6m) to R10 (10m)	—
	R11 (11m) to R15 (15m)	—
	R16 (16m) to R20 (20m)	—

*See P384 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-rod guide type, rod diameter φ10mm ball-bushing
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±0.05 degrees
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

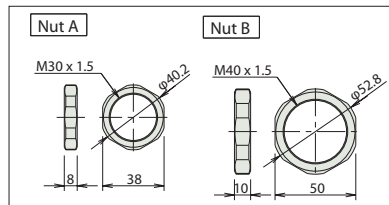
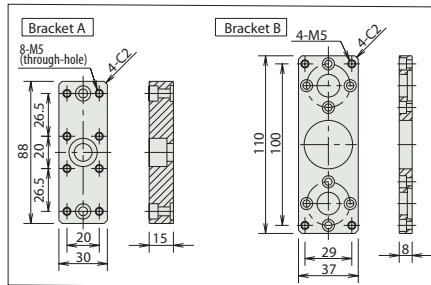
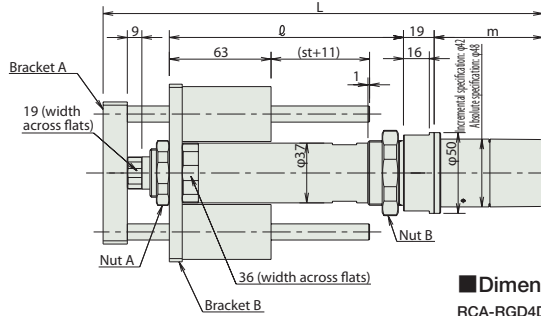
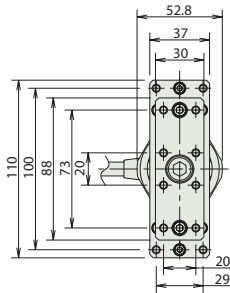
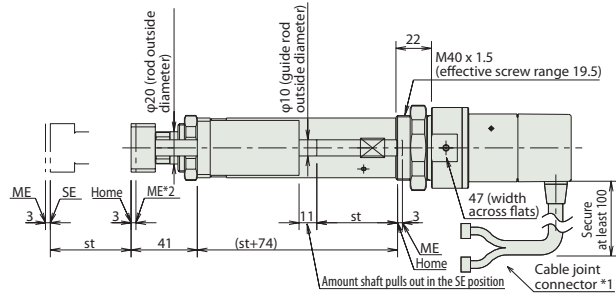
2D CAD

1. Connect the motor-encoder cable. See P384 for cable details.
2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end

Information on special orders

P. 454

[Without brake]



Dimensions and Weight by Stroke

RCA-RGD4D (without brake)

Stroke	RCA-RGD4D (without brake)							
	50	100	150	200	250	300		
L	20W	Incremental	250.5	300.5	350.5	400.5	450.5	500.5
		Absolute	263.5	313.5	363.5	413.5	463.5	513.5
	30W	Incremental	265.5	315.5	365.5	415.5	465.5	515.5
		Absolute	278.5	328.5	378.5	428.5	478.5	528.5
φ		145	195	245	295	345	395	
m	20W	Incremental	45.5					
		Absolute	58.5					
	30W	Incremental	60.5					
		Absolute	73.5					
Weight (kg)		1.6	1.8	2.1	2.3	2.5	2.7	

The RCA-RGD4D type is not available with a brake.

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner type		ACON-C-20I②-NP-2-0 ACON-C-30I②-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	20W Rated 1.3A Peak 5.1A 30W Rated 1.3A Peak 5.1A	-	P375
Safety category compatible Positioner type		ACON-CG-20I②-NP-2-0 ACON-CG-30I②-NP-2-0						
Solenoid valve type		ACON-CY-20I②-NP-2-0 ACON-CY-30I②-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points			-	P375
Pulse series input type (Differential line driver specification)		ACON-PL-20I②-NP-2-0 ACON-PL-30I②-NP-2-0	Compatible with differential line driver Pulse train input type	(-)			-	P375
Pulse series input type (Open collector specification)		ACON-PO-20I②-NP-2-0 ACON-PO-30I②-NP-2-0	Open collector compatible Pulse series input type	(-)			-	P375
Serial communication type		ACON-SE-20I②-N-0-0 ACON-SE-30I②-N-0-0	Serial communications Special type	64 points			-	P375
Field network type		RACON-20② RACON-30②	Field network Dedicated type	768 points			-	P343
Program control type		ASEL-C-1-20①②-NP-2-0 ASEL-C-1-30①②-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points			-	P405

*ASEL is for 1-axis specifications.
① For entering the encoder type (I: incremental/A: absolute).
② For entering the code when designating power saving applications (LA).

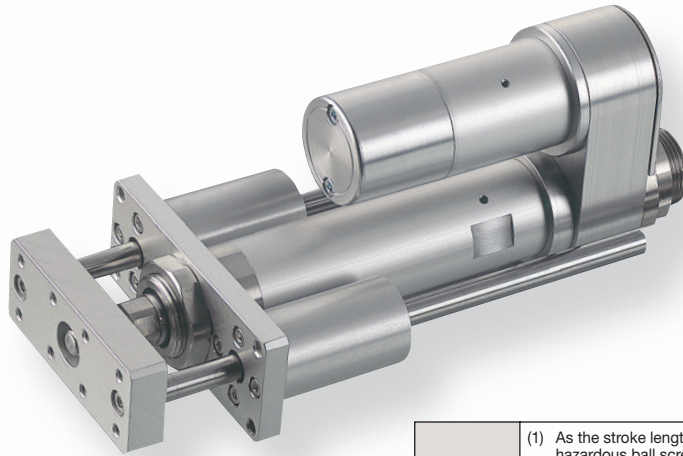
Controller- Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in Direct
Reverse-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor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

RCA-RGD3R

ROBO Cylinder, Double-guide Rod Type, Actuator Dimensions 32mm, 24V Servo Motor, Reverse-mounted Motor Specification

Model Description	RCA	RGD3R	I	20			A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
			I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm To 200:200mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table

See preceding section for model descriptions.



Power saving

Technical Reference P.451

- POINT**
Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation at lead 2.5). The above value is the maximum acceleration.
 - The horizontal payload is the value when external guides are used and no external force is exerted from outside the direction of travel of the rod. Refer to technical materials (P500) for weights with which accessory guide units can be used.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGD3R-I-20-10-①-A1-②-③	20	10	4.0	1.2	36.2	50 to 200 (Every 50mm)
RCA-RGD3R-I-20-5-①-A1-②-③		5	9.0	2.7	72.4	
RCA-RGD3R-I-20-2.5-①-A1-②-③		2.5	18.0	6.2	144.8	

Legend: ① Stroke ② Cable length ③ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 200 (Every 50mm)
	10	500
5	250	250
2.5	125	125

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGD3R	Encoder type
	Incremental	
	I	
50	—	
100	—	
150	—	
200	—	

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Flange bracket (Rear)	FLR	P439	—
Home check sensor	HS	P442	—
Power saving	LA	P442	—
Reversed-home specification	NM	P442	—
Clevis bracket	QR	P443	—
Rear mounting plate	RP	P444	—

*The home check sensor cannot be used with the reversed-home specification.

② 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 P384 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ8mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum, white alumite treatment
Rod diameter	φ16mm
Non-rotation accuracy of the rod	±1.0 degrees
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
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

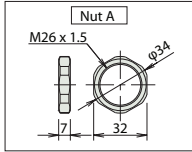
Information on special orders

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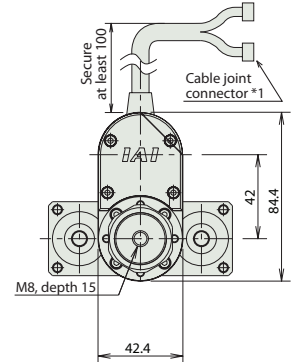
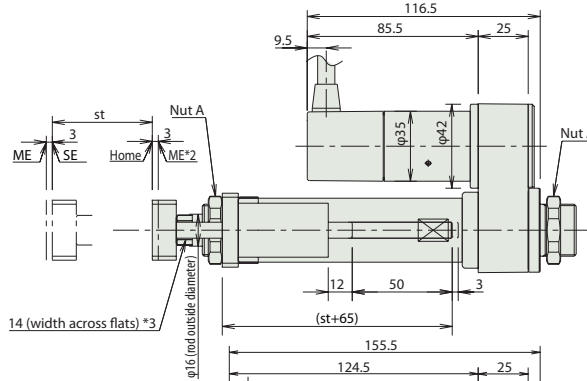
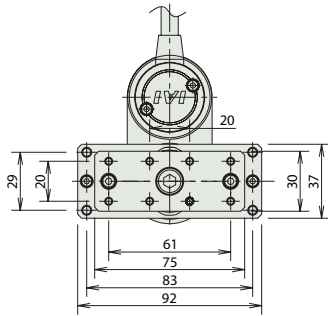
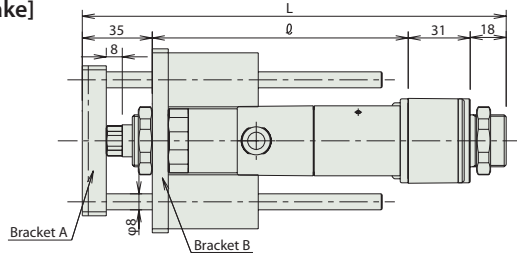
2D CAD

3D CAD

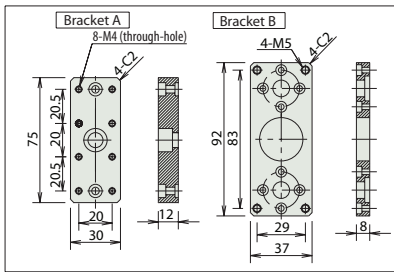
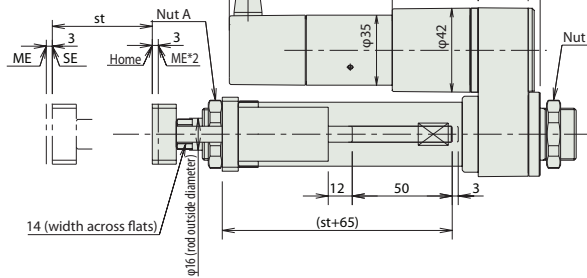
- *1. Connect the motor-encoder cable. See P384 for cable details.
- *2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end
- *3. The orientation of the width across flats differs with the product.



[Without brake]



[With brake]



■ Dimensions and Weight by Stroke

RCA-RGD3R (without brake)				
Stroke	50	100	150	200
L	212	262	312	362
φ	128	178	228	278
Weight (kg)	1.2	1.3	1.5	1.6

RCA-RGD3R (with brake)				
Stroke	50	100	150	200
L	212	262	312	362
φ	128	178	228	278
Weight (kg)	1.4	1.5	1.7	1.8

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page				
Positioner type		ACON-C-20SI②-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Rating 1.7A Peak 5.1A	-	P375				
Safety category compatible Positioner type		ACON-CG-20SI②-NP-2-0										
Solenoid valve type		ACON-CY-20SI②-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points								
Pulse series input type (Differential line driver specification)		ACON-PL-20SI②-NP-2-0	Compatible with differential line driver Pulse train input type	(-)								
Pulse series input type (Open collector specification)		ACON-PO-20SI②-NP-2-0	Open collector compatible Pulse series input type									
Serial communication type		ACON-SE-20SI②-N-0-0	Serial communications Special type	64 points								
Field network type		RACON-20S②	Field network Dedicated type	768 points								P343
Program control type		ASEL-C-1-20SI②-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points								P405

*ASEL is for 1-axis specifications.

*② For entering the code when designating power saving applications (LA).

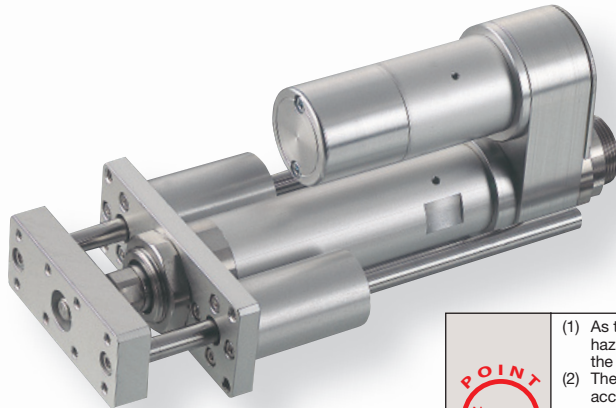
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in Direct
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor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

RCA-RGD4R

ROBO Cylinder, Double-guide Rod Type, Actuator Dimensions 37mm, 24V Servo Motor, Reverse-mounted Motor Specification

Model Description	RCA — RGD4R —							A1		
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	
			I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable	Options below See Pricing Table	

See preceding section for model descriptions.



Power saving

Technical Reference P.451

- POINT**
Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation at lead 3). The above value is the maximum acceleration.
 - The horizontal payload is the value when external guides are used and no external force is exerted from outside the direction of travel of the rod. Refer to technical materials (P500) for weights with which accessory guide units can be used.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGD4R-①-20-12-②-A1-③-④	20	12	3.0	0.5	18.9	50 to 300 (Every 50mm)
RCA-RGD4R-①-20-6-②-A1-③-④		6	6.0	1.5	37.7	
RCA-RGD4R-①-20-3-②-A1-③-④		3	12.0	3.5	75.4	
RCA-RGD4R-①-30-12-②-A1-③-④	30	12	4.0	1.0	28.3	
RCA-RGD4R-①-30-6-②-A1-③-④		6	9.0	2.5	56.6	
RCA-RGD4R-①-30-3-②-A1-③-④		3	18.0	6.0	113.1	

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

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RGD4R			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

④ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Flange bracket (Rear)	FLR	P439	—
Home check sensor	HS	P442	—
Power saving	LA	P442	—
Reversed-home specification	NM	P442	—
Clevis bracket	QR	P443	—
Rear mounting plate	RP	P444	—

*The home check sensor cannot be used with the reversed-home specification.

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 P384 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum, white alumite treatment
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±1.0 degrees
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

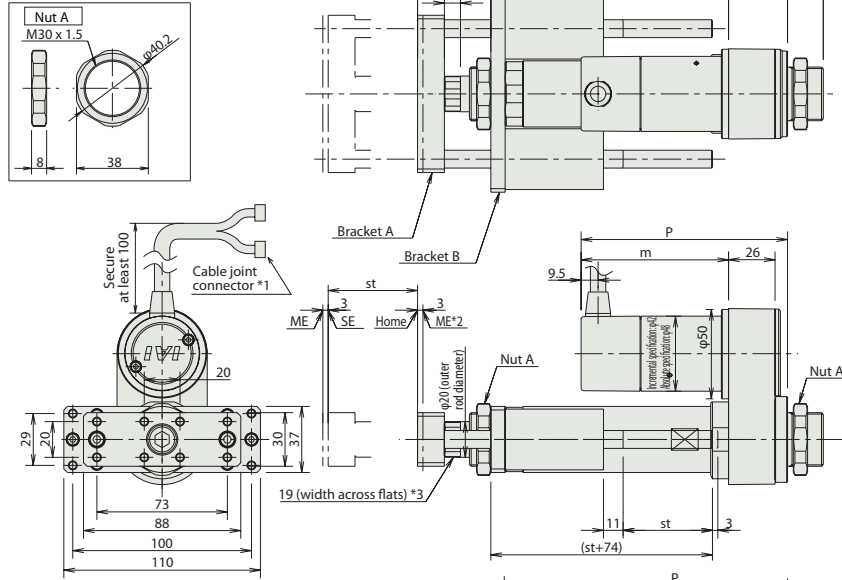
3D CAD

1. Connect the motor-encoder cable. See P384 for cable details.
2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
3. The orientation of the width across flats differs with the product.

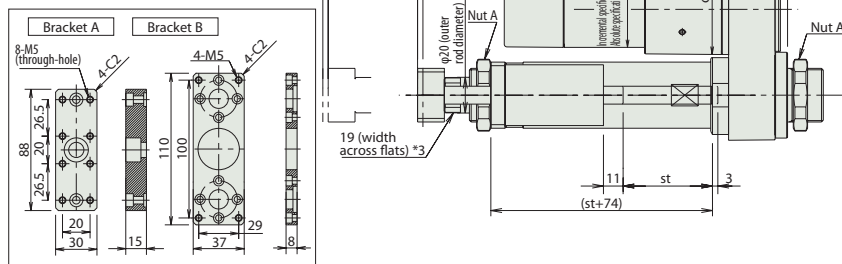
Information on special orders

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[Without brake]



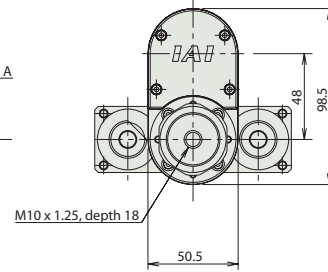
[With brake]



■ Dimensions and Weight by Stroke

RCA-RGD4R (without brake)

Stroke	50	100	150	200	250	300		
L	20W	Incremental	227	277	327	377	427	477
		Absolute	227	277	327	377	427	477
	30W	Incremental	227	277	327	377	427	477
		Absolute	227	277	327	377	427	477
q		133	188	233	288	333	383	
m	20W	Incremental	67.5					
		Absolute	80.5					
	30W	Incremental	82.5					
		Absolute	95.5					
P	20W	Incremental	100.5					
		Absolute	113.5					
	30W	Incremental	115.5					
		Absolute	128.5					
Weight (kg)		1.9	2.2	2.3	2.6	2.7	3.0	



RCA-RGD4R (with brake)

Stroke	50	100	150	200	250	300		
L	20W	Incremental	227	277	327	377	427	477
		Absolute	227	277	327	377	427	477
	30W	Incremental	227	277	327	377	427	477
		Absolute	227	277	327	377	427	477
q		133	188	233	288	333	383	
m	20W	Incremental	110.5					
		Absolute	123.5					
	30W	Incremental	125.5					
		Absolute	138.5					
P	20W	Incremental	143.5					
		Absolute	156.5					
	30W	Incremental	158.5					
		Absolute	171.5					
Weight (kg)		2.1	2.4	2.5	2.8	2.9	3.2	

Compatible Controllers

The RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner type		ACON-C-20I②-NP-2-0 ACON-C-30I②-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	20W Rated 1.3A Peak 5.1A 30W Rated 1.3A Peak 5.1A	-	
Safety category compatible Positioner type		ACON-CG-20I②-NP-2-0 ACON-CG-30I②-NP-2-0						
Solenoid valve type		ACON-CY-20I②-NP-2-0 ACON-CY-30I②-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points			-	P375
Pulse series input type (Differential line driver specification)		ACON-PL-20I②-NP-2-0 ACON-PL-30I②-NP-2-0	Compatible with differential line driver Pulse train input type	(-)			-	
Pulse series input type (Open collector specification)		ACON-PO-20I②-NP-2-0 ACON-PO-30I②-NP-2-0	Open collector compatible Pulse series input type				-	
Serial communication type		ACON-SE-20I②-N-0-0 ACON-SE-30I②-N-0-0	Serial communications Special type	64 points			-	
Field network type		RACON-20② RACON-30②	Field network Dedicated type	768 points			-	P343
Program control type		ASEL-C-1-20①②-NP-2-0 ASEL-C-1-30①②-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points			-	P405

*ASEL is for 1-axis specifications.
 *① For entering the encoder type (I: incremental/A: absolute).
 *② For entering the code when designating power saving applications (LA).

Controller-Integrated
 Slider Type
 Rod Type
 Table Arm/Fat Type
 Gripper/Rotary Type
 Cleanroom
 Splash-resistant
 Controller
 Coupling
 Built-in (Direct)
 Reversed-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

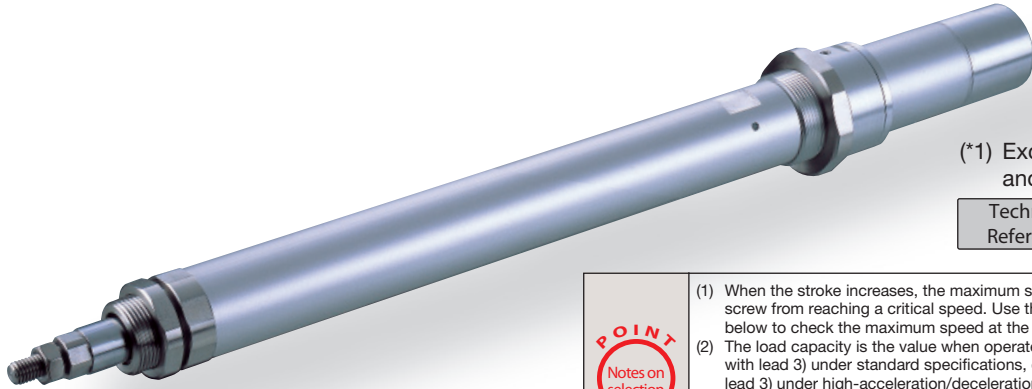
RCS2-RA4C

ROBO Cylinder, Rod Type, Actuator Width 37mm,
200-V Servo Motor, Coupling Specification

Model Description **RCS2 — RA4C**

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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.



High-acceleration/
deceleration

(*1)

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

Technical Reference P.451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The load capacity is the value when operated at 0.3G acceleration (0.2G with lead 3) under standard specifications, or at 1G acceleration (except lead 3) under high-acceleration/deceleration specifications. (The maximum capacity loads for accelerations are shown in the table below)
 - (3) 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.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RA4C-①-20-12-②-③-④-⑤	20	12	3.0	1.0	18.9	50 to 300 (Every 50mm)
RCS2-RA4C-①-20-6-②-③-④-⑤		6	6.0	2.0	37.7	
RCS2-RA4C-①-20-3-②-③-④-⑤		3	12.0	4.0	75.4	
RCS2-RA4C-①-30-12-②-③-④-⑤	30	12	4.0	1.5	28.3	
RCS2-RA4C-①-30-6-②-③-④-⑤		6	9.0	3.0	56.6	
RCS2-RA4C-①-30-3-②-③-④-⑤		3	18.0	6.5	113.1	

Legend: ① Encoder type ② Stroke ③ Compatible Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RA4C			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

⑤ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Flange bracket (front)	FL	P438	—
Flange bracket (rear)	FLR	P439	—
High-acceleration/deceleration (*1)	HA	P442	—
Home check sensor (*2)	HS	P442	—
Knuckle joint	NJ	P443	—
Reversed-home specification	NM	P442	—
Trunion bracket (front)	TRF	P446	—
Trunion bracket (rear)	TRR	P446	—

(*1) High-acceleration/deceleration cannot be used with any 20W models or 30W-lead 3.
(*2) Home check sensor cannot be used with reversed-home specification.

④ 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)	—
	R16 (16m) to R20 (20m)	—

*See P394 for maintenance cables.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum, white alumite treatment
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±1.0 degrees
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

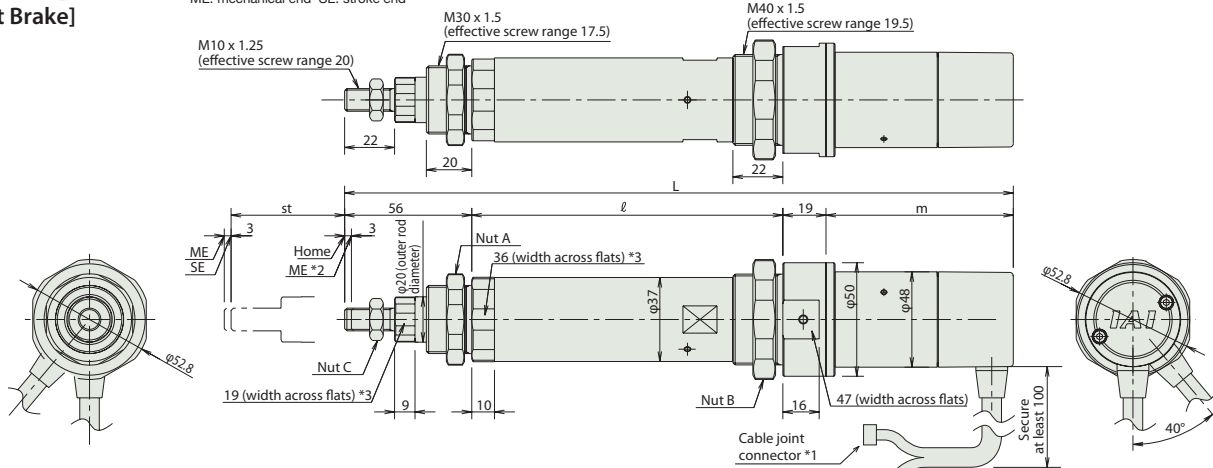
Information on special orders

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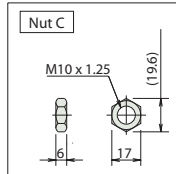
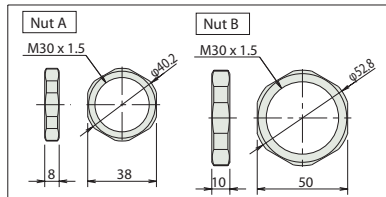
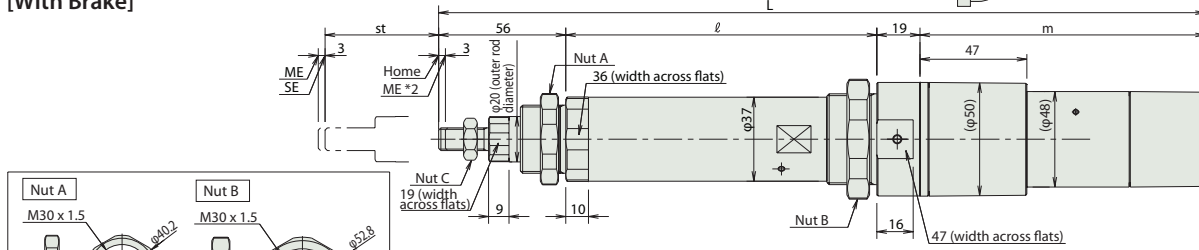
2D CAD

3D CAD

[Without Brake]



[With Brake]



■ Dimensions and Weight by Stroke

RCS2-RA4C (without brake)

Stroke	50	100	150	200	250	300	
L	20W	292.5	342.5	392.5	442.5	492.5	542.5
	30W	307.5	357.5	407.5	457.5	507.5	557.5
∅	137	187	237	287	337	487	
m	20W	80.5					
	30W	95.5					
Weight (kg)	1.1	1.2	1.4	1.5	1.7	1.8	

RCS2-RA4C (with brake)

Stroke	50	100	150	200	250	300	
L	20W	335.5	385.5	435.5	485.5	535.5	585.5
	30W	350.5	400.5	450.5	500.5	550.5	600.5
∅	137	187	237	287	337	487	
m	20W	123.5					
	30W	138.5					
Weight (kg)	1.3	1.5	1.6	1.7	1.9	2.0	

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-20①-NP-2-③ SCON-C-30D①②-NP-2-③	Up to 512-point positioning possible	512 points	Single-phase AC 100V	Maximum 360VA *1-axis specification for 150W operation	-	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	(-)				
Program control 1-2 axis type		SSEL-C-1-20①-NP-2-③ SSEL-C-1-30D①②-NP-2-③	Programmable type capable of operating up to 2 axes	20000 points	Three-phase AC 200V (XSEL-P/Q only)		-	P415
Program control 1-6 axis type		XSEL-④-1-20①-N1-EEE-2-⑤ XSEL-④-1-30D①②-N1-EEE-2-⑤	Programmed operation enabled Can drive up to 6 axes	4000 points			-	P425

*SSEL, XSEL are for 1-axis specification.
 ① Indicates the encoder type (I: Incremental/A: Absolute).
 ② HA indicates high-acceleration/deceleration.
 ③ Indicates the power supply voltage type (1: 100V/2: single-phase 200V).
 ④ indicates XSEL type (J/K/P/Q).
 ⑤ Indicates the power supply voltage type (1: 100V, 2: single-phase 200V, 3: three-phase 200V).

Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
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

RCS2-RA5C

ROBO Cylinder, Rod Type, Actuator Width 55mm,
 200-V Servo Motor, Coupling Specification

Model Description	RCS2	RA5C								
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option		
I: Incremental specification A: Absolute specification	60: Servo motor 60W 100: Servo motor 100W	16: 16mm 8: 8mm 4: 4mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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.



High-acceleration/
deceleration (*1)

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

Technical Reference **P.451**

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The load capacity is based on operation at an acceleration of 0.3G (lead 4), with a high speed acceleration of 1G (0.2G for lead 4). (The maximum capacity loads for accelerations are shown in the table below)
 - (3) 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.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		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 to 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	

Legend: ① Encoder type ② Stroke ③ Compatible Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

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

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RA5C			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	60W	100W	60W	100W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

⑤ Option Price List

Title	Option code	See page	Standard price
Cable Outlet Direction	A2	P437	—
Brake	B	P437	—
Flange	FL	P438	—
Foot bracket	FT	P441	—
High-acceleration/deceleration (*1)	HA	P442	—

(*1) High-acceleration/deceleration cannot be used with any 60W models or 100W-lead 4.

④ 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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	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.

Actuator Specification

Item	Description
Drive method	Ball screw φ12mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum, white alumite treatment
Rod diameter	φ30mm
Non-rotation accuracy of the rod	±0.7 degrees
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

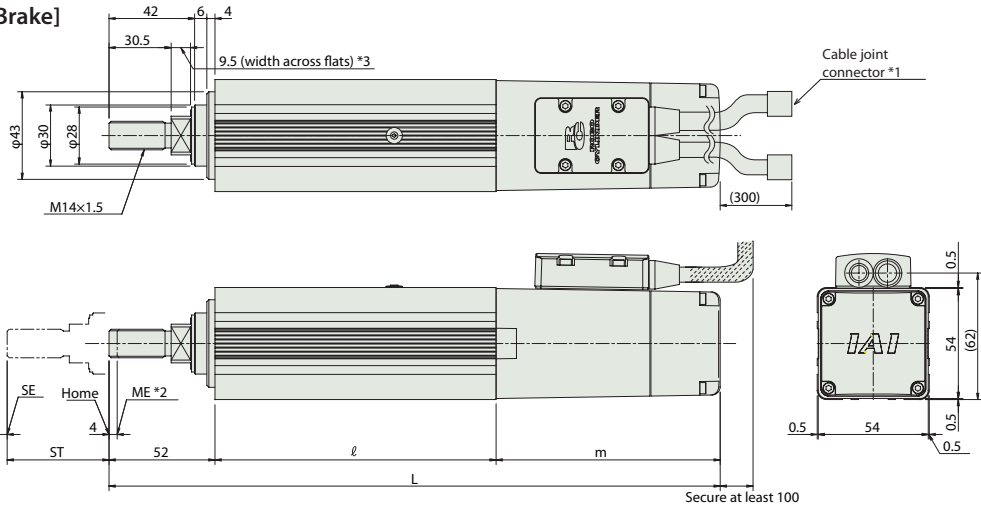
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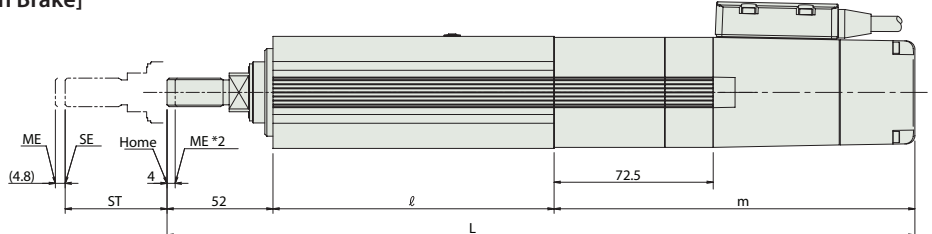
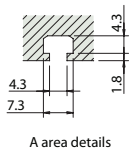
*Please note that for structural reasons, the reversed-home specification cannot be used for the RA5C type.

- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts during home return. ME: mechanical end SE: stroke end
- *3 The orientation of the width across flats differs with the product.

[Without Brake]



[With Brake]



■ 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
φ	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
φ	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	

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-60①-NP-2-③ SCON-C-100①②-NP-2-③	Up to 512-point positioning possible	512 points	Single-phase AC 100V	Maximum 360VA *1-axis specification for 150W operation	-	P385
Solenoid valve mode			Same as solenoid valve Controlled operation enabled	7 points				
Serial communication type			Serial communications Special type	64 points	Single-phase AC 200V			
Pulse train input control type			Pulse train input type Special type	(-)	Three-phase AC 200V (XSEL-P/Q only)			
Program control 1-2 axis type		SSEL-C-1-60①-NP-2-③ SSEL-C-1-100①②-NP-2-③	Programmable type capable of operating up to 2 axes	20000 points			-	P415
Program control 1-6 axis type		XSEL-④-1-60①-N1-EEE-2-⑤ XSEL-④-1-100①②-N1-EEE-2-⑤	Programmed operation enabled Can drive up to 6 axes	4000 points				

*SSEL, XSEL are for 1-axis specification.
 ① Indicates the encoder type (I: Incremental/A: Absolute).
 ② HA indicates high-acceleration/deceleration.
 ③ Indicates the power supply voltage type (1: 100V/2: single-phase 200V).
 ④ Indicates XSEL type (J/K/P/Q).
 ⑤ Indicates the power supply voltage type (1: 100V, 2: single-phase 200V, 3: three-phase 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

RCS2-RA4D

ROBO Cylinder, Rod Type, Actuator Width 37mm,
 200-V Servo Motor, Built-in Motor (Direct connection) Specification

Model Description **RCS2 — RA4D**

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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.



Technical Reference P.451

- POINT**
Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - The load capacity is based on operation at an acceleration of 0.3G (or 0.2G if the lead is 3). 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.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RA4D-①-20-12-②-③-④-⑤	20	12	3.0	1.0	18.9	50 to 300 (Every 50mm)
RCS2-RA4D-①-20-6-②-③-④-⑤		6	6.0	2.0	37.7	
RCS2-RA4D-①-20-3-②-③-④-⑤		3	12.0	4.0	75.4	
RCS2-RA4D-①-30-12-②-③-④-⑤	30	12	4.0	1.5	28.3	
RCS2-RA4D-①-30-6-②-③-④-⑤		6	9.0	3.0	56.6	
RCS2-RA4D-①-30-3-②-③-④-⑤		3	18.0	6.5	113.1	

Legend: ① Encoder type ② Stroke ③ Compatible Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code RA4D			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

④ 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.

⑤ Option Price List

Title	Option code	See page	Standard price
Foot bracket	FT	P440	—
Flange bracket (front)	FL	P438	—
Flange bracket (rear)	FLR	P439	—
Home check sensor	HS	P442	—
Knuckle joint	NJ	P443	—
Reversed-home specification	NM	P442	—
Trunion bracket (front)	TRF	P446	—
Trunion bracket (rear)	TRR	P446	—

*The home check sensor cannot be used with the reversed-home specification.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum, white alumite treatment
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±1.0 degrees
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

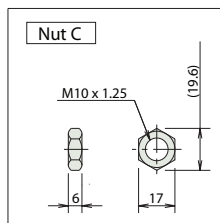
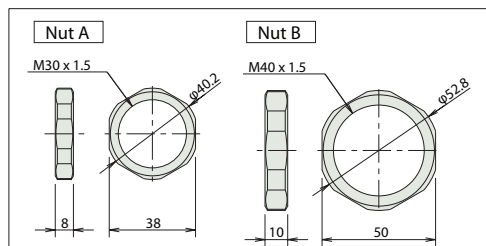
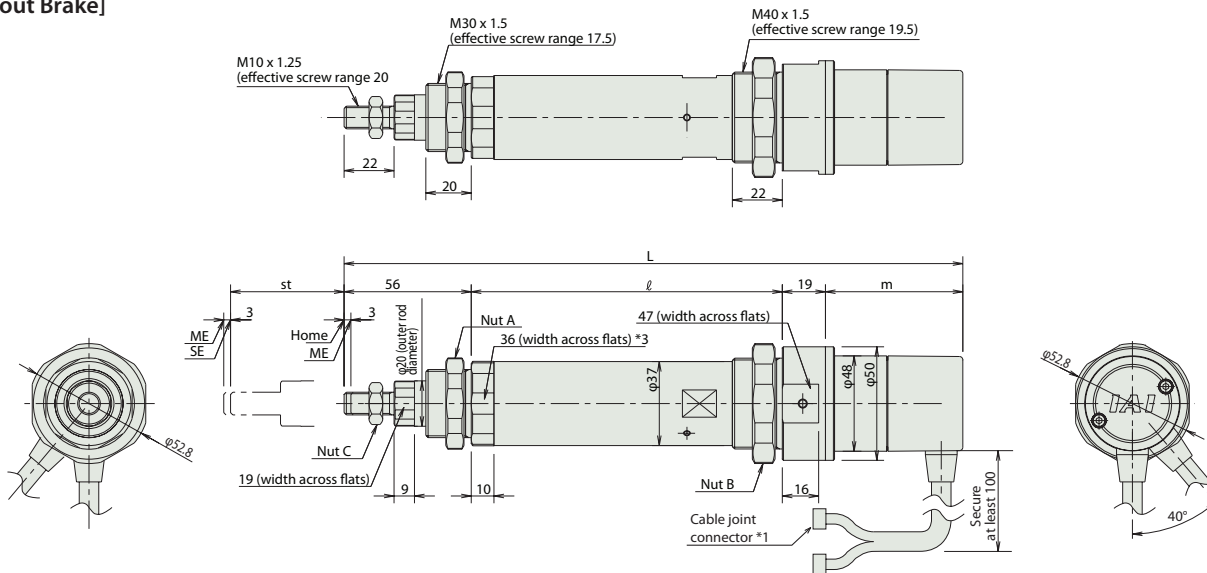
2D CAD

Information on special orders

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- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts during home return. ME: mechanical end SE: stroke end
- *3 The orientation of the width across flats differs with the product.

[Without Brake]



■ Dimensions and Weight by Stroke

RCS2-RA4D (without brake)

Stroke	50	100	150	200	250	300	
L	20W	270.5	320.5	370.5	420.5	470.5	520.5
	30W	285.5	335.5	385.5	435.5	485.5	535.5
l	137	187	237	287	337	487	
	m	58.5					
	73.5						
Weight (kg)	1.0	1.2	1.3	1.5	1.6	1.8	

No brake-equipped setting for RCS2-RA4D.

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-20①-NP-2-② SCON-C-30D①-NP-2-②	Up to 512-point positioning possible	512 points	Single-phase AC 100V	Maximum 360VA *1-axis specification for 150W operation	-	P385
Solenoid valve mode			Same as solenoid valve Controlled operation enabled	7 points				
Serial communication type			Serial communications Special type	64 points	Single-phase AC 200V			
Pulse train input control type			Pulse train input type Special type	(-)	Three-phase AC 200V (XSEL-P/Q only)			
Program control 1-2 axis type		SSEL-C-1-20①-NP-2-② SSEL-C-1-30D①-NP-2-②	Programmable type capable of operating up to 2 axes	20000 points			-	P415
Program control 1-6 axis type		XSEL-③-1-20①-N1-EEE-2-④ XSEL-③-1-30D①-N1-EEE-2-④	Programmed operation enabled Can drive up to 6 axes	4000 points			-	P425

*SSEL, XSEL are for 1-axis specification.
 ① Indicates the encoder type (I: Incremental/A: Absolute).
 ② Indicates the power supply voltage type (1: 100V/2: single-phase 200V).
 ③ Indicates the XSEL type (J/K/P/Q).
 ④ Indicates the power supply voltage type (1: 100V/2: single-phase, 200V/3: three-phase, 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

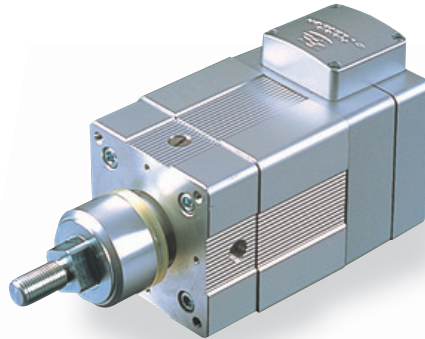
RCS2-RA7AD

ROBO Cylinder, Rod Type, Actuator Width 75mm, 200-V Servo Motor, Built-in Motor (Direct connection) Specification

Model Description **RCS2-RA7AD-I**

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification			60: Servo motor 60W 100: Servo motor 100W	12: 12mm 6: 6mm 3: 3mm	50-50mm To 300-300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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. *Lead 3 setting is only for 60W.



Technical Reference P.451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The load capacity is based on operation at an acceleration of 0.15G (lead 12), 0.1G (lead 6) or 0.05G (lead 3) with a motor output of 60W.
 - (3) 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.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RA7AD-I-60-12-①-②-③-④	60	12	10.0	2.5	85.3	50 to 300 (Every 50mm)
RCS2-RA7AD-I-60-6-①-②-③-④		6	20.0	7.0	169.5	
RCS2-RA7AD-I-60-3-①-②-③-④		3	40.0	15.0	340.1	
RCS2-RA7AD-I-100-12-①-②-③-④	100	12	15.0	5.5	141.1	
RCS2-RA7AD-I-100-6-①-②-③-④		6	30.0	12.5	283.2	

Legend: ① Stroke ② Compatible Controller ③ Cable length ④ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 250	300
	(mm)	(every 50mm)	(mm)
12	600	505	
6	300	250	
3	150	125	

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RA7AD	
	Encoder type	
	Incremental	
	Motor wattage (W)	
	60W	100W
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

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
Cable Outlet Direction	A1 to A3	P437	—
Brake	B	P437	—
Flange	FL	P439	—
Foot bracket	FT	P441	—

Actuator Specification

Item	Description
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum, white alumite treatment
Rod diameter	ϕ 30mm
Non-rotation accuracy of the rod	\pm 0.7 degrees
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

Information on special orders

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2D CAD

Caution

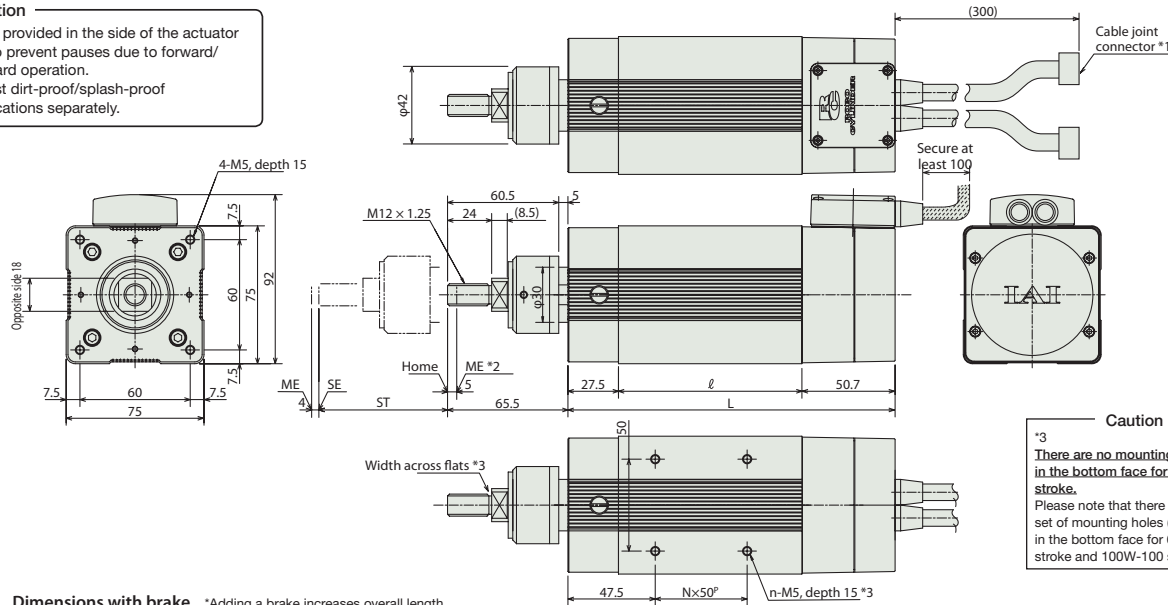
Do not apply external force on the rod in any direction other than the moving direction of the rod.
If the rod receives external force from the lateral direction or rotating direction, the detent may be damaged.

Caution

A slit is provided in the side of the actuator body to prevent pauses due to forward/backward operation.
Request dirt-proof/splash-proof specifications separately.

*Please note that for structural reasons, the reversed-home specification cannot be used for the RA7AD type.

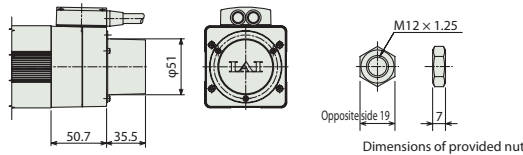
- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ST: stroke
SE: stroke end
ME: mechanical end
- *3 The 2D orientation differs with the product.



Caution
*3 There are no mounting holes in the bottom face for 100W-50 stroke.
Please note that there is only one set of mounting holes (2 holes) in the bottom face for 60W-50 stroke and 100W-100 stroke.

Dimensions with brake

*Adding a brake increases overall length by 35.5mm and weight by 0.3kg.



Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	
L	128	178	228	278	328	378	
φ	49.8	99.8	149.8	199.8	249.8	299.8	
N	60W	-	1	2	3	4	5
	100W	-	-	1	2	3	4
n	60W	2	4	6	8	10	12
	100W	-	2	4	6	8	10
Weight (kg)	60W	2.1	2.6	3.0	3.5	3.9	4.4
	100W	2.2	2.7	3.1	3.6	4.0	4.5

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-60I-NP-2-① SCON-C-100I-NP-2-①	Up to 512-point positioning possible	512 points	Single-phase AC 100V Single-phase AC 200V Three-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1-axis specification for 150W operation	-	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	(-)				
Program control 1-2 axis type		SSEL-C-1-60I-NP-2-① SSEL-C-1-100I-NP-2-①	Programmable type capable of operating up to 2 axes	20000 points			-	P415
Program control 1-6 axis type		XSEL-②-1-60I-N1-EEE-2-③ XSEL-②-1-100I-N1-EEE-2-③	Programmed operation enabled Can drive up to 6 axes	4000 points			-	P425

CAUTION: Please note that the 5-axis /6-axis of the XSEL-P/Q type controllers cannot be connected to RA7D/RA7BD type actuators.

- *SSEL, XSEL are for 1-axis specification.
- *① Indicates the power supply voltage type (1: 100V, 2: single-phase 200V).
- *② Indicates the XSEL type (J/K/P/Q) entered.
- *③ Indicates the power supply voltage type (1: 100V, 2: single-phase, 3: three-phase 200V).

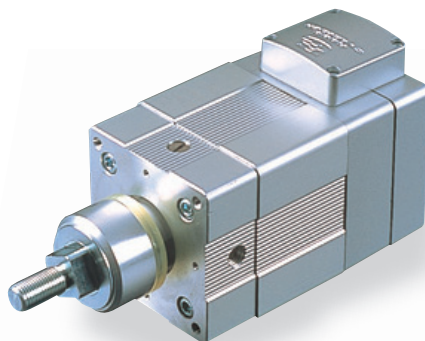
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reverse-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor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

RCS2-RA7BD

ROBO Cylinder, Rod Type, Actuator Width 75mm, 200-V Servo Motor, Built-in Motor (Direct connection) Specification

Model Description	RCS2	— RA7BD	— I	—	—	—	—	—	—	—
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option		
I: Incremental specification			100: Servo motor 100W 150: Servo motor 150W	16: 16mm 8: 8mm 4: 4mm	50-50mm To 300-300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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. *The lead 4 setting is only for 100W.



Technical Reference P.451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The payload is the value when a 100W motor is operated at 0.25G acceleration (lead 16), 0.17G (lead 8), or 0.1G (lead 4), or when a 150W motor is operated at 0.3G acceleration (lead 16) or 0.2G (lead 8).
 - (3) 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.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RA7BD-I-100-16-①-②-③-④	100	16	10.0	3.5	105.8	50 to 300 (every 50mm)
RCS2-RA7BD-I-100-8-①-②-③-④		8	22.0	9.0	212.7	
RCS2-RA7BD-I-100-4-①-②-③-④		4	40.0	19.5	424.3	
RCS2-RA7BD-I-150-16-①-②-③-④	150	16	15.0	6.5	158.8	100 to 300 (every 50mm)
RCS2-RA7BD-I-150-8-①-②-③-④		8	35.0	14.5	318.5	

Legend: ① Stroke ② Compatible Controller ③ Cable length ④ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 300 (every 50mm)
	16	800
8	400	400
4	200	200

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RA7BD	
	Encoder type	
	Incremental	
	Motor wattage (W)	
	100W	150W
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

Note: There is no 50 stroke setting for 150W.

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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	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
Cable Outlet Direction	A1 to A3	P437	—
Brake	B	P437	—
Flange	FL	P439	—
Foot bracket	FT	P441	—

Actuator Specification

Item	Description
Drive method	Ball screw ϕ 12mm, rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum, white alumite treatment
Rod diameter	ϕ 35mm
Non-rotation accuracy of the rod	\pm 0.7 degrees
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

Information on special orders P. 454

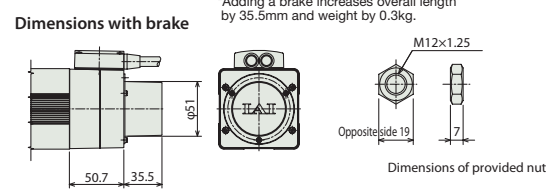
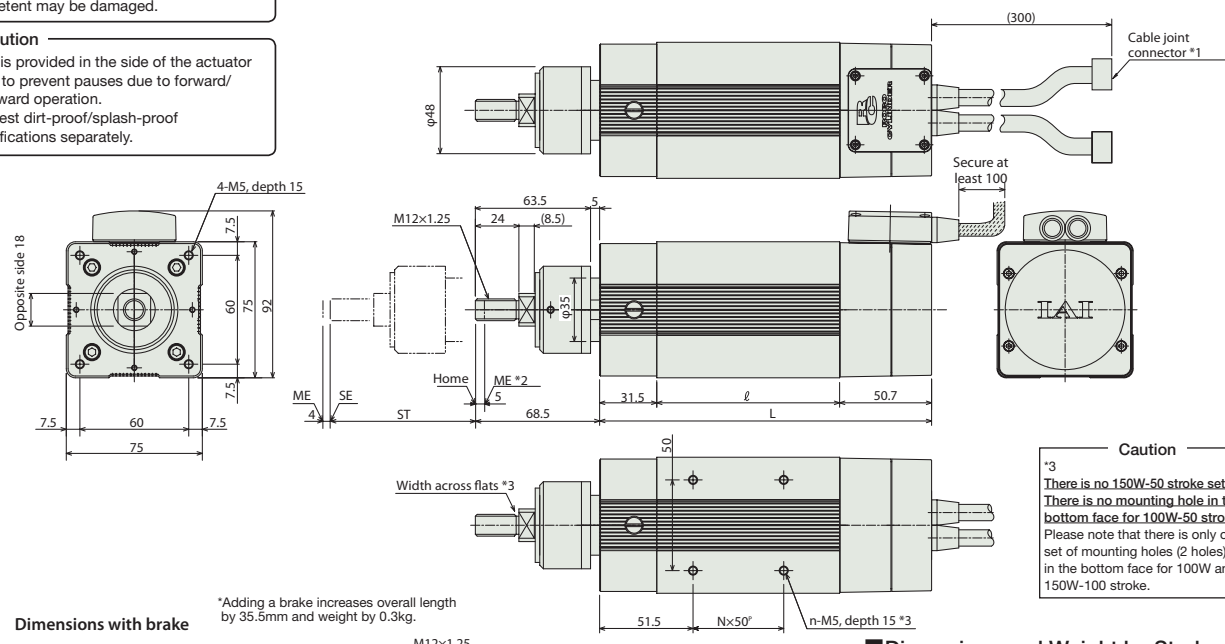
2D CAD

Caution
Do not apply external force on the rod in any direction other than the moving direction of the rod.
If the rod receives external force from the lateral direction or rotating direction, the detent may be damaged.

Caution
A slit is provided in the side of the actuator body to prevent pauses due to forward/backward operation.
Request dirt-proof/splash-proof specifications separately.

*Please note that for structural reasons, the reversed-home specification cannot be used for the RA7BD type.

- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ST: stroke
SE: stroke end
ME: mechanical end
- *3 The 2D orientation differs with the product.



Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	
L	100W	133	183	233	283	333	383
	150W	-	183	233	283	333	383
q	100W	50.8	100.8	150.8	200.8	250.8	300.8
	150W	-	100.8	150.8	200.8	250.8	300.8
N	100W	-	-	1	2	3	4
	150W	-	-	1	2	3	4
n	100W	-	2	4	6	8	10
	150W	-	2	4	6	8	10
Weight (kg)	100W	2.7	3.2	3.6	4.1	4.5	5.0
	150W	-	3.3	3.7	4.2	4.6	5.1

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-100I-NP-2-① SCON-C-150I-NP-2-①	Up to 512-point positioning possible	512 points	Single-phase AC 100V	Maximum 360VA *1-axis specification for 150W operation	-	P385
Solenoid valve mode			Same as solenoid valve Controlled operation enabled	7 points				
Serial communication type			Serial communications Special type	64 points	Single-phase AC 200V			
Pulse train input control type			Pulse train input type Special type	(-)	Three-phase AC 200V (XSEL-P/Q only)			
Program control 1-2 axis type		SSEL-C-1-100I-NP-2-① SSEL-C-1-150I-NP-2-①	Programmable type capable of operating up to 2 axes	20000 points	-	-	P415	
Program control 1-6 axis type		XSEL-②-1-100I-N1-EEE-2-③ XSEL-②-1-150I-N1-EEE-2-③	Programmed operation enabled Can drive up to 6 axes	4000 points			P425	

CAUTION: Please note that the 5-axis /6-axis of the XSEL-P/Q type controllers cannot be connected to RA7D/RA7BD type actuators.

*SSEL, XSEL are for 1-axis specification.
 *① Indicates the power supply voltage type (1: 100V, 2: single-phase 200V).
 *② Indicates the XSEL type (J/K/P/Q) entered.
 *③ Indicates the power supply voltage type (1: 100V, 2: single-phase, 3: three-phase 200V).

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

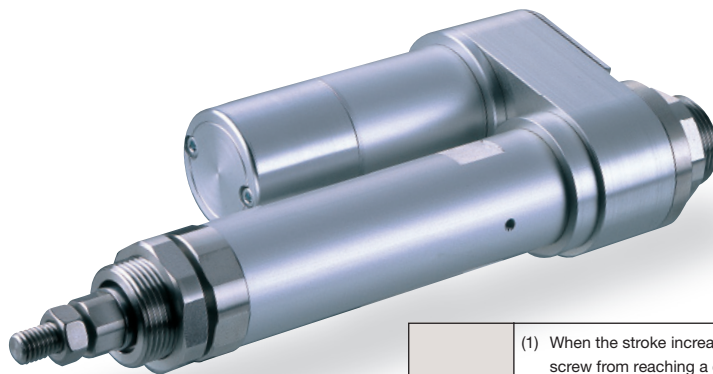
RCS2-RA4R

ROBO Cylinder, Rod type, Actuator Width 37mm, 200V Servo Motor, Reverse-mounted Motor Specification

Model Description **RCS2 — RA4R**

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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.



Technical Reference P.451



- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- The load capacity is based on operation at an acceleration of 0.3G (or 0.2G if the lead is 3). 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.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RA4R-①-20-12-②-③-④-⑤	20	12	3.0	1.0	18.9	50 to 300 (Every 50mm)
RCS2-RA4R-①-20-6-②-③-④-⑤		6	6.0	2.0	37.7	
RCS2-RA4R-①-20-3-②-③-④-⑤		3	12.0	4.0	75.4	
RCS2-RA4R-①-30-12-②-③-④-⑤	30	12	4.0	1.5	28.3	
RCS2-RA4R-①-30-6-②-③-④-⑤		6	9.0	3.0	56.6	
RCS2-RA4R-①-30-3-②-③-④-⑤		3	18.0	6.5	113.1	

Legend: ① Encoder type ② Stroke ③ Compatible Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code RA4R			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

④ 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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	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.

⑤ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
Flange bracket (front)	FL	P438	—
Flange bracket (rear)	FLR	P439	—
Home check sensor	HS	P442	—
Knuckle joint	NJ	P443	—
Reversed-home specification	NM	P442	—
Clevis bracket	QR	P443	—
Rear mounting plate	RP	P444	—
Trunion bracket (front)	TRF	P446	—

*The home check sensor cannot be used with the reversed-home specification.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum, white alumite treatment
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±1.0 degrees
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

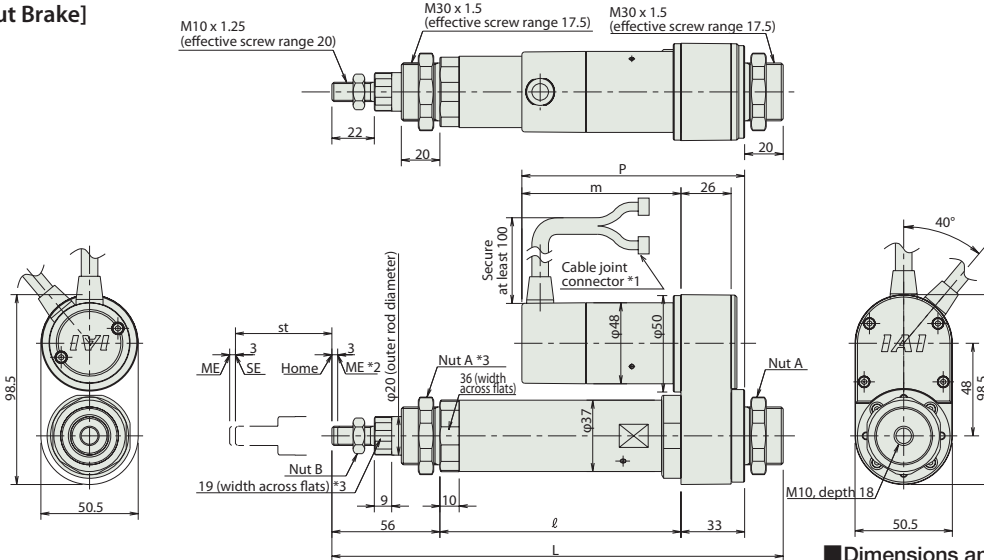


Information on special orders

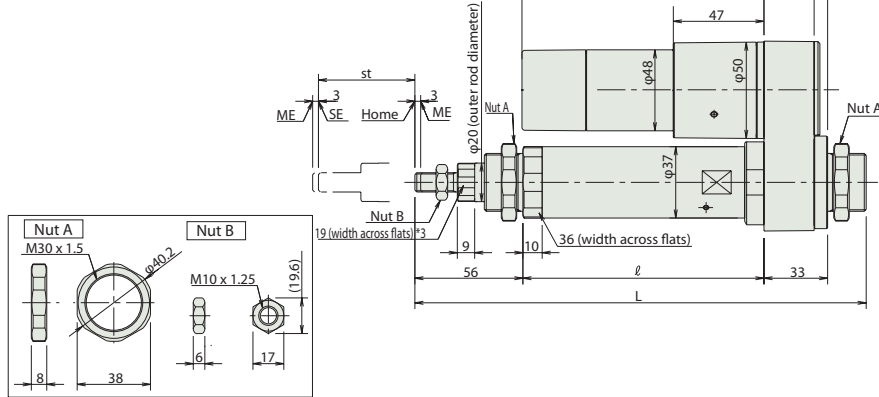
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- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts during home return. ME: mechanical end SE: stroke end
- *3 The width direction across flats orientation differs with the product.

[Without Brake]



[With Brake]



■ Dimensions and Weight by Stroke

RCS2-RA4R (without brake)

Stroke	50	100	150	200	250	300	
L	20W	234	284	334	384	434	484
	30W	234	284	334	384	434	484
φ	125	175	225	275	325	375	
m	20W	80.5					
	30W	95.5					
P	20W	113.5					
	30W	128.5					
Weight (kg)	1.2	1.4	1.5	1.7	1.8	2.0	

RCS2-RA4R (with brake)

Stroke	50	100	150	200	250	300	
L	20W	234	284	334	384	434	484
	30W	234	284	334	384	434	484
φ	125	175	225	275	325	375	
m	20W	123.5					
	30W	138.5					
P	20W	156.5					
	30W	171.5					
Weight (kg)	1.4	1.6	1.7	1.9	2.0	2.2	

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-20①-NP-2-② SCON-C-30D①-NP-2-②	Up to 512-point positioning possible	512 points	Single-phase AC 100V	Maximum 360VA *1-axis specification for 150W operation	-	P385
Solenoid valve mode			Same as solenoid valve Controlled operation enabled	7 points				
Serial communication type			Serial communications Special type	64 points	Single-phase AC 200V			
Pulse train input control type			Pulse train input type Special type	(-)	Three-phase AC 200V (XSEL-P/Q only)			
Program control 1-2 axis type		SSEL-C-1-20①-NP-2-② SSEL-C-1-30D①-NP-2-②	Programmable type capable of operating up to 2 axes	20000 points	-	-	P415	
Program control 1-6 axis type		XSEL-③-1-20①-N1-EEE-2-④ XSEL-③-1-30D①-N1-EEE-2-④	Programmed operation enabled Can drive up to 6 axes	4000 points			P425	

- *SSEL, XSEL are for 1-axis specification.
- *① Indicates the encoder type (I: Incremental/A: Absolute).
- *② Indicates the power supply voltage type (1: 100V/2: single-phase 200V).
- *③ Indicates the XSEL type (J/K/P/Q).
- *④ Indicates the power supply voltage type (1: 100V/2: single-phase, 200V/3: three-phase, 200V).

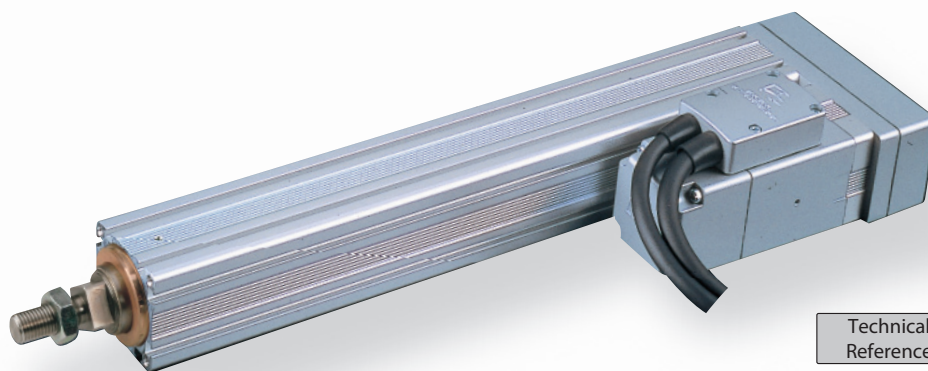
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor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

RCS2-RA5R

ROBO Cylinder, Rod type, Actuator Width 55mm, 220V Servo Motor, Reverse-mounted Motor Specification

Model Description	RCS2 — RA5R — <input type="checkbox"/> — 60 — <input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/> — <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			60: Servo motor 60W	16: 16mm 8: 8mm 4: 4mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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.



Technical Reference P.451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The load capacity is based on operation at an acceleration of 0.3G (or 0.2G if the lead is 4 or the actuator is operated vertically). The above values are maximum acceleration.
 - (3) 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.

Actuator Specifications Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RA5R-①-60-16-②-③-④-⑤	60	16	12.0	2.0	63.8	50 to 200 (Every 50mm)
RCS2-RA5R-①-60-8-②-③-④-⑤		8	25.0	5.0	127.5	
RCS2-RA5R-①-60-4-②-③-④-⑤		4	50.0	11.5	255.1	

Legend: ① Encoder type ② Stroke ③ Compatible Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	Stroke and Maximum Speed	
	50 to 250 (every 50mm)	300 (mm)
16	800	755
8	400	377
4	200	188

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code	
	RA5R	
	① Encoder type	
	Incremental	Absolute
50	I	A
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

④ 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.

⑤ Option Price List

Title	Option code	See page	Standard price
Cable Outlet Direction	A2	P437	—
Brake	B	P437	—
Flange	FL	P438	—
Foot bracket	FT	P440	—
Motor reversing on left specification (Standard)	ML	P444	—
Motor reversing on right specification	MR	P444	—

Actuator Specification

Item	Description
Drive method	Ball screw φ12mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Material: Aluminum, white alumite treatment
Rod diameter	φ30mm
Non-rotation accuracy of the rod	±0.7 degrees
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

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

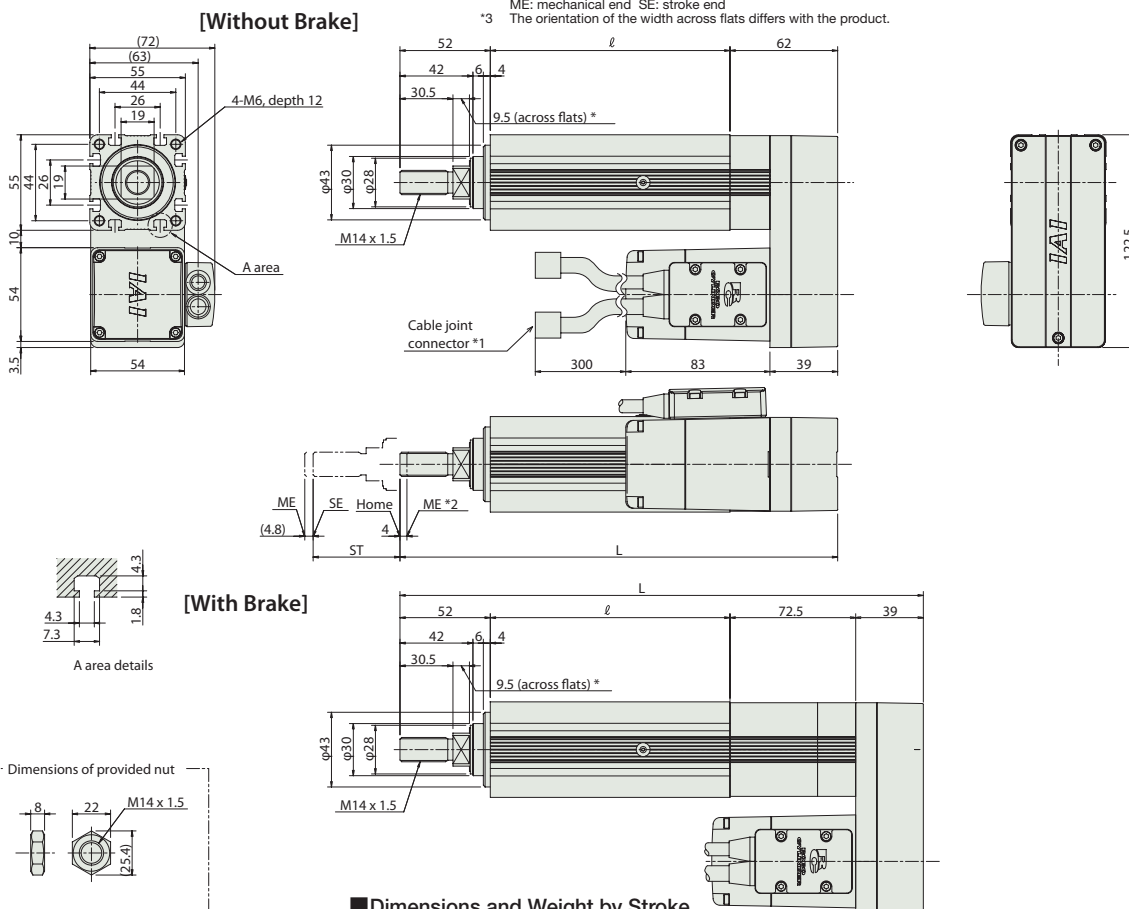
Information on special orders

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2D CAD

*Please note that for structural reasons, the reversed-home specification cannot be used for the RA5R type.

- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts during home return. ME: mechanical end SE: stroke end
- *3 The orientation of the width across flats differs with the product.



■ Dimensions and Weight by Stroke

RCS2-RA5R (without brake)

Stroke	50	100	150	200	250	300
L	252	302	352	402	452	502
φ	138	188	238	288	338	388
Weight (kg)	2.3	2.6	2.9	3.2	3.5	3.8

RCS2-RA5R (with brake)

Stroke	50	100	150	200	250	300
L	301.5	351.5	401.5	451.5	501.5	551.5
φ	138	188	238	288	338	388
Weight (kg)	2.6	2.9	3.2	3.5	3.8	4.1

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-60①-NP-2-②	Up to 512-point positioning possible	512 points	Single-phase AC 100V	Maximum 360VA *1-axis specification for 150W operation	-	P385
Solenoid valve mode			Same as solenoid valve Controlled operation enabled	7 points				
Serial communication type			Serial communications Special type	64 points	Single-phase AC 200V			
Pulse train input control type			Pulse train input type Special type	(-)	Three-phase AC 200V (XSEL-P/Q only)			
Program control 1-2 axis type		SSEL-C-1-60①-NP-2-②	Programmable type capable of operating up to 2 axes	20000 points	-	-	P415	
Program control 1-6 axis type		XSEL-③-1-60①-N1-EEE-2-④	Programmed operation enabled Can drive up to 6 axes	4000 points			-	P425

*SSEL, XSEL are for 1-axis specification.
 *① Indicates the encoder type (I: Incremental/A: Absolute).
 *② Indicates the power supply voltage type (1: 100V/2: single-phase 200V).
 *③ Indicates the XSEL type (J/K/P/Q).
 *④ Indicates the power supply voltage type (1: 100V/2: single-phase, 200V/3: three-phase, 200V).

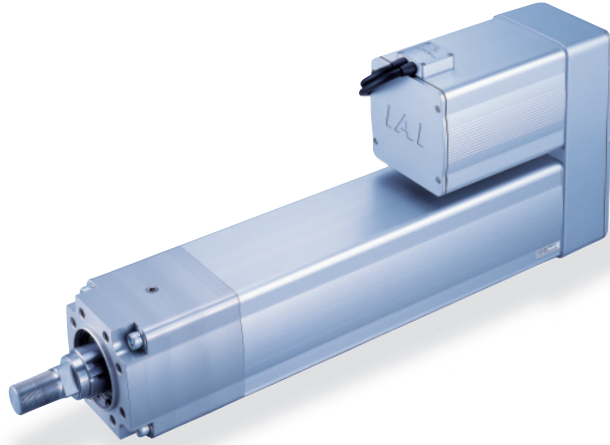
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor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

RCS2-RA13R

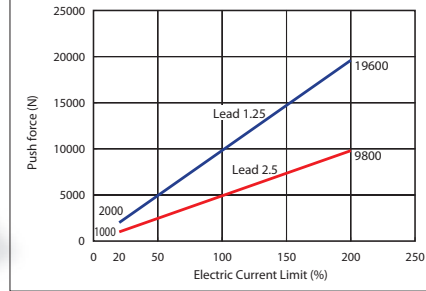
ROBO Cylinder, Super-high Thrust Rod Type, Actuator Dimensions 130mm, 200-V Servo Motor, Reverse-mounted Motor Specification

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

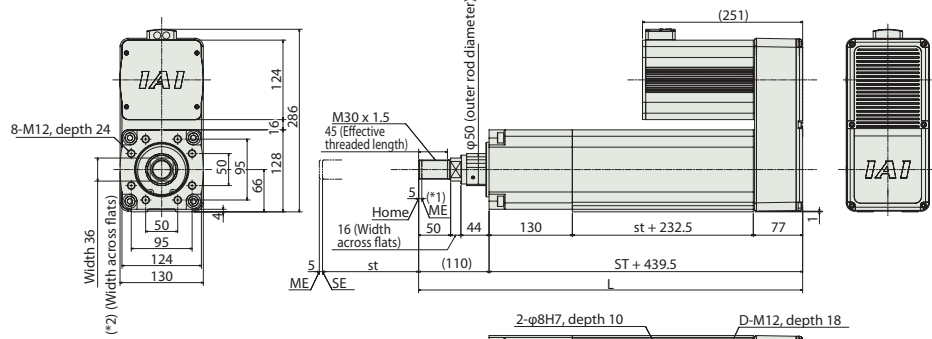
Dimensional Drawings

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



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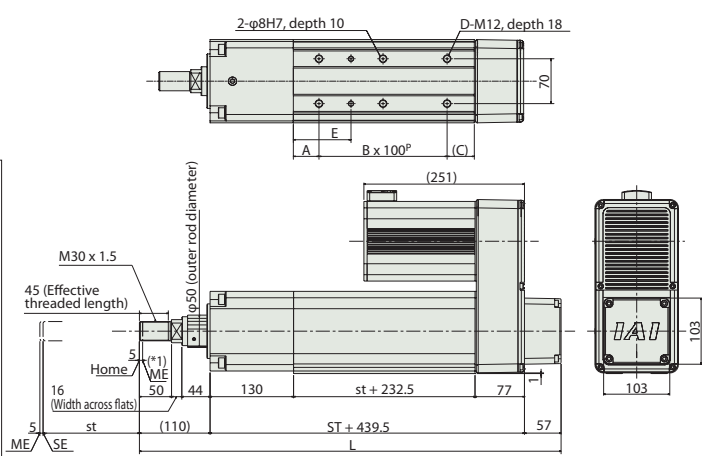
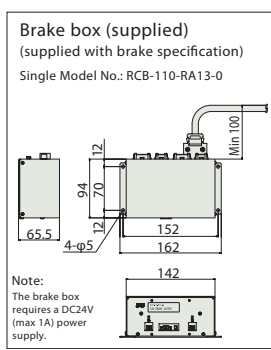
[Without Brake]



- *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.

[With Brake]



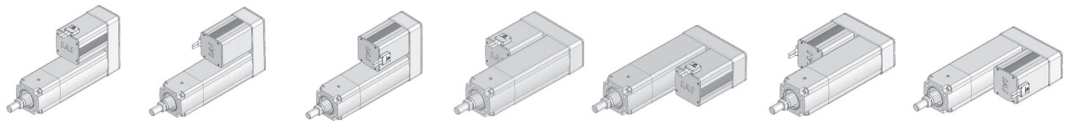
■ Dimensions and Weight by Stroke

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	MT1	MT2	MT3	MR1	ML1	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	—	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).

- 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 20 P
- Pulse Motor 28 P
- Pulse Motor 35 P
- Pulse Motor 42 P
- Pulse Motor 56 P
- Pulse Motor 86 P
- Servo Motor 10 W
- Servo Motor 20 W
- Servo Motor 30 W
- Servo Motor 60 W
- Servo Motor 100 W
- Servo Motor 150 W
- Servo Motor 750 W

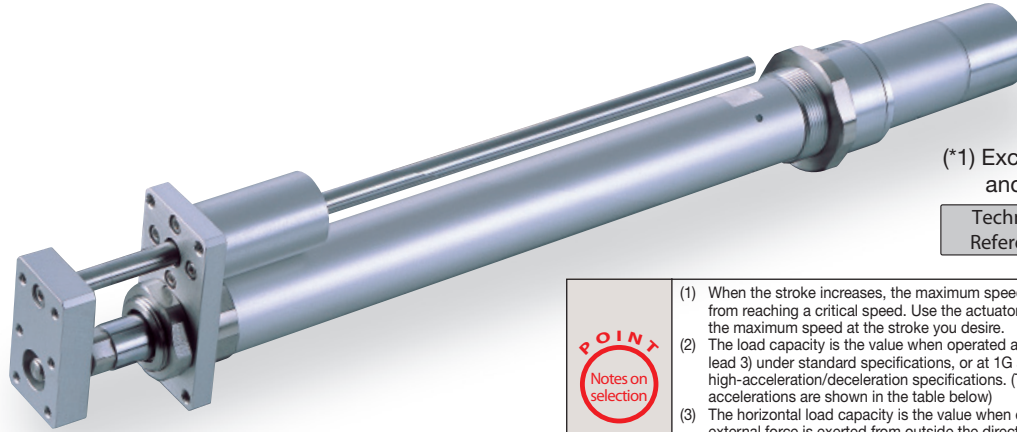
RCS2-RGS4C

ROBO Cylinder, Single-guided Rod Type, Actuator Width 37mm, 200-V Servo Motor, Coupling Specification

Model Description **RCS2 — RGS4C**

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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.



High-acceleration/
deceleration (*1)

(*1) Excluding all 20W models and 30W-lead 3

Technical Reference P. 451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The load capacity is the value when operated at 0.3G acceleration (0.2G with lead 3) under standard specifications, or at 1G acceleration (except lead 3) under high-acceleration/deceleration specifications. (The maximum capacity loads for accelerations are shown in the table below)
 - (3) 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. Refer to the technical materials (P500) for weights that can be used in the accessory guide unit.

Actuator Specification Table					
Leads and Payloads					
Model	Motor output	Lead (mm)	Max. payload		Thrust (N)
			Horizontal (kg)	Vertical (kg)	
RCS2-RGS4C-①-20-12-②-③-④-⑤	20	12	3.0	0.5	18.9
RCS2-RGS4C-①-20-6-②-③-④-⑤		6	6.0	1.5	37.7
RCS2-RGS4C-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4
RCS2-RGS4C-①-30-12-②-③-④-⑤	30	12	4.0	1.0	28.3
RCS2-RGS4C-①-30-6-②-③-④-⑤		6	9.0	2.5	56.6
RCS2-RGS4C-①-30-3-②-③-④-⑤		3	18.0	6.0	113.1

Legend: ① Encoder type ② Stroke ③ Compatible Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed		
Stroke	50 to 300 (Every 50mm)	
12	600	
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RGS4C			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

④ 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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	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.

⑤ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
High-acceleration/deceleration (*1)	HA	P442	—
Home check sensor (*2)	HS	P442	—
Reversed-home specification	NM	P442	—
Trunion (rear)	TRR	P446	—

(*1) High-acceleration/deceleration cannot be used with any 20W models or 30W-lead 3.
 (*2) Home check sensor cannot be used with reversed-home specification.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-guide, φ10mm Diameter Guide, Rod Ball Push Type
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±0.05 degrees
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

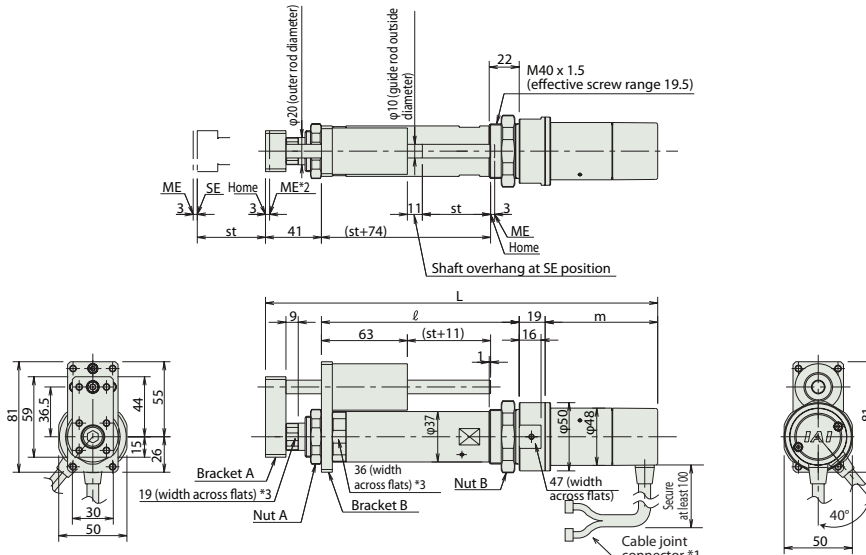
*1 Connect the motor-encoder cable. See P394 for cable details.
*2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts during home return. ME: mechanical end SE: stroke end

*3 The width direction across flats orientation differs with the product.

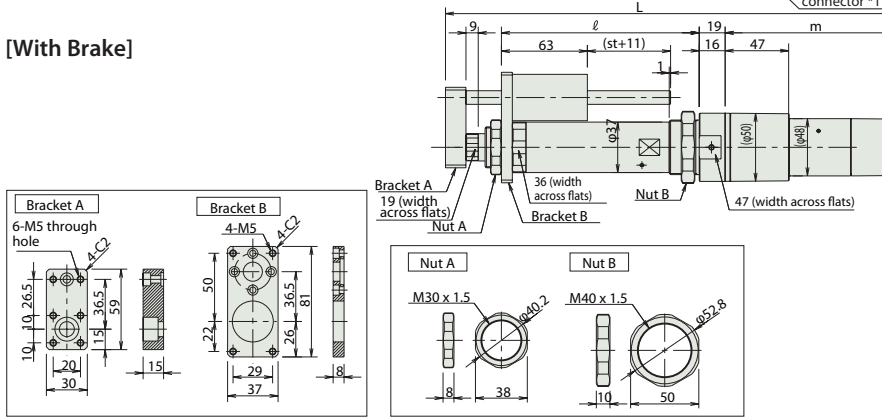
Information on special orders

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[Without Brake]



[With Brake]



■ Dimensions and Weight by Stroke

RCS2-RGS4C (without brake)

Stroke	50	100	150	200	250	300	
L	20W	285.5	335.5	385.5	435.5	485.5	535.5
	30W	300.5	350.5	400.5	450.5	500.5	550.5
φ	145	195	245	295	345	395	
m	20W	80.5					
	30W	95.5					
Weight (kg)	1.5	1.6	1.8	2.0	2.2	2.4	

RCS2-RGS4C (with brake)

Stroke	50	100	150	200	250	300	
L	20W	328.5	378.5	428.5	478.5	528.5	578.5
	30W	343.5	393.5	443.5	493.5	543.5	593.5
φ	145	195	245	295	345	395	
m	20W	123.5					
	30W	138.5					
Weight (kg)	1.7	1.8	2.0	2.2	2.4	2.6	

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-20①-NP-2-③ SCON-C-30D①②-NP-2-③	Up to 512-point positioning possible	512 points	Single-phase AC 100V	Maximum 360VA *1-axis specification For 150W operation	-	P385
Solenoid valve mode			Same as solenoid valve Controlled operation enabled	7 points				
Serial communication type			Serial communications Special type	64 points	Single-phase AC 200V			
Pulse train input control type			Pulse train input type Special type	(-)	Three-phase AC 200V (XSEL-P/Q only)			
Program control 1-2 axis type		SSEL-C-1-20①-NP-2-③ SSEL-C-1-30D①②-NP-2-③	Programmable type capable of operating up to 2 axes	20000 points	-	-	P415	
Program control 1-6 axis type		XSEL-④-1-20①-N1-EEE-2-⑤ XSEL-④-1-30D①②-N1-EEE-2-⑤	Programmed operation enabled Can drive up to 6 axes	4000 points			-	P425

*SSEL, XSEL are for 1-axis specification.
① Indicates the encoder type (I: Incremental/A: Absolute).
② HA indicates high-acceleration/deceleration.
③ Indicates the power supply voltage type (1: 100V/2: single-phase 200V).
④ Indicates XSEL type (J/K/P/Q).
⑤ Indicates the power supply voltage type (1: 100V, 2: single-phase 200V, 3: three-phase 200V).

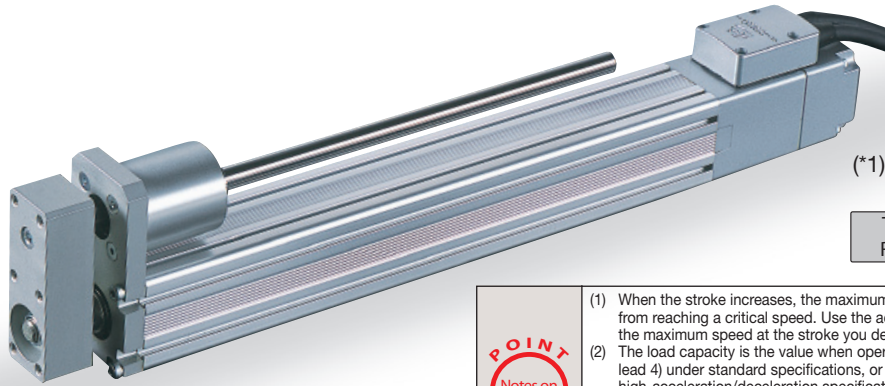
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reverse-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor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

RCS2-RGS5C

ROBO Cylinder, Single-guided Rod Type, Actuator Width 55mm, 200-V Servo Motor, Coupling Specification

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification A: Absolute specification	60: Servo motor 60W 100: Servo motor 100W	16: 16mm 8: 8mm 4: 4mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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.



High-acceleration/
deceleration (*1)

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

Technical Reference P. 451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The load capacity is the value when operated at 0.3G acceleration (0.2G with lead 4) under standard specifications, or at 1G acceleration (except lead 4) under high-acceleration/deceleration specifications. (The maximum capacity loads for accelerations are shown in the table below)
 - (3) 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. Refer to the technical materials (P500) for weights that can be used in the accessory guide unit.

Actuator Specification Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RGS5C-①-60-16-②-③-④-⑤	60	16	12.0	1.3	63.8	50 to 300 (Every 50mm)
RCS2-RGS5C-①-60-8-②-③-④-⑤		8	25.0	4.3	127.5	
RCS2-RGS5C-①-60-4-②-③-④-⑤	4	50.0	10.8	255.1		
RCS2-RGS5C-①-100-16-②-③-④-⑤	100	16	15.0	2.8	105.8	
RCS2-RGS5C-①-100-8-②-③-④-⑤		8	30.0	8.3	212.7	
RCS2-RGS5C-①-100-4-②-③-④-⑤		4	60.0	17.3	424.3	

Legend: ① Encoder type ② Stroke ③ Compatible Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

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

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RGS5C			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	60W	100W	60W	100W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

⑤ Option Price List

Title	Option code	See page	Standard price
Change the cable connector outlet direction	A2	P437	—
Brake	B	P437	—
Foot bracket	FT	P441	—
Change guide orientation	GS2 to GS4	Page at right	—
High-acceleration/deceleration (*1)	HA	P442	—

(*1) High-acceleration/deceleration cannot be used with any 60W models or 100W-lead 4.

④ 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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	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.

Actuator Specification

Item	Description
Drive method	Ball screw φ12mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-guide, φ12mm Diameter Guide, Rod Ball Push Type
Rod diameter	φ30mm
Non-rotation accuracy of the rod	±0.1 degrees
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

Information on special orders

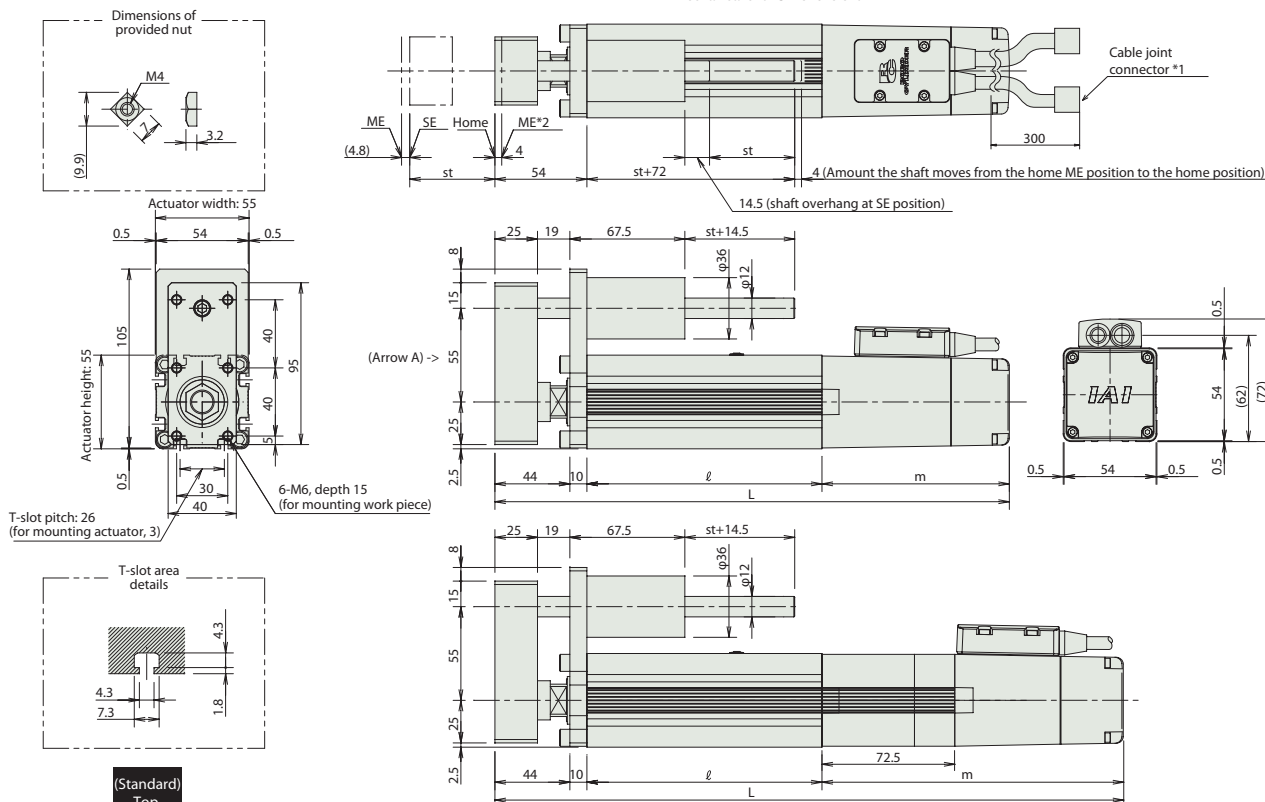
P. 454

2D CAD

3D CAD

*Please note that for structural reasons, the reversed-home specification cannot be used for the RGSSC type.

- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts during home return. ME: mechanical end SE: stroke end



■ Dimensions and Weight by Stroke

RCS2-RGSSC

Stroke	50	100	150	200	250	300	
L	60W	284	334	384	434	484	534
	100W	302	352	402	452	502	552
φ	138	188	238	288	338	388	
m	60W	92					
	100W	110					
Weight (kg)	2.5	2.8	3.2	3.6	3.9	4.3	

RCS2-RGS5C (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
φ	138	188	238	288	338	388	
m	60W	164.5					
	100W	182.5					
Weight (kg)	2.8	3.1	3.5	3.9	4.2	4.6	

Guide mounting orientation (for arrow A)

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-60①-NP-2-③ SCON-C-100①②-NP-2-③	Up to 512-point positioning possible	512 points	Single-phase AC 100V Single-phase AC 200V Three-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1-axis specification For 150W operation	-	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	(-)				
Program control 1-2 axis type		SSEL-C-1-60①-NP-2-③ SSEL-C-1-100①②-NP-2-③	Programmable type capable of operating up to 2 axes	20000 points			-	P415
Program control 1-6 axis type		XSEL-④-1-60①-N1-EEE-2-⑤ XSEL-④-1-100①②-N1-EEE-2-⑤	Programmed operation enabled Can drive up to 6 axes	4000 points			-	P425

*SSEL, XSEL are for 1-axis specification.
 *① Indicates the encoder type (I: Incremental/A: Absolute).
 *② HA indicates high-acceleration/deceleration.
 *③ Indicates the power supply voltage type (1: 100V/2: single-phase 200V).
 *④ Indicates XSEL type (J/K/P/Q).
 *⑤ Indicates the power supply voltage type (1: 100V, 2: single-phase 200V, 3: three-phase 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

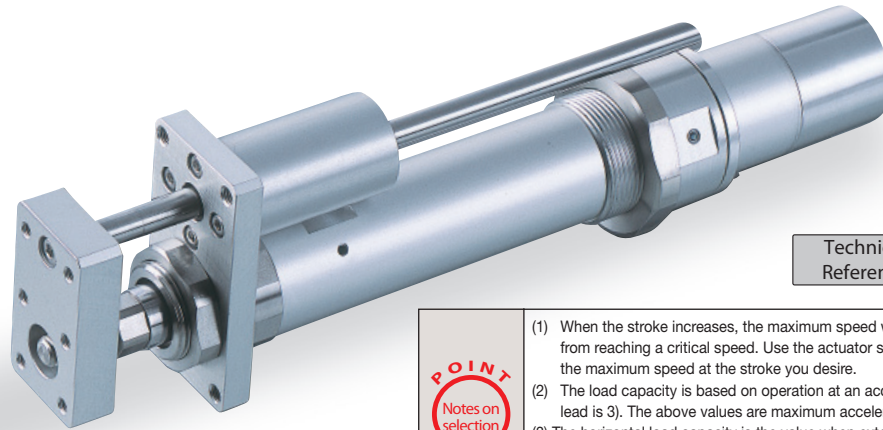
RCS2-RGS4D

ROBO Cylinder, Single-guided Rod Type, Actuator Width 37mm, 200-V Servo Motor, Built-in Motor Specification

Model Description **RCS2 — RGS4D**

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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.



Technical Reference P. 451

- POINT**
Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - The load capacity is based on operation at an acceleration of 0.3G (or 0.2G if the lead is 3). 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. Refer to the technical materials (P500) for weights that can be used in the accessory guide unit.

Actuator Specification Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RGS4D-①-20-12-②-③-④-⑤	20	12	3.0	0.5	18.9	50 to 300 (Every 50mm)
RCS2-RGS4D-①-20-6-②-③-④-⑤		6	6.0	1.5	37.7	
RCS2-RGS4D-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4	
RCS2-RGS4D-①-30-12-②-③-④-⑤	30	12	4.0	1.0	28.3	
RCS2-RGS4D-①-30-6-②-③-④-⑤		6	9.0	2.5	56.6	
RCS2-RGS4C-①-30-3-②-③-④-⑤		3	18.0	6.0	113.1	

Legend: ① Encoder type ② Stroke ③ Compatible Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RGS4D			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

⑤ Option Price List

Title	Option code	See page	Standard price
Foot bracket	FT	P440	—
Home check sensor	HS	P442	—
Reversed-home specification	NM	P442	—
Trunion (rear)	TRR	P446	—

*The home check sensor cannot be used with the reversed-home specification.

④ 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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	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.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-guide, φ10mm Diameter Guide, Rod Ball Push Type
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±0.05 degrees
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Dimensional Drawings

CAD drawings can be downloaded from the website.

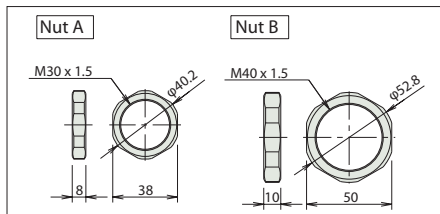
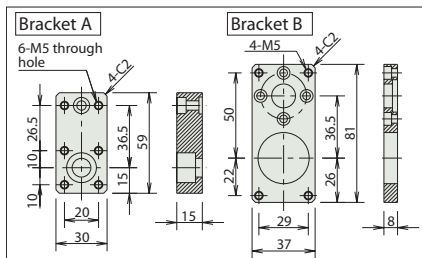
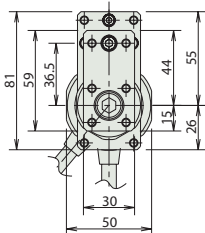
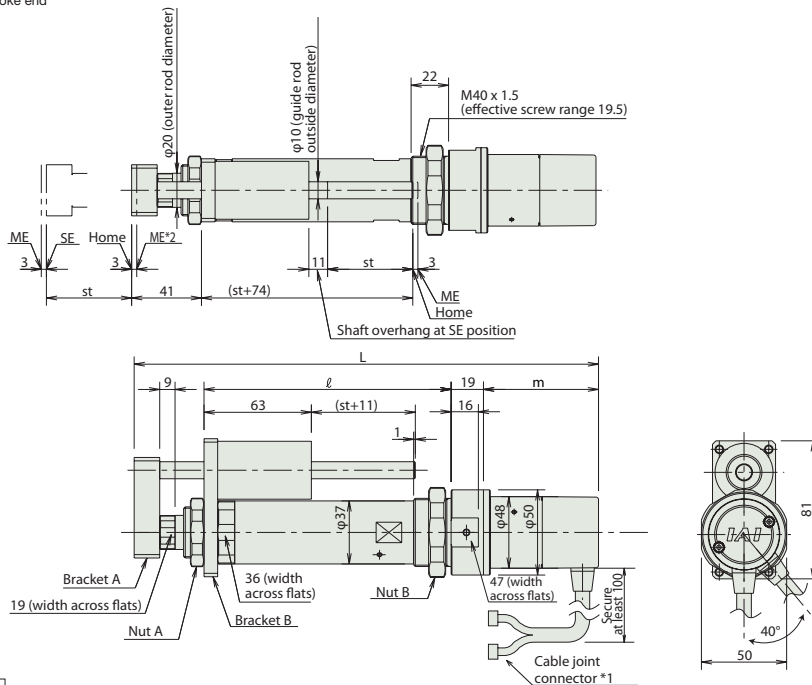
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Information on special orders

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2D CAD

- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts during home return. ME: mechanical end SE: stroke end



■ Dimensions and Weight by Stroke

RCS2-RGS4D (without brake)							
Stroke	50	100	150	200	250	300	
L	20W	263.5	313.5	363.5	413.5	463.5	513.5
	30W	278.5	328.5	378.5	428.5	478.5	528.5
q	145	195	245	295	345	395	
m	20W	58.5					
	30W	73.5					
Weight (kg)	1.3	1.5	1.7	1.9	2.1	2.3	

No brake-equipped setting for RCS2-RGS4D.

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-20①-NP-2-② SCON-C-30D①-NP-2-②	Up to 512-point positioning possible	512 points	Single-phase AC 100V	Maximum 360VA *1-axis specification For 150W operation	-	P385
Solenoid valve mode			Same as solenoid valve Controlled operation enabled	7 points				
Serial communication type			Serial communications Special type	64 points	Single-phase AC 200V			
Pulse train input control type			Pulse train input type Special type	(-)	Three-phase AC 200V (XSEL-P/Q only)			
Program control 1-2 axis type		SSEL-C-1-20①-NP-2-② SSEL-C-1-30D①-NP-2-②	Programmable type capable of operating up to 2 axes	20000 points			-	P415
Program control 1-6 axis type		XSEL-③-1-20①-N1-EEE-2-④ XSEL-③-1-30D①-N1-EEE-2-④	Programmed operation enabled Can drive up to 6 axes	4000 points			-	P425

*SSEL, XSEL are for 1-axis specification.
 *① Indicates the encoder type (1: Incremental/A: Absolute).
 *② Indicates the power supply voltage type (1: 100V/2: single-phase 200V).
 *③ Indicates the XSEL type (J/K/P/Q).
 *④ Indicates the power supply voltage type (1: 100V/2: single-phase, 200V/3: three-phase, 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

RCS2-RGS7AD

ROBO Cylinder, Single-guided Rod Type, Actuator Width 75mm, 200-V Servo Motor, Built-in Motor (Direct connection) Specification

Model Description	RCS2	—RGS7AD—	I	—	—	—	—	—	—	—
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option		
I: Incremental specification			60: Servo motor 60W 100: Servo motor 100W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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. *Lead 3 setting is only for 60W.



Technical Reference P. 451

- POINT**
Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - The load capacity is the value when a 60W motor is operated at 0.15G acceleration (lead 12), 0.1G (lead 6), or 0.05G (lead 3), or when a 100W motor is operated at 0.2G acceleration (lead 12) or 0.1G (lead 6).
 - 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. Refer to the technical materials (P500) for weights that can be used in the accessory guide unit.

Actuator Specification Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RGS7AD-I-60-12-①-②-③-④	60	12	10.0	1.5	85.3	50 to 300 (every 50mm)
RCS2-RGS7AD-I-60-6-①-②-③-④		6	20.0	6.0	169.5	
RCS2-RGS7AD-I-60-3-①-②-③-④		3	40.0	14.5	340.1	
RCS2-RGS7AD-I-100-12-①-②-③-④	100	12	15.0	4.5	141.1	
RCS2-RGS7AD-I-100-6-①-②-③-④		6	30.0	11.5	283.2	

Legend: ① Stroke ② Compatible Controller ③ Cable length ④ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 250 (every 50mm)		300 (mm)
		600	250	
12	600	600	250	505
6	300	300	250	250
3	150	150	125	125

(Unit = mm/s)

① Pricing List By Stroke

(1) Stroke (mm)	Type code	
	RGS7AD	
	Encoder type	
	Incremental	
	Motor wattage (W)	
	60W	100W
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

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
Change the cable connector outlet direction	A1 to A3	P437	—
Brake	B	P437	—
Foot bracket	FT	P441	—
Change guide orientation	GS2 to GS4	Page at right	—

Actuator Specification

Item	Description
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Guide	Single-guide, ϕ 16mm Diameter Guide, Rod Ball Push Type
Rod diameter	ϕ 30mm
Non-rotation accuracy of the rod	\pm 0.1 degrees
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

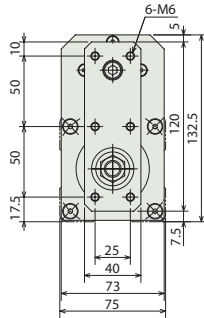
Information on special orders

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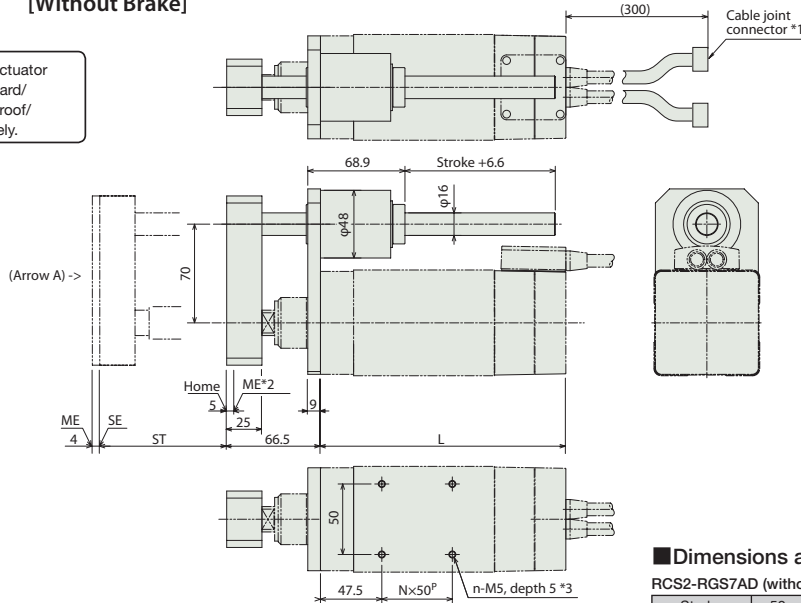
2D CAD

*Please note that for structural reasons, the reversed-home specification cannot be used for the RGS7AD type.

Caution
A slit is provided in the side of the actuator body to prevent pauses due to forward/backward operation. Request dirt-proof/splash-proof specifications separately.

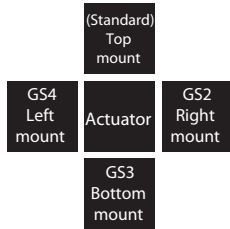


[Without Brake]



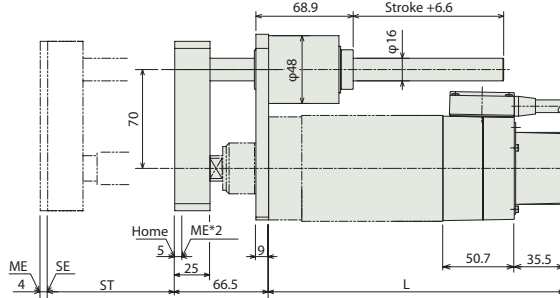
- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ST: stroke
SE: stroke end
ME: mechanical end

Caution
*3 There are no mounting holes in the bottom face for 100W-50 stroke. Please note that there is only one set of mounting holes (2 holes) in the bottom face for 60W-50 stroke and 100W-100 stroke.



Guide mounting orientation (for arrow A)

[With Brake]



■ Dimensions and Weight by Stroke

RCS2-RGS7AD (without brake)

Stroke		50	100	150	200	250	300
L	60W	128	178	228	278	328	378
	100W	-	-	1	2	3	4
	100W	-	-	1	2	3	4
n	60W	2	4	6	8	10	12
	100W	-	2	4	6	8	10
	100W	-	2	4	6	8	10
Weight (kg)	60W	3.2	3.8	4.3	4.8	5.3	5.9
	100W	3.3	3.9	4.4	4.9	5.4	6.0

RCS2-RGS7AD (with brake)

Stroke		50	100	150	200	250	300
L	60W	163.5	213.5	263.5	313.5	363.5	413.5
	100W	-	-	1	2	3	4
	100W	-	-	1	2	3	4
n	60W	2	4	6	8	10	12
	100W	-	2	4	6	8	10
	100W	-	2	4	6	8	10
Weight (kg)	60W	3.5	4.1	4.6	5.1	5.6	6.2
	100W	3.6	4.2	4.7	5.2	5.7	6.3

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-60I-NP-2-① SCON-C-100I-NP-2-①	Up to 512-point positioning possible	512 points	Single-phase AC 100V Single-phase AC 200V Three-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1-axis specification For 150W operation	-	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	(-)				
Program control 1-2 axis type		SSEL-C-1-60I-NP-2-① SSEL-C-1-100I-NP-2-①	Programmable type capable of operating up to 2 axes	20000 points			-	P415
Program control 1-6 axis type		XSEL-②-1-60I-N1-EEE-2-③ XSEL-②-1-100I-N1-EEE-2-③	Programmed operation enabled Can drive up to 6 axis	4000 points			-	P425

CAUTION: Please note that the 5-axis /6-axis of the XSEL-P/Q type controllers cannot be connected to RA7D/RA7BD type actuators.

*SSEL, XSEL are for 1-axis specification.
*① Indicates the power supply voltage type (1: 100V, 2: single-phase 200V).
*② Indicates the XSEL type (J/K/P/Q) entered.
*③ Indicates the power supply voltage type (1: 100V, 2: single-phase, 3: three-phase 200V).

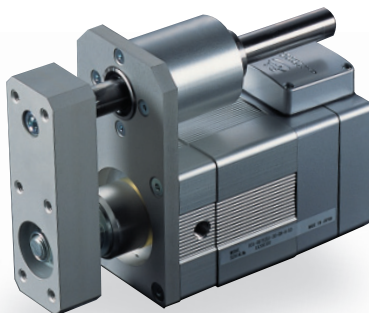
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reverse-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor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

RCS2-RGS7BD

ROBO Cylinder, Single-guided Rod Type, Actuator Width 75mm, 200-V Servo Motor, Built-in Motor (Direct connection) Specification

Model Description	RCS2-RGS7BD-I								
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	
I: Incremental specification			100: Servo motor100W 150: Servo motor150W	16: 16mm 8: 8mm 4: 4mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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. * The lead 4 setting is only for 100W.



Technical Reference P. 451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The load capacity is the value when a 100W motor is operated at 0.25G acceleration (lead 16), 0.17G (lead 8), or 0.1G (lead 4), or when a 150W motor is operated at 0.3G acceleration (lead 16) or 0.2G (lead 8).
 - (3) 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. Refer to the technical materials (P500) for weights that can be used in the accessory guide unit.

Actuator Specification Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RGS7BD-I-100-16-①-②-③-④	100	16	10.0	2.5	105.8	50 to 300 (every 50mm)
RCS2-RGS7BD-I-100-8-①-②-③-④		8	22.0	8.0	212.7	
RCS2-RGS7BD-I-100-4-①-②-③-④		4	40.0	18.5	424.3	
RCS2-RGS7BD-I-150-16-①-②-③-④	150	16	15.0	5.5	158.8	
RCS2-RGS7BD-I-150-8-①-②-③-④		8	35.0	13.5	318.5	

Legend: ① Stroke ② Compatible Controller ③ Cable length ④ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 300 (every 50mm)
	16	800
8	400	
4	200	

(Unit = mm/s)

① Pricing List By Stroke

(1) Stroke (mm)	Type code	
	RGS7BD	
	Encoder type	
	Incremental	
	Motor wattage (W)	Motor wattage (W)
	100W	150W
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

Note: There is no 50 stroke setting for 150W.

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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	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
Change the cable connector outlet direction	A1 to A3	P437	—
Brake	B	P437	—
Foot bracket	FT	P441	—
Change guide orientation	GS2 to GS4	Page at right	—

Actuator Specification

Item	Description
Drive method	Ball screw φ12mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Single-guide, φ16mm Diameter Guide, Rod Ball Push Type
Rod diameter	φ35mm
Non-rotation accuracy of the rod	±0.1 degrees
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

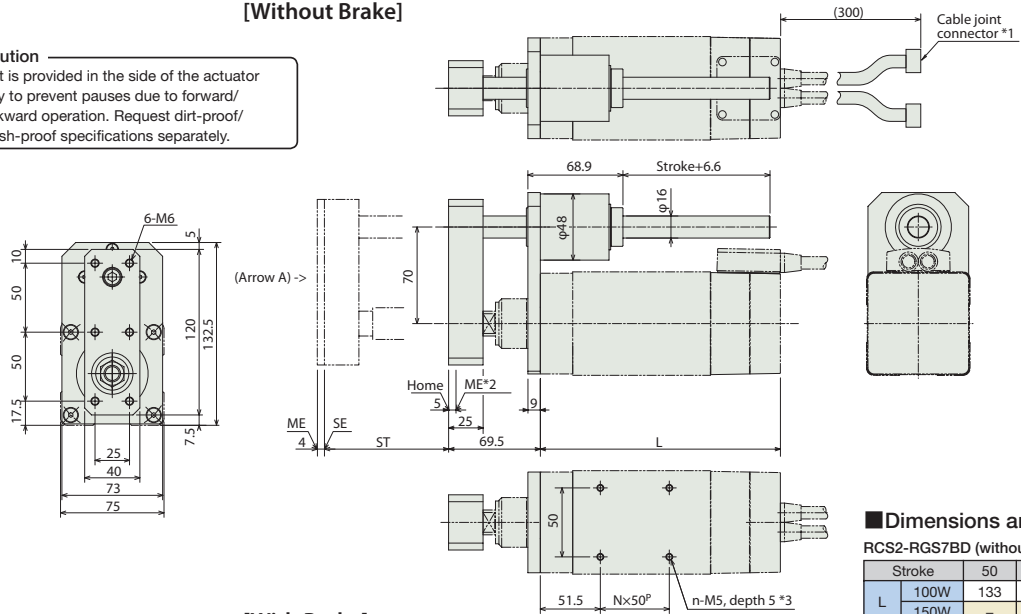
Information on special orders P. 454

2D CAD

*Please note that for structural reasons, the reversed-home specification cannot be used for the RGS7BD type.

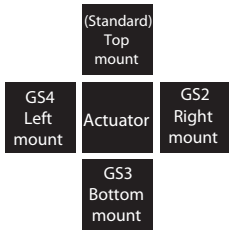
Caution
A slit is provided in the side of the actuator body to prevent pauses due to forward/backward operation. Request dirt-proof/splash-proof specifications separately.

[Without Brake]



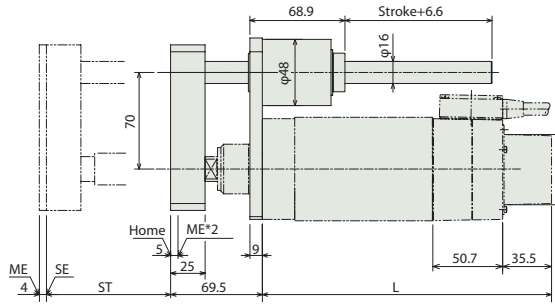
- *1 Connect the motor-encoder cable. See P394 for cable details.
 - *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
- ST: stroke
SE: stroke end
ME: mechanical end

Caution
*3 There is no 50W-50 stroke setting. There is no mounting hole in the bottom face for 100W-50 stroke. Please note that there is only one set of mounting holes (2 holes) in the bottom face for 100W and 150W-100 stroke.



Guide mounting orientation (for arrow A)

[With Brake]



■ Dimensions and Weight by Stroke

RCS2-RGS7BD (without brake)		Stroke	50	100	150	200	250	300
L	100W	133	183	233	283	333	383	
	150W	-	183	233	283	333	383	
N	100W	-	-	1	2	3	4	
	150W	-	-	1	2	3	4	
n	100W	-	2	4	6	8	10	
	150W	-	2	4	6	8	10	
Weight (kg)	100W	3.8	4.4	4.9	5.4	5.9	6.5	
	150W	-	4.5	5.0	5.5	6.0	6.6	

RCS2-RGS7BD (with brake)		Stroke	50	100	150	200	250	300
L	100W	168.5	218.5	268.5	318.5	368.5	418.5	
	150W	-	218.5	268.5	318.5	368.5	418.5	
N	100W	-	-	1	2	3	4	
	150W	-	-	1	2	3	4	
n	100W	-	2	4	6	8	10	
	150W	-	2	4	6	8	10	
Weight (kg)	100W	4.1	4.7	5.2	5.7	6.2	6.8	
	150W	-	4.8	5.3	5.8	6.3	6.9	

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-100I-NP-2-① SCON-C-150I-NP-2-①	Up to 512-point positioning possible	512 points	Single-phase AC 100V Single-phase AC 200V Three-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1-axis specification For 150W operation	-	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	(-)				
Program control 1-2 axis type		SSEL-C-1-100I-NP-2-① SSEL-C-1-150I-NP-2-①	Programmable type capable of operating up to 2 axes	20000 points			-	P415
Program control 1-6 axis type		XSEL-②-1-100I-N1-EEE-2-③ XSEL-②-1-150I-N1-EEE-2-③	Programmed operation enabled Can drive up to 6 axis	4000 points			-	P425

CAUTION: Please note that the 5-axis /6-axis of the XSEL-P/Q type controllers cannot be connected to RA7D/RA7BD type actuators.

*SSEL, XSEL are for 1-axis specification.
 *① Indicates the power supply voltage type (1: 100V, 2: single-phase 200V).
 *② Indicates the XSEL type (J/K/P/Q) entered.
 *③ Indicates the power supply voltage type (1: 100V, 2: single-phase, 3: three-phase 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

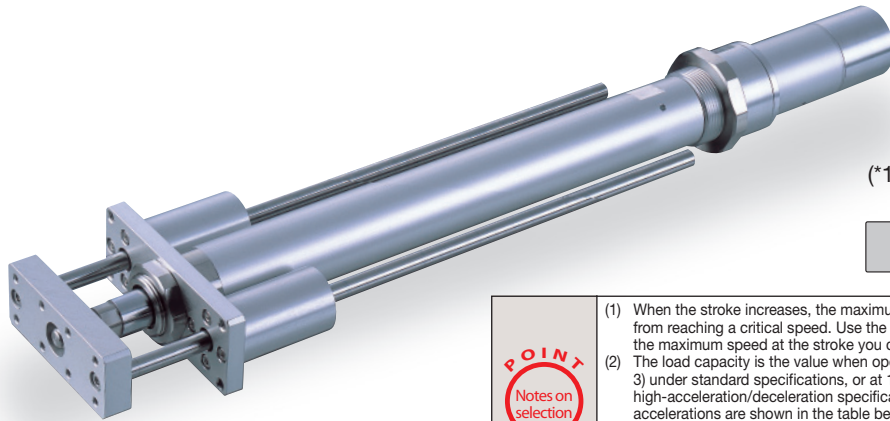
RCS2-RGD4C

ROBO Cylinder, Double-guided Rod Type, Actuator Diameter 37mm, 200-V Servo Motor, Coupling Specification

Model Description **RCS2-RGD4C**

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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.



High-acceleration/
deceleration

(*1)

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

Technical Reference P. 451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The load capacity is the value when operated at 0.3G acceleration (0.2G with lead 3) under standard specifications, or at 1G acceleration (except lead 3) under high-acceleration/deceleration specifications. (The maximum capacity loads for accelerations are shown in the table below)
 - (3) 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. Refer to the technical materials (P500) for weights that can be used in the accessory guide unit.

Actuator Specification Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RGD4C-①-20-12-②-③-④-⑤	20	12	3.0	0.5	18.9	50 to 300 (Every 50mm)
RCS2-RGD4C-①-20-6-②-③-④-⑤		6	6.0	1.5	37.7	
RCS2-RGD4C-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4	
RCS2-RGD4C-①-30-12-②-③-④-⑤	30	12	4.0	1.0	28.3	
RCS2-RGD4C-①-30-6-②-③-④-⑤		6	9.0	2.5	56.6	
RCS2-RGD4C-①-30-3-②-③-④-⑤		3	18.0	6.0	113.1	

Legend: ① Encoder type ② Stroke ③ Compatible Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RGD4C			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

⑤ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
High-acceleration/deceleration (*1)	HA	P442	—
Home check sensor (*2)	HS	P442	—
Reversed-home specification	NM	P442	—
Trunion (rear)	TRR	P446	—

(*1) High-acceleration/deceleration cannot be used with any 20W models or 30W-lead 3.

(*2) Home check sensor cannot be used with reversed-home specification.

④ 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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	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.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Double-guide, φ10mm Diameter Guide, Rod Ball, Push Type
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±0.05 degrees
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

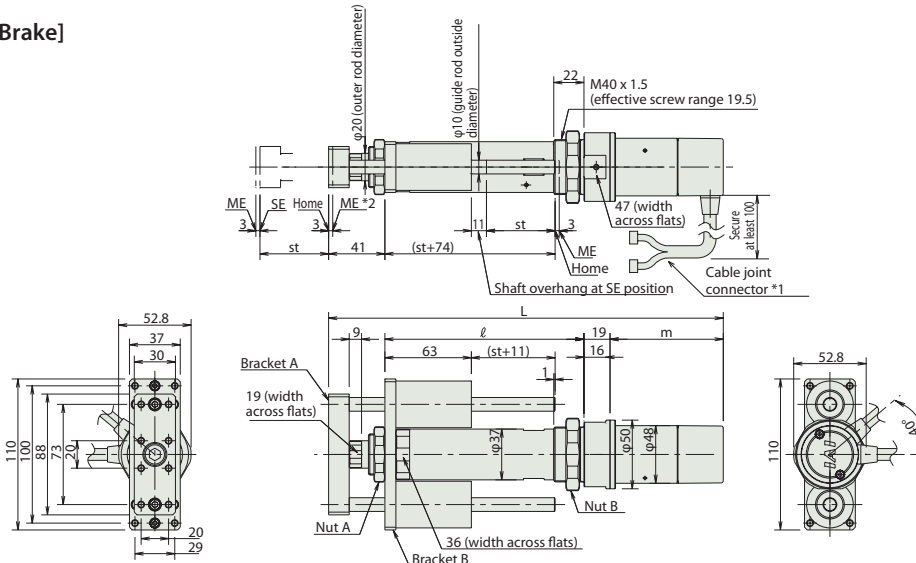
3D CAD

- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts during home return. ME: mechanical end SE: stroke end

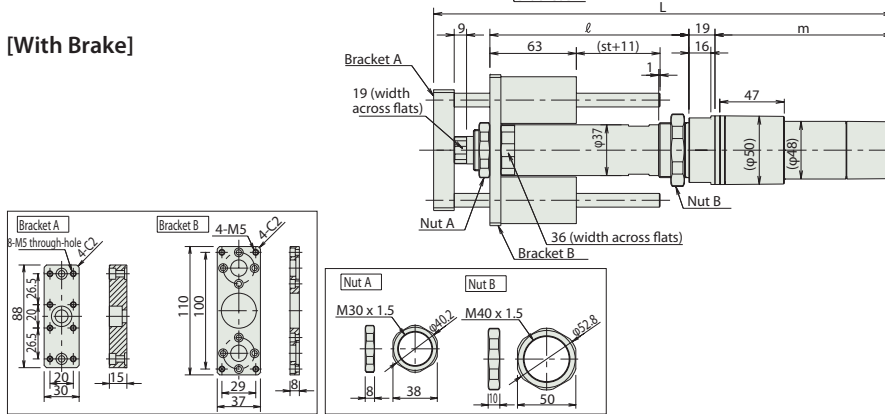
Information on special orders

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[Without Brake]



[With Brake]



■ Dimensions and Weight by Stroke

RCS2-RGD4C (without brake)							
Stroke	50	100	150	200	250	300	
L	20W	285.5	335.5	385.5	435.5	485.5	535.5
	30W	300.5	350.5	400.5	450.5	500.5	550.5
φ	145	195	245	295	345	395	
m	20W	80.5					
	30W	95.5					
Weight (kg)	1.8	2.0	2.2	2.4	2.6	2.8	

RCS2-RGD4C (with brake)							
Stroke	50	100	150	200	250	300	
L	20W	328.5	378.5	428.5	478.5	528.5	578.5
	30W	343.5	393.5	443.5	493.5	543.5	593.5
φ	145	195	245	295	345	395	
m	20W	123.5					
	30W	138.5					
Weight (kg)	2.0	2.2	2.4	2.6	2.8	3.0	

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-20①-NP-2-③ SCON-C-30D①②-NP-2-③	Up to 512-point positioning possible	512 points	Single-phase AC 100V Single-phase AC 200V Three-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1-axis specification For 150W operation	-	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	(-)				
Program control 1-2 axis type		SSEL-C-1-20①-NP-2-③ SSEL-C-1-30D①②-NP-2-③	Programmable type capable of operating up to 2 axes	20000 points			-	P415
Program control 1-6 axis type		XSEL-④-1-20①-N1-EEE-2-⑤ XSEL-④-1-30D①②-N1-EEE-2-⑤	Programmed operation enabled Can drive up to 6 axes	4000 points			-	P425

*SSEL, XSEL are for 1-axis specification.
 ① Indicates the encoder type (1: Incremental/A: Absolute).
 ② HA indicates high-acceleration/deceleration.
 ③ Indicates the power supply voltage type (1: 100V/2: single-phase 200V).
 ④ Indicates XSEL type (J/K/P/Q).
 ⑤ Indicates the power supply voltage type (1: 100V, 2: single-phase 200V, 3: three-phase 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

RCS2-RGD5C

ROBO Cylinder, Double-guided Rod Type, Actuator Width 55mm, 200-V Servo Motor, Coupling Specification

Model Description **RCS2 — RGD5C**

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification A: Absolute specification	60: Servo motor 60W 100: Servo motor 100W	16: 16mm 8: 8mm 4: 4mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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.



High-acceleration/
deceleration (*1)

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

Technical Reference P. 451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The load capacity is the value when operated at 0.3G acceleration (0.2G with lead 4) under standard specifications, or at 1G acceleration (except lead 4) under high-acceleration/deceleration specifications. (The maximum capacity loads for accelerations are shown in the table below)
 - (3) 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. Refer to the technical materials (P500) for weights that can be used in the accessory guide unit.

Actuator Specification Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RGD5C-①-60-16-②-③-④-⑤	60	16	12.0	1.3	63.8	50 to 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	

Legend: ① Encoder type ② Stroke ③ Compatible Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

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

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RGD5C			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	60W	100W	60W	100W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

⑤ Option Price List

Title	Option code	See page	Standard price
Change the cable connector outlet direction	A2	P437	—
Brake	B	P437	—
Foot bracket	FT	P441	—
High-acceleration/deceleration (*1)	HA	P442	—

(*1) High-acceleration/deceleration cannot be used with any 60W models or 100W-lead 4.

④ 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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	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.

Actuator Specification

Item	Description
Drive method	Ball screw φ12mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Double-guide, φ12mm Diameter Guide, Rod Ball, Push Type
Rod diameter	φ30mm
Non-rotation accuracy of the rod	±0.08 degrees
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

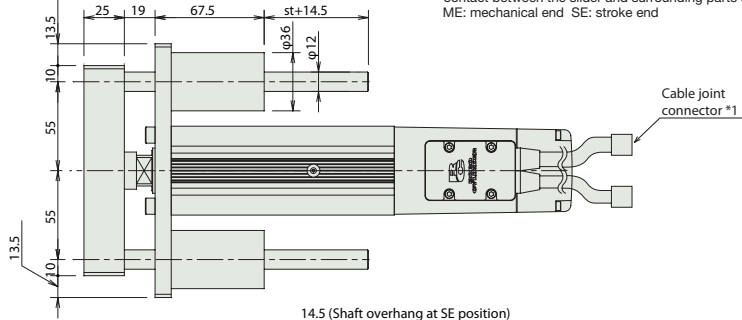
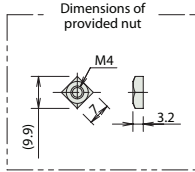
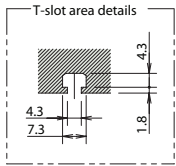


*Please note that for structural reasons, the reversed-home specification cannot be used for the RGD5C type.

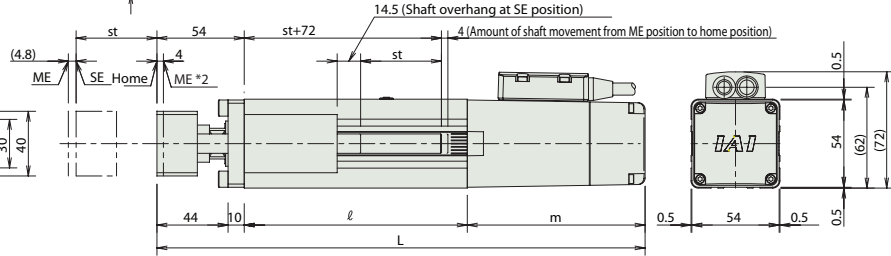
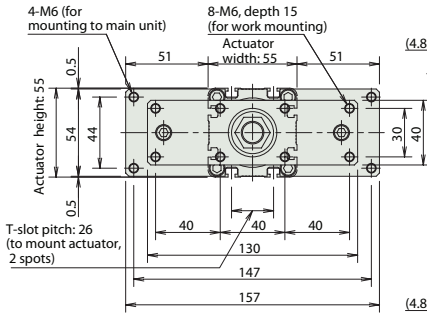
Information on special orders

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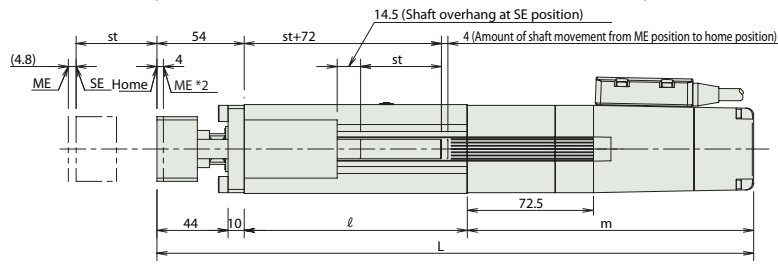
[Without Brake]



- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts during home return. ME: mechanical end SE: stroke end



[With Brake]



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
∅	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
∅	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	

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-60①-NP-2-③ SCON-C-100①②-NP-2-③	Up to 512-point positioning possible	512 points	Single-phase AC 100V	Maximum 360VA *1-axis specification For 150W operation	-	P385
Solenoid valve mode			Same as solenoid valve Controlled operation enabled	7 points				
Serial communication type			Serial communications Special type	64 points	Single-phase AC 200V			
Pulse train input control type			Pulse train input type Special type	(-)	Three-phase AC 200V (XSEL-P/Q only)			
Program control 1-2 axis type		SSEL-C-1-60①-NP-2-③ SSEL-C-1-100①②-NP-2-③	Programmable type capable of operating up to 2 axes	20000 points	-	-	P415	
Program control 1-6 axis type		XSEL-④-1-60①-N1-EEE-2-⑤ XSEL-④-1-100①②-N1-EEE-2-⑤	Programmed operation enabled Can drive up to 6 axes	4000 points			-	P425

*SSEL, XSEL are for 1-axis specification.
 ① Indicates the encoder type (I: Incremental/A: Absolute).
 ② HA indicates high-acceleration/deceleration.
 ③ Indicates the power supply voltage type (1: 100V/2: single-phase 200V).
 ④ Indicates XSEL type (J/K/P/Q).
 ⑤ Indicates the power supply voltage type (1: 100V, 2: single-phase 200V, 3: three-phase 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- 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

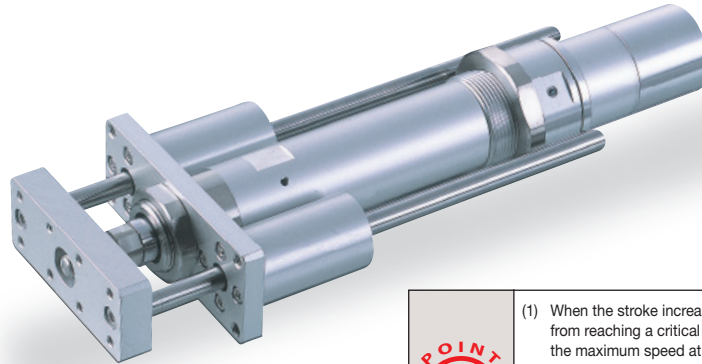
RCS2-RGD4D

ROBO Cylinder, Double-guided Rod Type, Actuator Diameter 37mm, 200-V Servo Motor, Built-in Specification

Model Description **RCS2-RGD4D**

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification A: Absolute specification	20: Servo motor 20W 30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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.



Technical Reference P. 451

- POINT**
Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - The load capacity is based on operation at an acceleration of 0.3G (or 0.2G if the lead is 3). 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. Refer to the technical materials (P500) for weights that can be used in the accessory guide unit.

Actuator Specification Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RGD4D-①-20-12-②-③-④-⑤	20	12	3.0	0.5	18.9	50 to 300 (Every 50mm)
RCS2-RGD4D-①-20-6-②-③-④-⑤		6	6.0	1.5	37.7	
RCS2-RGD4D-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4	
RCS2-RGD4D-①-30-12-②-③-④-⑤	30	12	4.0	1.0	28.3	
RCS2-RGD4D-①-30-6-②-③-④-⑤		6	9.0	2.5	56.6	
RCS2-RGD4D-①-30-3-②-③-④-⑤		3	18.0	6.0	113.1	

Legend: ① Encoder type ② Stroke ③ Compatible Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	50 to 300 (Every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

① Pricing List By Encoder Type and ② Stroke

② Stroke (mm)	Type code			
	RGD4D			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage (W)		Motor wattage (W)	
	20W	30W	20W	30W
50	—	—	—	—
100	—	—	—	—
150	—	—	—	—
200	—	—	—	—
250	—	—	—	—
300	—	—	—	—

④ 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.

⑤ Option Price List

Title	Option code	See page	Standard price
Foot bracket	FT	P440	—
Home check sensor	HS	P442	—
Reversed-home specification	NM	P442	—
Trunion (rear)	TRR	P446	—

*The home check sensor cannot be used with the reversed-home specification.

Actuator Specification

Item	Description
Drive method	Ball screw φ10mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Double-guide, φ10mm Diameter Guide, Rod Ball, Push Type
Rod diameter	φ20mm
Non-rotation accuracy of the rod	±0.05 degrees
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

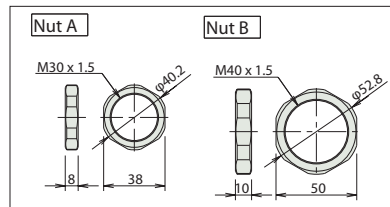
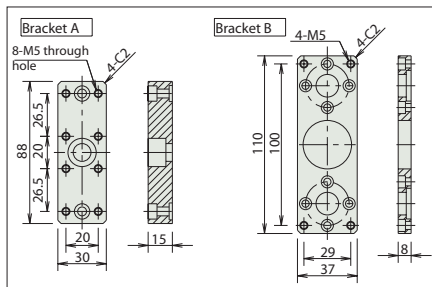
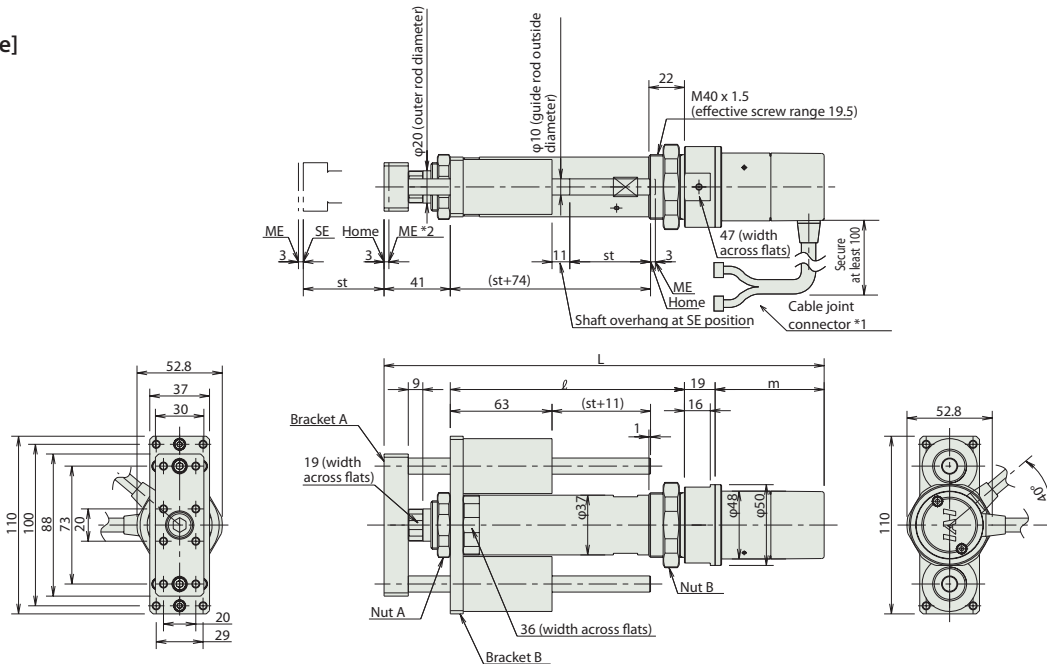
Information on special orders

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2D CAD

- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts during home return. ME: mechanical end SE: stroke end

[Without Brake]



■ Dimensions and Weight by Stroke

RCS2-RGD4D (without brake)

Stroke	50	100	150	200	250	300
L	20W	263.5	313.5	363.5	413.5	463.5
	30W	278.5	328.5	378.5	428.5	478.5
l	20W	145	195	245	295	345
	30W	58.5				
m	20W	73.5				
	30W	73.5				
Weight (kg)	1.6	1.8	2.1	2.3	2.5	2.7

No brake-equipped setting for RCS2-RGD4D.

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-20①-NP-2-② SCON-C-30D①-NP-2-②	Up to 512-point positioning possible	512 points	Single-phase AC 100V Single-phase AC 200V Three-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1-axis specification For 150W operation	-	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	(-)				
Program control 1-2 axis type		SSEL-C-1-20①-NP-2-② SSEL-C-1-30D①-NP-2-②	Programmable type capable of operating up to 2 axes	20000 points			-	P415
Program control 1-6 axis type		XSEL-③-1-20①-N1-EEE-2-④ XSEL-③-1-30D①-N1-EEE-2-④	Programmed operation enabled Can drive up to 6 axis	4000 points			-	P425

*SSEL, XSEL are for 1-axis specification.

① Indicates the encoder type (I: Incremental/A: Absolute).

② Indicates the power supply voltage type (1: 100V/2: single-phase 200V).

③ Indicates the XSEL type (J/K/P/Q).

④ Indicates the power supply voltage type (1: 100V/2: single-phase, 200V/3: three-phase, 200V).

Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
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

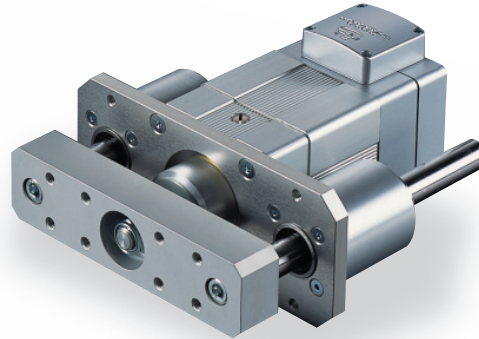
RCS2-RGD7AD

ROBO Cylinder, Double-guided Rod Type, Actuator Width 75mm, 200-V Servo Motor, Built-in Motor (Direct connection) Specification

Model Description **RCS2-RGD7AD-I**

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification			60: Servo motor 60W 100: Servo motor 100W	12: 12mm 6: 6mm 3: 3mm	50-50mm To 300-300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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. *Lead 3 setting is only for 60W.



Technical Reference P. 451

- POINT**
Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - The load capacity is the value when a 60W motor is operated at 0.15G acceleration (lead 12), 0.1G (lead 6), or 0.05G (lead 3), or when a 100W motor is operated at 0.2G acceleration (lead 12) or 0.1G (lead 6).
 - 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. Refer to the technical materials (P500) for weights that can be used in the accessory guide unit.

Actuator Specification Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RGD7AD-I-60-12-①②③④	60	12	10.0	0.9	85.3	50 to 300 (every 50mm)
RCS2-RGD7AD-I-60-6-①②③④		6	20.0	5.4	169.5	
RCS2-RGD7AD-I-60-3-①②③④		3	40.0	13.9	340.1	
RCS2-RGD7AD-I-100-12-①②③④①	100	12	15.0	3.9	141.4	
RCS2-RGD7AD-I-100-6-①②③④		6	30.0	10.9	283.2	

Legend: ① Stroke ② Compatible Controller ③ Cable length ④ Option

Stroke and Maximum Speed

Lead	Stroke	Maximum Speed (mm/s)	
		50 to 250 (every 50mm)	300
12	600	600	505
6	300	300	250
3	150	150	125

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGD7AD	
	Encoder type	
	Incremental	
	Motor wattage (W)	
	60W	100W
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

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
Change the cable connector outlet direction	A1 to A3	P437	—
Brake	B	P437	—
Foot bracket	FT	P441	—

*Note: foot brackets cannot be used with 60W/50 stroke and 100W/50, 100 stroke.

Actuator Specification

Item	Description
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Guide	Double-guide, ϕ 16mm Diameter Guide, Rod Ball, Push Type
Rod diameter	ϕ 30mm
Non-rotation accuracy of the rod	\pm 0.08 degrees
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

Information on special orders

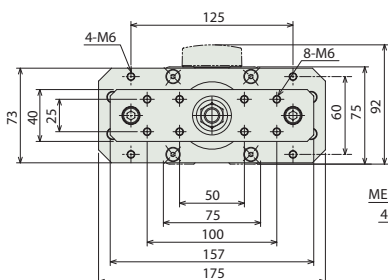
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2D CAD

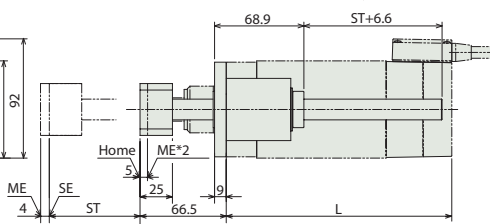
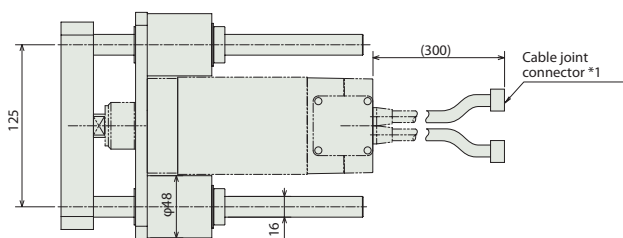
*Please note that for structural reasons, the reversed-home specification cannot be used for the RGD7AD type.

Caution

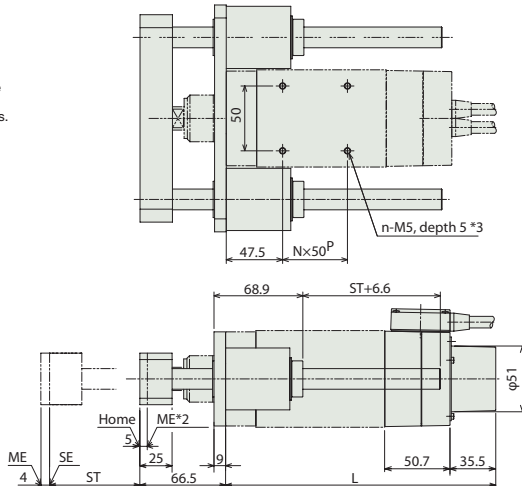
A slit is provided in the side of the actuator body to prevent pauses due to forward/backward operation. Request dirt-proof/splash-proof specifications separately.



- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ST: stroke
SE: stroke end
ME: mechanical end



Caution
*3 There are no mounting holes in the bottom face for 100W-50 stroke. Please note that there is only one set of mounting holes (2 holes) in the bottom face for 60W-50 stroke and 100W-100 stroke.



■ Dimensions and Weight by Stroke

RCS2-RGD7AD (without brake)

Stroke		50	100	150	200	250	300
N	L	128	178	228	278	328	378
	60W	-	1	2	3	4	5
	100W	-	-	1	2	3	4
n	60W	2	4	6	8	10	12
	100W	-	2	4	6	8	10
Weight (kg)	60W	3.8	4.5	5.1	5.7	6.3	6.9
	100W	3.9	4.6	5.2	5.8	6.4	7.0

RCS2-RGD7AD (with brake)

Stroke		50	100	150	200	250	300
N	L	163.5	213.5	263.5	313.5	363.5	413.5
	60W	-	1	2	3	4	5
	100W	-	-	1	2	3	4
n	60W	2	4	6	8	10	12
	100W	-	2	4	6	8	10
Weight (kg)	60W	4.1	4.8	5.4	6	6.6	7.2
	100W	4.2	4.9	5.5	6.1	6.7	7.3

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-60I-NP-2-① SCON-C-100I-NP-2-①	Up to 512-point positioning possible	512 points	Single-phase AC 100V Single-phase AC 200V Three-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1-axis specification For 150W operation	-	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	(-)				
Program control 1-2 axis type		SSEL-C-1-60I-NP-2-① SSEL-C-1-100I-NP-2-①	Programmable type capable of operating up to 2 axes	20000 points			-	P415
Program control 1-6 axis type		XSEL-②-1-60I-N1-EEE-2-③ XSEL-②-1-100I-N1-EEE-2-③	Programmed operation enabled Can drive up to 6 axis	4000 points			-	P425

CAUTION: Please note that the 5-axis /6-axis of the XSEL-P/Q type controllers cannot be connected to RA7D/RA7BD type actuators.

*SSEL, XSEL are for 1-axis specification.
 *① Indicates the power supply voltage type (1: 100V, 2: single-phase 200V).
 *② Indicates the XSEL type (J/K/P/Q) entered.
 *③ Indicates the power supply voltage type (1: 100V, 2: single-phase, 3: three-phase 200V).

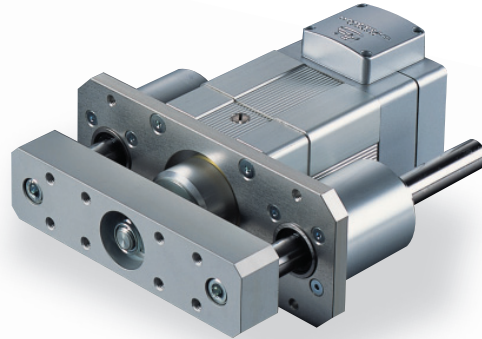
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reverse-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W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

RCS2-RGD7BD

ROBO Cylinder, Double-guided Rod Type, Actuator Width 75mm, 200-V Servo Motor, Built-in Motor (Direct connection) Specification

Model Description	RCS2	RGD7BD	I							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option		
I: Incremental specification			100: Servo motor 100W 150: Servo motor 150W	16: 16mm 8: 8mm 4: 4mm	50:50mm To 300:300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	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. * The lead 4 setting is only for 100W.



Technical Reference P. 451

- POINT**
Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - The load capacity is the value when a 100W motor is operated at 0.25G acceleration (lead 16), 0.17G (lead 8), or 0.1G (lead 4), or when a 150W motor is operated at 0.3G acceleration (lead 16) or 0.2G (lead 8).
 - 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. Refer to the technical materials (P500) for weights that can be used in the accessory guide unit.

Actuator Specification Table

Leads and Payloads

Model	Motor output	Lead (mm)	Max. payload		Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-RGD7BD-I-100-16-①②③④	100	16	10.0	1.9	105.8	50 to 300 (every 50mm)
RCS2-RGD7BD-I-100-8-①②③④		8	22.0	7.4	212.7	
RCS2-RGD7BD-I-100-4-①②③④		4	40.0	17.9	424.3	
RCS2-RGD7BD-I-150-16-①②③④	150	16	15.0	4.9	158.8	
RCS2-RGD7BD-I-150-8-①②③④		8	35.0	12.9	318.5	

Legend: ① Stroke ② Compatible Controller ③ Cable length ④ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 300 (every 50mm)
	16	
8		400
4		200

(Unit = mm/s)

① Pricing List By Stroke

① Stroke (mm)	Type code	
	RGD7BD	
	Encoder type	
	Incremental	
	Motor wattage (W)	
	100W	150W
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

Note: There is no 50 stroke setting for 150W.

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)	—
Robot cable	R01 (1m) to R03 (3m)	—
	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
Change the cable connector outlet direction	A1 to A3	P437	—
Brake	B	P437	—
Foot bracket	FT	P441	—

*Note: Foot brackets cannot be used with 50, 100 stroke.

Actuator Specification

Item	Description
Drive method	Ball screw φ12mm, rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Guide	Double-guide, φ16mm Diameter Guide, Rod Ball, Push Type
Rod diameter	φ35mm
Non-rotation accuracy of the rod	±0.08 degrees
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

Information on special orders

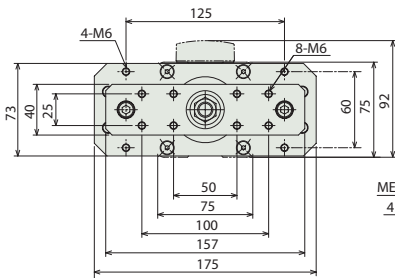
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2D CAD

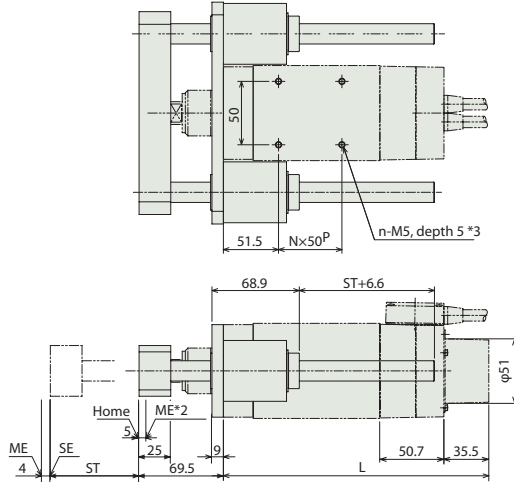
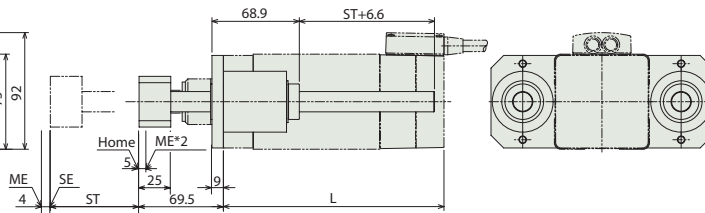
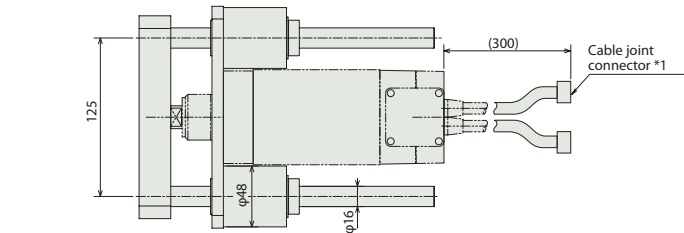
*Please note that for structural reasons, the reversed-home specification cannot be used for the RGD7BD type.

Caution

A slit is provided in the side of the actuator body to prevent pauses due to forward/backward operation. Request dirt-proof/splash-proof specifications separately.



- *1 Connect the motor-encoder cable. See P394 for cable details.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ST: stroke
SE: stroke end
ME: mechanical end



Caution
*3 There is no 50W-50 stroke setting. There is no mounting hole in the bottom face for 100W-50 stroke. Please note that there is only one set of mounting holes (2 holes) in the bottom face for 100W and 150W-100 stroke.

Dimensions and Weight by Stroke

RCS2-RGD7BD (without brake)

Stroke	50	100	150	200	250	300	
L	100W	133	183	233	283	333	383
	150W	-	183	233	283	333	383
N	100W	-	-	1	2	3	4
	150W	-	-	1	2	3	4
n	100W	-	2	4	6	8	10
	150W	-	2	4	6	8	10
Weight (kg)	100W	4.4	5.1	5.7	6.3	6.9	7.5
	150W	-	5.2	5.8	6.4	7.0	7.6

RCS2-RGD7BD (with brake)

Stroke	50	100	150	200	250	300	
L	100W	168.5	218.5	268.5	318.5	368.5	418.5
	150W	-	218.5	268.5	318.5	368.5	418.5
N	100W	-	-	1	2	3	4
	150W	-	-	1	2	3	4
n	100W	-	2	4	6	8	10
	150W	-	2	4	6	8	10
Weight (kg)	100W	4.7	5.4	6	6.6	7.2	7.8
	150W	-	5.5	6.1	6.7	7.3	7.9

Compatible Controllers

The RCS2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-100I-NP-2-① SCON-C-150I-NP-2-①	Up to 512-point positioning possible	512 points	Single-phase AC 100V Single-phase AC 200V Three-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1-axis specification For 150W operation	-	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	(-)				
Program control 1-2 axis type		SSEL-C-1-100I-NP-2-① SSEL-C-1-150I-NP-2-①	Programmable type capable of operating up to 2 axes	20000 points			-	P415
Program control 1-6 axis type		XSEL-②-1-100I-N1-EEE-2-③ XSEL-②-1-150I-N1-EEE-2-③	Programmed operation enabled Can drive up to 6 axis	4000 points			-	P425

CAUTION: Please note that the 5-axis /6-axis of the XSEL-P/Q type controllers cannot be connected to RA7D/RA7BD type actuators.

*SSEL, XSEL are for 1-axis specification.
*① Indicates the power supply voltage type (1: 100V, 2: single-phase 200V).
*② Indicates the XSEL type (J/K/P/Q) entered.
*③ Indicates the power supply voltage type (1: 100V, 2: single-phase, 3: three-phase 200V).

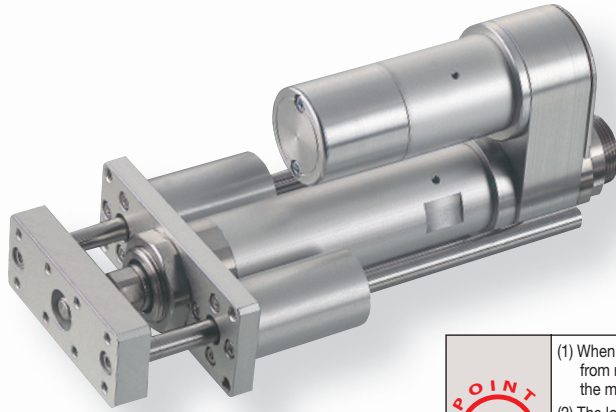
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reverse-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W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

RCS2-RGD4R

ROBO Cylinder, Double Guide Rod Type, Actuator Diameter ϕ 37mm, 200-V Servo Motor, Reverse-mounted Motor Specification

Model Description	RCS2 – RGD4R	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	
I: Incremental specification	20: Servo motor 20W	12: 12mm 6: 6mm	30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50: 50mm to 300: 300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	N : None P : 1m S : 3m M : 5m X□□: Length R□□: Robot cable	Refer to the Option Price List below.	

See preceding section for model descriptions.



Technical Reference P. 451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The load capacity is based on operation at an acceleration of 0.3G (or 0.2G if the lead is 3). This is the maximum acceleration.
 - (3) The horizontal load capacity assumes use of an external guide and absence of external force applied from any direction other than the moving direction of the rod. See the Technical Reference (P500).

Actuator Specification Table

Leads and Payloads

Model	Motor output (W)	Lead (mm)	Maximum payload Horizontal(kg) / Vertical(kg)	Rated thrust (N)	Stroke (mm)
RCS2-RGD4R-①-20-12-②-③-④-⑤	20	12	3.0 / 0.5	18.9	50 to 300 (every 50mm)
RCS2-RGD4R-①-20-6-②-③-④-⑤		6	6.0 / 1.5	37.7	
RCS2-RGD4R-①-20-3-②-③-④-⑤		3	12.0 / 3.5	75.4	
RCS2-RGD4R-①-30-12-②-③-④-⑤	30	12	4.0 / 1.0	28.3	
RCS2-RGD4R-①-30-6-②-③-④-⑤		6	9.0 / 2.5	56.6	
RCS2-RGD4R-①-30-3-②-③-④-⑤		3	18.0 / 6.0	113.1	

Legend: ① Encoder type ② Stroke ③ Controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	50 to 300 (every 50mm)
	600
300	
150	

(Unit = mm/s)

Price List by ① Encoder Type / ② Stroke

② Stroke (mm)	Type code			
	RGD4R			
	① Encoder type			
	Incremental		Absolute	
	Motor wattage		Motor wattage	
	20W	30W	20W	30W
50	-	-	-	-
100	-	-	-	-
150	-	-	-	-
200	-	-	-	-
250	-	-	-	-
300	-	-	-	-

④ 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)	-
Robot cable	R01 (1m) to R03 (3m)	-
	R04 (4m) to R05 (5m)	-
	R06 (6m) to R10 (10m)	-
	R11 (11m) to R15 (15m)	-
	R16 (16m) to R20 (20m)	-

Refer to P394 for maintenance cables.

⑤ Option Price List

Title	Option code	See page	Standard price
Brake	B	→P437	-
Foot bracket	FT	→P440	-
Flange bracket (rear)	FLR	→P438	-
Home check sensor	HS	→P442	-
Reversed-home specification	NM	→P442	-
Clevis bracket	QR	→P443	-
Rear mounting plate	RP	→P444	-

*The home check sensor (HS) cannot be used with the reversed-home specification.

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 10mm, rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Aluminum with white alumite treatment
Rod Diameter	ϕ 20mm
Non-rotary Rod Precision	\pm 1.0 degree
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Controller-Integrated
Slider Type
Rod Type
Table Arm/flat
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

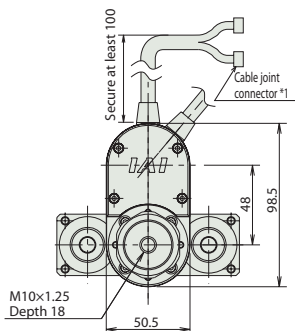
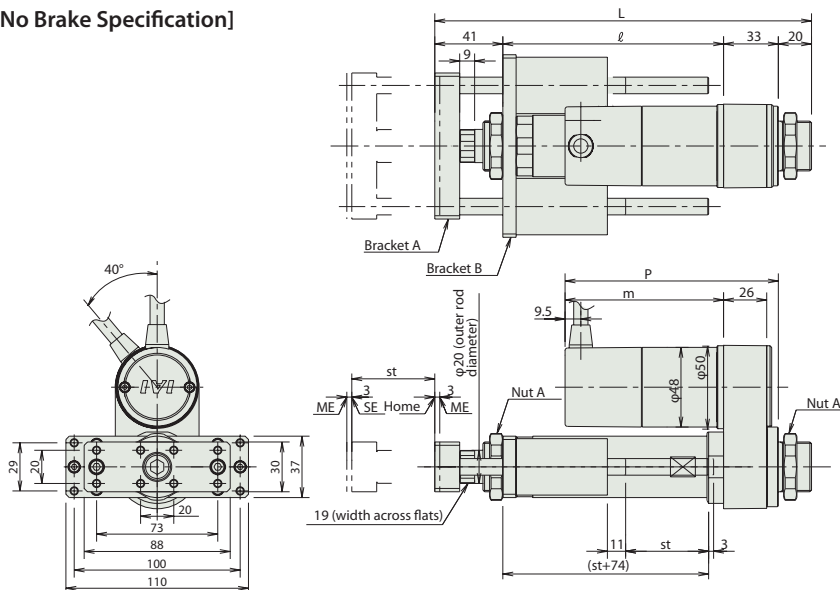
Information on special orders P. 454



*1 Connect the motor/encoder cables. Refer to P394 for details on the cables.
 *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and the surrounding parts.
 ME: Mechanical End SE: Stroke End

*3 The orientation of the across flats surface varies depending on the product

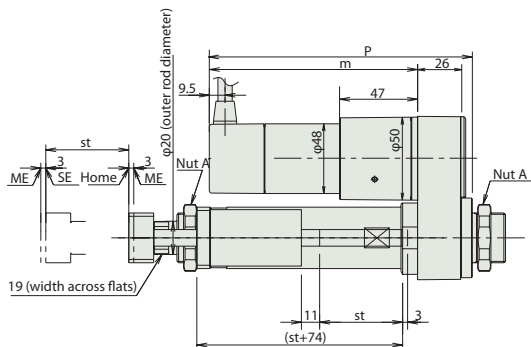
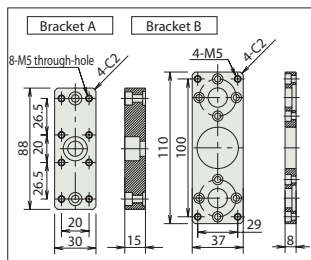
[No Brake Specification]



■ Dimensions and Weight by Stroke
 RCS2-RGD4R(without brake)

	Stroke	50	100	150	200	250	300
		L	20W	227	277	327	377
	30W	227	277	327	377	427	477
	φ	133	188	233	288	333	383
m	20W	80.5					
	30W	95.5					
P	20W	113.5					
	30W	128.5					
Weight (kg)		1.9	2.2	2.3	2.6	2.7	3.0

[Brake Specification]



RCS2-RGD4R(with brake)

	Stroke	50	100	150	200	250	300
		L	20W	227	277	327	377
	30W	227	277	327	377	427	477
	φ	133	188	233	288	333	383
m	20W	123.5					
	30W	138.5					
P	20W	156.5					
	30W	171.5					
Weight (kg)		2.1	2.4	2.5	2.8	2.9	3.2

Compatible Controllers

RCS2 Series Actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Max. positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner mode		SCON-C-20①-NP-2-② SCON-C-30D①-NP-2-②	Up to 512-point positioning possible	512 points	Single-phase AC 100V Single-phase AC 200V Three-phase AC 200V (XSEL-P/Q only)	Max. 360VA *1-axis specification for 150W operation	-	→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 control type Special Type	(-)				
Program control, 1 or 2-axis type		SSEL-C-1-20①-NP-2-② SSEL-C-1-30D①-NP-2-②	Programmable type. Can be operated for up to 2 axes.	20000 points			-	→P415
Program control, 1 to 6 axis type		XSEL-③-1-20①-N1-EEE-2-④ XSEL-③-1-30D①-N1-EEE-2-④	Programmable type, capable of operating up to 6 axes	4000 points			-	→P425

*The SSEL and XSEL model names are based on a 1-axis specification.
 *① indicates an encoder type (I: Incremental, A: Absolute).
 *② indicates the power-supply voltage type (1: 100V, 2: Single-phase 200V).
 *③ indicates the XSEL type (J/K/P/Q).
 *④ indicates the power-supply voltage type (1: 100V, 2: Single-phase 200V, 3: Three-phase 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/flat
- 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

MEMO

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- 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 20 P
- Pulse Motor 28 P
- Pulse Motor 35 P
- Pulse Motor 42 P
- Pulse Motor 56 P
- Pulse Motor 86 P
- Servo Motor 10 W
- Servo Motor 20 W
- Servo Motor 30 W
- Servo Motor 60 W
- Servo Motor 100 W
- Servo Motor 150 W
- Servo Motor 750 W