

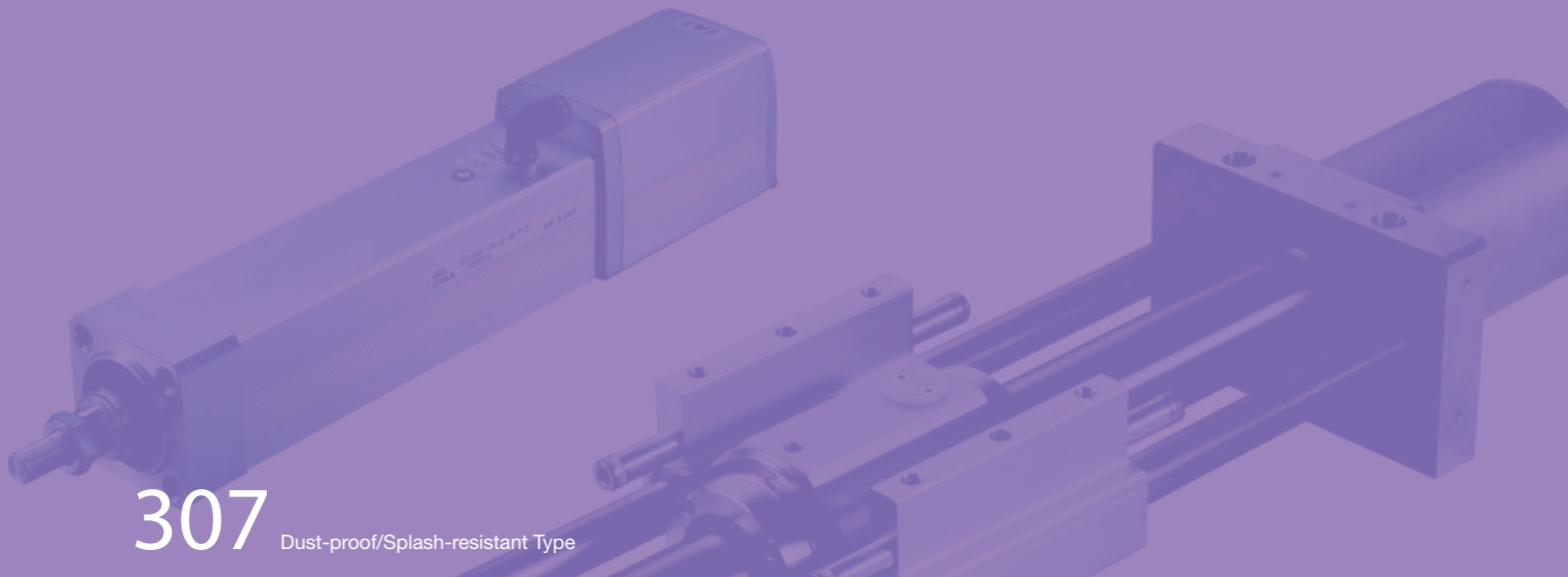
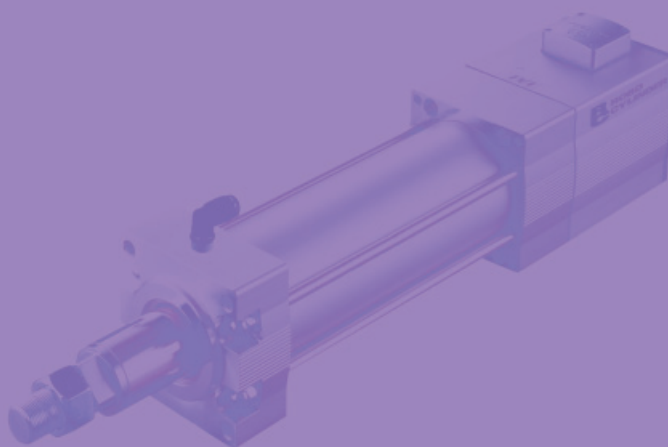


Dust-proof/Splash-resistant Type

RCP2W

RCAW

RCS2W



RCP2W series Pulse Motor Type	Slider type	Coupling type	Width 160mm	RCP2W-SA16C	309
	Rod type	Coupling type	Width 45mm	RCP2W-RA4C	311
			Width 64mm	RCP2W-RA6C	313
		High-thrust type	Width 100mm	RCP2W-RA10C	315

RCAW series 24V Servo Motor Type	Rod type	Coupling type	Width 32mm	RCAW-RA3C	317
		Built-in type	Width 32mm	RCAW-RA3D	
		Reverse-mounted motor type	Width 32mm	RCAW RA3R	
	Rod type	Coupling type	Width 37mm	RCAW-RA4C	319
		Built-in type	Width 37mm	RCAW-RA4D	
		Reverse-mounted motor type	Width 37mm	RCAW-RA4R	

RCS2W series 200V Servo Motor Type	Rod type	Coupling type	Width 37mm	RCS2W-RA4C	321
		Built-in type	Width 37mm	RCS2W-RA4D	
		Reverse-mounted motor type	Width 37mm	RCS2W-RA4R	

Controller-Integrated Type
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**

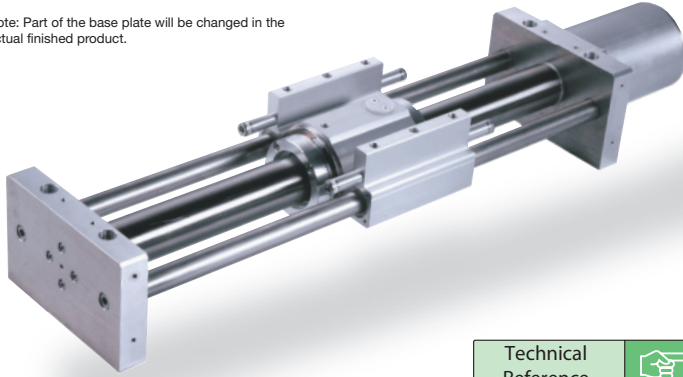
RCP2W-SA16C

ROBO Cylinder, Waterproof Type, Actuator Width 158mm, Pulse Motor, Straight Type

Model Description	RCP2W SA16C	I	86P			P2		
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	86P: Pulse motor 86 Size	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm to 600: 600mm (Set steps every 50mm)	P2: PCON-CF RCP2-CF	N : None P : 1m S : 3m M : 5m X□: Length R□: Robot cable	CO: With cover NM: Reversed-home specification

See preceding section for model descriptions.

Note: Part of the base plate will be changed in the actual finished product.

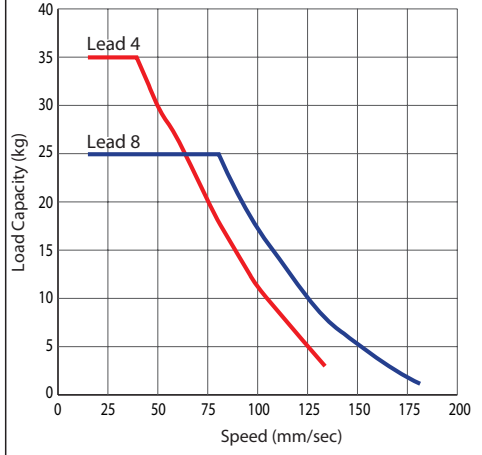


Technical Reference P. 451

- POINT** Notes on selection
- (1) The mounting for this actuator is horizontal and flat. Do not use in any other mounting orientation (on the side, vertical, reverse). (The same is true when in a protective tube)
 - (2) 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.
 - (3) Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the diagram of speed and load capacity on the right to check the load capacity at the speed you desire.
 - (4) The load capacity is based on operation at an acceleration of 0.2G. 0.2G is the upper limit for acceleration.

Speed vs. Payload Graph

Because of the characteristics of the pulse motor of the RCP2 series, 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

Model	Lead (mm)	Maximum payload (Note 1)		Stroke (mm)	Stroke and Maximum Speed	
		Horizontal (kg)	Vertical (kg)		Stroke	50 to 600 (every 50mm)
RCP2W-SA16C-I-86P-8-①-P2-②-③	8	Up to 25	Not Possible	50 to 600 (every 50mm)	8	180
RCP2W-SA16C-I-86P-4-①-P2-②-③	4	Up to 35			4	133

Legend: ① Stroke ② Cable length ③ Option

(Unit = mm/s)

Price List by ① Stroke

① Stroke (mm)	Type code	
	SA16C	
	Encoder type	
	Incremental	
	Without cover	With cover
50	-	-
100	-	-
150	-	-
200	-	-
250	-	-
300	-	-
350	-	-
400	-	-
450	-	-
500	-	-
550	-	-
600	-	-

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 P374 for maintenance cables.

③ Option Price List

Title	Option code	See page	Standard price
With cover	CO	→P437	-
Reversed-home specification	NM	→P442	-

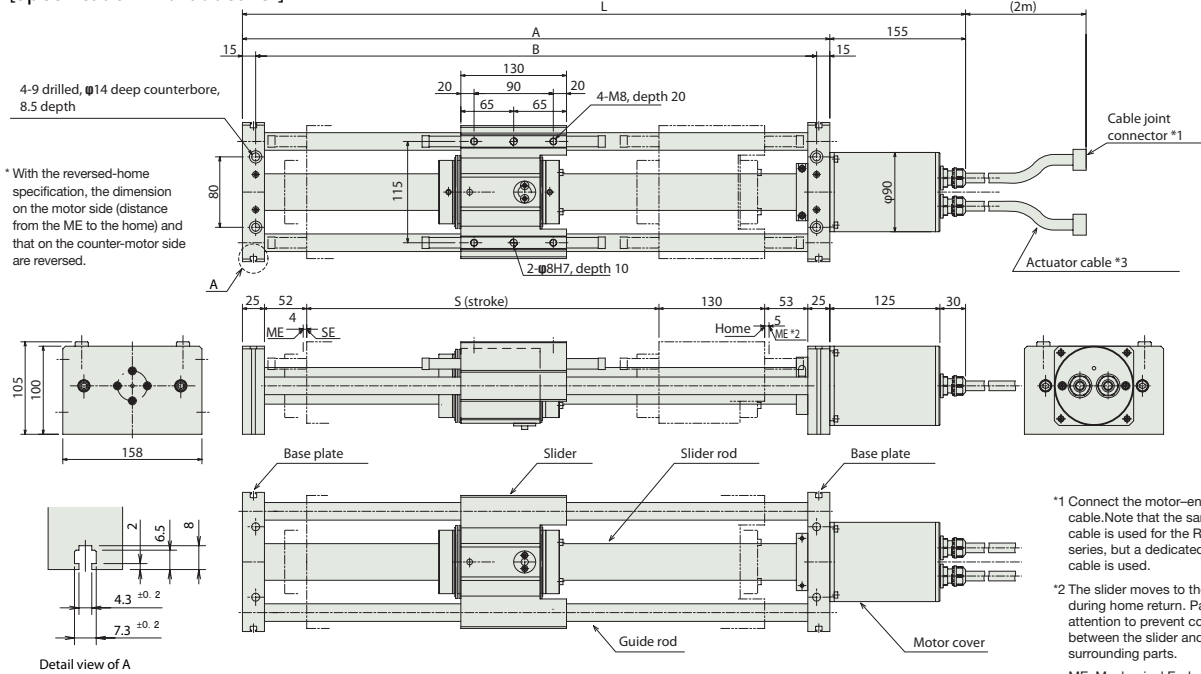
Actuator Specification

Item	Description
Drive system	Ball screw φ12mm, rolled C10
Positioning repeatability	±0.08mm
Backlash	0.1mm or less
Guide	φ20 Non-lubricated, straight sliding guide
Allowable load moment	20.0N·m
Overhang load length	Max. 200mm in Ma direction
Protective structure	IP67
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

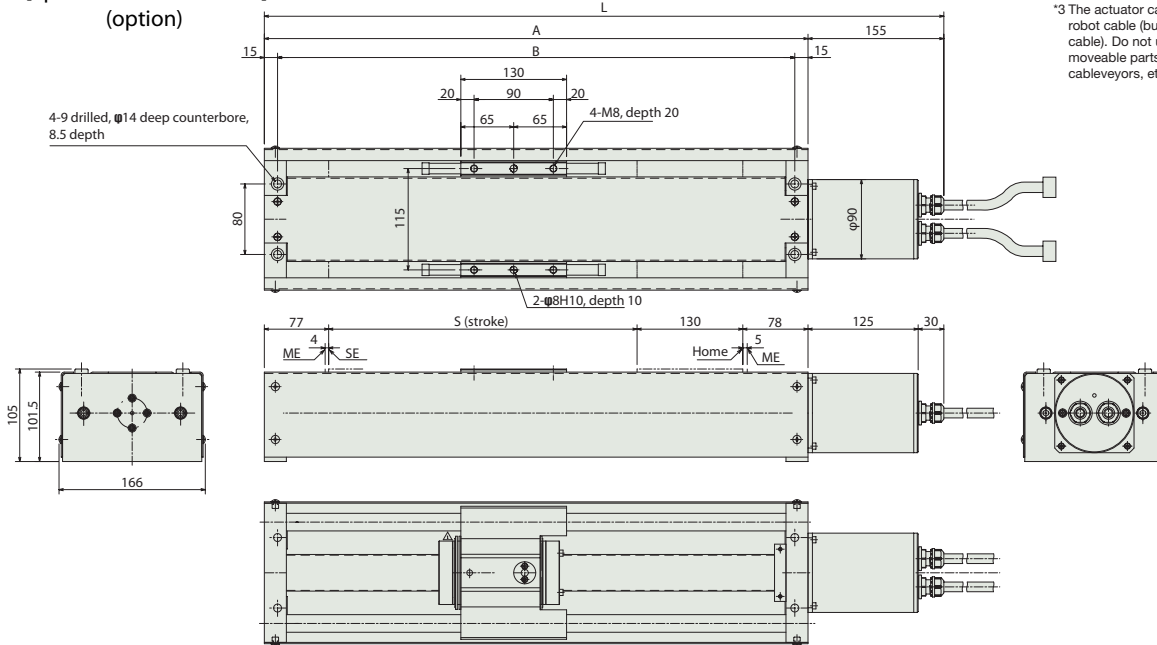
CAUTION
The SA16C is structurally unable to receive dynamic moment. When something is mounted to the slider, install it so that it does not exert a moment in the Mb or Mc direction, and its weight is evenly distributed on the slider.

- 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

[Specification without cover]



[Specification with cover] (option)



- *1 Connect the motor-encoder cable. Note that the same motor cable is used for the RCP2 series, but a dedicated encoder cable is used.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical End
SE: Stroke End
- *3 The actuator cable is not a robot cable (buckle-resistant cable). Do not use it with moveable parts, e.g., cableveyors, etc.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	490	540	590	640	690	740	790	840	890	940	990	1040
A	335	385	435	485	535	585	635	685	735	785	835	885
B	305	355	405	455	505	555	605	655	705	755	805	855
S	50	100	150	200	250	300	350	400	450	500	550	600
Weight w/o cover(kg)	9	9.4	9.9	10.4	10.9	11.3	11.8	12.3	12.7	13.2	13.7	15.1
Weight w/ cover(kg)	10.5	11.1	11.8	12.5	13.2	13.8	14.6	15.3	15.9	16.6	17.3	18.9

Compatible Controller

The following dedicated controller is used for the RCP2W-SA16C type.

Title	External View	Model	Features	Max. positioning p 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

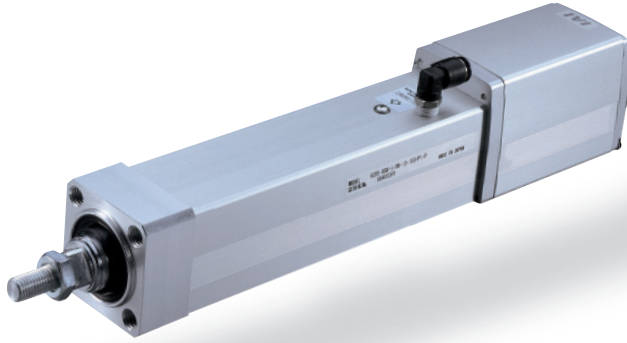
CAUTION Please note that a different CF type dedicated encoder cable is used than with the PCON-C/CG/CY/PL/PO/SE controllers.

RCP2W-RA4C

ROBO Cylinder, Splash-Resistant Rod Type, Actuator Width 45mm, Pulse Motor, Coupling Specification

Model Description	RCP2W — RA4C — I — 42P — [] — [] — P1 — [] — []
Series	Type — Encoder type — Motor type — Lead — Stroke — Compatible Controllers — Cable length — Option
	I: Incremental specification 42P: Pulse motor 42 Size 10: 10mm 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 R [] : Robot cable B : With brake FL : With flange FT : With foot bracket NM : Reversed-home specification

See preceding section for model descriptions.

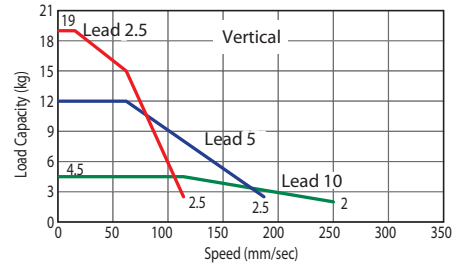
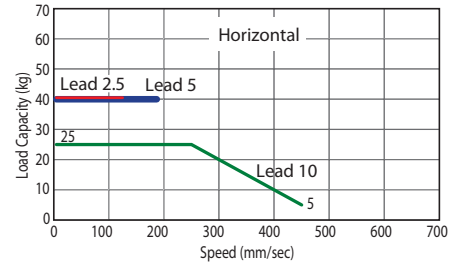


Technical Reference P. 451

- POINT** Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) With the RCP2 series, the load capacity will decrease as the speed increases due to the characteristics of the pulse motor used in the actuator. Use the table below to check if the desired speed and load capacity are satisfied.
 - (3) The load capacity is based on operation at an acceleration of 0.3G. 0.2G is the upper limit for acceleration.

Speed vs. Payload Graph

Because of the characteristics of the pulse motor of the RCP2 series, 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

Model	Lead (mm)	Maximum payload (Note 1)		Max. pushing force (N) (Note 2)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2W-RA4C-I-42P-10-①-P1-②-③	10	Up to 25	Up to 4.5	150	50 to 300 (every 50mm)
RCP2W-RA4C-I-42P-5-①-P1-②-③	5	40	Up to 12	284	
RCP2W-RA4C-I-42P-2.5-①-P1-②-③	2.5	40	To 19	358	

Legend: ① Stroke ② Cable length ③ Option (Note 2) See P492 for the graph of pushing force. * < > indicate vertical service. (Unit = mm/s)

Price List by ① Stroke

① Stroke (mm)	Type code
	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)	-

*See P374 about maintenance cables.

③ Option Price List

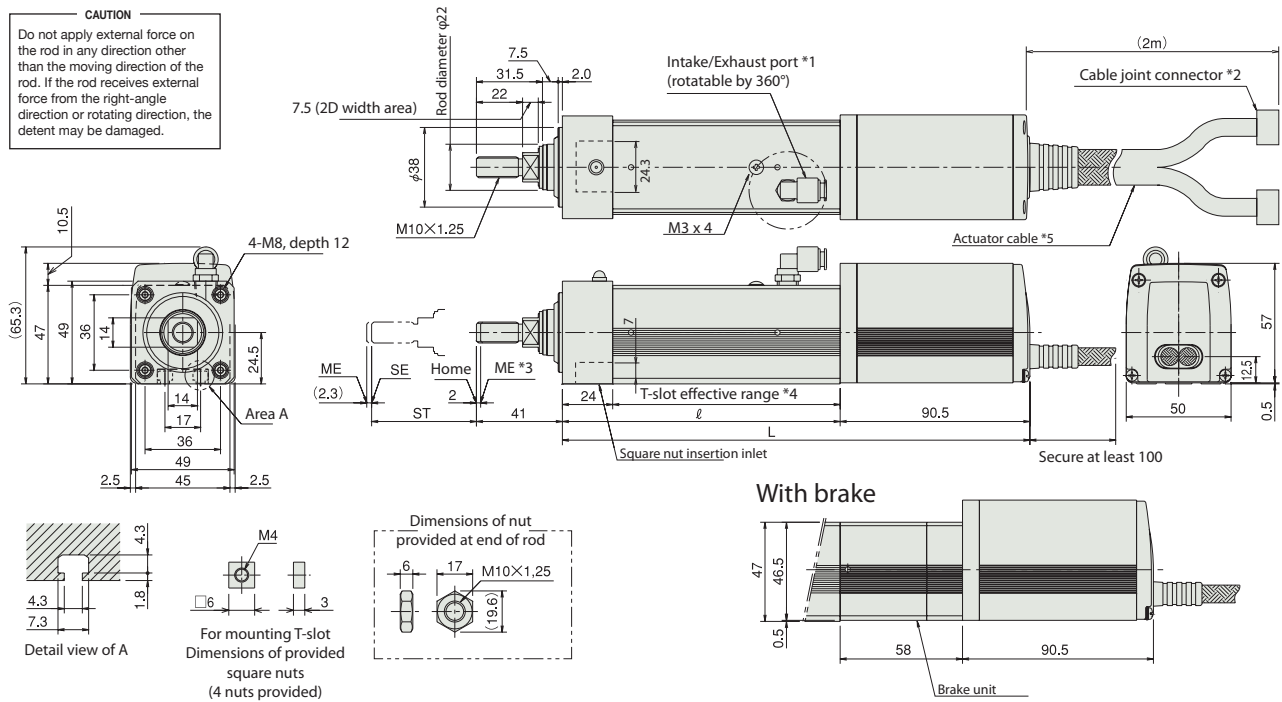
Title	Option code	See page	Standard price
Brake-equipped	B	→P437	-
With flange	FL	→P439	-
With foot bracket	FT	→P440	-
Reversed-home specification	NM	→P442	-

Actuator Specification

Item	Description
Drive system	Ball screw φ8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Rod diameter	φ22mm
Non-rotary rod precision	±1.5 degrees
Protective structure	IP65
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km



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 right-angle direction or rotating direction, the detent may be damaged.



- *1. The intake/exhaust port connects to a line used for bleeding air from inside the actuator. Connect a tube with an outer diameter of $\phi 6$ and extend the other end of the tube to a place not exposed to water.
- *2. Connect the motor-encoder cable. See P374 for cable details.
- *3. The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
ME: Mechanical End
SE: Stroke End
Dimensions in () are for reference.
- *4. Note that there is no T-slot on the bottom of the brake unit.
- *5. The actuator cable is not a robot cable (buckle-resistant cable). Do not use it with moveable parts, e.g., cableveyors, etc.

*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
R	132.5	182.5	232.5	282.5	332.5	382.5
L	223	273	323	373	423	473
Weight(kg)	1.9	2.1	2.2	2.5	2.9	3.1

Compatible Controllers

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

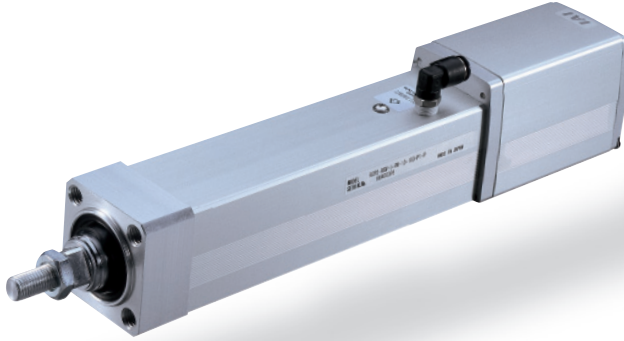
Title	External View	Model	Features	Max. positioning p points	Input power	Power-supply capacity	Standard price	See page	
Positioner type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	→P365	
Safety category compatible positioner type		PCON-CG-42PI-NP-2-0					-		
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve controlled operation enabled	3 points			-		
Pulse series input type (differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible, pulse series 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

RCP2W-RA6C

ROBO Cylinder, Splash-Resistant Rod Type, Actuator Width 64mm, Pulse Motor, Coupling Specification

Model Description	RCP2W	—	RA6C	—	I	—	56P	—		—		—	P1	—		—	
	Series		Type		Encoder type		Motor type		Lead		Stroke		Compatible Controllers		Cable length		Option
					I: Incremental specification		56P: 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 R□□: Robot cable		B : With brake FL : With flange FT : With foot bracket NM : Reversed-home specification

See preceding section for model descriptions.

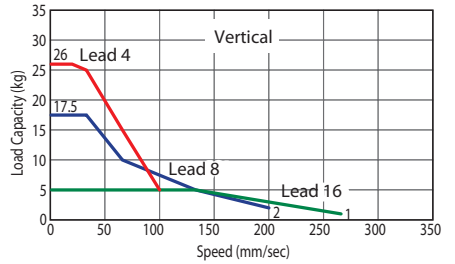
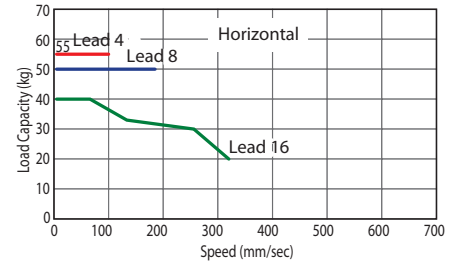


Technical Reference P. 451

- POINT** Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) With the RCP2 series, the load capacity will decrease as the speed increases due to the characteristics of the pulse motor used in the actuator. Use the table below to check if the desired speed and load capacity are satisfied.
 - (3) The load capacity is based on operation at an acceleration of 0.3G. 0.2G is the upper limit for acceleration.

Speed vs. Payload Graph

Because of the characteristics of the pulse motor of the RCP2 series, 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				Stroke and Maximum Speed	
Model	Lead (mm)	Maximum payload (Note 1)		Max. pushing force (N) (Note 2)	Stroke (mm)
RCP2W-RA6C-I-56P-16-①-P1-②-③	16	Horizontal (kg)	Vertical (kg)		50 to 300 (every 50mm)
RCP2W-RA6C-I-56P-8-①-P1-②-③	8	50	Up to 17.5	470	
RCP2W-RA6C-I-56P-4-①-P1-②-③	4	55	To 26	800	

Legend: ① Stroke ② Cable length ③ Option (Note 2) See P492 for the graph of pushing force. * < > indicate vertical service. (Unit = mm/s)

Price List by ① 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)	-

*See P374 about maintenance cables.

③ Option Price List

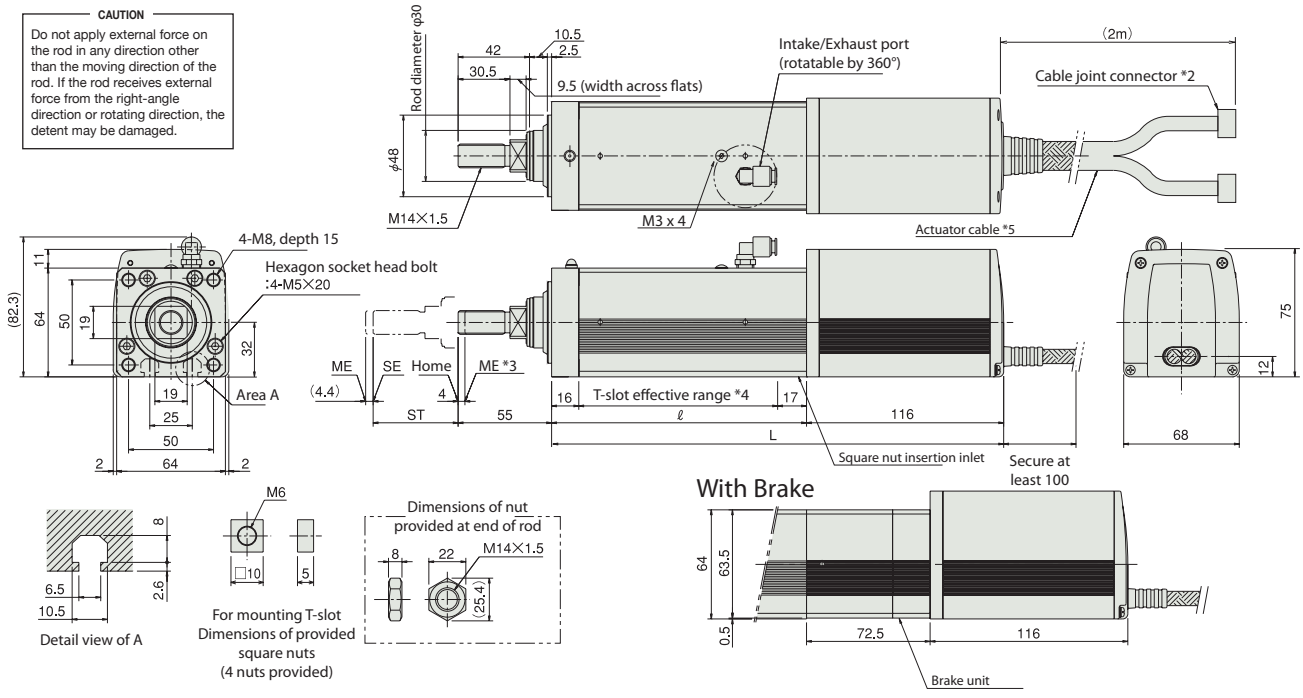
Title	Option code	See page	Standard price
Brake-equipped	B	→P437	-
With flange	FL	→P439	-
With foot bracket	FT	→P440	-
Reversed-home specification	NM	→P442	-

Actuator Specification

Item	Description
Drive system	Ball screw φ12mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Rod diameter	φ30mm
Non-rotary rod precision	±1.0 degree
Protective structure	IP65
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km



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 right-angle direction or rotating direction, the detent may be damaged.



- *1. The intake/exhaust port connects to a line used for bleeding air from inside the actuator. Connect a tube with an outer diameter of $\phi 6$ and extend the other end of the tube to a place not exposed to water.
- *2. Connect the motor-encoder cable. See P374 for cable details.
- *3. The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
ME: Mechanical End
SE: Stroke End
Dimensions in () are for reference.
- *4. Note that there is no T-slot on the bottom of the brake unit.
- *5. The actuator cable is not a robot cable (buckle-resistant cable). Do not use it with moveable parts, e.g., cableveyors, etc.

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

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
R	150	200	250	300	350	400
L	266	316	366	416	466	516
Weight(kg)	3.5	4.0	4.5	5.0	5.5	6.0

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	Max. positioning p 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-56PI-NP-2-0					-		
Solenoid valve type		PCON-CY-56PI-NP-2-0	Same as solenoid valve controlled operation enabled	3 points			-		
Pulse series input type (differential line driver specification)		PCON-PL-56PI-NP-2-0	Differential line driver compatible, pulse series 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

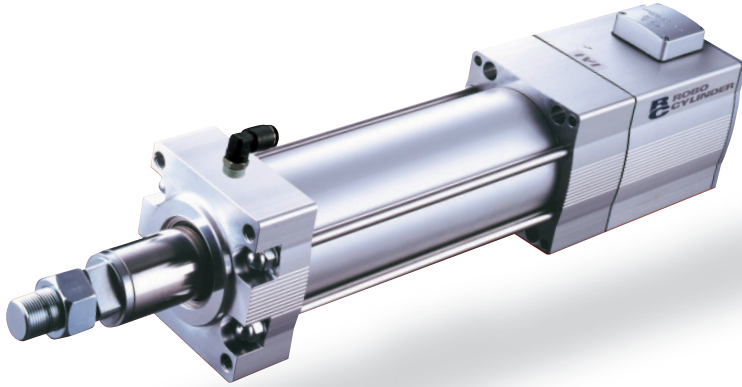
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Clearroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor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

RCP2W-RA10C

ROBO Cylinder, Splash-Resistant Rod Type, Actuator Width 100mm, Pulse Motor Coupling Specification

Model Description	RCP2W — RA10C — I — 86P — [] — [] — P2 — [] — []
Series	Type — Encoder type — Motor type — Lead — Stroke — Compatible Controllers — Cable length — Option
	I: Incremental specification 86P: 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 R [] : Robot cable A1 to A3: Change the cable connector outlet direction B : Brake-equipped FL : With flange FT : With foot bracket

See preceding section for model descriptions.

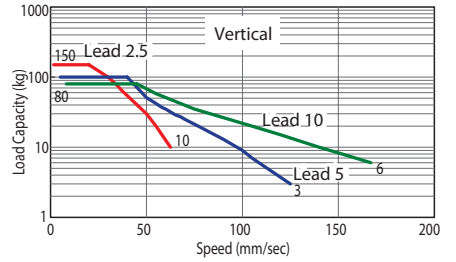
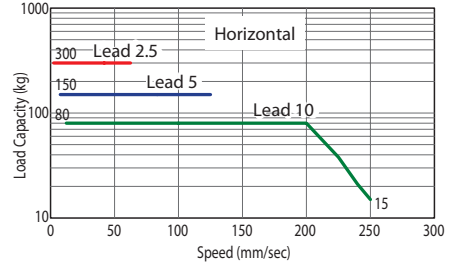


Technical Reference P. 451

- 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.
 - Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at 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 maximum acceleration. Also, the horizontal payload is when combined with an external guide. External force exerted on the rod in a direction other than its direction of travel may damage the detent.

Speed vs. Payload Graph

Because of the characteristics of the pulse motor of the RCP2 series, 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 as the speed increases.

Model	Lead (mm)	Maximum payload (Note 1)		Max. pushing force (N) (Note 2)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2W-RA10C-I-86P-10-①-P2-②-③	10	Up to 80	Up to 80	1500	50 to 300 (every 50mm)
RCP2W-RA10C-I-86P-5-①-P2-②-③	5	150	Up to 100	3000	
RCP2W-RA10C-I-86P-2.5-①-P2-②-③	2.5	300	Up to 150	6000	

Legend: ① Stroke ② Cable length ③ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 300 (every 50mm)	
	Stroke	Maximum Speed
10	250	167
5	125	
2.5	63	

* < > indicate vertical service. (Unit = mm/s)

Price List by ① 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)	-

*See P374 about maintenance cables.

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 system	Ball screw, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Rod diameter	φ40mm
Non-rotary rod precision	±1.0 degree
Protective structure	IP54
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

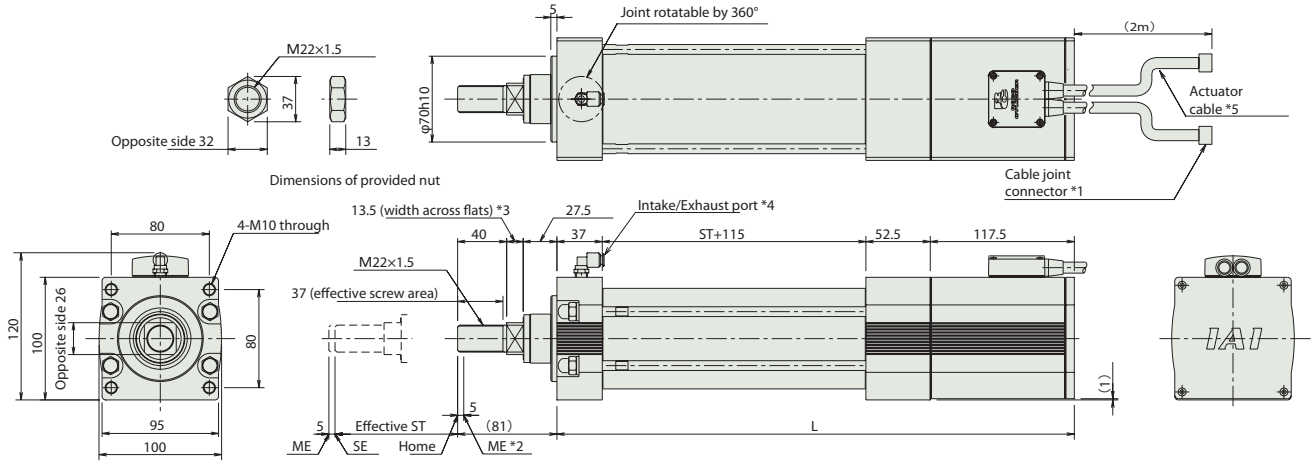
Dimensional Drawings

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

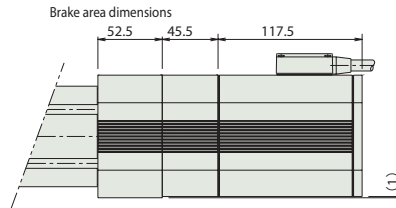
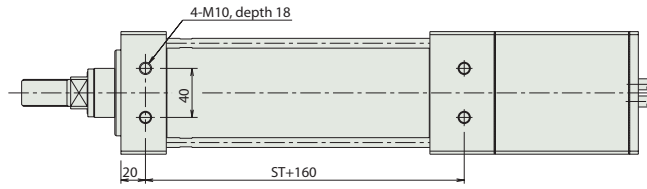
Information on special orders P. 454



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



1. Connect the motor-encoder cable. Please note that the same motor cable is used for the RCP2 series, but that a dedicated encoder cable is used. For details on cables, see P374.
2. The rod moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts. ME: Mechanical End SE: Stroke End Dimensions in () are for reference.
3. The orientation across flats differs with the product.
4. The air intake/exhaust port is the air extraction tubing inside the actuator body.
5. The actuator cable is not a robot cable (buckle-resistant cable). Do not use it with moveable parts, e.g., cableveyors, etc.



*The brake-equipped specification adds 45.5mm to the overall length and 1.5kg to the weight of 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

Compatible Controllers

The following dedicated controller is used for the RCP2W-RA10C type.

Title	External View	Model	Features	Max. positioning p 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

CAUTION Please note that a different CF type dedicated encoder cable is used than with the PCON-C/CG/CY/PL/PO/SE controllers.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/flat
- Gripper/Rotary Type
- Clearroom
- 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

RCAW-RA3C/RA3D/RA3R

ROBO Cylinder, Splash-resistant Rod Type, Actuator Width ϕ 32mm, 24-V Servo Motor, Coupling/Built-in Specification

Model Description	RCAW	<input type="checkbox"/>	I	20	<input type="checkbox"/>	<input type="checkbox"/>	A1	<input type="checkbox"/>	<input type="checkbox"/>
Series	RA3C: Coupling specification RA3D: Built-in specification RA3R: Reverse-mounted motor specification	Type	Encoder type I: Incremental specification	Motor type 20: Servo motor 20W	Lead 10: 10mm 5: 5mm 2.5: 2.5mm	Stroke 50: 50mm to 200: 200mm (Set steps every 50mm)	Compatible Controllers A1: ACON ASEL	Cable length N : None P : 1m S : 3m M : 5m X□: Length R□: Robot cable	Option Refer to the Options Price List below

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. 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 2.5).
The above values are 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 Specification Table

Leads and Payloads

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCAW-①-I-10-20-②-A1-③-④	20	10	4	1.5	36.2	50 to 200 (every 50mm)
RCAW-①-I-20-5-②-A1-③-④		5	9	3	72.4	
RCAW-①-I-20-2.5-②-A1-③-④		2.5	18	6.5	144.8	

Legend: ① Type ② Stroke ③ Cable length ④ Option

Stroke, Maximum Speed and Suction Volume

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

(Unit = mm/s)

Price List by Encoder Type/② Stroke

② Stroke (mm)	Type code		
	RA3C	RA3D	RA3R
	Encoder type	Encoder type	Encoder type
	Incremental	Incremental	Incremental
50	-	-	-
100	-	-	-
150	-	-	-
200	-	-	-

③ Cable Length Price List

Type	③ Cable code	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 (*1)	B	→P437	-
Flange bracket	FL	→P438	-
Foot bracket	FT	→P440	-
Home check sensor (*2)	HS	→P442	-
Power saving	LA	→P442	-
Knuckle joint	NJ	→P442	-
Reversed-home specification (*2)	NM	→P442	-
Clevis bracket (*3)	QR	→P443	-
Rear mounting plate (*3)	RP	→P444	-
Trunion bracket (front) (*4)	TRF	→P446	-
Trunion bracket (rear) (*4)	TRR	→P446	-

(*1) There is no brake setting for the RA3D.
 (*2) Home check sensors (HS) cannot be used with the reversed-home specification.
 (*3) The clevis bracket and rear mounting plate can only be used with the RA3R.
 (*4) The trunion bracket (rear) can only be used with the RA3C/RA3D.

Actuator Specification

Item	Description
Drive system	Ball screw ϕ 8mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Guide	Material: aluminum with alumite treatment
Allowable load moment	ϕ 16mm
Overhang load length	\pm 1.0 degree
Protective structure	IP54
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

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

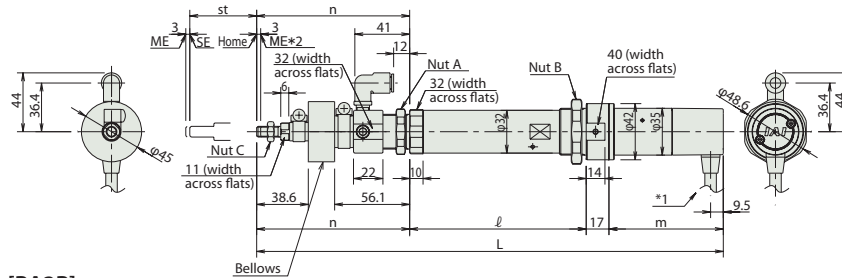
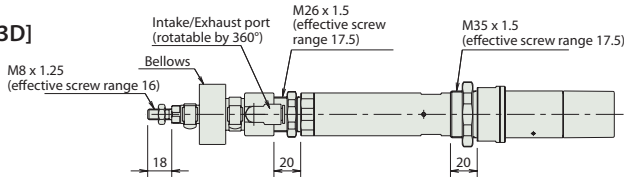
CAD drawings can be downloaded from the website. www.intelligentactuator.com

Information on special orders **P. 454**

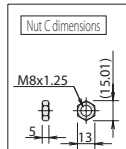
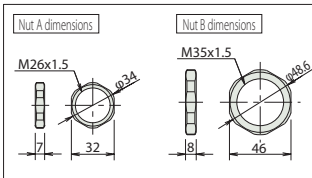
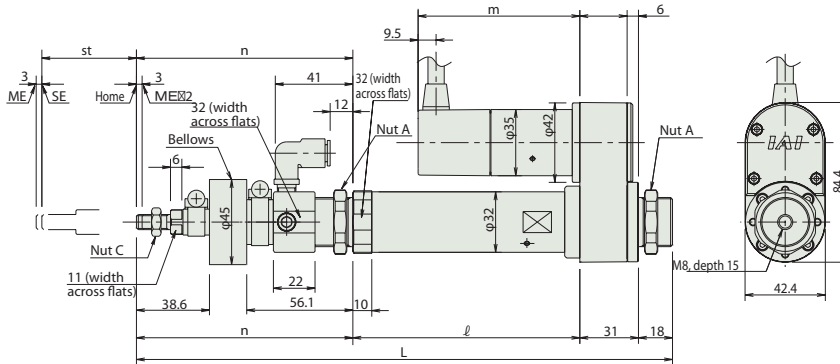


- *1. Cable joint connector and cable bending space are the same as for RCA-RA4C (see P142).
 - *2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
- ME: Mechanical End SE: Stroke End

[RA3C/RA3D]



[RA3R]



■ Dimensions/Weight by Stroke

RCAW-RA3C/RA3D/RA3R (without brake)

Stroke	50	100	150	200	
L	RA3C	348.9	408.9	468.9	528.9
	RA3D	329.9	389.9	449.9	509.9
	RA3R	283.4	343.4	403.4	463.4
ℓ	RA3C	132	182	232	282
	RA3D	132	182	232	282
	RA3R	120	170	220	270
m	RA3C	85.5			
	RA3D	66.5			
	RA3R	85.5			
n	RA3C	114.4	124.4	134.4	144.4
	RA3D	114.4	124.4	134.4	144.4
	RA3R	114.4	124.4	134.4	144.4
Weight (kg)	RA3C	1.0	1.1	1.2	1.3
	RA3D	1.0	1.1	1.2	1.3
	RA3R	1.1	1.2	1.3	1.4

RCAW-RA3C/RA3D/RA3R (with brake)

Stroke	50	100	150	200	
L	RA3C	387.9	447.9	507.9	567.9
	RA3D	Without brake.			
	RA3R	283.4	343.4	403.4	463.4
ℓ	RA3C	132	182	232	282
	RA3D	Without brake.			
	RA3R	120	170	220	270
m	RA3C	124.5			
	RA3D	Without brake.			
	RA3R	124.5			
n	RA3C	114.4	124.4	134.4	144.4
	RA3D	Without brake.			
	RA3R	114.4	124.4	134.4	144.4
Weight (kg)	RA3C	1.2	1.3	1.4	1.5
	RA3D	1.2	1.3	1.4	1.5
	RA3R	1.3	1.4	1.5	1.6

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	Max. positioning p points	Input power	Power-supply capacity	Standard price	See page	
Positioner type		ACON-C-20SI-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-20SI-NP-2-0					-		
Solenoid valve type		ACON-CY-20SI-NP-2-0	Same as solenoid valve controlled operation enabled	3 points			-		
Pulse series input type (differential line driver specification)		ACON-PL-20SI-NP-2-0	Differential line driver compatible, pulse series input type	(-)			-		
Pulse series input type (open collector specification)		ACON-PO-20SI-NP-2-0	Open collector compatible pulse series input type				-		
Serial communication type		ACON-SE-20SI-N-0-0	Serial communications special type	64 points			-		
Field network type		RACON-20S	Field network dedicated type	768 points			-		→P343
Program control type		ASEL-C-1-20SI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points			-		→P405

* ASEL is for 1-axis specification.
* (1) Indicates the encoder type (I: Incremental, A: Absolute) is needed.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Clearroom
- 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

RCAW-RA4C/RA4D/RA4R

ROBO Cylinder, Splash-resistant Rod type, Actuator Width ϕ 37mm, 24-V Servo Motor, Coupling/Built-in Specification

Model Description	RCAW							A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option	Refer to the Options Price List below	
RA4C: Coupling specification	RA4D: Built-in specification	I: Incremental specification	20: Servo motor 20W	12:12mm	50: 50mm to 6:6mm	A1:ACON ASEL	N : None P : 1m S : 3m M : 5m	X□□: Length R□□: Robot cable		
RA4R: Reverse-mounted motor specification		A:Absolute specification	30: Servo motor 30W	3:3mm	300: 300mm (Set steps every 50mm)					

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. 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).
 - (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 Specification Table

Leads and Payloads

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCAW-①-②-20-12-③-④-⑤-⑥	20	12	3.0	1.0	18.9	50 to 300 (every 50mm)
RCAW-①-②-20-6-③-④-⑤-⑥		6	6.0	2.0	37.7	
RCAW-①-②-20-3-③-④-⑤-⑥		3	12.0	4.0	75.4	
RCAW-①-②-30-12-③-④-⑤-⑥	30	12	4.0	1.5	28.3	
RCAW-①-②-30-6-③-④-⑤-⑥		6	9.0	3.0	56.6	
RCAW-①-②-30-3-③-④-⑤-⑥		3	18.0	6.5	113.1	

Legend: ① Type ② Encoder type ③ Stroke ④ Controller ⑤ Cable length ⑥ Option

Stroke, Maximum Speed and Suction Volume

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

(Unit = mm/s)

Price List by ② Encoder Type/③ Stroke

③ Stroke (mm)	① Type code							
	RA4C/RA4D				RA4R			
	② Encoder type		② Encoder type		② Encoder type		② Encoder type	
	Incremental		Absolute		Incremental		Absolute	
	Motor W number	Motor W number	Motor W number	Motor W number	Motor W number	Motor W number	Motor W number	Motor W number
	20W	30W	20W	30W	20W	30W	20W	30W
50	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-

⑤ Cable Length Price List

Type	(5) Cable code	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.

⑥ Option Price List

Title	Option code	See page	Standard price
Brake (*1)	B	→P437	-
Flange bracket	FL	→P438	-
Foot bracket	FT	→P440	-
Home check sensor (*2)	HS	→P442	-
Power saving	LA	→P442	-
Knuckle joint	NJ	→P442	-
Reversed-home specification (*2)	NM	→P442	-
Clevis bracket (*3)	QR	→P443	-
Rear mounting plate (*3)	RP	→P444	-
Trunion bracket (Front) (*4)	TRF	→P446	-
Trunion bracket (Rear) (*4)	TRR	→P446	-

(*1) There is no brake setting for the RA4D.

(*2) Home check sensors (HS) cannot be used with the reversed-home specification.

(*3) The clevis bracket and rear mounting plate can only be used with the RA3R.

(*4) The trunion bracket (rear) can only be used with the RA4C/RA4D.

Actuator Specification

Item	Description
Drive system	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Guide	Material: aluminum with alumite treatment
Allowable load moment	ϕ 20mm
Overhang load length	\pm 1.0 degree
Protective structure	IP54
Ambient operating temperature, humidity	0 to 4040°C, 85% RH or less (non-condensing)
Service life	5000km

Controller-Integrated
Slider Type
Rod Type
Table Arm/flut
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
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Servo Motor 10W
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Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

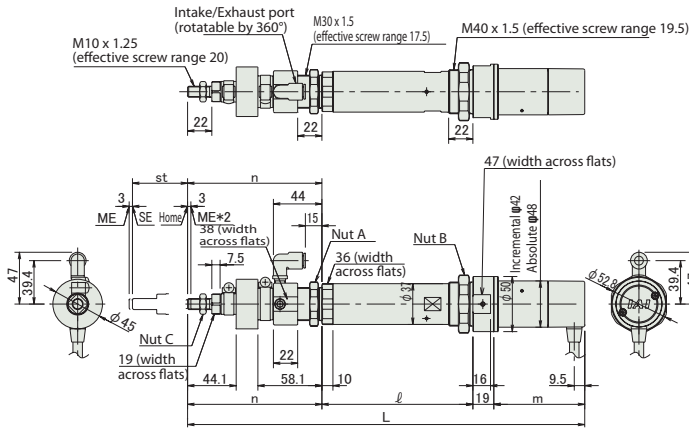
Dimensional Drawings

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

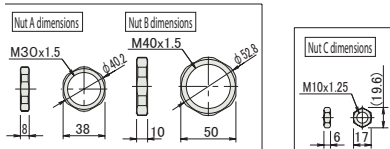
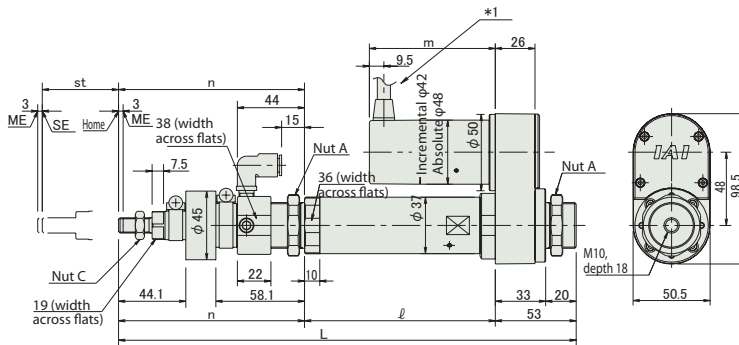


- Cable joint connector and cable bending space are the same as for RCA-RA4C. (See P144)
- The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical End SE: Stroke End

[RA4C/RA4D]



[RA4R]



Information on special orders

P. 454

■ Dimensions and Weight by Stroke
RCAW-RA4C/RA4D/RA4R (without brake)

Stroke	Type	Stroke							
		50	100	150	200	250	300		
L	RA4C	20W Incremental	345.4	405.4	465.4	525.4	586.4	647.4	
		20W Absolute	358.4	418.4	478.4	538.4	599.4	660.4	
		30W Incremental	360.4	420.4	480.4	540.4	601.4	662.4	
		30W Absolute	373.4	433.4	493.4	553.4	614.4	675.4	
	RA4D	20W Incremental	323.4	383.4	443.4	503.4	564.4	625.4	
		20W Absolute	336.4	396.4	456.4	516.4	577.4	638.4	
		30W Incremental	338.4	398.4	458.4	518.4	579.4	640.4	
		30W Absolute	351.4	411.4	471.4	531.4	592.4	653.4	
	RA4R	20W Incremental	299.9	359.9	419.9	479.9	540.9	601.9	
		20W Absolute	299.9	359.9	419.9	479.9	540.9	601.9	
		30W Incremental	299.9	359.9	419.9	479.9	540.9	601.9	
		30W Absolute	299.9	359.9	419.9	479.9	540.9	601.9	
l	RA4C	20W Incremental	137	187	237	287	337	387	
		20W Absolute	137	187	237	287	337	387	
	RA4D	20W Incremental	137	187	237	287	337	387	
		20W Absolute	137	187	237	287	337	387	
	RA4R	20W Incremental	125	175	225	275	325	375	
		20W Absolute	125	175	225	275	325	375	
	m	RA4C	20W Incremental	67.5					
			20W Absolute	80.5					
RA4D		20W Incremental	82.5						
		20W Absolute	95.5						
RA4R		20W Incremental	45.5						
		20W Absolute	58.5						
n	RA4C	20W Incremental	121.9	131.9	141.9	151.9	162.9	173.9	
		20W Absolute	121.9	131.9	141.9	151.9	162.9	173.9	
	RA4D	20W Incremental	121.9	131.9	141.9	151.9	162.9	173.9	
		20W Absolute	121.9	131.9	141.9	151.9	162.9	173.9	
	RA4R	20W Incremental	121.9	131.9	141.9	151.9	162.9	173.9	
		20W Absolute	121.9	131.9	141.9	151.9	162.9	173.9	
Weight (kg)	RA4C	20W/30W	1.4	1.5	1.7	1.8	2.0	2.1	
	RA4D	20W/30W	1.3	1.5	1.6	1.8	1.9	2.1	
	RA4R	20W/30W	1.5	1.7	1.8	2.0	2.1	2.3	

* Adding a brake increases the overall length by 43mm. The RA4R type has a 43mm longer motor, but overall length is unchanged because it is reverse-mounted. There is no brake setting for the RA4D type. The weight is also increased 0.2kg, regardless of the model.

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	Max. positioning p points	Input power	Power-supply capacity	Standard price	See page		
Positioner type		ACON-C-20I-NP-2-0 ACON-C-30I-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-20I-NP-2-0 ACON-CG-30I-NP-2-0								
Solenoid valve type		ACON-CY-20I-NP-2-0 ACON-CY-30I-NP-2-0	Same as solenoid valve controlled operation enabled	3 points			30W Rated 1.3A Peak 5.1A		-	→P343
Pulse series input type (differential line driver specification)		ACON-PL-20I-NP-2-0 ACON-PL-30I-NP-2-0	Differential line driver compatible, pulse series input type	(-)						
Pulse series input type (open collector specification)		ACON-PO-20I-NP-2-0 ACON-PO-30I-NP-2-0	Open collector compatible pulse series input type							
Serial communication type		ACON-SE-20I-N-0-0 ACON-SE-30I-N-0-0	Serial communications special type	64 points						
Field network type		RACON-20 RACON-30	Field network dedicated type	768 points						
Program control type		ASEL-C-1-20①-NP-2-0 ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					→P405	

* ASEL is for 1-axis specification.

* (1) Indicates the encoder type(I: Incremental, A: Absolute) is needed.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Clearroom
- 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

RCS2W-RA4C/RA4D/RA4R

ROBO Cylinder, Splash-Resistant RodType, Actuator Width ϕ 37mm, 200-V Servo Motor, Coupling /Built-in/Reverse-mounted
Motor Specification

Model Description **RCS2W** — [] — [] — [] — [] — [] — [] — [] — [] — []

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
RA4C: Coupling specification		I: Incremental specification	20: Servo motor 20W	12: 12mm	50: 50mm to 300mm (Set steps every 50mm)	T1: XSEL-J/K T2: SCON	N : None P : 1m S : 3m M : 5m X□: Length R□: Robot cable	Refer to the Option Price List below.
RA4D: Built-in specification		A: Absolute specification	30: Servo motor 30W	6: 6mm 3: 3mm		SSEL XSEL-P/Q		
RA4R: Reverse-mounted motor specification								

See preceding section for model descriptions.



Technical Reference P. 451

POINT
Notes on selection

(1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. 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). The above values are maximum acceleration.

Actuator Specification Table

Leads and Payloads

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2W-[1]-[2]-20-12-[3]-[4]-[5]-[6]	20	12	3.0	1.0	18.9	50 to 300 (every 50mm)
RCS2W-[1]-[2]-20-6-[3]-[4]-[5]-[6]		6	6.0	2.0	37.7	
RCS2W-[1]-[2]-20-3-[3]-[4]-[5]-[6]		3	12.0	4.0	75.4	
RCS2W-[1]-[2]-30-12-[3]-[4]-[5]-[6]	30	12	4.0	1.5	28.3	
RCS2W-[1]-[2]-30-6-[3]-[4]-[5]-[6]		6	9.0	3.0	56.6	
RCS2W-[1]-[2]-30-3-[3]-[4]-[5]-[6]		3	18.0	6.5	113.1	

Legend: [1] Type [2] Encoder type [3] Stroke [4] Controller [5] Cable length [6] Option

Stroke and Maximum Speed

Stroke Lead	50 to 300 (every 50mm)	
	Stroke	Maximum Speed
12	600	
6	300	
3	150	

(Unit = mm/s)

Price List by [2] Encoder Type/[3] Stroke

[3] Stroke (mm)	[1] Type code							
	RA4C/RA4D				RA4R			
	[2] Encoder type		[2] Encoder type		[2] Encoder type		[2] Encoder type	
	Incremental	Absolute	Incremental	Absolute	Incremental	Absolute	Incremental	Absolute
	Motor W number	Motor W number	Motor W number	Motor W number	Motor W number	Motor W number	Motor W number	Motor W number
	20W	30W	20W	30W	20W	30W	20W	30W
50	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-

[4] Option Price List

Title	Option code	See page	Standard price
Brake (*1)	B	→P437	-
Flange bracket	FL	→P438	-
Foot bracket	FT	→P440	-
Home check sensor (*2)	HS	→P442	-
Knuckle joint	NJ	→P442	-
Reversed-home specification (*2)	NM	→P442	-
Clevis bracket (*3)	QR	→P443	-
Rear mounting plate (*3)	RP	→P444	-
Trunion bracket (front) (*4)	TRF	→P446	-
Trunion bracket (rear) (*4)	TRR	→P446	-

(*1) There is no brake setting for the RA4D.
 (*2) Home check sensors (HS) cannot be used with the reversed-home specification.
 (*3) The clevis bracket and rear mounting plate can only be used with the RA4R.
 (*4) The trunion bracket (rear) can only be used with the RA4C/RA4D.

[5] Cable Length Price List

Type	Cable symbol	Standard price
Standard type	P (1m)	-
	S (3m)	-
	M (5m)	-
	X06 (6m) to X10 (10m)	-
Special length	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 details on maintenance cable.

Actuator Specification

Item	Description
Drive system	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: aluminum with alumite treatment
Rod diameter	ϕ 20mm
Non-rotary rod precision	\pm 1.0 degree
Protective structure	IP54
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

Dimensional Drawings

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



Note) There is no 3-dimensional CAD data for the RA4D type.

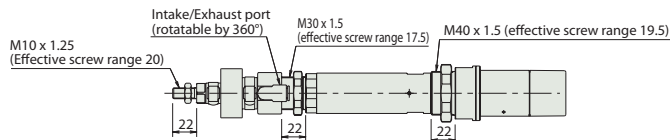
Information on special orders P. 454

Dimensions and Weight by Stroke

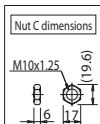
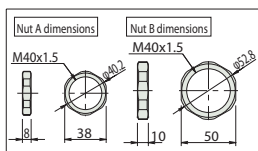
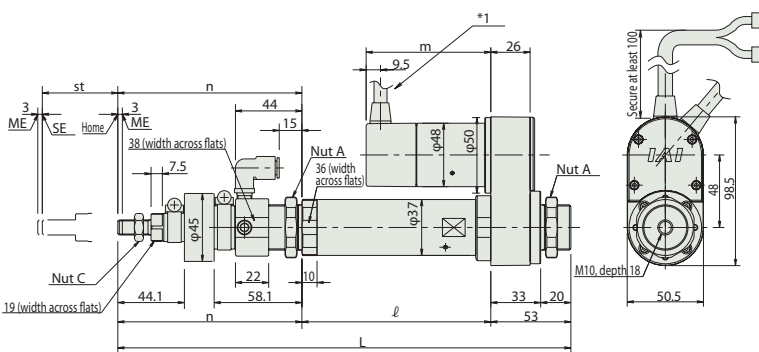
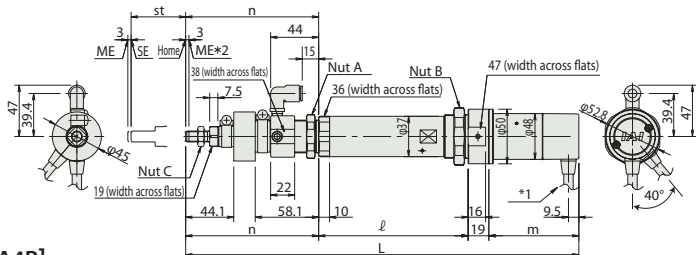
RCS2W-RA4C/RA4D/RA4R (without brake)

Stroke		50	100	150	200	250	300	
L	RA4C	20W	358.4	418.4	478.4	538.4	599.4	660.4
		30W	373.4	433.4	493.4	553.4	614.4	675.4
	RA4D	20W	336.4	396.4	456.4	516.4	577.4	638.4
		30W	351.4	411.4	471.4	531.4	592.4	653.4
		20W	299.9	359.9	419.9	479.9	540.9	601.9
		30W	299.9	359.9	419.9	479.9	540.9	601.9
l	RA4C	20W	137	187	237	287	337	387
		30W	137	187	237	287	337	387
	RA4D	20W	137	187	237	287	337	387
		30W	137	187	237	287	337	387
		20W	125	175	225	275	325	375
		30W	125	175	225	275	325	375
m	RA4C	20W	80.5					
		30W	95.5					
	RA4D	20W	58.5					
		30W	73.5					
		20W	80.5					
		30W	95.5					
n	RA4C	20W	121.9	131.9	141.9	151.9	162.9	173.9
		30W	121.9	131.9	141.9	151.9	162.9	173.9
	RA4D	20W	121.9	131.9	141.9	151.9	162.9	173.9
		30W	121.9	131.9	141.9	151.9	162.9	173.9
		20W	121.9	131.9	141.9	151.9	162.9	173.9
		30W	121.9	131.9	141.9	151.9	162.9	173.9
Weight (kg)	RA4C 20W/30W	1.4	1.5	1.7	1.8	2.0	2.1	
	RA4D 20W/30W	1.3	1.5	1.6	1.8	1.9	2.1	
	RA4R 20W/30W	1.5	1.7	1.8	2.0	2.1	2.3	

[RA4C/RA4D]



[RA4R]



RCS2W-RA4C/RA4D/RA4R (with brake)

Stroke		50	100	150	200	250	300	
L	RA4C	20W	401.4	461.4	521.4	581.4	642.4	703.4
		30W	416.4	476.4	536.4	596.4	657.4	718.4
	RA4D	20W	Without brake.					
		30W	Without brake.					
		20W	299.9	359.9	419.9	479.9	540.9	601.9
		30W	299.9	359.9	419.9	479.9	540.9	601.9
l	RA4C	20W	137	187	237	287	337	387
		30W	137	187	237	287	337	387
	RA4D	20W	Without brake.					
		30W	Without brake.					
		20W	125	175	225	275	325	375
		30W	125	175	225	275	325	375
m	RA4C	20W	123.5					
		30W	138.5					
	RA4D	20W	Without brake.					
		30W	Without brake.					
		20W	123.5					
		30W	138.5					
n	RA4C	20W	121.9	131.9	141.9	151.9	162.9	173.9
		30W	121.9	131.9	141.9	151.9	162.9	173.9
	RA4D	20W	Without brake.					
		30W	Without brake.					
		20W	121.9	131.9	141.9	151.9	162.9	173.9
		30W	121.9	131.9	141.9	151.9	162.9	173.9
Weight (kg)	RA4C 20W/30W	1.6	1.7	1.9	2.0	2.2	2.3	
	RA4D 20W/30W	-						
	RA4R 20W/30W	1.7	1.9	2.0	2.2	2.3	2.5	

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 p points	Input power	Power-supply capacity	Standard price	See page
Positioner type		SCON-C-20 ①-NP-2-② SCON-C-30D ①-NP-2-②	Up to 512-point positioning possible	512 points	Single-phase AC 100V Single-phase AC 200V 3-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1-axis specification for 150W operation	-	→P385
Solenoid valve type			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 special type	(-)				
Program control 1-2 axis type		SSEL-C-1-20 ①-NP-2-② SSEL-C-1-30D ①-NP-2-②	Programmable type capable of operating up to 2 axes	20000 points				→P415
Program control 1-6 axis type			XSEL-③-1-20 ①-N1-EEE-2-④ XSEL-③-1-30D ①-N1-EEE-2-④	Programmed operation enabled, maximum 6-axes operation possible	4000 points			For inquiries

*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).