

ROBO Cylinder®
with Battery-less Absolute Encoder

Cleanroom Type

RCP5
RCP5CR



Battery-less
Absolute

Series Added



Side-mounted
Motor Type



Belt Type

Introducing the RCP5 Series, powered by a battery-less actuator, with the convenience of an absolute encoder and the cost and simplicity of an incremental encoder

The innovative battery-less absolute encoder (patent pending) operates through a combination of gears to read the rotational position data. This eliminates the need for the battery that is normally required for a conventional absolute encoder. This means there is no longer a need for battery replacement, with the associated costs and adjustments.

Slider Type



Rod Type

Radial Cylinder

Can carry radial loads.



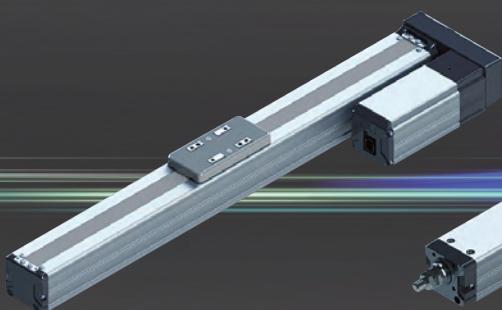
Added to the Series: Side-mounted Motor and Belt Types

Compared to the existing model (RCP2-BA), the belt type is;

- Available with a maximum stroke of 2,600mm
- Equipped with a standard stainless steel dust cover
- 1.5 times greater maximum speed and maximum payload

Side-mounted
Motor Type

Slider Type



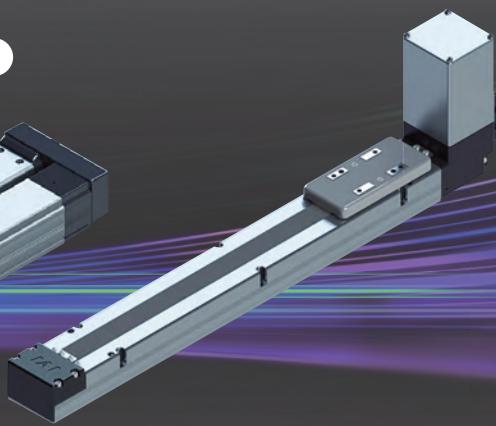
RCP5-SA4R/SA6R/SA7R

Rod Type (Radial Cylinder)



RCP5-RA4R/RA6R/RA7R

Belt Type



RCP5-BA4/BA6/BA7

Cleanroom
Type



RCP5CR-SA7C

RCP5CR-SA6C



RCP5CR-SA4C

The ROBO Cylinder is Easy to Use!!!**Problem Solving****Manufacturing Site Problems and Solutions****Air Cylinder Problems**

- 1 Reduced operation rate due to choco-tei caused by position switch failure or air pressure fluctuations
- 2 Cycle time cannot be shortened when sudden stops limit the operating speed.

Electric Actuator (Incremental Type) Problems

- After an emergency stop is reset, there is a long delay before the actuator returns to its home position or for an adjustment

Electric Actuator (Absolute Type) Problems

- 1 Higher cost
- 2 Battery replacement time management is required
- 3 Battery replacement labor and cost

**Electric Actuator Solutions (CT Effect)***

- 1 Choco-tei significantly reduced
- 2 Operating speeds are able to increase since there are no sudden stops

Absolute Type Solutions

- Home return is not required

Battery-less Absolute Type Solutions

- 1 Battery is not required
- 2 Slider type offered at the same price as the incremental type in RCP4 Series

Problems solved with the RCP5 Series!

Battery-less
ABSOLUTE

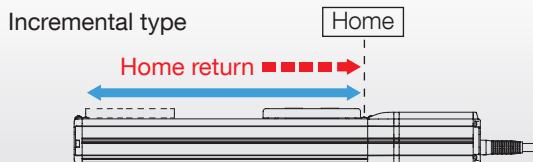
* The "CT Effect" refers to the increase in production volume per unit of time, which enables "shorter cycle-times" and "reduced choco-tei", due to re-evaluating the configuration of the automated equipment.

Feature

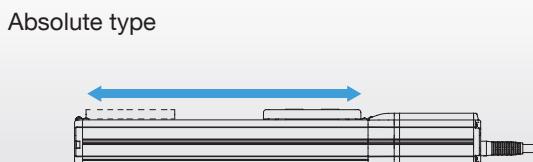
1

The Battery-less Absolute Encoder

What is an absolute encoder?



Since position data is lost when the power is shut down, this type of encoder will not operate until it has established its home position.



This type of encoder will maintain its position data even when the power is shut off, and will resume operating from its current position when the power is switched on.

Advantages of an absolute encoder

- Advantage 1:** Home return is not required, which means reduced amount of labor and time required for adjustment when starting up the device.
- Advantage 2:** The amount of time required for adjustment after an emergency stop until operation resumes is reduced.

What is a battery-less absolute encoder?

The battery-less absolute encoder verifies its current position based on the linked gear positions. A conventional absolute encoder uses a battery to store its current position, but since the battery-less type has no need to store this data, the battery was eliminated.



Advantages of a battery-less absolute encoder

- Advantage 1:** More economical with no cost associated with battery replacement.
- Advantage 2:** Battery replacement management is no longer required. Labor for replacement work is also no longer required.
- Advantage 3:** Battery installation space is not required.
- Advantage 4:** Even if the cable between the controller and the actuator is replaced, operation will resume with no adjustments needed, since positioning data is read each time it operates.
- Advantage 5:** No external sensor, such as a sensor to check the origin, is required since home return is not necessary.
- Advantage 6:** IAI's slider type, even with the battery-less absolute encoder, is offered for the same price as the conventional incremental type in RCP4 series.

Service life of a battery-less absolute encoder

The mechanical configuration of the battery-less absolute encoder offers a service life that is approximately four times the actuator guide's standard rating. Furthermore, it can be used with a sense of security because it will output an error when a certain amount of wear in the gear section is detected.

The ROBO Cylinder is Easy to Use!!!

Feature

2

1.5 Times Higher Maximum Speed and Double the Payload When Combined with a **PowerCON®**

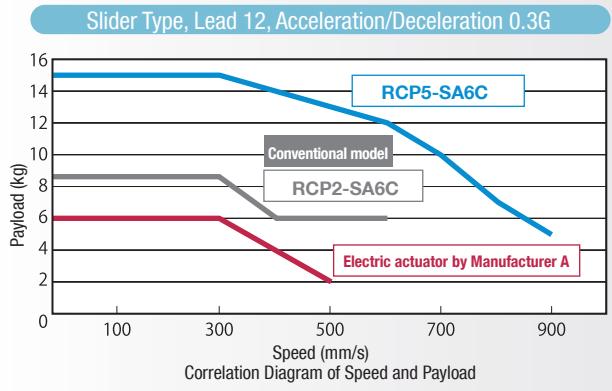
Shorter cycle time significantly boosts the productivity of your system

The new controller (PowerCON) is equipped with the newly developed high-output driver (patent pending) and has achieved significantly higher speeds up to 1.5 times more than IAI's conventional models. In addition, the payload is as much as two times greater, which are astonishing improvements in specifications. Furthermore, due to the motor's torque improvement at increased rotations, maximum speeds are not reduced even when the payload is increased, and it has achieved performance equivalent to a higher-class model at a lower cost.

(*) The specific rates of improvement vary depending on the model.



PowerCON
PCON-CB



* Previous model:
PCON-CA

New controllers are available!

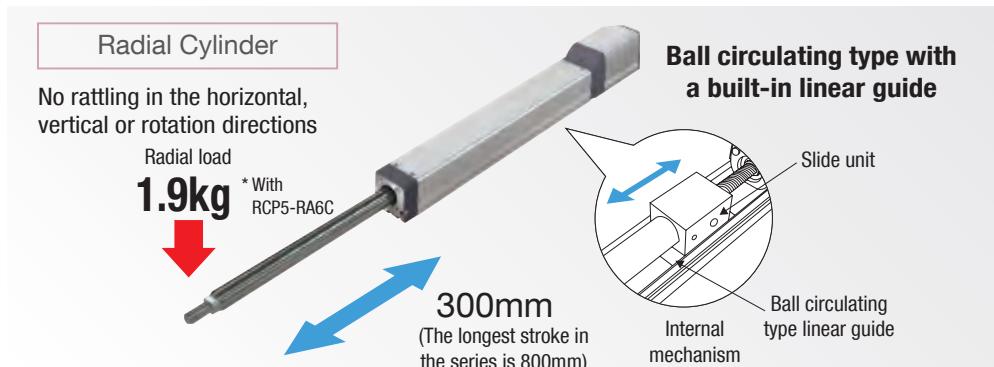
* Please see our Controller General Catalog and/or contact IAI to find latest models.
(Some model/part numbers are old on this RCP5 catalog since the catalog was issued in 2016.)

Feature 3

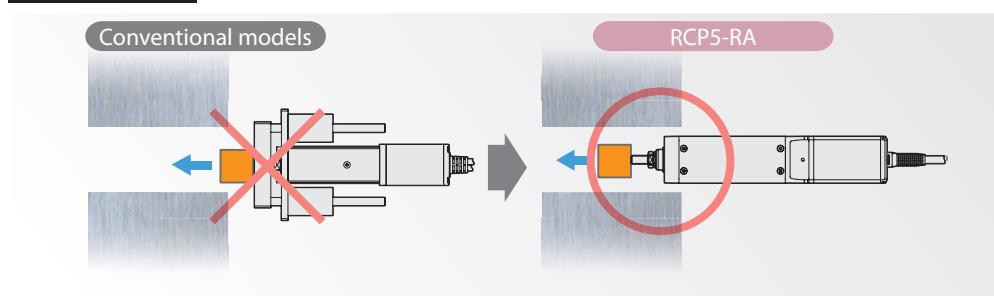
The Rod Type Can Carry Radial Loads.

The rod type <Radial Cylinder> with a built-in guide mechanism can carry radial loads over a long stroke of up to 800mm.

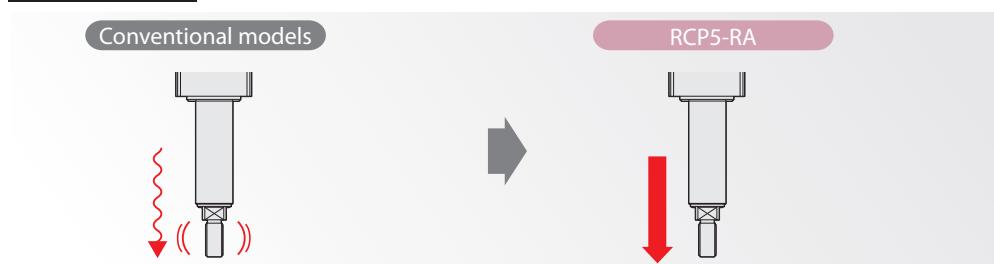
The rod type (Radial Cylinder) has a built-in ball circulating type linear guide mechanism, which allows it to carry radial loads and have a long stroke of up to 800mm. In addition, the actuator can support a radial load that is offset from the center of the rod.



Usage example 1 When a guide mechanism is required in a tight space



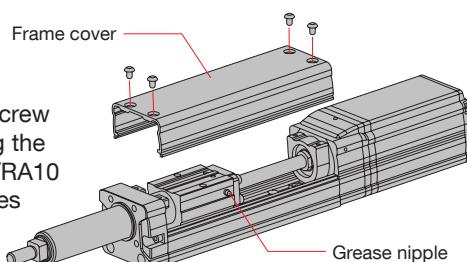
Usage example 2 When the rod needs to be straight



Feature 4

Easier to Maintain

Once the frame cover is removed, both the ball screw and guide can be greased at the same time using the right and left grease nipples. (For the RCP5-RA8/RA10 models, apply grease directly to the grease nipples without removing the frame cover.)



Feature 5

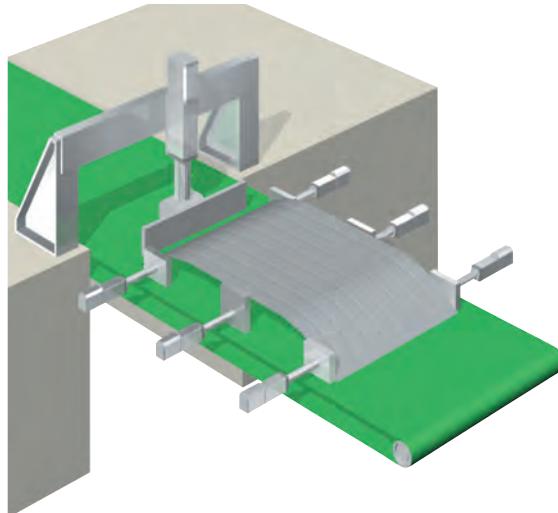
Added to the Series: Side-mounted Motor and Belt Type

In addition to the cleanroom type which is applicable for Cleanliness Class 10, the side-mounted motor and belt types have been added in the series.

Application Examples

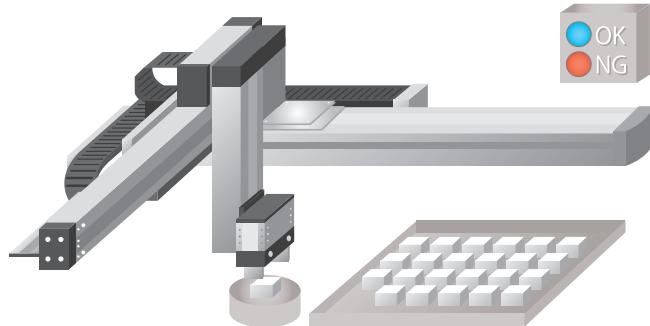
Rear Panel Positioning System

Work parts that have shifted can be realigned during the processing stage of an automotive rear panel by corrective "pushing" by the ROBO Cylinder. Even when the number of axes increases, a single controller can support them all, making wiring simple.



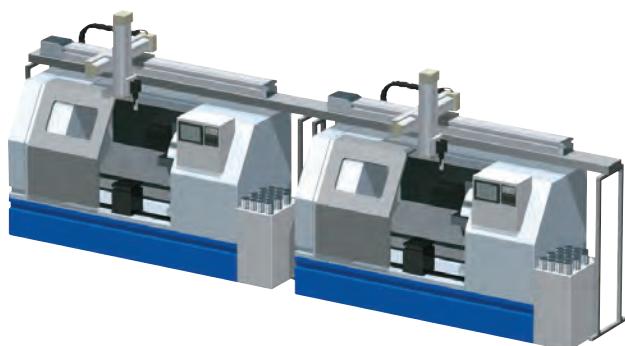
Palletizing System

Thanks to the battery-less absolute encoder, operations can easily be resumed even after an emergency stop or other halts in operation.



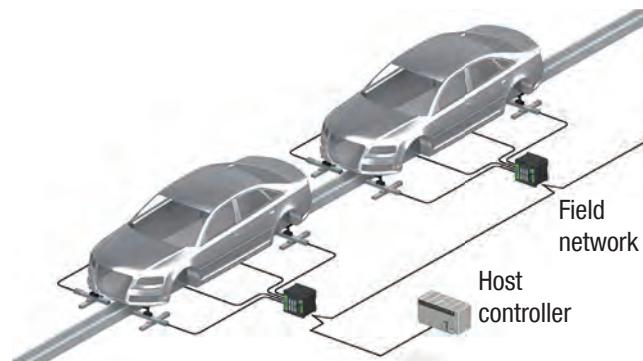
Work Transfer Between Processing Systems

Work parts can be transferred between systems without using a dedicated PLC.



Positioning for Automotive Assembly Lines

In a large-scale assembly line, implementing distributed control of each process and connecting to the host controller via a field network will reduce the load of the host controller.



Variation RCP5 series

The ROBO Cylinder is Easy to Use!!!

Slider Type

→P. 15

* Please also see our RCP6 series catalog.

Model	Type	External view	Actuator width	Stroke (mm)	Ball screw lead (mm)	Maximum speed (mm/s)	Maximum payload (kg)		Page
							Horizontal	Vertical	
Straight motor specification	SA4C*		 40 mm	50~500	16	1260	4	1	→P. 15
					10	785	10	2.25	
					5	390	12	4.5	
					2.5	195	12	9	
	SA6C*		 58 mm	50~800	20	1440<1280>	10	1	→P. 17
					12	900	15	2.5	
					6	450	25	6	
					3	225	25	16	
	SA7C*		 73 mm	50~800	24	1200	20	3	→P. 19
					16	980<840>	40	8	
					8	490	45	16	
					4	245<210>	45	25	
Side-mounted motor specification	SA4R*		 40 mm	50~500	16	1260	4	1	→P. 21
					10	785	10	2.25	
					5	390	12	4.5	
					2.5	195	12	9	
	SA6R*		 58 mm	50~800	20	1280	10	1	→P. 23
					12	900<800>	15	2.5	
					6	450	25	6	
					3	225	25	12	
	SA7R*		 73 mm	50~800	24	1000	20	3	→P. 25
					16	840<700>	40	8	
					8	490	45	16	
					4	210	45	25	

Values in brackets < > are for vertical use.

Rod Type

→P. 27

* Please also see our RCP6 series catalog.

Model	Type	External view	Actuator width	Stroke (mm)	Ball screw lead (mm)	Maximum speed (mm/s)	Maximum payload (kg)		Page
							Horizontal	Vertical	
Straight motor specification	RA4C*		 40 mm	60~410	16	1120<840>	6	1.5	→P. 27
					10	700	15	2.5	
					5	350	28	5	
					2.5	175	40	10	
	RA6C*		 58 mm	65~415	20	800	6	1.5	→P. 29
					12	700	25	4	
					6	450	40	10	
					3	225	60	20	
	RA7C*		 73 mm	70~520	24	800<600>	20	3	→P. 31
					16	700<560>	50	8	
					8	420	60	18	
					4	210	80	28	
	RA8C*		 88 mm	50~700	20	600<450>	30	5	→P. 33
					10	300<250>	60	40	
					5	150	100	70	
	RA10C		 108 mm	50~800	10	250<167>	80	80	→P. 35
					5	125	150	100	
					2.5	63	300	150	

Values in brackets < > are for vertical use.

Rod Type

→P. 37

* Please also see our RCP6 series catalog.

Model	Type	External view	Actuator width	Stroke (mm)	Ball screw lead (mm)	Maximum speed (mm/s)	Maximum payload (kg)		Page
							Horizontal	Vertical	
Side-mounted motor specification	RA4R*		40 mm	60~410	16	840	5	1	→P. 37
					10	610	12	2.5	
					5	350	25	5	
					2.5	175	40	10	
	RA6R*		58 mm	65~415	20	800	6	1.5	→P. 39
					12	700	25	4	
					6	450	40	10	
					3	225	60	20	
	RA7R*		73 mm	70~520	24	800<600>	20	3	→P. 41
					16	560	50	8	
					8	420<350>	60	18	
					4	175	80	28	
	RA8R*		88 mm	50~700	20	400	30	5	→P. 43
					10	200	60	40	
					5	100	100	70	
					10	200<140>	80	80	
	RA10R		108 mm	50~800	5	100	150	100	→P. 45
					2.5	50	300	150	

Values in brackets < > are for vertical use.

Cleanroom Type

→P. 47

* Please also see our RCP6 series catalog.

Type	External view	Actuator width	Stroke (mm)	Ball screw lead (mm)	Maximum speed (mm/s)	Maximum payload (kg)		Page
						Horizontal	Vertical	
SA4C*		40 mm	50~500	16	1260	4	1	→P. 47
				10	785	10	2.25	
				5	390	12	4.5	
				2.5	195	12	9	
SA6C*		58 mm	50~800	20	1440<1280>	10	1	→P. 49
				12	900	15	2.5	
				6	450	25	6	
				3	225	25	16	
SA7C*		73 mm	50~800	24	1200	20	3	→P. 51
				16	980<840>	40	8	
				8	490	45	16	
				4	245<210>	45	25	

Values in brackets < > are for vertical use.

Belt Type

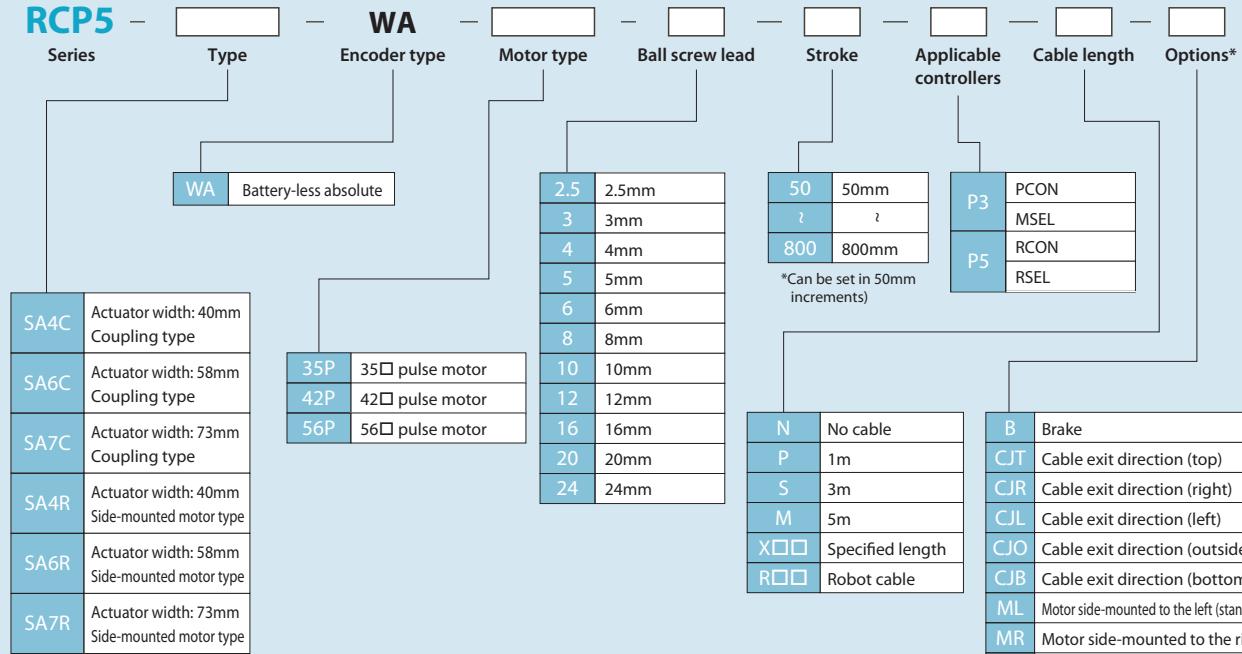
→P. 53

Type	External view	Actuator width	Stroke (mm)	Ball screw lead (mm)	Maximum speed (mm/s)	Maximum payload (kg)		Page
						Horizontal	Vertical	
BA4/BA4U		40 mm	300~1200	Equivalent to 48	1200	1.5		→P. 53
BA6/BA6U		58 mm	300~2200	Equivalent to 48	1500	6		→P. 55
BA7/BA7U		70 mm	300~2600	Equivalent to 48	1600	16		→P. 57

Model Specification Items

Model Specification Items

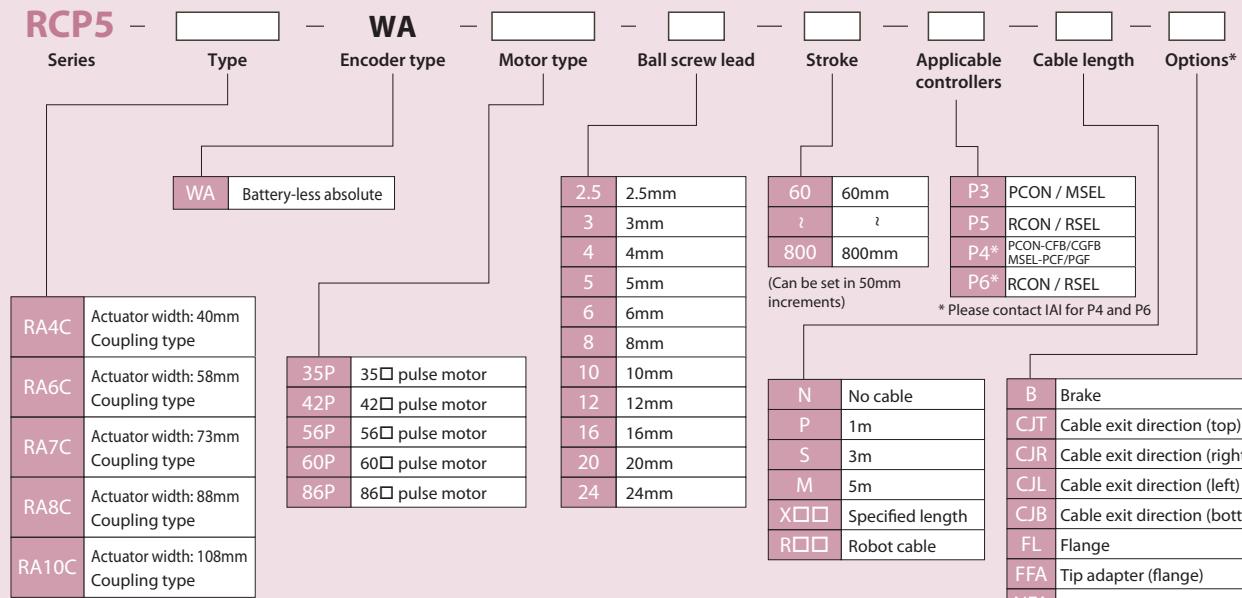
<Slider type>



* The available selections for encoder type, motor type, ball screw lead and stroke vary depending on the actuator type.
For details, please refer to the page featuring each actuator type.

* Please contact IAI for current options availability

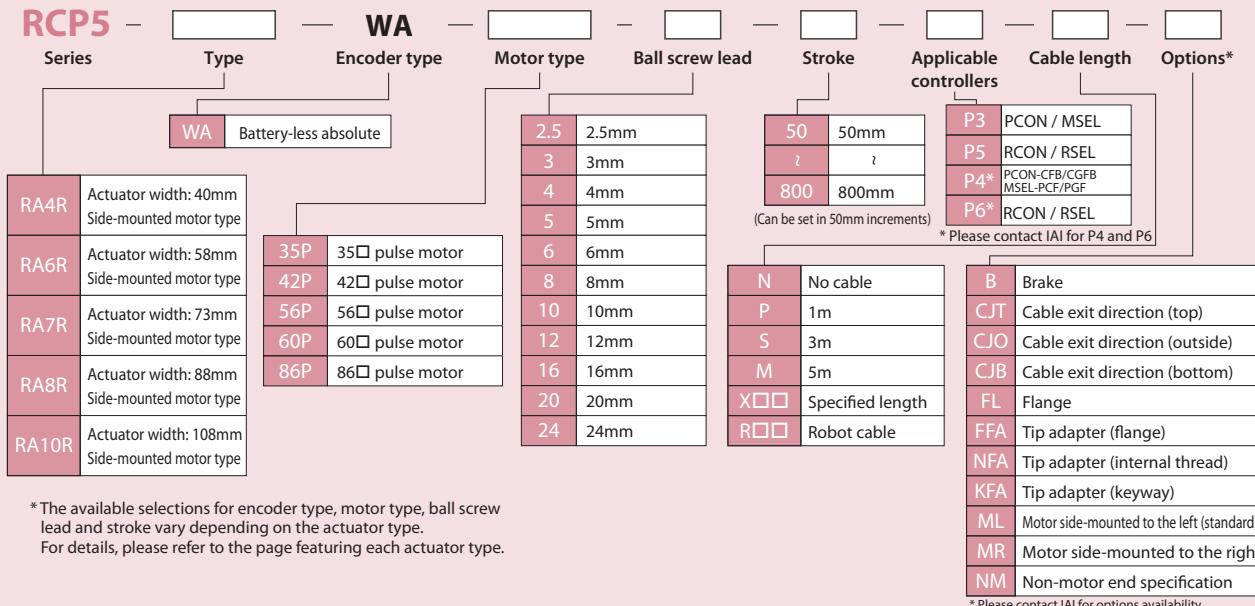
<Rod type: Straight motor specification>



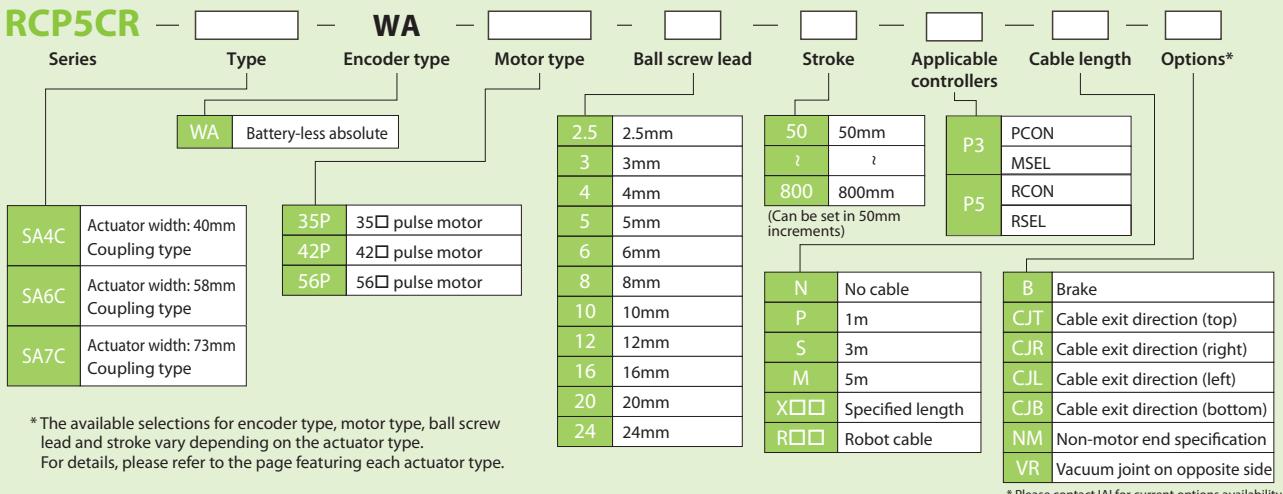
* The available selections for encoder type, motor type, ball screw lead and stroke vary depending on the actuator type.
For details, please refer to the page featuring each actuator type.

* Please contact IAI for current options availability

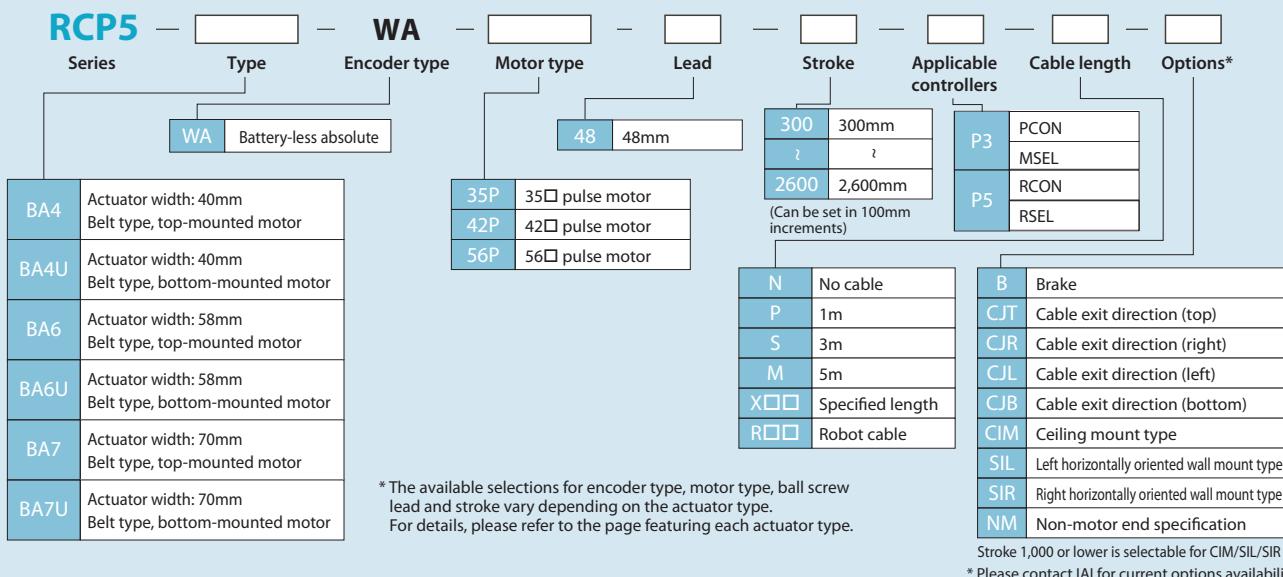
<Rod type: Side-mounted motor specification>



<Cleanroom type>



<Belt type>



Options

Actuator Options *Please contact IAI for current options availability

■ Brake

Option code: **B**

Applicable models

All models

Description

This is a holding mechanism that prevents the slider from falling and damaging any attached fittings when the power or servo is turned off.

■ Optional cable exit direction

Option code: **CJT**

CJR

CJL

CJB

CJO

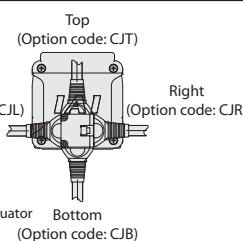
Applicable models

All models

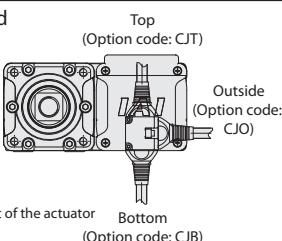
Description

This option allows you to change the exit direction of the motor-encoder cable to up, down, left or right.

Motor coupled type



Side-mounted motor type



■ Side-mounted motor direction

Option code:
ML/MR

* Please make sure to specify either "ML" or "MR" when ordering the side-mounted motor type.

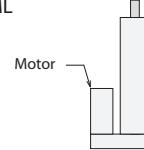
Applicable models

RCP5-SA□R/RA□R

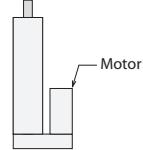
Description

This allows you to specify the direction of the side-mounted motor. As viewed from the motor side of the actuator, ML represents left and MR represents right.

The motor is side-mounted to the left (standard)
Option code: **ML**



The motor is side-mounted to the right
Option code: **MR**



■ Non-motor end specification

Option code: **NM**

Applicable models

All models

Description

This option changes the home position of the actuator's slider or rod from the normal position (motor-side), to the opposite side.

■ Slider spacer

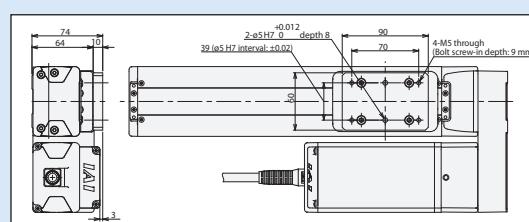
Option code: **SS**

Applicable models

RCP5-SA7R

Description

This option changes the top of the slider position to be higher than the motor height.



■ Slider roller specification

Option code: **SR**

Applicable models

RCP5-SA4□/SA6□/SA7□

Description

The slider of the standard slider type specification is changed to the same roller structure of the cleanroom type.

When using the slider roller specification, the appearance and dimensions of the slider cover will be the same as the cleanroom type.

■ Vacuum joint on opposite side

Option code: **VR**

Applicable models

RCP5CR-SA4C/SA6C/SA7C

Description

The vacuum joint in the standard models are installed on the left side of the actuator as viewed from the motor side. This option changes the position to the right (opposite) side.

Rod Attachment Options *Please contact IAI for current options availability

Front flange

■ Option code: FL

Applicable models RCP5-RA4□/RA6□/RA7□/RA8□/RA10□

Flange

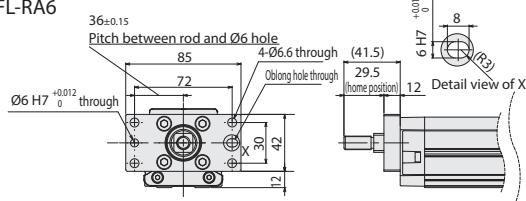
Option code :
FL

Description A bracket that attaches to the actuator body with bolts.



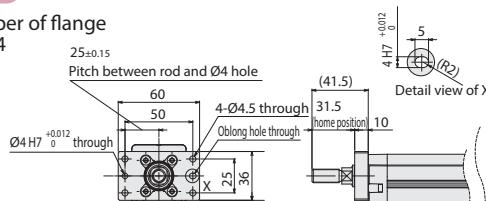
RCP5-RA4□

Model number of flange
RCP5-FL-RA4



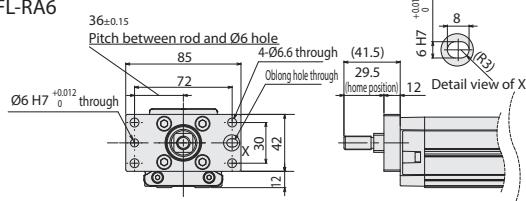
RCP5-RA4□

Model number of flange
RCP5-FL-RA4



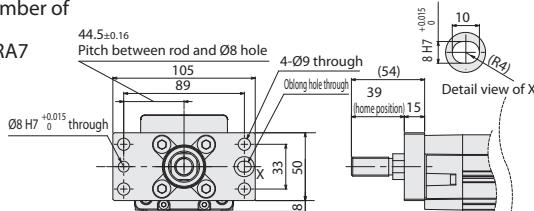
RCP5-RA6□

Model number of flange
RCP5-FL-RA6



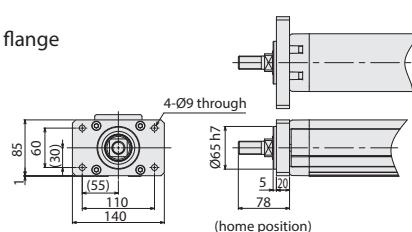
RCP5-RA7□

Model number of flange
RCP5-FL-RA7



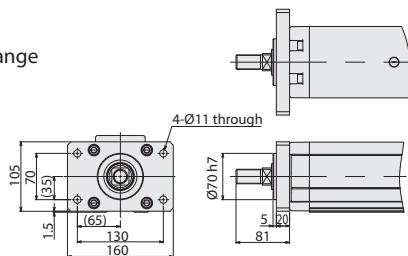
RCP5-RA8□

Model number of flange
RCP5-FL-RA8



RCP5-RA10□

Model number of flange
RCP5-FL-RA10



Tip Adapter (Flange)

■ Option code: FFA

Applicable models RCP5-RA4□/RA6□/RA7□

Tip Adapter (Flange)

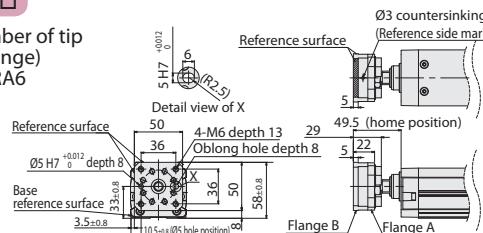
Option code :
FFA

Description A rod-end tooling adapter with 4 threaded holes.



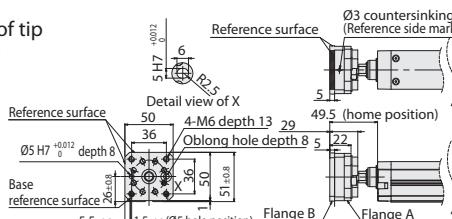
RCP5-RA6□

Model number of tip adapter (flange)
RCP5-FFA-RA6



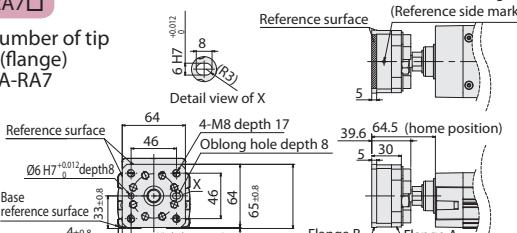
RCP5-RA4□

Model number of tip adapter (flange)
RCP5-FFA-RA4



RCP5-RA7□

Model number of tip adapter (flange)
RCP5-FFA-RA7



Rod Attachment Options *Please contact IAI for current options availability

Tip Adapter (Internal Thread)

■ Option code: **NFA**

Applicable models RCP5-RA4□/RA6□/RA7□

**Tip Adapter
(Internal
Thread):**

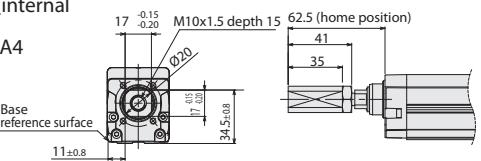
Option code:
NFA

Description | A threaded female tip adapter.



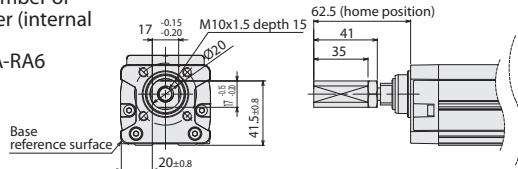
RCP5-RA4□

Model number of
tip adapter (internal
thread)
RCP5-NFA-RA4



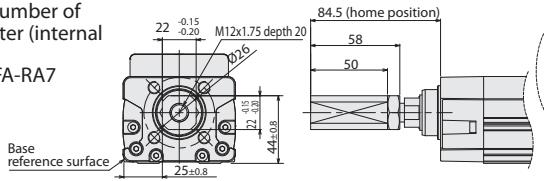
RCP5-RA6□

Model number of
tip adapter (internal
thread)
RCP5-NFA-RA6



RCP5-RA7□

Model number of
tip adapter (internal
thread)
RCP5-NFA-RA7



Tip Adapter (Keyway)

■ Option code: **KFA**

Applicable models RCP5-RA4□/RA6□/RA7□

**Tip Adapter
(Keyway)**

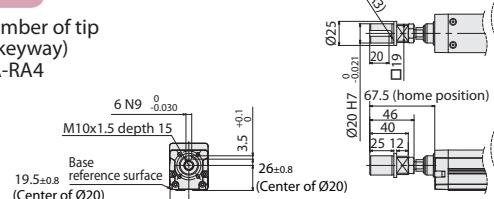
Option code:
KFA

Description | A female threaded tip adapter with a parallel keyway.



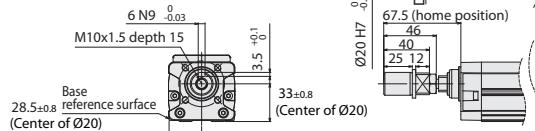
RCP5-RA4□

Model number of tip
adapter (keyway)
RCP5-KFA-RA4



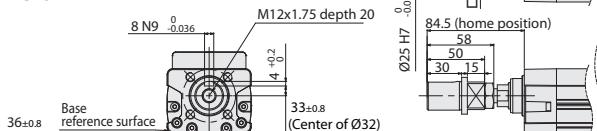
RCP5-RA6□

Model number of tip
adapter (keyway)
RCP5-KFA-RA6



RCP5-RA7□

Model number of tip
adapter (keyway)
RCP5-KFA-RA7



■ Warnings when Selecting the Rod Attachment Option

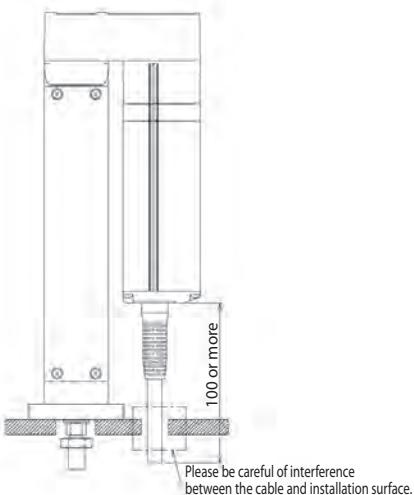
*Please contact IAI for current options availability

When Selecting the Front Flange (FL)

■The front flange (FL) rod attachment option cannot be selected when the following strokes are selected for RCP5-RA4R/RA6R/RA7R;

- (1) RA4R: 60mm (standard) and 60~110mm (with brake)
- (2) RA6R: 65mm (with brake)
- (3) RA7R: 70mm (standard) and 70~120mm (with brake)

■Please be careful of nearby objects when selecting the front flange (FL) option for the RCP5-RA4R/RA6R/RA7R models, as selecting a short stroke may cause some interference between the cable and installation surface for certain strokes.



When Selecting the Tip Adapter Option (FFA, NFA, KFA)

■Please be careful of nearby objects when selecting the tip adapter option (FFA, NFA, KFA) for the RCP5-RA4R/RA6R/RA7R models, as selecting a short stroke may cause some interference between the cable and work piece for certain strokes.

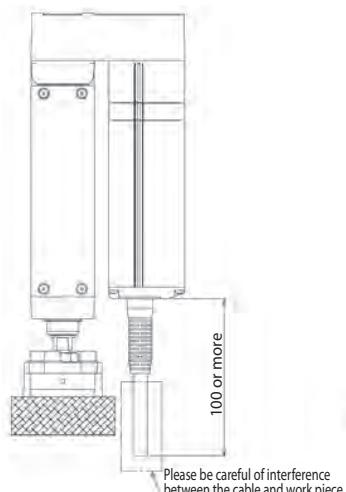


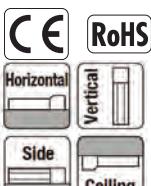
Figure above shows the case of tip adapter (Flange=FFA).

RCP5-SA4C

ROBO Cylinder, Slider Type, Motor Unit Coupled,
Actuator Width 40mm, 24V Pulse Motor

Model	RCP5-SA4C	WA	35P	Lead	Stroke	Applicable controllers	Cable length	Options
Specification	Series	Type	Encoder type	Motor type				
Items	WA: Battery-less absolute specification	35P: Pulse motor, size 35□	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 500: 500mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	X□□: Specified length R□□: Robot cable	Please refer to the options table below.

*Controller is not included.



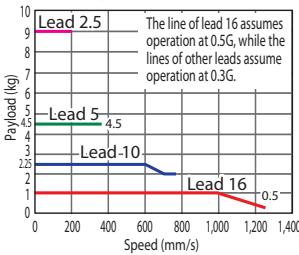
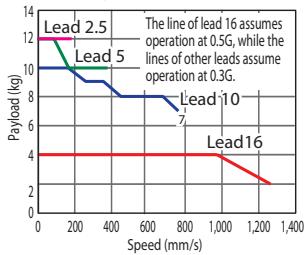
* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to P.59 for details.



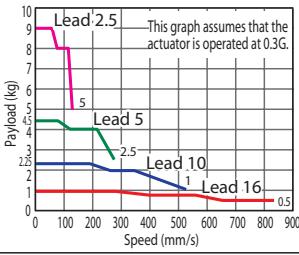
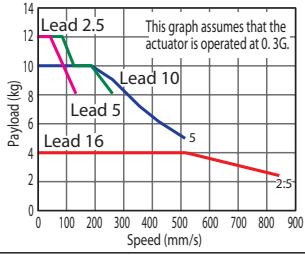
- The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- Please refer to P. 59 for push-motion operation.

Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON-CA, MSEP, MSEL connected
RCP5-SA4C, Horizontal mount



(2) High-output disabled with PCON-CA, MSEP connected
RCP5-SA4C, Horizontal mount



Actuator Specifications

Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Vertical (kg)	Stroke (mm)
RCP5-SA4C-WA-35P-16-①-P3-②-③	16	High-output enabled	4	1	50~500 (Every 50mm)
RCP5-SA4C-WA-35P-10-①-P3-②-③		High-output disabled			
RCP5-SA4C-WA-35P-5-①-P3-②-③	5	High-output enabled	12	4.5	
RCP5-SA4C-WA-35P-2.5-①-P3-②-③		High-output disabled			

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	300	-
100	-	350	-
150	-	400	-
200	-	450	-
250	-	500	-

Stroke and Maximum Speed

(Unit: mm/s)

Lead (mm)	Connected controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
16	High-output enabled	1,260	1,060	875
	High-output disabled		840	
10	High-output enabled	785	675	555
	High-output disabled		525	
5	High-output enabled	390	330	275
	High-output disabled		260	
2.5	High-output enabled	195	165	135
	High-output disabled		130	

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Slider roller specification	SR	→P. 11	-
Non-motor end specification	NM	→P. 11	-

* Please contact IAI for current available options.

Actuator Specifications

Item	Description
Drive system	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic allowable moment (*1)	Ma: 4.98N·m, Mb: 7.11N·m, Mc: 9.68N·m
Static allowable moment	Ma: 8.6N·m, Mb: 12.2N·m, Mc: 16.7N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
• Reference for overhang load length/Ma: 120mm or less, Mb, Mc: 120mm or less	

(*1) Assumes a standard rated life of 5,000km.

(*2) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

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

2D CAD

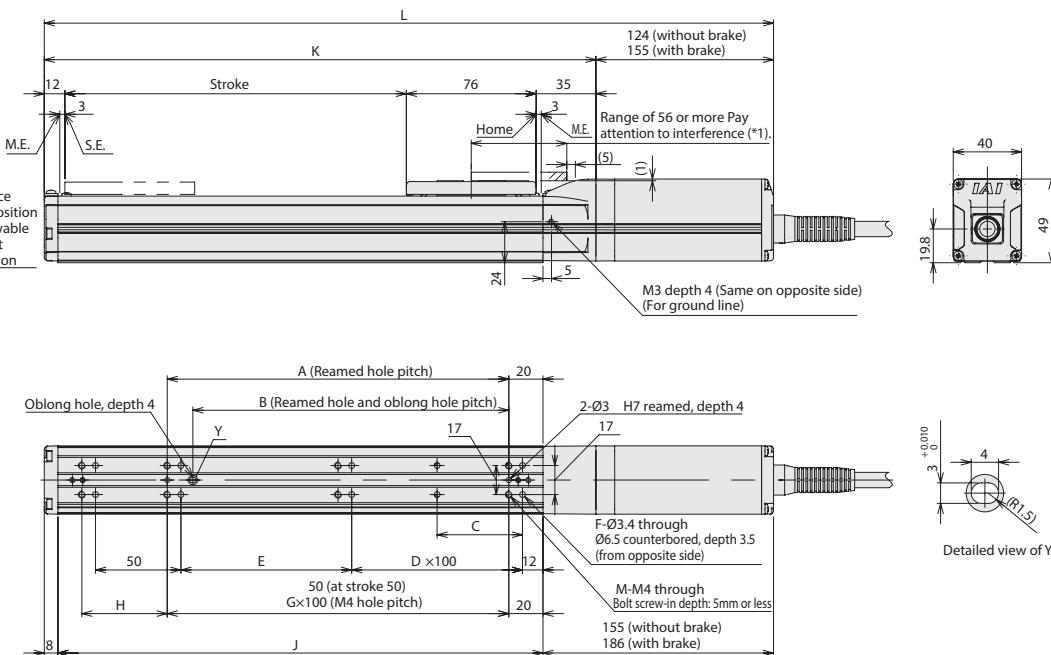
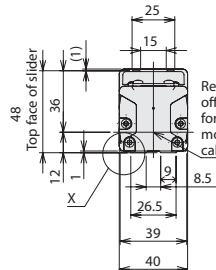
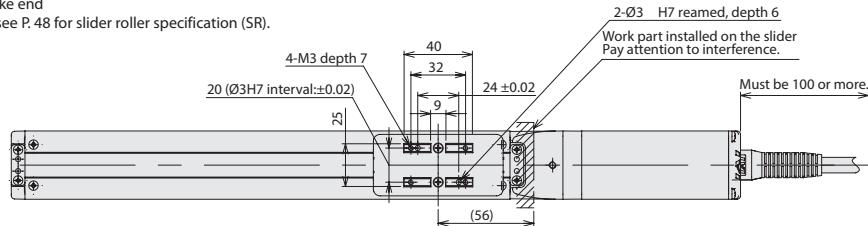
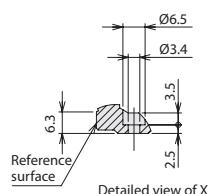
3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

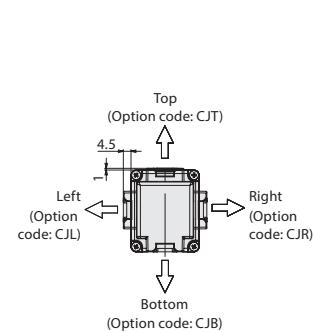
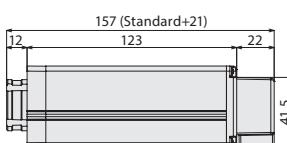
ME: Mechanical end

SE: Stroke end

*2 Please see P.48 for slider roller specification (SR).



Cable Exit Direction (Option)



Dimensions and Mass by Stroke

	Stroke	50	100	150	200	250	300	350	400	450	500
L	Without brake	297	347	397	447	497	547	597	647	697	747
	With brake	328	378	428	478	528	578	628	678	728	778
A	50	100	100	200	200	300	300	400	400	500	500
B	35	85	85	185	185	285	285	385	385	485	485
C	25	50	50	50	50	50	50	50	50	50	50
D	0	0	1	1	2	2	3	3	4	4	4
E	50	100	50	100	50	100	50	100	50	100	50
F	8	8	10	10	12	12	14	14	16	16	16
G	0	1	1	2	2	3	3	4	4	5	5
H	50	50	100	50	100	50	100	50	100	50	50
J	134	184	234	284	334	384	434	484	534	584	584
K	173	223	273	323	373	423	473	523	573	623	623
M	6	6	6	8	8	10	10	12	12	14	14
Mass (kg)	Without brake	1.0	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.7	1.8
	With brake	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0

Applicable Controllers

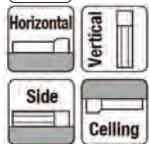
* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

RCP5-SA6C

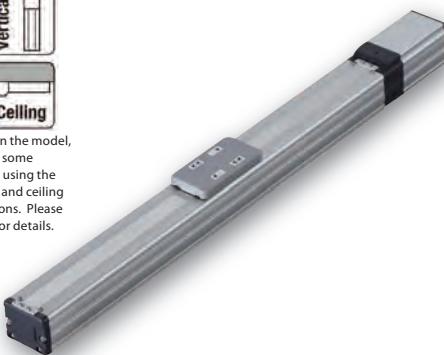
ROBO Cylinder, Slider Type, Motor Unit Coupled,
Actuator Width 58mm, 24V Pulse Motor

Model	RCP5-SA6C	WA	42P	Lead	Stroke	Applicable controllers	Cable length	Options
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke		
Items	WA: Battery-less absolute specification	42P: Pulse motor, size 42□	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm 800: 800mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	Please refer to the options table below.	X□□: Specified length R□□: Robot cable

*Controller is not included.



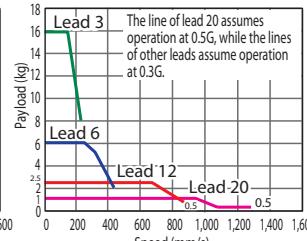
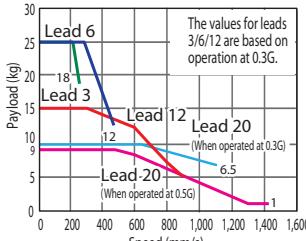
* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to P.59 for details.



- The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- Please refer to P. 59 for push-motion operation.

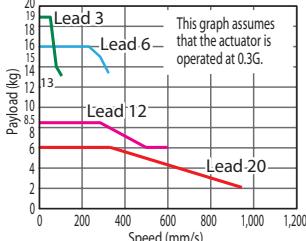
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON-CA, MSEP, MSEL connected
RCP5-SA6C, Horizontal mount

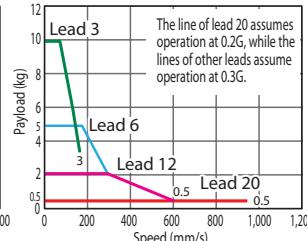


(2) High-output disabled with PCON-CA, MSEP connected

RCP5-SA6C, Horizontal mount



RCP5-SA6C, Vertical mount



Actuator Specifications

Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload		Stroke (mm)
			Horizontal (kg)	Vertical (kg)	
RCP5-SA6C-WA-42P-20-①-P3-②-③	20	High-output enabled	10	1	50~800 (Every 50mm)
		High-output disabled	6	0.5	
RCP5-SA6C-WA-42P-12-①-P3-②-③	12	High-output enabled	15	2.5	
		High-output disabled	8.5	2	
RCP5-SA6C-WA-42P-6-①-P3-②-③	6	High-output enabled	25	6	
		High-output disabled	16	5	
RCP5-SA6C-WA-42P-3-①-P3-②-③	3	High-output enabled	25	16	
		High-output disabled	19	10	

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	450	-
100	-	500	-
150	-	550	-
200	-	600	-
250	-	650	-
300	-	700	-
350	-	750	-
400	-	800	-

■ Stroke and Maximum Speed Values in brackets <> are for vertical use. (Unit: mm/s)

Lead (mm)	Connected controller	50~400 (Every 50mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	High-output enabled	1,440 <1,280>	1,335	1,130	970	840	735	650	575	
	High-output disabled		960			840	735	650	575	
12	High-output enabled	900	885	735	620	535	460	405	355	315
	High-output disabled		600			535	460	405	355	315
6	High-output enabled	450	435	365	305	265	230	200	175	155
	High-output disabled		300			265	230	200	175	155
3	High-output enabled	225	215	180	150	130	115	100	85	75
	High-output disabled		150			130	115	100	85	75

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Slider roller specification	SR	→P. 11	-
Non-motor end specification	NM	→P. 11	-

* Please contact IAI for current available options.

Actuator Specifications

Item	Description
Drive system	Ball screw Ø10mm, rolled C10
Positioning repeatability (*1)	±0.02mm [±0.03mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic allowable moment (*2)	Ma: 11.6N·m, Mb: 16.6N·m, Mc: 24.6N·m
Static allowable moment	Ma: 38.3N·m, Mb: 54.7N·m, Mc: 81N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

*Reference for overhang load length/Ma: 150mm or less, Mb, Mc: 150mm or less

(*1) The values in brackets [] are for Lead 20.

(*2) Assumes a standard rated life of 5,000km.

(*3) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

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

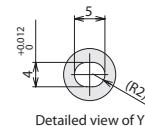
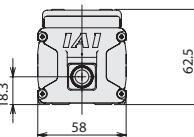
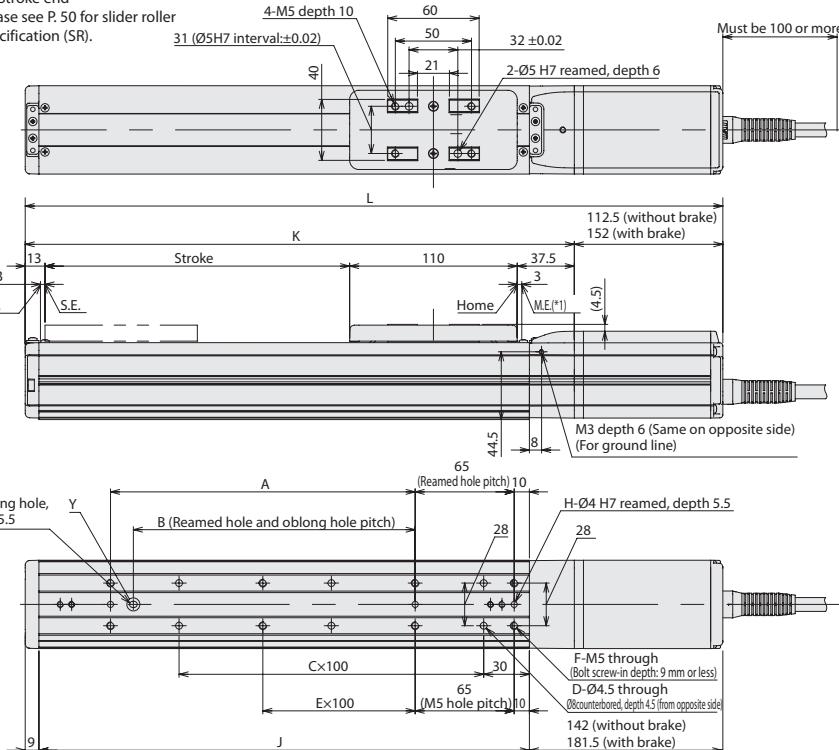
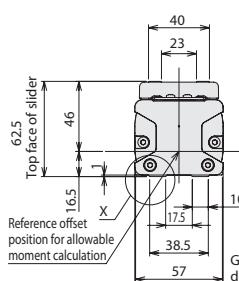
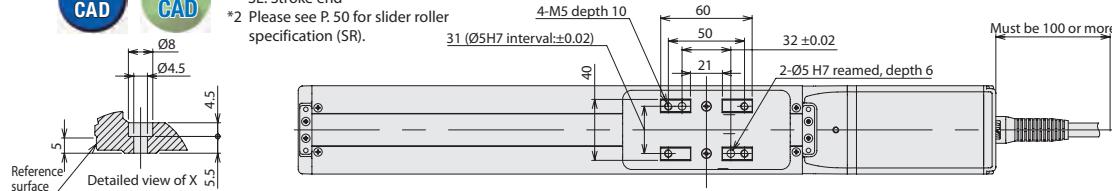


*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

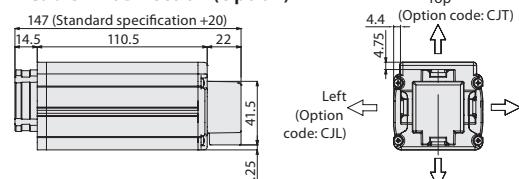
ME: Mechanical end

SE: Stroke end

*2 Please see P.50 for slider roller specification (SR).



■ Cable Exit Direction (Option)



■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
L	323	373	423	473	523	573	623	673	723	773	823	873	923	973	1,023	1,073	
	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1,012.5	1,062.5	1,112.5	
A	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	
B	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785	
C	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	
D	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	
E	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	
F	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
H	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
J	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922	
K	210.5	260.5	310.5	360.5	410.5	460.5	510.5	560.5	610.5	660.5	710.5	760.5	810.5	860.5	910.5	960.5	
Mass (kg)	Without brake	1.7	1.8	2.0	2.2	2.4	2.5	2.7	2.9	3.1	3.2	3.4	3.6	3.8	3.9	4.1	4.3
	With brake	1.9	2.0	2.2	2.4	2.6	2.7	2.9	3.1	3.3	3.4	3.6	3.8	4.0	4.1	4.3	4.5

Applicable Controllers

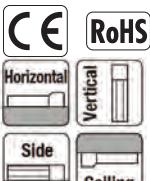
* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

RCP5-SA7C

ROBO Cylinder, Slider Type, Motor Unit Coupled,
Actuator Width 73mm, 24V Pulse Motor

Model	RCP5-SA7C	WA	56P								
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options		
Items	WA: Battery-less absolute specification	56P: Pulse motor, size 56□	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm 800: 800mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	X□□: Specified length R□□: Robot cable	Please refer to the options table below.			

*Controller is not included.



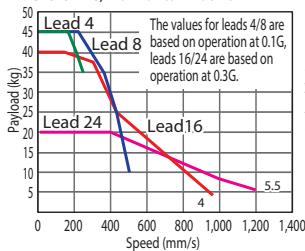
* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to P.59 for details.



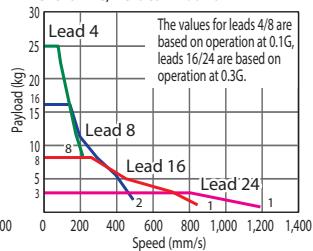
- The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- Please refer to P. 59 for push-motion operation.

Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON-CA, MSEP, MSEL connected
RCP5-SA7C, Horizontal mount

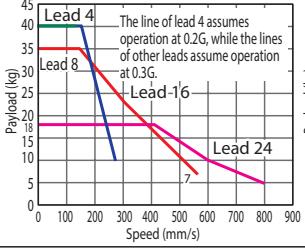


RCP5-SA7C, Vertical mount

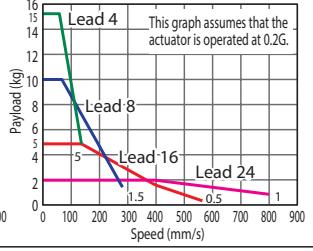


(2) High-output disabled with PCON-CA, MSEP connected

RCP5-SA7C, Horizontal mount



RCP5-SA7C, Vertical mount



Actuator Specifications

■ Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload		Stroke (mm)
			Horizontal (kg)	Vertical (kg)	
RCP5-SA7C-WA-56P-24-①-P3-②-③	24	High-output enabled	20	3	50~800 (Every 50mm)
		High-output disabled	18	2	
RCP5-SA7C-WA-56P-16-①-P3-②-③	16	High-output enabled	40	8	
		High-output disabled	35	5	
RCP5-SA7C-WA-56P-8-①-P3-②-③	8	High-output enabled	45	16	
		High-output disabled	40	10	
RCP5-SA7C-WA-56P-4-①-P3-②-③	4	High-output enabled	45	25	
		High-output disabled	40	15	

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	450	-
100	-	500	-
150	-	550	-
200	-	600	-
250	-	650	-
300	-	700	-
350	-	750	-
400	-	800	-

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Slider roller specification	SR	→P. 11	-
Non-motor end specification	NM	→P. 11	-

* Please contact IAI for current available options.

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

Actuator Specifications

Item	Description			
Drive system	Ball screw Ø12mm, rolled C10			
Positioning repeatability (*1)	±0.02mm [±0.03mm]			
Lost motion	0.1mm or less			
Base	Material: Aluminum with white alumite treatment			
Dynamic allowable moment (*2)	Ma: 11.6N·m, Mb: 16.6N·m, Mc: 33.7N·m			
Static allowable moment	Ma: 51.2N·m, Mb: 73.1N·m, Mc: 148N·m			
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)			

(*1) The values in brackets [] are for Lead 24.

(*2) Assumes a standard rated life of 5,000km.

(*) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

* PCON-CA is a previous model. Current model is PCON-CB.

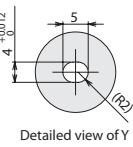
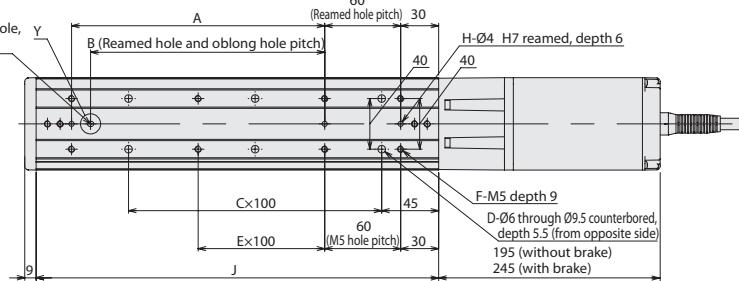
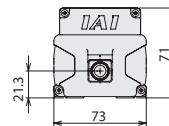
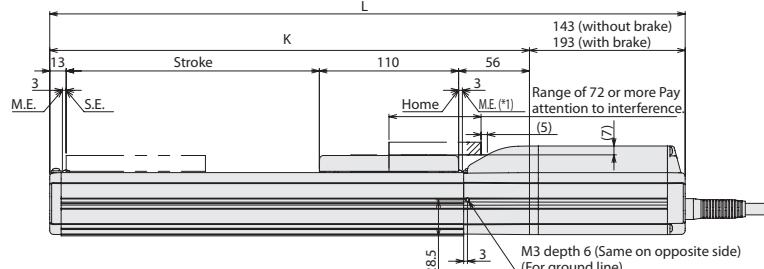
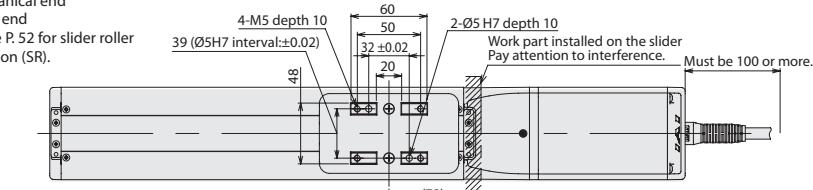
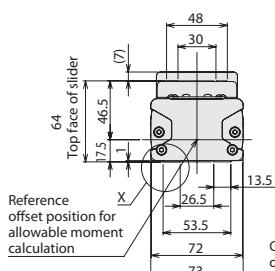
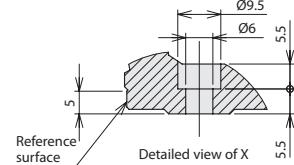
Dimensions

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

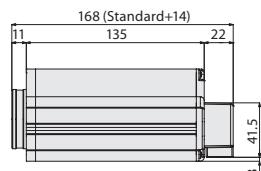
2D CAD

3D CAD

- *1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
- ME: Mechanical end
- SE: Stroke end
- *2 Please see P.52 for slider roller specification (SR).



■ Cable Exit Direction (Option)



■ Dimensions and Mass by Stroke

	Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	Without brake	372	422	472	522	572	622	672	722	772	822	872	922	972	1,022	1,072	1,122
	With brake	422	472	522	572	622	672	722	772	822	872	922	972	1,022	1,072	1,122	1,172
A	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	
B	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785	
C	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	
D	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	
E	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	
F	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
H	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
J	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	
K	229	279	329	379	429	479	529	579	629	679	729	779	829	879	929	979	
Mass (kg)	Without brake	3.0	3.2	3.5	3.7	3.9	4.1	4.4	4.6	4.8	5.0	5.3	5.5	5.7	5.9	6.1	6.4
	With brake	3.5	3.7	4.0	4.2	4.4	4.6	4.9	5.1	5.3	5.5	5.8	6.0	6.2	6.4	6.6	6.9

Applicable Controllers

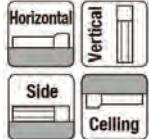
* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

RCP5-SA4R

ROBO Cylinder, Slider Type, Side-mounted Motor Type,
Actuator Width 40mm, 24V Pulse Motor

Model	RCP5-SA4R	WA	35P	Lead	Stroke	Applicable controllers	Cable length	Options
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke		
Items	WA: Battery-less absolute specification	35P: Pulse motor, size 35□	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 10: 10mm 5: 5mm 2.5: 2.5mm	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	X□□: Specified length R□□: Robot cable	Please refer to the options table below.

*Controller is not included.



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to P.59 for details.



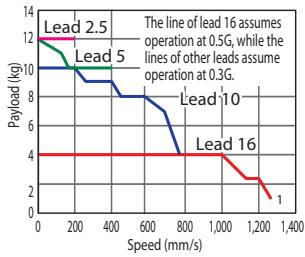
The figure above is the motor side-mounted to the left (ML).



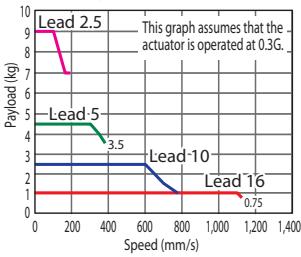
- (1) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- (2) Please refer to P. 59 for push-motion operation.

Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON-CA, MSEP, MSEL connected
RCP5-SA4R, Horizontal mount

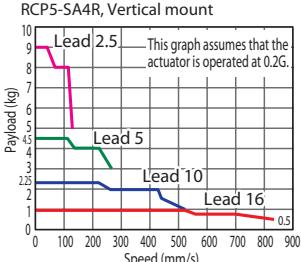
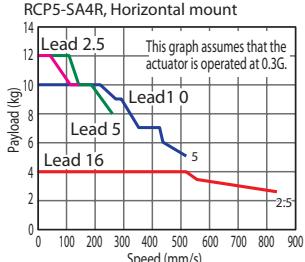


RCP5-SA4R, Vertical mount



* PCON-CA is a previous model. Current model is PCON-CB.

(2) High-output disabled with PCON-CA, MSEP connected
RCP5-SA4R, Horizontal mount



Actuator Specifications

Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Vertical (kg)	Stroke (mm)
RCP5-SA4R-WA-35P-16-①-P3-②-③	16	High-output enabled	4	1	
		High-output disabled			
RCP5-SA4R-WA-35P-10-①-P3-②-③	10	High-output enabled	10	2.25	
		High-output disabled			
RCP5-SA4R-WA-35P-5-①-P3-②-③	5	High-output enabled	12	4.5	
		High-output disabled			
RCP5-SA4R-WA-35P-2.5-①-P3-②-③	2.5	High-output enabled	12	9	
		High-output disabled			

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	300	-
100	-	350	-
150	-	400	-
200	-	450	-
250	-	500	-

② Stroke and Maximum Speed

(Unit: mm/s)

Lead (mm)	Connected controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
16	High-output enabled	1,260	1,060	875
	High-output disabled			840
10	High-output enabled	785	675	555
	High-output disabled			525
5	High-output enabled	390	330	275
	High-output disabled			260
2.5	High-output enabled	195	165	135
	High-output disabled			130

③ Cable Length

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

*Please refer to P. 89 for maintenance cables.

④ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Outside)	CJO	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Motor side-mounted to the left (Standard)	ML	→P. 11	-
Motor side-mounted to the right	MR	→P. 11	-
Slider roller specification	SR	→P. 11	-
Non-motor end specification	NM	→P. 11	-

* Please contact IAI for current available options.

RCP5-SA4R

Actuator Specifications

Item	Description
Drive system	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic allowable moment (*1)	Ma: 4.98N·m, Mb: 7.11N·m, Mc: 9.68N·m
Static allowable moment	Ma: 8.6N·m, Mb: 12.2N·m, Mc: 16.7N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

*Reference for overhang load length/Ma: 120mm or less, Mb, Mc: 120mm or less

(*1) Assumes a standard rated life of 5,000km.

(*2) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

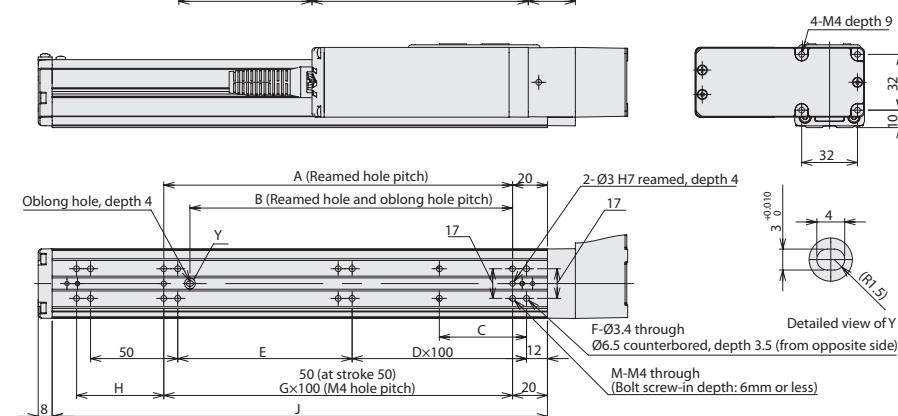
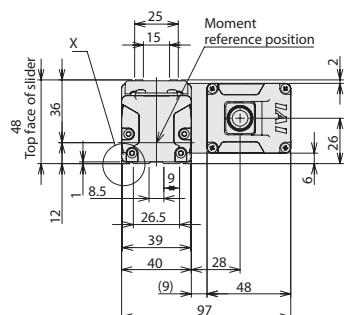
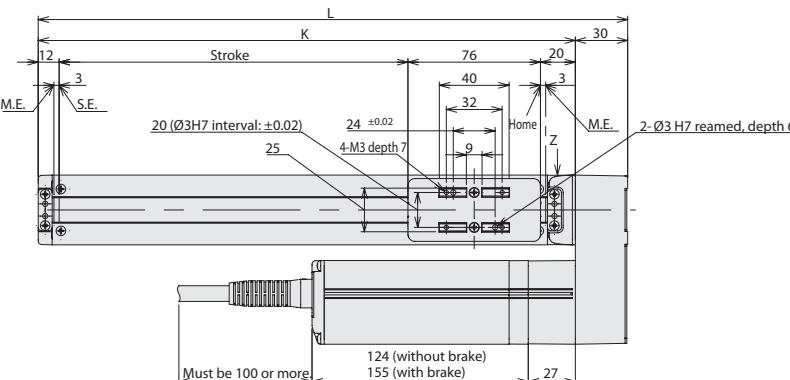
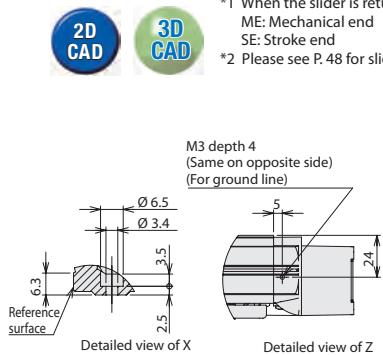
CAD drawings can be downloaded from our website. www.intelligentactuator.com

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

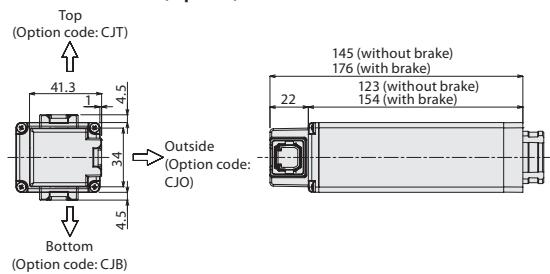
ME: Mechanical end

SE: Stroke end

*2 Please see P. 48 for slider roller specification (SR).



■Cable Exit Direction (Option)



*The figure above is for the motor side-mounted to the left (ML).

■Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	188	238	288	338	388	438	488	538	588	638
A	50	100	100	200	200	300	300	400	400	500
B	35	85	85	185	185	285	285	385	385	485
C	25	50	50	50	50	50	50	50	50	50
D	0	0	1	1	2	2	3	3	4	4
E	50	100	50	100	50	100	50	100	50	100
F	8	8	10	10	12	12	14	14	16	16
G	-	1	1	2	2	3	3	4	4	5
H	50	50	100	50	100	50	100	50	100	50
J	134	184	234	284	334	384	434	484	534	584
K	158	208	258	308	358	408	458	508	558	608
M	6	6	6	8	8	10	10	12	12	14
Mass (kg)	Without brake	1.3	1.4	1.5	1.6	1.6	1.7	1.8	1.9	2.0
	With brake	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.1	2.3

Applicable Controllers

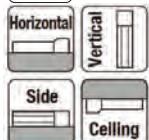
* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

RCP5-SA6R

ROBO Cylinder, Slider Type, Side-mounted Motor Type,
Actuator Width 58mm, 24V Pulse Motor

Model	RCP5-SA6R	WA	42P	□	□	□	□	□	□	□
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options	
Items	WA: Battery-less absolute specification		42P: Pulse motor, size 42□		20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm 800: 800mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	Please refer to the options table below.	

*Controller is not included.



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to P.59 for details.



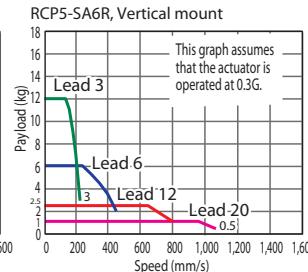
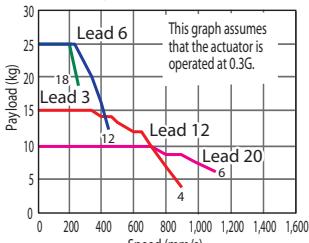
The figure above is the motor side-mounted to the left (ML).



- The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- Please refer to P. 59 for push-motion operation.

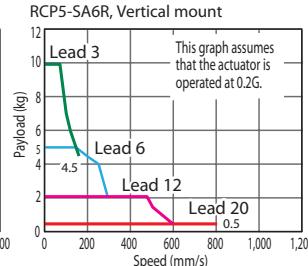
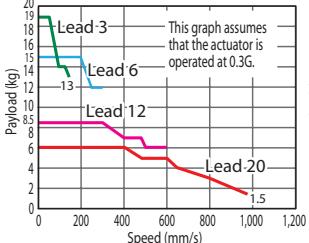
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON-CA, MSEP, MSEL connected
RCP5-SA6R, Horizontal mount



(2) High-output disabled with PCON-CA, MSEP connected

RCP5-SA6R, Horizontal mount



Actuator Specifications

Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Vertical (kg)	Stroke (mm)
RCP5-SA6R-WA-42P-20-①-P3-②-③	20	High-output enabled	10	1	50~800 (Every 50mm)
		High-output disabled	6	0.5	
RCP5-SA6R-WA-42P-12-①-P3-②-③	12	High-output enabled	15	2.5	
		High-output disabled	8.5	2	
RCP5-SA6R-WA-42P-6-①-P3-②-③	6	High-output enabled	25	6	
		High-output disabled	16	5	
RCP5-SA6R-WA-42P-3-①-P3-②-③	3	High-output enabled	25	12	
		High-output disabled	19	10	

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	450	-
100	-	500	-
150	-	550	-
200	-	600	-
250	-	650	-
300	-	700	-
350	-	750	-
400	-	800	-

■ Stroke and Maximum Speed Values in brackets <> are for vertical use. (Unit: mm/s)

Lead (mm)	Connected controller	50~400 (Every 50mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	High-output enabled	1,280		1,130	970	840	735	650	575	
	High-output disabled		960			840	735	650	575	
12	High-output enabled	900 <800>	885 <800>	735	620	535	460	405	355	315
	High-output disabled		600			535	460	405	355	315
6	High-output enabled	450	435	365	305	265	230	200	175	155
	High-output disabled		300			265	230	200	175	155
3	High-output enabled	225	215	180	150	130	115	100	85	75
	High-output disabled		150			130	115	100	85	75

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Outside)	CJO	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Motor side-mounted to the left (Standard)	ML	→P. 11	-
Motor side-mounted to the right	MR	→P. 11	-
Slider roller specification	SR	→P. 11	-
Non-motor end specification	NM	→P. 11	-

* Please contact IAI for current available options.

RCP5-SA6R

Actuator Specifications

Item	Description
Drive system	Ball screw Ø10mm, rolled C10
Positioning repeatability (*1)	±0.02mm [±0.03mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic allowable moment (*2)	Ma: 11.6N·m, Mb: 16.6N·m, Mc: 24.6N·m
Static allowable moment	Ma: 38.3N·m, Mb: 54.7N·m, Mc: 81N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

*Reference for overhang load length/Ma: 150mm or less, Mb, Mc: 150mm or less

(*1) The values in brackets [] are for Lead 20.

(*2) Assumes a standard rated life of 50,000km.

(*3) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

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

2D CAD

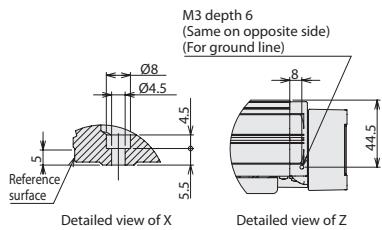
3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

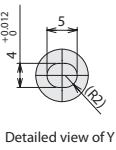
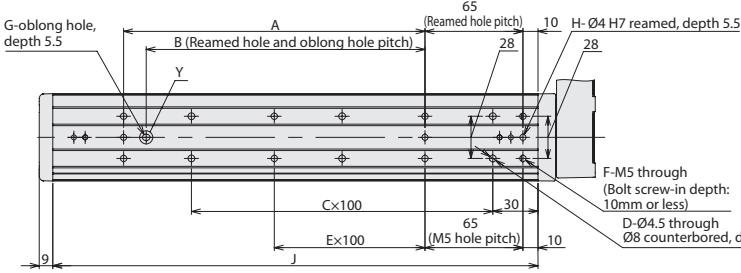
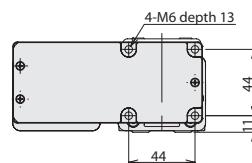
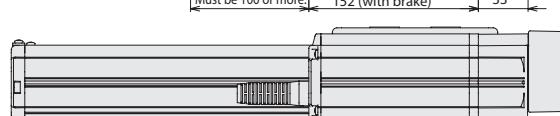
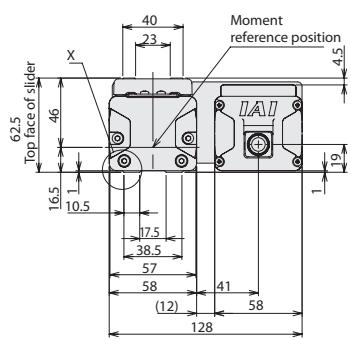
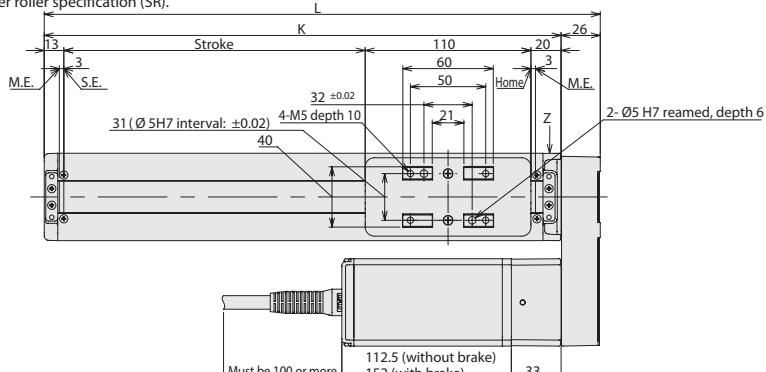
ME: Mechanical end

SE: Stroke end

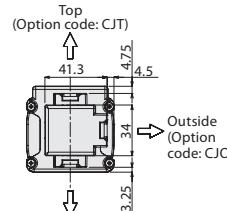
*2 Please see P.50 for slider roller specification (SR).



Detailed view of Z



■ Cable Exit Direction (Option)



*The figure above is for the motor side-mounted to the left (ML).

■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
L	219	269	319	369	419	469	519	569	619	669	719	769	819	869	919	969	
A	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	
B	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785	
C	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	
D	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	
E	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	
F	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
H	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
J	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922	
K	193	243	293	343	393	443	493	543	593	643	693	743	793	843	893	943	
Mass (kg)	Without brake	2.1	2.2	2.4	2.6	2.8	2.9	3.1	3.3	3.5	3.6	3.8	4.0	4.2	4.3	4.5	4.7
	With brake	2.3	2.4	2.6	2.8	3.0	3.1	3.3	3.5	3.7	3.8	4.0	4.2	4.4	4.5	4.7	4.9

Applicable Controllers

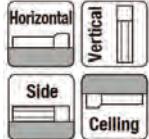
* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

RCP5-SA7R

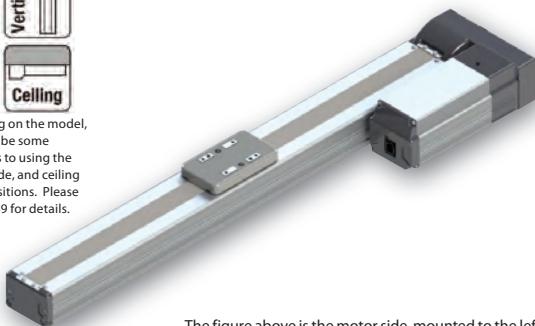
ROBO Cylinder, Slider Type, Side-mounted Motor Type,
Actuator Width 73mm, 24V Pulse Motor

Model	RCP5-SA7R	WA	56P	—	—	—	—	—	—	—	—
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options		
Items	WA: Battery-less absolute specification	56P: Pulse motor, size 56□	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm 800: 800mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	X□□: Specified length R□□: Robot cable	Please refer to the options table below.			

*Controller is not included.



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to P.59 for details.



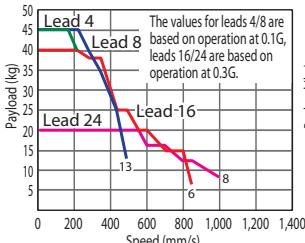
The figure above is the motor side-mounted to the left (ML).



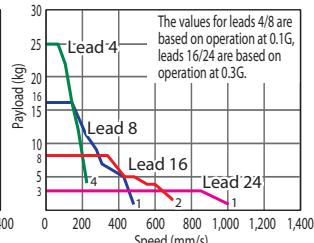
- The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- Please refer to P. 59 for push-motion operation.

Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON-CA, MSEP, MSEL connected
RCP5-SA7R, Horizontal mount

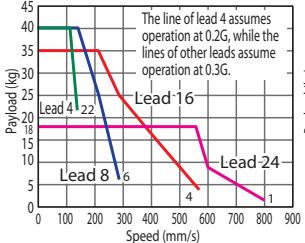


RCP5-SA7R, Vertical mount

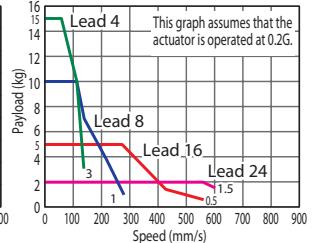


(2) High-output disabled with PCON-CA, MSEP connected

RCP5-SA7R, Horizontal mount



RCP5-SA7R, Vertical mount



Actuator Specifications

Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Maximum payload Vertical (kg)	Stroke (mm)
RCP5-SA7R-WA-56P-24-[①]-P3-[②]-[③]	24	High-output enabled	20	3	50~800 (Every 50mm)
		High-output disabled	18	2	
RCP5-SA7R-WA-56P-16-[①]-P3-[②]-[③]	16	High-output enabled	40	8	
		High-output disabled	35	5	
RCP5-SA7R-WA-56P-8-[①]-P3-[②]-[③]	8	High-output enabled	45	16	
		High-output disabled	40	10	
RCP5-SA7R-WA-56P-4-[①]-P3-[②]-[③]	4	High-output enabled	45	25	
		High-output disabled	40	15	

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	450	-
100	-	500	-
150	-	550	-
200	-	600	-
250	-	650	-
300	-	700	-
350	-	750	-
400	-	800	-

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Outside)	CJO	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Motor side-mounted to the left (Standard)	ML	→P. 11	-
Motor side-mounted to the right	MR	→P. 11	-
Non-motor end specification	NM	→P. 11	-
Slider roller specification	SR	→P. 11	-
Slider spacer	SS	→P. 11	-

* Please contact IAI for current available options.

Actuator Specifications

Item	Description					
Drive system	Ball screw Ø12mm, rolled C10					
Positioning repeatability (*1)	$\pm 0.02\text{mm} [\pm 0.03\text{mm}]$					
Lost motion	0.1mm or less					
Base	Material: Aluminum with white alumite treatment					
Dynamic allowable moment (*2)	Ma: 11.6N·m, Mb: 16.6N·m, Mc: 33.7N·m					
Static allowable moment	Ma: 51.2N·m, Mb: 73.1N·m, Mc: 148N·m					
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)					

*Reference for overhang load length/Ma: 230mm or less, Mb, Mc: 230mm or less

(*1) The values in brackets [] are for Lead 24.

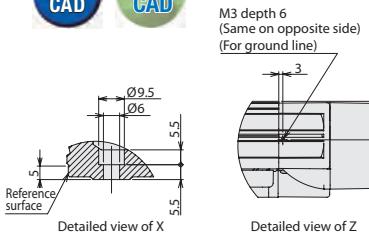
(*2) Assumes a standard rated life of 5,000km.

(*) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

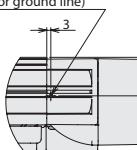
* PCON-CA is a previous model. Current model is PCON-CB.

Dimensions

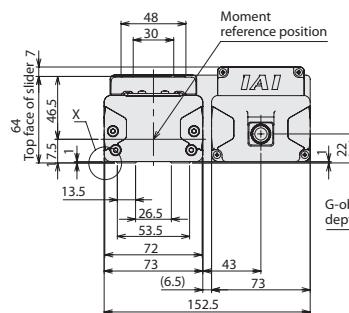
CAD drawings can be downloaded from our website. www.intelligentactuator.com



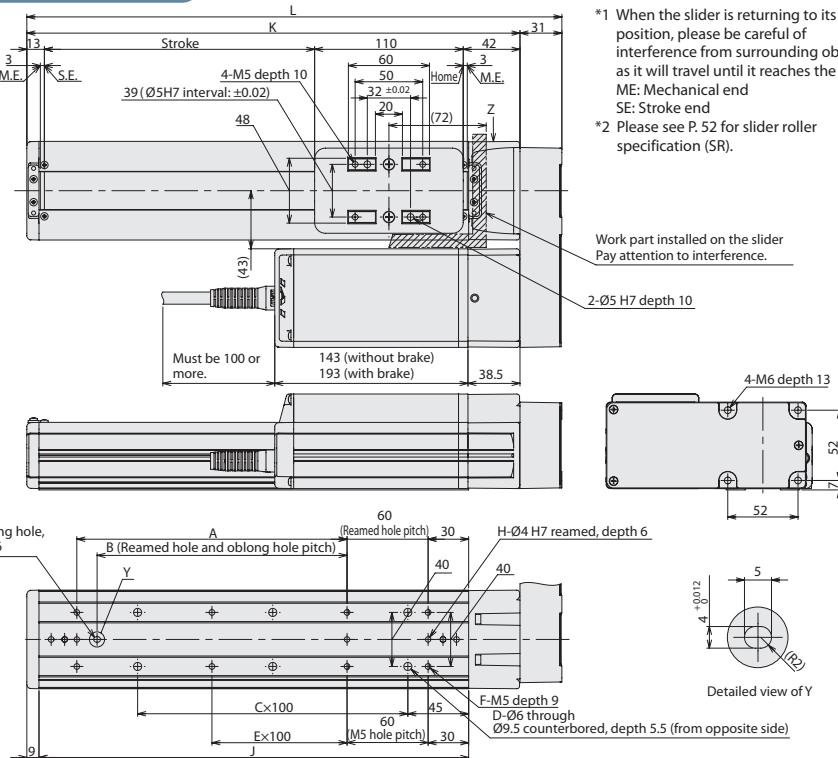
M3 depth 6
(Same on opposite side)
(For ground line)



Detailed view of X Detailed view of Z



Moment reference position
G-oblong hole, depth 6

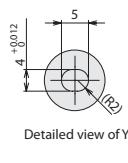
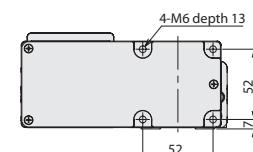


*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
ME: Mechanical end
SE: Stroke end

*2 Please see P. 52 for slider roller specification (SR).

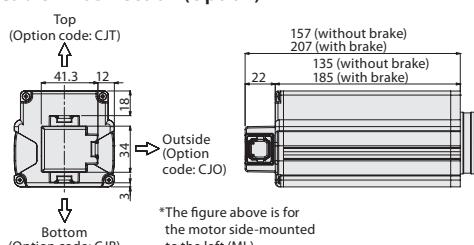
Work part installed on the slider
Pay attention to interference.

2-Ø5 H7 depth 10



Detailed view of Y

■Cable Exit Direction (Option)

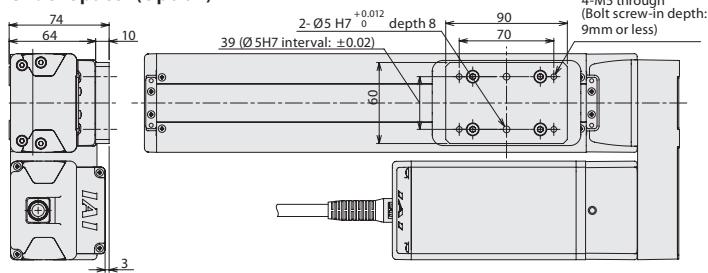


*The figure above is for the motor side-mounted to the left (ML).

■Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	
A	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	
B	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785	
C	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	
D	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	
E	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	
F	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
H	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
J	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	
K	215	265	315	365	415	465	515	565	615	665	715	765	815	865	915	965	
Mass (kg)	Without brake	3.7	3.9	4.2	4.4	4.6	4.8	5.1	5.3	5.5	5.7	6.0	6.2	6.4	6.6	6.8	7.1
	With brake	4.2	4.4	4.7	4.9	5.1	5.3	5.6	5.8	6.0	6.2	6.5	6.7	6.9	7.1	7.3	7.6

■Slider Spacer (Option)



Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

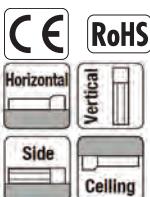
RCP5-RA4C

ROBO Cylinder, Rod Type, Motor Unit Coupled,
Actuator Width 40mm, 24V Pulse Motor

Model	RCP5-RA4C	WA	35P	Lead	Stroke	Applicable controllers	Cable length	Options
Specification	Series	Type	Encoder type	Motor type				
Items	WA: Battery-less absolute specification	35P: Pulse motor, size 35□		16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	60: 60mm 410: 410mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Please refer to the options table below.

*Controller is not included.

Radial Load Applicable



* Depending on the model, there may be some limitations to using the vertical mount position. Please refer to P.59 for details.

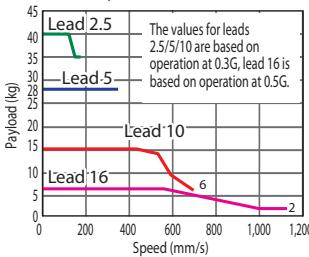


- (1) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- (2) Please refer to P. 59 for push-motion operation.
- (3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P. 65 and after for the allowable load mass.

Correlation Diagrams of Speed and Payload

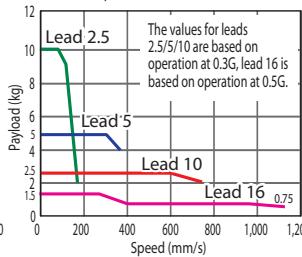
(1) High-output enabled with PCON-CA, MSEP, MSEL connected

RCP5-RA4C, Horizontal mount



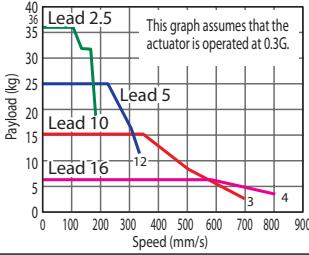
* PCON-CA is a previous model. Current model is PCON-CB.

RCP5-RA4C, Vertical mount

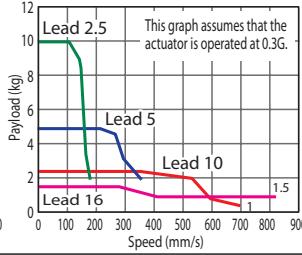


(2) High-output disabled with PCON-CA, MSEP connected

RCP5-RA4C, Horizontal mount



RCP5-RA4C, Vertical mount



Actuator Specifications

■ Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload		Maximum push force (N)	Stroke (mm)	
			Horizontal (kg)	Vertical (kg)			
RCP5-RA4C-WA-35P-16-①-P3-②-③	16	High-output enabled	6	1.5	48	60~410 (Every 50mm)	
		High-output disabled					
RCP5-RA4C-WA-35P-10-①-P3-②-③	10	High-output enabled	15	2.5	77		
		High-output disabled					
RCP5-RA4C-WA-35P-5-①-P3-②-③	5	High-output enabled	28	5	155		
		High-output disabled					
RCP5-RA4C-WA-35P-2.5-①-P3-②-③	2.5	High-output enabled	40	10	310		
		High-output disabled					

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

① Stroke

Stroke (mm)	Standard price
60	-
110	-
160	-
210	-
260	-
310	-
360	-
410	-

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Flange	FL	→P. 12	-
Tip adapter (Flange)	FFA	→P. 12	-
Tip adapter (Internal thread)	NFA	→P. 13	-
Tip adapter (Keyway)	KFA	→P. 13	-
Non-motor end specification	NM	→P. 11	-

* Please contact IAI for current available options.

■ Stroke and Maximum Speed

(Unit: mm/s)

Lead (mm)	Connected controller	60~360 (Every 50mm)	410 (mm)
16	High-output enabled	1,120	1,080
	High-output disabled	840	
10	High-output enabled	700	685
	High-output disabled		
5	High-output enabled	350	340
	High-output disabled		
2.5	High-output enabled	175	170
	High-output disabled		

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

Actuator Specifications

Item	Description
Drive system	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	Ø20mm Aluminum
Rod non-rotation precision (*1)	0 deg.
Allowable load and torque on rod tip	Refer to table in the page on the right, refer to P. 65
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*1) Rod's angular displacement in rotational direction with no applied load is shown.

Dimensions

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



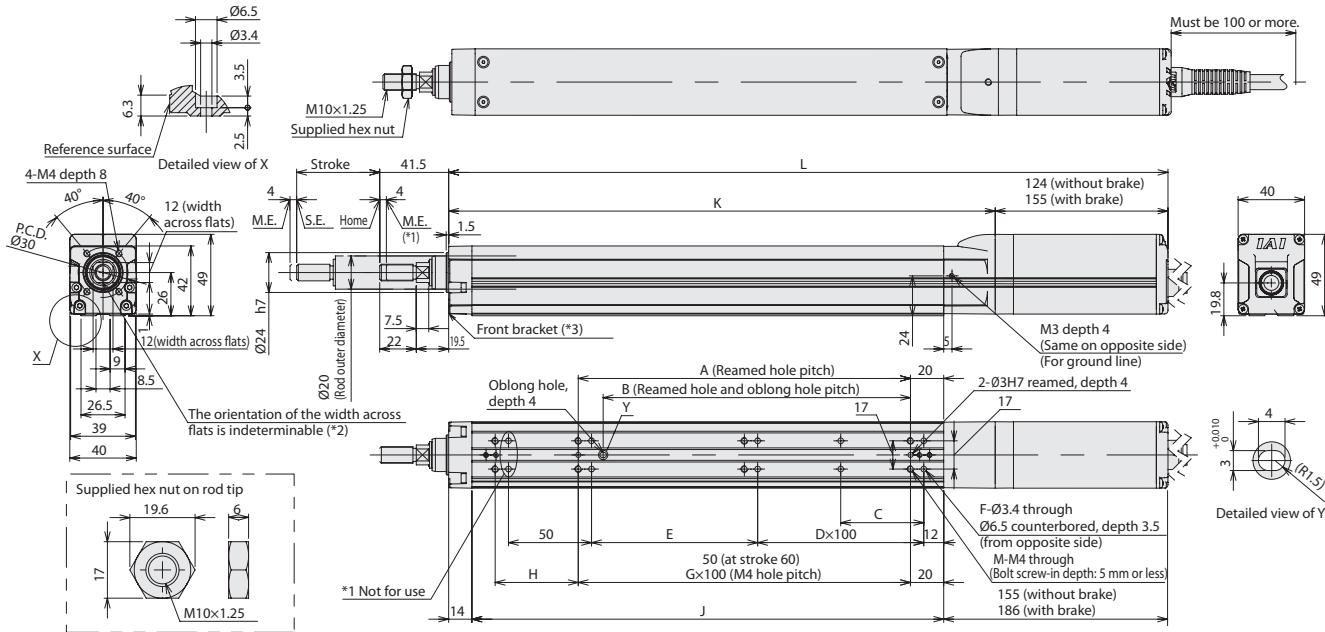
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

*2 The direction of width across flats varies depending on the product.

*3 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.

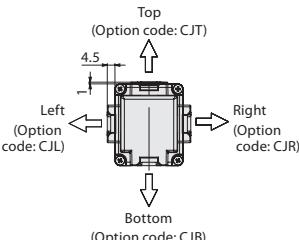
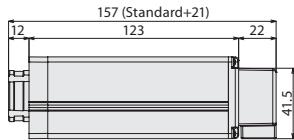
ME: Mechanical end

SE: Stroke end

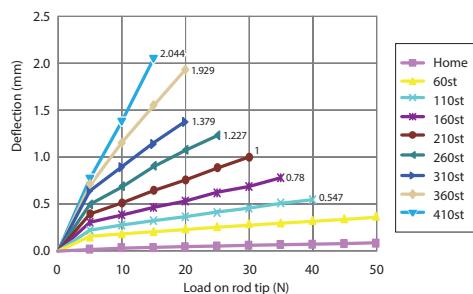


*1 Two mounting holes on the rod side of the top of the base cannot be used.

■ Cable Exit Direction (Option)



■ Rod Deflection of RCP5-RA4C (Reference Values)



■ Dimensions and Mass by Stroke

Stroke	60	110	160	210	260	310	360	410	
	Without brake	303	353	403	453	503	553	603	653
L	With brake	334	384	434	484	534	584	634	684
A	50	100	100	200	200	300	300	400	
B	35	85	85	185	185	285	285	385	
C	25	50	50	50	50	50	50	50	
D	0	0	1	1	2	2	3	3	
E	50	100	50	100	50	100	50	100	
F	8	8	10	10	12	12	14	14	
G	-	1	1	2	2	3	3	4	
H	50	50	100	50	100	50	100	50	
J	134	184	234	284	334	384	434	484	
K	179	229	279	329	379	429	479	529	
M	6	6	6	8	8	10	10	12	
Allowable static load on rod tip (N)									
55.8									
Allowable dynamic load on rod tip (N)									
25.4									
Load offset 0mm									
19.5									
Allowable static torque on rod tip (N·m)									
5.6									
Allowable dynamic torque on rod tip (N·m)									
1.7									
Mass (kg)									
Without brake									
1.1									
With brake									
1.3									

Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

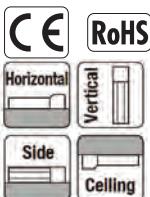
RCP5-RA6C

ROBO Cylinder, Rod Type, Motor Unit Coupled,
Actuator Width 58mm, 24V Pulse Motor

Model	RCP5-RA6C	WA	42P	□	□	□	□	□	□	□
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options	
Items	WA: Battery-less absolute specification		42P: Pulse motor, size 42□		20: 20mm 12: 12mm 6: 6mm 3: 3mm	65: 65mm 415: 415mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Please refer to the options table below.	

*Controller is not included.

Radial Load Applicable



* Depending on the model, there may be some limitations to using the vertical mount position. Please refer to P.59 for details.

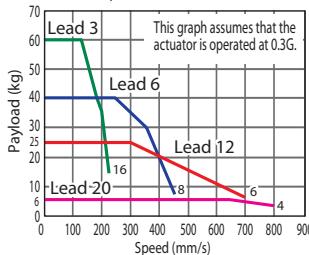


- The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- Please refer to P. 59 for push-motion operation.
- The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P. 65 and after for the allowable load mass.

Correlation Diagrams of Speed and Payload

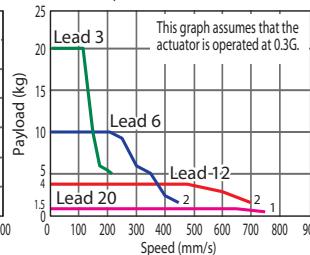
(1) High-output enabled with PCON-CA, MSEP, MSEL connected

RCP5-RA6C, Horizontal mount



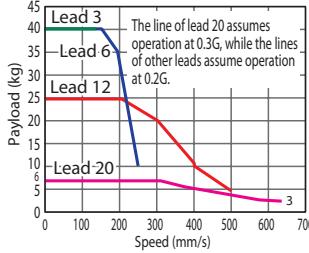
* PCON-CA is a previous model. Current model is PCON-CB.

RCP5-RA6C, Vertical mount

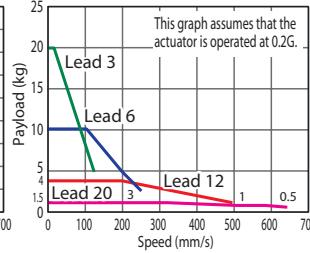


(2) High-output disabled with PCON-CA, MSEP connected

RCP5-RA6C, Horizontal mount



RCP5-RA6C, Vertical mount



Actuator Specifications

Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Maximum payload Vertical (kg)	Maximum push force (N)	Stroke (mm)	
RCP5-RA6C-WA-42P-20-①-P3-②-③	20	High-output enabled	6	1.5	56		
RCP5-RA6C-WA-42P-12-①-P3-②-③		High-output disabled					
RCP5-RA6C-WA-42P-6-①-P3-②-③	6	High-output enabled	40	10	185		
RCP5-RA6C-WA-42P-3-①-P3-②-③		High-output disabled					

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
65	-	265	-
115	-	315	-
165	-	365	-
215	-	415	-

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Flange	FL	→P. 12	-
Tip adapter (Flange)	FFA	→P. 12	-
Tip adapter (Internal thread)	NFA	→P. 13	-
Tip adapter (Keyway)	KFA	→P. 13	-
Non-motor end specification	NM	→P. 11	-

* Please contact IAI for current available options.

Stroke and Maximum Speed

(Unit: mm/s)

Lead (mm)	Connected controller	65~365 (Every 50mm)	415 (mm)
20	High-output enabled	800	
	High-output disabled	640	
12	High-output enabled	700	
	High-output disabled	500	
6	High-output enabled	450	
	High-output disabled	250	
3	High-output enabled	225	220
	High-output disabled	125	

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

Actuator Specifications

Item	Description
Drive system	Ball screw Ø10mm, rolled C10
Positioning repeatability (*1)	±0.02mm [±0.03mm]
Lost motion	0.1mm or less
Rod	Ø25mm Aluminum
Rod non-rotation precision (*2)	0 deg.
Allowable load and torque on rod tip	Refer to table in the page on the right, refer to P. 65
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*1) The values in brackets [] are for Lead 20.

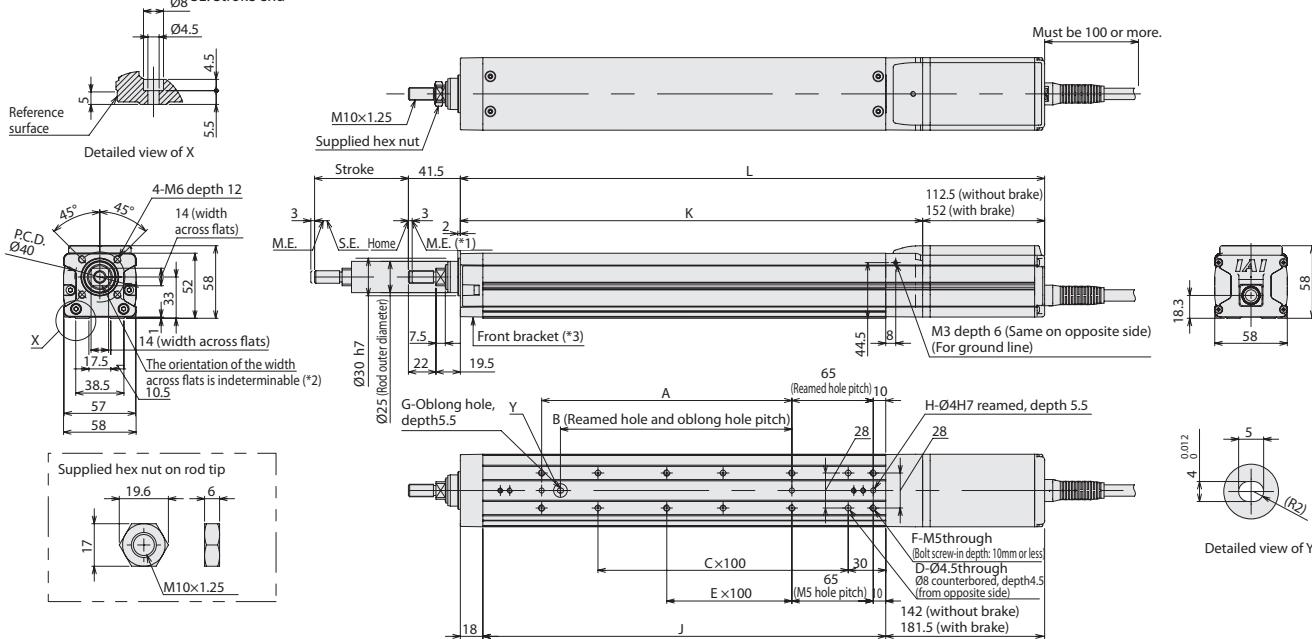
(*2) Rod's angular displacement in rotational direction with no applied load is shown.

Dimensions

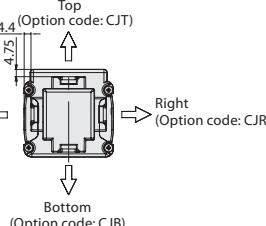
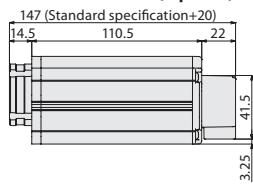
CAD drawings can be downloaded from our website. www.intelligentactuator.com



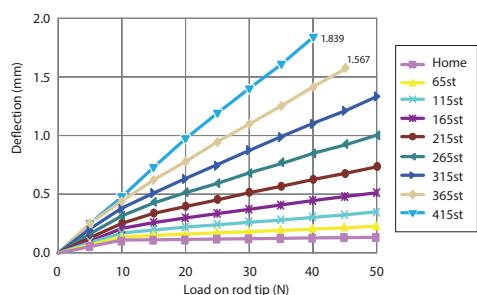
- *1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
- *2 The direction of width across flats varies depending on the product.
- *3 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.
ME: Mechanical end
SE: Stroke end



■ Cable Exit Direction (Option)



■ Rod Deflection of RCP5-RA6C (Reference Values)



■ Dimensions and Mass by Stroke

Stroke	65	115	165	215	265	315	365	415
L	Without brake	332	382	432	482	532	582	632
	With brake	371.5	421.5	471.5	521.5	571.5	621.5	671.5
A	0	100	100	200	200	300	300	400
B	0	85	85	185	185	285	285	385
C	1	1	2	2	3	3	4	4
D	4	4	6	6	8	8	10	10
E	0	0	0	1	1	2	2	3
F	4	6	6	8	8	10	10	12
G	0	1	1	1	1	1	1	1
H	2	3	3	3	3	3	3	3
J	172	222	272	322	372	422	472	522
K	219.5	269.5	319.5	369.5	419.5	469.5	519.5	569.5
Allowable static load on rod tip (N)	113.8	92.6	78.0	67.3	59.0	52.5	47.2	42.8
Allowable dynamic load on rod tip (N)	45.7	36.3	29.8	25.1	21.6	18.8	16.6	14.7
Allowable static torque on rod tip (Nm)	11.5	9.4	7.9	6.8	6.0	5.4	4.9	4.5
Allowable dynamic torque on rod tip (Nm)	3.2	2.8	2.5	2.1	1.9	1.7	1.5	1.3
Mass (kg)	Without brake	1.8	2.0	2.2	2.4	2.6	2.9	3.1
	With brake	2.0	2.2	2.4	2.6	2.8	3.1	3.3

Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

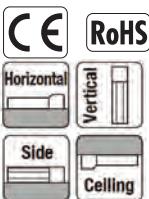
RCP5-RA7C

ROBO Cylinder, Rod Type, Motor Unit Coupled,
Actuator Width 73mm, 24V Pulse Motor

Model	RCP5-RA7C	WA	56P	Lead	Stroke	Applicable controllers	Cable length	Options
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	P3: PCON/MSEL	N: No cable P: 1m S: 3m M: 5m
Items		WA: Battery-less absolute specification	56P: Pulse motor, size 56□	24: 24mm 16: 16mm 8: 8mm 4: 4mm	70: 70mm 520: 520mm (Every 50mm)		P5: RCON/RSEL	Please refer to the options table below.

*Controller is not included.

Radial Load Applicable



* Depending on the model, there may be some limitations to using the vertical mount position. Please refer to P.59 for details.

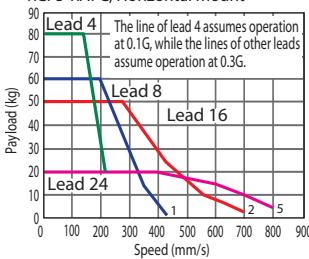


- The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- Please refer to P. 59 for push-motion operation.
- The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P. 65 and after for the allowable load mass.

Correlation Diagrams of Speed and Payload

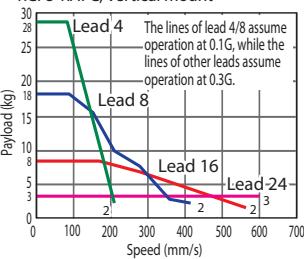
(1) High-output enabled with PCON-CA, MSEP, MSEL connected

RCP5-RA7C, Horizontal mount



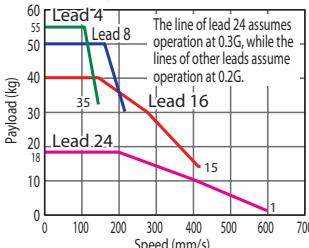
* PCON-CA is a previous model. Current model is PCON-CB.

RCP5-RA7C, Vertical mount

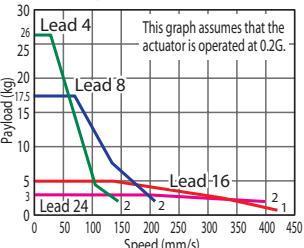


(2) High-output disabled with PCON-CA, MSEP connected

RCP5-RA7C, Horizontal mount



RCP5-RA7C, Vertical mount



Actuator Specifications

Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Vertical (kg)	Maximum push force (N)	Stroke (mm)
RCP5-RA7C-WA-56P-24-①-P3-②-③	24	High-output enabled	20	3	182	70~520 (Every 50mm)
		High-output disabled	18	3		
RCP5-RA7C-WA-56P-16-①-P3-②-③	16	High-output enabled	50	8	273	
		High-output disabled	40	5		
RCP5-RA7C-WA-56P-8-①-P3-②-③	8	High-output enabled	60	18	547	
		High-output disabled	50	17.5		
RCP5-RA7C-WA-56P-4-①-P3-②-③	4	High-output enabled	80	28	1,094	
		High-output disabled	55	26		

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
70	-	320	-
120	-	370	-
170	-	420	-
220	-	470	-
270	-	520	-

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Flange	FL	→P. 12	-
Tip adapter (Flange)	FFA	→P. 12	-
Tip adapter (Internal thread)	NFA	→P. 13	-
Tip adapter (Keyway)	KFA	→P. 13	-
Non-motor end specification	NM	→P. 11	-

* Please contact iAI for current available options.

Stroke and Maximum Speed

Values in brackets < > are for vertical use. (Unit: mm/s)

Lead (mm)	Connected controller	70~520 (Every 50mm)
24	High-output enabled	800 <600>
	High-output disabled	600 <400>
16	High-output enabled	700 <560>
	High-output disabled	420
8	High-output enabled	420
	High-output disabled	210
4	High-output enabled	210
	High-output disabled	140

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

Actuator Specifications

Item	Description
Drive system	Ball screw Ø12mm, rolled C10
Positioning repeatability (*1)	±0.02mm [±0.03mm]
Lost motion	0.1mm or less
Rod	Ø30mm Aluminum
Rod non-rotation precision (*2)	0 deg.
Allowable load and torque on rod tip	Refer to table in the page on the right, refer to P. 65
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*1) The values in brackets [] are for Lead 24.

(*2) Rod's angular displacement in rotational direction with no applied load is shown.

Dimensions

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



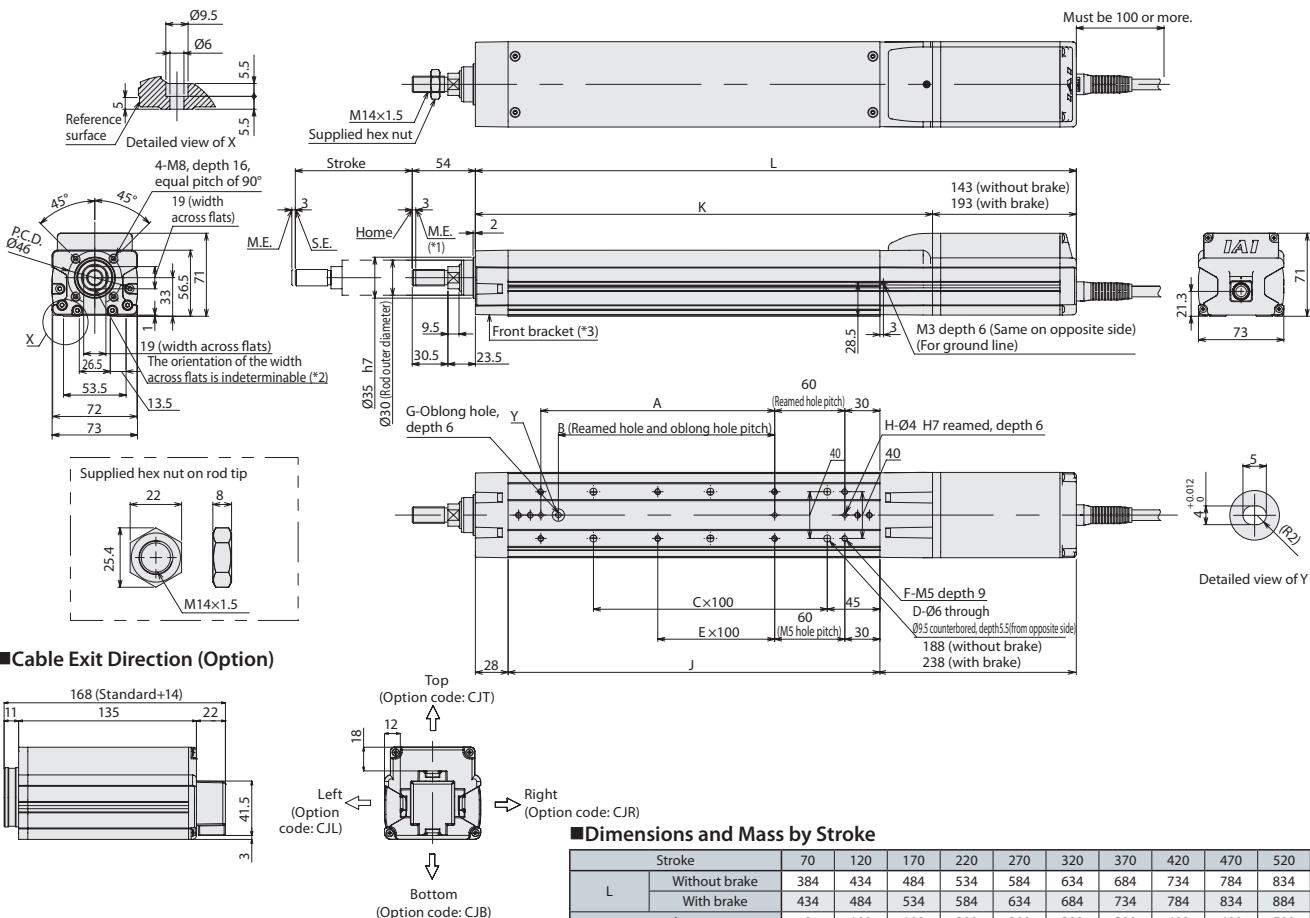
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

*2 The direction of width across flats varies depending on the product.

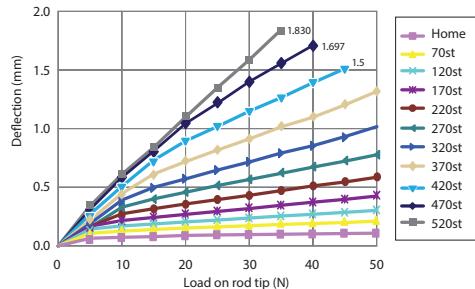
*3 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.

ME: Mechanical end

SE: Stroke end



Rod Deflection of RCP5-RA7C (Reference Values)



Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

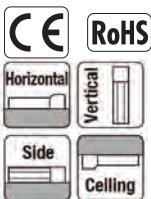
RCP5-RA8C

ROBO Cylinder, High-thrust Rod Type, Motor Unit Coupled,
Actuator Width 88mm, 24V Pulse Motor

■ Model	RCP5-RA8C	WA	60P									
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options			
Items	WA: Battery-less absolute specification	60P: Pulse motor, size 60□	20: 20mm 10: 10mm 5: 5mm	50: 50mm 700: 700mm (Every 50mm)	P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	Please refer to the options table below.	X□□: Specified length R□□: Robot cable				

*Controller is not included.

Radial Load Applicable



* Depending on the model, there may be some limitations to using the vertical mount position. Please refer to P.59 for details.

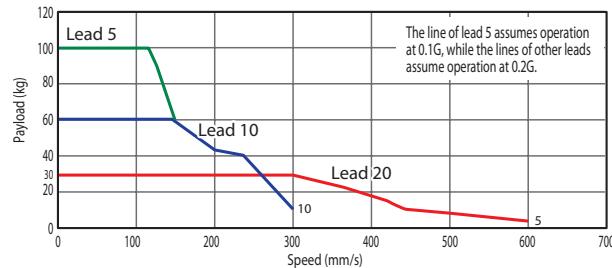


Note on selection

- The payload assumes operation at an acceleration of 0.1G for lead 5 and operation at an acceleration of 0.2G for lead 10 and lead 20. The above values are the upper limits of acceleration/deceleration.
- Please note that the RA8C requires a dedicated controller (high-thrust model).
- The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P. 65 and after for the allowable load mass.

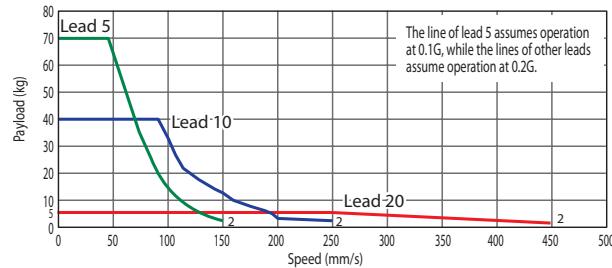
Correlation Diagrams of Speed and Payload

RCP5-RA8C, Horizontal mount, PCON-CFA connected



* PCON-CFA is a previous model. Current model is PCON-CFB.

RCP5-RA8C, Vertical mount, PCON-CFA connected



Actuator Specifications

■ Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Maximum payload Vertical (kg)	Maximum push force (N)	Stroke (mm)
RCP5-RA8C-WA-60P-20-[①]-P4-[②]-[③]	20	PCON-CFB	30	5	500	50~700 (Every 50mm)
RCP5-RA8C-WA-60P-10-[①]-P4-[②]-[③]	10	PCON-CFB	60	40	1,000	
RCP5-RA8C-WA-60P-5-[①]-P4-[②]-[③]	5	PCON-CFB	100	70	2,000	

Legend: [①] Stroke [②] Cable length [③] Options *Please refer to P.59 for push-motion operation.

■ Stroke and Maximum Speed

Values in brackets <> are for vertical use. (Unit: mm/s)

Lead (mm)	50 (mm)	100 (mm)	150 (mm)	200 (mm)	250~350 (mm)	400 (mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)
20	280	405	505 <450>	585 <450>	600 <450>	520 <450>	440	360	320	280	240	220
10	280 <250>		300 <250>			260 <250>	220	180	160	140	120	110
5			150			130	110	90	80	70	60	55

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	400	-
100	-	450	-
150	-	500	-
200	-	550	-
250	-	600	-
300	-	650	-
350	-	700	-

② Cable Length

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

*Please refer to P.89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Flange	FL	→P. 12	-
Non-motor end specification	NM	→P. 11	-

Actuator Specifications

Item	Description
Drive system	Ball screw Ø16mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	Ø40mm Aluminum
Rod non-rotation precision (*1)	0 deg.
Allowable load and torque on rod tip	Refer to table in the page on the right, refer to P.65
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*1) Rod's angular displacement in rotational direction with no applied load is shown.

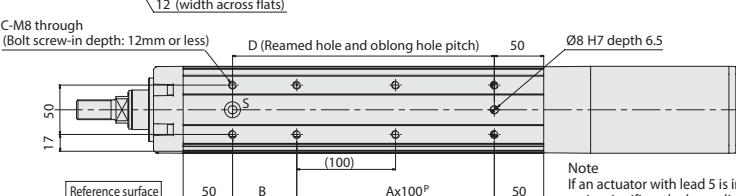
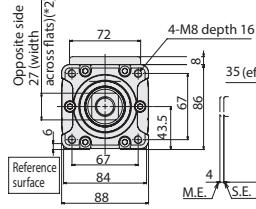
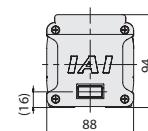
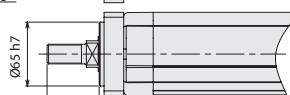
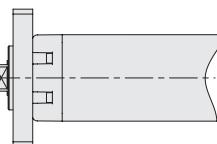
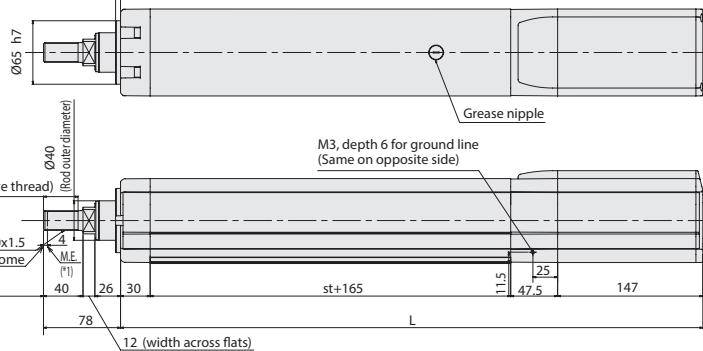
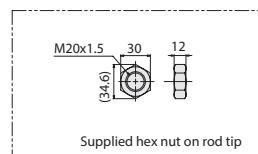
Dimensions

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



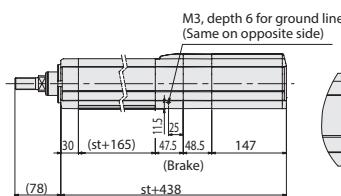
- *1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
- *2 The direction of width across flats varies depending on the product.
- *3 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.
ME: Mechanical end
SE: Stroke end

■Dimensions with Flange (Option)

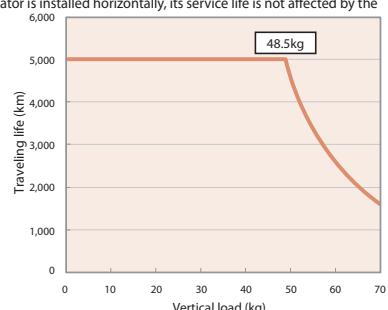
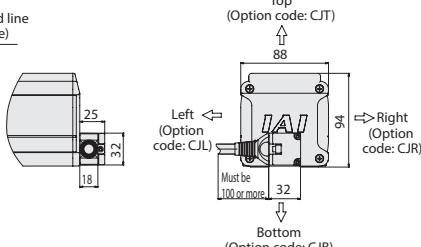


Note
If an actuator with lead 5 is installed vertically, the service life of the actuator varies significantly depending on its payload.
Please refer to the correlation diagram of vertical load and traveling life shown below.
(If the actuator is installed horizontally, its service life is not affected by the payload.)

■Dimensions with Brake (Option)

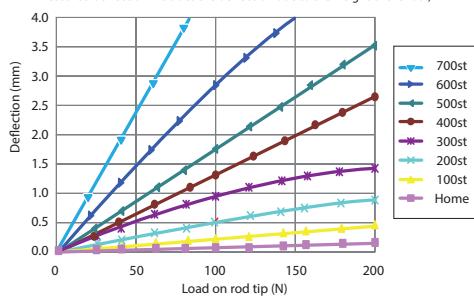


■4 Cable Exit Directions (Option)



■Rod Deflection of RCP5-RA8C

(The graph below shows the measurements of how much a horizontally installed rod would deflect when a load is applied to the end of the rod. The measured deflection includes the deflection due to the weight of the rod.)



■Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700
L	Without brake	439.5	489.5	539.5	589.5	639.5	689.5	739.5	789.5	839.5	889.5	939.5	989.5	1,039.5 / 1,089.5
	With brake	488	538	588	638	688	738	788	838	888	938	988	1,038	1,088 / 1,138
A	0	1	1	2	2	3	3	4	4	5	5	6	6	7
B	115	65	115	65	115	65	115	65	115	65	115	65	115	65
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18
D	115	165	215	265	315	365	415	465	515	565	615	665	715	765
Allowable static load on rod tip (N)	180	150.3	128.9	112.7	99.9	89.7	81.3	74.3	68.3	63.1	58.6	54.6	51.1	47.9
Allowable dynamic load on rod tip (N)	Load offset 0mm	73.6	60.3	51.0	44.1	38.7	34.3	30.7	27.7	25.2	23.0	21.1	19.4	17.8 / 16.5
Allowable static torque on rod tip (N·m)	Load offset 100mm	57.0	48.6	42.5	37.8	33.8	30.5	27.6	25.2	23.1	21.2	19.5	18.1	16.7 / 15.5
Allowable dynamic torque on rod tip (N·m)	5.7	4.9	4.3	3.8	3.4	3.0	2.8	2.5	2.3	2.1	2.0	1.8	1.7	1.5
Mass (kg)	Without brake	7.1	7.6	8.0	8.4	8.9	9.3	9.7	10.2	10.6	11.0	11.4	11.9	12.3 / 12.7
	With brake	8.3	8.7	9.1	9.6	10.0	10.4	10.9	11.3	11.7	12.1	12.6	13.0	13.4 / 13.9

Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

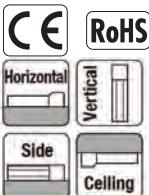
RCP5-RA10C

ROBO Cylinder, High-thrust Rod Type, Motor Unit Coupled,
Actuator Width 108mm, 24V Pulse Motor

■ Model	RCP5-RA10C	WA	86P	—	—	—	—	—	—	—	—
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options		
Items	WA: Battery-less absolute specification	86P: Pulse motor, size 86□	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 800: 800mm (Every 50mm)	P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	Please refer to the options table below.	X□□: Specified length R□□: Robot cable			

*Controller is not included.

Radial Load Applicable



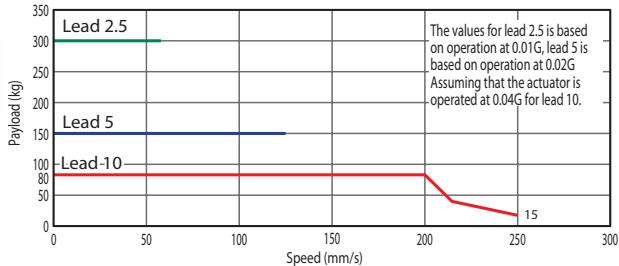
* Depending on the model, there may be some limitations to using the vertical mount position. Please refer to P.59 for details.



- The payload assumes operation at an acceleration of 0.01G for lead 2.5, operation at an acceleration of 0.02G for lead 5 and operation at an acceleration of 0.04G for lead 10. The above values are the upper limits of acceleration/deceleration.
- Please note that the RA10C requires a dedicated controller (high-thrust model).
- The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P. 65 and after for the allowable load mass.

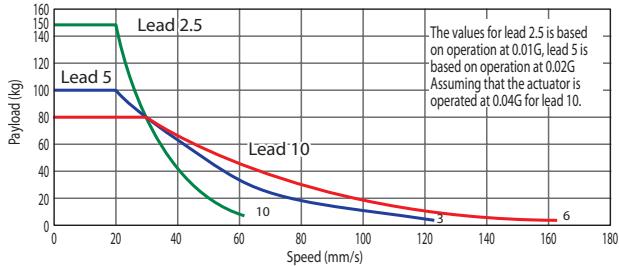
Correlation Diagrams of Speed and Payload

RCP5-RA10C, Horizontal mount, PCON-CFA connected



* PCON-CFA is a previous model. Current model is PCON-CFB.

RCP5-RA10C, Vertical mount, PCON-CFA connected



Actuator Specifications

■ Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Maximum payload Vertical (kg)	Maximum push force (N)	Stroke (mm)
RCP5-RA10C-WA-86P-10-①-P4-②-③	10	PCON-CFB	80	80	1,500	50~800 (Every 50mm)
RCP5-RA10C-WA-86P-5-①-P4-②-③	5	PCON-CFB	150	100	3,000	
RCP5-RA10C-WA-86P-2.5-①-P4-②-③	2.5	PCON-CFB	300	150	6,000	

Legend: ① Stroke ② Cable length ③ Options *Please refer to P.59 for push-motion operation.

■ Stroke and Maximum Speed

Values in brackets <> are for vertical use. (Unit: mm/s)

Lead (mm)	50 (mm)	100 (mm)	150 (mm)	200~400 (Every 50mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
10	117	167	200 <167>	250 <167>	220 <167>	200 <167>	180 <167>	160	140	120		
5	83		125	110	90	80	70	60	55	50	45	
2.5			63			55	50	45	40	35	30	

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	450	-
100	-	500	-
150	-	550	-
200	-	600	-
250	-	650	-
300	-	700	-
350	-	750	-
400	-	800	-

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Flange	FL	→P. 12	-
Non-motor end specification	NM	→P. 11	-

Actuator Specifications

Item	Description
Drive system	Ball screw Ø20mm (Lead 2.5/10mm), Ø16mm (Lead 5mm), rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	Ø40mm Aluminum
Rod non-rotation precision (*1)	0 deg.
Allowable load and torque on rod tip	Refer to table in the page on the right, refer to P. 65
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

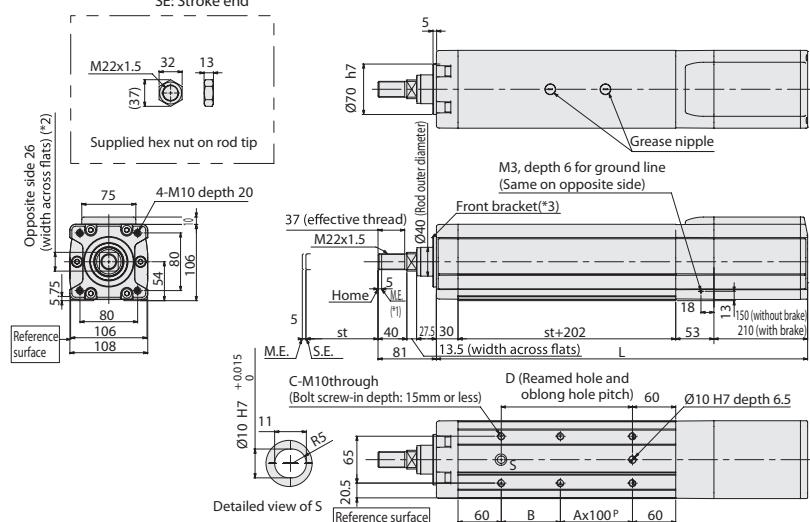
(*1) Rod's angular displacement in rotational direction with no applied load is shown.

Dimensions

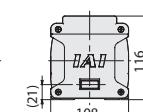
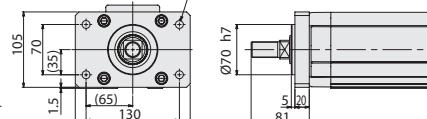
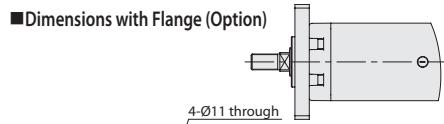
CAD drawings can be downloaded from our website. www.intelligentactuator.com



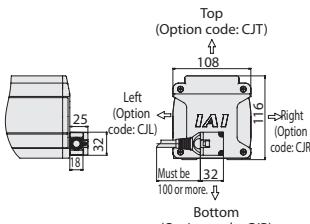
- *1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
- *2 The direction of width across flats varies depending on the product.
- *3 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.
ME: Mechanical end
SE: Stroke end



Dimensions with Flange (Option)

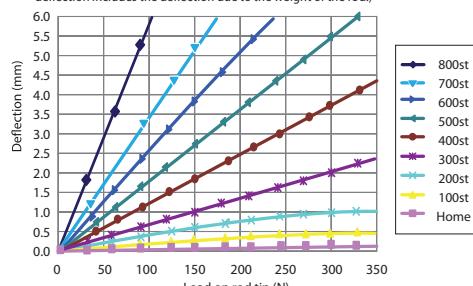


4 Cable Exit Directions (Option)



Rod Deflection of RCP5-RA10C

(The graph below shows the measurements of how much a horizontally installed rod would deflect when a load is applied to the end of the rod. The measured deflection includes the deflection due to the weight of the rod.)



Dimensions and Mass by Stroke

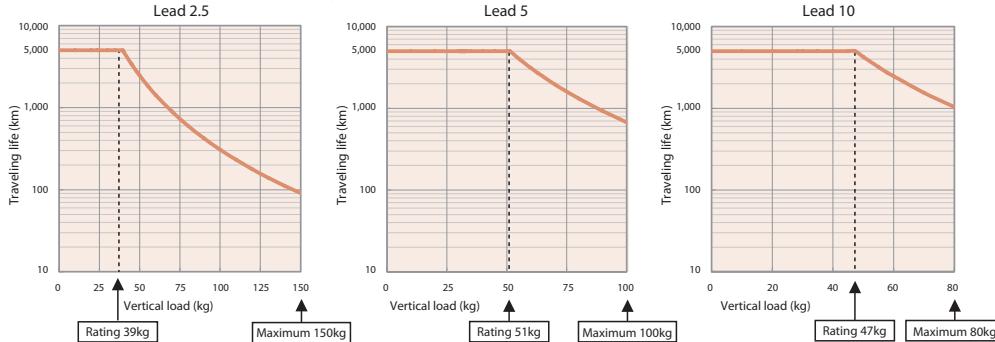
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
L	Without brake	485	535	585	635	685	735	785	835	885	935	985	1,035	1,085	1,135	1,185	1,235
	With brake	545	595	645	695	745	795	845	895	945	995	1,045	1,095	1,145	1,195	1,245	1,295
A	0	1	1	2	3	3	4	4	5	5	6	6	7	7	8		
B	132	82	132	82	132	82	132	82	132	82	132	82	132	82	132	82	
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	
D	132	182	232	282	332	382	432	482	532	582	632	682	732	782	832	882	
Allowable static load on rod tip (N)	316.9	268.4	232.6	205.1	183.4	165.7	151.0	138.6	128.1	119.0	111.0	103.9	97.7	92.1	87.0	82.5	
Allowable dynamic load on rod tip (N)	119.1	99.1	84.7	73.8	65.3	58.5	52.8	48.1	44.0	40.5	37.5	34.8	32.4	30.2	28.3	26.5	
Allowable static torque on rod tip (N·m)	31.8	27.0	23.4	20.7	18.5	16.8	15.3	14.1	13.1	12.2	11.4	10.7	10.1	9.6	9.1	8.6	
Allowable dynamic torque on rod tip (N·m)	10.1	8.6	7.5	6.6	5.9	5.4	4.9	4.5	4.1	3.8	3.5	3.3	3.1	2.9	2.7	2.5	
Mass (kg)	Without brake	11.5	12.2	12.9	13.6	14.3	15	15.7	16.4	17.1	17.8	18.5	19.2	19.9	20.6	21.3	22
	With brake	13.1	13.8	14.5	15.2	15.9	16.6	17.3	18	18.7	19.4	20.1	20.8	21.5	22.2	22.9	23.6

Correlation Diagrams of Vertical Load and Traveling Life

- Since the RCP5-RA10C has a greater maximum thrust than other types, its service life varies significantly depending on the payload and push force applied when the actuator is installed vertically. When selecting an appropriate type from the correlation diagram of speed and payload or correlation diagram of push force and current-limiting value, check its traveling life on the correlation diagram of payload and service life as well as on the correlation diagram of push force and service life.

Note

The rated value represents the maximum value at a traveling life of 5,000km. The greatest value is the maximum value at which the actuator can operate. Take note that, if an actuator is operated beyond its rating, its service life will drop as shown by the applicable graph on the right.



Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

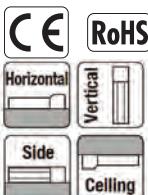
RCP5-RA4R

ROBO Cylinder, Rod Type, Side-mounted Motor Type,
Actuator Width 40mm, 24V Pulse Motor

Model	RCP5-RA4R	WA	35P	Lead	Stroke	Applicable controllers	Cable length	Options
Specification	Series	Type	Encoder type	Motor type	Lead	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	Please refer to the options table below.
Items	WA: Battery-less absolute specification	35P: Pulse motor, size 35□	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	60: 60mm 410: 410mm (Every 50mm)			X□□: Specified length R□□: Robot cable	

*Controller is not included.

Radial Load Applicable



* Depending on the model, there may be some limitations to using the vertical mount position. Please refer to P.59 for details.

The figure above is the motor side-mounted to the left (ML).



- The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- Please refer to P. 59 for push-motion operation.
- The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P. 65 and after for the allowable load mass.

Actuator Specifications

Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload		Maximum push force (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCP5-RA4R-WA-35P-16-①-P3-②-③	16	High-output enabled	5	1	48	
RCP5-RA4R-WA-35P-10-①-P3-②-③		High-output disabled				
RCP5-RA4R-WA-35P-5-①-P3-②-③	5	High-output enabled	25	5	155	
RCP5-RA4R-WA-35P-2.5-①-P3-②-③		High-output disabled				

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
60	-	260	-
110	-	310	-
160	-	360	-
210	-	410	-

③ Options

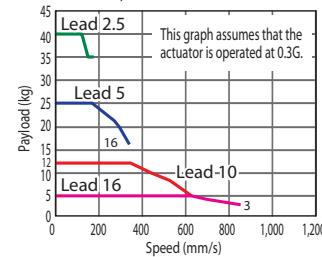
Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Outside)	CJO	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Flange	FL	→P. 12	-
Tip adapter (Flange)	FFA	→P. 12	-
Tip adapter (Internal thread)	NFA	→P. 13	-
Tip adapter (Keyway)	KFA	→P. 13	-
Motor side-mounted to the left (Standard)	ML	→P. 11	-
Motor side-mounted to the right	MR	→P. 11	-
Non-motor end specification	NM	→P. 11	-

Depending on the stroke, some rod attachment options are not available. Also, when selecting the shorter strokes, please be careful of nearby objects. Some interference may occur. Please refer to P. 14.

Correlation Diagrams of Speed and Payload

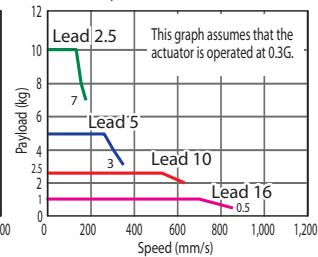
(1) High-output enabled with PCON-CA, MSEP, MSEL connected

RCP5-RA4R, Horizontal mount



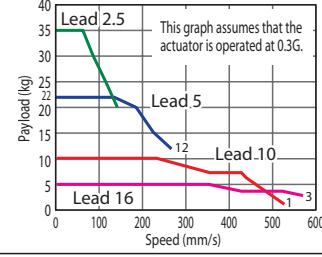
* PCON-CA is a previous model. Current model is PCON-CB.

RCP5-RA4R, Vertical mount

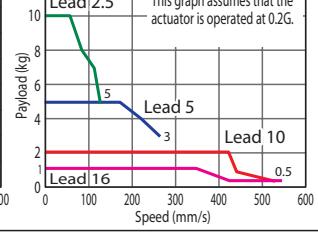


(2) High-output disabled with PCON-CA, MSEP connected

RCP5-RA4R, Horizontal mount



RCP5-RA4R, Vertical mount



Stroke and Maximum Speed

(Unit: mm/s)

Lead (mm)	Connected controller	60~360 (Every 50mm)	410 (mm)
16	High-output enabled	840	
	High-output disabled	560	
10	High-output enabled	610	
	High-output disabled	525	
5	High-output enabled	350	340
	High-output disabled	260	
2.5	High-output enabled	175	170
	High-output disabled	130	

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

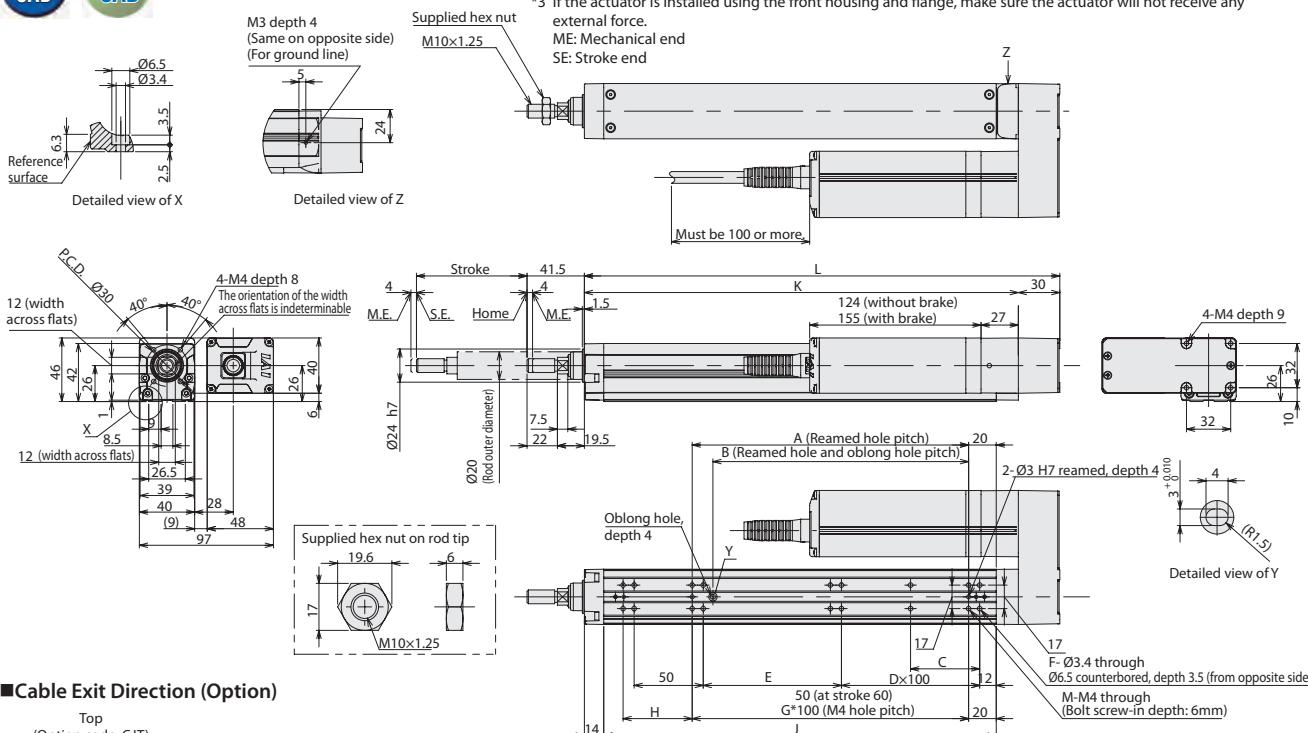
Actuator Specifications

Item	Description
Drive system	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	Ø20mm Aluminum
Rod non-rotation precision (*1)	0 deg.
Allowable load and torque on rod tip	Refer to table in the page on the right, refer to P. 65
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

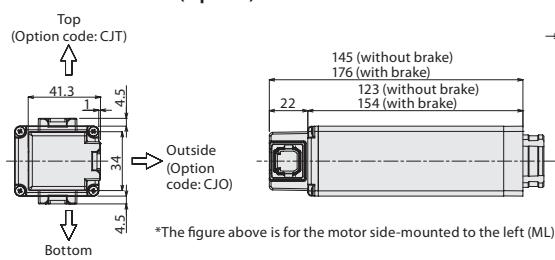
(*1) Rod's angular displacement in rotational direction with no applied load is shown.

Dimensions

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

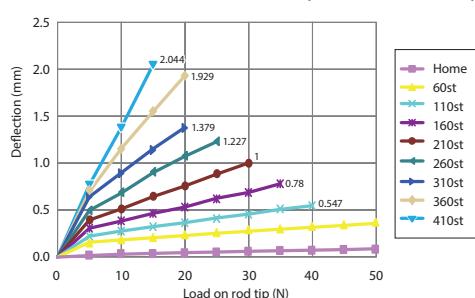


■ Cable Exit Direction (Option)



*The figure above is for the motor side-mounted to the left (ML).

■ Rod Deflection of RCP5-RA4R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke	60	110	160	210	260	310	360	410
L	194	244	294	344	394	444	494	544
A	50	100	100	200	200	300	300	400
B	35	85	85	185	185	285	285	385
C	25	50	50	50	50	50	50	50
D	0	0	1	1	2	2	3	3
E	50	100	50	100	50	100	50	100
F	8	8	10	10	12	12	14	14
G	-	1	1	2	2	3	3	4
H	50	50	100	50	100	50	100	50
J	134	184	234	284	334	384	434	484
K	164	214	264	314	364	414	464	514
M	6	6	6	8	8	10	10	12
Allowable static load on rod tip (N)	55.8	44.6	37.1	31.7	27.6	24.3	21.7	19.5
Allowable dynamic load on rod tip (N)	25.4	19.5	15.5	12.8	10.8	9.2	7.9	6.9
Load offset 100mm (N)	16.5	14.5	12.4	10.7	9.2	8.0	7.0	6.2
Allowable static torque on rod tip (N·m)	5.6	4.5	3.8	3.2	2.8	2.5	2.3	2.1
Allowable dynamic torque on rod tip (N·m)	1.7	1.5	1.2	1.1	0.9	0.8	0.7	0.6
Mass (kg)	Without brake	1.4	1.5	1.6	1.7	1.9	2.0	2.1
	With brake	1.6	1.7	1.8	1.9	2.1	2.2	2.3

Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

Dimensions

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



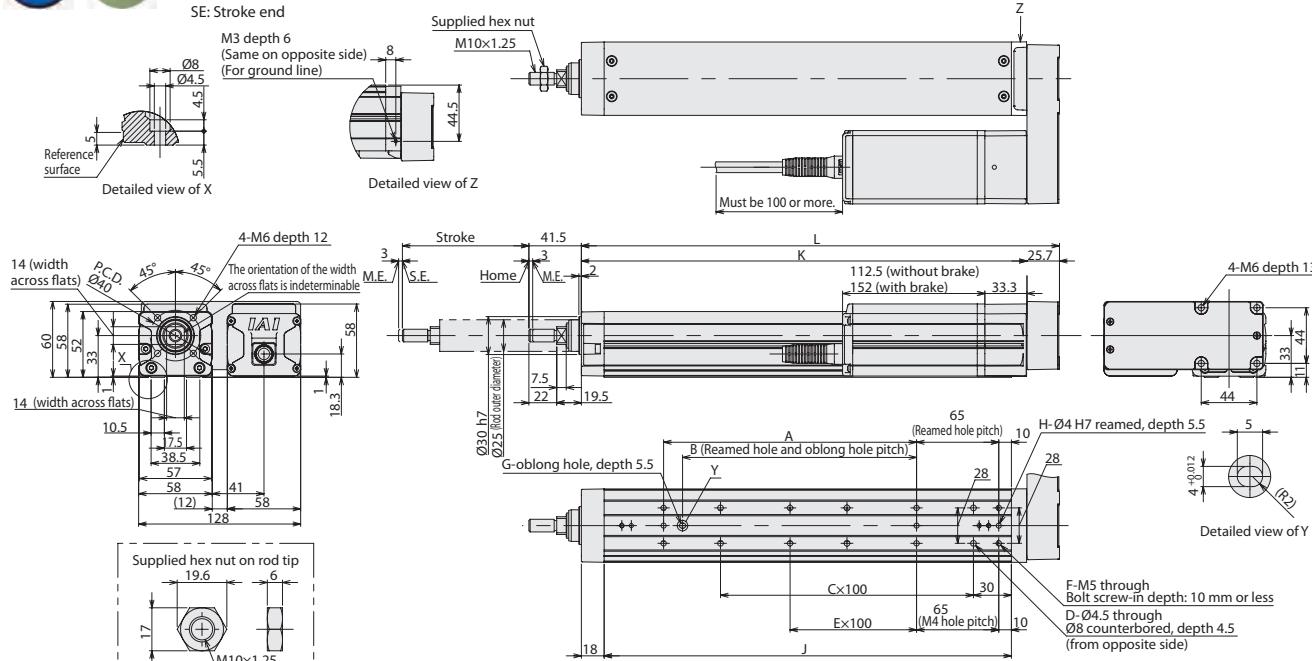
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

*2 The direction of width across flats varies depending on the product.

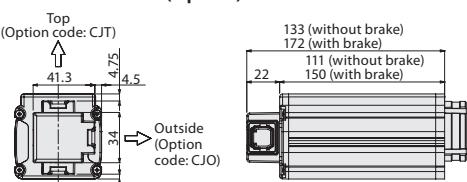
*3 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.

ME: Mechanical end

SE: Stroke end

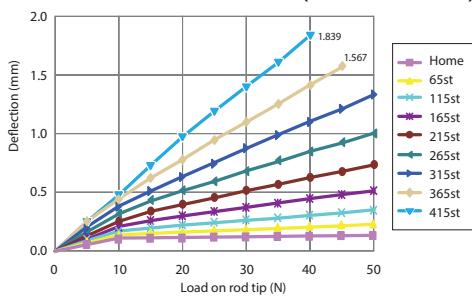


■ Cable Exit Direction (Option)



*The figure above is for the motor side-mounted to the left (ML).

■ Rod Deflection of RCP5-RA6R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke	65	115	165	215	265	315	365	415
L	228	278	328	378	428	478	528	578
A	0	100	100	200	200	300	300	400
B	0	85	85	185	185	285	285	385
C	1	1	2	2	3	3	4	4
D	4	4	6	6	8	8	10	10
E	0	0	0	1	1	2	2	3
F	4	6	6	8	8	10	10	12
G	0	1	1	1	1	1	1	1
H	2	3	3	3	3	3	3	3
J	172	222	272	322	372	422	472	522
K	202.3	252.3	302.3	352.3	402.3	452.3	502.3	552.3
Allowable static load on rod tip (N)	113.8	92.6	78.0	67.3	59.0	52.5	47.2	42.8
Allowable dynamic load on rod tip (N)	45.7	36.3	29.8	25.1	21.6	18.8	16.6	14.7
Load offset 0mm	32.1	28.3	24.6	21.5	18.9	16.7	14.9	13.4
Load offset 100mm	11.5	9.4	7.9	6.8	6.0	5.4	4.9	4.5
Allowable static torque on rod tip (N·m)	3.2	2.8	2.5	2.1	1.9	1.7	1.5	1.3
Allowable dynamic torque on rod tip (N·m)								
Mass (kg)	Without brake	2.2	2.4	2.6	2.8	3.0	3.3	3.5
	With brake	2.4	2.6	2.8	3.0	3.2	3.5	3.7

Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

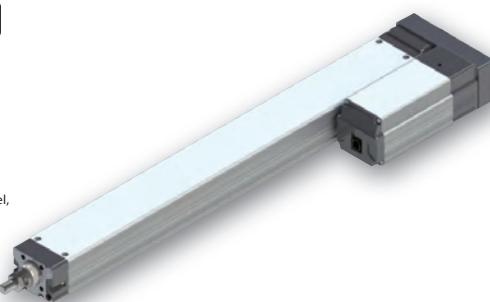
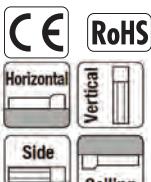
RCP5-RA7R

ROBO Cylinder, Rod Type, Side-mounted Motor Type,
Actuator Width 73mm, 24V Pulse Motor

Model	RCP5-RA7R	WA	56P									
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options			
Items	WA: Battery-less absolute specification	56P: Pulse motor, size 56□	24: 24mm 16: 16mm 8: 8mm 4: 4mm	70: 70mm 520: 520mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	Please refer to the options table below.	X□□: Specified length R□□: Robot cable				

*Controller is not included.

Radial Load Applicable



* Depending on the model, there may be some limitations to using the vertical mount position. Please refer to P.59 for details.

The figure above is the motor side-mounted to the left (ML).



- (1) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- (2) Please refer to P. 59 for push-motion operation.
- (3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P. 65 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg) Vertical (kg)	Maximum push force (N)	Stroke (mm)
RCP5-RA7R-WA-56P-24-[①]-P3-[②]-[③]	24	High-output enabled	20 3	182	70~520 (Every 50mm)
		High-output disabled	18 3		
RCP5-RA7R-WA-56P-16-[①]-P3-[②]-[③]	16	High-output enabled	50 8	273	
		High-output disabled	40 5		
RCP5-RA7R-WA-56P-8-[①]-P3-[②]-[③]	8	High-output enabled	60 18	547	
		High-output disabled	50 17.5		
RCP5-RA7R-WA-56P-4-[①]-P3-[②]-[③]	4	High-output enabled	80 28	1,094	
		High-output disabled	55 26		

Legend: [①] Stroke [②] Cable length [③] Options *Please refer to P. 59 for push-motion operation.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
70	-	320	-
120	-	370	-
170	-	420	-
220	-	470	-
270	-	520	-

③ Options

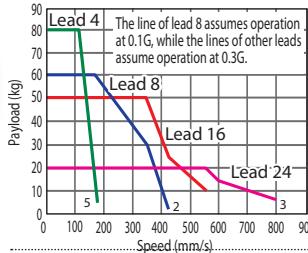
Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Outside)	CJO	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Flange	FL	→P. 12	-
Tip adapter (Flange)	FFA	→P. 12	-
Tip adapter (Internal thread)	NFA	→P. 13	-
Tip adapter (Keyway)	KFA	→P. 13	-
Motor side-mounted to the left (Standard)	ML	→P. 11	-
Motor side-mounted to the right	MR	→P. 11	-
Non-motor end specification	NM	→P. 11	-

Depending on the stroke, some rod attachment options are not available. Also, when selecting the shorter strokes, please be careful of nearby objects. Some interference may occur. Please refer to P. 14.

■ Correlation Diagrams of Speed and Payload

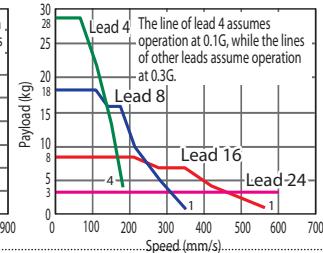
(1) High-output enabled with PCON-CA, MSEP, MSEL connected

RCP5-RA7R, Horizontal mount



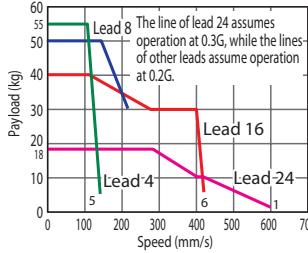
* PCON-CA is a previous model. Current model is PCON-CB.

RCP5-RA7R, Vertical mount

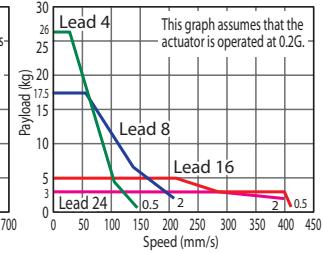


(2) High-output disabled with PCON-CA, MSEP connected

RCP5-RA7R, Horizontal mount



RCP5-RA7R, Vertical mount



■ Stroke and Maximum Speed Values in brackets < > are for vertical use. (Unit: mm/s)

Lead (mm)	Connected controller	70~520 (Every 50mm)
24	High-output enabled	800 <600>
	High-output disabled	600 <400>
16	High-output enabled	560
	High-output disabled	420
8	High-output enabled	420 <350>
	High-output disabled	210
4	High-output enabled	175
	High-output disabled	140

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

Actuator Specifications

Item	Description
Drive system	Ball screw Ø12mm, rolled C10
Positioning repeatability (*1)	±0.02mm [$\pm 0.03\text{mm}$]
Lost motion	0.1mm or less
Rod	Ø30mm Aluminum
Rod non-rotation precision (*2)	0 deg.
Allowable load and torque on rod tip	Refer to table in the page on the right, refer to P. 65
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*1) The values in brackets [] are for Lead 24.

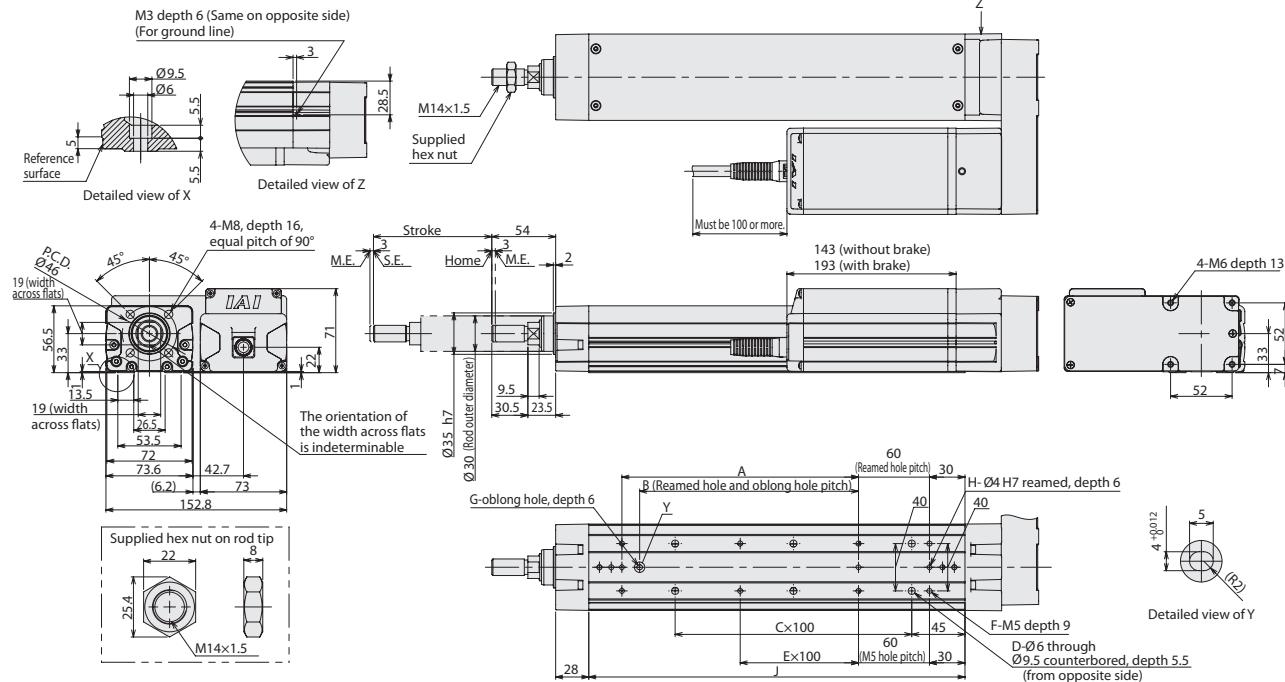
(*2) Rod's angular displacement in rotational direction with no applied load is shown.

Dimensions

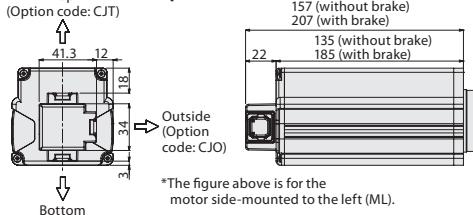
CAD drawings can be downloaded from our website. www.intelligentactuator.com



- *1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
 - *2 The direction of width across flats varies depending on the product.
 - *3 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.
- ME: Mechanical end
SE: Stroke end

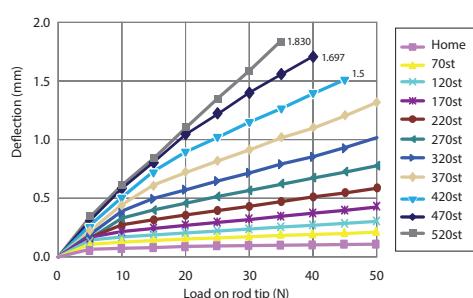


■ Cable Exit Direction (Option)



*The figure above is for the motor side-mounted to the left (ML).

■ Rod Deflection of RCP5-RA7R



■ Dimensions and Mass by Stroke

Stroke	70	120	170	220	270	320	370	420	470	520	
L	258	308	358	408	458	508	558	608	658	708	
A	0	100	200	200	200	300	300	400	400	500	
B	0	85	85	185	185	285	285	385	385	485	
C	1	1	2	2	3	3	3	4	4	5	
D	4	4	6	6	8	8	10	10	12	12	
E	0	0	0	1	1	2	2	3	3	4	
F	4	6	6	8	8	10	10	12	12	14	
G	0	1	1	1	1	1	1	1	1	1	
H	2	3	3	3	3	3	3	3	3	3	
J	168	218	268	318	368	418	468	518	568	618	
K	227	277	327	377	427	477	527	577	627	677	
Allowable static load on rod tip (N)	119.2	97.7	82.8	71.6	63.0	56.2	50.6	46.0	42.2	38.8	
Allowable dynamic load on rod tip (N)	44.3	35.7	29.6	25.2	21.7	19.0	16.8	15.0	13.6	12.2	
Load offset 0mm	33.9	29.7	25.7	22.4	19.7	17.4	15.5	14.0	12.8	11.5	
Allowable static torque on rod tip (N·m)	12.1	10.0	8.5	7.4	6.5	5.9	5.3	4.9	4.5	4.1	
Allowable dynamic torque on rod tip (N·m)	3.4	3.0	2.6	2.2	2.0	1.7	1.6	1.4	1.3	1.2	
Mass (kg)	Without brake	4.0	4.3	4.6	4.9	5.2	5.5	5.8	6.1	6.3	6.6
	With brake	4.5	4.8	5.1	5.4	5.7	6.0	6.3	6.6	6.8	7.1

Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

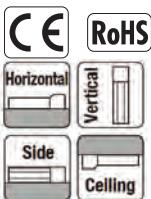
RCP5-RA8R

ROBO Cylinder, High-thrust Rod Type, Side-mounted Motor Type,
Actuator Width 88mm, 24V Pulse Motor

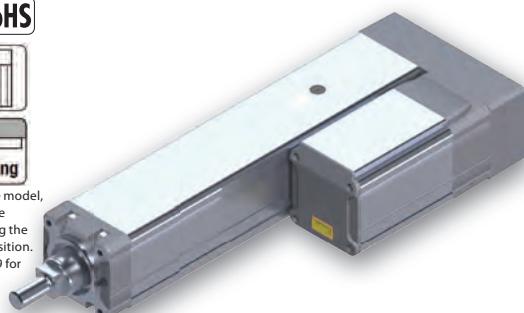
Model	RCP5-RA8R	WA	60P									
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options			
Items	WA: Battery-less absolute specification	60P: Pulse motor, size 60□	20: 20mm 10: 10mm 5: 5mm	50: 50mm 700: 700mm (Every 50mm)	P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	Please refer to the options table below.	X□□: Specified length R□□: Robot cable				

*Controller is not included.

Radial Load Applicable



Depending on the model, there may be some limitations to using the vertical mount position. Please refer to P.59 for details.



The figure above is the motor side-mounted to the left (ML).

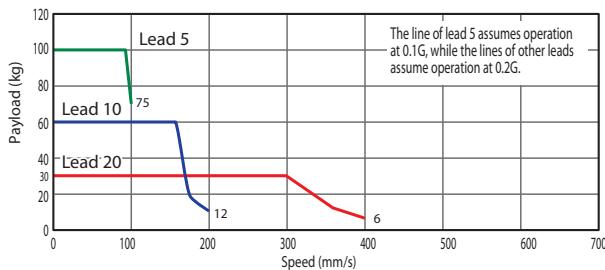


- The payload assumes operation at an acceleration of 0.1G for lead 5 and operation at an acceleration of 0.2G for lead 10 and lead 20. The above values are the upper limits of acceleration/deceleration.
- Please note that the RA8R requires a dedicated controller (high-thrust model).
- The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P. 65 and after for the allowable load mass.

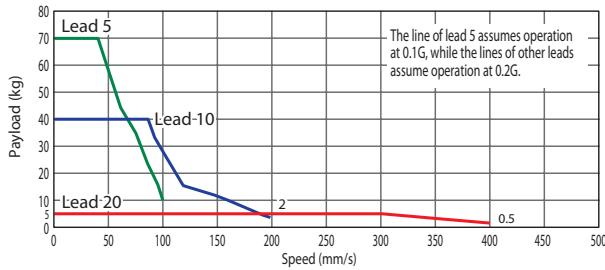
* PCON-CFA is a previous model. Current model is PCON-CFB.

Correlation Diagrams of Speed and Payload

RCP5-RA8R, Horizontal mount, PCON-CFA connected



RCP5-RA8R, Vertical mount, PCON-CFA connected



Actuator Specifications

Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Maximum payload Vertical (kg)	Maximum push force (N)	Stroke (mm)
RCP5-RA8R-WA-60P-20-①-P4-②-③	20	PCON-CFB	30	5	500	50~700 (Every 50mm)
RCP5-RA8R-WA-60P-10-①-P4-②-③	10	PCON-CFB	60	40	1,000	
RCP5-RA8R-WA-60P-5-①-P4-②-③	5	PCON-CFB	100	70	2,000	

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

Stroke and Maximum Speed

(Unit: mm/s)

Lead (mm)	50 (mm)	100~450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)
20	280	400	360	320	280	240	220
10	200		180	160	140	120	110
5	100		90	80	70	60	55

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	400	-
100	-	450	-
150	-	500	-
200	-	550	-
250	-	600	-
300	-	650	-
350	-	700	-

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Outside)	CJO	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Motor side-mounted to the left (Standard)	ML	→P. 11	-
Motor side-mounted to the right	MR	→P. 11	-
Flange	FL	→P. 12	-
Non-motor end specification	NM	→P. 11	-

Actuator Specifications

Item	Description
Drive system	Ball screw Ø16mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	Ø40mm Aluminum
Rod non-rotation precision (*1)	0 deg.
Allowable load and torque on rod tip	Refer to table in the page on the right, refer to P. 65
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

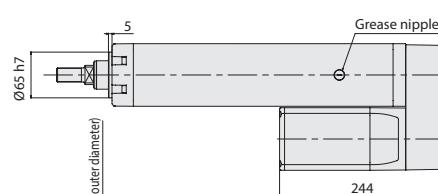
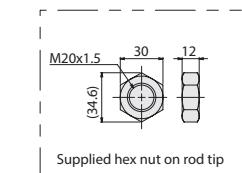
(*1) Rod's angular displacement in rotational direction with no applied load is shown.

Dimensions

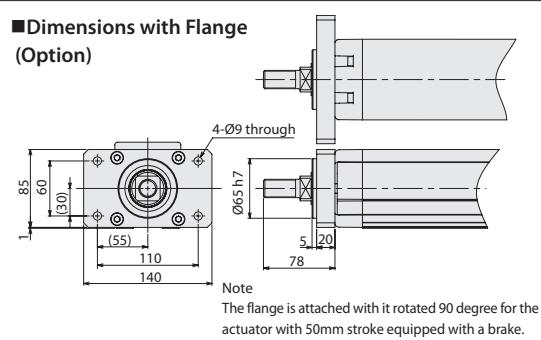
CAD drawings can be downloaded from our website. www.intelligentactuator.com



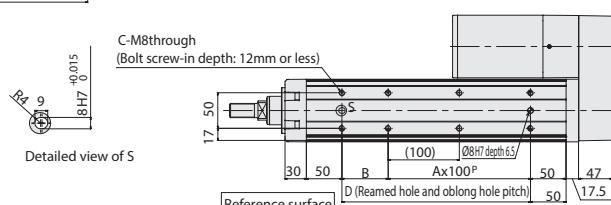
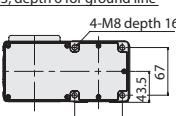
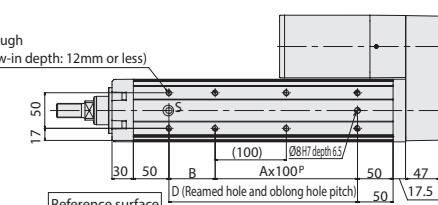
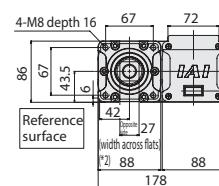
- *1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
- *2 The direction of width across flats varies depending on the product.
- *3 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.
ME: Mechanical end
SE: Stroke end



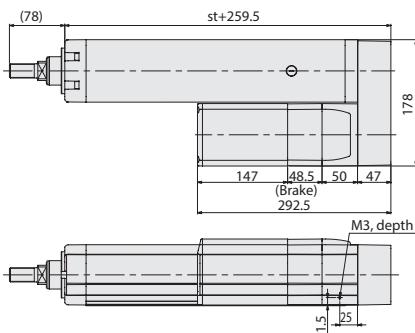
Dimensions with Flange (Option)



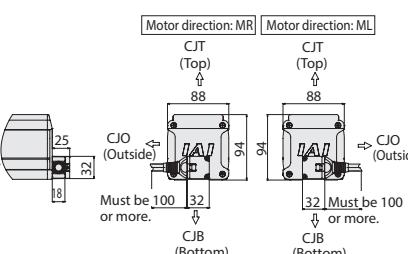
Note
The flange is attached with it rotated 90 degree for the actuator with 50mm stroke equipped with a brake.



Dimensions with Brake (Option)

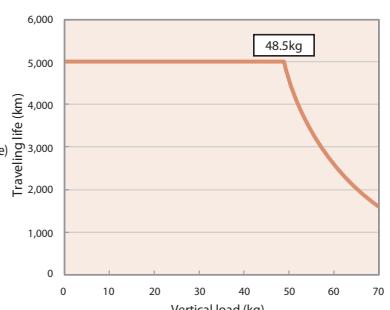


3 Cable Exit Directions (Option)



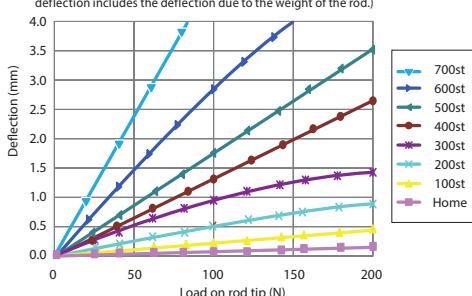
Note
If an actuator with lead 5 is installed vertically, the service life of the actuator varies significantly depending on its payload. Please refer to the correlation diagram of vertical load and traveling life shown below.

(If the actuator is installed horizontally, its service life is not affected by the payload.)



Rod Deflection of RCP5-RA8R

(The graph below shows the measurements of how much a horizontally installed rod would deflect when a load is applied to the end of the rod. The measured deflection includes the deflection due to the weight of the rod.)



Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	
L	309.5	359.5	409.5	459.5	509.5	559.5	609.5	659.5	709.5	759.5	809.5	859.5	909.5	959.5	
A	0	1	1	2	2	3	3	4	4	5	5	6	6	7	
B	115	65	115	65	115	65	115	65	115	65	115	65	115	65	
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	
D	115	165	215	265	315	365	415	465	515	565	615	665	715	765	
Allowable static load on rod tip (N)	180	150.3	128.9	112.7	99.9	89.7	81.3	74.3	68.3	63.1	58.6	54.6	51.1	47.9	
Allowable dynamic load on rod tip (N)	57.0	48.6	42.5	37.8	33.8	30.5	27.6	25.2	23.1	21.2	19.5	18.1	16.7	15.5	
Allowable static torque on rod tip (N·m)	18.1	15.2	13.0	11.4	10.2	9.2	8.4	7.7	7.1	6.6	6.1	5.8	5.4	5.1	
Allowable dynamic torque on rod tip (N·m)	5.7	4.9	4.3	3.8	3.4	3.0	2.8	2.5	2.3	2.1	2.0	1.8	1.7	1.5	
Mass (kg)	Without brake	8.6	9.0	9.4	9.8	10.3	10.7	11.1	11.6	12.0	12.4	12.9	13.3	13.7	14.1
	With brake	9.6	10.0	10.4	10.9	11.3	11.7	12.2	12.6	13.0	13.4	13.9	14.3	14.7	15.2

Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

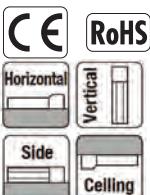
RCP5-RA10R

ROBO Cylinder, High-thrust Rod Type, Side-mounted Motor Type,
Actuator Width 108mm, 24V Pulse Motor

Model	RCP5-RA10R	WA	86P	Lead	Stroke	Applicable controllers	Cable length	Options
Specification	Series	Type	Encoder type	Motor type	Lead	P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	Please refer to the options table below.
Items	WA: Battery-less absolute specification	86P: Pulse motor, size 86□	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 800: 800mm (Every 50mm)		X□□: Specified length R□□: Robot cable		

*Controller is not included.

Radial Load Applicable



* Depending on the model, there may be some limitations to using the vertical mount position. Please refer to P.59 for details.

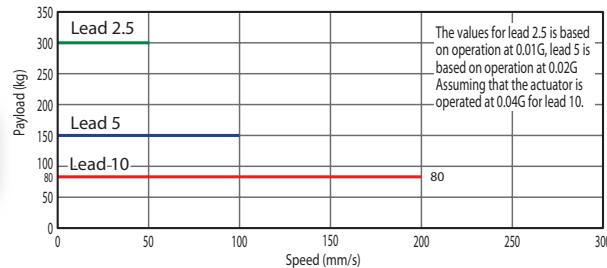
The figure above is the motor side-mounted to the left (ML).



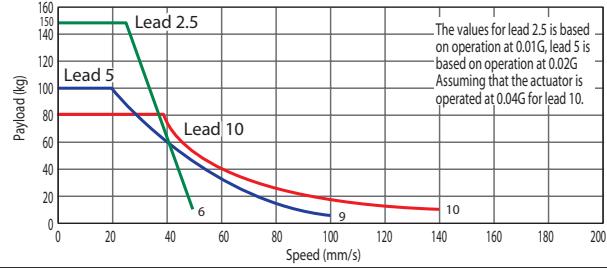
- (1) The payload assumes operation at an acceleration of 0.01G for lead 2.5, operation at an acceleration of 0.02G for lead 5 and operation at an acceleration of 0.04G for lead 10. The above values are the upper limits of acceleration/deceleration.
- (2) Please note that the RA10R requires a dedicated controller (high-thrust model).
- (3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P. 65 and after for the allowable load mass.

Correlation Diagrams of Speed and Payload

RCP5-RA10R, Horizontal mount, PCON-CFA connected



RCP5-RA10R, Vertical mount, PCON-CFA connected



Actuator Specifications

■ Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Maximum payload Vertical (kg)	Maximum push force (N)	Stroke (mm)
RCP5-RA10R-WA-86P-10-①-P4-②-③	10	PCON-CFB	80	80	1,500	50~800 (Every 50mm)
RCP5-RA10R-WA-86P-5-①-P4-②-③	5	PCON-CFB	150	100	3,000	
RCP5-RA10R-WA-86P-2.5-①-P4-②-③	2.5	PCON-CFB	300	150	6,000	

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

■ Stroke and Maximum Speed

Values in brackets <> are for vertical use. (Unit: mm/s)

Lead (mm)	50 (mm)	100 (mm)	150 (mm)	200~400 (Every 50mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
10	117	<140>			200	<140>			180	160	140	120
5	83		100		90	80	70	60	55	50	45	
2.5				50				45	40	35	30	

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	450	-
100	-	500	-
150	-	550	-
200	-	600	-
250	-	650	-
300	-	700	-
350	-	750	-
400	-	800	-

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Outside)	CJO	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Motor side-mounted to the left (Standard)	ML	→P. 11	-
Motor side-mounted to the right	MR	→P. 11	-
Flange	FL	→P. 12	-
Non-motor end specification	NM	→P. 11	-

Actuator Specifications

Item	Description
Drive system	Ball screw Ø20mm (Lead 2.5/10mm), Ø16mm (Lead 5mm), rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	Ø40mm Aluminum
Rod non-rotation precision (*1)	0 deg.
Allowable load and torque on rod tip	Refer to table in the page on the right, refer to P. 65
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*1) Rod's angular displacement in rotational direction with no applied load is shown.

* PCON-CFA is a previous model. Current model is PCON-CFB.

Dimensions

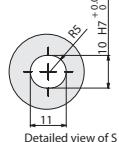
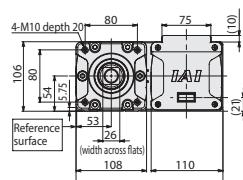
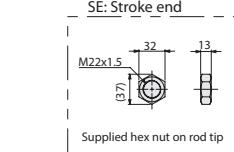
CAD drawings can be downloaded from our website. www.intelligentactuator.com



- *1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
 - *2 The direction of width across flats varies depending on the product.
 - *3 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.

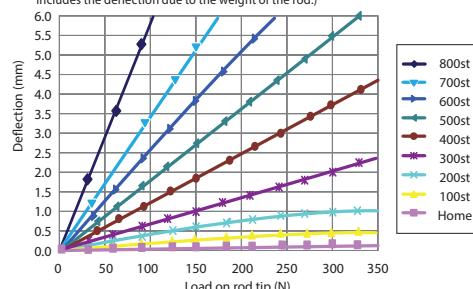
ME: Mechanical end

SE: Stroke end



■ Rod Deflection of RCP5-RA10B

(The graph below shows the measurements of how much a horizontally installed rod would deflect when a load is applied to the end of the rod. The measured deflection includes the deflection due to the weight of the rod.)



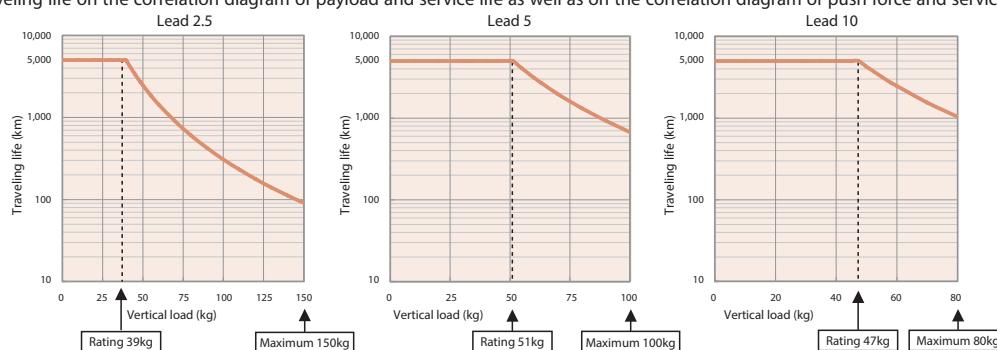
Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
L	366.5	416.5	466.5	516.5	566.5	616.5	666.5	716.5	766.5	816.5	866.5	916.5	966.5	1,016.5	1,066.5	1,116.5	
A	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	
B	132	82	132	82	132	82	132	82	132	82	132	82	132	82	132	82	
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	
D	132	182	232	282	332	382	432	482	532	582	632	682	732	782	832	882	
Allowable static load on rod tip (N)	316.9	268.4	232.6	205.1	183.4	165.7	151.0	138.6	128.1	119.0	111.0	103.9	97.7	92.1	87.0	82.5	
Allowable dynamic load on rod tip (N)	Load offset 0mm	119.1	99.1	84.7	73.8	65.3	58.5	52.8	48.1	44.0	40.5	37.5	34.8	32.4	30.2	28.3	26.5
	Load offset 100mm	100.7	85.9	74.9	66.3	59.3	53.6	48.8	44.7	41.2	38.1	35.4	32.9	30.8	28.8	27.0	25.4
Allowable static torque on rod tip (Nm)	31.8	27.0	23.4	20.7	18.5	16.8	15.3	14.1	13.1	12.2	11.4	10.7	10.1	9.6	9.1	8.6	
Allowable dynamic torque on rod tip (Nm)	10.1	8.6	7.5	6.6	5.9	5.4	4.9	4.5	4.1	3.8	3.5	3.3	3.1	2.9	2.7	2.5	
Mass (kg)	Without brake	14.6	15.3	16.0	16.7	17.4	18.1	18.8	19.5	20.2	20.9	21.6	22.3	23.0	23.7	24.4	25.1
	With brake	16.2	16.9	17.6	18.3	19.0	19.7	20.4	21.1	21.8	22.5	23.2	23.9	24.6	25.3	26.0	26.7

Correlation Diagrams of Vertical Load and Traveling Life

- Since the RCP5-RA10R has a greater maximum thrust than other types, its service life varies significantly depending on the payload and push force applied when the actuator is installed vertically. When selecting an appropriate type from the correlation diagram of speed and payload or correlation diagram of push force and current-limiting value, check its traveling life on the correlation diagram of payload and service life as well as on the correlation diagram of push force and service life.

Note
The rated value represents the maximum value at a traveling life of 5,000km. The greatest value is the maximum value at which the actuator can operate.
Take note that, if an actuator is operated beyond its rating, its service life will drop as shown by the applicable graph on the right.



Applicable Controllers

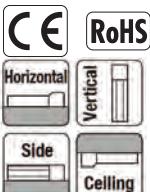
* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI

RCP5CR-SA4C

Cleanroom Type, ROBO Cylinder, Slider Type, Motor Unit Coupled,
Actuator Width 40mm, 24V Pulse Motor

■ Model	RCP5CR	SA4C	WA	35P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options		
Items	WA: Battery-less absolute specification	35P: Pulse motor, size 35□		16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 500: 500mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	X□□: Specified length R□□: Robot cable	Please refer to the options table below.		

*Controller is not included.



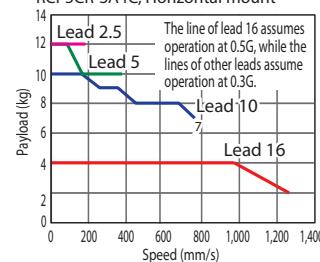
* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to P.59 for details.



- The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- Please refer to P. 59 for push-motion operation.

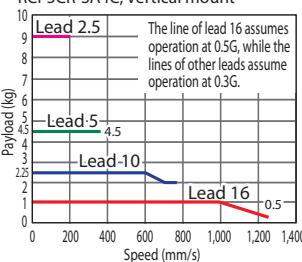
(1) High-output enabled with PCON-CA, MSEP, MSEL connected

RCP5CR-SA4C, Horizontal mount



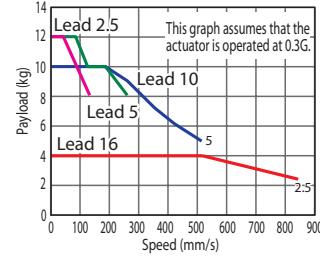
* PCON-CA is a previous model. Current model is PCON-CB.

RCP5CR-SA4C, Vertical mount

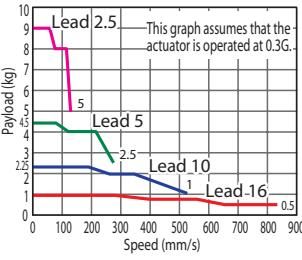


(2) High-output disabled with PCON-CA, MSEP connected

RCP5CR-SA4C, Horizontal mount



RCP5CR-SA4C, Vertical mount



Actuator Specifications

■ Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Maximum payload Vertical (kg)	Stroke (mm)	
RCP5CR-SA4C-WA-35P-16-①-P3-②-③	16	High-output enabled	4	1	50~500 (Every 50mm)	
RCP5CR-SA4C-WA-35P-10-①-P3-②-③		High-output disabled				
RCP5CR-SA4C-WA-35P-5-①-P3-②-③	5	High-output enabled	12	4.5		
RCP5CR-SA4C-WA-35P-2.5-①-P3-②-③		High-output disabled				
		High-output enabled	12	9		
		High-output disabled				

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

■ Stroke, Max. Speed and Suction Amount

(Unit: mm/s)

Lead (mm)	Connected controller	50~400 (Every 50mm)	450 (mm)	500 (mm)	Suction amount (N·L/min)
16	High-output enabled	1,260	1,060	875	60
	High-output disabled		840		
10	High-output enabled	785	675	555	40
	High-output disabled		525		
5	High-output enabled	390	330	275	20
	High-output disabled		260		
2.5	High-output enabled	195	165	135	10
	High-output disabled		130		

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	300	-
100	-	350	-
150	-	400	-
200	-	450	-
250	-	500	-

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Non-motor end specification	NM	→P. 11	-
Vacuum joint on opposite side	VR	→P. 11	-

* Please contact IAI for current available options.

Actuator Specifications

Item	Description		
Drive system	Ball screw Ø8mm, rolled C10		
Positioning repeatability	±0.02mm		
Lost motion	0.1mm or less		
Base	Material: Aluminum with white alumite treatment		
Dynamic allowable moment (*1)	Ma: 4.98N·m, Mb: 7.11N·m, Mc: 9.68N·m		
Static allowable moment	Ma: 8.6N·m, Mb: 12.2N·m, Mc: 16.7N·m		
Cleanliness	Class 10 (0.1μm)		
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)		

(*1) Reference for overhang load length/Ma: 120mm or less, Mb, Mc: 120mm or less

(*2) Assumes a standard rated life of 5,000km.

(*3) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

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

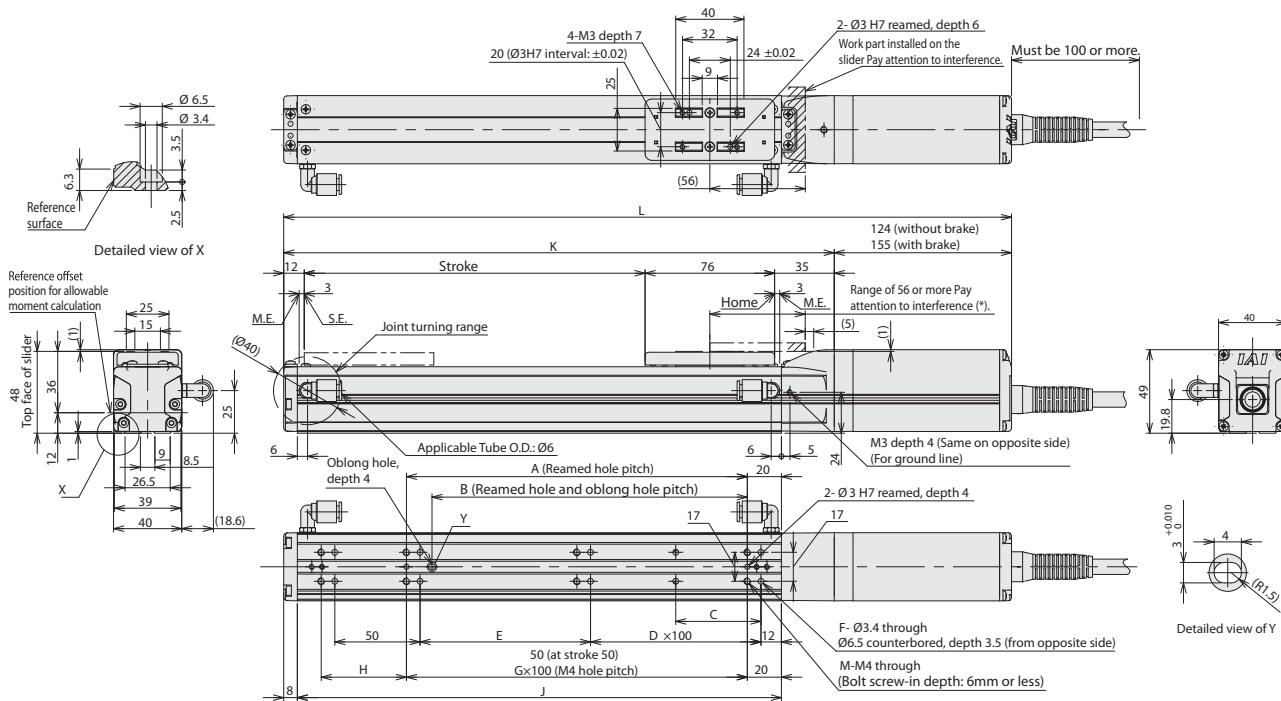


*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

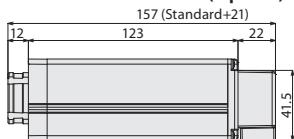
ME: Mechanical end

SE: Stroke end

*2 There is no pipe joint for RCP5-SA4C Slider Roller Type (SR).



■ Cable Exit Direction (Option)



Top
(Option code: CJT)
Left
(Option code: CJL)
Right
(Option code: CJR)
Bottom
(Option code: CJB)

■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	Without brake	297	347	397	447	497	547	597	647	697
	With brake	328	378	428	478	528	578	628	678	728
A	50	100	100	200	200	300	300	400	400	500
B	35	85	85	185	185	285	285	385	385	485
C	25	50	50	50	50	50	50	50	50	50
D	0	0	1	1	2	2	3	3	4	4
E	50	100	50	100	50	100	50	100	50	100
F	8	8	10	10	12	12	14	14	16	16
G	0	1	1	2	2	3	3	4	4	5
H	50	50	100	50	100	50	100	50	100	50
J	134	184	234	284	334	384	434	484	534	584
K	173	223	273	323	373	423	473	523	573	623
M	6	6	6	8	8	10	10	12	12	14
Mass (kg)	Without brake	1.0	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.7
	With brake	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9
										2.0

Applicable Controllers

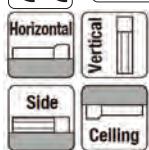
* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

RCP5CR-SA6C

Cleanroom Type, ROBO Cylinder, Slider Type, Motor Unit Coupled,
Actuator Width 58mm, 24V Pulse Motor

Model	RCP5CR	SA6C	WA	42P						
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options	
Items	WA: Battery-less absolute specification	42P: Pulse motor, size 42□		20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm 800: 800mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	X□□: Specified length R□□: Robot cable	Please refer to the options table below.	

*Controller is not included.



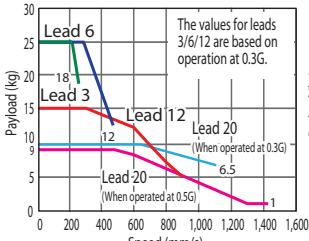
* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to P.59 for details.



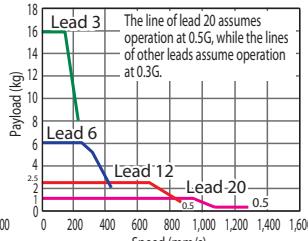
- (1) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- (2) Please refer to P. 59 for push-motion operation.

Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON-CA, MSELP, MSEL connected
RCP5CR-SA6C, Horizontal mount



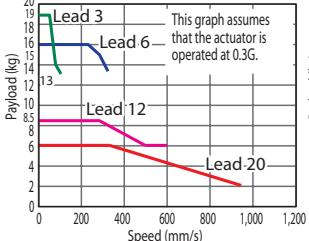
RCP5CR-SA6C, Vertical mount



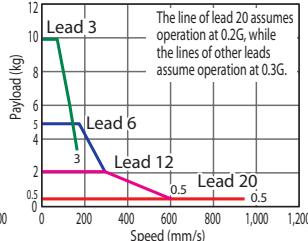
* PCON-CA is a previous model. Current model is PCON-CB.

(2) High-output disabled with PCON-CA, MSELP connected

RCP5CR-SA6C, Horizontal mount



RCP5CR-SA6C, Vertical mount



Actuator Specifications

■ Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload		Stroke (mm)
			Horizontal (kg)	Vertical (kg)	
RCP5CR-SA6C-WA-42P-20-[①]-P3-[②]-[③]	20	High-output enabled	10	1	50~800 (Every 50mm)
		High-output disabled	6	0.5	
RCP5CR-SA6C-WA-42P-12-[①]-P3-[②]-[③]	12	High-output enabled	15	2.5	
		High-output disabled	8.5	2	
RCP5CR-SA6C-WA-42P-6-[①]-P3-[②]-[③]	6	High-output enabled	25	6	
		High-output disabled	16	5	
RCP5CR-SA6C-WA-42P-3-[①]-P3-[②]-[③]	3	High-output enabled	25	16	
		High-output disabled	19	10	

Legend: [①] Stroke [②] Cable length [③] Options *Please refer to P. 59 for push-motion operation.

■ Stroke, Max. Speed and Suction Amount

(Unit: mm/s)

Lead (mm)	Connected controller	50~400 (Every 50mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction amount (Nℓ/min)
20	High-output enabled	1,440 <1,280>	1,335 <1,280>	1,130	970	840	735	650	575	575	100
	High-output disabled		960			840	735	650	575	575	
12	High-output enabled	900	885	735	620	535	460	405	355	315	70
	High-output disabled		600			535	460	405	355	315	
6	High-output enabled	450	435	365	305	265	230	200	175	155	30
	High-output disabled		300			265	230	200	175	155	
3	High-output enabled	225	215	180	150	130	115	100	85	75	15
	High-output disabled		150			130	115	100	85	75	

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	450	-
100	-	500	-
150	-	550	-
200	-	600	-
250	-	650	-
300	-	700	-
350	-	750	-
400	-	800	-

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Non-motor end specification	NM	→P. 11	-
Vacuum joint on opposite side	VR	→P. 11	-

* Please contact IAI for current available options.

Actuator Specifications

Item	Description
Drive system	Ball screw Ø10mm, rolled C10
Positioning repeatability (*1)	±0.02mm [±0.03mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic allowable moment (*2)	Ma: 11.6N·m, Mb: 16.6N·m, Mc: 24.6N·m
Static allowable moment	Ma: 38.3N·m, Mb: 54.7N·m, Mc: 81N·m
Cleanliness	Class 10 (0.1μm)
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

*Reference for overhang load length/Ma: 150mm or less, Mb, Mc: 150mm or less

(*1) The values in brackets [] are for Lead 20.

(*2) Assumes a standard rated life of 5,000km.

(*3) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

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

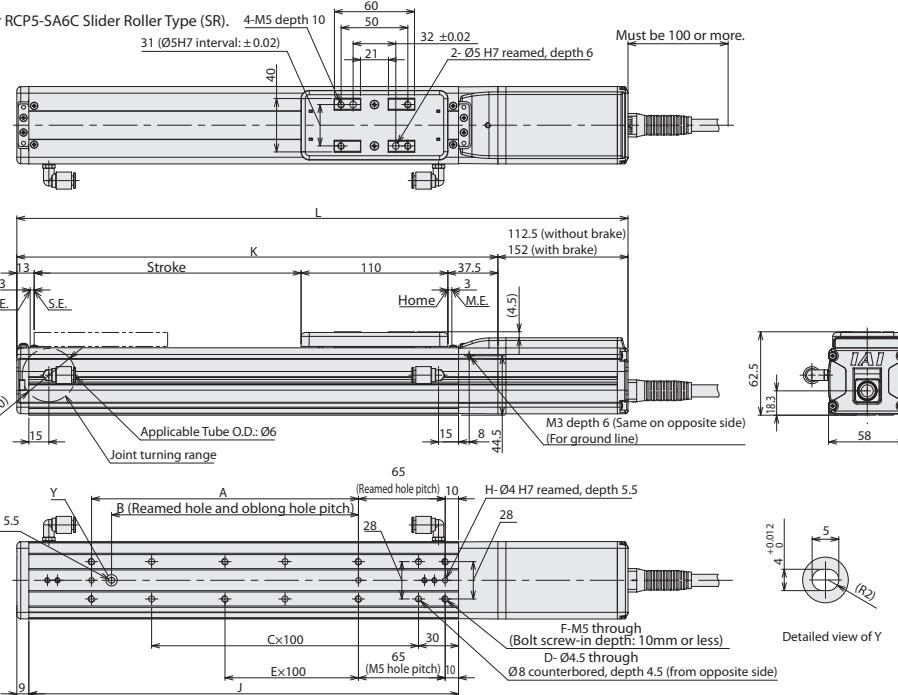
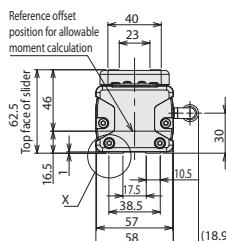
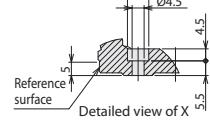


*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

ME: Mechanical end

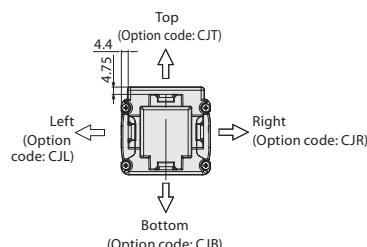
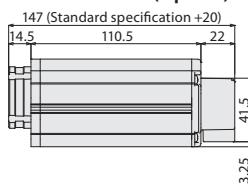
SE: Stroke end

*2 There is no pipe joint for RCP5-SA6C Slider Roller Type (SR).



Detailed view of Y

Cable Exit Direction (Option)



Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
L	Without brake	323	373	423	473	523	573	623	673	723	773	823	873	923	973	1,023	1,073
	With brake	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1,012.5	1,062.5	1,112.5
A	0	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	
B	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785	
C	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	
D	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	
E	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	
F	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
H	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
J	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922	
K	210.5	260.5	310.5	360.5	410.5	460.5	510.5	560.5	610.5	660.5	710.5	760.5	810.5	860.5	910.5	960.5	
Mass	Without brake	1.7	1.8	2.0	2.2	2.4	2.5	2.7	2.9	3.1	3.2	3.4	3.6	3.8	3.9	4.1	4.3
	With brake	1.9	2.0	2.2	2.4	2.6	2.7	2.9	3.1	3.3	3.4	3.6	3.8	4.0	4.1	4.3	4.5
(kg)																	

Applicable Controllers

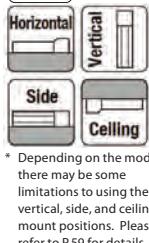
* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

RCP5CR-SA7C

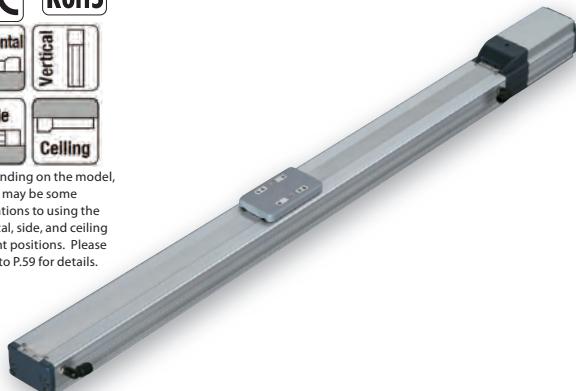
Cleanroom Type, ROBO Cylinder, Slider Type, Motor Unit Coupled,
Actuator Width 73mm, 24V Pulse Motor

■ Model	RCP5CR	SA7C	WA	56P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options	
Items	WA: Battery-less absolute specification	56P: Pulse motor, size 56□		24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm 800: 800mm (Every 50mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	X□□: Specified length R□□: Robot cable	Please refer to the options table below.	

*Controller is not included.



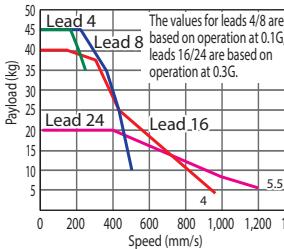
* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to P.59 for details.



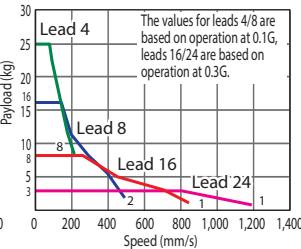
- The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- Please refer to P. 59 for push-motion operation.

Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON-CA, MSEP, MSEL connected
RCP5CR-SA7C, Horizontal mount

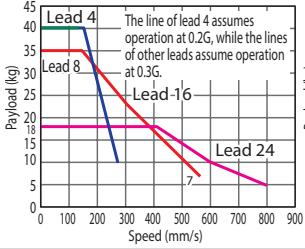


RCP5CR-SA7C, Vertical mount

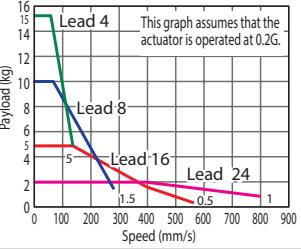


(2) High-output disabled with PCON-CA, MSEP connected

RCP5CR-SA7C, Horizontal mount



RCP5CR-SA7C, Vertical mount



Actuator Specifications

■ Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Vertical (kg)	Stroke (mm)
RCP5CR-SA7C-WA-56P-24-[①]-P3-[②]-[③]	24	High-output enabled	20	3	50~800 (Every 50mm)
RCP5CR-SA7C-WA-56P-16-[①]-P3-[②]-[③]		High-output disabled	18	2	
RCP5CR-SA7C-WA-56P-8-[①]-P3-[②]-[③]	8	High-output enabled	40	8	50~800 (Every 50mm)
RCP5CR-SA7C-WA-56P-4-[①]-P3-[②]-[③]		High-output disabled	35	5	
RCP5CR-SA7C-WA-56P-8-[①]-P3-[②]-[③]	8	High-output enabled	45	16	50~800 (Every 50mm)
RCP5CR-SA7C-WA-56P-4-[①]-P3-[②]-[③]		High-output disabled	40	10	
RCP5CR-SA7C-WA-56P-4-[①]-P3-[②]-[③]	4	High-output enabled	45	25	50~800 (Every 50mm)
RCP5CR-SA7C-WA-56P-4-[①]-P3-[②]-[③]		High-output disabled	40	15	

Legend: [①] Stroke [②] Cable length [③] Options *Please refer to P. 59 for push-motion operation.

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	450	-
100	-	500	-
150	-	550	-
200	-	600	-
250	-	650	-
300	-	700	-
350	-	750	-
400	-	800	-

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Non-motor end specification	NM	→P. 11	-
Vacuum joint on opposite side	VR	→P. 11	-

* Please contact IAI for current available options.

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

Actuator Specifications

Item	Description			
Drive system	Ball screw Ø12mm, rolled C10			
Positioning repeatability (*1)	±0.02mm (±0.03mm)			
Lost motion	0.1mm or less			
Base	Material: Aluminum with white alumite treatment			
Dynamic allowable moment (*2)	Ma: 11.6N·m, Mb: 16.6N·m, Mc: 33.7N·m			
Static allowable moment	Ma: 51.2N·m, Mb: 73.1N·m, Mc: 148N·m			
Cleanliness	Class 10 (0.1μm)			
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)			

*Reference for overhang load length/Ma: 230mm or less, Mb, Mc: 230mm or less

(*1) The values in brackets [] are for Lead 24.

(*2) Assumes a standard rated life of 5,000km.

(*) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

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

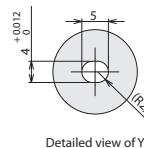
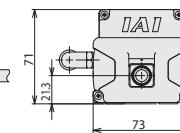
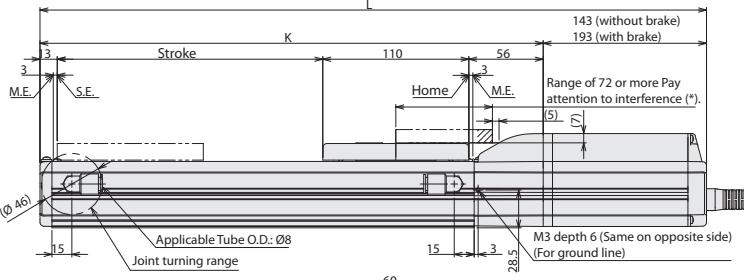
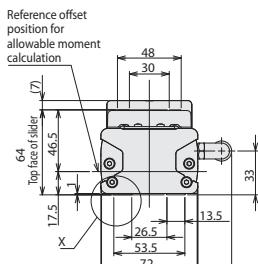
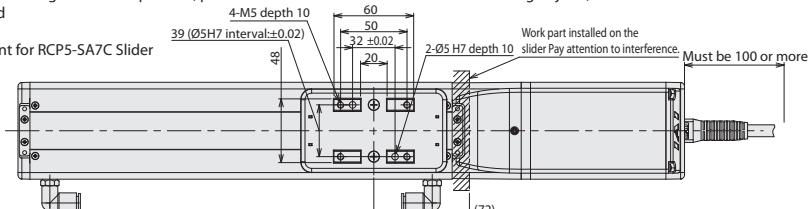
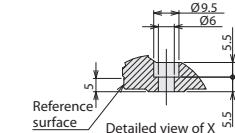


*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

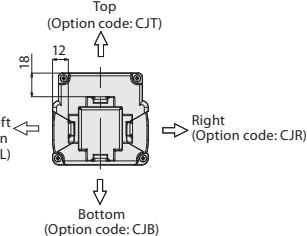
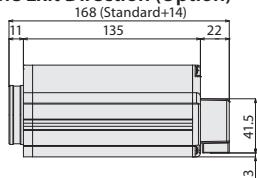
ME: Mechanical end

SE: Stroke end

*2 There is no pipe joint for RCP5-SA7C Slider Roller Type (SR).



■ Cable Exit Direction (Option)



■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
L	Without brake	372	422	472	522	572	622	672	722	772	822	872	922	972	1,022	1,072	
	With brake	422	472	522	572	622	672	722	772	822	872	922	972	1,022	1,072	1,122	
A	0	100	100	200	200	300	300	400	400	500	500	600	600	700	800		
B	0	85	85	185	185	285	285	385	385	485	485	585	585	685	785		
C	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8		
D	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18		
E	0	0	0	1	1	2	2	3	3	4	4	5	5	6	7		
F	4	6	6	8	8	10	10	12	12	14	14	16	16	18	20		
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
H	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
J	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	
K	229	279	329	379	429	479	529	579	629	679	729	779	829	879	929	979	
Mass (kg)	Without brake	3.0	3.2	3.5	3.7	3.9	4.1	4.4	4.6	4.8	5.0	5.3	5.5	5.7	5.9	6.1	6.4
	With brake	3.5	3.7	4.0	4.2	4.4	4.6	4.9	5.1	5.3	5.5	5.8	6.0	6.2	6.4	6.6	6.9

Applicable Controllers

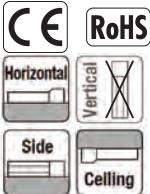
* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

RCP5-BA4/BA4U

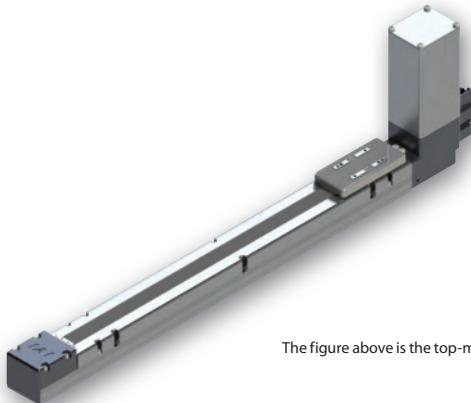
ROBO Cylinder, Belt Type, Actuator Width 40mm,
Pulse Motor, Top-mounted Motor/Bottom-mounted Motor

Model	RCP5	—	WA	—	35P	—	48	—	Applicable controllers	—	Cable length	—	Options
Specification	Series	—	Type	—	Encoder type	—	Motor type	—	Lead	—	Stroke	—	
Items			BA4: Belt type Top-mounted motor	WA: Battery-less absolute specification		35P: Pulse motor, size 35□	48: Equiv. to 48mm		300: 300mm 1200: 1,200mm (Every 100mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	X□□: Specified length R□□: Robot cable	Please refer to the options table below.
			BA4U: Belt type Bottom- mounted motor										

*Controller is not included.



* Depending on the model,
there may be some
limitations to using the
side and ceiling mount
positions. Please refer to
P.59 for details.



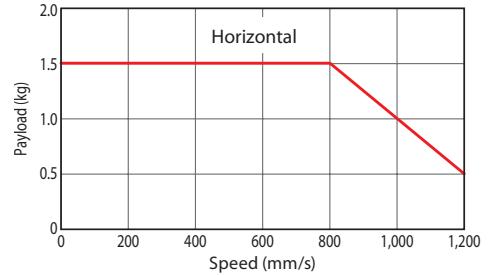
The figure above is the top-mounted motor type.



- (1) Horizontal or Ceiling specifications cannot be installed on Side. Similarly, Side specifications cannot be installed in Horizontal or Ceiling.
- (2) Please set the operation speed at 150mm/s or higher for the belt type as it may cause vibration or noise when used at lower speed.
- (3) The payload in the main specifications shows the maximum value. For details, refer to the table of load capacity by speed/acceleration. (P.61)
- (4) Push-motion operation cannot be performed.
- (5) Care must be taken depending on the mounting posture. See "Actuator Installation Orientation" page in our Technical Reference.
- (6) The standard overhang load length is 120 mm or less in the Ma, Mb or Mc direction.

Correlation Diagram of Speed and Payload

Due to a pulse motor used for RCP5 series, its payload gets lower when operated at higher speed. Please refer to this diagram below to make sure that the required payload will be met at the operation speed you desire.



Warnings

- This model cannot be installed in the vertical mount position.
- Horizontal and ceiling mount specifications cannot be installed in the side position. Similarly, side mount specification cannot be installed in a horizontal or ceiling mount position.
- The maximum stroke for the side and ceiling mount positions is 1,000mm.

Actuator Specifications

Lead and Payload

Model number	Motor attached side	Lead (mm)	Maximum payload	Stroke (mm)
			Horizontal (kg)	
RCP5-BA4-WA-35P-48-①-P3-②-③	Top	Equiv. to 48mm	1.5	300~1,200 (Every 100mm)
RCP5-BA4U-WA-35P-48-①-P3-②-③	Bottom			

Legend: ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

(Unit: mm/s)

Lead (mm)	300 (mm)	400 (mm)	500 (mm)	600 (mm)	700~1,200 (Every 100mm)
Equiv. to 48mm	890	1,040	1,120	1,160	1,200

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
300	-	800	-
400	-	900	-
500	-	1,000	-
600	-	1,100	-
700	-	1,200	-

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Ceiling mount type	CIM	→P. 59	-
Left side-mount type	SIL	→P. 59	-
Right side-mount type	SIR	→P. 59	-
Non-motor end specification	NM	→P. 11	-

Actuator Specifications

Item	Description
Drive system	Timing belt
Positioning repeatability	±0.08mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic allowable moment (*1)	Ma: 6.14N·m, Mb: 6.14N·m, Mc: 11.9N·m
Static allowable moment	Ma: 16N·m, Mb: 16N·m, Mc: 31.2N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

*Reference for overhang load length/Ma: 120mm or less, Mb, Mc: 120mm or less

(*1) Assumes a standard rated life of 5,000km.

(*) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

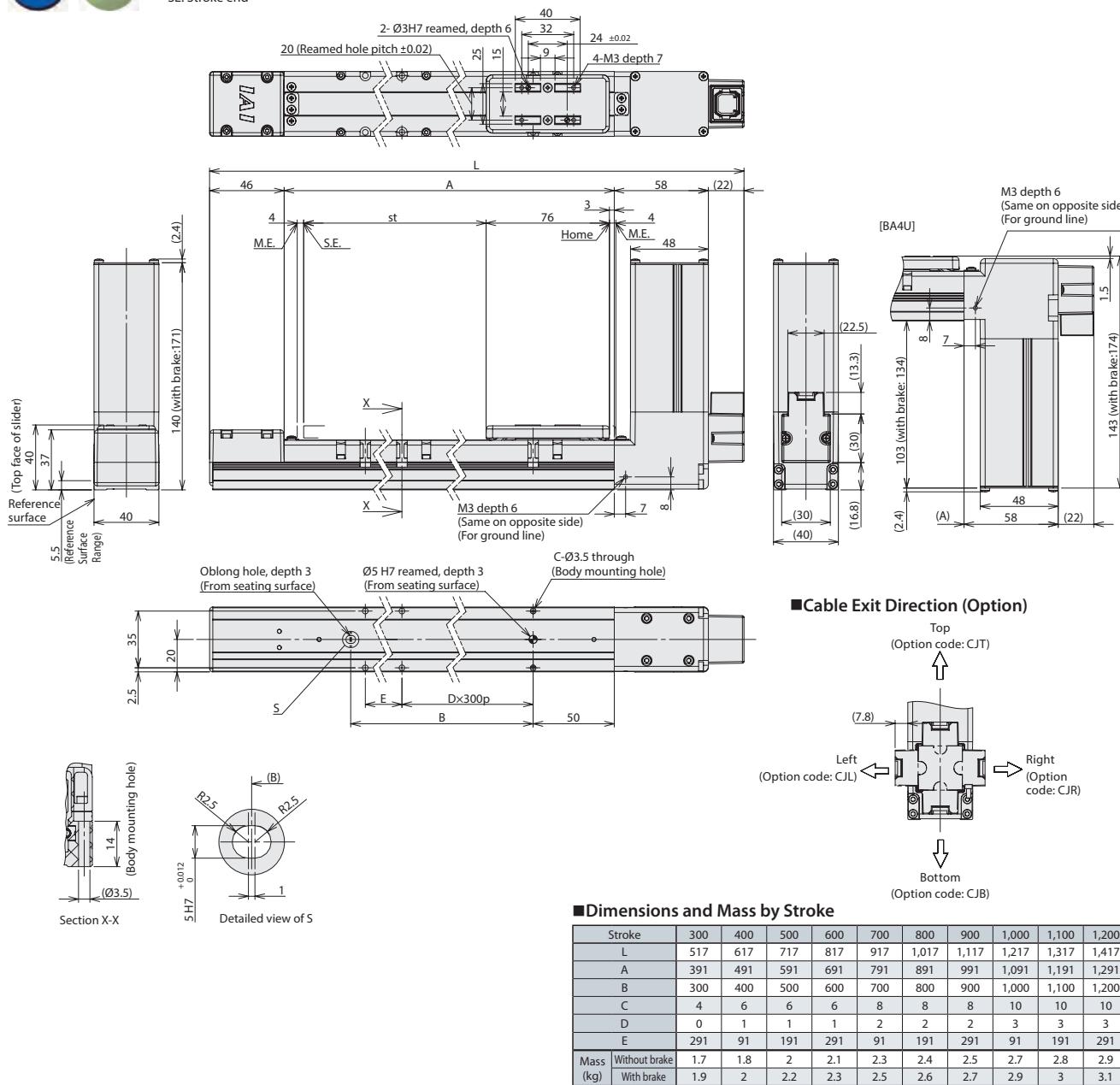
Dimensions

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



*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
ME: Mechanical end
SE: Stroke end

*The way to attach the actuator is to fix with screws from the top only.



*The weights shown in the table above are for BA4. The weight increases by 0.2kg for BA4U.

Applicable Controllers

* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

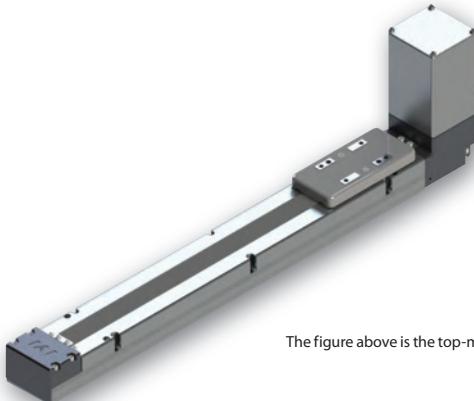
RCP5-BA6/BA6U

ROBO Cylinder, Belt Type, Actuator Width 58mm,
Pulse Motor, Top-mounted Motor/Bottom-mounted Motor

■ Model	RCP5	—	WA	—	42P	—	48	—	Applicable controllers	—	Cable length	—	Options
Specification	Series	—	Type	—	Encoder type	—	Motor type	—	Lead	—	Stroke	—	
Items	BA6: Belt type Top-mounted motor	WA: Battery-less absolute specification	42P: Pulse motor, size 42□	48: Equiv. to 48mm	300: 300mm 2200: 2,200mm (Every 100mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	X□□: Specified length R□□: Robot cable					Please refer to the options table below.
*Controller is not included.	BA6U: Belt type Bottom- mounted motor												



* Depending on the model, there may be some limitations to using the side and ceiling mount positions. Please refer to P.59 for details.



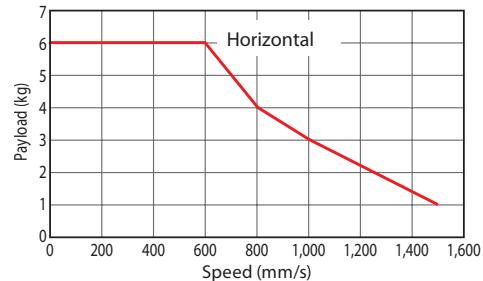
The figure above is the top-mounted motor type.



- (1) Horizontal or Ceiling specifications cannot be installed on Side. Similarly, Side specifications cannot be installed in Horizontal or Ceiling.
- (2) Please set the operation speed at 100mm/s or higher for the belt type as it may cause vibration or noise when used at lower speed.
- (3) The payload in the main specifications shows the maximum value. For details, refer to the table of load capacity by speed/acceleration. (P.61)
- (4) Push-motion operation cannot be performed.
- (5) Care must be taken depending on the mounting posture. See "Actuator Installation Orientation" page in our Technical Reference.
- (6) The standard overhang load length is 150 mm or less in the Ma, Mb or Mc direction.

Correlation Diagram of Speed and Payload

Due to a pulse motor used for RCP5 series, its payload gets lower when operated at higher speed. Please refer to this diagram below to make sure that the required payload will be met at the operation speed you desire.



Warnings

- This model cannot be installed in the vertical mount position.
- Horizontal and ceiling mount specifications cannot be installed in the side position. Similarly, side mount specification cannot be installed in a horizontal or ceiling mount position.
- The maximum stroke for the side and ceiling mount positions is 1,000mm.

Actuator Specifications

■ Lead and Payload

Model number	Motor attached side	Lead (mm)	Maximum payload	Stroke (mm)
			Horizontal (kg)	
RCP5-BA6-WA-42P-48-①-P3-②-③	Top	Equiv. to 48mm	6	300~2,200 (Every 100mm)
RCP5-BA6U-WA-42P-48-①-P3-②-③	Bottom			

Legend: ① Stroke ② Cable length ③ Options

■ Stroke and Maximum Speed

(Unit: mm/s)

Lead (mm)	300 (mm)	400 (mm)	500 (mm)	600 (mm)	700 (mm)	800 (mm)	900~2,200 (Every 100mm)
Equiv. to 48mm	890	1,070	1,220	1,340	1,400	1,440	1,500

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
300	-	1,300	-
400	-	1,400	-
500	-	1,500	-
600	-	1,600	-
700	-	1,700	-
800	-	1,800	-
900	-	1,900	-
1,000	-	2,000	-
1,100	-	2,100	-
1,200	-	2,200	-

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Ceiling mount type	CIM	→P. 59	-
Left side-mount type	SIL	→P. 59	-
Right side-mount type	SIR	→P. 59	-
Non-motor end specification	NM	→P. 11	-

Actuator Specifications

Item	Description
Drive system	Timing belt
Positioning repeatability	±0.08mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic allowable moment (*1)	Ma: 15.7N·m, Mb: 15.7N·m, Mc: 31.6N·m
Static allowable moment	Ma: 44.9N·m, Mb: 44.5N·m, Mc: 89.2N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

*Reference for overhang load length/Ma: 150mm or less, Mb, Mc: 150mm or less

(*1) Assumes a standard rated life of 5,000km.

(*2) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

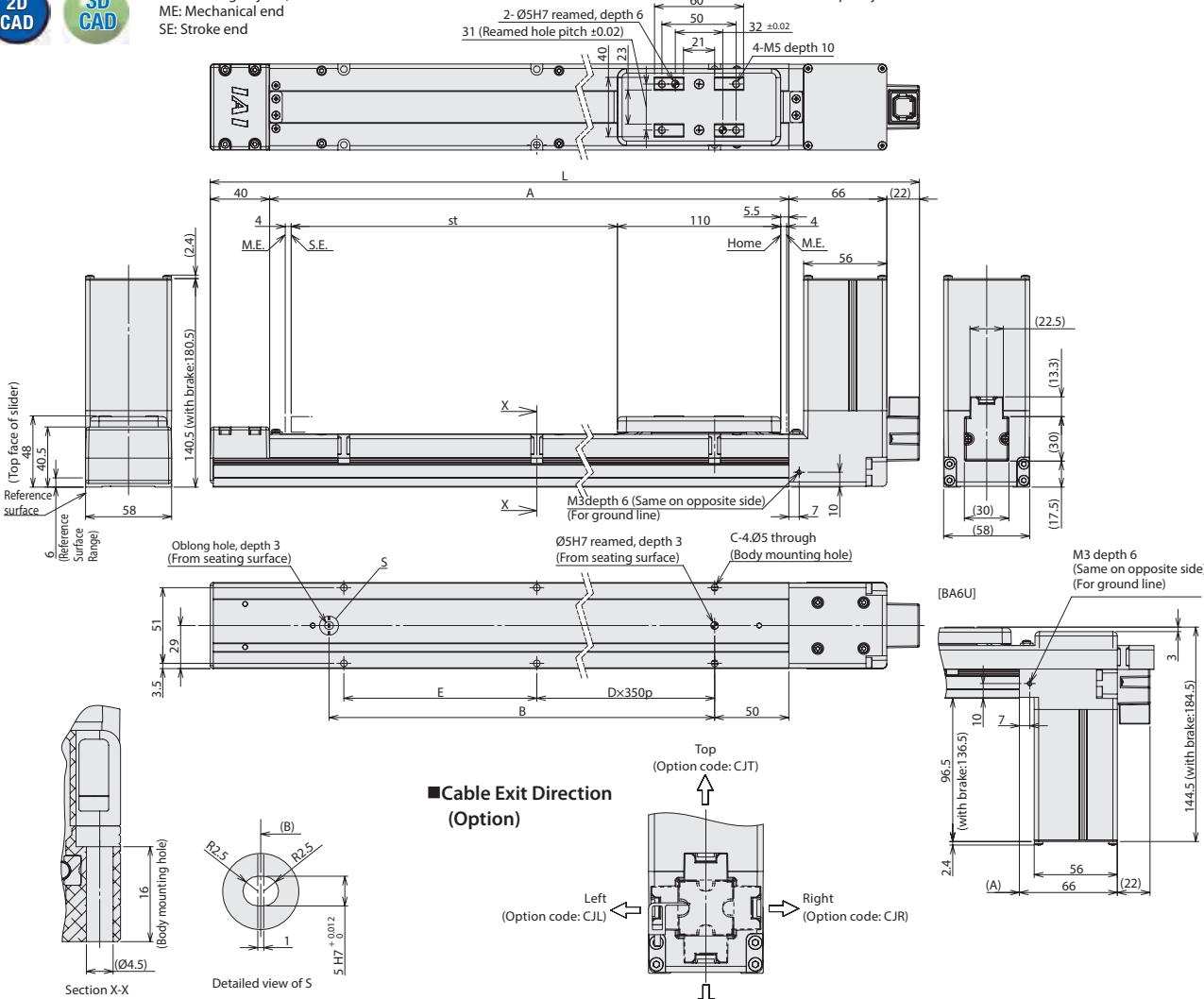
Dimensions

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

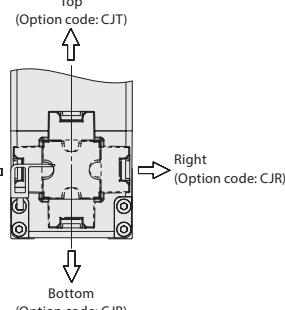


*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
ME: Mechanical end
SE: Stroke end

*The way to attach the actuator is to fix with screws from the top only.



■Cable Exit Direction (Option)



■Dimensions and Mass by Stroke

Stroke	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600	1,700	1,800	1,900	2,000	2,100	2,200	
L	558	658	758	858	958	1,058	1,158	1,258	1,358	1,458	1,558	1,658	1,758	1,858	1,958	2,058	2,158	2,258	2,358	2,458	
A	430	530	630	730	830	930	1,030	1,130	1,230	1,330	1,430	1,530	1,630	1,730	1,830	1,930	2,030	2,130	2,230	2,330	
B	340	440	540	640	740	840	940	1,040	1,140	1,240	1,340	1,440	1,540	1,640	1,740	1,840	1,940	2,040	2,140	2,240	
C	4	6	6	6	6	8	8	8	10	10	10	12	12	12	14	14	14	14	14	16	
D	0	1	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	5	5	6	
E	330	80	180	280	380	130	230	330	80	180	280	380	130	230	330	80	180	280	380	130	
Mass (kg)	Without brake	2.2	2.4	2.7	2.9	3.1	3.3	3.5	3.7	3.9	4.2	4.4	4.6	4.8	5	5.2	5.4	5.6	5.9	6.1	6.3
	With brake	2.6	2.8	3.1	3.3	3.5	3.7	3.9	4.1	4.3	4.6	4.8	5	5.2	5.4	5.6	5.8	6	6.3	6.5	6.7

*The weights shown in the table above are for BA6. The weight increases by 0.2kg for BA6U.

Applicable Controllers

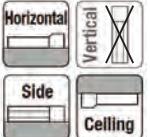
* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

RCP5-BA7/BA7U

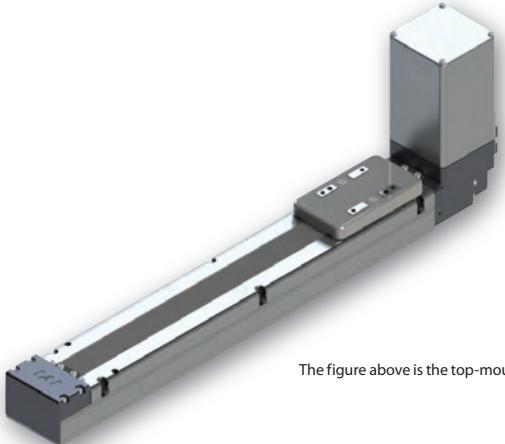
ROBO Cylinder, Belt Type, Actuator Width 70mm,
Pulse Motor, Top-mounted Motor/Bottom-mounted Motor

Model	RCP5	WA	56P	48	Stroke	Applicable controllers	Cable length	Options
Specification	Series	Type	Encoder type	Motor type	Lead			
Items	BA7: Belt type Top-mounted motor	WA: Battery-less absolute specification	56P: Pulse motor, size 56□	48: Equiv. to 48mm	300: 300mm 2600: 2,600mm (Every 100mm)	P3: PCON/MSEL P5: RCON/RSEL	N: No cable P: 1m S: 3m M: 5m	Please refer to the options table below.
	BA7U: Belt type Bottom- mounted motor					X□□: Specified length		

*Controller is not included.



* Depending on the model, there may be some limitations to using the side and ceiling mount positions. Please refer to P.59 for details.

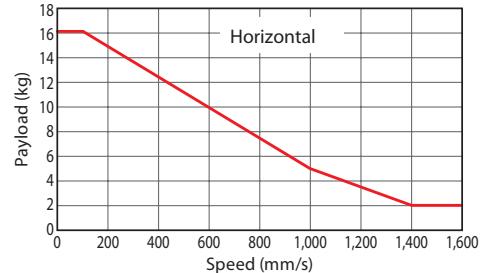


The figure above is the top-mounted motor type.

POINT Note on selection	(1) Horizontal or Ceiling specifications cannot be installed on Side. Similarly, Side specifications cannot be installed in Horizontal or Ceiling.
	(2) Please set the operation speed at 100mm/s or higher for the belt type as it may cause vibration or noise when used at lower speed.
	(3) The payload in the main specifications shows the maximum value. For details, refer to the table of load capacity by speed/acceleration. (P.61)
	(4) Push-motion operation cannot be performed.
	(5) Care must be taken depending on the mounting posture. See "Actuator Installation Orientation" page in our Technical Reference.
	(6) The standard overhang load length is 180 mm or less in the Ma, Mb or Mc direction.

Correlation Diagram of Speed and Payload

Due to a pulse motor used for RCP5 series, its payload gets lower when operated at higher speed. Please refer to this diagram below to make sure that the required payload will be met at the operation speed you desire.



Warnings

- This model cannot be installed in the vertical mount position.
- Horizontal and ceiling mount specifications cannot be installed in the side position. Similarly, side mount specification cannot be installed in a horizontal or ceiling mount position.
- The maximum stroke for the side and ceiling mount positions is 1,000mm.

Actuator Specifications

■ Lead and Payload

Model number	Motor attached side	Lead (mm)	Maximum payload	Stroke (mm)
			Horizontal (kg)	
RCP5-BA7-WA-56P-48-①-P3-②-③	Top	Equiv. to 48mm	16	300~2,600 (Every 100mm)
RCP5-BA7U-WA-56P-48-①-P3-②-③	Bottom			

Legend: ① Stroke ② Cable length ③ Options

■ Stroke and Maximum Speed

(Unit: mm/s)

Lead (mm)	300 (mm)	400 (mm)	500 (mm)	600 (mm)	700 (mm)	800 (mm)	900 (mm)	1,000~2,600 (Every 100mm)
Equiv. to 48mm	890	1,070	1,220	1,340	1,450	1,520	1,550	1,600

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
300	-	1,500	-
400	-	1,600	-
500	-	1,700	-
600	-	1,800	-
700	-	1,900	-
800	-	2,000	-
900	-	2,100	-
1,000	-	2,200	-
1,100	-	2,300	-
1,200	-	2,400	-
1,300	-	2,500	-
1,400	-	2,600	-

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CIL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Ceiling mount type	CIM	→P. 59	-
Left side-mount type	SIL	→P. 59	-
Right side-mount type	SIR	→P. 59	-
Non-motor end specification	NM	→P. 11	-

② Cable Length

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

*Please refer to P. 89 for maintenance cables.

Actuator Specifications

Item	Description
Drive system	Timing belt
Positioning repeatability	±0.08mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic allowable moment (*1)	Ma: 33.2N·m, Mb: 33.2N·m, Mc: 72.3N·m
Static allowable moment	Ma: 80.7N·m, Mb: 80.7N·m, Mc: 175N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

*Reference for overhang load length/Ma: 180mm or less, Mb, Mc: 180mm or less

(*1) Assumes a standard rated life of 5,000km.

(*) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

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

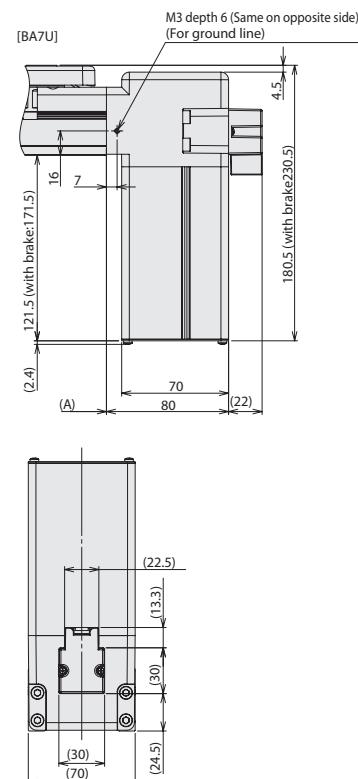
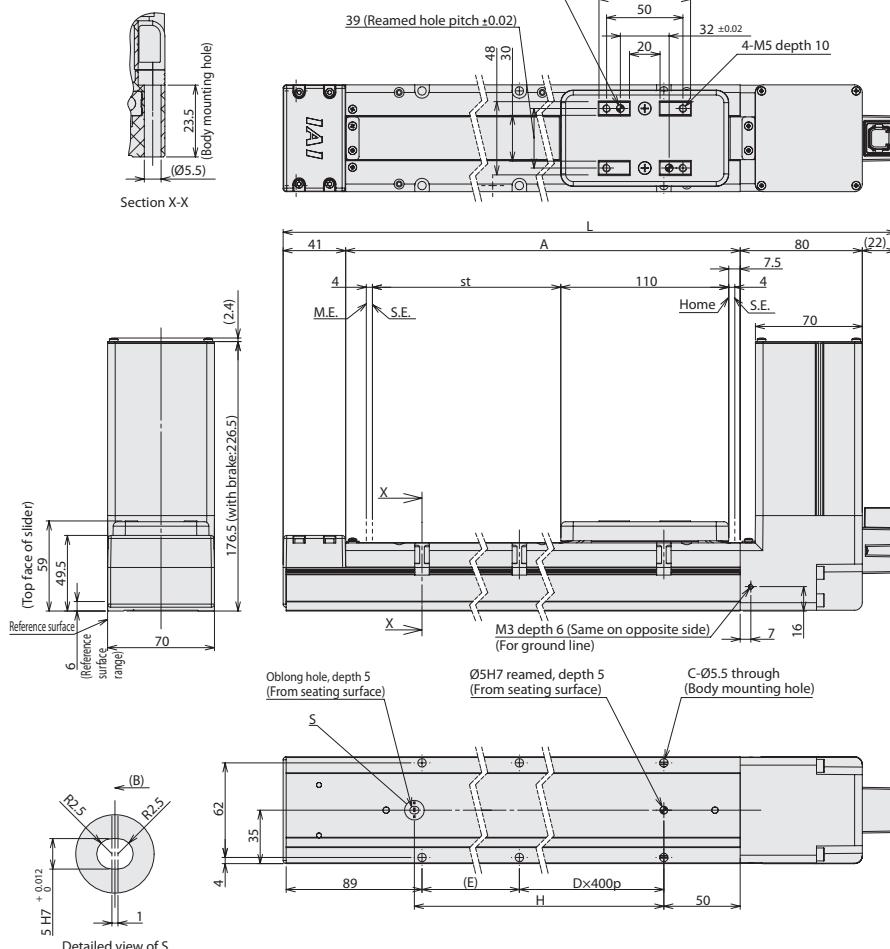


*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

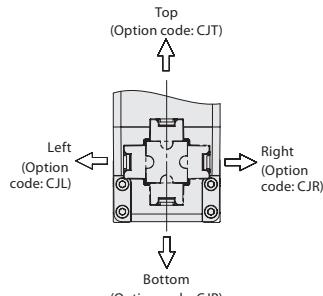
ME: Mechanical end

SE: Stroke end

*The way to attach the actuator is to fix with screws from the top only.



■ Cable Exit Direction (Option)



■ Dimensions and Mass by Stroke

Stroke	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600	1,700	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500	2,600	
L	578	678	778	878	978	1,078	1,178	1,278	1,378	1,478	1,578	1,678	1,778	1,878	1,978	2,078	2,178	2,278	2,378	2,478	2,578	2,678	2,778	2,878	
A	435	535	635	735	835	935	1,035	1,135	1,235	1,335	1,435	1,535	1,635	1,735	1,835	1,935	2,035	2,135	2,235	2,335	2,435	2,535	2,635	2,735	
B	340	440	540	640	740	840	940	1,040	1,140	1,240	1,340	1,440	1,540	1,640	1,740	1,840	1,940	2,040	2,140	2,240	2,340	2,440	2,540	2,640	
C	4	4	6	6	6	8	8	8	8	10	10	10	10	12	12	12	14	14	14	14	16	16	16	16	
D	0	0	1	1	1	1	2	2	2	2	3	3	3	4	4	4	5	5	5	5	6	6	6	6	
E	335	435	135	235	335	435	135	235	335	435	135	235	335	435	135	235	335	435	135	235	335	435	135	235	
Mass (kg)	Without brake	3.8	4.1	4.4	4.8	5.1	5.4	5.8	6.1	6.5	6.8	7.1	7.5	7.8	8.1	8.5	8.8	9.1	9.5	9.8	10.2	10.5	10.8	11.2	11.5
(kg)	With brake	4.4	4.7	5	5.4	5.7	6	6.4	6.7	7.1	7.4	7.7	8.1	8.4	8.7	9.1	9.4	9.7	10.1	10.4	10.8	11.1	11.4	11.8	12.1

*The weights shown in the table above are for BA7. The weight increases by 0.2kg for BA7U.

Applicable Controllers

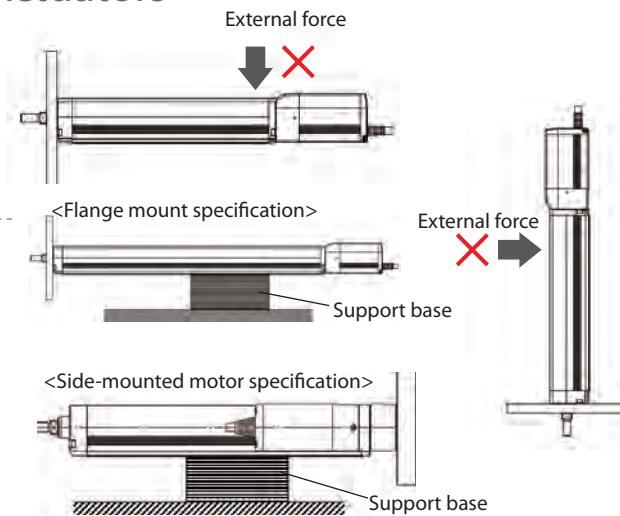
* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.

■ Warnings When Installing the Rod Actuators

When installing the front bracket or flange (optional), please be careful that the actuator does not experience any external force. (External force may cause malfunctions or damaged parts)

If the actuator will experience external force or is being used in conjunction with a Cartesian robot, etc, please use the mounting holes on the base of the actuator to secure it into place.

Even in cases when external force will not be applied, to secure the actuator in place when installed horizontally using a flange or side-mounted motor specification, please use the bracket mounting holes to create a support base as shown in the diagram on the right.



■ About the Mounting Positions

- While installation in the side and ceiling mount positions are available, this may cause slack or misalignment in the stainless steel sheet. Continuing to use it this way could cause the stainless steel sheet to break. Please inspect it daily and adjust the sheet if any slack or misalignment is found.
- When installing the motor straight-type vertically, please set the motor on the top if possible. While installing the motor on the bottom will not cause problems in normal operation, long periods of no activity may cause the grease to separate, flow into the motor unit, and cause problems in rare occasions.

Belt Type Mounting Positions

Horizontal and ceiling mount specifications cannot be installed in the side position. Similarly, side mount specification cannot be installed in a horizontal or ceiling mount position.

Tilted or vertical mount installations will cause operational failure, so please do not install it in these positions.

The maximum stroke for the side and ceiling mount positions is 1,000mm.

Please do not attempt to use a product with a stroke of more than 1,000mm in the side or ceiling mount positions.

■ Selection Guideline (Correlation Diagram of Push Force and Current-limiting Value)

In the push operation, the push force can be changed by changing the current force of the controller to be between 20%-70% (for SA4□ and RA4□, start from 30%). The maximum push force will vary depending on the model, so please refer to the graphs on the following pages and select one based on the needed push force for your intended use.

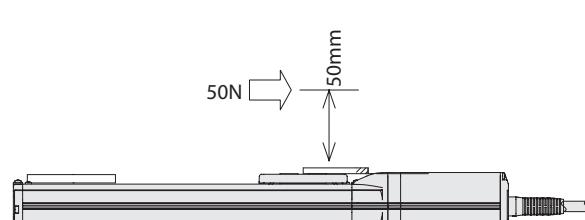
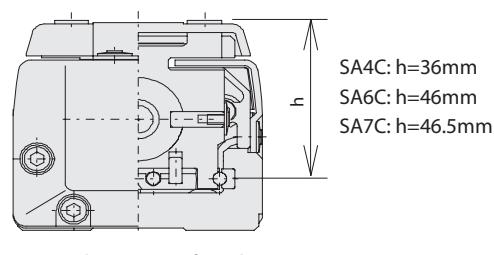
When using the push operation with the slider actuator, please limit the push current in order that the reactive moment caused by the push force does not exceed the dynamic allowable moment (M_a , M_b) specified in the catalog. Please refer to the figure on the right which shows the guide moment's active positions for help with calculating the moment. This can be done by considering the offset of the push force application position.

Please note that if excessive force which exceeds the dynamic allowable moment is applied, it may damage the guide and shorten its operational life. Please keep this in mind and select a push current that is safely within its limits.

Calculation example:

If push-motion operation is performed with an RCP5-SA7C by applying 50N at the position shown to the right, the moment received by the guide, or

$$M_a \text{ is calculated as } (46.5 + 50) \times 50 = 4825 \text{ (N}\cdot\text{mm)} \\ = 4.825 \text{ (N}\cdot\text{m)}.$$



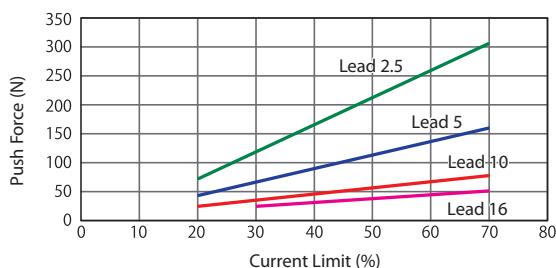
Since the dynamic allowable moment of the SA7C is $M_a=10$ (N·m), since $10 \times 0.8 = 8 > 4.825$, this is an acceptable selection.

Also, should an M_b moment occur due to the push operation, calculate the moment from the overhang and ensure that it is within range of the dynamic allowable moment.

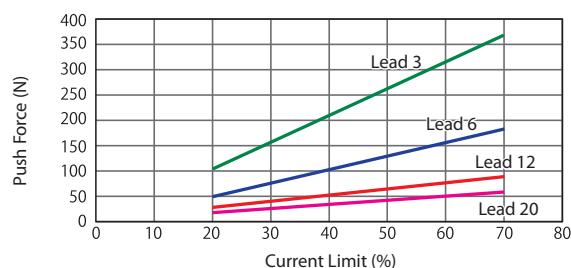
Correlation Diagrams of Push Force and Current Limit

The graphs below are only a reference, and the graphs may vary slightly from the actual

SA4C/SA4R/RA4C/RA4R type



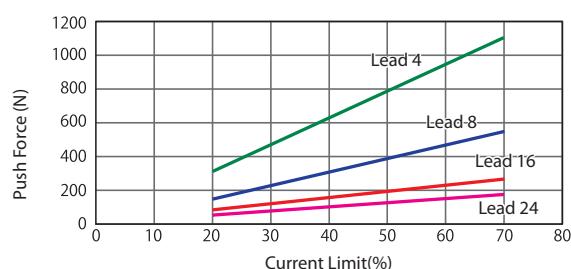
SA6C/SA6R/RA6C/RA6R type



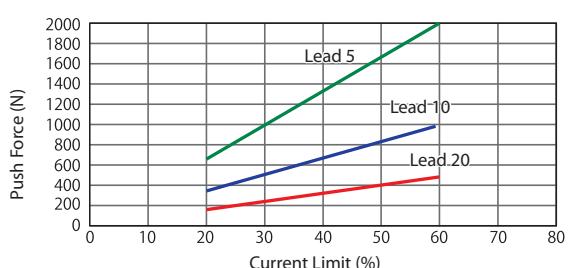
SA7C/SA7R type

* Please see the graphs on the next page

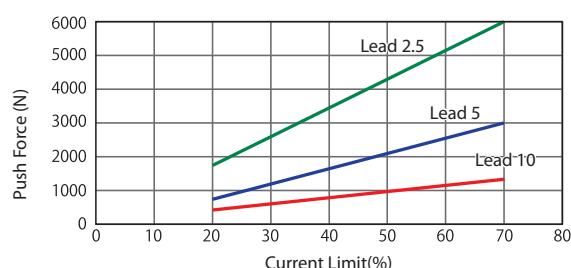
RA7C/RA7R type



RA8C/RA8R type



RA10C/RA10R type



Warnings

- The correlation between push force and current limit are strictly for reference purposes. Actual numbers may vary slightly.
- A current limit of less than 20% will cause the push force to vary, so please use a limit of higher than 20%.
- Using the push operation, these graphs assume a traveling speed of 10mm/s for the RA8C/RA8R/RA10C/RA10R models and a 20mm/s speed for all other models.
- Using the RA8C/RA8R models at a current limit of greater than 70% can cause the motor to burn out, so please use a limit of 60% or less.
- Please refer to the table below when determining the upper limit of push cycles when the RCP5-RA10C/RA10R models are operated at the maximum push force and a push travel distance of 1mm.

Lead (type)	2.5	5	10
Push cycles	1.4 million cycles	25 million cycles	157.6 million cycles

* The upper limit of push cycles varies depending on the impact, vibration and other operating conditions. The cycles shown to the left assume no impact or vibration.

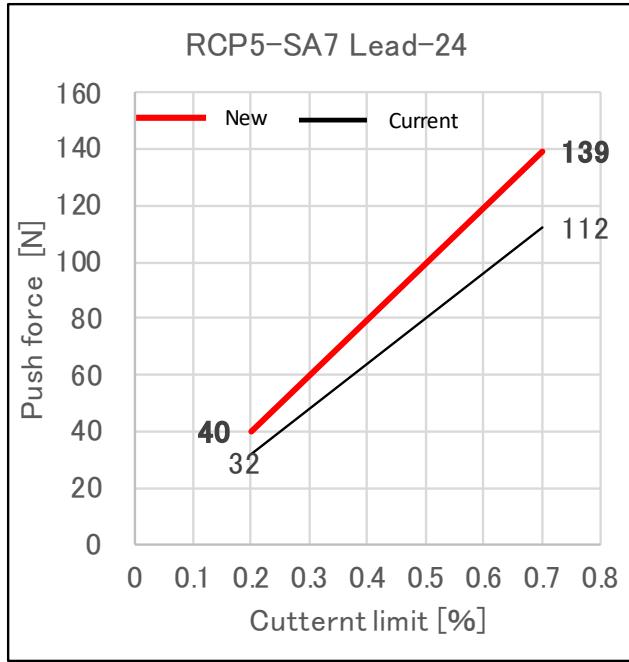
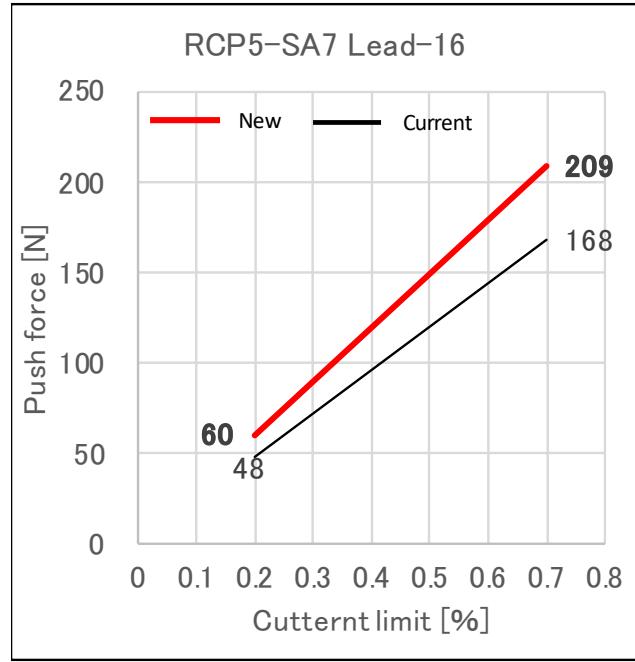
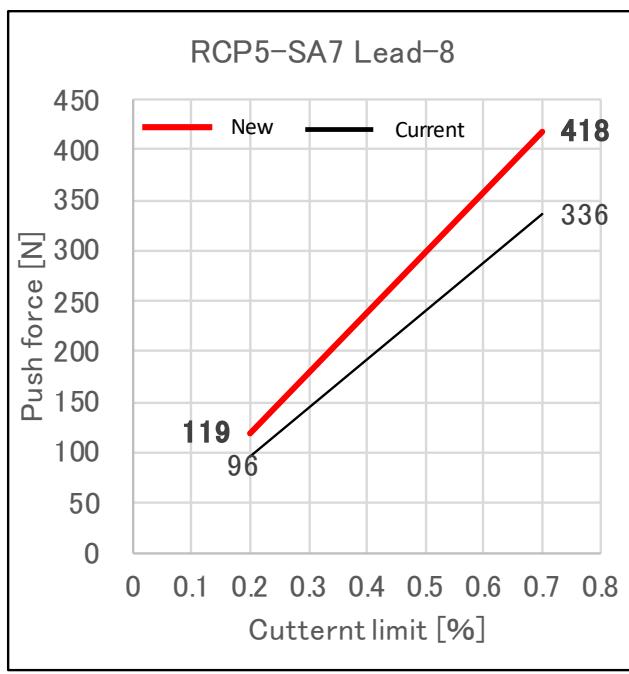
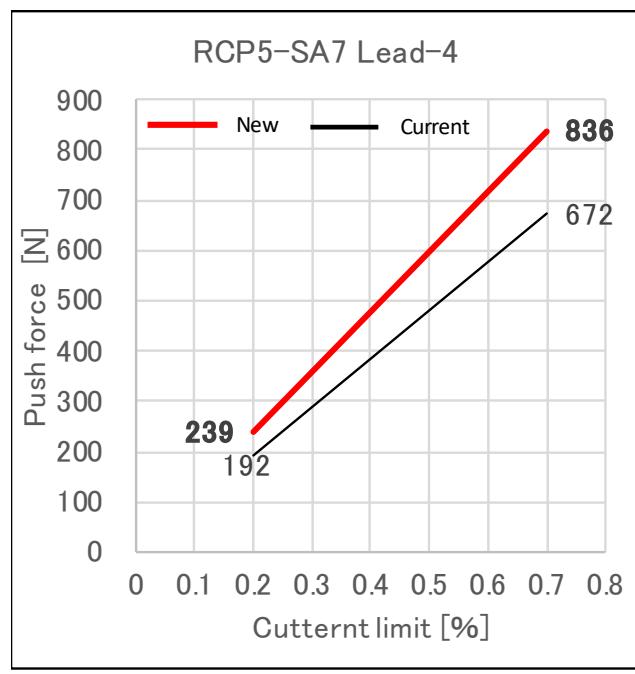
■ Warnings for RCP5-RA10C/RA10R Models Using the Push Operation

The push force is limited on certain RA10C/RA10R models due to its relationship with the buckling load of the ball screw. (Refer to the table below.)

(N)

Items	Stroke 550mm or less	Stroke 600mm or less	Stroke 650mm or less	Stroke 700mm or less	Stroke 750mm or less	Stroke 800mm or less
Lead 10						As shown in the push force graph
Lead 5	As shown in the graph	2,900	2,500	2,200	2,000	1,800
Lead 2.5					5,900	5,400

Correlation of Push force of RCP5-SA7 and current limits



Selection Guideline (Tables of RCP5 Payload by Speed/Acceleration)

When operating the RCP5, increasing the speed/acceleration reduces the travel time, but it also causes the payload to drop. The tables below provide the maximum payload in each acceleration/deceleration for different models. Find a model that satisfies the operational conditions you desire.

High-output enabled operation is only available if "high-output setting" is selected for the MSEP-C/CL controller.

High-output Setting Enabled

RCP5 Series									
RCP5-SA4C					Lead 16				
Orientation	Horizontal			Vertical		Speed (mm/s)	Acceleration (G)		
	0.1	0.3	0.5	0.7	1		0.1	0.3	0.5
0	4	4	4	4	4	1	1	1	1
140	4	4	4	4	4	1	1	1	1
280	4	4	4	4	4	1	1	1	1
420	4	4	4	4	4	1	1	1	1
560	4	4	4	4	4	1	1	1	1
700	4	4	4	4	4	1	1	1	1
840	4	4	4	3.5	3	1	1		
980	4	4	3.5	3	3	1	1		
1120	4	3	2	1.5	1	0.75			
1260	2	1.5	1			0.5			

Slider Type Motor Coupled Specification *The same tables apply when the RCP5CR is used.									
RCP5-SA4C					Lead 10				
Orientation	Horizontal			Vertical		Speed (mm/s)	Acceleration (G)		
	0.1	0.3	0.5	0.7	1		0.1	0.3	0.5
0	10	10	10	8	8	2.25	2.25	2.25	2.25
85	10	10	10	8	8	2.25	2.25	2.25	2.25
175	10	10	10	8	8	2.25	2.25	2.25	2.25
260	9	9	9	8	8	2.25	2.25	2.25	2.25
350	9	9	9	8	8	2.25	2.25	2.25	2.25
435	8	8	8	8	8	2.25	2.25	2.25	2.25
525	8	8	8	7	7	2.25	2.25	2.25	2.25
610	8	8	7	6	5	2.25	2.25	2.25	2.25
700	8	6	4	3	2	2			
785	7	4	3	3	2	1.5			

RCP5-SA4C									
RCP5-SA4C					Lead 5				
Orientation	Horizontal			Vertical		Speed (mm/s)	Acceleration (G)		
	0.1	0.3	0.5	0.7	1		0.1	0.3	0.5
0	12	12	12	10	10	4.5	4.5	4.5	4.5
40	12	12	12	10	10	4.5	4.5	4.5	4.5
85	12	12	12	10	10	4.5	4.5	4.5	4.5
130	11	11	11	10	10	4.5	4.5	4.5	4.5
175	10	10	10	10	10	4.5	4.5	4.5	4.5
215	10	10	10	10	10	4.5	4.5	4.5	4.5
260	10	10	10	10	10	4.5	4.5	4.5	4.5
305	10	10	10	10	10	4.5	4.5	4.5	4.5
350	10	10	10	10	10	4.5	4.5	4.5	4.5
390	10	10	10	10	10	4.5	4.5	4.5	4.5

RCP5-SA4C									
RCP5-SA4C					Lead 2.5				
Orientation	Horizontal			Vertical		Speed (mm/s)	Acceleration (G)		
	0.1	0.3	0.5	0.7	1		0.1	0.3	0.5
0	12	12	12	12	12	9	9	9	9
20	12	12	12	12	12	9	9	9	9
40	12	12	12	12	12	9	9	9	9
65	12	12	12	12	12	9	9	9	9
85	12	12	12	12	12	9	9	9	9
105	12	12	12	12	12	9	9	9	9
130	12	12	12	12	12	9	9	9	9
150	12	12	12	12	12	9	9	9	9
175	12	12	12	12	12	9	9	9	9
195	12	12	12	12	12	9	9	9	9

RCP5 Series

Rod Type Motor Coupled Specification

RCP5-RA4C		Lead 16									
Orientation		Horizontal					Vertical				
Speed (mm/s)		Acceleration (G)									
0.1	0.3	0.5	0.7	1	0.1	0.3	0.5				
0	6	6	6	5	3.5	1.5	1.5	1.5			
140	6	6	6	5	3.5	1.5	1.5	1.5			
280	6	6	6	5	3.5	1.5	1.5	1.5			
420	6	6	6	5	3.5	1	1	1			
560	6	6	5	5	3.5	1	1	1			
700	5.5	5	4	2.5		1	1				
840	4.5	3.5	3	2		1	1				
980	2.5	2	1.5	1		1	1				
1120		2	1.5	1				0.75			
RCP5-RA6C		Lead 20									
Orientation		Horizontal					Vertical				
Speed (mm/s)		Acceleration (G)									
0.1	0.3	0.5	0.7	1	0.1	0.3	0.5				
0	6	6	6	5	5	1.5	1.5	1.5			
160	6	6	6	5	5	1.5	1.5	1.5			
320	6	6	6	5	3	1.5	1.5	1.5			
480	6	6	6	5	3	1.5	1.5	1.5			
640	6	4	3	2		1.5	1.5	1.5			
800	4	3				1	1				
RCP5-RA4C		Lead 10									
Orientation		Horizontal					Vertical				
Speed (mm/s)		Acceleration (G)									
0.1	0.3	0.5	0.7	1	0.1	0.3	0.5				
0	15	15	13	13	12	2.5	2.5	2.5			
85	15	15	13	13	12	2.5	2.5	2.5			
175	15	15	13	13	12	2.5	2.5	2.5			
260	15	15	13	13	12	2.5	2.5	2.5			
350	15	15	13	13	10	2.5	2.5	2.5			
435	15	15	13	11	9	2.5	2.5	2.5			
525	14	14	10	8	7	2.5	2.5	2.5			
610	9	7	5	4		2.5	2.5				
700	6	5	3	2		2	2				
RCP5-RA4C		Lead 5									
Orientation		Horizontal					Vertical				
Speed (mm/s)		Acceleration (G)									
0.1	0.3	0.5	0.7	1	0.1	0.3	0.5				
0	28	25	22	20	20	5	5	5			
40	28	25	22	20	20	5	5	5			
85	28	25	22	20	20	5	5	5			
130	28	25	22	20	20	5	5	5			
175	28	25	22	20	20	5	5	5			
215	28	25	22	20	20	5	5	5			
260	28	25	22	20	18	5	5	5			
305	28	22	20	18	16	5	5	4.5			
350	28	20	16	14	12	5	4	3.5			
RCP5-RA6C		Lead 2.5									
Orientation		Horizontal					Vertical				
Speed (mm/s)		Acceleration (G)									
0.1	0.3	0.5	0.7	1	0.1	0.3	0.5				
0	40	40	35	30	25	10	10	10			
20	40	40	35	30	25	10	10	10			
65	40	40	40	35	30	10	10	10			
85	40	40	40	35	30	10	10	10			
105	40	40	35	30	30	10	10	10			
130	40	40	35	30	30	10	10	9			
150	40	35	35	30	30	10	9	8			
175	40	35	35	30	25	9	8	7			
RCP5-RA6C		Lead 6									
Orientation		Horizontal					Vertical				
Speed (mm/s)		Acceleration (G)									
0.1	0.3	0.5	0.7	1	0.1	0.3	0.5				
0	40	40	35	30	25	10	10	10			
50	40	40	35	30	25	10	10	10			
100	40	40	35	30	25	10	10	10			
150	40	40	35	25	25	10	10	10			
200	40	40	30	25	20	10	10	10			
250	40	40	27.5	22.5	18	10	9	8			
300	40	35	25	20	14	6	6	6			
350	40	30	14	12	10	5	5	5			
400	30	18	10	6	5	4	3	3			
450	25	8	3			2	2	1			
RCP5-RA7C		Lead 24									
Orientation		Horizontal					Vertical				
Speed (mm/s)		Acceleration (G)									
0.1	0.3	0.5	0.7	1	0.1	0.3	0.5				
0	20	20	18	15	12	3	3	3			
200	20	20	18	15	12	3	3	3			
400	20	20	18	15	10	3	3	3			
600	15	14	9	7	4	3	3	2			
800	5	1	1								
RCP5-RA7C		Lead 16									
Orientation		Horizontal					Vertical				
Speed (mm/s)		Acceleration (G)									
0.1	0.3	0.5	0.7	1	0.1	0.3	0.5				
0	50	50	40	35	30	8	8	8			
140	50	50	40	35	30	8	8	8			
280	50	50	35	25	20	8	7	7			
420	50	25	18	14	10	6	4.5	4			
560	12	10	5	3	2	4	2	1			
700	3	2									
RCP5-RA7C		Lead 8									
Orientation		Horizontal					Vertical				
Speed (mm/s)		Acceleration (G)									
0.1	0.3	0.5	0.7	1	0.1	0.3	0.5				
0	60	60	50	45	40	18	18	18			
70	60	60	50	45	40	18	18	18			
140	60	60	50	45	40	16	16	12			
210	60	60	40	31	26	10	10	9			
280	60	34	22	15	11	8	7	6			
350	60	14	5	1		3	3	2			
RCP5-RA7C		Lead 4									
Orientation		Horizontal					Vertical				
Speed (mm/s)		Acceleration (G)									
0.1	0.3	0.5	0.7	1	0.1	0.3	0.5				
0	80	80	70	65	60	28	28	28			
35	80	80	70	65	60	28	28	28			
70	80	80	70	65	60	28	28	28			
105	80	80	60	50	40	22	20	18			
140	80	50	30	20	15	16	12	10			
175	50	15				9	4				

High-output Setting Disabled

RCP5 Series

Slider Type Motor Coupled Specification *The same tables apply when the RCP5CR is used.

RCP5-SA4C		Lead 16	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	0.3	0.5
140	0.4	0.4	3.5
280	0.4	0.4	3.5
420	0.4	0.4	3.5
560	0.4	3.5	3
700	3.5	3	2.5
840	2.5	2	1.5
			0.5
			0.5

RCP5-SA6C		Lead 20	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	0.3	0.5
160	6	6	4
320	6	6	4
480	5	5	3
640	4	4	2
800	3	3	1
960	2	2	1
			0.5
			0.5

RCP5-SA7C		Lead 24	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	0.3	0.5
200	18		2
400			2
600	10		1.5
800	5		1

RCP5-SA4C		Lead10	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	0.3	0.5
85	10	10	9
175	10	10	9
260	9	9	8
350	8	7	6
435	7	6	5
525	6	5	4
			3.5
			1

RCP5-SA6C		Lead 12	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	0.3	0.5
100	8.5	8.5	7
200	8.5	8.5	7
300	8.5	8.5	7
400	8	7	4
500	7	6	3
600	6	6	2
			1.5
			1

RCP5-SA7C		Lead 16	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	0.3	0.5
140	35		5
280	25		3
420	15		1.5
560	7		0.5

RCP5-SA4C		Lead 5	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	0.3	0.5
40	12	12	10
85	12	12	10
130	10	10	9
175	10	9	8
215	10	9	8
260	9	8	7
			3.5
			1

RCP5-SA6C		Lead 6	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	0.3	0.5
50	16	15	13
100	16	15	13
150	16	15	13
200	16	15	13
250	15	12	10
300	13	12	6
			4.5
			2

RCP5-SA4C		Lead 2.5	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	0.3	0.5
20	12	12	12
40	12	12	12
65	12	12	11
85	12	11	10
105	12	10	9
130	12	10	9
			5
			5

RCP5-SA6C		Lead 3	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	0.3	0.5
25	19	19	19
50	19	19	19
75	19	19	19
100	19	16	14
125	18	14	11
150	16	13	10
			4.5
			2

RCP5 Series

Rod Type Motor Coupled Specification

RCP5-RA4C		Lead 16	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.1	0.3	0.5
140	6	6	5
280	6	6	5
420	6	6	5
560	6	5.5	4.5
700	4	2.5	1.5

RCP5-RA6C		Lead 20	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	0.3	0.5
160	6		1.5
320	6		1.5
480	4		1
640	3		0.5

RCP5-RA7C		Lead 24	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.2	18	3
200	18		3
400	10		2
600	1		1

RCP5-RA8C		Lead 5	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.1G	0.1G	
90	100	48	70
120	100	60	50
130	90	70	35
140	75	80	25
150	60	100	15
			10
			5

RCP5-RA8C		Lead 10	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	0.1G	0.1G	
88	40	150	60
110	28	200	45
120	23	240	40
130	18	300	30
140	15	360	24
150	11	420	16
160	10	450	12
170	8	480	10
180	7	510	8
190	5	540	6
200	4	600	5
220	3	250	2

RCP5-RA10C		Lead 2.5	
Orientation	Horizontal		Vertical
	Speed (mm/s)	Acceleration (G)	
0	300	0.01G	
42	300	20	150
63	300	30	75
		35	65
		50	30
		55	20
		63</td	

Selection—RCP5 series

High-output Setting Enabled

RCP5 Series		Slider Type Side-mounted Motor Specification																																	
RCP5-SA4R		Lead 16		RCP5-SA4R		Lead 10		RCP5-SA4R		Lead 5		RCP5-SA4R		Lead 2.5																					
Orientation		Horizontal			Vertical	Orientation		Horizontal			Vertical	Orientation		Horizontal			Vertical	Orientation		Horizontal			Vertical	Orientation		Horizontal			Vertical						
Speed (mm/s)		0.1	0.3	0.5	0.7	1		0.1	0.3	0.5		Speed (mm/s)		0.1	0.3	0.5	0.7	1		0.1	0.3	0.5		Speed (mm/s)		0.1	0.3	0.5	0.7	1		0.1	0.3	0.5	
0		4	4	4	4	4		1	1	1		0		10	10	10	8	8		2.25	2.25	2.25		0		12	12	12	10	10		4.5	4.5	4.5	
140		4	4	4	4	4		1	1	1		85		10	10	10	8	8		2.25	2.25	2.25		40		12	12	12	10	10		4.5	4.5	4.5	
280		4	4	4	4	4		1	1	1		175		10	10	10	8	8		2.25	2.25	2.25		85		12	12	12	10	10		4.5	4.5	4.5	
420		4	4	4	4	4		1	1	1		260		9	9	9	8	8		2.25	2.25	2.25		130		11	11	11	10	10		4.5	4.5	4.5	
560		4	4	4	4	4		1	1	1		350		9	9	9	8	8		2.25	2.25	2.25		175		10	10	10	10	10		4.5	4.5	4.5	
700		4	4	4	4	4		1	1	1		435		8	8	8	8	8		2.25	2.25	2.25		215		10	10	10	10	10		4.5	4.5	4.5	
840		4	4	3	3	3		1	1	1		525		8	8	8	7	7		2.25	2.25	2.25		260		10	10	10	10	10		4.5	4.5	4.5	
980		4	4	2.5	2	2		1	1	1		610		8	8	7	5	4		2.25	2	2		305		10	10	10	10	10		4.5	4.5	4.5	
1120		2.5	2.5	1	1	1		0.75	0.5	0.5		700		7	4	3	2	2		1.5	1	1		350		10	10	10	10	10		4	4	4	
1260		1	0.5	0.5	0.5	0.5						785		4	3	2	1.5	1		1	1	1		390		10	10	7	6	4		3.5	2.5	2.5	

RCP5-5A6R						Lead 20		
Orientation	Horizontal			Vertical				
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	10	10	9	7	6	1	1	1
160	10	10	9	7	6	1	1	1
320	10	10	9	7	6	1	1	1
480	10	10	9	7	6	1	1	1
640	10	10	8	6	5	1	1	1
800	10	9	6.5	4.5	3	1	1	1
960		8	5	3.5	2		1	1
1120		6	3	2	1.5		0.5	0.5
1280		1	0.5	0.5				

RCP5-5A6R		Lead 12							
Orientation	Speed (mm/s)	Horizontal			Vertical				
		Acceleration (G)							
		0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	15	15	12.5	11	10	2.5	2.5	2.5	
100	15	15	12.5	11	10	2.5	2.5	2.5	
200	15	15	12.5	11	10	2.5	2.5	2.5	
300	15	15	12.5	11	10	2.5	2.5	2.5	
400	15	14	11	10	8.5	2.5	2.5	2.5	
500	15	13	10	8	6.5	2.5	2.5	2.5	
600	15	12	9	6	4	2.5	2.5	2.5	
700	12	10	8	4	2.5	2.5	2	1.5	
800	10	7	5	2	1	2	1	0.5	

RCP5-5A6R							Lead 6			
Orientation	Horizontal				Vertical					
	Acceleration (G)									
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5		
0	25	25	20	16	14	6	6	6		
50	25	25	20	16	14	6	6	6		
100	25	25	20	16	14	6	6	6		
150	25	25	20	16	14	6	6	6		
200	25	25	20	16	14	6	6	6		
250	25	25	20	16	14	6	6	5.5		
300	25	25	20	15	11	6	5.5	5		
350	25	20	14	12	9	5.5	4.5	4		
400	25	16	10	8	6.5	4.5	3.5	3		

RCP5-SA4R							Lead 2.5		
Orientation	Horizontal				Vertical				
	Acceleration (G)								
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5	
0	12	12	12	12	12	9	9	9	
20	12	12	12	12	12	9	9	9	
40	12	12	12	12	12	9	9	9	
65	12	12	12	12	12	9	9	9	
85	12	12	12	12	12	9	9	9	
105	12	12	12	12	12	9	9	9	
130	12	12	12	12	12	9	9	9	
150	12	12	12	12	10	9	9	9	
175	12	12	12	12	9	9	7	7	
195	12	12	12	12	9	9	7	7	

RCP5-5A7R							Lead 24		
Orientation	Horizontal				Vertical				
	Acceleration (G)								
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5	
0	20	20	18	16	14	3	3	3	
200	20	20	18	16	14	3	3	3	
400	20	20	18	16	14	3	3	3	
600	20	16	15	10	9	3	3	3	
800	16	12	10	6	4			3	2.5
1000		8	4.5	2	1			1	1

RCP5-5A7R						Lead 16		
Orientation	Horizontal			Vertical				
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	40	40	35	28	27	8	8	8
140	40	40	35	28	27	8	8	8
280	40	38	35	25	24	8	8	8
420	35	25	20	15	10	6	5	4.5
560	25	20	15	10	6	5	4	3
700	20	15	8	5	3	3	2	1.5

RCP5-5A7R							Lead 8			
Orientation	Horizontal				Vertical					
	Acceleration (G)									
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5		
0	45	45	45	40	40	16	16	16		
70	45	45	45	40	40	16	16	16		
140	45	45	40	38	35	16	16	16		
210	45	40	35	30	24	11	10	9.5		
280	40	30	25	20	15	9	8	7		
350	35	20	9	4		7	5	4		

RCP5-5A7R						Lead 4		
Orientation	Horizontal					Vertical		
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	45	45	45	40	40	25	25	25
35	45	45	45	40	40	25	25	25
70	45	45	45	40	40	25	25	25
105	45	45	45	40	35	22	20	19
140	45	45	35	30	25	16	14	12
175	45	30	18			11	7	5

RCP5 Series						
RCP5-RA4R				Lead 16		
Orientation	Horizontal			Vertical		
Speed (mm/s)	Acceleration (G)					
0.1	0.3	0.5	0.7	1	0.1	0.3
0	5	4.5	3	2.5	1	1
140	5	4.5	3	2.5	1	1
280	5	4.5	3	2	1	1
420	5	4.5	3	2	1	1
560	5	4.5	2.5	2	1	1
700	4.5	3.5	2	1.5	1	1
840	3	2.5	1	0.5	0.5	0.5

Rod Type Side-mounted Model									
RCP5-RA4R				Lead 10					
Orientation	Horizontal			Vertical			Acceleration (G)		
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5	
0	12	12	10	10	8	2.5	2.5	2.5	
85	12	12	10	10	8	2.5	2.5	2.5	
175	12	12	10	10	6	2.5	2.5	2.5	
260	12	12	10	10	5	2.5	2.5	2.5	
350	12	12	10	8	5	2.5	2.5	2.5	
435	12	12	10	8	6	4	2.5	2.5	2.5
525	12	8	6	3	2	2.5	2.5	2	

RCP5-RA4R Specification							
Horizontal				Vertical			
Orientation	Acceleration (G)				Lead 5		
	0.1	0.3	0.5	0.7	1	0.1	0.3
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3
0	25	25	22	20	18	5	5
40	25	25	22	20	18	5	5
85	25	25	22	20	18	5	5
130	25	25	22	20	18	5	5
175	25	25	22	20	18	5	5
215	25	25	22	18	16	5	5
260	25	22	20	16	12	5	5

RCP5-RA4R							Lead 2.5			
Orientation	Horizontal				Vertical					
	Acceleration (G)									
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5		
0	40	40	40	35	30	10	10	10		
20	40	40	40	35	30	10	10	10		
40	40	40	40	35	30	10	10	10		
65	40	40	40	35	30	10	10	10		
85	40	40	40	35	30	10	10	10		
105	40	40	35	35	30	10	10	10		
130	40	40	35	30	30	10	10	8		

RCP5-RA6R						Lead 20		
Orientation	Horizontal			Vertical				
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	6	6	5	5	5	1.5	1.5	1.5
160	6	6	6	5	5	1.5	1.5	1.5
320	6	6	6	5	3	1.5	1.5	1.5
480	6	6	6	5	3	1.5	1.5	1.5
640		6	4	3	2		1.5	1.5

RCP5-RA6R							Lead 12			
Orientation	Horizontal				Vertical					
	Acceleration (G)									
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5		
0	25	25	18	16	12	4	4	4		
100	25	25	18	16	12	4	4	4		
200	25	25	18	16	10	4	4	4		
300	25	25	18	12	8	4	4	4		
400	20	20	14	10	6	4	4	4		

RCP5-RA6R						Lead 6			
Orientation	Horizontal			Vertical					
	Acceleration (G)								
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3		
0	40	40	35	30	25	10	10		
50	40	40	35	30	25	10	10		
100	40	40	35	30	25	10	10		
150	40	40	35	25	20	10	10		
200	40	40	30	25	20	10	10		

RCPS-RA6R						Lead 3		
Orientation	Horizontal			Vertical				
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	60	60	50	45	40	20	20	20
25	60	60	50	45	40	20	20	20
50	60	60	50	45	40	20	20	20
75	60	60	50	45	40	20	20	20
100	60	60	50	45	40	20	20	20

RCP5-RA7R		Lead 24						
Orientation	Speed (mm/s)	Horizontal				Vertical		
		Acceleration (G)						
0.1	0.3	0.5	0.7	1	0.1	0.3	0.5	
0	20	20	18	15	12	3	3	3
200	20	20	18	15	12	3	3	3
400	20	20	18	15	10	3	3	3
600	15	14	9	7	4	3	3	2
900			2	1				

RCP5-RA7R		Lead 16							
Orientation		Horizontal				Vertical			
		Acceleration (G)							
Speed (mm/s)		0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		50	50	40	35	30	8	8	8
140		50	50	40	35	30	8	8	8
280		50	50	35	25	20	8	7	7
420		50	25	18	14	10	4.5	4.5	4
560		12	10	5	3	2	1	1	1

RCPS-RA7R						Lead 8		
Orientation	Horizontal			Vertical				
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	60	60	50	45	40	18	18	18
70	60	60	50	45	40	18	18	18
140	60	60	50	45	40	16	16	12
210	60	60	40	31	26	10	10	9
280	60	26	16	10	8	8	5	3
350	30	3				3	1	
420	2							

RCPS-RA7R							Lead 4	
Orientation	Horizontal				Vertical			
	Acceleration (G)							
Speed (mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	80	80	70	65	60	28	28	28
35	80	80	70	65	60	28	28	28
70	80	80	70	65	60	28	28	28
105	80	80	60	50	40	22	20	18
140	80	50	10	6	6	13	8	3
175	40	5				4		

High-output Setting Disabled

RCP5 Series

Slider Type Side-mounted Motor Specification

RCP5-SA4R Lead 16

Orientation	Horizontal			Vertical			
	Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2
0	4	4	4	3.5	1	1	1
140	4	4	4	3.5	1	1	1
280	4	4	4	3.5	1	1	1
420	4	4	4	3.5	1	1	0.75
560	4	3.5	3	2.5	1	0.75	0.75
700	3.5	3	2.5	2	0.75	0.75	0.5
840	2.5	2	1.5		0.5	0.5	

RCP5-SA6R Lead 20

Orientation	Horizontal			Vertical				
	Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3
0	6	6	4	4	0.5	0.5		
160	6	6	4	4	0.5	0.5		
320	6	6	4	4	0.5	0.5		
480	5	5	3	3	0.5	0.5		
640	4	4	2	2	0.5	0.5		
800	3	3	1	1	0.5	0.5		
960	2	1.5	0.5					

RCP5-SA7R Lead 24

Orientation	Horizontal			Vertical			
	Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2
0	18				2		
200	18				2		
400	18				2		
600	9				1.5		
800	1				1.5		

RCP5-SA4R Lead 10

Orientation	Horizontal			Vertical				
	Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3
0	10	10	9	8	2	2	2	2
85	10	10	9	8	2.25	2.25	2.25	
175	10	10	9	8	2.25	2.25	2.25	
260	9	9	8	6	2	2	2	
350	8	7	6	5	2	2	2	
435	7	6	5	4	2	1.5	1.5	
525	6	5	4	3	1.5	1	1	

RCP5-SA6R Lead 6

Orientation	Horizontal			Vertical				
	Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2	0.3
0	15	15	13	12	5	5	5	5
50	15	15	13	12	5	5	5	5
100	15	15	13	12	5	5	5	5
150	15	15	13	12	5	5	5	5
200	15	15	13	12	5	4.5	4	
250	12	10	7	4	4	3		
300	12	6	4	2.5	2	1.5		

RCP5-SA7R Lead 16

Orientation	Horizontal			Vertical			
	Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2
0	35				5		
140	35				5		
280	25				3		
420	15				1.5		
560	4				0.5		

RCP5-SA6R Lead 8

Orientation	Horizontal			Vertical			
	Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2
0	40				10		
70	40				10		
140	40				7		
210	25				4		
280	6				1		

RCP5 Series

Rod Type Side-mounted Motor Specification

RCP5-RA4R Lead 16

Orientation	Horizontal			Vertical				
	Speed (mm/s)	0.1	0.3	0.5	0.7	0.1	0.2	0.3
0	5	5	4	3	1	1	1	
140	5	5	4	3	1	1	1	
280	5	5	4	3	1	1	1	
420	5	4	3.5	2.5	1	0.5	0.5	
560	3	2.5	1.5	0.5	0.5			

RCP5-RA6R Lead 20

Orientation	Horizontal			Vertical			
	Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2
0	6				1.5		
160	6				1.5		
320	6				1.5		
480	4				1		
640	3				1		

RCP5-RA7R Lead 24

Orientation	Horizontal			Vertical			
	Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2
0	18				3		
200	18				3		
400	10				2		
600	1				0.5		

RCP5-RA7R Lead 16

Orientation	Horizontal			Vertical			
	Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2
0	40				5		
140	40				5		
280	30				3		
420	6				0.5		

RCP5-RA7R Lead 8

Orientation	Horizontal			Vertical			
	Speed (mm/s)	0.2	0.3	0.5	0.7	0.1	0.2
0	50				17.5		
70	50				17.5		
140	50				7		
210	30				2		

RCP5-RA8R Lead 20

Orientation	Horizontal			Vertical			
	Speed (mm/s)	0.2G	0.3G	0.5G	0.7G	0.1G	0.2G
0	30				5		
300	30				5		
350	14				3.5		
400	6				2		
	400				0.5		

RCP5-RA8R Lead 10

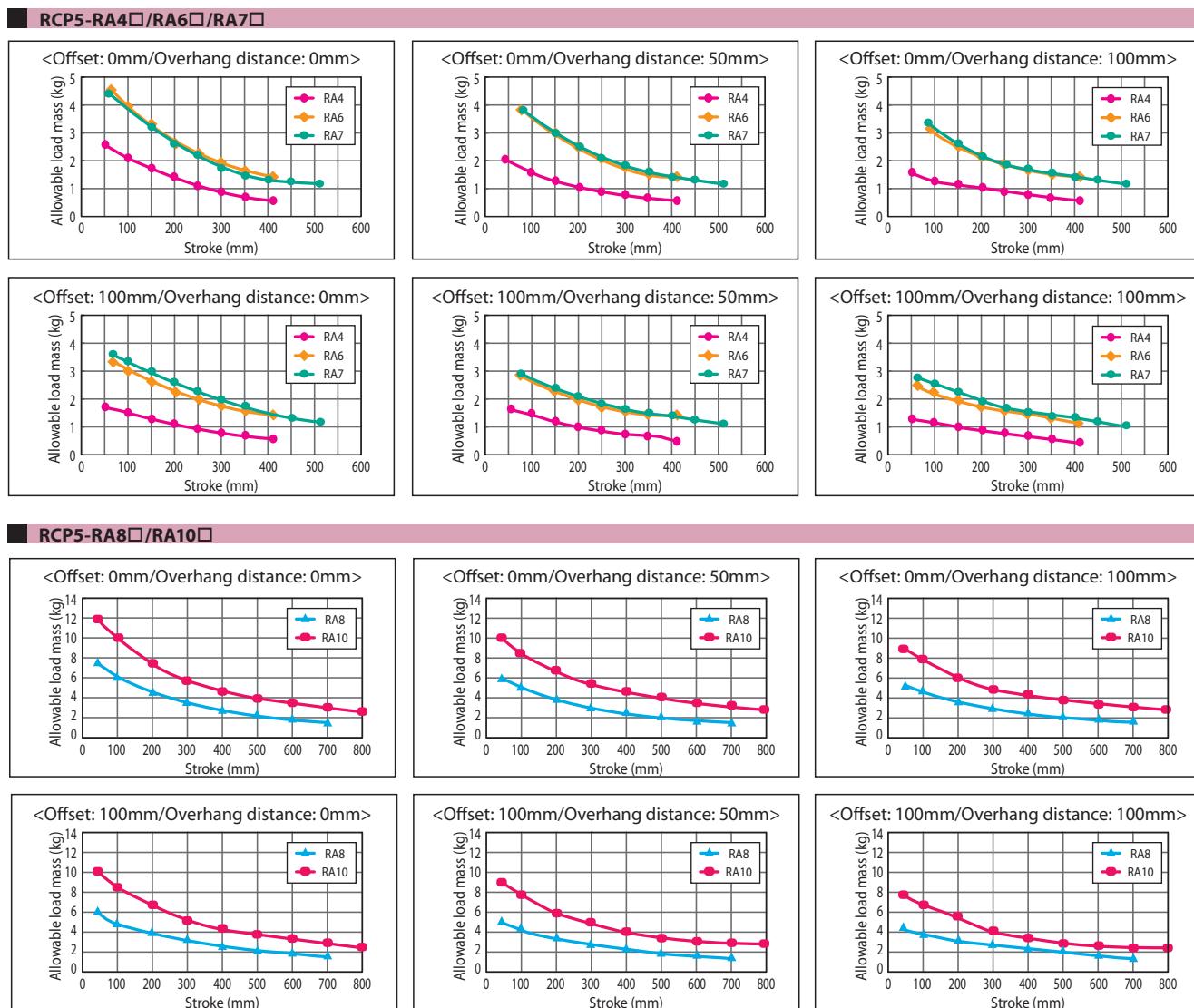
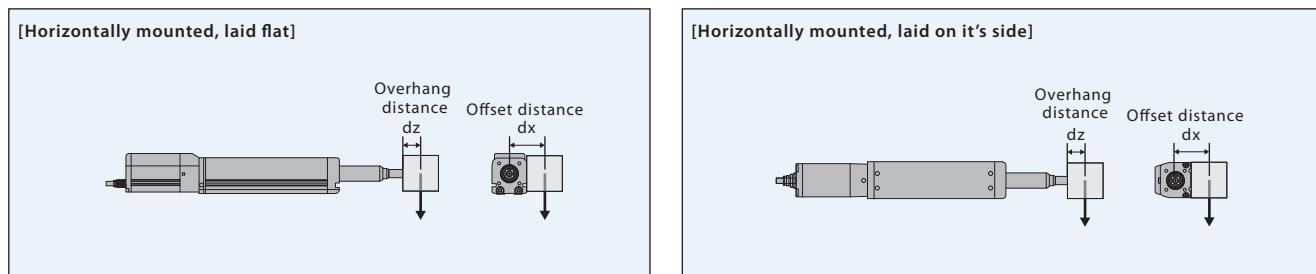
Orientation	Horizontal			Vertical			
	Speed (mm/s)	0.2G	0.3G	0.5G	0.7G	0.1G	0.2G
0	60				20		
170	40				20		

RCP5 Series		Belt Type Top-mounted Motor / Bottom-mounted Motor Specification			
RCP5-BA4/BA4U		RCP5-BA6/BA6U		RCP5-BA7/BA7U	
Orientation	Horizontal	Orientation	Horizontal	Orientation	Horizontal
Speed (mm/s)	Acceleration (G)	Speed (mm/s)	Acceleration (G)	Speed (mm/s)	Acceleration (G)
0	0.5 G	0	6	0	16
200	1.5	600	6	100	16
800	1.5	800	4	1000	5
1000	1	1000	3	1400	2
1200	0.5	1500	1	1600	2

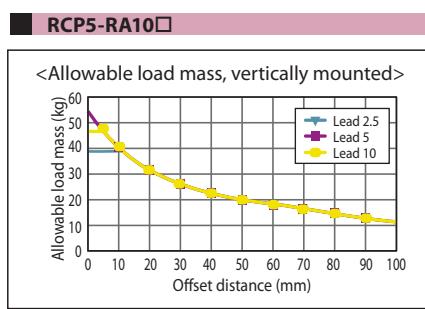
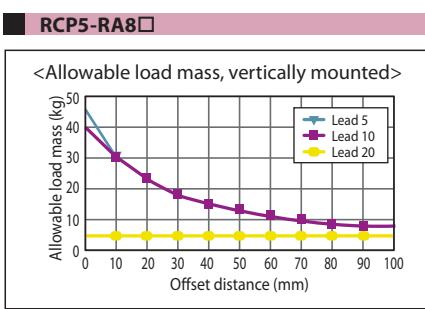
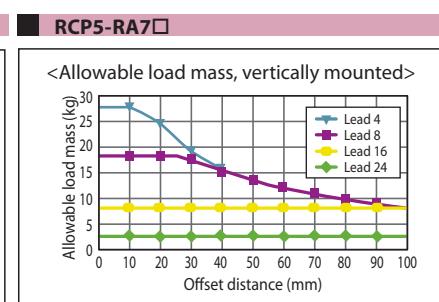
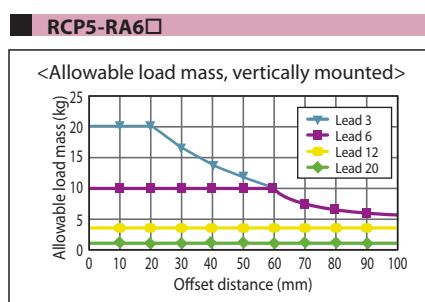
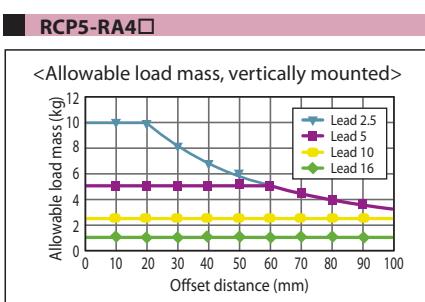
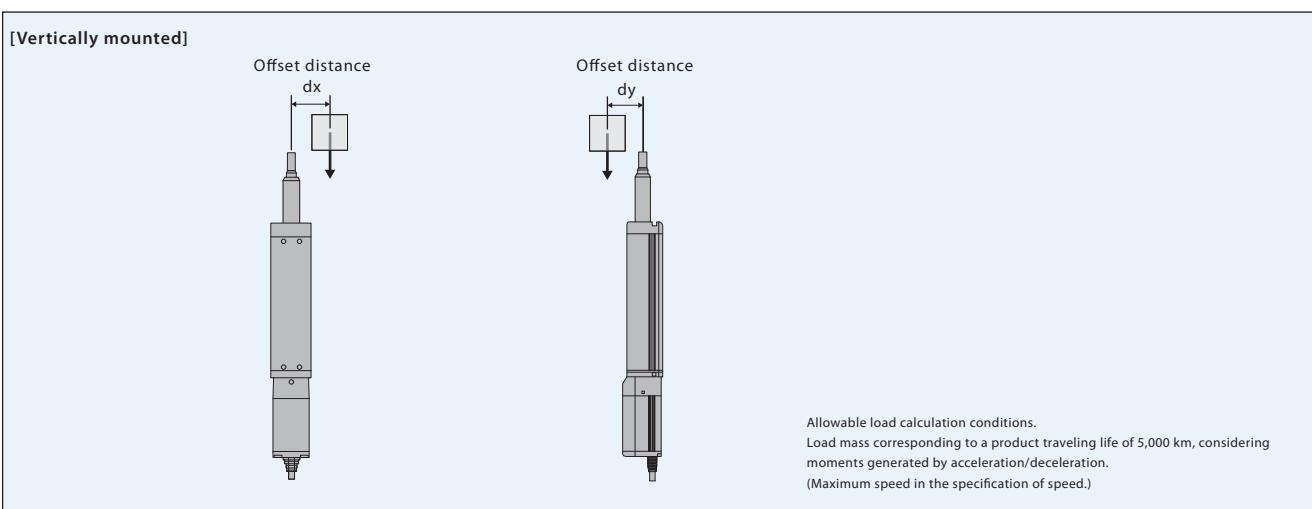
■ Selection Guideline (Selecting the Allowable Load for the Radial Cylinder)

The radial cylinder has a built-in guide, so loads up to a certain level can be applied to the rod without using an external guide. Refer to the graphs below for the allowable load mass. If the allowable load will be exceeded under the required operating conditions, add an external guide.

■ Allowable Load Mass for a Horizontally Mounted RCP5



■ Allowable Load Mass for a Vertically Mounted RCP5



MSEL

Multi-axis Program Controller for the ROBO Cylinder



Introducing MSEL, the Multi-axis Program Controller with a High-output Driver (PowerCON) for the ROBO Cylinder

1

The Pulse Motor Equipped ROBO Cylinder Controls a Maximum of 4 Axes

Traditionally, up to two pulse motor actuators could be controlled by a program controller. By using MSEL, a maximum of 4 axes can be controlled. Interpolation function is also available, enhancing its range of use.

Example of Combinations

3-axis Cartesian (Pulse Motor)



RCP5



A Maximum of 4 Axes Can Be Connected

2

The ROBO Cylinders RCP5 and RCP4 Can be Connected

PowerCON drivers make it possible to perform interpolation functions using the high-output RCP5 and RCP4 Robo Cylinders, which could not be performed with the traditional PSEL program controller.



3

Significant Enhancements in Programming Functions

Compared to the conventional product (PSEL), we have enhanced the functionality of the MSEL by having 4 times as many programs and 20 times more positions.

	Conventional product PSEL	New product MSEL
Number of programs	64	4 times → 255
Number of program steps	2,000	5 times → 9,999
Number of multi-tasking programs	8	2 times → 16
Number of positions	1,500	20 times → 30,000 (*1)

(*1) Note that the number of points available for backup in system memory is 10,000 points.

4

Equipped with an Optional Expansion I/O Slot

In addition to the standard I/O (IN 16 points/OUT 16 points), an expansion I/O slot can be filled with either a PIO board (IN 16 points/OUT 16 points) or one of four types of field networks.

	Conventional Product PSEL	New Product MSEL
Max. I/O Input and Output Points	24/8 Not applicable for expansion	32/32 When the expandable slot is used
Field Network	3 types (CC-Link, DeviceNet, PROFIBUS-DP)	4 types (CC-Link, DeviceNet, PROFIBUS-DP, EtherNet/IP)
Other External Connections	RS232C: 1ch	RS232C: 1ch

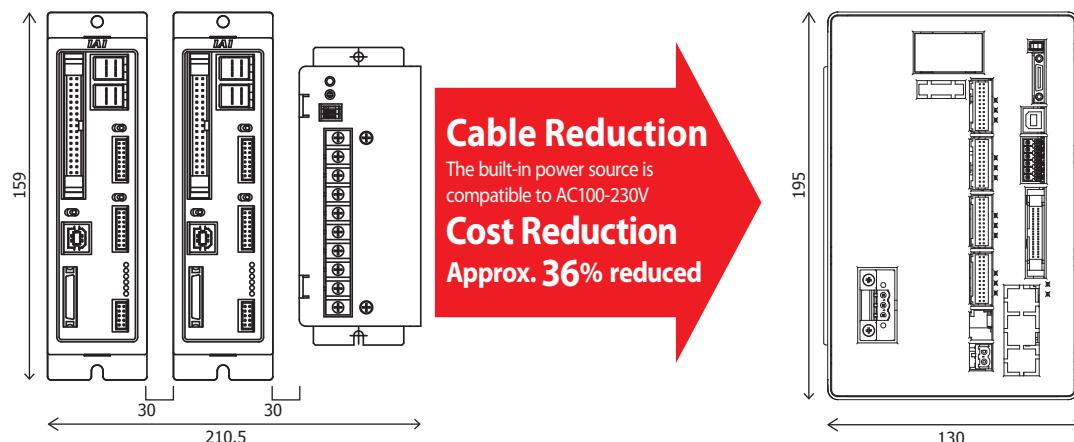
5

Cable and Cost Reduction

When Controlling 4 Actuator Axes

Conventional Product PSEL 2 units + PS241
(24V power supply)

New Product MSEL 1 unit



6

Introducing the Safety Category Compatible Type to the Lineup (For Category 3)

The MSEL-PG is compatible with safety category 3.

(In order to function with the safety category, you must first install an external safety circuit for the controller)

7

Compatible with Various Models

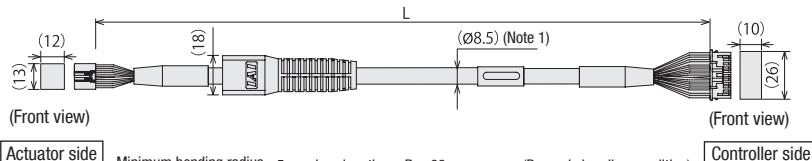
The MSEL can be connected to a range of pulse motor type ROBO Cylinders including RCP5/RCP4/RCP3/RCP2.



Service Parts

Model Number	CB-CAN-MPA □□□	Standard Motor-Encoder Cable	for RCP5/RCD
	CB-CAN-MPA □□□ -RB	Integrated Motor-Encoder Robot Cable	

* Please indicate cable length (L) in □□□, maximum 20m, e.g.) 080 = 8m



Actuator side Minimum bending radius 5m or less length R = 68mm or more (Dynamic bending condition)
Longer than 5m R = 73mm or more (Dynamic bending condition)

* The robot cable is designed for flex-resistance: Please use the robot cable if the cable has to be installed through the cable track.

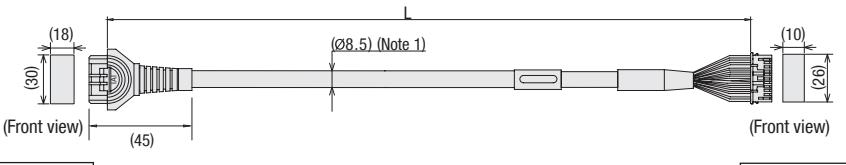
(Note 1) If the cable is 5m or longer, Ø9.1 cable diameter applies for a non-robot cable and Ø10 for a robot cable.

Pin No	Signal name
3	ØA
5	VMM
10	ØB
12	VMM
4	Ø A
15	Ø B
8	LS+
14	LS-
12	SA(mABS)
17	SB(mABS)
1	A+
6	A-
11	B+
16	B-
20	BK+
2	BK-
21	VCC
7	GND
18	VPS
13	LS GND
19	—
22	—(CFvcc)
23	—
24	FG

Pin No	Signal name
1	ØA
2	VMM
3	ØB
4	VMM
5	Ø A
6	Ø B
7	LS+
8	LS-
11	SA(mABS)
12	SB(mABS)
13	A+
14	A-
15	B+
16	B-
9	BK+
10	BK-
17	VCC
19	GND
18	VPS
20	LS GND
22	—(CFvcc)
21	—
23	—
24	FG

Model Number	CB-CFA3-MPA □□□	Standard Motor-Encoder Cable	for RCP5-RA8C/8R/10C/10R
	CB-CFA3-MPA □□□ -RB	Integrated Motor-Encoder Robot Cable	

* Please indicate cable length (L) in □□□, maximum 20m, e.g.) 080 = 8m



Actuator side Minimum bending radius 5m or less length R = 68mm or more (Dynamic bending condition)
Longer than 5m R = 73mm or more (Dynamic bending condition)

* The robot cable is designed for flex-resistance: Please use the robot cable if the cable has to be installed through the cable track.

(Note 1) If the cable is 5m or longer, Ø9.1 cable diameter applies for a non-robot cable and Ø10 for a robot cable.

Actuator side
1-1827863-1
(AMP)

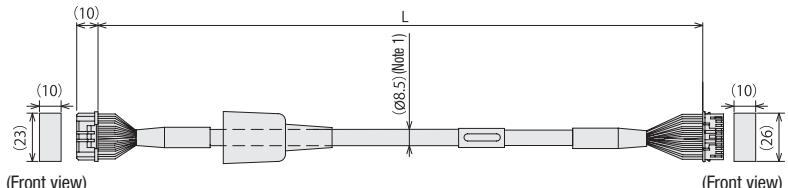
Controller side
PADP-24V-1-S
(JST)

Pin No	Signal name
A1	Ø A
B1	VMM
A2	Ø A
B2	Ø B
A3	VMM
B3	Ø B
A4	LS+
B4	LS-
A6	SA(mABS)
B6	SB(mABS)
A7	A+
B7	A-
A8	B+
B8	B-
A5	BK+
B5	BK-
A9	LS GND
B9	VPS
A10	VCC
B10	GND
A11	—
B11	FG

Pin No	Signal name
1	Ø A
2	VMM
3	Ø B
4	VMM
5	Ø A
6	Ø B
7	LS+
8	LS-
11	SA(mABS)
12	SB(mABS)
13	A+
14	A-
15	B+
16	B-
9	BK+
10	BK-
20	LS GND
18	VPS
21	VCC
19	GND
17	—
22	—
23	—
24	FG

Model Number	CB-CA-MPA □□□	Standard Motor-Encoder Cable	for RCP4
	CB-CA-MPA □□□ -RB	Integrated Motor-Encoder Robot Cable	

* Please indicate cable length (L) in □□□, maximum 20m, e.g.) 080 = 8m



Actuator side Minimum bending radius 5m or less length R = 68mm or more (Dynamic bending condition)
Longer than 5m R = 73mm or more (Dynamic bending condition)

* The robot cable is designed for flex-resistance: Please use the robot cable if the cable has to be installed through the cable track.

(Note 1) If the cable is 5m or longer, Ø9.1 cable diameter applies for a non-robot cable and Ø10 for a robot cable.

Actuator side
1-1827863-1
(AMP)

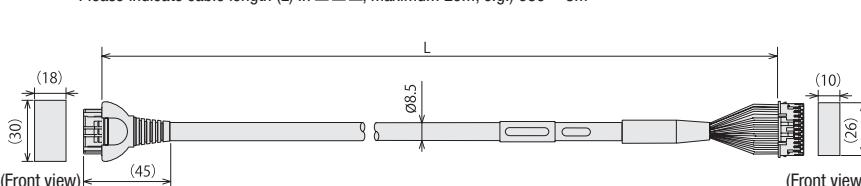
Controller side
PADP-24V-1-S
(JST)

Pin No	Signal name
A1	ØA/U
B1	VMM/V
A2	ØA/W
B2	ØB/-
A3	VMM/-
B3	Ø B/-
A4	LS+/BK+
B4	LS-/BK-
A6	/A+
B6	/A-
A7	A+/B+
B7	A-/B-
A8	B+/Z+
B8	B-/Z-
A5	BK-/LS+
B5	BK-/LS-
A9	LS GND
B9	VPS
A10	VCC
B10	GND
A11	—
B11	FG

Pin No	Signal name
1	Ø A/U
2	VMM/V
5	Ø A/W
3	Ø B/-
4	VMM/-
6	Ø B/-
7	LS+/BK+
8	LS-/BK-
11	/A+
12	/A-
13	/A-
14	A+/B+
15	A-/B-
16	B+/Z+
17	B-/Z-
9	BK-/LS+
10	BK-/LS-
20	LS GND
18	VPS
17	VCC
19	GND
21	—
22	—
23	—
24	FG

Model Number	CB-APSEP-MPA □□□ - LC	Standard Motor-Encoder Cable	for RCP3/RCA2 and others
	CB-APSEP-MPA □□□	Integrated Motor-Encoder Robot Cable	

* Please indicate cable length (L) in □□□, maximum 20m, e.g.) 080 = 8m



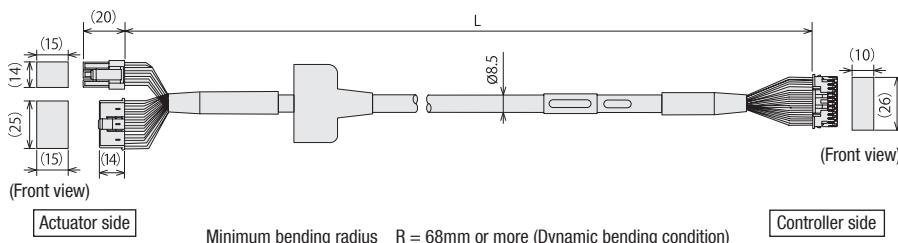
Actuator side Minimum bending radius R = 68mm or more (Dynamic bending condition)

Actuator side Pin number	[PCON] (AON)
A1	[ØA] (U)
B1	[VMM] (V)
A2	[ØA] (W)
B2	[ØB] (-)
A3	[VMM] (-)
B3	[ØB] (-)
A4	[LS+] (BK+)
B4	[LS-] (BK-)
A6	[/-] (A+)
B6	[/-] (A-)
A7	[A+] (B+)
B7	[A-] (B-)
A8	[B+] (Z+)
B8	[B-/Z-]
A5	[BK-/LS+]
B5	[BK-/LS-]
A9	[GNLS] (GNLS)
B9	[VPS] (VPS)
A10	[VCC] (VCC)
B10	[GND] (GND)
A11	NC
B11	NC

Controller side Pin number	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
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21	
22	
23	
24	

Model Number	CB-PSEP-MPA □□□	Integrated Motor-Encoder Robot Cable	for RCP2
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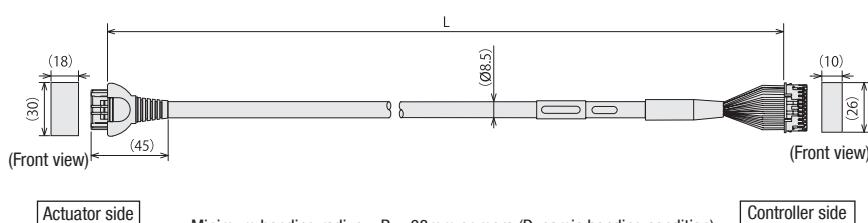
* Please indicate cable length (L) in □□□, maximum 20m, e.g.) 080 = 8m



Actuator side	Pin number	Controller side	Pin number
1	[ΦA]	1	
2	[VMM]	2	
4	[ΦB]	3	
5	[VMM]	4	
3	[Φ/A]	5	
6	[Φ/B]	6	
16	[BK+]	9	
17	[BK-]	10	
5	NC	11	
6	NC	12	
13	[LS-]	7	
14	[A+]	8	
1	[A-]	13	
2	[B+]	14	
3	[B-]	15	
4	[VCC]	16	
10	[VPS]	17	
11	[GND]	18	
9	Spare	19	
12		20	
15	NC	21	
7	NC	22	
8	NC	23	
18	Shield [FG]	24	

Model Number	CB-RPSEP-MPA □□□	Integrated Motor-Encoder Robot Cable	for RCP2-RTBS/RTBSL/RTCS/RTCSL
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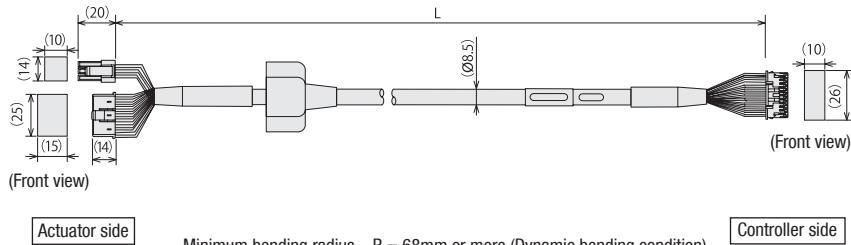
* Please indicate cable length (L) in □□□, maximum 20m, e.g.) 080 = 8m



Actuator side	Pin number	Controller side	Pin number
A1	[ΦA]	1	
B1	[VMM]	2	
A2	[ΦB]	3	
B2	[VMM]	4	
A3	[Φ/A]	5	
B3	[Φ/B]	6	
A6	[LS-]	7	
B6	[LS-]	8	
A7	[A+]	13	
B7	[A-]	14	
A8	[B+]	15	
B8	[B-]	16	
A4	NC	—	
B4	NC	—	
A5	[BK+]	9	
B5	[BK-]	10	
A9	[GNDLS]	20	
B9	[VPS]	18	
A10	[VCC]	17	
B10	[GND]	19	
A11	Spare	21	
B11	NC	22	
	NC	23	
	NC	24	
	Shield [FG]		

Model Number	CB-ASEP-MPA □□□	Integrated Motor-Encoder Robot Cable	for RCA
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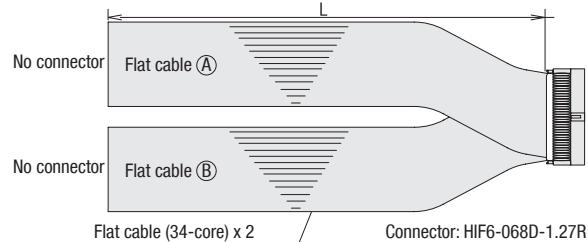
* Please indicate cable length (L) in □□□, maximum 20m, e.g.) 080 = 8m



Actuator side	Pin number	Controller side	Pin number
1	[U]	1	
2	[V]	2	
3	NC	3	
	NC	4	
	NC	5	
	NC	6	
18	[W]	7	
17	[NC]	8	
7	[LS-]	9	
16	[A+]	10	
1	[A-]	11	
2	[B+]	12	
3	[B-]	13	
4	[G-]	14	
10	[Z-]	15	
11	[VCC]	16	
14	[VPS]	17	
13	[GND]	18	
15	Spare	19	
6	NC	20	
5	NC	21	
8	NC	22	
9	NC	23	
12	NC	24	
9	Shield [FG]		

Model Number	CB-MSEP-PIO □□□	PIO Flat Cable
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* Please indicate cable length (L) in □□□, maximum 10m, e.g.) 020 = 2m

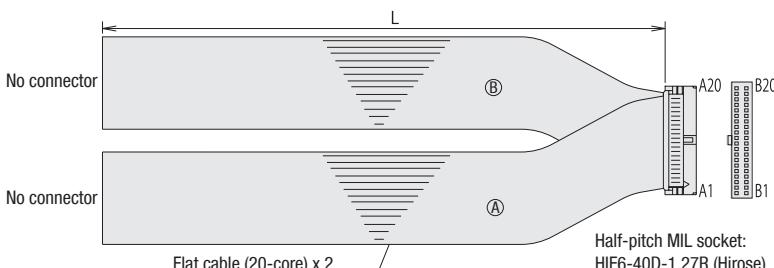


HIF6-068D-1.27R

No.	Cable color	Wiring	No.	Cable color	Wiring	No.	Cable color	Wiring
A1	Brown-1		A18	Gray-2		B1	Brown-5	
A2	Red-1		A20	Black-2		B2	Red-5	
A3	Orange-1		A21	Orange-5		B3	Orange-5	
A4	Yellow-1		A22	Green-5		B4	Green-5	
A5	Green-1		A23	Orange-3		B5	Blue-5	
A6	Blue-1		A24	Yellow-3		B6	Purple-5	
A7	Purple-1		A25	Green-3		B7	Gray-5	
A8	Gray-1		A26	Blue-3		B8	White-5	
A9	White-1		A27	Purple-3		B9	White-5	
A10	Black-1		A28	Gray-3		B10	Black-5	
A11	Brown-2		A29	White-3		B11	Brown-6	
A12	Red-2		A30	Black-3		B12	Red-6	
A13	Orange-2		A31	Orange-6		B13	Orange-6	
A14	Yellow-2		A32	Red-4		B14	Yellow-6	
A15	Green-2		A33	Blue-4		B15	Green-6	
A16	Blue-2		A34	Orange-4		B16	Blue-6	
A17	Purple-2					B17	Purple-6	

Model Number	CB-PAC-PIO □□□	PIO Flat Cable
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* Please indicate cable length (L) in □□□, maximum 10m, e.g.) 080 = 8m



HIF6-40D-1.27R

No.	Signal name	Cable color	Wiring	No.	Signal name	Cable color	Wiring
A1	24V	Brown-1		B1	OUT0	Brown-3	
A2	24V	Red-1		B2	OUT1	Red-3	
A3	—	Orange-1		B3	OUT2	Orange-3	
A4	—	Yellow-1		B4	OUT3	Yellow-3	
A5	IN0	Green-1		B5	OUT4	Green-3	
A6	IN1	Blue-1		B6	OUT5	Blue-3	
A7	IN2	Purple-1		B7	OUT6	Purple-3	
A8	IN3	Gray-1		B8	OUT7	Gray-3	
A9	IN4	White-1		B9	OUT8	White-3	
A10	IN5	Black-1		B10	OUT9	Black-3	
A11	IN6	Brown-2		B11	OUT10	Brown-4	
A12	IN7	Red-2		B12	OUT11	Red-4	
A13	IN8	Orange-2		B13	OUT12	Orange-4	
A14	IN9	Yellow-2		B14	OUT13	Yellow-4	
A15	IN10	Green-2		B15	OUT14	Green-4	
A16	IN11	Blue-2		B16	OUT15	Blue-4	
A17	IN12	Purple-2		B17	—	Purple-4	
A18	IN13	Gray-2		B18	—	Gray-4	
A19	IN14	White-2		B19	0V	White-4	
A20	IN15	Black-2		B20	0V	Black-4	

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