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Quality and Innovation

GB

RoboCylinder with Battery-less Absolute Encoder & Separate or Built-in Controller

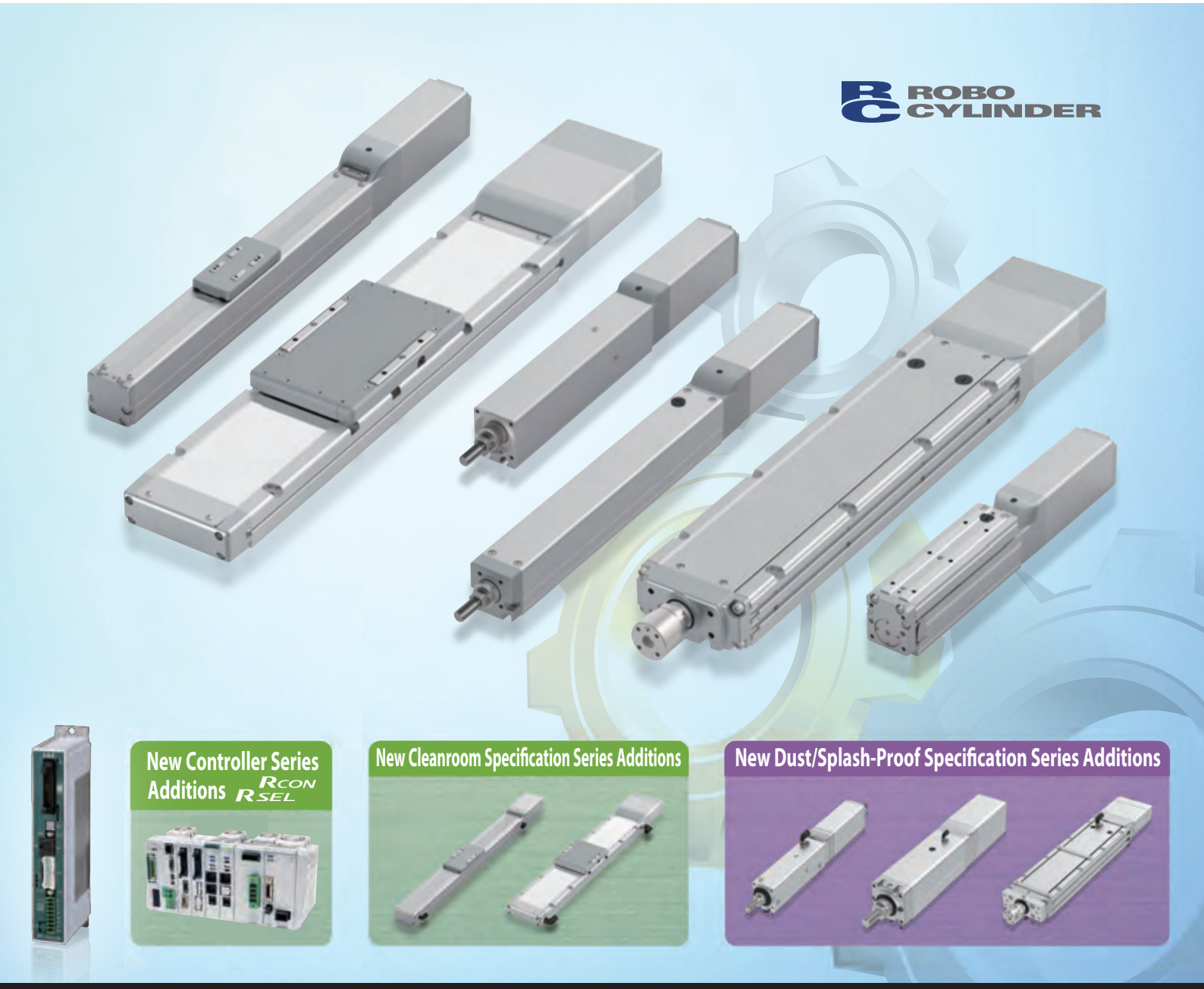
RCP6/RCP6S Series

Cleanroom Slider Type

RCP6(S)CR-SA/WSA

Dust/Splash-Proof Rod Type & Radial Cylinder

RCP6(S)W-RA/RRA/WRA



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IAI's Next Generation RoboCylinder: RCP6

You Can Select the Product That Best Suits Your Needs from an Abundant Lineup of 156 Models*.

*Total by Types, Separate or Built-In Controller, and Specifications

1 Equipped with High-resolution Battery-less Absolute Encoder as Standard.

The advantages of an actuator with battery-less absolute encoder

No battery maintenance is required since there is no battery. Since home-return operation is not required at start up or after emergency stop or malfunction, this reduces your operation time, resulting in reduced production costs. Price is the same as the conventional incremental encoders.

The advantages of using an absolute encoder.

1. With an absolute encoder, home-return is not required.
2. No external home sensor is required since home-return is not necessary.
3. Removal of items being worked on is not necessary, even after an emergency stop.
4. The troublesome creation of home-return programs is not necessary even when stopping in the complex inside of a machine.

The advantages of battery-less

1. No battery maintenance required
2. No installation space for battery required

2 Improved Positioning Repeatability

With the improvement of the accurate processing technology of rolled ball screws and the thread grooves of nuts, a significantly higher precision compared to the previous RoboCylinder's positioning repeatability (±20μm) has been achieved.

Standard specification ±10μm

High-precision specification ±5μm (Available only for RCP6(S)-SA/WSA, RCP6(S)CR-SA/WSA)

*1μm=0.001mm

3 PowerCon Compatible

Compatible with PowerCon which is equipped with a high-output driver. The output of the pulse motor has increased by about 50% due to the use of PowerCon. Shortened cycle times were achieved through increased maximum speeds, which contributes to improved equipment productivity.

4 The Built-in Controller Type Is Available for All Models.

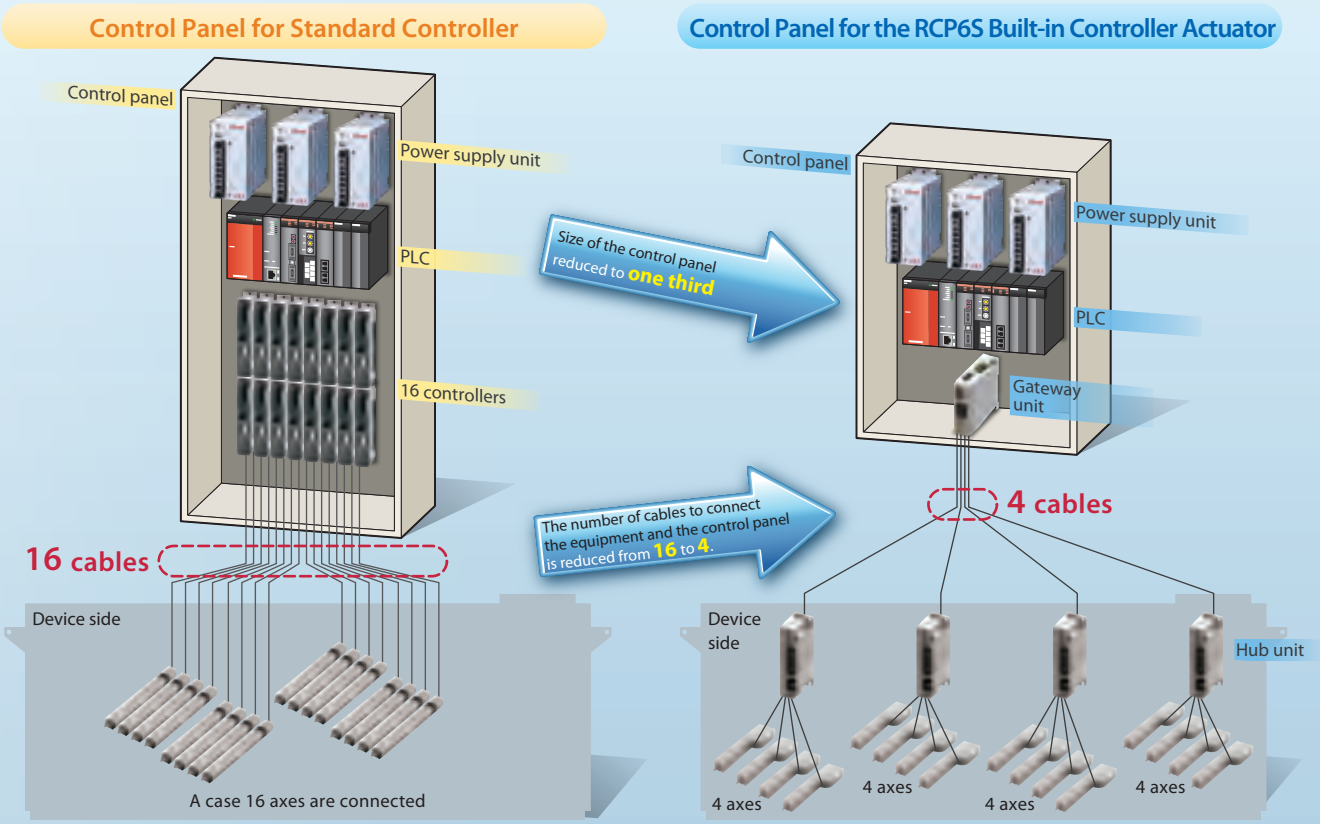
Standard/separate controller type or built-in controller type can be selected for all models.

The advantages of a built-in controller type.

- ▶Smaller control panel.
- ▶Simple wiring.
- ▶Less maintenance parts necessary because wires are being shared.

By using the gateway unit and the hub unit(s), it is possible to reduce the size of the control panel and a number of cables.

*Please refer to P.8 for more information regarding the gateway unit and the hub unit.

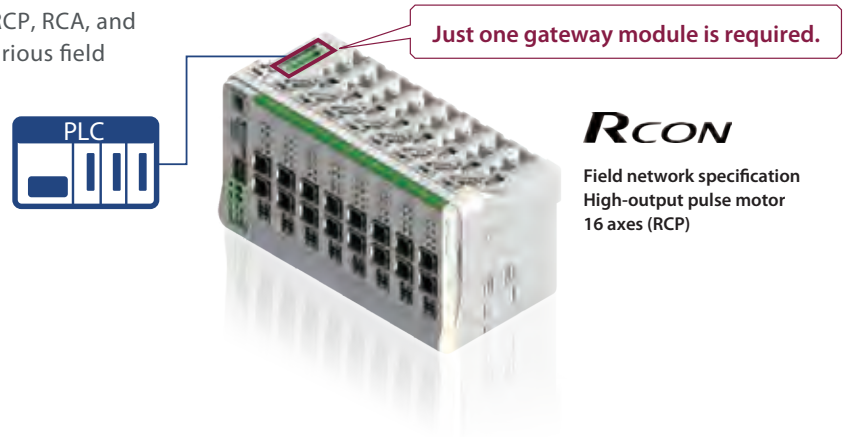


[Notes] Maximum cable length between the gateway unit and RCP6S is 20m.
If there is a hub unit in between, the maximum combined cable length is still 20m.
The cable length from the gateway unit to the hub unit needs to be 10m or less.

New Multi-axis Position Controller RCON and Program Controller RSEL

5 Applicable 1~16-axis Modular Network Controllers for RCP6

These controllers can connect RCP, RCA, and RCD series actuators (24V) to various field networks and a PLC hub unit. Please see the dedicated catalogues for information on connectable models.



RCON

Field network specification
High-output pulse motor
16 axes (RCP)

6 Cleanroom Specification Is Now Available

ISO Cleanliness Class 2.5

US FED Cleanliness Class 10

Cleanroom specification is now available. Eight slider types, including the wide slider, are available in total. Ideal for use in special environments such as cleanroom.

There are 2 standards that represent the cleanliness.

1. ISO Standard 14644-1:2015

The number of particles 0.1µm or larger in $1m^3$ is expressed in exponents when expressed in power of 10.

2. US FED Standard 209D

Displays the number of particles in $1ft^3$ with reference to particles of 0.5µm or more.
<Display method> Class 1, 10, 100, 1000, 10000, 100000

7 Dust/Splash-Proof Specification Is Now Available

IP 65

Dust-proof/splash-proof specification is now available. Twenty-four rod types or 48 models, including the Radial Cylinder and Wide Radial Cylinder, are available in total. Can be used for equipment that comes in contact with water.

Protection Degree Display

IP □ □

First Indicative Number
Protection against human bodies and solid foreign matter

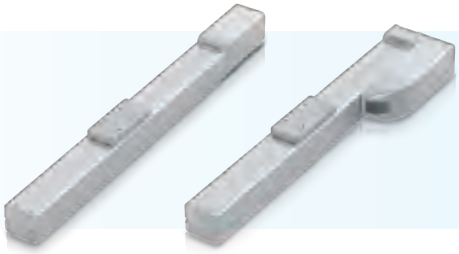
Second Indicative Number
Protection against ingress of water

IP65	Solid foreign matter	(Summary) Dust-resistant type * Total protection of the interior from dust ingress.
	Water	(Summary) Protection from water jets.* No harmful effects from direct water jets coming from any direction.

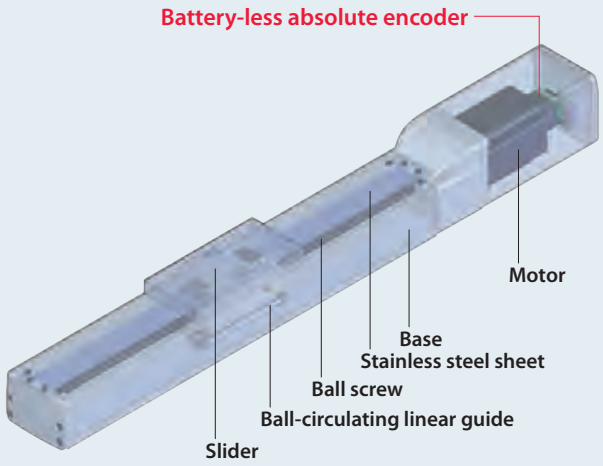
* IEC 60529

Table of Contents

RCP6/RCP6S Series: Models and Features



Slider Type: SA



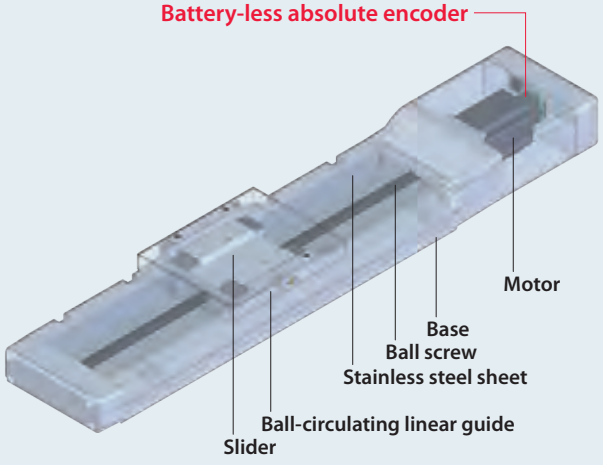
Features

- With a base integrated ball circulating linear guide, it will be able to deal with moments in the pitching (Ma), yawing (Mb), and rolling (Mc) directions.
- By combining multiple axes, two-dimensional and three-dimensional operations are possible.

Usage examples

- Switching from rod-less air cylinder
- Switching from self-made equipment with ballscrew, guide, and motor.
- Using as base and movable axes of the cartesian system.
- Work such as assembly, inspection, and measuring length that require high accuracy.

Wide Slider Type: WSA

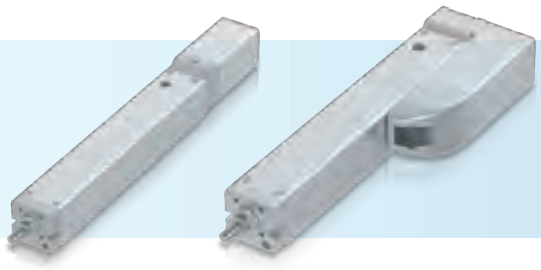


Features

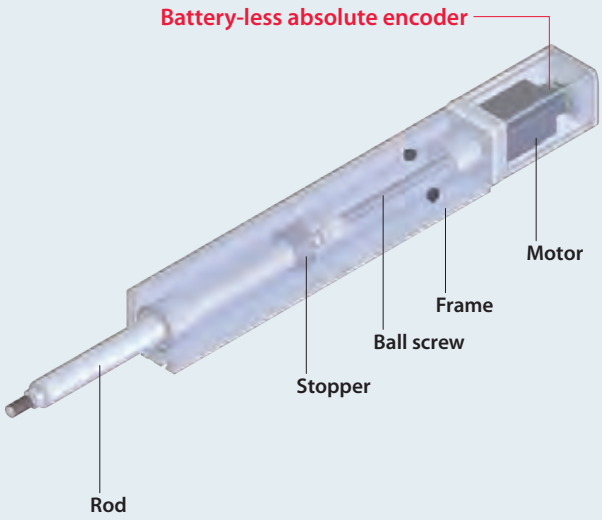
- Perfect for the base axis of the cartesian system. With a built-in ball circulating linear guide inside its wide body, it will be able to deal with moments in the pitching (Ma), yawing (Mb), and rolling (Mc) directions.
- 2nd axis can be installed onto the wide slider type without removing its stainless steel sheet.
- By combining multiple axes, two-dimensional and three-dimensional operations are possible.

Usage examples

- Switching from rod-less air cylinder
- Switching from self-made equipment with ballscrew, guide, and motor.
- Work such as assembly, inspection, and measuring length that require high accuracy.



Rod Type: RA



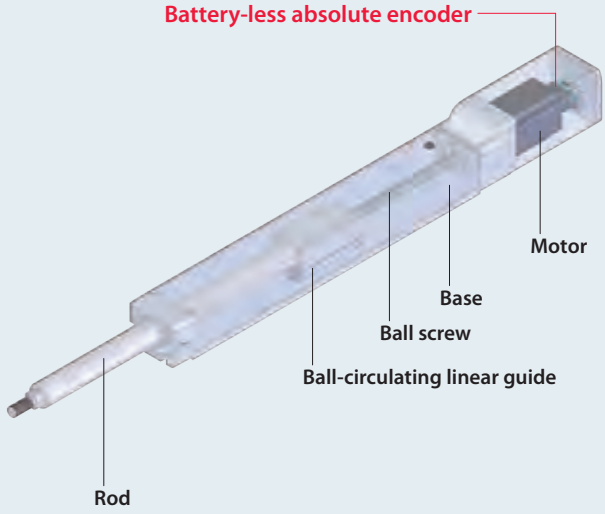
Features

▶ This is a type that does not build in a linear guide inside of the actuator. Of the RCP6 rod-types that resemble air cylinders, this is the least expensive model.

Usage examples

- Switching from rod type air cylinder
- Push force combined with a guide
- Inserting, press-fitting, or riveting a work
- Using as a lifter or a work piece unloader

Radial Cylinder: RRA



Features

▶ Since ball circulating linear guides are built in, it can take radial loads and moment loads. The vibration upon stopping can be suppressed and a long stroke of up to 700mm has become possible. In addition, product quality has significantly increased with a non-rotating rod precision of "0 degree" with a no load condition.

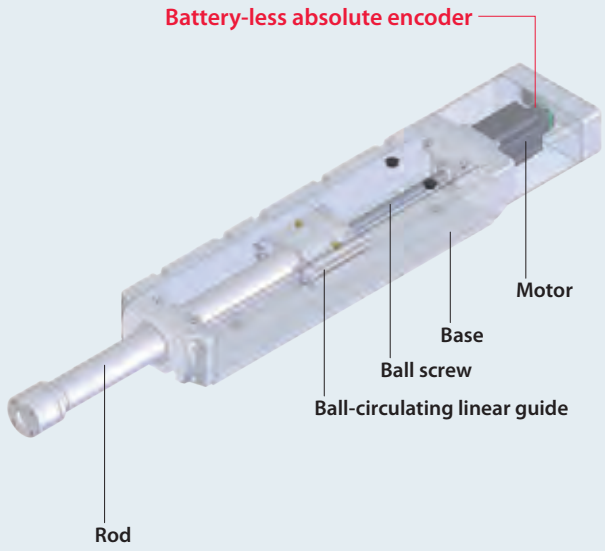
▶ The equipment will be compact since an external guide is unnecessary.

Usage examples

- Inserting, press-fitting, or riveting a work
- Using as a lifter or a work piece unloader
- Using as a movable vertical axis of the cartesian system
- Transferring or positioning a lightweight object

RCP6/RCP6S Series: Models and Features

Wide Radial Cylinder: WRA



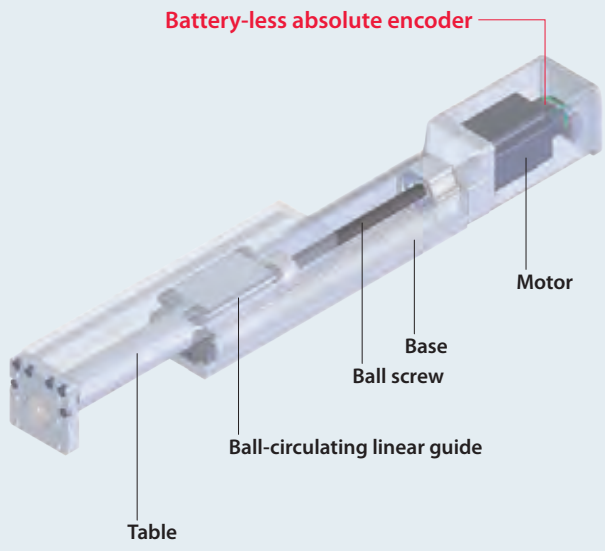
Features

- Due to a wide body and high-rigidity rod, it can deal with up to four times the allowable torque on rod tip compared to a standard radial cylinder. Due to a high dynamic allowable moment, it can be utilized for uses such as tightening screws and stirring that have large load torque.
- The equipment will be compact since an external guide is unnecessary.

Usage examples

- Inserting, press-fitting, or riveting a work
- Tightening a screw or stirring
- Using as a lifter or a work piece unloader
- Using as a movable vertical axis of the cartesian system
- Transferring or positioning a lightweight object
- Using as a base axis of the pick-and-place unit

Table Type: TA



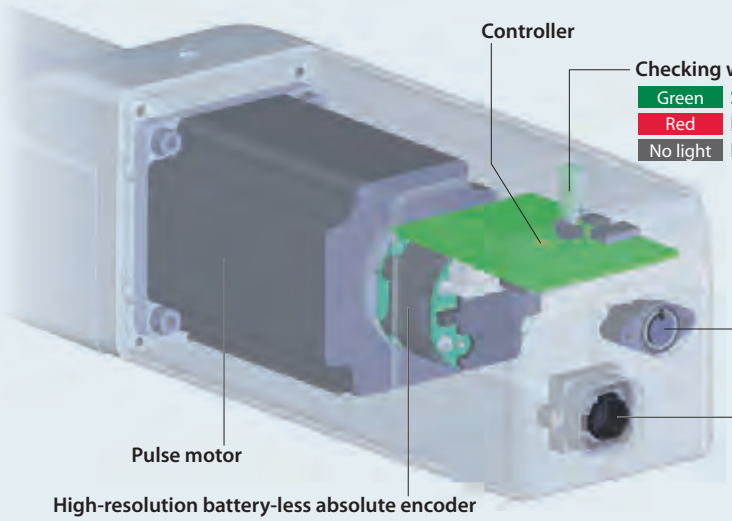
Features

- Work piece can be installed using the tapped mounting holes on the top surface of the table and the tip plate.
- With a built-in ball circulating linear guide in the table section, it will be able to deal with moments in the pitching (Ma), yawing (Mb), and rolling (Mc) directions.
- High-rigidity specification (double-block) can be selected as an option. With two guide blocks, the dynamic allowable moment increases.

Usage examples

- Switching from table type air cylinder
- Clamping tasks that pinch work from both sides
- Positioning tasks that hold work with the front side of the table
- A function for pushing works on a conveyor to the side
- Using as a movable vertical axis of the cartesian system

Built-in Controller Type: RCP6S



RCP6S Peripheral Equipment

*Gateway unit or PLC connection unit is required to operate the RCP6S.

1 Gateway Unit

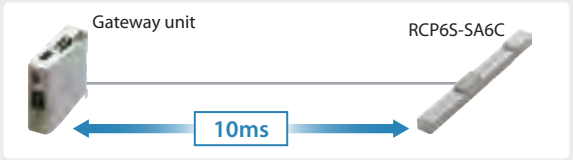
▶Compatible field networks
The gate unit can be used with the following 6 types of field networks.

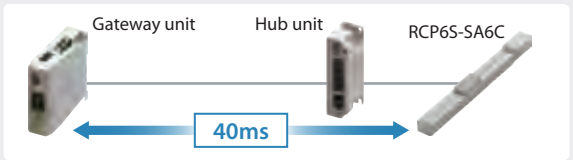
CC-Link | DeviceNet | PROFIBUS | PROFINET | EtherNet/IP | EtherCAT

▶4 RCP6S' or 4 hub units can be connected to a gateway unit.

▶Brake can be forcibly released by supplying power to the brake release input terminal of external power input for each channel. (In the case that the actuator is directly connected)

▶The communication time when RCP6S is connected directly is 10ms, while it is 40ms when using the RCP6S with a hub unit. There will be no change in communication time when the number of connected actuators is increased.





2 Hub Unit

▶A hub unit is a signal distribution unit used by combining with a gateway unit.

▶A gateway unit and a hub unit, or a hub unit and a RCP6 are each connected with a serial communication.

▶A maximum of 4 RCP6S' can be connected.

▶By operating the brake release switch, ON/OFF actions of the brake can be performed.

3 PLC Connection Unit

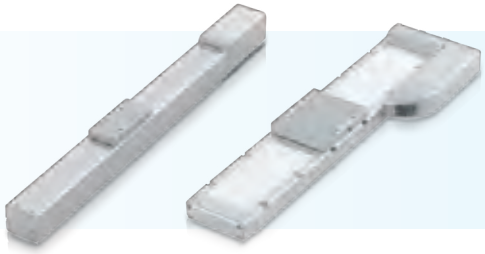
▶A PLC connection unit is a unit to be moved with serial communication from a master controller or a PLC by combining it with RCP6S.

▶A RCP6S and a PLC connection unit can be connected with a cable with connectors.

4 RCP6S Gateway Controller

▶A controller for connecting RCP, RCA and RCD series units to a gateway unit or hub unit.

▶Capable of connecting mini RoboCylinders and gripper type actuators within the RCP6S network.



Product Lineup

Slider Type: SA

Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Stroke (mm)	Max. Speed (mm/s)	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Reference Page
Coupled Motor	SA4C		40mm	16	±0.01	50~500 (50mm increments)	1260	7	1.5	P.21
				10	±0.01 [±0.005]		785	12	3	
				5			390	14	5.5	
				2.5			195	18	12	
	SA6C		58mm	20	±0.01	50~800 (50mm increments)	1440 <1280>	15	1	P.23
				12	±0.01 [±0.005]		900	28	2.5	
				6			450	32	6	
				3			225	40	16	
	SA7C		70mm	24	±0.01	50~800 (50mm increments)	1200	37	3	P.25
				16			980 <840>	46	8	
				8	±0.01 [±0.005]		490	51	16	
				4			245 <210>	55	25	
	SA8C		85mm	30	±0.01	50~1100 (50mm increments)	1200 <850>	28	3	P.27
				20			1000 <800>	60	4	
				10	±0.01 [±0.005]		500	70	25	
				5			250	80	55	
Side-mounted Motor	SA4R		40mm	16	±0.01	50~500 (50mm increments)	1260 <1120>	7	1.5	P.29
				10			785	12	3	
				5			390	14	5.5	
				2.5			195	18	12	
	SA6R		58mm	20	±0.01	50~800 (50mm increments)	1280 <1120>	15	1	P.31
				12			900 <800>	28	2.5	
				6			450	32	6	
				3			225	40	14	
	SA7R		70mm	24	±0.01	50~800 (50mm increments)	1,080	37	3	P.33
				16			840 <700>	46	8	
				8			420	51	16	
				4			210	55	25	
	SA8R		85mm	30	±0.01	50~1100 (50mm increments)	1200 <850>	26	3	P.35
				20			1000 <800>	55	4	
				10			500 <450>	70	25	
				5			250	80	55	

Values in brackets < > are for when the maximum speed differs due to vertical use. Values in brackets [ ] are for high-precision specification.

Wide Slider Type: WSA

Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Stroke (mm)	Max. Speed (mm/s)	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Reference Page
Coupled Motor	WSA10C		100mm	16	±0.01	50~500 (50mm increments)	840	4	-	P.37
				10	±0.01 [±0.005]		610	15	-	
				5			390 <350>	28	3	
				2.5			195 <175>	40	10	
	WSA12C		120mm	20	±0.01	50~800 (50mm increments)	800	12	-	P.39
				12	±0.01 [±0.005]		600	25	-	
				6			450 <400>	40	9	
				3			225	60	18	
	WSA14C		140mm	24	±0.01	50~800 (50mm increments)	700	25	-	P.41
				16			560	50	-	
				8	±0.01 [±0.005]		420 <350>	65	14	
				4			210 <175>	80	26	
	WSA16C		160mm	20	±0.01	50~1100 (50mm increments)	720	50	-	P.43
				10	±0.01 [±0.005]		450 <240>	70	15	
				5			195 <170>	100	50	
Side-mounted Motor	WSA10R		100mm	16	±0.01	50~500 (50mm increments)	840	4	-	P.45
				10			610	15	-	
				5			390 <305>	28	3	
				2.5			195 <175>	40	10	
	WSA12R		120mm	20	±0.01	50~800 (50mm increments)	800	12	-	P.47
				12			600	25	-	
				6			450 <400>	40	9	
				3			225	60	16	
	WSA14R		140mm	24	±0.01	50~800 (50mm increments)	700	25	-	P.49
				16			560	50	-	
				8			420 <350>	65	14	
				4			175	80	26	
	WSA16R		160mm	20	±0.01	50~1100 (50mm increments)	600	30	-	P.51
				10			365 <210>	70	15	
				5			170 <145>	100	45	

Values in brackets < > are for when the maximum speed differs due to vertical use. Values in brackets [ ] are for high-precision specification.

Rod Type: RA

*Push force can be achieved only during push mode and speed is limited below 20mm/s depending on the model. See manual for details.

Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Stroke (mm)	Max. Speed (mm/s)	Max. Push Force (N)*	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Reference Page
Coupled Motor	RA4C		40mm	16	±0.01	50~200 (50mm increments)	840	48	6	1.5	P.53
				10			700	77	15	2.5	
				5			350	155	28	5	
				2.5			175	310	40	10	
	RA6C		58mm	20	±0.01	50~300 (50mm increments)	800	56	6	1.5	P.55
				12			700	93	25	4	
				6			450	185	40	10	
				3			225	370	60	20	
	RA7C		70mm	24	±0.01	50~300 (50mm increments)	860 <640>	182	20	3	P.57
				16			700 <560>	273	50	8	
				8			420 <350>	547	60	18	
				4			210 <175>	1094	80	28	
	RA8C		85mm	20	±0.01	50~300 (50mm increments)	600 <450>	500	30	5	P.59
				10			300 <250>	1000	60	40	
				5			150	2000	100	70	
Side-mounted Motor	RA4R		40mm	16	±0.01	50~200 (50mm increments)	840	48	5	1	P.61
				10			610	77	12	2.5	
				5			350	155	25	5	
				2.5			175	310	40	10	
	RA6R		58mm	20	±0.01	50~300 (50mm increments)	800	56	6	1.5	P.63
				12			700	93	25	4	
				6			450	185	40	10	
				3			225	370	60	20	
	RA7R		70mm	24	±0.01	50~300 (50mm increments)	800 <640>	182	20	3	P.65
				16			560	273	50	8	
				8			420 <350>	547	60	18	
				4			175	1094	80	28	
	RA8R		85mm	20	±0.01	50~300 (50mm increments)	400	500	30	5	P.67
				10			200	1000	60	40	
				5			100	2000	100	70	

Values in brackets < > are for when the maximum speed differs due to vertical use.

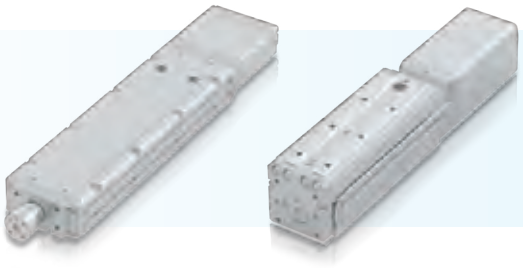
Radial Cylinder: RRA

*Push force can be achieved only during push mode and speed is limited below 20mm/s depending on the model. See manual for details.

Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Stroke (mm)	Max. Speed (mm/s)	Max. Push Force (N)*	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Reference Page
Coupled Motor	RRA4C		40mm	16	±0.01	60~410 (50mm increments)	1120	48	7	1.5	P.69
				10			700	77	18	3	
				5			350	155	28	6	
				2.5			175	310	40	10	
	RRA6C		58mm	20	±0.01	65~415 (50mm increments)	800	56	6	1.5	P.71
				12			700	93	25	4	
				6			450	185	40	10	
				3			225	370	60	20	
	RRA7C		70mm	24	±0.01	70~520 (50mm increments)	860 <640>	182	20	3	P.73
				16			700 <560>	273	50	8	
				8			420	547	60	18	
				4			210	1094	80	28	
	RRA8C		85mm	20	±0.01	50~700 (50mm increments)	600 <450>	500	30	5	P.75
				10			300 <250>	1000	60	40	
				5			150	2000	100	70	
Side-mounted Motor	RRA4R		40mm	16	±0.01	60~410 (50mm increments)	840	48	5	1	P.77
				10			610	77	13	2.5	
				5			350	155	28	5	
				2.5			175	310	40	10	
	RRA6R		58mm	20	±0.01	65~415 (50mm increments)	800	56	6	1.5	P.79
				12			700	93	25	4	
				6			450	185	40	10	
				3			225	370	60	20	
	RRA7R		70mm	24	±0.01	70~520 (50mm increments)	860 <640>	182	20	3	P.81
				16			560	273	50	8	
				8			420 <350>	547	60	18	
				4			175	1094	80	28	
	RRA8R		85mm	20	±0.01	50~700 (50mm increments)	400	500	30	5	P.83
				10			200	1000	60	40	
				5			100	2000	100	70	

Values in brackets < > are for when the maximum speed differs due to vertical use.

Product Lineup



Wide Radial Cylinder: WRA

*Push force can be achieved only during push mode and speed is limited below 20mm/s depending on the model. See manual for details.

Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Stroke (mm)	Max. Speed (mm/s)	Max. Push Force (N)*	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Reference Page
Coupled Motor	WRA10C		100mm	16	±0.01	50~500 (50mm increments)	700	48	4	-	P.85
				10			525	77	14.5	-	
				5			350 <260>	155	28	5	
				2.5			175	310	40	10	
	WRA12C		120mm	20	±0.01	50~500 (50mm increments)	800	56	7.5	-	P.87
				12			560	93	30	-	
				6			400 <340>	185	55	7.5	
				3			225 <200>	370	70	17.5	
	WRA14C		140mm	24	±0.01	50~600 (50mm increments)	630	182	25	-	P.89
				16			560	273	50	-	
				8			420 <210>	547	65	15	
				4			210 <130>	1094	85	25	
	WRA16C		160mm	20	±0.01	50~800 (50mm increments)	450	500	30	-	P.91
				10			240 <200>	1000	60	36.5	
				5			130 <100>	2000	100	70	
Side-mounted Motor	WRA10R		100mm	16	±0.01	50~500 (50mm increments)	700	48	4	-	P.93
				10			525	77	11.5	-	
				5			350 <260>	155	28	5	
				2.5			175 <150>	310	40	10	
	WRA12R		120mm	20	±0.01	50~500 (50mm increments)	800	56	7.5	-	P.95
				12			560	93	30	-	
				6			400 <280>	185	55	7.5	
				3			225 <200>	370	70	17.5	
	WRA14R		140mm	24	±0.01	50~600 (50mm increments)	630	182	25	-	P.97
				16			560	273	50	-	
				8			350 <210>	547	65	15	
				4			175 <130>	1094	85	25	
	WRA16R		160mm	20	±0.01	50~800 (50mm increments)	420	500	30	-	P.99
				10			240 <180>	1000	60	34.5	
				5			120 <100>	2000	100	63	

Values in brackets < > are for when the maximum speed differs due to vertical use.

Table Type: TA

Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Stroke (mm)	Max. Speed (mm/s)	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Reference Page
Coupled Motor	TA4C		40mm	16*	±0.01	Single Block: 25~150 (25mm increments)	980 <700>	3 [-]	1 [-]	P.101 P.103
				10			785 <700>	4 [8]	2.5 [2.5]	
				5		Double Block: 40, 65, 90, 140, 190, 240	390	5 [10]	5 [5]	
				2.5			195	5 [10]	10 [10]	
	TA6C		58mm	20*	±0.01	Single Block: 25~200 (25mm increments)	1120 <800>	5 [-]	1 [-]	P.105 P.107
				12			800 [800<680>]	8 [15]	3 [3]	
				6		Double Block: 45, 70, 95, 120~320 (50mm increments)	400	10 [20]	6 [6]	
				3			200	10 [20]	12 [12]	
	TA7C		70mm	24*	±0.01	Single Block: 25~300	1080 <860>	10 [-]	3 [-]	P.109 P.111
				16		Double Block: 40, 65, 90~390 (50mm increments)	700 <560>	12 [25]	7 [7]	
				8			420 <350>	15 [30]	16 [16]	
				4			210	15 [30]	20 [24]	
Side-mounted Motor	TA4R		40mm	16*	±0.01	Single Block: 25~150 (25mm increments)	980 <700>	3 [-]	1 [-]	P.113 P.115
				10			785 <700> [700<525>]	4 [8]	2.5 [2.5]	
				5		Double Block: 40, 65, 90, 140, 190, 240	390	5 [10]	5 [5]	
				2.5			195	5 [10]	10 [10]	
	TA6R		58mm	20*	±0.01	Single Block: 25~200 (25mm increments)	1120 <800>	5 [-]	1 [-]	P.117 P.119
				12			800 <680>	8 [15]	3 [3]	
				6		Double Block: 45, 70, 95, 120~320 (50mm increments)	400	10 [20]	6 [6]	
				3			200	10 [20]	12 [12]	
	TA7R		70mm	24*	±0.01	Single Block: 25~300 (25mm increments)	1080 <860>	10 [-]	3 [-]	P.121 P.123
				16			700 <560>	12 [25]	7 [7]	
				8		Double Block: 40, 65, 90~390 (50mm increments)	420 <350>	15 [30]	16 [16]	
				4			210	15 [30]	20 [24]	

* Single Block (SB) specification only. Values in brackets < > are for when the maximum speed differs due to vertical use. Values in brackets [ ] are for the double-block specification.

Slider Type SA <Cleanroom Specification>

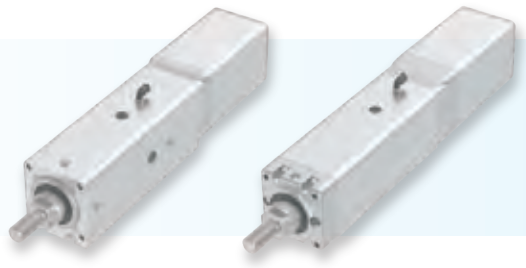
Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Max Speed (mm/s)	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Cleanliness	Reference Page
Coupled Motor	SA4C		 40mm	16	±0.01	1260	7	1.5	ISO Class 2.5 Equivalent (ISO Std. 14644-1:2015) US FED Class 10 (Fed. Std. 209D)	P.125
				10	±0.01 [±0.005]	785	12	3		
				5		390	14	5.5		
				2.5		195	18	12		
	SA6C		 58mm	20	±0.01	1440<1280>	15	1		P.127
				12	±0.01 [±0.005]	900	28	2.5		
				6		450	32	6		
				3		225	40	16		
	SA7C		 70mm	24	±0.01	1200	37	3		P.129
				16		980<840>	46	8		
				8	±0.01 [±0.005]	490	51	16		
				4		245<210>	55	25		
	SA8C		 85mm	30	±0.01	1200<850>	28	3		P.131
				20		1000<800>	60	4		
				10	±0.01 [±0.005]	500	70	25		
				5		250	80	55		

Values in brackets < > are for when the maximum speed differs for vertical use. Values in brackets [ ] are for High-Precision Specification.

Wide Slider Type WSA <Cleanroom Specification>

Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Max Speed (mm/s)	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Cleanliness	Reference Page
Coupled Motor	WSA10C		 100mm	16	±0.01	840	4	–	ISO Class 2.5 Equivalent (ISO Std. 14644-1:2015) US FED Class 10 (Fed. Std. 209D)	P.133
				10	±0.01 [±0.005]	610	15	–		
				5		390<350>	28	3		
				2.5		195<175>	40	10		
	WSA12C		 120mm	20	±0.01	800	12	–		P.135
				12	±0.01 [±0.005]	600	25	–		
				6		450<400>	40	9		
				3		225	60	18		
	WSA14C		 140mm	24	±0.01	700	25	–		P.137
				16		560	50	–		
				8	±0.01 [±0.005]	420<350>	65	14		
				4		210<175>	80	26		
	WSA16C		 160mm	20	±0.01	720	50	–		P.139
				10	±0.01 [±0.005]	450<240>	70	15		
				5		195<170>	100	50		

Values in brackets < > are for when the maximum speed differs for vertical use. Values in brackets [ ] are for High-Precision Specification.



Product Lineup

Rod Type RA <Dust/Splash-Proof Specification>

*Push force can be achieved only during push mode and speed is limited below 20mm/s depending on the model. See manual for details.

Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Max speed (mm/s) Ambient Temperature Exceeding 5°C	Max speed (mm/s) Ambient Temperature 5°C or Below	Max. Push Force (N)*	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Ingress Protection	Reference Page
Coupled Motor	RA4C		40mm	10	±0.01	525 <435>	435	77	11	2	IP65 (IEC 60529 Std.)	P.141
				5		350	260	155	23	4		
				2.5		175 <150>	130	310	40	10		
	RA6C		58mm	12	±0.01	630 <525>	525	93	25	4		P.143
				6		420 <370>	315	185	40	10		
				3		210	105	370	60	20		
	RA7C		70mm	16	±0.01	420	280	273	50	8		P.145
				8		350 <280>	140	547	60	18		
				4		140	105	1094	80	28		
	RA8C		85mm	20	±0.01	350 <330>	300	500	30	3		P.147
				10		200	170	1000	60	35		
				5		100	80	2000	100	70		
Side-mounted Motor	RA4R		40mm	10	±0.01	525 <435>	435	77	11	2	IP65 (IEC 60529 Std.)	P.149
				5		350	260	155	23	4		
				2.5		175 <150>	130	310	40	10		
	RA6R		58mm	12	±0.01	630 <525>	525	93	25	4		P.151
				6		420 <370>	315	185	40	10		
				3		210	105	370	60	20		
	RA7R		70mm	16	±0.01	420	280	273	50	8		P.153
				8		350 <280>	140	547	60	18		
				4		140	105	1094	80	28		
	RA8R		85mm	20	±0.01	350 <330>	300	500	30	3		P.155
				10		200	170	1000	60	35		
				5		100	80	2000	100	70		

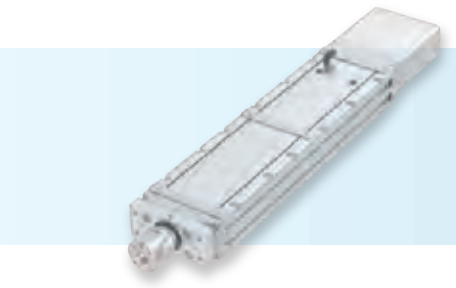
Values in brackets < > are for when the maximum speed differs for vertical use.

Radial Cylinder RRA <Dust/Splash-Proof Specification>

*Push force can be achieved only during push mode and speed is limited below 20mm/s depending on the model. See manual for details.

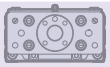
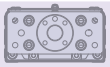
Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Max speed (mm/s) Ambient Temperature Exceeding 5°C	Max speed (mm/s) Ambient Temperature 5°C or Below	Max. Push Force (N)*	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Ingress Protection	Reference Page
Coupled Motor	RRA4C		45mm	10	±0.01	525 <435>	435	77	11	2	IP65 (IEC 60529 Std.)	P.157
				5		350	260	155	23	4		
				2.5		175 <150>	105	310	40	10		
	RRA6C		65mm	12	±0.01	630 <525>	525	93	25	4		P.159
				6		420 <370>	315	185	40	10		
				3		210	105	370	60	20		
	RRA7C		78mm	16	±0.01	420	280	273	50	8		P.161
				8		350 <280>	140	547	60	18		
				4		140	105	1094	80	28		
	RRA8C		85mm	20	±0.01	350 <330>	210	500	30	3		P.163
				10		200	130	1000	60	35		
				5		100	60	2000	100	70		
Side-mounted Motor	RRA4R		45mm	10	±0.01	525 <435>	435	77	11	2	IP65 (IEC 60529 Std.)	P.165
				5		350	260	155	23	4		
				2.5		175 <150>	105	310	40	10		
	RRA6R		65mm	12	±0.01	630 <525>	525	93	25	4		P.167
				6		420 <370>	315	185	40	10		
				3		210	105	370	60	20		
	RRA7R		78mm	16	±0.01	420	280	273	50	8		P.169
				8		350 <280>	140	547	60	18		
				4		140	105	1094	80	28		
	RRA8R		85mm	20	±0.01	350 <330>	210	500	30	3		P.171
				10		200	130	1000	60	35		
				5		100	60	2000	100	70		

Values in brackets < > are for when the maximum speed differs for vertical use.

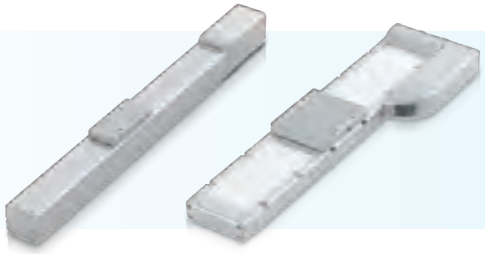


Wide Radial Cylinder WRA <Dust/Splash-Proof Specification>

*Push force can be achieved only during push mode and speed is limited below 20mm/s depending on the model. See manual for details.

Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Max speed (mm/s) Ambient Temperature Exceeding 5°C	Max speed (mm/s) Ambient Temperature 5°C or Below	Max. Push Force (N)*	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Ingress Protection	Reference Page
Coupled Motor	WRA10C		 100mm	10	±0.01	525 <–>	350	77	11.5	–	IP65 (IEC 60529 Std.)	P.173
				5		350 <215>	215	155	28	4		
				2.5		175 <150>	65	310	40	10		
	WRA12C		 120mm	12	±0.01	560 <–>	320	93	30	–		P.175
				6		400 <220>	220	185	55	4		
				3		225 <140>	80	370	70	14		
	WRA14C		 140mm	16	±0.01	420 <–>	280	273	50	–		P.177
				8		280 <210>	140	547	65	11.5		
				4		130	70	1094	85	21.5		
	WRA16C		 160mm	20	±0.01	360 <–>	240	500	30	–		P.179
				10		220 <160>	120	1000	60	30.5		
				5		110 <90>	80	2000	100	59		
Side-mounted Motor	WRA10R		 100mm	10	±0.01	525 <–>	350	77	11.5	–	IP65 (IEC 60529 Std.)	P.181
				5		350 <215>	215	155	28	4		
				2.5		175 <150>	65	310	40	10		
	WRA12R		 120mm	12	±0.01	560 <–>	320	93	30	–		P.183
				6		400 <220>	220	185	55	4		
				3		225 <140>	80	370	70	14		
	WRA14R		 140mm	16	±0.01	420 <–>	280	273	50	–		P.185
				8		280 <210>	140	547	65	11.5		
				4		130	70	1094	85	21.5		
	WRA16R		 160mm	20	±0.01	360 <–>	240	500	30	–		P.187
				10		220 <160>	120	1000	60	30.5		
				5		110 <90>	80	2000	100	59		

Values in brackets < > are for when the maximum speed differs for vertical use.



Model Specification Items

Slider Type: SA

RCP6 / RCP6S — Series — [ ] Type — **WA** Encoder Type — [ ] Motor Type — [ ] Ball Screw Lead — [ ] Stroke — [ ] Applicable Controller (RCP6) / [ ] I/O Type (RCP6S) — [ ] Cable Length — [ ] Options

Series	
RCP6	Separate controller
RCP6S	Built-in controller

Type	
SA4C	Body width 40mm Coupled motor type
SA6C	Body width 58mm Coupled motor type
SA7C	Body width 70mm Coupled motor type
SA8C	Body width 85mm Coupled motor type
SA4R	Body width 40mm Side-mounted motor type
SA6R	Body width 58mm Side-mounted motor type
SA7R	Body width 70mm Side-mounted motor type
SA8R	Body width 85mm Side-mounted motor type

Encoder Type	
WA	Battery-less absolute

Motor Type	
35P	35□ Pulse motor
42P	42□ Pulse motor
56P	56□ Pulse motor
56SP	56□ Pulse motor

Ball Screw Lead	
2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm
30	30mm

Stroke	
50	50mm
≀	≀
1100	1100mm

(Can be set in 50mm increments)

Applicable Controller (RCP6)	
P3	PCON-CB/CGB PCON-CYB/PLB/POB MCON-C/CG-LC/LCG MSEL-PC/PG
P4	PCON-CFB/CGFB MSEL-PCF/PGF
P5	RCON-PC, RSEL-G
P6	RCON-PCF, RSEL-G

When RCP6 (separate controller type) is selected, please pick a code for the applicable controller, and when RCP6S (built-in controller type) is selected, please pick a code for the I/O type.

I/O Type (RCP6S)	
SE	SIO Type

Cable Length	
N	None
P	1m
S	3m
M	5m
X□□	Specified length
R□□	Robot cable

Options	
B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
HPR	High-precision specification
ML	Motor side-mounted to the left
MR	Motor side-mounted to the right
NM	Non-motor end specification
SS	Slider spacer
SR	Slider roller specification
W	Double slider specification

*The type of motor, ball screw lead, stroke, and options vary depending on the actuator type. Please refer to the pages of each type for details.

Wide Slider Type: WSA

RCP6 / RCP6S — Series — [ ] Type — **WA** Encoder Type — [ ] Motor Type — [ ] Ball Screw Lead — [ ] Stroke — [ ] Applicable Controller (RCP6) / [ ] I/O Type (RCP6S) — [ ] Cable Length — [ ] Options

Series	
RCP6	Separate controller
RCP6S	Built-in controller

Type	
WSA10C	Body width 100mm Coupled motor type
WSA12C	Body width 120mm Coupled motor type
WSA14C	Body width 140mm Coupled motor type
WSA16C	Body width 160mm Coupled motor type
WSA10R	Body width 100mm Side-mounted motor type
WSA12R	Body width 120mm Side-mounted motor type
WSA14R	Body width 140mm Side-mounted motor type
WSA16R	Body width 160mm Side-mounted motor type

Encoder Type	
WA	Battery-less absolute

Motor Type	
35P	35□ Pulse motor
42P	42□ Pulse motor
56P	56□ Pulse motor
56SP	56□ Pulse motor

Ball Screw Lead	
2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm

Stroke	
50	50mm
≀	≀
1100	1100mm

(Can be set in 50mm increments)

Applicable Controller (RCP6)	
P3	PCON-CB/CGB PCON-CYB/PLB/POB MCON-C/CG-LC/LCG MSEL-PC/PG
P4	PCON-CFB/CGFB MSEL-PCF/PGF
P5	RCON-PC, RSEL-G
P6	RCON-PCF, RSEL-G

When RCP6 (separate controller type) is selected, please pick a code for the applicable controller, and when RCP6S (built-in controller type) is selected, please pick a code for the I/O type.

I/O Type (RCP6S)	
SE	SIO Type

Cable Length	
N	None
P	1m
S	3m
M	5m
X□□	Specified length
R□□	Robot cable

Options	
B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
HPR	High-precision specification
ML	Motor side-mounted to the left
MR	Motor side-mounted to the right
NM	Non-motor end specification
SR	Slider roller specification

*The type of motor, ball screw lead, stroke, and options vary depending on the actuator type. Please refer to the pages of each type for details.

Rod Type: RA

RCP6 / RCP6S — Series — [ ] Type — WA Encoder Type — [ ] Motor Type — [ ] Ball Screw Lead — [ ] Stroke — [ ] Applicable Controller (RCP6) / [ ] I/O Type (RCP6S) — [ ] Cable Length — [ ] Options

Series	
RCP6	Separate controller
RCP6S	Built-in controller

Type	
RA4C	Body width 40mm Coupled motor type
RA6C	Body width 58mm Coupled motor type
RA7C	Body width 70mm Coupled motor type
RA8C	Body width 85mm Coupled motor type
RA4R	Body width 40mm Side-mounted motor type
RA6R	Body width 58mm Side-mounted motor type
RA7R	Body width 70mm Side-mounted motor type
RA8R	Body width 85mm Side-mounted motor type

Encoder Type	
WA	Battery-less absolute

Motor Type	
35P	35□ Pulse motor
42P	42□ Pulse motor
56P	56□ Pulse motor
60P	60□ Pulse motor

Ball Screw Lead	
2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm

Stroke	
50	50mm
≀	≀
300	300mm

(Can be set in 50mm increments)

Applicable Controller (RCP6)	
P3	PCON-CB/CGB PCON-CYB/PLB/POB MCON-C/CG-LC/LCG MSEL-PC/PG
P4	PCON-CFB/CGFB MSEL-PCF/PGF
P5	RCON-PC, RSEL-G
P6	RCON-PCF, RSEL-G

When RCP6 (separate controller type) is selected, please pick a code for the applicable controller, and when RCP6S (built-in controller type) is selected, please pick a code for the I/O type.

I/O Type (RCP6S)	
SE	SIO Type

Cable Length	
N	None
P	1m
S	3m
M	5m
X□□	Specified length
R□□	Robot cable

Options	
B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
FL	Flange
FT	Foot bracket
ML	Motor side-mounted to the left
MR	Motor side-mounted to the right
MT	Motor side-mounted to the top
NFA	Tip adapter (Internal thread)
NM	Non-motor end specification
NTB	T-slot nut bar

*The type of motor, ball screw lead, stroke, and options vary depending on the actuator type. Please refer to the pages of each type for details.

Radial Cylinder: RRA

RCP6 / RCP6S — Series — [ ] Type — WA Encoder Type — [ ] Motor Type — [ ] Ball Screw Lead — [ ] Stroke — [ ] Applicable Controller (RCP6) / [ ] I/O Type (RCP6S) — [ ] Cable Length — [ ] Options

Series	
RCP6	Separate controller
RCP6S	Built-in controller

Type	
RRA4C	Body width 40mm Coupled motor type
RRA6C	Body width 58mm Coupled motor type
RRA7C	Body width 70mm Coupled motor type
RRA8C	Body width 85mm Coupled motor type
RRA4R	Body width 40mm Side-mounted motor type
RRA6R	Body width 58mm Side-mounted motor type
RRA7R	Body width 70mm Side-mounted motor type
RRA8R	Body width 85mm Side-mounted motor type

Encoder Type	
WA	Battery-less absolute

Motor Type	
35P	35□ Pulse motor
42P	42□ Pulse motor
56P	56□ Pulse motor
60P	60□ Pulse motor

Ball Screw Lead	
2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm

Stroke	
60	60mm
≀	≀
700	700mm

(Can be set in 50mm increments)

Applicable Controller (RCP6)	
P3	PCON-CB/CGB PCON-CYB/PLB/POB MCON-C/CG-LC/LCG MSEL-PC/PG
P4	PCON-CFB/CGFB MSEL-PCF/PGF
P5	RCON-PC, RSEL-G
P6	RCON-PCF, RSEL-G

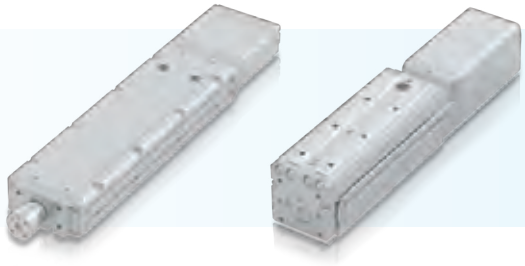
When RCP6 (separate controller type) is selected, please pick a code for the applicable controller, and when RCP6S (built-in controller type) is selected, please pick a code for the I/O type.

I/O Type (RCP6S)	
SE	SIO Type

Cable Length	
N	None
P	1m
S	3m
M	5m
X□□	Specified length
R□□	Robot cable

Options	
B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
FL	Flange
FFA	Tip adapter (Flange)
NFA	Tip adapter (Internal thread)
KFA	Tip adapter (Keyway)
ML	Motor side-mounted to the left
MR	Motor side-mounted to the right
NJ	Knuckle joint
QR	Clevis bracket
NM	Non-motor end specification

*The type of motor, ball screw lead, stroke, and options vary depending on the actuator type. Please refer to the pages of each type for details.



Model Specification Items

Wide Radial Cylinder: WRA

RCP6 / RCP6S — Series — Type — WA — Encoder Type — Motor Type — Ball Screw Lead — Stroke — Applicable Controller (RCP6) / I/O Type (RCP6S) — Cable Length — Options

Series	
RCP6	Separate controller
RCP6S	Built-in controller

Type	
WRA10C	Body width 100mm Coupled motor type
WRA12C	Body width 120mm Coupled motor type
WRA14C	Body width 140mm Coupled motor type
WRA16C	Body width 160mm Coupled motor type
WRA10R	Body width 100mm Side-mounted motor type
WRA12R	Body width 120mm Side-mounted motor type
WRA14R	Body width 140mm Side-mounted motor type
WRA16R	Body width 160mm Side-mounted motor type

Encoder Type	
WA	Battery-less absolute

Motor Type	
35P	35□ Pulse motor
42P	42□ Pulse motor
56P	56□ Pulse motor
60P	60□ Pulse motor

Ball Screw Lead	
2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm

Stroke	
50	50mm
⁝	⁝
800	800mm

(Can be set in 50mm increments)

Applicable Controller (RCP6)	
P3	PCON-CB/CGB PCON-CYB/PLB/POB MCON-C/CG-LC/LCG MSEL-PC/PG
P4	PCON-CFB/CGFB MSEL-PCF/PGF
P5	RCON-PC, RSEL-G
P6	RCON-PCF, RSEL-G

When RCP6 (separate controller type) is selected, please pick a code for the applicable controller, and when RCP6S (built-in controller type) is selected, please pick a code for the I/O type.

I/O Type (RCP6S)	
SE	SIO Type

Cable Length	
N	None
P	1m
S	3m
M	5m
X□□	Specified length
R□□	Robot cable

Options	
B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
FL	Flange
ML	Motor side-mounted to the left
MR	Motor side-mounted to the right
NM	Non-motor end specification
NTBL	T-slot nut bar (Left)
NTBR	T-slot nut bar (Right)

*The type of motor, ball screw lead, stroke, and options vary depending on the actuator type. Please refer to the pages of each type for details.

Table Type: TA

RCP6 / RCP6S — Series — Type — WA — Encoder Type — Motor Type — Ball Screw Lead — Stroke — Applicable Controller (RCP6) / I/O Type (RCP6S) — Cable Length — Options

Series	
RCP6	Separate controller
RCP6S	Built-in controller

Type	
TA4C	Body width 40mm Coupled motor type
TA6C	Body width 58mm Coupled motor type
TA7C	Body width 70mm Coupled motor type
TA4R	Body width 40mm Side-mounted motor type
TA6R	Body width 58mm Side-mounted motor type
TA7R	Body width 70mm Side-mounted motor type

Encoder Type	
WA	Battery-less absolute

Motor Type	
35P	35□ Pulse motor
42P	42□ Pulse motor
56P	56□ Pulse motor

Ball Screw Lead	
2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm

Stroke	
25	25mm
⁝	⁝
390	390mm

Applicable Controller (RCP6)	
P3	PCON-CB/CGB PCON-CYB/PLB/POB MCON-C/CG-LC/LCG MSEL-PC/PG
P5	RCON-PC, RSEL-G

When RCP6 (separate controller type) is selected, please pick a code for the applicable controller, and when RCP6S (built-in controller type) is selected, please pick a code for the I/O type.

I/O Type (RCP6S)	
SE	SIO Type

Cable Length	
N	None
P	1m
S	3m
M	5m
X□□	Specified length
R□□	Robot cable

Options	
B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
DB	High-rigidity (Double-block guide)
ML	Motor side-mounted to the left
MR	Motor side-mounted to the right
NM	Non-motor end specification

*The type of motor, ball screw lead, stroke, and options vary depending on the actuator type. Please refer to the pages of each type for details.

Slider Type: SA <Cleanroom Specification>

RCP6CR / RCP6SCR — Series — Type — WA Encoder Type — Motor Type — Ball Screw Lead — Stroke — Applicable Controller (RCP6CR) / I/O Type (RCP6SCR) — Cable Length — Options

Type	
RCP6CR	Separate controller
RCP6SCR	Built-in controller

Encoder Type	
WA	Battery-less absolute

Motor Type	
35P	35□ Pulse motor
42P	42□ Pulse motor
56P	56□ Pulse motor
56SP	56□ Pulse motor

Stroke	
50	50mm
↓	↓
1100	1100mm

(Can be set in 50mm increments)

I/O Type (RCP6SCR)	
SE	SIO Type

Cable Length	
N	None
P	1m
S	3m
M	5m
X□□	Specified length
R□□	Robot cable

Options	
B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
HPR	High-precision specification
NM	Non-motor end specification
SS	Slider spacer
VR	Air suction joint in opposite position
W	Double slider specification

Series	
SA4C	Body width 40mm Coupled motor type
SA6C	Body width 58mm Coupled motor type
SA7C	Body width 70mm Coupled motor type
SA8C	Body width 85mm Coupled motor type

Ball Screw Lead	
2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm
30	30mm

Applicable Controller (RCP6CR)	
P3	PCON-CB/CGB PCON-CYB/PLB/POB MCON-C/CG-LC/LCG MSEL-PC/PG
P4	PCON-CFB/CGFB MSEL-PCF/PGF
P5	RCON-PC, RSEL-G
P6	RCON-PCF, RSEL-G

When RCP6CR (separate controller type) is selected, please pick a code for the applicable controller, and when RCP6SCR (built-in controller type) is selected, please pick a code for the I/O type.

*The type of motor, ball screw lead, stroke, and options vary depending on the actuator type.
Please refer to the pages of each type for details.

Wide Slider Type: WSA <Cleanroom Specification>

RCP6CR / RCP6SCR — Series — Type — WA Encoder Type — Motor Type — Ball Screw Lead — Stroke — Applicable Controller (RCP6CR) / I/O Type (RCP6SCR) — Cable Length — Options

Type	
RCP6CR	Separate controller
RCP6SCR	Built-in controller

Encoder Type	
WA	Battery-less absolute

Motor Type	
35P	35□ Pulse motor
42P	42□ Pulse motor
56P	56□ Pulse motor
56SP	56□ Pulse motor

Stroke	
50	50mm
↓	↓
1100	1100mm

(Can be set in 50mm increments)

I/O Type (RCP6SCR)	
SE	SIO Type

Cable Length	
N	None
P	1m
S	3m
M	5m
X□□	Specified length
R□□	Robot cable

Options	
B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
HPR	High-precision specification
NM	Non-motor end specification
VR	Air suction joint in opposite position

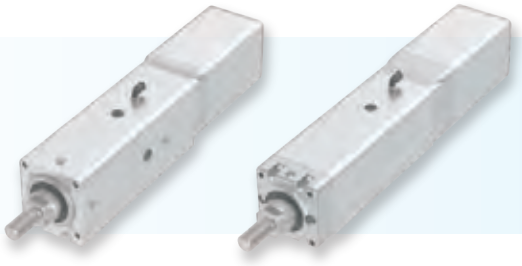
Series	
WSA10C	Body width 100mm Coupled motor type
WSA12C	Body width 120mm Coupled motor type
WSA14C	Body width 140mm Coupled motor type
WSA16C	Body width 160mm Coupled motor type

Ball Screw Lead	
2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm

Applicable Controller (RCP6CR)	
P3	PCON-CB/CGB PCON-CYB/PLB/POB MCON-C/CG-LC/LCG MSEL-PC/PG
P4	PCON-CFB/CGFB MSEL-PCF/PGF
P5	RCON-PC, RSEL-G
P6	RCON-PCF, RSEL-G

When RCP6CR (separate controller type) is selected, please pick a code for the applicable controller, and when RCP6SCR (built-in controller type) is selected, please pick a code for the I/O type.

*The type of motor, ball screw lead, stroke, and options vary depending on the actuator type.
Please refer to the pages of each type for details.



Model Specification Items

Rod Type: RA <Dust/Splash-Proof Specification>

RCP6W / RCP6SW — Type — WA — — — — — / — — —

Series | Type | Encoder Type | Motor Type | Ball Screw Lead | Stroke | Applicable Controller (RCP6W) | I/O Type (RCP6SW) | Cable Length | Options

Series	
RCP6W	Separate controller
RCP6SW	Built-in controller

Type	
RA4C	Body width 40mm Coupled motor type
RA6C	Body width 58mm Coupled motor type
RA7C	Body width 70mm Coupled motor type
RA8C	Body width 85mm Coupled motor type
RA4R	Body width 40mm Side-mounted motor type
RA6R	Body width 58mm Side-mounted motor type
RA7R	Body width 70mm Side-mounted motor type
RA8R	Body width 85mm Side-mounted motor type

Encoder Type	
WA	Battery-less absolute

Motor Type	
35P	35□ Pulse motor
42P	42□ Pulse motor
56P	56□ Pulse motor
60P	60□ Pulse motor

Ball Screw Lead	
2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm

Stroke	
50	50mm
≀	≀
300	300mm

(Can be set in 50mm increments)

Applicable Controller (RCP6W)	
P3	PCON-CB/CGB PCON-CYB/PLB/POB MCON-C/CG-LC/LCG MSEL-PC/PG
P4	PCON-CFB/CGFB MSEL-PCF/PGF
P5	RCON-PC, RSEL-G
P6	RCON-PCF, RSEL-G

I/O Type (RCP6SW)	
SE	SIO Type

Cable Length	
N	None
P	1m
S	3m
M	5m
X□□	Specified length
R□□	Robot cable

When RCP6W (separate controller type) is selected, please pick a code for the applicable controller, and when RCP6SW (built-in controller type) is selected, please pick a code for the I/O type.

Options			
Not specified	Actuator cable length 2m	FL	Flange
AC5	Actuator cable length 5m	FT	Foot bracket
AC10	Actuator cable length 10m	ML	Motor side-mounted to the left
AC15	Actuator cable length 15m	MR	Motor side-mounted to the right
B	Brake	MT	Motor side-mounted on the top
CJT	Cable exit direction (Top)	NFA	Tip adapter (Internal thread)
CJR	Cable exit direction (Right)	NM	Non-motor end specification
CJL	Cable exit direction (Left)	NTB	T-slot nut bar
CJO	Cable exit direction (Outside)		
CJB	Cable exit direction (Bottom)		

* The type of motor, ball screw lead, stroke, and options vary depending on the actuator type.
Please refer to the pages of each type for details.

Radial Cylinder: RRA <Dust/Splash-Proof Specification>

RCP6W / RCP6SW — Type — WA — — — — — / — — —

Series | Type | Encoder Type | Motor Type | Ball Screw Lead | Stroke | Applicable Controller (RCP6W) | I/O Type (RCP6SW) | Cable Length | Options

Series	
RCP6W	Separate controller
RCP6SW	Built-in controller

Type	
RRA4C	Body width 45mm Coupled motor type
RRA6C	Body width 65mm Coupled motor type
RRA7C	Body width 78mm Coupled motor type
RRA8C	Body width 85mm Coupled motor type
RRA4R	Body width 45mm Side-mounted motor type
RRA6R	Body width 65mm Side-mounted motor type
RRA7R	Body width 78mm Side-mounted motor type
RRA8R	Body width 85mm Side-mounted motor type

Encoder Type	
WA	Battery-less absolute

Motor Type	
35P	35□ Pulse motor
42P	42□ Pulse motor
56P	56□ Pulse motor
60P	60□ Pulse motor

Ball Screw Lead	
2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm

Stroke	
50	50mm
≀	≀
700	700mm

(Can be set in 50mm increments)

Applicable Controller (RCP6W)	
P3	PCON-CB/CGB PCON-CYB/PLB/POB MCON-C/CG-LC/LCG MSEL-PC/PG
P4	PCON-CFB/CGFB MSEL-PCF/PGF
P5	RCON-PC, RSEL-G
P6	RCON-PCF, RSEL-G

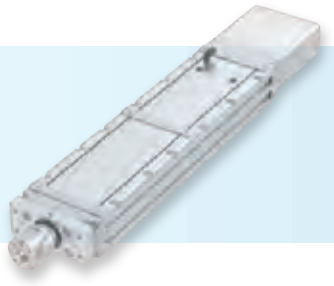
I/O Type (RCP6SW)	
SE	SIO Type

Cable Length	
N	None
P	1m
S	3m
M	5m
X□□	Specified length
R□□	Robot cable

When RCP6W (separate controller type) is selected, please pick a code for the applicable controller, and when RCP6SW (built-in controller type) is selected, please pick a code for the I/O type.

Options			
Not specified	Actuator cable length 2m	FL	Flange
AC5	Actuator cable length 5m	FT	Foot bracket
AC10	Actuator cable length 10m	FFA	Tip adapter (Flange)
AC15	Actuator cable length 15m	KFA	Tip adapter (Keyway)
B	Brake	ML	Motor side-mounted to the left
CJT	Cable exit direction (Top)	MR	Motor side-mounted to the right
CJR	Cable exit direction (Right)	MT	Motor side-mounted on the top
CJL	Cable exit direction (Left)	NFA	Tip adapter (Internal thread)
CJO	Cable exit direction (Outside)	NM	Non-motor end specification
CJB	Cable exit direction (Bottom)	NTB	T-slot nut bar

* The type of motor, ball screw lead, stroke, and options vary depending on the actuator type.
Please refer to the pages of each type for details.



Wide Radial Cylinder: WRA <Dust/Splash-Proof Specification>

RCP6W / RCP6SW — [Type] — WA — [Motor Type] — [Ball Screw Lead] — [Stroke] — [Applicable Controller (RCP6W)] / [I/O Type (RCP6SW)] — [Cable Length] — [Options]

Series

RCP6W	Separate controller
RCP6SW	Built-in controller

Type

WRA10C	Body width 100mm Coupled motor type
WRA12C	Body width 120mm Coupled motor type
WRA14C	Body width 140mm Coupled motor type
WRA16C	Body width 160mm Coupled motor type
WRA10R	Body width 100mm Side-mounted motor type
WRA12R	Body width 120mm Side-mounted motor type
WRA14R	Body width 140mm Side-mounted motor type
WRA16R	Body width 160mm Side-mounted motor type

Encoder Type

WA	Battery-less absolute

Motor Type

35P	35☐ Pulse motor
42P	42☐ Pulse motor
56P	56☐ Pulse motor
60P	60☐ Pulse motor

Ball Screw Lead

2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm

Stroke

50	50mm
↕	↕
800	800mm

(Can be set in 50mm increments)

Applicable Controller (RCP6W)

P3	PCON-CB/CGB PCON-CYB/PLB/POB MCON-C/CG-LC/LCG MSEL-PC/PG
P4	PCON-CFB/CGFB MSEL-PCF/PGF
P5	RCON-PC, RSEL-G
P6	RCON-PCF, RSEL-G

When RCP6W (separate controller type) is selected, please pick a code for the applicable controller, and when RCP6SW (built-in controller type) is selected, please pick a code for the I/O type.

I/O Type (RCP6SW)

SE	SIO Type

Cable Length

N	None
P	1m
S	3m
M	5m
X☐☐	Specified length
R☐☐	Robot cable

Options

Not specified	Actuator cable length 2m
AC5	Actuator cable length 5m
AC10	Actuator cable length 10m
AC15	Actuator cable length 15m
B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
FL	Flange
ML	Motor side-mounted to the left
MR	Motor side-mounted to the right
NM	Non-motor end specification
NTBL	T-slot nut bar (Left)
NTBR	T-slot nut bar (Right)

*The type of motor, ball screw lead, stroke, and options vary depending on the actuator type. Please refer to the pages of each type for details.

RCP6(S)-SA4C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 40 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	SA4C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16:16mm 10:10mm 5: 5mm 2.5:2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

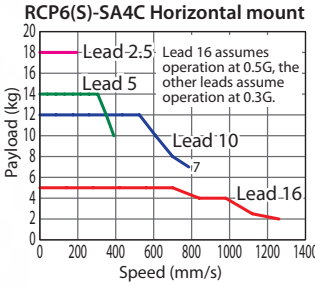
POINT Selection Notes

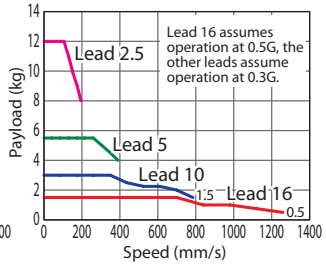
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.207 for more details.
(3) Please refer to P205 for performing push-motion operation.

■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

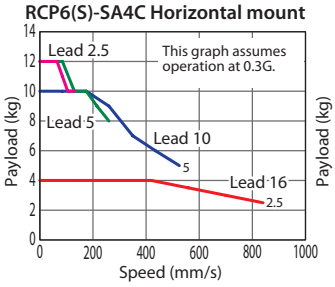
RCP6(S)-SA4C Horizontal mount



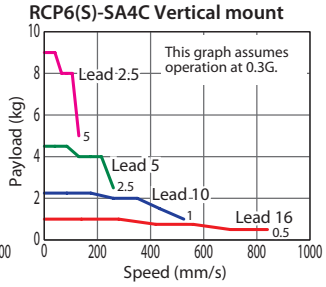


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-SA4C Horizontal mount



RCP6(S)-SA4C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-SA4C-WA-35P-16-①-②-③-④	16	High-output Enabled	7	1.5	48
		High-output Disabled	4	1	
RCP6(S)-SA4C-WA-35P-10-①-②-③-④	10	High-output Enabled	12	3	77
		High-output Disabled	10	2.25	
RCP6(S)-SA4C-WA-35P-5-①-②-③-④	5	High-output Enabled	14	5.5	155
		High-output Disabled	12	4.5	
RCP6(S)-SA4C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	18	12	310
		High-output Disabled	12	9	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
16	High-output Enabled	1260	1060	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		

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G1/G3/G4**	
High-Precision Specification (*1)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195
Double slider specification (*2)	**W**	See P.196

(*1) When the lead is 16, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 248)
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

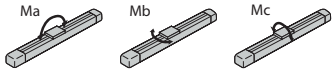
Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 13.0N•m, Mb: 18.6N•m, Mc: 25.3N•m
Dynamic allowable moment (*2)	Ma: 5.0N•m, Mb: 7.1N•m, Mc: 9.7N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

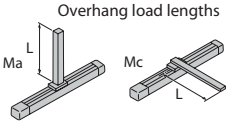
(*1) Values in [ ] are for high-precision (for lead 2.5/5/10) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

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

Allowable load moment directions



Overhang load lengths

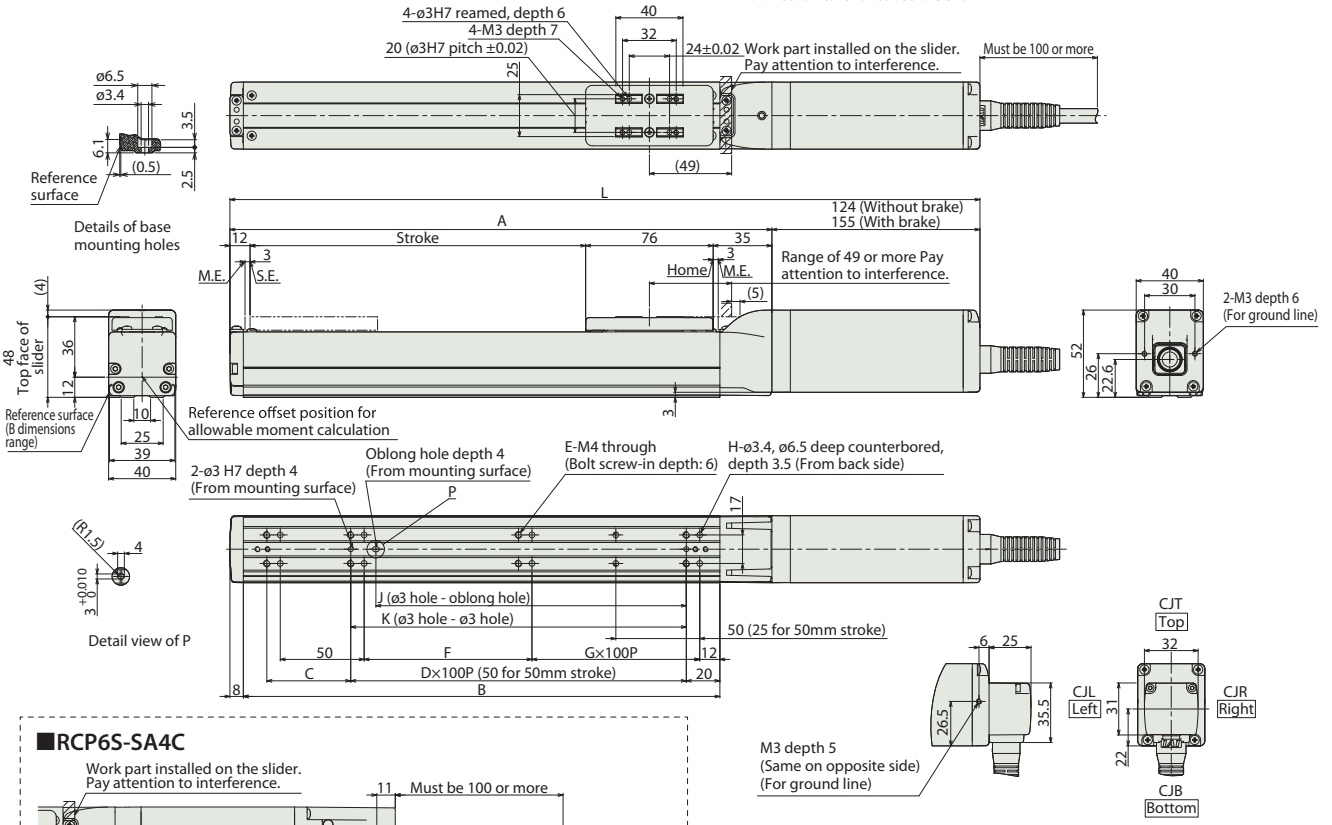


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

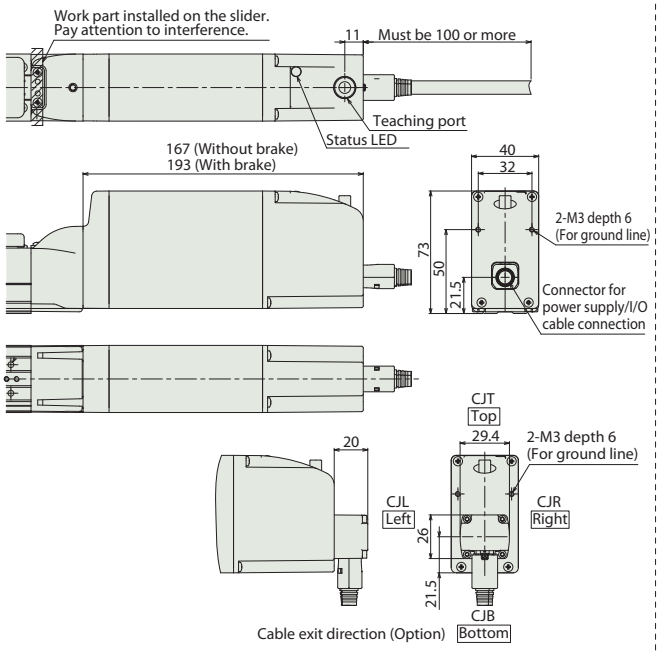
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E.
M.E: Mechanical end S.E: Stroke end



Cable exit direction (Option)

■RCP6S-SA4C



Cable exit direction (Option)

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L	RCP6	w/o brake	297	347	397	447	497	547	597	647	697	747
		w/ brake	328	378	428	478	528	578	628	678	728	778
	RCP6S	w/o brake	340	390	440	490	540	590	640	690	740	790
		w/ brake	366	416	466	516	566	616	666	716	766	816
A			173	223	273	323	373	423	473	523	573	623
B			134	184	234	284	334	384	434	484	534	584
C			50	50	100	50	100	50	100	50	100	50
D			-	1	1	2	2	3	3	4	4	5
E			6	6	6	8	8	10	10	12	12	14
F			50	100	50	100	50	100	50	100	50	100
G			0	0	1	1	2	2	3	3	4	4
H			8	8	10	10	12	12	14	14	16	16
J			35	85	85	185	185	285	285	385	385	485
K			50	100	100	200	200	300	300	400	400	500
Mass (kg)	RCP6	w/o brake	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.9
		w/ brake	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0	2.1
	RCP6S	w/o brake	1.3	1.4	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.1
		w/ brake	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-SA6C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 58 mm | 24V Pulse Motor

■ Model Specification Items

□ — SA6C — WA — 42P — □ — □ — □ — □ — □ — □

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20:20mm 12:12mm 6: 6mm 3: 3mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

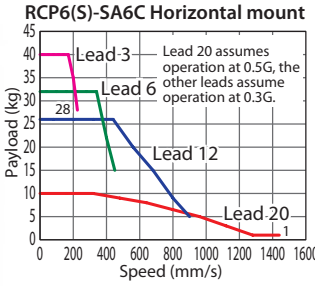
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.207 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

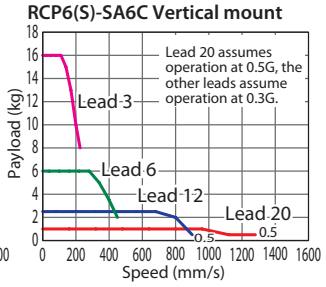
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-SA6C Horizontal mount

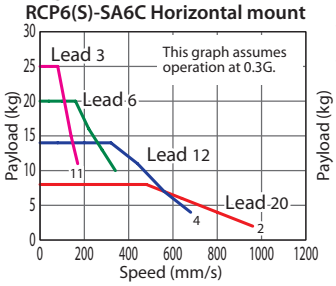


RCP6(S)-SA6C Vertical mount

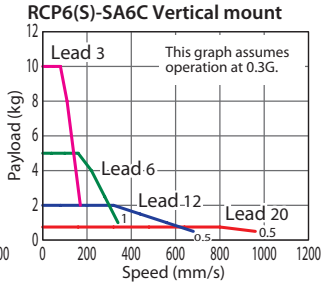


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-SA6C Horizontal mount



RCP6(S)-SA6C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-SA6C-WA-42P-20-①-②-③-④	20	High-output Enabled	15	1	56
		High-output Disabled	8	0.75	
RCP6(S)-SA6C-WA-42P-12-①-②-③-④	12	High-output Enabled	28	2.5	93
		High-output Disabled	14	2	
RCP6(S)-SA6C-WA-42P-6-①-②-③-④	6	High-output Enabled	32	6	185
		High-output Disabled	20	5	
RCP6(S)-SA6C-WA-42P-3-①-②-③-④	3	High-output Enabled	40	16	370
		High-output Disabled	25	10	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(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	1440<1280>		1335<1280>	1130	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	680			620	535	460	405	355	315
6	High-output Enabled	450	435	365	305	265	230	200	175	155
	High-output Disabled	340			305	265	230	200	175	155
3	High-output Enabled	225	215	180	150	130	115	100	85	75
	High-output Disabled	170			150	130	115	100	85	75

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G1/G3/G4**	
High-Precision Specification (*1)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195
Double slider specification (*2)	**W**	See P.196

(*1) When the lead is 20, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 248)
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

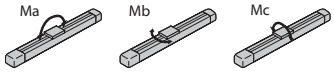
Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 48.5N•m, Mb: 69.3N•m, Mc: 103N•m
Dynamic allowable moment (*2)	Ma: 11.6N•m, Mb: 16.6N•m, Mc: 24.6N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

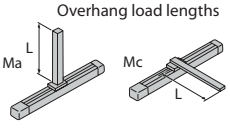
(*1) Values in [ ] are for high-precision (for lead 3/6/12) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 220mm or less, Mb, Mc: 220mm or less

Allowable load moment directions



Overhang load lengths

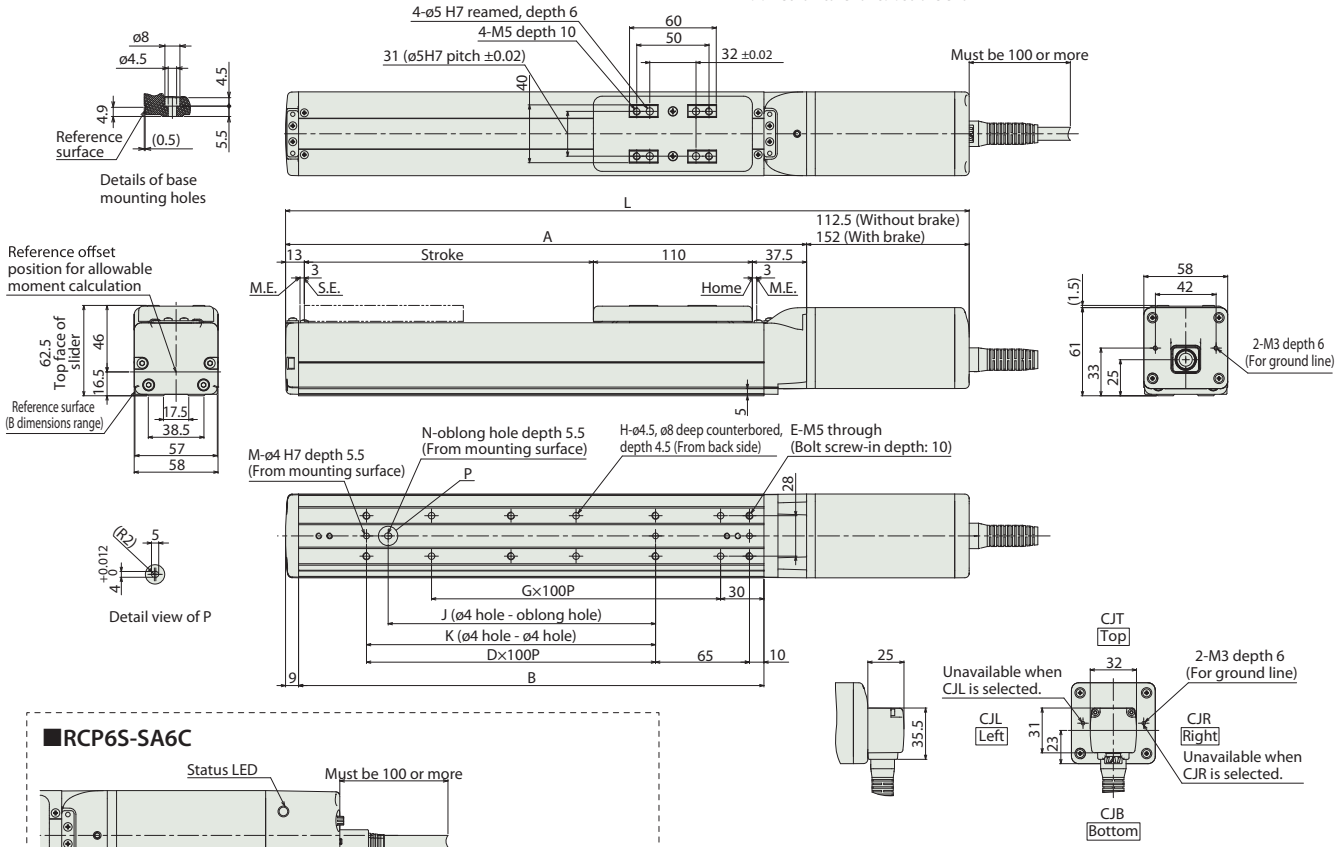


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

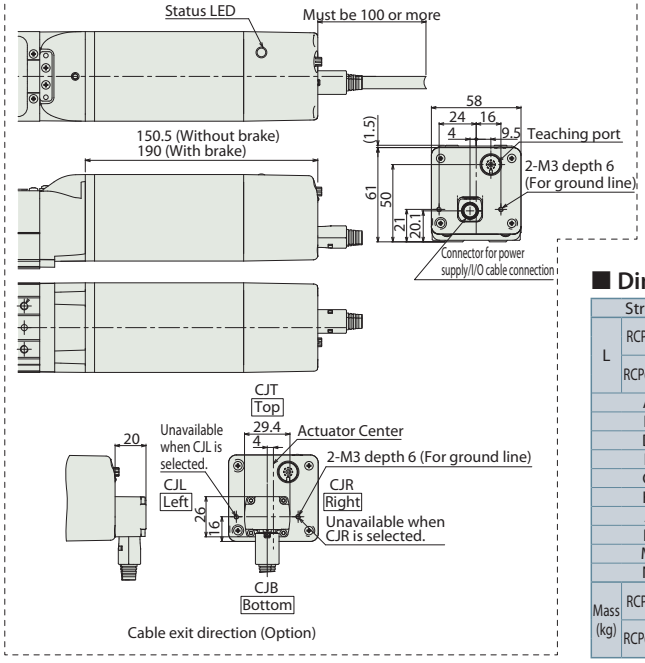
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end



■RCP6S-SA6C



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	RCP6	w/o brake	323	373	423	473	523	573	623	673	723	773	823	873	923	973	1,023	1,073
		w/ 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
	RCP6S	w/o brake	361	411	461	511	561	611	661	711	761	811	861	911	961	1,011	1,061	1,111
		w/ brake	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1,000.5	1,050.5	1,100.5	1,150.5
A			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
B			172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
D			0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H			4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J			0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K			0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
M			2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N			0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	2.0	2.2	2.3	2.5	2.7	2.8	3.0	3.2	3.4	3.5	3.7	3.9	4.1	4.2	4.4	4.6
		w/ brake	2.2	2.4	2.6	2.8	2.9	3.1	3.3	3.4	3.6	3.8	4.0	4.1	4.3	4.5	4.6	4.8
	RCP6S	w/o brake	2.1	2.3	2.5	2.6	2.8	3.0	3.2	3.3	3.5	3.7	3.9	4.0	4.2	4.4	4.6	4.7
		w/ brake	2.4	2.5	2.7	2.9	3.1	3.2	3.4	3.6	3.8	3.9	4.1	4.3	4.4	4.6	4.8	4.9

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-SA7C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 70 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	SA7C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24:24mm 16:16mm 8: 8mm 4: 4mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

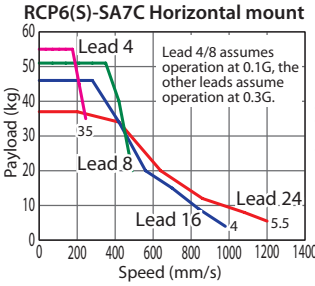
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.207 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

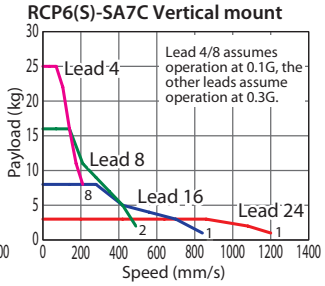
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-SA7C Horizontal mount

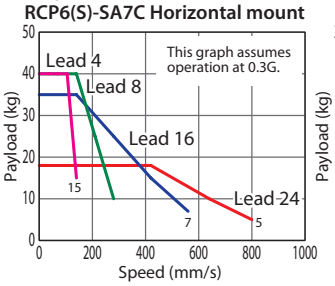


RCP6(S)-SA7C Vertical mount

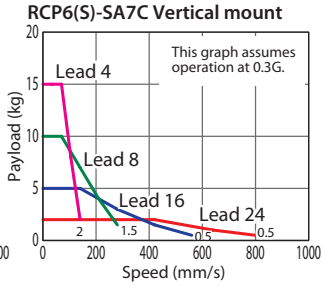


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-SA7C Horizontal mount



RCP6(S)-SA7C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-SA7C-WA-56P-24-①-②-③-④	24	High-output Enabled	37	3	112
		High-output Disabled	18	2	
RCP6(S)-SA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	46	8	168
		High-output Disabled	35	5	
RCP6(S)-SA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	51	16	336
		High-output Disabled	40	10	
RCP6(S)-SA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	55	25	673
		High-output Disabled	40	15	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~500 (Every 50mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
24	High-output Enabled	1200			1095	965	850	760
	High-output Disabled	800						760
16	High-output Enabled	980<840>	965<840>	830	720	635	560	500
	High-output Disabled	560						500
8	High-output Enabled	490	475	410	355	315	275	245
	High-output Disabled	280					275	245
4	High-output Enabled	245<210>	235<210>	205	175	155	135	120
	High-output Disabled	140					135	120

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G1/G3/G4**	
High-Precision Specification (*1)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195
Double slider specification (*2)	**W**	See P.196

(*1) When the lead is 16/24, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 248)
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

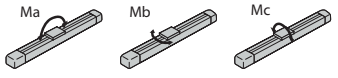
Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 115N•m, Mb: 115N•m, Mc: 229N•m
Dynamic allowable moment (*2)	Ma: 44.7N•m, Mb: 44.7N•m, Mc: 89.1N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

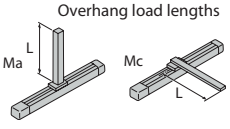
(*1) Values in [ ] are for high-precision (for lead 4/8) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 300mm or less, Mb, Mc: 300mm or less

Allowable load moment directions



Overhang load lengths



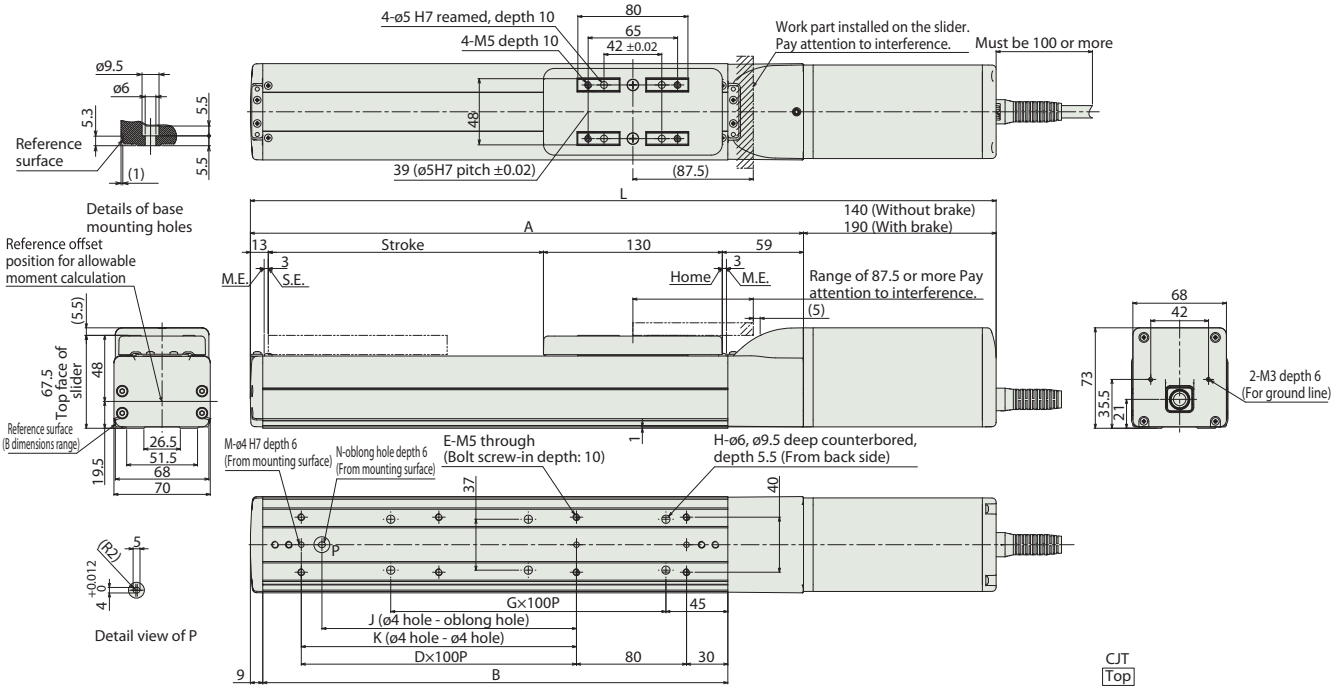
Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

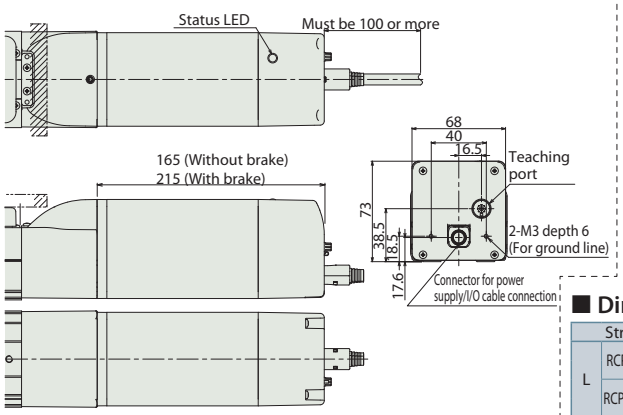
CAD drawings can be downloaded from our website.
www.iai-automation.com

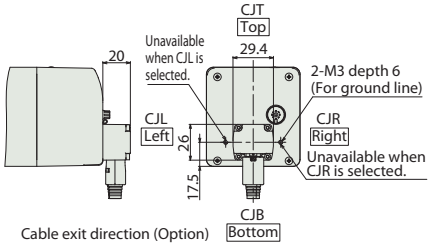
2D CAD 3D CAD

*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 M.E.
M.E: Mechanical end S.E: Stroke end

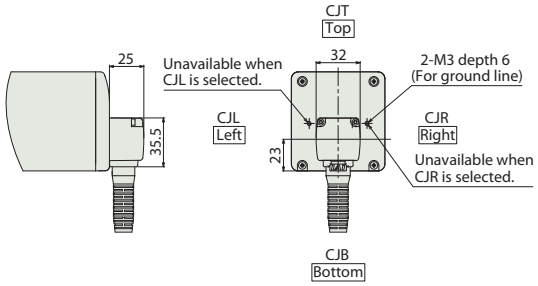


■RCP6S-SA7C





Cable exit direction (Option)



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	RCP6	w/o brake	392	442	492	542	592	642	692	742	792	842	892	942	992	1,042	1,092	1,142
		w/ brake	442	492	542	592	642	692	742	792	842	892	942	992	1,042	1,092	1,142	1,192
	RCP6S	w/o brake	417	467	517	567	617	667	717	767	817	867	917	967	1,017	1,067	1,117	1,167
		w/ brake	467	517	567	617	667	717	767	817	867	917	967	1,017	1,067	1,117	1,167	1,217
A			252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1,002
B			188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
D			0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H			4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J			0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K			0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
M			2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N			0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	3.6	3.8	4.0	4.3	4.5	4.7	4.9	5.2	5.4	5.6	5.9	6.1	6.3	6.5	6.8	7.0
		w/ brake	4.0	4.2	4.5	4.7	4.9	5.1	5.4	5.6	5.8	6.1	6.3	6.5	6.7	7.0	7.2	7.4
	RCP6S	w/o brake	3.8	4.0	4.2	4.4	4.7	4.9	5.1	5.3	5.6	5.8	6.0	6.3	6.5	6.7	6.9	7.2
		w/ brake	4.2	4.4	4.6	4.9	5.1	5.3	5.6	5.8	6.0	6.2	6.5	6.7	6.9	7.1	7.4	7.6

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-SA8C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 85 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	SA8C	WA: Battery-less Absolute	56SP: High-thrust Pulse Motor 56□ Size	30: 30mm 20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 1100: 1100mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

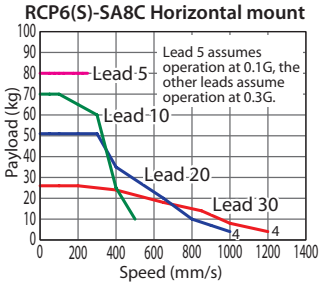
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.207 for more details.
(3) Please refer to P205 for performing push-motion operation.

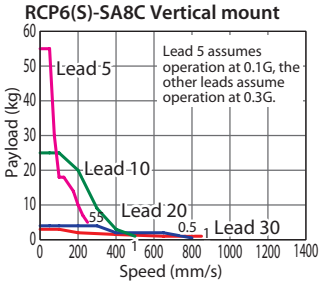
■ Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.

RCP6(S)-SA8C Horizontal mount



RCP6(S)-SA8C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-SA8C-WA-56SP-30-①-②-③-④	30	28	3	159
RCP6(S)-SA8C-WA-56SP-20-①-②-③-④	20	60	4	239
RCP6(S)-SA8C-WA-56SP-10-①-②-③-④	10	70	25	478
RCP6(S)-SA8C-WA-56SP-5-①-②-③-④	5	80	55	956

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	50~650 (Every 50mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
30	1200 <850>			1155 <850>	1040 <850>	940 <850>	855 <850>	780	715	660
20	1000 <800>	950 <800>	860 <800>	770	695	630	570	520	480	440
10	500	480	430	385	345	310	285	260	235	220
5	250	240	215	190	175	155	140	130	120	110

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G1/G3/G4**	
High-Precision Specification (*1)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195
Double slider specification (*2)	**W**	See P.196

(*1) When the lead is 20/30, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 248)
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

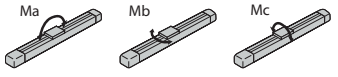
Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 219N•m, Mb: 219N•m, Mc: 414N•m
Dynamic allowable moment (*2)	Ma: 77.0N•m, Mb: 77.0N•m, Mc: 146N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

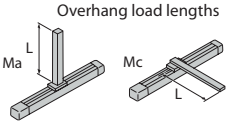
(*1) Values in [ ] are for high-precision (for lead 5/10) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 400mm or less, Mb, Mc: 400mm or less

Allowable load moment directions



Overhang load lengths

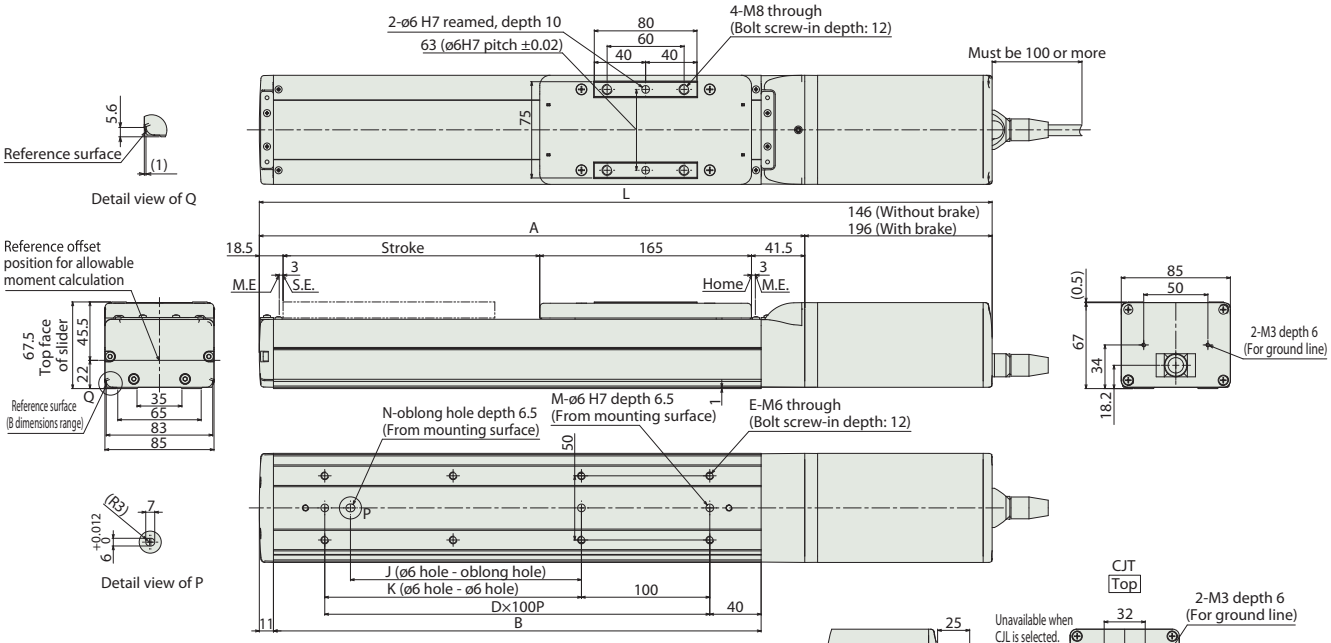


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

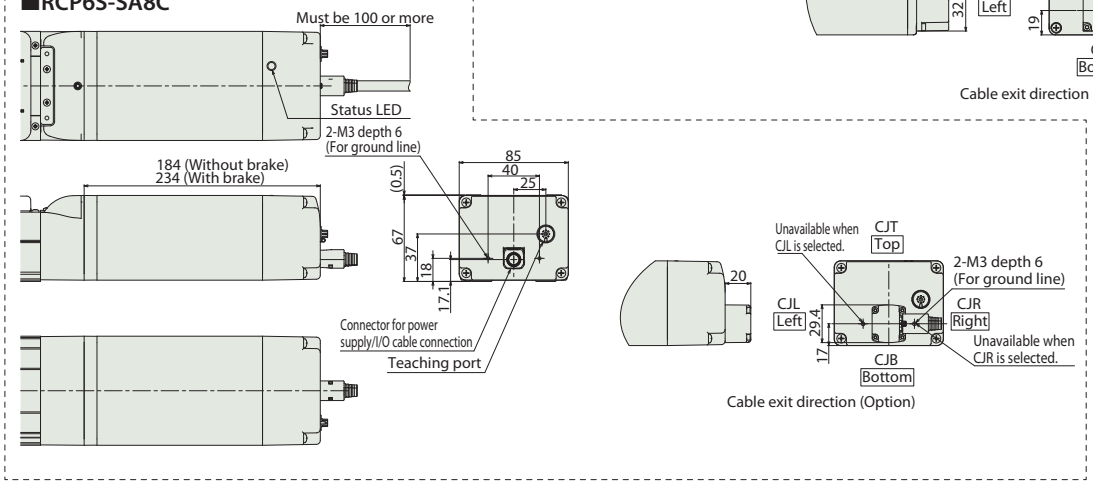
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end



■RCP6S-SA8C



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1,050	1,100
L	RCP6	w/o brake	421	471	521	571	621	671	721	771	821	871	921	971	1,021	1,071	1,121	1,171	1,221	1,271	1,321	1,371	1,421	1,471
		w/ brake	471	521	571	621	671	721	771	821	871	921	971	1,021	1,071	1,121	1,171	1,221	1,271	1,321	1,371	1,421	1,471	1,521
	RCP6S	w/o brake	459	509	559	609	659	709	759	809	859	909	959	1,009	1,059	1,109	1,159	1,209	1,259	1,309	1,359	1,409	1,459	1,509
		w/ brake	509	559	609	659	709	759	809	859	909	959	1,009	1,059	1,109	1,159	1,209	1,259	1,309	1,359	1,409	1,459	1,509	1,559
A			275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1,025	1,075	1,125	1,175	1,225	1,275	1,325
B			230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1,030	1,080	1,130	1,180	1,230	1,280
D			1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
E			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
J			0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1,080
K			0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1,000	1,000	1,100
M			2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	4.5	4.7	5.0	5.3	5.5	5.8	6.1	6.4	6.6	6.9	7.2	7.5	7.7	8.0	8.3	8.5	8.8	9.1	9.4	9.6	9.9	10.2
		w/ brake	5.0	5.2	5.5	5.8	6.1	6.3	6.6	6.9	7.1	7.4	7.7	8.0	8.2	8.5	8.8	9.1	9.3	9.6	9.9	10.1	10.4	10.7
	RCP6S	w/o brake	4.7	4.9	5.2	5.5	5.8	6.0	6.3	6.6	6.9	7.1	7.4	7.7	7.9	8.2	8.5	8.8	9.0	9.3	9.6	9.9	10.1	10.4
		w/ brake	5.2	5.5	5.7	6.0	6.3	6.5	6.8	7.1	7.4	7.6	7.9	8.2	8.5	8.7	9.0	9.3	9.5	9.8	10.1	10.4	10.6	10.9

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)-SA4R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 24V Pulse Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	SA4R	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16:16mm 10:10mm 5: 5mm 2.5:2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

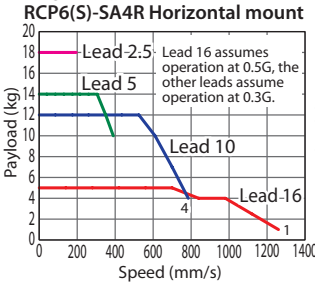
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.209 for more details.
(3) Please refer to P205 for performing push-motion operation.

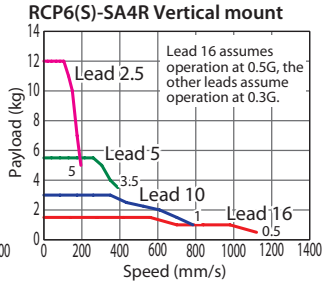
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-SA4R Horizontal mount

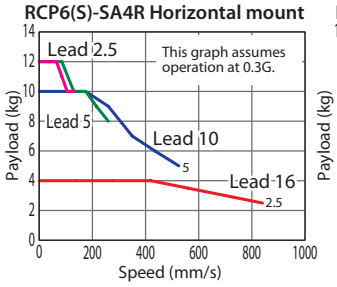


RCP6(S)-SA4R Vertical mount

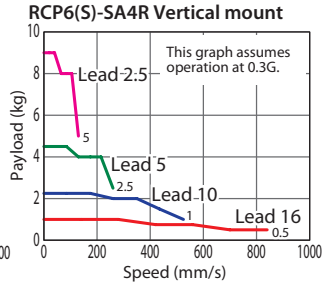


(2) High-output disabled with PCON/RCON/MCON/RSEL connected.

RCP6(S)-SA4R Horizontal mount



RCP6(S)-SA4R Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-SA4R-WA-35P-16-①-②-③-④	16	High-output Enabled	7	1.5	48
		High-output Disabled	4	1	
RCP6(S)-SA4R-WA-35P-10-①-②-③-④	10	High-output Enabled	12	3	77
		High-output Disabled	10	2.25	
RCP6(S)-SA4R-WA-35P-5-①-②-③-④	5	High-output Enabled	14	5.5	155
		High-output Disabled	12	4.5	
RCP6(S)-SA4R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	18	12	310
		High-output Disabled	12	9	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
16	High-output Enabled	1260<1120>	1060	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		

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195
Double slider specification (*1)	**W**	See P.196

(*1) Some leads cannot be selected. (Please see P. 248)
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

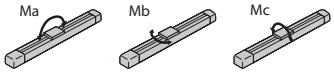
Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 13.0N•m, Mb: 18.6N•m, Mc: 25.3N•m
Dynamic allowable moment (1*)	Ma: 5.0N•m, Mb: 7.1N•m, Mc: 9.7N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

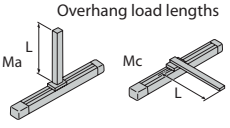
(*1) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

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

Allowable load moment directions



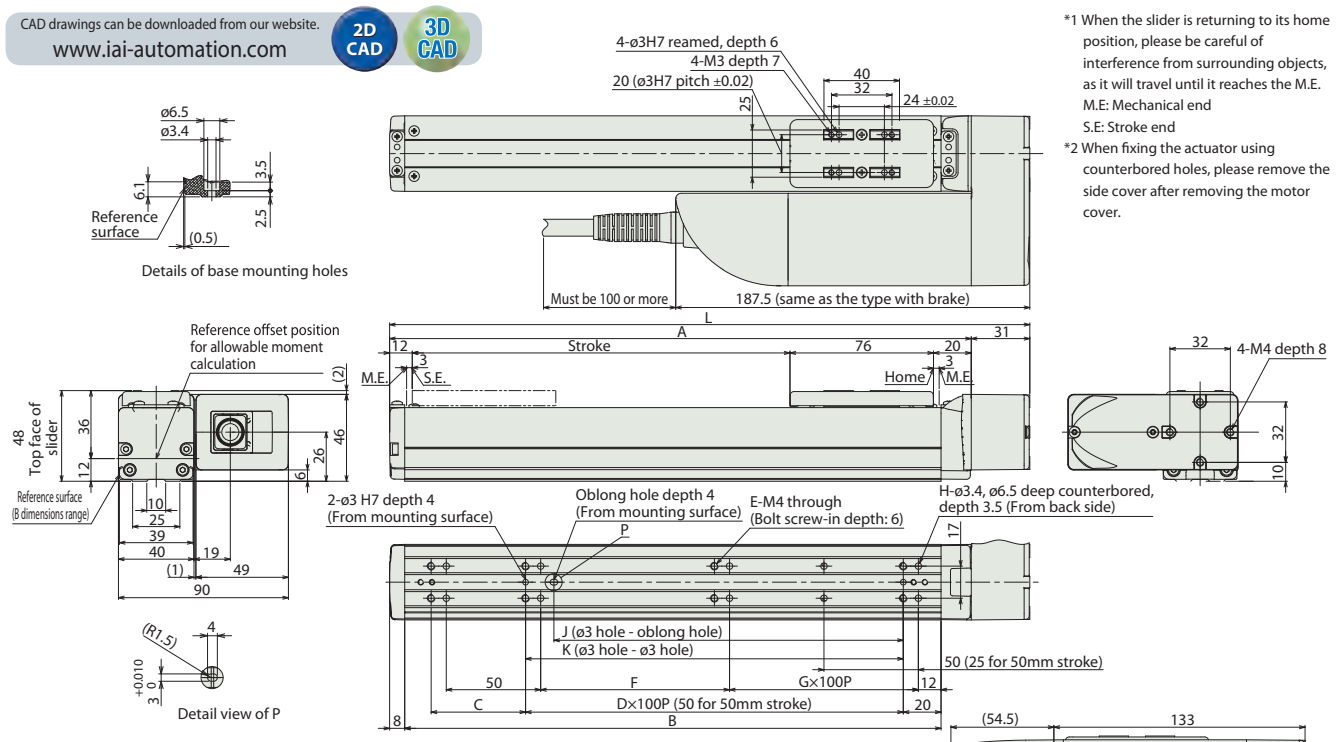
Overhang load lengths



Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

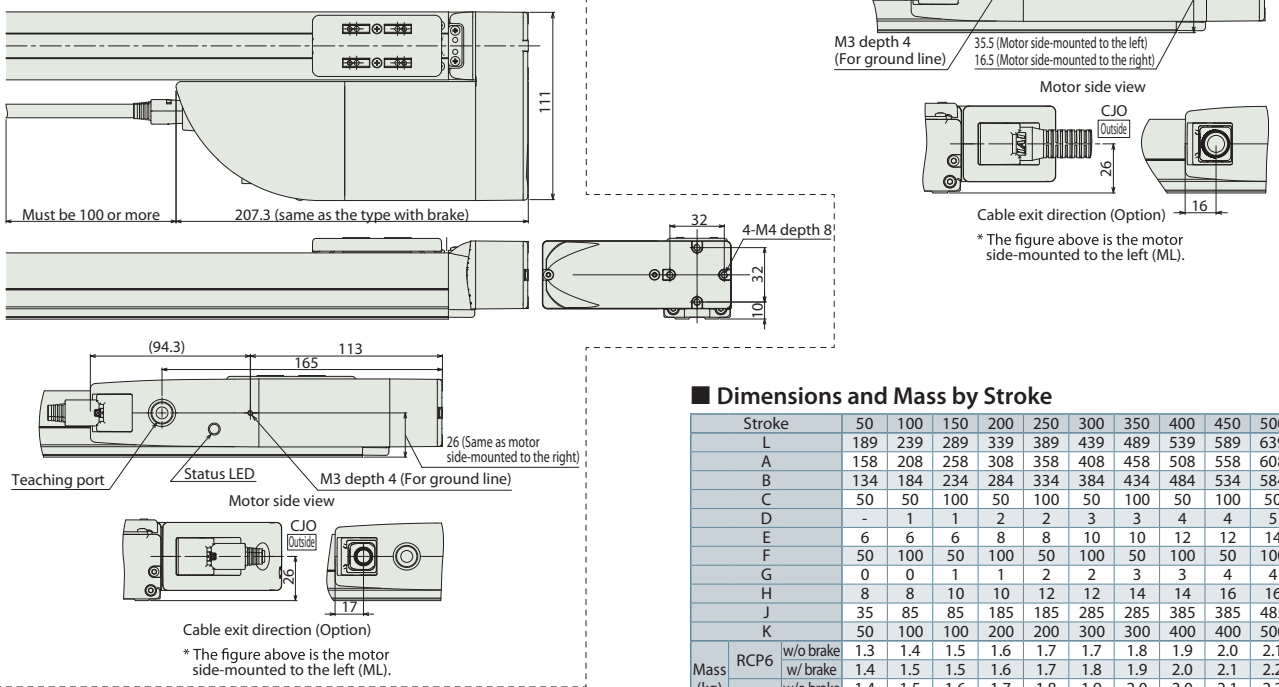
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end
S.E: Stroke end
*2 When fixing the actuator using counterbored holes, please remove the side cover after removing the motor cover.

■RCP6S-SA4R



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

* The figure above is 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			189	239	289	339	389	439	489	539	589	639
A			158	208	258	308	358	408	458	508	558	608
B			134	184	234	284	334	384	434	484	534	584
C			50	50	100	50	100	50	100	50	100	50
D			-	1	1	2	2	3	3	4	4	5
E			6	6	6	8	8	10	10	12	12	14
F			50	100	50	100	50	100	50	100	50	100
G			0	0	1	1	2	2	3	3	4	4
H			8	8	10	10	12	12	14	14	16	16
J			35	85	85	185	185	285	285	385	385	485
K			50	100	100	200	200	300	300	400	400	500
Mass (kg)	RCP6	w/o brake	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.9	2.0	2.1
		w/ brake	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2
	RCP6S	w/o brake	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.0	2.1	2.2
		w/ brake	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.1	2.2	2.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-SA6R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 58* mm | 24V Pulse Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

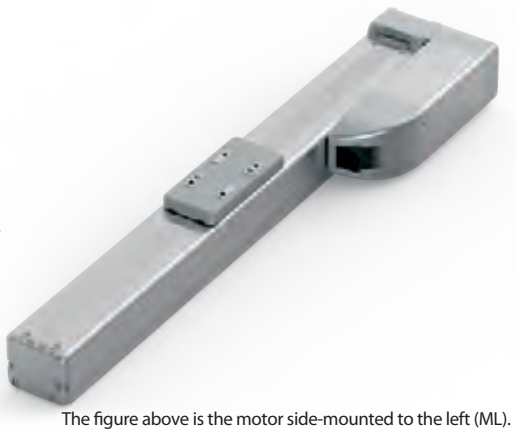
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	SA6R	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20:20mm 12:12mm 6: 6mm 3: 3mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

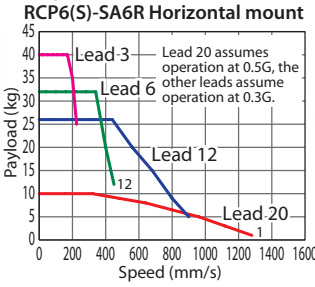
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.209 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

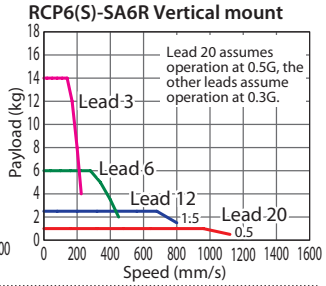
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-SA6R Horizontal mount

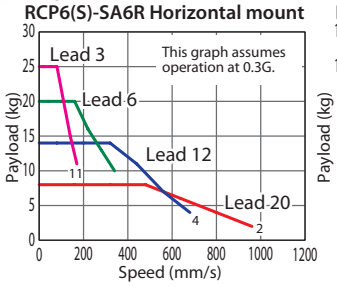


RCP6(S)-SA6R Vertical mount

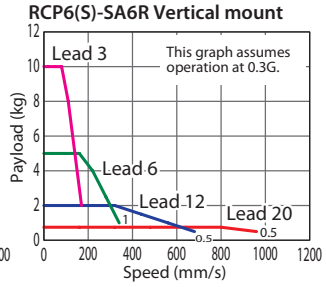


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-SA6R Horizontal mount



RCP6(S)-SA6R Vertical mount



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-SA6R-WA-42P-20-①-②-③-④	20	High-output Enabled	15	1	56
		High-output Disabled	8	0.75	
RCP6(S)-SA6R-WA-42P-12-①-②-③-④	12	High-output Enabled	28	2.5	93
		High-output Disabled	14	2	
RCP6(S)-SA6R-WA-42P-6-①-②-③-④	6	High-output Enabled	32	6	185
		High-output Disabled	20	5	
RCP6(S)-SA6R-WA-42P-3-①-②-③-④	3	High-output Enabled	40	14	370
		High-output Disabled	25	10	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Stroke and Max. Speed

(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	1280<1120>			1130<1120>	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	680			620	535	460	405	355	315
6	High-output Enabled	450	435	365	305	265	230	200	175	155
	High-output Disabled	340			305	265	230	200	175	155
3	High-output Enabled	225	215	180	150	130	115	100	85	75
	High-output Disabled	170			150	130	115	100	85	75

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195
Double slider specification (*1)	**W**	See P.196

(*1) Some leads cannot be selected. (Please see P. 248)
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

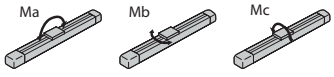
Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 48.5N•m, Mb: 69.3N•m, Mc: 103N•m
Dynamic allowable moment (1*)	Ma: 11.6N•m, Mb: 16.6N•m, Mc: 24.6N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

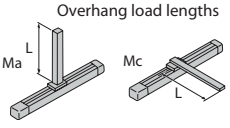
(*1) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 220mm or less, Mb, Mc: 220mm or less

Allowable load moment directions



Overhang load lengths

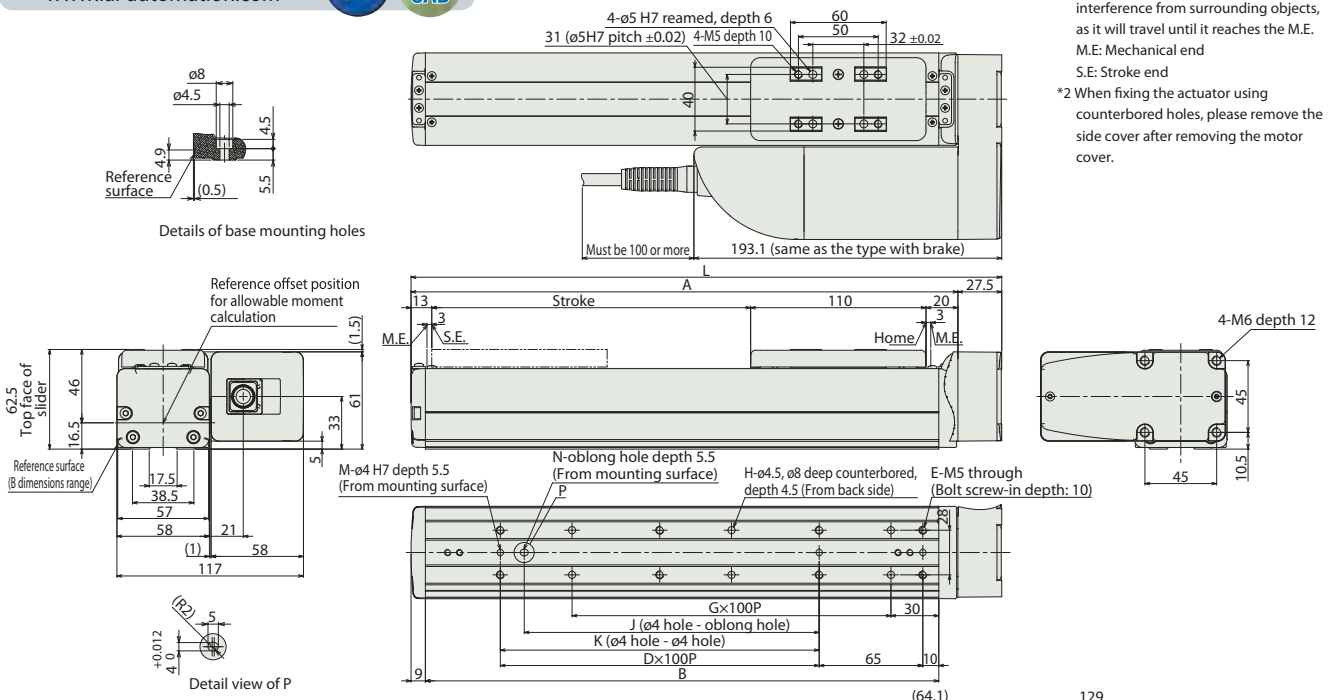


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

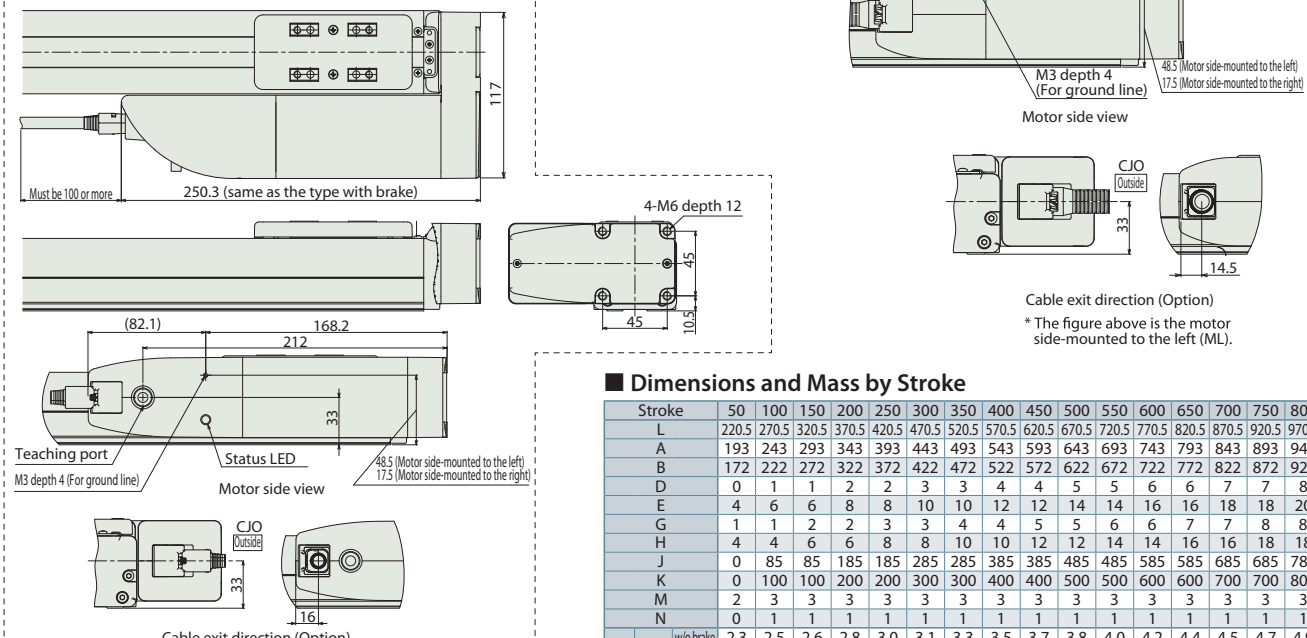
Dimensions

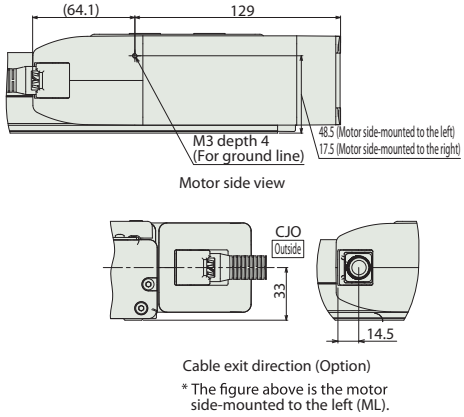
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E.
M.E: Mechanical end
S.E: Stroke end
*2 When fixing the actuator using counterbored holes, please remove the side cover after removing the motor cover.



■RCP6S-SA6R





■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L			220.5	270.5	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5
A			193	243	293	343	393	443	493	543	593	643	693	743	793	843	893	943
B			172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
D			0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H			4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J			0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K			0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
M			2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N			0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	2.3	2.5	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
		w/ brake	2.4	2.5	2.7	2.9	3.0	3.2	3.4	3.6	3.7	3.9	4.1	4.3	4.4	4.6	4.8	4.9
	RCP6S	w/o brake	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	4.8	5.0
		w/ brake	2.5	2.7	2.8	3.0	3.2	3.4	3.5	3.7	3.9	4.1	4.2	4.4	4.6	4.7	4.9	5.1

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-SA7R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 24V Pulse Motor

* Body width does not include the width of the side-mounted motor.

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	SA7R	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

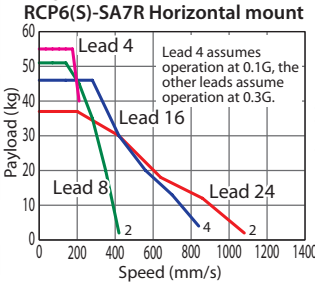
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.209 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

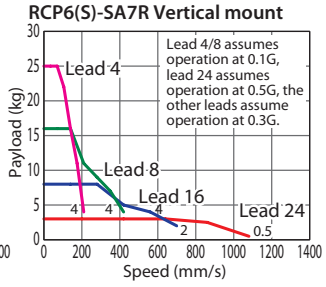
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-SA7R Horizontal mount

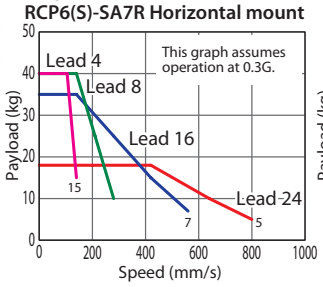


RCP6(S)-SA7R Vertical mount

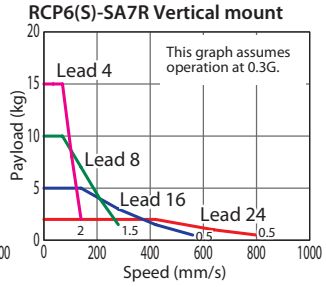


(2) High-output disabled with PCON/RCON/MCON/RSEL connected.

RCP6(S)-SA7R Horizontal mount



RCP6(S)-SA7R Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-SA7R-WA-56P-24-①-②-③-④	24	High-output Enabled	37	3	112
		High-output Disabled	18	2	
RCP6(S)-SA7R-WA-56P-16-①-②-③-④	16	High-output Enabled	46	8	168
		High-output Disabled	35	5	
RCP6(S)-SA7R-WA-56P-8-①-②-③-④	8	High-output Enabled	51	16	336
		High-output Disabled	40	10	
RCP6(S)-SA7R-WA-56P-4-①-②-③-④	4	High-output Enabled	55	25	673
		High-output Disabled	40	15	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~500 (Every 50mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
24	High-output Enabled	1080			965	850	760
	High-output Disabled	800					760
16	High-output Enabled	840<700>	830<700>	720<700>	635	560	500
	High-output Disabled	560					500
8	High-output Enabled	420	410	355	315	275	245
	High-output Disabled	280				275	245
4	High-output Enabled	210	205	175	155	135	120
	High-output Disabled	140				135	120

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195
Slider spacer (*1)	**SS**	See P.195
Double slider specification (*2)	**W**	See P.196

(*1) Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 248)
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

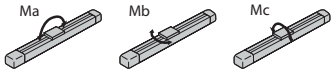
Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 115N•m, Mb: 115N•m, Mc: 229N•m
Dynamic allowable moment (1*)	Ma: 44.7N•m, Mb: 44.7N•m, Mc: 89.1N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

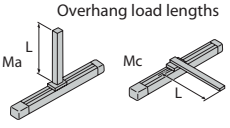
(*1) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 300mm or less, Mb, Mc: 300mm or less

Allowable load moment directions



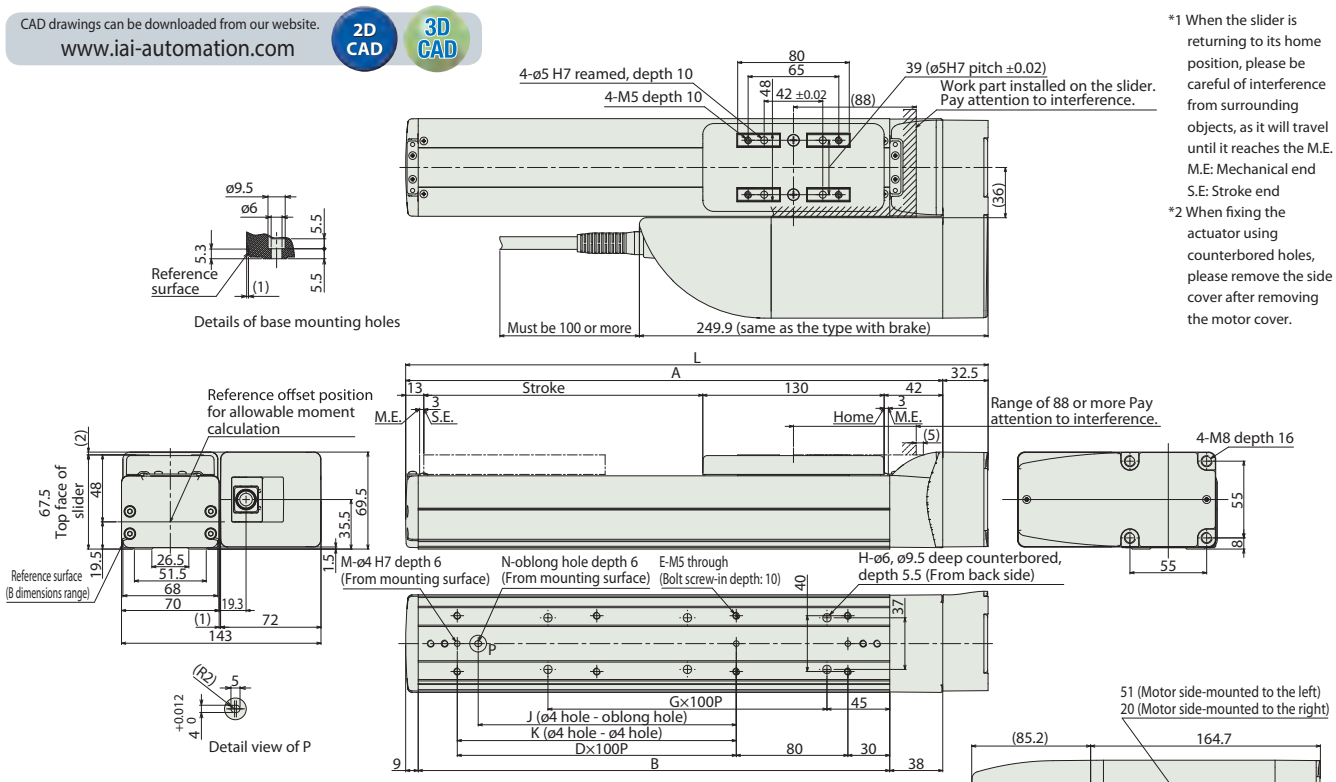
Overhang load lengths



Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

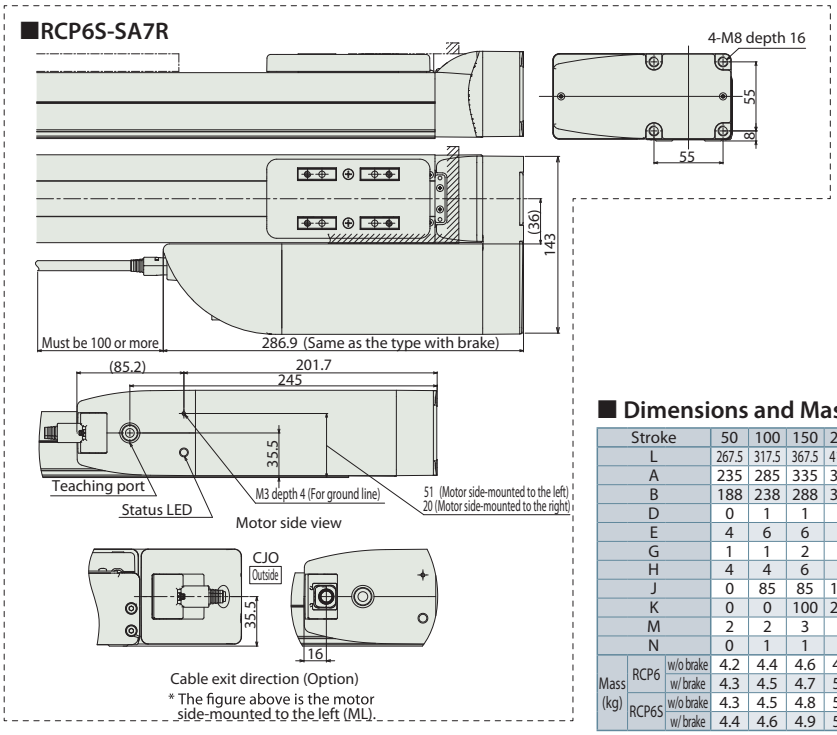
CAD drawings can be downloaded from our website.
www.iai-automation.com



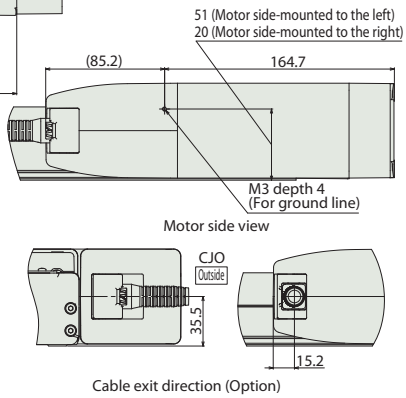
*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end
S.E: Stroke end

*2 When fixing the actuator using counterbored holes, please remove the side cover after removing the motor cover.

■RCP6S-SA7R



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



* The figure above is 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			267.5	317.5	367.5	417.5	467.5	517.5	567.5	617.5	667.5	717.5	767.5	817.5	867.5	917.5	967.5	1,017.5
A			235	285	335	385	435	485	535	585	635	685	735	785	835	885	935	985
B			188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
D			0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H			4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J			0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K			0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
M			2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N			0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	4.2	4.4	4.6	4.9	5.1	5.3	5.5	5.8	6.0	6.2	6.4	6.7	6.9	7.1	7.3	7.6
		w/ brake	4.3	4.5	4.7	5.0	5.2	5.4	5.6	5.9	6.1	6.3	6.6	6.8	7.0	7.2	7.5	7.7
	RCP6S	w/o brake	4.3	4.5	4.8	5.0	5.2	5.4	5.7	5.9	6.1	6.3	6.6	6.8	7.0	7.2	7.5	7.7
		w/ brake	4.4	4.6	4.9	5.1	5.3	5.5	5.8	6.0	6.2	6.4	6.7	6.9	7.1	7.3	7.6	7.8

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, POWERLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-SA8R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 85* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	SA8R	WA: Battery-less Absolute	56SP: High-thrust Pulse Motor 56□ Size	30: 30mm 20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 1100: 1100mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify either ML or MR when ordering the side-mounted motor type.

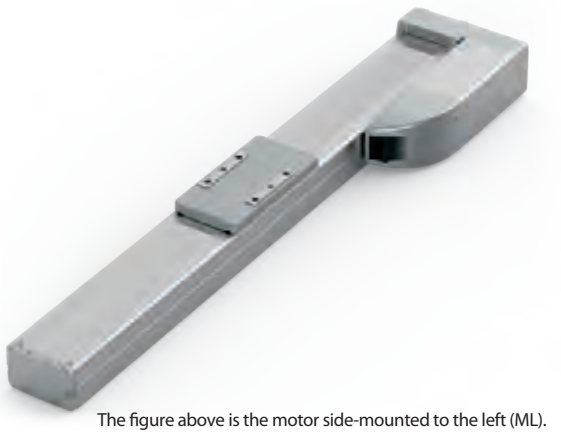
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

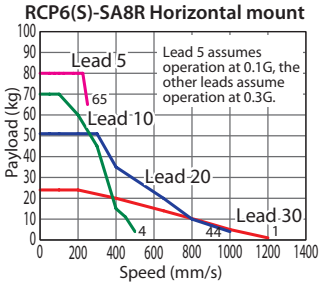
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.209 for more details.
(3) Please refer to P205 for performing push-motion operation.

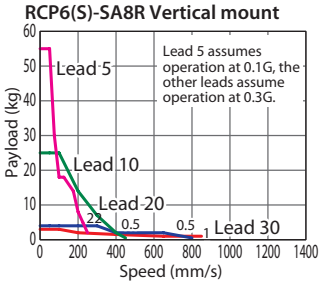
■ Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.

RCP6(S)-SA8R Horizontal mount



RCP6(S)-SA8R Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-SA8R-WA-56SP-30-①-②-③-④	30	26	3	159
RCP6(S)-SA8R-WA-56SP-20-①-②-③-④	20	55	4	239
RCP6(S)-SA8R-WA-56SP-10-①-②-③-④	10	70	25	478
RCP6(S)-SA8R-WA-56SP-5-①-②-③-④	5	80	55	956

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	50~650 (Every 50mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
30	1200 <850>			1155 <850>	1040 <850>	940 <850>	855 <850>	780	715	660
20	1000 <800>	950 <800>	860 <800>	770	695	630	570	520	480	440
10	500 <450>	480 <450>	430	385	345	310	285	260	235	220
5	250	240	215	190	175	155	145	130	120	110

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195
Slider spacer (*1)	**SS**	See P.195
Double slider specification (*2)	**W**	See P.196

(*1) Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 248)
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

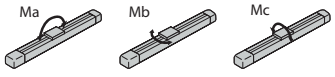
Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 219N•m, Mb: 219N•m, Mc: 414N•m
Dynamic allowable moment (1*)	Ma: 77.0N•m, Mb: 77.0N•m, Mc: 146N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

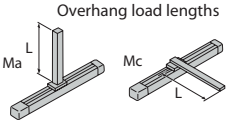
(*1) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 400mm or less, Mb, Mc: 400mm or less

Allowable load moment directions



Overhang load lengths



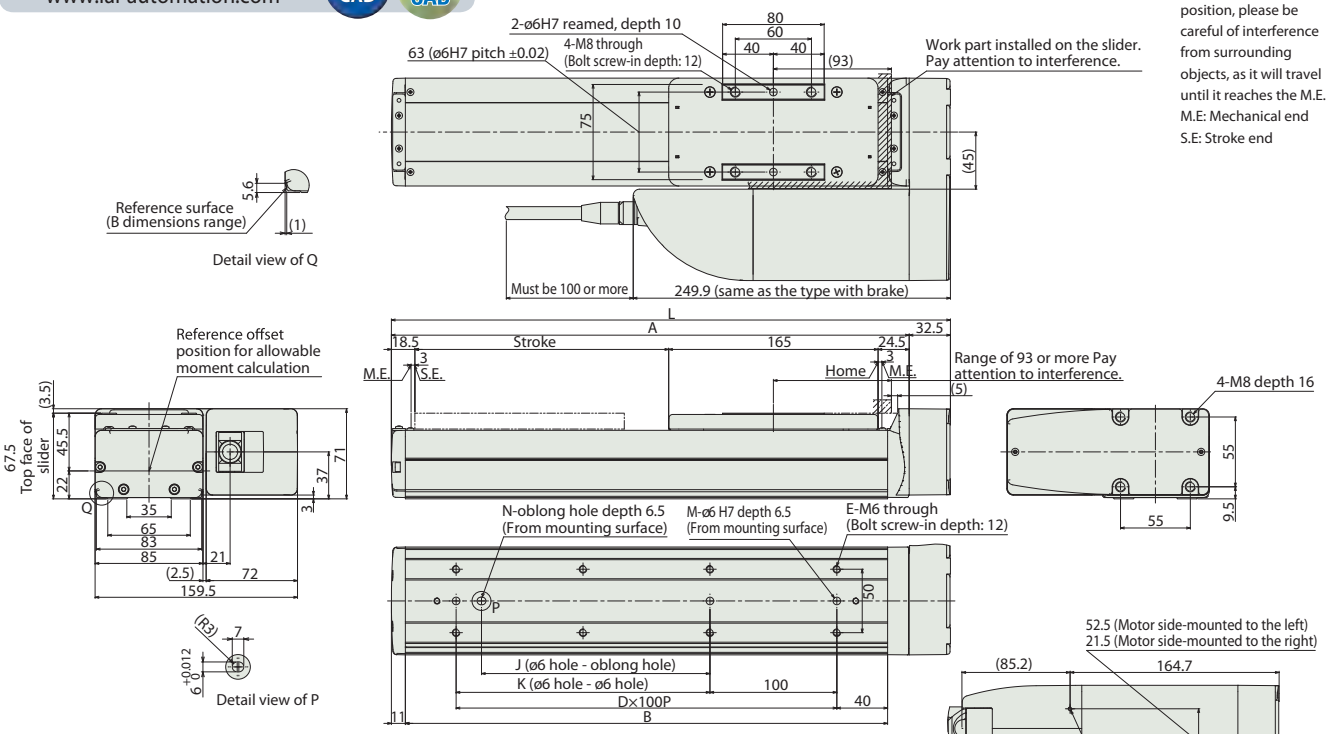
Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

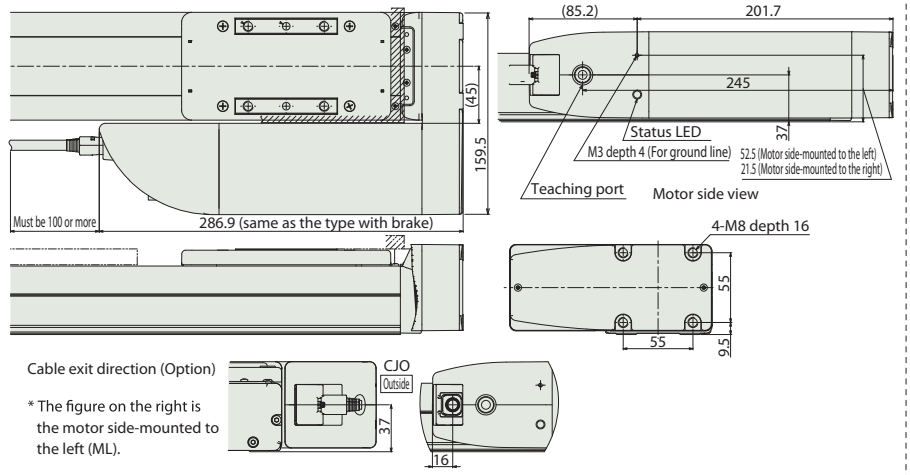
CAD drawings can be downloaded from our website.
www.iai-automation.com

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 M.E.
M.E: Mechanical end
S.E: Stroke end



■RCP6S-SA8R



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1,050	1,100
L		290.5	340.5	390.5	440.5	490.5	540.5	590.5	640.5	690.5	740.5	790.5	840.5	890.5	940.5	990.5	1,040.5	1,090.5	1,140.5	1,190.5	1,240.5	1,290.5	1,340.5
A		258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1,008	1,058	1,108	1,158	1,208	1,258	1,308
B		230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1,030	1,080	1,130	1,180	1,230	1,280
D		1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
J		0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1,080
K		0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1,000	1,000	1,100
M		2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N		0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6 w/o brake	4.8	5.1	5.4	5.7	5.9	6.2	6.5	6.8	7.1	7.4	7.6	7.9	8.2	8.5	8.8	9.0	9.3	9.6	9.9	10.2	10.5	10.7
	RCP6 w/ brake	5.0	5.3	5.5	5.8	6.1	6.4	6.7	6.9	7.2	7.5	7.8	8.1	8.4	8.6	8.9	9.2	9.5	9.8	10.1	10.3	10.6	10.9
	RCP6S w/o brake	4.9	5.2	5.5	5.8	6.1	6.3	6.6	6.9	7.2	7.5	7.8	8.0	8.3	8.6	8.9	9.2	9.4	9.7	10.0	10.3	10.6	10.9
	RCP6S w/ brake	5.1	5.4	5.7	5.9	6.2	6.5	6.8	7.1	7.3	7.6	7.9	8.2	8.5	8.8	9.0	9.3	9.6	9.9	10.2	10.5	10.7	11.0

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)-WSA10C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 100 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
—	WSA10C	WA	35P	—	—	—	—	—
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16:16mm 10:10mm 5: 5mm 2.5: 2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

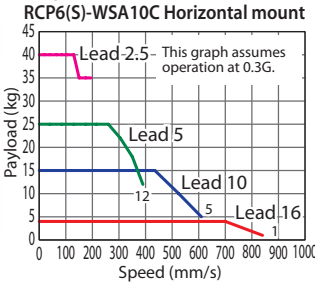
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.211 for more details.
(3) Please refer to P205 for performing push-motion operation.

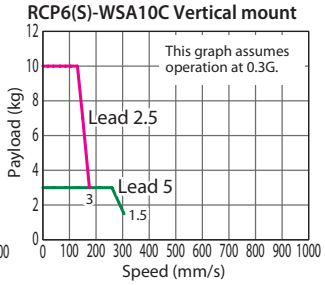
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WSA10C Horizontal mount

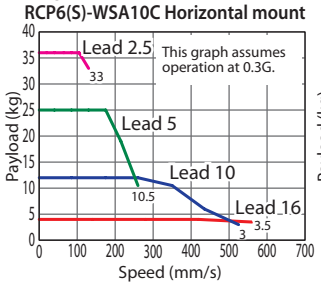


RCP6(S)-WSA10C Vertical mount

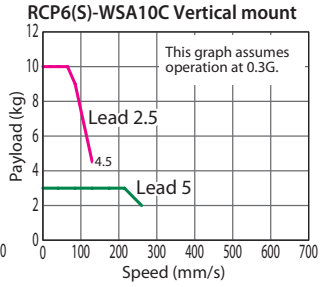


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WSA10C Horizontal mount



RCP6(S)-WSA10C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-WSA10C-WA-35P-16-①-②-③-④	16	High-output Enabled	4	–	48
		High-output Disabled	4	–	
RCP6(S)-WSA10C-WA-35P-10-①-②-③-④	10	High-output Enabled	15	–	77
		High-output Disabled	12	–	
RCP6(S)-WSA10C-WA-35P-5-①-②-③-④	5	High-output Enabled	28	3	155
		High-output Disabled	25	3	
RCP6(S)-WSA10C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	310
		High-output Disabled	36	10	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~300 (Every 50mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)
16	High-output Enabled	840			775	660
	High-output Disabled	560				
10	High-output Enabled	610		590	490	415
	High-output Disabled	525				
5	High-output Enabled	390<350>	355<350>	290	245	205
	High-output Disabled	260			245	205
2.5	High-output Enabled	195<175>	175	145	120	100
	High-output Disabled	130			120	100

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left) (*1)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G1/G3/G4**	
High-Precision Specification (*2)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195

(*1) RCP6S cannot be selected.
(*2) When the lead is 16, it cannot be selected.
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

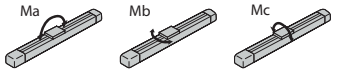
Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 271N•m, Mb: 271N•m, Mc: 553N•m
Dynamic allowable moment (*2)	Ma: 65.4N•m, Mb: 65.4N•m, Mc: 134N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

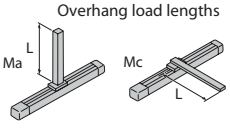
(*1) Values in [ ] are for high-precision (for lead 2.5/5/10) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 500mm or less, Mb, Mc: 500mm or less

Allowable load moment directions



Overhang load lengths

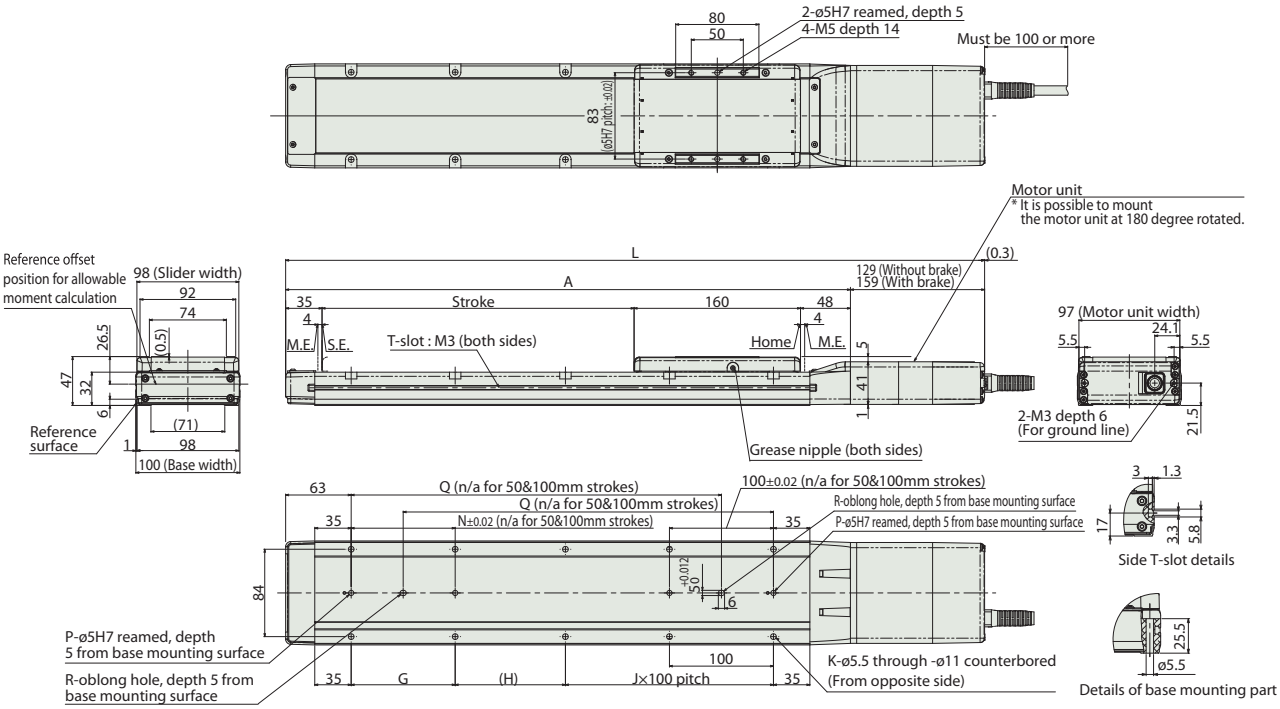


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

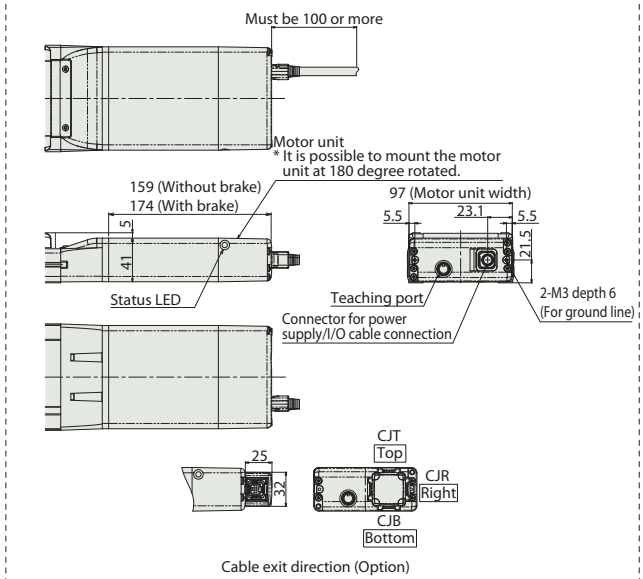
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

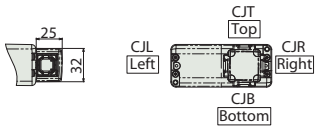
*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■RCP6S-WSA10C



Cable exit direction (Option)



Cable exit direction (Option)

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L	RCP6	w/o brake	422	472	522	572	622	672	722	772	822	872
		w/ brake	452	502	552	602	652	702	752	802	852	902
	RCP6S	w/o brake	452	502	552	602	652	702	752	802	852	902
		w/ brake	467	517	567	617	667	717	767	817	867	917
A			293	343	393	443	493	543	593	643	693	743
G			-	-	100	100	100	100	100	100	100	100
H			156	206	56	106	56	106	56	106	56	106
J			0	0	1	1	2	2	3	3	4	4
K			4	4	8	8	10	10	12	12	14	14
N			-	-	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2
Q			-	-	206	256	306	356	406	456	506	556
R			0	0	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	2.9	3.1	3.4	3.6	3.8	4.1	4.3	4.6	4.8	5.0
		w/ brake	3.1	3.3	3.6	3.8	4.0	4.3	4.5	4.8	5.0	5.2
	RCP6S	w/o brake	3.0	3.2	3.5	3.7	3.9	4.2	4.4	4.7	4.9	5.1
		w/ brake	3.1	3.4	3.6	3.9	4.1	4.3	4.6	4.8	5.1	5.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method			Network * Option	Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program			
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WSA12C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 120 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WSA12C	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

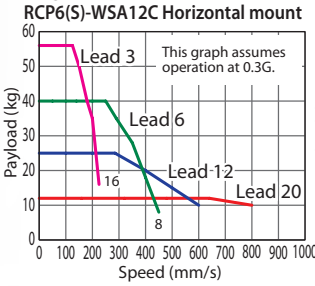
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.211 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

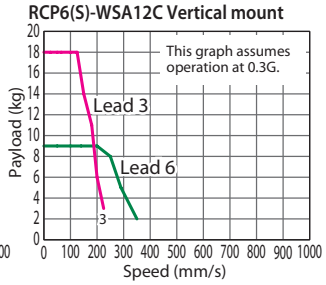
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WSA12C Horizontal mount

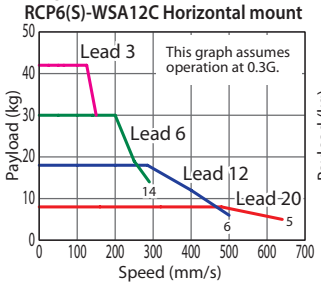


RCP6(S)-WSA12C Vertical mount

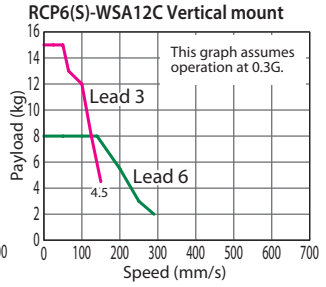


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WSA12C Horizontal mount



RCP6(S)-WSA12C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-WSA12C-WA-42P-20-①-②-③-④	20	High-output Enabled	12	–	56
		High-output Disabled	8	–	
RCP6(S)-WSA12C-WA-42P-12-①-②-③-④	12	High-output Enabled	25	–	93
		High-output Disabled	18	–	
RCP6(S)-WSA12C-WA-42P-6-①-②-③-④	6	High-output Enabled	40	9	185
		High-output Disabled	30	8	
RCP6(S)-WSA12C-WA-42P-3-①-②-③-④	3	High-output Enabled	60	18	370
		High-output Disabled	42	15	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~350 (Every 50mm)	400 (mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	High-output Enabled	800						740	650	580	520
	High-output Disabled	640								580	520
12	High-output Enabled	600				535	465	405	355	315	285
	High-output Disabled	500					465	405	355	315	285
6	High-output Enabled	<450>	<435>	365	310	265	230	200	175	155	140
	High-output Disabled	290				265	230	200	175	155	140
3	High-output Enabled	225	215	180	150	130	115	100	85	75	70
	High-output Disabled	150				130	115	100	85	75	70

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G1/G3/G4**	
High-Precision Specification (*1)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195

(*1) When the lead is 20, it cannot be selected.
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

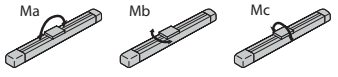
Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 311N•m, Mb: 311N•m, Mc: 827N•m
Dynamic allowable moment (*2)	Ma: 87.5N•m, Mb: 87.5N•m, Mc: 233N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

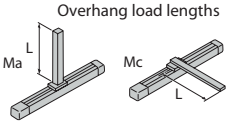
(*1) Values in [ ] are for high-precision (for lead 3/6/12) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 450mm or less, Mb, Mc: 450mm or less

Allowable load moment directions



Overhang load lengths

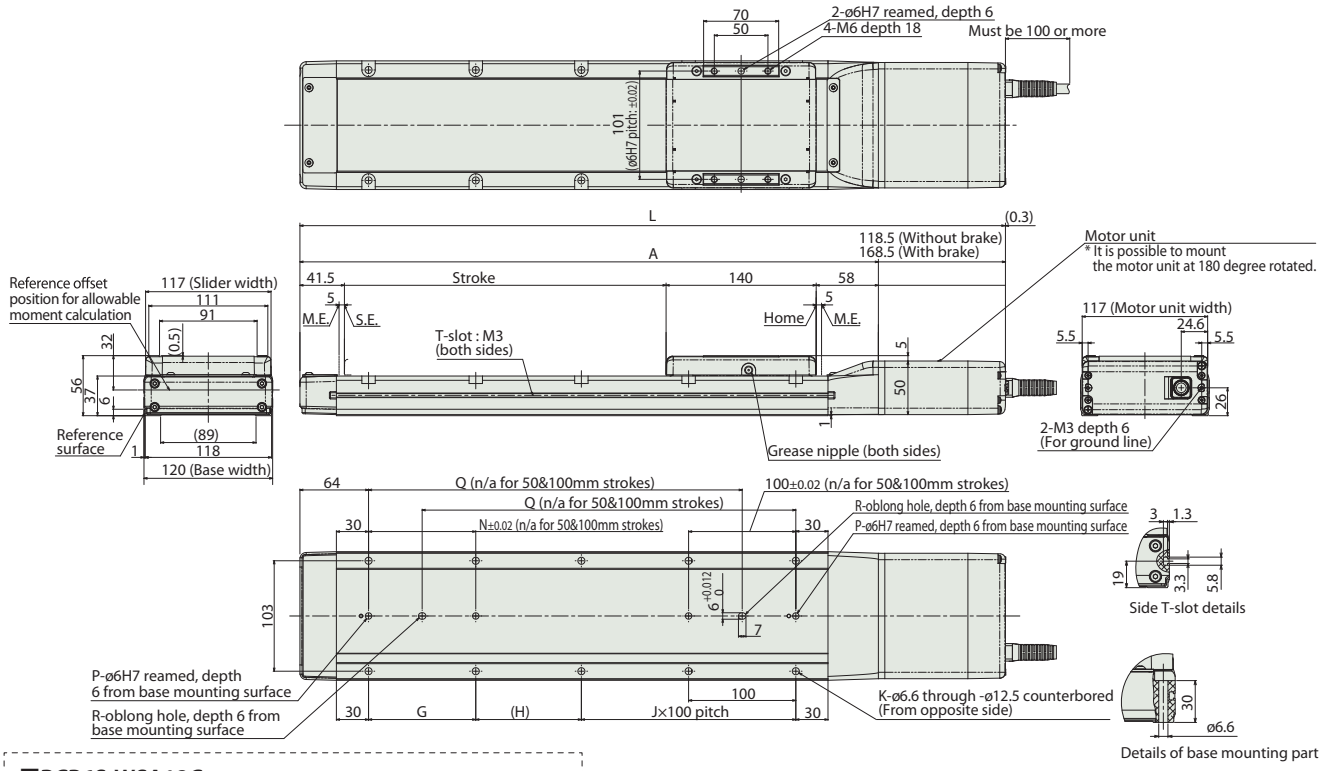


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

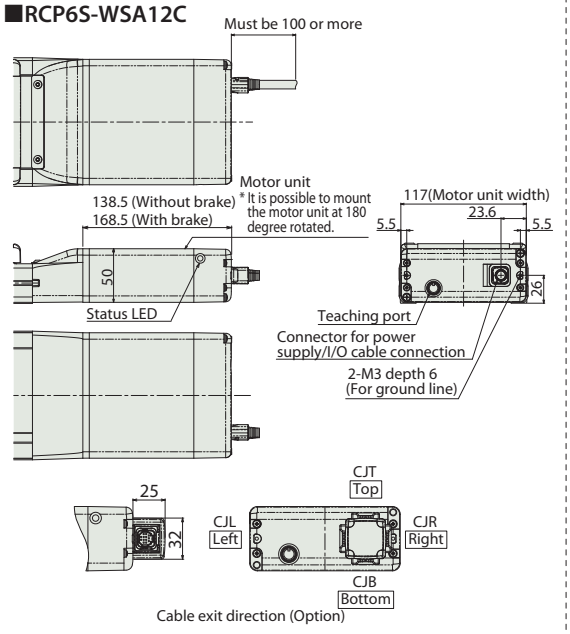
Dimensions

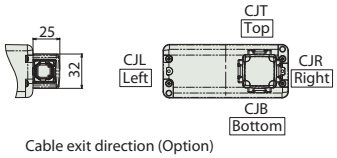
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E.
M.E: Mechanical end S.E: Stroke end



■RCP6S-WSA12C





■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	RCP6	w/o brake	408	458	508	558	608	658	708	758	808	858	908	958	1,008	1,058	1,108	1,158
		w/ brake	458	508	558	608	658	708	758	808	858	908	958	1,008	1,058	1,108	1,158	1,208
	RCP6S	w/o brake	428	478	528	578	628	678	728	778	828	878	928	978	1,028	1,078	1,128	1,178
		w/ brake	458	508	558	608	658	708	758	808	858	908	958	1,008	1,058	1,108	1,158	1,208
A			289.5	339.5	389.5	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
G			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
H			148.5	198.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5
J			0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
K			4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
N			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			-	-	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	3.8	4.1	4.4	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.8	8.1	8.4	8.8
		w/ brake	4.0	4.4	4.7	5.0	5.4	5.7	6.0	6.4	6.7	7.1	7.4	7.7	8.1	8.4	8.7	9.1
	RCP6S	w/o brake	3.8	4.2	4.5	4.8	5.2	5.5	5.8	6.2	6.5	6.8	7.2	7.5	7.8	8.2	8.5	8.8
		w/ brake	4.1	4.4	4.7	5.1	5.4	5.7	6.1	6.4	6.7	7.1	7.4	7.8	8.1	8.4	8.8	9.1

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WSA14C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 140 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WSA14C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

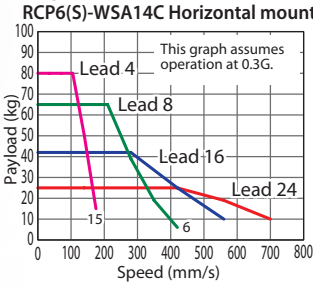
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.211 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

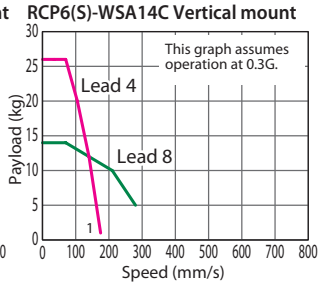
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WSA14C Horizontal mount

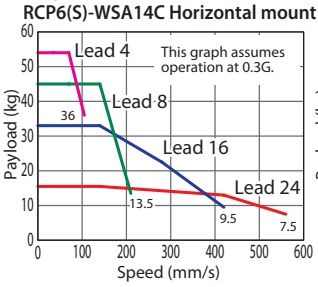


RCP6(S)-WSA14C Vertical mount

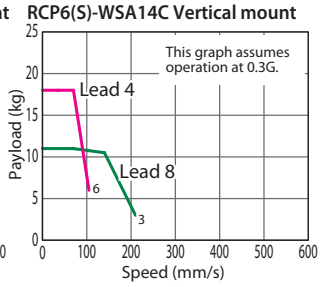


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WSA14C Horizontal mount



RCP6(S)-WSA14C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-WSA14C-WA-56P-24-①-②-③-④	24	High-output Enabled	25	–	112
		High-output Disabled	15.5	–	
RCP6(S)-WSA14C-WA-56P-16-①-②-③-④	16	High-output Enabled	50	–	168
		High-output Disabled	33	–	
RCP6(S)-WSA14C-WA-56P-8-①-②-③-④	8	High-output Enabled	65	14	336
		High-output Disabled	45	11	
RCP6(S)-WSA14C-WA-56P-4-①-②-③-④	4	High-output Enabled	80	26	673
		High-output Disabled	54	18	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~500 (Every 50mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
24	High-output Enabled	700						665
	High-output Disabled	560						
16	High-output Enabled	560				550	490	440
	High-output Disabled	420						
8	High-output Enabled	420<350>	400<350>	350	305	270	240	215
	High-output Disabled	210						
4	High-output Enabled	210<175>	200<175>	170	150	135	120	105
	High-output Disabled	105						

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G1/G3/G4**	
High-Precision Specification (*1)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195

(*1) When the lead is 16/24, it cannot be selected.
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

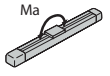
Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 462N•m, Mb: 462N•m, Mc: 1,170N•m
Dynamic allowable moment (*2)	Ma: 122N•m, Mb: 122N•m, Mc: 308N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

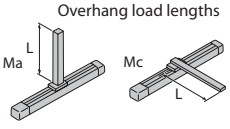
(*1) Values in [ ] are for high-precision (for lead 4/8) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 550mm or less, Mb, Mc: 550mm or less

Allowable load moment directions



Overhang load lengths

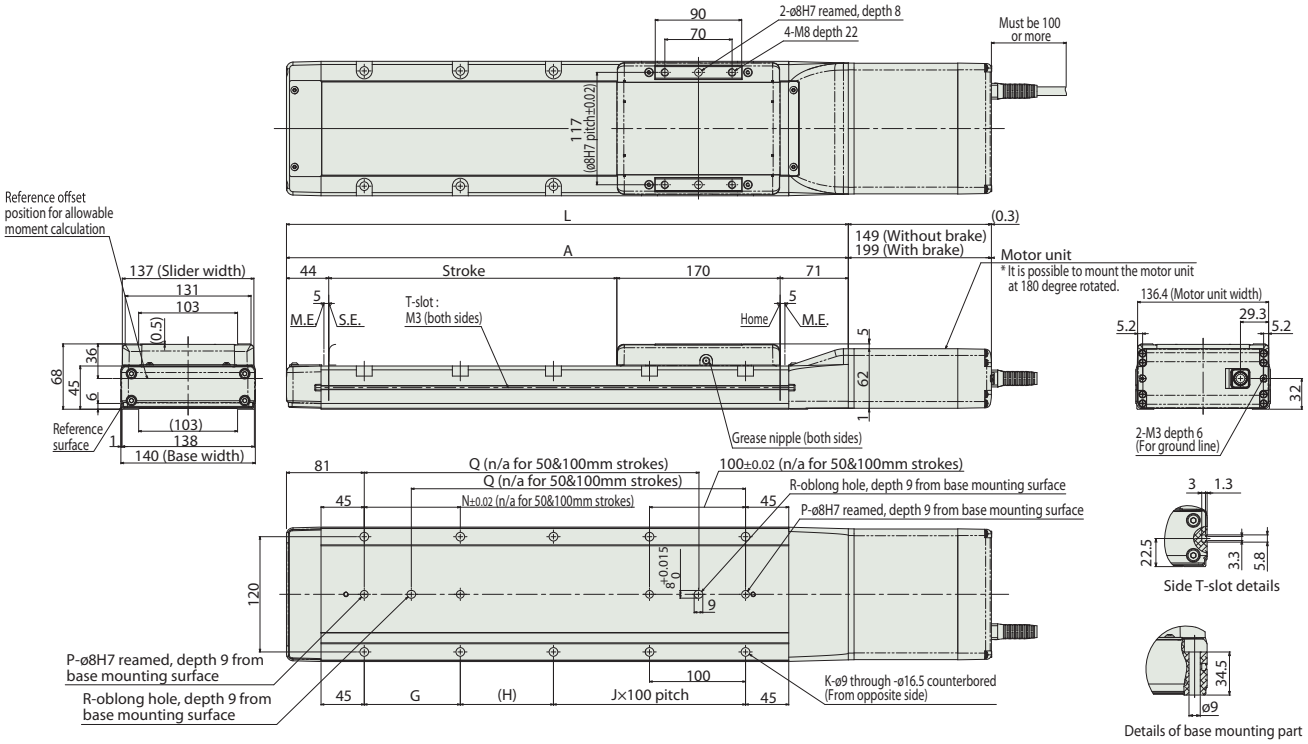


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

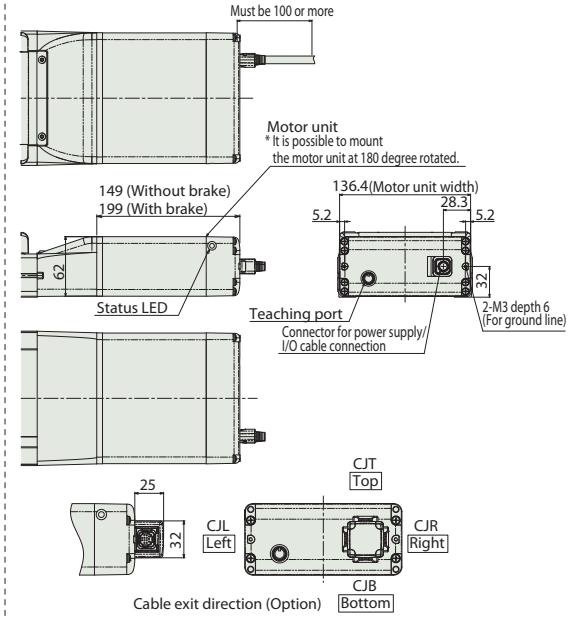
Dimensions

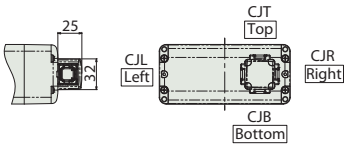
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E.
M.E: Mechanical end S.E: Stroke end



■RCP6S-WSA14C





■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	RCP6	w/o brake	484	534	584	634	684	734	784	834	884	934	984	1,034	1,084	1,134	1,184	1,234
		w/ brake	534	584	634	684	734	784	834	884	934	984	1,034	1,084	1,134	1,184	1,234	1,284
	RCP6S	w/o brake	484	534	584	634	684	734	784	834	884	934	984	1,034	1,084	1,134	1,184	1,234
		w/ brake	534	584	634	684	734	784	834	884	934	984	1,034	1,084	1,134	1,184	1,234	1,284
A			335	385	435	485	535	585	635	685	735	785	835	885	935	985	1,035	1,085
G			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
H			147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
J			0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
K			4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
N			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			-	-	198	248	298	348	398	448	498	548	598	648	698	748	798	848
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	6.6	7.0	7.5	8.0	8.5	8.9	9.4	9.9	10.4	10.9	11.3	11.8	12.3	12.8	13.2	13.7
		w/ brake	7.0	7.5	8.0	8.5	8.9	9.4	9.9	10.4	10.9	11.3	11.8	12.3	12.8	13.2	13.7	14.2
	RCP6S	w/o brake	6.6	7.1	7.6	8.0	8.5	9.0	9.5	9.9	10.4	10.9	11.4	11.9	12.3	12.8	13.3	13.8
		w/ brake	7.1	7.6	8.0	8.5	9.0	9.5	9.9	10.4	10.9	11.4	11.8	12.3	12.8	13.3	13.8	14.2

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WSA16C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 160 mm | 24V Pulse Motor

■ Model Specification Items

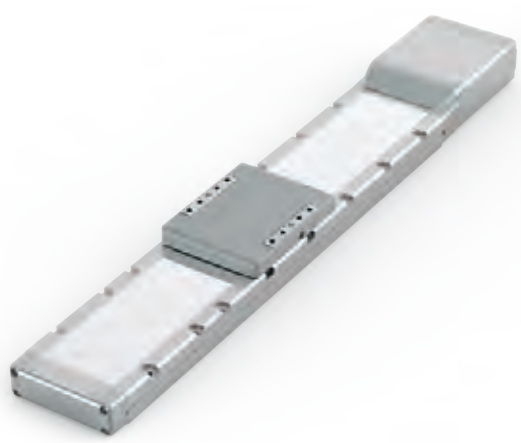
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WSA16C	WA: Battery-less Absolute	56SP: High-thrust Pulse Motor 56□ Size	20:20mm 10:10mm 5: 5mm	50: 50mm ~ 1100: 1100mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



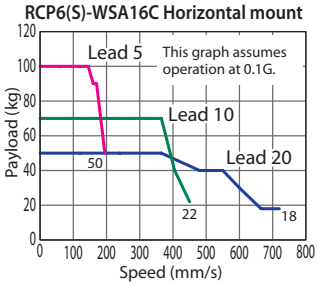
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.211 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P. 206 for more information.

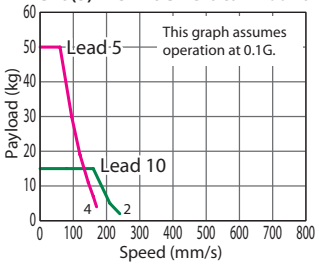
■ Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.

RCP6(S)-WSA16C Horizontal mount



RCP6(S)-WSA16C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-WSA16C-WA-56SP-20-①-②-③-④	20	50	–	239
RCP6(S)-WSA16C-WA-56SP-10-①-②-③-④	10	70	15	478
RCP6(S)-WSA16C-WA-56SP-5-①-②-③-④	5	100	50	956

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	50~650 (Every 50mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
20	720			715	645	590	535	490	450	415
10	450 <240>	440 <240>	395 <240>	355 <240>	320 <240>	290 <240>	265 <240>	240	225	205
5	195 <170>			175 <170>	160	145	130	120	110	100

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G1/G3/G4**	
High-Precision Specification (*1)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195

(*1) When the lead is 20, it cannot be selected.
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

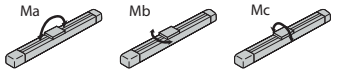
Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 642N•m, Mb: 642N•m, Mc: 1610N•m
Dynamic allowable moment (*2)	Ma: 161N•m, Mb: 161N•m, Mc: 404N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

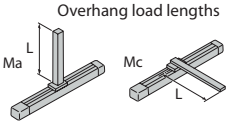
(*1) Values in [ ] are for high-precision (for lead 5/10) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 650mm or less, Mb, Mc: 650mm or less

Allowable load moment directions



Overhang load lengths

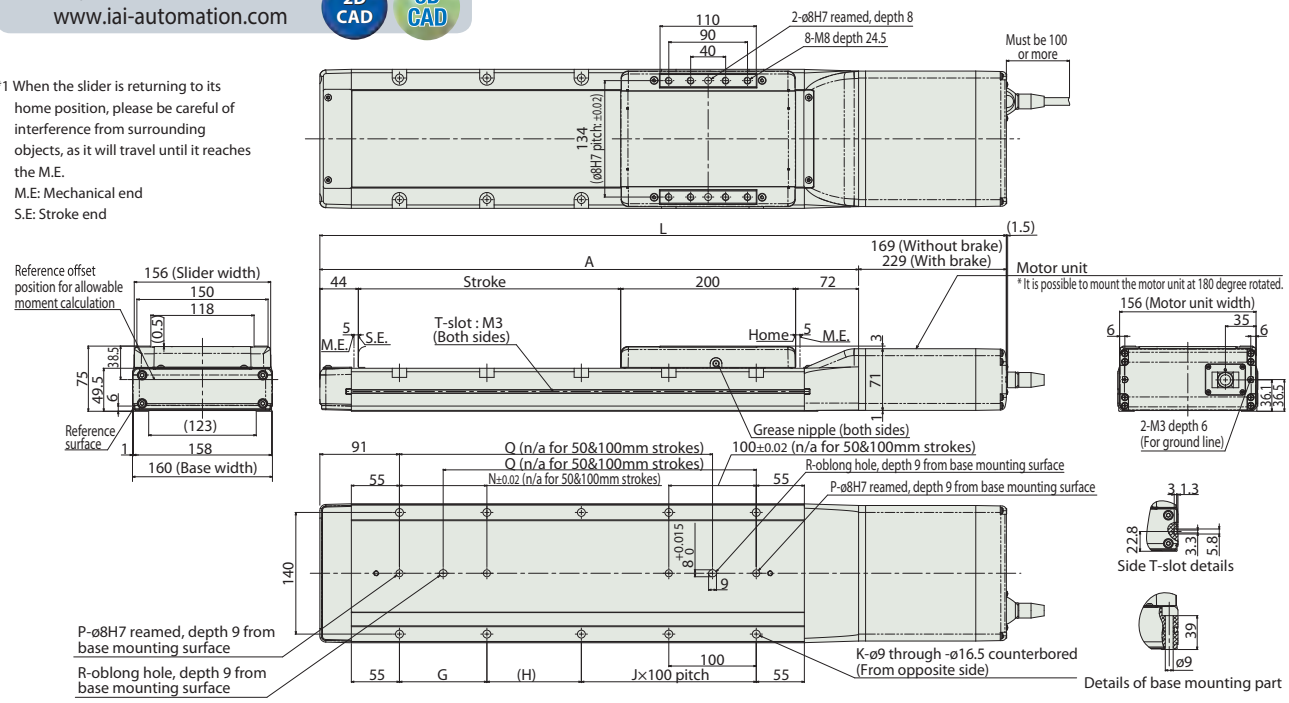


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

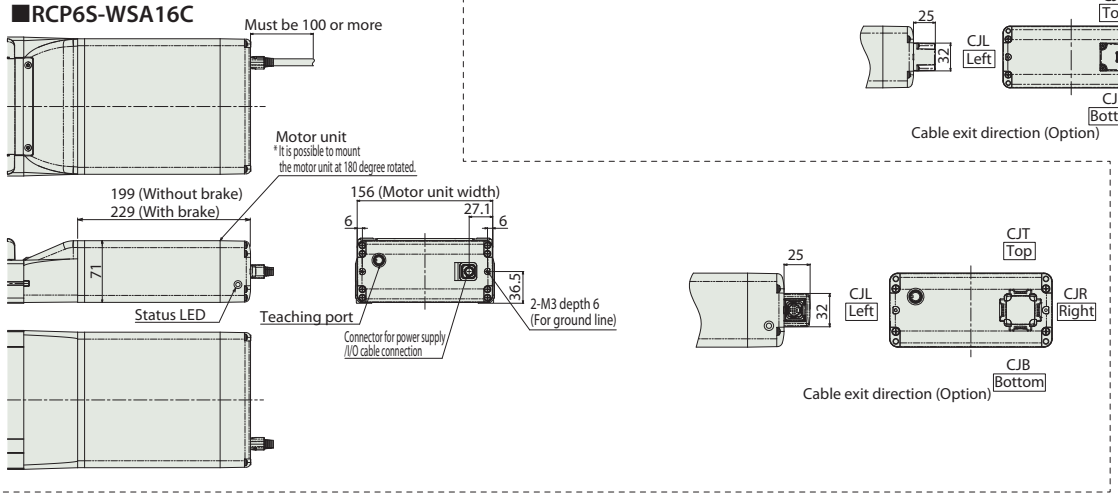
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end
S.E: Stroke end



■RCP6S-WSA16C



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1,050	1,100
L	RCP6	w/o brake	535	585	635	685	735	785	835	885	935	985	1,035	1,085	1,135	1,185	1,235	1,285	1,335	1,385	1,435	1,485	1,535	1,585
		w/ brake	595	645	695	745	795	845	895	945	995	1,045	1,095	1,145	1,195	1,245	1,295	1,345	1,395	1,445	1,495	1,545	1,595	1,645
	RCP6S	w/o brake	565	615	665	715	765	815	865	915	965	1,015	1,065	1,115	1,165	1,215	1,265	1,315	1,365	1,415	1,465	1,515	1,565	1,615
		w/ brake	595	645	695	745	795	845	895	945	995	1,045	1,095	1,145	1,195	1,245	1,295	1,345	1,395	1,445	1,495	1,545	1,595	1,645
A			366	416	466	516	566	616	666	716	766	816	866	916	966	1,016	1,066	1,116	1,166	1,216	1,266	1,316	1,366	1,416
G			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
H			158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
J			0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
K			4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
N			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			-	-	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	9.0	9.6	10.2	10.8	11.4	12.0	12.6	13.2	13.8	14.4	15.0	15.7	16.2	16.9	17.4	18.1	18.7	19.3	19.9	20.5	21.1	21.7
		w/ brake	9.5	10.1	10.7	11.3	11.9	12.5	13.1	13.7	14.3	14.9	15.5	16.1	16.7	17.3	17.9	18.5	19.1	19.7	20.3	21.0	21.5	22.2
	RCP6S	w/o brake	9.2	9.8	10.4	11.0	11.6	12.2	12.8	13.4	14.0	14.6	15.2	15.8	16.4	17.0	17.6	18.2	18.8	19.4	20.0	20.6	21.2	21.8
		w/ brake	9.5	10.2	10.7	11.4	11.9	12.6	13.2	13.8	14.4	15.0	15.6	16.2	16.8	17.4	18.0	18.6	19.2	19.8	20.4	21.0	21.6	22.2

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)-WSA10R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 100* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WSA10R	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

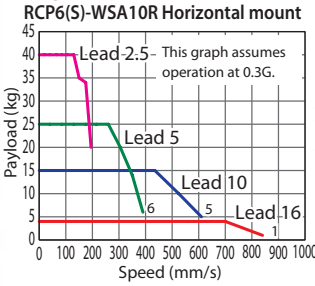
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.213 for more details.
(3) Please refer to P205 for performing push-motion operation.

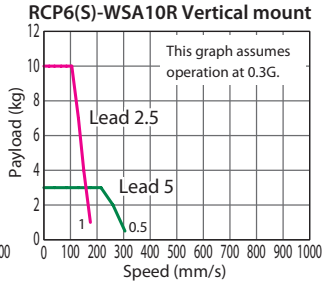
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WSA10R Horizontal mount

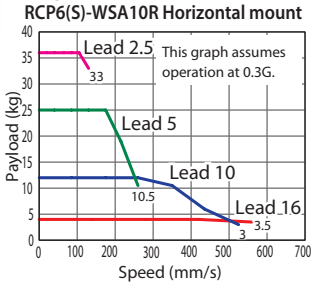


RCP6(S)-WSA10R Vertical mount

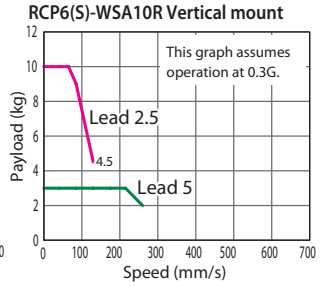


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WSA10R Horizontal mount



RCP6(S)-WSA10R Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-WSA10R-WA-35P-16-①-②-③-④	16	High-output Enabled	4	–	48
		High-output Disabled	4	–	
RCP6(S)-WSA10R-WA-35P-10-①-②-③-④	10	High-output Enabled	15	–	77
		High-output Disabled	12	–	
RCP6(S)-WSA10R-WA-35P-5-①-②-③-④	5	High-output Enabled	28	3	155
		High-output Disabled	25	3	
RCP6(S)-WSA10R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	310
		High-output Disabled	36	10	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~300 (Every 50mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)
16	High-output Enabled	840			775	660
	High-output Disabled	560				
10	High-output Enabled	610		590	490	415
	High-output Disabled	525				
5	High-output Enabled	390<305>	355<305>	290	245	205
	High-output Disabled	260			245	205
2.5	High-output Enabled	195<175>	175	145	120	100
	High-output Disabled	130			120	100

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195

When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

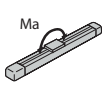
Actuator Specifications

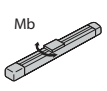
Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 271N•m, Mb: 271N•m, Mc: 553N•m
Dynamic allowable moment (*1)	Ma: 65.4N•m, Mb: 65.4N•m, Mc: 134N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

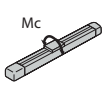
(*1) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 500mm or less, Mb, Mc: 500mm or less

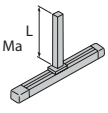
Allowable load moment directions

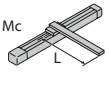






Overhang load lengths



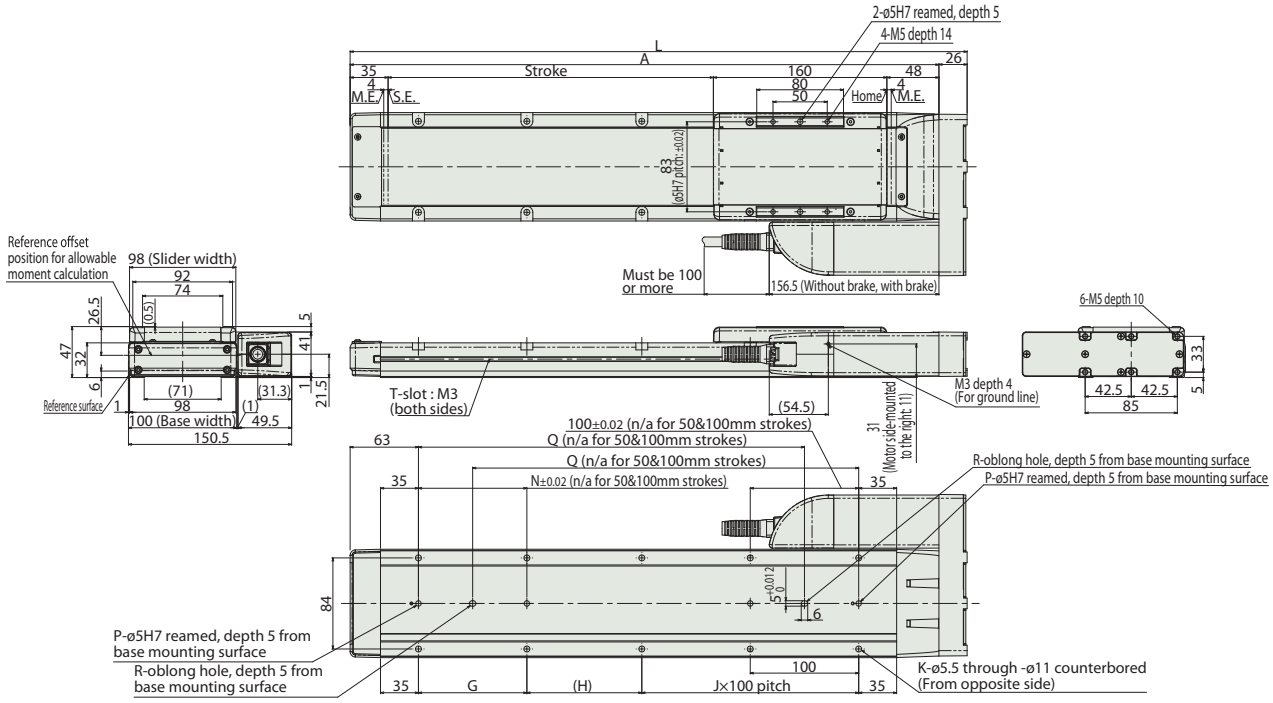


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

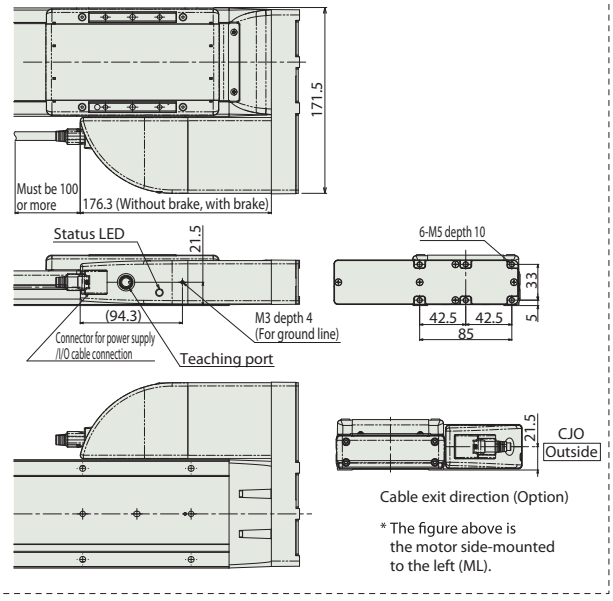
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end

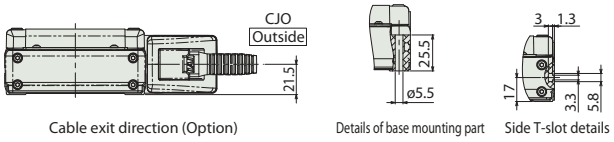


■RCP6S-WSA10R



Cable exit direction (Option)

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



Cable exit direction (Option)

Details of base mounting part

Side T-slot details

* The figure above is 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			319	369	419	469	519	569	619	669	719	769
A			293	343	393	443	493	543	593	643	693	743
G			-	-	100	100	100	100	100	100	100	100
H			156	206	56	106	56	106	56	106	56	106
J			0	0	1	1	2	2	3	3	4	4
K			4	4	8	8	10	10	12	12	14	14
N			-	-	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2
Q			-	-	206	256	306	356	406	456	506	556
R			0	0	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	2.9	3.2	3.4	3.6	3.9	4.1	4.4	4.6	4.8	5.1
		w/ brake	3.0	3.2	3.5	3.7	3.9	4.2	4.4	4.7	4.9	5.2
	RCP6S	w/o brake	3.0	3.3	3.5	3.8	4.0	4.3	4.5	4.7	5.0	5.2
		w/ brake	3.1	3.4	3.6	3.8	4.1	4.3	4.6	4.8	5.0	5.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WSA12R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 120* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
—	WSA12R	WA	42P	—	—	—	—	—
	RCP6: Separate Controller RCP6S: Built-in Controller	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

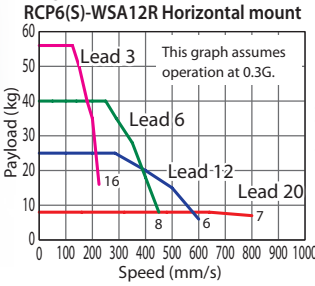
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.213 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

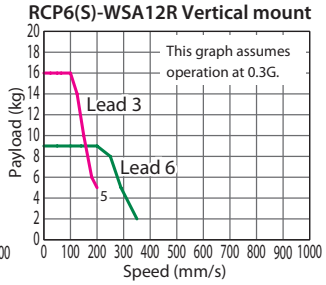
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WSA12R Horizontal mount

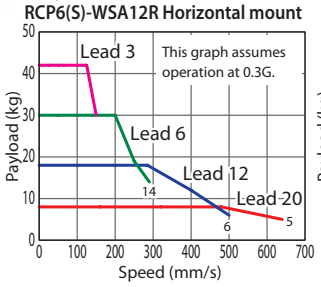


RCP6(S)-WSA12R Vertical mount

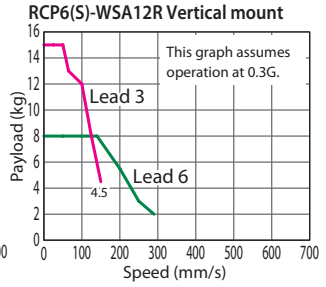


(2) High-output disabled with PCON/RCON/MCON/RSEL connected.

RCP6(S)-WSA12R Horizontal mount



RCP6(S)-WSA12R Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-WSA12R-WA-42P-20-①-②-③-④	20	High-output Enabled	12	–	56
		High-output Disabled	8	–	
RCP6(S)-WSA12R-WA-42P-12-①-②-③-④	12	High-output Enabled	25	–	93
		High-output Disabled	18	–	
RCP6(S)-WSA12R-WA-42P-6-①-②-③-④	6	High-output Enabled	40	9	185
		High-output Disabled	30	8	
RCP6(S)-WSA12R-WA-42P-3-①-②-③-④	3	High-output Enabled	60	16	370
		High-output Disabled	42	15	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~350 (Every 50mm)	400 (mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	High-output Enabled	800						740	650	580	520
	High-output Disabled	640								580	520
12	High-output Enabled	600				535	465	405	355	315	285
	High-output Disabled	500					465	405	355	315	285
6	High-output Enabled	450<400>	435<400>	365	310	265	230	200	175	155	140
	High-output Disabled	290				265	230	200	175	155	140
3	High-output Enabled	225	215	180	150	130	115	100	85	75	70
	High-output Disabled	150				130	115	100	85	75	70

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195

When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

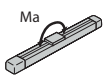
Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 311N•m, Mb: 311N•m, Mc: 827N•m
Dynamic allowable moment (*1)	Ma: 87.5N•m, Mb: 87.5N•m, Mc: 233N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

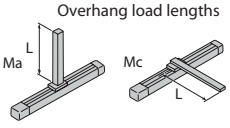
(*1) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 450mm or less, Mb, Mc: 450mm or less

Allowable load moment directions



Overhang load lengths

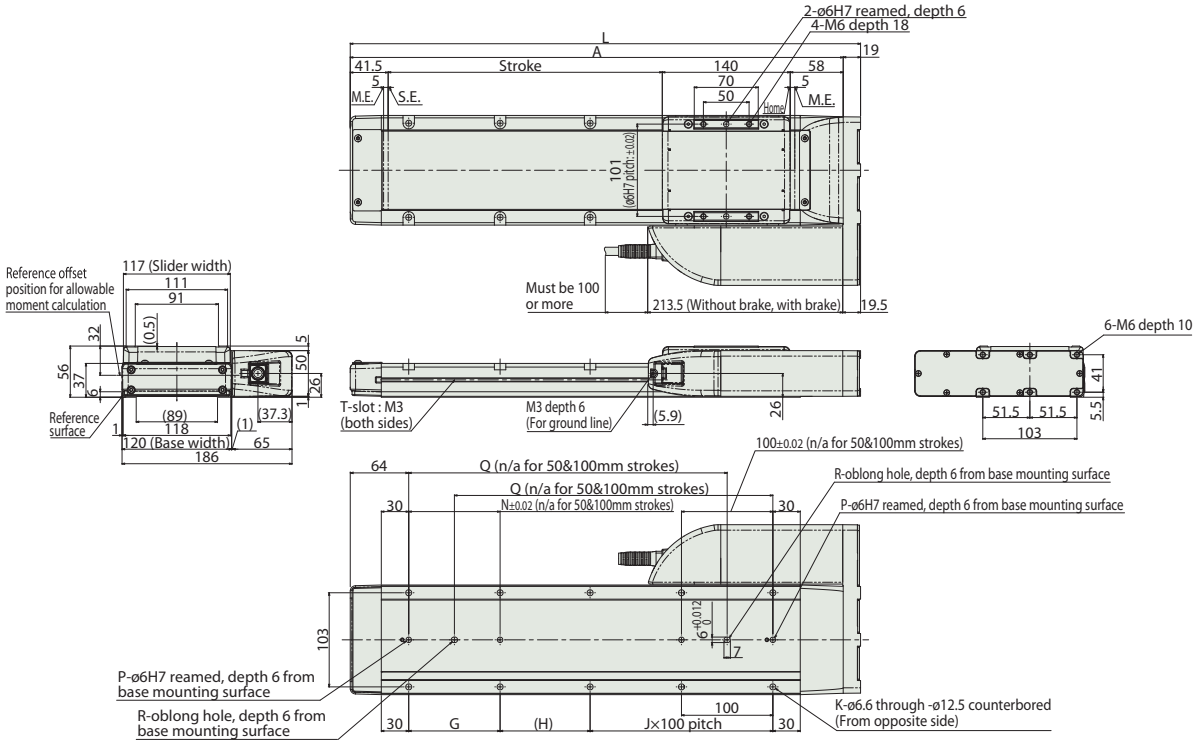


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

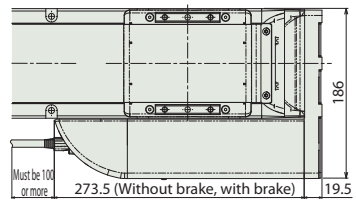
Dimensions

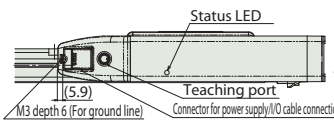
CAD drawings can be downloaded from our website.
www.iai-automation.com

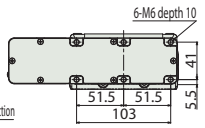
*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end

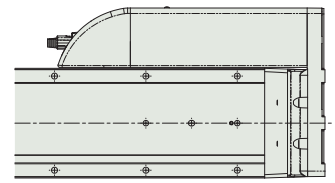


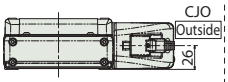
■RCP6S-WSA12R





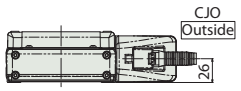




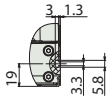


Cable exit direction (Option)

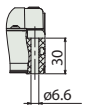
* The figure above is the motor side-mounted to the left (ML).



Cable exit direction (Option)



Side T-slot details



Details of base mounting part

* The figure above is 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			308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5	858.5	908.5	958.5	1,008.5	1,058.5
A			289.5	339.5	389.5	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
G			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
H			148.5	198.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5
J			0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
K			4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
N			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			-	-	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	4.1	4.4	4.7	5.1	5.4	5.7	6.1	6.4	6.7	7.1	7.4	7.7	8.1	8.4	8.7	9.1
		w/ brake	4.1	4.5	4.8	5.1	5.5	5.8	6.1	6.5	6.8	7.1	7.5	7.8	8.1	8.5	8.8	9.1
	RCP6S	w/o brake	4.2	4.5	4.9	5.2	5.5	5.9	6.2	6.5	6.9	7.2	7.5	7.9	8.2	8.5	8.9	9.2
		w/ brake	4.3	4.6	4.9	5.3	5.6	5.9	6.3	6.6	6.9	7.3	7.6	7.9	8.3	8.6	8.9	9.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WSA14R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 140* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WSA14R	WA: Battery-less Absolute	56P:Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

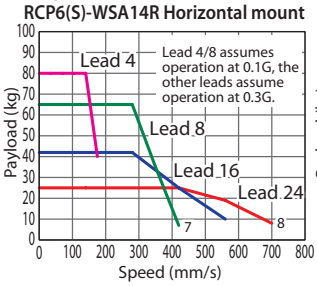
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.213 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

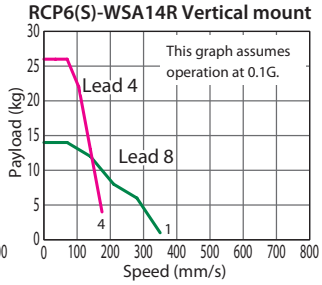
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WSA14R Horizontal mount

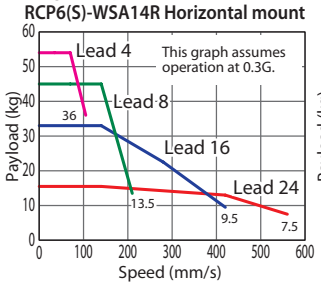


RCP6(S)-WSA14R Vertical mount

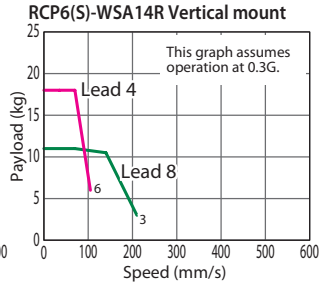


(2) High-output disabled with PCON/RCON/MCON/RSEL connected.

RCP6(S)-WSA14R Horizontal mount



RCP6(S)-WSA14R Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-WSA14R-WA-56P-24-①-②-③-④	24	High-output Enabled	25	–	112
		High-output Disabled	15.5	–	
RCP6(S)-WSA14R-WA-56P-16-①-②-③-④	16	High-output Enabled	50	–	168
		High-output Disabled	33	–	
RCP6(S)-WSA14R-WA-56P-8-①-②-③-④	8	High-output Enabled	65	14	336
		High-output Disabled	45	11	
RCP6(S)-WSA14R-WA-56P-4-①-②-③-④	4	High-output Enabled	80	26	673
		High-output Disabled	54	18	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~500 (Every 50mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
24	High-output Enabled	700						665
	High-output Disabled	560						
16	High-output Enabled	560				550	490	440
	High-output Disabled	420						
8	High-output Enabled	420<350>	400<350>	350	305	270	240	215
	High-output Disabled	210						
4	High-output Enabled	175		170	150	135	120	105
	High-output Disabled	105						

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195

When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

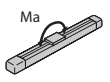
Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 462N•m, Mb: 462N•m, Mc: 1,170N•m
Dynamic allowable moment (*1)	Ma: 122N•m, Mb: 122N•m, Mc: 308N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

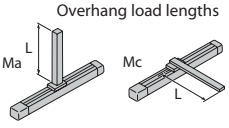
(*1) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 550mm or less, Mb, Mc: 550mm or less

Allowable load moment directions



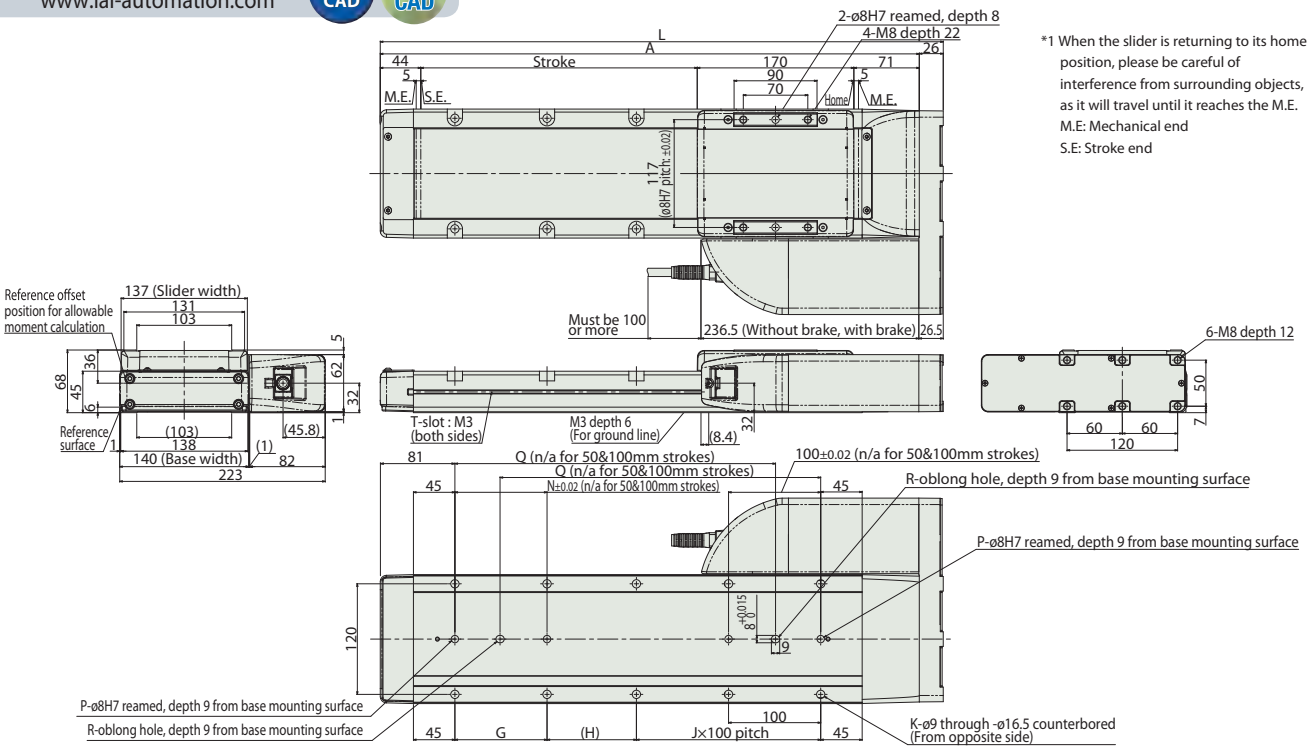
Overhang load lengths



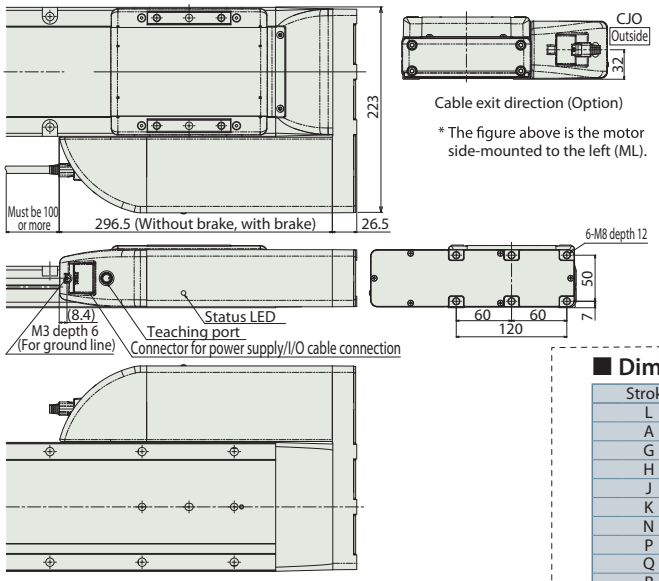
Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

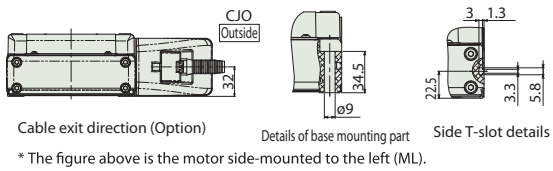
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com



■RCP6S-WSA14R





■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L			361	411	461	511	561	611	661	711	761	811	861	911	961	1,011	1,061	1,111
A			335	385	435	485	535	585	635	685	735	785	835	885	935	985	1,035	1,085
G			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
H			147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
J			0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
K			4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
N			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			-	-	198	248	298	348	398	448	498	548	598	648	698	748	798	848
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	7.3	7.8	8.2	8.7	9.2	9.6	10.1	10.6	11.1	11.5	12.0	12.5	13.0	13.4	13.9	14.4
		w/ brake	7.4	7.9	8.3	8.8	9.3	9.8	10.2	10.7	11.2	11.7	12.1	12.6	13.1	13.6	14.0	14.5
	RCP6S	w/o brake	7.4	7.9	8.4	8.9	9.3	9.8	10.3	10.8	11.2	11.7	12.2	12.7	13.1	13.6	14.1	14.6
		w/ brake	7.6	8.0	8.5	9.0	9.4	9.9	10.4	10.9	11.4	11.8	12.3	12.8	13.3	13.7	14.2	14.7

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WSA16R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 160* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
—	WSA16R	WA	56SP					
	RCP6: Separate Controller RCP6S: Built-in Controller	WA: Battery-less Absolute	56SP: High-thrust Pulse Motor 56□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 1100: 1100mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

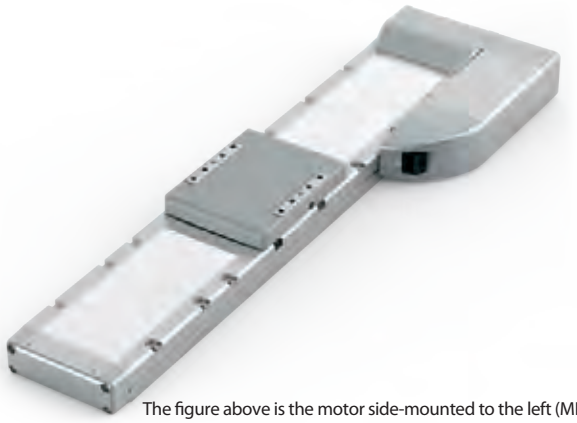
* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.15 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

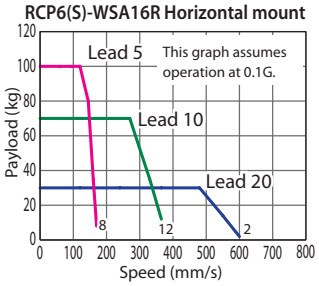
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.213 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P. 206 for more information.

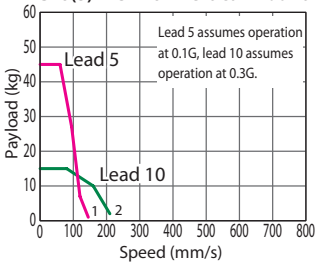
■ Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.

RCP6(S)-WSA16R Horizontal mount



RCP6(S)-WSA16R Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)-WSA16R-WA-56SP-20-①-②-③-④	20	30	–	239
RCP6(S)-WSA16R-WA-56SP-10-①-②-③-④	10	70	15	478
RCP6(S)-WSA16R-WA-56SP-5-①-②-③-④	5	100	45	956

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	50~650 (Every 50mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
20	600					590	535	490	450	415
10	365 <210>			355 <210>	320 <210>	290 <210>	265 <210>	240 <210>	225 <210>	205
5	170 <145>				160 <145>	145	130	120	110	100

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
Slider roller specification	**SR**	See P.195

When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

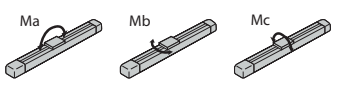
Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 642N•m, Mb: 642N•m, Mc: 1,610N•m
Dynamic allowable moment (*1)	Ma: 161N•m, Mb: 161N•m, Mc: 404N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

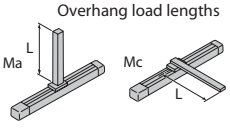
(*1) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 650mm or less, Mb, Mc: 650mm or less

Allowable load moment directions



Overhang load lengths



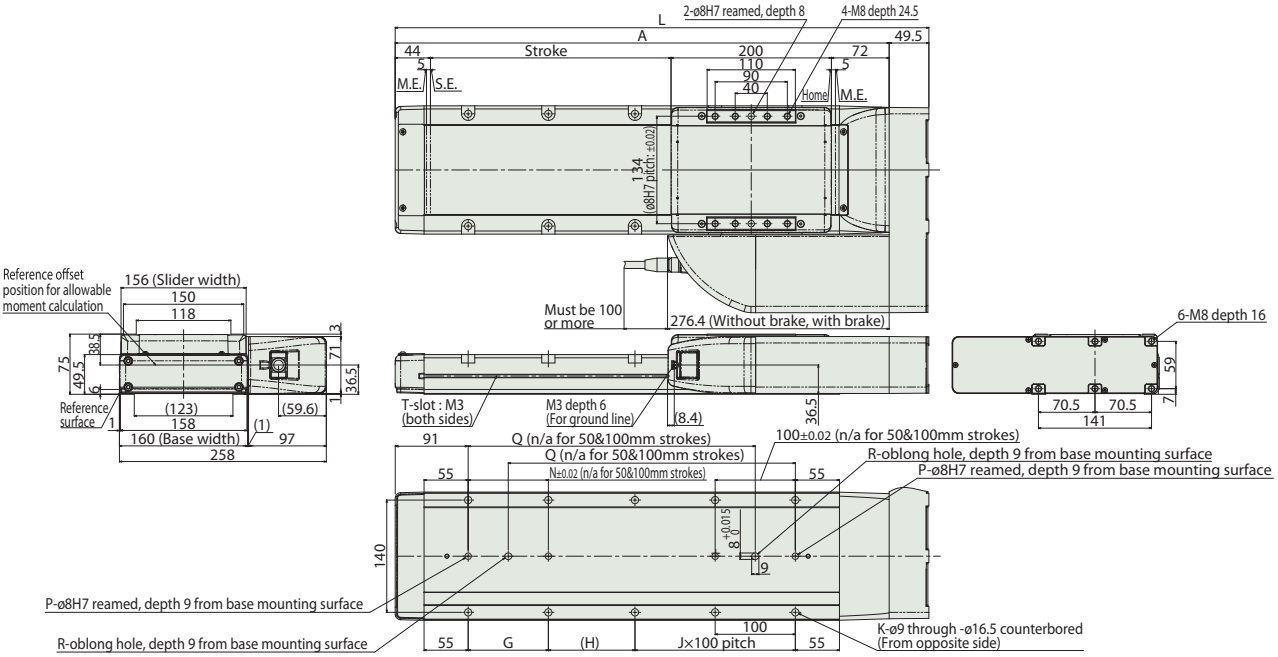
Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

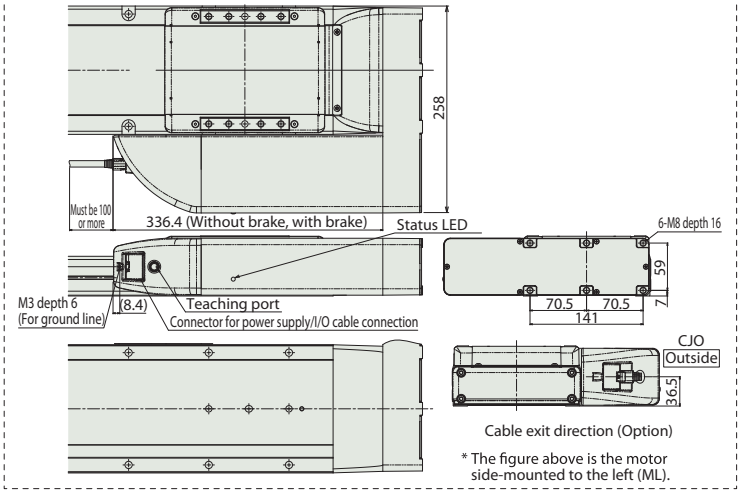
CAD drawings can be downloaded from our website.
www.iai-automation.com

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 M.E.
M.E: Mechanical end S.E: Stroke end

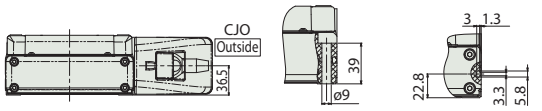


■RCP6S-WSA16R



Cable exit direction (Option)

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



Cable exit direction (Option) | Details of base mounting part | Side T-slot details

* The figure above is 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	850	900	950	1,000	1,050	1,100
L			415.5	465.5	515.5	565.5	615.5	665.5	715.5	765.5	815.5	865.5	915.5	965.5	1,015.5	1,065.5	1,115.5	1,165.5	1,215.5	1,265.5	1,315.5	1,365.5	1,415.5	1,465.5
A			366	416	466	516	566	616	666	716	766	816	866	916	966	1,016	1,066	1,116	1,166	1,216	1,266	1,316	1,366	1,416
G			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
H			158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
J			0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
K			4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
N			-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			-	-	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1,008	1,058	1,108	1,158
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	10.4	11.0	11.6	12.2	12.7	13.3	13.9	14.5	15.1	15.7	16.3	16.9	17.5	18.1	18.7	19.3	19.9	20.5	21.0	21.7	22.2	22.8
		w/ brake	10.6	11.2	11.8	12.4	13.0	13.6	14.2	14.8	15.4	16.0	16.6	17.2	17.7	18.3	18.9	19.5	20.1	20.7	21.3	21.9	22.5	23.1
	RCP6S	w/o brake	10.6	11.2	11.8	12.4	13.0	13.6	14.2	14.8	15.4	16.0	16.6	17.2	17.7	18.4	18.9	19.5	20.1	20.7	21.3	21.9	22.5	23.1
		w/ brake	10.9	11.5	12.1	12.7	13.3	13.9	14.4	15.0	15.6	16.2	16.8	17.4	18.0	18.6	19.2	19.8	20.4	21.0	21.6	22.2	22.7	23.4

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, SSCNET III/H	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)-RA4C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 40 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RA4C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm	50: 50mm ↓ 200: 200mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

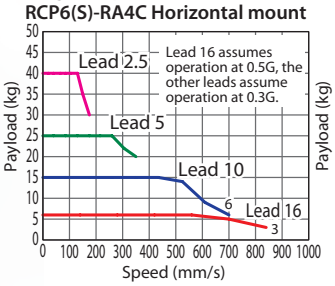
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.223 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.

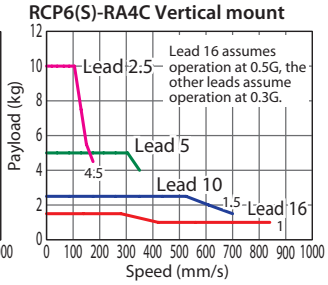
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RA4C Horizontal mount

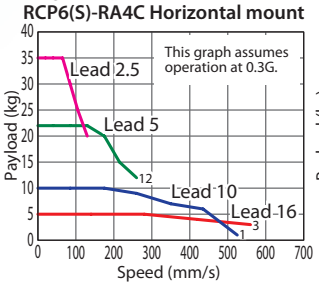


RCP6(S)-RA4C Vertical mount

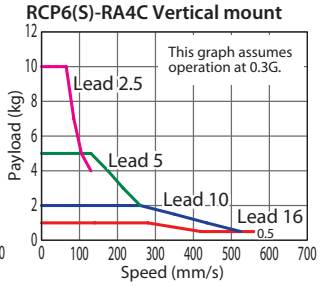


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RA4C Horizontal mount



RCP6(S)-RA4C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-RA4C-WA-35P-16-①-②-③-④	16	High-output Enabled	6	1.5	48	50~200 (The increment of stroke is 50mm)
		High-output Disabled	5	1		
RCP6(S)-RA4C-WA-35P-10-①-②-③-④	10	High-output Enabled	15	2.5	77	
		High-output Disabled	10	2		
RCP6(S)-RA4C-WA-35P-5-①-②-③-④	5	High-output Enabled	28	5	155	
		High-output Disabled	22	5		
RCP6(S)-RA4C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	310	
		High-output Disabled	35	10		

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~200 (Every 50mm)
16	High-output Enabled	840
	High-output Disabled	560
10	High-output Enabled	700
	High-output Disabled	525
5	High-output Enabled	350
	High-output Disabled	260
2.5	High-output Enabled	175
	High-output Disabled	130

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

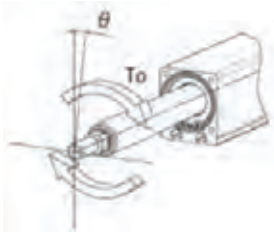
Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Foot bracket	**FT**	See P.191
Tip adapter (Internal thread)	**NFA**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar	**NTB**	See P.194

When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	To: 1.0N•m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

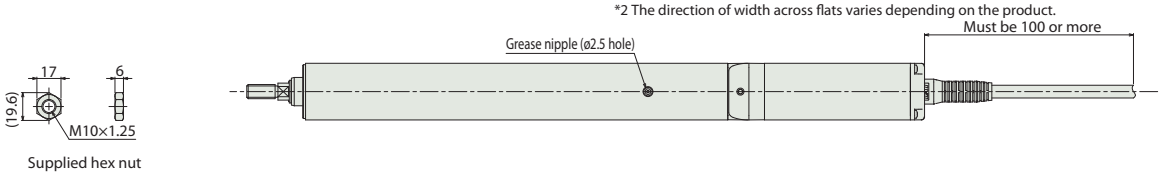
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.

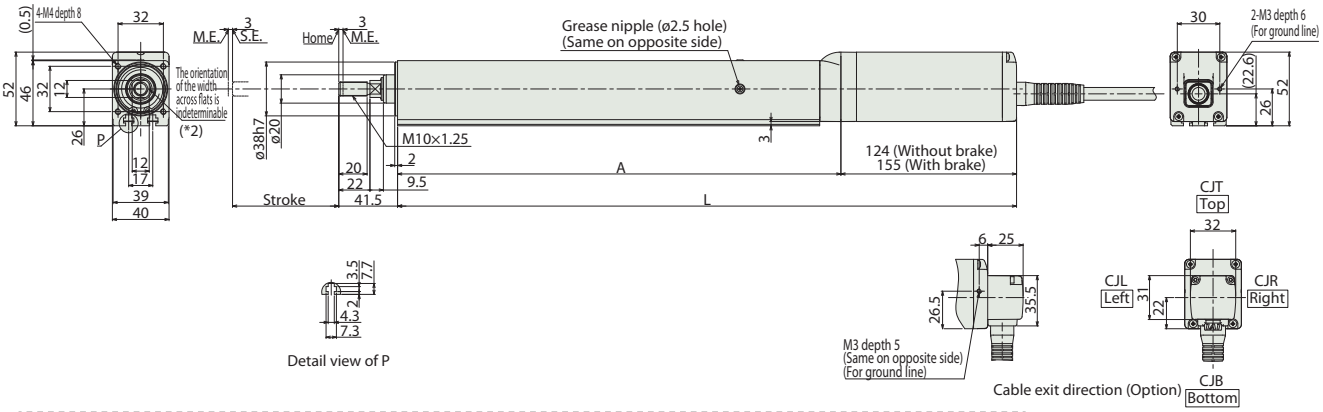


Dimensions

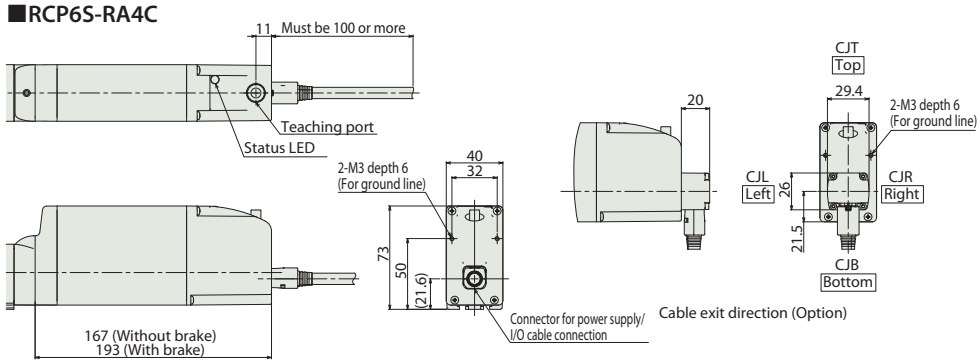
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.





■RCP6S-RA4C



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200
L	RCP6	w/o brake	287	337	387	437
		w/ brake	318	368	418	468
	RCP6S	w/o brake	330	380	430	480
		w/ brake	356	406	456	506
A			163	213	263	313
Mass (kg)	RCP6	w/o brake	1.4	1.6	1.7	1.9
		w/ brake	1.5	1.7	1.9	2.1
	RCP6S	w/o brake	1.6	1.8	1.9	2.1
		w/ brake	1.7	1.9	2.1	2.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method			Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RA6C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 58 mm | 24V Pulse Motor

■ Model Specification Items

□ — RA6C — WA — 42P — □ — □ — □ — □ — □ — □

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

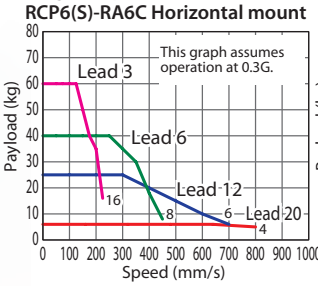
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.223 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

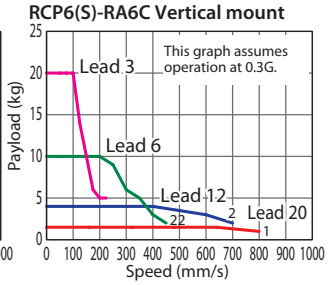
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RA6C Horizontal mount

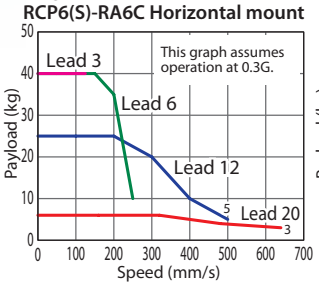


RCP6(S)-RA6C Vertical mount

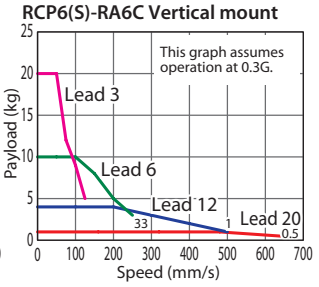


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RA6C Horizontal mount



RCP6(S)-RA6C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-RA6C-WA-42P-20-①-②-③-④	20	High-output Enabled	6	1.5	56	50~300 (The increment of stroke is 50mm)
		High-output Disabled	6	1		
RCP6(S)-RA6C-WA-42P-12-①-②-③-④	12	High-output Enabled	25	4	93	
		High-output Disabled	25	4		
RCP6(S)-RA6C-WA-42P-6-①-②-③-④	6	High-output Enabled	40	10	185	
		High-output Disabled	40	10		
RCP6(S)-RA6C-WA-42P-3-①-②-③-④	3	High-output Enabled	60	20	370	
		High-output Disabled	40	20		

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~300 (Every 50mm)
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
	High-output Disabled	125

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

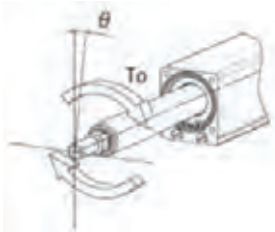
Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Foot bracket	**FT**	See P.191
Tip adapter (Internal thread)	**NFA**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar	**NTB**	See P.194

When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	To: 1.5N•m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

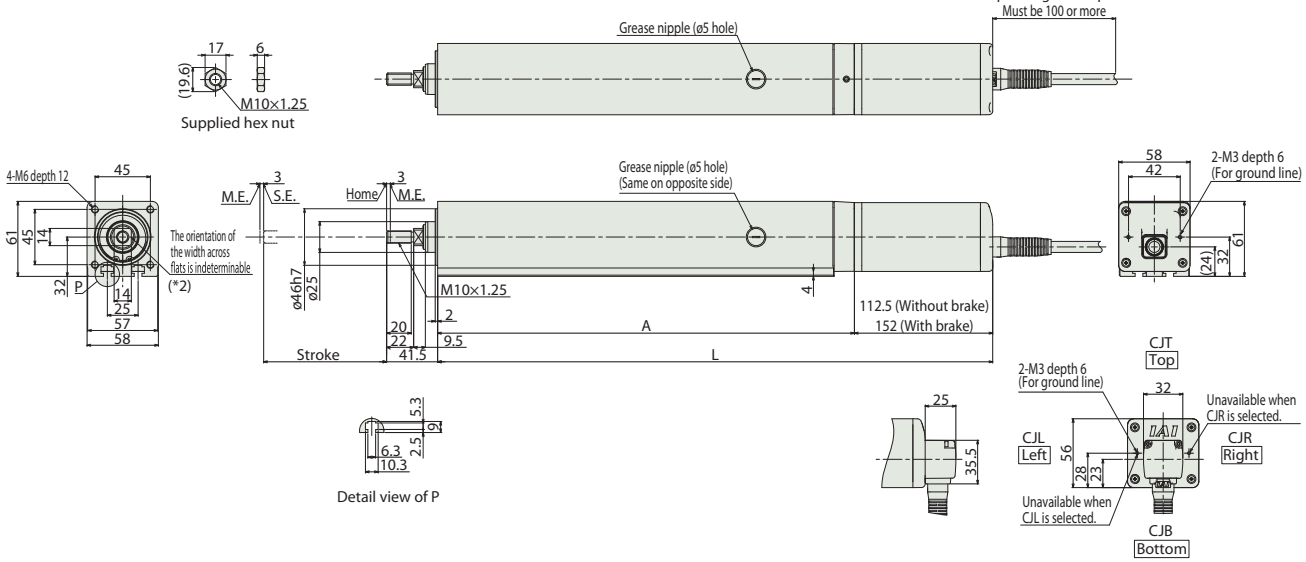
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.



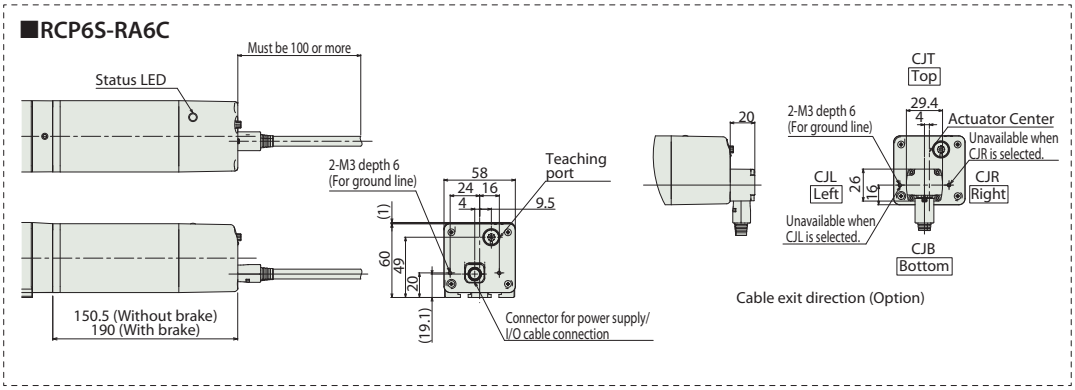
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■RCP6S-RA6C



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L	RCP6	w/o brake	301.5	351.5	401.5	451.5	501.5	551.5
		w/ brake	341	391	441	491	541	591
	RCP6S	w/o brake	339.5	389.5	439.5	489.5	539.5	589.5
		w/ brake	379	429	479	529	579	629
A			189	239	289	339	389	439
Mass (kg)	RCP6	w/o brake	2.5	2.9	3.3	3.6	4.0	4.4
		w/ brake	2.7	3.1	3.5	3.9	4.3	4.7
	RCP6S	w/o brake	2.6	3.0	3.4	3.8	4.2	4.6
		w/ brake	2.9	3.2	3.6	4.0	4.4	4.8

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RA7C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 70 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RA7C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

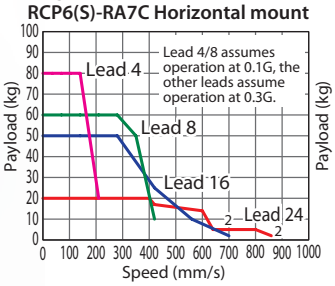
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.223 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

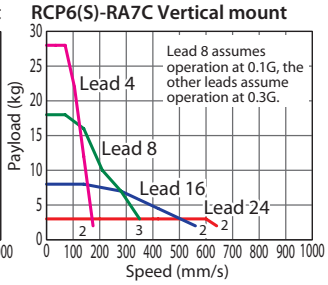
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RA7C Horizontal mount

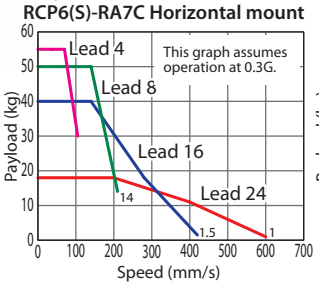


RCP6(S)-RA7C Vertical mount

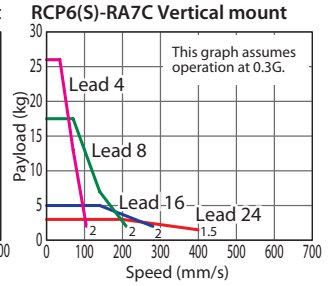


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RA7C Horizontal mount



RCP6(S)-RA7C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-RA7C-WA-56P-24-①-②-③-④	24	High-output Enabled	20	3	182	50~300 (The increment of stroke is 50mm)
		High-output Disabled	18	3		
RCP6(S)-RA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	50	8	273	
		High-output Disabled	40	5		
RCP6(S)-RA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	60	18	547	
		High-output Disabled	50	17.5		
RCP6(S)-RA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	80	28	1094	
		High-output Disabled	55	26		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~300 (Every 50mm)
24	High-output Enabled	860 <640>
	High-output Disabled	600 <400>
16	High-output Enabled	700 <560>
	High-output Disabled	420 <280>
8	High-output Enabled	420 <350>
	High-output Disabled	210
4	High-output Enabled	210 <175>
	High-output Disabled	105

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

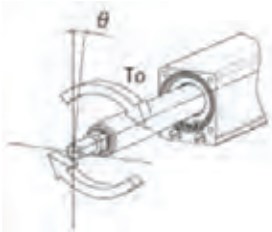
Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Foot bracket	**FT**	See P.191
Tip adapter (Internal thread)	**NFA**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar	**NTB**	See P.194

When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	To: 2.5N•m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

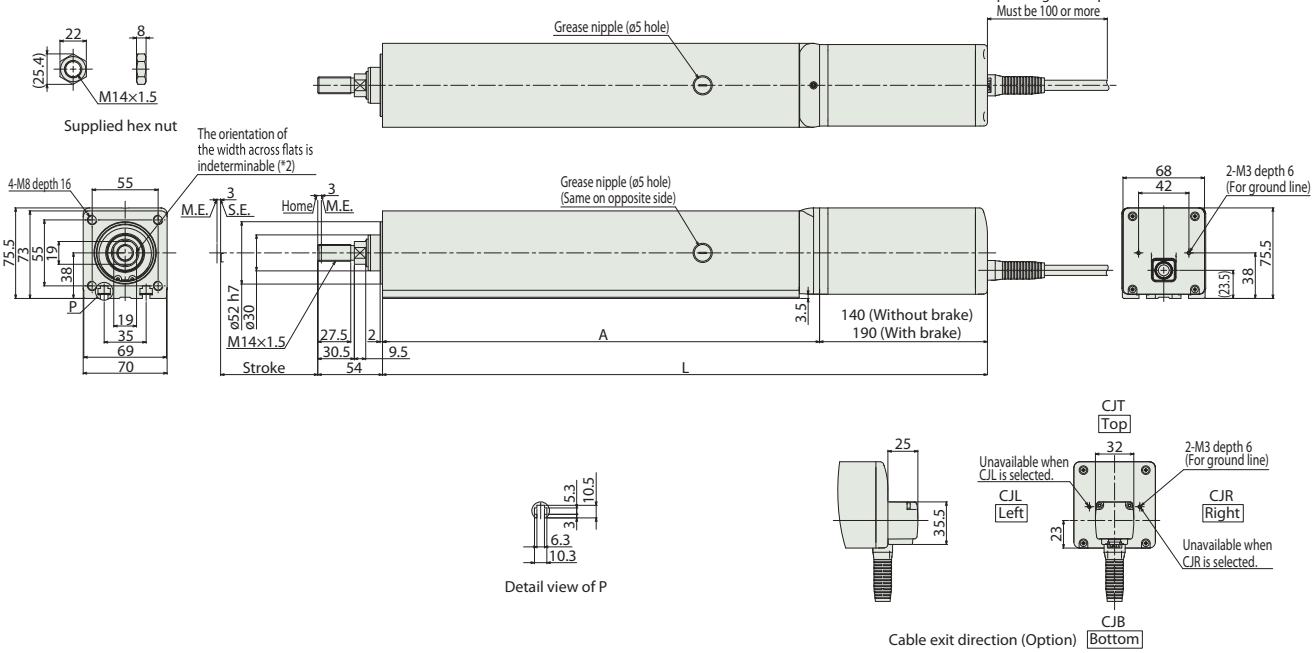
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.



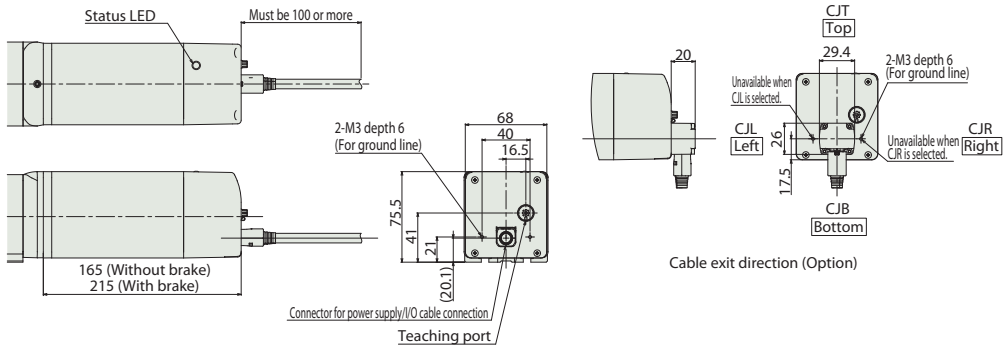
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■RCP6S-RA7C



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L	RCP6	w/o brake	354.5	404.5	454.5	504.5	554.5	604.5
		w/ brake	404.5	454.5	504.5	554.5	604.5	654.5
	RCP6S	w/o brake	379.5	429.5	479.5	529.5	579.5	629.5
		w/ brake	429.5	479.5	529.5	579.5	629.5	679.5
A			214.5	264.5	314.5	364.5	414.5	464.5
Mass (kg)	RCP6	w/o brake	4.5	5.1	5.6	6.2	6.7	7.3
		w/ brake	4.9	5.5	6.0	6.6	7.2	7.7
	RCP6S	w/o brake	4.7	5.2	5.8	6.3	6.9	7.5
		w/ brake	5.1	5.7	6.2	6.8	7.3	7.9

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RA8C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 85 mm | 24V Pulse Motor

Model Specification Items

□ — RA8C — WA — 60P — □ — □ — □ — □ — □ — □

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

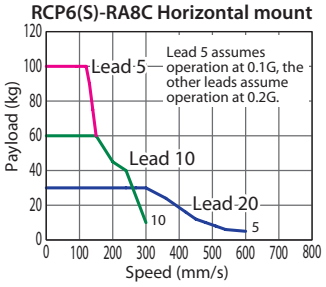
POINT Selection Notes

(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.223 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6S (built-in controller type), please limit the duty cycle to 70% or less.
(6) The service life of an actuator varies depending on the payload when using vertically. Please refer to P.206 for more information.

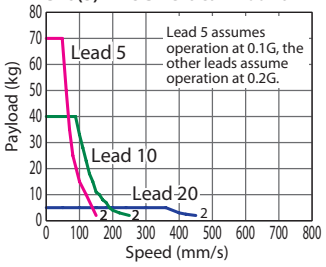
Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.

RCP6(S)-RA8C Horizontal mount



RCP6(S)-RA8C Vertical mount



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-RA8C-WA-60P-20-①-②-③-④	20	30	5	500	50~300 (The increment of stroke is 50mm)
RCP6(S)-RA8C-WA-60P-10-①-②-③-④	10	60	40	1000	
RCP6(S)-RA8C-WA-60P-5-①-②-③-④	5	100	70	2000	

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
20	600 <450>
10	300 <250>
5	150

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

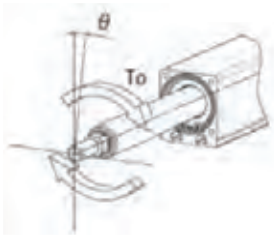
Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Foot bracket	**FT**	See P.191
Tip adapter (Internal thread)	**NFA**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar	**NTB**	See P.194

When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø18mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	To: 5N•m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

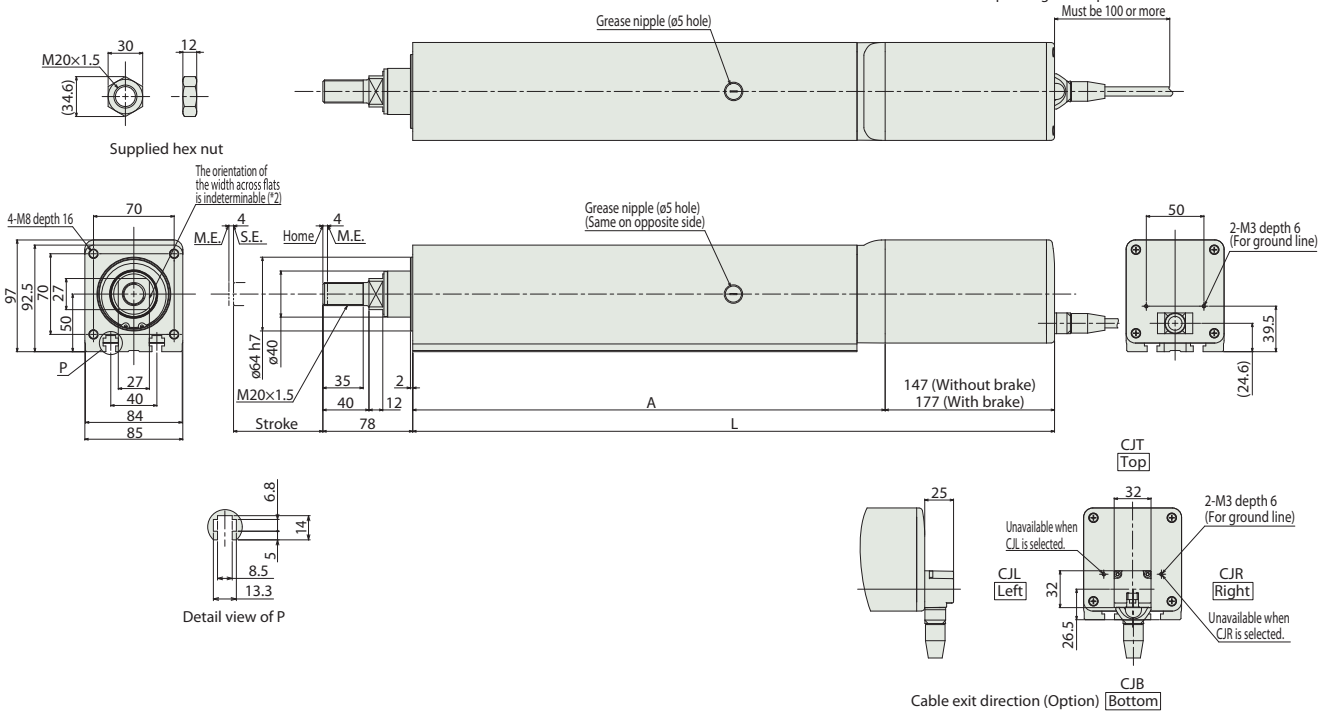
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.



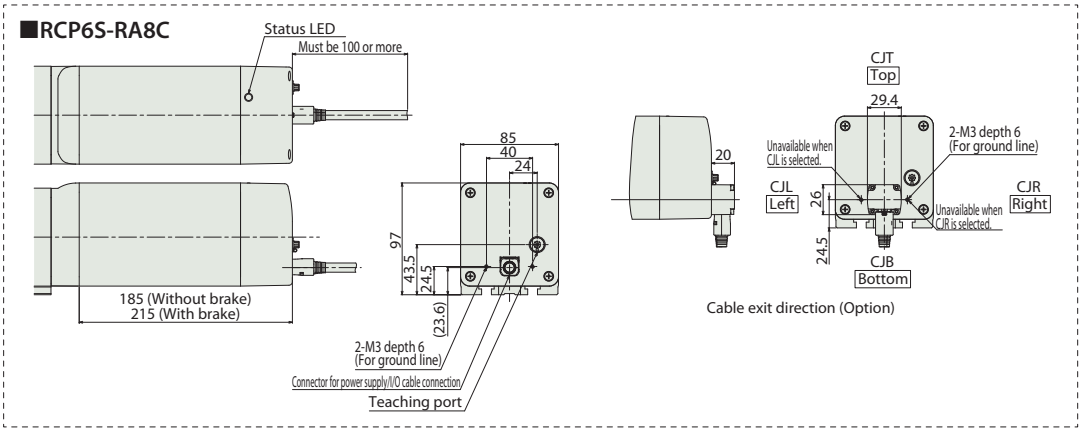
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■RCP6S-RA8C



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L	RCP6	w/o brake	407	457	507	557	607	657
		w/ brake	437	487	537	587	637	687
	RCP6S	w/o brake	445	495	545	595	645	695
		w/ brake	475	525	575	625	675	725
A			260	310	360	410	460	510
Mass (kg)	RCP6	w/o brake	7.8	8.6	9.5	10.3	11.1	11.9
		w/ brake	8.4	9.2	10.0	10.9	11.7	12.5
	RCP6S	w/o brake	8.1	9.0	9.8	10.6	11.4	12.3
		w/ brake	8.7	9.5	10.4	11.2	12.0	12.8

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)-RA4R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 24V Pulse Motor

* Body width does not include the width of the side-mounted motor.

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RA4R	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ↓ 200: 200mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

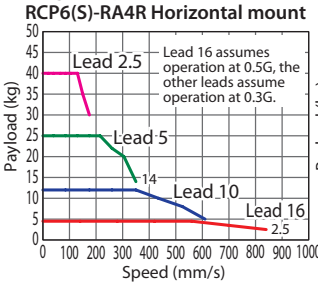
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.225 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.

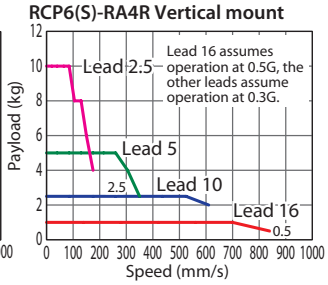
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RA4R Horizontal mount

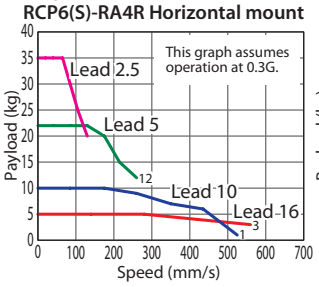


RCP6(S)-RA4R Vertical mount

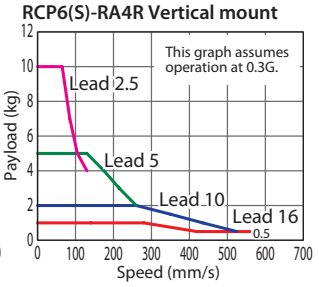


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RA4R Horizontal mount



RCP6(S)-RA4R Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-RA4R-WA-35P-16-①-②-③-④	16	High-output Enabled	5	1	48	50~200 (The increment of stroke is 50mm)
		High-output Disabled	5	1		
RCP6(S)-RA4R-WA-35P-10-①-②-③-④	10	High-output Enabled	12	2.5	77	
		High-output Disabled	10	2		
RCP6(S)-RA4R-WA-35P-5-①-②-③-④	5	High-output Enabled	25	5	155	
		High-output Disabled	22	5		
RCP6(S)-RA4R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	310	
		High-output Disabled	35	10		

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~200 (Every 50mm)
16	High-output Enabled	840
	High-output Disabled	560
10	High-output Enabled	610
	High-output Disabled	525
5	High-output Enabled	350
	High-output Disabled	260
2.5	High-output Enabled	175
	High-output Disabled	130

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

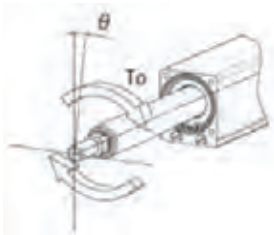
Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Foot bracket	**FT**	See P.191
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Motor side-mounted to the top	**MT**	See P.193
Tip adapter (Internal thread)	**NFA**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar	**NTB**	See P.194

* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	To: 1.0N•m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

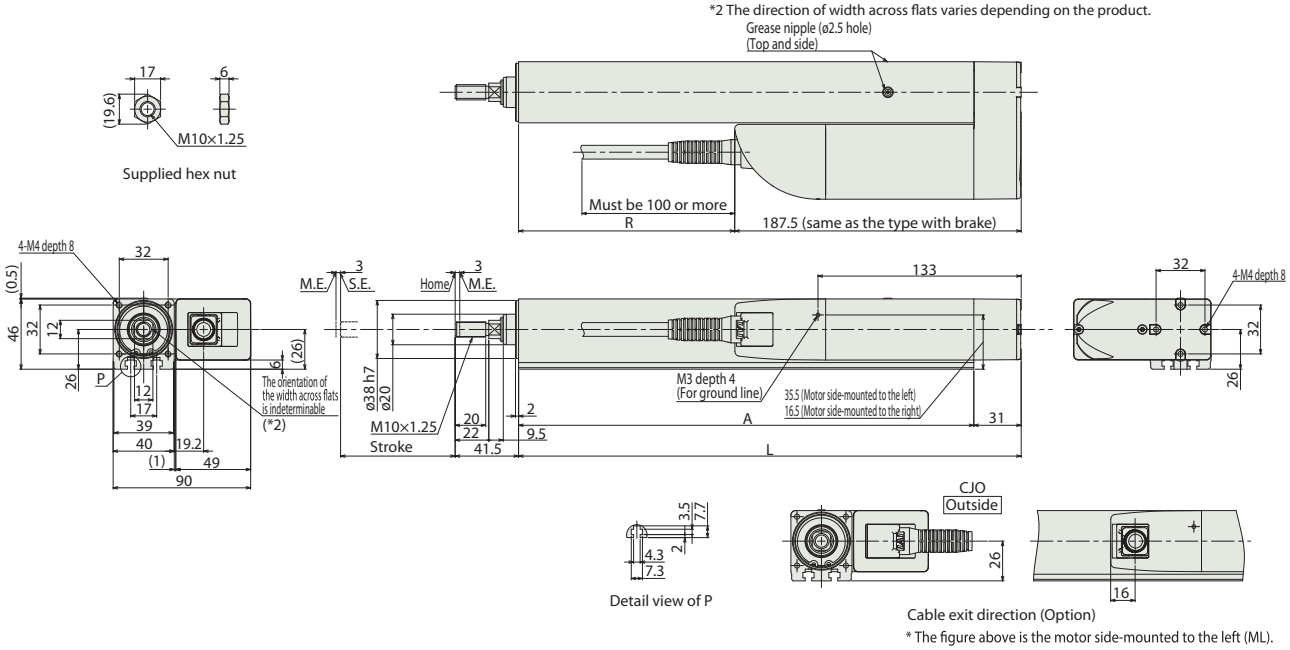
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.



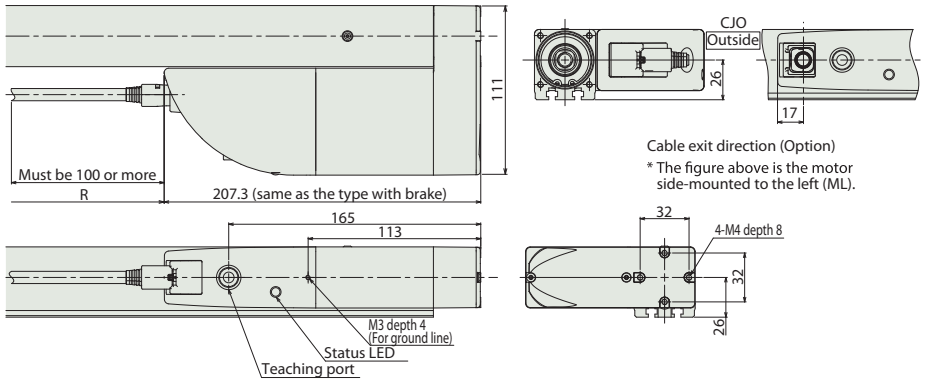
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■RCP6S-RA4R



Note:
* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200
L			179	229	279	329
A			148	198	248	298
R	RCP6		-8.5	41.5	91.5	141.5
	RCP6S		-28.3	21.7	71.7	121.7
Mass (kg)	RCP6	w/o brake	1.5	1.7	1.9	2.1
		w/ brake	1.6	1.8	2	2.2
	RCP6S	w/o brake	1.6	1.8	2	2.2
		w/ brake	1.7	1.9	2.1	2.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RA6R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 58* mm | 24V Pulse Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RA6R	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

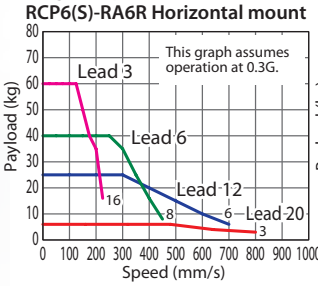
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.225 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

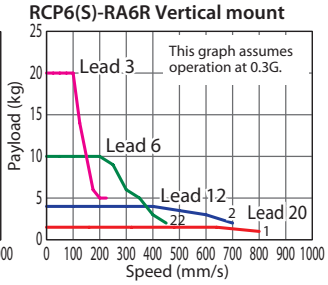
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RA6R Horizontal mount

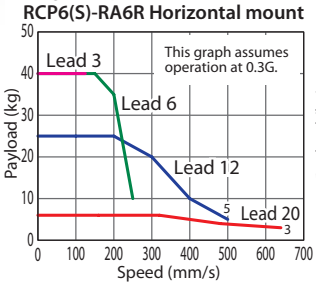


RCP6(S)-RA6R Vertical mount

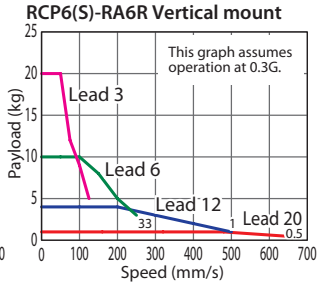


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RA6R Horizontal mount



RCP6(S)-RA6R Vertical mount



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-RA6R-WA-42P-20-①-②-③-④	20	High-output Enabled	6	1.5	56	50~300 (The increment of stroke is 50mm)
		High-output Disabled	6	1		
RCP6(S)-RA6R-WA-42P-12-①-②-③-④	12	High-output Enabled	25	4	93	
		High-output Disabled	25	4		
RCP6(S)-RA6R-WA-42P-6-①-②-③-④	6	High-output Enabled	40	10	185	
		High-output Disabled	40	10		
RCP6(S)-RA6R-WA-42P-3-①-②-③-④	3	High-output Enabled	60	20	370	
		High-output Disabled	40	20		

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~300 (Every 50mm)
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
	High-output Disabled	125

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

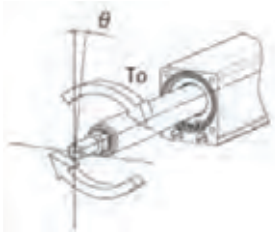
Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Foot bracket	**FT**	See P.191
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Motor side-mounted to the top	**MT**	See P.193
Tip adapter (Internal thread)	**NFA**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar	**NTB**	See P.194

* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	To: 1.5N•m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

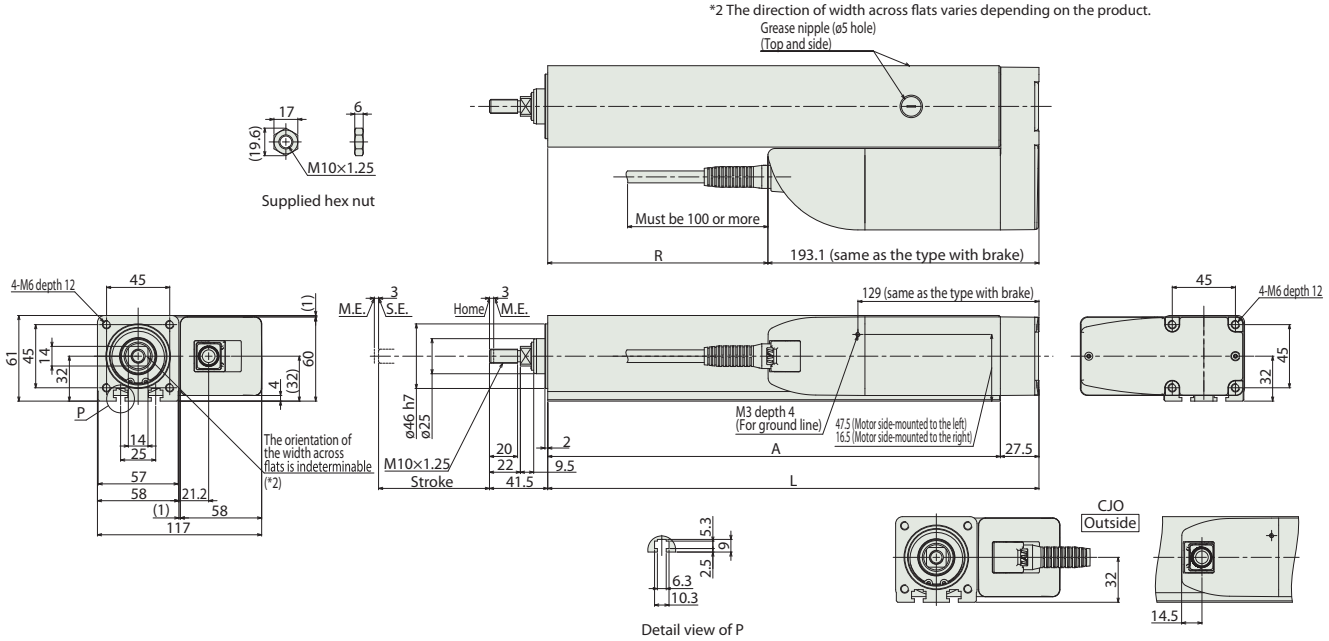
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.



Dimensions

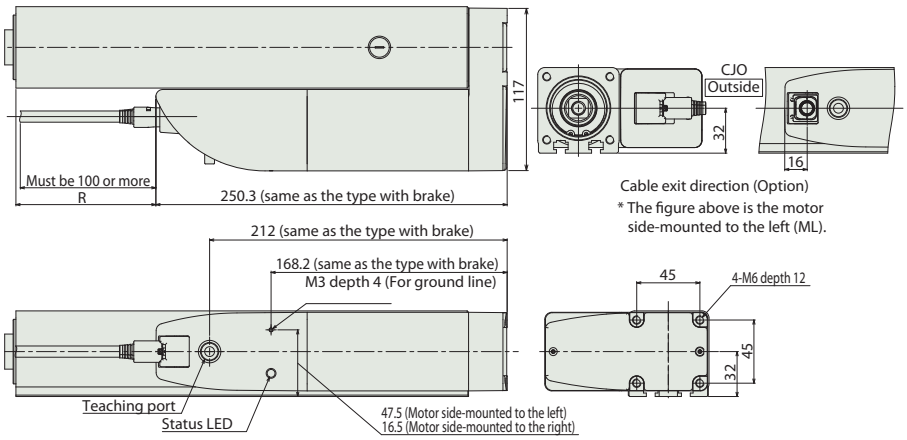
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



Cable exit direction (Option)
* The figure above is the motor side-mounted to the left (ML).

■RCP6S-RA6R



Cable exit direction (Option)
* The figure above is the motor side-mounted to the left (ML).

Note:
* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L			200	250	300	350	400	450
A			172.5	222.5	272.5	322.5	372.5	422.5
R	RCP6		6.9	56.9	106.9	156.9	206.9	256.9
	RCP6S		-50.3	-0.3	49.7	99.7	149.7	199.7
Mass (kg)	RCP6	w/o brake	2.8	3.2	3.6	4.0	4.4	4.8
		w/ brake	2.9	3.3	3.7	4.1	4.5	4.9
	RCP6S	w/o brake	2.9	3.3	3.7	4.1	4.5	4.9
		w/ brake	3.0	3.4	3.8	4.2	4.6	5.0

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RA7R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 24v Pulse Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RA7R	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

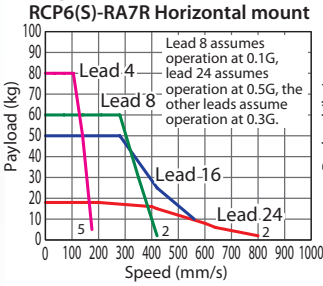
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.225 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

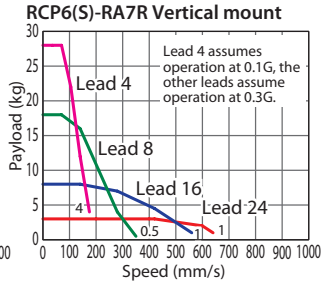
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RA7R Horizontal mount

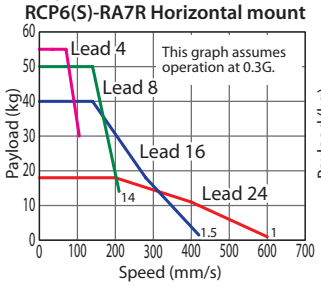


RCP6(S)-RA7R Vertical mount

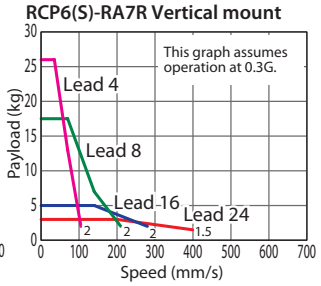


(2) High-output disabled with PCON/RCON/MCON/RSEL connected.

RCP6(S)-RA7R Horizontal mount



RCP6(S)-RA7R Vertical mount



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-RA7R-WA-56P-24-①-②-③-④	24	High-output Enabled	20	3	182	50~300 (The increment of stroke is 50mm)
		High-output Disabled	18	3		
RCP6(S)-RA7R-WA-56P-16-①-②-③-④	16	High-output Enabled	50	8	273	
		High-output Disabled	40	5		
RCP6(S)-RA7R-WA-56P-8-①-②-③-④	8	High-output Enabled	60	18	547	
		High-output Disabled	50	17.5		
RCP6(S)-RA7R-WA-56P-4-①-②-③-④	4	High-output Enabled	80	28	1,094	
		High-output Disabled	55	26		

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~300 (Every 50mm)
24	High-output Enabled	800 <640>
	High-output Disabled	600 <400>
16	High-output Enabled	560
	High-output Disabled	420 <280>
8	High-output Enabled	420 <350>
	High-output Disabled	210
4	High-output Enabled	175
	High-output Disabled	105

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

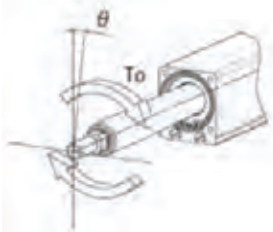
Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Foot bracket	**FT**	See P.191
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Motor side-mounted to the top	**MT**	See P.193
Tip adapter (Internal thread)	**NFA**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar	**NTB**	See P.194

* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	To: 2.5N•m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

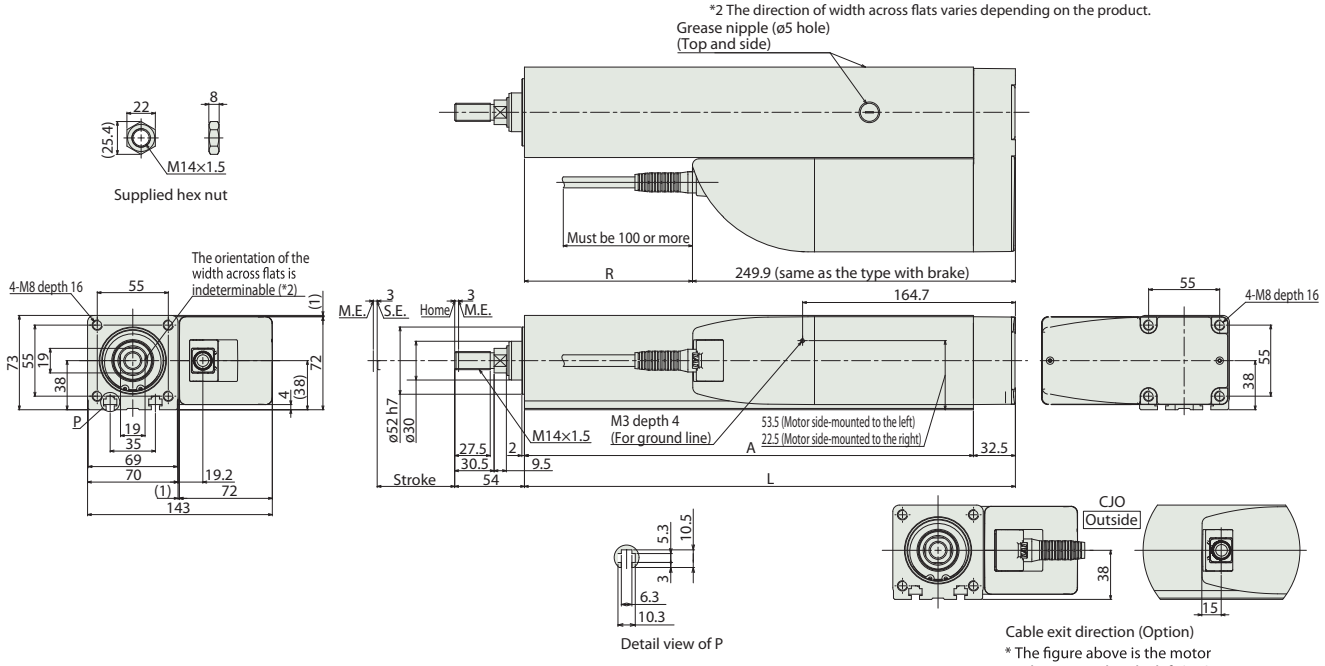
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.



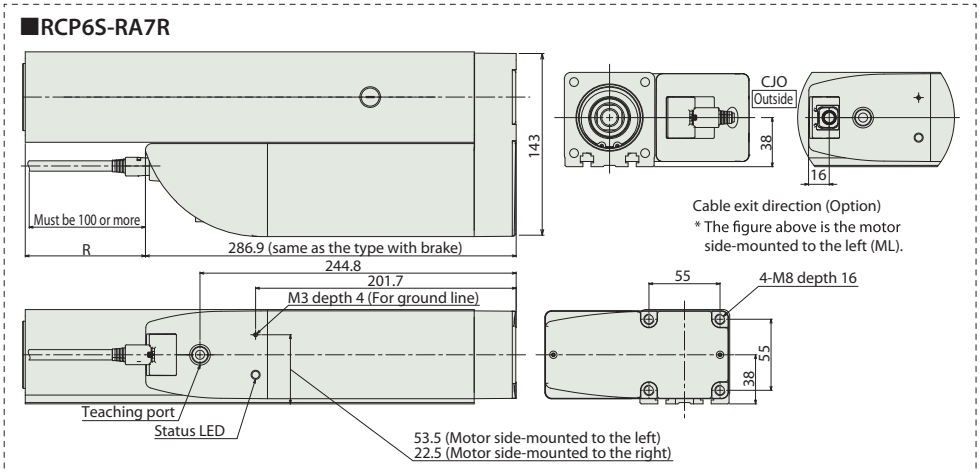
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■RCP6S-RA7R



Note:
* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L			230	280	330	380	430	480
A			197.5	247.5	297.5	347.5	397.5	447.5
R	RCP6		-19.9	30.1	80.1	130.1	180.1	230.1
	RCP6S		-56.9	-6.9	43.1	93.1	143.1	193.1
Mass (kg)	RCP6	w/o brake	5.1	5.7	6.3	6.9	7.5	8.1
		w/ brake	5.2	5.8	6.4	7.0	7.6	8.2
	RCP6S	w/o brake	5.2	5.8	6.4	7.0	7.6	8.1
		w/ brake	5.3	5.9	6.5	7.1	7.7	8.2

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RA8R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 85* mm | 24V Pulse Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RA8R	WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

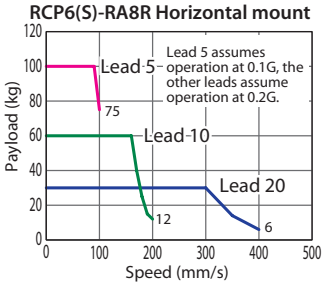
POINT Selection Notes

(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.225 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6S (built-in controller type), please limit the duty cycle to 70% or less.
(6) The service life of an actuator varies depending on the payload when using vertically. Please refer to P.206 for more information.

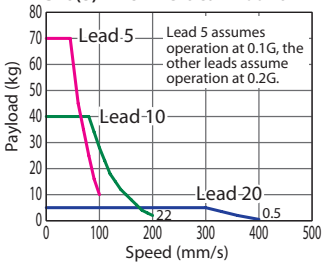
Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.

RCP6(S)-RA8R Horizontal mount



RCP6(S)-RA8R Vertical mount



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-RA8R-WA-60P-20-①-②-③-④	20	30	5	500	50~300 (The increment of stroke is 50mm)
RCP6(S)-RA8R-WA-60P-10-①-②-③-④	10	60	40	1000	
RCP6(S)-RA8R-WA-60P-5-①-②-③-④	5	100	70	2000	

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
20	400
10	200
5	100

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

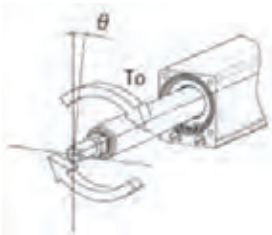
Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Foot bracket	**FT**	See P.191
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Motor side-mounted to the top	**MT**	See P.193
Tip adapter (Internal thread)	**NFA**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar	**NTB**	See P.194

* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	To: 5N•m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

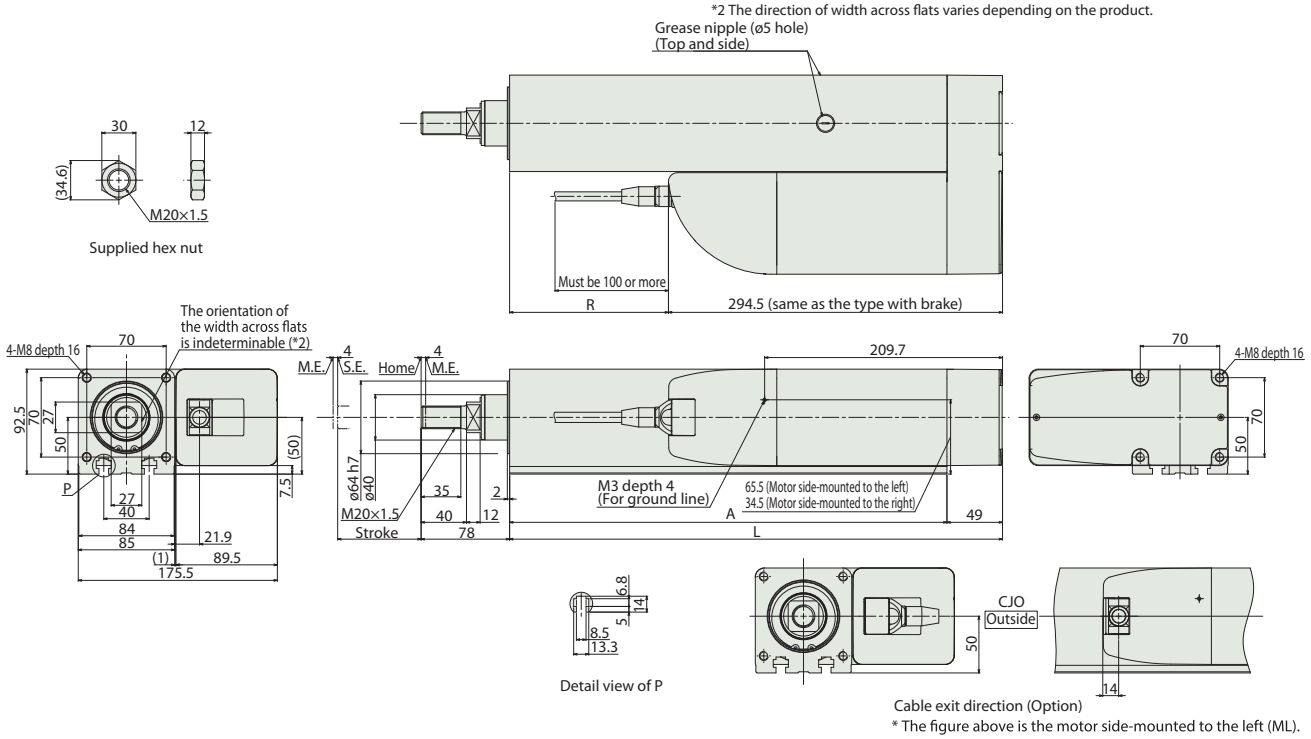
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.



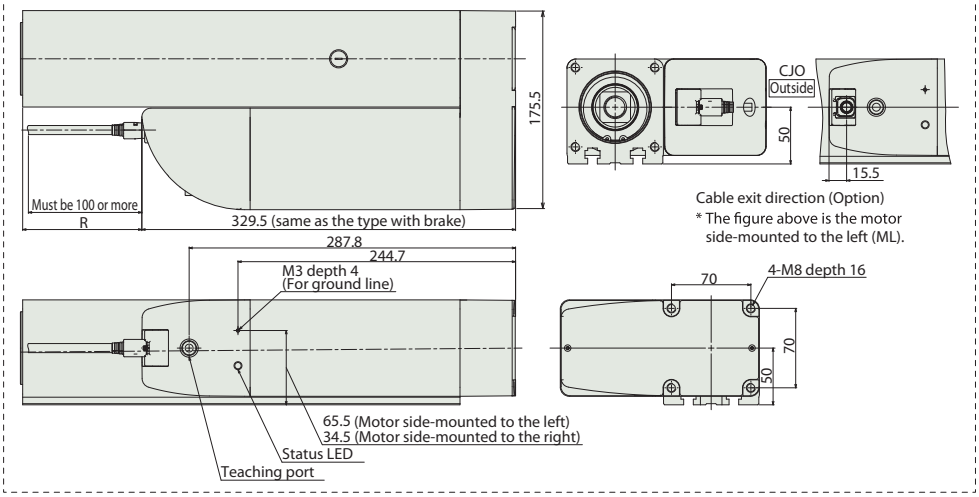
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■RCP6S-RA8R



Note:
* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L			284.5	334.5	384.5	434.5	484.5	534.5
A			235.5	285.5	335.5	385.5	435.5	485.5
R	RCP6		-10	40	90	140	190	240
	RCP6S		-45	5	55	105	155	205
Mass (kg)	RCP6	w/o brake	9.0	9.9	10.8	11.7	12.6	13.5
		w/ brake	9.2	10.1	11.0	11.9	12.8	13.7
	RCP6S	w/o brake	9.2	10.1	11.0	11.9	12.8	13.7
		w/ brake	9.4	10.3	11.2	12.1	13.0	13.9

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, SSCNET III/H	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)-RRA4C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 40 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RRA4C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	60: 60mm ~ 410: 410mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

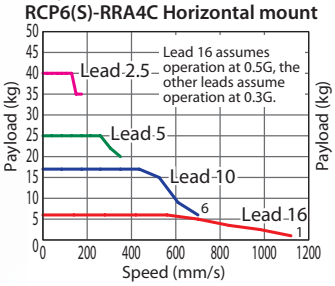
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.215 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.

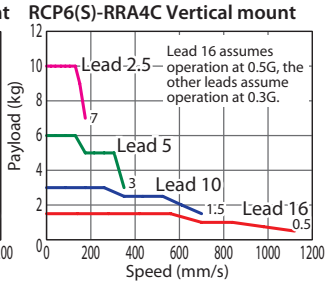
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RRA4C Horizontal mount

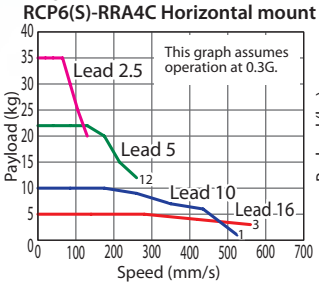


RCP6(S)-RRA4C Vertical mount

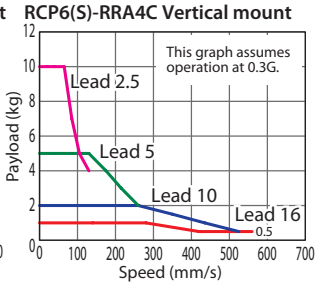


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RRA4C Horizontal mount



RCP6(S)-RRA4C Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-RRA4C-WA-35P-16-①-②-③-④	16	High-output Enabled	7	1.5	48	60~410 (The increment of stroke is 50mm)
		High-output Disabled	5	1		
RCP6(S)-RRA4C-WA-35P-10-①-②-③-④	10	High-output Enabled	18	3	77	
		High-output Disabled	10	2		
RCP6(S)-RRA4C-WA-35P-5-①-②-③-④	5	High-output Enabled	28	6	155	
		High-output Disabled	22	5		
RCP6(S)-RRA4C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	310	
		High-output Disabled	35	10		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	60~360 (Every 50mm)	410 (mm)
16	High-output Enabled	1120	1080
	High-output Disabled	560	
10	High-output Enabled	700	685
	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	

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Tip adapter (Flange)	**FFA**	See P.189
Tip adapter (Internal thread)	**NFA**	See P.192
Tip adapter (Keyway)	**KFA**	See P.193
Non-motor end specification	**NM**	See P.194

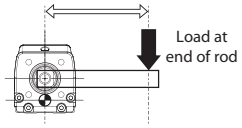
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

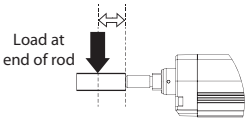
Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm Aluminum
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip overhang distance	dx/dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



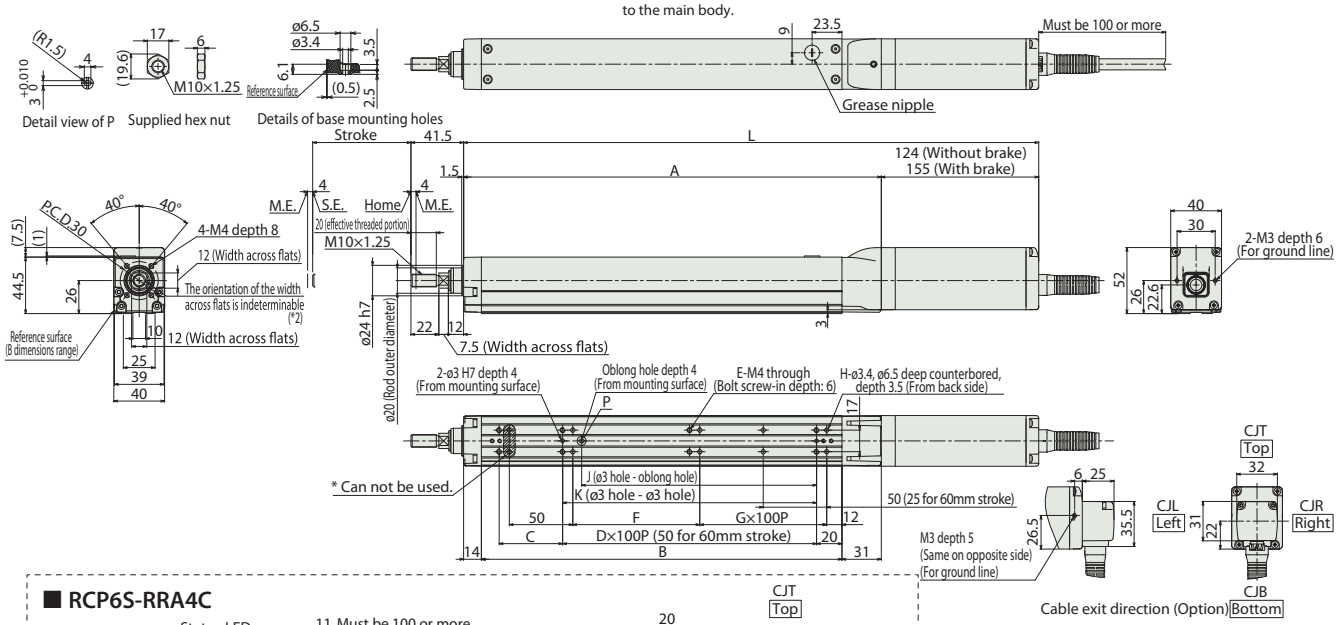
Overhang distance at end of rod (dz: 100mm or less)



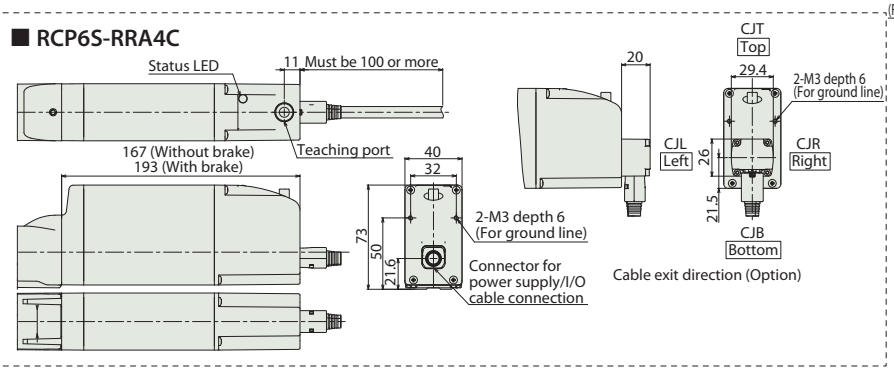
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E. M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.



■ RCP6S-RRA4C

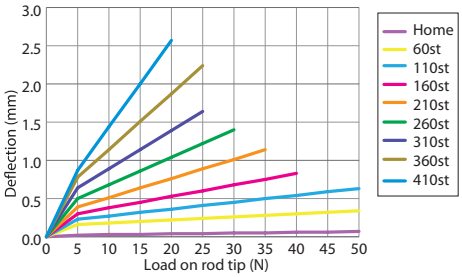


* The two mounting holes (H) on the rod side of the top surface of the base can not be used. The number of the holes (H) in the table does not include these holes that cannot be used.

■ Dimensions and Mass by Stroke

Stroke			60	110	160	210	260	310	360	410
L	RCP6	w/o brake	303	353	403	453	503	553	603	653
		w/ brake	334	384	434	484	534	584	634	684
	RCP6S	w/o brake	346	396	446	496	546	596	646	696
		w/ brake	372	422	472	522	572	622	672	722
A			179	229	279	329	379	429	479	529
B			134	184	234	284	334	384	434	484
C			50	50	100	50	100	50	100	50
D			0	1	1	2	2	3	3	4
E			6	6	6	8	8	10	10	12
F			50	100	50	100	50	100	50	100
G			0	0	1	1	2	2	3	3
H			6	6	8	8	10	10	12	12
J			35	85	85	185	185	285	285	385
K			50	100	100	200	200	300	300	400
Allowable static load on rod tip (N)			63.4	50.7	42.1	36	31.3	27.6	24.6	22.2
Allowable dynamic load on rod tip (5000km life) (N)		Load offset 0mm	28.9	22.2	17.9	14.8	12.6	10.8	9.4	8.2
		Load offset 100mm	17.9	15.5	13.4	11.6	10.2	9.0	8.0	7.1
Allowable static torque on rod tip (N•m)			6.4	5.1	4.3	3.7	3.2	2.9	2.6	2.3
Allowable dynamic torque on rod tip (N•m)			1.7	1.5	1.3	1.1	1.0	0.9	0.7	0.7
Mass (kg)	RCP6	w/o brake	1.2	1.4	1.5	1.6	1.7	1.9	2.0	2.1
		w/ brake	1.4	1.5	1.7	1.8	1.9	2.0	2.2	2.3
	RCP6S	w/o brake	1.4	1.6	1.7	1.8	1.9	2.1	2.2	2.3
		w/ brake	1.6	1.7	1.8	2.0	2.1	2.2	2.3	2.5

■ Rod Deflection of RCP6(S)-RRA4C (Reference Values)



Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RRA6C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 58 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RRA6C	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	65: 65mm ~ 415: 415mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

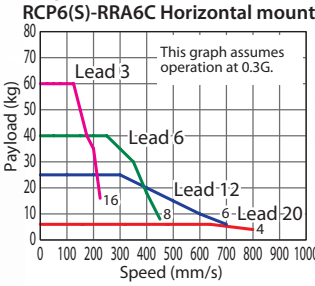
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.215 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

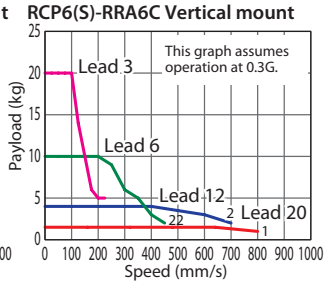
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RRA6C Horizontal mount

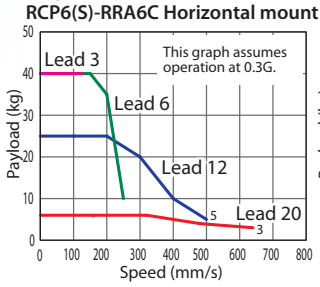


RCP6(S)-RRA6C Vertical mount

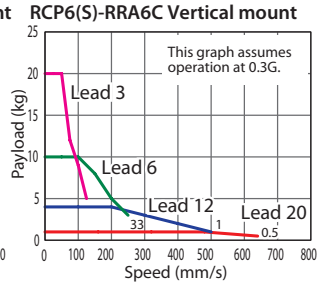


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RRA6C Horizontal mount



RCP6(S)-RRA6C Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-RRA6C-WA-42P-20-①-②-③-④	20	High-output Enabled	6	1.5	56	65~415 (The increment of stroke is 50mm)
		High-output Disabled	6	1		
RCP6(S)-RRA6C-WA-42P-12-①-②-③-④	12	High-output Enabled	25	4	93	
		High-output Disabled	25	4		
RCP6(S)-RRA6C-WA-42P-6-①-②-③-④	6	High-output Enabled	40	10	185	
		High-output Disabled	40	10		
RCP6(S)-RRA6C-WA-42P-3-①-②-③-④	3	High-output Enabled	60	20	370	
		High-output Disabled	40	20		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. 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	

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Tip adapter (Flange)	**FFA**	See P.189
Tip adapter (Internal thread)	**NFA**	See P.192
Tip adapter (Keyway)	**KFA**	See P.193
Non-motor end specification	**NM**	See P.194

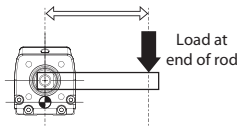
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

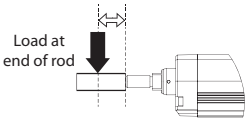
Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm Aluminum
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip overhang distance	dx/dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



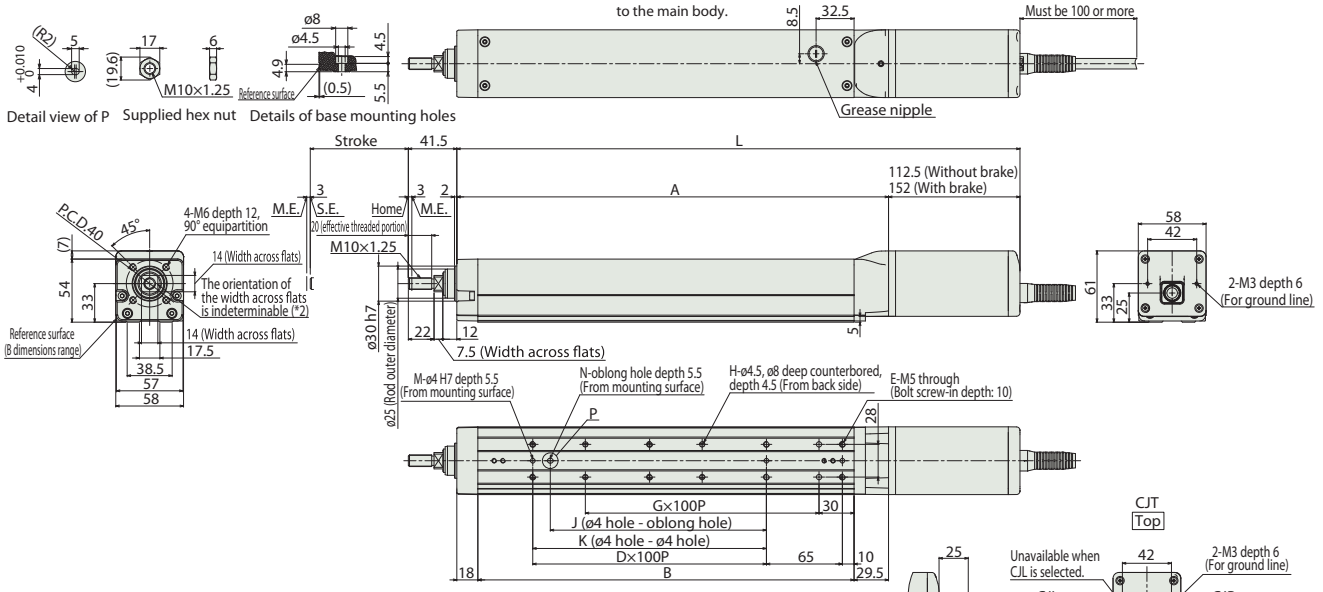
Overhang distance at end of rod (dz: 100mm or less)



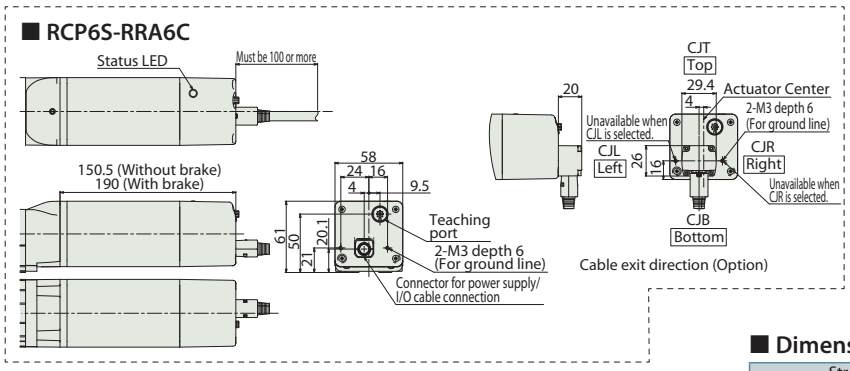
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E. M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.



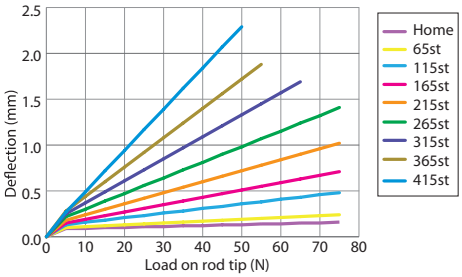
■ RCP6S-RRA6C



■ Dimensions and Mass by Stroke

Stroke			65	115	165	215	265	315	365	415
L	RCP6	w/o brake	332	382	432	482	532	582	632	682
		w/ brake	371.5	421.5	471.5	521.5	571.5	621.5	671.5	721.5
	RCP6S	w/o brake	370	420	470	520	570	620	670	720
		w/ brake	409.5	459.5	509.5	559.5	609.5	659.5	709.5	759.5
A			219.5	269.5	319.5	369.5	419.5	469.5	519.5	569.5
B			172	222	272	322	372	422	472	522
D			0	1	1	2	2	3	3	4
E			4	6	6	8	8	10	10	12
G			1	1	2	2	3	3	4	4
H			4	4	6	6	8	8	10	10
J			0	85	85	185	185	285	285	385
K			0	100	100	200	200	300	300	400
M			2	3	3	3	3	3	3	3
N			0	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			144	117	99	85.4	75	66.7	59.9	54.3
Allowable dynamic load on rod tip (5000km life) (N)		Load offset 0mm	58.1	46.4	38.3	32.4	27.9	24.4	21.5	19.2
		Load offset 100mm	38.8	34.0	29.7	26.2	23.2	20.8	18.7	16.8
Allowable static torque on rod tip (N•m)			14.5	11.8	10.0	8.7	7.6	6.8	6.2	5.6
Allowable dynamic torque on rod tip (N•m)			3.8	3.3	2.9	2.6	2.3	2.0	1.8	1.6
Mass (kg)	RCP6	w/o brake	2.1	2.3	2.6	2.8	3.0	3.2	3.5	3.7
		w/ brake	2.4	2.6	2.8	3.0	3.3	3.5	3.7	3.9
	RCP6S	w/o brake	2.3	2.5	2.7	2.9	3.2	3.4	3.6	3.8
		w/ brake	2.5	2.7	3.0	3.2	3.4	3.6	3.8	4.1

■ Rod Deflection of RCP6(S)-RRA6C (Reference Values)



Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RRA7C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 70 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RRA7C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	70: 70mm ~ 520: 520mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

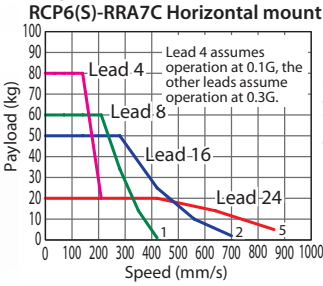
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.215 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

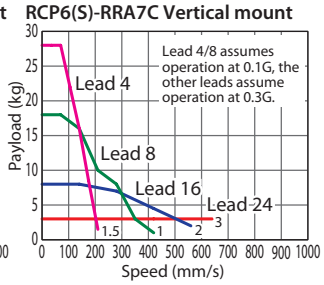
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RRA7C Horizontal mount

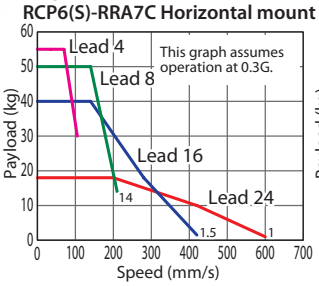


RCP6(S)-RRA7C Vertical mount

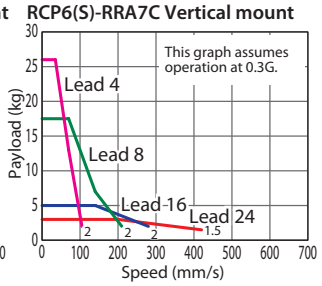


(2) High-output disabled with PCON/RCON/MCON/RSEL connected.

RCP6(S)-RRA7C Horizontal mount



RCP6(S)-RRA7C Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-RRA7C-WA-56P-24-①-②-③-④	24	High-output Enabled	20	3	182	70~520 (The increment of stroke is 50mm)
		High-output Disabled	18	3		
RCP6(S)-RRA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	50	8	273	
		High-output Disabled	40	5		
RCP6(S)-RRA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	60	18	547	
		High-output Disabled	50	17.5		
RCP6(S)-RRA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	80	28	1094	
		High-output Disabled	55	26		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	70~520 (Every 50mm)
24	High-output Enabled	860 <640>
	High-output Disabled	600 <420>
16	High-output Enabled	700 <560>
	High-output Disabled	420 <280>
8	High-output Enabled	420
	High-output Disabled	210
4	High-output Enabled	210
	High-output Disabled	105

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Tip adapter (Flange)	**FFA**	See P.189
Tip adapter (Internal thread)	**NFA**	See P.192
Tip adapter (Keyway)	**KFA**	See P.193
Non-motor end specification	**NM**	See P.194

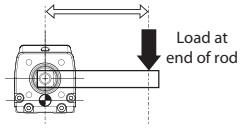
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

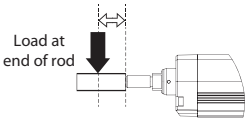
Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm Aluminum
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip overhang distance	dx/dz: 150mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



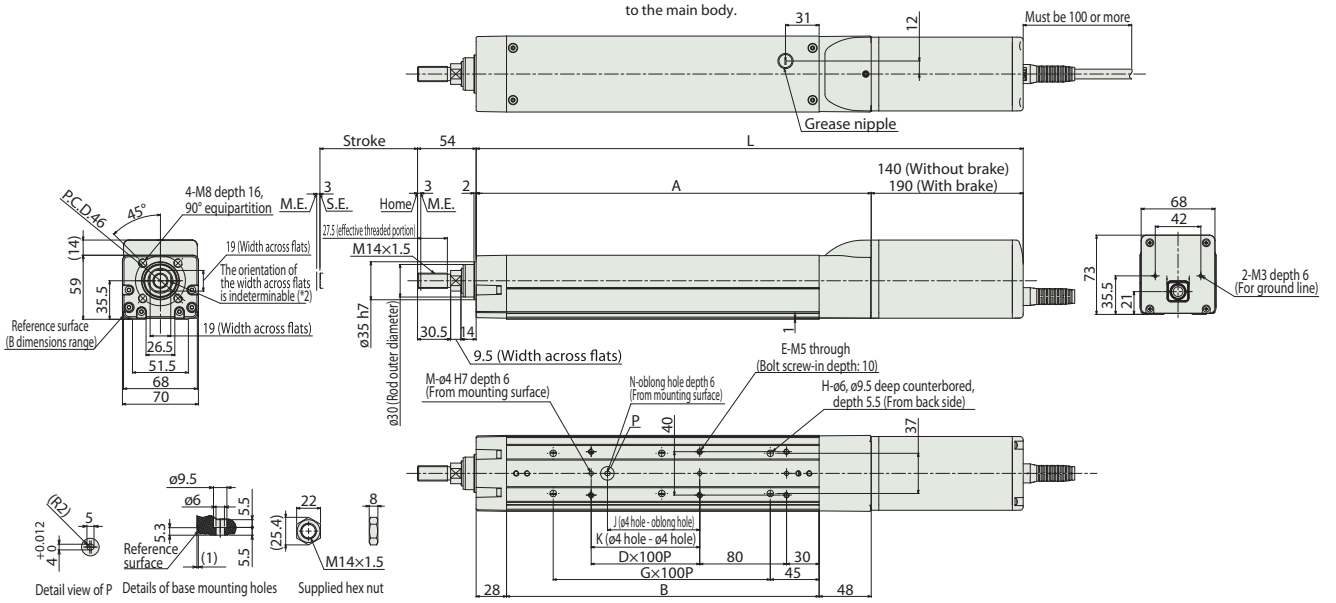
Overhang distance at end of rod (dz: 150mm or less)

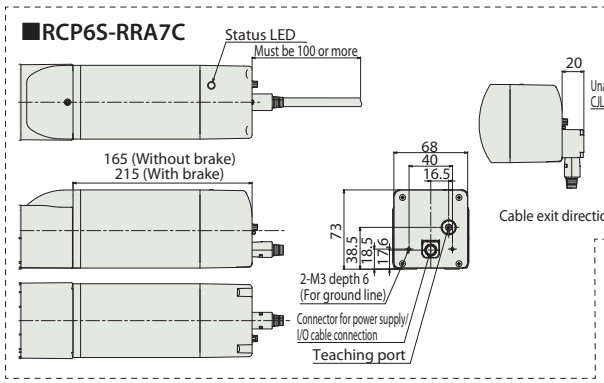


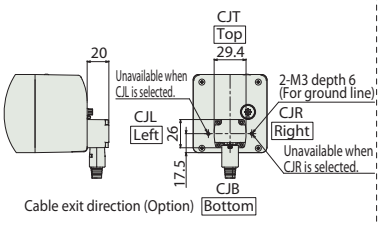
Dimensions

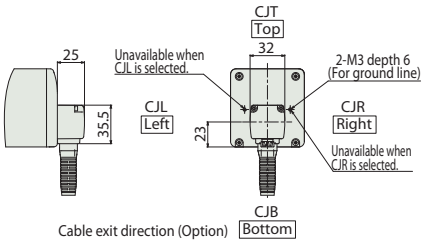
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E. M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.





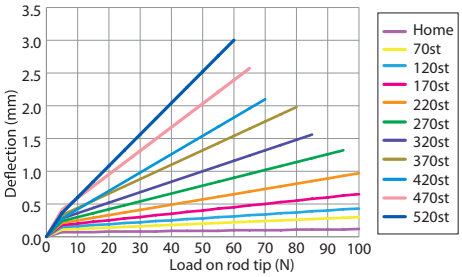




■ Dimensions and Mass by Stroke

Stroke			70	120	170	220	270	320	370	420	470	520
L	RCP6	w/o brake	404	454	504	554	604	654	704	754	804	854
		w/ brake	454	504	554	604	654	704	754	804	854	904
	RCP6S	w/o brake	429	479	529	579	629	679	729	779	829	879
		w/ brake	479	529	579	629	679	729	779	829	879	929
A			264	314	364	414	464	514	564	614	664	714
B			188	238	288	338	388	438	488	538	588	638
D			0	1	1	2	2	3	3	4	4	5
E			4	6	6	8	8	10	10	12	12	14
G			1	1	2	2	3	3	4	4	5	5
H			4	4	6	6	8	8	10	10	12	12
J			0	85	85	185	185	285	285	385	385	485
K			0	0	100	200	200	300	300	400	400	500
M			2	2	3	3	3	3	3	3	3	3
N			0	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			175	147	126	111	98.6	88.7	80.6	73.8	68	63
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm		75.7	62.6	53.1	46.0	40.5	36.1	32.5	29.4	26.9	24.7
	Load offset 100mm		49.8	45.1	40.5	36.5	33.1	30.2	27.7	25.5	23.6	21.9
Allowable static torque on rod tip (N•m)			17.6	14.7	12.7	11.2	9.9	9.0	8.2	7.5	6.94	6.45
Allowable dynamic torque on rod tip (N•m)			5.0	4.5	4.0	3.6	3.3	3.0	2.8	2.5	2.32	2.16
Mass (kg)	RCP6	w/o brake	4.0	4.3	4.6	4.8	5.1	5.4	5.7	5.9	6.2	6.5
		w/ brake	4.4	4.7	5.0	5.3	5.5	5.8	6.1	6.4	6.7	6.9
	RCP6S	w/o brake	4.2	4.5	4.7	5.0	5.3	5.6	5.8	6.1	6.4	6.7
		w/ brake	4.6	4.9	5.2	5.5	5.7	6.0	6.3	6.6	6.8	7.1

■ Rod Deflection of RCP6(S)-RRA7C (Reference Values)



Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RRA8C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 85 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RRA8C	WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 700: 700mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

Radial Load OK

CE RoHS

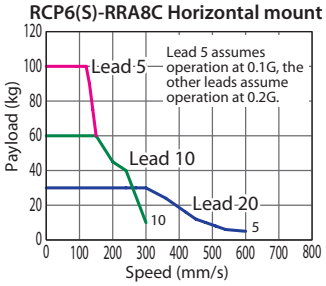
Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

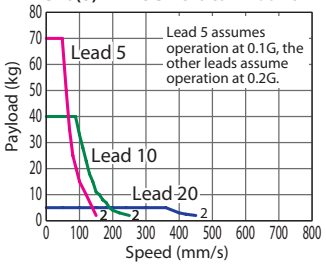
■ Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.

RCP6(S)-RRA8C Horizontal mount



RCP6(S)-RRA8C Vertical mount



POINT Selection Notes

(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.215 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6S (built-in controller type), please limit the duty cycle to 70% or less..
(6) The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.

Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-RRA8C-WA-60P-20-①-②-③-④	20	30	5	500	50~700 (The increment of stroke is 50mm)
RCP6(S)-RRA8C-WA-60P-10-①-②-③-④	10	60	40	1000	
RCP6(S)-RRA8C-WA-60P-5-①-②-③-④	5	100	70	2000	

■ Stroke and Max. Speed (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

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Tip adapter (Internal thread)	**NFA**	See P.193
Non-motor end specification	**NM**	See P.194

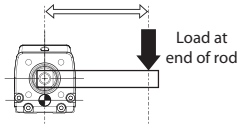
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

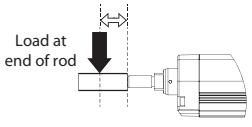
Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm Aluminum
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip overhang distance	dx/dz: 150mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



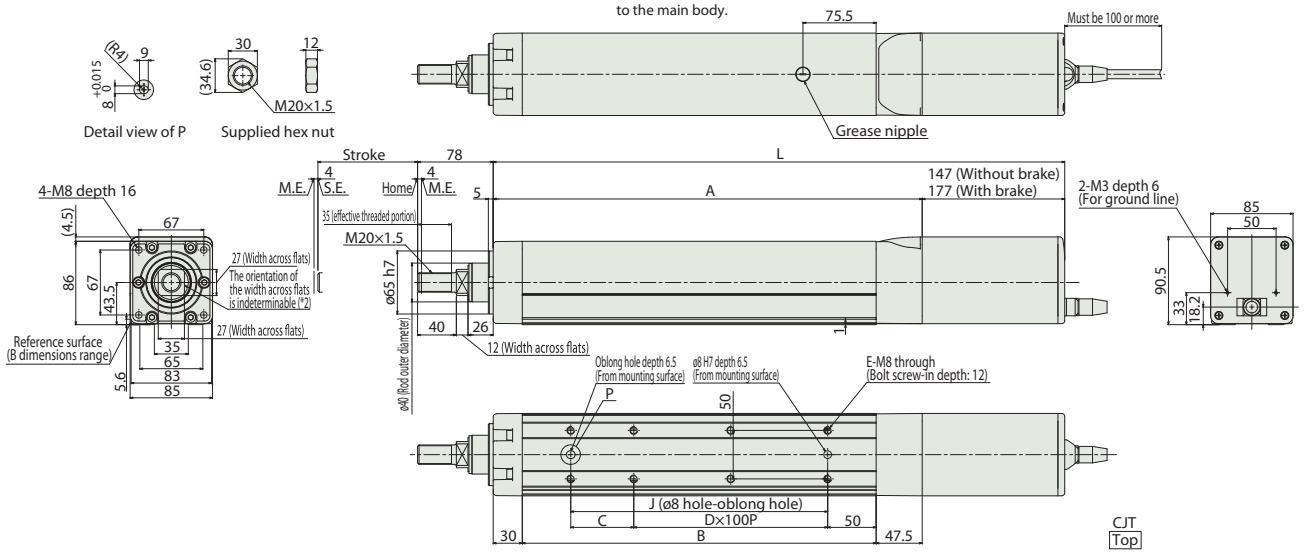
Overhang distance at end of rod (dz: 150mm or less)



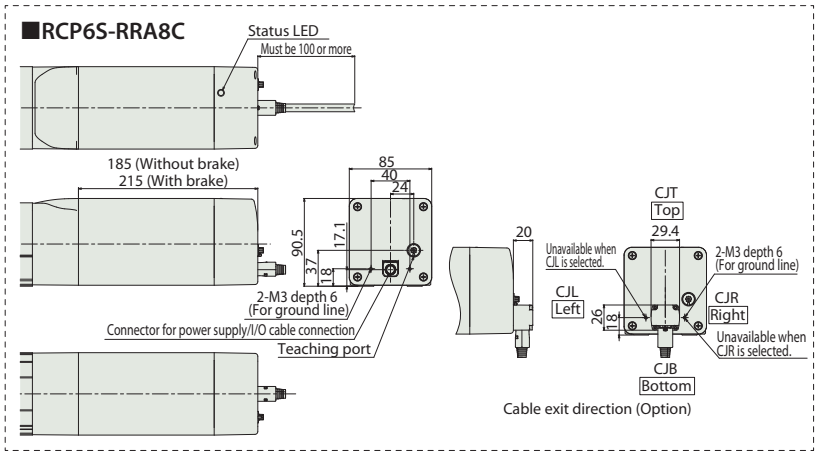
Dimensions

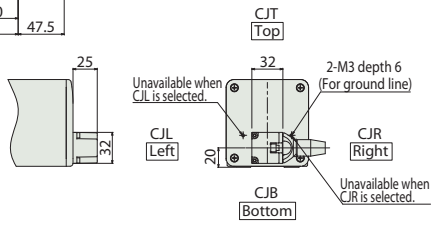
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E. M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.

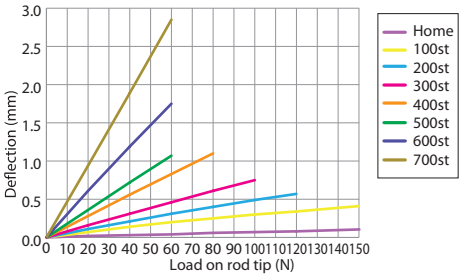


■RCP6S-RRA8C





■ Rod Deflection of RCP6(S)-RRA8C (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700
L	RCP6	w/o 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
		w/ brake	469.5	519.5	569.5	619.5	669.5	719.5	769.5	819.5	869.5	919.5	969.5	1,019.5	1,069.5	1,119.5
	RCP6S	w/o brake	477.5	527.5	577.5	627.5	677.5	727.5	777.5	827.5	877.5	927.5	977.5	1,027.5	1,077.5	1,127.5
		w/ brake	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5	1,007.5	1,057.5	1,107.5	1,157.5
A			292.5	342.5	392.5	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5	892.5	942.5
B			215	265	315	365	415	465	515	565	615	665	715	765	815	865
C			115	65	115	65	115	65	115	65	115	65	115	65	115	65
D			0	1	1	2	2	3	3	4	4	5	5	6	6	7
E			4	6	6	8	8	10	10	12	12	14	14	16	16	18
J			115	165	215	265	315	365	415	465	515	565	615	665	715	765
Allowable static load on rod tip (N)			222	186	159	139	124	111	101	92.1	84.7	78.4	72.8	68	63.7	59.8
Allowable dynamic load on rod tip (5000km life) (N)		Load offset 0mm	93.0	76.3	64.7	56.0	49.2	43.8	39.3	35.6	32.4	29.7	27.3	25.2	23.3	21.7
		Load offset 100mm	72.0	61.6	53.9	48.0	43.0	38.9	35.4	32.3	29.7	27.4	25.3	23.5	21.9	20.4
Allowable static torque on rod tip (N•m)			22.3	18.7	16.1	14.1	12.6	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.3
Allowable dynamic torque on rod tip (N•m)			7.2	6.2	5.4	4.8	4.3	3.9	3.5	3.2	3.0	2.7	2.5	2.4	2.2	2.0
Mass (kg)	RCP6	w/o brake	6.6	7.1	7.6	8.0	8.5	9.0	9.5	9.9	10.4	10.9	11.4	11.8	12.3	12.8
		w/ brake	7.2	7.7	8.2	8.6	9.1	9.6	10.1	10.5	11.0	11.5	11.9	12.4	12.9	13.4
	RCP6S	w/o brake	7.0	7.4	7.9	8.4	8.8	9.3	9.8	10.3	10.7	11.2	11.7	12.1	12.6	13.1
		w/ brake	7.5	8.0	8.5	9.0	9.4	9.9	10.4	10.8	11.3	11.8	12.3	12.7	13.2	13.7

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)-RRA4R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 24v Pulse Motor

■ Model Specification Items

□ — RRA4R — WA — 35P — □ — □ — □ — □ — □ — □

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm	60: 60mm ~ 410: 410mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

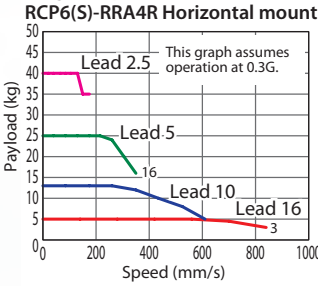
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.217 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.

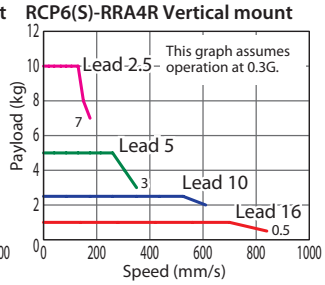
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RRA4R Horizontal mount

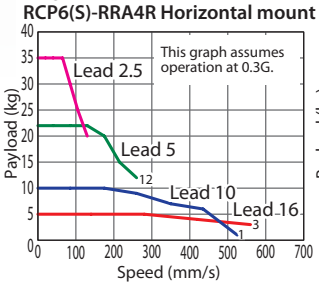


RCP6(S)-RRA4R Vertical mount

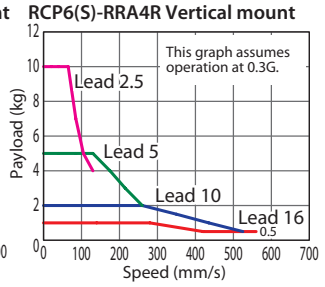


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RRA4R Horizontal mount



RCP6(S)-RRA4R Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-RRA4R-WA-35P-16-①-②-③-④	16	High-output Enabled	5	1	48	60~410 (The increment of stroke is 50mm)
		High-output Disabled	5	1		
RCP6(S)-RRA4R-WA-35P-10-①-②-③-④	10	High-output Enabled	13	2.5	77	
		High-output Disabled	10	2		
RCP6(S)-RRA4R-WA-35P-5-①-②-③-④	5	High-output Enabled	28	5	155	
		High-output Disabled	22	5		
RCP6(S)-RRA4R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	310	
		High-output Disabled	35	10		

■ Stroke and Max. 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	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Tip adapter (Flange)	**FFA**	See P.189
Tip adapter (Internal thread)	**NFA**	See P.192
Tip adapter (Keyway)	**KFA**	See P.193
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Knuckle joint	**NJ**	See P.194
Non-motor end specification	**NM**	See P.194
Clevis bracket	**QR**	See P.195

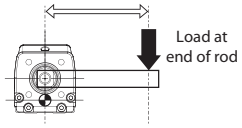
* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

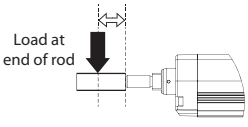
Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm Aluminum
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip overhang distance	dx/dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



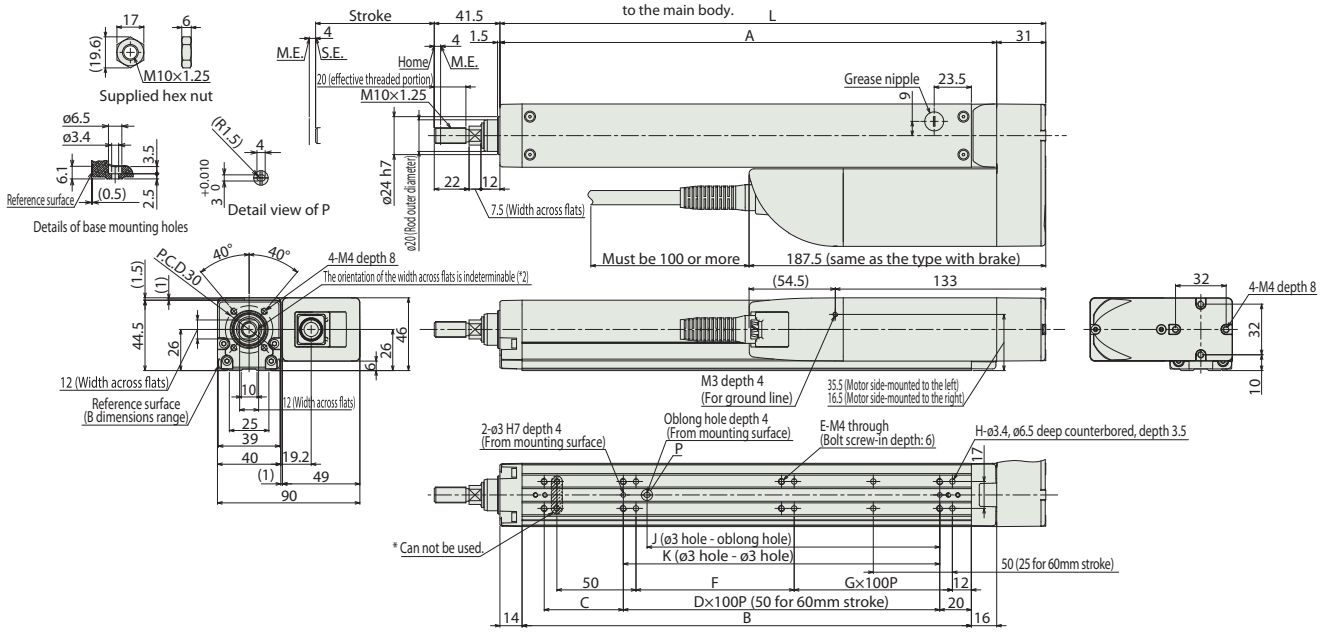
Overhang distance at end of rod (dz: 100mm or less)



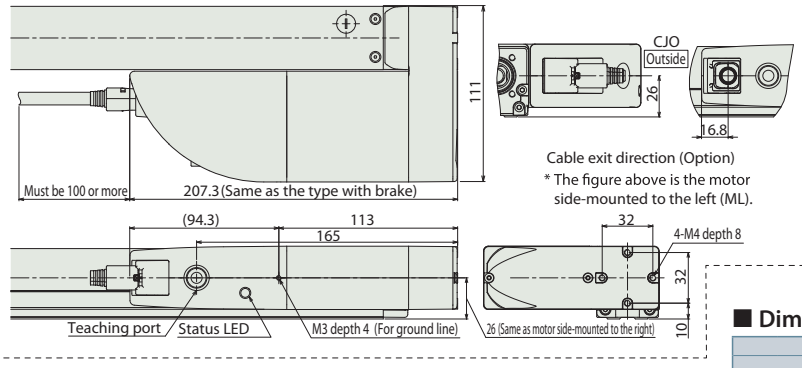
Dimensions

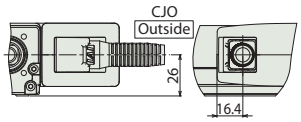
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E. M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.



■RCP6S-RRA4R



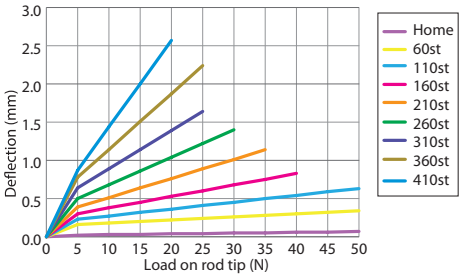


* The two mounting holes (H) on the rod side of the top surface of the base can not be used. The number of the holes (H) in the table does not include these holes that cannot be used.

■ Dimensions and Mass by Stroke

Stroke		60	110	160	210	260	310	360	410
L		195	245	295	345	395	445	495	545
A		164	214	264	314	364	414	464	514
B		134	184	234	284	334	384	434	484
C		50	50	100	50	100	50	100	50
D		0	1	1	2	2	3	3	4
E		6	6	6	8	8	10	10	12
F		50	100	50	100	50	100	50	100
G		0	0	1	1	2	2	3	3
H		6	6	8	8	10	10	12	12
J		35	85	85	185	185	285	285	385
K		50	100	100	200	200	300	300	400
Allowable static load on rod tip (N)		63.4	50.7	42.1	36	31.3	27.6	24.6	22.2
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm	28.9	22.2	17.9	14.8	12.6	10.8	9.4	8.2
	Load offset 100mm	17.9	15.5	13.4	11.6	10.2	9.0	8.0	7.1
Allowable static torque on rod tip (N•m)		6.4	5.1	4.3	3.7	3.2	2.9	2.6	2.3
Allowable dynamic torque on rod tip (N•m)		1.7	1.5	1.3	1.1	1.0	0.9	0.7	0.7
Mass (kg)	RCP6 w/o brake	1.4	1.5	1.6	1.8	1.9	2.0	2.1	2.3
	RCP6 w/ brake	1.4	1.6	1.7	1.8	1.9	2.1	2.2	2.3
	RCP6S w/o brake	1.5	1.6	1.8	1.9	2.0	2.1	2.3	2.4
	RCP6S w/ brake	1.6	1.7	1.8	1.9	2.1	2.2	2.3	2.4

■ Rod Deflection of RCP6(S)-RRA4R (Reference Values)



Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RRA6R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 58* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RRA6R	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	65: 65mm ~ 415: 415mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

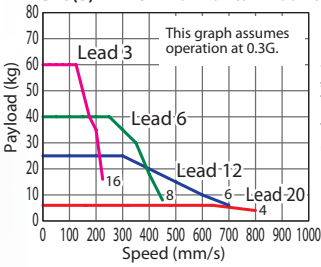
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.217 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

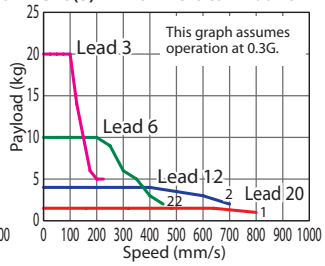
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RRA6R Horizontal mount

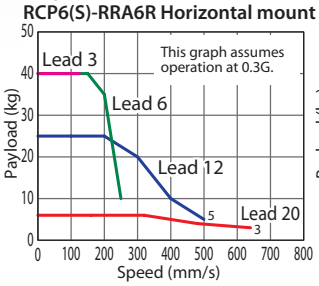


RCP6(S)-RRA6R Vertical mount

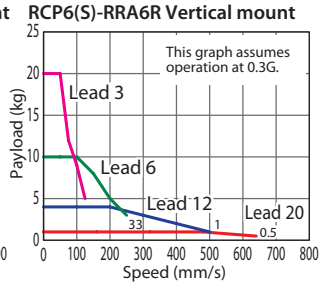


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RRA6R Horizontal mount



RCP6(S)-RRA6R Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-RRA6R-WA-42P-20-①-②-③-④	20	High-output Enabled	6	1.5	56	65~415 (The increment of stroke is 50mm)
		High-output Disabled	6	1		
RCP6(S)-RRA6R-WA-42P-12-①-②-③-④	12	High-output Enabled	25	4	93	
		High-output Disabled	25	4		
RCP6(S)-RRA6R-WA-42P-6-①-②-③-④	6	High-output Enabled	40	10	185	
		High-output Disabled	40	10		
RCP6(S)-RRA6R-WA-42P-3-①-②-③-④	3	High-output Enabled	60	20	370	
		High-output Disabled	40	20		

■ Stroke and Max. 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	

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Tip adapter (Flange)	**FFA**	See P.189
Tip adapter (Internal thread)	**NFA**	See P.192
Tip adapter (Keyway)	**KFA**	See P.193
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Knuckle joint	**NJ**	See P.194
Non-motor end specification	**NM**	See P.194
Clevis bracket	**QR**	See P.195

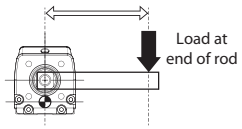
* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

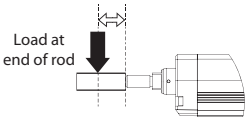
Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm Aluminum
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip overhang distance	dx/dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



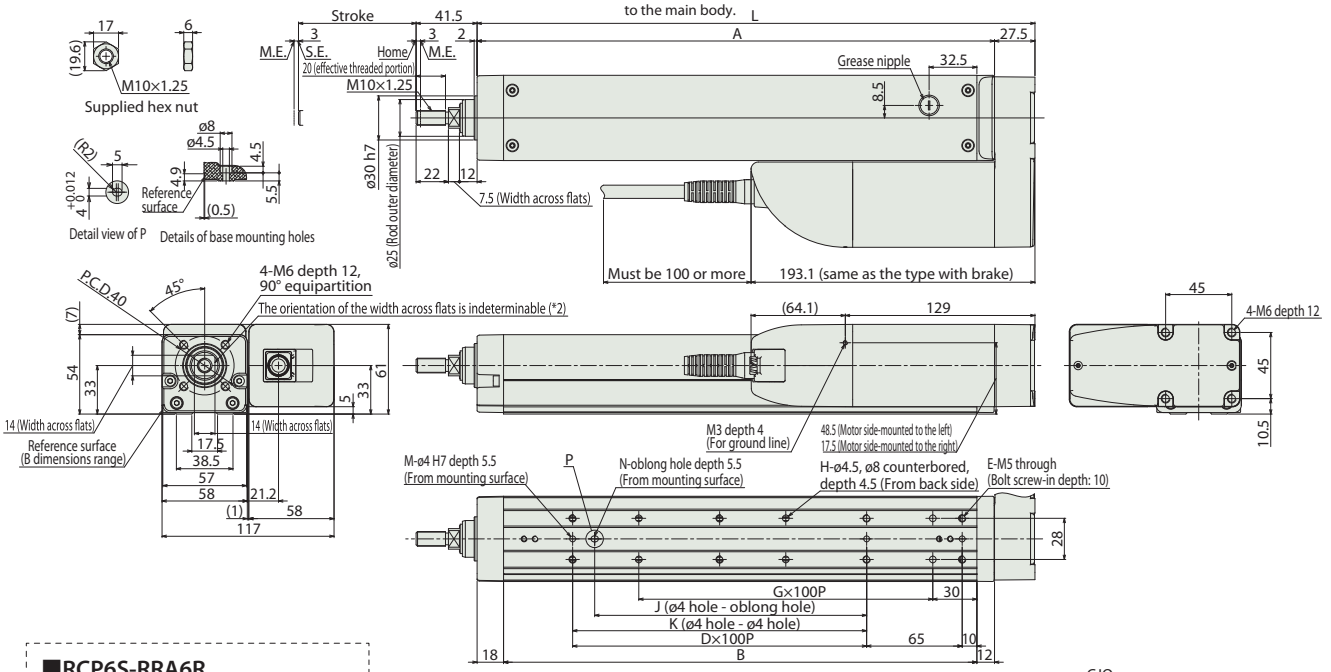
Overhang distance at end of rod (dz: 100mm or less)



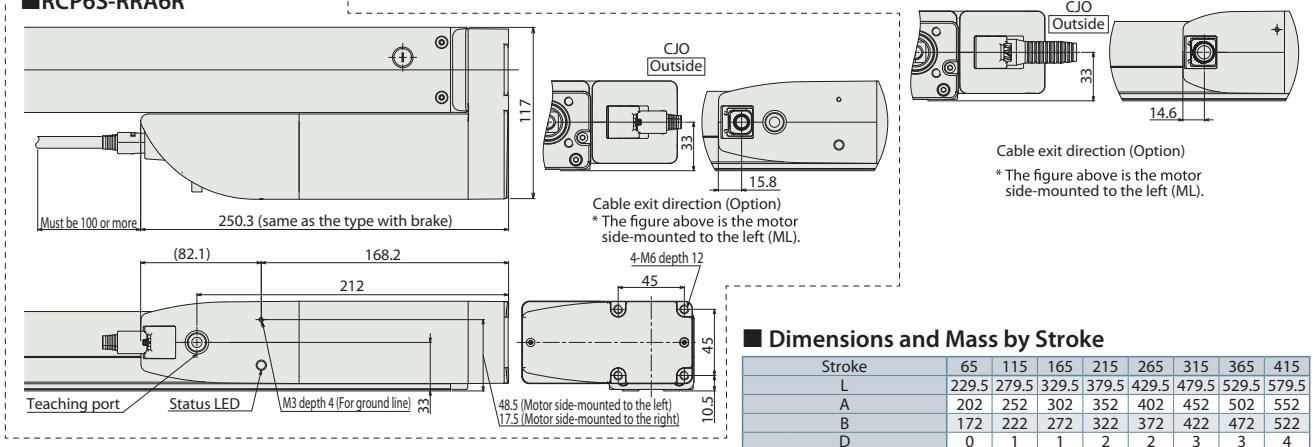
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

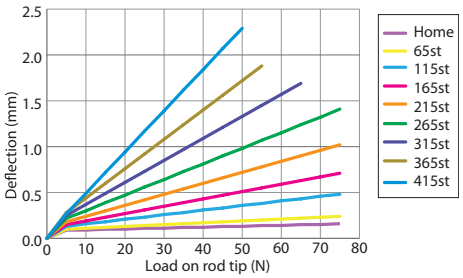
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E. M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.



■RCP6S-RRA6R



■ Rod Deflection of RCP6(S)-RRA6R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke		65	115	165	215	265	315	365	415
L		229.5	279.5	329.5	379.5	429.5	479.5	529.5	579.5
A		202	252	302	352	402	452	502	552
B		172	222	272	322	372	422	472	522
D		0	1	1	2	2	3	3	4
E		4	6	6	8	8	10	10	12
G		1	1	2	2	3	3	4	4
H		4	4	6	6	8	8	10	10
J		0	85	85	185	185	285	285	385
K		0	100	100	200	200	300	300	400
M		2	3	3	3	3	3	3	3
N		0	1	1	1	1	1	1	1
Allowable static load on rod tip (N)		144	117	99	85.4	75	66.7	59.9	54.3
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm	58.1	46.4	38.3	32.4	27.9	24.4	21.5	19.2
	Load offset 100mm	38.8	34.0	29.7	26.2	23.2	20.8	18.7	16.8
Allowable static torque on rod tip (N•m)		14.5	11.8	10.0	8.7	7.6	6.8	6.2	5.6
Allowable dynamic torque on rod tip (N•m)		3.8	3.3	2.9	2.6	2.3	2.0	1.8	1.6
Mass (kg)	RCP6 w/o brake	2.4	2.6	2.9	3.1	3.3	3.5	3.8	4.0
	RCP6 w/ brake	2.5	2.7	2.9	3.2	3.4	3.6	3.8	4.1
	RCP6S w/o brake	2.6	2.8	3.0	3.2	3.4	3.7	3.9	4.1
	RCP6S w/ brake	2.6	2.8	3.1	3.3	3.5	3.7	4.0	4.2

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RRA7R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 24v Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
—	RRA7R	WA	56P	—	—	—	—	—
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	70: 70mm ~ 520: 520mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

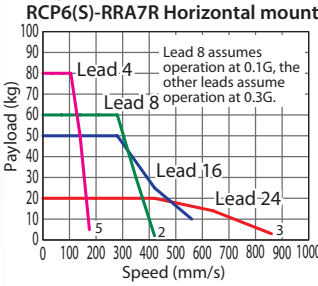
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.217 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

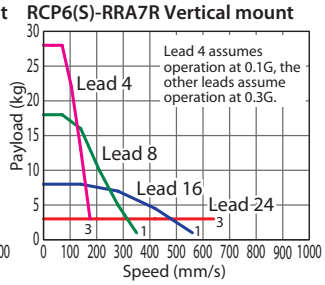
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RRA7R Horizontal mount

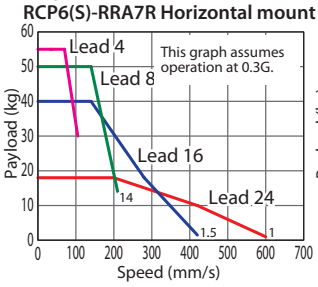


RCP6(S)-RRA7R Vertical mount

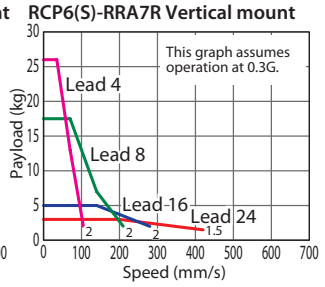


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-RRA7R Horizontal mount



RCP6(S)-RRA7R Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-RRA7R-WA-56P-24-①-②-③-④	24	High-output Enabled	20	3	182	70~520 (The increment of stroke is 50mm)
		High-output Disabled	18	3		
RCP6(S)-RRA7R-WA-56P-16-①-②-③-④	16	High-output Enabled	50	8	273	
		High-output Disabled	40	5		
RCP6(S)-RRA7R-WA-56P-8-①-②-③-④	8	High-output Enabled	60	18	547	
		High-output Disabled	50	17.5		
RCP6(S)-RRA7R-WA-56P-4-①-②-③-④	4	High-output Enabled	80	28	1094	
		High-output Disabled	55	26		

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	70~520 (Every 50mm)
24	High-output Enabled	860 <640>
	High-output Disabled	600 <420>
16	High-output Enabled	560
	High-output Disabled	420 <280>
8	High-output Enabled	420 <350>
	High-output Disabled	210
4	High-output Enabled	175
	High-output Disabled	105

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Tip adapter (Flange)	**FFA**	See P.189
Tip adapter (Internal thread)	**NFA**	See P.192
Tip adapter (Keyway)	**KFA**	See P.193
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Knuckle joint	**NJ**	See P.194
Non-motor end specification	**NM**	See P.194
Clevis bracket	**QR**	See P.195

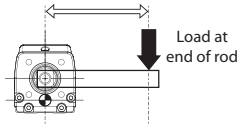
* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

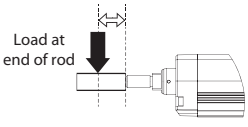
Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm Aluminum
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip overhang distance	dx/dz: 150mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



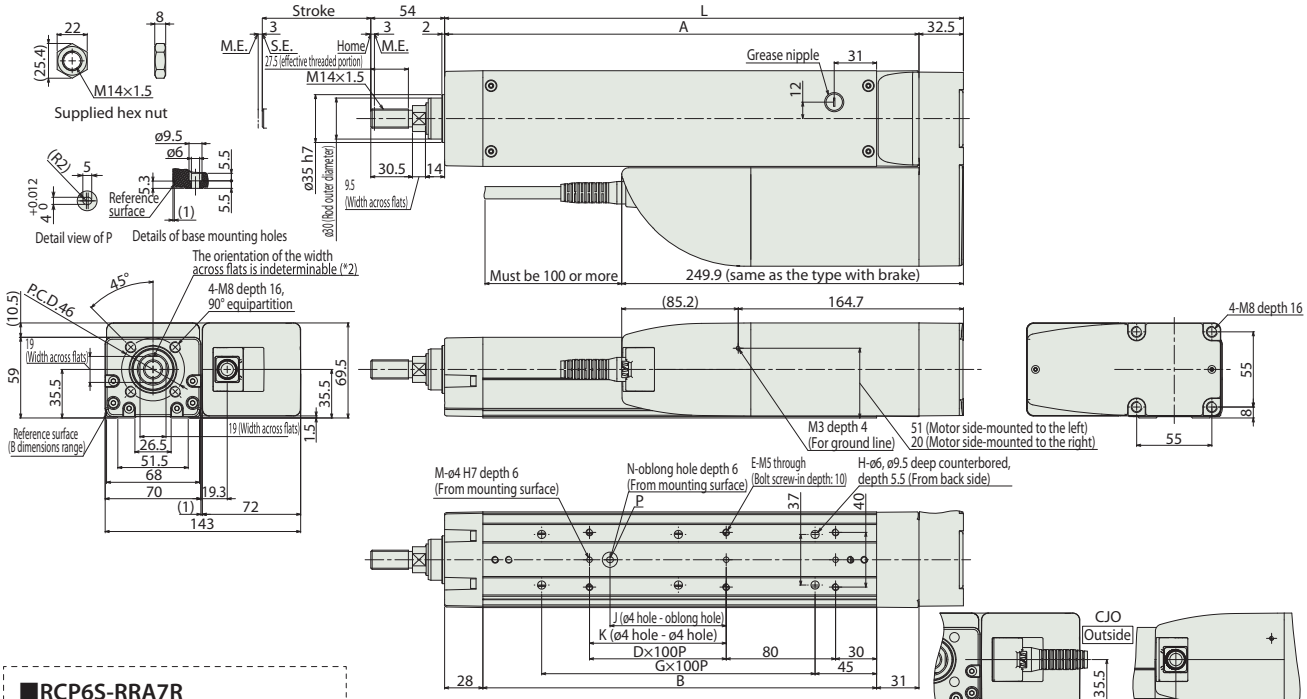
Overhang distance at end of rod (dz: 150mm or less)



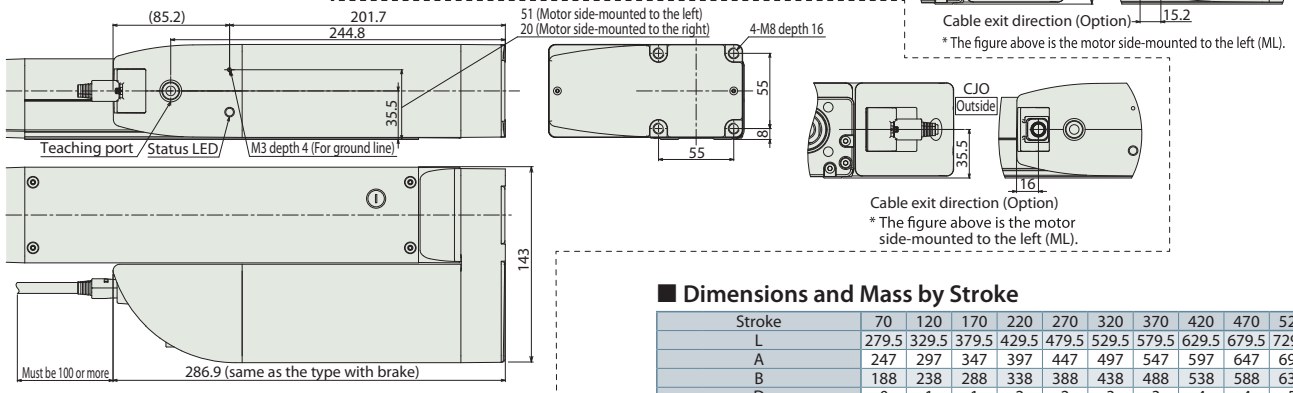
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

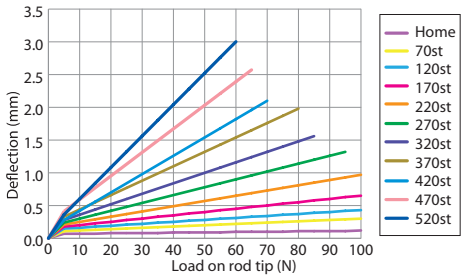
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E. M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.



■RCP6S-RRA7R



■ Rod Deflection of RCP6(S)-RRA7R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke		70	120	170	220	270	320	370	420	470	520
L		279.5	329.5	379.5	429.5	479.5	529.5	579.5	629.5	679.5	729.5
A		247	297	347	397	447	497	547	597	647	697
B		188	238	288	338	388	438	488	538	588	638
D		0	1	1	2	2	3	3	4	4	5
E		4	6	6	8	8	10	10	12	12	14
G		1	1	2	2	3	3	4	4	5	5
H		4	4	6	6	8	8	10	10	12	12
J		0	85	85	185	185	285	285	385	385	485
K		0	0	100	200	200	300	300	400	400	500
M		2	2	3	3	3	3	3	3	3	3
N		0	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)		175	147	126	111	98.6	88.7	80.6	73.8	68	63
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm	75.7	62.6	53.1	46.0	40.5	36.1	32.5	29.4	26.9	24.7
	Load offset 100mm	49.8	45.1	40.5	36.5	33.1	30.2	27.7	25.5	23.6	21.9
Allowable static torque on rod tip (N•m)		17.6	14.7	12.7	11.2	9.9	9.0	8.2	7.5	6.94	6.45
Allowable dynamic torque on rod tip (N•m)		5.0	4.5	4.0	3.6	3.3	3.0	2.8	2.5	2.32	2.16
Mass (kg)	RCP6 w/o brake	4.6	4.9	5.2	5.5	5.7	6.0	6.3	6.6	6.8	7.1
	RCP6 w/ brake	4.8	5.0	5.3	5.6	5.9	6.1	6.4	6.7	7.0	7.2
	RCP6S w/o brake	4.8	5.0	5.3	5.6	5.9	6.1	6.4	6.7	7.0	7.2
	RCP6S w/ brake	4.9	5.1	5.4	5.7	6.0	6.2	6.5	6.8	7.1	7.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-RRA8R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 85* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RRA8R	WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 700: 700mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

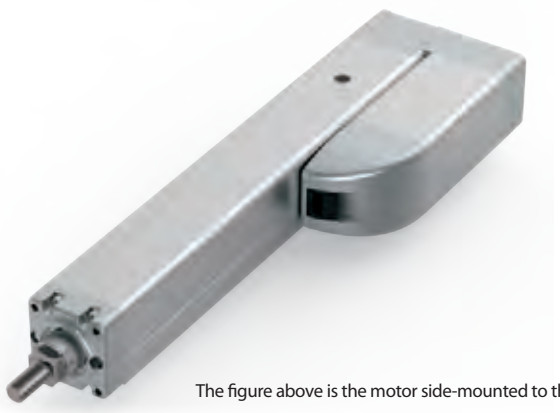
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.16 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

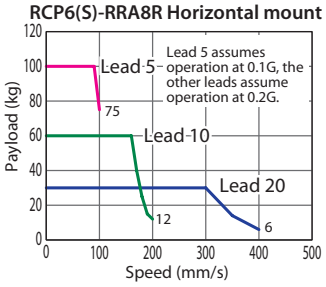
POINT Selection Notes

(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.217 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6S (built-in controller type), please limit the duty cycle to 70% or less..
(6) The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.

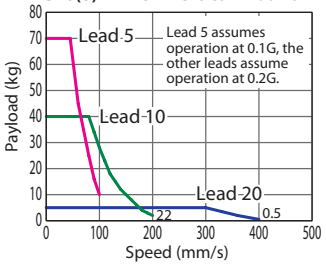
■ Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.

RCP6(S)-RRA8R Horizontal mount



RCP6(S)-RRA8R Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-RRA8R-WA-60P-20-①-②-③-④	20	30	5	500	50~700 (The increment of stroke is 50mm)
RCP6(S)-RRA8R-WA-60P-10-①-②-③-④	10	60	40	1000	
RCP6(S)-RRA8R-WA-60P-5-①-②-③-④	5	100	70	2000	

■ Stroke and Max. 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

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Tip adapter (Internal thread)	**NFA**	See P.193
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Knuckle joint	**NJ**	See P.194
Non-motor end specification	**NM**	See P.194
Clevis bracket	**QR**	See P.195

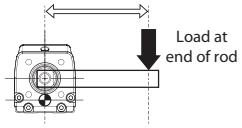
* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

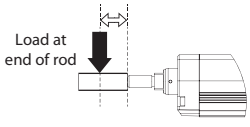
Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm Aluminum
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip overhang distance	dx/dz: 150mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



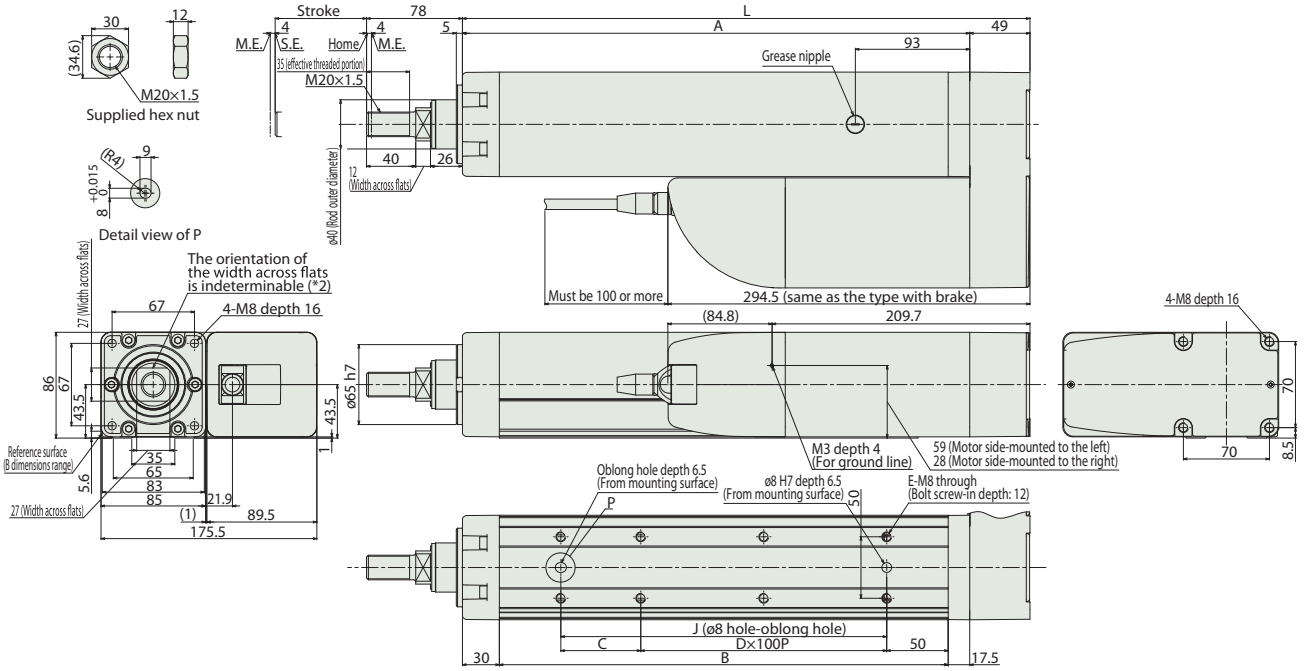
Overhang distance at end of rod (dz: 150mm or less)



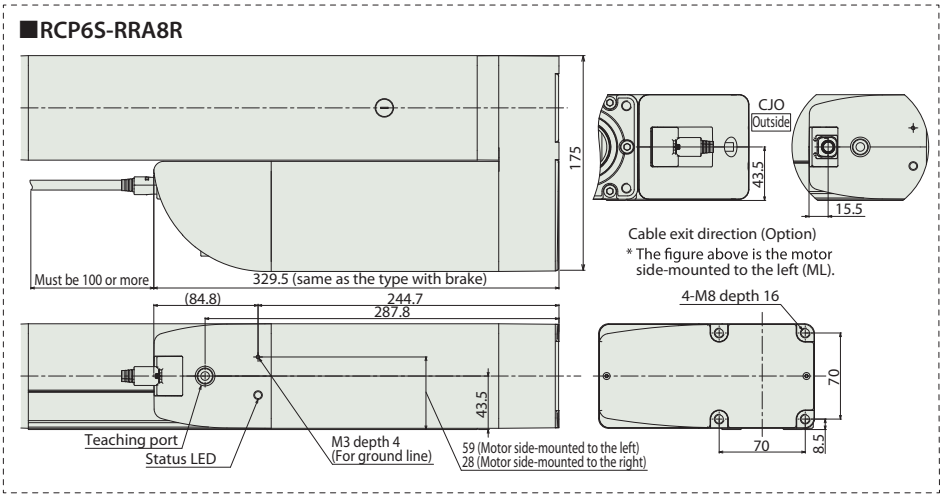
Dimensions

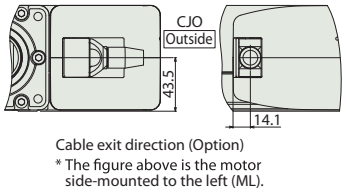
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E. M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.

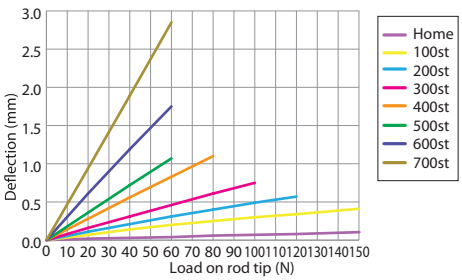


■RCP6S-RRA8R





■ Rod Deflection of RCP6(S)-RRA8R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700
L			311.5	361.5	411.5	461.5	511.5	561.5	611.5	661.5	711.5	761.5	811.5	861.5	911.5	961.5
A			262.5	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5
B			215	265	315	365	415	465	515	565	615	665	715	765	815	865
C			115	65	115	65	115	65	115	65	115	65	115	65	115	65
D			0	1	1	2	2	3	3	4	4	5	5	6	6	7
E			4	6	6	8	8	10	10	12	12	14	14	16	16	18
J			115	165	215	265	315	365	415	465	515	565	615	665	715	765
Allowable static load on rod tip (N)			222	186	159	139	124	111	101	92.1	84.7	78.4	72.8	68	63.7	59.8
Allowable dynamic load on rod tip (5000km life) (N)		Load offset 0mm	93.0	76.3	64.7	56.0	49.2	43.8	39.3	35.6	32.4	29.7	27.3	25.2	23.3	21.7
		Load offset 100mm	72.0	61.6	53.9	48.0	43.0	38.9	35.4	32.3	29.7	27.4	25.3	23.5	21.9	20.4
Allowable static torque on rod tip (N•m)			22.3	18.7	16.1	14.1	12.6	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.3
Allowable dynamic torque on rod tip (N•m)			7.2	6.2	5.4	4.8	4.3	3.9	3.5	3.2	3.0	2.7	2.5	2.4	2.2	2.0
Mass (kg)	RCP6	w/o brake	7.9	8.3	8.8	9.3	9.8	10.2	10.7	11.2	11.7	12.1	12.6	13.1	13.6	14.0
		w/ brake	8.1	8.6	9.1	9.6	10.0	10.5	11.0	11.5	11.9	12.4	12.9	13.4	13.8	14.3
	RCP6S	w/o brake	8.1	8.5	9.0	9.5	10.0	10.4	10.9	11.4	11.9	12.3	12.8	13.3	13.8	14.2
		w/ brake	8.3	8.8	9.3	9.8	10.2	10.7	11.2	11.7	12.1	12.6	13.1	13.6	14.0	14.5

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, SSCNET III/H	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)-WRA10C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 100 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WRA10C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

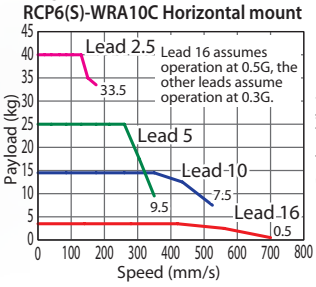
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.219 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.

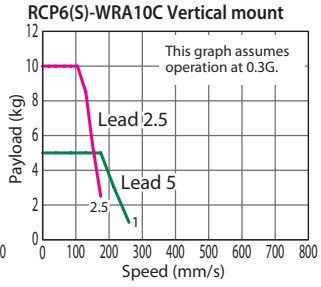
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WRA10C Horizontal mount

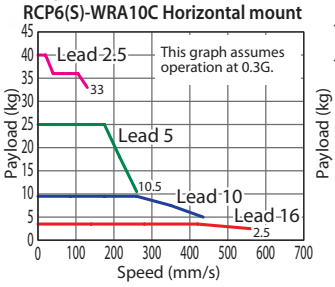


RCP6(S)-WRA10C Vertical mount

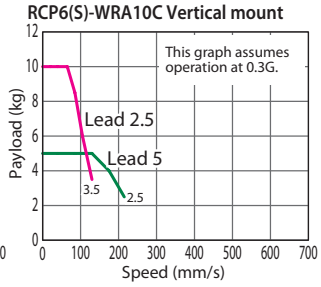


(2) High-output disabled with PCON/RCON/MCON/RSEL connected.

RCP6(S)-WRA10C Horizontal mount



RCP6(S)-WRA10C Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-WRA10C-WA-35P-16-①-②-③-④	16	High-output Enabled	4	–	48	50~500 (The increment of stroke is 50mm)
		High-output Disabled	3.5	–		
RCP6(S)-WRA10C-WA-35P-10-①-②-③-④	10	High-output Enabled	14.5	–	77	
		High-output Disabled	9.5	–		
RCP6(S)-WRA10C-WA-35P-5-①-②-③-④	5	High-output Enabled	28	5	155	
		High-output Disabled	25	5		
RCP6(S)-WRA10C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	310	
		High-output Disabled	40	10		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
16	High-output Enabled	700		
	High-output Disabled	560		
10	High-output Enabled	525		490
	High-output Disabled	435		
5	High-output Enabled	350 <260>	290 <260>	240
	High-output Disabled	260 <215>		240
2.5	High-output Enabled	175	145	120
	High-output Disabled	130		120

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left) (*1)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Non-motor end specification	**NM**	See P.194
T-slot nut bar (Left)	**NTBL**	See P.194
T-slot nut bar (Right)	**NTBR**	See P.194

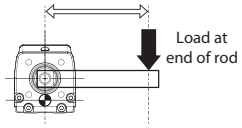
(*1) RCP6S cannot be selected.
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

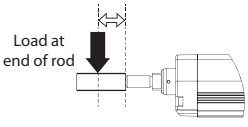
Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm Stainless steel
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip overhang distance	dx/dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



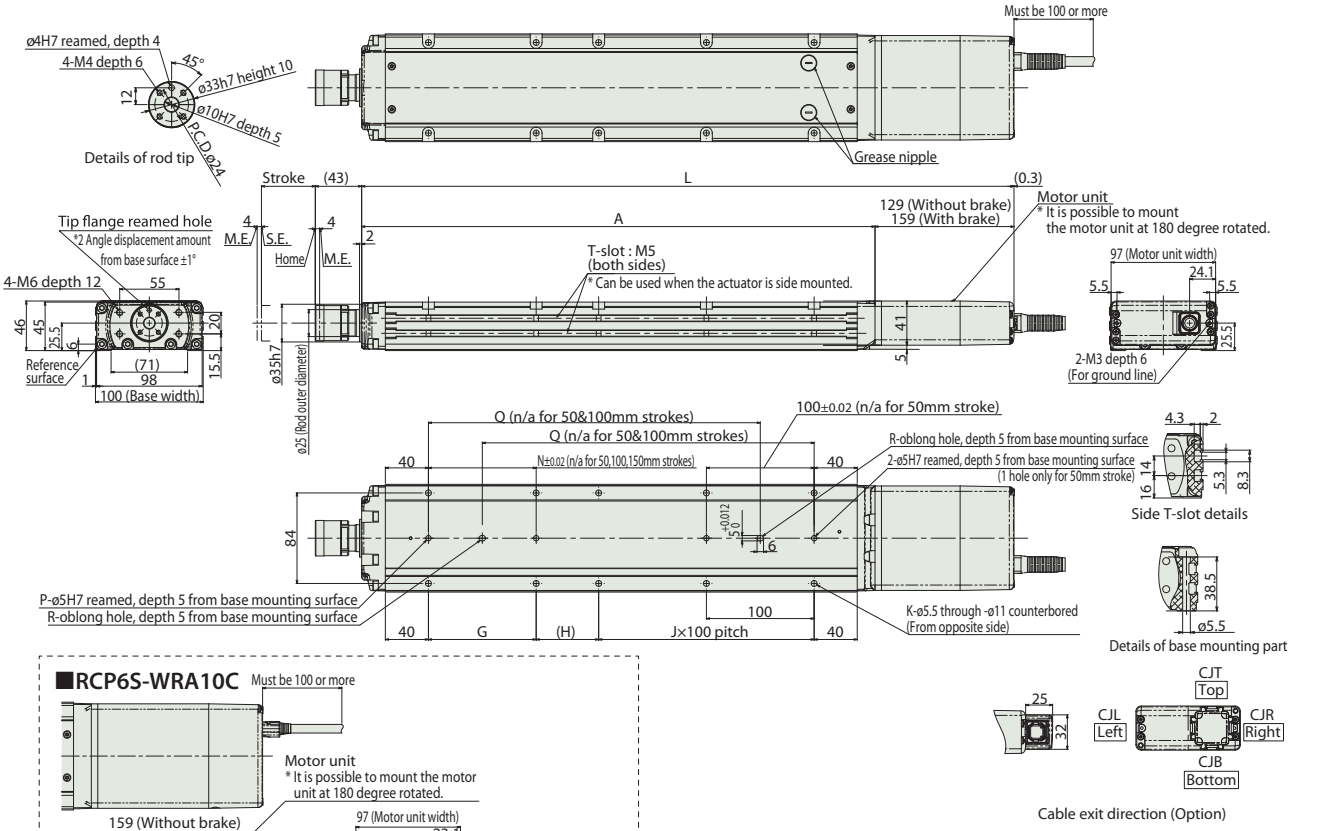
Overhang distance at end of rod (dz: 100mm or less)



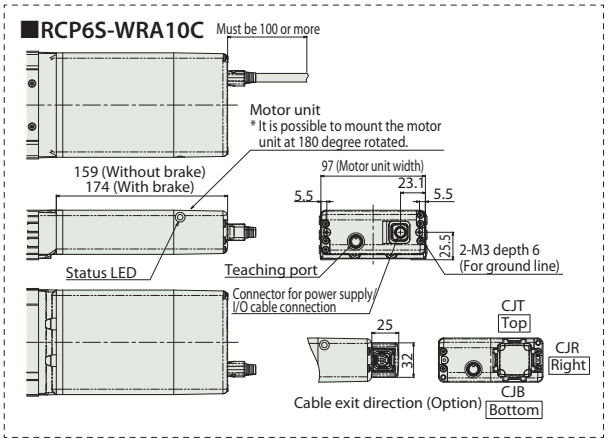
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

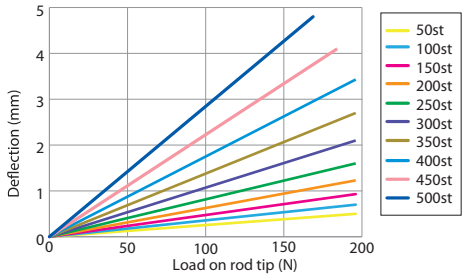
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



■RCP6S-WRA10C



■ Rod Deflection of RCP6(S)-WRA10C (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L	RCP6	w/o brake	355.5	405.5	455.5	505.5	555.5	605.5	655.5	705.5	755.5	805.5
		w/ brake	385.5	435.5	485.5	535.5	585.5	635.5	685.5	735.5	785.5	835.5
	RCP6S	w/o brake	385.5	435.5	485.5	535.5	585.5	635.5	685.5	735.5	785.5	835.5
		w/ brake	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5
A			226.5	276.5	326.5	376.5	426.5	476.5	526.5	576.5	626.5	676.5
G			-	-	-	100	100	100	100	100	100	100
H			108	58	108	58	108	58	108	58	108	58
J			0	1	1	1	1	2	2	3	3	4
K			4	6	6	8	8	10	10	12	12	14
N			-	-	-	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2
Q			-	-	158	208	258	308	358	408	458	508
R			0	0	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			196	196	196	196	196	196	196	196	184	169
Allowable static torque on rod tip (N•m)			10	10	10	10	10	10	10	10	10	10
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	98	98	98	95	85	76	68	62	57	52
		Load offset 100mm	50	50	50	50	50	50	50	50	50	49
	Allowable dynamic torque on rod tip (N•m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.9
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	98	98	91	80	71	63	57	52	47	43
		Load offset 100mm	50	50	50	50	50	50	50	48	44	40
	Allowable dynamic torque on rod tip (N•m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.8	4.4	4.0
Mass (kg)	RCP6	w/o brake	3.3	3.8	4.2	4.7	5.1	5.6	6.0	6.5	6.9	7.4
		w/ brake	3.5	4.0	4.4	4.9	5.3	5.8	6.2	6.7	7.1	7.6
	RCP6S	w/o brake	3.4	3.9	4.3	4.8	5.2	5.7	6.1	6.6	7.0	7.5
		w/ brake	3.6	4.1	4.5	4.9	5.4	5.8	6.3	6.7	7.2	7.6

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WRA12C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 120 mm | 24v Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WRA12C	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ↓ 500: 500mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

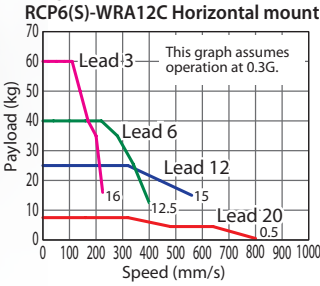
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.219 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

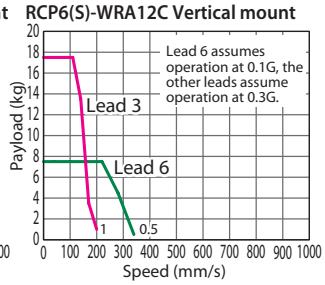
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WRA12C Horizontal mount

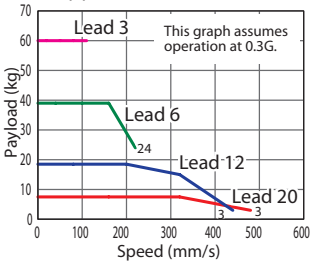


RCP6(S)-WRA12C Vertical mount

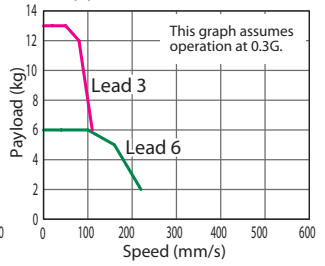


(2) High-output disabled with PCON/RCON/MCON/MSEL connected.

RCP6(S)-WRA12C Horizontal mount



RCP6(S)-WRA12C Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-WRA12C-WA-42P-20-①-②-③-④	20	High-output Enabled	7.5	–	56	50~500 (The increment of stroke is 50mm)
		High-output Disabled	7.5	–		
RCP6(S)-WRA12C-WA-42P-12-①-②-③-④	12	High-output Enabled	30	–	93	
		High-output Disabled	18.5	–		
RCP6(S)-WRA12C-WA-42P-6-①-②-③-④	6	High-output Enabled	55	7.5	185	
		High-output Disabled	39	6		
RCP6(S)-WRA12C-WA-42P-3-①-②-③-④	3	High-output Enabled	70	17.5	370	
		High-output Disabled	60	13		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
20	High-output Enabled	800		
	High-output Disabled	480		
12	High-output Enabled	560		
	High-output Disabled	440		
6	High-output Enabled	400 <340>		375 <340>
	High-output Disabled	220		
3	High-output Enabled	225 <200>	220 <200>	185
	High-output Disabled	110		

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Non-motor end specification	**NM**	See P.194
T-slot nut bar (Left)	**NTBL**	See P.194
T-slot nut bar (Right)	**NTBR**	See P.194

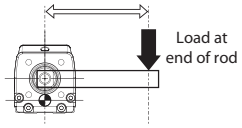
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

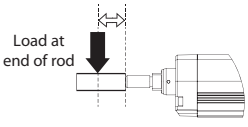
Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm Stainless steel
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip overhang distance	dx/dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



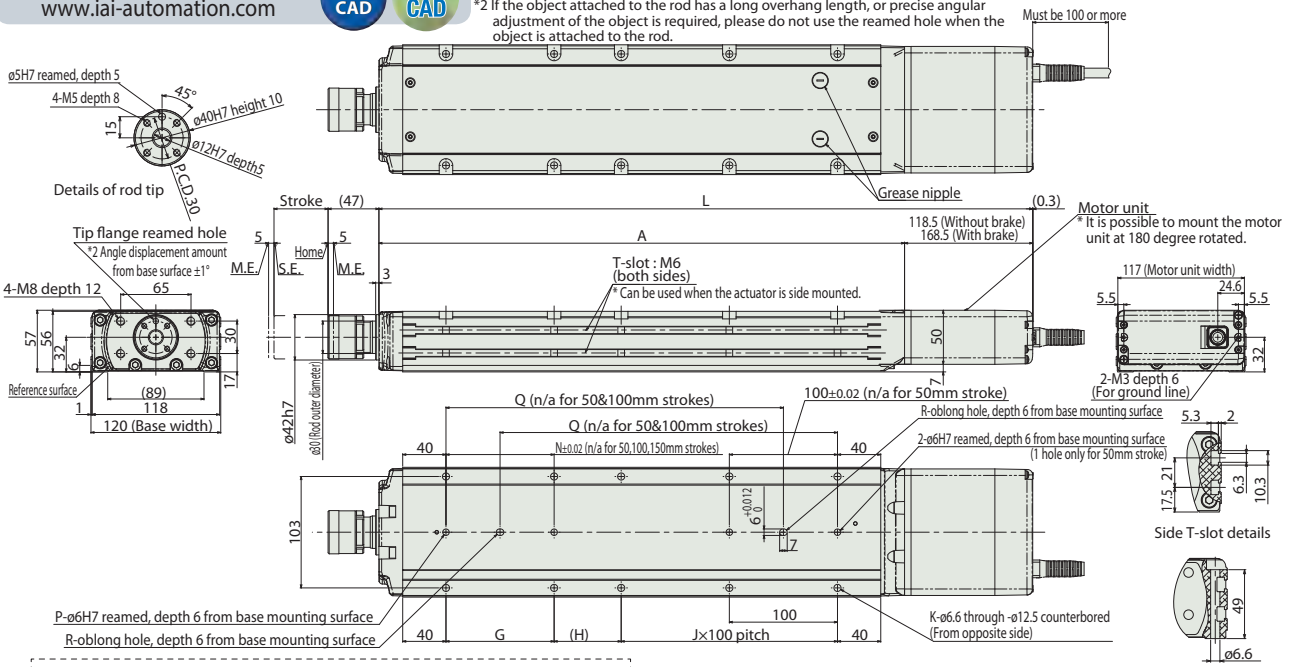
Overhang distance at end of rod (dz: 100mm or less)



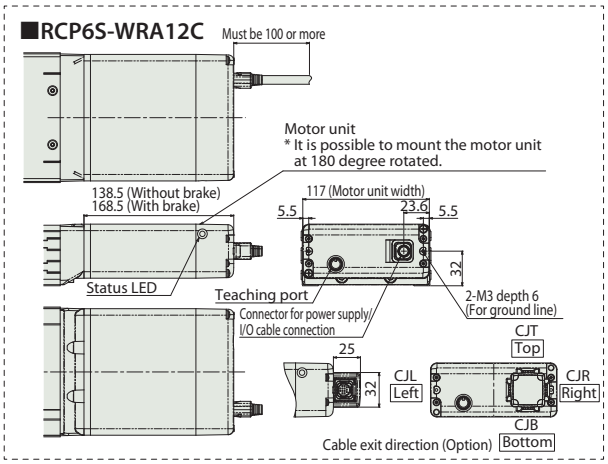
Dimensions

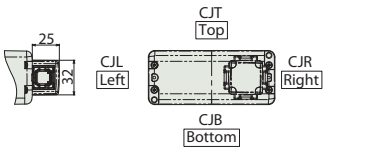
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.

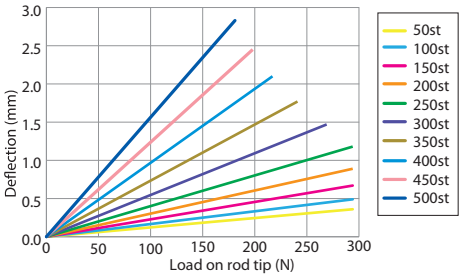


■RCP6S-WRA12C





■ Rod Deflection of RCP6(S)-WRA12C (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L	RCP6	w/o brake	354.5	404.5	454.5	504.5	554.5	604.5	654.5	704.5	754.5	804.5
		w/ brake	404.5	454.5	504.5	554.5	604.5	654.5	704.5	754.5	804.5	854.5
	RCP6S	w/o brake	374.5	424.5	474.5	524.5	574.5	624.5	674.5	724.5	774.5	824.5
		w/ brake	404.5	454.5	504.5	554.5	604.5	654.5	704.5	754.5	804.5	854.5
A			236	286	336	386	436	486	536	586	636	686
G			-	-	-	100	100	100	100	100	100	100
H			112	62	112	62	112	62	112	62	112	62
J			0	1	1	1	1	2	2	3	3	4
K			4	6	6	8	8	10	10	12	12	14
N			-	-	-	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2
Q			-	-	162	212	262	312	362	412	462	512
R			0	0	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			294	294	294	294	294	269	241	218	198	181
Allowable static torque on rod tip (N•m)			20	20	20	20	20	20	20	20	20	20
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	147	147	137	121	107	96	87	79	72	65
		Load offset 100mm	100	100	100	100	99	90	82	75	68	63
	Allowable dynamic torque on rod tip (N•m)		10.0	10.0	10.0	10.0	9.9	9.0	8.2	7.5	6.8	6.3
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	147	133	115	101	90	80	72	65	59	54
		Load offset 100mm	100	100	100	92	83	75	68	62	56	51
	Allowable dynamic torque on rod tip (N•m)		10.0	10.0	10.0	9.2	8.3	7.5	6.8	6.2	5.6	5.1
Mass (kg)	RCP6	w/o brake	4.7	5.3	6.0	6.6	7.3	7.9	8.5	9.2	9.8	10.5
		w/ brake	5.0	5.6	6.3	6.9	7.6	8.2	8.8	9.5	10.1	10.8
	RCP6S	w/o brake	4.8	5.4	6.1	6.7	7.3	8.0	8.6	9.3	9.9	10.5
		w/ brake	5.0	5.7	6.3	6.9	7.6	8.2	8.9	9.5	10.1	10.8

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WRA14C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 140 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WRA14C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 600: 600mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

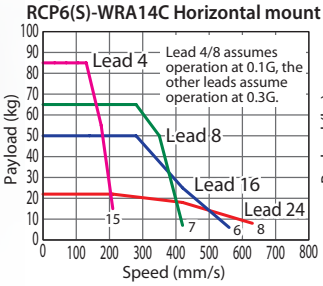
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.219 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

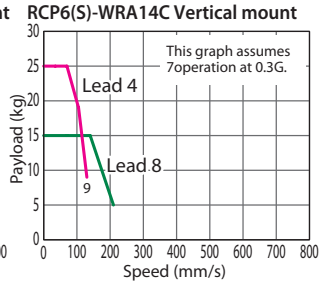
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WRA14C Horizontal mount

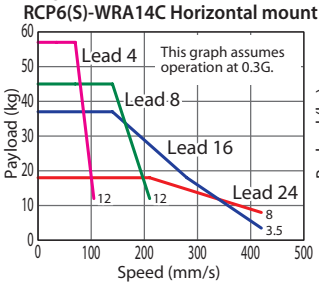


RCP6(S)-WRA14C Vertical mount

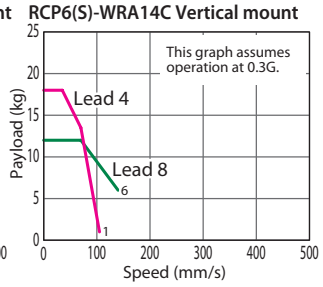


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WRA14C Horizontal mount



RCP6(S)-WRA14C Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-WRA14C-WA-56P-24-①-②-③-④	24	High-output Enabled	25	–	182	50~600 (The increment of stroke is 50mm)
		High-output Disabled	18	–		
RCP6(S)-WRA14C-WA-56P-16-①-②-③-④	16	High-output Enabled	50	–	273	
		High-output Disabled	37	–		
RCP6(S)-WRA14C-WA-56P-8-①-②-③-④	8	High-output Enabled	65	15	547	
		High-output Disabled	45	12		
RCP6(S)-WRA14C-WA-56P-4-①-②-③-④	4	High-output Enabled	85	25	1094	
		High-output Disabled	57	18		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~550 (Every 50mm)	600 (mm)
24	High-output Enabled	630	
	High-output Disabled	420	
16	High-output Enabled	560	
	High-output Disabled	420	
8	High-output Enabled	420 <210>	395 <210>
	High-output Disabled	210 <140>	
4	High-output Enabled	210 <130>	195 <130>
	High-output Disabled	105	

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Non-motor end specification	**NM**	See P.194
T-slot nut bar (Left)	**NTBL**	See P.194
T-slot nut bar (Right)	**NTBR**	See P.194

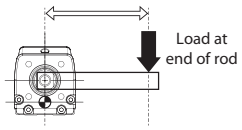
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

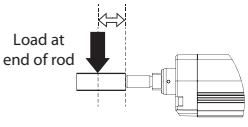
Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm Stainless steel
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip overhang distance	dx: 150mm or less / dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



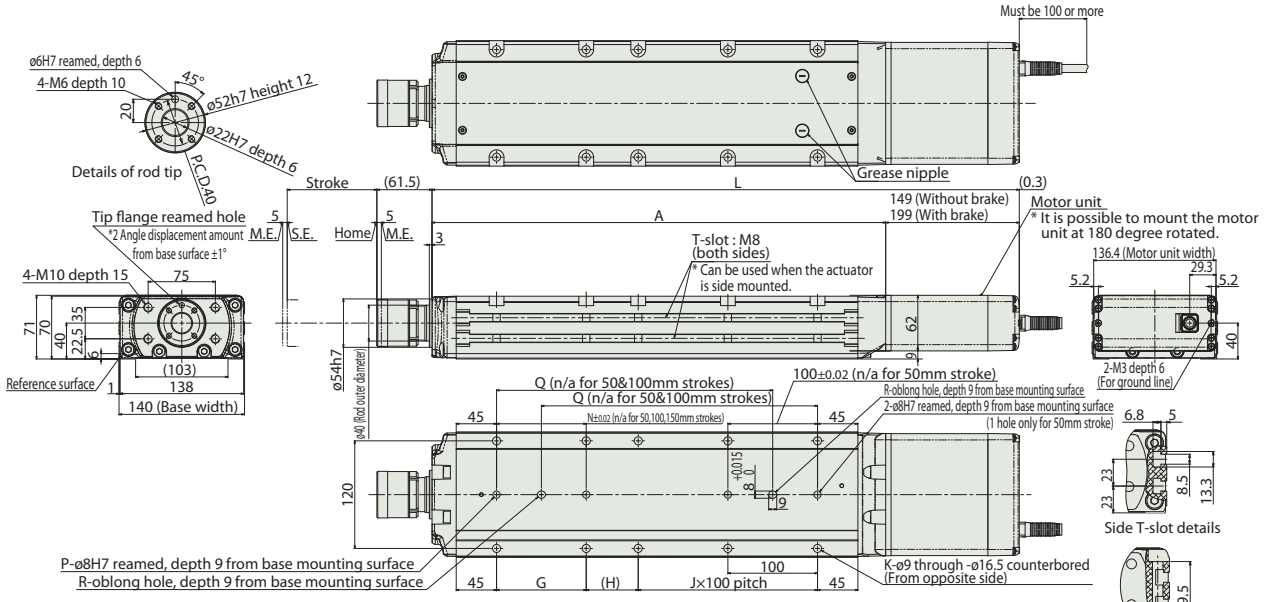
Overhang distance at end of rod (dz: 100mm or less)



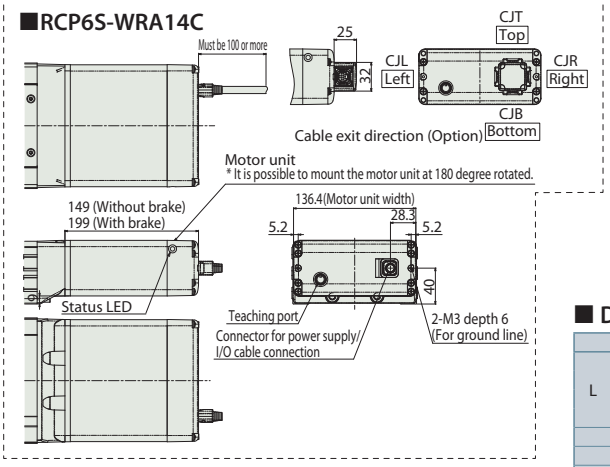
Dimensions

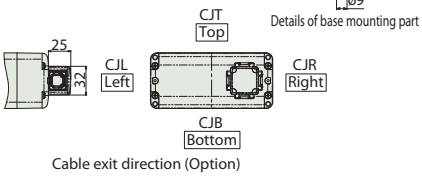
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.

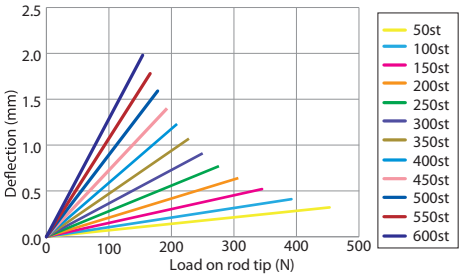


■RCP6S-WRA14C





■ Rod Deflection of RCP6(S)-WRA14C (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600
L	RCP6	w/o brake	405	455	505	555	605	655	705	755	805	855	905	955
		w/ brake	455	505	555	605	655	705	755	805	855	905	955	1,005
	RCP6S	w/o brake	405	455	505	555	605	655	705	755	805	855	905	955
		w/ brake	455	505	555	605	655	705	755	805	855	905	955	1,005
A			256	306	356	406	456	506	556	606	656	706	756	806
G			-	-	-	100	100	100	100	100	100	100	100	100
H			108	58	108	58	108	58	108	58	108	58	108	58
J			0	1	1	1	1	2	2	3	3	4	4	5
K			4	6	6	8	8	10	10	12	12	14	14	16
N			-	-	-	100	100	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2	2	2
Q			-	-	158	208	258	308	358	408	458	508	558	608
R			0	0	1	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			454	392	345	307	276	251	229	210	193	179	166	154
Allowable static torque on rod tip (N•m)			30	30	30	30	30	30	30	30	30	30	30	30
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	199	170	148	131	117	104	94	85	77	70	64	58
		Load offset 150mm	100	100	100	100	100	95	87	79	72	66	60	55
	Allowable dynamic torque on rod tip (N•m)		15.0	15.0	15.0	15.0	15.0	14.3	13.0	11.8	10.8	9.9	9.0	8.2
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	167	143	124	109	97	87	78	70	63	57	51	46
		Load offset 150mm	100	100	100	96	87	79	71	65	59	53	48	44
	Allowable dynamic torque on rod tip (N•m)		15.0	15.0	15.0	14.4	13.0	11.8	10.7	9.7	8.8	8.0	7.3	6.6
Mass (kg)	RCP6	w/o brake	8.0	8.9	9.8	10.6	11.5	12.4	13.3	14.2	15.0	15.9	16.8	17.7
		w/ brake	8.5	9.4	10.2	11.1	12.0	12.9	13.8	14.6	15.5	16.4	17.3	18.2
	RCP6S	w/o brake	8.0	8.9	9.8	10.7	11.6	12.4	13.3	14.2	15.1	16.0	16.8	17.7
		w/ brake	8.5	9.4	10.3	11.2	12.0	12.9	13.8	14.7	15.6	16.4	17.3	18.2

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WRA16C

Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 160 mm | 24V Pulse Motor

Model Specification Items

□ — WRA16C — WA — 60P — □ — □ — □ — □ — □ — □

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

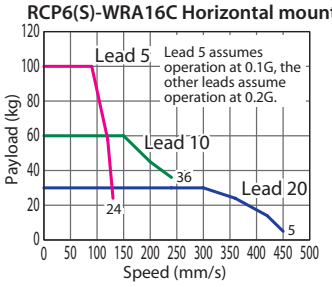
POINT Selection Notes

(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.219 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6S (built-in controller type), please limit the duty cycle to 70% or less..
(6) The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P.206 for more information.

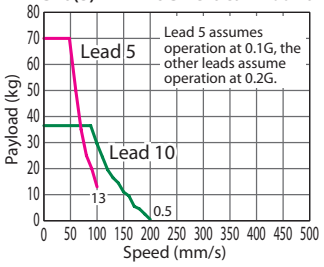
Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.

RCP6(S)-WRA16C Horizontal mount



RCP6(S)-WRA16C Vertical mount



Actuator Specifications

Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-WRA16C-WA-60P-20-①-②-③-④	20	30	–	500	50~800 (The increment of stroke is 50mm)
RCP6(S)-WRA16C-WA-60P-10-①-②-③-④	10	60	36.5	1000	
RCP6(S)-WRA16C-WA-60P-5-①-②-③-④	5	100	70	2000	

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	50 (mm)	100 (mm)	150~400 (mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	280	405	450		400	340	295	260	225	200	180
10	240 <200>			230 <200>	195	165	145	125	110	100	90
5	130 <100>			115 <100>	95	80	70	60	55	50	45

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Flange	**FL**	See P.190
Non-motor end specification	**NM**	See P.194
T-slot nut bar (Left)	**NTBL**	See P.194
T-slot nut bar (Right)	**NTBR**	See P.194

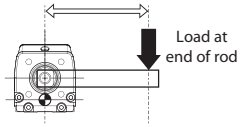
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

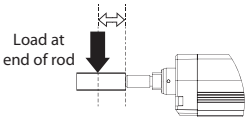
Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø45mm Stainless steel
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip overhang distance	dx: 150mm or less / dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



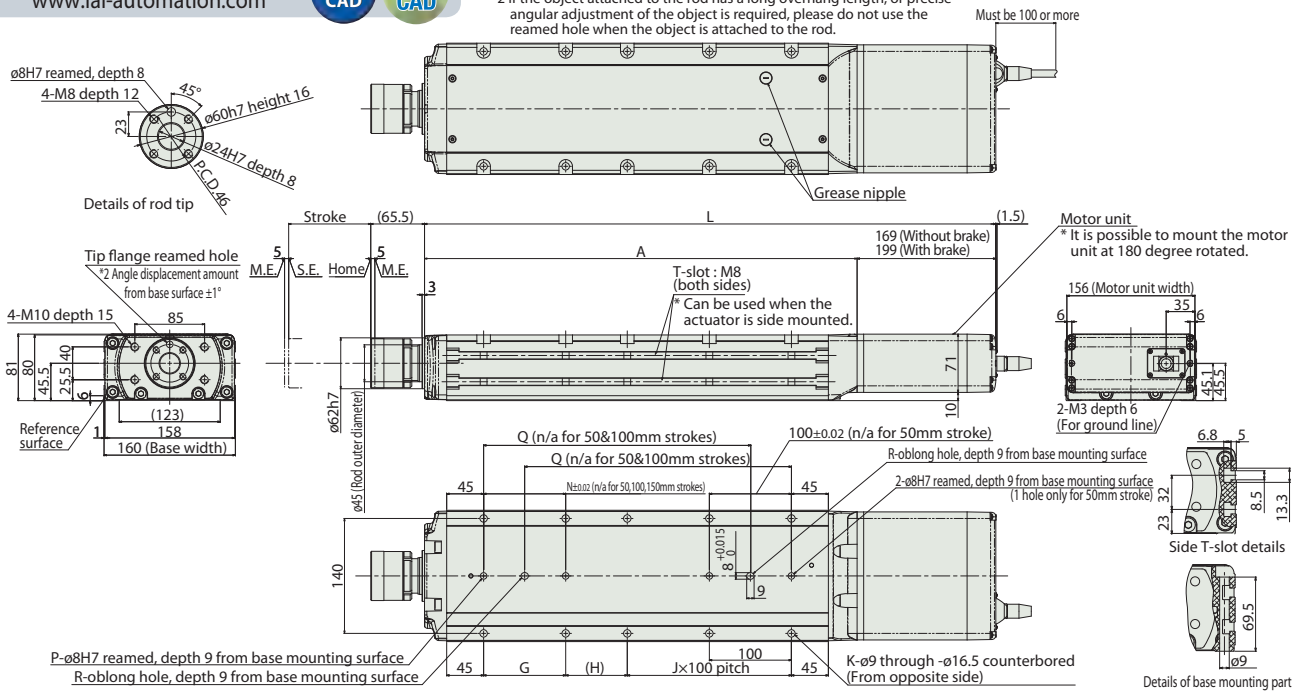
Overhang distance at end of rod (dz: 100mm or less)



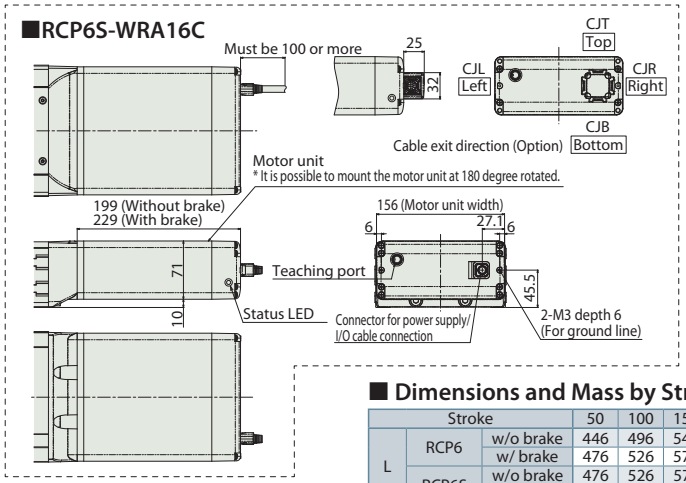
Dimensions

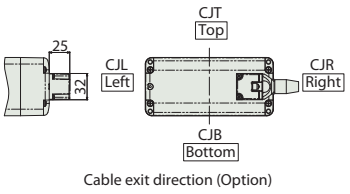
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.

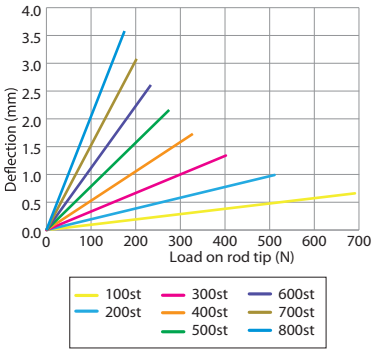


■RCP6S-WRA16C





■ Rod Deflection of RCP6(S)-WRA16C (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	RCP6	w/o brake	446	496	546	596	646	696	746	796	846	896	946	996	1,046	1,096	1,146	1,196
		w/ brake	476	526	576	626	676	726	776	826	876	926	976	1,026	1,076	1,126	1,176	1,226
	RCP6S	w/o brake	476	526	576	626	676	726	776	826	876	926	976	1,026	1,076	1,126	1,176	1,226
		w/ brake	506	556	606	656	706	756	806	856	906	956	1,006	1,056	1,106	1,156	1,206	1,256
A			277	327	377	427	477	527	577	627	677	727	777	827	877	927	977	1,027
G			-	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100
H			125	75	125	75	125	75	125	75	125	75	125	75	125	75	125	75
J			0	1	1	1	1	2	2	3	3	4	4	5	5	6	6	7
K			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
N			-	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			-	-	175	225	275	325	375	425	475	525	575	625	675	725	775	825
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			588	588	588	511	451	402	362	329	300	275	254	235	217	202	188	176
Allowable static torque on rod tip (N•m)			40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	255	220	191	168	149	134	120	109	99	90	81	74	67	61	55	50
		Load offset 150mm	133	133	133	133	133	122	111	101	92	84	77	70	64	58	53	48
	Allowable dynamic torque on rod tip (N•m)		20.0	20.0	20.0	20.0	20.0	18.3	16.7	15.2	13.8	12.6	11.5	10.5	9.6	8.7	7.9	7.1
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	214	184	160	140	124	111	99	89	80	72	65	59	53	47	42	37
		Load offset 150mm	133	133	133	124	112	101	91	83	75	68	62	56	50	45	40	36
	Allowable dynamic torque on rod tip (N•m)		20.0	20.0	20.0	18.6	16.8	15.2	13.7	12.4	11.3	10.2	9.2	8.4	7.5	6.8	6.0	5.3
Mass (kg)	RCP6	w/o brake	11.5	12.6	13.7	14.9	16.0	17.1	18.3	19.4	20.5	21.7	22.8	23.9	25.1	26.2	27.3	28.5
		w/ brake	12.0	13.1	14.3	15.4	16.5	17.6	18.8	19.9	21.1	22.2	23.3	24.5	25.6	26.7	27.9	29.0
	RCP6S	w/o brake	11.6	12.7	13.9	15.0	16.2	17.3	18.4	19.5	20.7	21.8	23.0	24.1	25.2	26.3	27.5	28.6
		w/ brake	12.1	13.3	14.4	15.5	16.7	17.8	18.9	20.1	21.2	22.3	23.5	24.6	25.8	26.9	28.0	29.1

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, SSCNET III/H	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)-WRA10R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 100* mm | 24v Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WRA10R	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

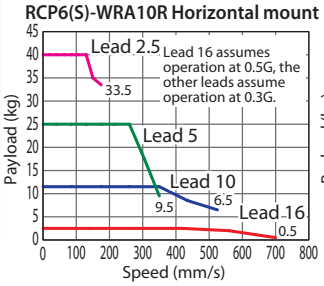
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.221 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.

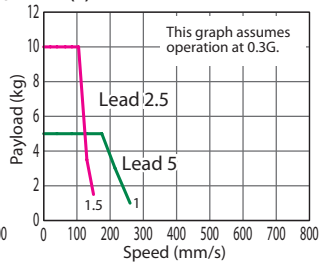
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WRA10R Horizontal mount

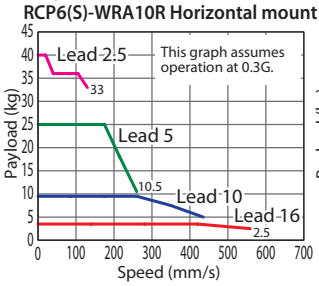


RCP6(S)-WRA10R Vertical mount

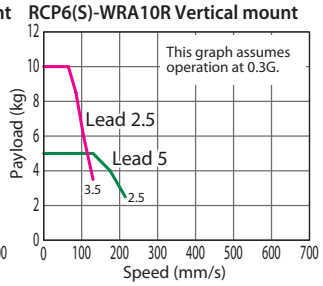


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WRA10R Horizontal mount



RCP6(S)-WRA10R Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-WRA10R-WA-35P-16-①-②-③-④	16	High-output Enabled	4	–	48	50~500 (The increment of stroke is 50mm)
		High-output Disabled	3.5	–		
RCP6(S)-WRA10R-WA-35P-10-①-②-③-④	10	High-output Enabled	11.5	–	77	
		High-output Disabled	9.5	–		
RCP6(S)-WRA10R-WA-35P-5-①-②-③-④	5	High-output Enabled	28	5	155	
		High-output Disabled	25	5		
RCP6(S)-WRA10R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	310	
		High-output Disabled	40	10		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
16	High-output Enabled	700		
	High-output Disabled	560		
10	High-output Enabled	525		490
	High-output Disabled	435		
5	High-output Enabled	350 <260>	290 <260	240
	High-output Disabled	260 <215>		240 <215>
2.5	High-output Enabled	175 <150>	145	120
	High-output Disabled	130		120

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar (Left)	**NTBL**	See P.194
T-slot nut bar (Right)	**NTBR**	See P.194

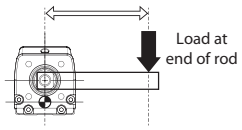
* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

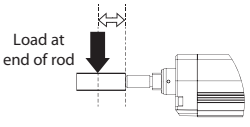
Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm Stainless steel
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip overhang distance	dx/dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



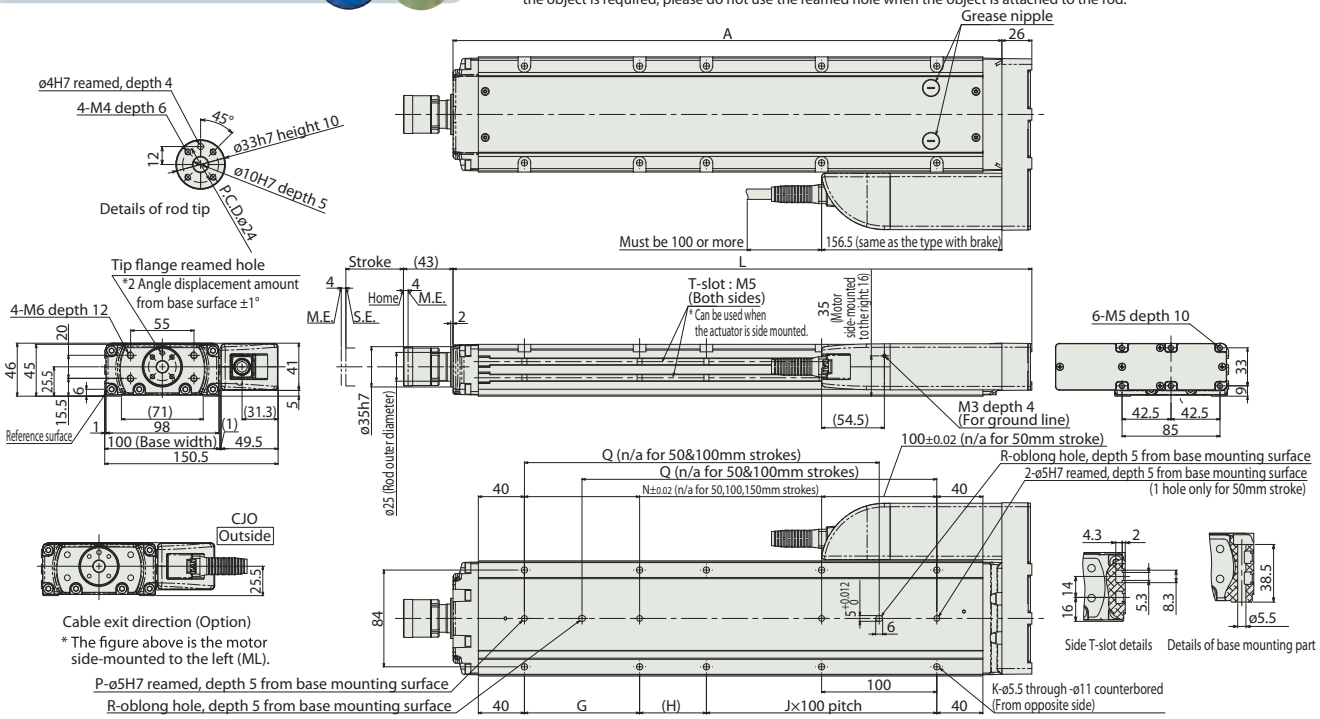
Overhang distance at end of rod (dz: 100mm or less)



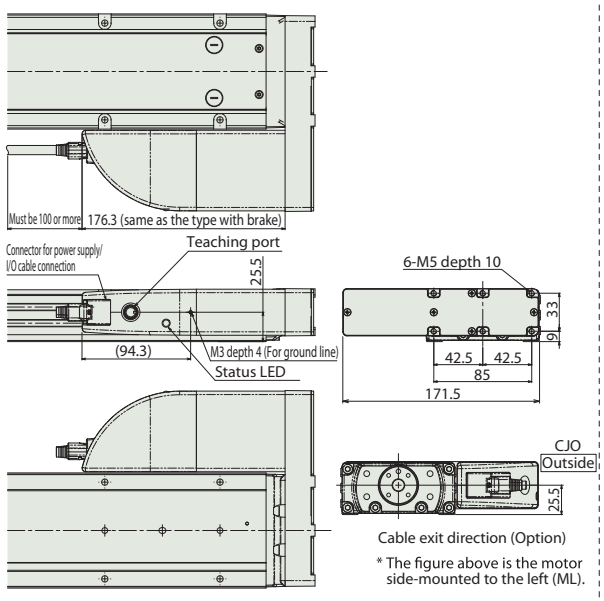
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

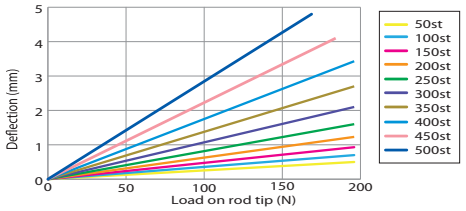
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



■RCP6S-WRA10R



■ Rod Deflection of RCP6(S)-WRA10R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L			252.5	302.5	352.5	402.5	452.5	502.5	552.5	602.5	652.5	702.5
A			226.5	276.5	326.5	376.5	426.5	476.5	526.5	576.5	626.5	676.5
G			-	-	-	100	100	100	100	100	100	100
H			108	58	108	58	108	58	108	58	108	58
J			0	1	1	1	1	2	2	3	3	4
K			4	6	6	8	8	10	10	12	12	14
N			-	-	-	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2
Q			-	-	158	208	258	308	358	408	458	508
R			0	0	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			196	196	196	196	196	196	196	196	184	169
Allowable static torque on rod tip (N•m)			10	10	10	10	10	10	10	10	10	10
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	98	98	98	95	85	76	68	62	57	52
		Load offset 100mm	50	50	50	50	50	50	50	50	50	49
	Allowable dynamic torque on rod tip (N•m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.9
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	98	98	91	80	71	63	57	52	47	43
		Load offset 100mm	50	50	50	50	50	50	50	48	44	40
	Allowable dynamic torque on rod tip (N•m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.8	4.4	4.0
Mass (kg)	RCP6	w/o brake	3.4	3.8	4.3	4.7	5.2	5.6	6.1	6.5	7.0	7.4
		w/ brake	3.5	3.9	4.4	4.8	5.3	5.7	6.1	6.6	7.0	7.5
	RCP6S	w/o brake	3.5	4.0	4.4	4.9	5.3	5.8	6.2	6.6	7.1	7.5
		w/ brake	3.6	4.0	4.5	4.9	5.4	5.8	6.3	6.7	7.2	7.6

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WRA12R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 120* mm | 24v Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WRA12R	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

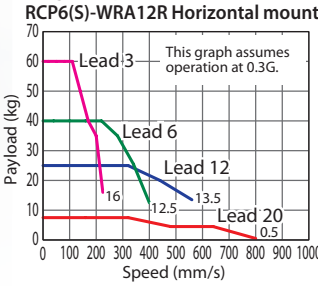
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.221 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

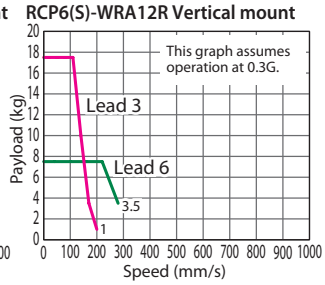
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WRA12R Horizontal mount

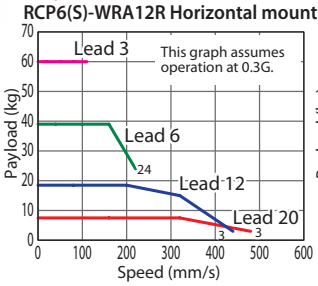


RCP6(S)-WRA12R Vertical mount

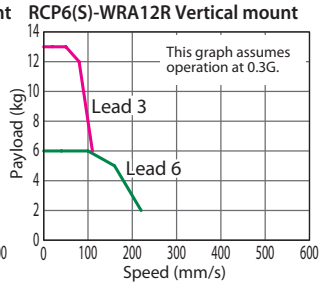


(2) High-output disabled with PCON/RCON/MCON/RSEL connected.

RCP6(S)-WRA12R Horizontal mount



RCP6(S)-WRA12R Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-WRA12R-WA-42P-20-①-②-③-④	20	High-output Enabled	7.5	–	56	50~500 (The increment of stroke is 50mm)
		High-output Disabled	7.5	–		
RCP6(S)-WRA12R-WA-42P-12-①-②-③-④	12	High-output Enabled	30	–	93	
		High-output Disabled	18.5	–		
RCP6(S)-WRA12R-WA-42P-6-①-②-③-④	6	High-output Enabled	55	7.5	185	
		High-output Disabled	39	6		
RCP6(S)-WRA12R-WA-42P-3-①-②-③-④	3	High-output Enabled	70	17.5	370	
		High-output Disabled	60	13		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
20	High-output Enabled	800		
	High-output Disabled	480		
12	High-output Enabled	560		
	High-output Disabled	440		
6	High-output Enabled	400 <280>		375 <280>
	High-output Disabled	220		
3	High-output Enabled	225 <200>	220 <200>	185
	High-output Disabled	110		

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar (Left)	**NTBL**	See P.194
T-slot nut bar (Right)	**NTBR**	See P.194

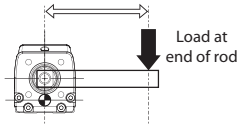
* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

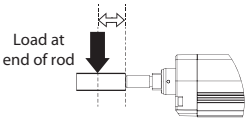
Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm Stainless steel
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip overhang distance	dx/dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



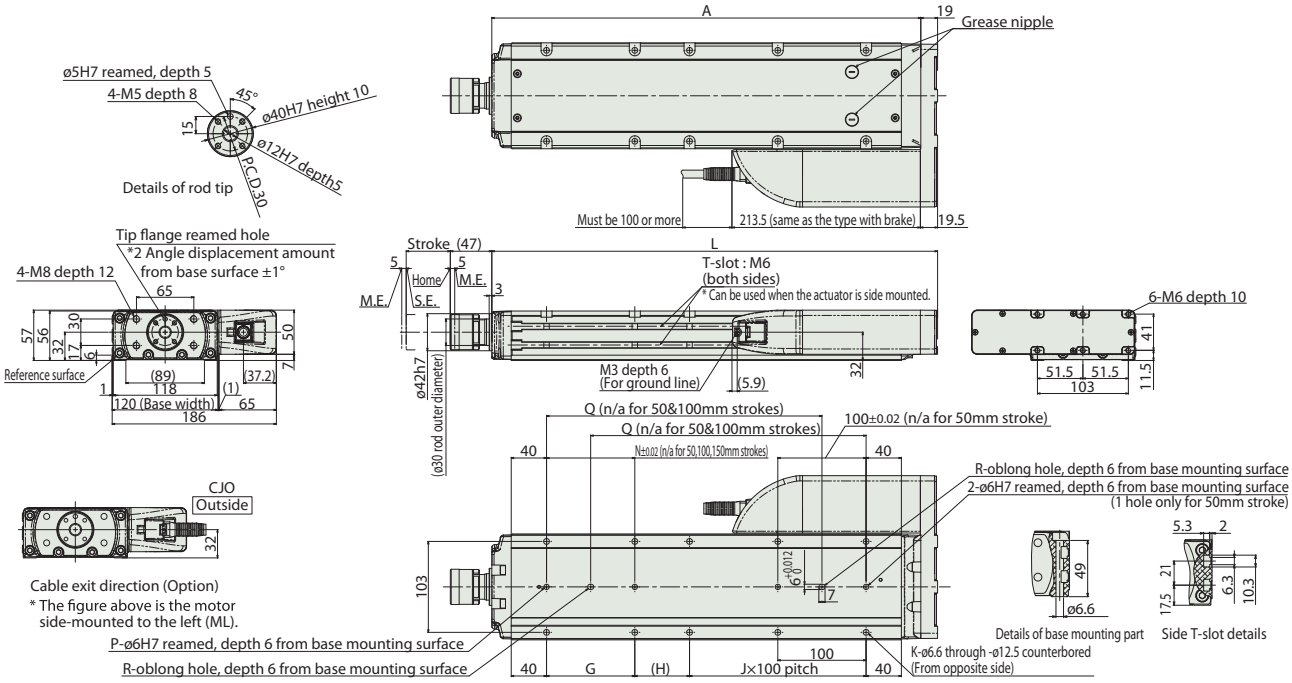
Overhang distance at end of rod (dz: 100mm or less)



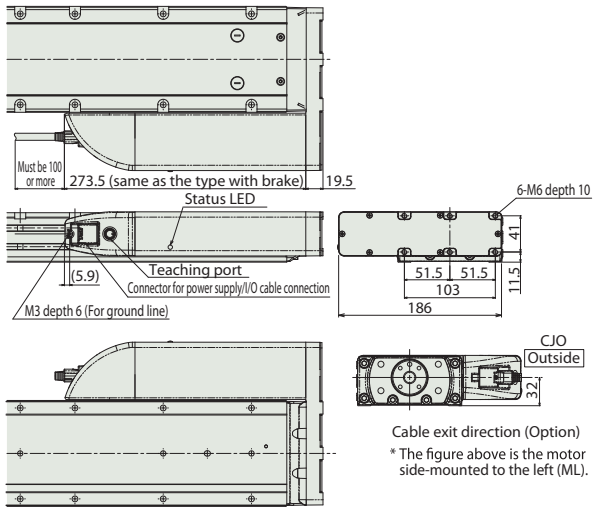
Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

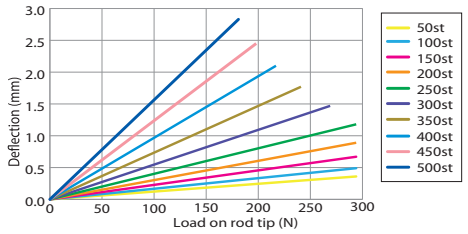
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



■RCP6S-WRA12R



■ Rod Deflection of RCP6(S)-WRA12R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L			255	305	355	405	455	505	555	605	655	705
A			236	286	336	386	436	486	536	586	636	686
G			-	-	-	100	100	100	100	100	100	100
H			112	62	112	62	112	62	112	62	112	62
J			0	1	1	1	1	2	2	3	3	4
K			4	6	6	8	8	10	10	12	12	14
N			-	-	-	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2
Q			-	-	162	212	262	312	362	412	462	512
R			0	0	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			294	294	294	294	294	269	241	218	198	181
Allowable static torque on rod tip (N•m)			20	20	20	20	20	20	20	20	20	20
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	147	147	137	121	107	96	87	79	72	65
		Load offset 100mm	100	100	100	100	99	90	82	75	68	63
	Allowable dynamic torque on rod tip (N•m)		10.0	10.0	10.0	10.0	9.9	9.0	8.2	7.5	6.8	6.3
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	147	133	115	101	90	80	72	65	59	54
		Load offset 100mm	100	100	100	92	83	75	68	62	56	51
	Allowable dynamic torque on rod tip (N•m)		10.0	10.0	10.0	9.2	8.3	7.5	6.8	6.2	5.6	5.1
Mass (kg)	RCP6	w/o brake	5.1	5.7	6.3	7.0	7.6	8.2	8.9	9.5	10.2	10.8
		w/ brake	5.1	5.8	6.4	7.0	7.7	8.3	9.0	9.6	10.2	10.9
	RCP6S	w/o brake	5.2	5.8	6.5	7.1	7.7	8.4	9.0	9.6	10.3	10.9
		w/ brake	5.3	5.9	6.5	7.2	7.8	8.4	9.1	9.7	10.4	11.0

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WRA14R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 140* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
—	WRA14R	WA	56P	—	—	—	—	—
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ↕ 600: 600mm (50mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

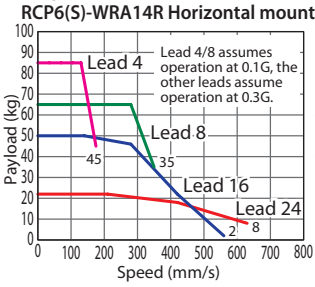
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.221 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

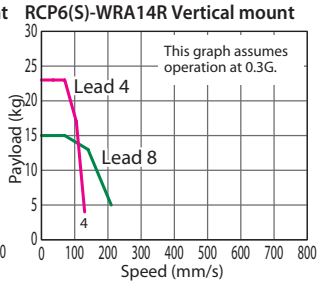
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-WRA14R Horizontal mount

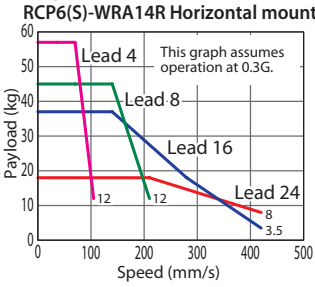


RCP6(S)-WRA14R Vertical mount

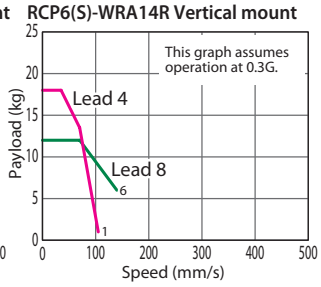


(2) High-output disabled with PCON/RCON/MCON/RSEL connected.

RCP6(S)-WRA14R Horizontal mount



RCP6(S)-WRA14R Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-WRA14R-WA-56P-24-①-②-③-④	24	High-output Enabled	25	–	182	50~600 (The increment of stroke is 50mm)
		High-output Disabled	18	–		
RCP6(S)-WRA14R-WA-56P-16-①-②-③-④	16	High-output Enabled	50	–	273	
		High-output Disabled	37	–		
RCP6(S)-WRA14R-WA-56P-8-①-②-③-④	8	High-output Enabled	65	15	547	
		High-output Disabled	45	12		
RCP6(S)-WRA14R-WA-56P-4-①-②-③-④	4	High-output Enabled	85	25	1094	
		High-output Disabled	57	18		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~600 (Every 50mm)
24	High-output Enabled	630
	High-output Disabled	420
16	High-output Enabled	560
	High-output Disabled	420
8	High-output Enabled	350 <210>
	High-output Disabled	210 <140>
4	High-output Enabled	175 <130>
	High-output Disabled	105

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar (Left)	**NTBL**	See P.194
T-slot nut bar (Right)	**NTBR**	See P.194

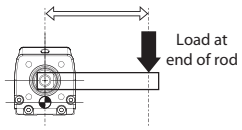
* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

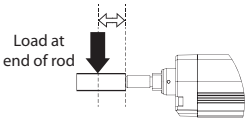
Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm Stainless steel
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip overhang distance	dx: 150mm or less / dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



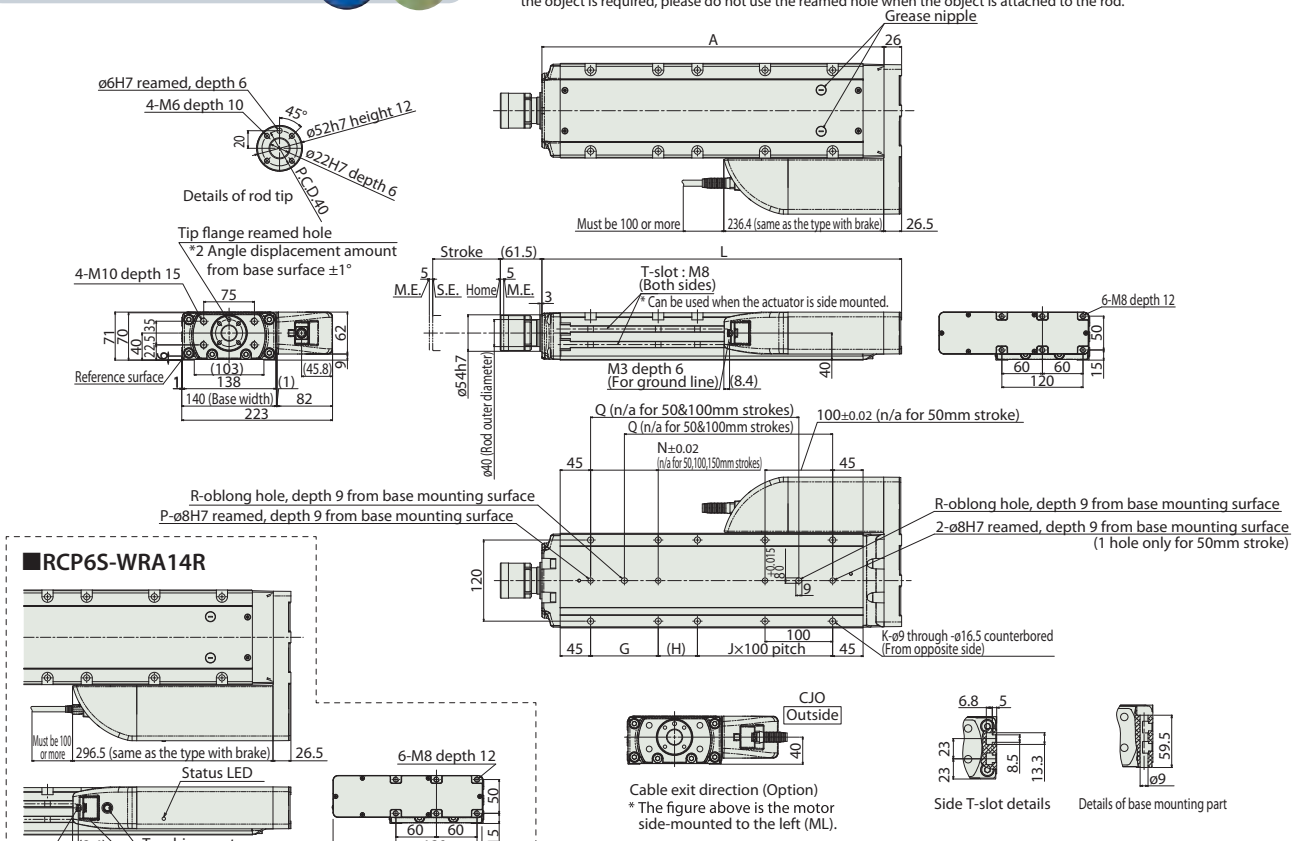
Overhang distance at end of rod (dz: 100mm or less)



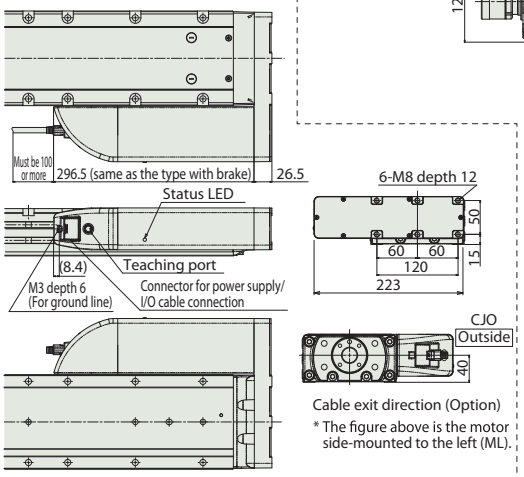
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

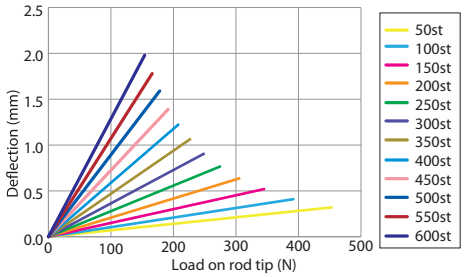
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



■RCP6S-WRA14R



■ Rod Deflection of RCP6(S)-WRA14R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600
L			282	332	382	432	482	532	582	632	682	732	782	832
A			256	306	356	406	456	506	556	606	656	706	756	806
G			-	-	-	100	100	100	100	100	100	100	100	100
H			108	58	108	58	108	58	108	58	108	58	108	58
J			0	1	1	1	1	2	2	3	3	4	4	5
K			4	6	6	8	8	10	10	12	12	14	14	16
N			-	-	-	100	100	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2	2	2
Q			-	-	158	208	258	308	358	408	458	508	558	608
R			0	0	1	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			454	392	345	307	276	251	229	210	193	179	166	154
Allowable static torque on rod tip (N•m)			30	30	30	30	30	30	30	30	30	30	30	30
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	199	170	148	131	117	104	94	85	77	70	64	58
		Load offset 150mm	100	100	100	100	100	95	87	79	72	66	60	55
	Allowable dynamic torque on rod tip (N•m)		15.0	15.0	15.0	15.0	15.0	14.3	13.0	11.8	10.8	9.9	9.0	8.2
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	167	143	124	109	97	87	78	70	63	57	51	46
		Load offset 150mm	100	100	100	96	87	79	71	65	59	53	48	44
	Allowable dynamic torque on rod tip (N•m)		15.0	15.0	15.0	14.4	13.0	11.8	10.7	9.7	8.8	8.0	7.3	6.6
Mass (kg)	RCP6	w/o brake	8.7	9.6	10.5	11.4	12.2	13.1	14.0	14.9	15.7	16.6	17.5	18.4
		w/ brake	8.9	9.7	10.6	11.5	12.4	13.2	14.1	15.0	15.9	16.7	17.6	18.5
	RCP6S	w/o brake	8.9	9.8	10.7	11.5	12.4	13.3	14.2	15.0	15.9	16.8	17.7	18.5
		w/ brake	9.0	9.9	10.8	11.6	12.5	13.4	14.3	15.2	16.0	16.9	17.8	18.7

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-WRA16R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 160* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WRA16R	WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ↓ 800: 800mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

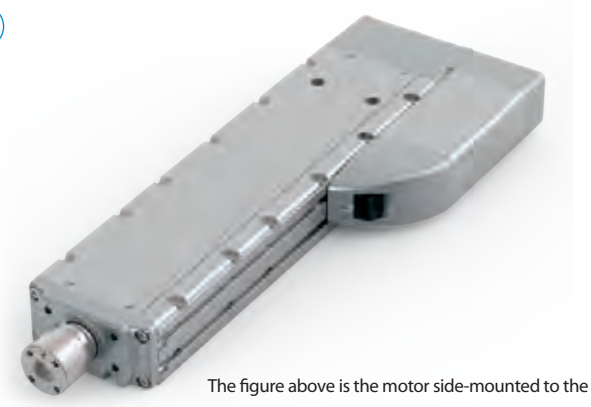
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

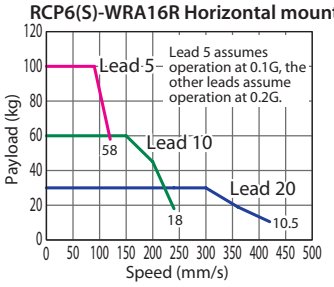
POINT Selection Notes

(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.221 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6S (built-in controller type), please limit the duty cycle to 70% or less..
(6) The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P.206 for more information.

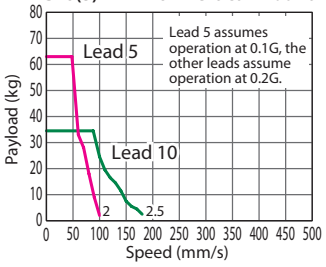
■ Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.

RCP6(S)-WRA16R Horizontal mount



RCP6(S)-WRA16R Vertical mount



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w / limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)-WRA16R-WA-60P-20-①-②-③-④	20	30	–	500	50~800 (The increment of stroke is 50mm)
RCP6(S)-WRA16R-WA-60P-10-①-②-③-④	10	60	34.5	1000	
RCP6(S)-WRA16R-WA-60P-5-①-②-③-④	5	100	63	2000	

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	50 (mm)	100 (mm)	150~400 (mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	280	405	420		400	340	295	260	225	200	180
10	240 <180>			230 <180>	195	165	145	125	110	100	90
5	120 <100>			115 <100>	95	80	70	60	55	50	45

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Flange	**FL**	See P.190
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194
T-slot nut bar (Left)	**NTBL**	See P.194
T-slot nut bar (Right)	**NTBR**	See P.194

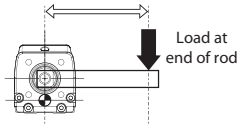
* Be sure to confirm with the "Selection Notes (P.196)" when selecting options.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

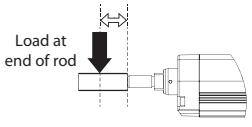
Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø45mm Stainless steel
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip overhang distance	dx: 150mm or less / dz: 100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



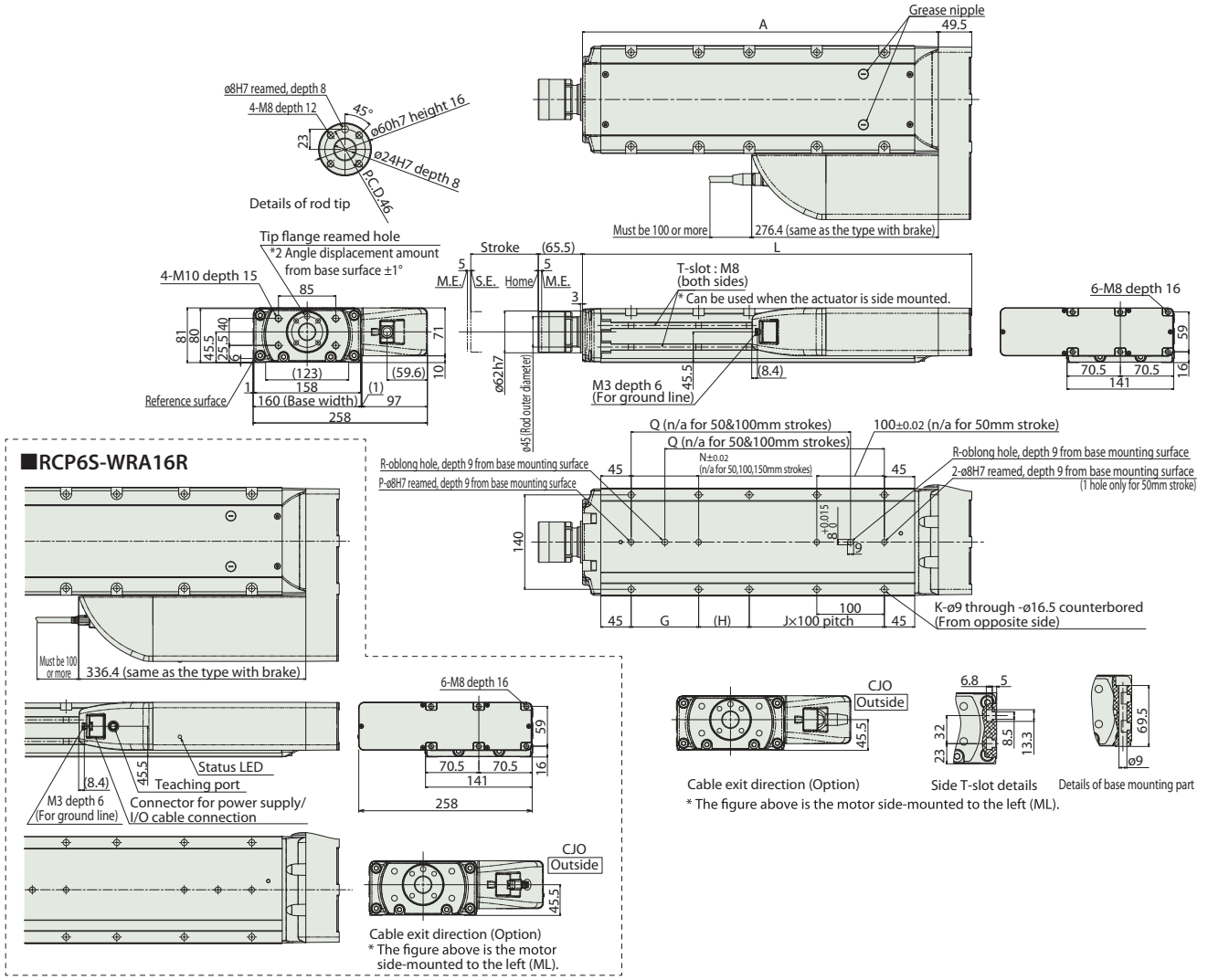
Overhang distance at end of rod (dz: 100mm or less)



Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

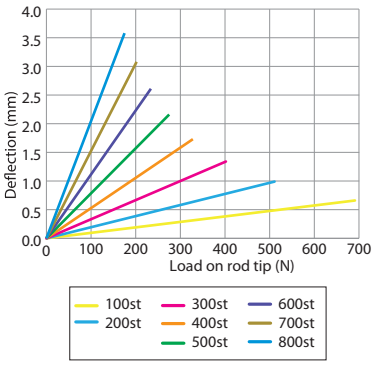
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



■RCP6S-WRA16R

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

■ Rod Deflection of RCP6(S)-WRA16R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L			326.5	376.5	426.5	476.5	526.5	576.5	626.5	676.5	726.5	776.5	826.5	876.5	926.5	976.5	1,026.5	1,076.5
A			277	327	377	427	477	527	577	627	677	727	777	827	877	927	977	1,027
G			-	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100
H			125	75	125	75	125	75	125	75	125	75	125	75	125	75	125	75
J			0	1	1	1	1	2	2	3	3	4	4	5	5	6	6	7
K			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
N			-	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			-	-	175	225	275	325	375	425	475	525	575	625	675	725	775	825
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			588	588	588	511	451	402	362	329	300	275	254	235	217	202	188	176
Allowable static torque on rod tip (N•m)			40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	255	220	191	168	149	134	120	109	99	90	81	74	67	61	55	50
		Load offset 150mm	133	133	133	133	133	122	111	101	92	84	77	70	64	58	53	48
	Allowable dynamic torque on rod tip (N•m)		20.0	20.0	20.0	20.0	20.0	18.3	16.7	15.2	13.8	12.6	11.5	10.5	9.6	8.7	7.9	7.1
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	214	184	160	140	124	111	99	89	80	72	65	59	53	47	42	37
		Load offset 150mm	133	133	133	124	112	101	91	83	75	68	62	56	50	45	40	36
	Allowable dynamic torque on rod tip (N•m)		20.0	20.0	20.0	18.6	16.8	15.2	13.7	12.4	11.3	10.2	9.2	8.4	7.5	6.8	6.0	5.3
Mass (kg)	RCP6	w/o brake	13.1	14.2	15.3	16.5	17.6	18.7	19.9	21.0	22.2	23.3	24.5	25.6	26.7	27.9	29.0	30.1
		w/ brake	13.3	14.4	15.6	16.7	17.9	19.0	20.1	21.3	22.4	23.5	24.7	25.8	27.0	28.1	29.3	30.4
	RCP6S	w/o brake	13.3	14.4	15.6	16.7	17.9	19.0	20.1	21.3	22.4	23.5	24.7	25.8	27.0	28.1	29.2	30.4
		w/ brake	13.6	14.7	15.8	16.9	18.1	19.2	20.4	21.5	22.7	23.8	24.9	26.1	27.2	28.3	29.5	30.6

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, SSCNET III/H	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)-TA4C

Single Block Specific. | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 40 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	TA4C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm	25: 25mm ~ 150: 150mm (25mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

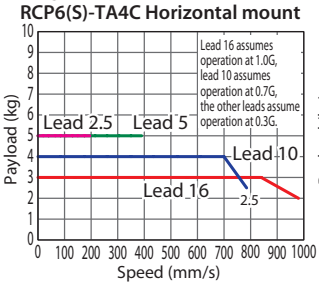
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.227 for more details.
(3) Please refer to P205 for performing push-motion operation.

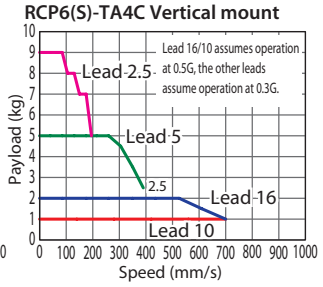
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA4C Horizontal mount

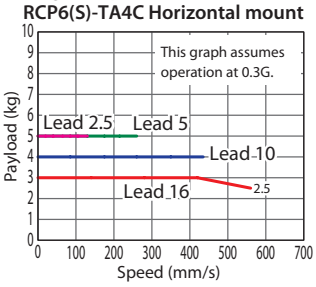


RCP6(S)-TA4C Vertical mount

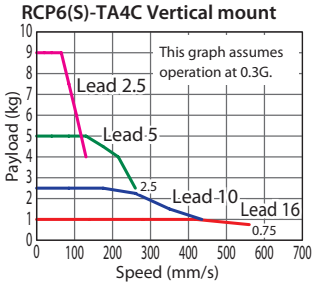


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA4C Horizontal mount



RCP6(S)-TA4C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA4C-WA-35P-16-①-②-③-④	16	High-output Enabled	3	1	48	25~150 (The increment of stroke is 25mm)
		High-output Disabled				
RCP6(S)-TA4C-WA-35P-10-①-②-③-④	10	High-output Enabled	4	2.5	77	
		High-output Disabled				
RCP6(S)-TA4C-WA-35P-5-①-②-③-④	5	High-output Enabled	5	5	155	
		High-output Disabled				
RCP6(S)-TA4C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	5	10	310	
		High-output Disabled		9		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	25~150 (mm)
16	High-output Enabled	980 <700>
	High-output Disabled	840 <560>
10	High-output Enabled	785 <700>
	High-output Disabled	525 <435>
5	High-output Enabled	390
	High-output Disabled	260
2.5	High-output Enabled	195
	High-output Disabled	130

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Non-motor end specification	**NM**	See P.194

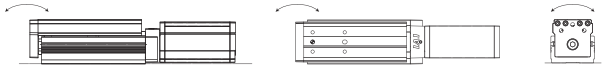
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 13N•m, Mb: 18.6N•m, Mc: 25.3N•m
Dynamic allowable moment (*)	Ma: 4.98N•m, Mb: 7.11N•m, Mc: 9.68N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

Allowable load moment directions

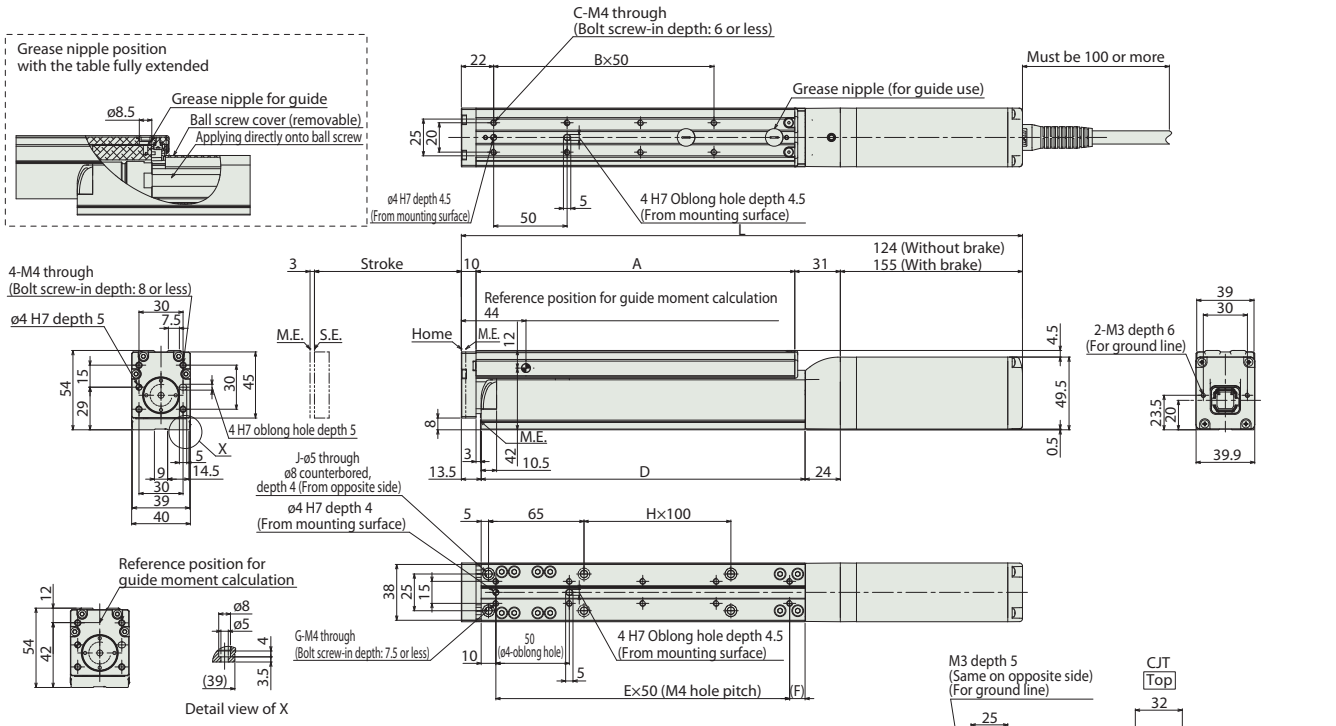


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

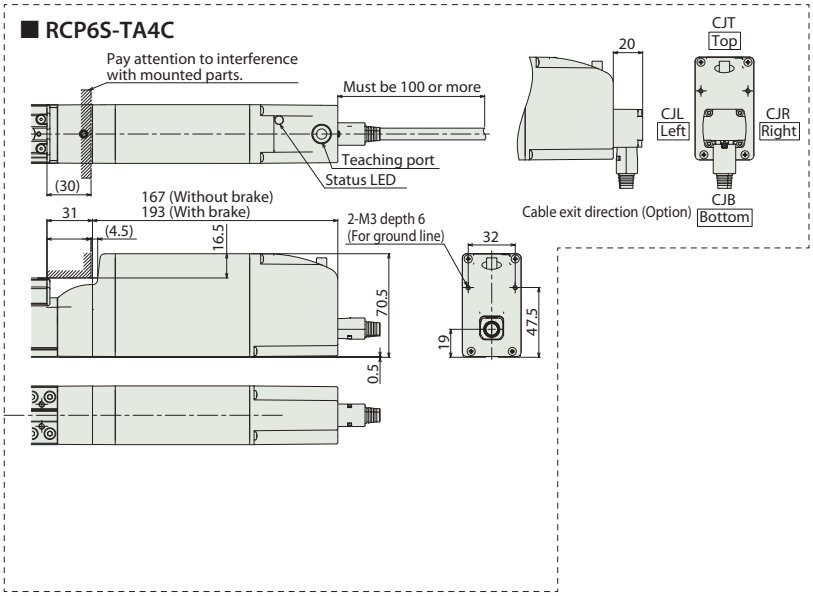
Dimensions

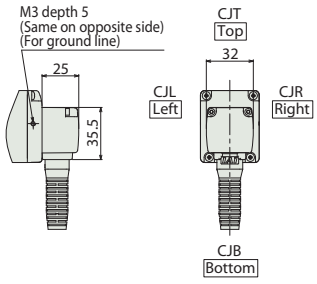
CAD drawings can be downloaded from our website.
www.iai-automation.com

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



■ RCP6S-TA4C





■ Dimensions and Mass by Stroke

Stroke			25	50	75	100	125	150
L	RCP6	w/o brake	257	282	307	332	357	382
		w/ brake	288	313	338	363	388	413
	RCP6S	w/o brake	300	325	350	375	400	425
		w/ brake	326	351	376	401	426	451
A			92	117	142	167	192	217
B			1	1	2	2	3	3
C			4	4	6	6	8	8
D			95.5	120.5	145.5	170.5	195.5	220.5
E			1	2	2	3	3	4
F			35.5	10.5	35.5	10.5	35.5	10.5
G			4	6	6	8	8	10
H			0	0	0	0	1	1
J			4	4	4	4	6	6
Mass (kg)	RCP6	w/o brake	1.2	1.3	1.4	1.5	1.6	1.6
		w/ brake	1.4	1.4	1.5	1.6	1.7	1.8
	RCP6S	w/o brake	1.4	1.5	1.6	1.7	1.7	1.8
		w/ brake	1.5	1.6	1.7	1.8	1.9	2.0

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA4C-□DB

Double Block Specific. | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 40 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
□	TA4C	WA	35P	□	□	□	□	DB-□
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10 : 10mm 5 : 5mm 2.5 : 2.5mm	40:40mm ~ 240:240mm	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Model number symbols should be written in alphabetical order, including "DB".

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

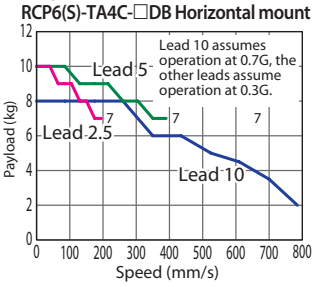
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.228 for more details.
(3) Please refer to P205 for performing push-motion operation.

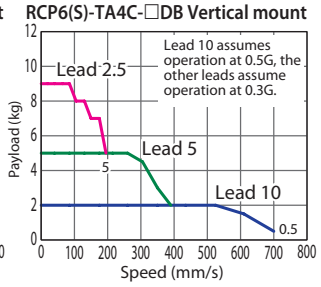
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA4C-□DB Horizontal mount

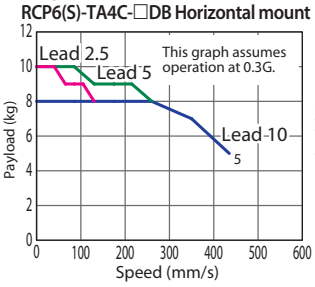


RCP6(S)-TA4C-□DB Vertical mount

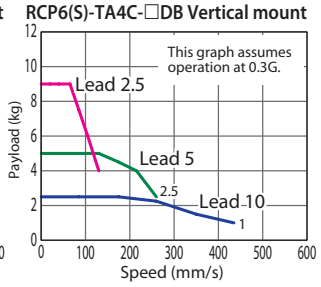


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA4C-□DB Horizontal mount



RCP6(S)-TA4C-□DB Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA4C-WA-35P-10-①-②-③-DB-④	10	High-output Enabled	8	2.5	77	40~240
		High-output Disabled				
RCP6(S)-TA4C-WA-35P-5-①-②-③-DB-④	5	High-output Enabled	10	5	155	
		High-output Disabled				
RCP6(S)-TA4C-WA-35P-2.5-①-②-③-DB-④	2.5	High-output Enabled	10	10	310	
		High-output Disabled		9		

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	40~190 (mm)	240 (mm)
10	High-output Enabled	785<700>	680
	High-output Disabled	525<435>	
5	High-output Enabled	390	340
	High-output Disabled	260	
2.5	High-output Enabled	195	170
	High-output Disabled	130	

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Non-motor end specification	**NM**	See P.194

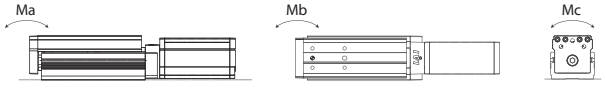
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 76.8N•m, Mb: 110N•m, Mc: 50.5N•m
Dynamic allowable moment (*)	Ma: 23.9N•m, Mb: 34.1N•m, Mc: 15.7N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

Allowable load moment directions

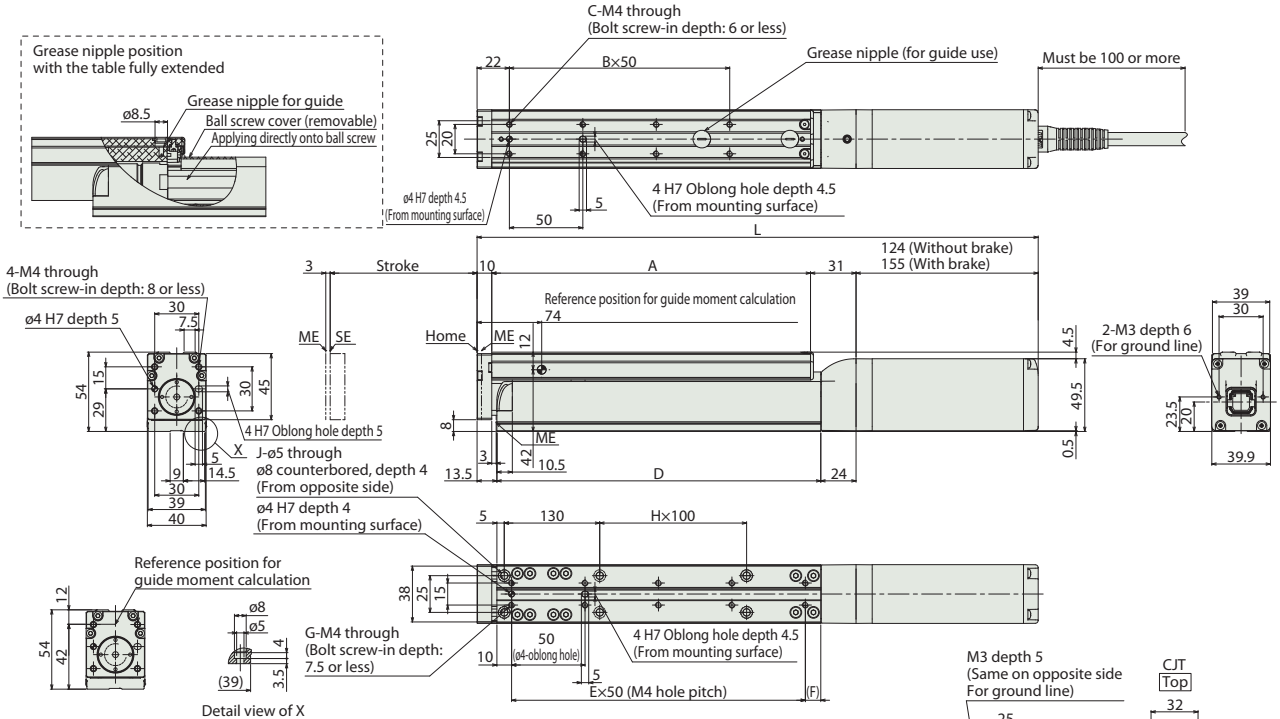


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

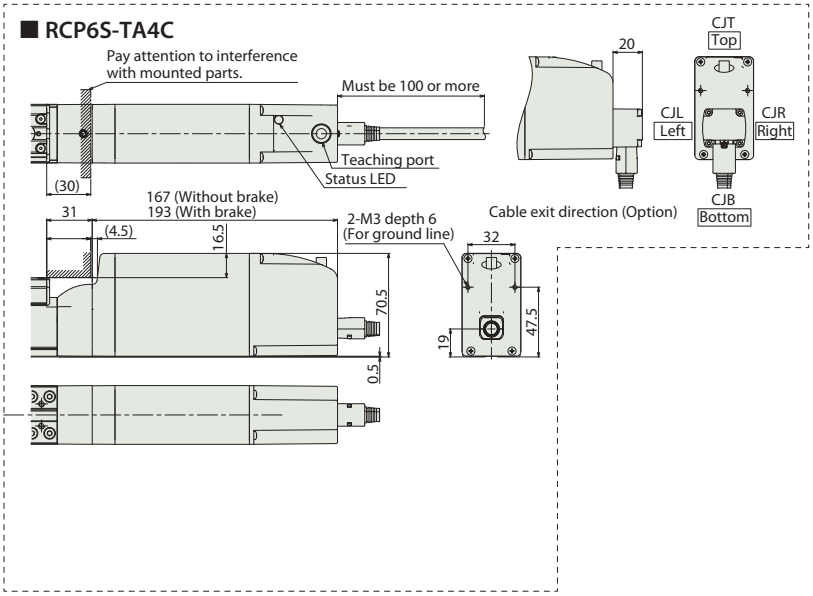
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

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



■ RCP6S-TA4C



■ Dimensions and Mass by Stroke

Stroke			40	65	90	140	190	240
L	RCP6	w/o brake	332	357	382	432	482	532
		w/ brake	363	388	413	463	513	563
	RCP6S	w/o brake	375	400	425	475	525	575
		w/ brake	401	426	451	501	551	601
A			167	192	217	267	317	367
B			2	3	3	4	5	6
C			6	8	8	10	12	14
D			170.5	195.5	220.5	270.5	320.5	370.5
E			3	3	4	5	6	7
F			10.5	35.5	10.5	10.5	10.5	10.5
G			8	8	10	12	14	16
H			0	0	0	1	1	2
J			4	4	4	6	6	8
Mass (kg)	RCP6	w/o brake	1.5	1.6	1.7	1.9	2.1	2.2
		w/ brake	1.7	1.8	1.9	2.0	2.2	2.4
	RCP6S	w/o brake	1.7	1.8	1.9	2.1	2.3	2.4
		w/ brake	1.9	2.0	2.1	2.2	2.4	2.6

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method			Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option	
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA6C

Single Block Specific. | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 58 mm | 24v Pulse Motor

■ Model Specification Items

□ — TA6C — WA — 42P — □ — □ — □ — □ — □ — □

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	25: 25mm ~ 200: 200mm (25mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

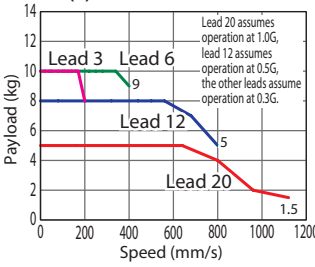
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.227 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

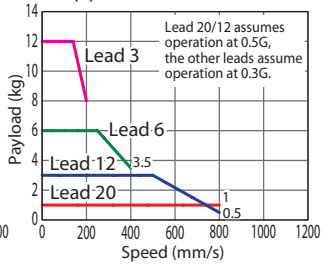
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA6C Horizontal mount

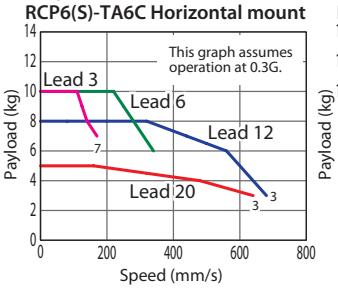


RCP6(S)-TA6C Vertical mount

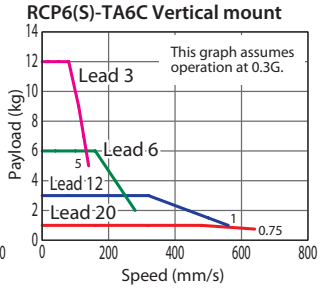


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA6C Horizontal mount



RCP6(S)-TA6C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA6C-WA-42P-20-①-②-③-④	20	High-output Enabled	5	1	56	25~200 (The increment of stroke is 25mm)
		High-output Disabled				
RCP6(S)-TA6C-WA-42P-12-①-②-③-④	12	High-output Enabled	8	3	93	
		High-output Disabled				
RCP6(S)-TA6C-WA-42P-6-①-②-③-④	6	High-output Enabled	10	6	185	
		High-output Disabled				
RCP6(S)-TA6C-WA-42P-3-①-②-③-④	3	High-output Enabled	10	12	370	
		High-output Disabled				

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	25~200 (mm)
20	High-output Enabled	1120 <800>
	High-output Disabled	800 <640>
12	High-output Enabled	800
	High-output Disabled	680 <560>
6	High-output Enabled	400
	High-output Disabled	340 <280>
3	High-output Enabled	200
	High-output Disabled	170 <140>

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Non-motor end specification	**NM**	See P.194

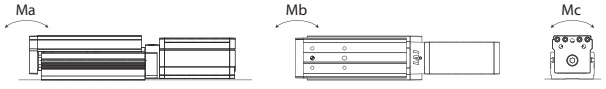
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 32.3N•m, Mb: 46.2N•m, Mc: 68.3N•m
Dynamic allowable moment (*)	Ma: 11.6N•m, Mb: 16.6N•m, Mc: 24.6N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

Allowable load moment directions

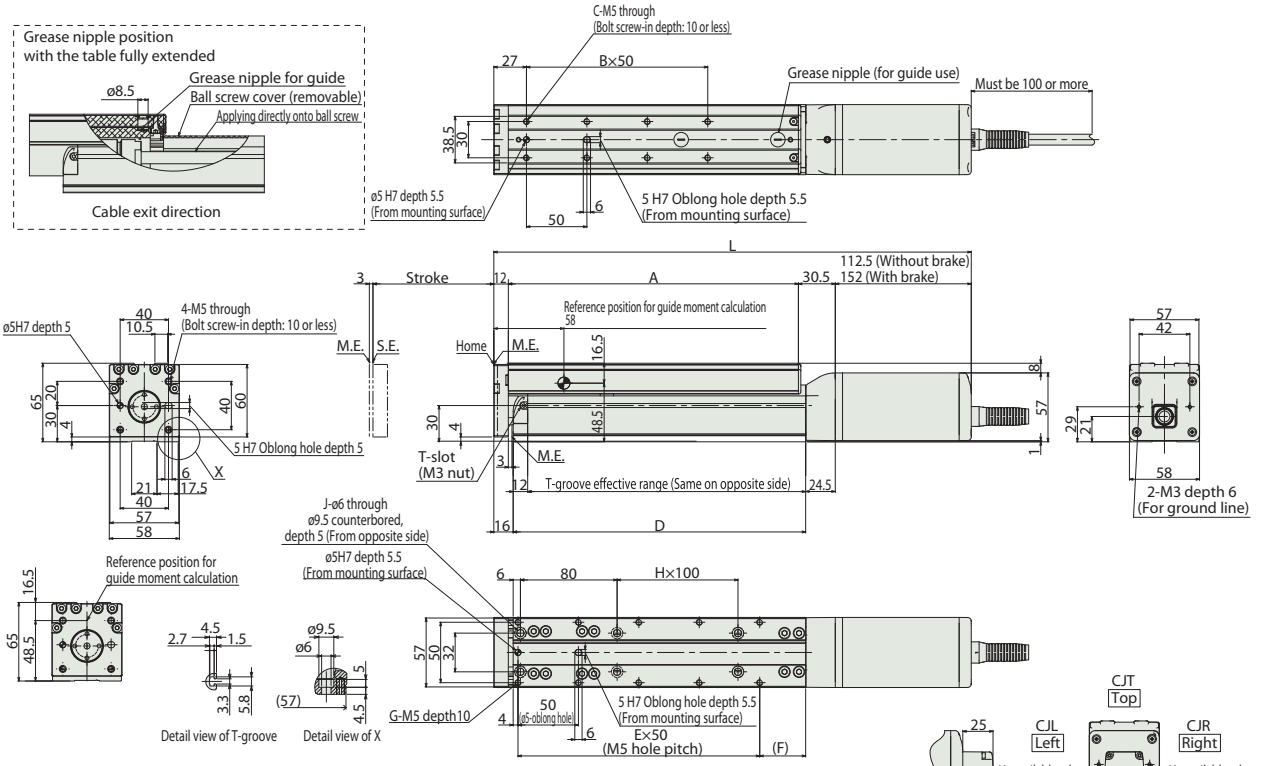


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

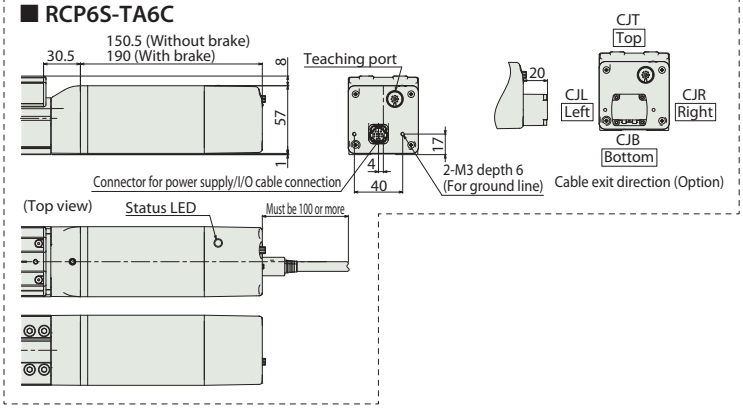
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

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



■ RCP6S-TA6C



■ Dimensions and Mass by Stroke

Stroke			25	50	75	100	125	150	175	200
L	RCP6	w/o brake	270	295	320	345	370	395	420	445
		w/ brake	309.5	334.5	359.5	384.5	409.5	434.5	459.5	484.5
	RCP6S	w/o brake	308	333	358	383	408	433	458	483
		w/ brake	347.5	372.5	397.5	422.5	447.5	472.5	497.5	522.5
A			115	140	165	190	215	240	265	290
B			1	1	2	2	3	3	4	4
C			4	4	6	6	8	8	10	10
D			117	142	167	192	217	242	267	292
E			2	2	3	3	4	4	5	5
F			13	38	13	38	13	38	13	38
G			6	6	8	8	10	10	12	12
H			0	0	0	0	1	1	1	1
J			4	4	4	4	6	6	6	6
Mass (kg)	RCP6	w/o brake	2.1	2.2	2.4	2.5	2.7	2.9	3.0	3.2
		w/ brake	2.3	2.5	2.6	2.8	2.9	3.1	3.3	3.4
	RCP6S	w/o brake	2.2	2.4	2.5	2.7	2.8	3.0	3.2	3.3
		w/ brake	2.4	2.6	2.8	2.9	3.1	3.2	3.4	3.6

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA6C-□DB

Double Block Specific. | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 58 mm | 24V Pulse Motor

■ Model Specification Items

□ — TA6C — WA — 42P — □ — □ — □ — □ — DB — □

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12 :12mm 6 : 6mm 3 : 3mm	45:45mm ~ 320:320mm	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Model number symbols should be written in alphabetical order, including "DB".

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

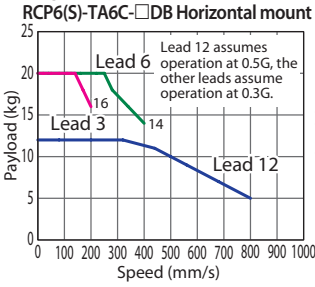
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.228 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

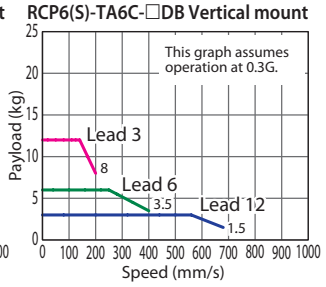
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA6C-□DB Horizontal mount

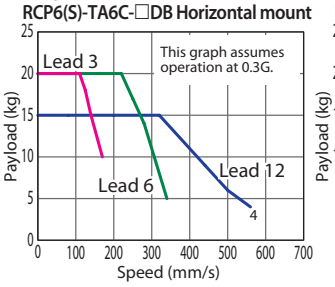


RCP6(S)-TA6C-□DB Vertical mount

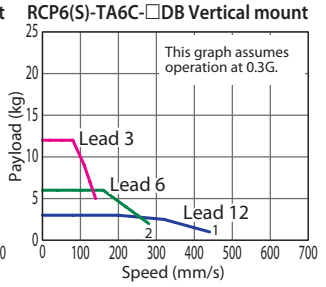


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA6C-□DB Horizontal mount



RCP6(S)-TA6C-□DB Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA6C-WA-42P-12-①-②-③-DB-④	12	High-output Enabled	15	3	93	45~320
		High-output Disabled				
RCP6(S)-TA6C-WA-42P-6-①-②-③-DB-④	6	High-output Enabled	20	6	185	
		High-output Disabled				
RCP6(S)-TA6C-WA-42P-3-①-②-③-DB-④	3	High-output Enabled	20	12	370	
		High-output Disabled				

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	45~220 (mm)	270 (mm)	320 (mm)
12	High-output Enabled	800<680>	735<680>	575
	High-output Disabled	560<440>		
6	High-output Enabled	400	365	285
	High-output Disabled	340<280>		285<280>
3	High-output Enabled	200	185	140
	High-output Disabled	170<140>		140

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Non-motor end specification	**NM**	See P.194

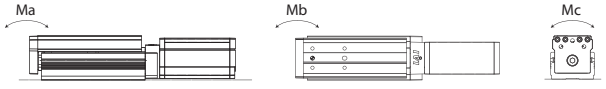
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 169N•m, Mb: 242N•m, Mc: 137N•m
Dynamic allowable moment (*)	Ma: 49.5N•m, Mb: 70.7N•m, Mc: 40N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

Allowable load moment directions

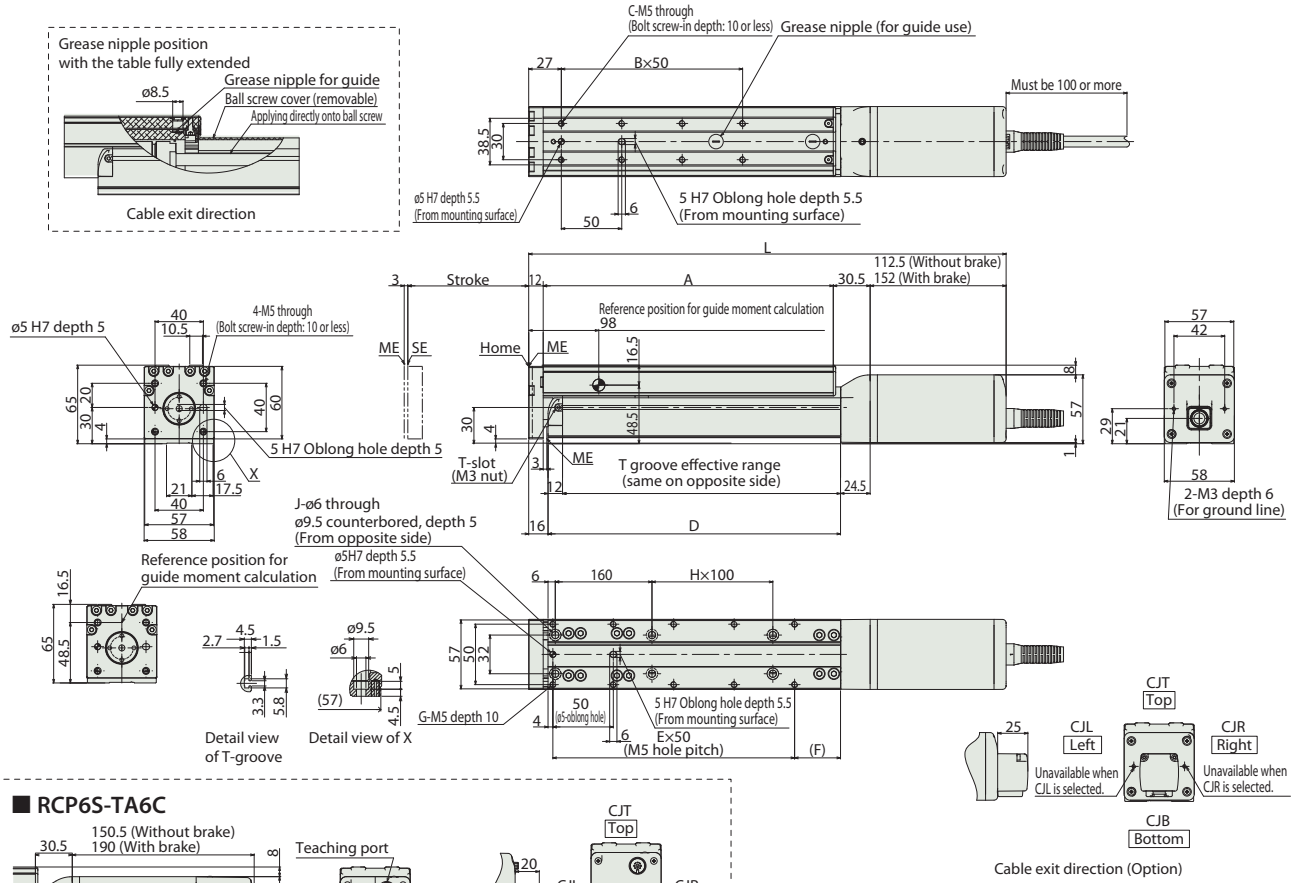


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

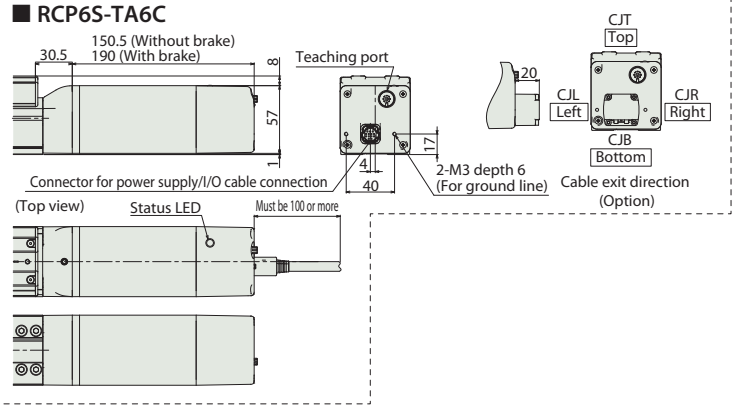
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

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



■ RCP6S-TA6C



■ Dimensions and Mass by Stroke

Stroke			45	70	95	120	170	220	270	320
L	RCP6	w/o brake	370	395	420	445	495	545	595	645
		w/ brake	409.5	434.5	459.5	484.5	534.5	584.5	634.5	684.5
	RCP6S	w/o brake	408	433	458	483	533	583	633	683
		w/ brake	447.5	472.5	497.5	522.5	572.5	622.5	672.5	722.5
A			215	240	265	290	340	390	440	490
B			3	3	4	4	5	6	7	8
C			8	8	10	10	12	14	16	18
D			217	242	267	292	342	392	442	492
E			4	4	5	5	6	7	8	9
F			13	38	13	38	38	38	38	38
G			10	10	12	12	14	16	18	20
H			0	0	0	0	1	1	2	2
J			4	4	4	4	6	8	8	8
Mass (kg)	RCP6	w/o brake	2.9	3.0	3.2	3.3	3.7	4.0	4.3	4.6
		w/ brake	3.1	3.3	3.4	3.6	3.9	4.2	4.5	4.9
	RCP6S	w/o brake	3.0	3.2	3.3	3.5	3.8	4.1	4.4	4.8
		w/ brake	3.2	3.4	3.6	3.7	4.0	4.4	4.7	5.0

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA7C

Single Block Specific. | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 70 mm | 24v Pulse Motor

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	TA7C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	25: 25mm ~ 300: 300mm	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

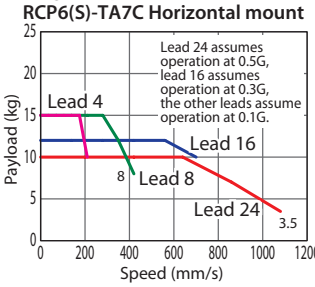
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.227 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

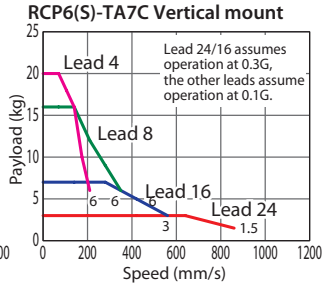
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA7C Horizontal mount

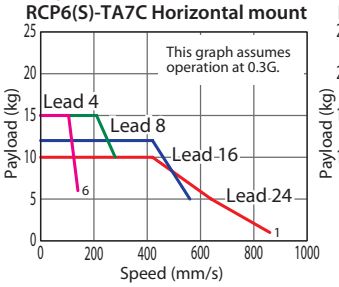


RCP6(S)-TA7C Vertical mount

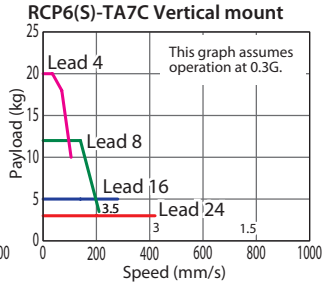


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA7C Horizontal mount



RCP6(S)-TA7C Vertical mount



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA7C-WA-56P-24-①-②-③-④	24	High-output Enabled	10	3	112	25~300
		High-output Disabled				
RCP6(S)-TA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	12	7	168	
		High-output Disabled		5		
RCP6(S)-TA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	15	16	336	
		High-output Disabled		12		
RCP6(S)-TA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	15	20	673	
		High-output Disabled				

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	25~300 (mm)
24	High-output Enabled	1080 <860>
	High-output Disabled	860 <420>
16	High-output Enabled	700 <560>
	High-output Disabled	560 <280>
8	High-output Enabled	420 <350>
	High-output Disabled	280 <210>
4	High-output Enabled	210
	High-output Disabled	140 <105>

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Non-motor end specification	**NM**	See P.194

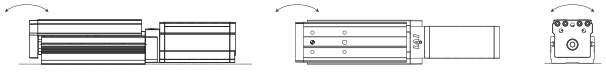
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 115N•m, Mb: 115N•m, Mc: 229N•m
Dynamic allowable moment (*)	Ma: 44.7N•m, Mb: 44.7N•m, Mc: 89.1N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

Allowable load moment directions

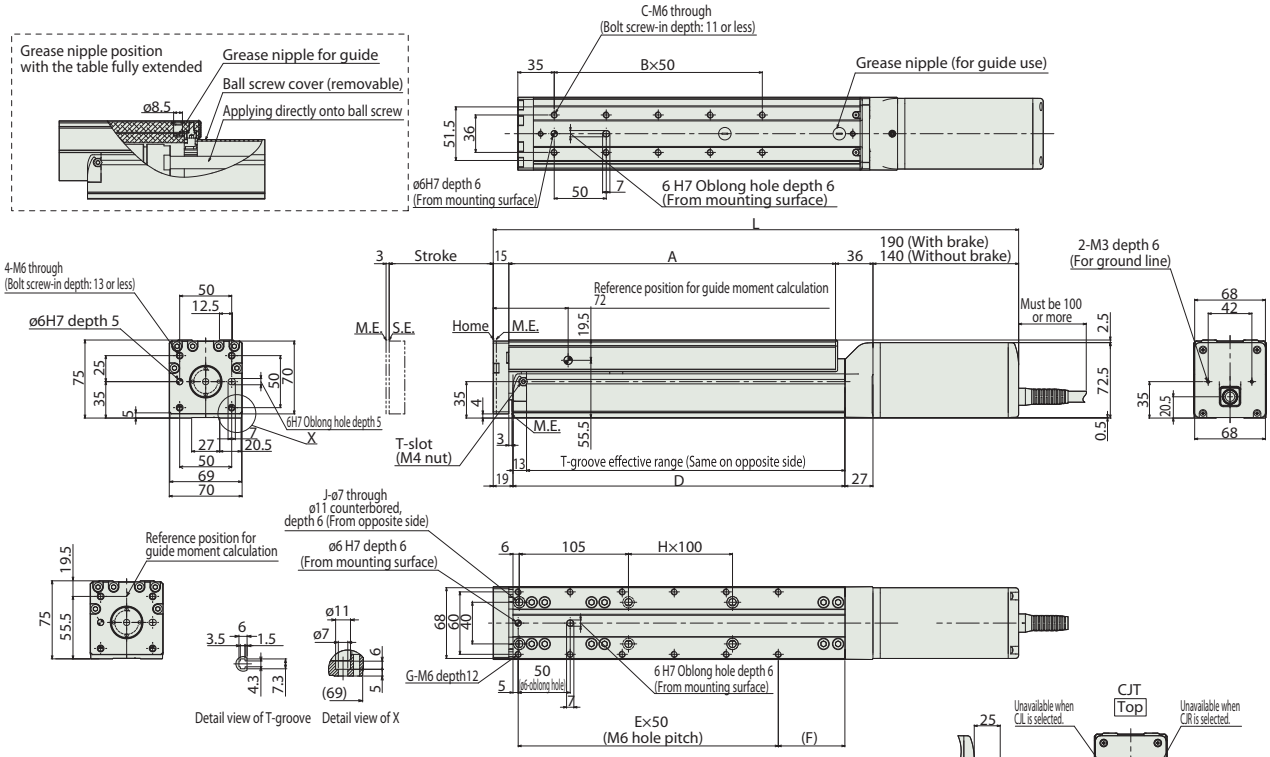


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

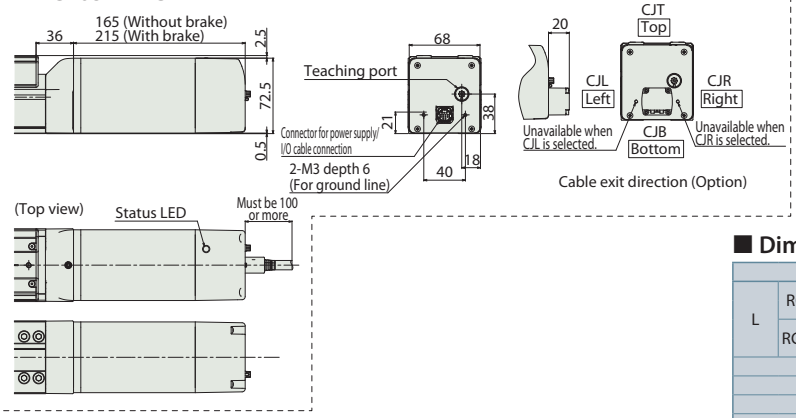
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

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



■ RCP6S-TA7C



■ Dimensions and Mass by Stroke

Stroke			25	50	75	100	125	150	175	200	250	300
L	RCP6	w/o brake	330	355	380	405	430	455	480	505	555	605
		w/ brake	380	405	430	455	480	505	530	555	605	655
	RCP6S	w/o brake	355	380	405	430	455	480	505	530	580	630
		w/ brake	405	430	455	480	505	530	555	580	630	680
A			139	164	189	214	239	264	289	314	364	414
B			1	1	2	2	3	3	4	4	5	6
C			4	4	6	6	8	8	10	10	12	14
D			144	169	194	219	244	269	294	319	369	419
E			2	2	3	3	4	4	5	5	6	7
F			39	64	39	64	39	64	39	64	64	64
G			6	6	8	8	10	10	12	12	14	16
H			0	0	0	0	1	1	1	1	2	2
J			4	4	4	4	6	6	6	6	8	8
Mass (kg)	RCP6	w/o brake	3.9	4.1	4.3	4.5	4.7	5.0	5.2	5.4	5.8	6.3
		w/ brake	4.3	4.5	4.7	5.0	5.2	5.4	5.6	5.8	6.3	6.7
	RCP6S	w/o brake	4.0	4.3	4.5	4.7	4.9	5.1	5.3	5.6	6.0	6.4
		w/ brake	4.5	4.7	4.9	5.1	5.3	5.6	5.8	6.0	6.4	6.9

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA7C-□DB

Double Block Specific. | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 70 mm | 24v Pulse Motor

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
□	TA7C	WA	56P	□	□	□	□	DB-□
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 :16mm 8 : 8mm 4 : 4mm	40:40mm ~ 390:390mm	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Model number symbols should be written in alphabetical order, including "DB".

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

CE RoHS

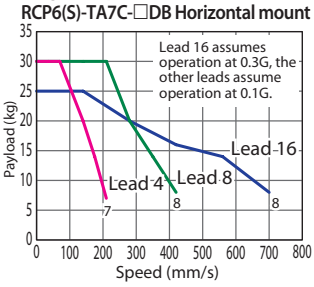
Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

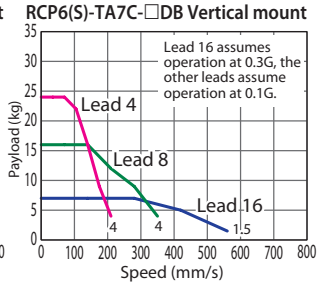
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA7C-□DB Horizontal mount

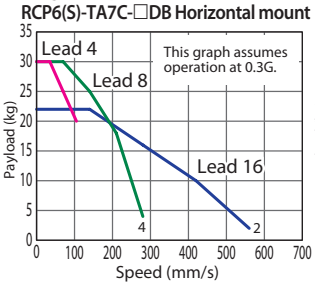


RCP6(S)-TA7C-□DB Vertical mount

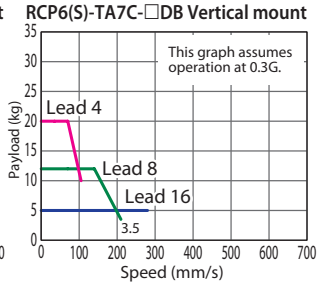


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA7C-□DB Horizontal mount



RCP6(S)-TA7C-□DB Vertical mount



POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.228 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA7C-WA-56P-16-①-②-③-DB-④	16	High-output Enabled	25	7	168	40~390
		High-output Disabled	22	5		
RCP6(S)-TA7C-WA-56P-8-①-②-③-DB-④	8	High-output Enabled	30	16	336	
		High-output Disabled		12		
RCP6(S)-TA7C-WA-56P-4-①-②-③-DB-④	4	High-output Enabled	30	24	673	
		High-output Disabled		20		

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	40~290 (mm)	340 (mm)	390 (mm)
16	High-output Enabled	700<560>		600<560>
	High-output Disabled	560<280>		
8	High-output Enabled	420<350>	365<350>	300
	High-output Disabled	280<210>		
4	High-output Enabled	210	180	150
	High-output Disabled	105		

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Non-motor end specification	**NM**	See P.194

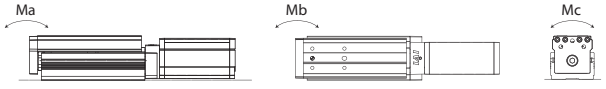
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 620N•m, Mb: 620N•m, Mc: 458N•m
Dynamic allowable moment (*)	Ma: 196N•m, Mb: 196N•m, Mc: 145N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

Allowable load moment directions

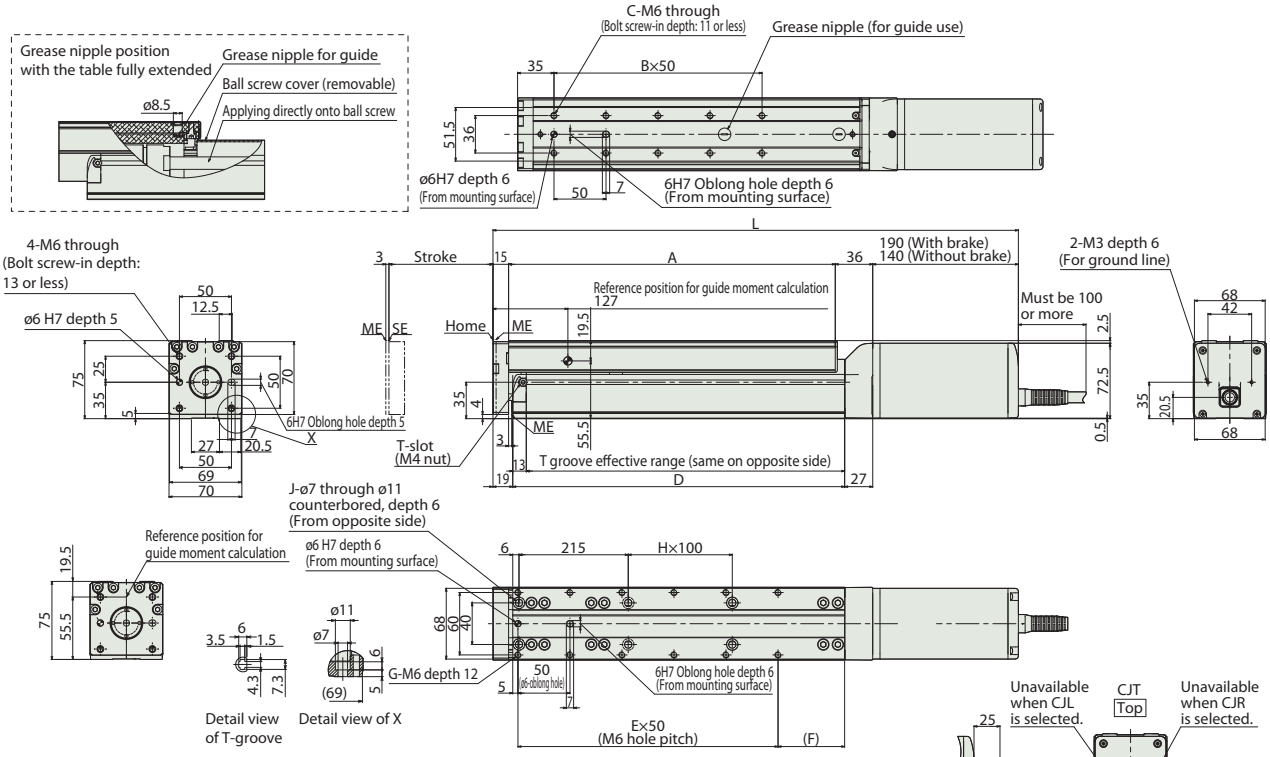


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

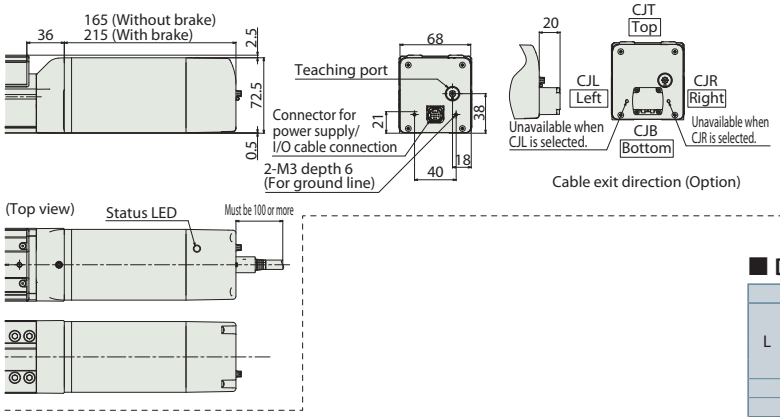
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

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



RCP6S-TA7C



Dimensions and Mass by Stroke

Stroke			40	65	90	140	190	240	290	340	390
L	RCP6	w/o brake	455	480	505	555	605	655	705	755	805
		w/ brake	505	530	555	605	655	705	755	805	855
	RCP6S	w/o brake	480	505	530	580	630	680	730	780	830
		w/ brake	530	555	580	630	680	730	780	830	880
A			264	289	314	364	414	464	514	564	614
B			3	4	4	5	6	7	8	9	10
C			8	10	10	12	14	16	18	20	22
D			269	294	319	369	419	469	519	569	619
E			4	5	5	6	7	8	9	10	11
F			64	39	64	64	64	64	64	64	64
G			10	12	12	14	16	18	20	22	24
H			0	0	0	1	1	2	2	3	3
J			4	4	4	6	6	8	8	10	10
Mass (kg)	RCP6	w/o brake	5.3	5.6	5.8	6.2	6.6	7.1	7.5	8.0	8.4
		w/ brake	5.8	6.0	6.2	6.6	7.1	7.5	8.0	8.4	8.8
	RCP6S	w/o brake	5.5	5.7	5.9	6.4	6.8	7.3	7.7	8.1	8.6
		w/ brake	5.9	6.2	6.4	6.8	7.3	7.7	8.1	8.6	9.0

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA4R

Single Block Specific. | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 24v Pulse Motor

■ Model Specification Items

□ — TA4R — WA — 35P — □ — □ — □ — □ — □ — □

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	25: 25mm ~ 150:150mm (25mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

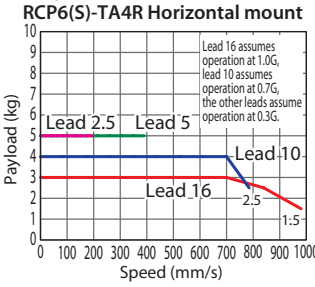
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.229 for more details.
(3) Please refer to P205 for performing push-motion operation.

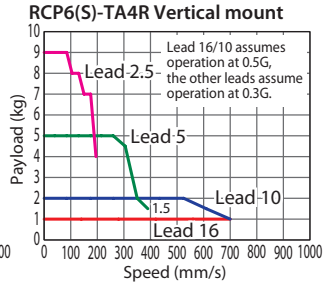
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA4R Horizontal mount

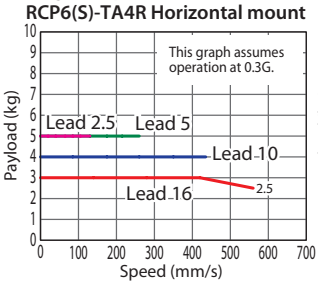


RCP6(S)-TA4R Vertical mount

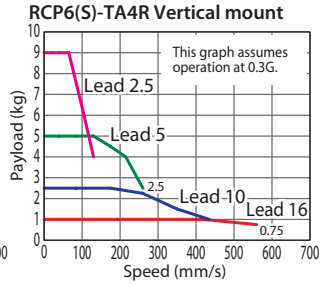


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA4R Horizontal mount



RCP6(S)-TA4R Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA4R-WA-35P-16-①-②-③-④	16	High-output Enabled	3	1	48	25~150 (The increment of stroke is 25mm)
		High-output Disabled				
RCP6(S)-TA4R-WA-35P-10-①-②-③-④	10	High-output Enabled	4	2.5	77	
		High-output Disabled				
RCP6(S)-TA4R-WA-35P-5-①-②-③-④	5	High-output Enabled	5	5	155	
		High-output Disabled				
RCP6(S)-TA4R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	5	10	310	
		High-output Disabled		9		

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	25~150 (mm)
16	High-output Enabled	980 <700>
	High-output Disabled	840 <560>
10	High-output Enabled	785 <700>
	High-output Disabled	525 <435>
5	High-output Enabled	390
	High-output Disabled	260
2.5	High-output Enabled	195
	High-output Disabled	130

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194

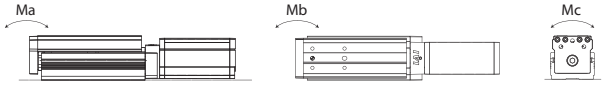
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 13N•m, Mb: 18.6N•m, Mc: 25.3N•m
Dynamic allowable moment (*)	Ma: 4.98N•m, Mb: 7.11N•m, Mc: 9.68N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

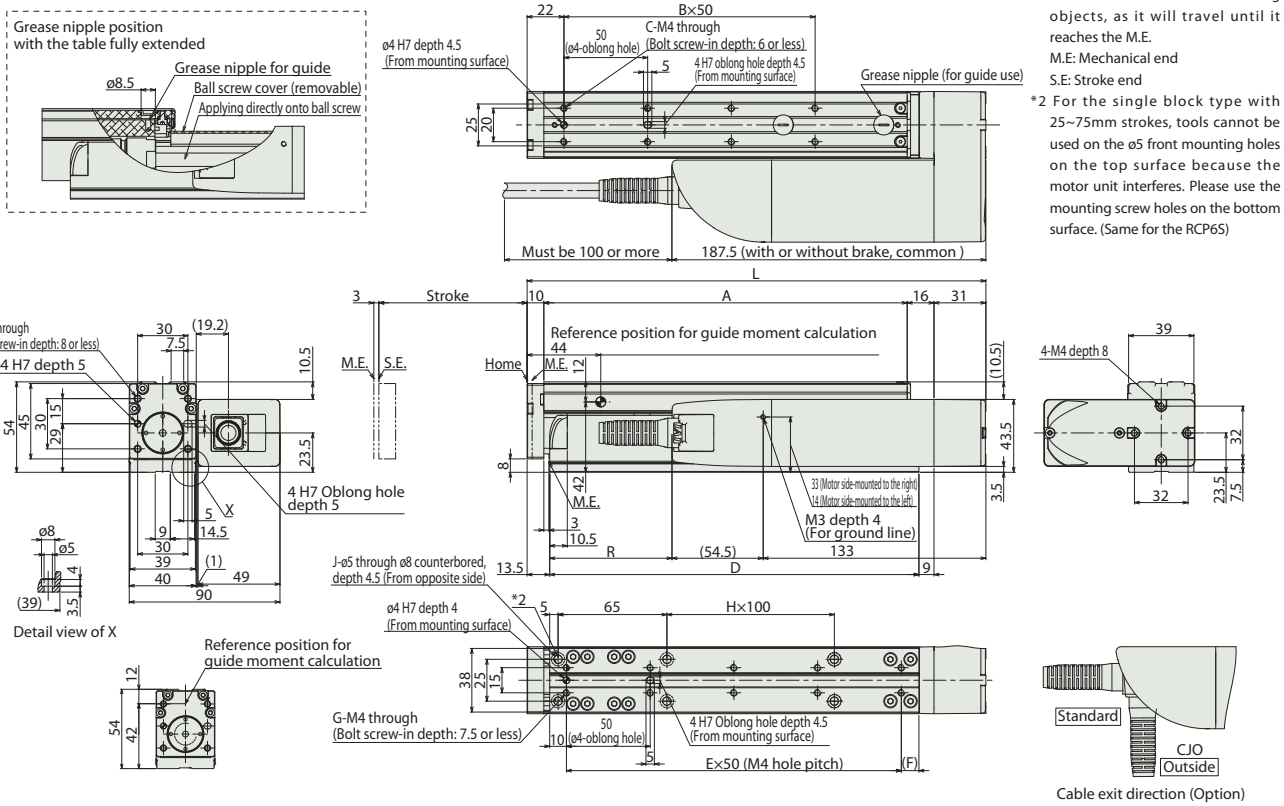
Allowable load moment directions



Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

Dimensions

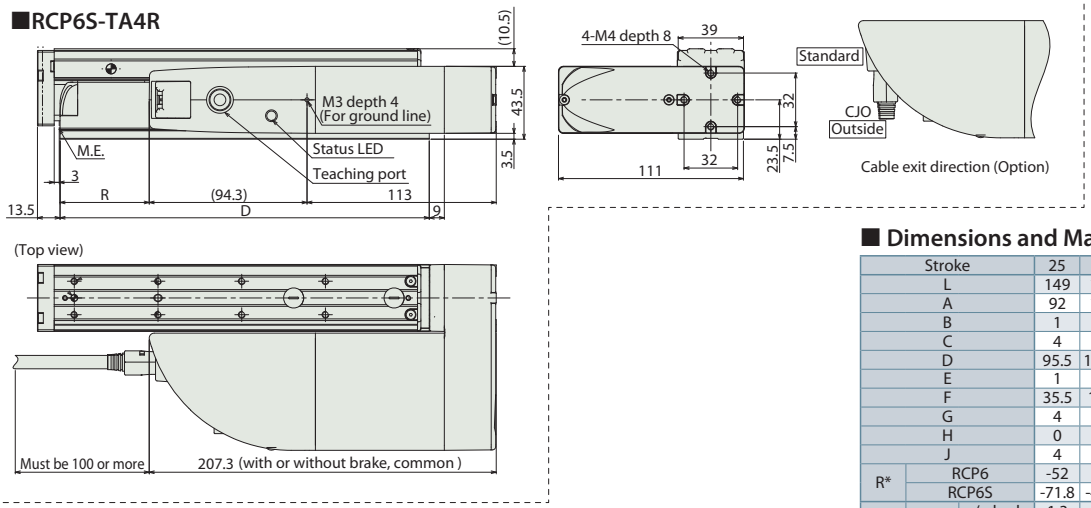
CAD drawings can be downloaded from our website.
www.iai-automation.com



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

*2 For the single block type with 25~75mm strokes, tools cannot be used on the ø5 front mounting holes on the top surface because the motor unit interferes. Please use the mounting screw holes on the bottom surface. (Same for the RCP6S)

■RCP6S-TA4R



■ Dimensions and Mass by Stroke

Stroke			25	50	75	100	125	150
L			149	174	199	224	249	274
A			92	117	142	167	192	217
B			1	1	2	2	3	3
C			4	4	6	6	8	8
D			95.5	120.5	145.5	170.5	195.5	220.5
E			1	2	2	3	3	4
F			35.5	10.5	35.5	10.5	35.5	10.5
G			4	6	6	8	8	10
H			0	0	0	0	1	1
J			4	4	4	4	6	6
R*	RCP6		-52	-27	-2	23	48	73
	RCP6S		-71.8	-46.8	-21.8	3.2	28.2	53.2
Mass (kg)	RCP6	w/o brake	1.3	1.4	1.5	1.6	1.7	1.8
		w/ brake	1.4	1.5	1.6	1.7	1.8	1.8
	RCP6S	w/o brake	1.5	1.6	1.6	1.7	1.8	1.9
		w/ brake	1.5	1.6	1.7	1.8	1.9	2.0

* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET IRT	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA4R-□DB

Double Block Specific. | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 24v Pulse Motor

*Body width does not include the width of the side-mounted motor.

■ Model Specification Items

□ — TA4R — WA — 35P — □ — □ — □ — □ — DB — □

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10 : 10mm 5 : 5mm 2.5 : 2.5mm	40:40mm ~ 240:240mm	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Model number symbols should be written in alphabetical order, including "DB".

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

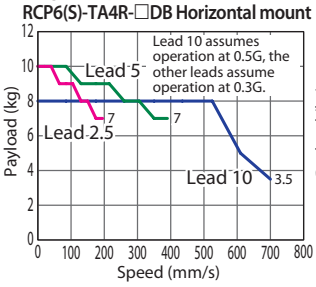
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.230 for more details.
(3) Please refer to P205 for performing push-motion operation.

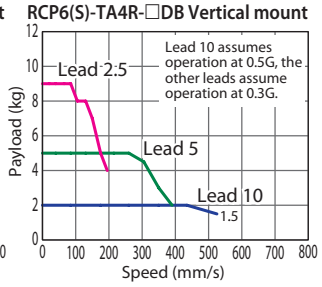
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA4R-□DB Horizontal mount

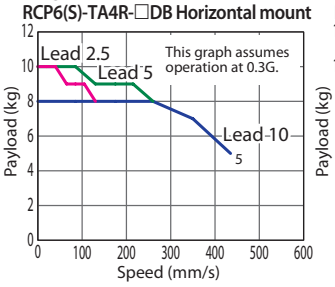


RCP6(S)-TA4R-□DB Vertical mount

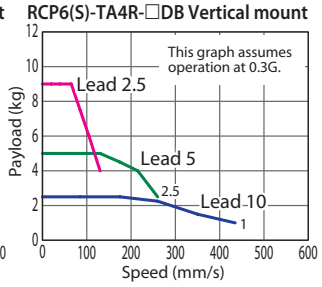


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA4R-□DB Horizontal mount



RCP6(S)-TA4R-□DB Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA4R-WA-35P-10-①-②-③-DB-④	10	High-output Enabled	8	2.5	77	40~240
		High-output Disabled				
RCP6(S)-TA4R-WA-35P-5-①-②-③-DB-④	5	High-output Enabled	10	5	155	
		High-output Disabled				
RCP6(S)-TA4R-WA-35P-2.5-①-②-③-DB-④	2.5	High-output Enabled	10	10	310	
		High-output Disabled		9		

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	40~190 (mm)	240 (mm)
10	High-output Enabled	700<525>	680<525>
	High-output Disabled	525<435>	
5	High-output Enabled	390	340
	High-output Disabled	260	
2.5	High-output Enabled	195	170
	High-output Disabled	130	

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194

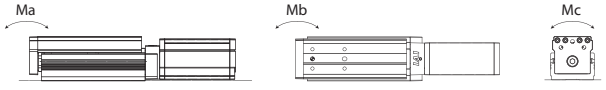
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 76.8N•m, Mb: 110N•m, Mc: 50.5N•m
Dynamic allowable moment (*)	Ma: 23.9N•m, Mb: 34.1N•m, Mc: 15.7N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

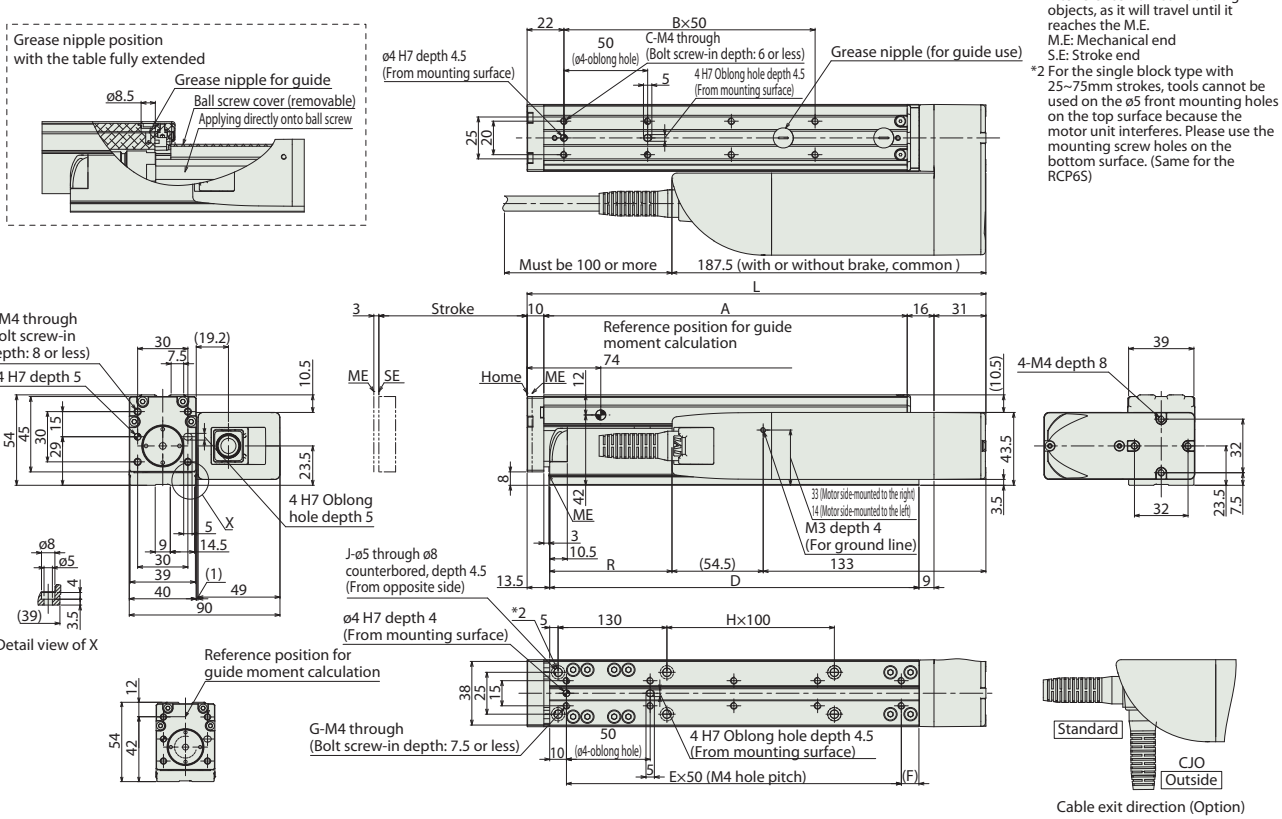
Allowable load moment directions



Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

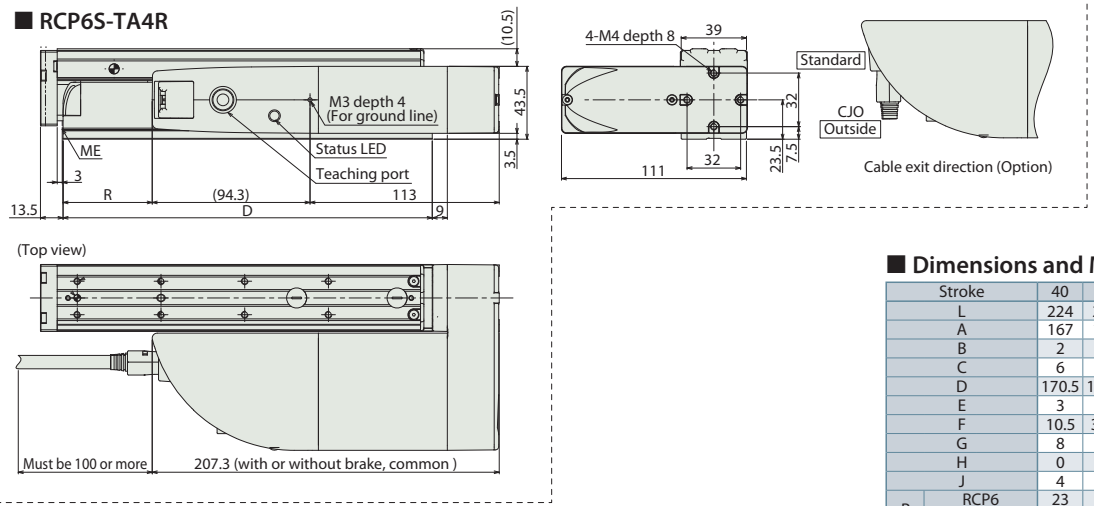
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com



*1 When the table is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end
S.E: Stroke end
*2 For the single block type with 25~75mm strokes, tools cannot be used on the ø5 front mounting holes on the top surface because the motor unit interferes. Please use the mounting screw holes on the bottom surface. (Same for the RCP6S)

■ RCP6S-TA4R



■ Dimensions and Mass by Stroke

Stroke			40	65	90	140	190	240
L			224	249	274	324	374	424
A			167	192	217	267	317	367
B			2	3	3	4	5	6
C			6	8	8	10	12	14
D			170.5	195.5	220.5	270.5	320.5	370.5
E			3	3	4	5	6	7
F			10.5	35.5	10.5	10.5	10.5	10.5
G			8	8	10	12	14	16
H			0	0	0	1	1	2
J			4	4	4	6	6	8
R	RCP6		23	48	73	123	173	223
	RCP6S		3.2	28.2	53.2	103.2	153.2	203.2
Mass (kg)	RCP6	w/o brake	1.7	1.8	1.9	2.1	2.2	2.4
		w/ brake	1.8	1.9	1.9	2.1	2.3	2.5
	RCP6S	w/o brake	1.8	1.9	2.0	2.2	2.4	2.5
		w/ brake	1.9	2.0	2.1	2.2	2.4	2.6

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA6R

Single Block Specific. | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 58* mm | 24v Pulse Motor

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	TA6R	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	25: 25mm ~ 200: 200mm (25mm increments)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

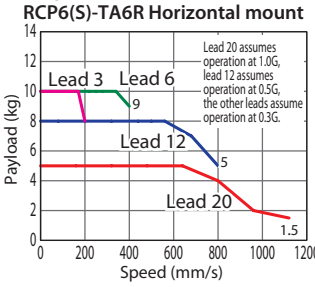
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.229 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

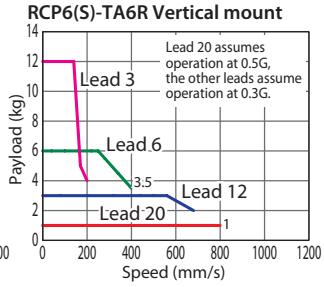
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA6R Horizontal mount

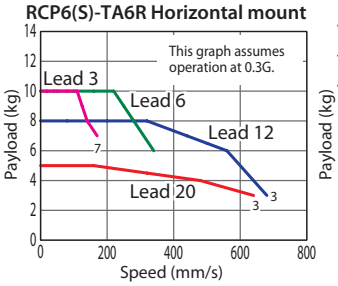


RCP6(S)-TA6R Vertical mount

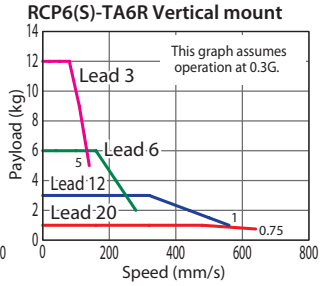


(2) High-output disabled with PCON/RCON/MCON/RSEL connected.

RCP6(S)-TA6R Horizontal mount



RCP6(S)-TA6R Vertical mount



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA6R-WA-42P-20-①-②-③-④	20	High-output Enabled	5	1	56	25~200 (The increment of stroke is 25mm)
		High-output Disabled				
RCP6(S)-TA6R-WA-42P-12-①-②-③-④	12	High-output Enabled	8	3	93	
		High-output Disabled				
RCP6(S)-TA6R-WA-42P-6-①-②-③-④	6	High-output Enabled	10	6	185	
		High-output Disabled				
RCP6(S)-TA6R-WA-42P-3-①-②-③-④	3	High-output Enabled	10	12	370	
		High-output Disabled				

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	25~200 (mm)
20	High-output Enabled	1120 <800>
	High-output Disabled	800 <640>
12	High-output Enabled	800 <680>
	High-output Disabled	680 <560>
6	High-output Enabled	400
	High-output Disabled	340 <280>
3	High-output Enabled	200
	High-output Disabled	170 <140>

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194

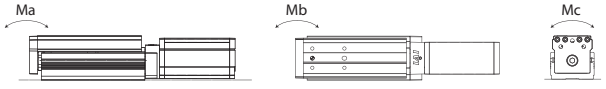
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 32.3N•m, Mb: 46.2N•m, Mc: 68.3N•m
Dynamic allowable moment (*)	Ma: 11.6N•m, Mb: 16.6N•m, Mc: 24.6N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

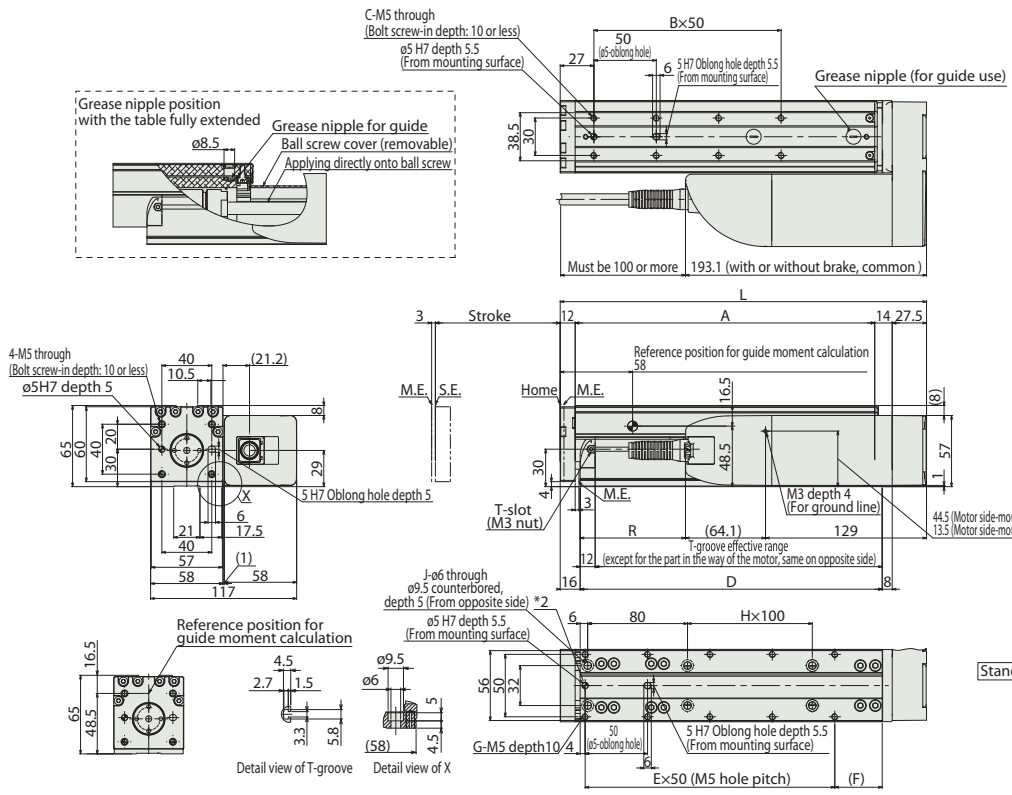
Allowable load moment directions



Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

Dimensions

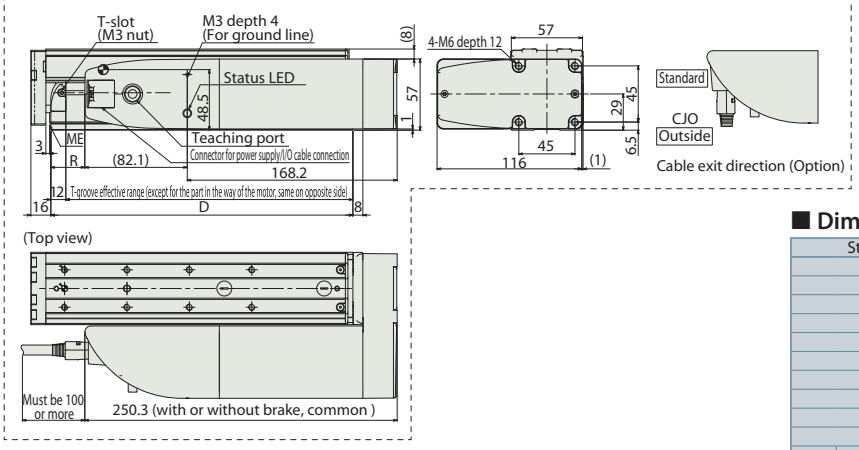
CAD drawings can be downloaded from our website.
www.iai-automation.com



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

*2 For the single block type with 25~50mm (RCP6) and 25~125mm (RCP6S) strokes, tools cannot be used on the ø6 front mounting holes on the top surface because the motor unit interferes.
Please use the mounting screw holes on the bottom surface.

■ RCP6S-TA6R



■ Dimensions and Mass by Stroke

Stroke			25	50	75	100	125	150	175	200
L			168.5	193.5	218.5	243.5	268.5	293.5	318.5	343.5
A			115	140	165	190	215	240	265	290
B			1	1	2	2	3	3	4	4
C			4	4	6	6	8	8	10	10
D			117	142	167	192	217	242	267	292
E			2	2	3	3	4	4	5	5
F			13	38	13	38	13	38	13	38
G			6	6	8	8	10	10	12	12
H			0	0	0	0	1	1	1	1
J			4	4	4	4	6	6	6	6
R*	RCP6		-40.6	-15.6	9.4	34.4	59.4	84.4	109.4	134.4
	RCP6S		-97.8	-72.8	-47.8	-22.8	2.2	27.2	52.2	77.2
Mass (kg)	RCP6	w/o brake	2.3	2.5	2.7	2.8	3.0	3.1	3.3	3.5
		w/ brake	2.4	2.6	2.7	2.9	3.0	3.2	3.4	3.5
	RCP6S	w/o brake	2.5	2.6	2.8	3.0	3.1	3.3	3.4	3.6
		w/ brake	2.5	2.7	2.9	3.0	3.2	3.3	3.5	3.7

* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA6R-□DB

Double Block Specific. | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 58* mm | 24v Pulse Motor

■ Model Specification Items

□	— TA6R —	WA	— 42P —	□	— □ —	□	— □ —	□	— DB —	□
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options		
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12 :12mm 6 : 6mm 3 : 3mm	45:45mm ~ 320:320mm	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Model number symbols should be written in alphabetical order, including "DB".		

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

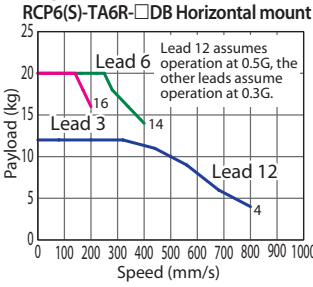
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.230 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

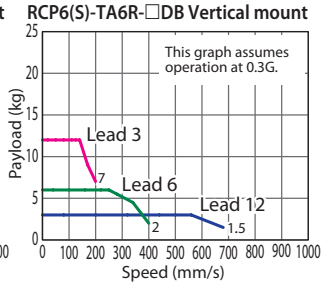
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA6R-□DB Horizontal mount

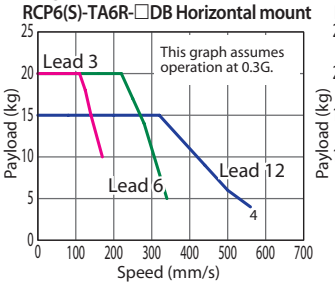


RCP6(S)-TA6R-□DB Vertical mount

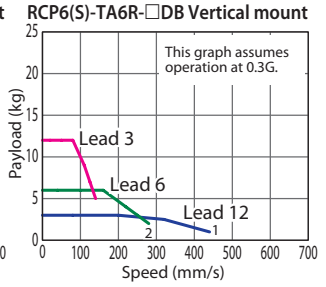


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA6R-□DB Horizontal mount



RCP6(S)-TA6R-□DB Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA6R-WA-42P-12-①-②-③-DB-④	12	High-output Enabled	15	3	93	45~320
		High-output Disabled				
RCP6(S)-TA6R-WA-42P-6-①-②-③-DB-④	6	High-output Enabled	20	6	185	
		High-output Disabled				
RCP6(S)-TA6R-WA-42P-3-①-②-③-DB-④	3	High-output Enabled	20	12	370	
		High-output Disabled				

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	45~220 (mm)	270 (mm)	320 (mm)
12	High-output Enabled	800<680>	735<680>	575
	High-output Disabled	560<440>		
6	High-output Enabled	400	365	285
	High-output Disabled	340<280>		285<280>
3	High-output Enabled	200	185	140
	High-output Disabled	170<140>		140

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194

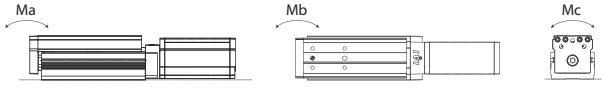
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 169N•m, Mb: 242N•m, Mc: 137N•m
Dynamic allowable moment (*)	Ma: 49.5N•m, Mb: 70.7N•m, Mc: 40N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

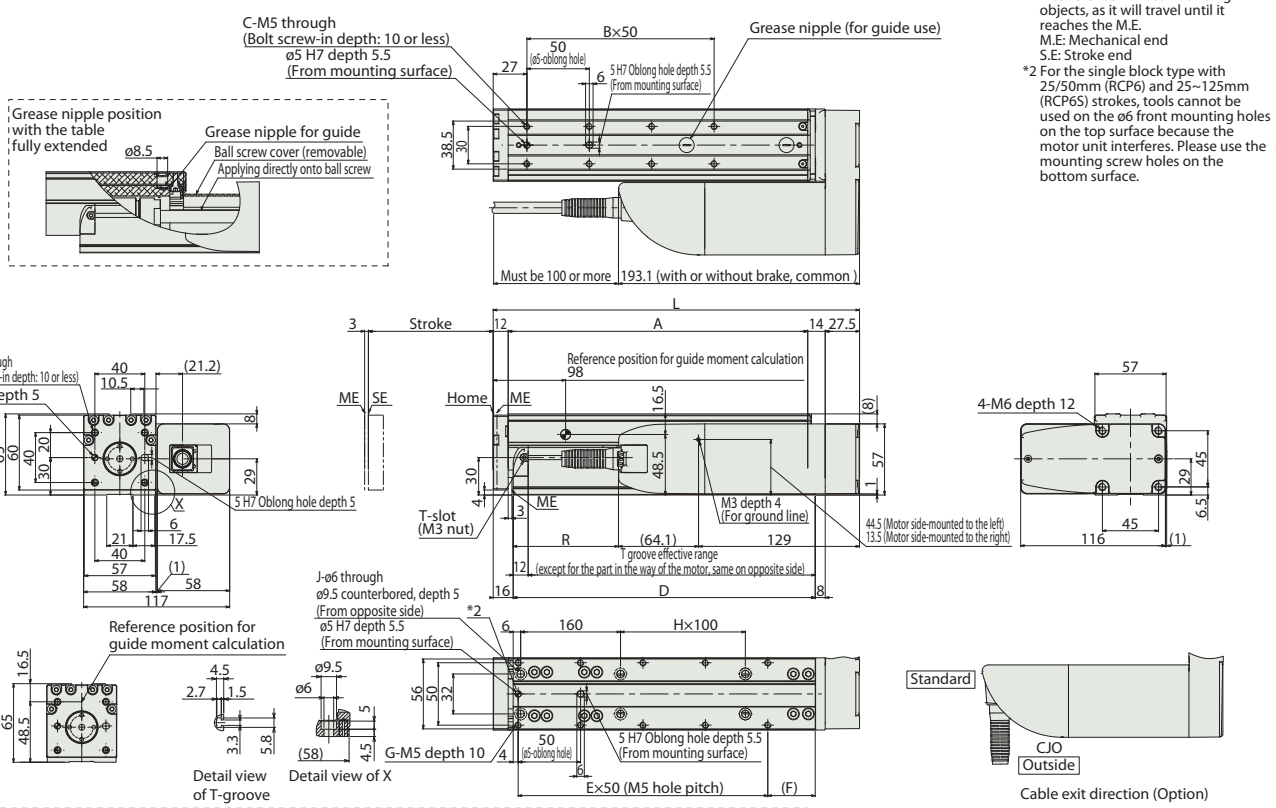
Allowable load moment directions



Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

Dimensions

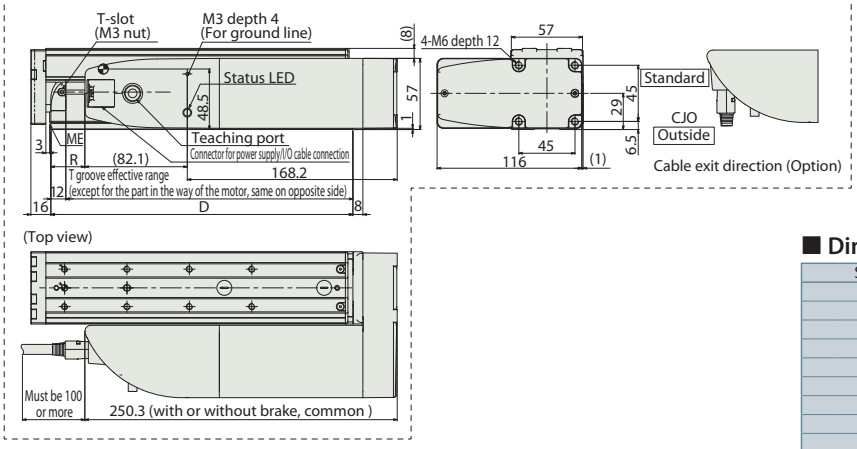
CAD drawings can be downloaded from our website.
www.iai-automation.com



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

*2 For the single block type with 25/50mm (RCP6) and 25~125mm (RCP6S) strokes, tools cannot be used on the ø6 front mounting holes on the top surface because the motor unit interferes. Please use the mounting screw holes on the bottom surface.

■ RCP6S-TA6R



■ Dimensions and Mass by Stroke

Stroke			45	70	95	120	170	220	270	320
L			268.5	293.5	318.5	343.5	393.5	443.5	493.5	543.5
A			215	240	265	290	340	390	440	490
B			3	3	4	4	5	6	7	8
C			8	8	10	10	12	14	16	18
D			217	242	267	292	342	392	442	492
E			4	4	5	5	6	7	8	9
F			13	38	13	38	38	38	38	38
G			10	10	12	12	14	16	18	20
H			0	0	0	0	1	1	2	2
J			4	4	4	4	6	6	8	8
R	RCP6		59.4	84.4	109.4	134.4	184.4	234.4	284.4	334.4
	RCP6S		2.2	27.2	52.2	77.2	127.2	177.2	227.2	277.2
Mass (kg)	RCP6	w/o brake	3.2	3.4	3.5	3.7	4.0	4.3	4.7	5.0
		w/ brake	3.3	3.4	3.6	3.8	4.1	4.4	4.7	5.0
	RCP6S	w/o brake	3.3	3.5	3.7	3.8	4.1	4.5	4.8	5.1
		w/ brake	3.4	3.6	3.7	3.9	4.2	4.5	4.9	5.2

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method			Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA7R

Single Block Specific. | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 24V Pulse Motor

Model Specification Items

□ — TA7R — WA — 56P — □ — □ — □ — □ — □ — □

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller / I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	25: 25mm ~ 300: 300mm	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

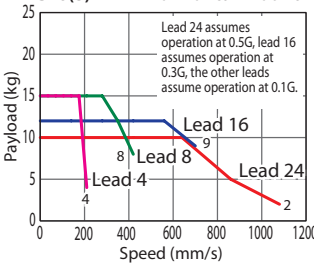
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.229 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

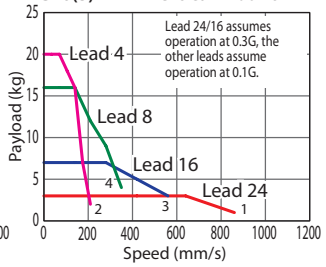
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA7R Horizontal mount

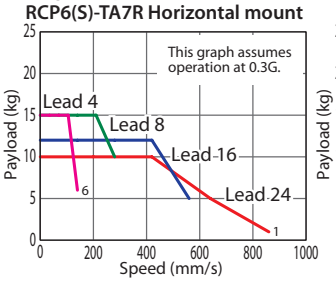


RCP6(S)-TA7R Vertical mount

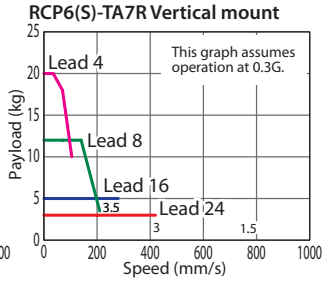


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA7R Horizontal mount



RCP6(S)-TA7R Vertical mount



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA7R-WA-56P-24-①-②-③-④	24	High-output Enabled	10	3	112	25~300
		High-output Disabled				
RCP6(S)-TA7R-WA-56P-16-①-②-③-④	16	High-output Enabled	12	7	168	
		High-output Disabled		5		
RCP6(S)-TA7R-WA-56P-8-①-②-③-④	8	High-output Enabled	15	16	336	
		High-output Disabled		12		
RCP6(S)-TA7R-WA-56P-4-①-②-③-④	4	High-output Enabled	15	20	673	
		High-output Disabled				

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	25~300 (mm)
24	High-output Enabled	1080 <860>
	High-output Disabled	860 <420>
16	High-output Enabled	700 <560>
	High-output Disabled	560 <280>
8	High-output Enabled	420 <350>
	High-output Disabled	280 <210>
4	High-output Enabled	210
	High-output Disabled	140 <105>

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194

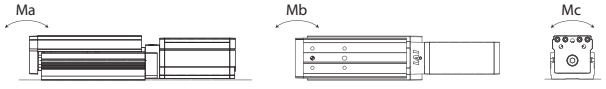
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 115N•m, Mb: 115N•m, Mc: 229N•m
Dynamic allowable moment (*)	Ma: 44.7N•m, Mb: 44.7N•m, Mc: 89.1N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

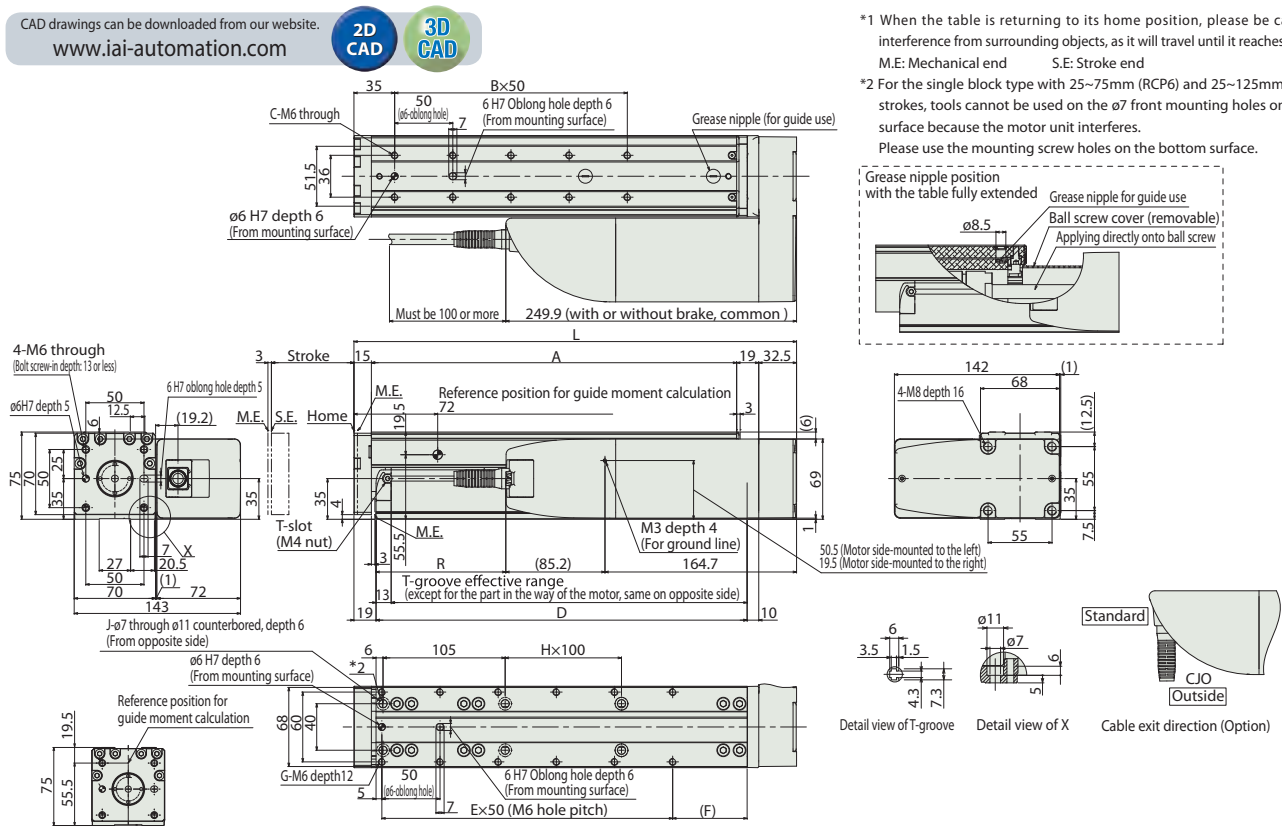
Allowable load moment directions



Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

Dimensions

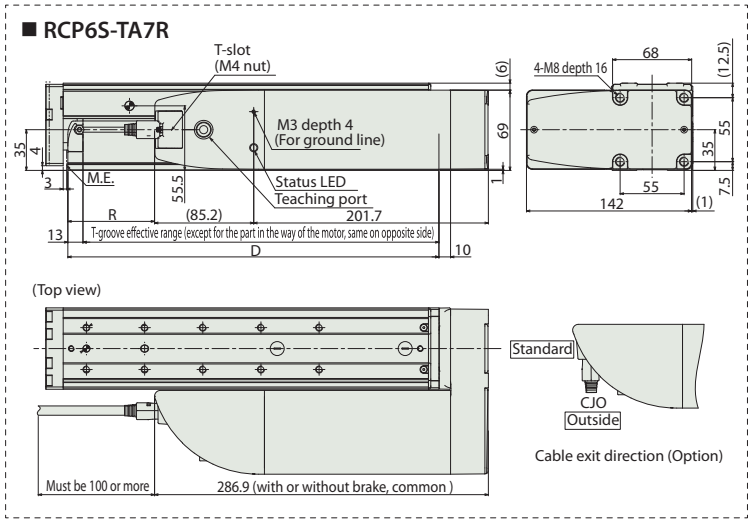
CAD drawings can be downloaded from our website.
www.iai-automation.com



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

*2 For the single block type with 25~75mm (RCP6) and 25~125mm (RCP6S) strokes, tools cannot be used on the ø7 front mounting holes on the top surface because the motor unit interferes.
Please use the mounting screw holes on the bottom surface.

■ RCP6S-TA7R



■ Dimensions and Mass by Stroke

Stroke			25	50	75	100	125	150	175	200	250	300
L			205.5	230.5	255.5	280.5	305.5	330.5	355.5	380.5	430.5	480.5
A			139	164	189	214	239	264	289	314	364	414
B			1	1	2	2	3	3	4	4	5	6
C			4	4	6	6	8	8	10	10	12	14
D			144	169	194	219	244	269	294	319	369	419
E			2	2	3	3	4	4	5	5	6	7
F			39	64	39	64	39	64	39	64	64	64
G			6	6	8	8	10	10	12	12	14	16
H			0	0	0	0	1	1	1	1	2	2
J			4	4	4	4	6	6	6	6	8	8
R *	RCP6		-63.4	-38.4	-13.4	11.6	36.6	61.6	86.6	111.6	161.6	211.6
	RCP6S		-100.4	-75.4	-50.4	-25.4	-0.4	24.6	49.6	74.6	124.6	174.6
Mass (kg)	RCP6	w/o brake	4.4	4.6	4.9	5.1	5.3	5.5	5.7	5.9	6.4	6.8
		w/ brake	4.5	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.5	6.9
	RCP6S	w/o brake	4.5	4.8	5.0	5.2	5.4	5.6	5.8	6.1	6.5	6.9
		w/ brake	4.6	4.9	5.1	5.3	5.5	5.7	5.9	6.2	6.6	7.0

* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method			Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option	
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA7R-□DB

Double Block Specific. | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 24v Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
—	TA7R	WA	56P	—	—	—	—	DB —
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 :16mm 8 : 8mm 4 : 4mm	40:40mm ~ 390:390mm	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Model number symbols should be written in alphabetical order, including "DB".

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

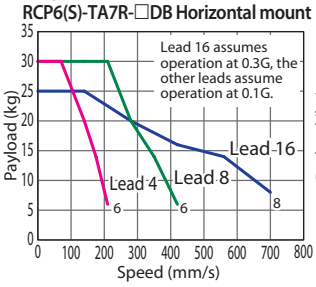
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.230 for more details.
(3) Please refer to P205 for performing push-motion operation.
(4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

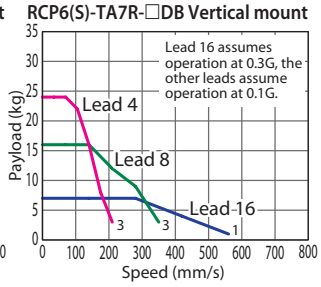
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA7R-□DB Horizontal mount

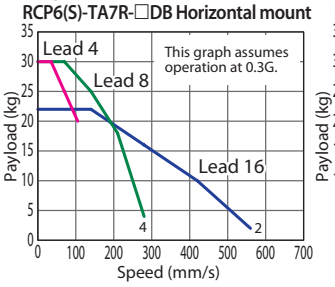


RCP6(S)-TA7R-□DB Vertical mount

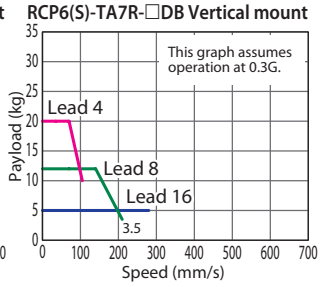


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)-TA7R-□DB Horizontal mount



RCP6(S)-TA7R-□DB Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)-TA7R-WA-56P-16-①-②-③-DB-④	16	High-output Enabled	25	7	168	40~390
		High-output Disabled	22	5		
RCP6(S)-TA7R-WA-56P-8-①-②-③-DB-④	8	High-output Enabled	30	16	336	
		High-output Disabled		12		
RCP6(S)-TA7R-WA-56P-4-①-②-③-DB-④	4	High-output Enabled	30	24	673	
		High-output Disabled		20		

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	40~290 (mm)	340 (mm)	390 (mm)
16	High-output Enabled	700<560>		600<560>
	High-output Disabled	560<280>		
8	High-output Enabled	420<350>	365<350>	300
	High-output Disabled	280<210>		
4	High-output Enabled	210	180	150
	High-output Disabled	105		

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Outside)	**CJO**	See P.189
Motor side-mounted to the left	**ML**	See P.193
Motor side-mounted to the right	**MR**	See P.193
Non-motor end specification	**NM**	See P.194

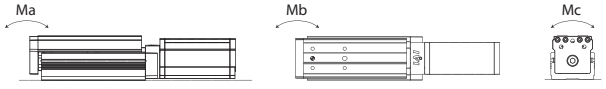
When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 620N•m, Mb: 620N•m, Mc: 458N•m
Dynamic allowable moment (*)	Ma: 196N•m, Mb: 196N•m, Mc: 145N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

Allowable load moment directions



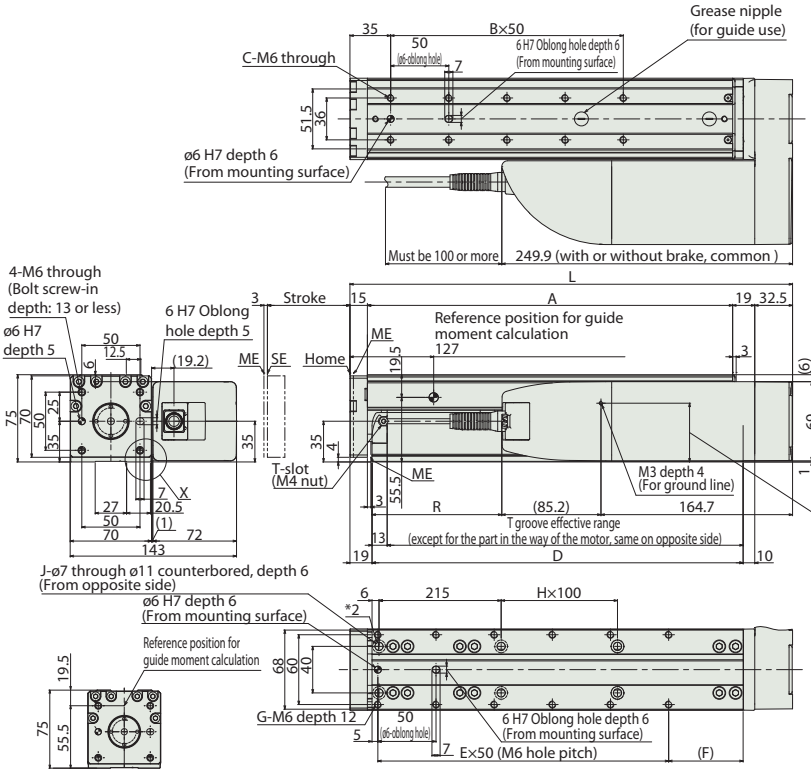
Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.
Please refer to the RCP6 manual regarding the displacement of the table.

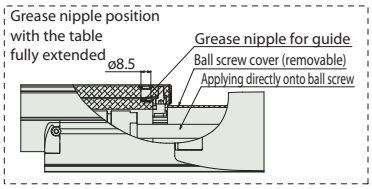
Dimensions

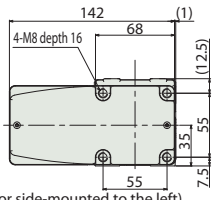
CAD drawings can be downloaded from our website.
www.iai-automation.com

2D CAD 3D CAD

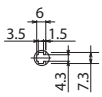
*1 When the table is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 For the single block type with 25/50/75mm (RCP6) and 25~125mm (RCP6S) strokes, tools cannot be used on the ø7 front mounting holes on the top surface because the motor unit interferes. Please use the mounting screw holes on the bottom surface.



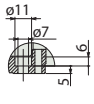




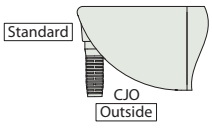
50.5 (Motor side-mounted to the left)
19.5 (Motor side-mounted to the right)



Detail view of T-groove

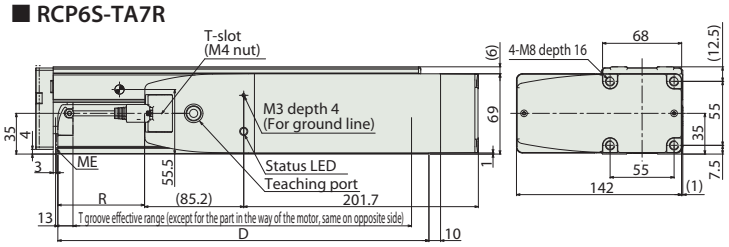


Detail view of X

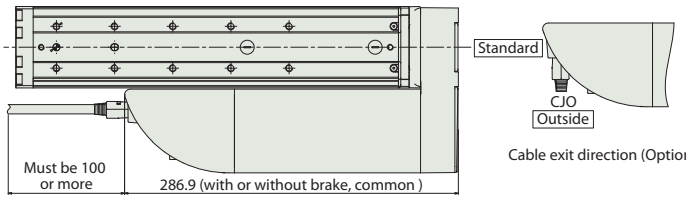


Cable exit direction (Option)

■ RCP6S-TA7R



(Top view)



Cable exit direction (Option)

■ Dimensions and Mass by Stroke

Stroke			40	65	90	140	190	240	290	340	390
L			330.5	355.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5
A			264	289	314	364	414	464	514	564	614
B			3	4	4	5	6	7	8	9	10
C			8	10	10	12	14	16	18	20	22
D			269	294	319	369	419	469	519	569	619
E			4	5	5	6	7	8	9	10	11
F			64	39	64	64	64	64	64	64	64
G			10	12	12	14	16	18	20	22	24
H			0	0	0	1	1	2	2	3	3
J			4	4	4	6	6	8	8	10	10
R	RCP6		61.6	86.6	111.6	161.6	211.6	261.6	311.6	361.6	411.6
	RCP6S		24.6	49.6	74.6	124.6	174.6	224.6	274.6	324.6	374.6
Mass (kg)	RCP6	w/o brake	6.0	6.2	6.4	6.9	7.3	7.7	8.2	8.6	9.1
		w/ brake	6.1	6.3	6.5	7.0	7.4	7.8	8.3	8.7	9.2
	RCP6S	w/o brake	6.1	6.3	6.5	7.0	7.4	7.8	8.3	8.7	9.2
		w/ brake	6.2	6.4	6.6	7.1	7.5	8.0	8.4	8.8	9.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET IRT	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)CR-SA4C

±10μm Standard | ±5μm High-precision Optional | Cleanroom Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 40 mm | 24V Pulse Motor

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6CR: Separate Controller RCP6SCR: Built-in Controller	SA4C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm	50:50mm ~ 500:500mm (Every 50mm)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

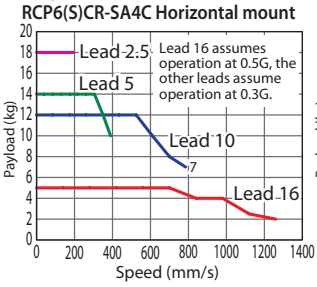
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.207 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.

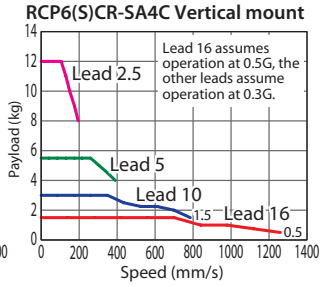
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)CR-SA4C Horizontal mount

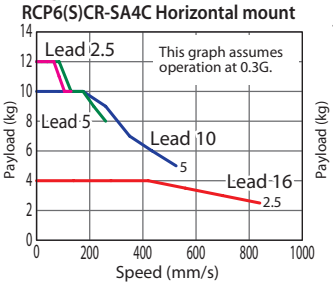


RCP6(S)CR-SA4C Vertical mount

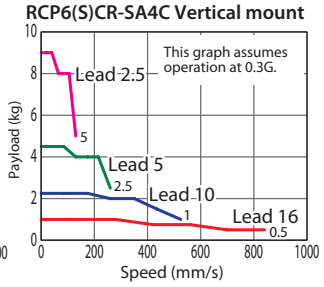


(2) High-output disabled with PCON/RCON/MCON/MSEL connected.

RCP6(S)CR-SA4C Horizontal mount



RCP6(S)CR-SA4C Vertical mount



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)CR-SA4C-WA-35P-16-①-②-③-④	16	High-output Enabled	7	1.5	48
		High-output Disabled	4	1	
RCP6(S)CR-SA4C-WA-35P-10-①-②-③-④	10	High-output Enabled	12	3	77
		High-output Disabled	10	2.25	
RCP6(S)CR-SA4C-WA-35P-5-①-②-③-④	5	High-output Enabled	14	5.5	155
		High-output Disabled	12	4.5	
RCP6(S)CR-SA4C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	18	12	310
		High-output Disabled	12	9	

Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)	Suction amount (N2/min)
16	High-output Enabled	1260	1060	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		

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G3/G4**	
High-precision specification (*1)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Air suction joint in opposite position	**VR**	See P.195
Double slider specification (*2)	**W**	See P.196

(*1) When the lead is 16, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (See P. 248)

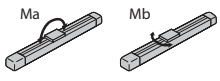
Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 13.0N•m, Mb: 18.6N•m, Mc: 25.3N•m
Dynamic allowable moment (*2)	Ma: 5.0N•m, Mb: 7.1N•m, Mc: 9.7N•m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

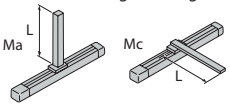
(*1) Values in [ ] are for high-precision (for lead 2.5/5/10) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

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

Allowable load moment directions



Overhang load lengths

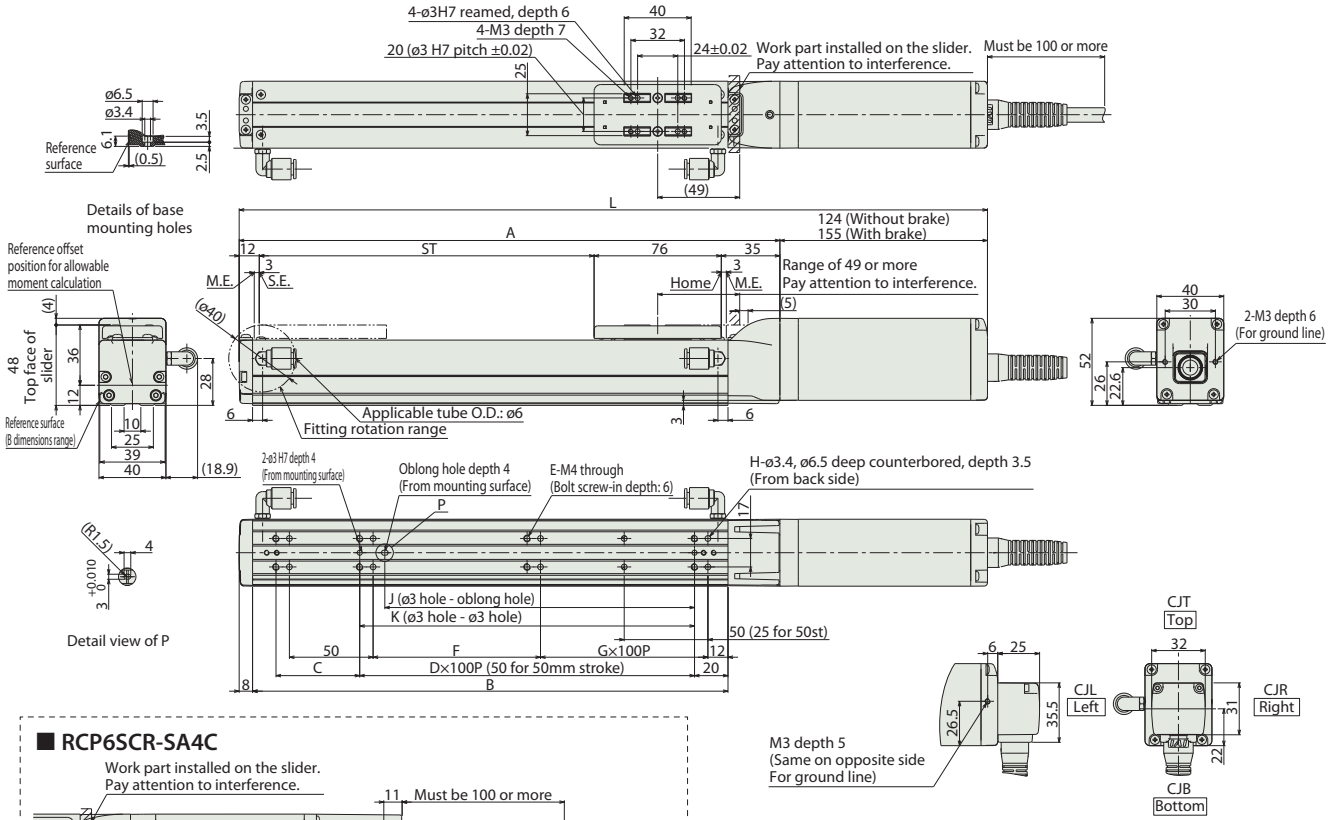


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

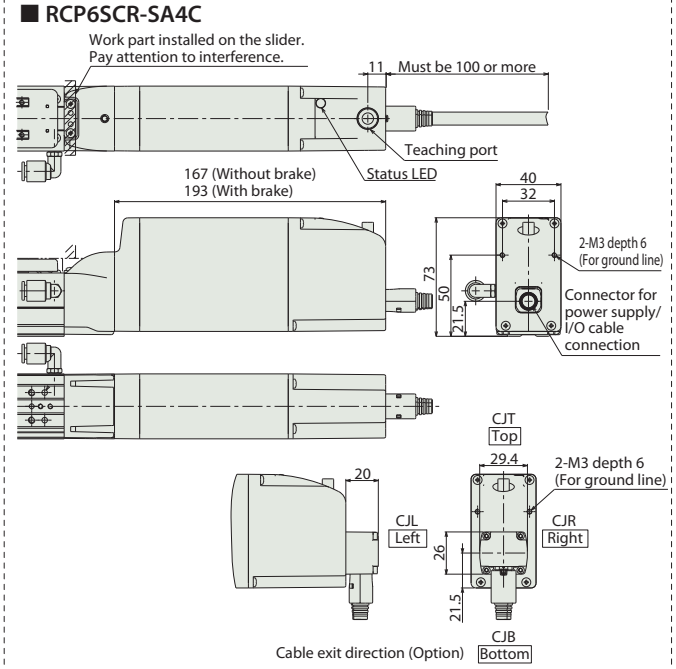
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end



■ RCP6SCR-SA4C



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L	RCP6CR	w/o brake	297	347	397	447	497	547	597	647	697	747
		w/ brake	328	378	428	478	528	578	628	678	728	778
	RCP6SCR	w/o brake	340	390	440	490	540	590	640	690	740	790
		w/ brake	366	416	466	516	566	616	666	716	766	816
A			173	223	273	323	373	423	473	523	573	623
B			134	184	234	284	334	384	434	484	534	584
C			50	50	100	50	100	50	100	50	100	50
D			–	1	1	2	2	3	3	4	4	5
E			6	6	6	8	8	10	10	12	12	14
F			50	100	50	100	50	100	50	100	50	100
G			0	0	1	1	2	2	3	3	4	4
H			8	8	10	10	12	12	14	14	16	16
J			35	85	85	185	185	285	285	385	385	485
K			50	100	100	200	200	300	300	400	400	500
Mass (kg)	RCP6CR	w/o brake	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.9
		w/ brake	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0	2.1
	RCP6SCR	w/o brake	1.3	1.4	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.1
		w/ brake	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)CR-SA6C

±10μm Standard | ±5μm High-precision Optional | Cleanroom Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 58 mm | 24V Pulse Motor

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6CR: Separate Controller RCP6SCR: Built-in Controller	SA6C	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20 :20mm 12 :12mm 6 : 6mm 3 : 3mm	50:50mm ~ 800:800mm (Every 50mm)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

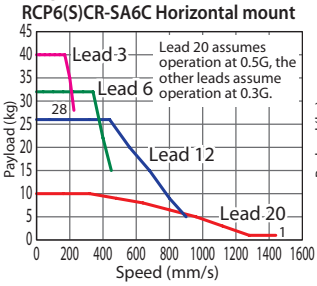
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.207 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.
(4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

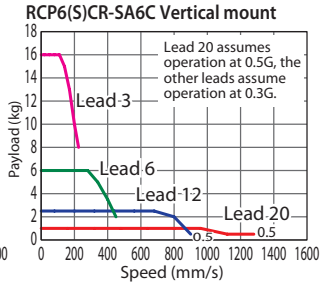
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)CR-SA6C Horizontal mount

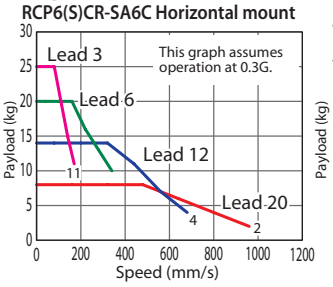


RCP6(S)CR-SA6C Vertical mount

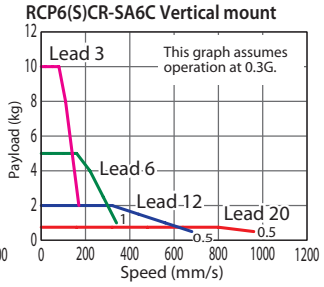


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)CR-SA6C Horizontal mount



RCP6(S)CR-SA6C Vertical mount



Actuator Specifications

Lead and Payload

H: Horizontal V: Vertical
* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload H(kg)	Max. Payload V(kg)	Max. Push Force (N)*
RCP6(S)CR-SA6C-WA-42P-20-①-②-③-④	20	High-output Enabled	15	1	56
		High-output Disabled	8	0.75	
RCP6(S)CR-SA6C-WA-42P-12-①-②-③-④	12	High-output Enabled	28	2.5	93
		High-output Disabled	14	2	
RCP6(S)CR-SA6C-WA-42P-6-①-②-③-④	6	High-output Enabled	32	6	185
		High-output Disabled	20	5	
RCP6(S)CR-SA6C-WA-42P-3-①-②-③-④	3	High-output Enabled	40	16	370
		High-output Disabled	25	10	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed/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	1440 <1280>		1335 <1280>	1130	970	840	735	650	575	100
	High-output Disabled	960					840	735	650	575	
12	High-output Enabled	900	885	735	620	535	460	405	355	315	70
	High-output Disabled	680			620	535	460	405	355	315	
6	High-output Enabled	450	435	365	305	265	230	200	175	155	30
	High-output Disabled	340			305	265	230	200	175	155	
3	High-output Enabled	225	215	180	150	130	115	100	85	75	15
	High-output Disabled	170			150	130	115	100	85	75	

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G3/G4**	
High-precision specification (*1)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Air suction joint in opposite position	**VR**	See P.195
Double slider specification (*2)	**W**	See P.196

(*1) When the lead is 20, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (See P. 248)

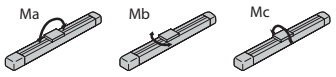
Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 48.5N•m, Mb: 69.3N•m, Mc: 103N•m
Dynamic allowable moment (*2)	Ma: 11.6N•m, Mb: 16.6N•m, Mc: 24.6N•m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

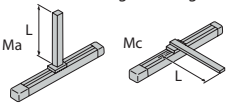
(*1) Values in [ ] are for high-precision (for lead 3/6/12) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 220mm or less, Mb, Mc: 220mm or less

Allowable load moment directions



Overhang load lengths

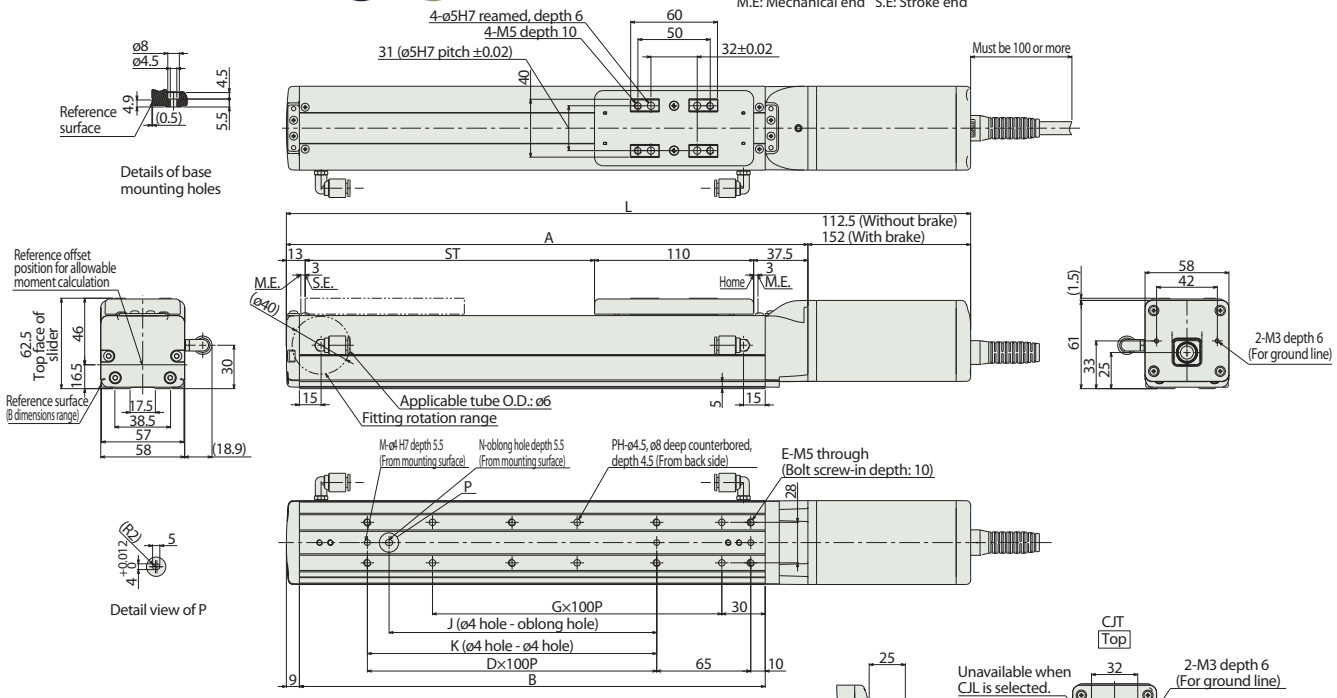


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

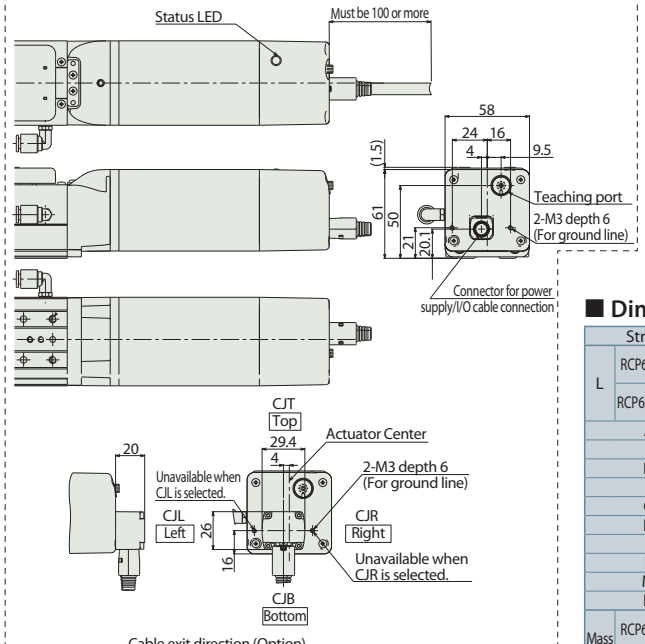
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end



■ RCP6SCR-SA6C



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	RCP6CR	w/o brake	323	373	423	473	523	573	623	673	723	773	823	873	923	973	1023	1073
		w/ 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	1012.5	1062.5	1112.5
	RCP6SCR	w/o brake	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061	1111
		w/ brake	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5	1050.5	1100.5	1150.5
A			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
B			172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
D			0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H			4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J			0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K			0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
M			2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N			0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6CR	w/o brake	2.0	2.2	2.3	2.5	2.7	2.8	3.0	3.2	3.4	3.5	3.7	3.9	4.1	4.2	4.4	4.6
		w/ brake	2.2	2.4	2.6	2.8	2.9	3.1	3.3	3.4	3.6	3.8	4.0	4.1	4.3	4.5	4.6	4.8
	RCP6SCR	w/o brake	2.1	2.3	2.5	2.6	2.8	3.0	3.2	3.3	3.5	3.7	3.9	4.0	4.2	4.4	4.6	4.7
		w/ brake	2.4	2.5	2.7	2.9	3.1	3.2	3.4	3.6	3.8	3.9	4.1	4.3	4.4	4.6	4.8	4.9

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)CR-SA7C

±10μm Standard | ±5μm High-precision Optional | Cleanroom Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 70 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6CR: Separate Controller RCP6SCR: Built-in Controller	SA7C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24 :24mm 16 :16mm 8 : 8mm 4 : 4mm	50:50mm ~ 800:800mm (Every 50mm)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

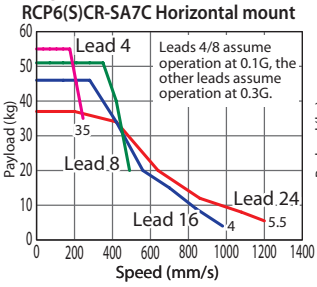
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.207 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.
(4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

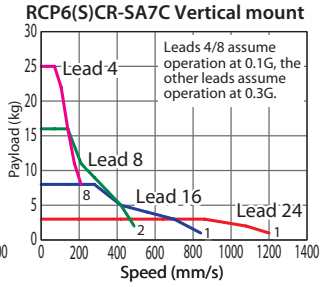
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)CR-SA7C Horizontal mount

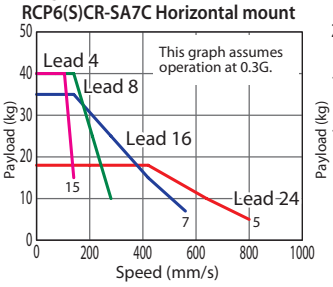


RCP6(S)CR-SA7C Vertical mount

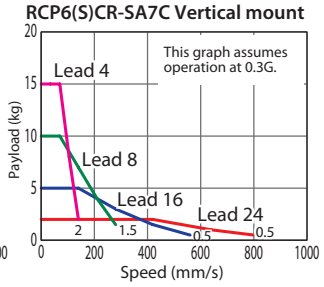


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)CR-SA7C Horizontal mount



RCP6(S)CR-SA7C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)CR-SA7C-WA-56P-24-①-②-③-④	24	High-output Enabled	37	3	112
		High-output Disabled	18	2	
RCP6(S)CR-SA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	46	8	168
		High-output Disabled	35	5	
RCP6(S)CR-SA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	51	16	336
		High-output Disabled	40	10	
RCP6(S)CR-SA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	55	25	673
		High-output Disabled	40	15	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead (mm)	Connected Controller	50~500 (Every 50mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction amount (NL/min)
24	High-output Enabled	1200			1095	965	850	760	90
	High-output Disabled	800						760	
16	High-output Enabled	980<840>	965<840>	830	720	635	560	500	70
	High-output Disabled	560						500	
8	High-output Enabled	490	475	410	355	315	275	245	40
	High-output Disabled	280					275	245	
4	High-output Enabled	245<210>	235<210>	205	175	155	135	120	30
	High-output Disabled	140					135	120	

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G3/G4**	
High-precision specification (*1)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Air suction joint in opposite position	**VR**	See P.195
Double slider specification (*2)	**W**	See P.196

(*1) When the lead is 16/24, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (See P. 248)

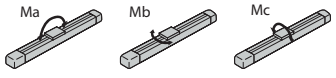
Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 115N•m, Mb: 115N•m, Mc: 229N•m
Dynamic allowable moment (*2)	Ma: 44.7N•m, Mb: 44.7N•m, Mc: 89.1N•m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

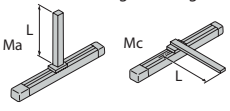
(*1) Values in [ ] are for high-precision (for lead 4/8) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 300mm or less, Mb, Mc: 300mm or less

Allowable load moment directions



Overhang load lengths

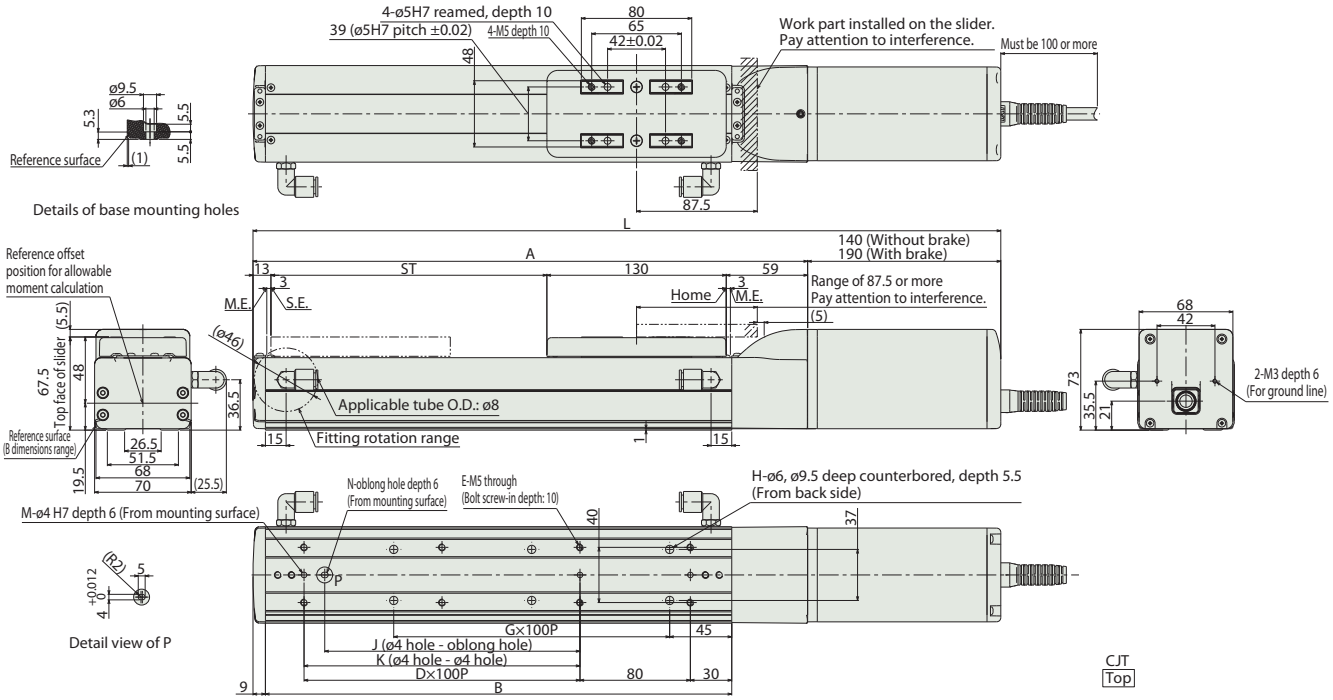


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

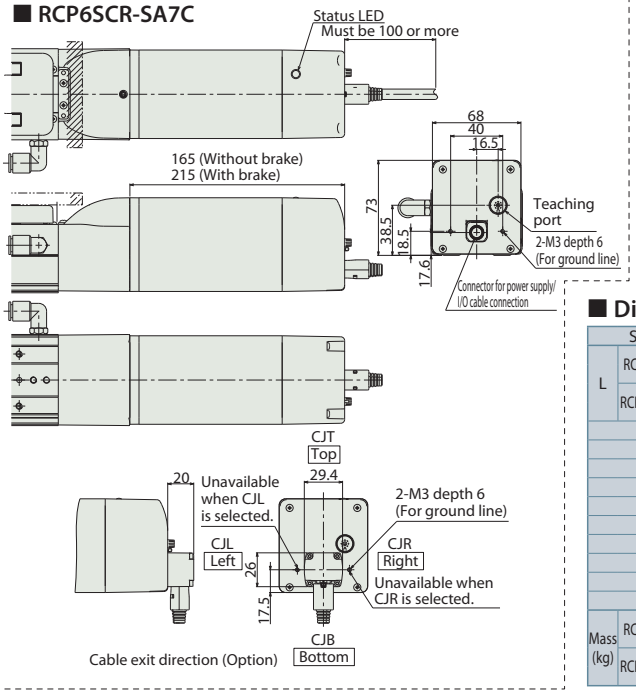
Dimensions

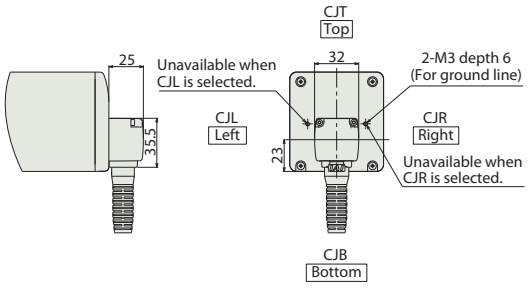
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E.
M.E: Mechanical end S.E: Stroke end



■ RCP6SCR-SA7C





■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	RCP6CR	w/o brake	392	442	492	542	592	642	692	742	792	842	892	942	992	1042	1092	1142
		w/ brake	442	492	542	592	642	692	742	792	842	892	942	992	1042	1092	1142	1192
	RCP6SCR	w/o brake	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167
		w/ brake	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217
A			252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002
B			188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
D			0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H			4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J			0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K			0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
M			2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N			0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6CR	w/o brake	3.6	3.8	4.0	4.3	4.5	4.7	4.9	5.2	5.4	5.6	5.9	6.1	6.3	6.5	6.8	7.0
		w/ brake	4.0	4.2	4.5	4.7	4.9	5.1	5.4	5.6	5.8	6.1	6.3	6.5	6.7	7.0	7.2	7.4
	RCP6SCR	w/o brake	3.8	4.0	4.2	4.4	4.7	4.9	5.1	5.3	5.6	5.8	6.0	6.3	6.5	6.7	6.9	7.2
		w/ brake	4.2	4.4	4.6	4.9	5.1	5.3	5.6	5.8	6.0	6.2	6.5	6.7	6.9	7.1	7.4	7.6

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)CR-SA8C

±10μm Standard | ±5μm High-precision Optional | Cleanroom Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 85 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6CR: Separate Controller RCP6SCR: Built-in Controller	SA8C	WA: Battery-less Absolute	56SP: High Thrust Pulse Motor 56□ Size	30 :30mm 20 :20mm 10 :10mm 5 : 5mm	50:50mm ~ 1100:1100mm (Every 50mm)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

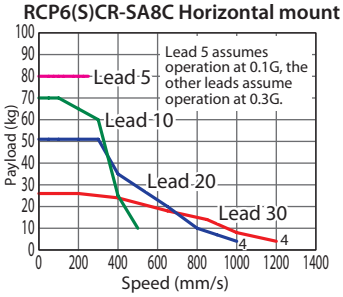
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.207 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.

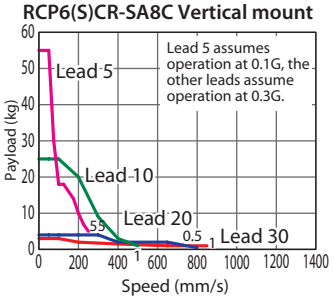
■ Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.

RCP6(S)CR-SA8C Horizontal mount



RCP6(S)CR-SA8C Vertical mount



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)CR-SA8C-WA-56SP-30-①-②-③-④	30	28	3	159
RCP6(S)CR-SA8C-WA-56SP-20-①-②-③-④	20	60	4	239
RCP6(S)CR-SA8C-WA-56SP-10-①-②-③-④	10	70	25	478
RCP6(S)CR-SA8C-WA-56SP-5-①-②-③-④	5	80	55	956

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead (mm)	50~650 (Every 50mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)	Suction amount (NL/min)
30	1200 <850>			1155 <850>	1040 <850>	940 <850>	855 <850>	780	715	660	160
20	1000 <800>	950 <800>	860 <800>	770	695	630	570	520	480	440	110
10	500	480	430	385	345	310	285	260	235	220	60
5	250	240	215	190	175	155	140	130	120	110	30

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G3/G4**	
High-precision specification (*1)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Air suction joint in opposite position	**VR**	See P.195
Double slider specification (*2)	**W**	See P.196

(*1) When the lead is 20/30, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (See P. 248)

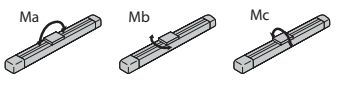
Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 219N•m, Mb: 219N•m, Mc: 414N•m
Dynamic allowable moment (*2)	Ma: 77.0N•m, Mb: 77.0N•m, Mc: 146N•m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

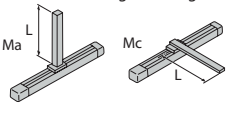
(*1) Values in [ ] are for high-precision (for lead 5/10) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 400mm or less, Mb, Mc: 400mm or less

Allowable load moment directions



Overhang load lengths

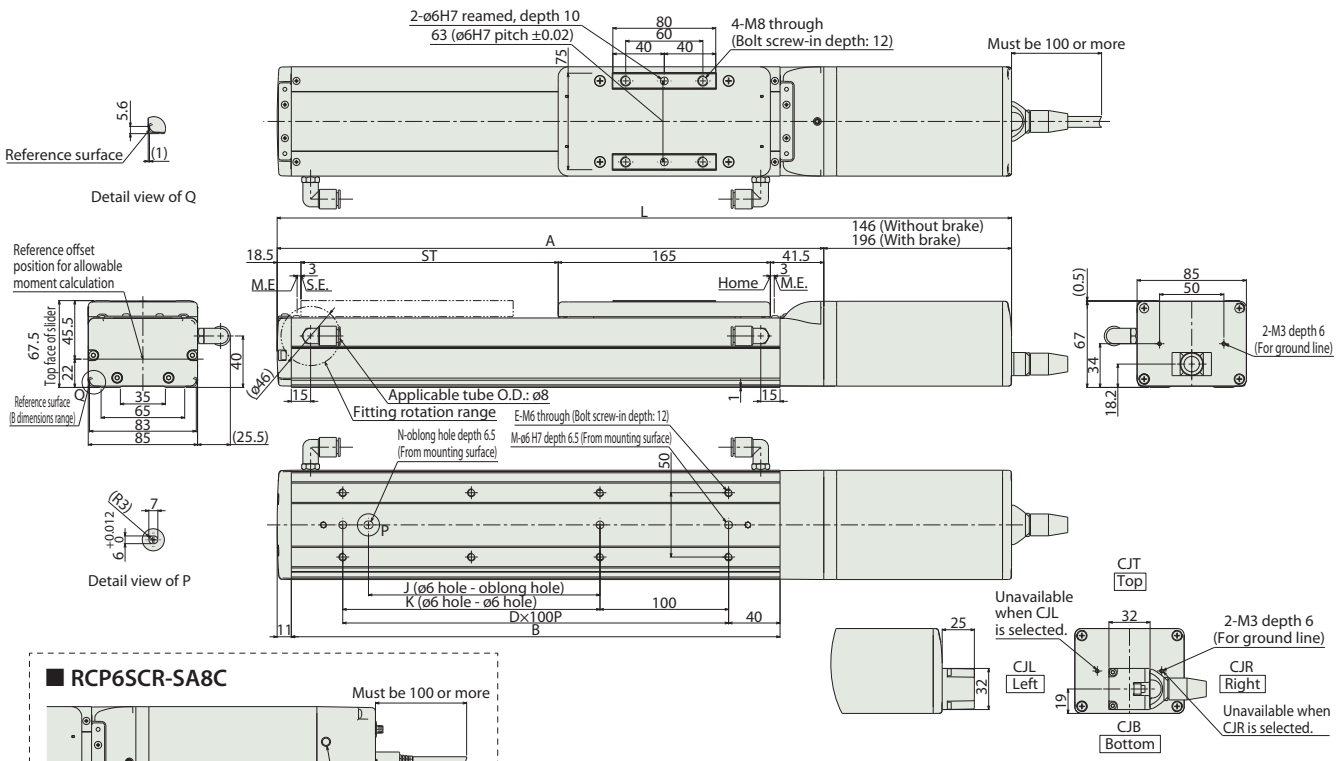


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

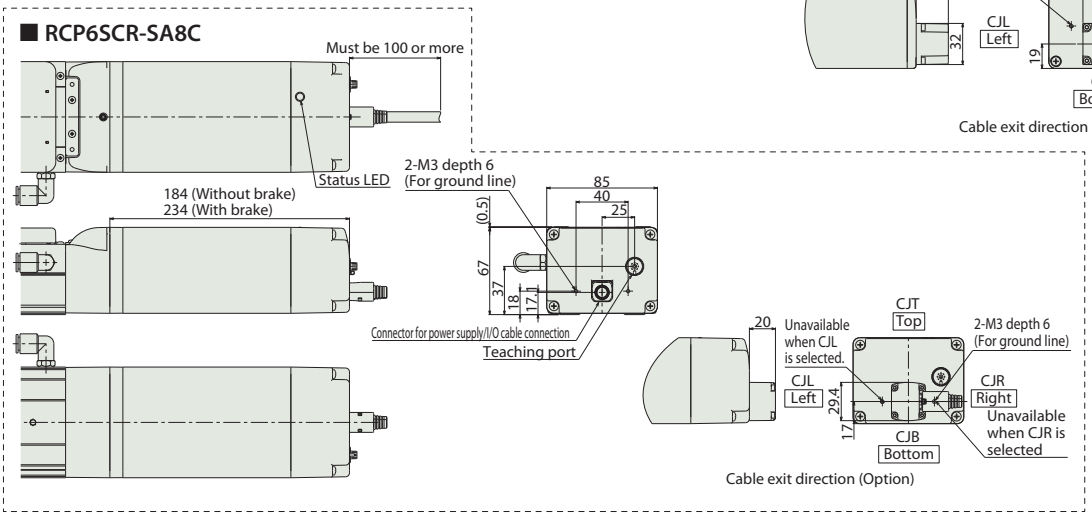
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end



■ RCP6SCR-SA8C



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	RCP6CR	w/o brake	421	471	521	571	621	671	721	771	821	871	921	971	1,021	1,071	1,121	1,171	1,221	1,271	1,321	1,371	1,421	1,471
		w/ brake	471	521	571	621	671	721	771	821	871	921	971	1,021	1,071	1,121	1,171	1,221	1,271	1,321	1,371	1,421	1,471	1,521
	RCP6SCR	w/o brake	459	509	559	609	659	709	759	809	859	909	959	1,009	1,059	1,109	1,159	1,209	1,259	1,309	1,359	1,409	1,459	1,509
		w/ brake	509	559	609	659	709	759	809	859	909	959	1,009	1,059	1,109	1,159	1,209	1,259	1,309	1,359	1,409	1,459	1,509	1,559
A			275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1,025	1,075	1,125	1,175	1,225	1,275	1,325
B			230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1,030	1,080	1,130	1,180	1,230	1,280
D			1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
E			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
J			0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1,080
K			0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1,000	1,000	1,100
M			2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6CR	w/o brake	4.5	4.7	5.0	5.3	5.5	5.8	6.1	6.4	6.6	6.9	7.2	7.5	7.7	8.0	8.3	8.5	8.8	9.1	9.4	9.6	9.9	10.2
		w/ brake	5.0	5.2	5.5	5.8	6.1	6.3	6.6	6.9	7.1	7.4	7.7	8.0	8.2	8.5	8.8	9.1	9.3	9.6	9.9	10.1	10.4	10.7
	RCP6SCR	w/o brake	4.7	4.9	5.2	5.5	5.8	6.0	6.3	6.6	6.9	7.1	7.4	7.7	7.9	8.2	8.5	8.8	9.0	9.3	9.6	9.9	10.1	10.4
		w/ brake	5.2	5.5	5.7	6.0	6.3	6.5	6.8	7.1	7.4	7.6	7.9	8.2	8.5	8.7	9.0	9.3	9.5	9.8	10.1	10.4	10.6	10.9

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)CR-WSA10C

±10μm Standard | ±5μm High-precision Optional | Cleanroom Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 100 mm | 24V Pulse Motor

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6CR: Separate Controller RCP6SCR: Built-in Controller	WSA10C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm	50:50mm ~ 500:500mm (Every 50mm)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

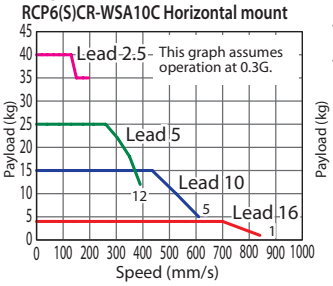
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.211 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.

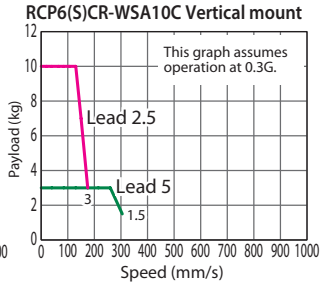
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)CR-WSA10C Horizontal mount

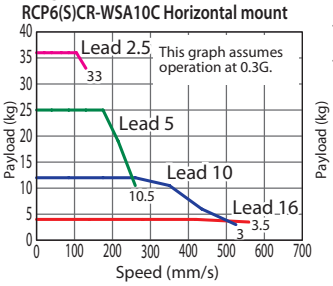


RCP6(S)CR-WSA10C Vertical mount

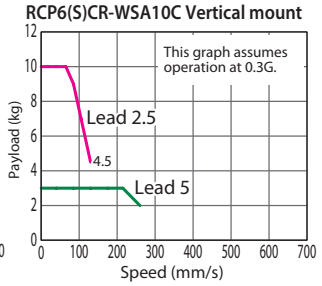


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)CR-WSA10C Horizontal mount



RCP6(S)CR-WSA10C Vertical mount



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)CR-WSA10C-WA-35P-16-①-②-③-④	16	High-output Enabled	4	–	48
		High-output Disabled	4	–	
RCP6(S)CR-WSA10C-WA-35P-10-①-②-③-④	10	High-output Enabled	15	–	77
		High-output Disabled	12	–	
RCP6(S)CR-WSA10C-WA-35P-5-①-②-③-④	5	High-output Enabled	28	3	155
		High-output Disabled	25	3	
RCP6(S)CR-WSA10C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	310
		High-output Disabled	36	10	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead (mm)	Connected Controller	50~300 (Every 50mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)	Suction amount (NL/min)
16	High-output Enabled	840			775	660	105
	High-output Disabled	560					
10	High-output Enabled	610		590	490	415	60
	High-output Disabled	525					
5	High-output Enabled	390<350>	355<350>	290	245	205	30
	High-output Disabled	260			245	205	
2.5	High-output Enabled	195<175>	175	145	120	100	25
	High-output Disabled	130			120	100	

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left) (*1)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G3/G4**	
High-precision specification (*2)	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Air suction joint in opposite position	**VR**	See P.195

(*1) RCP6SCR cannot be selected.
(*2) When the lead is 16, it cannot be selected.

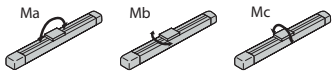
Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 271N•m, Mb: 271N•m, Mc: 553N•m
Dynamic allowable moment (*2)	Ma: 65.4N•m, Mb: 65.4N•m, Mc: 134N•m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

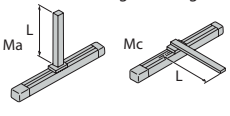
(*1) Values in [ ] are for high-precision (for lead 2.5/5/10) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 500mm or less, Mb, Mc: 500mm or less

Allowable load moment directions



Overhang load lengths

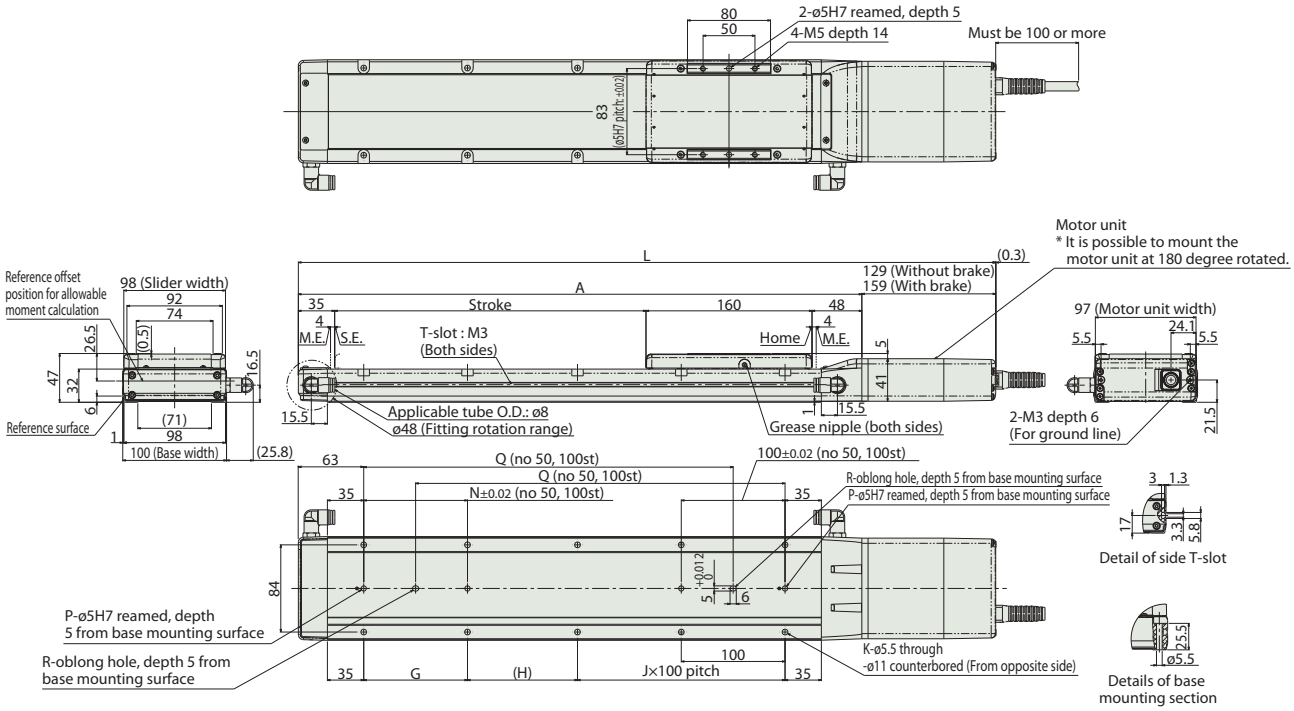


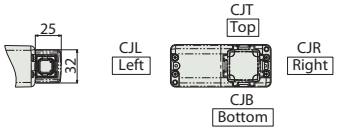
Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com

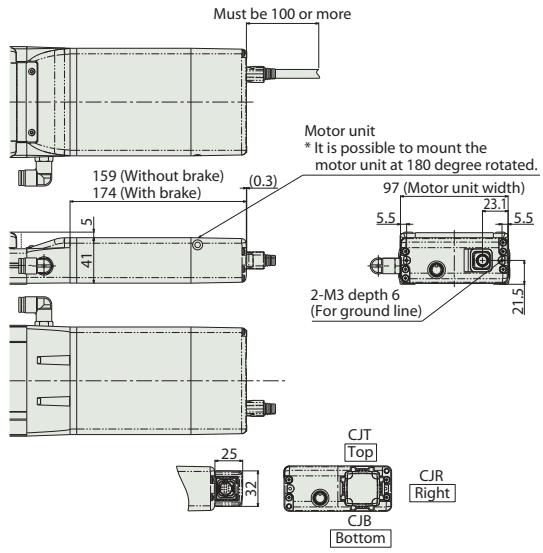
*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end





Cable exit direction (Option)

■ RCP6SCR-WSA10C



Cable exit direction (Option)

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L	RCP6CR	w/o brake	422	472	522	572	622	672	722	772	822	872
		w/ brake	452	502	552	602	652	702	752	802	852	902
	RCP6SCR	w/o brake	452	502	552	602	652	702	752	802	852	902
		w/ brake	467	517	567	617	667	717	767	817	867	917
A			293	343	393	443	493	543	593	643	693	743
G			–	–	100	100	100	100	100	100	100	100
H			156	206	56	106	56	106	56	106	56	106
J			0	0	1	1	2	2	3	3	4	4
K			4	4	8	8	10	10	12	12	14	14
N			–	–	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2
Q			–	–	206	256	306	356	406	456	506	556
R			0	0	1	1	1	1	1	1	1	1
Mass (kg)	RCP6CR	w/o brake	2.9	3.1	3.4	3.6	3.8	4.1	4.3	4.6	4.8	5.0
		w/ brake	3.1	3.3	3.6	3.8	4.0	4.3	4.5	4.8	5.0	5.2
	RCP6SCR	w/o brake	3.0	3.2	3.5	3.7	3.9	4.2	4.4	4.7	4.9	5.1
		w/ brake	3.1	3.4	3.6	3.9	4.1	4.3	4.6	4.8	5.1	5.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, POWERLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)CR-WSA12C

±10μm Standard | ±5μm High-precision Optional | Cleanroom Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 120 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6CR: Separate Controller RCP6SCR: Built-in Controller	WSA12C	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20 :20mm 12 :12mm 6 : 6mm 3 : 3mm	50:50mm ~ 800:800mm (Every 50mm)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

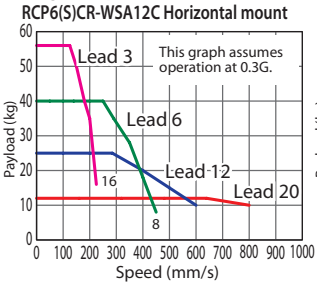
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.211 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.
(4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

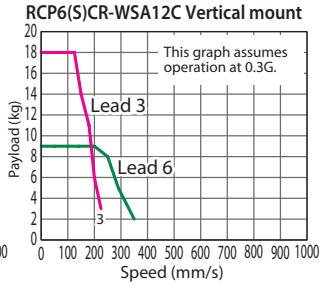
■ Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)CR-WSA12C Horizontal mount

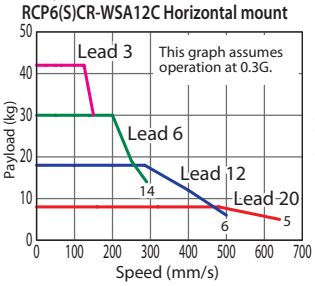


RCP6(S)CR-WSA12C Vertical mount

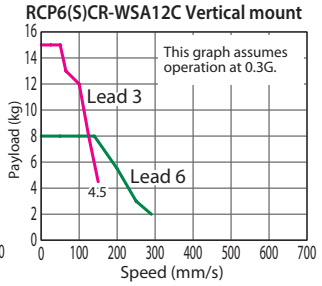


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)CR-WSA12C Horizontal mount



RCP6(S)CR-WSA12C Vertical mount



Actuator Specifications

■ Lead and Payload

H: Horizontal V: Vertical
* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload H(kg)	Max. Payload V(kg)	Max. Push Force (N)*
RCP6(S)CR-WSA12C-WA-42P-20-①-②-③-④	20	High-output Enabled	12	–	56
		High-output Disabled	8	–	
RCP6(S)CR-WSA12C-WA-42P-12-①-②-③-④	12	High-output Enabled	25	–	93
		High-output Disabled	18	–	
RCP6(S)CR-WSA12C-WA-42P-6-①-②-③-④	6	High-output Enabled	40	9	185
		High-output Disabled	30	8	
RCP6(S)CR-WSA12C-WA-42P-3-①-②-③-④	3	High-output Enabled	60	18	370
		High-output Disabled	42	15	

■ Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead (mm)	Connected Controller	50~350 (Every 50mm)	400 (mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction amount (NL/min)
20	High-output Enabled	800						740	650	580	520	130
	High-output Disabled	640								580	520	
12	High-output Enabled	600				535	465	405	355	315	285	80
	High-output Disabled	500					465	405	355	315	285	
6	High-output Enabled	450<400>	435<400>	365	310	265	230	200	175	155	140	40
	High-output Disabled	290				265	230	200	175	155	140	
3	High-output Enabled	225	215	180	150	130	115	100	85	75	70	25
	High-output Disabled	150				130	115	100	85	75	70	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G3/G4**	
High-precision specification *	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Air suction joint in opposite position	**VR**	See P.195

* When the lead is 20, it cannot be selected.

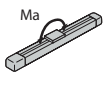
Actuator Specifications

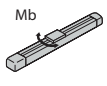
Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 311N•m, Mb: 311N•m, Mc: 827N•m
Dynamic allowable moment (*2)	Ma: 87.5N•m, Mb: 87.5N•m, Mc: 233N•m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

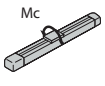
(*1) Values in [ ] are for high-precision (for lead 3/6/12) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 450mm or less, Mb, Mc: 450mm or less

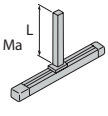
Allowable load moment directions

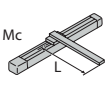






Overhang load lengths



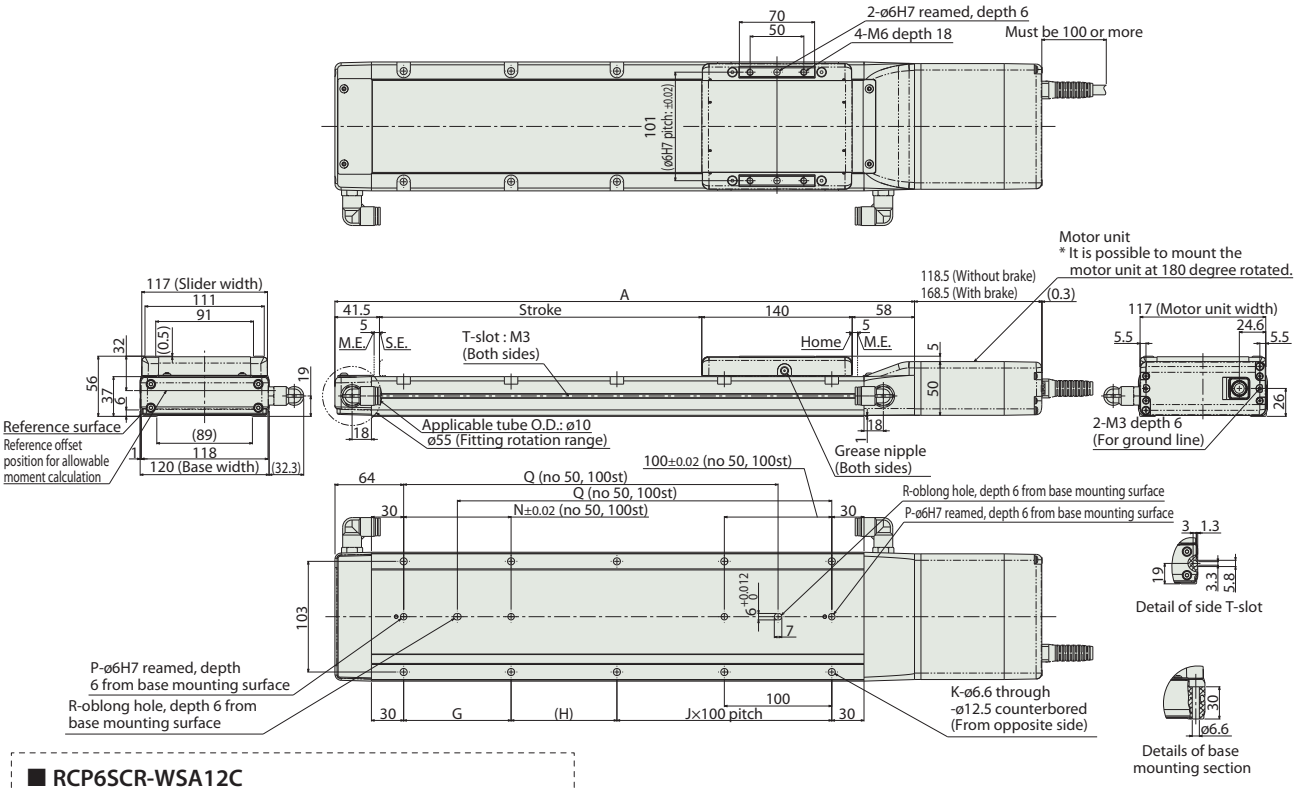


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

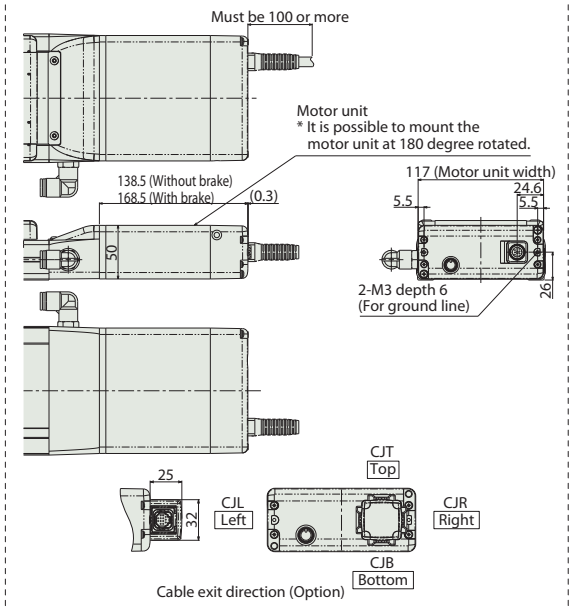
Dimensions

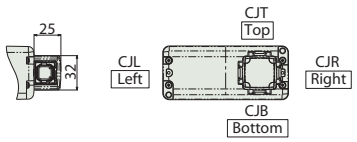
CAD drawings can be downloaded from our website.
www.iai-automation.com

*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 M.E.
M.E: Mechanical end S.E: Stroke end



■ RCP6SCR-WSA12C





■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	RCP6CR	w/o brake	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
		w/ brake	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208
	RCP6SCR	w/o brake	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178
		w/ brake	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208
A			289.5	339.5	389.5	439.5	489.5	539.5	589.5	639.5	689.5	739.5	789.5	839.5	889.5	939.5	989.5	1039.5
G			–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100
H			148.5	198.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5
J			0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
K			4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
N			–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			–	–	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6CR	w/o brake	3.8	4.1	4.4	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.8	8.1	8.4	8.8
		w/ brake	4.0	4.4	4.7	5.0	5.4	5.7	6.0	6.4	6.7	7.1	7.4	7.7	8.1	8.4	8.7	9.1
	RCP6SCR	w/o brake	3.8	4.2	4.5	4.8	5.2	5.5	5.8	6.2	6.5	6.8	7.2	7.5	7.8	8.2	8.5	8.8
		w/ brake	4.1	4.4	4.7	5.1	5.4	5.7	6.1	6.4	6.7	7.1	7.4	7.8	8.1	8.4	8.8	9.1

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)CR-WSA14C

±10μm Standard | ±5μm High-precision Optional | Cleanroom Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 140 mm | 24V Pulse Motor

Model Specification Items

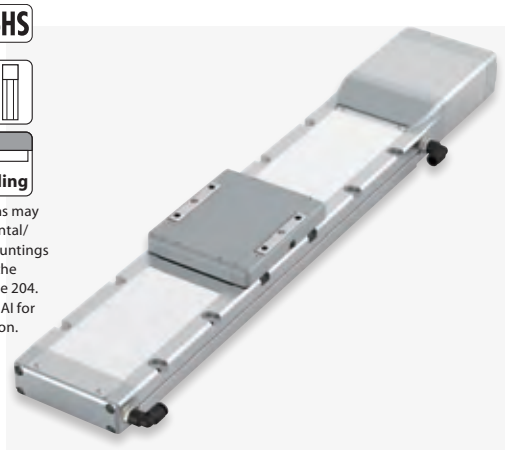
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6CR: Separate Controller RCP6SCR: Built-in Controller	WSA14C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24 :24mm 16 :16mm 8 : 8mm 4 : 4mm	50:50mm ~ 800:800mm (Every 50mm)	[RCP6] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



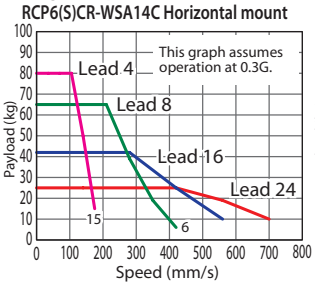
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.211 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.
(4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

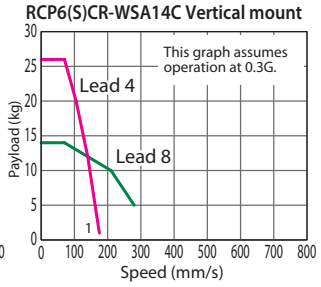
Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)CR-WSA14C Horizontal mount

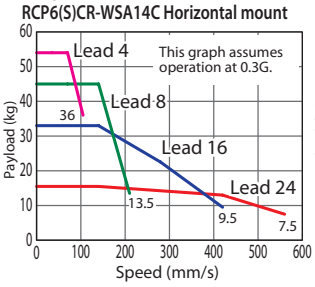


RCP6(S)CR-WSA14C Vertical mount

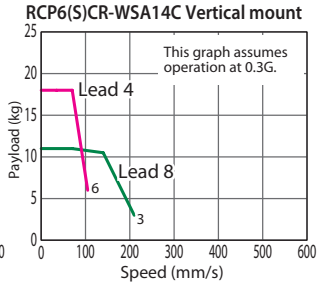


(2) High-output disabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)CR-WSA14C Horizontal mount



RCP6(S)CR-WSA14C Vertical mount



Actuator Specifications

Lead and Payload

H: Horizontal V: Vertical
* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Connected Controller	Max. Payload H(kg)	Max. Payload V(kg)	Max. Push Force (N)*
RCP6(S)CR-WSA14C-WA-56P-24-①-②-③-④	24	High-output Enabled	25	–	112
		High-output Disabled	15.5	–	
RCP6(S)CR-WSA14C-WA-56P-16-①-②-③-④	16	High-output Enabled	50	–	168
		High-output Disabled	33	–	
RCP6(S)CR-WSA14C-WA-56P-8-①-②-③-④	8	High-output Enabled	65	14	336
		High-output Disabled	45	11	
RCP6(S)CR-WSA14C-WA-56P-4-①-②-③-④	4	High-output Enabled	80	26	673
		High-output Disabled	54	18	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead (mm)	Connected Controller	50~500 (Every 50mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction amount (N2/min)
24	High-output Enabled	700						665	105
	High-output Disabled	560							
16	High-output Enabled	560				550	490	440	80
	High-output Disabled	420							
8	High-output Enabled	420<350>	400<350>	350	305	270	240	215	45
	High-output Disabled	210							
4	High-output Enabled	210<175>	200<175>	170	150	135	120	105	25
	High-output Disabled	105							

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G3/G4**	
High-precision specification *	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Air suction joint in opposite position	**VR**	See P.195

* When the lead is 16/24, it cannot be selected.

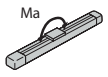
Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 462N•m, Mb: 462N•m, Mc: 1,170N•m
Dynamic allowable moment (*2)	Ma: 122N•m, Mb: 122N•m, Mc: 308N•m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

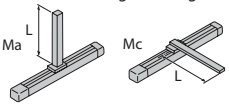
(*1) Values in [ ] are for high-precision (for lead 4/8) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 550mm or less, Mb, Mc: 550mm or less

Allowable load moment directions



Overhang load lengths

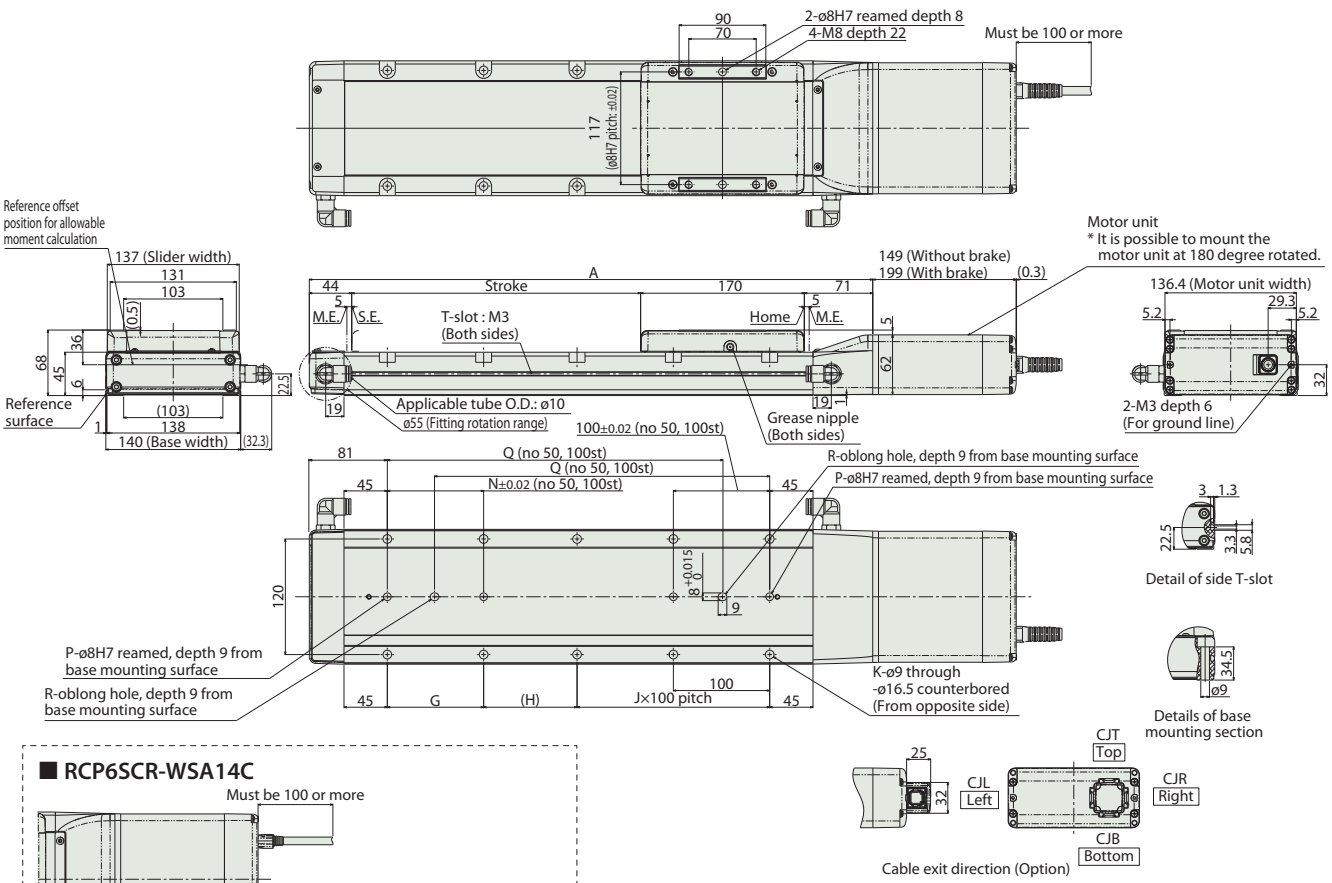


Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

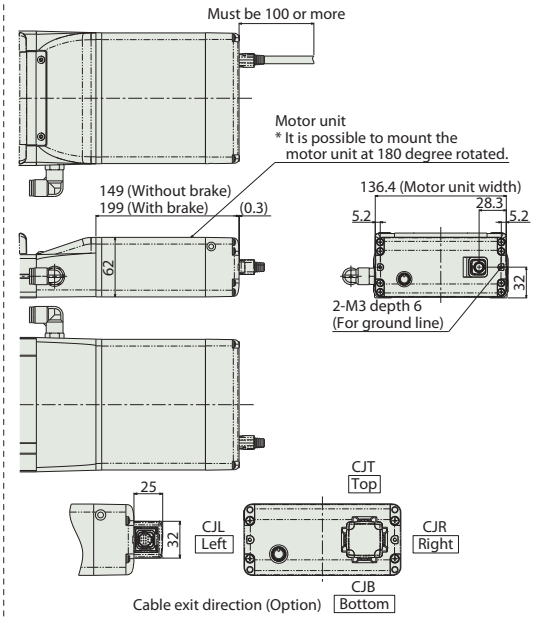
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end



■ RCP6SCR-WSA14C



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	RCP6CR	w/o brake	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234
		w/ brake	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284
	RCP6SCR	w/o brake	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234
		w/ brake	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284
A			335	385	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085
G			–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100
H			147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
J			0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
K			4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
N			–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			–	–	198	248	298	348	398	448	498	548	598	648	698	748	798	848
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6CR	w/o brake	6.6	7.0	7.5	8.0	8.5	8.9	9.4	9.9	10.4	10.9	11.3	11.8	12.3	12.8	13.2	13.7
		w/ brake	7.0	7.5	8.0	8.5	8.9	9.4	9.9	10.4	10.9	11.3	11.8	12.3	12.8	13.2	13.7	14.2
	RCP6SCR	w/o brake	6.6	7.1	7.6	8.0	8.5	9.0	9.5	9.9	10.4	10.9	11.4	11.9	12.3	12.8	13.3	13.8
		w/ brake	7.1	7.6	8.0	8.5	9.0	9.5	9.9	10.4	10.9	11.4	11.8	12.3	12.8	13.3	13.8	14.2

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET IRT	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)CR-WSA16C

±10μm Standard | ±5μm High-precision Optional | Cleanroom Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 160 mm | 24V Pulse Motor

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6CR: Separate Controller RCP6SCR: Built-in Controller	WSA16C	WA: Battery-less Absolute	56SP: Hig Thrust Pulse Motor 56□ Size	20 :20mm 10 :10mm 5 : 5mm	50:50mm ~ 1100:1100mm (Every 50mm)	[RCP6] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

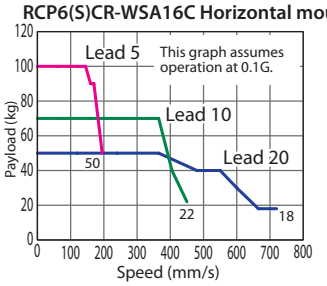
*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

POINT Selection Notes

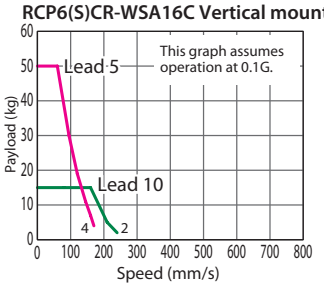
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.211 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.
(4) The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P. 206 for more information.

Correlation Diagrams of Speed and Payload

PCON/RCON/MSEL/RSEL connected.
RCP6(S)CR-WSA16C Horizontal mount



RCP6(S)CR-WSA16C Vertical mount



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*
RCP6(S)CR-WSA16C-WA-56SP-20-①-②-③-④	20	50	–	239
RCP6(S)CR-WSA16C-WA-56SP-10-①-②-③-④	10	70	15	478
RCP6(S)CR-WSA16C-WA-56SP-5-①-②-③-④	5	100	50	956

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead (mm)	50~650 (Every 50mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)	Suction amount (NL/min)
20	720			715	645	590	535	490	450	415	65
10	450 <240>	440 <240>	395 <240>	355 <240>	320 <240>	290 <240>	265 <240>	240	225	205	30
5	195 <170>			175 <170>	160	145	130	120	110	100	20

Values in brackets < > are for vertical use.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R20** (20m)
	X16 (16m) ~**X20** (20m)		—

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Brake	**B**	See P.189
Cable exit direction (Top)	**CJT**	See P.189
Cable exit direction (Right)	**CJR**	See P.189
Cable exit direction (Left)	**CJL**	See P.189
Cable exit direction (Bottom)	**CJB**	See P.189
Designated grease coating specification	**G3/G4**	
High-precision specification *	**HPR**	See P.192
Non-motor end specification	**NM**	See P.194
Air suction joint in opposite position	**VR**	See P.195

* When the lead is 20, it cannot be selected.

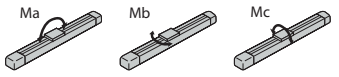
Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 642N•m, Mb: 642N•m, Mc: 1,610N•m
Dynamic allowable moment (*2)	Ma: 161N•m, Mb: 161N•m, Mc: 404N•m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

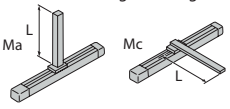
(*1) Values in [ ] are for high-precision (for lead 5/10) specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions.

• Reference for overhang load length: Ma: 650mm or less, Mb, Mc: 650mm or less

Allowable load moment directions



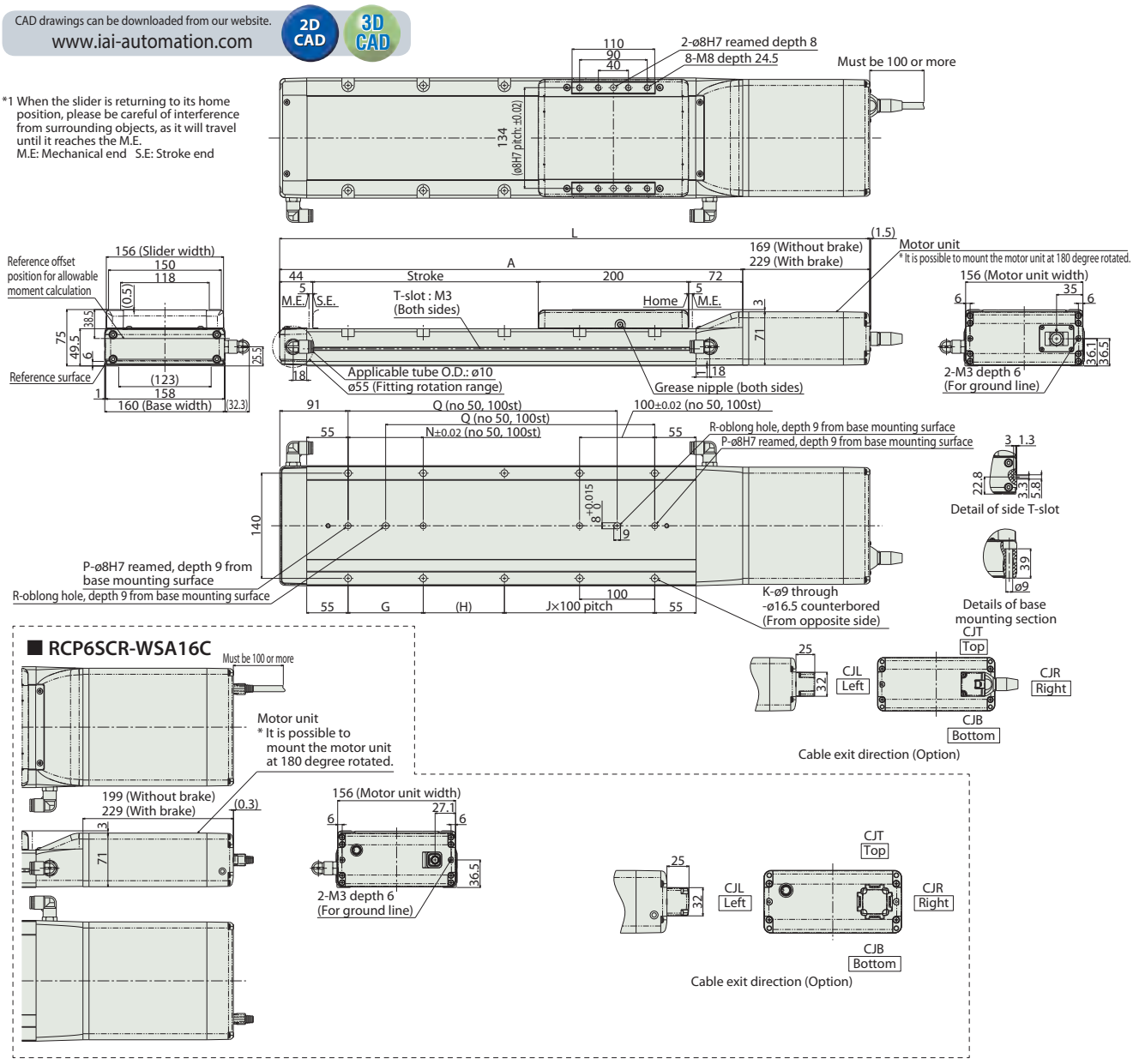
Overhang load lengths



Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.com



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	RCP6CR	w/o brake	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385	1435	1485	1535	1585
		w/ brake	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195	1245	1295	1345	1395	1445	1495	1545	1595	1645
	RCP6SCR	w/o brake	565	615	665	715	765	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415	1465	1515	1565	1615
		w/ brake	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195	1245	1295	1345	1395	1445	1495	1545	1595	1645
A			366	416	466	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416
G			–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
H			158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
J			0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
K			4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
N			–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			–	–	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6CR	w/o brake	9.0	9.6	10.2	10.8	11.4	12.0	12.6	13.2	13.8	14.4	15.0	15.7	16.2	16.9	17.4	18.1	18.7	19.3	19.9	20.5	21.1	21.7
		w/ brake	9.5	10.1	10.7	11.3	11.9	12.5	13.1	13.7	14.3	14.9	15.5	16.1	16.7	17.3	17.9	18.5	19.1	19.7	20.3	21.0	21.5	22.2
	RCP6SCR	w/o brake	9.2	9.8	10.4	11.0	11.6	12.2	12.8	13.4	14.0	14.6	15.2	15.8	16.4	17.0	17.6	18.2	18.8	19.4	20.0	20.6	21.2	21.8
		w/ brake	9.5	10.2	10.7	11.4	11.9	12.6	13.2	13.8	14.4	15.0	15.6	16.2	16.8	17.4	18.0	18.6	19.2	19.8	20.4	21.0	21.6	22.2

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, SSCNET III/H	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)W-RA4C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 40 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA4C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50:50mm ~ 200:200mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

POINT Selection Notes

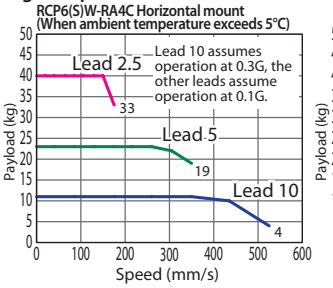
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.231 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P.205 for performing push-motion operation.
(5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

■ Correlation Diagrams of Speed and Payload

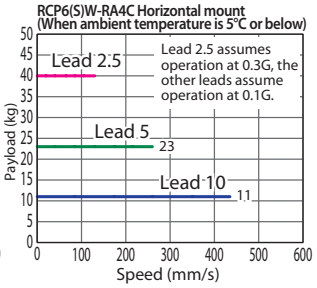
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)W-RA4C Horizontal mount (When ambient temperature exceeds 5°C)

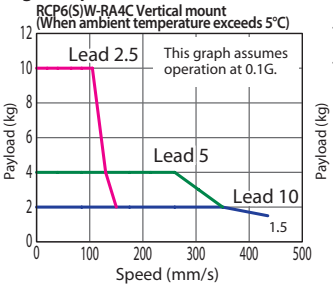


RCP6(S)W-RA4C Horizontal mount (When ambient temperature is 5°C or below)

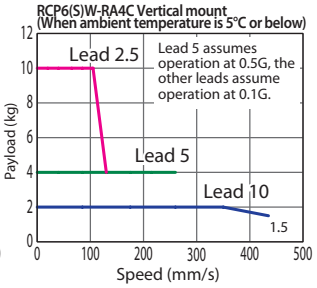


High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)W-RA4C Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RA4C Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA4C-WA-35P-10-①-②-③-④	10	11	2	77	50~200 (Every 50mm)
RCP6(S)W-RA4C-WA-35P-5-①-②-③-④	5	23	4	155	
RCP6(S)W-RA4C-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~200 (Every 50mm)
10	525 <435> [435]
5	350 [260]
2.5	175 <150> [130]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

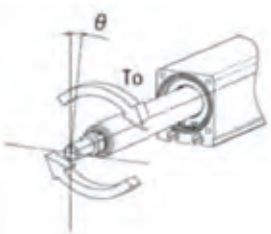
Options

Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm
Allowable static torque on rod tip	To: 1.0N•m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

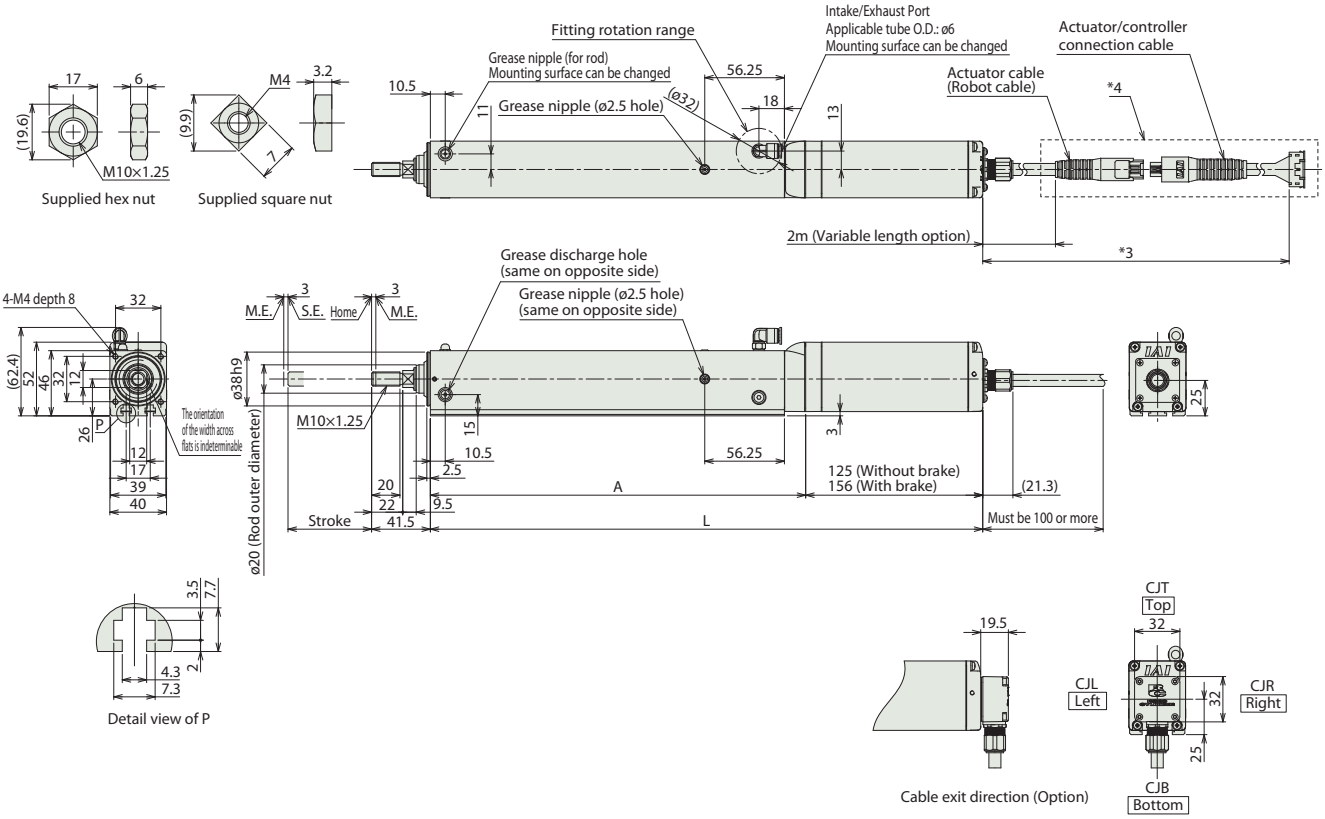
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.



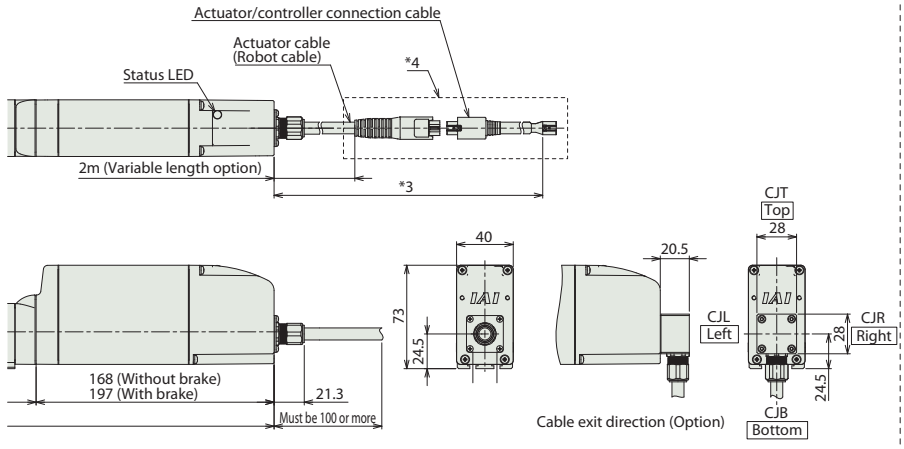
Dimensions

CAD drawings can be downloaded from our website.
www.iai-automation.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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■ RCP6SW-RA4C



*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 4 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200
L	RCP6W	w/o brake	288	338	388	438
		w/ brake	319	369	419	469
	RCP6SW	w/o brake	331	381	431	481
		w/ brake	360	410	460	510
A			163	213	263	313
Mass (kg)	RCP6W	w/o brake	1.4	1.6	1.8	2.0
		w/ brake	1.5	1.7	1.9	2.1
	RCP6SW	w/o brake	1.6	1.8	2.0	2.2
		w/ brake	1.7	1.9	2.1	2.3

* Please refer to P.249 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA6C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 58 mm | 24V Pulse Motor

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA6C	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12 :12mm 6 : 6mm 3 : 3mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

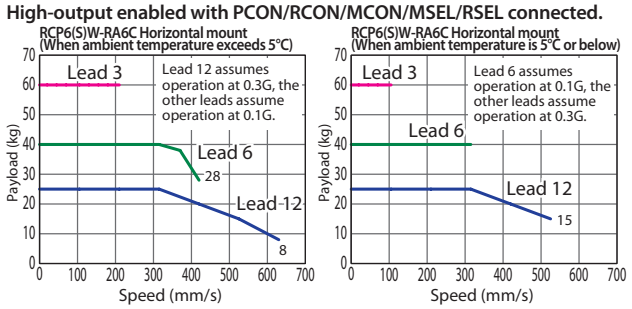
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.231 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

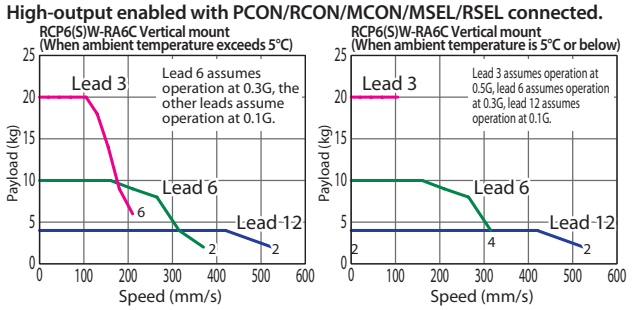
Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA6C-WA-42P-12-①-②-③-④	12	25	4	93	50~300 (Every 50mm)
RCP6(S)W-RA6C-WA-42P-6-①-②-③-④	6	40	10	185	
RCP6(S)W-RA6C-WA-42P-3-①-②-③-④	3	60	20	370	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
12	630 <525> [525]
6	420 <370> [315]
3	210 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

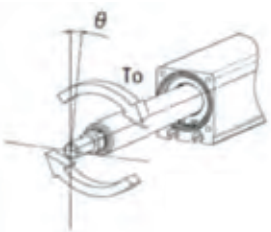
Options

Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Allowable static torque on rod tip	To: 1.5N•m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

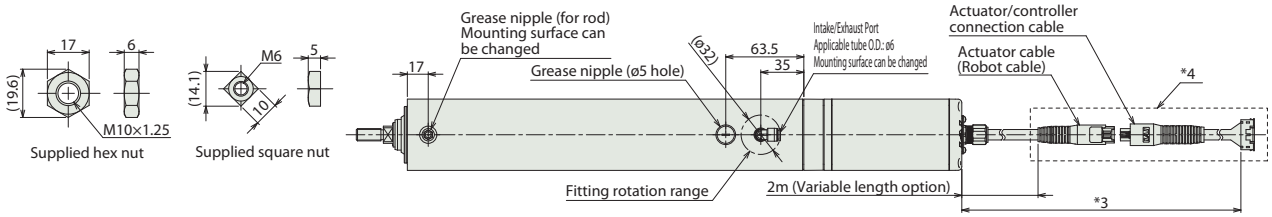
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.

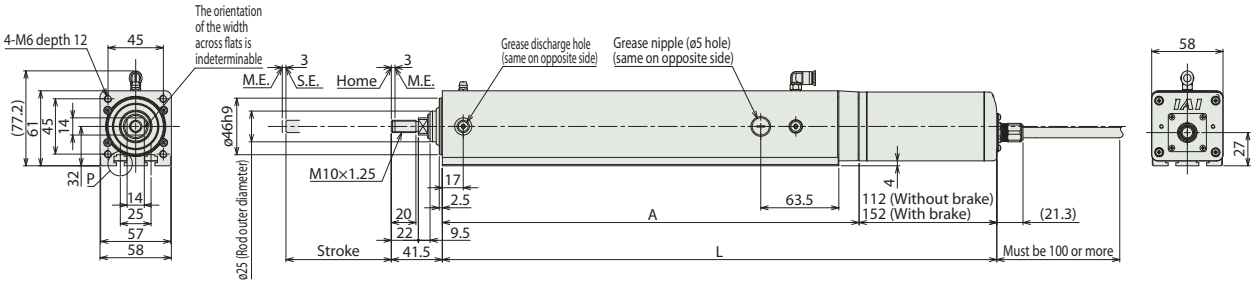


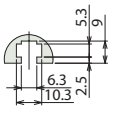
Dimensions

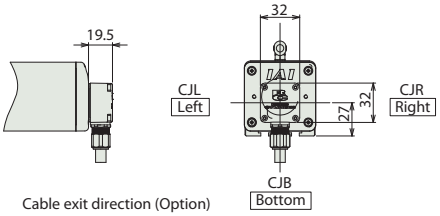
CAD drawings can be downloaded from our website.
www.robocylinder.de

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.

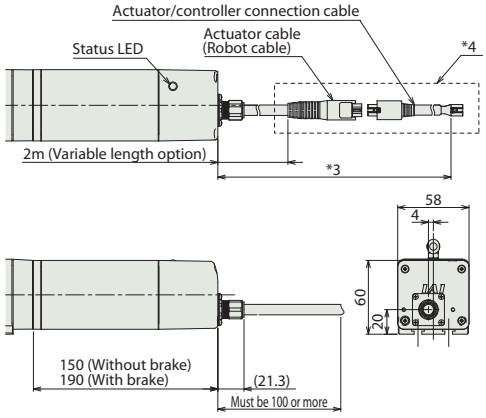


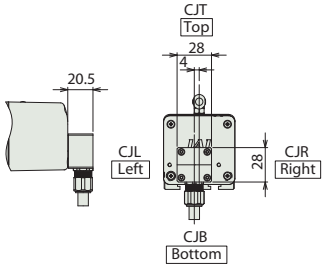






■ RCP6SW-RA6C





Cable exit direction (Option)

*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 4 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L	RCP6W	w/o brake	301	351	401	451	501	551
		w/ brake	341	391	441	491	541	591
	RCP6SW	w/o brake	339	389	439	489	539	589
		w/ brake	379	429	479	529	579	629
A			189	239	289	339	389	439
Mass (kg)	RCP6W	w/o brake	2.5	2.9	3.3	3.6	4.0	4.4
		w/ brake	2.8	3.2	3.6	3.9	4.3	4.7
	RCP6SW	w/o brake	2.7	3.1	3.5	3.8	4.2	4.6
		w/ brake	2.9	3.3	3.7	4.0	4.4	4.8

* Please refer to P.249 and P.250 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET IRT	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA7C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 70 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA7C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 :16mm 8 : 8mm 4 : 4mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

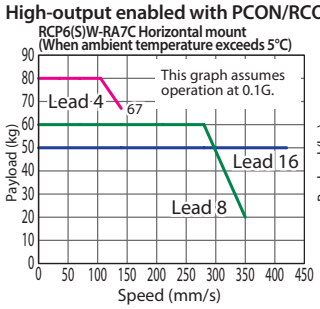
POINT Selection Notes

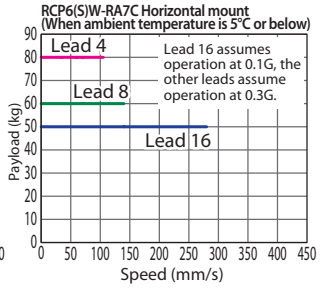
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.232 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

■ Correlation Diagrams of Speed and Payload

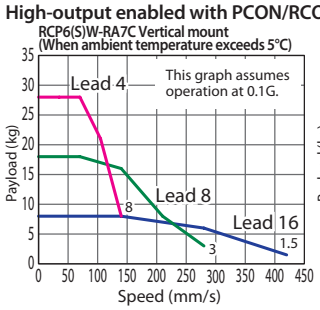
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

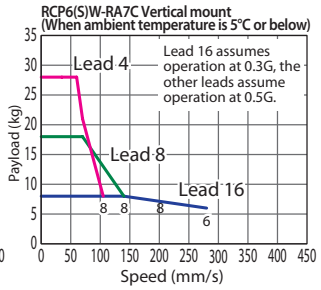
High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA7C-WA-56P-16-①-②-③-④	16	50	8	273	50~300 (Every 50mm)
RCP6(S)W-RA7C-WA-56P-8-①-②-③-④	8	60	18	547	
RCP6(S)W-RA7C-WA-56P-4-①-②-③-④	4	80	28	1094	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
16	420 [280]
8	350 <280> [140]
4	140 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

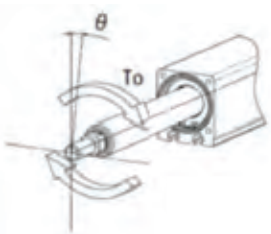
Options

Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Allowable static torque on rod tip	To: 2.5N•m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

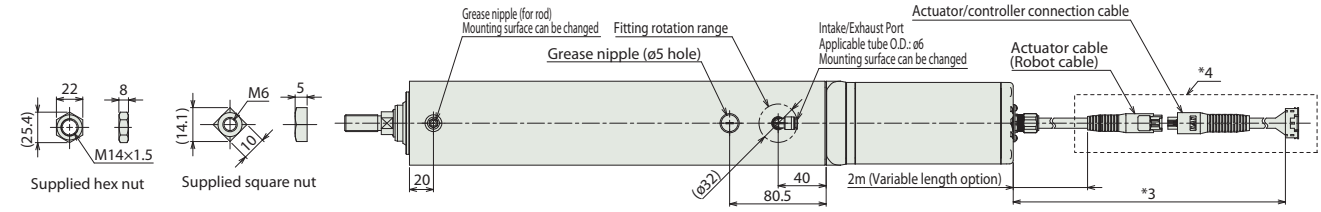
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.

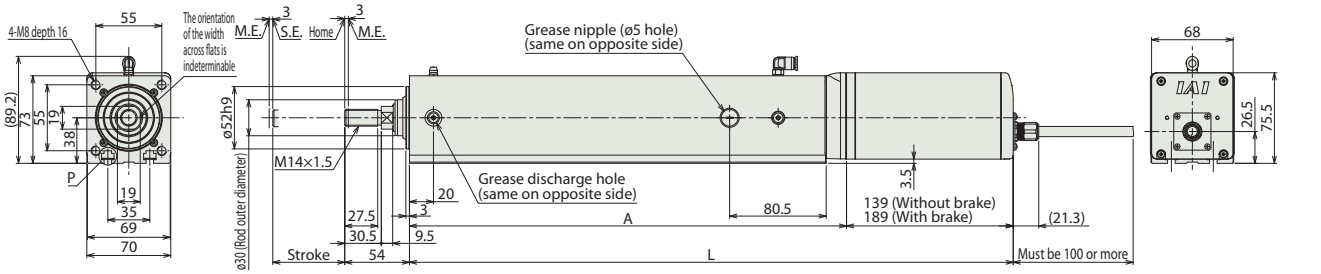


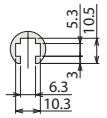
Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

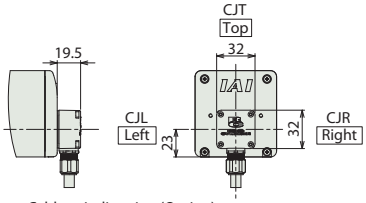
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.





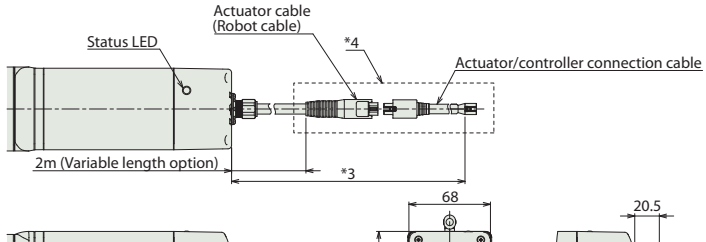


Detail view of P



Cable exit direction (Option)

■ RCP6SW-RA7C



Cable exit direction (Option)

*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 6 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L	RCP6W	w/o brake	353.5	403.5	453.5	503.5	553.5	603.5
		w/ brake	403.5	453.5	503.5	553.5	603.5	653.5
	RCP6SW	w/o brake	378.5	428.5	478.5	528.5	578.5	628.5
		w/ brake	428.5	478.5	528.5	578.5	628.5	678.5
A			214.5	264.5	314.5	364.5	414.5	464.5
Mass (kg)	RCP6W	w/o brake	4.5	5.1	5.7	6.3	6.8	7.4
		w/ brake	5.0	5.6	6.2	6.8	7.3	7.9
	RCP6SW	w/o brake	4.7	5.3	5.9	6.5	7.0	7.6
		w/ brake	5.1	5.7	6.3	6.9	7.4	8.0

* Please refer to P.250 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA8C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 85 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA8C	WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20 :20mm 10 :10mm 5 : 5mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

POINT Selection Notes

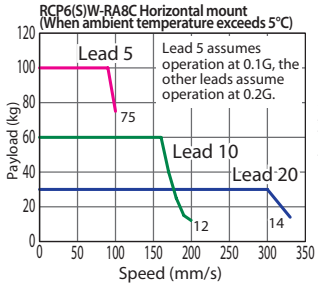
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.232 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
(6) The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.
(7) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

■ Correlation Diagrams of Speed and Payload

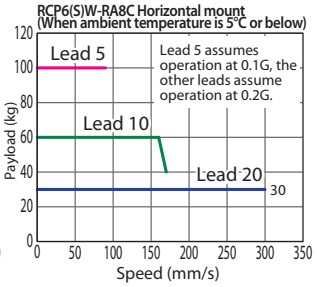
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

PCON/RCON/MSEL/RSEL connected.

RCP6(S)W-RA8C Horizontal mount (When ambient temperature exceeds 5°C)

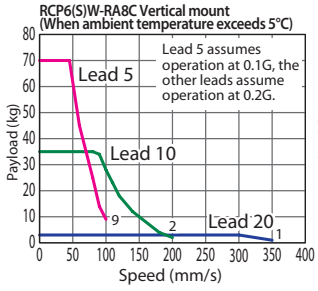


RCP6(S)W-RA8C Horizontal mount (When ambient temperature is 5°C or below)

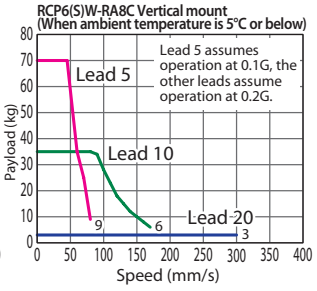


PCON/RCON/MSEL/RSEL connected.

RCP6(S)W-RA8C Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RA8C Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA8C-WA-60P-20-①-②-③-④	20	30	3	500	50~300 (Every 50mm)
RCP6(S)W-RA8C-WA-60P-10-①-②-③-④	10	60	35	1000	
RCP6(S)W-RA8C-WA-60P-5-①-②-③-④	5	100	70	2000	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
20	350 <330> [300]
10	200 [170]
5	100 [80]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

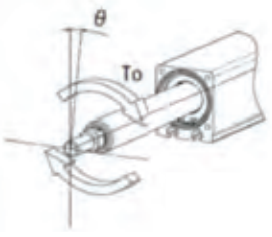
Options

Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Allowable static torque on rod tip	To: 5.0N•m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

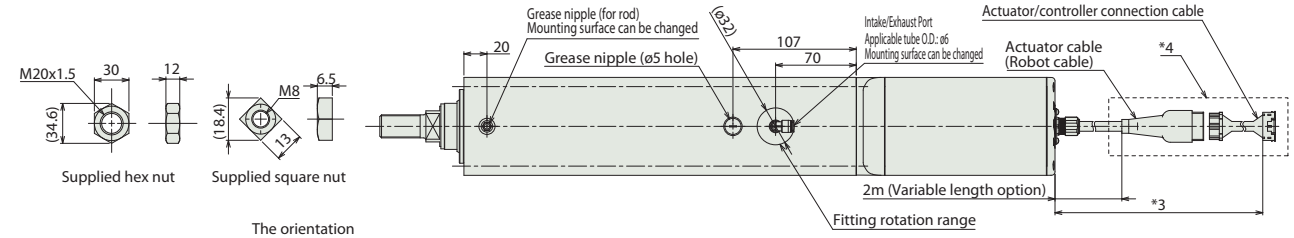
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.

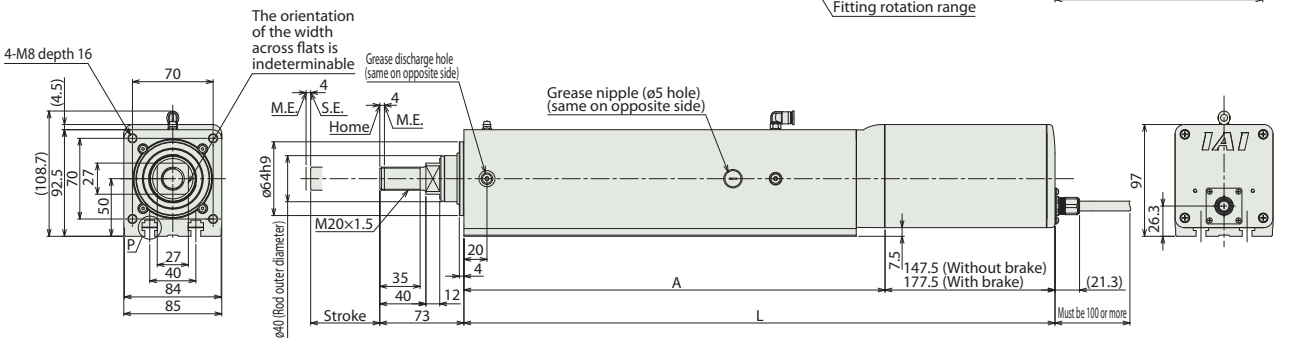


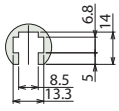
Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

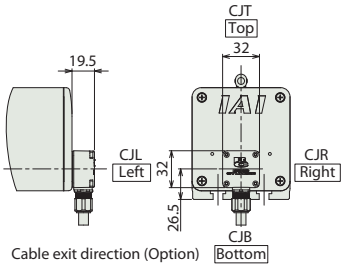
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.





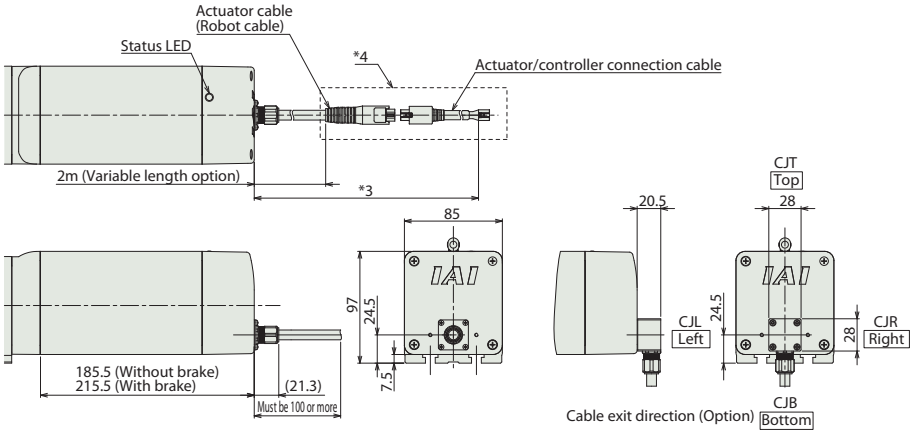


Detail view of P



Cable exit direction (Option)

■ RCP6SW-RA8C



Cable exit direction (Option)

*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 8 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L	RCP6W	w/o brake	413	463	513	563	613	663
		w/ brake	443	493	543	593	643	693
	RCP6SW	w/o brake	451	501	551	601	651	701
		w/ brake	481	531	581	631	681	731
A			265.5	315.5	365.5	415.5	465.5	515.5
Mass (kg)	RCP6W	w/o brake	8.0	8.8	9.7	10.5	11.4	12.2
		w/ brake	8.6	9.4	10.3	11.1	12.0	12.8
	RCP6SW	w/o brake	8.3	9.1	10.0	10.8	11.7	12.5
		w/ brake	8.9	9.7	10.6	11.4	12.3	13.1

* Please refer to P.250 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)W-RA4R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 24v Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA4R	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50:50mm ~ 200:200mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

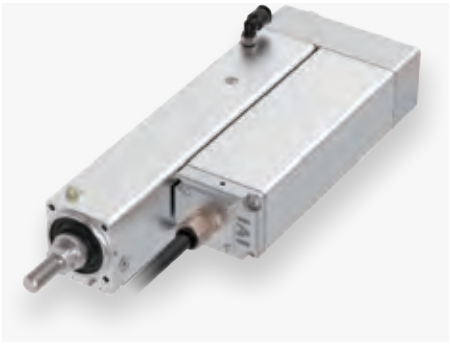
* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

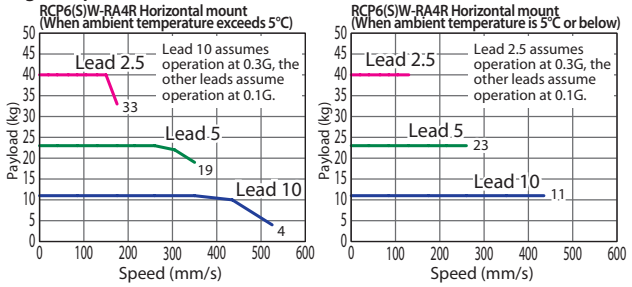
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.233 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

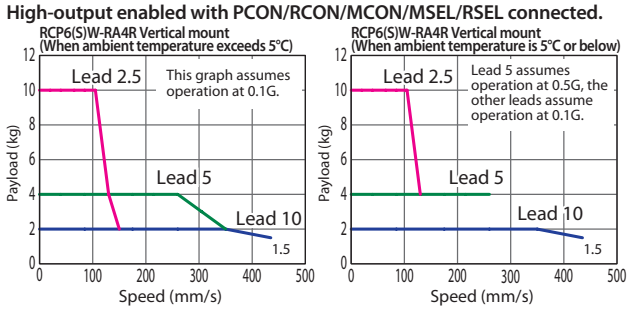
■ Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA4R-WA-35P-10-①-②-③-④	10	11	2	77	50~200 (Every 50mm)
RCP6(S)W-RA4R-WA-35P-5-①-②-③-④	5	23	4	155	
RCP6(S)W-RA4R-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~200 (Every 50mm)
10	525 <435> [435]
5	350 [260]
2.5	175 <150> [130]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

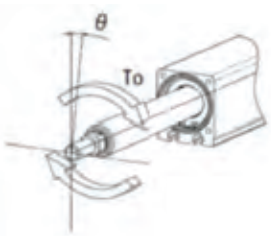
Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm
Allowable static torque on rod tip	To: 1.0N•m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.



Options

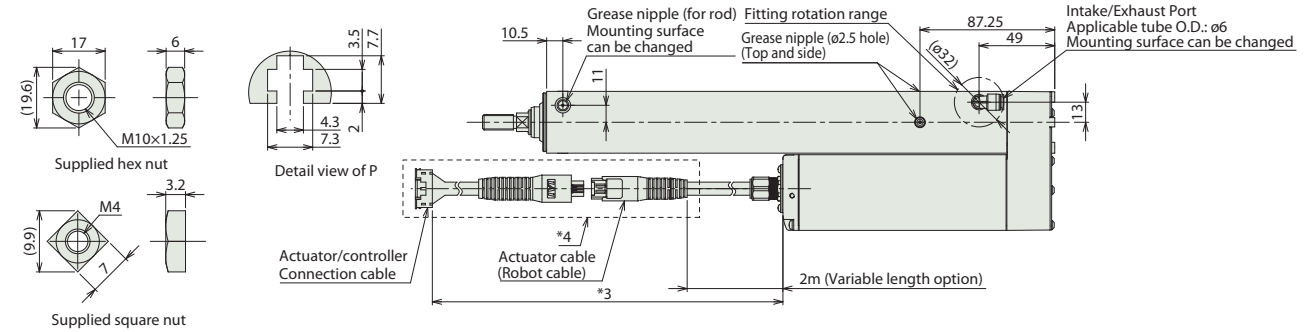
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Motor side-mounted on top	**MT**	See P.201
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

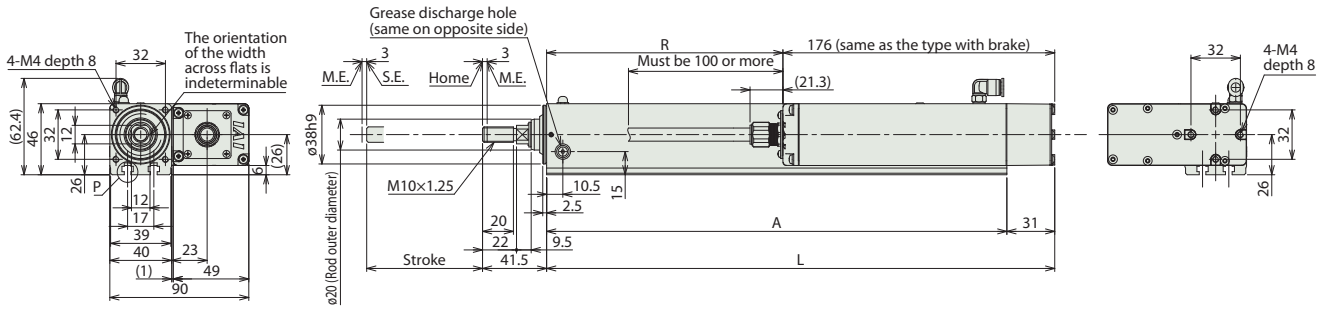
* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Dimensions

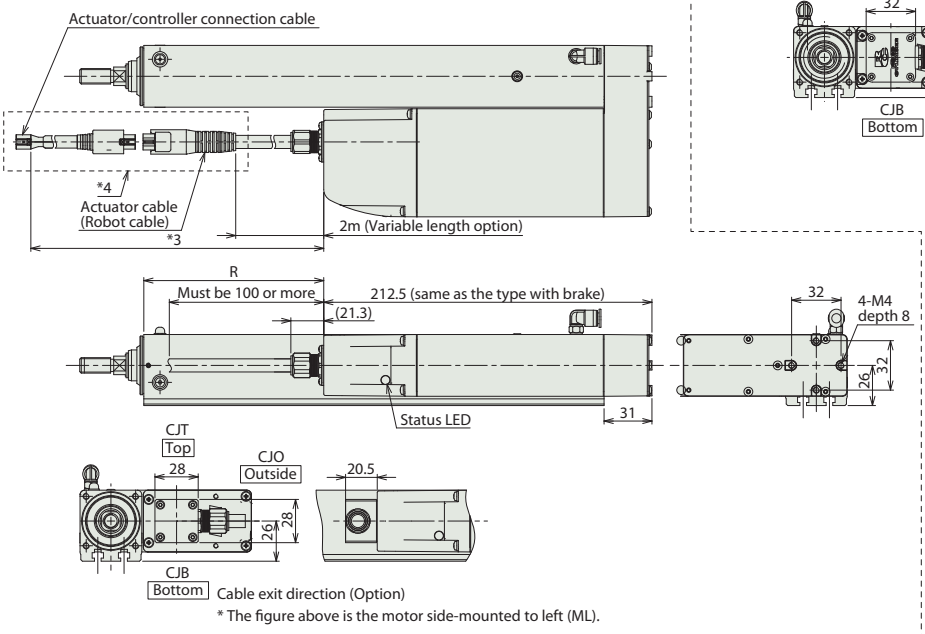
CAD drawings can be downloaded from our website.
www.robocylinder.de

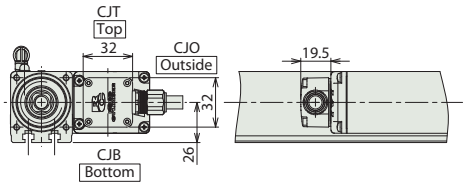
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.





■ RCP6SW-RA4R





*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 4 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200
L			179	229	279	329
A			148	198	248	298
R	RCP6W		3	53	103	153
	RCP6SW		-33.5	16.5	66.5	116.5
Mass (kg)	RCP6W	w/o brake	1.5	1.7	1.9	2.1
		w/ brake	1.6	1.8	2.0	2.2
	RCP6SW	w/o brake	1.7	1.9	2.1	2.3
		w/ brake	1.8	2.0	2.2	2.4

* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

* Please refer to P.249 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET IRT	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA6R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 58* mm | 24v Pulse Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA6R	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12 :12mm 6 : 6mm 3 : 3mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

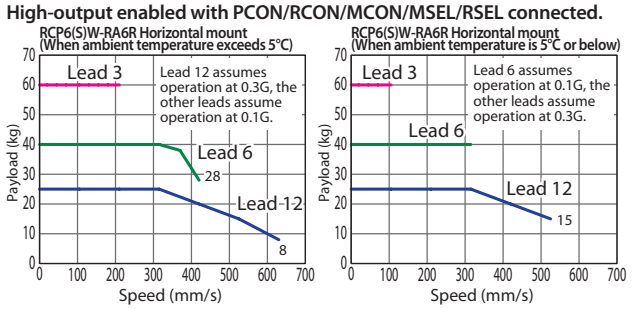
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.233 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

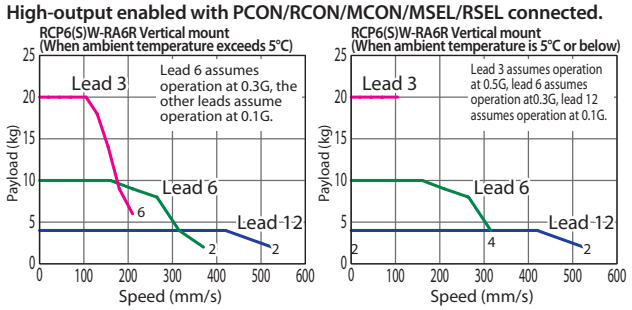
Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA6R-WA-42P-12-①-②-③-④	12	25	4	93	50~300 (Every 50mm)
RCP6(S)W-RA6R-WA-42P-6-①-②-③-④	6	40	10	185	
RCP6(S)W-RA6R-WA-42P-3-①-②-③-④	3	60	20	370	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
12	630 <525> [525]
6	420 <370> [315]
3	210 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

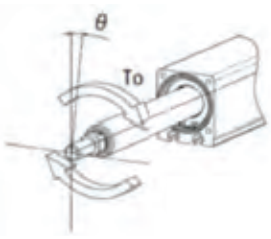
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Motor side-mounted on top	**MT**	See P.201
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Allowable static torque on rod tip	To: 1.5N•m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

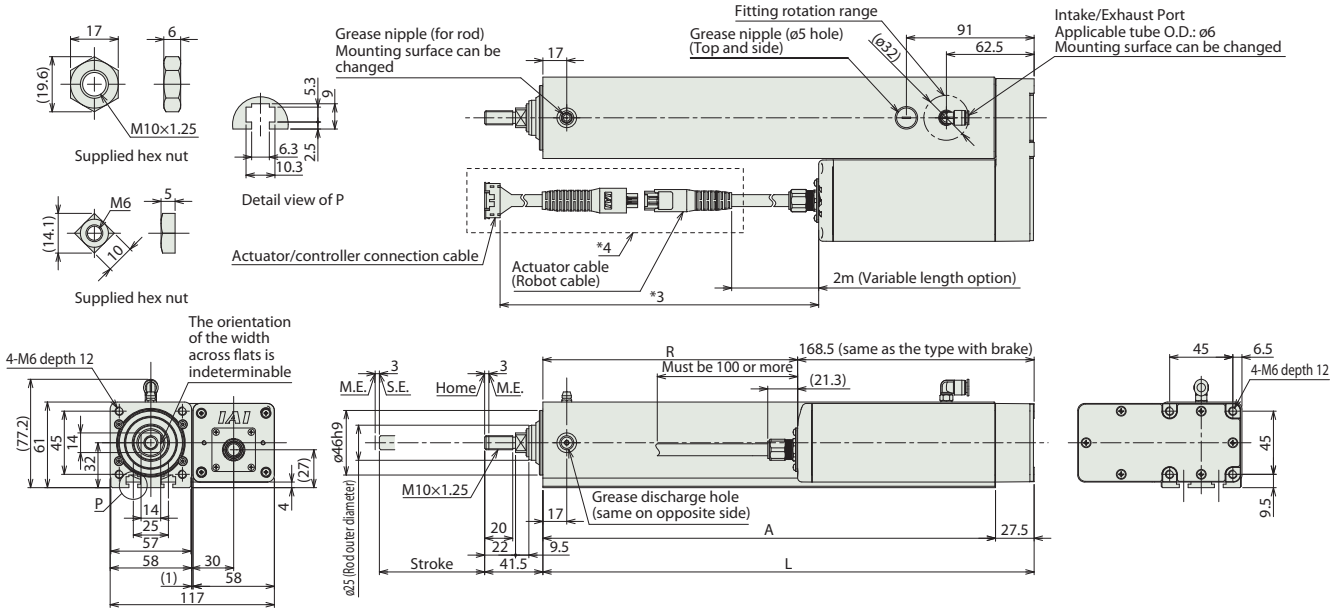
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.



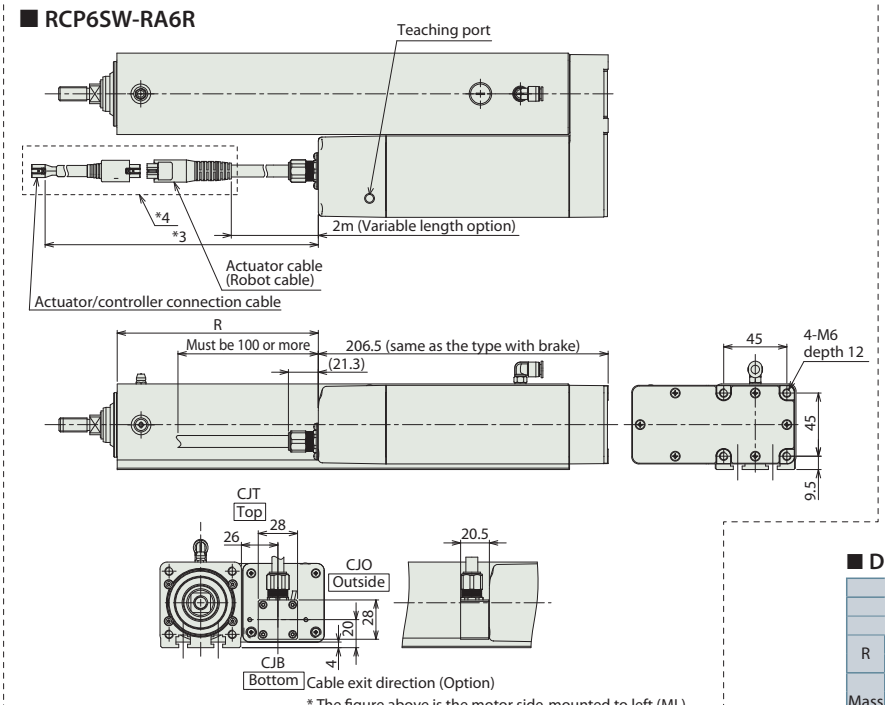
Dimensions

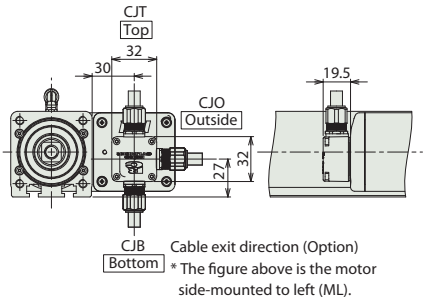
CAD drawings can be downloaded from our website.
www.robocylinder.de

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■ RCP6SW-RA6R





*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 4 pcs. included.

* Please refer to P.249 and P.250 for more information on component materials.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L			200	250	300	350	400	450
A			172.5	222.5	272.5	322.5	372.5	422.5
R	RCP6W		31.5	81.5	131.5	181.5	231.5	281.5
	RCP6SW		-6.5	43.5	93.5	143.5	193.5	243.5
Mass (kg)	RCP6W	w/o brake	2.8	3.2	3.6	3.9	4.3	4.7
		w/ brake	2.9	3.3	3.7	4.0	4.4	4.8
	RCP6SW	w/o brake	3.0	3.4	3.8	4.1	4.5	4.9
		w/ brake	3.1	3.5	3.9	4.2	4.6	5.0

* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, POWERLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA7R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 24v Pulse Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA7R	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 :16mm 8 : 8mm 4 : 4mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

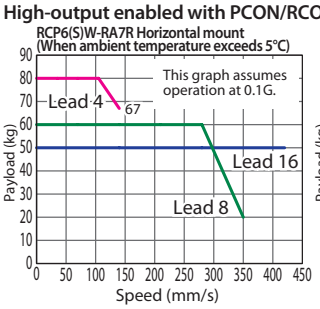
POINT Selection Notes

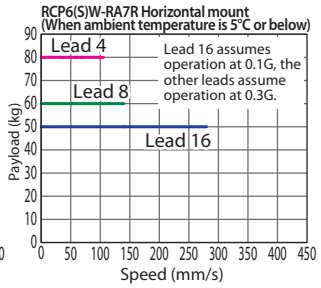
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.234 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

Correlation Diagrams of Speed and Payload

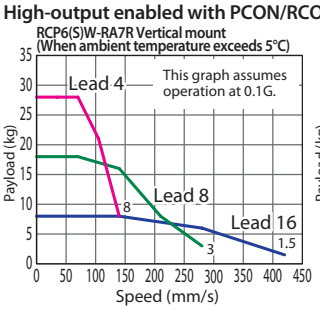
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

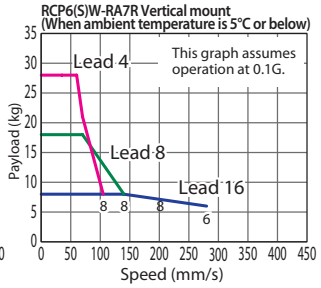
High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA7R-WA-56P-16-①-②-③-④	16	50	8	273	50~300 (Every 50mm)
RCP6(S)W-RA7R-WA-56P-8-①-②-③-④	8	60	18	547	
RCP6(S)W-RA7R-WA-56P-4-①-②-③-④	4	80	28	1094	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
16	420 [280]
8	350 <280> [140]
4	140 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

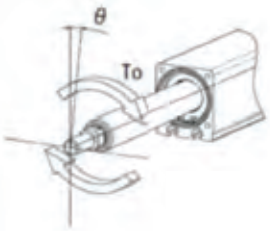
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Motor side-mounted on top	**MT**	See P.201
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Allowable static torque on rod tip	To: 2.5N•m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

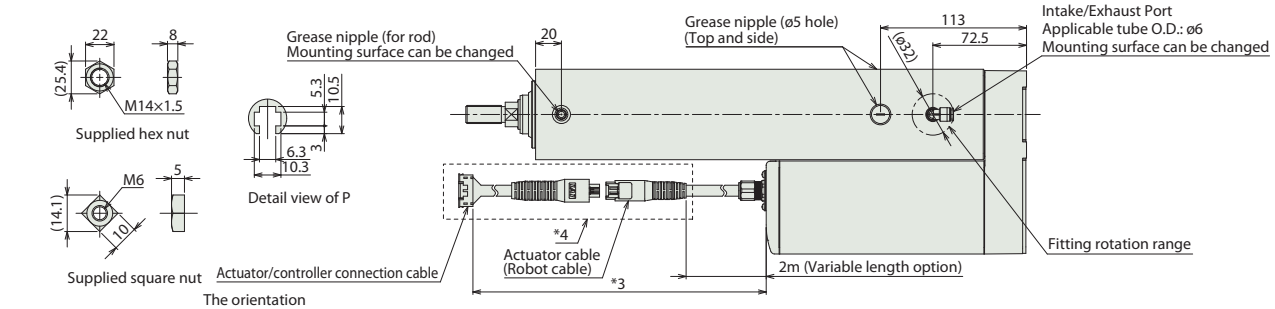
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.

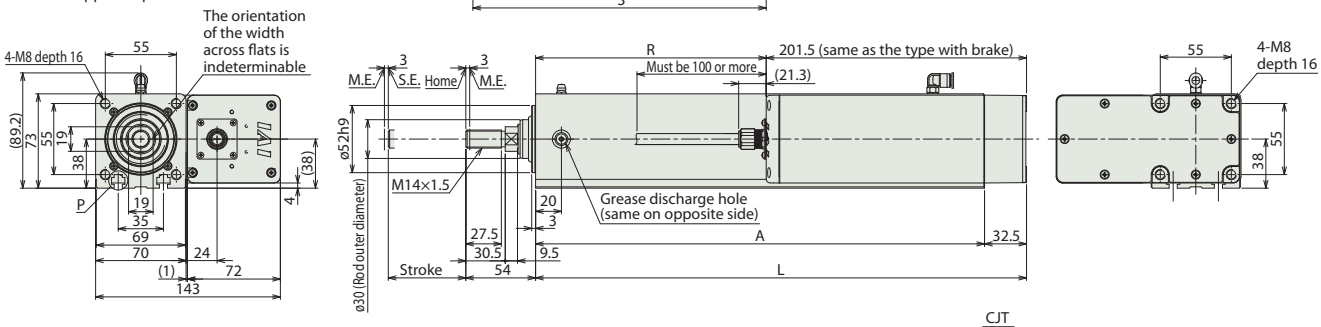


Dimensions

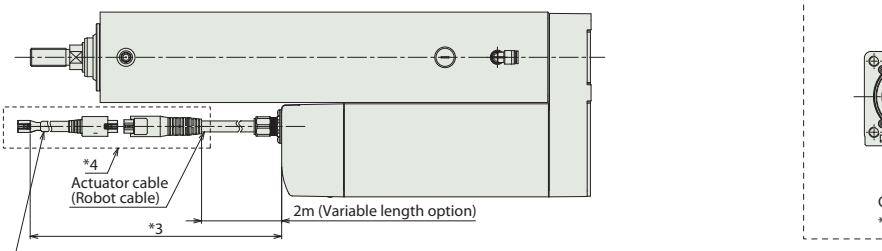
CAD drawings can be downloaded from our website.
www.robocylinder.de

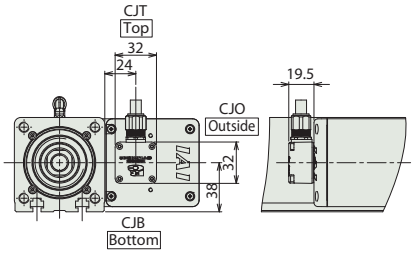
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



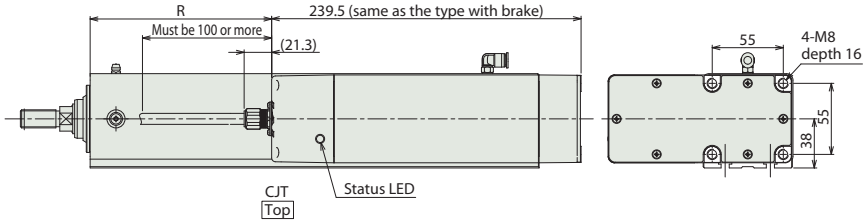


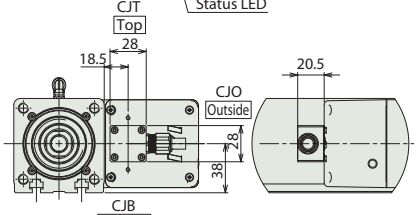
■ RCP6SW-RA7R





Cable exit direction (Option)
* The figure above is the motor side-mounted to left (ML).





Cable exit direction (Option)
* The figure above is the motor side-mounted to left (ML).

*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 6 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L			230	280	330	380	430	480
A			197.5	247.5	297.5	347.5	397.5	447.5
R	RCP6W		26.5	76.5	126.5	176.5	226.5	276.5
	RCP6SW		-9.5	40.5	90.5	140.5	190.5	240.5
Mass (kg)	RCP6W	w/o brake	5.2	5.8	6.4	7.0	7.5	8.1
		w/ brake	5.3	5.9	6.5	7.1	7.6	8.2
	RCP6SW	w/o brake	5.4	6.0	6.6	7.2	7.7	8.3
		w/ brake	5.5	6.1	6.7	7.3	7.8	8.4

* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

* Please refer to P.250 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, POWERLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA8R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 85* mm | 24V Pulse Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

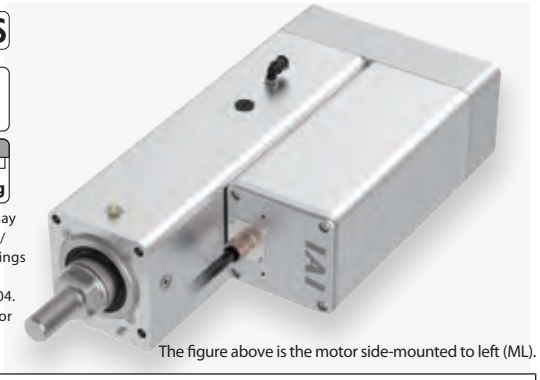
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA8R	WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20 :20mm 10 :10mm 5 : 5mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

POINT Selection Notes

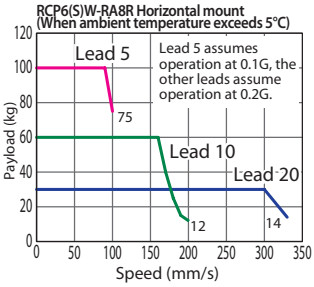
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.234 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
(6) The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.
(7) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

Correlation Diagrams of Speed and Payload

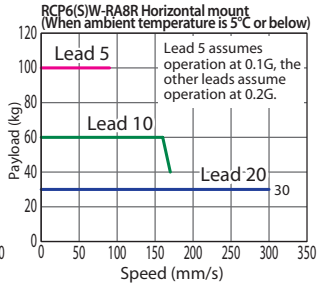
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

PCON/RCON/MSEL/RSEL connected.

RCP6(S)W-RA8R Horizontal mount (When ambient temperature exceeds 5°C)

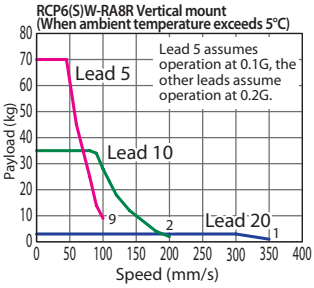


RCP6(S)W-RA8R Horizontal mount (When ambient temperature is 5°C or below)

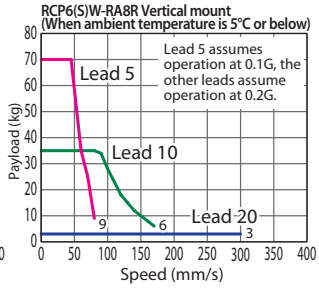


PCON/RCON/MSEL/RSEL connected.

RCP6(S)W-RA8R Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RA8R Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA8R-WA-60P-20-①-②-③-④	20	30	3	500	50~300 (Every 50mm)
RCP6(S)W-RA8R-WA-60P-10-①-②-③-④	10	60	35	1000	
RCP6(S)W-RA8R-WA-60P-5-①-②-③-④	5	100	70	2000	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
20	350 <330> [300]
10	200 [170]
5	100 [80]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

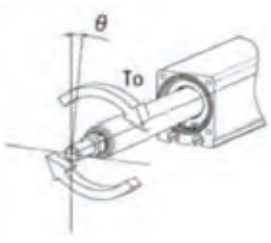
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Motor side-mounted on top	**MT**	See P.201
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Allowable static torque on rod tip	To: 5.0N•m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

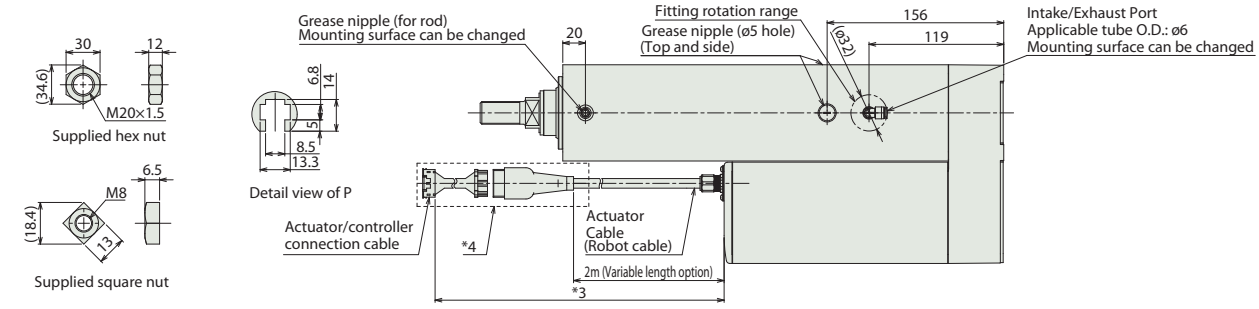
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.

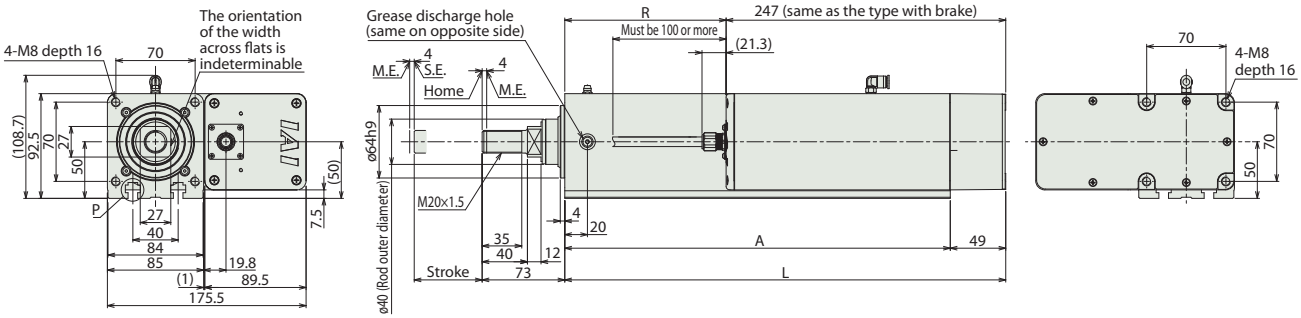


Dimensions

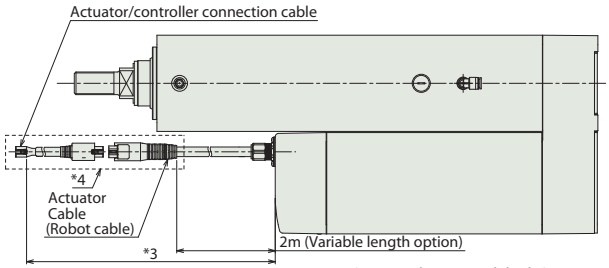
CAD drawings can be downloaded from our website.
www.robocylinder.de

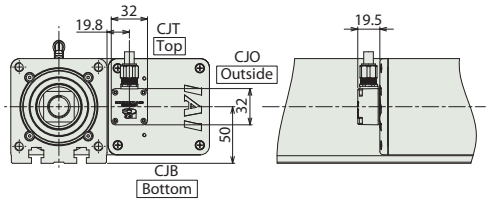
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



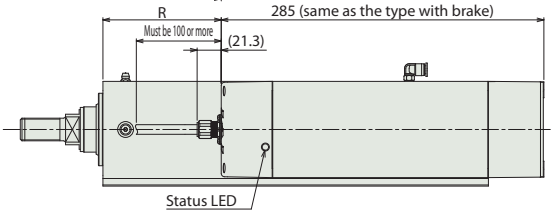


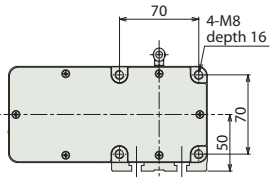
■ RCP6SW-RA8R

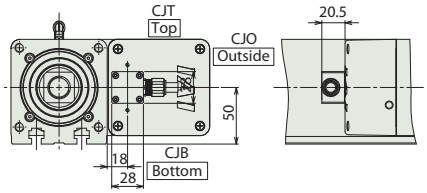




Cable exit direction (Option)
* The figure above is the motor side-mounted to left (ML).







Cable exit direction (Option)
* The figure above is the motor side-mounted to left (ML).

*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 8 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L			289.5	339.5	389.5	439.5	489.5	539.5
A			240.5	290.5	340.5	390.5	440.5	490.5
R	RCP6W		42.5	92.5	142.5	192.5	242.5	292.5
	RCP6SW		4.5	54.5	104.5	154.5	204.5	254.5
Mass (kg)	RCP6W	w/o brake	9.2	10.0	10.9	11.7	12.6	13.4
		w/ brake	9.5	10.3	11.2	12.0	12.9	13.7
	RCP6SW	w/o brake	9.5	10.3	11.2	12.0	12.9	13.7
		w/ brake	9.8	10.6	11.5	12.3	13.2	14.0

* Please refer to P.250 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)W-RRA4C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 45 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RRA4C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50:50mm ~ 400:400mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

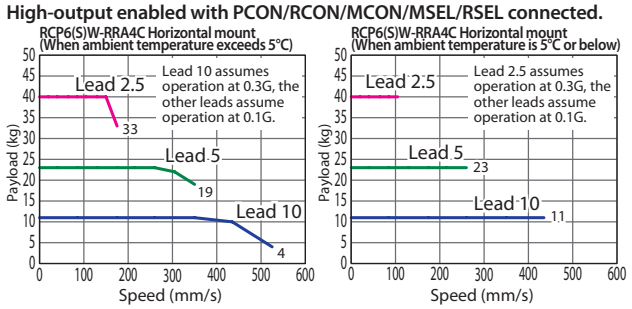
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.235 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

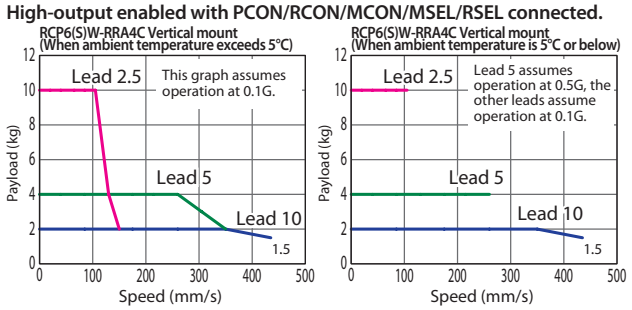
■ Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-RRA4C-WA-35P-10-①-②-③-④	10	11	2	77	50~400 (Every 50mm)
RCP6(S)W-RRA4C-WA-35P-5-①-②-③-④	5	23	4	155	
RCP6(S)W-RRA4C-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~350 (Every 50mm)	400
10	525 <435> [435]	
5	350 [260]	340 [260]
2.5	175 <150> [105]	170 <150> [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

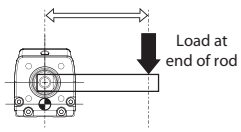
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Flange)	**FFA**	See P.197
Tip adapter (Internal thread)	**NFA**	See P.201
Tip adapter (Keyway)	**KFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

Actuator Specifications

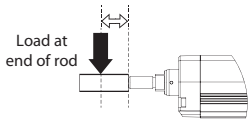
Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



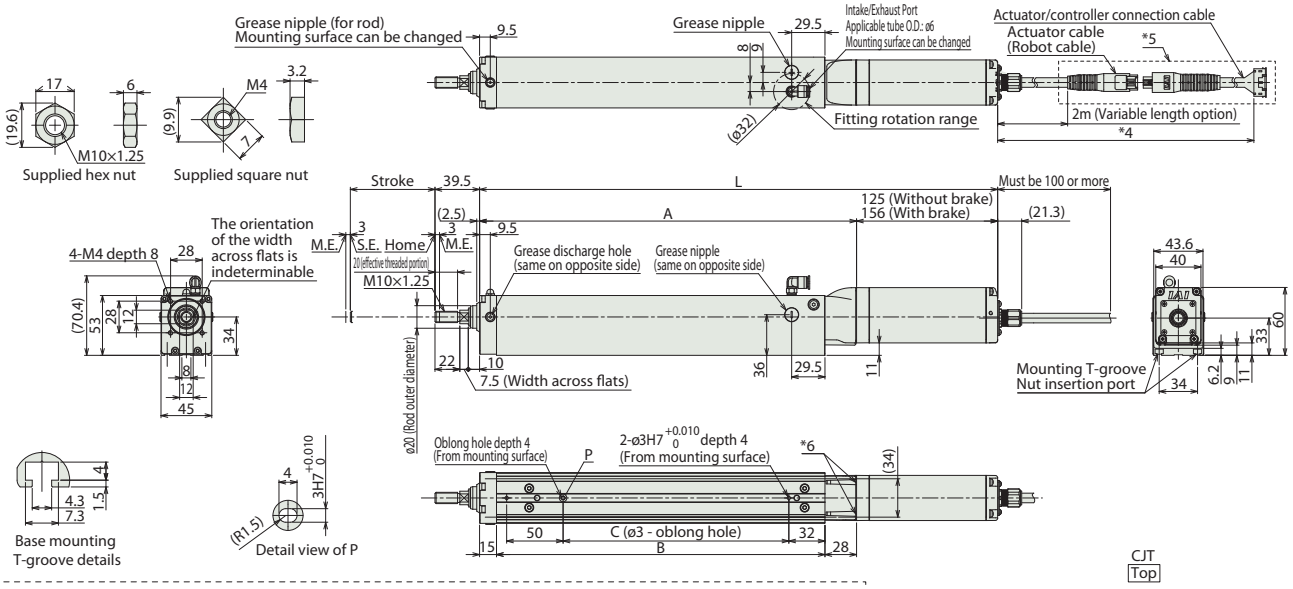
Overhang distance at end of rod (dz: 100mm or less)



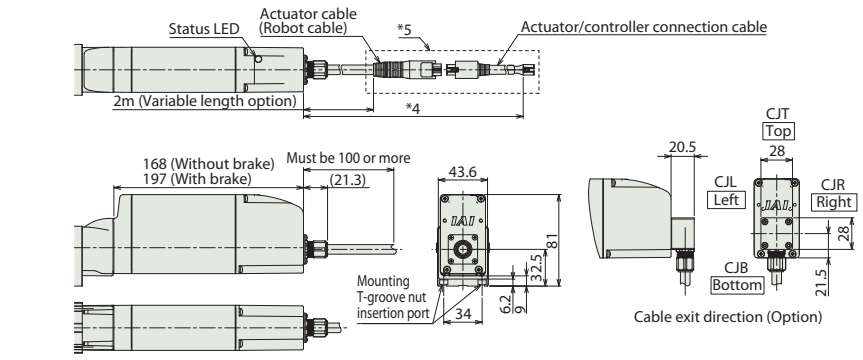
Dimensions

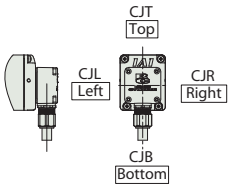
CAD drawings can be downloaded from our website.
www.robocylinder.de

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.



■ RCP6SW-RRA4C

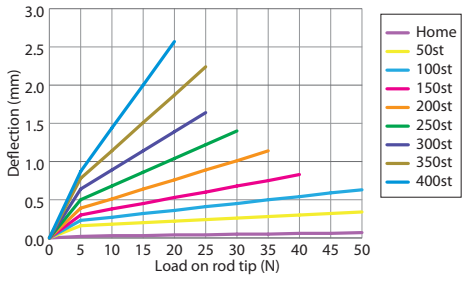




Cable exit direction (Option)

*4 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*5 The cable joint (connector) within the dotted line is not splash-proofed.
*6 Part of the gasket lifts up, but this does not affect splash-proof performance.
*7 Hex nut x 1 pc., square nut x 4 pcs. included.

■ Rod Deflection of RCP6(S)W-RRA4C (Reference Values)



* Please refer to P.251 for more information on component materials.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400
L	RCP6W	w/o brake	309	359	409	459	509	559	609	659
		w/ brake	340	390	440	490	540	590	640	690
	RCP6SW	w/o brake	352	402	452	502	552	602	652	702
		w/ brake	381	431	481	531	581	631	681	731
A			184	234	284	334	384	434	484	534
B			141	191	241	291	341	391	441	491
C			50	100	150	200	250	300	350	400
Allowable static load on rod tip (N)			63.4	50.7	42.1	36.0	31.3	27.6	24.6	22.2
Allowable dynamic load on rod tip (5,000km life) (N)		Load offset 0mm	28.9	22.2	17.9	14.8	12.6	10.8	9.4	8.2
		Load offset 100mm	17.9	15.5	13.4	11.6	10.2	9.0	8.0	7.1
Allowable static torque on rod tip (N•m)			6.4	5.1	4.3	3.7	3.2	2.9	2.6	2.3
Allowable dynamic torque on rod tip (N•m)			1.7	1.5	1.3	1.1	1.0	0.9	0.7	0.7
Mass (kg)	RCP6W	w/o brake	1.5	1.7	1.9	2.1	2.3	2.5	2.7	2.9
		w/ brake	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0
	RCP6SW	w/o brake	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1
		w/ brake	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RRA6C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 65 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RRA6C	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12 :12mm 6 : 6mm 3 : 3mm	50:50mm ~ 400:400mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

POINT Selection Notes

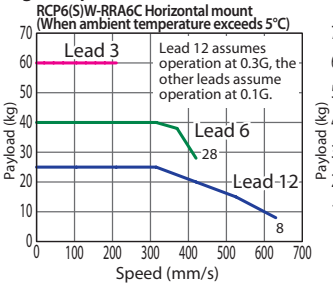
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.235 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

■ Correlation Diagrams of Speed and Payload

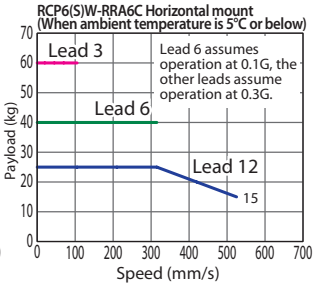
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)W-RRA6C Horizontal mount (When ambient temperature exceeds 5°C)

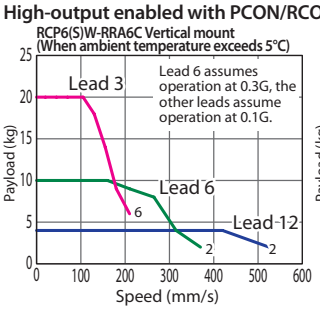


RCP6(S)W-RRA6C Horizontal mount (When ambient temperature is 5°C or below)

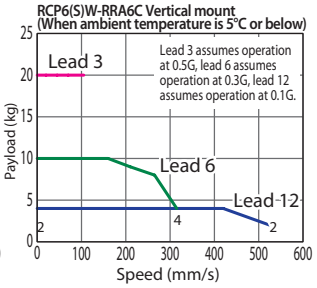


High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)W-RRA6C Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RRA6C Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-RRA6C-WA-42P-12-①-②-③-④	12	25	4	93	50~400 (Every 50mm)
RCP6(S)W-RRA6C-WA-42P-6-①-②-③-④	6	40	10	185	
RCP6(S)W-RRA6C-WA-42P-3-①-②-③-④	3	60	20	370	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~400 (Every 50mm)
12	630 <525> [525]
6	420 <370> [315]
3	210 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

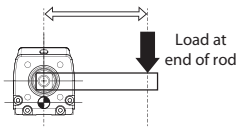
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Flange)	**FFA**	See P.197
Tip adapter (Internal thread)	**NFA**	See P.201
Tip adapter (Keyway)	**KFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

Actuator Specifications

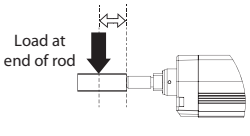
Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



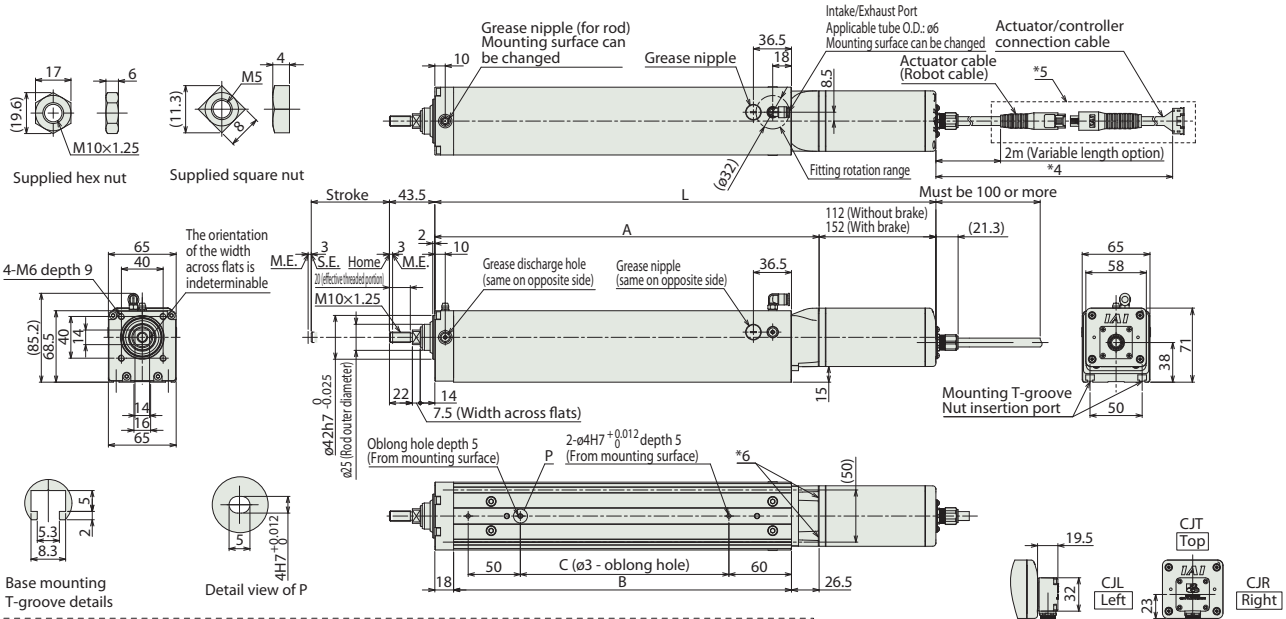
Overhang distance at end of rod (dz: 100mm or less)



Dimensions

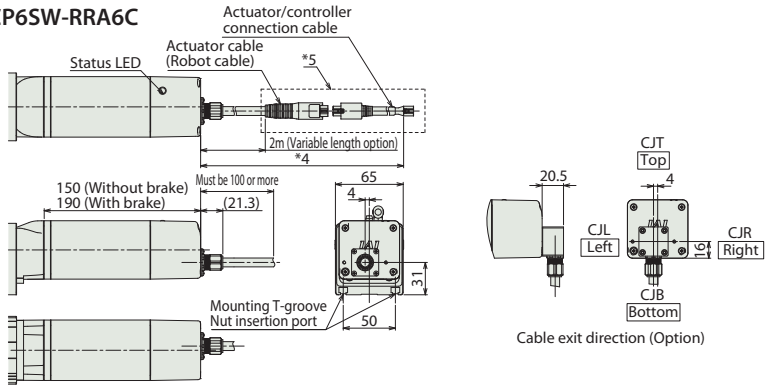
CAD drawings can be downloaded from our website.
www.robocylinder.de

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.



Cable exit direction (Option)

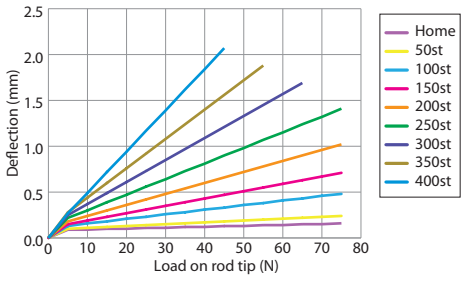
■ RCP6SW-RRA6C



Cable exit direction (Option)

*4 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*5 The cable joint (connector) within the dotted line is not splash-proofed.
*6 Part of the gasket lifts up, but this does not affect splash-proof performance.
*7 Hex nut x 1 pc., square nut x 4 pcs. included.

■ Rod Deflection of RCP6(S)W-RRA6C (Reference Values)



* Please refer to P.251 for more information on component materials.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400
L	RCP6W	w/o brake	330.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5
		w/ brake	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5
	RCP6SW	w/o brake	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5
		w/ brake	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5
A			218.5	268.5	318.5	368.5	418.5	468.5	518.5	568.5
B			174	224	274	324	374	424	474	524
C			50	100	150	200	250	300	350	400
Allowable static load on rod tip (N)			144	117	99	85.4	75	66.7	59.9	54.3
Allowable dynamic load on rod tip (5,000km life) (N)		Load offset 0mm	58.1	46.4	38.3	32.4	27.9	24.4	21.5	19.2
		Load offset 100mm	38.8	34.0	29.7	26.2	23.2	20.8	18.7	16.8
Allowable static torque on rod tip (N•m)			14.5	11.8	10.0	8.7	7.6	6.8	6.2	5.6
Allowable dynamic torque on rod tip (N•m)			3.8	3.3	2.9	2.6	2.3	2.0	1.8	1.6
Mass (kg)	RCP6W	w/o brake	2.8	3.1	3.5	3.9	4.2	4.6	4.9	5.3
		w/ brake	3.0	3.3	3.7	4.1	4.4	4.8	5.1	5.5
	RCP6SW	w/o brake	2.9	3.2	3.6	4.0	4.3	4.7	5.0	5.4
		w/ brake	3.2	3.5	3.9	4.3	4.6	5.0	5.3	5.7

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET IRT	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RRA7C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 78 mm | 24v Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RRA7C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 :16mm 8 : 8mm 4 : 4mm	50:50mm ~ 500:500mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

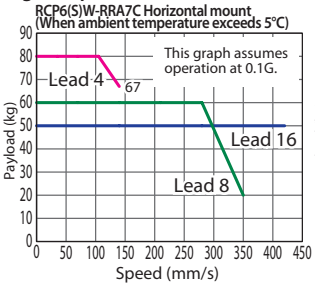
POINT Selection Notes

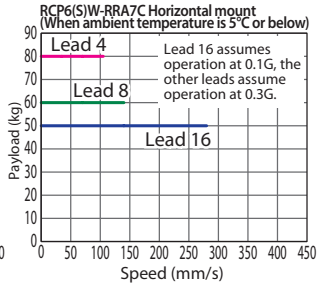
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.236 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

■ Correlation Diagrams of Speed and Payload

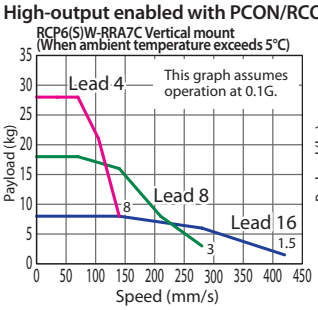
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

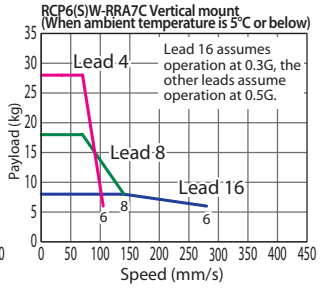
High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-RRA7C-WA-56P-16-①-②-③-④	16	50	8	273	50~500 (Every 50mm)
RCP6(S)W-RRA7C-WA-56P-8-①-②-③-④	8	60	18	547	
RCP6(S)W-RRA7C-WA-56P-4-①-②-③-④	4	80	28	1094	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~500 (Every 50mm)
16	420 [280]
8	350 <280> [140]
4	140 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

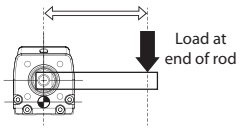
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Flange)	**FFA**	See P.197
Tip adapter (Internal thread)	**NFA**	See P.201
Tip adapter (Keyway)	**KFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

Actuator Specifications

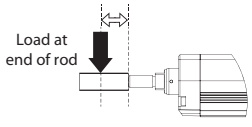
Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



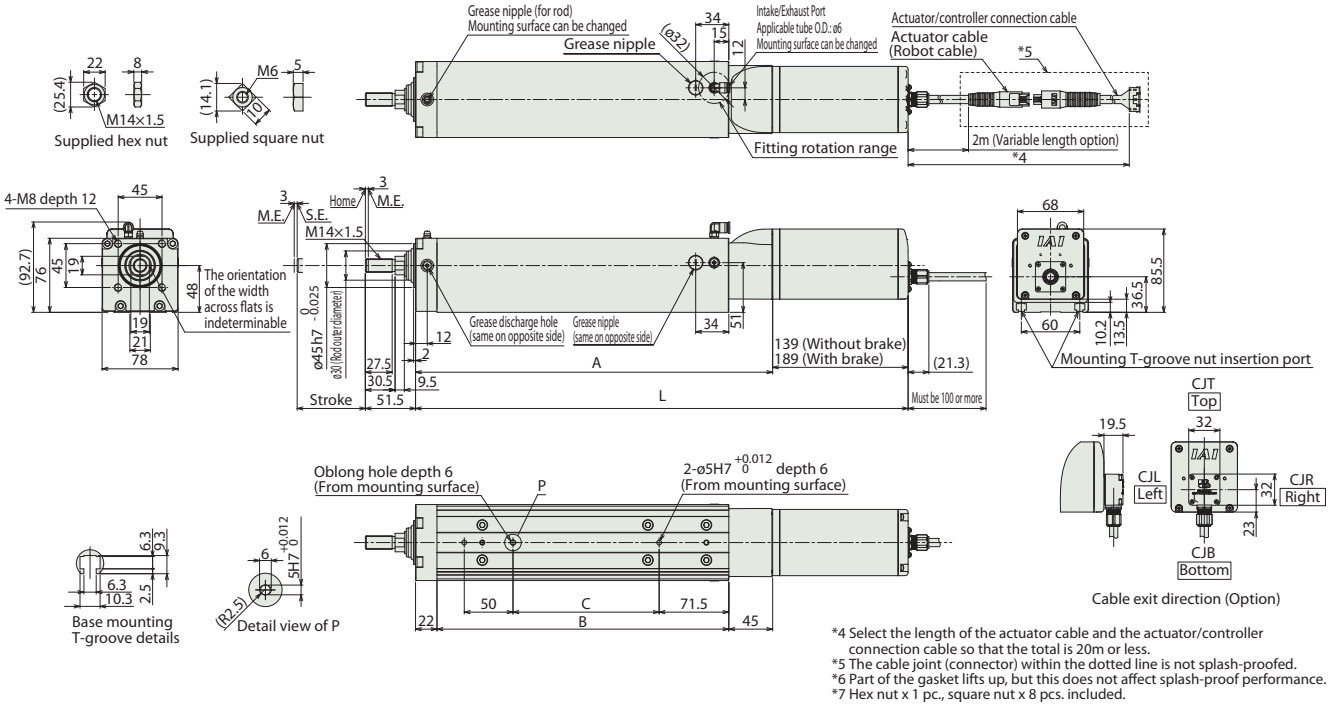
Overhang distance at end of rod (dz: 150mm or less)



Dimensions

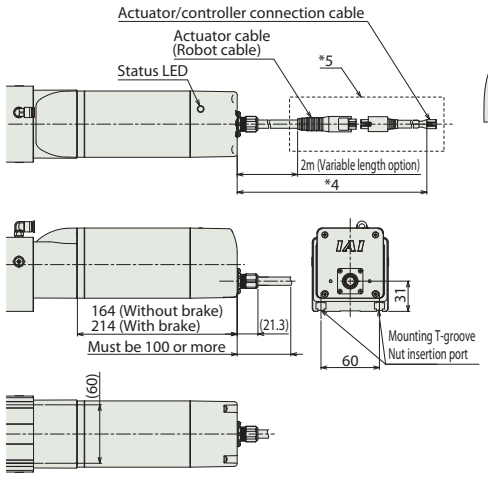
CAD drawings can be downloaded from our website.
www.robocylinder.de

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.

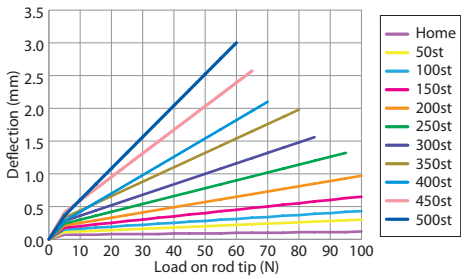


*4 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*5 The cable joint (connector) within the dotted line is not splash-proofed.
*6 Part of the gasket lifts up, but this does not affect splash-proof performance.
*7 Hex nut x 1 pc., square nut x 8 pcs. included.

■ RCP6SW-RRA7C



■ Rod Deflection of RCP6(S)W-RRA7C (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L	RCP6W	w/o brake	405.5	455.5	505.5	555.5	605.5	655.5	705.5	755.5	805.5	855.5
		w/ brake	455.5	505.5	555.5	605.5	655.5	705.5	755.5	805.5	855.5	905.5
	RCP6SW	w/o brake	430.5	480.5	530.5	580.5	630.5	680.5	730.5	780.5	830.5	880.5
		w/ brake	480.5	530.5	580.5	630.5	680.5	730.5	780.5	830.5	880.5	930.5
A			266.5	316.5	366.5	416.5	466.5	516.5	566.5	616.5	666.5	716.5
B			199.5	249.5	299.5	349.5	399.5	449.5	499.5	549.5	599.5	649.5
C			50	100	150	200	250	300	350	400	450	500
Allowable static load on rod tip (N)			175	147	126	111	98.6	88.7	80.6	73.8	68	63
Allowable dynamic load on rod tip (5,000km life) (N)		Load offset 0mm	75.7	62.6	53.1	46.0	40.5	36.1	32.5	29.4	26.9	24.7
		Load offset 100mm	49.8	45.1	40.5	36.5	33.1	30.2	27.7	25.5	23.6	21.9
Allowable static torque on rod tip (N•m)			17.6	14.7	12.7	11.2	9.9	9.0	8.2	7.5	6.94	6.45
Allowable dynamic torque on rod tip (N•m)			5.0	4.5	4.0	3.6	3.3	3.0	2.8	2.5	2.32	2.16
Mass (kg)	RCP6W	w/o brake	5.0	5.5	6.0	6.5	6.9	7.4	7.9	8.4	8.9	9.4
		w/ brake	5.4	5.9	6.4	6.9	7.3	7.8	8.3	8.8	9.3	9.8
	RCP6SW	w/o brake	5.2	5.7	6.2	6.7	7.1	7.6	8.1	8.6	9.1	9.6
		w/ brake	5.6	6.1	6.6	7.1	7.5	8.0	8.5	9.0	9.5	10.0

* Please refer to P.251 and P.252 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET IRT	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RRA8C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 85 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RRA8C	WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20 :20mm 10 :10mm 5 : 5mm	50:50mm ~ 700:700mm (Every 50mm)	[RCP6W] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

POINT Selection Notes

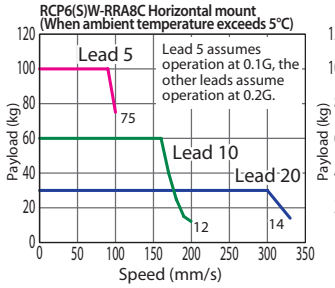
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.236 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
(6) The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.
(7) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

■ Correlation Diagrams of Speed and Payload

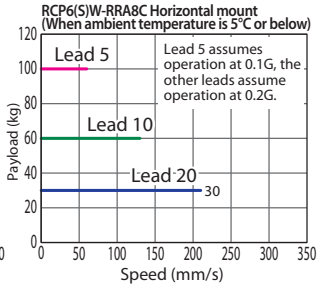
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

PCON/RCON/MSEL/RSEL connected.

RCP6(S)W-RRA8C Horizontal mount (When ambient temperature exceeds 5°C)

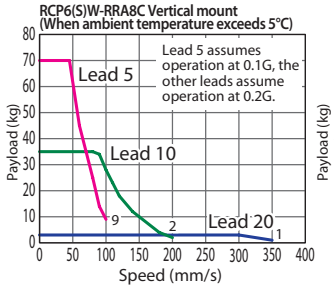


RCP6(S)W-RRA8C Horizontal mount (When ambient temperature is 5°C or below)

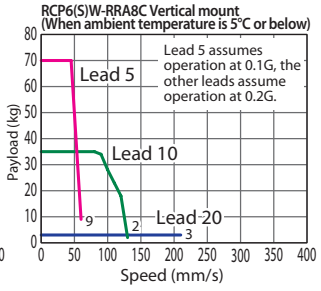


PCON/RCON/MSEL/RSEL connected.

RCP6(S)W-RRA8C Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RRA8C Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-RRA8C-WA-60P-20-①-②-③-④	20	30	3	500	50~700 (Every 50mm)
RCP6(S)W-RRA8C-WA-60P-10-①-②-③-④	10	60	35	1000	
RCP6(S)W-RRA8C-WA-60P-5-①-②-③-④	5	100	70	2000	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50	100~450 (Every 50mm)	500	550	600	650	700
20	280 [210]	350<330> [210]		320 [210]	280 [210]	240 [210]	220 [210]
10	200 [130]		180 [130]	160 [130]	140 [130]	120 [120]	110 [110]
5	100 [60]		90 [60]	80 [60]	70 [60]	60 [60]	55 [55]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

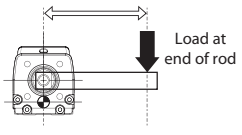
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202

Actuator Specifications

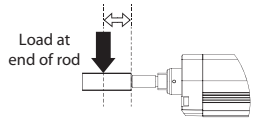
Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



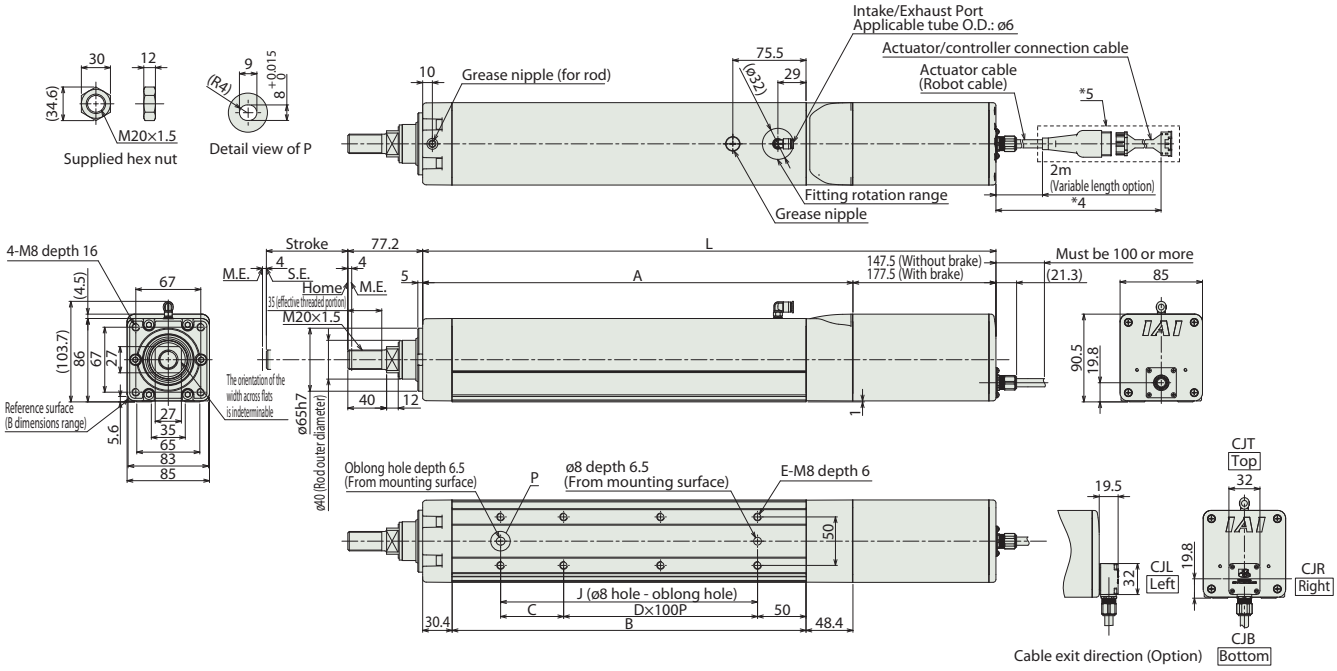
Overhang distance at end of rod (dz: 150mm or less)



Dimensions

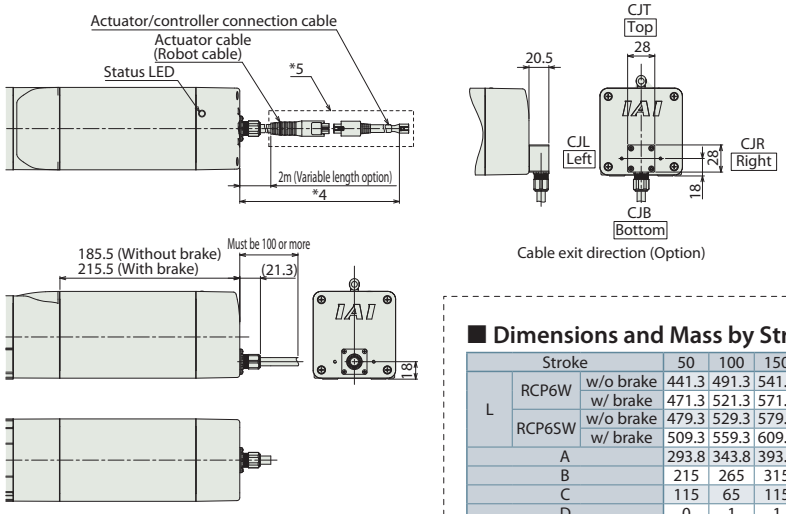
CAD drawings can be downloaded from our website.
www.robocylinder.de

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.

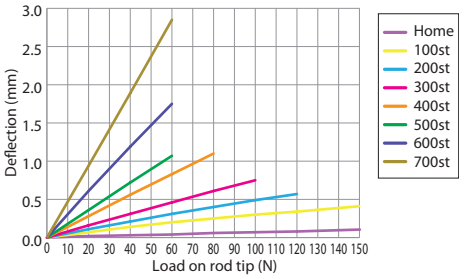


*4 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*5 The cable joint (connector) within the dotted line is not splash-proofed.

■ RCP6SW-RRA8C



■ Rod Deflection of RCP6(S)W-RRA8C (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700
L	RCP6W	w/o brake	441.3	491.3	541.3	591.3	641.3	691.3	741.3	791.3	841.3	891.3	941.3	991.3	1041.3	1091.3
		w/ brake	471.3	521.3	571.3	621.3	671.3	721.3	771.3	821.3	871.3	921.3	971.3	1021.3	1071.3	1121.3
	RCP6SW	w/o brake	479.3	529.3	579.3	629.3	679.3	729.3	779.3	829.3	879.3	929.3	979.3	1029.3	1079.3	1129.3
		w/ brake	509.3	559.3	609.3	659.3	709.3	759.3	809.3	859.3	909.3	959.3	1009.3	1059.3	1109.3	1159.3
A			293.8	343.8	393.8	443.8	493.8	543.8	593.8	643.8	693.8	743.8	793.8	843.8	893.8	943.8
B			215	265	315	365	415	465	515	565	615	665	715	765	815	865
C			115	65	115	65	115	65	115	65	115	65	115	65	115	65
D			0	1	1	2	2	3	3	4	4	5	5	6	6	7
E			4	6	6	8	8	10	10	12	12	14	14	16	16	18
J			115	165	215	265	315	365	415	465	515	565	615	665	715	765
Allowable static load on rod tip (N)			222	186	159	139	124	111	101	92.1	84.7	78.4	72.8	68	63.7	59.8
Allowable dynamic load on rod tip (5,000km life) (N)		Offset 0mm	93.0	76.3	64.7	56.0	49.2	43.8	39.3	35.6	32.4	29.7	27.3	25.2	23.3	21.7
		Offset 100mm	72.0	61.6	53.9	48.0	43.0	38.9	35.4	32.3	29.7	27.4	25.3	23.5	21.9	20.4
Allowable static torque on rod tip (N•m)			22.3	18.7	16.1	14.1	12.6	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.3
Allowable dynamic torque on rod tip (N•m)			7.2	6.2	5.4	4.8	4.3	3.9	3.5	3.2	3.0	2.7	2.5	2.4	2.2	2.0
Mass (kg)	RCP6W	w/o brake	6.8	7.3	7.8	8.3	8.8	9.2	9.7	10.2	10.7	11.2	11.7	12.1	12.6	13.1
		w/ brake	7.4	7.9	8.4	8.9	9.4	9.8	10.3	10.8	11.3	11.8	12.3	12.7	13.2	13.7
	RCP6SW	w/o brake	7.1	7.6	8.1	8.6	9.1	9.5	10.0	10.5	11.0	11.5	12.0	12.4	12.9	13.4
		w/ brake	7.7	8.2	8.7	9.2	9.7	10.1	10.6	11.1	11.6	12.1	12.6	13.0	13.5	14.0

* Please refer to P.252 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)W-RRA4R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 45* mm | 24V Pulse Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

— RRA4R — WA — 35P — [ ] — [ ] — [ ] — [ ] — [ ] — [ ]

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller		WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50:50mm ~ 400:400mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify MT when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

POINT Selection Notes

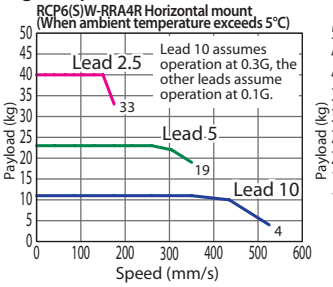
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.237 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

Correlation Diagrams of Speed and Payload

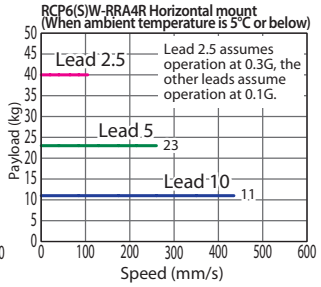
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)W-RRA4R Horizontal mount (When ambient temperature exceeds 5°C)

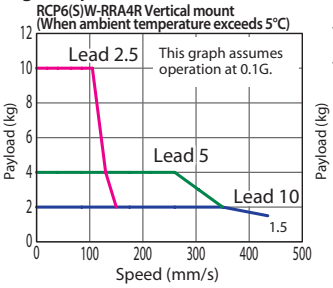


RCP6(S)W-RRA4R Horizontal mount (When ambient temperature is 5°C or below)

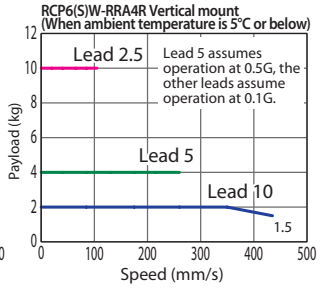


High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)W-RRA4R Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RRA4R Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-RRA4R-WA-35P-10-①-②-③-④	10	11	2	77	50~400 (Every 50mm)
RCP6(S)W-RRA4R-WA-35P-5-①-②-③-④	5	23	4	155	
RCP6(S)W-RRA4R-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~350 (Every 50mm)	400
10	525 <435> [435]	
5	350 [260]	340 [260]
2.5	175 <150> [105]	170 <150> [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Flange)	**FFA**	See P.197
Tip adapter (Internal thread)	**NFA**	See P.201
Tip adapter (Keyway)	**KFA**	See P.201
Motor side-mounted on top	**MT**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

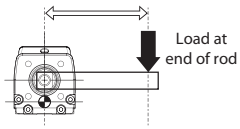
* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Actuator Specifications

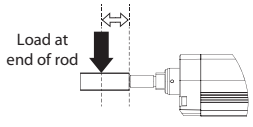
Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



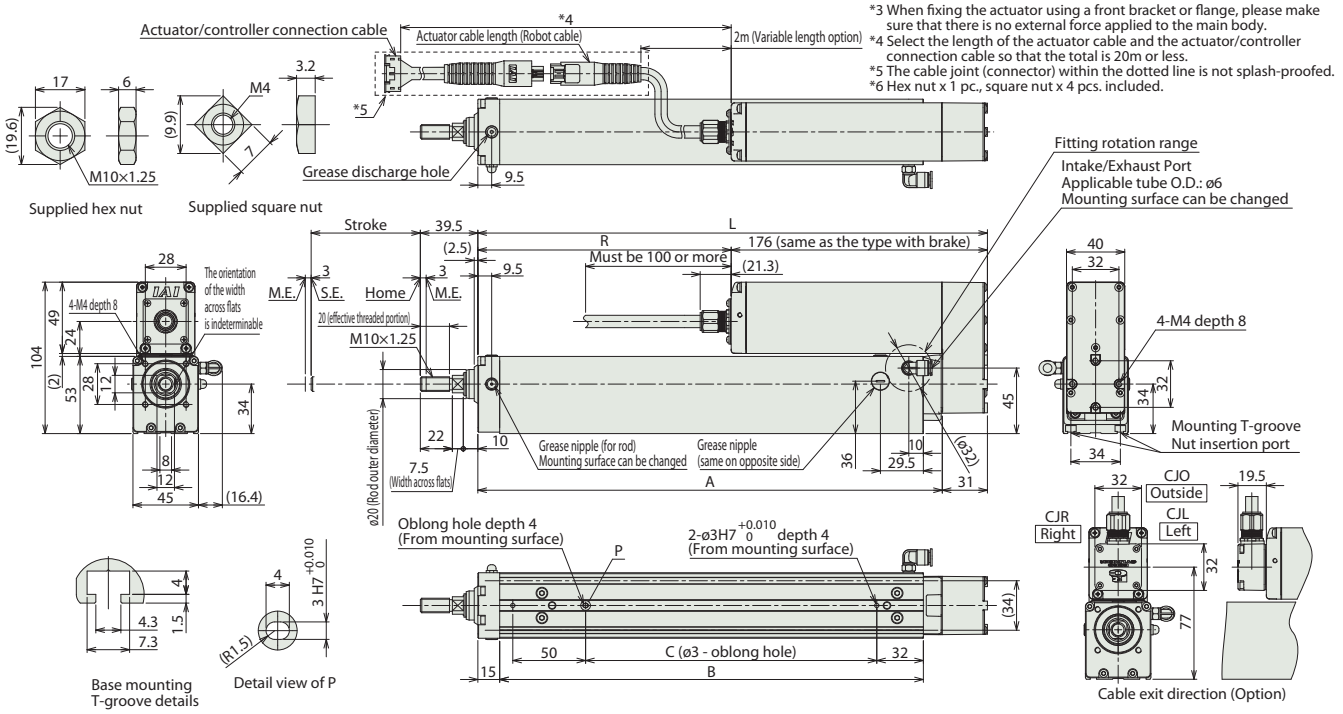
Overhang distance at end of rod (dz: 100mm or less)



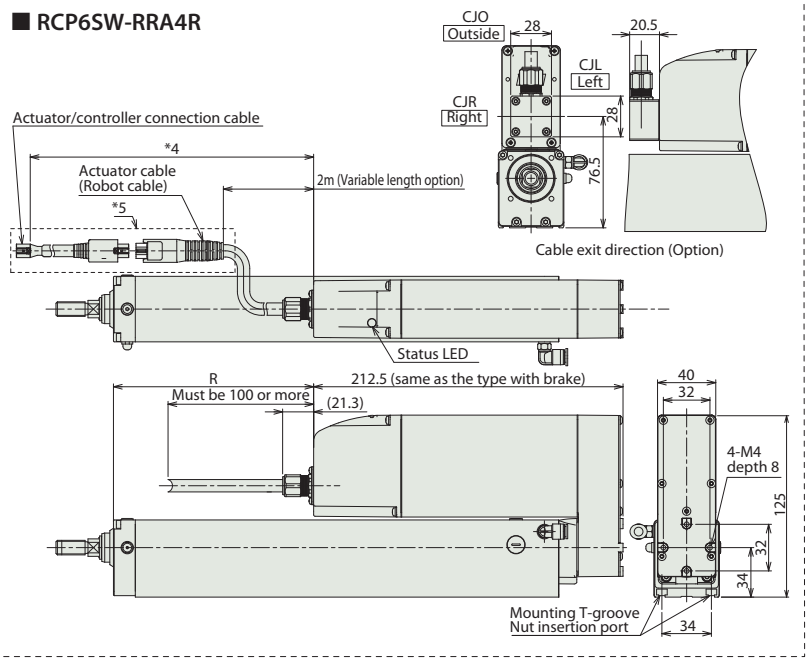
Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

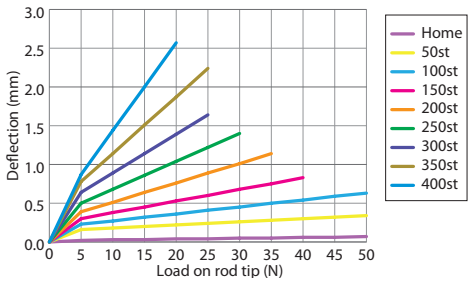
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.
*4 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*5 The cable joint (connector) within the dotted line is not splash-proofed.
*6 Hex nut x 1 pc., square nut x 4 pcs. included.



■ RCP6SW-RRA4R



■ Rod Deflection of RCP6(S)W-RRA4R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400
L		200	250	300	350	400	450	500	550
A		169	219	269	319	369	419	469	519
B		141	191	241	291	341	391	441	491
C		50	100	150	200	250	300	350	400
R	RCP6W	24	74	124	174	224	274	324	374
	RCP6SW	-12.5	37.5	87.5	137.5	187.5	237.5	287.5	337.5
Allowable static load on rod tip (N)		63.4	50.7	42.1	36	31.3	27.6	24.6	22.2
Allowable dynamic load on rod tip (5,000km life) (N)	Offset 0mm	28.9	22.2	17.9	14.8	12.6	10.8	9.4	8.2
	Offset 100mm	17.9	15.5	13.4	11.6	10.2	9.0	8.0	7.1
Allowable static torque on rod tip (N•m)		6.4	5.1	4.3	3.7	3.2	2.9	2.6	2.3
Allowable dynamic torque on rod tip (N•m)		1.7	1.5	1.3	1.1	1.0	0.9	0.7	0.7
Mass (kg)	RCP6W w/o brake	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0
	RCP6W w/ brake	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1
	RCP6SW w/o brake	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2
	RCP6SW w/ brake	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.3

* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

* Please refer to P.251 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RRA6R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 65* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RRA6R	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12 :12mm 6 : 6mm 3 : 3mm	50:50mm ~ 400:400mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify MT when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

POINT Selection Notes

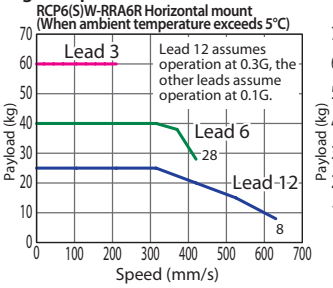
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.237 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

■ Correlation Diagrams of Speed and Payload

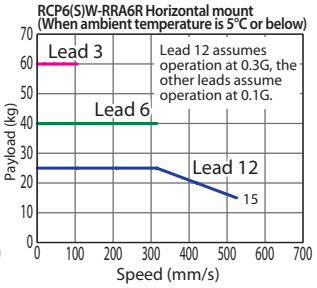
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)W-RRA6R Horizontal mount (When ambient temperature exceeds 5°C)

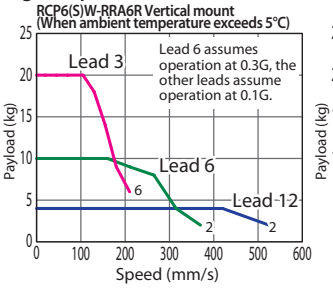


RCP6(S)W-RRA6R Horizontal mount (When ambient temperature is 5°C or below)

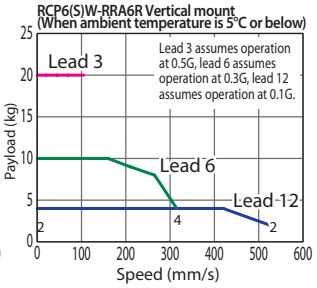


High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)W-RRA6R Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RRA6R Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-RRA6R-WA-42P-12-①-②-③-④	12	25	4	93	50~400 (Every 50mm)
RCP6(S)W-RRA6R-WA-42P-6-①-②-③-④	6	40	10	185	
RCP6(S)W-RRA6R-WA-42P-3-①-②-③-④	3	60	20	370	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~400 (Every 50mm)
12	630 <525> [525]
6	420 <370> [315]
3	210 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Flange)	**FFA**	See P.197
Tip adapter (Internal thread)	**NFA**	See P.201
Tip adapter (Keyway)	**KFA**	See P.201
Motor side-mounted on top	**MT**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

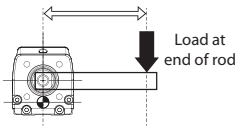
* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Actuator Specifications

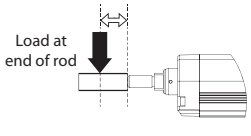
Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)

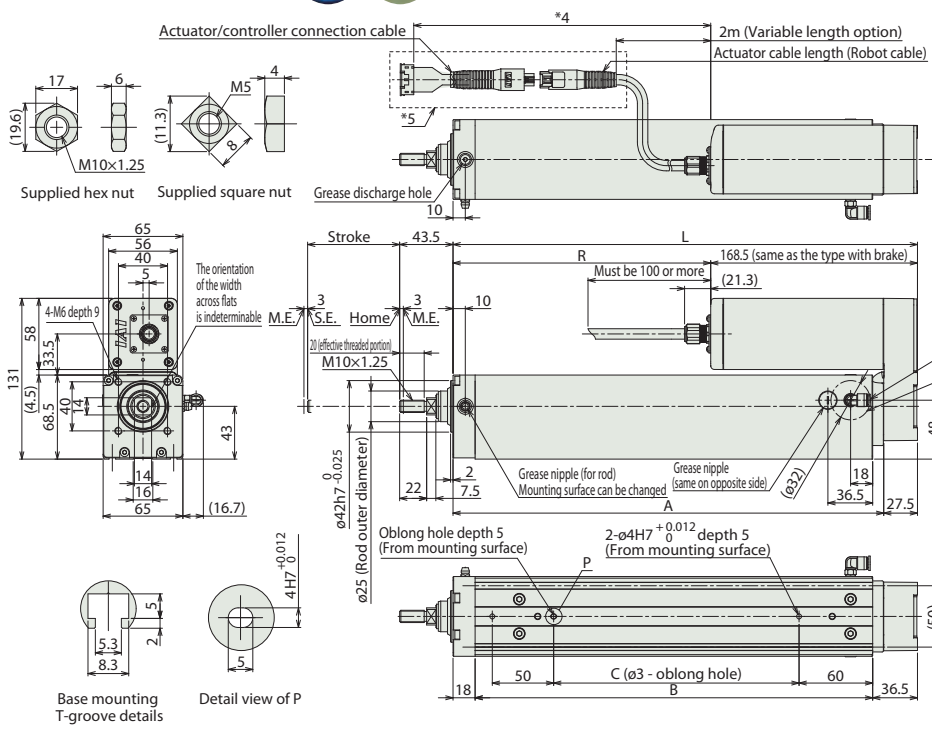


Overhang distance at end of rod (dz: 100mm or less)



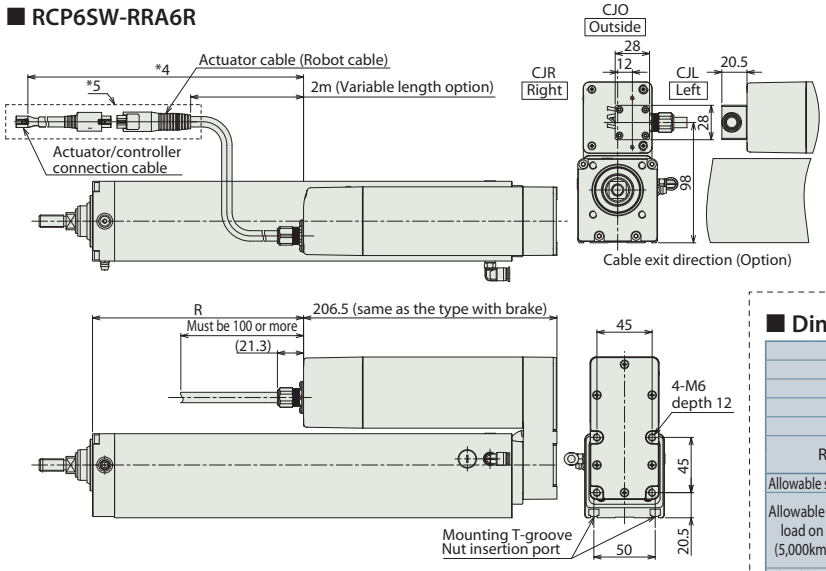
Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

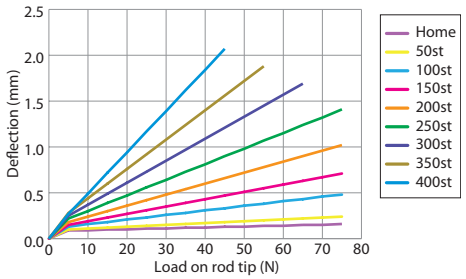


*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E. M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.
*4 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*5 The cable joint (connector) within the dotted line is not splash-proofed.
*6 Hex nut x 1 pc., square nut x 4 pcs. included.

■ RCP6SW-RRA6R



■ Rod Deflection of RCP6(S)W-RRA6R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400
L			228.5	278.5	328.5	378.5	428.5	478.5	528.5	578.5
A			201	251	301	351	401	451	501	551
B			174	224	274	324	374	424	474	524
C			50	100	150	200	250	300	350	400
R	RCP6W		60	110	160	210	260	310	360	410
	RCP6SW		22	72	122	172	222	272	322	372
Allowable static load on rod tip (N)			144	117	99.0	85.4	75.0	66.7	59.9	54.3
Allowable dynamic load on rod tip (5,000km life) (N)		Offset 0mm	58.1	46.4	38.3	32.4	27.9	24.4	21.5	19.2
		Offset 100mm	38.8	34.0	29.7	26.2	23.2	20.8	18.7	16.8
Allowable static torque on rod tip (N•m)			14.5	11.8	10.0	8.7	7.6	6.8	6.2	5.6
Allowable dynamic torque on rod tip (N•m)			3.8	3.3	2.9	2.6	2.3	2.0	1.8	1.6
Mass (kg)	RCP6W	w/o brake	3.1	3.4	3.8	4.2	4.5	4.9	5.2	5.6
		w/ brake	3.2	3.5	3.9	4.3	4.6	5.0	5.3	5.7
	RCP6SW	w/o brake	3.3	3.6	4.0	4.4	4.7	5.1	5.4	5.8
		w/ brake	3.4	3.7	4.1	4.5	4.8	5.2	5.5	5.9

* Please refer to P.251 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RRA7R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 78* mm | 24v Pulse Motor

■ Model Specification Items

— RRA7R — WA — 56P — [ ] — [ ] — [ ] — [ ] — [ ] — [ ]

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller		WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 :16mm 8 : 8mm 4 : 4mm	50:50mm ~ 500:500mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify MT when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

POINT Selection Notes

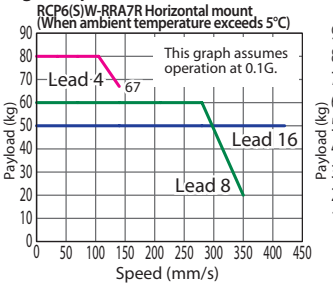
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.238 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

■ Correlation Diagrams of Speed and Payload

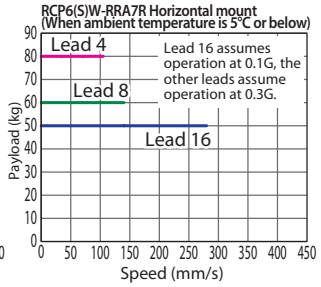
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)W-RRA7R Horizontal mount (When ambient temperature exceeds 5°C)

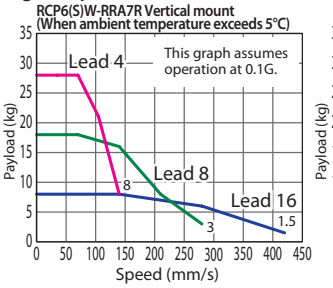


RCP6(S)W-RRA7R Horizontal mount (When ambient temperature is 5°C or below)

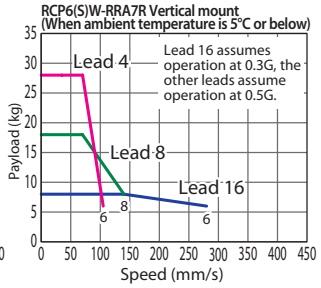


High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.

RCP6(S)W-RRA7R Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RRA7R Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-RRA7R-WA-56P-16-①-②-③-④	16	50	8	273	50~500 (Every 50mm)
RCP6(S)W-RRA7R-WA-56P-8-①-②-③-④	8	60	18	547	
RCP6(S)W-RRA7R-WA-56P-4-①-②-③-④	4	80	28	1094	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~500 (Every 50mm)
16	420 [280]
8	350 <280> [140]
4	140 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Flange)	**FFA**	See P.197
Tip adapter (Internal thread)	**NFA**	See P.201
Tip adapter (Keyway)	**KFA**	See P.201
Motor side-mounted on top	**MT**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

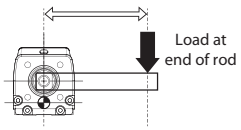
* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Actuator Specifications

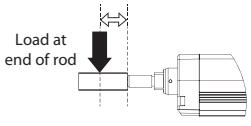
Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)

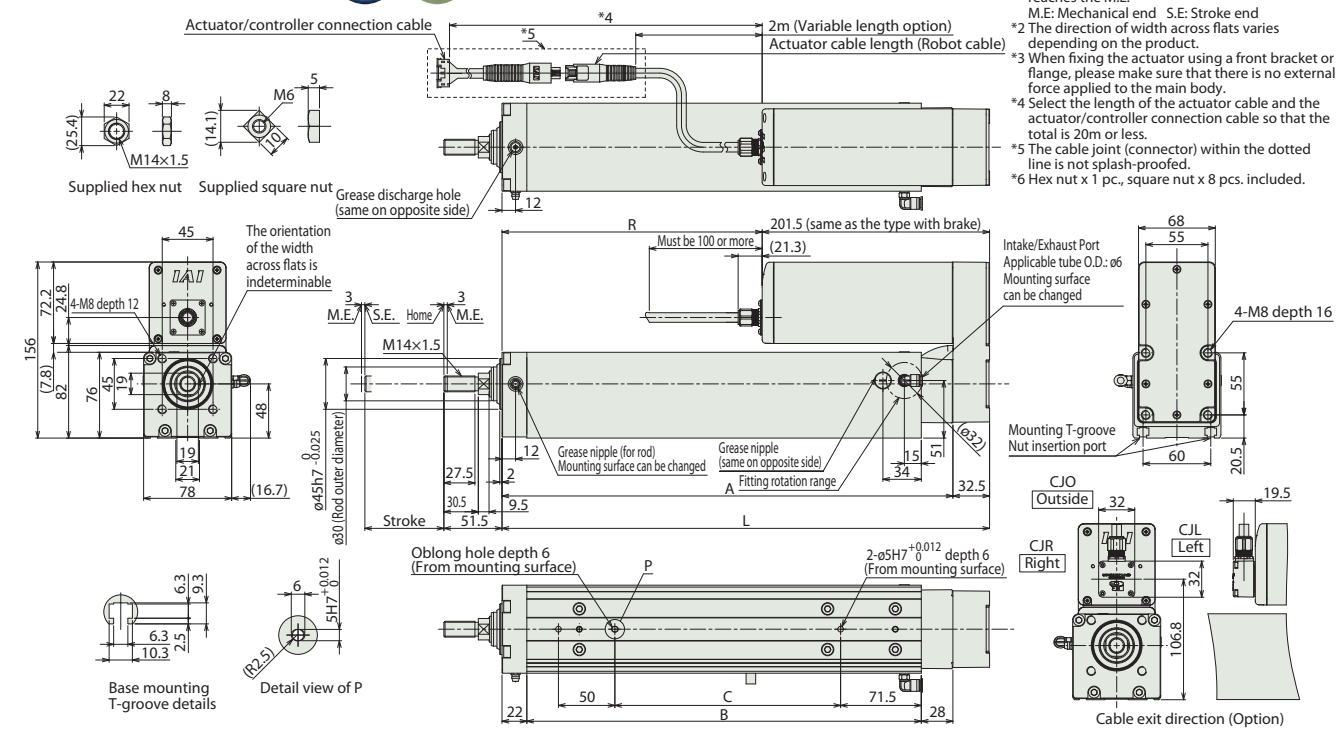


Overhang distance at end of rod (dz: 150mm or less)



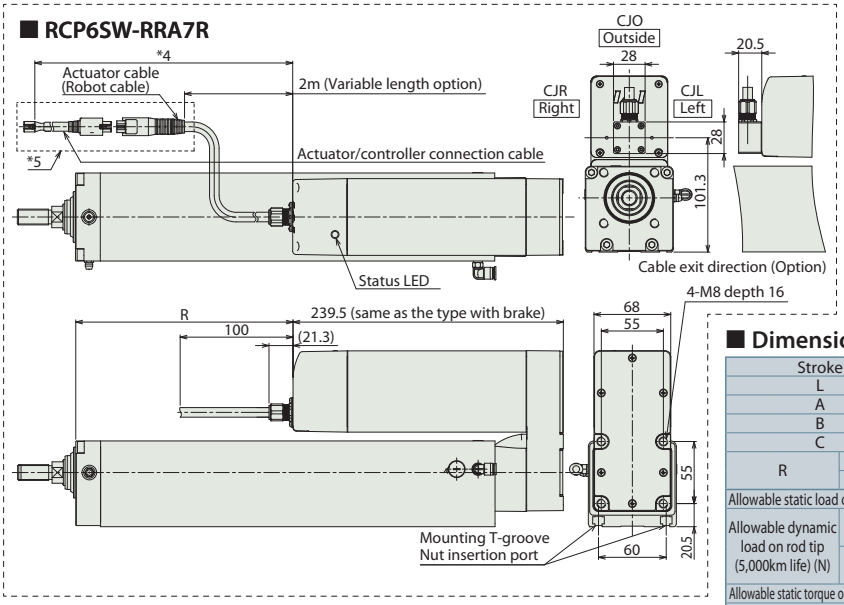
Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

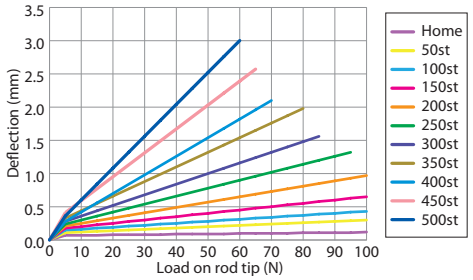


*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.
*4 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*5 The cable joint (connector) within the dotted line is not splash-proofed.
*6 Hex nut x 1 pc., square nut x 8 pcs. included.

■ RCP6SW-RRA7R



■ Rod Deflection of RCP6(S)W-RRA7R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500
L		282	332	382	432	482	532	582	632	682	732
A		249.5	299.5	349.5	399.5	449.5	499.5	549.5	599.5	649.5	699.5
B		199.5	249.5	299.5	349.5	399.5	449.5	499.5	549.5	599.5	649.5
C		50	100	150	200	250	300	350	400	450	500
R	RCP6W	80.5	130.5	180.5	230.5	280.5	330.5	380.5	430.5	480.5	530.5
	RCP6SW	42.5	92.5	142.5	192.5	242.5	292.5	342.5	392.5	442.5	492.5
Allowable static load on rod tip (N)		175	147	126	111	98.6	88.7	80.6	73.8	68.0	63.0
Allowable dynamic load on rod tip (5,000km life) (N)	Offset 0mm	75.7	62.6	53.1	46.0	40.5	36.1	32.5	29.4	26.9	24.7
	Offset 100mm	49.8	45.1	40.5	36.5	33.1	30.2	27.7	25.5	23.6	21.9
Allowable static torque on rod tip (N•m)		17.6	14.7	12.7	11.2	9.9	9.0	8.2	7.5	6.94	6.45
Allowable dynamic torque on rod tip (N•m)		5.0	4.5	4.0	3.6	3.3	3.0	2.8	2.5	2.32	2.16
Mass (kg)	RCP6W w/o brake	5.6	6.1	6.6	7.1	7.5	8.0	8.5	9.0	9.5	10.0
	RCP6W w/ brake	5.7	6.2	6.7	7.2	7.6	8.1	8.6	9.1	9.6	10.1
	RCP6SW w/o brake	5.8	6.3	6.8	7.3	7.7	8.2	8.7	9.2	9.7	10.2
	RCP6SW w/ brake	5.9	6.4	6.9	7.4	7.8	8.3	8.8	9.3	9.8	10.3

* Please refer to P.251 and P.252 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET IRT	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RRA8R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 85* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RRA8R	WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20 :20mm 10 :10mm 5 : 5mm	50:50mm ~ 700:700mm (Every 50mm)	[RCP6W] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

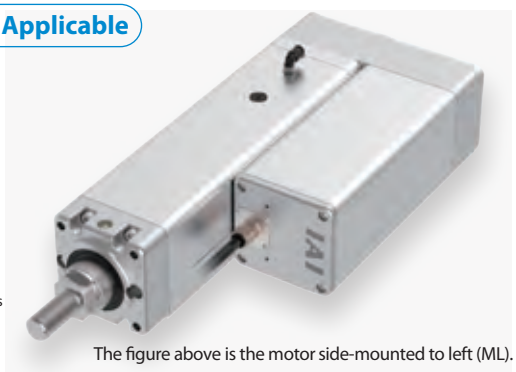
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

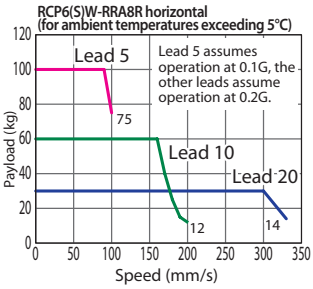
POINT Selection Notes

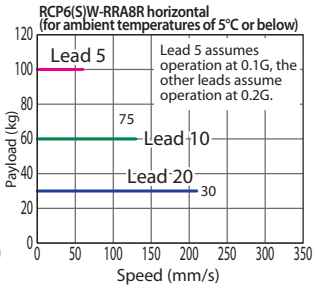
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.238 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
(6) The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.
(7) Install the cable joint connector in locations where it will not be exposed to water, as it is not splash-proofed.

■ Correlation Diagrams of Speed and Payload

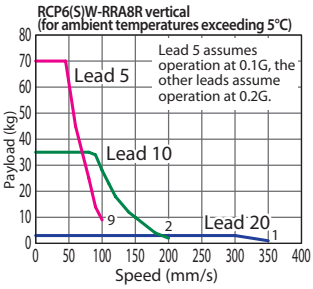
If the ambient temperature is 5℃ or below, the speed will be lower than when it exceeds 5℃.

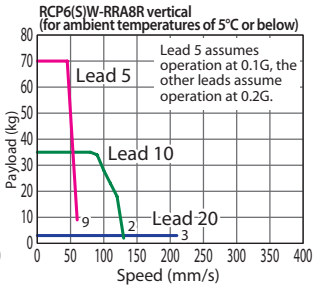
PCON/RCON/MSEL/RSEL connected.





PCON/RCON/MSEL/RSEL connected.





Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-RRA8R-WA-60P-20-①-②-③-④	20	30	3	500	50~700 (Every 50mm)
RCP6(S)W-RRA8R-WA-60P-10-①-②-③-④	10	60	35	1000	
RCP6(S)W-RRA8R-WA-60P-5-①-②-③-④	5	100	70	2000	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50	100~450 (Every 50mm)	500	550	600	650	700
20	280 [210]	350 <330> [210]		320 [210]	280 [210]	240 [210]	220 [210]
10	200 [130]		180 [130]	160 [130]	140 [130]	120 [120]	110 [110]
5	100 [60]		90 [60]	80 [60]	70 [60]	60 [60]	55 [55]

Values in brackets < > are for vertical use.
Values in brackets [ ] are for ambient temperatures of 5℃ or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Tip adapter (Internal thread)	**NFA**	See P.201
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Non-motor end specification	**NM**	See P.202

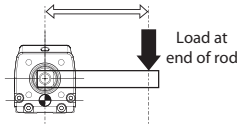
* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Actuator Specifications

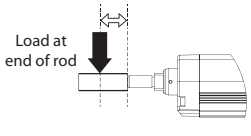
Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)

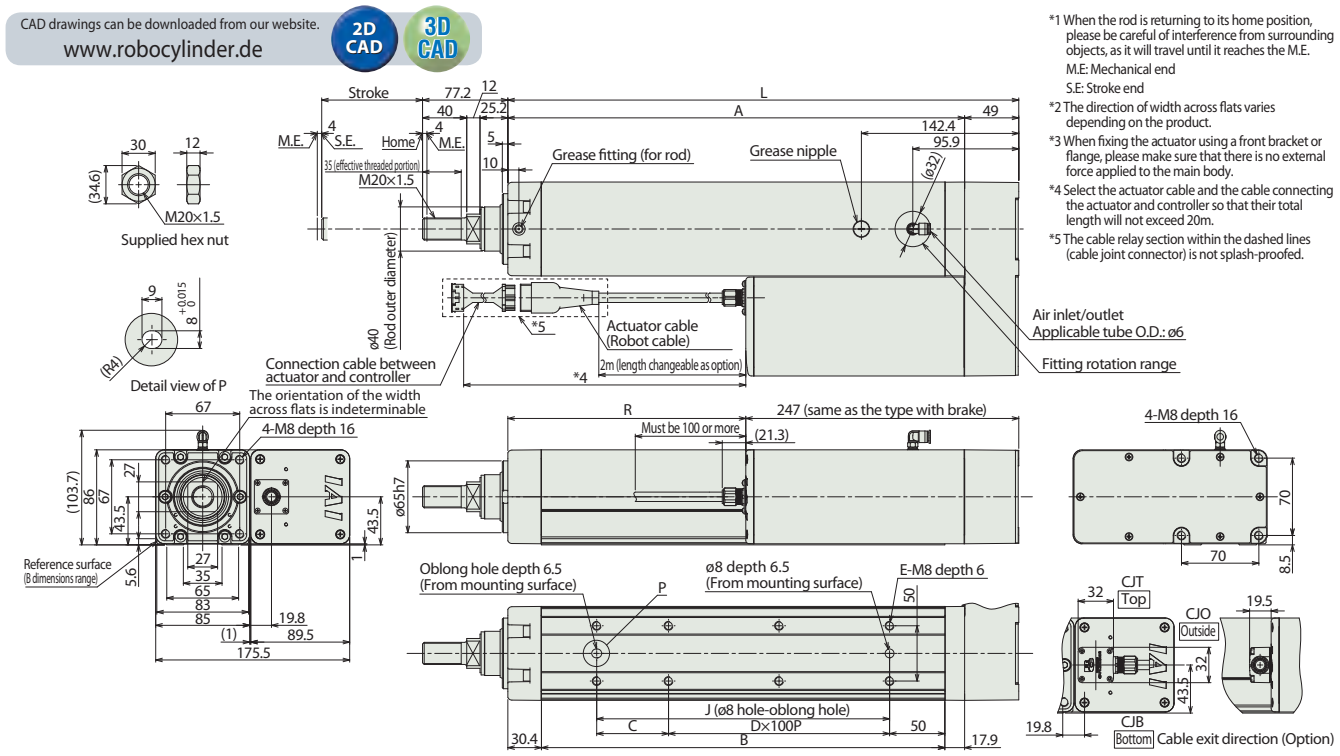


Overhang distance at end of rod (dz: 150mm or less)



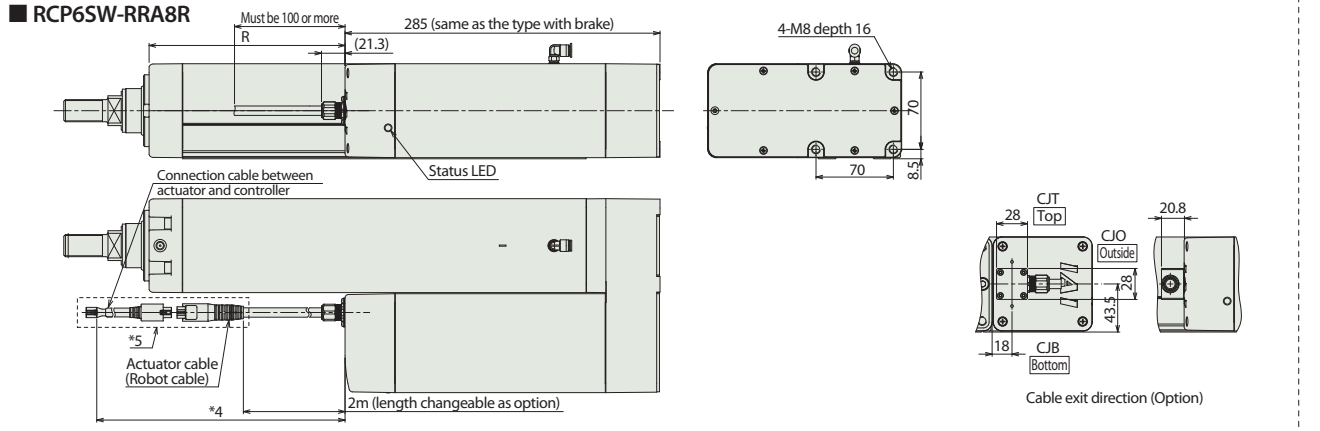
Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

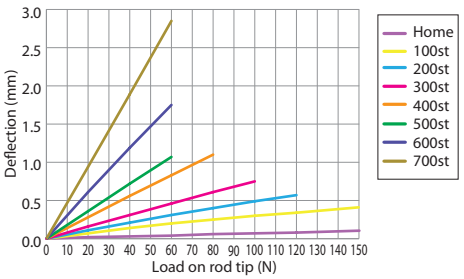


*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end
S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.
*4 Select the actuator cable and the cable connecting the actuator and controller so that their total length will not exceed 20m.
*5 The cable relay section within the dashed lines (cable joint connector) is not splash-proofed.

■ RCP6SW-RRA8R



■ Rod Deflection of RCP6(S)W-RRA8R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700
L		312.3	362.3	412.3	462.3	512.3	562.3	612.3	662.3	712.3	762.3	812.3	862.3	912.3	962.3
A		263.3	313.3	363.3	413.3	463.3	513.3	563.3	613.3	663.3	713.3	763.3	813.3	863.3	913.3
B		215	265	315	365	415	465	515	565	615	665	715	765	815	865
C		115	65	115	65	115	65	115	65	115	65	115	65	115	65
D		0	1	1	2	2	3	3	4	4	5	5	6	6	7
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18
J		115	165	215	265	315	365	415	465	515	565	615	665	715	765
R	RCP6W	65.3	115.3	165.3	215.3	265.3	315.3	365.3	415.3	465.3	515.3	565.3	615.3	665.3	715.3
	RCP6SW	27.3	77.3	127.3	177.3	227.3	277.3	327.3	377.3	427.3	477.3	527.3	577.3	627.3	677.3
Allowable static load on rod tip (N)		222	186	159	139	124	111	101	92.1	84.7	78.4	72.8	68.0	63.7	59.8
Allowable dynamic load on rod tip (5,000km life) (N)	Load offset 0mm	93.0	76.3	64.7	56.0	49.2	43.8	39.3	35.6	32.4	29.7	27.3	25.2	23.3	21.7
	Load offset 100mm	72.0	61.6	53.9	48.0	43.0	38.9	35.4	32.3	29.7	27.4	25.3	23.5	21.9	20.4
Allowable static torque on rod tip (N•m)		22.3	18.7	16.1	14.1	12.6	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.3
Allowable dynamic torque on rod tip (N•m)		7.2	6.2	5.4	4.8	4.3	3.9	3.5	3.2	3.0	2.7	2.5	2.4	2.2	2.0
Mass (kg)	RCP6W w/o brake	8.0	8.5	9.0	9.5	10.0	10.4	10.9	11.4	11.9	12.4	12.9	13.3	13.8	14.3
	RCP6W w/ brake	8.3	8.8	9.3	9.8	10.3	10.7	11.2	11.7	12.2	12.7	13.2	13.6	14.1	14.6
	RCP6SW w/o brake	8.4	8.9	9.4	9.9	10.4	10.8	11.3	11.8	12.3	12.8	13.3	13.7	14.2	14.7
	RCP6SW w/ brake	8.6	9.1	9.6	10.1	10.6	11.0	11.5	12.0	12.5	13.0	13.5	13.9	14.4	14.9

* Please refer to P.252 for part materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)W-WRA10C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 100 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA10C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50:50mm ~ 500:500mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.20 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

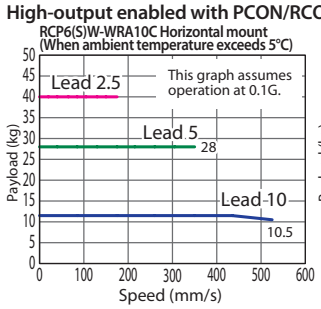
POINT Selection Notes

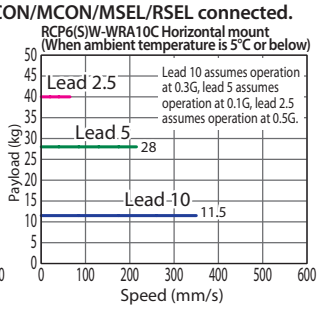
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.239 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.
(6) The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

■ Correlation Diagrams of Speed and Payload

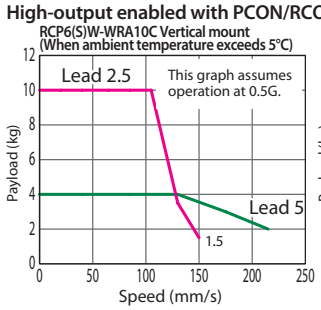
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

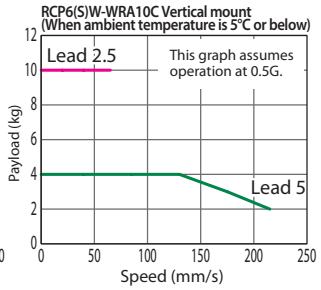
High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-WRA10C-WA-35P-10-①-②-③-④	10	11.5	–	77	50~500 (Every 50mm)
RCP6(S)W-WRA10C-WA-35P-5-①-②-③-④	5	28	4	155	
RCP6(S)W-WRA10C-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~400 (Every 50mm)	450	500
10	525 [350]		490 [350]
5	350 <215> [215]	290 <215> [215]	240 <215> [215]
2.5	175 <150> [65]	145 [65]	120 [65]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

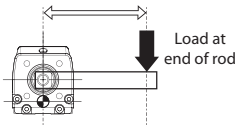
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Non-motor end specification	**NM**	See P.202
T-slot nut bar (Left)	**NTBL**	See P.202
T-slot nut bar (Right)	**NTBR**	See P.202

Actuator Specifications

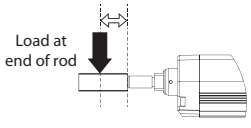
Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



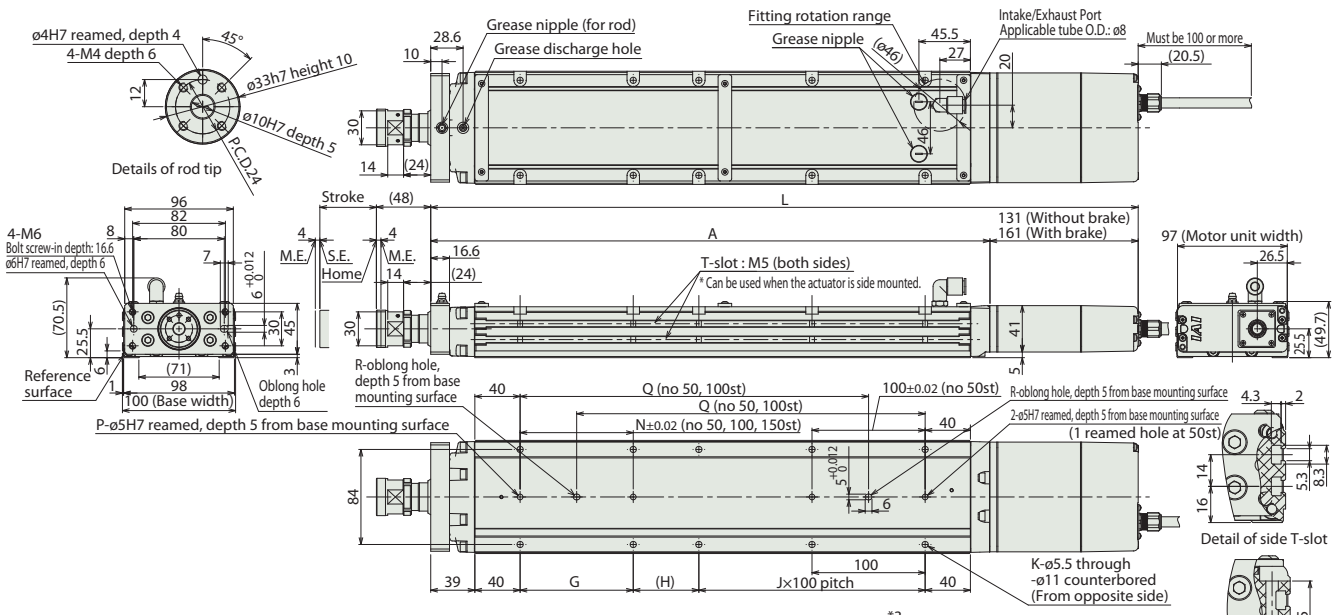
Overhang distance at end of rod (dz: 100mm or less)



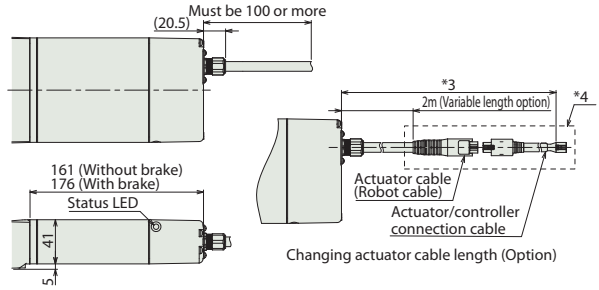
Dimensions

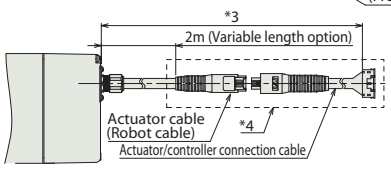
CAD drawings can be downloaded from our website.
www.robocylinder.de

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.

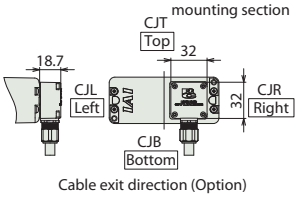


■ RCP6SW-WRA10C

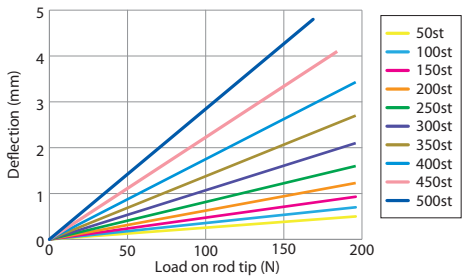




*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.



■ Rod Deflection of RCP6(S)W-WRA10C (Reference Values)



* Please refer to P.253 for more information on component materials.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L	RCP6W	w/o brake	375.3	425.3	475.3	525.3	575.3	625.3	675.3	725.3	775.3	825.3
		w/ brake	405.3	455.3	505.3	555.3	605.3	655.3	705.3	755.3	805.3	855.3
	RCP6SW	w/o brake	405.3	455.3	505.3	555.3	605.3	655.3	705.3	755.3	805.3	855.3
		w/ brake	420.3	470.3	520.3	570.3	620.3	670.3	720.3	770.3	820.3	870.3
A			244.3	294.3	344.3	394.3	444.3	494.3	544.3	594.3	644.3	694.3
G			-	-	-	100	100	100	100	100	100	100
H			108	58	108	58	108	58	108	58	108	58
J			0	1	1	1	1	2	2	3	3	4
K			4	6	6	8	8	10	10	12	12	14
N			-	-	-	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2
Q			-	-	158	208	258	308	358	408	458	508
R			0	0	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			196	196	196	196	196	196	196	196	184	169
Allowable static torque on rod tip (N•m)			10	10	10	10	10	10	10	10	10	10
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	98	98	98	95	85	76	68	62	57	52
		Load offset 100mm	50	50	50	50	50	50	50	50	50	49
	Allowable dynamic torque on rod tip (N•m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.9
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	98	98	91	80	71	63	57	52	47	43
		Load offset 100mm	50	50	50	50	50	50	50	48	44	40
	Allowable dynamic torque on rod tip (N•m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.8	4.4	4.0
Mass (kg)	RCP6W	w/o brake	3.7	4.1	4.6	5.0	5.5	5.9	6.4	6.8	7.3	7.7
		w/ brake	3.9	4.3	4.8	5.2	5.7	6.1	6.6	7.0	7.5	7.9
	RCP6SW	w/o brake	3.8	4.2	4.7	5.1	5.6	6.0	6.5	6.9	7.4	7.8
		w/ brake	4.0	4.4	4.9	5.3	5.8	6.2	6.7	7.1	7.6	8.0

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, POWERLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-WRA12C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 120 mm | 24v Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA12C	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12 :12mm 6 : 6mm 3 : 3mm	50:50mm ~ 500:500mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.20 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

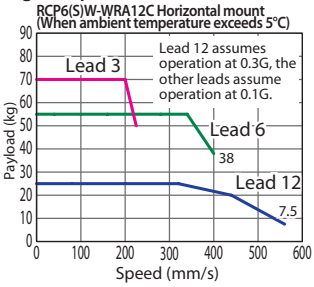
POINT Selection Notes

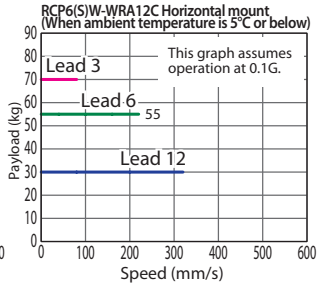
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.239 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.
(7) The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

■ Correlation Diagrams of Speed and Payload

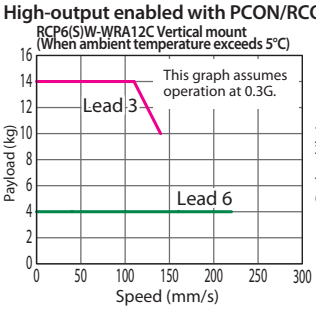
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

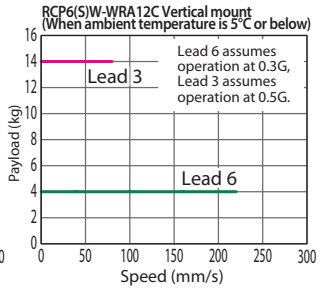
High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-WRA12C-WA-42P-12-①-②-③-④	12	30	–	93	50~500 (Every 50mm)
RCP6(S)W-WRA12C-WA-42P-6-①-②-③-④	6	55	4	185	
RCP6(S)W-WRA12C-WA-42P-3-①-②-③-④	3	70	14	370	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~400 (Every 50mm)	450	500
12	560 [320]		
6	400 <220> [220]		375 <220> [220]
3	225 <140> [80]	220 <140> [80]	185 <140> [80]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

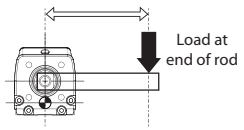
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Non-motor end specification	**NM**	See P.202
T-slot nut bar (Left)	**NTBL**	See P.202
T-slot nut bar (Right)	**NTBR**	See P.202

Actuator Specifications

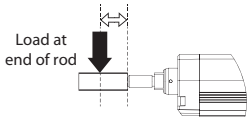
Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



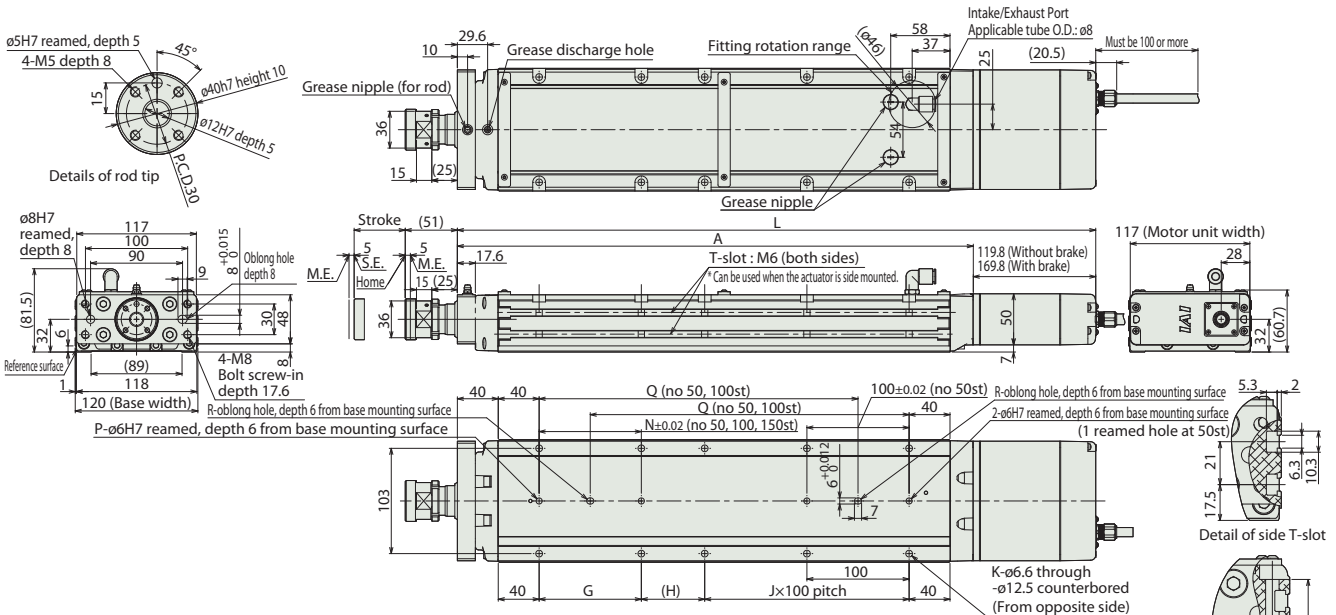
Overhang distance at end of rod (dz: 100mm or less)



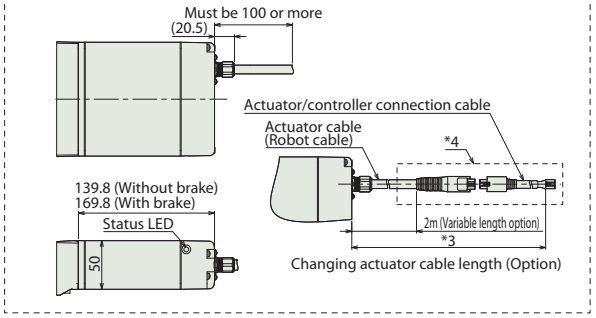
Dimensions

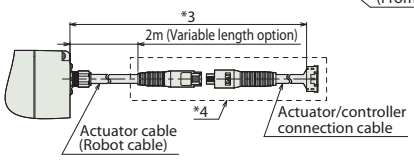
CAD drawings can be downloaded from our website.
www.robocylinder.de

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



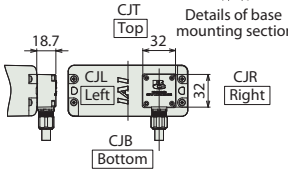
■ RCP6SW-WRA12C



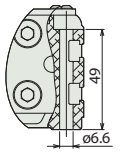


Changing actuator cable length (Option)

*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.

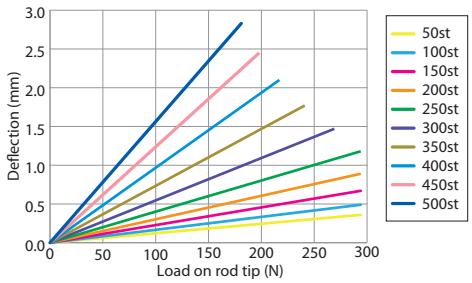


Cable exit direction (Option)



Details of base mounting section

■ Rod Deflection of RCP6(S)W-WRA12C (Reference Values)



* Please refer to P.254 for more information on component materials.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L	RCP6W	w/o brake	374.6	424.6	474.6	524.6	574.6	624.6	674.6	724.6	774.6	824.6
		w/ brake	424.6	474.6	524.6	574.6	624.6	674.6	724.6	774.6	824.6	874.6
	RCP6SW	w/o brake	394.6	444.6	494.6	544.6	594.6	644.6	694.6	744.6	794.6	844.6
		w/ brake	424.6	474.6	524.6	574.6	624.6	674.6	724.6	774.6	824.6	874.6
A			254.8	304.8	354.8	404.8	454.8	504.8	554.8	604.8	654.8	704.8
G			-	-	-	100	100	100	100	100	100	100
H			112	62	112	62	112	62	112	62	112	62
J			0	1	1	1	1	2	2	3	3	4
K			4	6	6	8	8	10	10	12	12	14
N			-	-	-	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2
Q			-	-	162	212	262	312	362	412	462	512
R			0	0	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			294	294	294	294	294	269	241	218	198	181
Allowable static torque on rod tip (N•m)			20	20	20	20	20	20	20	20	20	20
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	147	147	137	121	107	96	87	79	72	65
		Load offset 100mm	100	100	100	100	99	90	82	75	68	63
	Allowable dynamic torque on rod tip (N•m)		10.0	10.0	10.0	10.0	9.9	9.0	8.2	7.5	6.8	6.3
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	147	133	115	101	90	80	72	65	59	54
		Load offset 100mm	100	100	100	92	83	75	68	62	56	51
	Allowable dynamic torque on rod tip (N•m)		10.0	10.0	10.0	9.2	8.3	7.5	6.8	6.2	5.6	5.1
Mass (kg)	RCP6W	w/o brake	5.2	5.8	6.5	7.1	7.8	8.4	9.1	9.7	10.4	11.0
		w/ brake	5.5	6.1	6.8	7.4	8.1	8.7	9.4	10.0	10.7	11.3
	RCP6SW	w/o brake	5.3	5.9	6.6	7.2	7.9	8.5	9.2	9.8	10.5	11.1
		w/ brake	5.6	6.2	6.9	7.5	8.2	8.8	9.5	10.1	10.8	11.4

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, EtherCAT, EtherNet/IP, PROFIBUS, PROFINET, CompoNet	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-WRA14C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 140 mm | 24v Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA14C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 :16mm 8 : 8mm 4 : 4mm	50:50mm ~ 600:600mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.20 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

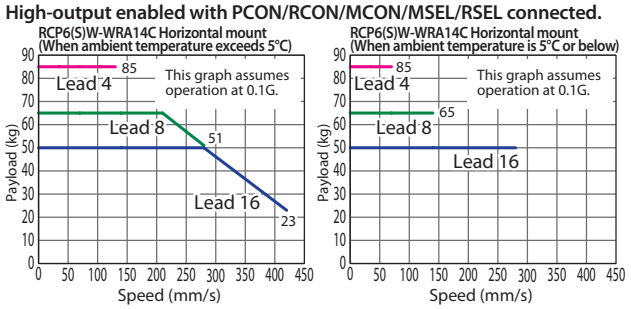
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.240 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.
(7) The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

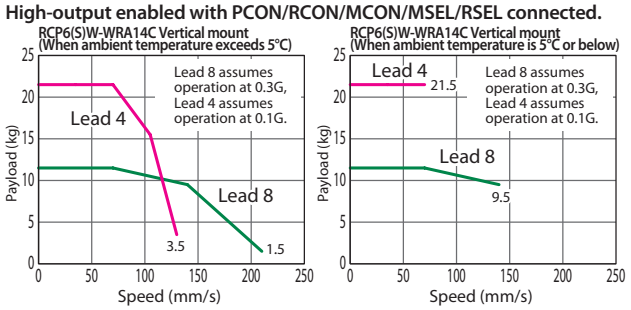
■ Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-WRA14C-WA-56P-16-①-②-③-④	16	50	–	273	50~600 (Every 50mm)
RCP6(S)W-WRA14C-WA-56P-8-①-②-③-④	8	65	11.5	547	
RCP6(S)W-WRA14C-WA-56P-4-①-②-③-④	4	85	21.5	1094	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~600 (Every 50mm)
16	420 [280]
8	280 <210> [140]
4	130 [70]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

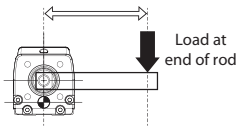
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Non-motor end specification	**NM**	See P.202
T-slot nut bar (Left)	**NTBL**	See P.202
T-slot nut bar (Right)	**NTBR**	See P.202

Actuator Specifications

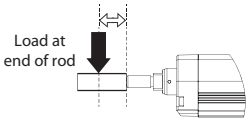
Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx: 150mm or less / dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



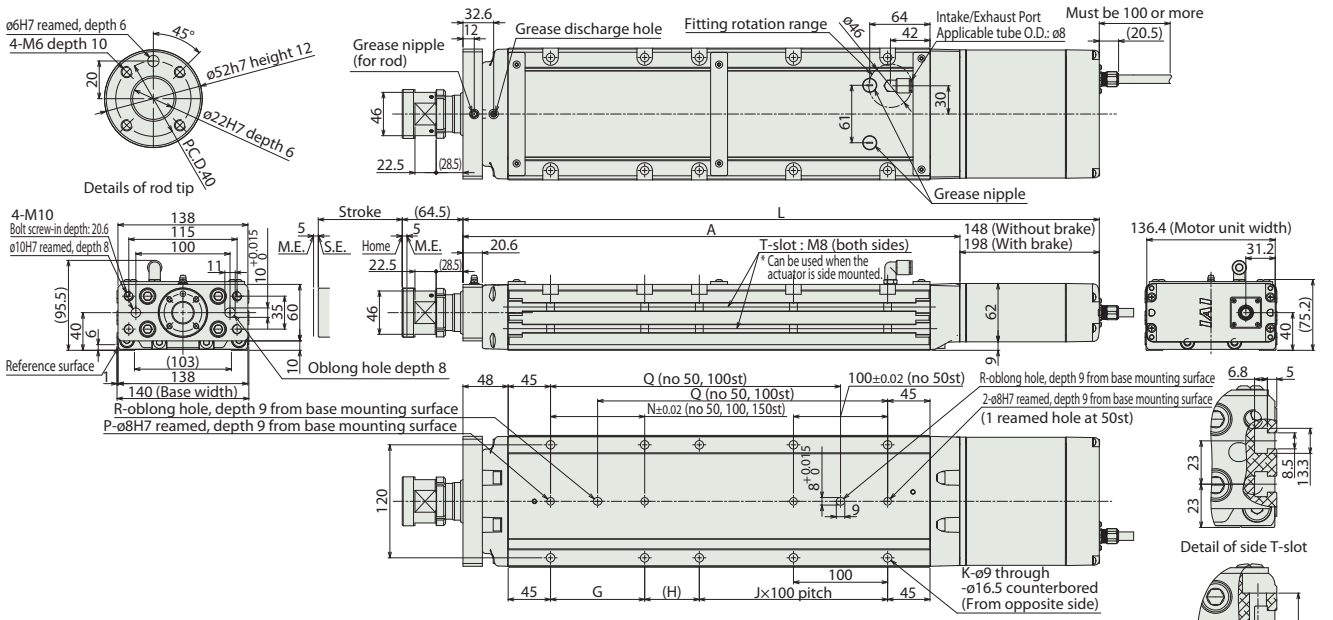
Overhang distance at end of rod (dz: 100mm or less)



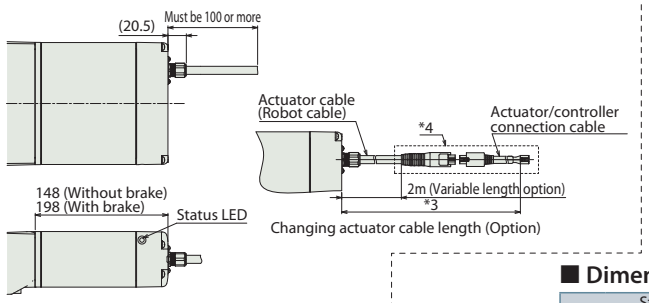
Dimensions

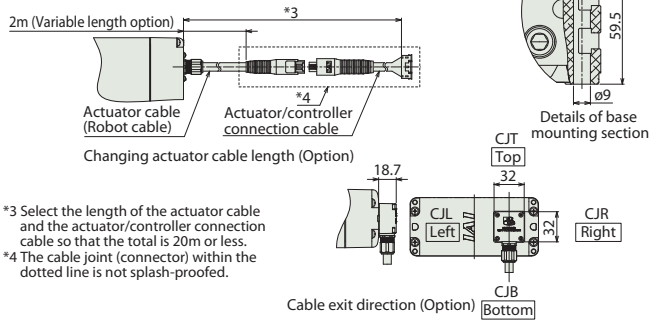
CAD drawings can be downloaded from our website.
www.robocylinder.de

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



■ RCP6SW-WRA14C



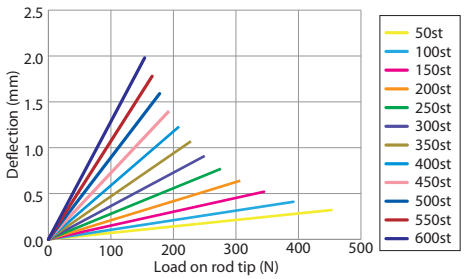


*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600
L		w/o brake	425.8	475.8	525.8	575.8	625.8	675.8	725.8	775.8	825.8	875.8	925.8	975.8
		w/ brake	475.8	525.8	575.8	625.8	675.8	725.8	775.8	825.8	875.8	925.8	975.8	1025.8
A			277.8	327.8	377.8	427.8	477.8	527.8	577.8	627.8	677.8	727.8	777.8	827.8
G			-	-	-	100	100	100	100	100	100	100	100	100
H			108	58	108	58	108	58	108	58	108	58	108	58
J			0	1	1	1	1	2	2	3	3	4	4	5
K			4	6	6	8	8	10	10	12	12	14	14	16
N			-	-	-	100	100	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2	2	2
Q			-	-	158	208	258	308	358	408	458	508	558	608
R			0	0	1	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			454	392	345	307	276	251	229	210	193	179	166	154
Allowable static torque on rod tip (N•m)			30	30	30	30	30	30	30	30	30	30	30	30
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	199	170	148	131	117	104	94	85	77	70	64	58
		Load offset 150mm	100	100	100	100	100	95	87	79	72	66	60	55
	Allowable dynamic torque on rod tip (N•m)		15.0	15.0	15.0	15.0	15.0	14.3	13.0	11.8	10.8	9.9	9.0	8.2
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	167	143	124	109	97	87	78	70	63	57	51	46
		Load offset 150mm	100	100	100	96	87	79	71	65	59	53	48	44
	Allowable dynamic torque on rod tip (N•m)		15.0	15.0	15.0	14.4	13.0	11.8	10.7	9.7	8.8	8.0	7.3	6.6
Mass (kg)	RCP6W	w/o brake	8.9	9.7	10.6	11.5	12.4	13.3	14.2	15.1	16.0	16.9	17.8	18.7
		w/ brake	9.4	10.2	11.1	12.0	12.9	13.8	14.7	15.6	16.5	17.4	18.3	19.2
	RCP6SW	w/o brake	9.0	9.8	10.7	11.6	12.5	13.4	14.3	15.2	16.1	17.0	17.9	18.8
		w/ brake	9.4	10.2	11.1	12.0	12.9	13.8	14.7	15.6	16.5	17.4	18.3	19.2

■ Rod Deflection of RCP6(S)W-WRA14C (Reference Values)



* Please refer to P.254 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-WRA16C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Straight Motor | Body Width 160 mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA16C	WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20 :20mm 10 :10mm 5 : 5mm	50:50mm ~ 800:800mm (Every 50mm)	[RCP6W] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.20 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

POINT Selection Notes

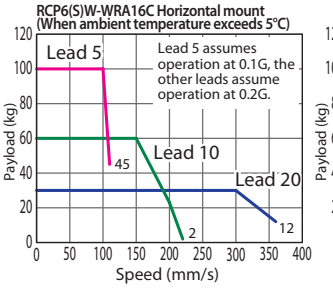
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.240 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
(6) The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P. 206 for more information.
(7) The cable joint connector is not splash-proofed, so it should be located where there is no splash.
(8) The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

■ Correlation Diagrams of Speed and Payload

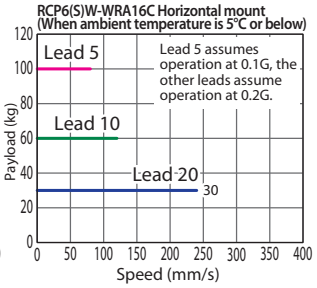
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

PCON/RCON/MSEL/RSEL connected.

RCP6(S)W-WRA16C Horizontal mount (When ambient temperature exceeds 5°C)

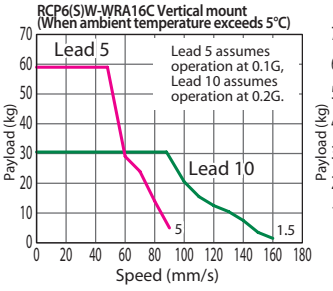


RCP6(S)W-WRA16C Horizontal mount (When ambient temperature is 5°C or below)

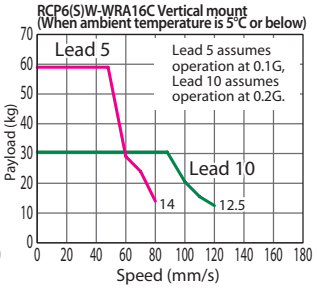


PCON/RCON/MSEL/RSEL connected.

RCP6(S)W-WRA16C Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-WRA16C Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-WRA16C-WA-60P-20-①-②-③-④	20	30	–	500	50~800 (Every 50mm)
RCP6(S)W-WRA16C-WA-60P-10-①-②-③-④	10	60	30.5	1000	
RCP6(S)W-WRA16C-WA-60P-5-①-②-③-④	5	100	59	2000	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50	100~450 (Every 50mm)	500	550	600	650	700	750	800
20	280 [240]	360 [240]		340 [240]	295 [240]	260 [240]	225 [225]	200 [200]	180 [180]
10	220 <160> [120]		195 <160> [120]	165 <160> [120]	145 [120]	125 [120]	110 [110]	100 [100]	90 [90]
5	110 <90> [80]		95 <90> [80]	80 [80]	70 [70]	60 [60]	55 [55]	50 [50]	45 [45]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

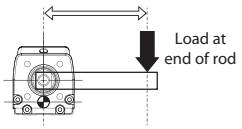
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Non-motor end specification	**NM**	See P.202
T-slot nut bar (Left)	**NTBL**	See P.202
T-slot nut bar (Right)	**NTBR**	See P.202

Actuator Specifications

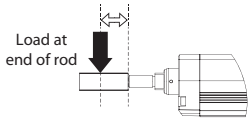
Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø45mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx: 150mm or less / dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



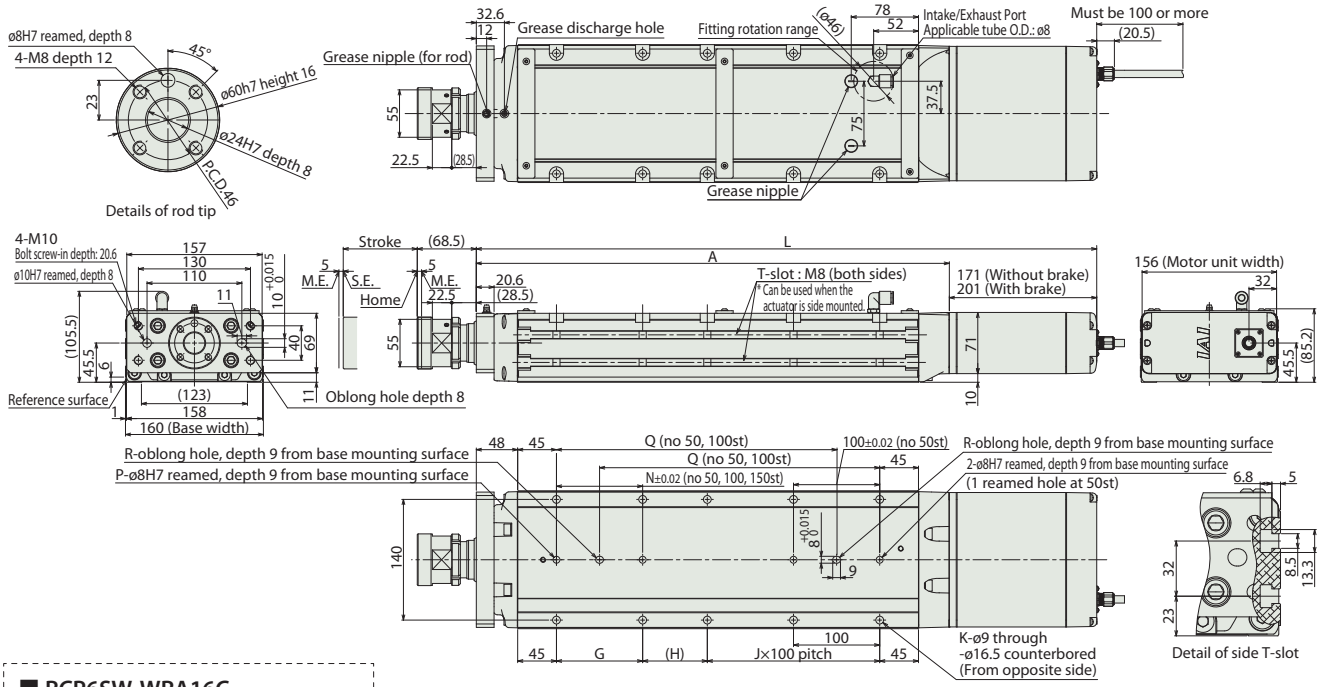
Overhang distance at end of rod (dz: 100mm or less)



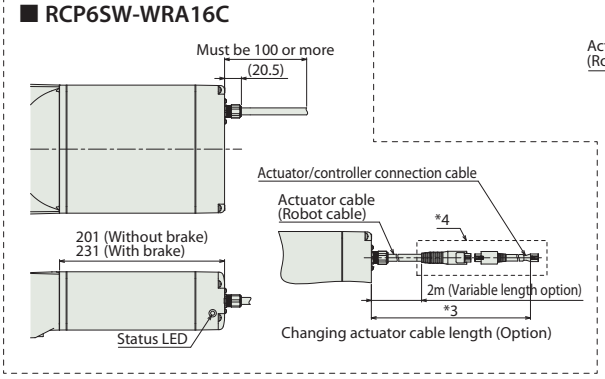
Dimensions

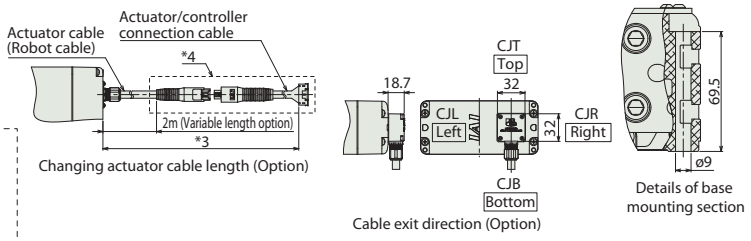
CAD drawings can be downloaded from our website.
www.robocylinder.de

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



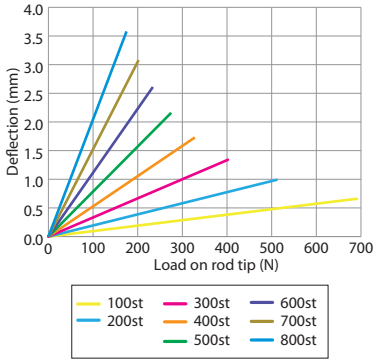
■ RCP6SW-WRA16C





*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.

■ Rod Deflection of RCP6(S) W-WRA16C (Reference Values)



* Please refer to P.254 for more information on component materials.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	RCP6W	w/o brake	469.8	519.8	569.8	619.8	669.8	719.8	769.8	819.8	869.8	919.8	969.8	1019.8	1069.8	1119.8	1169.8	1219.8
		w/ brake	499.8	549.8	599.8	649.8	699.8	749.8	799.8	849.8	899.8	949.8	999.8	1049.8	1099.8	1149.8	1199.8	1249.8
	RCP6SW	w/o brake	499.8	549.8	599.8	649.8	699.8	749.8	799.8	849.8	899.8	949.8	999.8	1049.8	1099.8	1149.8	1199.8	1249.8
		w/ brake	529.8	579.8	629.8	679.8	729.8	779.8	829.8	879.8	929.8	979.8	1029.8	1079.8	1129.8	1179.8	1229.8	1279.8
A			298.8	348.8	398.8	448.8	498.8	548.8	598.8	648.8	698.8	748.8	798.8	848.8	898.8	948.8	998.8	1048.8
G			-	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100
H			125	75	125	75	125	75	125	75	125	75	125	75	125	75	125	75
J			0	1	1	1	1	2	2	3	3	4	4	5	5	6	6	7
K			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
N			-	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			-	-	175	225	275	325	375	425	475	525	575	625	675	725	775	825
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			588	588	588	511	451	402	362	329	300	275	254	235	217	202	188	176
Allowable static torque on rod tip (N·m)			40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	255	220	191	168	149	134	120	109	99	90	81	74	67	61	55	50
		Load offset 150mm	133	133	133	133	133	122	111	101	92	84	77	70	64	58	53	48
	Allowable dynamic torque on rod tip (N·m)		20.0	20.0	20.0	20.0	20.0	18.3	16.7	15.2	13.8	12.6	11.5	10.5	9.6	8.7	7.9	7.1
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	214	184	160	140	124	111	99	89	80	72	65	59	53	47	42	37
		Load offset 150mm	133	133	133	124	112	101	91	83	75	68	62	56	50	45	40	36
	Allowable dynamic torque on rod tip (N·m)		20.0	20.0	20.0	18.6	16.8	15.2	13.7	12.4	11.3	10.2	9.2	8.4	7.5	6.8	6.0	5.3
Mass (kg)	RCP6W	w/o brake	12.4	13.6	14.8	15.9	17.0	18.2	19.3	20.5	21.6	22.8	23.9	25.1	26.2	27.4	28.5	29.7
		w/ brake	12.9	14.1	15.3	16.4	17.5	18.7	19.8	21.0	22.1	23.3	24.4	25.6	26.7	27.9	29.0	30.2
	RCP6SW	w/o brake	12.5	13.7	14.9	16.0	17.1	18.3	19.4	20.6	21.7	22.9	24.0	25.2	26.3	27.5	28.6	29.8
		w/ brake	13.0	14.2	15.4	16.5	17.6	18.8	19.9	21.1	22.2	23.4	24.5	25.7	26.8	28.0	29.1	30.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6(S)W-WRA10R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 100* mm | 24v Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA10R	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50:50mm ~ 500:500mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

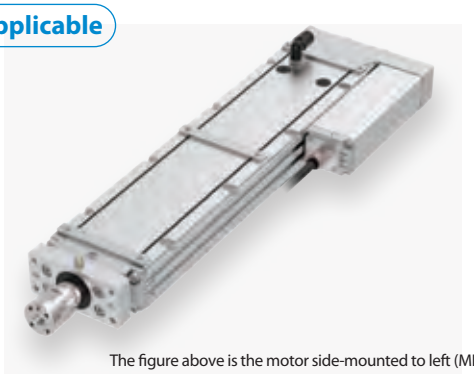
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.20 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

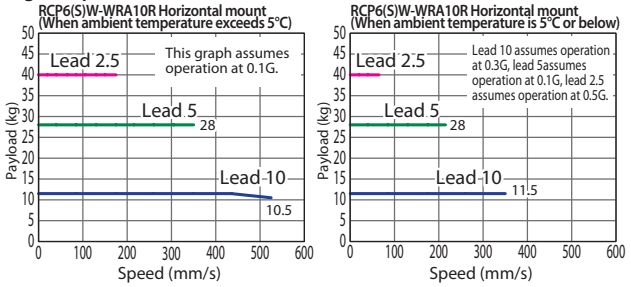
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.241 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.
(6) The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

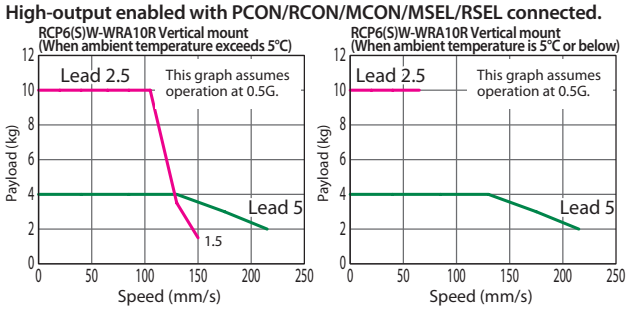
■ Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-WRA10R-WA-35P-10-①-②-③-④	10	11.5	–	77	50~500 (Every 50mm)
RCP6(S)W-WRA10R-WA-35P-5-①-②-③-④	5	28	4	155	
RCP6(S)W-WRA10R-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~400 (Every 50mm)	450	500
10	525 [350]		490 [350]
5	350 <215> [215]	290 <215> [215]	240 <215> [215]
2.5	175 <150> [65]	145 [65]	120 [65]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

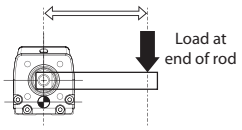
* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Actuator Specifications

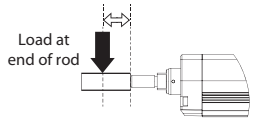
Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



Overhang distance at end of rod (dz: 100mm or less)



Options

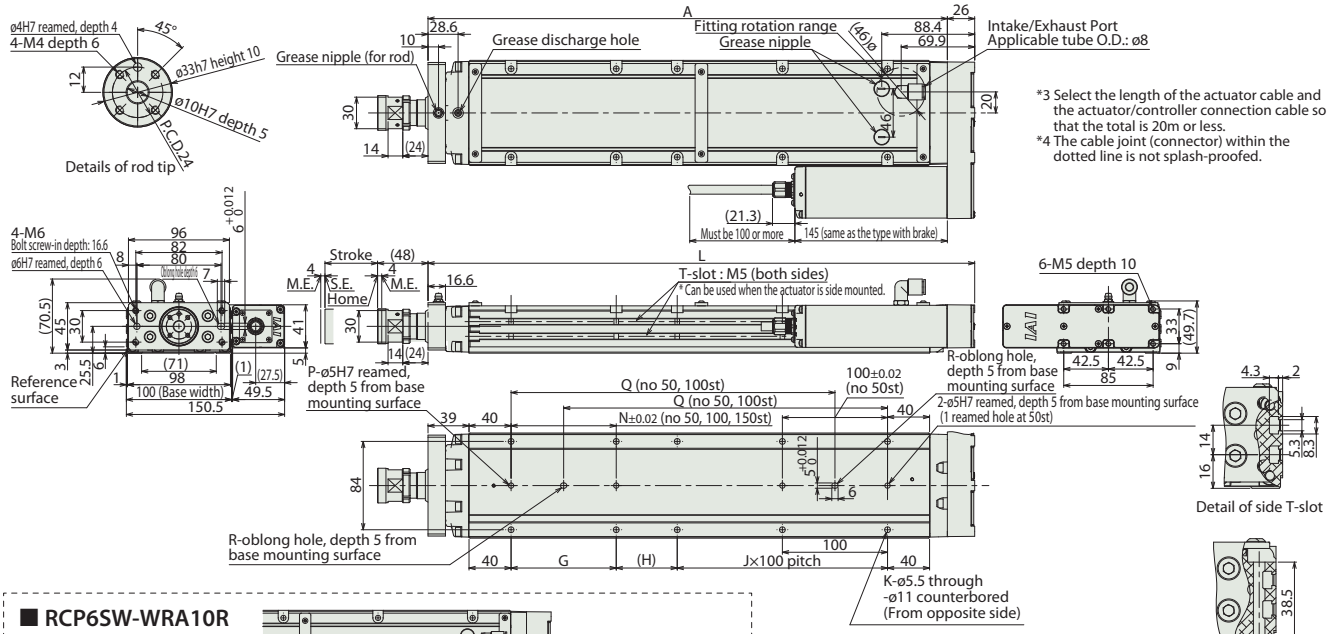
Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar (Left)	**NTBL**	See P.202
T-slot nut bar (Right)	**NTBR**	See P.202

* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

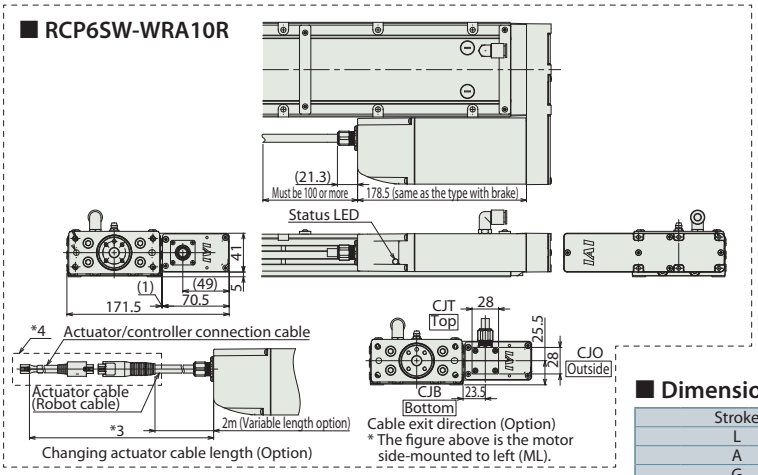
Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

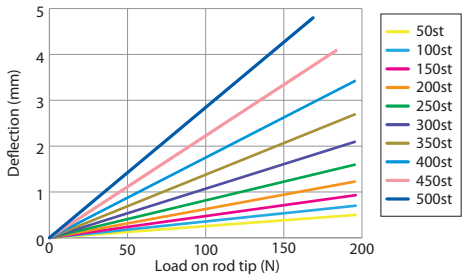
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



■ RCP6SW-WRA10R



■ Rod Deflection of RCP6(S)W-WRA10R (Reference Values)



* Please refer to P.253 for more information on component materials.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L			269.9	319.9	369.9	419.9	469.9	519.9	569.9	619.9	669.9	719.9
A			243.9	293.9	343.9	393.9	443.9	493.9	543.9	593.9	643.9	693.9
G			-	-	-	100	100	100	100	100	100	100
H			108	58	108	58	108	58	108	58	108	58
J			0	1	1	1	1	2	2	3	3	4
K			4	6	6	8	8	10	10	12	12	14
N			-	-	-	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2
Q			-	-	158	208	258	308	358	408	458	508
R			0	0	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			196	196	196	196	196	196	196	196	184	169
Allowable static torque on rod tip (N•m)			10	10	10	10	10	10	10	10	10	10
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	98	98	98	95	85	76	68	62	57	52
		Load offset 100mm	50	50	50	50	50	50	50	50	50	49
	Allowable dynamic torque on rod tip (N•m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.9
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	98	98	91	80	71	63	57	52	47	43
		Load offset 100mm	50	50	50	50	50	50	50	48	44	40
	Allowable dynamic torque on rod tip (N•m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.8	4.4	4.0
Mass (kg)	RCP6W	w/o brake	3.8	4.2	4.7	5.1	5.6	6.0	6.5	6.9	7.4	7.8
		w/ brake	3.9	4.3	4.8	5.2	5.7	6.1	6.6	7.0	7.5	7.9
	RCP6SW	w/o brake	4.0	4.4	4.9	5.3	5.8	6.2	6.7	7.1	7.6	8.0
		w/ brake	4.1	4.5	5.0	5.4	5.9	6.3	6.8	7.2	7.7	8.1

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, EtherCAT, EtherNet/IP, PROFIBUS, PROFINET, CompoNet	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-WRA12R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 120* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA12R	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12 :12mm 6 : 6mm 3 : 3mm	50:50mm ~ 500:500mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

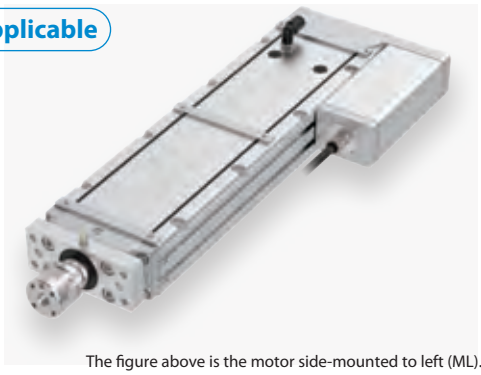
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.20 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

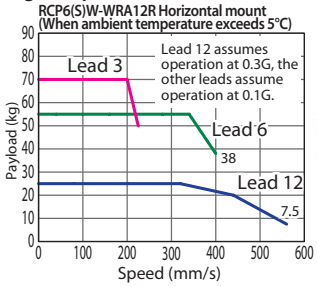
POINT Selection Notes

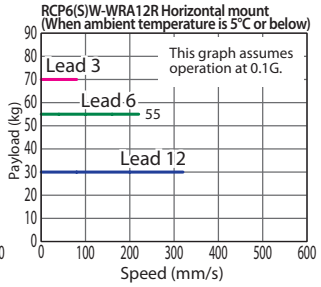
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.241 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.
(7) The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

■ Correlation Diagrams of Speed and Payload

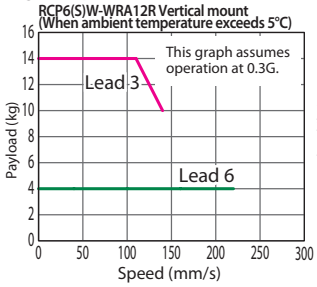
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

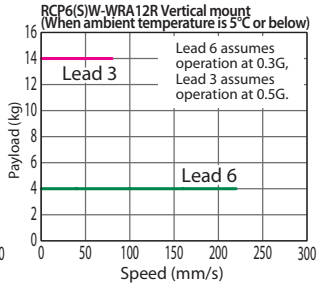
High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.





Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-WRA12R-WA-42P-12-①-②-③-④	12	30	–	93	50~500 (Every 50mm)
RCP6(S)W-WRA12R-WA-42P-6-①-②-③-④	6	55	4	185	
RCP6(S)W-WRA12R-WA-42P-3-①-②-③-④	3	70	14	370	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~400 (Every 50mm)	450	500
12	560 [320]		
6	400 <220> [220]		375 <220> [220]
3	225 <140> [80]	220 <140> [80]	185 <140> [80]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar (Left)	**NTBL**	See P.202
T-slot nut bar (Right)	**NTBR**	See P.202

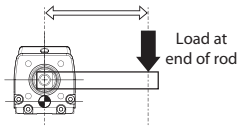
* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Actuator Specifications

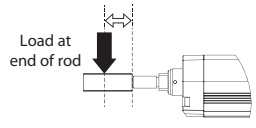
Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 100mm or less)



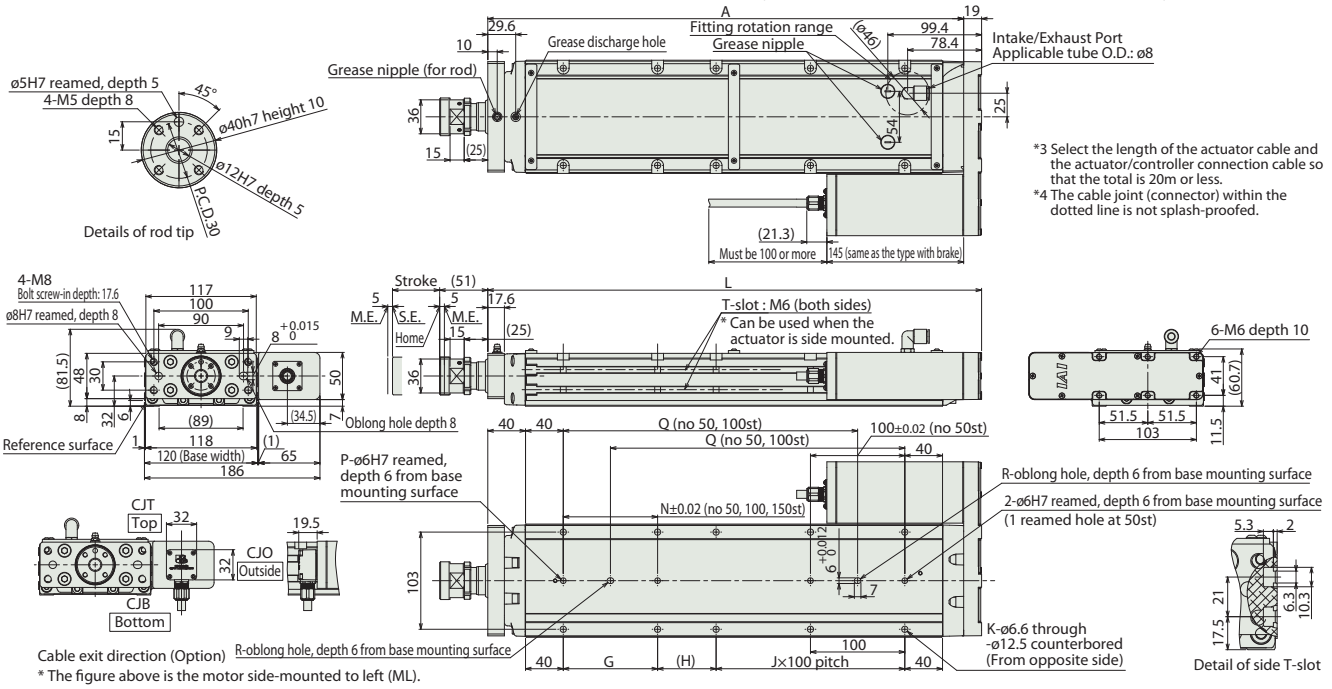
Overhang distance at end of rod (dz: 100mm or less)



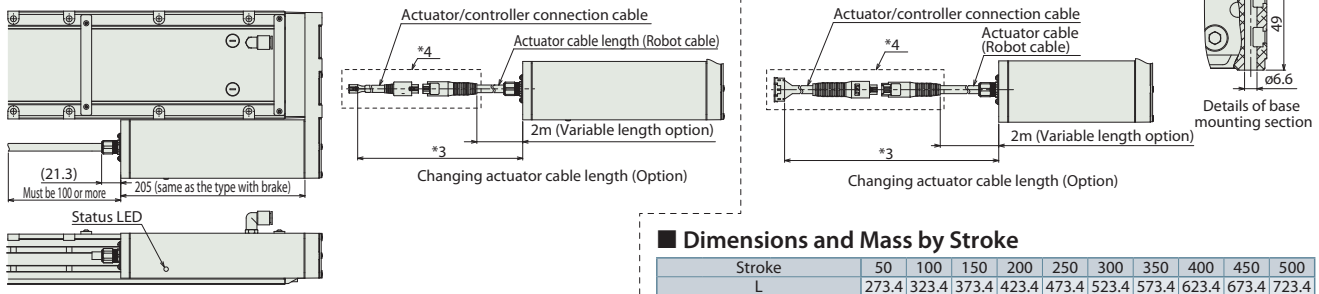
Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

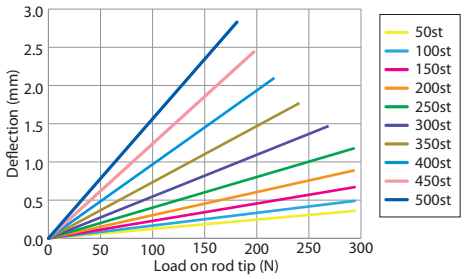
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



RCP6SW-WRA12R



Rod Deflection of RCP6(S)W-WRA12R (Reference Values)



* Please refer to P.254 for more information on component materials.

Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L			273.4	323.4	373.4	423.4	473.4	523.4	573.4	623.4	673.4	723.4
A			254.4	304.4	354.4	404.4	454.4	504.4	554.4	604.4	654.4	704.4
G			-	-	-	100	100	100	100	100	100	100
H			112	62	112	62	112	62	112	62	112	62
J			0	1	1	1	1	2	2	3	3	4
K			4	6	6	8	8	10	10	12	12	14
N			-	-	-	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2
Q			-	-	162	212	262	312	362	412	462	512
R			0	0	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			294	294	294	294	294	269	241	218	198	181
Allowable static torque on rod tip (N•m)			20	20	20	20	20	20	20	20	20	20
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	147	147	137	121	107	96	87	79	72	65
		Load offset 100mm	100	100	100	100	99	90	82	75	68	63
	Allowable dynamic torque on rod tip (N•m)		10.0	10.0	10.0	10.0	9.9	9.0	8.2	7.5	6.8	6.3
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	147	133	115	101	90	80	72	65	59	54
		Load offset 100mm	100	100	100	92	83	75	68	62	56	51
	Allowable dynamic torque on rod tip (N•m)		10.0	10.0	10.0	9.2	8.3	7.5	6.8	6.2	5.6	5.1
Mass (kg)	RCP6W	w/o brake	5.4	6.0	6.7	7.3	8.0	8.6	9.3	9.9	10.6	11.2
		w/ brake	5.5	6.1	6.8	7.4	8.1	8.7	9.4	10.0	10.7	11.3
	RCP6SW	w/o brake	5.5	6.1	6.8	7.4	8.1	8.7	9.4	10.0	10.7	11.3
		w/ brake	5.6	6.2	6.9	7.5	8.2	8.8	9.5	10.1	10.8	11.4

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-WRA14R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 140* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA14R	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 :16mm 8 : 8mm 4 : 4mm	50:50mm ~ 600:600mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

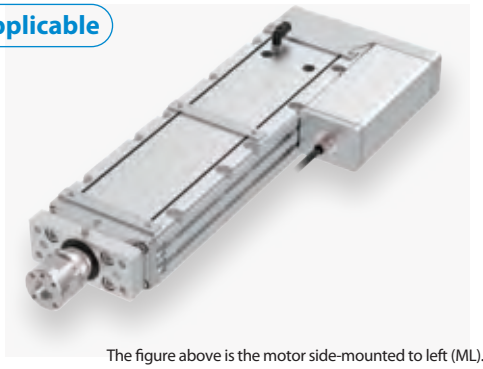
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.20 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

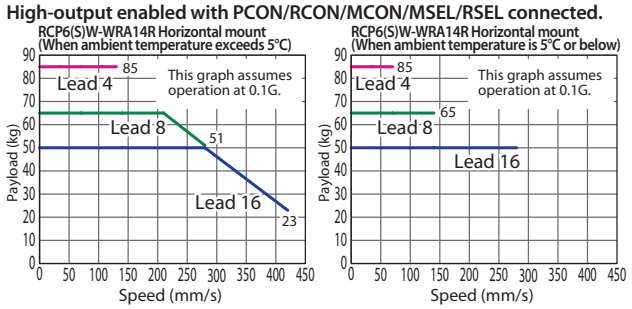
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.242 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.245 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.
(7) The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

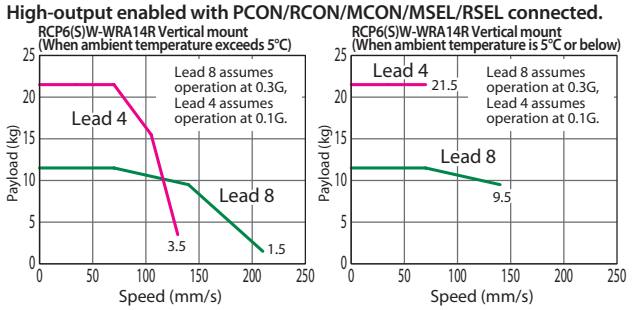
■ Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



High-output enabled with PCON/RCON/MCON/MSEL/RSEL connected.



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-WRA14R-WA-56P-16-①-②-③-④	16	50	–	273	50~600 (Every 50mm)
RCP6(S)W-WRA14R-WA-56P-8-①-②-③-④	8	65	11.5	547	
RCP6(S)W-WRA14R-WA-56P-4-①-②-③-④	4	85	21.5	1094	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~600 (Every 50mm)
16	420 [280]
8	280 <210> [140]
4	130 [70]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar (Left)	**NTBL**	See P.202
T-slot nut bar (Right)	**NTBR**	See P.202

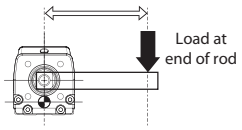
* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Actuator Specifications

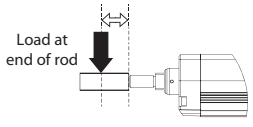
Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx: 150mm or less / dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



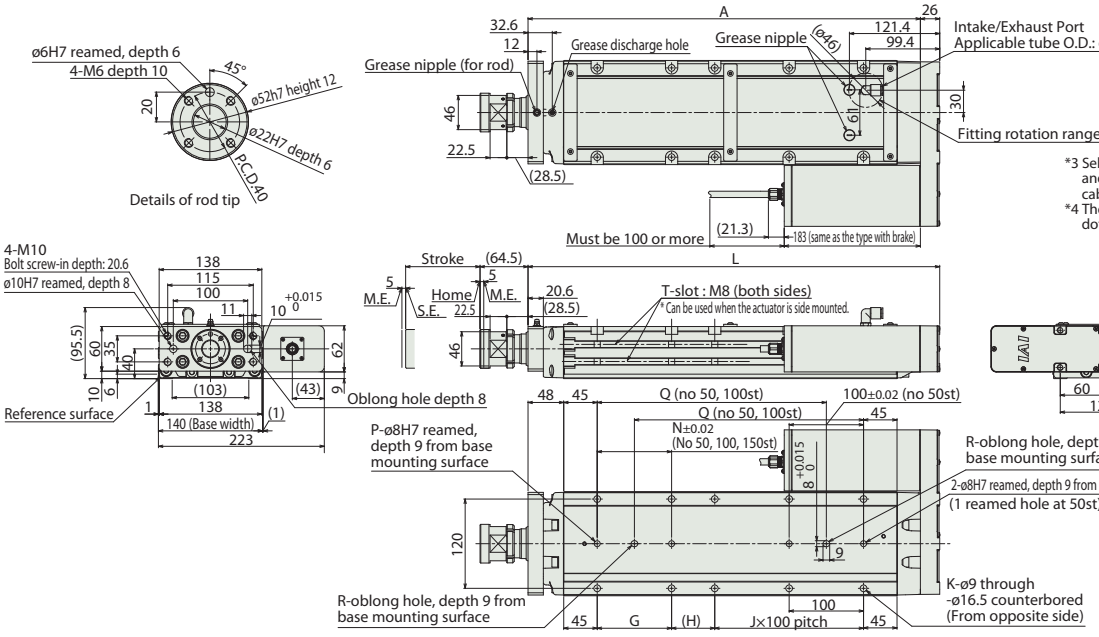
Overhang distance at end of rod (dz: 100mm or less)



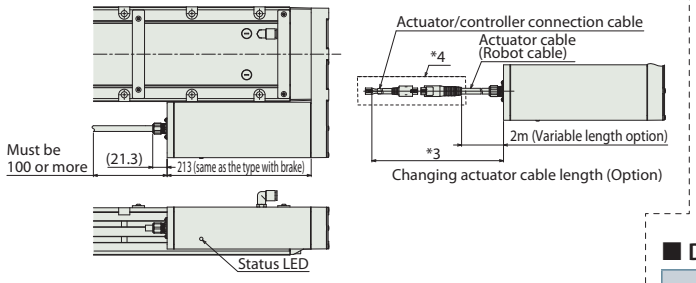
Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

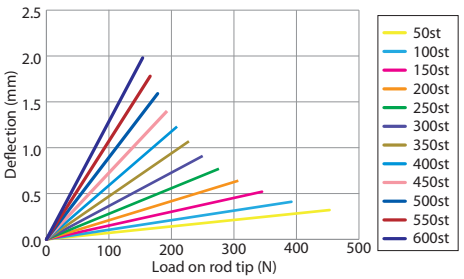
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



■ RCP6SW-WRA14R



■ Rod Deflection of RCP6(S)W-WRA14R (Reference Values)



* Please refer to P.254 for more information on component materials.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600
L			303.4	353.4	403.4	453.4	503.4	553.4	603.4	653.4	703.4	753.4	803.4	853.4
A			277.4	327.4	377.4	427.4	477.4	527.4	577.4	627.4	677.4	727.4	777.4	827.4
G			-	-	-	100	100	100	100	100	100	100	100	100
H			108	58	108	58	108	58	108	58	108	58	108	58
J			0	1	1	1	1	2	2	3	3	4	4	5
K			4	6	6	8	8	10	10	12	12	14	14	16
N			-	-	-	100	100	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2	2	2
Q			-	-	158	208	258	308	358	408	458	508	558	608
R			0	0	1	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			454	392	345	307	276	251	229	210	193	179	166	154
Allowable static torque on rod tip (N•m)			30	30	30	30	30	30	30	30	30	30	30	30
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	199	170	148	131	117	104	94	85	77	70	64	58
		Load offset 100mm	100	100	100	100	100	95	87	79	72	66	60	55
	Allowable dynamic torque on rod tip (N•m)		15.0	15.0	15.0	15.0	15.0	14.3	13.0	11.8	10.8	9.9	9.0	8.2
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	167	143	124	109	97	87	78	70	63	57	51	46
		Load offset 100mm	100	100	100	96	87	79	71	65	59	53	48	44
	Allowable dynamic torque on rod tip (N•m)		15.0	15.0	15.0	14.4	13.0	11.8	10.7	9.7	8.8	8.0	7.3	6.6
Mass (kg)	RCP6W	w/o brake	9.4	10.2	11.1	12.0	12.9	13.8	14.7	15.6	16.5	17.4	18.3	19.2
		w/ brake	9.5	10.3	11.2	12.1	13.0	13.9	14.8	15.7	16.6	17.5	18.4	19.3
	RCP6SW	w/o brake	9.6	10.4	11.3	12.2	13.1	14.0	14.9	15.8	16.7	17.6	18.5	19.4
		w/ brake	9.7	10.5	11.4	12.3	13.2	14.1	15.0	15.9	16.8	17.7	18.6	19.5

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET IRT	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-WRA16R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 160* mm | 24V Pulse Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA16R	WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20 :20mm 10 :10mm 5 : 5mm	50:50mm ~ 800:800mm (Every 50mm)	[RCP6W] P4: PCON-CFB/CGFB MSEL-PCF/PGF P6: RCON, RSEL [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify either ML or MR when ordering the side-mounted motor type.

* Body width does not include the width of the side-mounted motor.

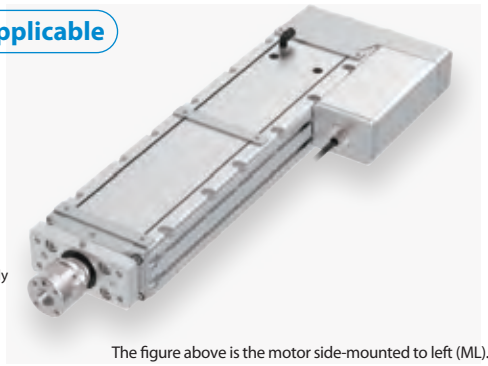
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.20 for more information about the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



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

POINT Selection Notes

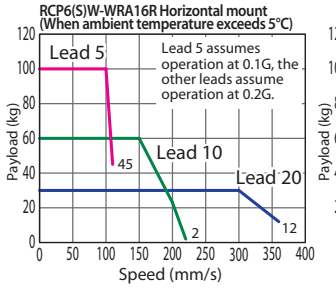
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.242 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.245 and after for the allowable load mass.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
(6) The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P. 206 for more information.
(7) The cable joint connector is not splash-proofed, so it should be located where there is no splash.
(8) The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

■ Correlation Diagrams of Speed and Payload

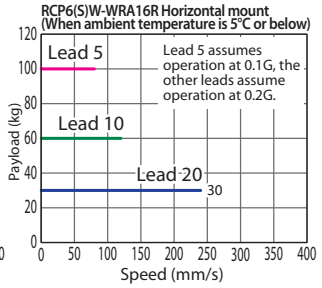
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

PCON/RCON/MSEL/RSEL connected.

RCP6(S)W-WRA16R Horizontal mount (When ambient temperature exceeds 5°C)

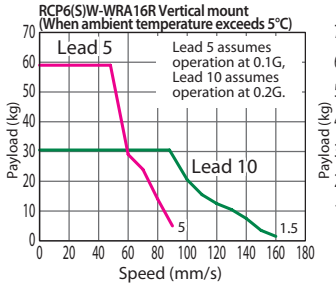


RCP6(S)W-WRA16R Horizontal mount (When ambient temperature is 5°C or below)

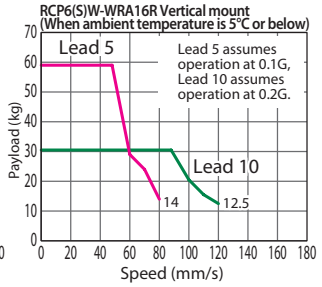


PCON/RCON/MSEL/RSEL connected.

RCP6(S)W-WRA16R Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-WRA16R Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

■ Lead and Payload

* Horizontal external guide rail required for horizontal payload.
** Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)*	Max. Payload Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
RCP6(S)W-WRA16R-WA-60P-20-①-②-③-④	20	30	–	500	50~800 (Every 50mm)
RCP6(S)W-WRA16R-WA-60P-10-①-②-③-④	10	60	30.5	1000	
RCP6(S)W-WRA16R-WA-60P-5-①-②-③-④	5	100	59	2000	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50	100~450 (Every 50mm)	500	550	600	650	700	750	800
20	280 [240]	360 [240]		340 [240]	295 [240]	260 [240]	225 [225]	200 [200]	180 [180]
10	220 <160> [120]		195 <160> [120]	165 <160> [120]	145 [120]	125 [120]	110 [110]	100 [100]	90 [90]
5	110 <90> [80]		95 <90> [80]	80 [80]	70 [70]	60 [60]	55 [55]	50 [50]	45 [45]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	**P** (1m)	Robot Cable	**R01** (1m) ~**R03** (3m)
	S (3m)		**R04** (4m) ~**R05** (5m)
	M (5m)		**R06** (6m) ~**R10** (10m)
Specified Length	**X06** (6m) ~**X10** (10m)		**R11** (11m) ~**R15** (15m)
	X11 (11m) ~**X15** (15m)		**R16** (16m) ~**R18** (18m)
	X16 (16m) ~**X18** (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.
* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Options

Name	Option Code	Reference Page
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar (Left)	**NTBL**	See P.202
T-slot nut bar (Right)	**NTBR**	See P.202

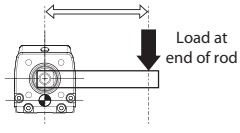
* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Actuator Specifications

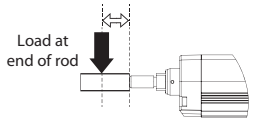
Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø45mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx: 150mm or less / dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Rod's angular displacement in rotational direction with no load applied to the rod.

Offset distance at end of rod (dx: 150mm or less)



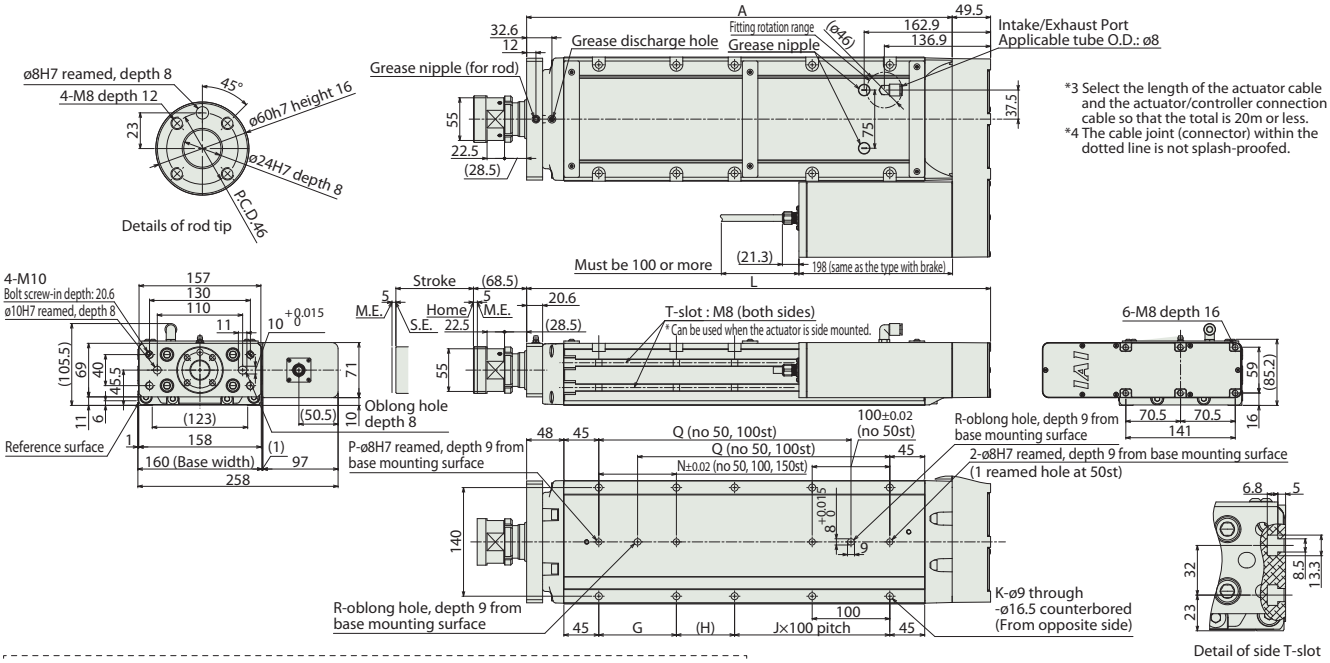
Overhang distance at end of rod (dz: 100mm or less)



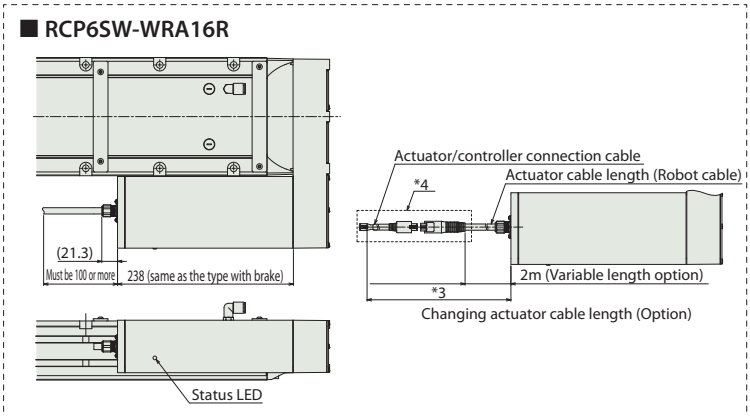
Dimensions

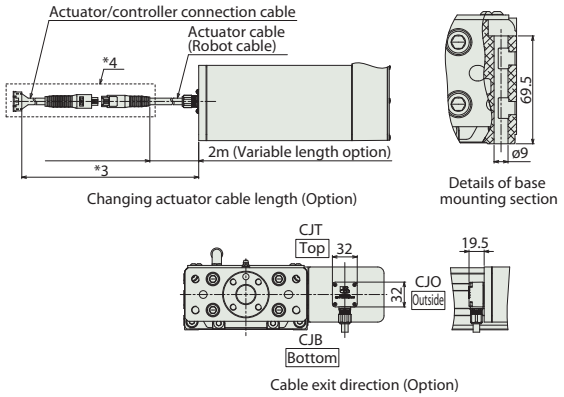
CAD drawings can be downloaded from our website.
www.robocylinder.de

*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 M.E.
M.E: Mechanical end S.E: Stroke end
*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.

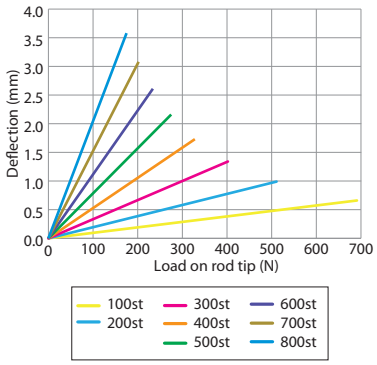


■ RCP6SW-WRA16R





■ Rod Deflection of RCP6(S) W-WRA16R (Reference Values)



* Please refer to P.254 for more information on component materials.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L			347.9	397.9	447.9	497.9	547.9	597.9	647.9	697.9	747.9	797.9	847.9	897.9	947.9	997.9	1047.9	1097.9
A			298.4	348.4	398.4	448.4	498.4	548.4	598.4	648.4	698.4	748.4	798.4	848.4	898.4	948.4	998.4	1048.4
G			-	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100
H			125	75	125	75	125	75	125	75	125	75	125	75	125	75	125	75
J			0	1	1	1	1	2	2	3	3	4	4	5	5	6	6	7
K			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
N			-	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Q			-	-	175	225	275	325	375	425	475	525	575	625	675	725	775	825
R			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			588	588	588	511	451	402	362	329	300	275	254	235	217	202	188	176
Allowable static torque on rod tip (N•m)			40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	255	220	191	168	149	134	120	109	99	90	81	74	67	61	55	50
		Load offset 150mm	133	133	133	133	133	122	111	101	92	84	77	70	64	58	53	48
	Allowable dynamic torque on rod tip (N•m)		20.0	20.0	20.0	20.0	20.0	18.3	16.7	15.2	13.8	12.6	11.5	10.5	9.6	8.7	7.9	7.1
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	214	184	160	140	124	111	99	89	80	72	65	59	53	47	42	37
		Load offset 150mm	133	133	133	124	112	101	91	83	75	68	62	56	50	45	40	36
	Allowable dynamic torque on rod tip (N•m)		20.0	20.0	20.0	18.6	16.8	15.2	13.7	12.4	11.3	10.2	9.2	8.4	7.5	6.8	6.0	5.3
Mass (kg)	RCP6W	w/o brake	13.5	14.7	15.9	17.0	18.1	19.3	20.4	21.6	22.7	23.9	25.0	26.2	27.3	28.5	29.6	30.8
		w/ brake	13.8	15.0	16.2	17.3	18.4	19.6	20.7	21.9	23.0	24.2	25.3	26.5	27.6	28.8	29.9	31.1
	RCP6SW	w/o brake	13.7	14.9	16.1	17.2	18.3	19.5	20.6	21.8	22.9	24.1	25.2	26.4	27.5	28.7	29.8	31.0
		w/ brake	14.0	15.2	16.4	17.5	18.6	19.8	20.9	22.1	23.2	24.4	25.5	26.7	27.8	29.0	30.1	31.3

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
PCON-CBF/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, MECHATROLINK	512 (768 for network spec.)	Please see P.255
RCON		16		This model is network-compatible only.				128	Please see the RCON catalog or manual.
MSEL-PCF/PGF (**)		4	Single-phase 100 ~ 230 VAC	–	–	●		30000	Please see the MSEL catalog or manual.
RSEL (*)		8	DC24V	–	–	●		36000	—

Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

(*) Coming soon. (**) The MCON-PCF/PGF controller cannot be connected to the 3rd and 4th axis.

RCP6 Series Options

Brake

Option Code **B** Applicable Models **All Models**

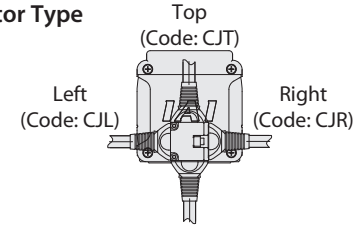
Description When the actuator is mounted vertically, this works as a holding mechanism that prevents the slider, rod, or table from falling and damaging any attachments when the power or servo is turned off.

Cable Exit Direction

Option Code **CJT / CJR / CJL / CJB / CJO** Applicable Models **All Models**

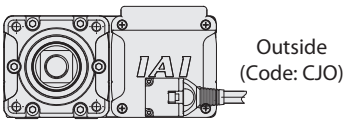
Description This option allows you to change the exit direction of the motor-encoder cable to top, bottom, left, or right.

Coupled Motor Type



* When viewed from the actuator rear side (motor side).

Side-mounted Motor Type



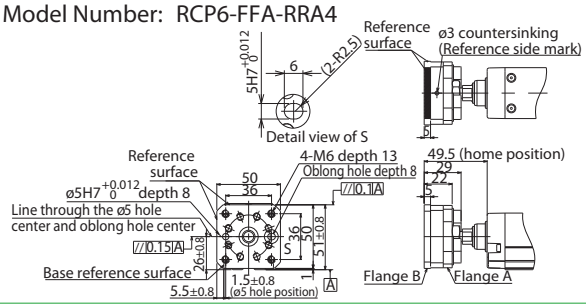
* When viewed from the actuator front side.

Tip Adapter (Flange)

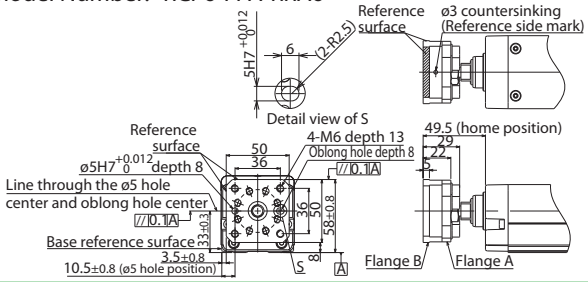
Option Code **FFA** Applicable Models **RCP6(S)-RRA4□/RRA6□/RRA7□**

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

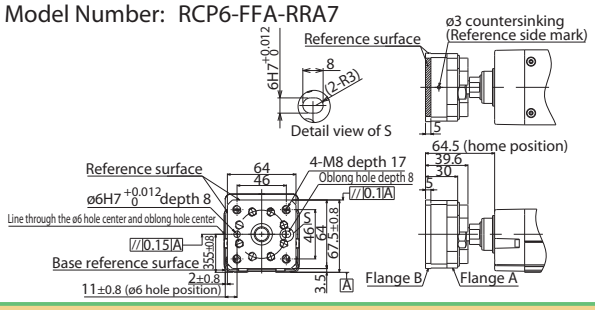
For RCP6(S)-RRA4□
Model Number: RCP6-FFA-RRA4



For RCP6(S)-RRA6□
Model Number: RCP6-FFA-RRA6



For RCP6(S)-RRA7□
Model Number: RCP6-FFA-RRA7



Flange

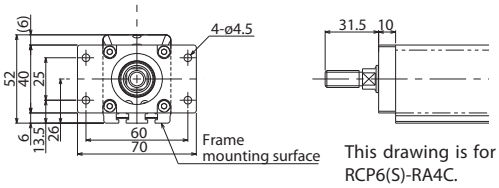
Option Code **FL** Applicable Models **RCP6(S)-RA4□/RA6□/RA7□/RA8□/RRA4□/RRA6□/RRA7□/RRA8□/WRA10□/WRA12□/WRA14□/WRA16□**

Description A bracket that attaches to the actuator body with bolts. * Be sure to confirm with the Selection Notes (P.196).

For RCP6(S)-RA4□

Model Number: RCP6-FL-RA4

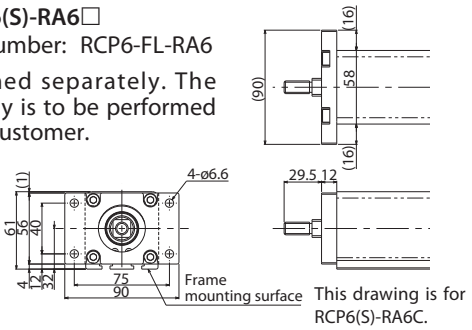
*Furnished separately. The assembly is to be performed by the customer.



For RCP6(S)-RA6□

Model Number: RCP6-FL-RA6

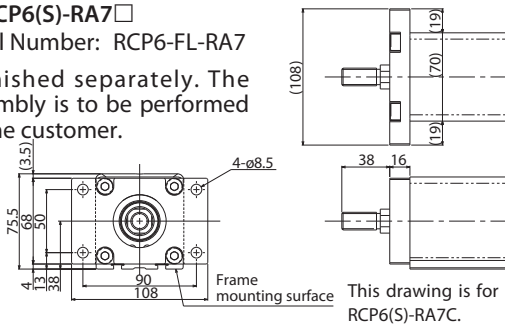
*Furnished separately. The assembly is to be performed by the customer.



For RCP6(S)-RA7□

Model Number: RCP6-FL-RA7

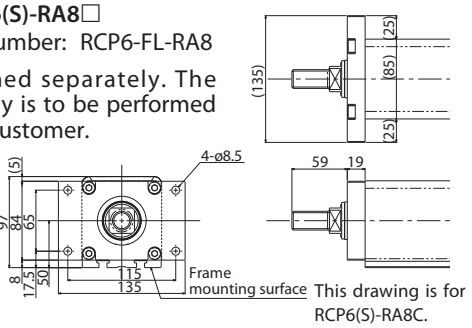
*Furnished separately. The assembly is to be performed by the customer.



For RCP6(S)-RA8□

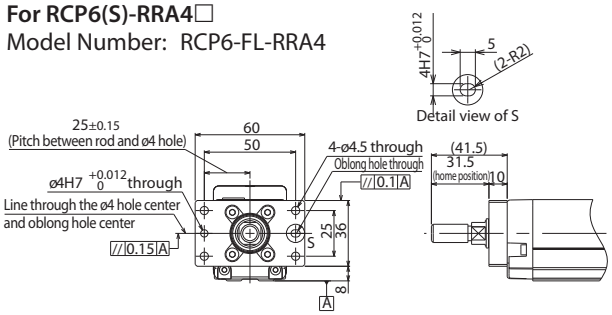
Model Number: RCP6-FL-RA8

*Furnished separately. The assembly is to be performed by the customer.



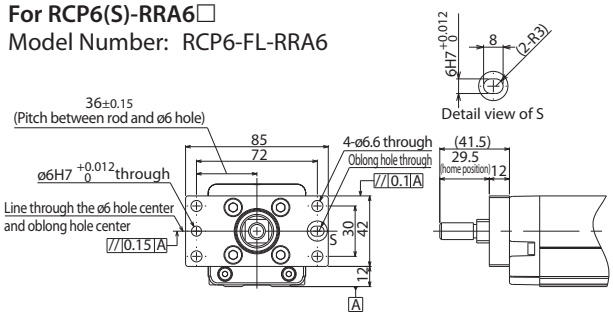
For RCP6(S)-RRA4□

Model Number: RCP6-FL-RRA4



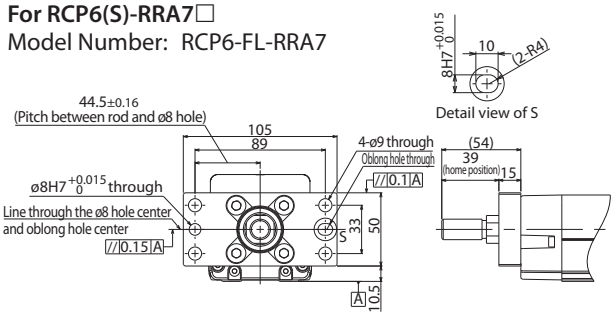
For RCP6(S)-RRA6□

Model Number: RCP6-FL-RRA6



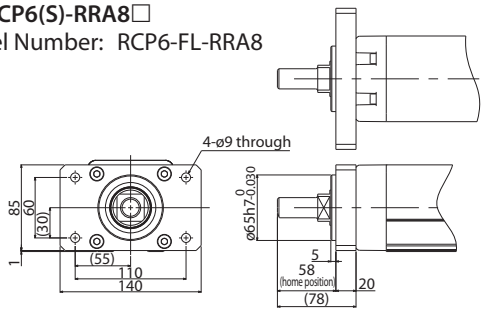
For RCP6(S)-RRA7□

Model Number: RCP6-FL-RRA7



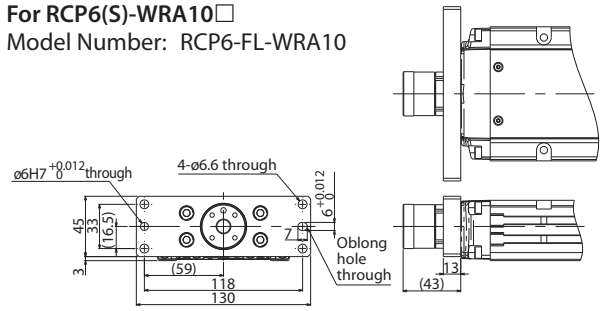
For RCP6(S)-RRA8□

Model Number: RCP6-FL-RRA8



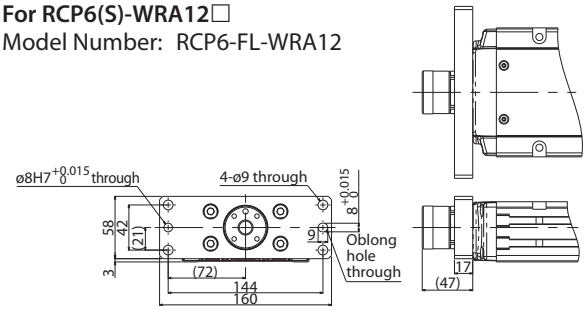
For RCP6(S)-WRA10□

Model Number: RCP6-FL-WRA10

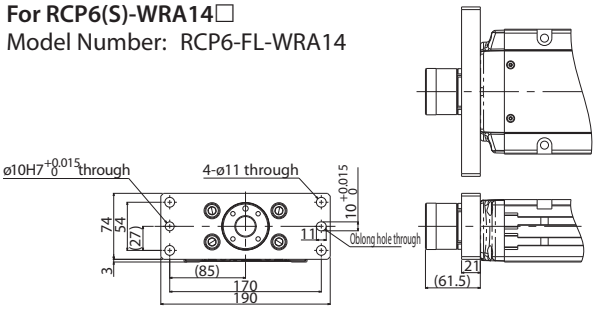


For RCP6(S)-WRA12□

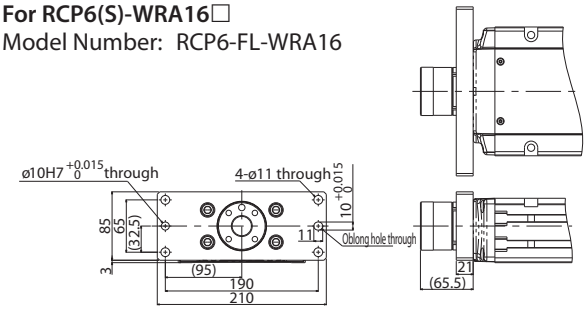
Model Number: RCP6-FL-WRA12



For RCP6(S)-WRA14□
Model Number: RCP6-FL-WRA14



For RCP6(S)-WRA16□
Model Number: RCP6-FL-WRA16

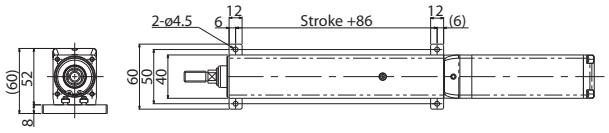


Foot Bracket

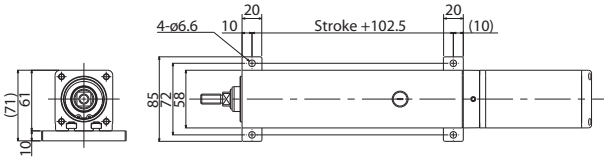
Option Code **FT** Applicable Models **RCP6(S)-RA4□/RA6□/RA7□/RA8□**

Description
This is a bracket to fix the actuator with bolts from the top side. (Bolts are tightened from the top, not from the bottom)
For slider type actuators, when the moment load is large, please attach the foot brackets on all the mounting holes on the actuator.
The actuator body may be twisted or deformed if insufficient number of mounting foot brackets are used. Actuator life could also be shortened.
* Refer to the installation dimensions in the actuator drawing for the installation pitch between the foot brackets.

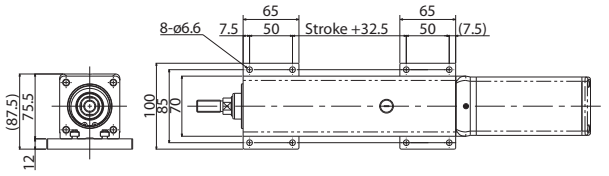
For RCP6(S)-RA4C
Model Number: RCP6-FT-RA4C
(Sold as a set of 2)



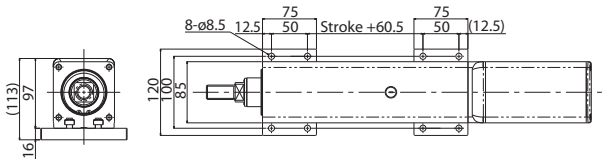
For RCP6(S)-RA6C
Model Number: RCP6-FT-RA6C
(Sold as a set of 2)



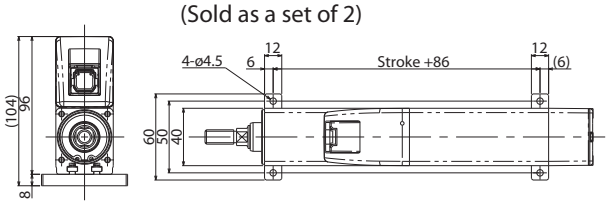
For RCP6(S)-RA7C
Model Number: RCP6-FT-RA7C
(Sold as a set of 2)



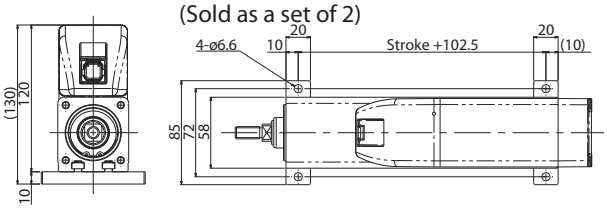
For RCP6(S)-RA8C
Model Number: RCP6-FT-RA8C
(Sold as a set of 2)



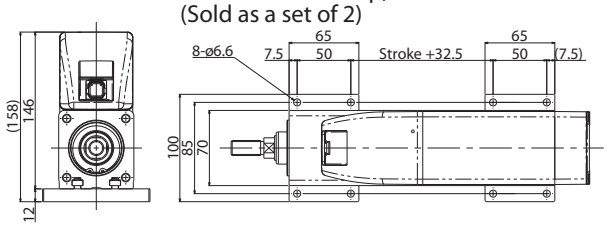
For RCP6(S)-RA4R
Model Number: RCP6-FT-RA4R-1 (For the motor side-mounted to the top)
(Sold as a set of 2)



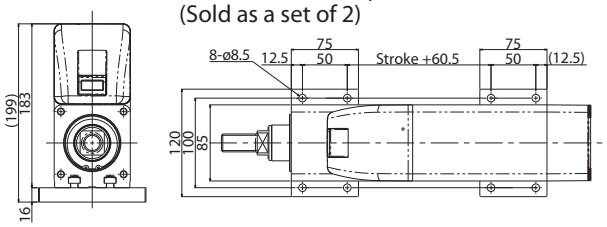
For RCP6(S)-RA6R
Model Number: RCP6-FT-RA6R-1 (For the motor side-mounted to the top)
(Sold as a set of 2)



For RCP6(S)-RA7R
Model Number: RCP6-FT-RA7R-1 (For the motor side-mounted to the top)
(Sold as a set of 2)

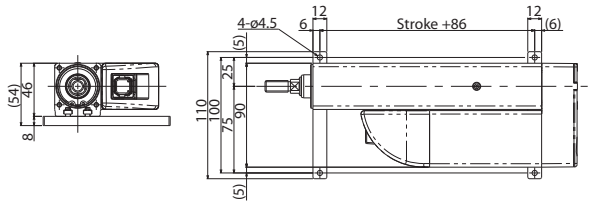


For RCP6(S)-RA8R
Model Number: RCP6-FT-RA8R-1 (For the motor side-mounted to the top)
(Sold as a set of 2)



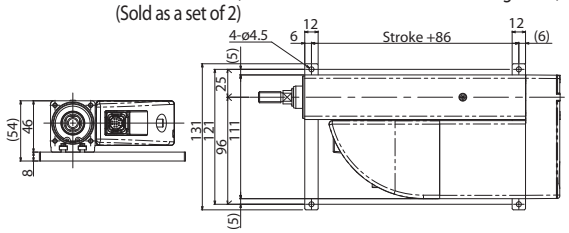
For RCP6(S)-RA4R

Model Number: RCP6-FT-RA4R-2 (For the motor side-mounted to the right/left)
(Sold as a set of 2)



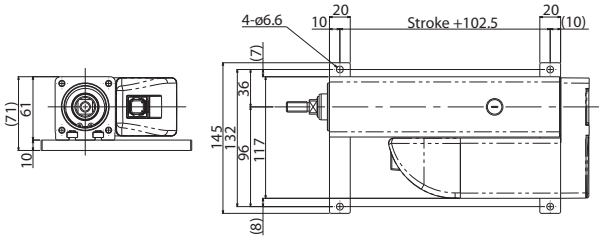
For RCP6(S)-RA4R

Model Number: RCP6-FT-RA4R-3 (For the motor side-mounted to the right/left)
(Sold as a set of 2)



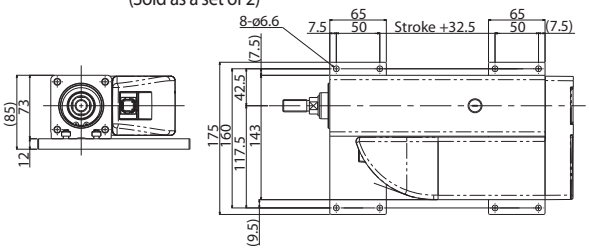
For RCP6(S)-RA6R

Model Number: RCP6-FT-RA6R-2 (For the motor side-mounted to the right/left)
(Sold as a set of 2)



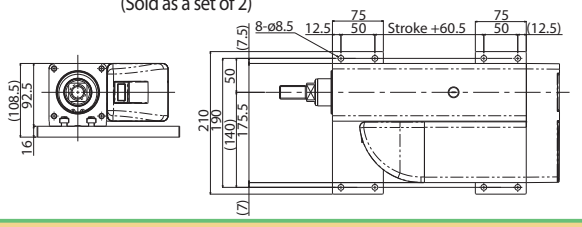
For RCP6(S)-RA7R

Model Number: RCP6-FT-RA7R-2 (For the motor side-mounted to the right/left)
(Sold as a set of 2)



For RCP6(S)-RA8R

Model Number: RCP6-FT-RA8R-2 (For the motor side-mounted to the right/left)
(Sold as a set of 2)



High-precision Specification

Option Code **HPR** Applicable Models **RCP6(S)/RCP6(S)CR-SA□C/WSA□C**

Description The positioning repeatability of the standard type of the RCP6(S)/RCP6(S)CR slider and wide slider models is ±0.01mm.
If this option is selected, the positioning repeatability can be ±0.005mm. * This option can be selected for actuators with lead 12mm or less.

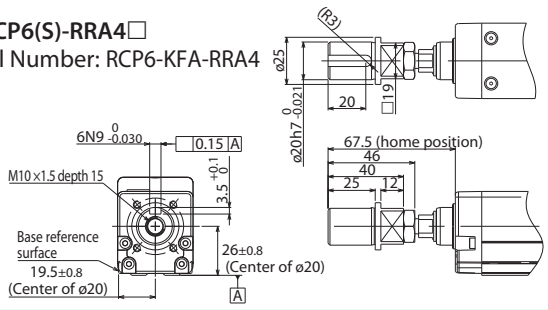
Tip Adapter (Keyway)

Option Code **KFA** Applicable Models **RCP6(S)-RRA4□/RRA6□/RRA7□**

Description A female threaded tip adapter with a parallel keyway.

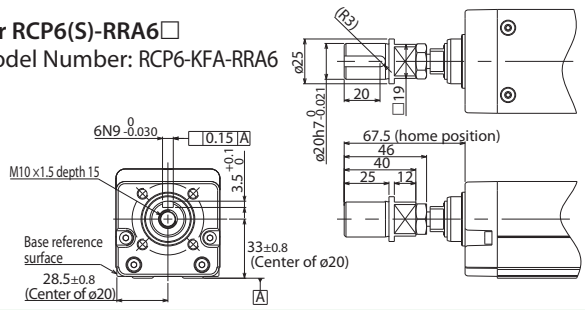
For RCP6(S)-RRA4□

Model Number: RCP6-KFA-RRA4



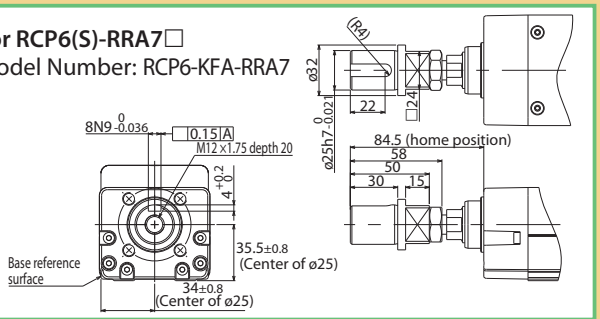
For RCP6(S)-RRA6□

Model Number: RCP6-KFA-RRA6



For RCP6(S)-RRA7□

Model Number: RCP6-KFA-RRA7

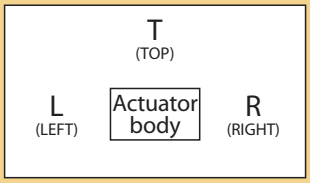


Side-mounted Motor Direction

Option Code **ML / MR / MT**

Applicable Models **RCP6(S)-SA□R/WSA□R/RA□R/RRA□R/WRA□R/TA□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, MR represents right, and MT represents top.

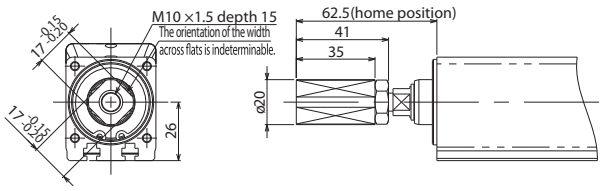


Tip Adapter (Internal Thread)

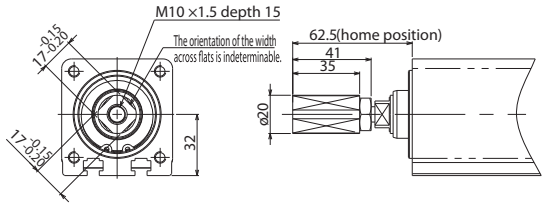
Option Code **NFA** Applicable Models **RCP6(S)-RA4□/RA6□/RA7□/RA8□/RRA4□/RRA6□/RRA7□/RRA8□**

Description A rod-end tooling adapter with 1 threaded hole.

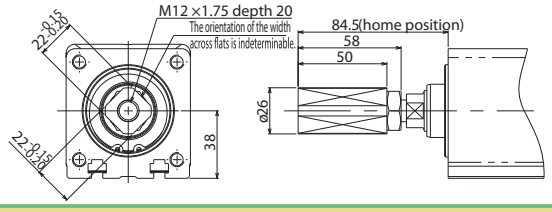
For RCP6(S)-RA4□
Model Number: RCP6-NFA-RA4



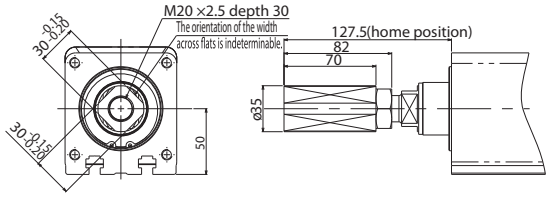
For RCP6(S)-RA6□
Model Number: RCP6-NFA-RA6



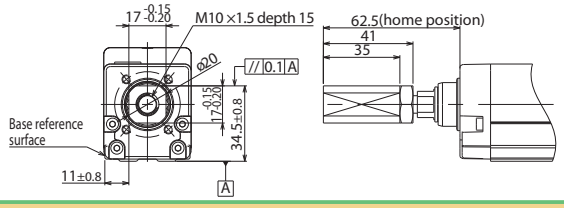
For RCP6(S)-RA7□
Model Number: RCP6-NFA-RA7



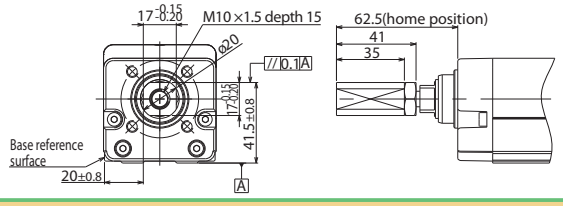
For RCP6(S)-RA8□
Model Number: RCP6-NFA-RA8



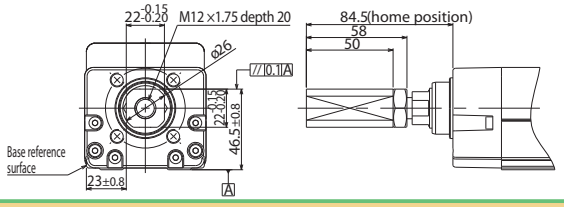
For RCP6(S)-RRA4□
Model Number: RCP6-NFA-RRA4



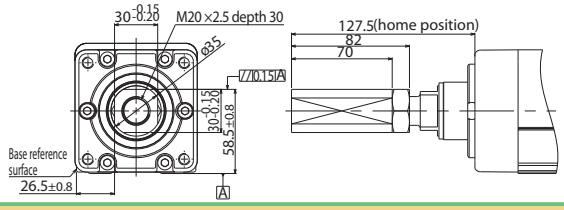
For RCP6(S)-RRA6□
Model Number: RCP6-NFA-RRA6



For RCP6(S)-RRA7□
Model Number: RCP6-NFA-RRA7



For RCP6(S)-RRA8□
Model Number: RCP6-NFA-RRA8

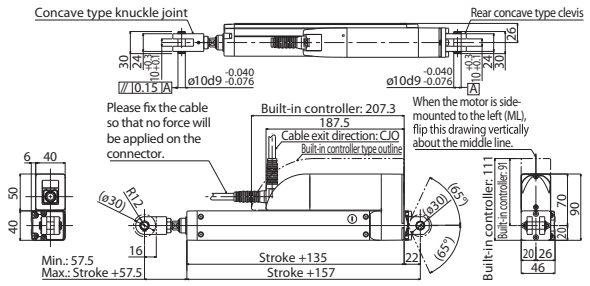


Knuckle Joint

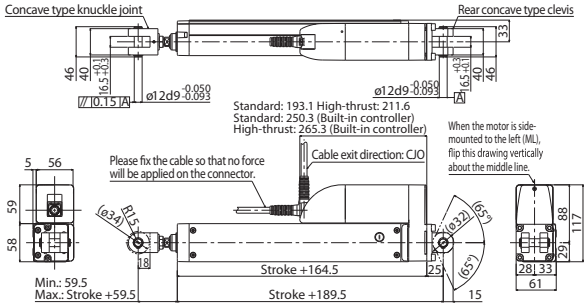
Option Code **NJ** Applicable Models **RCP6(S)-RRA□R**

Description The knuckle joint gives rotational freedom of movement to the rod tip when clevis or trunnion brackets are used.
* Knuckle joint and clevis brackets for RCP6(S) radial cylinders are furnished separately. The assembly is to be performed by the customer with reference to the mechanical drawings. When making adjustments, we recommend that the parallelism fall within the level mentioned on the mechanical drawings provided. Also, for RCP6(S) Series, please use the knuckle joint and the clevis brackets together as a set.

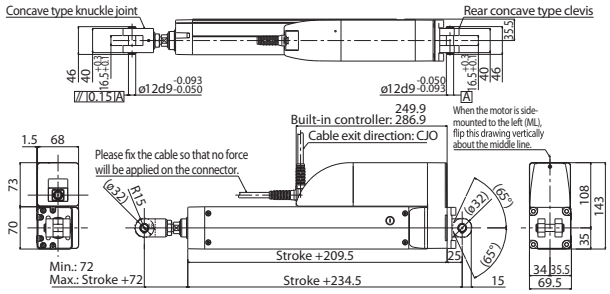
For RCP6(S)-RRA4R
Model Number: RCP6-NJ-RRA4R



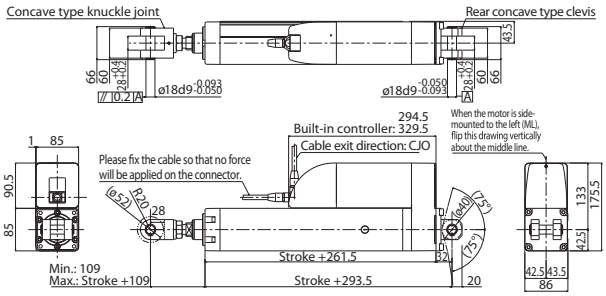
For RCP6(S)-RRA6R
Model Number: RCP6-NJ-RRA6R



For RCP6(S)-RRA7R
Model Number: RCP6-NJ-RRA7R



For RCP6(S)-RRA8R
Model Number: RCP6-NJ-RRA8R



Non-motor End Specification

Option Code **NM** Applicable Models **All Models**

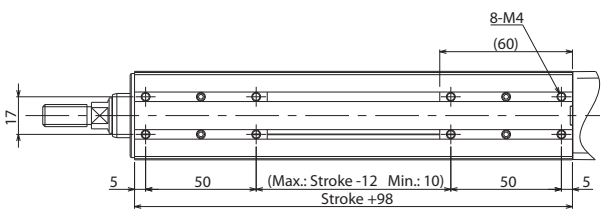
Description The normal home position is set by the slider and rod on the motor side, but there is the option for the home position to be on the other side to accommodate variations in equipment layout, etc. (Please note that changing the home position after the actuator is manufactured and shipped from the factory may require the products to be sent back to IAI for re-setting.)

T-slot Nut Bar

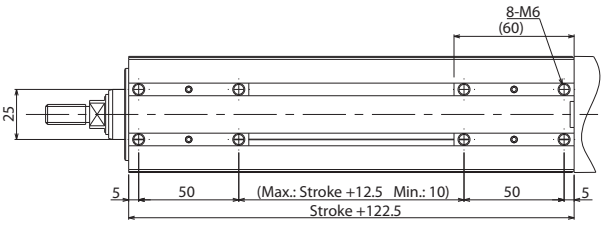
Option Code **NTB / NTBL / NTBR** Applicable Models **RCP6(S)-RA4□/RA6□/RA7□/RA8□/WRA10□/WRA12□/WRA14□/WRA16□**

Description T-slot nut bar is a bar-shaped bracket which is to be inserted into the actuator's T-slot. There are tapped mounting holes on the T-slot nut bar. From the motor-side view, NTBL is inserted on the left side, and NTBR is inserted on the right.
*Rod (RA) type can choose only NTB, while wide radial cylinder (WRA) type can choose either NTBL (for the actuator with its motor side-mounted to the right) or NTBR (for the actuator with its motor side-mounted to the left).
Note: Mounting holes on the top of the base crossing the nut bar cannot be used for the wide radial cylinder type (WRA).

For RCP6(S)-RA4□
Model Number: RCP6-NTB-RA4

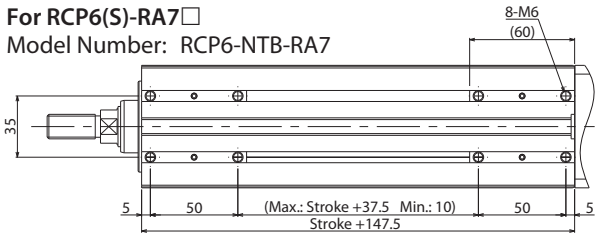


For RCP6(S)-RA6□
Model Number: RCP6-NTB-RA6

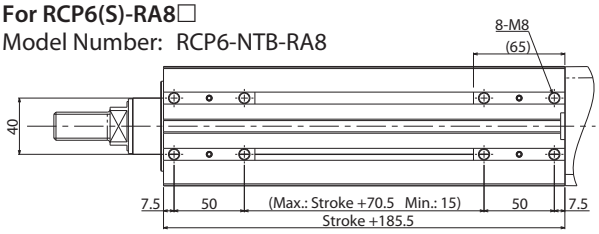


Options

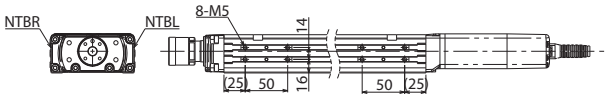
For RCP6(S)-RA7□
Model Number: RCP6-NTB-RA7



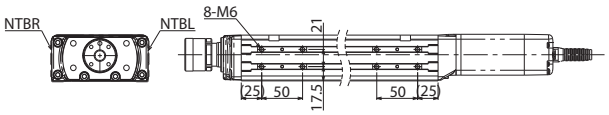
For RCP6(S)-RA8□
Model Number: RCP6-NTB-RA8



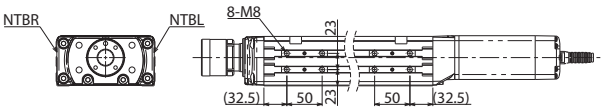
For RCP6(S)-WRA10□
Model Number: RCP6-NTB-WRA10



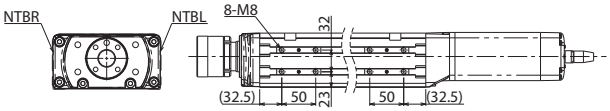
For RCP6(S)-WRA12□
Model Number: RCP6-NTB-WRA12



For RCP6(S)-WRA14□
Model Number: RCP6-NTB-WRA14



For RCP6(S)-WRA16□
Model Number: RCP6-NTB-WRA16



Clevis Bracket

Option Code **QR** Applicable Models **RCP6(S)-RRA□R**

Description A bracket for aligning the cylinder movement when the load installed on the rod tip moves in a direction different from the rod.

Applicable Models	Model Number
RCP6(S)-RRA4R	RCP6-QR-RRA4R
RCP6(S)-RRA6R	RCP6-QR-RRA6R
RCP6(S)-RRA7R	RCP6-QR-RRA7R
RCP6(S)-RRA8R	RCP6-QR-RRA8R

* Knuckle joint and clevis brackets for RCP6(S) radial cylinders are furnished separately. The assembly is to be performed by the customer with reference to the mechanical drawings. When making adjustments, we recommend that the parallelism fall within the level mentioned on the mechanical drawings provided.
Also, for RCP6(S) Series, please use the knuckle joint and the clevis brackets together as a set.
For mechanical drawings, please refer to the knuckle joint option (NJ) on P.194.

Slider Roller Specification

Option Code **SR** Applicable Models **RCP6(S)-SA□/WSA□**

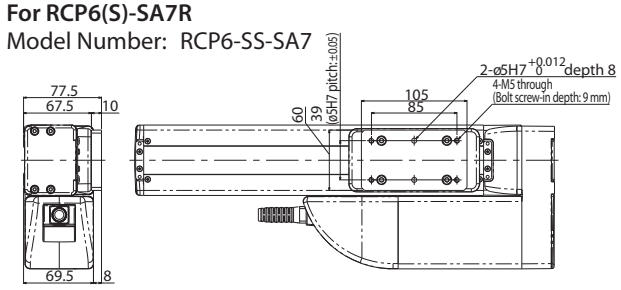
Description The standard slider structure of the slider type is changed to a roller structure similar to the cleanroom specification.
Using a roller specification in the slider part means that the slider cover external view and dimensions are the same as those of the cleanroom type.

Slider Spacer

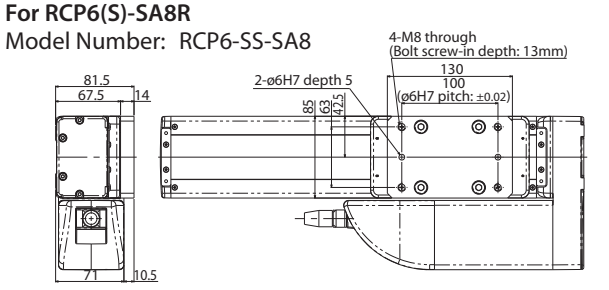
SS Applicable Models **RCP6(S) -SA7R/SA8R**

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

For RCP6(S)-SA7R
Model Number: RCP6-SS-SA7



For RCP6(S)-SA8R
Model Number: RCP6-SS-SA8



Vacuum joint mounting position opposite

Option Code **VR** Applicable Models **RCP6(S)CR-SA□/WSA□**

Description As standard, the vacuum joint is installed on the left side of the body when seen from the motor side, but this option changes it to the right side (opposite side).

Double Slider Specification

Option Code **W** Applicable Models **RCP6(S)/RCP6(S)CR-SA□**

Description This option adds a free slider not connected to the ball screw or drive belt.
Using a double slider enables increased moment and overhang load length.
* For the allowable dynamic moment and overhang load length of the double slider, refer to P.248.

Selection Notes for RCP6(S) Series

■ Warnings When Selecting the Rod Attachment Option

Model	Options				
RCP6	FL	NTBL	NTBR	QR	NJ
RA4R	①	–	–	–	–
RA6R	①	–	–	–	–
RA7R	②	–	–	–	–
RA8R	②	–	–	–	–
RRA4R	③	–	–	⑬	⑬
RRA6R	④	–	–	⑬	⑬
RRA7R	⑤	–	–	⑬	⑬
RRA8R	–	–	–	⑬	⑬
WRA10R	–	⑪	⑫	–	–
WRA12R	–	⑪	⑫	–	–
WRA14R	–	⑪	⑫	–	–
WRA16R	–	⑪	⑫	–	–

Model	Options				
RCP6S	FL	NTBL	NTBR	QR	NJ
RA4R	②	–	–	–	–
RA6R	②	–	–	–	–
RA7R	⑥	–	–	–	–
RA8R	⑥	–	–	–	–
RRA4R	⑦	–	–	⑬	⑬
RRA6R	⑧	–	–	⑬	⑬
RRA7R	⑨	–	–	⑬	⑬
RRA8R	–	–	–	⑬	⑬
WRA10R	–	⑪	⑫	–	–
WRA12R	–	⑪	⑫	–	–
WRA14R	–	⑪	⑫	–	–
WRA16R	–	⑪	⑫	–	–

Be sure to check the following conditions when selecting options.
① Cannot be selected for 50ST
② Cannot be selected for 50~100ST
③ Cannot be selected for 60ST
④ Cannot be selected for 65ST
⑤ Cannot be selected for 70ST
⑥ Cannot be selected for 50~150ST
⑦ Cannot be selected for 60~110ST
⑧ Cannot be selected for 65~115ST
⑨ Cannot be selected for 70~120ST
⑩: Always select CJ□ when using 150ST.
⑪: Can only be selected when MR is selected.
⑫: Can only be selected when ML is selected.
⑬: Purchase the clevis (QR) and knuckle joint (NJ) as a set.
The assembly is to be performed by the customer.

- The front flange (FL) rod attachment option cannot be used on side mounting position for RCP6(S)-RRA8R when the following strokes are selected.

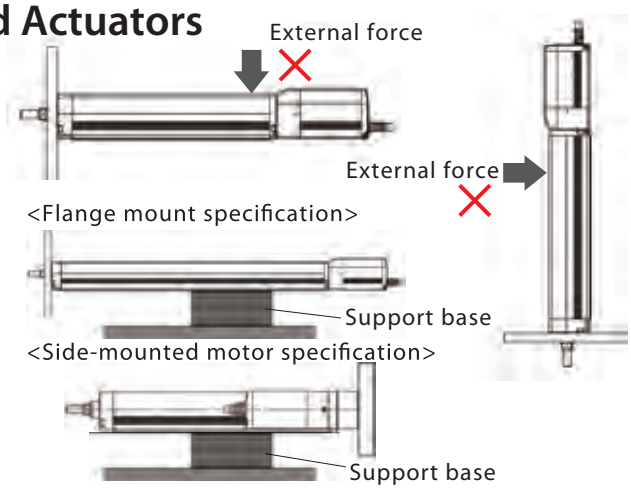
  • RCP6(S)-RRA8R 50~100mm (Standard/With a brake)

- Please be careful of nearby objects when selecting the flange option for the RCP6(S)-RRA□R models, as there may be some interference between the cable and flange surface for certain strokes. Please also be careful of nearby objects when selecting the tip adapter option (FFA, NFA, KFA) for the RCP6(S)-RRA4R/RRA6R/RRA7R models, there may be some interference between the cable and work piece for certain strokes.

■ 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-coupled 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.

Dust/Splash-Proof Specification Options

Changing Actuator Cable Length

Model AC5 / AC10 / AC15

Description Specify when changing the actuator cable (pigtail cable) length longer than 2m (standard). AC5: 5m, AC10: 10m, AC15: 15m.

Brake

Model B

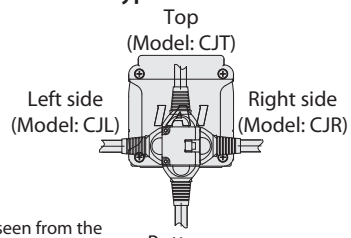
Description When the actuator is mounted vertically, this works as a holding mechanism that prevents the rod from falling and damaging any attachments when the power or servo is turned off.

Cable Exit Direction

Model CJT / CJR / CJL / CJB / CJO

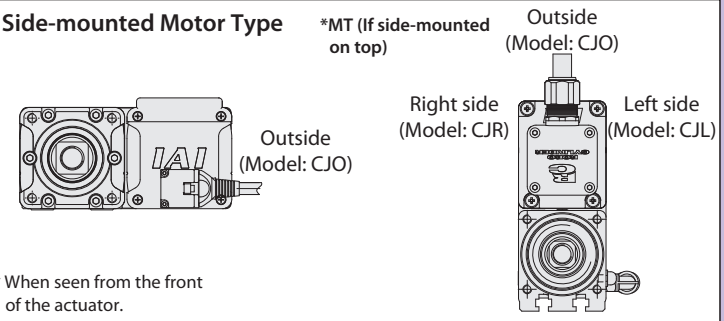
Description This option allows you to change the exit direction of the motor-encoder cable to top, bottom, left, or right.
* Be sure to confirm with the Selection Notes (P.204).

Coupled Motor Type



* When seen from the rear (motor side) of the actuator.

Side-mounted Motor Type *MT (If side-mounted on top)



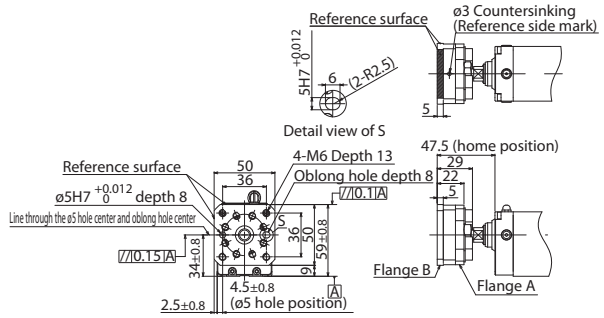
* When seen from the front of the actuator.

Tip Adapter (Flange)

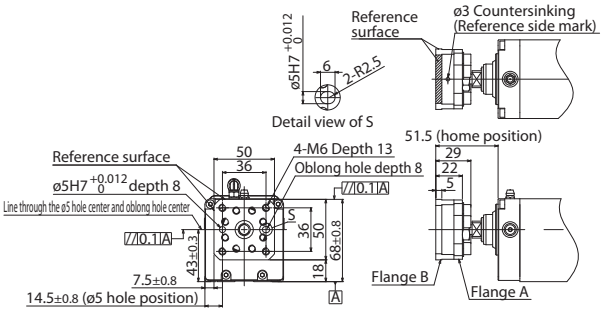
Model FFA

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

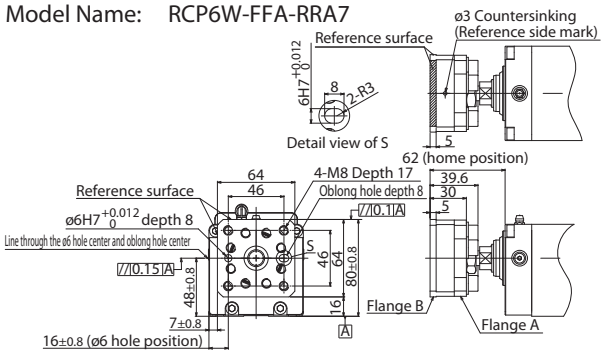
RCP6(S)W-RRA4□
Model Name: RCP6W-FFA-RRA4



RCP6(S)W-RRA6□
Model Name: RCP6W-FFA-RRA6



RCP6(S)W-RRA7□
Model Name: RCP6W-FFA-RRA7

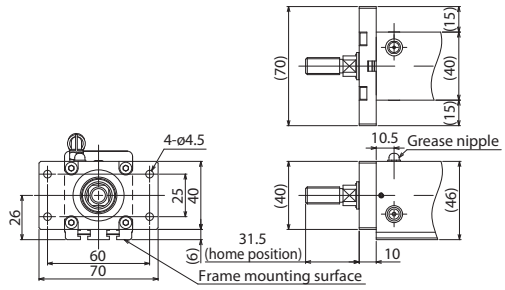


Flange

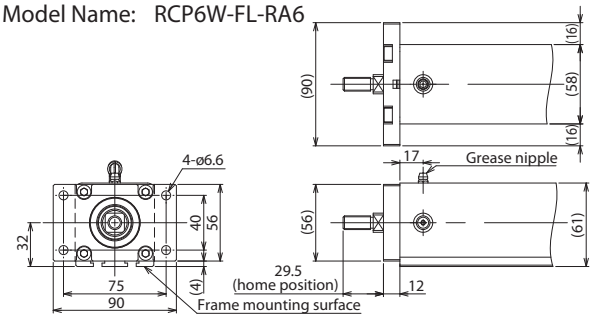
Model **FL**

Description A bracket that attaches to the actuator body with bolts. * Be sure to confirm with the Selection Notes (P.204).

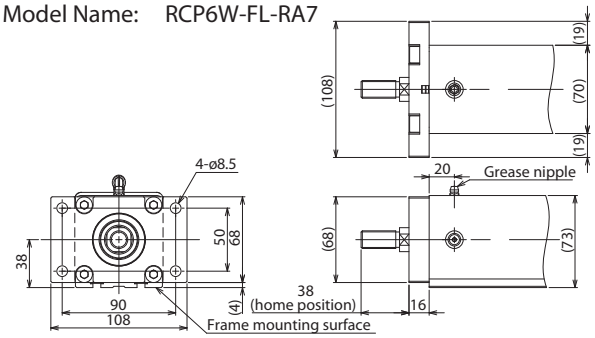
RCP6(S)W-RA4□
Model Name: RCP6W-FL-RA4



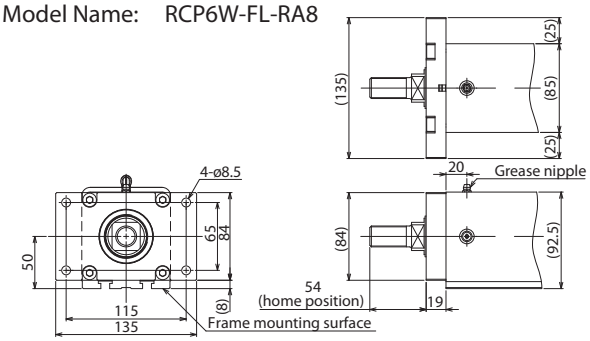
RCP6(S)W-RA6□
Model Name: RCP6W-FL-RA6



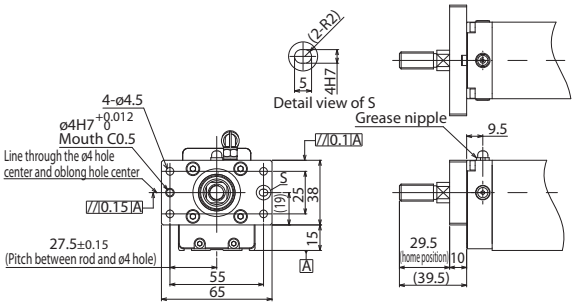
RCP6(S)W-RA7□
Model Name: RCP6W-FL-RA7



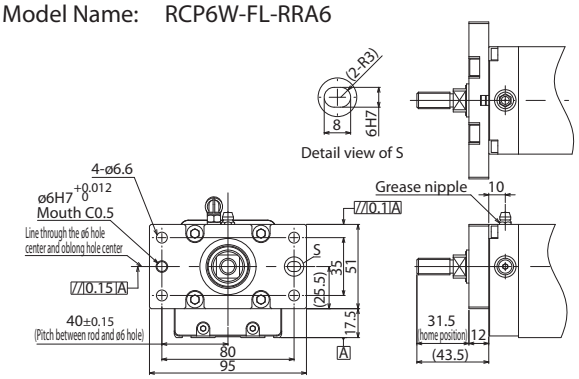
RCP6(S)W-RA8□
Model Name: RCP6W-FL-RA8



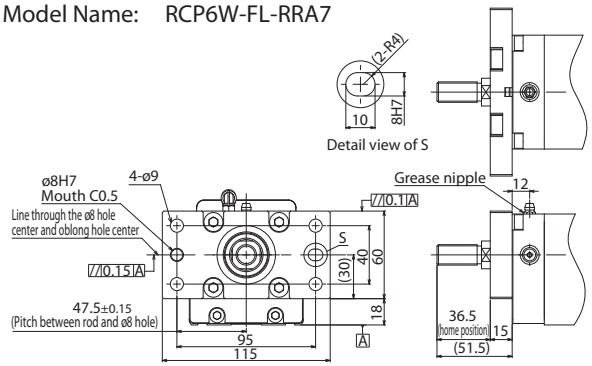
RCP6(S)W-RRA4□
Model Name: RCP6W-FL-RRA4



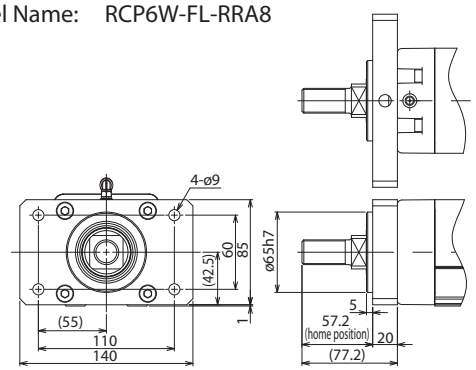
RCP6(S)W-RRA6□
Model Name: RCP6W-FL-RRA6



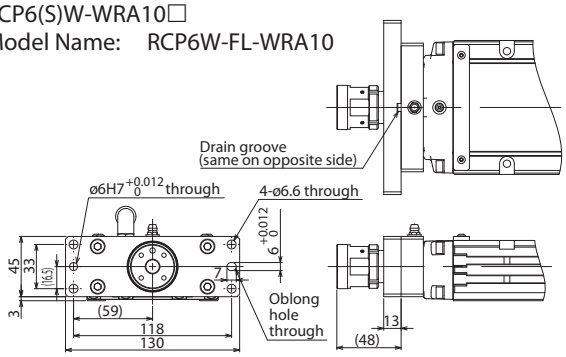
RCP6(S)W-RRA7□
Model Name: RCP6W-FL-RRA7



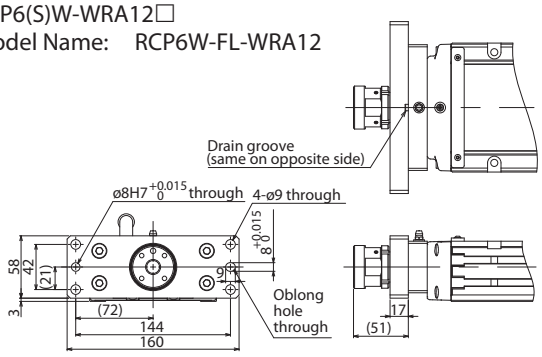
RCP6(S)W-RRA8□
Model Name: RCP6W-FL-RRA8



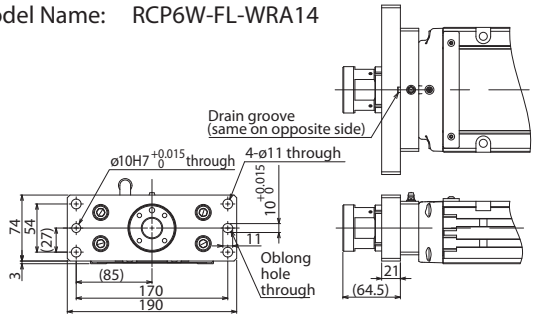
RCP6(S)W-WRA10□
Model Name: RCP6W-FL-WRA10



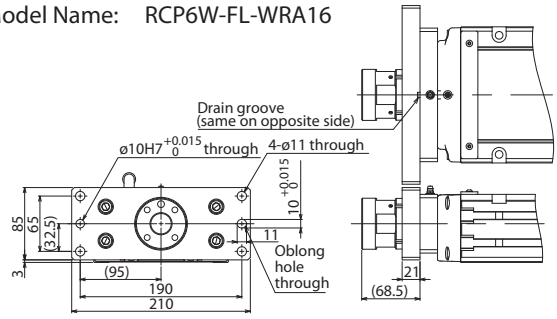
RCP6(S)W-WRA12□
Model Name: RCP6W-FL-WRA12



RCP6(S)W-WRA14□
Model Name: RCP6W-FL-WRA14



RCP6(S)W-WRA16□
Model Name: RCP6W-FL-WRA16

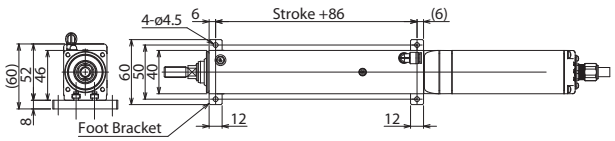


Foot Bracket

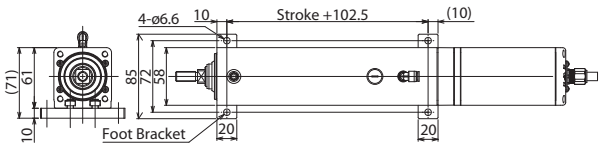
Model **FT**

Description This is a bracket used to fix the actuator with bolts from the top side. (Bolts are tightened from the top, not from the bottom) For slider type actuators, when the moment load is large, please attach the foot brackets on all the mounting holes on the actuator. The actuator body may be twisted or deformed if insufficient number of mounting foot brackets are used. Actuator life could also be shortened.
* Refer to the installation dimensions in the actuator drawing for the installation pitch between the foot brackets.

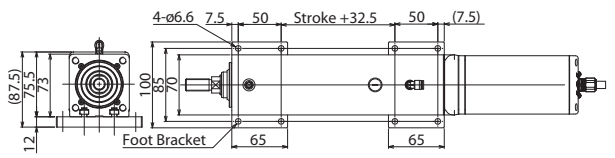
RCP6(S)W-RA4C
Model Name: RCP6W-FT-RA4C



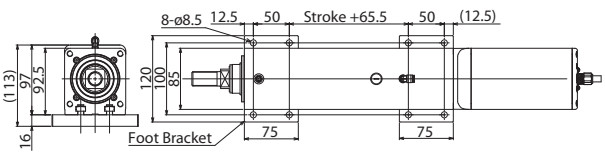
RCP6(S)W-RA6C
Model Name: RCP6W-FT-RA6C



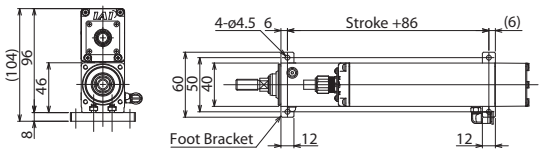
RCP6(S)W-RA7C
Model Name: RCP6W-FT-RA7C



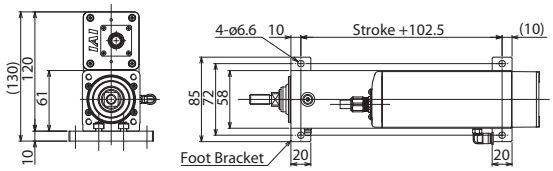
RCP6(S)W-RA8C
Model Name: RCP6W-FT-RA8C



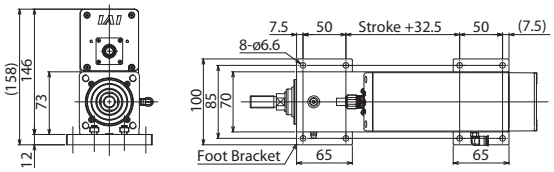
RCP6(S)W-RA4R
Model Name: RCP6W-FT-RA4R-1 (For the motor side-mounted to the top)



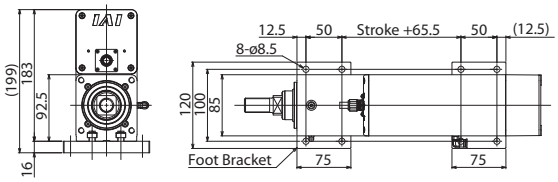
RCP6(S)W-RA6R
Model Name: RCP6W-FT-RA6R-1 (For the motor side-mounted to the top)



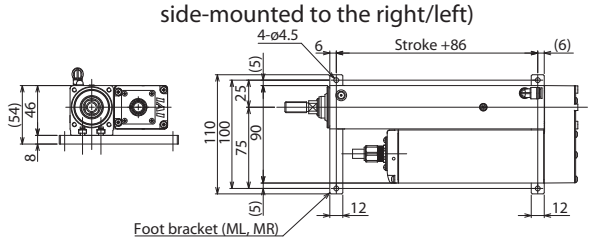
RCP6(S)W-RA7R
Model Name: RCP6W-FT-RA7R-1 (For the motor side-mounted to the top)



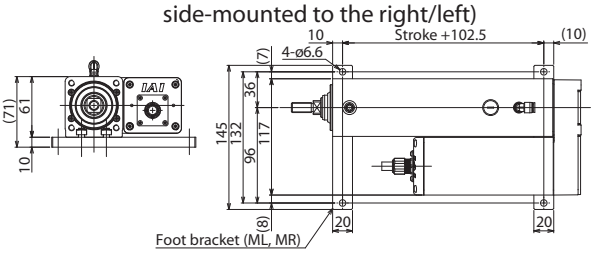
RCP6(S)W-RA8R
Model Name: RCP6W-FT-RA8R-1 (For the motor side-mounted to the top)



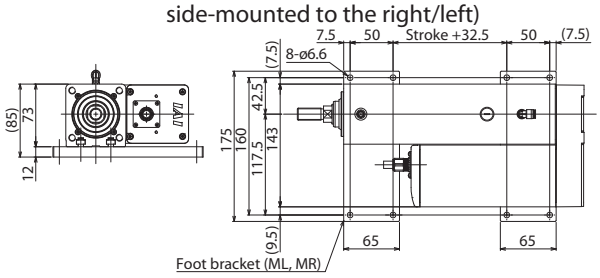
RCP6(S)W-RA4R
Model Name: RCP6W-FT-RA4R-2 (For the motor side-mounted to the right/left)



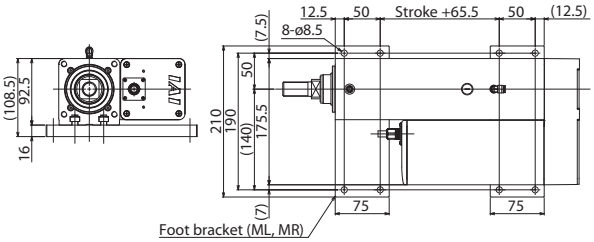
RCP6(S)W-RA6R
Model Name: RCP6W-FT-RA6R-2 (For the motor side-mounted to the right/left)



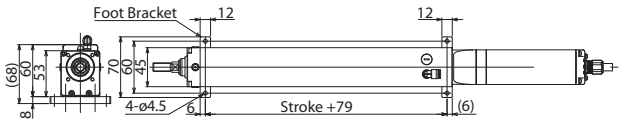
RCP6(S)W-RA7R
Model Name: RCP6W-FT-RA7R-2 (For the motor side-mounted to the right/left)



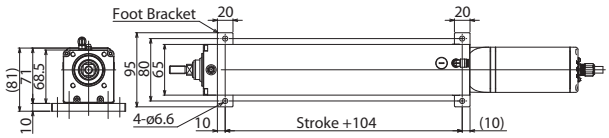
RCP6(S)W-RA8R
Model Name: RCP6W-FT-RA8R-2 (For the motor side-mounted to the right/left)



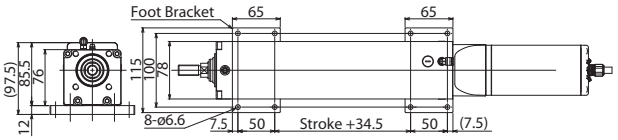
RCP6(S)W-RRA4C
Model Name: RCP6W-FT-RRA4



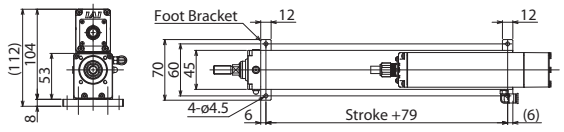
RCP6(S)W-RRA6C
Model Name: RCP6W-FT-RRA6



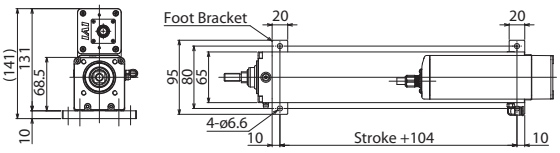
RCP6(S)W-RRA7C
Model Name: RCP6W-FT-RRA7



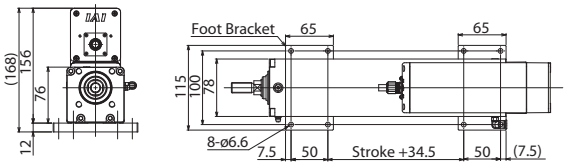
RCP6(S)W-RRA4R
Model Name: RCP6W-FT-RRA4 (For motor side-mounting)



RCP6(S)W-RRA6R
Model Name: RCP6W-FT-RRA6 (For motor side-mounting)



RCP6(S)W-RRA7R
Model Name: RCP6W-FT-RRA7 (For motor side-mounting)

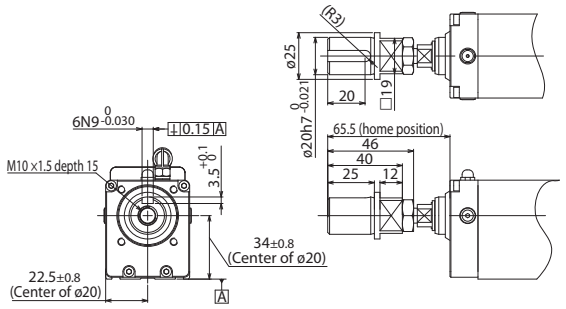


Tip Adapter (Keyway)

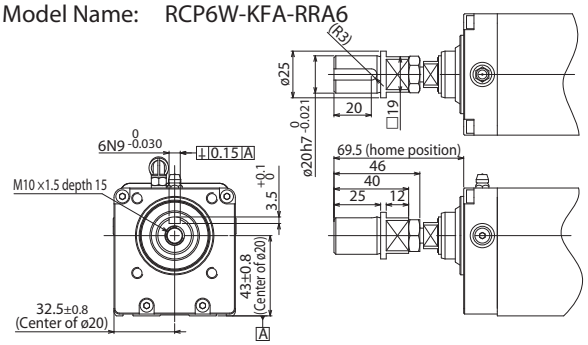
Model **KFA**

Description A female threaded tip adapter with a parallel keyway.

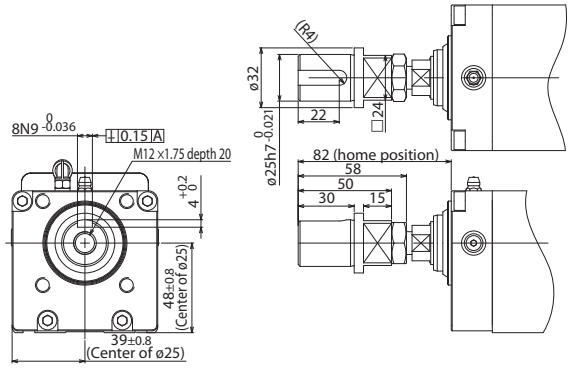
RCP6(S)W-RRA4□
Model Name: RCP6W-KFA-RRA4



RCP6(S)W-RRA6□
Model Name: RCP6W-KFA-RRA6



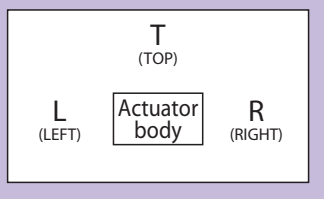
RCP6(S)W-RRA7□
Model Name: RCP6W-KFA-RRA7



Side-mounted Motor Direction

Model **ML / MR / MT**

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

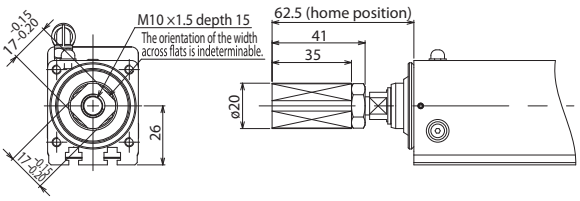


Tip Adapter (Internal Thread)

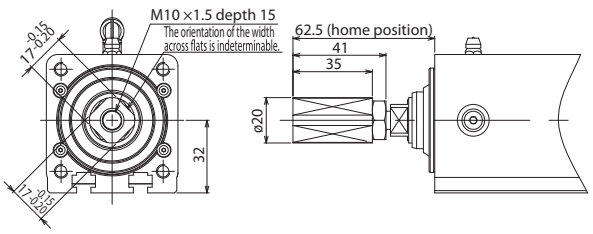
Model **NFA**

Description A rod-end tooling adapter with 1 threaded hole.

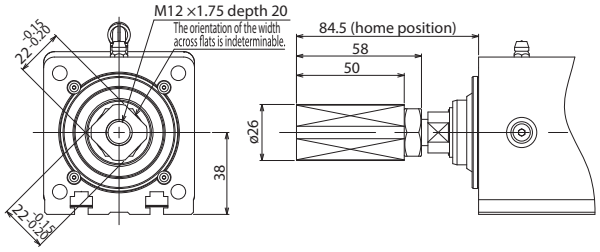
RCP6(S)W-RA4□
Model Name: RCP6W-NFA-RA4



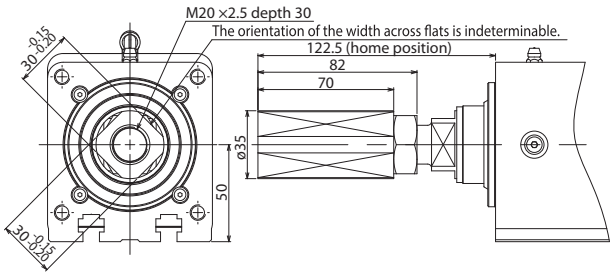
RCP6(S)W-RA6□
Model Name: RCP6W-NFA-RA6



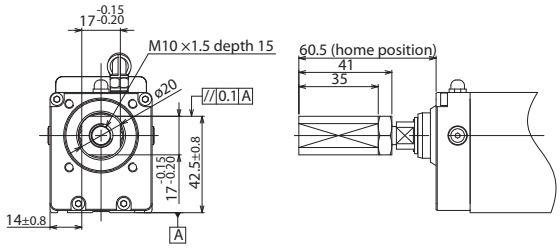
RCP6(S)W-RA7□
Model Name: RCP6W-NFA-RA7



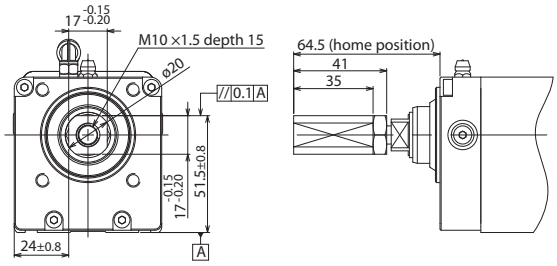
RCP6(S)W-RA8□
Model Name: RCP6W-NFA-RA8



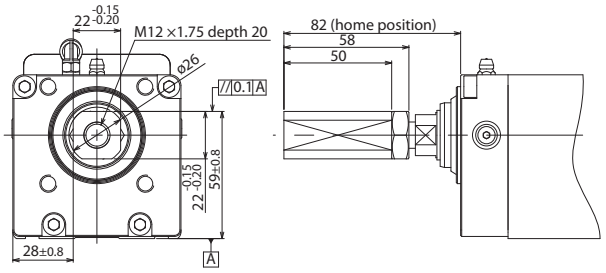
RCP6(S)W-RRA4□
Model Name: RCP6W-NFA-RRA4



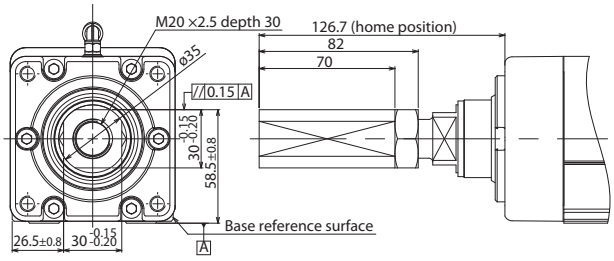
RCP6(S)W-RRA6□
Model Name: RCP6W-NFA-RRA6



RCP6(S)W-RRA7□
Model Name: RCP6W-NFA-RRA7



RCP6(S)W-RRA8□
Model Name: RCP6W-NFA-RRA8



Non-motor End Specification

Model **NM**

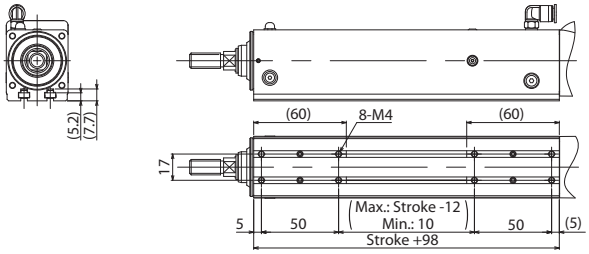
Description The normal home position is set by the slider, rod, and table on the motor side, but there is the option for the home position to be on the other side to accommodate variations in equipment layout, etc. (Please note that changing the home position after the actuator is manufactured and shipped from the factory may require the products to be sent back to IAI for re-setting.)

T-slot Nut Bar

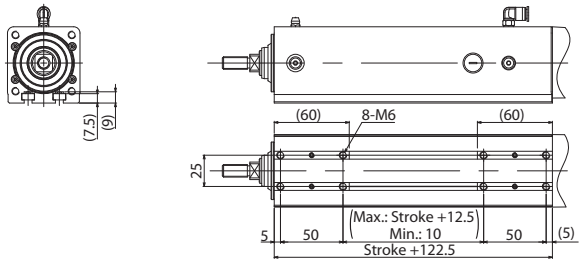
Model **NTB / NTBL / NTBR**

Description T-slot nut bar is a bar-shaped bracket which is to be inserted into the actuator's T-slot. There are tapped mounting holes on the T-slot nut bar. From the motor-side view, NTBL is inserted on the left side, and NTBR is inserted on the right.
* Only NTB can be selected for Rod type (RA) and Radial Cylinder (RRA4/6/7), while either NTBL (for the actuator with its motor side-mounted to the right) or NTBR (for the actuator with its motor side-mounted to the left) can be selected for wide radial cylinder type (WRA).
Note: Mounting holes on the top of the base crossing the nut bar cannot be used for the wide radial cylinder type (WRA).
Note: NTBL and NTBR for wide radial cylinder (WRA) cannot be installed by the customer after delivery.

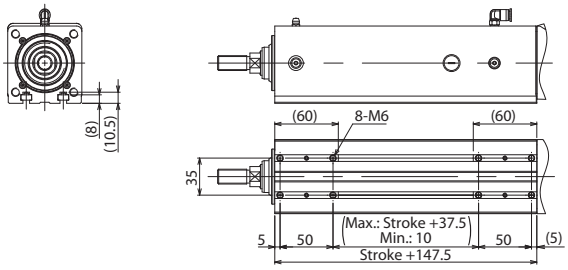
RCP6(S)W-RA4□
Model Name: RCP6W-NTB-RA4



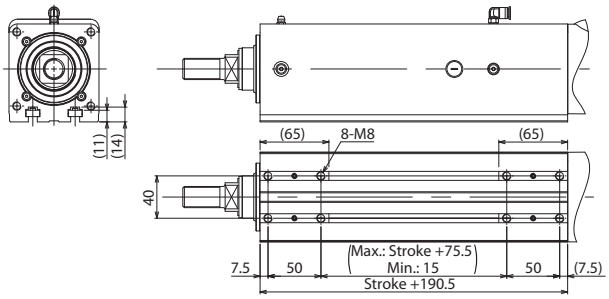
RCP6(S)W-RA6□
Model Name: RCP6W-NTB-RA6



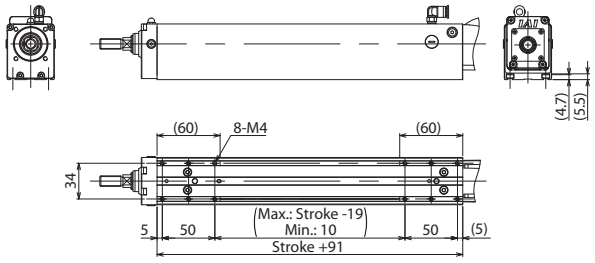
RCP6(S)W-RA7□
Model Name: RCP6W-NTB-RA7



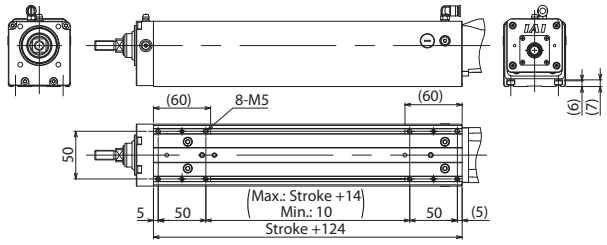
RCP6(S)W-RA8□
Model Name: RCP6W-NTB-RA8



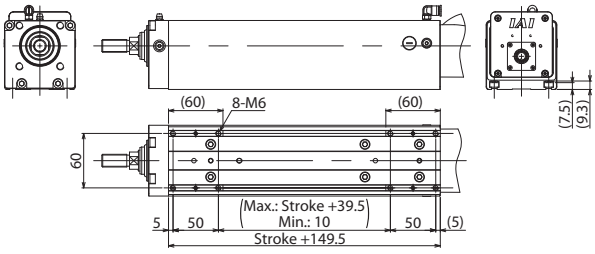
RCP6(S)W-RRA4□
Model Name: RCP6W-NTB-RRA4



RCP6(S)W-RRA6□
Model Name: RCP6W-NTB-RRA6

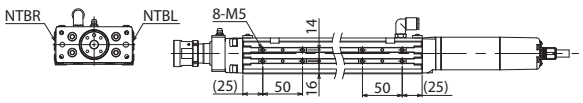


RCP6(S)W-RRA7□
Model Name: RCP6W-NTB-RRA7



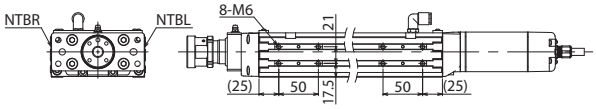
RCP6(S)W-WRA10□
Model Name: RCP6W-NTB-WRA10

* As replacement by the customer is not possible, it cannot be purchased alone.



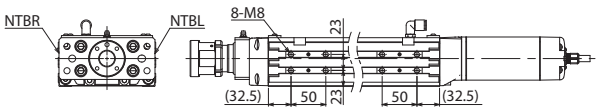
RCP6(S)W-WRA12□
Model Name: RCP6W-NTB-WRA12

* As replacement by the customer is not possible, it cannot be purchased alone.



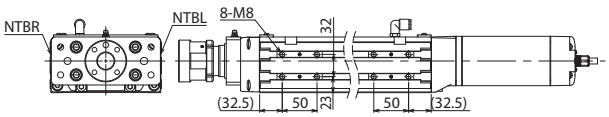
RCP6(S)W-WRA14□
Model Name: RCP6W-NTB-WRA14

* As replacement by the customer is not possible, it cannot be purchased alone.



RCP6(S)W-WRA16□
Model Name: RCP6W-NTB-WRA16

* As replacement by the customer is not possible, it cannot be purchased alone.



Selection Notes for RCP6W Series

■ Cautions When Selecting the Rod Attachment Option

Model	Options							
RCP6W	CJB	CJL	CJO	CJR	CJT	FL	NTBL	NTBR
RA4R	①	②	○	②	①	③④	–	–
RA6R	①	②	○	②	①	③④	–	–
RA7R	①	②	○	②	①	③④	–	–
RA8R	①	②	○	②	①	③④	–	–
RRA4R	–	○	○	○	–	③④	–	–
RRA6R	–	○	○	○	–	③④	–	–
RRA7R	–	○	○	○	–	③④	–	–
RRA8R	○	–	○	–	○	③④	–	–
WRA10R	○	–	○	–	○	③④	⑤	⑥
WRA12R	○	–	○	–	○	③④	⑤	⑥
WRA14R	○	–	○	–	○	③④	⑤	⑥
WRA16R	○	–	○	–	○	③④	⑤	⑥

Be sure to check the following conditions when selecting options.

① : Can be selected when ML or MR is selected.
② : Can be selected when MT is selected.
③ : Cannot be selected for 50ST.
④ : Always select CJ□ when using 100ST.
⑤ : Can only be selected when MR is selected.
⑥ : Can only be selected when ML is selected.

Model	Options							
RCP6SW	CJB	CJL	CJO	CJR	CJT	FL	NTBL	NTBR
RA4R	①	②	○	②	①	③④	–	–
RA6R	①	②	○	②	①	③④	–	–
RA7R	①	②	○	②	①	③④	–	–
RA8R	①	②	○	②	①	③④	–	–
RRA4R	–	○	○	○	–	③④	–	–
RRA6R	–	○	○	○	–	③④	–	–
RRA7R	–	○	○	○	–	③④	–	–
RRA8R	○	–	○	–	○	③④	–	–
WRA10R	○	–	○	–	○	③④	⑤	⑥
WRA12R	○	–	○	–	○	③④	⑤	⑥
WRA14R	○	–	○	–	○	③④	⑤	⑥
WRA16R	○	–	○	–	○	③④	⑤	⑥

Be sure to check the following conditions when selecting options.

① : Can be selected when ML or MR is selected.
② : Can be selected when MT is selected.
③ : Cannot be selected for 50ST or 100ST.
④ : Always select CJ□ when using 150ST.
⑤ : Can only be selected when MR is selected.
⑥ : Can only be selected when ML is selected.

Note: NTBL and NTBR cannot be installed by the customer after delivery.

- The front flange (FL) rod attachment option cannot be used on side mounting position for RCP6(S)W-RRA8R when the following strokes are selected.

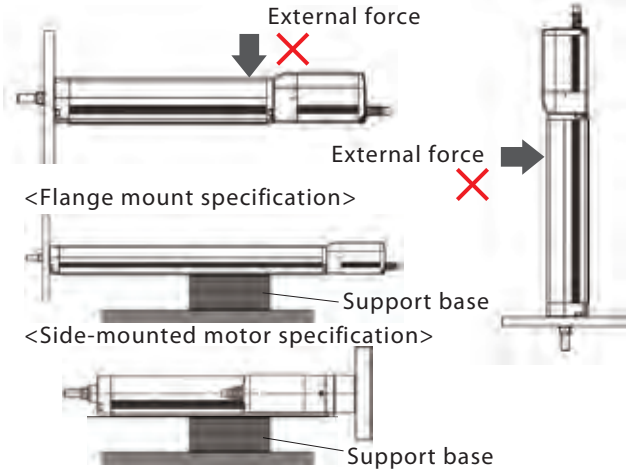
  • RCP6(S)W-RRA8R Stroke 50~100 (standard/with brake)

- Please be careful of nearby objects when selecting the front flange (FL) option for the RCP6(S)W-RRA□R models, as there may be some interference between the cable and flange surface for certain strokes. Please also be careful of nearby objects when selecting the tip adapter option (FFA, NFA, KFA) for the RCP6(S)W-RRA4R/ RRA6R/RRA7R models, as there may be some interference between the cable and work piece for certain strokes.

■ Notes When Installing the Rod Type

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 mounted 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 Orientation

- When mounting the motor coupled type vertically, please set the motor on the top if possible. While installing the motor on the bottom will not cause problems during normal operation, long periods of inactivity may cause the grease to separate, flow into the motor unit, and cause problems in rare occasions.

Correlation Diagrams of Push Force and Current Limit

RCP6 Series Slider Type/Rod Type * Includes RCP6CR/RCP6W

Push force can be achieved only during push mode and speed is limited below 20mm/s depending on the model. See manual for details.
In the push-motion operation, the push force can be changed by changing the current force of the controller to be between 20% (30%)-70%. The maximum push force will vary depending on the model, so please refer to the graphs below and on the following page, and select one based on the needed push force for your intended use.

When performing the push-motion operation with the slider type, please limit the push current in order that the reactive moment caused by the push force does not exceed the dynamic allowable moment (Ma, Mb) specified in the catalog (It should be 80% or less of the dynamic allowable moment for the slider type). Please refer to the figures below, which show the working point of the guide moment, 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 service life. Please keep this in mind and select a push current that is safely within its limits.

Slider type

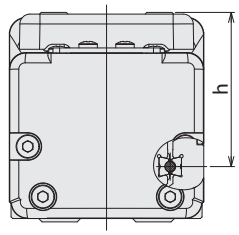
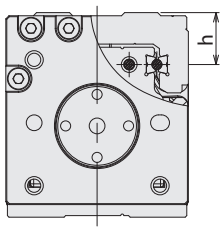


Table type



Working point of the guide moment

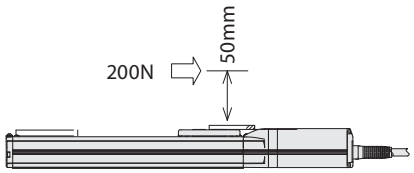
h dimension			
Slider type		Table type	
SA4	36	TA4	12
SA6	46	TA6	16.5
SA7	48	TA7	19.5
SA8	45.5		
WSA10	26.5		
WSA12	32		
WSA14	36		
WSA16	38.5		

* Unit: mm

Calculation example)

If push-motion operation is performed with an RCP6-SA7C by applying 200N at the position shown to the right, the moment received by the guide, or Ma, is calculated as:

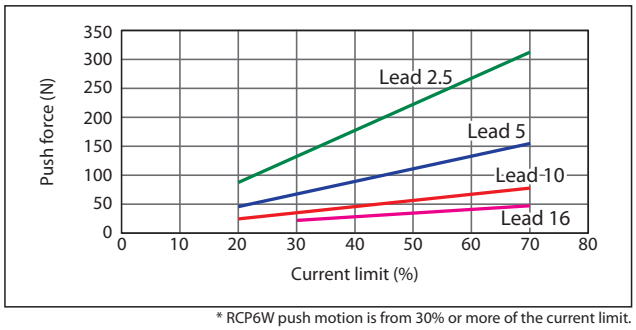
Ma = (48+50)×200 = 19600 (N•mm)
= 19.6 (N•m)



Since the dynamic allowable moment of the SA7C is Ma = 44.7 (N•m), so 44.7×0.8 = 35.76 > 19.6, this is an acceptable selection.
Also, should an Mb 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.

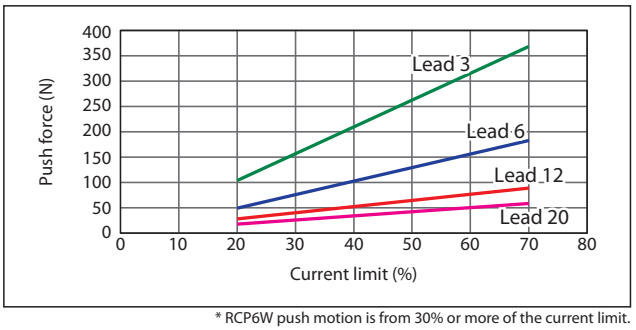
Correlation Diagrams of Push Force and Current Limit * The graphs below are only a reference, and the graphs may vary slightly from the actual.

SA4/RA4/RRA4/TA4 Type



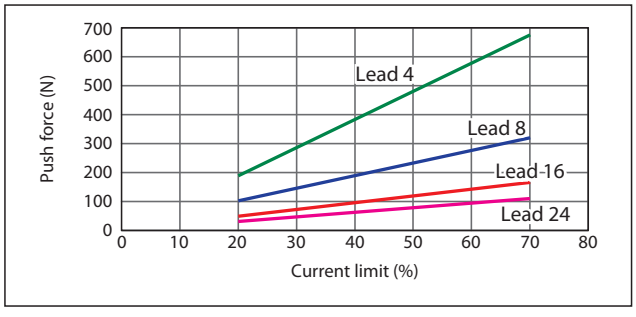
* RCP6W push motion is from 30% or more of the current limit.

SA6/RA6/RRA6/TA6 Type

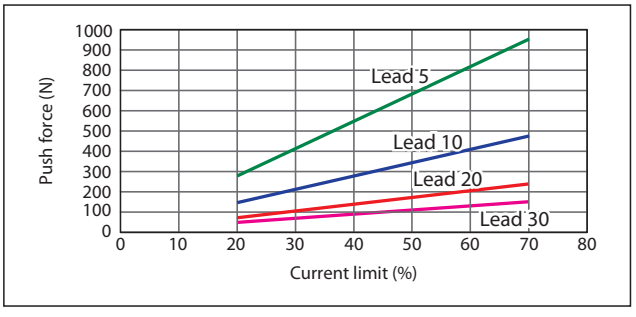


* RCP6W push motion is from 30% or more of the current limit.

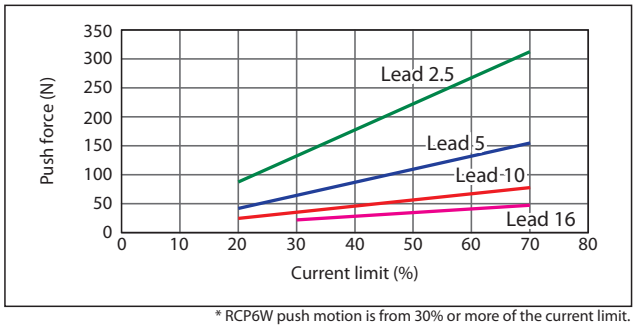
SA7/TA7/WSA14 Type



SA8 Type

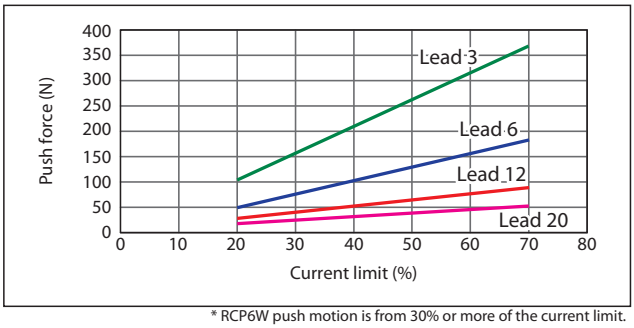


WSA10/WRA10 Type



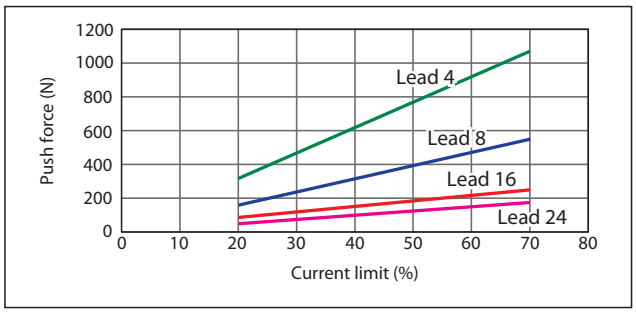
* RCP6W push motion is from 30% or more of the current limit.

WSA12/WRA12 Type



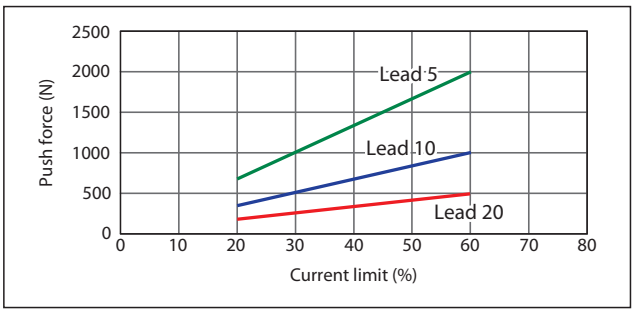
* RCP6W push motion is from 30% or more of the current limit.

RA7/RRA7/WRA14 Type



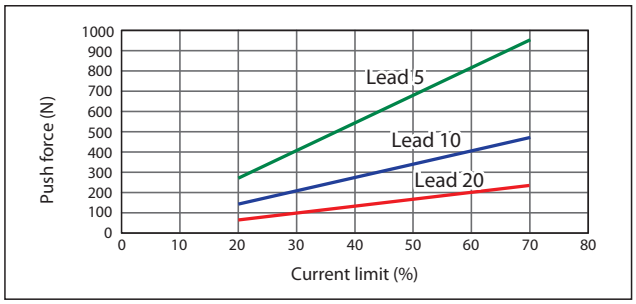
* RCP6W push motion is from 30% or more of the current limit.

RA8/RRA8/WRA16 Type



* RCP6W push motion is from 30% or more of the current limit.

WSA16 Type

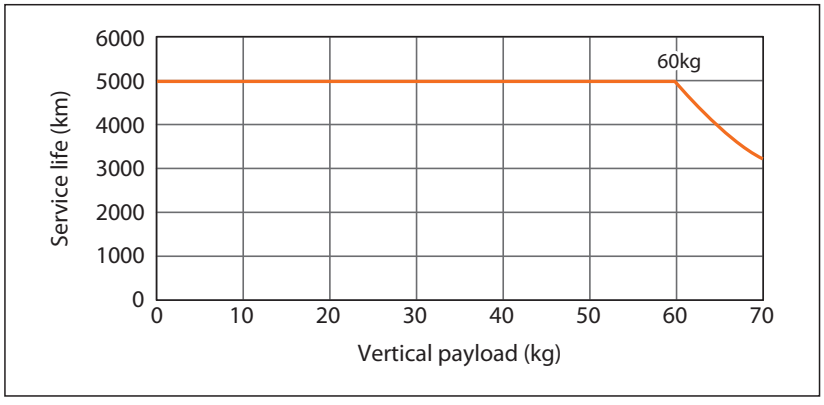


Vertical Payload and Service Life

* The graph below is only a reference, and the graph may vary slightly from the actual.

When using RCP6(S)-RA8, RRA8, WSA16 (lead 5 only), WRA16 (lead 5 only), RCP6(S)W-RA8, RRA8, WSA16 (lead 5 only), WRA16 (lead 5 only) vertically, their service life will vary greatly depending on the payload. Please check the following graph.

RA8/RRA8/WSA16/WRA16 Type



Tables of Payload by Speed/Acceleration

The tables below shows the maximum payload in each acceleration/deceleration for different models. Please select a model that satisfies the operational conditions you desire.
For the MCON-C/LC controller, high-output enabled operation is only available if "high-output setting" is selected as an option.
For the double slider payload, refer to P.248.

RCP6 Series | Slider Type Motor Coupling Specification

High-output Setting Enabled

* RCP6CR is the same.

■ RCP6/RCP6S-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	7	7	5	5	4.5	1.5	1.5	1.5
140	7	7	5	5	4.5	1.5	1.5	1.5
280	7	7	5	5	4.5	1.5	1.5	1.5
420	7	7	5	5	4.5	1.5	1.5	1.5
560	7	7	5	5	4.5	1.5	1.5	1.5
700	6	6	5	4.5	4	1.5	1.5	1.5
840		6	4	4	3.5		1	1
980		4	4	3	2.5		1	1
1120			2.5	2	1.5		1	0.75
1260			2	1.5	1			0.5

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	12	12	12	10	9	3	3	3
85	12	12	12	10	9	3	3	3
175	12	12	12	10	9	3	3	3
260	12	12	12	10	9	3	3	3
350	12	12	12	10	9	3	3	3
435	12	12	12	10	8	2.5	2.5	2.5
525	12	12	10	8	7	2.25	2.25	2.25
610	12	10	8	6	5	2.25	2.25	2.25
700		8	6	4	3		2	1.75
785		7	4	3	3		1.5	1.25

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	14	14	14	14	14	5.5	5.5	5.5
40	14	14	14	14	14	5.5	5.5	5.5
85	14	14	14	14	14	5.5	5.5	5.5
130	14	14	14	14	14	5.5	5.5	5.5
175	14	14	14	14	14	5.5	5.5	5.5
215	14	14	14	14	14	5.5	5.5	5.5
260	14	14	14	14	13	5.5	5.5	5.5
305	14	14	14	14	12	5	5	5
350	14	12	12	12	10	4.5	4.5	4.5
390	14	10	10	10	10	4	4	3.5

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	18	18	18	18	18	12	12	12
20	18	18	18	18	18	12	12	12
40	18	18	18	18	18	12	12	12
65	18	18	18	18	18	12	12	12
85	18	18	18	18	18	12	12	12
105	18	18	18	18	18	12	12	12
130	18	18	18	18	18	11	11	11
150	18	18	18	18	18	10	10	10
175	18	18	18	18	18	9	9	9
195	18	18	18	18	18	8	8	8

■ RCP6/RCP6S-SA6C

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	15	15	10	8	7	1	1	1
160	15	15	10	8	7	1	1	1
320	15	12	10	8	6	1	1	1
480	12	12	9	8	6	1	1	1
640	12	12	8	6	5	1	1	1
800	10	10	6.5	4.5	3	1	1	1
960		8	5	3.5	2		1	1
1120		6.5	3	2	1.5		0.5	0.5
1280			1	1	1			0.5
1440			1	0.5				

Lead 12

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	26	18	16	14	2.5	2.5	2.5
80	28	26	18	16	14	2.5	2.5	2.5
200	28	26	18	16	14	2.5	2.5	2.5
320	28	26	18	14	12	2.5	2.5	2.5
440	28	26	18	12	10	2.5	2.5	2.5
560	28	20	12	8	7	2.5	2.5	2.5
680	20	15	9	5	4	2.5	2.5	2.5
800	15	9	5	2	1	2	2	1
900		5	3	1	1		0.5	0.5

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	32	32	26	24	20	6	6	6
40	32	32	26	24	20	6	6	6
100	32	32	26	24	20	6	6	6
160	32	32	26	24	20	6	6	6
220	32	32	26	24	20	6	6	6
280	32	32	26	24	15	6	6	5.5
340	32	32	20	18	12	6	5	4.5
400	32	22	12	11	8	4.5	3.5	3.5
450	26	15	8	6	4	3.5	2	2

Lead 3

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	35	35	16	16	16
20	40	40	35	35	35	16	16	16
50	40	40	35	35	35	16	16	16
80	40	40	35	35	30	16	16	16
110	40	40	35	35	30	16	16	16
140	40	40	35	35	28	16	15	15
170	40	40	32	32	24	14	13	12
200	40	35	28	25	20	11	10	9
225	40	28	20	18	14	9	8	

■ RCP6/RCP6S-SA7C

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	37	37	22	16	14	3	3	3
200	37	37	22	16	14	3	3	3
420	37	34	20	16	14	3	3	3
640	37	20	15	10	9	3	3	3
860		12	10	7	4		3	2.5
1080		8	4.5	4	2		2	1
1200		5.5	2	2	1		1	

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	46	46	35	28	27	8	8	8
140	46	46	35	28	27	8	8	8
280	46	46	35	25	24	8	8	8
420	46	34	25	15	10	6	5	4.5
560	35	20	15	10	6	5	4	3
700	20	15	10	5	3	4	3	2
840		9	4	2			1	
980		4						

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	51	51	45	40	40	16	16	16
70	51	51	45	40	40	16	16	16
140	51	51	40	38	35	16	16	16
210	51	51	35	30	24	11	10	9.5
280	51	40	28	20	15	9	8	7
350	51	30	9	4		7	5	4
420	40	7				5	2	
490	20					2		

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	55	51	45	40	40	25	25	25
35	55	51	45	40	40	25	25	25
70	55	51	45	40	40	25	25	25
105	55	51	45	40	35	22	20	19
140	55	45	35	30	25	16	14	12
175	55	30	18			11	9	7.5
210	45	8				8		
245	35							

■ RCP6/RCP6S-SA8C

* SA8C does not have high output enable/disable settings.

Lead 30

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	26	20	16	13	3	3	3
100	28	26	20	16	13	3	3	3
200	28	26	20	16	13	2	2	2
400	28	24	18	15	11	1.5	1.5	1
650	21	18	15	12	8	1	1	1
850		14	10	7	5		1	1
1000		8	6	3	2			
1200		4	2	1	0.5			

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	0	51	45	40	35	4	4	4
50	60	51	45	40	32	4	4	4
100	60	51	45	33	30	4	4	4
200	60	51	45	33	25	4	4	4
300	60	51	40	30	23	4	4	4
400	50	35	30	23	20	2	2	2
650	50	20	15	8	6	2	2	2
800		10	6	2	1	1	0.5	
900		7	3	0.5				
1000		4	1					

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	70	70	70	70	65	25	25	25
50	70	70	70	70	65	25	25	25
100	70	70	70	70	65	25	25	25
200	70	65	50	40	35	20	20	20
250	70	62	40	31	26	13	12	12
300	70	60	30	25	20	10	9	9
400	70	25	15	8	5	5	3	2
500	55	10	2			3	1	

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	80	80	80	80	80	55	55	55
50	80	80	80	80	80	55	55	55
75	80	80	80	80	80	30	30	30
100	80	80	80	80	80	18	18	18
125	80	80	80	70	70	18	18	18
175	80	70	40	30	25	14	12	10
200	80	50	20	10	5	10	6	5
225	80	20	5			7	1	
250	80					5		

RCP6 Series | Slider Type Motor Coupling Specification

* RCP6CR is the same.

High-output Setting Disabled

■ RCP6/RCP6S-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		3.5			1	
140		4		3.5			1	
280		4		3.5			1	
420		4		3			0.75	
560		3.5		2.5			0.75	
700		3		2			0.5	
840		2.5		1.5			0.5	

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		8			2.25	
85		10		8			2.25	
175		10		8			2.25	
260		9		6			2	
350		7		5			2	
435		6		4			1.5	
525		5		3			1	

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		10			4.5	
40		12		10			4.5	
85		12		10			4.5	
130		10		9			4	
175		10		8			4	
215		9		7			4	
260		8		6			2.5	

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			9	
20		12		12			9	
40		12		12			9	
65		12		11			8	
85		11		10			8	
105		10		9			8	
130		10		8			5	

■ RCP6/RCP6S-SA6C

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		8		5			0.75	
160		8		5			0.75	
320		8		5			0.75	
480		8		4			0.75	
640		6		3			0.75	
800		4		1.5			0.75	
960		2		0.5			0.5	

Lead 12

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		14		10			2	
80		14		10			2	
200		14		10			2	
320		14		10			2	
440		11		7			1.5	
560		7		2.5			1	
680		4		1			0.5	

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		20		14			5	
40		20		14			5	
100		20		14			5	
160		20		14			5	
220		16		14			4	
280		13		7			2.5	
340		10		1			1	

Lead 3

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		25		22			10	
20		25		22			10	
50		25		22			10	
80		25		22			10	
110		20		14			8	
140		15		11			5	
170		11		9			2	

■ RCP6/RCP6S-SA7C

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		18		10			2	
200		18		10			2	
420		18		10			2	
640		10		2			1	
800		5		0.5			0.5	

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		35		20			5	
140		35		20			5	
280		25		12			3	
420		15		6			1.5	
560		7		0.5			0.5	

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		40		25			10	
70		40		25			10	
140		40		25			7	
210		25		14			4	
280		10		1			1.5	

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		40		30			15	
35		40		30			15	
70		40		30			15	
105		40		30			8	
140		15		6			2	

Tables of Payload by Speed/Acceleration

RCP6 Series | Slider Type Side-Mounted Motor Specification

High-output Setting Enabled

■ RCP6/RCP6S-SA4R

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	7	7	5	4.5	4.5	1.5	1.5	1.5
140	7	7	5	4.5	4.5	1.5	1.5	1.5
280	7	7	5	4.5	4.5	1.5	1.5	1.5
420	7	7	5	4.5	4.5	1.5	1.5	1.5
560	7	7	5	4.5	4	1.5	1.5	1.5
700		6	5	4	4		1	1
840		6	4	3	3		1	1
980		4	4	2.5	2		1	1
1120			2.5	1	1			0.5
1260			1	0.5	0.5			

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	12	12	12	10	9	3	3	3
85	12	12	12	10	9	3	3	3
175	12	12	12	10	9	3	3	3
260	12	12	10	9	9	3	3	3
350	12	12	10	9	8	3	3	3
435	12	12	10	9	8	2.5	2.5	2.5
525	12	12	9	7	7	2.25	2.25	2.25
610		10	7	5	4	2.25	2	2
700		7	4	3	2		1.5	1
785		4	3	2	1.5		1	1

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	14	14	14	12	12	5.5	5.5	5.5
40	14	14	14	12	12	5.5	5.5	5.5
85	14	14	14	12	12	5.5	5.5	5.5
130	14	14	12	12	11	5.5	5.5	5.5
175	14	14	12	12	11	5.5	5.5	5.5
215	14	14	12	12	11	5.5	5.5	5.5
260	14	14	12	12	11	5.5	5.5	5
305	14	14	12	12	11	5	5	4.5
350	14	12	12	10	10	4	4	4
390	14	10	7	6	4	3.5	3.5	2.5

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	18	18	18	18	18	12	12	12
20	18	18	18	18	18	12	12	12
40	18	18	18	18	18	12	12	12
65	18	18	16	16	16	12	12	12
85	18	18	16	16	16	12	12	12
105	18	18	16	15	15	12	12	12
130	18	18	16	15	14	11	11	11
150	18	18	16	15	14	10	10	10
175	18	18	16	15	14	8	7	7
195	18	18	16	14	10	7	5	5

■ RCP6/RCP6S-SA6R

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	15	15	10	8	7	1	1	1
160	15	15	10	8	7	1	1	1
320	15	12	10	8	6	1	1	1
480	12	12	9	8	6	1	1	1
640	12	12	8	6	5	1	1	1
800	10	10	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			

Lead 12

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	26	18	16	14	2.5	2.5	2.5
80	28	26	18	16	14	2.5	2.5	2.5
200	28	26	18	16	14	2.5	2.5	2.5
320	28	26	18	14	12	2.5	2.5	2.5
440	28	26	18	12	10	2.5	2.5	2.5
560	28	20	12	8	7	2.5	2.5	2.5
680	20	15	9	5	3	2.5	2.5	2.5
800	15	9	5	2	1	2	1.5	1
900		5	3	1				

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	32	32	26	24	20	6	6	6
40	32	32	26	24	20	6	6	6
100	32	32	26	24	20	6	6	6
160	32	32	26	24	20	6	6	6
220	32	32	26	24	20	6	6	6
280	32	32	26	24	15	6	6	5.5
340	32	32	20	18	12	6	5	4.5
400	32	20	12	11	8	4.5	3.5	3.5
450	26	12	6	5	3	3	2	2

Lead 3

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	35	35	14	14	14
20	40	40	35	35	35	14	14	14
50	40	40	35	35	35	14	14	14
80	40	40	35	35	30	14	14	14
110	40	40	35	35	30	14	14	14
140	40	40	35	35	28	14	14	12
170	40	40	32	32	24	12	12	10
200	40	35	28	25	18	10	8	7
225	40	25	16	12	10	6	4	

■ RCP6/RCP6S-SA7R

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	37	37	22	16	14	3	3	3
200	37	37	22	16	14	3	3	3
420	37	30	18	16	14	3	3	3
640	37	18	15	10	9	3	3	3
860		12	10	3	2		3	2.5
1080		2						0.5

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	46	46	35	28	27	8	8	8
140	46	46	35	28	27	8	8	8
280	46	46	35	25	21	8	8	8
420	46	30	20	15	10	6	5	4.5
560	35	20	13	10	6	5	4	3
700	20	13	6	3	2	3	2	1.5
840		4	1					

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	51	51	45	40	40	16	16	16
70	51	51	45	40	40	16	16	16
140	51	51	40	38	35	16	16	16
210	51	45	35	30	24	11	10	9.5
280	51	35	25	20	15	9	8	7
350	40	20	3	1		7	4	1
420	30	2				4		

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	55	51	45	40	40	25	25	25
35	55	51	45	40	40	25	25	25
70	55	51	45	40	40	25	25	25
105	55	51	45	40	35	22	20	19
140	55	45	35	30	25	16	14	12
175	55	30	16			11	7	5
210	40					4		

■ RCP6/RCP6S-SA8R

* SA8C does not have high output enable/disable settings.

Lead 30

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	26	24	18	15	13	3	3	3
100	26	24	18	15	13	3	3	3
200	26	24	16	15	13	2	2	2
400	24	20	13	12	11	1.5	1.5	1
650	21	14	10	9	8	1	1	1
850		9	6	4	2		1	1
1000		5	3	2	1			
1200		1						

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	55	51	35	33	30	4	4	4
50	55	51	35	33	30	4	4	4
100	55	51	35	33	30	4	4	4
200	55	51	35	33	25	4	4	4
300	55	51	35	24	16	4	4	4
400	45	35	22	18	12	2	2	2
650	40	20	9	4	3	2	2	2
800		10	3	1	0.5	1	0.5	
900		7	1					
1000		4						

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	70	70	70	70	65	25	25	25
50	70	70	70	70	65	25	25	25
100	70	70	70	70	65	25	25	25
200	70	60	50	40	35	14	14	14
250	70	52	40	30	27	9	9	9
300	70	45	30	20	20	7	7	7
400	65	15	9	4	1	3	2	1
450	45	11	2			1	0.5	
500	25	4						

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	80	80	80	80	80	55	55	55
50	80	80	80	80	80	55	55	55
75	80	80	80	80	80	30	30	30
100	80	80	80	80	80	18	18	18
125	80	80	80	70	70	18	18	18
175	80	70	35	30	25	14	11	10
200	80	40	14	4	2	8	3	2
225	80	10				5	0.5	
250	65					2		

RCP6 Series | Slider Type Side-Mounted Motor Specification

High-output Setting Disabled

■ RCP6/RCP6S-SA4R

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		3.5			1	
140		4		3.5			1	
280		4		3.5			1	
420		4		3			0.75	
560		3.5		2.5			0.75	
700		3		2			0.5	
840		2.5		1.5			0.5	

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		8			2.25	
85		10		8			2.25	
175		10		8			2.25	
260		9		6			2	
350		7		5			2	
435		6		4			1.5	
525		5		3			1	

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		10			4.5	
40		12		10			4.5	
85		12		10			4.5	
130		10		9			4	
175		10		8			4	
215		9		7			4	
260		8		6			2.5	

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			9	
20		12		12			9	
40		12		12			9	
65		12		11			8	
85		11		10			8	
105		10		9			8	
130		10		8			5	

■ RCP6/RCP6S-SA6R

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		8		5			0.75	
160		8		5			0.75	
320		8		5			0.75	
480		8		4			0.75	
640		6		3			0.75	
800		4		1.5			0.75	
960		2		0.5			0.5	

Lead 12

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		14		10			2	
80		14		10			2	
200		14		10			2	
320		14		10			2	
440		11		7			1.5	
560		7		2.5			1	
680		4		1			0.5	

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		20		14			5	
40		20		14			5	
100		20		14			5	
160		20		14			5	
220		16		14			4	
280		13		7			2.5	
340		10		1			1	

Lead 3

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		25		22			10	
20		25		22			10	
50		25		22			10	
80		25		22			10	
110		20		14			8	
140		15		11			5	
170		11		9			2	

■ RCP6/RCP6S-SA7R

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		18		10			2	
200		18		10			2	
420		18		10			2	
640		10		2			1	
800		5		0.5			0.5	

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		35		20			5	
140		35		20			5	
280		25		12			3	
420		15		6			1.5	
560		7		0.5			0.5	

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		40		25			10	
70		40		25			10	
140		40		25			7	
210		25		14			4	
280		10		1			1.5	

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		40		30			15	
35		40		30			15	
70		40		30			15	
105		40		30			8	
140		15		6			2	

Tables of Payload by Speed/Acceleration

RCP6 Series | Slider Type Motor Coupling Specification

* RCP6CR is the same.

High-output Setting Enabled

■ RCP6/RCP6S-WSA10C

Lead 16

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	4	4	3	3	2.5
140	4	4	3	3	2.5
280	4	4	3	3	2.5
420	4	4	3	3	2.5
560	4	4	3	1.5	1.5
700	4	4	3	0.5	0.5
840		1	0.5		

Lead 10

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	15	15	13	13	12
85	15	15	13	13	12
175	15	15	13	12	10
260	15	15	13	10	8
350	15	15	13	8	5
435	15	15	10	7	4
525	15	10	5	3	2
610	15	5	2	1	

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	3	3	3
40	28	25	22	20	20	3	3	3
85	28	25	22	20	20	3	3	3
130	28	25	22	20	20	3	3	3
175	28	25	22	20	20	3	3	3
215	28	25	22	20	18	3	3	3
260	28	25	22	20	14	3	3	3
305	28	22	18	14	10	2	1.5	1.5
350	28	18	11	7	6	1		
390	28	12	7	4	2			

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	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	9
150	40	35	35	30	30	7	7	7
175	40	35	35	30	25	3	3	3
195	40	35	30	26	18			

■ RCP6/RCP6S-WSA12C

Lead 20

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	12	12	12	11	11
160	12	12	12	11	11
320	12	12	12	11	9
480	12	12	12	11	9
640		12	10	9	8
800		10	9		

Lead 12

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	25	25	18	16	12
100	25	25	18	16	12
200	25	25	18	16	10
285	25	25	18	12	8
400	20	20	14	10	6
500	15	15	8	6	4
600	10	10	6	3	2

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	9	9	9
50	40	40	35	30	25	9	9	9
100	40	40	35	30	25	9	9	9
140	40	40	35	25	25	9	9	9
200	40	40	30	25	20	9	9	9
250	40	40	27.5	22.5	18	9	8	8
290	40	35	25	20	14	5	5	4
350	40	28	14	12	10	2	2	1
400	30	18	10	6	5	0.5		
450	25	8	3					

Lead 3

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	56	50	45	40	18	18	18
25	60	56	50	45	40	18	18	18
50	60	56	50	45	40	18	18	18
65	60	56	46	41	40	18	18	18
100	60	56	46	41	40	18	18	18
125	60	56	46	40	30	18	18	10
150	60	50	40	30	25	14	14	6
180	60	40	35	25	20	11	11	5
200	60	35	30	20	14	7	6	4.5
225	40	16	16	10	6	5	3	2

■ RCP6/RCP6S-WSA14C

Lead 24

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	25	25	23	20	17
140	25	25	23	20	17
420	25	25	23	20	15
560	20	19	14	12	9
700	20	10	6	6	6

Lead 16

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	50	42	40	32	30
140	50	42	40	32	30
280	50	42	35	23	17
420	47	25	18	14	10
560	12	10	5	3	2

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	65	65	55	50	45	14	14	14
70	65	65	55	50	45	14	14	14
140	65	65	55	46	45	12	12	12
210	65	65	45	36	22	10	10	9
280	65	39	27	18	12	8	5	4
350	61	19	10			2		
420	20	6						

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	26	26	26
35	80	80	70	65	60	26	26	26
70	80	80	70	65	60	26	26	26
105	80	80	60	50	40	22	20	18
140	80	50	30	20	15	16	12	10
175	50	15				6	1	
210	20							

■ RCP6/RCP6S-WSA16C

* WSA16C does not have high output enable/disable settings.

Lead 20

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	50	35	28	24	20
120	50	35	28	24	20
240	50	35	28	24	16
365	50	35	28	20	12
480	40	14	4	2	
550	40	4			
600	30				
665	18				
720	18				

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	70	70	60	60	60	15	15	15
80	70	70	60	60	60	15	15	15
160	70	70	55	50	45	15	15	15
210	70	70	55	50	40	5	4	4
240	70	55	50	35	30	2		
270	70	40	30	24	20			
330	70	14	2					
365	70							
405	40							
450	22							

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	100	90	90	90	90	50	50	50
60	100	90	90	90	90	50	50	50
95	100	90	90	80	80	30	30	30
120	100	90	70	70	70	19	19	19
145	100	70	45	35	30	11	7	7
160	90	35	18	16	12	7	2	
170	90	2				4		
195	50							

RCP6 Series | Slider Type Motor Coupling Specification

* RCP6CR is the same.

High-output Setting Disabled

■ RCP6/RCP6S-WSA10C

Lead 16

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		4		3	
140		4		3	
280		4		3	
420		4		3	
560		3.5		1	

Lead 10

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		12		9.5	
85		12		9.5	
175		12		9	
260		12		9	
350		10.5		6.5	
435		6		3.5	
525		3		1.5	

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		25		20			3	
40		25		20			3	
85		25		20			3	
130		25		20			3	
175		25		19			3	
215		19		13			3	
260		10.5		7.5			2	

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		36		27			10	
20		36		27			10	
40		36		27			10	
65		36		27			10	
85		36		27			9	
105		36		27			7	
130		33		20			4.5	

■ RCP6/RCP6S-WSA12C

Lead 20

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		8		4	
160		8		4	
320		8		4	
480		8		4	
640		5		3	

Lead 12

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		18		15.5	
100		18		15.5	
200		18		14	
285		18		11	
400		12		7.5	
500		6		4	

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		30		30			8	
50		30		30			8	
100		30		30			8	
140		30		30			8	
200		30		19			5.5	
250		19		16.5			3	
290		14		9			2	

Lead 3

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		42		33			15	
25		42		33			15	
50		42		33			15	
65		42		33			13	
100		42		33			12	
125		42		30			8	
150		30		24			4.5	

■ RCP6/RCP6S-WSA14C

Lead 24

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		15.5		12	
140		15.5		12	
420		13		8	
560		7.5		3	

Lead 16

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		33		24.5	
140		33		24.5	
280		22.5		12.5	
420		9.5		3.5	

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		45		33			11	
70		45		33			11	
140		45		27.5			10.5	
210		13.5		9			3	

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		54		48			18	
35		54		48			18	
70		54		48			18	
105		36		24			6	

Tables of Payload by Speed/Acceleration

RCP6 Series | Slider Type Side-Mounted Motor Specification

High-output Setting Enabled

■ RCP6/RCP6S-WSA10R

Lead 16

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	4	4	3	3	2.5
140	4	4	3	3	2.5
280	4	4	3	3	2.5
420	4	4	3	3	2.5
560	4	4	3	1.5	1.5
700	4	4	3	0.5	0.5
840		1	0.5		

Lead 10

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	15	15	13	13	12
85	15	15	13	13	12
175	15	15	13	12	10
260	15	15	13	10	8
350	15	15	13	8	5
435	15	15	10	7	4
525	14	10	5	3	2
610		5	2	1	

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	3	3	3
40	28	25	22	20	20	3	3	3
85	28	25	22	20	20	3	3	3
130	28	25	22	20	20	3	3	3
175	28	25	22	20	20	3	3	3
215	28	25	22	20	16	3	3	3
260	28	25	20	16	12	2	2	2.5
305	28	20	12	10	8	1	0.5	0.5
350	28	14	6	4	3			
390	28	6	1					

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	40	35	30	10	10	10
20	40	40	40	35	30	10	10	10
40	40	40	36	35	30	10	10	10
65	40	40	36	35	30	10	10	10
85	40	40	36	35	30	10	10	10
105	40	40	35	35	30	10	10	10
130	40	40	35	30	30	7	7	7
150	40	35	35	30	30	4	4	4
175	40	34	32	24	20	1	1	1
195	40	20	14	12	11			

■ RCP6/RCP6S-WSA12R

Lead 20

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	12	8	6	4	3
160	12	8	6	4	3
320	12	8	6	4	3
480	12	8	6	4	2
640		8	6	4	1
800		7	4		

Lead 12

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	25	25	18	16	10
100	25	25	18	16	10
200	25	25	18	16	10
285	25	25	18	12	8
400	20	20	14	10	6
500	15	15	8	6	4
600	10	6	6	3	2

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	9	9	9
50	40	40	35	30	25	9	9	9
100	40	40	35	30	25	9	9	9
140	40	40	35	25	25	9	9	9
200	40	40	30	25	20	9	9	8
250	40	40	27.5	22.5	18	9	8	4
290	40	35	25	20	14	5	5	4
350	40	28	14	12	10	2	2	1
400	30	18	10	6	5	1		
450	25	8	3					

Lead 3

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	56	50	45	40	16	16	16
25	60	56	50	45	40	16	16	16
50	60	56	50	45	40	16	16	16
65	60	56	46	41	40	16	16	16
100	60	56	46	41	40	16	16	16
125	60	56	46	40	30	16	14	10
150	60	50	40	30	25	12	10	6
180	60	40	35	25	20	8	6	5
200	60	35	30	20	14	5	5	4
225	40	16	16	10	6	2		

■ RCP6/RCP6S-WSA14R

Lead 24

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	25	23	19	14	11
140	25	23	19	14	11
420	25	23	19	13	8
560	20	19	14	10	5
700	20	8	6	6	3

Lead 16

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	50	42	40	32	30
140	50	42	40	32	30
280	50	42	35	23	17
420	47	25	18	14	10
560	12	10	5	3	2

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	65	65	55	50	45	14	14	14
70	65	65	55	50	45	14	14	14
140	65	65	51	46	45	12	12	12
210	65	65	45	31	22	8	6	6
280	65	31	21	14	6	6	4	2
350	35	8				1		
420	7							

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	26	26	26
35	80	80	70	65	60	26	26	26
70	80	80	70	65	60	26	26	26
105	80	80	60	50	40	22	20	18
140	80	50	10	6	6	13	8	3
175	40	5				4		

■ RCP6/RCP6S-WSA16R

* WSA16R does not have high output enable/disable settings.

Lead 20

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0	30	30	28	24	20
120	30	30	28	24	20
240	30	30	28	20	16
365	30	28	18	12	6
480	30	6			
550	14				
600	2				

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	70	70	60	60	60	15	15	15
80	70	70	60	60	60	15	15	15
160	70	70	55	45	45	10	10	10
210	70	65	45	30	28	2	2	1
240	70	30	22	14	10			
270	70	12	6	4				
330	35							
365	12							

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	100	90	90	90	90	45	45	45
60	100	90	90	90	90	45	45	45
95	100	90	90	80	80	27	27	27
120	100	90	65	50	45	7	7	7
145	80					1		
160	35							
170	8							

RCP6 Series | Slider Type Side-Mounted Motor Specification

High-output Setting Disabled

■ RCP6/RCP6S-WSA10R

Lead 16

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		4		3	
140		4		3	
280		4		3	
420		4		3	
560		3.5		1	

Lead 10

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		12		9.5	
85		12		9.5	
175		12		9	
260		12		9	
350		10.5		6.5	
435		6		3.5	
525		3		1.5	

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		25		20			3	
40		25		20			3	
85		25		20			3	
130		25		20			3	
175		25		19			3	
215		19		13			3	
260		10.5		7.5			2	

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		36		27			10	
20		36		27			10	
40		36		27			10	
65		36		27			10	
85		36		27			9	
105		36		27			7	
130		33		20			4.5	

■ RCP6/RCP6S-WSA12R

Lead 20

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		8		4	
160		8		4	
320		8		4	
480		8		4	
640		5		3	

Lead 12

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		18		15.5	
100		18		15.5	
200		18		14	
285		18		11	
400		12		7.5	
500		6		4	

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		30		30			8	
50		30		30			8	
100		30		30			8	
140		30		30			8	
200		30		19			5.5	
250		19		16.5			3	
290		14		9			2	

Lead 3

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		42		33			15	
25		42		33			15	
50		42		33			15	
65		42		33			13	
100		42		33			12	
125		42		30			8	
150		30		24			4.5	

■ RCP6/RCP6S-WSA14R

Lead 24

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		15.5		12	
140		15.5		12	
420		13		8	
560		7.5		3	

Lead 16

Orientation	Horizontal				
Speed (mm/s)	Acceleration (G)				
	0.1	0.3	0.5	0.7	1
0		33		24.5	
140		33		24.5	
280		22.5		12.5	
420		9.5		3.5	

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		45		33			11	
70		45		33			11	
140		45		27.5			10.5	
210		13.5		9			3	

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		54		48			18	
35		54		48			18	
70		54		48			18	
105		36		24			6	

Tables of Payload by Speed/Acceleration

RCP6 Series | Rod Type Motor Coupling Specification

* Dust-proof/splash-proof specifications have different specs.

High-output Setting Enabled

■ RCP6/RCP6S-RRA4C

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	7	7	6	5	3.5	1.5	1.5	1.5
140	7	7	6	5	3.5	1.5	1.5	1.5
280	7	7	6	5	3.5	1.5	1.5	1.5
420	7	7	6	5	3.5	1.5	1.5	1.5
560		6.5	6	5	3.5	1	1.5	1.5
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	0.75
1120			1	1	0.75			0.5

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	18	17	15	14	13	3	3	3
85	18	17	15	14	13	3	3	3
175	18	17	15	14	12	3	3	3
260	18	17	13	13	12	3	3	3
350	18	17	13	13	10	2.5	2.5	2.5
435	18	17	13	11	9	2.5	2.5	2.5
525	18	15	10	8	7	2.5	2.5	2.5
610		9	7	5	4		2	2
700		6	5	3	2		1.5	1

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	6	6	6
40	28	25	22	20	20	6	6	6
85	28	25	22	20	20	6	6	6
130	28	25	22	20	20	6	6	6
175	28	25	22	20	20	5	5	5
215	28	25	22	20	20	5	5	5
260	28	25	22	20	16	5	5	5
305	28	22	20	16	14	5	5	5
350	28	20	14	12	11	4.5	3	3

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	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	9
150	40	35	35	30	30	10	9	8
175	40	35	35	30	25	8	7	7

■ RCP6/RCP6S-RRA6C

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
800		4	3				1	1

Lead 12

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	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
500	15	15	8	6	4	4	3.5	3
600	10	10	6	3	2	4	3	2
700		6	2				2	1

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

Lead 3

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	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
125	60	60	50	40	30	18	14	10
150	60	50	40	30	25	14	10	6
175	60	40	35	25	20	12	6	5
200	60	35	30	20	14	8	5	4.5
225	40	16	16	10	6	5	5	4

■ RCP6/RCP6S-RRA7C

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
420	20	20	18	15	10	3	3	3
640	15	14	9	7	4	3	3	2
860		5	1	1				

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						

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	2.5	1.5
420	15	1				1		

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				8.5	4	
210	20					1.5		

■ RCP6/RCP6S-RRA8C

* RRA8C does not have high output enable/disable settings.

Lead 20

Orientation	Horizontal	Orientation	Vertical
Speed (mm/s)	Acceleration (G)	Speed (mm/s)	Acceleration (G)
	0.2		0.2
0	30	0	5
240	30	5	5
270	30	100	5
300	30	150	5
360	24	180	5
420	16	200	5
450	12	240	5
480	10	300	5
510	8	360	5
540	6	400	3
600	5	420	2.5
		450	2

Lead 10

Orientation	Horizontal	Orientation	Vertical
Speed (mm/s)	Acceleration (G)	Speed (mm/s)	Acceleration (G)
	0.2		0.2
0	60	0	40
150	60	88	40
200	45	100	33
240	40	110	28
300	10	120	23
		130	18
		140	15
		150	11
		160	10
		170	8
		180	7
		190	5
		200	4
		220	3
		250	2

Lead 5

Orientation	Horizontal	Orientation	Vertical
Speed (mm/s)	Acceleration (G)	Speed (mm/s)	Acceleration (G)
	0.1		0.1
0	100	0	70
90	100	48	70
120	100	60	50
130	90	70	35
140	75	80	25
150	60	90	20
		100	15
		120	10
		150	2

RCP6 Series | Rod Type Motor Coupling Specification

High-output Setting Disabled

■ RCP6/RCP6S-RRA4C

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		5		3			1	
140		5		3			1	
280		5		3			1	
420		4		2.5			0.5	
560		3		1.5			0.5	

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		8			2	
85		10		8			2	
175		10		8			2	
260		9		7			2	
350		7		5			1.5	
435		6		3			1	
525		1					0.5	

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		22		20			5	
40		22		20			5	
85		22		20			5	
130		22		18			5	
175		20		14			4	
215		15		10			3	
260		12		6			2	

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		35		30			10	
20		35		30			10	
40		35		30			10	
65		35		25			10	
85		30		20			7	
105		25		15			5	
130		20		10			4	

■ RCP6/RCP6S-RRA6C

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		5			1	
160		6		5			1	
320		6		5			1	
480		4		3			1	
640		3		1			0.5	

Lead 12

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		25		10			4	
100		25		10			4	
200		25		10			4	
300		20		8			3	
400		10		5			2	
500		5		2			1	

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		20			10	
50		40		20			10	
100		40		20			10	
150		40		20			8	
200		35		18			5	
250		10		6			3	

Lead 3

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		25			20	
25		40		25			20	
50		40		25			20	
75		40		25			12	
100		40		25			9	
125		40		25			5	

■ RCP6/RCP6S-RRA7C

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		18		9.5			3	
200		18		9.5			3	
420		10		5			1.5	
600		1						

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		40		25			5	
140		40		25			5	
280		18		12			2	
420		1.5		1				

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		50		30			17.5	
70		50		30			17.5	
140		50		30			7	
210		14		7			2	

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		55		50			26	
35		55		50			26	
70		55		50			13	
105		30		15			2	

Tables of Payload by Speed/Acceleration

RCP6 Series | Rod Type Side-Mounted Motor Specification

* Dust-proof/splash-proof specifications have different specs.

High-output Setting Enabled

■ RCP6/RCP6S-RRA4R

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	5	5	4.5	3	2.5	1	1	1
140	5	5	4.5	3	2.5	1	1	1
280	5	5	4.5	3	2	1	1	1
420	5	5	4.5	3	2	1	1	1
560		5	4.5	2.5	2	1	1	1
700		4.5	3.5	2	1.5		1	1
840		3	2.5	1	0.5		0.5	0.5

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	13	13	12	10	8	2.5	2.5	2.5
85	13	13	12	10	8	2.5	2.5	2.5
175	13	13	12	10	8	2.5	2.5	2.5
260	13	13	12	10	6	2.5	2.5	2.5
350	13	12	12	8	5	2.5	2.5	2.5
435	13	10	10	6	4	2.5	2.5	2.5
525	13	8	6	3	2	2.5	2.5	2
610		5	2				2	1.5

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	18	5	5	5
40	28	25	22	20	18	5	5	5
85	28	25	22	20	18	5	5	5
130	28	25	22	20	18	5	5	5
175	28	25	22	20	18	5	5	5
215	28	25	22	20	18	5	5	5
260	28	24	20	16	12	5	5	5
305	25	20	16	12	8	5	4	4
350	22	16	10	8	6	3.5	3	3

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	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
150	40	35	35	30	30	8	8	7
175	40	35	35	30	25	7.5	7	6

■ RCP6/RCP6S-RRA6R

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
800		4	3				1	1

Lead 12

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	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
500	15	15	8	6	4	4	3.5	3
600	10	10	6	3	2	4	3	2
700		6	2				2	1

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

Lead 3

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	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
125	60	60	50	40	30	18	14	10
150	60	50	40	30	25	14	10	6
175	60	40	35	25	20	12	6	5
200	60	35	30	20	14	8	5	4.5
225	40	16	16	10	6	5	5	4

■ RCP6/RCP6S-RRA7R

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
420	20	20	18	15	10	3	3	3
640	15	14	9	7	4	3	3	2
860		3	1					

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	4.5	4.5	4
560	12	10	5	3	2	2	1	1

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	26	16	10	8	6	5	3
350	30	3				3	1	
420	2							

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	10	6	6	13	8	3
175	40	5				3		

■ RCP6/RCP6S-RRA8R

* RRA8R does not have high output enable/disable settings.

Lead 20

Orientation	Horizontal	Orientation	Vertical
Speed (mm/s)	Acceleration (G)	Speed (mm/s)	Acceleration (G)
	0.2		0.2
0	30	0	5
300	30	300	5
350	14	330	3.5
400	6	360	2
		400	0.5

Lead 10

Orientation	Horizontal	Orientation	Vertical
Speed (mm/s)	Acceleration (G)	Speed (mm/s)	Acceleration (G)
	0.2		0.2
0	60	0	40
160	60	80	40
170	40	90	34
180	25	100	28
190	15	110	23
200	12	120	18
		130	15
		140	12
		150	10
		160	8
		170	6
		180	4
		190	3
		200	2

Lead 5

Orientation	Horizontal	Orientation	Vertical
Speed (mm/s)	Acceleration (G)	Speed (mm/s)	Acceleration (G)
	0.1		0.1
0	100	0	70
90	100	45	70
100	75	60	45
		70	35
		80	25
		90	16
		100	10

RCP6 Series | Rod Type Side-Mounted Motor Specification

High-output Setting Disabled

■ RCP6/RCP6S-RRA4R

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		5		3			1	
140		5		3			1	
280		5		3			1	
420		4		2.5			0.5	
560		3		1.5			0.5	

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		8			2	
85		10		8			2	
175		10		8			2	
260		9		7			2	
350		7		5			1.5	
435		6		3			1	
525		1					0.5	

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		22		20			5	
40		22		20			5	
85		22		20			5	
130		22		18			5	
175		20		14			4	
215		15		10			3	
260		12		6			2	

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		35		30			10	
20		35		30			10	
40		35		30			10	
65		35		25			10	
85		30		20			7	
105		25		15			5	
130		20		10			4	

■ RCP6/RCP6S-RRA6R

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		5			1	
160		6		5			1	
320		6		5			1	
480		4		3			1	
640		3		1			0.5	

Lead 12

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		25		10			4	
100		25		10			4	
200		25		10			4	
300		20		8			3	
400		10		5			2	
500		5		2			1	

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		20			10	
50		40		20			10	
100		40		20			10	
150		40		20			8	
200		35		18			5	
250		10		6			3	

Lead 3

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		25			20	
25		40		25			20	
50		40		25			20	
75		40		25			12	
100		40		25			9	
125		40		25			5	

■ RCP6/RCP6S-RRA7R

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		18		9.5			3	
200		18		9.5			3	
420		10		5			1.5	
600		1						

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		40		25			5	
140		40		25			5	
280		18		12			2	
420		1.5		1				

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		50		30			17.5	
70		50		30			17.5	
140		50		30			7	
210		14		7			2	

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		55		50			26	
35		55		50			26	
70		55		50			13	
105		30		15			2	

Tables of Payload by Speed/Acceleration

RCP6 Series | Rod Type Motor Coupling Specification

* Dust-proof/splash-proof specifications have different specs.

High-output Setting Enabled

■ RCP6/RCP6S-WRA10C

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	4	4	3.5	2.5	1.5
140	4	4	3.5	2.5	1.5
280	4	4	3.5	2.5	1
420	4	4	3.5	2	0.5
560		2.5	2.5		
700			0.5		

Lead 10

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	14.5	14.5	13	12.5	12
85	14.5	14.5	13	12.5	12
175	14.5	14.5	12.5	11.5	9.5
260	14.5	14.5	12.5	8.5	6.5
350	14.5	14.5	11.5	7.5	3.5
435	14.5	12.5	7.5	4.5	2.5
525	10.5	7.5	2.5	0.5	

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	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	13.5	3	3	3
260	28	25	20.5	15.5	12.5	1	1	1
305	28	17.5	13.5	12.5	7.5			
350	28	9.5	5.5	4.5	2.5			

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	8.5	8.5	8.5
150	40	35	35	30	30	5.5	5.5	5.5
175	40	33.5	29.5	27.5	17.5	2.5	2.5	0.5

■ RCP6/RCP6S-WRA12C

Lead 20

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	7.5	7.5	5.5	5.5	5.5
160	7.5	7.5	5.5	5.5	5.5
320	7.5	7.5	4.5	2.5	1.5
480	7.5	4.5	3.5	0.5	0.5
640		4.5	3.5		
800		0.5	0.5		

Lead 12

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	30	25	18	16	12
80	30	25	18	16	12
200	30	25	18	16	10
320	30	25	18	12	8
440	25	20	13.5	10	6
560		15	8	6	4

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	55	40	35	30	25	7.5	7.5	7.5
40	55	40	35	30	25	7.5	7.5	7.5
100	55	40	35	30	25	7.5	7.5	7.5
160	55	40	32.5	25	25	7.5	7.5	7.5
220	55	40	27.5	25	19.5	7.5	7.5	6.5
280	55	35	25	20	14	4.5	4.5	4.5
340	55	25.5	14	12	10	0.5		
400	45	12.5	10	6	3.5			

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	70	60	50	45	40	17.5	17.5	17.5
20	70	60	50	45	40	17.5	17.5	17.5
50	70	60	50	45	40	17.5	17.5	17.5
80	70	60	50	45	40	17.5	17.5	17.5
110	70	60	50	45	40	17.5	17.5	17.5
140	70	50	40	30	25	13.5	13.5	6
170	70	40	35	25	20	3.5	3.5	3.5
200	70	35	30	20	14	1	1	1
225	50	16	16	10	6			

■ RCP6/RCP6S-WRA14C

Lead 24

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	25	22	14	12	12
210	25	22	14	12	12
420	25	18	14	6	5
630	20	8	2		

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	50	50	40	35	30
140	50	50	40	35	30
280	50	50	31	25	20
420	50	25	14	8	6
560	10	6			

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	65	65	55	50	45	15	15	15
70	65	65	55	50	45	15	15	15
140	65	65	55	50	45	15	15	11
210	65	65	40	30	25	7	5	4
280	65	30	17	9	3			
350	50	7						
420	7							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	85	80	70	65	60	25	25	25
35	85	80	70	65	60	25	25	25
70	85	80	70	65	60	25	25	25
105	85	80	60	50	40	21	19	17
130	85	50	30	20	15	11	9	7
175	55	11						
210	15							

■ RCP6/RCP6S-WRA16C

* WRA16C does not have high output enable/disable settings.

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
240	30
300	30
360	24
420	14
450	5

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
150	60
200	45
240	36

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	36.5
88	36.5
100	29.5
110	24.5
120	19.5
130	16.5
140	14.5
150	11
160	9.5
170	5.5
180	4.5
190	2.5
200	0.5

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
90	100
120	58
130	24

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	70
48	70
60	50
70	35
80	25
90	20
100	13

RCP6 Series | Rod Type Motor Coupling Specification

High-output Setting Disabled

■ RCP6/RCP6S-WRA10C

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		3.5		0.5	
140		3.5		0.5	
280		3.5		0.5	
420		3.5		0.5	
560		2.5			

Lead 10

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		9.5		8	
85		9.5		8	
175		9.5		8	
260		9.5		6.5	
350		7.5		6	
435		5		2.5	

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		25		19			5	
40		25		19			5	
85		25		19			5	
130		25		19			5	
175		25		15.5			4	
215		18		12			2.5	
260		10.5		6.5				

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		40		27			10	
20		40		27			10	
40		36		27			10	
65		36		27			10	
85		36		27			8.5	
105		36		27			6	
130		33		22.5			3.5	

■ RCP6/RCP6S-WRA12C

Lead 20

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		7.5		5.5	
160		7.5		5.5	
320		7.5		2.5	
480		3		0.5	

Lead 12

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		18.5		10.5	
80		18.5		10.5	
200		18.5		9.5	
320		15		7	
440		3		1.5	

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		39		30			6	
40		39		30			6	
100		39		30			6	
160		39		24			5	
220		24		15			2	

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		60		45			13	
20		60		45			13	
50		60		45			13	
80		60		45			12	
110		60		45			6	

■ RCP6/RCP6S-WRA14C

Lead 24

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		18		9.5	
210		18		9.5	
420		8		3	

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		37		27	
140		37		27	
280		18		13	
420		3.5			

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		45		33			12	
70		45		33			12	
140		45		27			6	
210		12		4.5				

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		57		48			18	
35		57		48			18	
70		57		48			13.5	
105		12		7.5			1	

Tables of Payload by Speed/Acceleration

RCP6 Series | Rod Type Side-Mounted Motor Specification

* Dust-proof/splash-proof specifications have different specs.

High-output Setting Enabled

■ RCP6/RCP6S-WRA10R

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	4	3.5	2.5	0.5	
140	4	3.5	2.5	0.5	
280	4	3.5	2.5	0.5	
420	4	3.5	2.5	0.5	
560		2.5	2		
700			0.5		

Lead 10

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	11.5	11.5	8.5	8.5	6.5
85	11.5	11.5	8.5	8.5	6.5
175	11.5	11.5	8.5	8.5	3.5
260	11.5	11.5	8.5	7.5	2.5
350	11.5	11.5	8.5	6.5	2.5
435	11.5	8.5	6.5	3.5	1.5
525	10.5	6.5	2.5	0.5	

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	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	13.5	3	3	3
260	28	25	20.5	15.5	12.5	1	1	1
305	28	17.5	12.5	10.5	7.5			
350	28	9.5	5.5	3.5	0.5			

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	3.5	3.5	3.5
150	40	35	35	30	30	1.5	1.5	1.5
175	40	33.5	29.5	25.5	17.5			

■ RCP6/RCP6S-WRA12R

Lead 20

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	7.5	7.5	5.5	5.5	5.5
160	7.5	7.5	5.5	5.5	5.5
320	7.5	7.5	4.5	2.5	1.5
480	7.5	4.5	3.5	0.5	0.5
640		4.5	3.5		
800		0.5	0.5		

Lead 12

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	30	25	18	16	10
80	30	25	18	16	10
200	30	25	18	16	10
320	30	25	18	12	8
440	25	20	13.5	10	6
560		13.5	8	5.5	3.5

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	55	40	35	30	25	7.5	7.5	7.5
40	55	40	35	30	25	7.5	7.5	7.5
100	55	40	35	30	25	7.5	7.5	7.5
160	55	40	32.5	25	25	7.5	7.5	7.5
220	55	40	27.5	25	19.5	7.5	7.5	6.5
280	55	35	25	20	14	3.5	3.5	3.5
340	55	25.5	14	12	10			
400	45	12.5	10	6	3.5			

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	70	60	50	45	40	17.5	17.5	17.5
20	70	60	50	45	40	17.5	17.5	17.5
50	70	60	50	45	40	17.5	17.5	17.5
80	70	60	50	45	40	17.5	17.5	17.5
110	70	60	50	45	40	17.5	17.5	17.5
140	70	50	40	30	25	13.5	10	6
170	70	40	35	25	20	3.5	3.5	3.5
200	70	35	30	20	14	1	1	0.5
225	50	16	16	10	6			

■ RCP6/RCP6S-WRA14R

Lead 24

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	25	22	14	12	8
210	25	22	14	12	8
420	25	18	14	6	3
630		8	2		

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	50	50	40	35	30
140	50	50	40	35	30
280	50	46	31	22	18
420	50	22	12	8	6
560	10	2			

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	65	65	55	50	45	15	15	15
70	65	65	55	50	45	15	15	15
140	65	65	55	50	45	13	13	10
210	65	65	40	30	23	5	5	4
280	65	25	13	7	3			
350	35							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	85	80	70	65	60	25	23	23
35	85	80	70	65	60	25	23	23
70	85	80	70	65	60	25	23	23
105	85	80	60	50	40	19	17	17
130	85	50	10	6	6	7	4	
175	45							

■ RCP6/RCP6S-WRA16R

* WRA16R does not have high output enable/disable settings.

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
240	30
300	30
360	19
420	10.5

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
150	60
200	45
240	18

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	34.5
88	34.5
100	24.5
110	19.5
120	16.5
130	14.5
140	11.5
150	7.5
160	5.5
170	4.5
180	2.5

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
90	100
120	58

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	63
48	63
60	33
70	28
80	18
90	9
100	2

RCP6 Series | Rod Type Side-Mounted Motor Specification

High-output Setting Disabled

■ RCP6/RCP6S-WRA10R

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		3.5		0.5	
140		3.5		0.5	
280		3.5		0.5	
420		3.5		0.5	
560		2.5			

Lead 10

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		9.5		8	
85		9.5		8	
175		9.5		8	
260		9.5		6.5	
350		7.5		6	
435		5		2.5	

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		25		19			5	
40		25		19			5	
85		25		19			5	
130		25		19			5	
175		25		15.5			4	
215		18		12			2.5	
260		10.5		6.5				

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		40		27			10	
20		40		27			10	
40		36		27			10	
65		36		27			10	
85		36		27			8.5	
105		36		27			6	
130		33		22.5			3.5	

■ RCP6/RCP6S-WRA12R

Lead 20

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		7.5		5.5	
160		7.5		5.5	
320		7.5		2.5	
480		3		0.5	

Lead 12

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		18.5		10.5	
80		18.5		10.5	
200		18.5		9.5	
320		15		7	
440		3		1.5	

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		39		30			6	
40		39		30			6	
100		39		30			6	
160		39		24			5	
220		24		15			2	

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		60		45			13	
20		60		45			13	
50		60		45			13	
80		60		45			12	
110		60		45			6	

■ RCP6/RCP6S-WRA14R

Lead 24

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		18		9.5	
210		18		9.5	
420		8		3	

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0		37		27	
140		37		27	
280		18		13	
420		3.5			

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		45		33			12	
70		45		33			12	
140		45		27			6	
210		12		4.5				

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		57		48			18	
35		57		48			18	
70		57		48			13.5	
105		12		7.5			1	

Tables of Payload by Speed/Acceleration

RCP6 Series | Rod Type Motor Coupling Specification

* Dust-proof/splash-proof specifications have different specs.

High-output Setting Enabled

■ RCP6/RCP6S-RA4C

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	6	6	6	4	3.5	1.5	1.5	1.5
140	6	6	6	4	3.5	1.5	1.5	1.5
280	6	6	6	4	3.5	1.5	1.5	1.5
420	6	6	6	4	3	1	1	1
560		6	6	3	3		1	1
700		5.5	5	2	1.5		1	1
840			3	1	0.5			1

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	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	8	2.5	2.5	2.5
525		14	10	8	6		2.5	2.5
610		9	7	5	4		2	2
700		6	4	3	2		1.5	1.5

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	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	15	5	5	4.5
350	28	20	15	13	11	5	4	3.5

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	30	10	10	10
85	40	40	40	30	30	10	10	10
105	40	40	35	30	30	10	10	10
130	40	40	35	30	30	8	7.5	7
150	40	35	35	30	25	6	5.5	5
175	40	30	30	25	20	5	4.5	4

■ RCP6/RCP6S-RA6C

Lead 20

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	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
800		4	3				1	1

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
500	15	15	8	6	4	4	3.5	3
600		10	6	3	2		3	2
700		6	2				2	1

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	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

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
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
125	60	60	50	40	30	18	14	10
150	60	50	40	30	25	14	10	6
175	60	40	35	25	20	12	6	5
200	60	35	30	20	14	8	5	4.5
225	40	16	16	10	6	5	5	4

■ RCP6/RCP6S-RA7C

Lead 24

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	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	14	12	8	3	3	3
420	20	17	12	10	6	3	3	3
600		14	6	5	4		3	2
640		5	3	2	1.5		2	1
800		5	1	1				
860		2	0.5					

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	6	4.5	4
560		10	5	3	2		2	1
700		2						

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	34	20	15	11	7	5	4
350	50	12	4	1		3	2	1
420	10							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	22	18
140	80	50	30	20	15	14	12	10
175	50	15				5	2	
210	20							

■ RCP6/RCP6S-RA8C

* RA8C does not have high output enable/disable settings.

Lead 20

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.2	(mm/s)	0.2
0	30	0	5
240	30	50	5
270	30	100	5
300	30	150	5
360	24	180	5
420	16	200	5
450	12	240	5
480	10	300	5
510	8	360	5
540	6	400	3
600	5	420	2.5
		450	2

Lead 10

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.2	(mm/s)	0.2
0	60	0	40
150	60	88	40
200	45	100	33
240	40	110	28
300	10	120	23
		130	18
		140	15
		150	11
		160	10
		170	8
		180	7
		190	5
		200	4
		220	3
		250	2

Lead 5

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.1	(mm/s)	0.1
0	100	0	70
90	100	48	70
120	100	60	50
130	90	70	35
140	75	80	25
150	60	90	20
		100	15
		120	10
		150	2

RCP6 Series | Rod Type Motor Coupling Specification

High-output Setting Disabled

■ RCP6/RCP6S-RA4C

Lead 16

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

Lead 10

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

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		22		20			5	
40		22		20			5	
85		22		20			5	
130		22		18			5	
175		20		14			4	
215		15		10			3	
260		12		6			2	

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		35		30			10	
20		35		30			10	
40		35		30			10	
65		35		25			10	
85		30		20			7	
105		25		15			5	
130		20		10			4	

■ RCP6/RCP6S-RA6C

Lead 20

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		6		5			1	
160		6		5			1	
320		6		4			1	
480		4		3			1	
640		3		1			0.5	

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		25		10			4	
100		25		10			4	
200		25		10			4	
300		20		8			3	
400		10		5			2	
500		5		2			1	

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		40		20			10	
50		40		20			10	
100		40		20			10	
150		40		20			8	
200		35		18			5	
250		10		6			3	

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		40		25			20	
50		40		25			20	
75		40		25			12	
100		40		25			9	
125		40		25			5	

■ RCP6/RCP6S-RA7C

Lead 24

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		18		9.5			3	
200		18		9.5			3	
400		11		6			1.5	
420		10		5				
600		1						

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		40		25			5	
140		40		25			5	
280		18		12			2	
420		1.5		1				

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		50		30			17.5	
70		50		30			17.5	
140		50		30			7	
210		14		7			2	

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		55		50			26	
35		55		50			26	
70		55		50			13	
105		30		15			2	

Tables of Payload by Speed/Acceleration

RCP6 Series | Rod Type Side-Mounted Motor Specification

* Dust-proof/splash-proof specifications have different specs.

High-output Setting Enabled

■ RCP6/RCP6S-RA4R

Lead 16

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

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	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	10	8	6	4	2.5	2.5	2.5
525		8	6	3	2		2.5	2
610		5	2				2	1.5

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	25	25	22	20	18	5	5	5
40	25	25	22	20	18	5	5	5
85	25	25	22	20	18	5	5	5
130	25	25	22	18	18	5	5	5
175	25	25	22	18	16	5	5	5
215	25	25	22	16	14	5	5	5
260	25	22	20	14	12	5	5	5
305	22	20	14	12	8	4	4	4
350	20	14	10	8	6	3	2.5	2.5

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	30	10	10	10
85	40	40	35	30	30	10	10	10
105	40	40	35	30	30	10	8	8
130	40	40	35	30	30	8	8	8
150	40	35	35	30	25	6	6	6
175	40	30	30	25	20	4	4	4

■ RCP6/RCP6S-RA6R

Lead 20

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	5	5	5	1.5	1.5	1.5
320	6	6	5	4	3	1.5	1.5	1.5
480	6	6	5	4	3	1.5	1.5	1.5
640		4	3	3	2		1.5	1.5
800		3	2	2	1		1	1

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
285	25	25	18	12	8	4	4	4
400	20	20	14	10	6	4	4	4
500	15	15	8	6	4	4	3.5	3
600		10	6	3	2		3	2
700		6	2				2	1

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	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	25	14	12	10	5	5	5
400	30	16	10	6	5	4	3	3
450	25	8	3			2	2	1

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
125	60	60	50	40	30	18	14	10
150	60	50	40	30	25	14	10	6
175	60	40	35	25	20	12	6	5
200	60	35	30	20	14	8	5	4.5
225	40	16	16	10	6	5	5	4

■ RCP6/RCP6S-RA7R

Lead 24

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	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	16	12	8	3	3	3
420	20	20	15	10	6	3	3	3
600		12	8	5	3		2	2
640		10	6	4	2		1	1
800			2					

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	23	20	8	7	7
420	50	25	18	13	10	4.5	4.5	4
560		10	5	3	2		1	1

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	4	3
350	30	3				2	0.5	
420	2							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	12	8	3
175	40	5				4		

■ RCP6/RCP6S-RA8R

* RA8R does not have high output enable/disable settings.

Lead 20

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.2	(mm/s)	0.2
0	30	0	5
300	30	300	5
350	14	330	3.5
400	6	360	2
		400	0.5

Lead 10

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.2	(mm/s)	0.2
0	60	0	40
160	60	80	40
170	40	90	34
180	25	100	28
190	15	110	23
200	12	120	18
		130	15
		140	12
		150	10
		160	8
		170	6
		180	4
		190	3
		200	2

Lead 5

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.1	(mm/s)	0.1
0	100	0	70
90	100	45	70
100	75	60	45
		70	35
		80	25
		90	16
		100	10

RCP6 Series | Rod Type Side-Mounted Motor Specification

High-output Setting Disabled

■ RCP6/RCP6S-RA4R

Lead 16

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

Lead 10

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

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		22		20			5	
40		22		20			5	
85		22		20			5	
130		22		18			5	
175		20		14			4	
215		15		10			3	
260		12		6			2	

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		35		30			10	
20		35		30			10	
40		35		30			10	
65		35		25			10	
85		30		20			7	
105		25		15			5	
130		20		10			4	

■ RCP6/RCP6S-RA6R

Lead 20

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		6		5			1	
160		6		5			1	
320		6		4			1	
480		4		3			1	
640		3		1			0.5	

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		25		10			4	
100		25		10			4	
200		25		10			4	
300		20		8			3	
400		10		5			2	
500		5		2			1	

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		40		20			10	
50		40		20			10	
100		40		20			10	
150		40		20			8	
200		35		18			5	
250		10		6			3	

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		40		25			20	
25		40		25			20	
50		40		25			20	
75		40		25			12	
100		40		25			9	
125		40		25			5	

■ RCP6/RCP6S-RA7R

Lead 24

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		18		9.5			3	
200		18		9.5			3	
400		11		6			1.5	
420		10		5				
600		1						

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		40		25			5	
140		40		25			5	
280		18		12			2	
420		1.5		1				

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		50		30			17.5	
70		50		30			17.5	
140		50		30			7	
210		14		7			2	

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		55		50			26	
35		55		50			26	
70		55		50			13	
105		30		15			2	

Tables of Payload by Speed/Acceleration

RCP6 Series | Table Type Motor Coupling Specification Single Block

High-output Setting Enabled

■ RCP6/RCP6S-TA4C

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	3	3	3	3	3	1	1	1
140	3	3	3	3	3	1	1	1
280	3	3	3	3	3	1	1	1
420		3	3	3	3		1	1
560		3	3	3	3		1	1
700			3	3	3			1
840				3	3			
980					2			
1120								
1260								

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	4	4	4	4	4	2.5	2.5	2
85	4	4	4	4	4	2.5	2.5	2
175	4	4	4	4	4	2.5	2.5	2
260	4	4	4	4	4	2.5	2.5	2
350	4	4	4	4	4	2.5	2.5	2
435		4	4	4	4		2.5	2
525				4	4			2
610				4	4			1.5
700				4	4	2.5		1
785					2.5	2		

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	5	5	5	5	5	5	5	5
40	5	5	5	5	5	5	5	5
85	5	5	5	5	5	5	5	5
130	5	5	5	5	5	5	5	5
175	5	5	5	5	5	5	5	5
215	5	5	5	5	5	5	5	5
260	5	5	5	5	4.5	5	5	5
305	5	5	5	5	4	4.5	4.5	4.5
350	5	5	5	4	3.5	4	3.5	3.5
390		5	5	4	3		2.5	2.5

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	5	5	5	5	5	10	9	8
20	5	5	5	5	5	10	9	8
40	5	5	5	5	5	10	9	8
65	5	5	5	5	5	10	9	8
85	5	5	5	5	5	10	9	7
105	5	5	5	5	5	10	8	7
130	5	5	5	5	4.5	10	8	6
150	5	5	5	5	4	9	7	6
175	5	5	5	4	3.5	8	7	5
195	5	5	5	4	3	6	5	5

■ RCP6/RCP6S-TA6C

Lead 20

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	5	5	5	5	5	1	1	1
160	5	5	5	5	5	1	1	1
320	5	5	5	5	5	1	1	1
480		5	5	5	5		1	1
640		5	5	5	5		1	1
800			5	4.5	4			1
960				3.5	2			
1120					1.5			

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	8	8	8	7	6	3	3	3
80	8	8	8	7	6	3	3	3
200	8	8	8	7	6	3	3	3
320	8	8	8	7	6	3	3	3
440	8	8	8	7	6	3	3	3
500		8	8	7	6		3	3
560		8	8	6	4		3	2.5
680		8	7	4	2.5		2	1.5
800			5	2	1			0.5

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	10	10	9	8	7	6	6	6
40	10	10	9	8	7	6	6	6
100	10	10	9	8	7	6	6	6
160	10	10	9	8	7	6	6	6
220	10	10	9	8	7	6	6	6
250	10	10	9	8	7	6	6	5.5
280	10	10	9	8	7	6	5.5	5
340	10	10	9	8	7	6	4.5	4
400	10	9	8	7	6	4.5	3.5	3

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	10	10	10	8	7	12	12	10
20	10	10	10	8	7	12	12	10
50	10	10	10	8	7	12	12	10
80	10	10	10	8	7	12	12	10
110	10	10	10	8	7	12	12	10
125	10	10	10	8	7	12	12	10
140	10	10	10	8	7	12	12	10
170	10	10	8	7	6	12	10	9
200	10	8	7	6	4	10	8	8

■ RCP6/RCP6S-TA7C

Lead 24

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	10	10	10	8	8	3	3	3
200	10	10	10	8	8	3	3	3
420	10	10	10	8	8	3	3	3
640		10	10	8	7		3	3
860		9	7	6	3		1.5	1
1080			3.5	2				

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	12	12	12	10	10	7	7	7
140	12	12	12	10	10	7	7	7
280	12	12	12	10	10	7	7	6
420	12	12	12	10	8	6	5	4
560		12	10	8	5		3	2
700		10	6	3	2			

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	15	15	15	15	15	16	14	12
70	15	15	15	15	15	16	14	12
140	15	15	15	15	12	16	14	10
210	15	15	15	12	10	12	10	8
280	15	15	12	10	8	9	8	6
350	12	10	8			6		
420	8							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	15	15	15	15	15	20	20	20
35	15	15	15	15	15	20	20	20
70	15	15	15	15	15	20	18	14
105	15	15	15	15	12	18	16	10
140	15	15	15	12	10	16	12	6
175	15	12	10			10	6	
210	10					6		

High-output Setting Disabled

■ RCP6/RCP6S-TA4C

Lead 16

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

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		4		4			2.5	
85		4		4			2.5	
175		4		4			2.5	
260		4		4			2.25	
350		4		4			1.5	
435		4		3.5			1	
525				2				

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		5		5			5	
40		5		5			5	
85		5		5			5	
130		5		5			5	
175		5		5			4.5	
215		5		5			4	
260		5		5			2.5	

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		5		5			9	
20		5		5			9	
40		5		5			9	
65		5		5			9	
85		5		5			7.5	
105		5		5			6	
130		5		5			4	

■ RCP6/RCP6S-TA6C

Lead 20

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		5		5			1	
160		5		5			1	
320		4.5		4.5			1	
480		4		4			1	
640		3		3			0.75	
800				2				

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		8		7			3	
80		8		7			3	
200		8		7			3	
320		8		7			3	
440		7		6			2	
500		6.5		4.5			1.5	
560		6		3			1	
680		3		1				

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		10		8			6	
40		10		8			6	
100		10		8			6	
160		10		8			6	
220		10		8			4	
250		9		8			3	
280		8		8			2	
340		6		3				

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		10		8			12	
20		10		8			12	
50		10		8			12	
80		10		8			12	
110		10		8			9	
125		9		8			7	
140		8		8			5	
170		7		6				

■ RCP6/RCP6S-TA7C

Lead 24

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		10		8			3	
200		10		8			3	
420		10		8			3	
640		5		1				
860		1						

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		12		10			5	
140		12		10			5	
280		12		10			5	
420		12		4				
560		5						

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		15		15			12	
70		15		15			12	
140		15		15			12	
210		15		12			3.5	
280		10						

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		15		15			20	
35		15		15			20	
70		15		15			18	
105		15		13			10	
140		6						

RCP6 Series | Table Type Motor Coupling Specification Double Block

High-output Setting Enabled

■ RCP6/RCP6S-TA4C

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	8	8	8	8	6	2.5	2.5	2
85	8	8	8	8	6	2.5	2.5	2
175	8	8	8	8	6	2.5	2.5	2
260	8	8	8	8	6	2.5	2.5	2
350	8	8	8	6	6	2.5	2.5	2
435		8	8	6	5		2.5	2
525			8	5	4.5			2
610			6	4.5	4			1.5
700			4	3.5	2.5			0.5
785				2	2			

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	10	10	9	8	6	5	5	5
40	10	10	9	8	6	5	5	5
85	10	10	9	8	6	5	5	5
130	10	9	9	8	6	5	5	5
175	10	9	8	6	6	5	5	5
215	10	9	8	6	5	5	5	5
260	9	8	7	5	4.5	5	5	5
305	9	8	6	5	4	4.5	4.5	4.5
350	8	7	6	4	3.5	3.5	3	3
390		7	6	4	3		2	2

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	10	10	9	8	6	10	9	8
20	10	10	9	8	6	10	9	8
40	10	10	9	8	6	10	9	8
65	10	9	9	8	6	10	9	8
85	10	9	8	6	6	10	9	7
105	10	9	8	6	5	10	8	7
130	9	8	7	5	4.5	10	8	6
150	9	8	6	5	4	9	7	6
175	8	7	6	4	3.5	8	7	5
195	8	7	6	4	3	6	5	5

■ RCP6/RCP6S-TA6C

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	15	15	12	11	10	3	3	3
80	15	15	12	11	10	3	3	3
200	15	15	12	11	10	3	3	3
320	15	15	12	11	10	3	3	3
440	15	14	11	10	8	3	3	3
500		13	10	8	6		3	3
560		12	9	6	4		3	2.5
680		10	7	4	2		1.5	1
800			5	2	1			

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	20	20	18	16	14	6	6	6
40	20	20	18	16	14	6	6	6
100	20	20	18	16	14	6	6	6
160	20	20	18	16	14	6	6	6
220	20	20	18	16	14	6	6	6
250	20	20	18	16	14	6	6	5.5
280	20	18	16	15	11	6	5.5	5
340	20	16	14	12	9	6	4.5	4
400	18	14	10	8	6	4.5	3.5	3

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	20	20	18	16	15	12	12	10
20	20	20	18	16	15	12	12	10
50	20	20	18	16	15	12	12	10
80	20	20	18	16	15	12	12	10
110	20	20	18	16	15	12	12	10
125	20	20	18	16	15	12	12	10
140	20	20	18	16	15	12	12	10
170	20	18	16	14	12	12	10	9
200	18	16	14	12	10	9	8	8

■ RCP6/RCP6S-TA7C

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	25	25	20	20	18	7	7	7
140	25	25	20	20	18	7	7	7
280	22	20	16	16	14	7	7	6
420	20	16	14	12	8	6	5	4
560	16	14	10	6	4	3	1.5	0.5
700		8	3.5					

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	30	30	28	26	24	16	16	14
70	30	30	28	26	24	16	16	14
140	30	28	24	22	20	16	14	10
210	30	22	20	18	16	12	10	8
280	20	18	16	12	10	9	8	6
350	14	12	7			4		
420	8							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	30	30	28	26	24	24	24	24
35	30	30	28	26	24	24	24	24
70	30	28	24	22	20	24	22	20
105	25	22	20	18	16	22	20	16
140	20	18	16	12	10	16	14	10
175	14	12	6			9	4	
210	7					4		

High-output Setting Disabled

■ RCP6/RCP6S-TA4C

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		8		6			2.5	
85		8		6			2.5	
175		8		6			2.5	
260		8		6			2.25	
350		7		5			1.5	
435		5		3.5			1	
525				1.5				

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		10		8			5	
40		10		8			5	
85		10		8			5	
130		9		8			5	
175		9		6			4.5	
215		9		6			4	
260		8		5			2.5	

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		10		8			9	
20		10		8			9	
40		10		8			9	
65		9		8			9	
85		9		6			7.5	
105		9		6			6	
130		8		5			4	

■ RCP6/RCP6S-TA6C

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		15		11			3	
80		15		11			3	
200		15		11			3	
320		15		10			2.5	
440		9		5			1	
500		6		3				
560		4		1.5				

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		20		16			6	
40		20		16			6	
100		20		16			6	
160		20		16			6	
220		20		16			4	
250		17		12			3	
280		14		8			2	
340		5		3				

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		20		16			12	
20		20		16			12	
50		20		16			12	
80		20		16			12	
110		20		16			9	
125		18		15			7	
140		15		14			5	
170		10		7				

■ RCP6/RCP6S-TA7C

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		22		18			5	
140		22		18			5	
280		16		14			5	
420		10		4				
560		2						

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		30		26			12	
70		30		26			12	
140		25		18			12	
210		18		10			3.5	
280		4						

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		30		26			20	
35		30		26			20	
70		25		18			20	
105		20		12			10	

Tables of Payload by Speed/Acceleration

RCP6 Series | Table Type Side-Mounted Motor Specification Single Block

High-output Setting Enabled

■ RCP6/RCP6S-TA4R

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	3	3	3	3	3	1	1	1
140	3	3	3	3	3	1	1	1
280	3	3	3	3	3	1	1	1
420		3	3	3	3		1	1
560		3	3	3	3		1	1
700			3	3	3			1
840				3	2.5			
980					1.5			
1120								
1260								

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	4	4	4	4	4	2.5	2.5	2
85	4	4	4	4	4	2.5	2.5	2
175	4	4	4	4	4	2.5	2.5	2
260	4	4	4	4	4	2.5	2.5	2
350	4	4	4	4	4	2.5	2.5	2
435		4	4	4	4		2.5	2
525				4	4			2
610				4	4			1.5
700				4	4	2.5		1
785					2.5	2		

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	5	5	5	5	5	5	5	5
40	5	5	5	5	5	5	5	5
85	5	5	5	5	5	5	5	5
130	5	5	5	5	5	5	5	5
175	5	5	5	5	5	5	5	5
215	5	5	5	5	5	5	5	5
260	5	5	5	5	4.5	5	5	5
305	5	5	5	5	4	4.5	4.5	4.5
350	5	5	5	4	3.5	4	2	2
390		5	5	4	3		1.5	1

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	5	5	5	5	5	10	9	8
20	5	5	5	5	5	10	9	8
40	5	5	5	5	5	10	9	8
65	5	5	5	5	5	10	9	8
85	5	5	5	5	5	10	9	7
105	5	5	5	5	5	10	8	7
130	5	5	5	5	4.5	10	8	6
150	5	5	5	5	4	9	7	6
175	5	5	5	4	3.5	7.5	7	4.5
195	5	5	5	4	3	5	4	4

■ RCP6/RCP6S-TA6R

Lead 20

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	5	5	5	5	5	1	1	1
160	5	5	5	5	5	1	1	1
320	5	5	5	5	5	1	1	1
480		5	5	5	5		1	1
640		5	5	5	5		1	1
800			5	4.5	4			1
960				3.5	2			
1120					1.5			

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	8	8	8	7	6	3	3	3
80	8	8	8	7	6	3	3	3
200	8	8	8	7	6	3	3	3
320	8	8	8	7	6	3	3	3
440	8	8	8	7	6	3	3	3
500		8	8	7	6		3	3
560		8	8	6	4		3	2.5
680		8	7	4	2.5		2	1.5
800			5	2	1			

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	10	10	9	8	7	6	6	6
40	10	10	9	8	7	6	6	6
100	10	10	9	8	7	6	6	6
160	10	10	9	8	7	6	6	6
220	10	10	9	8	7	6	6	6
250	10	10	9	8	7	6	6	5.5
280	10	10	9	8	7	6	5.5	5
340	10	10	9	8	7	6	4.5	4
400	10	9	8	7	6	4.5	3.5	3

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	10	10	10	8	7	12	12	10
20	10	10	10	8	7	12	12	10
50	10	10	10	8	7	12	12	10
80	10	10	10	8	7	12	12	10
110	10	10	10	8	7	12	12	10
125	10	10	10	8	7	12	12	10
140	10	10	10	8	7	12	12	10
170	10	10	8	7	6	5	5	5
200	10	8	7	6	4	4	4	4

■ RCP6/RCP6S-TA7R

Lead 24

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	10	10	10	8	8	3	3	3
200	10	10	10	8	8	3	3	3
420	10	10	10	8	8	3	3	3
640		10	10	7	6		3	2.5
860		7	5	4	2		1	0.5
1080			2	0.5				

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	12	12	12	10	10	7	7	7
140	12	12	12	10	10	7	7	7
280	12	12	12	10	10	7	7	6
420	12	12	12	10	8	6	5	4
560		12	10	7	5		3	1.5
700		9	4	1				

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	15	15	15	15	15	16	14	12
70	15	15	15	15	15	16	14	12
140	15	15	15	15	12	16	14	10
210	15	15	15	12	10	12	10	8
280	15	15	12	10	8	9	7	6
350	12	10	8			4		
420	8							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	15	15	15	15	15	20	20	20
35	15	15	15	15	15	20	20	20
70	15	15	15	15	15	20	18	14
105	15	15	15	15	12	18	16	10
140	15	15	15	12	10	16	12	6
175	15	10	4			7	4	
210	4					2		

High-output Setting Disabled

■ RCP6/RCP6S-TA4R

Lead 16

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

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		4		4			2.5	
85		4		4			2.5	
175		4		4			2.5	
260		4		4			2.25	
350		4		4			1.5	
435		4		3.5			1	
525				2				

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		5		5			5	
40		5		5			5	
85		5		5			5	
130		5		5			5	
175		5		5			4.5	
215		5		5			4	
260		5		5			2.5	

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		5		5			9	
20		5		5			9	
40		5		5			9	
65		5		5			9	
85		5		5			7.5	
105		5		5			6	
130		5		5			4	

■ RCP6/RCP6S-TA6R

Lead 20

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		5		5			1	
160		5		5			1	
320		4.5		4.5			1	
480		4		4			1	
640		3		3			0.75	
800				2				

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		8		7			3	
80		8		7			3	
200		8		7			3	
320		8		7			3	
440		7		6			2	
500		6.5		4.5			1.5	
560		6		3			1	
680		3		1				

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		10		8			6	
40		10		8			6	
100		10		8			6	
160		10		8			6	
220		10		8			4	
250		9		8			3	
280		8		8			2	
340		6		3				

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		10		8			12	
20		10		8			12	
50		10		8			12	
80		10		8			12	
110		10		8			9	
125		9		8			7	
140		8		8			5	
170		7		6				

■ RCP6/RCP6S-TA7R

Lead 24

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		10		8			3	
200		10		8			3	
420		10		8			3	
640		5		1				
860		1						

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		12		10			5	
140		12		10			5	
280		12		10			5	
420		12		4				
560		5						

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		15		15			12	
70		15		15			12	
140		15		15			12	
210		15		12			3.5	
280		10						

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		15		15			20	
35		15		15			20	
70		15		15			18	
105		15		13			10	
140		6						

RCP6 Series | Table Type Side-Mounted Motor Specification Double Block

High-output Setting Enabled

■ RCP6/RCP6S-TA4R

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	8	8	8	8	6	2.5	2.5	2
85	8	8	8	8	6	2.5	2.5	2
175	8	8	8	8	6	2.5	2.5	2
260	8	8	8	8	6	2.5	2.5	2
350	8	8	8	6	6	2.5	2.5	2
435		8	8	6	5		2.5	2
525			8	5	4.5			1.5
610			5	4	3.5			
700			3.5	2.5	2			

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	10	10	9	8	6	5	5	5
40	10	10	9	8	6	5	5	5
85	10	10	9	8	6	5	5	5
130	10	9	9	8	6	5	5	5
175	10	9	8	6	6	5	5	5
215	10	9	8	6	5	5	5	5
260	9	8	7	5	4.5	5	5	5
305	9	8	6	5	4	4	4	4
350	8	7	6	4	3.5	3.5	3	3
390		7	6	3.5	3		2	2

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	10	10	9	8	6	10	9	8
20	10	10	9	8	6	10	9	8
40	10	10	9	8	6	10	9	8
65	10	9	9	8	6	10	9	8
85	10	9	8	6	6	10	9	7
105	10	9	8	6	5	10	8	7
130	9	8	7	5	4.5	10	8	6
150	9	8	6	5	4	9	7	6
175	8	7	6	4	3.5	5	5	4.5
195	8	7	6	4	3	4.5	4	4

■ RCP6/RCP6S-TA6R

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	15	15	12	11	10	3	3	3
80	15	15	12	11	10	3	3	3
200	15	15	12	11	10	3	3	3
320	15	15	12	11	10	3	3	3
440	15	14	11	10	8	3	3	3
500		13	10	8	6		3	3
560		12	9	6	3		3	2.5
680		10	6	3	1.5		1.5	1
800			4	1				

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	20	20	18	16	14	6	6	6
40	20	20	18	16	14	6	6	6
100	20	20	18	16	14	6	6	6
160	20	20	18	16	14	6	6	6
220	20	20	18	16	14	6	6	6
250	20	20	18	16	14	6	6	5.5
280	20	18	16	15	11	6	5.5	5
340	20	16	14	12	9	6	4.5	4
400	18	14	10	8	6	4	2	1.5

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	20	20	18	16	15	12	12	10
20	20	20	18	16	15	12	12	10
50	20	20	18	16	15	12	12	10
80	20	20	18	16	15	12	12	10
110	20	20	18	16	15	12	12	10
125	20	20	18	16	15	12	12	10
140	20	20	18	16	15	12	12	10
170	20	18	16	14	12	12	9	8
200	18	16	14	12	10	8	7	7

■ RCP6/RCP6S-TA7R

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	25	25	20	20	18	7	7	7
140	25	25	20	20	18	7	7	7
280	22	20	16	16	14	7	7	6
420	20	16	14	12	8	5	4	3
560	16	14	10	6	3	3	1	
700		8	3					

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	30	30	28	26	24	16	16	14
70	30	30	28	26	24	16	16	14
140	30	28	24	22	20	16	14	10
210	30	22	20	18	16	12	10	8
280	20	18	16	12	10	9	5.5	4.5
350	14	12	6			3		
420	6							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	30	30	28	26	24	24	24	24
35	30	30	28	26	24	24	24	24
70	30	28	24	22	20	24	22	20
105	25	22	20	18	16	22	20	16
140	20	18	16	12	10	16	14	10
175	14	10	5			8	3	
210	6					3		

High-output Setting Disabled

■ RCP6/RCP6S-TA4R

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		8		6			2.5	
85		8		6			2.5	
175		8		6			2.5	
260		8		6			2.25	
350		7		5			1.5	
435		5		3.5			1	
525				1.5				

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		10		8			5	
40		10		8			5	
85		10		8			5	
130		9		8			5	
175		9		6			4.5	
215		9		6			4	
260		8		5			2.5	

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		10		8			9	
20		10		8			9	
40		10		8			9	
65		9		8			9	
85		9		6			7.5	
105		9		6			6	
130		8		5			4	

■ RCP6/RCP6S-TA6R

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		15		11			3	
80		15		11			3	
200		15		11			3	
320		15		10			2.5	
440		9		5			1	
500		6		3				
560		4		1.5				

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		20		16			6	
40		20		16			6	
100		20		16			6	
160		20		16			6	
220		20		16			4	
250		17		12			3	
280		14		8			2	
340		5		3				

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		20		16			12	
20		20		16			12	
50		20		16			12	
80		20		16			12	
110		20		16			9	
125		18		15			7	
140		15		14			5	
170		10		7				

■ RCP6/RCP6S-TA7R

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		22		18			5	
140		22		18			5	
280		16		14			5	
420		10		4				
560		2						

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		30		26			12	
70		30		26			12	
140		25		18			12	
210		18		10			3.5	
280		4						

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0		30		26			20	
35		30		26			20	
70		25		18			20	
105		20		12			10	

Tables of Payload by Speed/Acceleration

RCP6W Series | Rod Type Motor Coupling Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-RA4C

<When ambient temperature exceeds 5°C>

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	11	11	9	9	7	2	2	2
85	11	11	9	9	7	2	2	2
175	11	11	8	7	5	2	2	2
260	11	11	7	4	2	2	2	2
350	11	11	7	3	1	2	2	2
435	11	10	6	3	1	1.5	1	1
525		4	1					

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	23	23	21	18	18	4	4	4
40	23	23	21	18	18	4	4	4
85	23	23	21	18	18	4	4	4
130	23	23	21	18	18	4	4	4
175	23	23	21	16	14	4	4	4
215	23	23	21	14	12	4	4	4
260	23	22	18	12	8	4	4	4
305	22	14	8	6	4	3	3	3
350	19	5	1			2	1	1

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	30	10	10	10
85	40	40	35	30	30	10	10	10
105	40	40	35	30	30	10	6	6
130	40	40	35	30	30	4	4	4
150	40	35	35	29	24	2	2	2
175	33	24	22	19	12			

<When ambient temperature is 5°C or below>

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	11	11	9	9	7	2	2	2
85	11	11	9	9	7	2	2	2
175	11	11	8	7	5	2	2	2
260	11	11	7	4	2	2	2	2
350	11	11	7	3	1	2	2	2
435	11	10	6	3	1	1.5	1	1

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	23	23	21	18	18	4	4	4
40	23	23	21	18	18	4	4	4
85	23	23	21	18	18	4	4	4
130	23	23	21	18	18	4	4	4
175	23	23	21	16	14	4	4	4
215	23	23	21	14	12	4	4	4
260	23	22	18	12	8	4	4	4

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	30	10	10	10
85	40	40	35	30	30	10	10	10
105	40	40	35	30	30	10	6	6
130	40	40	35	30	30	4	4	4

■ RCP6W/RCP6SW-RA6C

<When ambient temperature exceeds 5°C>

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
105	25	25	18	16	12	4	4	4
210	25	25	17	14	10	4	4	4
315	25	25	15	10	6	4	4	4
420	20	20	10	10	6	4	4	4
525	15	15	8	6	4.5	2	1	1
630		8	3	2	1			

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	40	40	35	30	25	10	10	10
55	40	40	35	30	25	10	10	10
105	40	40	35	30	25	10	10	10
160	40	40	35	25	25	10	10	10
210	40	40	30	25	20	9	9	9
265	40	40	27.5	22.5	18	8	8	7
315	40	35	21	20	14	4	4	4
370	38	16	10	8	6	2	2	2
420	28	7	6					

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
20	60	60	50	45	40	20	20	20
45	60	60	50	45	40	20	20	20
70	60	60	50	45	40	20	20	20
105	60	60	50	45	40	20	20	20
130	60	60	50	40	30	18	14	10
155	60	50	40	30	25	14	10	6
180	60	40	35	25	20	9	6	5
210	60	26	22	20	14	6	4	4

<When ambient temperature is 5°C or below>

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
105	25	25	18	16	12	4	4	4
210	25	25	17	14	10	4	4	4
315	25	25	15	10	6	4	4	4
420	20	20	10	10	6	4	4	4
525	15	15	8	6	4.5	2	1	1

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	40	40	35	30	25	10	10	10
55	40	40	35	30	25	10	10	10
105	40	40	35	30	25	10	10	10
160	40	40	35	25	25	10	10	10
210	40	40	30	25	20	9	9	9
265	40	40	27.5	22.5	18	8	8	7
315	40	35	21	20	14	4	4	4

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
20	60	60	50	45	40	20	20	20
45	60	60	50	45	40	20	20	20
70	60	60	50	45	40	20	20	20
105	60	60	50	45	40	20	20	20

RCP6W Series | Rod Type Motor Coupling Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-RA7C

<When ambient temperature exceeds 5°C>

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	45	32	22	17	6	6	5
420	50	18	9	6	5	1.5	1	0.5

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	20	8	7	6
280	60	20	9	6	3	3	2	1
350	20							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	21	20	18
140	67	47	10	6	6	8	6	6

<When ambient temperature is 5°C or below>

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	45	32	22	17	6	6	5

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	8	8	8

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
60	80	80	70	65	60	28	28	28
70	80	80	70	65	60	21	21	21
105	80	80	60	50	40	8	8	8

■ RCP6W/RCP6SW-RA8C

<When ambient temperature exceeds 5°C>

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
300	30
350	14

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	3
300	3
330	1

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
160	60
170	40
180	25
190	15
200	12

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	35
80	35
90	34
100	28
110	23
120	18
130	15
140	12
150	10
160	8
170	6
180	4
190	3
200	2

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
80	100
90	100
100	75

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	70
45	70
60	45
70	35
80	25
90	14
100	9

<When ambient temperature is 5°C or below>

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
300	30

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	3
300	3

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
160	60
170	40

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	35
80	35
90	34
100	28
110	23
120	18
130	15
140	12
150	10
160	8
170	6

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
80	100

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	70
45	70
60	35
70	25
80	9

Tables of Payload by Speed/Acceleration

RCP6W Series | Rod Type Side-Mounted Motor Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-RA4R

<When ambient temperature exceeds 5°C>

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	11	11	9	9	7	2	2	2
85	11	11	9	9	7	2	2	2
175	11	11	8	7	5	2	2	2
260	11	11	7	4	2	2	2	2
350	11	11	7	3	1	2	2	2
435	11	10	6	3	1	1.5	1	1
525		4	1					

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	23	23	21	18	18	4	4	4
40	23	23	21	18	18	4	4	4
85	23	23	21	18	18	4	4	4
130	23	23	21	18	18	4	4	4
175	23	23	21	16	14	4	4	4
215	23	23	21	14	12	4	4	4
260	23	22	18	12	8	4	4	4
305	22	14	8	6	4	3	3	3
350	19	5	1			2	1	1

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	30	10	10	10
85	40	40	35	30	30	10	10	10
105	40	40	35	30	30	10	6	6
130	40	40	35	30	30	4	4	4
150	40	35	35	29	24	2	2	2
175	33	24	22	19	12			

<When ambient temperature is 5°C or below>

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	11	11	9	9	7	2	2	2
85	11	11	9	9	7	2	2	2
175	11	11	8	7	5	2	2	2
260	11	11	7	4	2	2	2	2
350	11	11	7	3	1	2	2	2
435	11	10	6	3	1	1.5	1	1

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	23	23	21	18	18	4	4	4
40	23	23	21	18	18	4	4	4
85	23	23	21	18	18	4	4	4
130	23	23	21	18	18	4	4	4
175	23	23	21	16	14	4	4	4
215	23	23	21	14	12	4	4	4
260	23	22	18	12	8	4	4	4

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	30	10	10	10
85	40	40	35	30	30	10	10	10
105	40	40	35	30	30	10	6	6
130	40	40	35	30	30	4	4	4

■ RCP6W/RCP6SW-RA6R

<When ambient temperature exceeds 5°C>

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
105	25	25	18	16	12	4	4	4
210	25	25	17	14	10	4	4	4
315	25	25	15	10	6	4	4	4
420	20	20	10	10	6	4	4	4
525	15	15	8	6	4.5	2	1	1
630		8	3	2	1			

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	40	40	35	30	25	10	10	10
55	40	40	35	30	25	10	10	10
105	40	40	35	30	25	10	10	10
160	40	40	35	25	25	10	10	10
210	40	40	30	25	20	9	9	9
265	40	40	27.5	22.5	18	8	8	7
315	40	35	21	20	14	4	4	4
370	38	16	10	8	6	2	2	2
420	28	7	6					

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
20	60	60	50	45	40	20	20	20
45	60	60	50	45	40	20	20	20
70	60	60	50	45	40	20	20	20
105	60	60	50	45	40	20	20	20
130	60	60	50	40	30	18	14	10
155	60	50	40	30	25	14	10	6
180	60	40	35	25	20	9	6	5
210	60	26	22	20	14	6	4	4

<When ambient temperature is 5°C or below>

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
105	25	25	18	16	12	4	4	4
210	25	25	17	14	10	4	4	4
315	25	25	15	10	6	4	4	4
420	20	20	10	10	6	4	4	4
525	15	15	8	6	4.5	2	1	1

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	40	40	35	30	25	10	10	10
55	40	40	35	30	25	10	10	10
105	40	40	35	30	25	10	10	10
160	40	40	35	25	25	10	10	10
210	40	40	30	25	20	9	9	9
265	40	40	27.5	22.5	18	8	8	7
315	40	35	21	20	14	4	4	4

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
20	60	60	50	45	40	20	20	20
45	60	60	50	45	40	20	20	20
70	60	60	50	45	40	20	20	20
105	60	60	50	45	40	20	20	20

RCP6W Series | Rod Type Side-Mounted Motor Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-RA7R

<When ambient temperature exceeds 5°C>

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	45	32	22	17	6	6	5
420	50	18	9	6	5	1.5	1	0.5

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	20	8	7	6
280	60	20	9	6	3	3	2	1
350	20							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	21	20	18
140	67	47	10	6	6	8	6	6

<When ambient temperature is 5°C or below>

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	45	32	22	17	6	6	5

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	8	8	8

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
60	80	80	70	65	60	28	28	28
70	80	80	70	65	60	21	21	21
105	80	80	60	50	40	8	8	8

■ RCP6W/RCP6SW-RA8R

<When ambient temperature exceeds 5°C>

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
300	30
350	14

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	3
300	3
330	1

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
160	60
170	40
180	25
190	15
200	12

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	35
80	35
90	34
100	28
110	23
120	18
130	15
140	12
150	10
160	8
170	6
180	4
190	3
200	2

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
80	100
90	100
100	75

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	70
45	70
60	45
70	35
80	25
90	14
100	9

<When ambient temperature is 5°C or below>

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
300	30

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	3
300	3

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
160	60
170	40

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	35
80	35
90	34
100	28
110	23
120	18
130	15
140	12
150	10
160	8
170	6

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
80	100

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	70
45	70
60	35
70	25
80	9

Tables of Payload by Speed/Acceleration

RCP6W Series | Rod Type Motor Coupling Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-RRA4C

<When ambient temperature exceeds 5°C>

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	11	11	9	9	7	2	2	2
85	11	11	9	9	7	2	2	2
175	11	11	8	7	5	2	2	2
260	11	11	7	4	2	2	2	2
350	11	11	7	3	1	2	2	2
435	11	10	6	3	1	1.5	1	1
525		4	1					

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	23	23	21	18	18	4	4	4
40	23	23	21	18	18	4	4	4
85	23	23	21	18	18	4	4	4
130	23	23	21	18	18	4	4	4
175	23	23	21	16	14	4	4	4
215	23	23	21	14	12	4	4	4
260	23	22	18	12	8	4	4	4
305	22	14	8	6	4	3	3	3
350	19	5	1			2	1	1

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	30	10	10	10
85	40	40	35	30	30	10	10	10
105	40	40	35	30	30	10	6	6
130	40	40	35	30	30	4	4	4
150	40	35	35	29	24	2	2	2
175	33	24	22	19	12			

<When ambient temperature is 5°C or below>

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	11	11	9	9	7	2	2	2
85	11	11	9	9	7	2	2	2
175	11	11	8	7	5	2	2	2
260	11	11	7	4	2	2	2	2
350	11	11	7	3	1	2	2	2
435	11	10	6	3	1	1.5	1	1

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	23	23	21	18	18	4	4	4
40	23	23	21	18	18	4	4	4
85	23	23	21	18	18	4	4	4
130	23	23	21	18	18	4	4	4
175	23	23	21	16	14	4	4	4
215	23	23	21	14	12	4	4	4
260	23	22	18	12	8	4	4	4

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	30	10	10	10
85	40	40	35	30	30	10	10	10
105	40	40	35	30	30	10	6	6

■ RCP6W/RCP6SW-RRA6C

<When ambient temperature exceeds 5°C>

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
105	25	25	18	16	12	4	4	4
210	25	25	17	14	10	4	4	4
315	25	25	15	10	6	4	4	4
420	20	20	10	10	6	4	4	4
525	15	15	8	6	4.5	2	1	1
630		8	3	2	1			

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	40	40	35	30	25	10	10	10
55	40	40	35	30	25	10	10	10
105	40	40	35	30	25	10	10	10
160	40	40	35	25	25	10	10	10
210	40	40	30	25	20	9	9	9
265	40	40	27.5	22.5	18	8	8	7
315	40	35	21	20	14	4	4	4
370	38	16	10	8	6	2	2	2
420	28	7	6					

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
20	60	60	50	45	40	20	20	20
45	60	60	50	45	40	20	20	20
70	60	60	50	45	40	20	20	20
105	60	60	50	45	40	20	20	20
130	60	60	50	40	30	18	14	10
155	60	50	40	30	25	14	10	6
180	60	40	35	25	20	9	6	5
210	60	26	22	20	14	6	4	4

<When ambient temperature is 5°C or below>

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
105	25	25	18	16	12	4	4	4
210	25	25	17	14	10	4	4	4
315	25	25	15	10	6	4	4	4
420	20	20	10	10	6	4	4	4
525	15	15	8	6	4.5	2	1	1

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	40	40	35	30	25	10	10	10
55	40	40	35	30	25	10	10	10
105	40	40	35	30	25	10	10	10
160	40	40	35	25	25	10	10	10
210	40	40	30	25	20	9	9	9
265	40	40	27.5	22.5	18	8	8	7
315	40	35	21	20	14	4	4	4

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
20	60	60	50	45	40	20	20	20
45	60	60	50	45	40	20	20	20
70	60	60	50	45	40	20	20	20
105	60	60	50	45	40	20	20	20

RCP6W Series | Rod Type Motor Coupling Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-RRA7C

<When ambient temperature exceeds 5°C>

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	45	32	22	17	6	6	5
420	50	18	9	6	5	1.5	1	0.5

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	20	8	7	6
280	60	20	9	6	3	3	2	1
350	20							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	21	20	18
140	67	47	10	6	6	8	6	6

<When ambient temperature is 5°C or below>

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	45	32	22	17	6	6	5

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	8	8	8

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	6	6	6

■ RCP6W/RCP6SW-RRA8C

<When ambient temperature exceeds 5°C>

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
210	30
300	30
350	14

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	3
210	3
300	3
330	1

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
130	60
160	60
170	40
180	25
190	15
200	12

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	35
80	35
90	34
100	28
110	23
120	18
130	15
140	12
150	10
160	8
170	6
180	4
190	3
200	2

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
60	100
90	100
100	75

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	70
45	70
60	45
70	35
80	25
90	14
100	9

<When ambient temperature is 5°C or below>

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
210	30

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	3
210	3

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
130	60

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	35
80	35
90	34
100	28
110	23
120	18
130	2

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
60	100

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	70
45	70
60	9

Tables of Payload by Speed/Acceleration

RCP6W Series | Rod Type Side-Mounted Motor Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-RRA4R

<When ambient temperature exceeds 5°C>

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	11	11	9	9	7	2	2	2
85	11	11	9	9	7	2	2	2
175	11	11	8	7	5	2	2	2
260	11	11	7	4	2	2	2	2
350	11	11	7	3	1	2	2	2
435	11	10	6	3	1	1.5	1	1
525		4	1					

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	23	23	21	18	18	4	4	4
40	23	23	21	18	18	4	4	4
85	23	23	21	18	18	4	4	4
130	23	23	21	18	18	4	4	4
175	23	23	21	16	14	4	4	4
215	23	23	21	14	12	4	4	4
260	23	22	18	12	8	4	4	4
305	22	14	8	6	4	3	3	3
350	19	5	1			2	1	1

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	30	10	10	10
85	40	40	35	30	30	10	10	10
105	40	40	35	30	30	10	6	6
130	40	40	35	30	30	4	4	4
150	40	35	35	29	24	2	2	2
175	33	24	22	19	12			

<When ambient temperature is 5°C or below>

Lead 10

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	11	11	9	9	7	2	2	2
85	11	11	9	9	7	2	2	2
175	11	11	8	7	5	2	2	2
260	11	11	7	4	2	2	2	2
350	11	11	7	3	1	2	2	2
435	11	10	6	3	1	1.5	1	1

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	23	23	21	18	18	4	4	4
40	23	23	21	18	18	4	4	4
85	23	23	21	18	18	4	4	4
130	23	23	21	18	18	4	4	4
175	23	23	21	16	14	4	4	4
215	23	23	21	14	12	4	4	4
260	23	22	18	12	8	4	4	4

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	30	10	10	10
85	40	40	35	30	30	10	10	10
105	40	40	35	30	30	10	6	6

■ RCP6W/RCP6SW-RRA6R

<When ambient temperature exceeds 5°C>

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
105	25	25	18	16	12	4	4	4
210	25	25	17	14	10	4	4	4
315	25	25	15	10	6	4	4	4
420	20	20	10	10	6	4	4	4
525	15	15	8	6	4.5	2	1	1
630		8	3	2	1			

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	40	40	35	30	25	10	10	10
55	40	40	35	30	25	10	10	10
105	40	40	35	30	25	10	10	10
160	40	40	35	25	25	10	10	10
210	40	40	30	25	20	9	9	9
265	40	40	27.5	22.5	18	8	8	7
315	40	35	21	20	14	4	4	4
370	38	16	10	8	6	2	2	2
420	28	7	6					

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
20	60	60	50	45	40	20	20	20
45	60	60	50	45	40	20	20	20
70	60	60	50	45	40	20	20	20
105	60	60	50	45	40	20	20	20
130	60	60	50	40	30	18	14	10
155	60	50	40	30	25	14	10	6
180	60	40	35	25	20	9	6	5
210	60	26	22	20	14	6	4	4

<When ambient temperature is 5°C or below>

Lead 12

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
105	25	25	18	16	12	4	4	4
210	25	25	17	14	10	4	4	4
315	25	25	15	10	6	4	4	4
420	20	20	10	10	6	4	4	4
525	15	15	8	6	4.5	2	1	1

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	40	40	35	30	25	10	10	10
55	40	40	35	30	25	10	10	10
105	40	40	35	30	25	10	10	10
160	40	40	35	25	25	10	10	10
210	40	40	30	25	20	9	9	9
265	40	40	27.5	22.5	18	8	8	7
315	40	35	21	20	14	4	4	4

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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
20	60	60	50	45	40	20	20	20
45	60	60	50	45	40	20	20	20
70	60	60	50	45	40	20	20	20
105	60	60	50	45	40	20	20	20

RCP6W Series | Rod Type Side-Mounted Motor Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-RRA7R

<When ambient temperature exceeds 5°C>

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	45	32	22	17	6	6	5
420	50	18	9	6	5	1.5	1	0.5

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	30	20	8	7	6
280	60	20	9	6	3	3	2	1
350	20							

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	21	20	18
140	67	47	10	6	6	8	6	6

<When ambient temperature is 5°C or below>

Lead 16

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	45	32	22	17	6	6	5

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	8	8	8

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	6	6	6

■ RCP6W/RCP6SW-RRA8R

<When ambient temperature exceeds 5°C>

Lead 20

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.2	(mm/s)	0.2
0	30	0	3
210	30	210	3
300	30	300	3
350	14	330	1

Lead 10

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.2	(mm/s)	0.2
0	60	0	35
130	60	80	35
160	60	90	34
170	40	100	28
180	25	110	23
190	15	120	18
200	12	130	15
		140	12
		150	10
		160	8
		170	6
		180	4
		190	3
		200	2

Lead 5

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.1	(mm/s)	0.1
0	100	0	70
60	100	45	70
90	100	60	45
100	75	70	35
		80	25
		90	14
		100	9

<When ambient temperature is 5°C or below>

Lead 20

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.2	(mm/s)	0.2
0	30	0	3
210	30	210	3

Lead 10

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.2	(mm/s)	0.2
0	60	0	35
130	60	80	35
		90	34
		100	28
		110	23
		120	18
		130	2

Lead 5

Orientation	Horizontal	Orientation	Vertical
Speed	Acceleration (G)	Speed	Acceleration (G)
(mm/s)	0.1	(mm/s)	0.1
0	100	0	70
60	100	45	70
		60	9

Tables of Payload by Speed/Acceleration

RCP6W Series | Rod Type Motor Coupling Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-WRA10C

<When ambient temperature exceeds 5°C>

Lead 10

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	11.5	11.5	8.5	8.5	6.5
85	11.5	11.5	8.5	8.5	6.5
175	11.5	11.5	8.5	8.5	3.5
260	11.5	11.5	8.5	6	2.5
350	11.5	11.5	8.5	5	2
435	11.5	8.5	6	3.5	1.5
525	10.5	4			

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	28	25	22	20	20	4	4	4
40	28	25	22	20	20	4	4	4
85	28	25	22	20	20	4	4	4
130	28	25	22	20	20	4	4	4
175	28	25	22	20	18	3	3	3
215	28	25	22	18	13.5	2	2	2
260	28	25	20.5	15.5	11			
305	28	17.5	12.5	10	7.5			
350	28	9.5	5.5	3.5				

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	35	35	35	30	10	10	10
130	40	35	35	30	30	3.5	3.5	3.5
150	40	35	35	28	24	1.5	1.5	1.5
175	40	28	26	18	11			

<When ambient temperature is 5°C or below>

Lead 10

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	11.5	11.5	8.5	8.5	6.5
85	11.5	11.5	8.5	8.5	6.5
175	11.5	11.5	8.5	8.5	3.5
260	11.5	11.5	8.5	6	2.5
350	11.5	11.5	8.5	5	2

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	28	25	22	20	20	4	4	4
40	28	25	22	20	20	4	4	4
85	28	25	22	20	20	4	4	4
130	28	25	22	20	20	4	4	4
175	28	25	22	20	18	3	3	3
215	28	25	22	18	13.5	2	2	2

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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

■ RCP6W/RCP6SW-WRA12C

<When ambient temperature exceeds 5°C>

Lead 12

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	30	25	18	16	10
80	30	25	18	16	10
200	30	25	15	13	9
320	30	25	15	9	6
440	25	20	12	8	4.5
560		7.5	3.5	1	

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	55	40	35	30	25	4	4	4
40	55	40	35	30	25	4	4	4
100	55	40	35	30	25	4	4	4
160	55	40	32.5	25	25	4	4	4
220	55	40	27.5	22	16	4	4	3
280	55	35	25	18	11			
340	55	23	14	12	8			
400	38	7	2	1	1			

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	70	60	50	45	40	14	14	14
20	70	60	50	45	40	14	14	14
50	70	60	50	45	40	14	14	14
80	70	60	50	45	40	14	14	14
110	70	60	50	45	40	14	14	14
140	70	50	40	30	25	10	10	5
170	70	40	35	25	20			
200	70	26	26	20	14			
225	50	7	4	3	3			

<When ambient temperature is 5°C or below>

Lead 12

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	30	25	18	16	10
80	30	25	18	16	10
200	30	25	15	13	9
320	30	25	15	9	6

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	55	40	35	30	25	4	4	4
40	55	40	35	30	25	4	4	4
100	55	40	35	30	25	4	4	4
160	55	40	32.5	25	25	4	4	4
220	55	40	27.5	22	16	4	4	3

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	70	60	50	45	40	14	14	14
20	70	60	50	45	40	14	14	14
50	70	60	50	45	40	14	14	14
80	70	60	50	45	40	14	14	14

RCP6W Series | Rod Type Motor Coupling Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-WRA14C

<When ambient temperature exceeds 5°C>

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	50	50	40	35	30
140	50	50	40	35	30
280	50	32	25	17	12
420	23	7	2		

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	65	65	55	50	45	11.5	11.5	11.5
70	65	65	55	50	45	11.5	11.5	11.5
140	65	65	51	41	41	9.5	9.5	6.5
210	65	56	28	20	15	1.5	1.5	
280	51	14	1					

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	85	80	70	65	60	21.5	19.5	19.5
35	85	80	70	65	60	21.5	19.5	19.5
70	85	80	70	65	60	21.5	19.5	19.5
105	85	80	51	46	40	15.5	13.5	12
130	85	41	10	6	2	3.5		

<When ambient temperature is 5°C or below>

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	50	50	40	35	30
140	50	50	40	35	30
280	50	32	25	17	12

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	65	65	55	50	45	11.5	11.5	11.5
70	65	65	55	50	45	11.5	11.5	11.5
140	65	65	51	41	41	9.5	9.5	6.5

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	85	80	70	65	60	21.5	19.5	19.5
35	85	80	70	65	60	21.5	19.5	19.5
70	85	80	70	65	60	21.5	19.5	19.5

■ RCP6W/RCP6SW-WRA16C

<When ambient temperature exceeds 5°C>

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
240	30
300	30
360	12

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
150	60
200	23
220	2

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	30.5
88	30.5
100	20.5
110	15.5
120	12.5
130	10.5
140	7.5
150	3.5
160	1.5

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
100	100
110	45

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	59
48	59
60	29
70	24
80	14
90	5

<When ambient temperature is 5°C or below>

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
240	30

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
120	60

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	30.5
88	30.5
100	20.5
110	15.5
120	12.5

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
80	100

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	59
48	59
60	29
70	24
80	14

Tables of Payload by Speed/Acceleration

RCP6W Series | Rod Type Side-Mounted Motor Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-WRA10R

<When ambient temperature exceeds 5°C>

Lead 10

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	11.5	11.5	8.5	8.5	6.5
85	11.5	11.5	8.5	8.5	6.5
175	11.5	11.5	8.5	8.5	3.5
260	11.5	11.5	8.5	6	2.5
350	11.5	11.5	8.5	5	2
435	11.5	8.5	6	3.5	1.5
525	10.5	4			

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	28	25	22	20	20	4	4	4
40	28	25	22	20	20	4	4	4
85	28	25	22	20	20	4	4	4
130	28	25	22	20	20	4	4	4
175	28	25	22	20	18	3	3	3
215	28	25	22	18	13.5	2	2	2
260	28	25	20.5	15.5	11			
305	28	17.5	12.5	10	7.5			
350	28	9.5	5.5	3.5				

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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	35	35	35	30	10	10	10
130	40	35	35	30	30	3.5	3.5	3.5
150	40	35	35	28	24	1.5	1.5	1.5
175	40	28	26	18	11			

<When ambient temperature is 5°C or below>

Lead 10

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	11.5	11.5	8.5	8.5	6.5
85	11.5	11.5	8.5	8.5	6.5
175	11.5	11.5	8.5	8.5	3.5
260	11.5	11.5	8.5	6	2.5
350	11.5	11.5	8.5	5	2

Lead 5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	28	25	22	20	20	4	4	4
40	28	25	22	20	20	4	4	4
85	28	25	22	20	20	4	4	4
130	28	25	22	20	20	4	4	4
175	28	25	22	20	18	3	3	3
215	28	25	22	18	13.5	2	2	2

Lead 2.5

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(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

■ RCP6W/RCP6SW-WRA12R

<When ambient temperature exceeds 5°C>

Lead 12

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	30	25	18	16	10
80	30	25	18	16	10
200	30	25	15	13	9
320	30	25	15	9	6
440	25	20	12	8	4.5
560		7.5	3.5	1	

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	55	40	35	30	25	4	4	4
40	55	40	35	30	25	4	4	4
100	55	40	35	30	25	4	4	4
160	55	40	32.5	25	25	4	4	4
220	55	40	27.5	22	16	4	4	3
280	55	35	25	18	11			
340	55	23	14	12	8			
400	38	7	2	1	1			

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	70	60	50	45	40	14	14	14
20	70	60	50	45	40	14	14	14
50	70	60	50	45	40	14	14	14
80	70	60	50	45	40	14	14	14
110	70	60	50	45	40	14	14	14
140	70	50	40	30	25	10	10	5
170	70	40	35	25	20			
200	70	26	26	20	14			
225	50	7	4	3	3			

<When ambient temperature is 5°C or below>

Lead 12

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	30	25	18	16	10
80	30	25	18	16	10
200	30	25	15	13	9
320	30	25	15	9	6

Lead 6

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	55	40	35	30	25	4	4	4
40	55	40	35	30	25	4	4	4
100	55	40	35	30	25	4	4	4
160	55	40	32.5	25	25	4	4	4
220	55	40	27.5	22	16	4	4	3

Lead 3

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	70	60	50	45	40	14	14	14
20	70	60	50	45	40	14	14	14
50	70	60	50	45	40	14	14	14
80	70	60	50	45	40	14	14	14

RCP6W Series | Rod Type Side-Mounted Motor Specification

High-output Setting Enabled

■ RCP6W/RCP6SW-WRA14R

<When ambient temperature exceeds 5°C>

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	50	50	40	35	30
140	50	50	40	35	30
280	50	32	25	17	12
420	23	7	2		

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	65	65	55	50	45	11.5	11.5	11.5
70	65	65	55	50	45	11.5	11.5	11.5
140	65	65	51	41	41	9.5	9.5	6.5
210	65	56	28	20	15	1.5	1.5	
280	51	14	1					

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	85	80	70	65	60	21.5	19.5	19.5
35	85	80	70	65	60	21.5	19.5	19.5
70	85	80	70	65	60	21.5	19.5	19.5
105	85	80	51	46	40	15.5	13.5	12
130	85	41	10	6	2	3.5		

<When ambient temperature is 5°C or below>

Lead 16

Orientation	Horizontal				
Speed	Acceleration (G)				
(mm/s)	0.1	0.3	0.5	0.7	1
0	50	50	40	35	30
140	50	50	40	35	30
280	50	32	25	17	12

Lead 8

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	65	65	55	50	45	11.5	11.5	11.5
70	65	65	55	50	45	11.5	11.5	11.5
140	65	65	51	41	41	9.5	9.5	6.5

Lead 4

Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	85	80	70	65	60	21.5	19.5	19.5
35	85	80	70	65	60	21.5	19.5	19.5
70	85	80	70	65	60	21.5	19.5	19.5

■ RCP6W/RCP6SW-WRA16R

<When ambient temperature exceeds 5°C>

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
240	30
300	30
360	12

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
150	60
200	23
220	2

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	30.5
88	30.5
100	20.5
110	15.5
120	12.5
130	10.5
140	7.5
150	3.5
160	1.5

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
100	100
110	45

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	59
48	59
60	29
70	24
80	14
90	5

<When ambient temperature is 5°C or below>

Lead 20

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	30
240	30

Lead 10

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.2
0	60
120	60

Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.2
0	30.5
88	30.5
100	20.5
110	15.5
120	12.5

Lead 5

Orientation	Horizontal
Speed	Acceleration (G)
(mm/s)	0.1
0	100
80	100

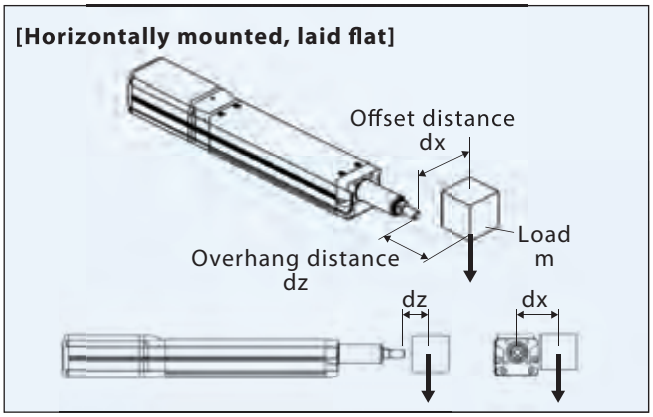
Orientation	Vertical
Speed	Acceleration (G)
(mm/s)	0.1
0	59
48	59
60	29
70	24
80	14

Selection Guideline for Allowable Load Mass

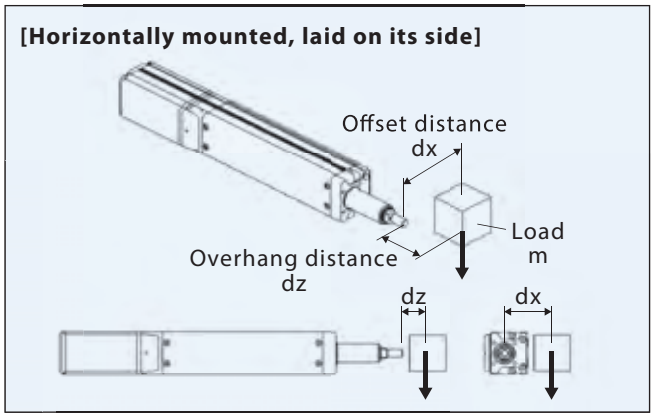
The radial cylinder has a built-in guide, so loads up to a certain level can be applied to the rod without using an external guide.
Refer to the graphs below for the allowable load mass.
If the allowable load mass is exceeded, please add an external guide.

■ Allowable Load Mass for Horizontally Mounted RCP6(S)-RRA Series * RCP6(S)W is the same.

[Horizontally mounted, laid flat]



[Horizontally mounted, laid on its side]



■ RCP6(S)-RRA4/RRA6/RRA7/RRA8

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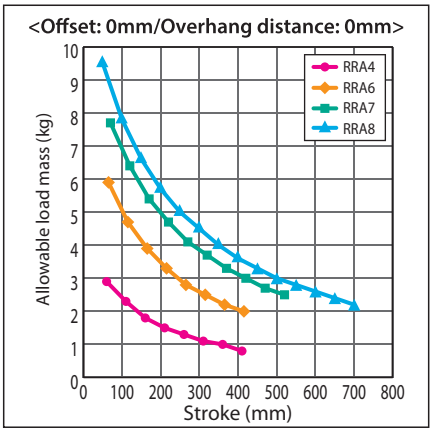

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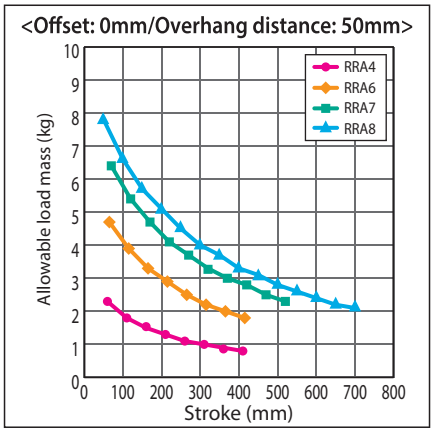

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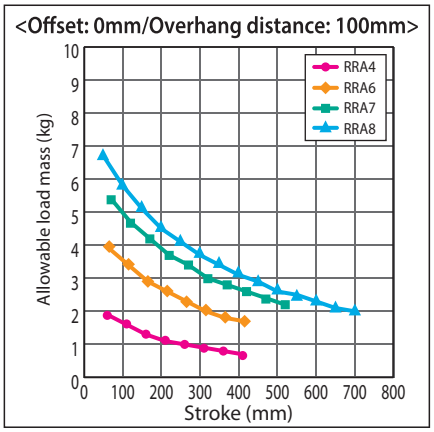

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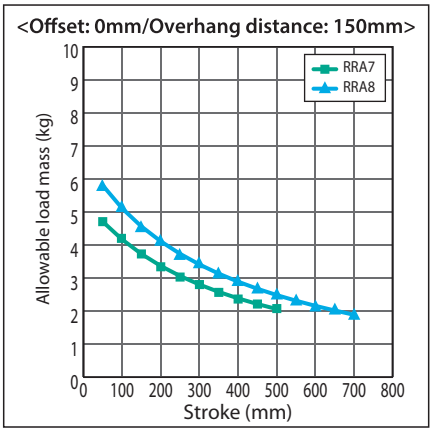

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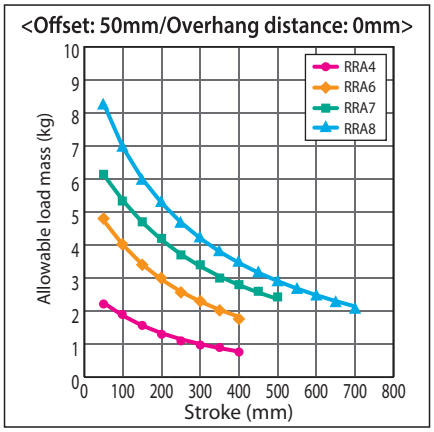

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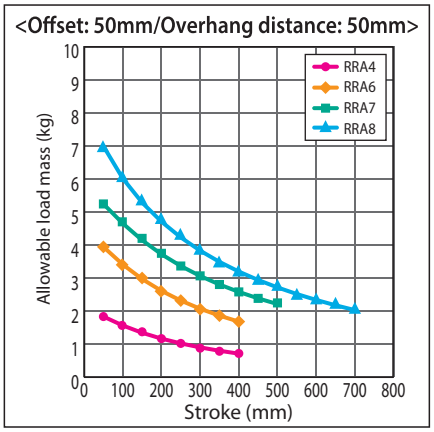
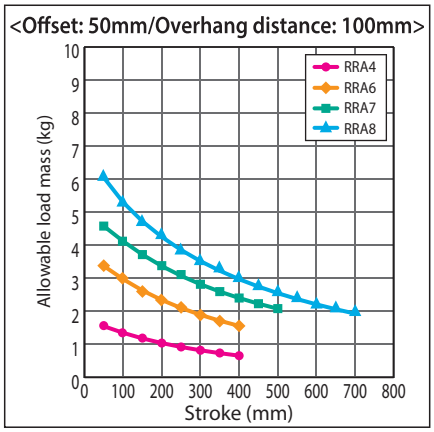
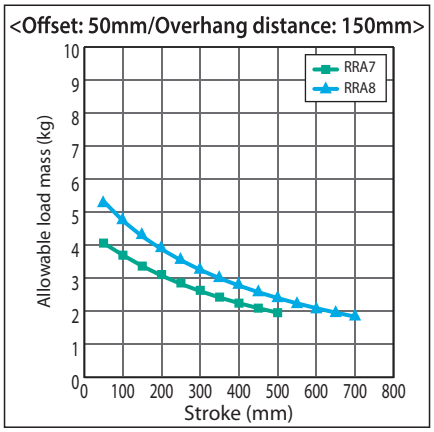
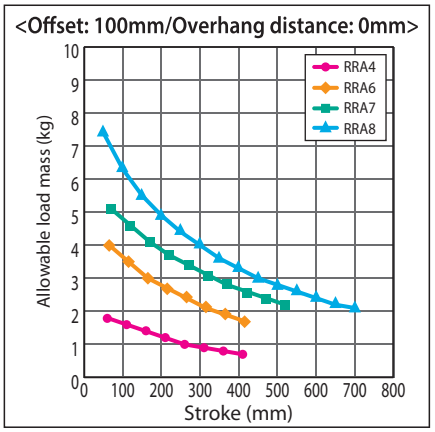
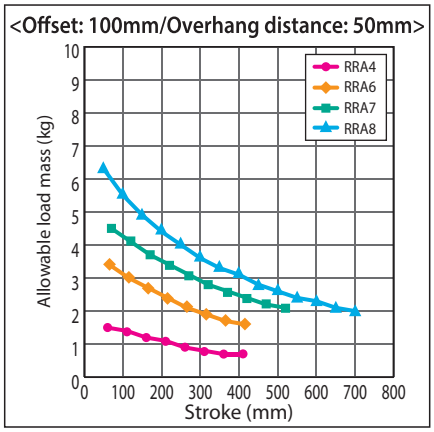


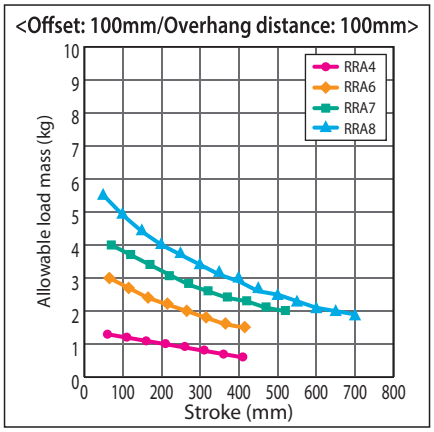
Allowable load calculation conditions.
Load mass corresponding to a product service life of 5000 km, considering moments generated by acceleration/deceleration. (Acceleration: 1G, speed 500mm/s)

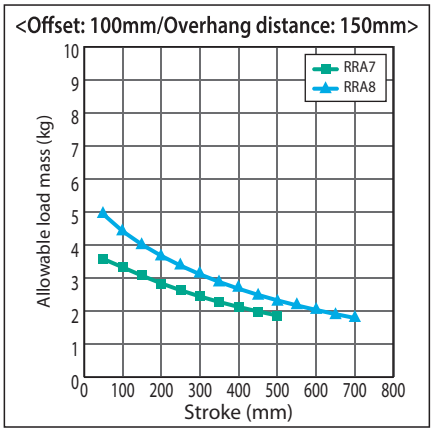


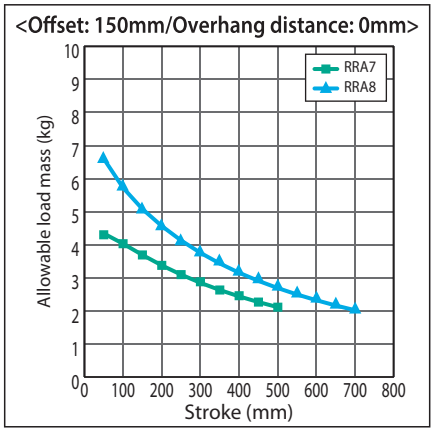


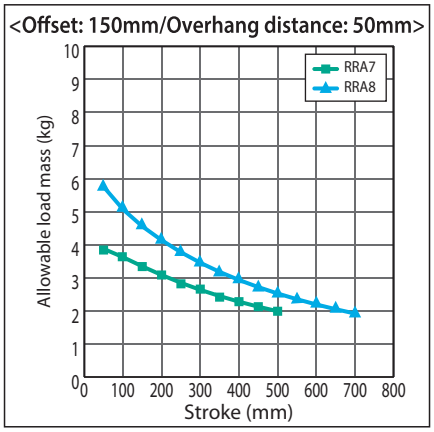


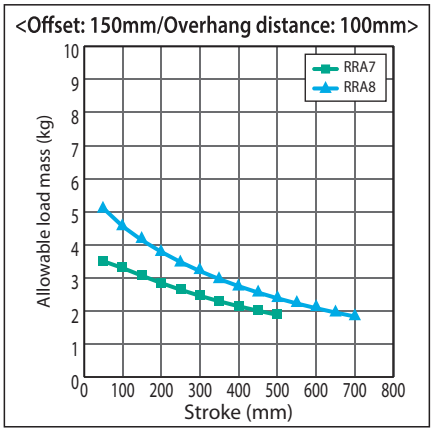


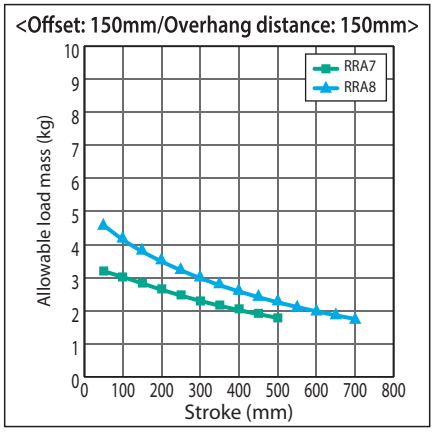










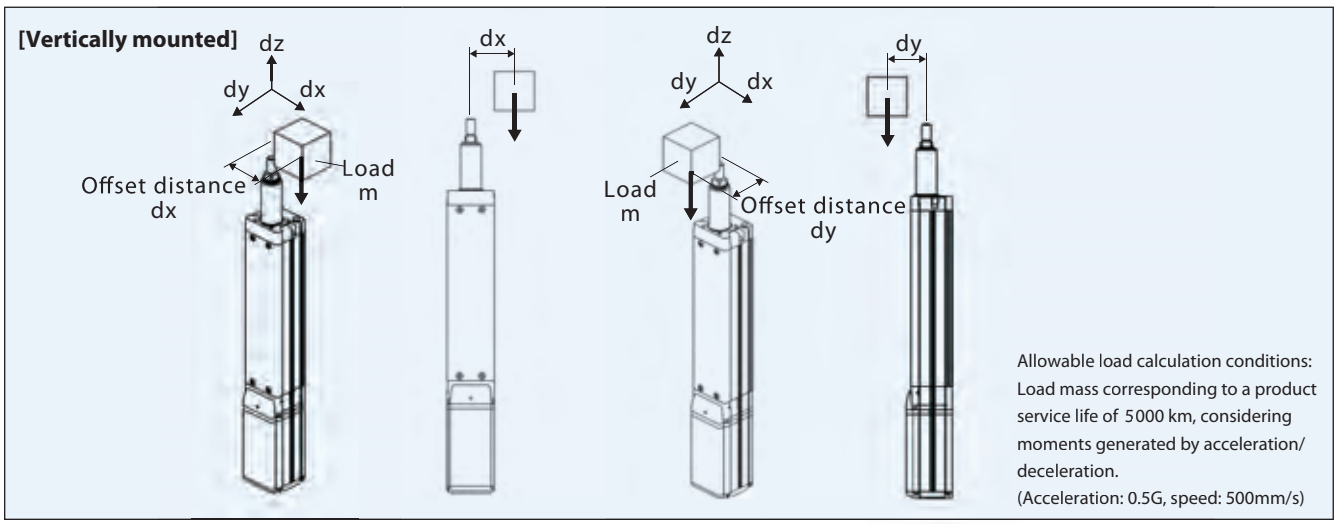


Allowable load calculation conditions.

Load mass corresponding to a product service life of 5000 km, considering moments generated by acceleration/deceleration. (Acceleration: 1G, speed 500mm/s)

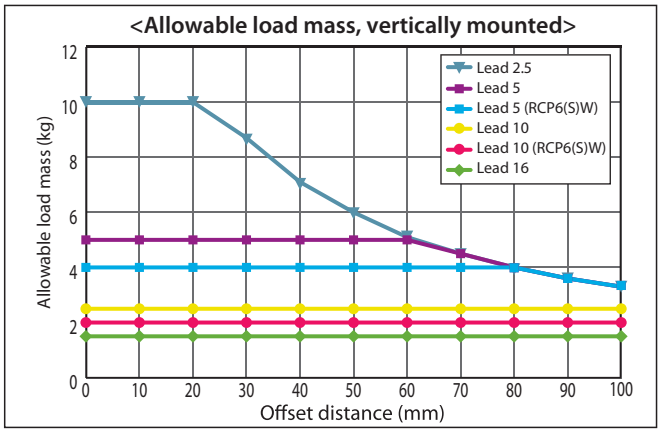
Selection Guideline for Allowable Load Mass

■ Allowable Load Mass for Vertically Mounted RCP6(S)-RRA *Series* * Differs for RCP6(S)W in some cases depending on lead.

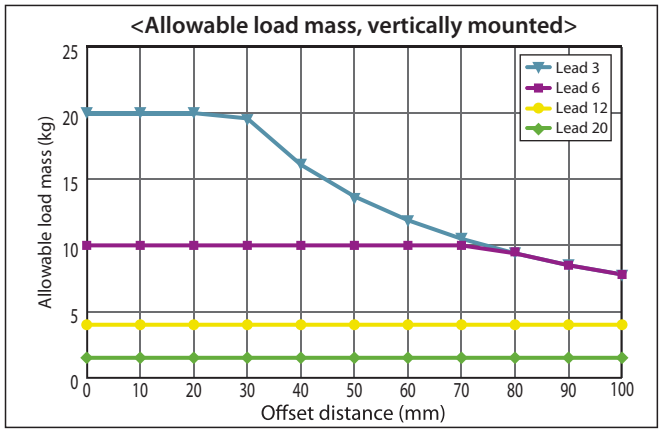


Allowable load calculation conditions:
Load mass corresponding to a product service life of 5000 km, considering moments generated by acceleration/deceleration.
(Acceleration: 0.5G, speed: 500mm/s)

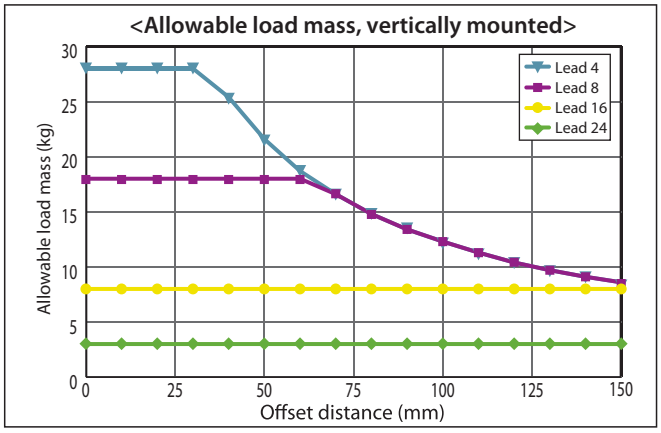
■ RCP6(S)-RRA4



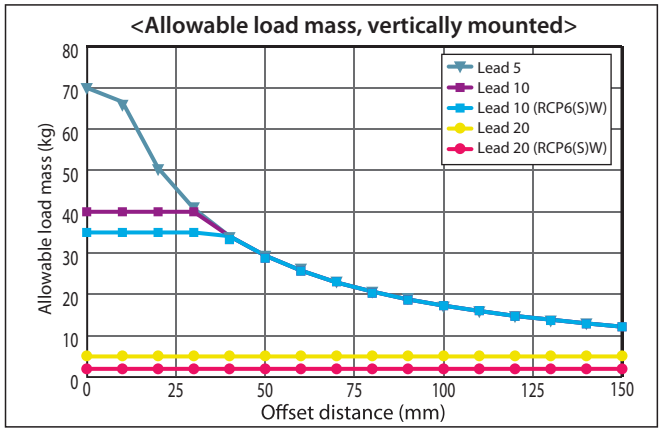
■ RCP6(S)-RRA6



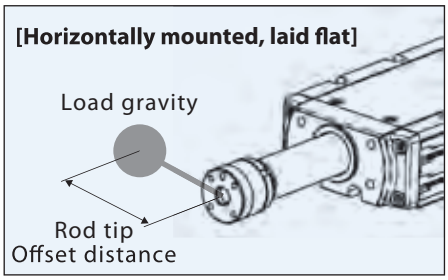
■ RCP6(S)-RRA7

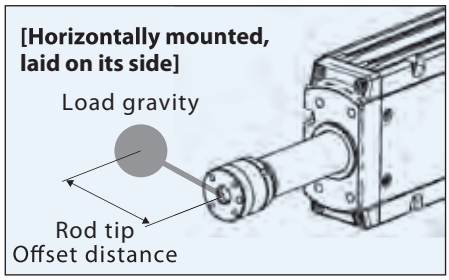


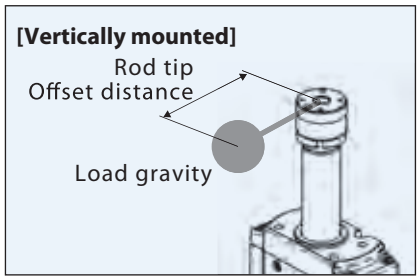
■ RCP6(S)-RRA8



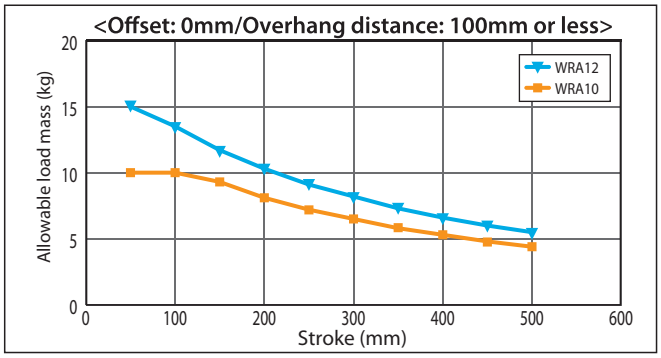
■ Allowable Load Mass for RCP6(S)-WRA Series * Differs for RCP6(S)W in some cases depending on lead.

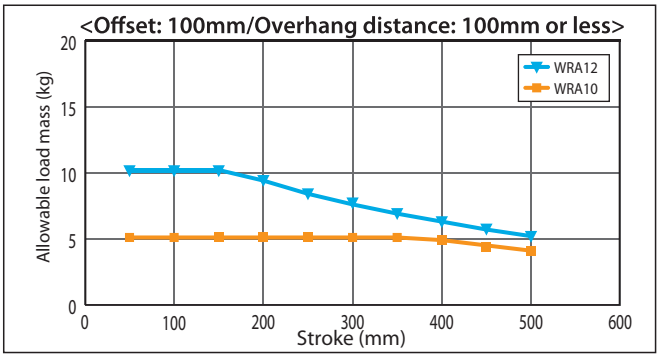




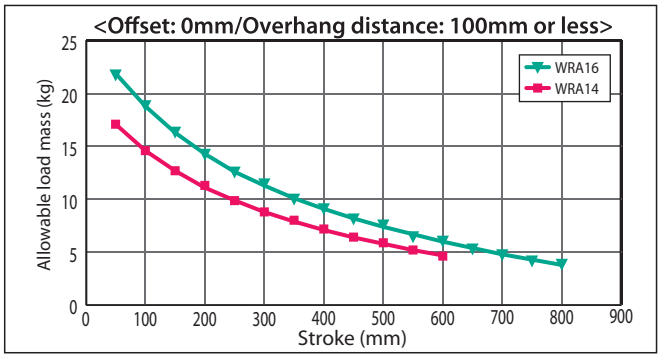


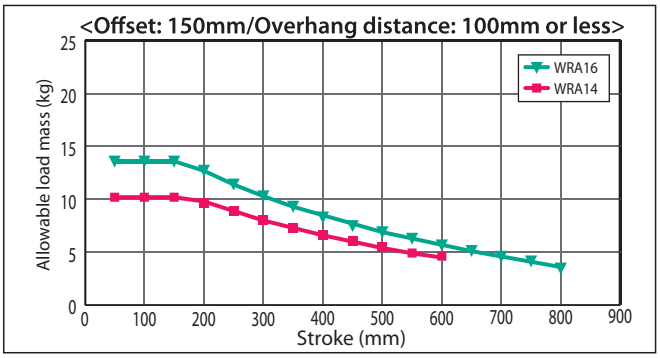
■ **RCP6(S)-WRA10/WRA12**





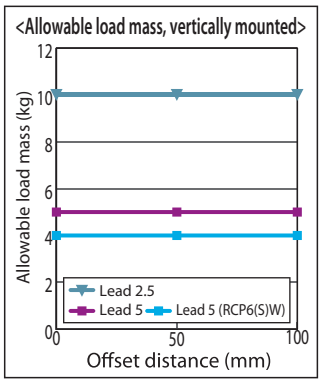
■ **RCP6(S)-WRA14/WRA16**



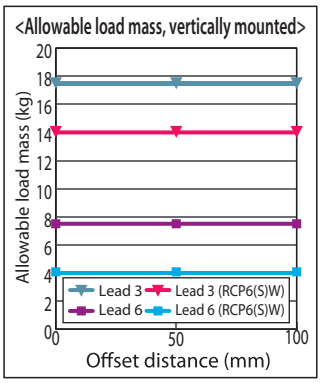


Allowable load calculation conditions: Load mass corresponding to a product service life of 5000 km, considering moments generated by acceleration/deceleration. (Acceleration: 1G, speed: 500mm/s. *For WRA16 type, acceleration: 0.2G, speed: 500mm/s)

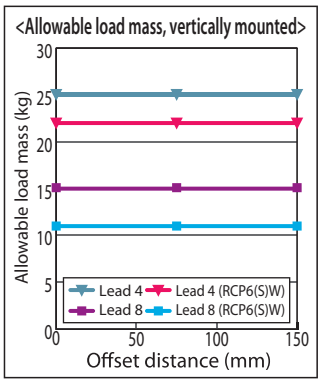
■ **RCP6(S)-WRA10**



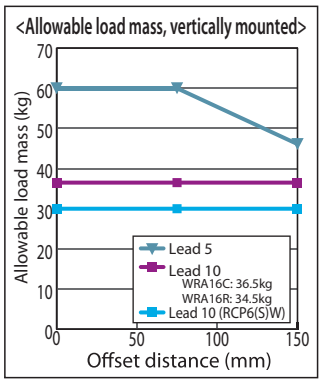
■ **RCP6(S)-WRA12**



■ **RCP6(S)-WRA14**

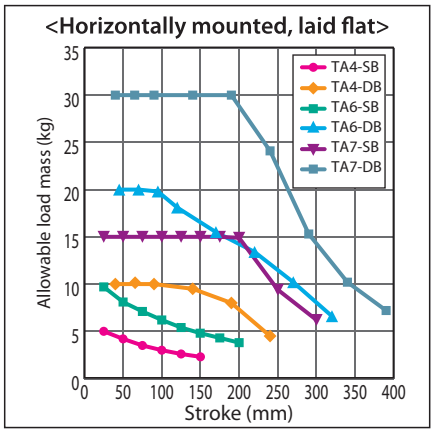


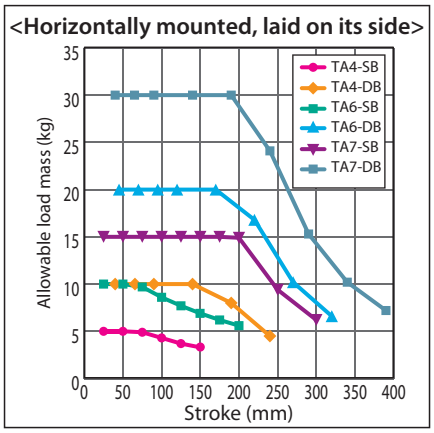
■ **RCP6(S)-WRA16**

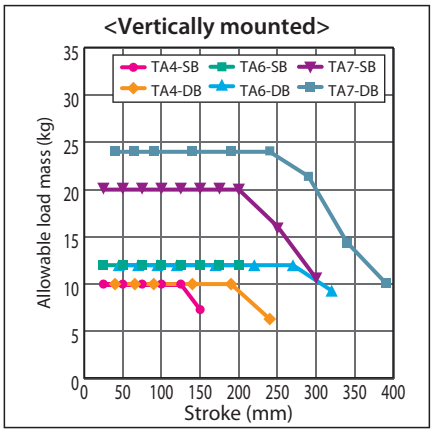


■ Allowable Load Mass for (Table type) RCP6(S)-TA Series

■ Due to the table type structure, longer stroke actuators result in lower allowable load mass.







Allowable load calculation conditions: Load mass corresponding to a product service life of 5000 km, considering moments generated by acceleration/deceleration. (Acceleration: 0.5G, speed: 500mm/s.

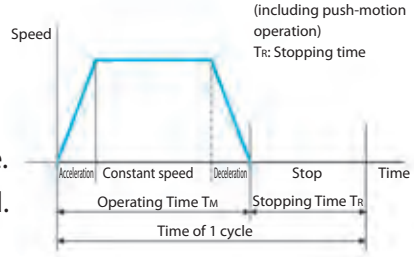
Duty Cycle

Duty cycle is the percentage of the actuator's active operation time in each cycle.
Please note that the way to calculate duty cycle for the pulse motor and AC servo motor types differs.

[Duty Cycle]
Duty cycle is the percentage of the actuator's active operation time in each cycle.

$$D = \frac{T_M}{T_M + T_R} \times 100(\%)$$

D: Duty
T_M: Operating time (including push-motion operation)
T_R: Stopping time



<Pulse motor>

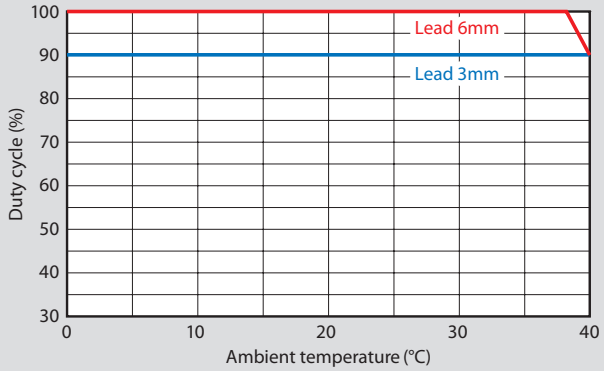
For pulse motor type, an actuator can be operated at 100% of its duty cycle.
RCP6SCR/RCP6SW is the model that requires the duty cycle to be limited.

For RCP6SCR/W

Duty Cycle by Models

RCP6S Series	Duty Cycle
☐35 pulse motor type SA4/RRA4/RA4/TA4/WSA10/WRA10 (Common to coupled motor/side-mounted motor)	100%
☐42 pulse motor type SA6/RRA6/RA6/TA6/WSA12/WRA12 (Common to coupled motor/side-mounted motor)	Please see the graph below.
☐56 pulse motor type SA7/RRA7/RA7/TA7/WSA14/WRA14 (Common to coupled motor/side-mounted motor)	Please see the graph below.
☐56 high thrust pulse motor type SA8/WSA16 (Common to coupled motor/side-mounted motor)	100%
☐60 high thrust pulse motor type RRA8/RA8/WRA16 (Common to coupled motor/side-mounted motor)	70%

■ Correlation diagram of ambient temperature and duty cycle for 42 pulse motor type

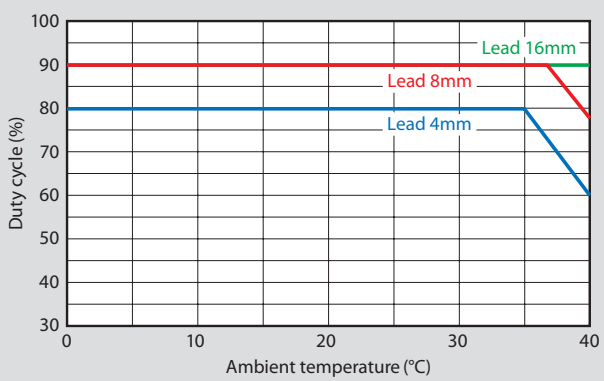


☐42 pulse motor type
SA6/RRA6/RA6/TA6/WSA12/WRA12
(Common to coupled motor/side-mounted motor)

Lead	3mm	6mm	12mm/20mm
Duty Cycle Limit	90% or less	100% at 38°C or less 90% or less at 40°C	100%

* RCP6W does not have a 20mm lead.

■ Correlation diagram of ambient temperature and duty cycle for 56 pulse motor type (Excludes the high thrust motor)



☐56 pulse motor type
SA7/RRA7/RA7/TA7/WSA14/WRA14
(Common to coupled motor/side-mounted motor)

Lead	4mm	8mm	16mm	24mm
Duty Cycle Limit	80% at 35°C or less 60% or less at 40°C	90% at 37°C or less 78% or less at 40°C	90% or less	100%

* RCP6W does not have a 24mm lead.

Double Slider Selection Notes

Be sure to check the following specifications when selecting a double slider.

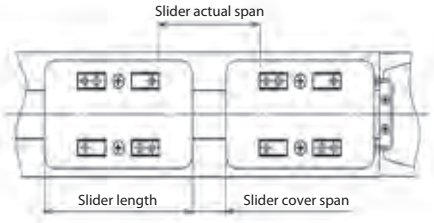
RCP6(S)(CR) Double Slider Specification

Series name	Type name	Lead (mm)	Allowable dynamic moment						Overhang load length (mm)	Cleanroom specification suction amount (Nℓ/min)	*1 Payload compensation A (kg)	*1 Payload compensation B (kg)	*1 Payload compensation speed (mm/s)	Slider length (mm)	Double slider minimum stroke (mm)
			Reference rated life (km)	Slider span (mm)		Ma direction (N·m)	Mb direction (N·m)	Mc direction (N·m)	Ma direction Mb/Mc direction						
				Slider actual span	Slider cover span										
RCP6(S)	SA4C(R)	10	5000	60	24	44.6	63.6	15.7	420	–	0.6	2	350	76	150
		5											215		
		2.5											105		
	SA6C(R)	12	5000	90	40	106	152	40	630	–	1.2	2	320	110	200
		6											280		
		3											140		
	SA7C(R)	16	5000	70	20	285	285	145	810	–	1.7	5	280	130	200
		8											140		
		4											70		
	SA8C(R)	20	5000	120	35	565	565	237	1200	–	7 (*2)	–	–	165	250
		10											–		
		5											–		
RCP6(S)CR	SA4C	10	5000	60	24	44.6	63.6	15.7	420	60	0.6	2	350	76	150
		5								30			215		
		2.5								20			105		
	SA6C	12	5000	90	40	106	152	40	630	110	1.2	2	320	110	200
		6								60			280		
		3								35			140		
	SA7C	16	5000	70	20	285	285	145	810	100	1.7	5	280	130	200
		8								50			140		
		4								40			70		
	SA8C	20	5000	120	35	565	565	237	1200	170	7 (*2)	–	–	165	250
		10								90			–		
		5								40			–		

[List of Options Unavailable for Double Slider]

Series name	Type name	Lead (mm)	Double Slider Selection **Not** Possible ("•")	
			Horizontal mount	Vertical mount
RCP6(S)	SA4C(R)	16	•	•
		10		•
	SA6C(R)	20	•	•
		12		•
	SA7C(R)	24	•	•
		16		•
	SA8C(R)	30	•	•
		20		•
RCP6(S)CR	SA4C	16	•	•
		10		•
	SA6C	20	•	•
		12		•
	SA7C	24	•	•
		16		•
	SA8C	30	•	•
		20		•

[Double Slider Span Diagram]



*1 Double slider specification (other than RCP6(CR)-SA8) values obtained by subtracting the payload compensation mass A from the standard specification payload are the payload specification values up to the payload compensation speed.
When operating at a speed exceeding the payload compensation speed, the value obtained by subtracting the payload compensation mass B from the standard specification payload is the payload specification value.
Moreover, refer to the nominal stroke specification value for the maximum speed.

*2 RCP6(CR)-SA8 double slider specification values obtained by subtracting the payload compensation mass A from the standard specification payload are the payload specification values at the full speed range.
Moreover, refer to the nominal stroke specification value for the maximum speed.

Notes: · Calculate the double slider load capacity using the specification table above and the "Payload by Speed /Acceleration Table" (P207~). Check the maximum speed from the calculated payload quantity. (Refer to the instruction manual for details.)

· The double slider cannot be selected in some cases depending on the lead. Check with the [List of Options Unavailable for Double Slider].

· When selecting the double slider specification and non-motor end specification at the same time, always check that the home return motion functions correctly after connecting the drive slider and the free slider.

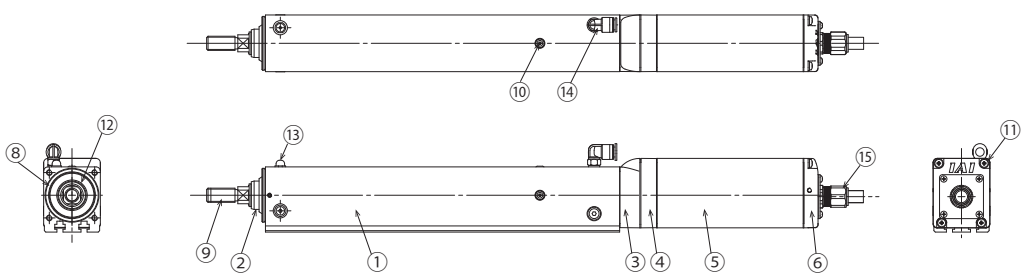
RCP6W Exterior Component Material

■ RCP6W-RA4

	Name		Material	Treatment	Finish	RA4C	RA4R
Exterior Components	① Body frame		Extruded aluminum	White alumite		○	○
	② Rod		Drawn aluminum	Hard alumite	Buffing finish	○	○
	③ Rear bracket		Aluminum die cast	Designer coating		○	○
	④ Motor bracket		Aluminum die cast	Designer coating		○	
	⑤ Motor cover		Extruded aluminum	White alumite		○	○
	⑥ End cover		Aluminum die cast	Designer coating		○	○
	⑦ Pulley cover		Stainless steel				○
	⑧ Rod seal housing IP		Aluminum	White alumite		○	○
	⑨ Tip bracket		Stainless steel			○	○
	⑩ Cap		Stainless steel			○	○
	⑪ Exterior bolts/screws		Stainless steel			○	○
	⑫ Dust seal		Rubber (NBR)			○	○
	⑬ Grease nipple		Brass (C3604)	Non-electrolytic metal plating		○	○
	⑭ Intake/exhaust port		Resin (PBT, POM), brass nickel plated			○	○
	⑮ Actuator cable	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated			○	○
		Cable sheath	Vinyl chloride (PVC)			○	○
	Hex nut		Stainless steel			○	○
	Square nut		Stainless steel			○	○
	Gaskets		Rubber (NBR)			○	○

RA4

[Coupling Type]



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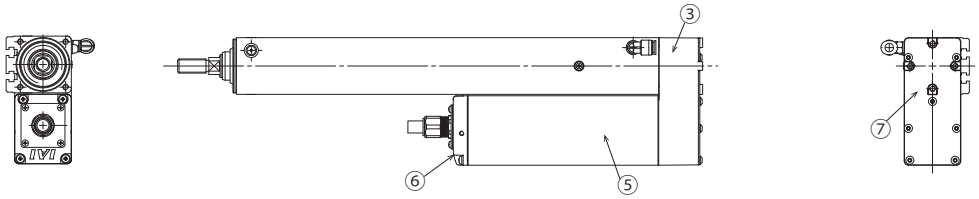
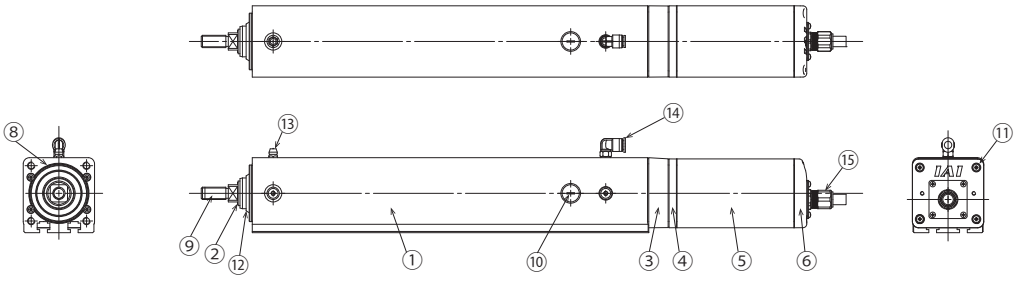


RA6

[Coupling Type]



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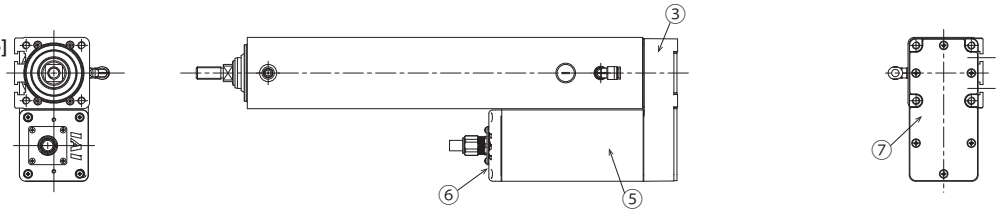
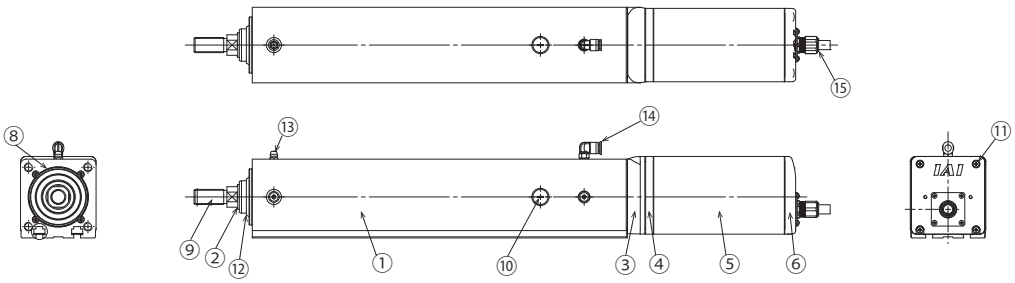


■ RCP6W-RA6/RA7/RA8

	Name		Material	Treatment	Finish	RA6C	RA6R	RA7C	RA7R	RA8C	RA8R
Exterior Components	① Body frame		Extruded aluminum	White alumite		○	○	○	○	○	○
	② Rod		Drawn aluminum	Hard alumite	Buffing finish	○	○	○	○	○	○
	③ Rear bracket		Aluminum die cast	Designer coating		○	○	○	○	○	○
	④ Motor bracket		Aluminum die cast	Designer coating		○		○			
	⑤ Motor cover		Extruded aluminum	White alumite		○	○	○	○	○	○
	⑥ End cover		Aluminum die cast	Designer coating		○	○	○	○	○	○
	⑦ Pulley cover		Stainless steel				○		○		○
	⑧ Rod seal housing IP		Aluminum	White alumite		○	○	○	○	○	○
	⑨ Tip bracket		Stainless steel			○	○	○	○	○	○
	⑩ Cap		Rubber (NBR)			○	○	○	○	○	○
	⑪ Exterior bolts/screws		Stainless steel			○	○	○	○	○	○
	⑫ Dust seal		Rubber (NBR)			○	○	○	○	○	○
	⑬ Grease nipple		Brass (C3604)	Non-electrolytic metal plating		○	○	○	○	○	○
	⑭ Intake/exhaust port		Resin (PBT, POM), brass nickel plated			○	○	○	○	○	○
	⑮ Actuator cable	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated			○	○	○	○	○	○
		Cable sheath	Vinyl chloride (PVC)			○	○	○	○	○	○
	Hex nut		Stainless steel			○	○	○	○	○	○
	Square nut		Stainless steel			○	○	○	○	○	○
	Gaskets		Rubber (NBR)			○	○	○	○	○	○

RA7

[Coupling Type]



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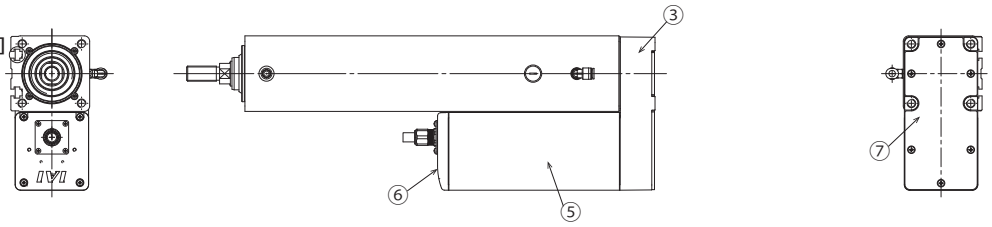

RA8

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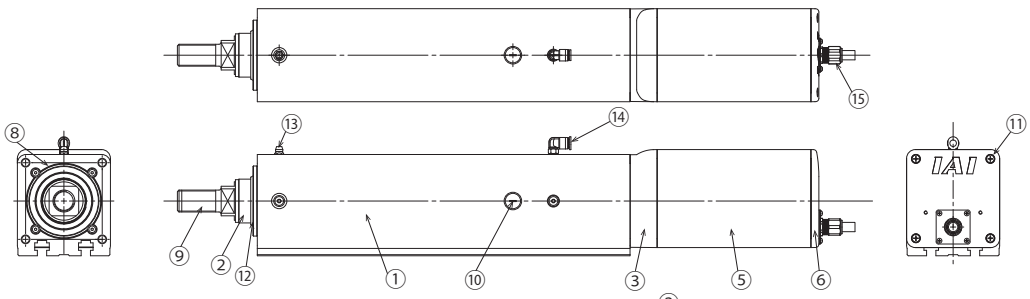

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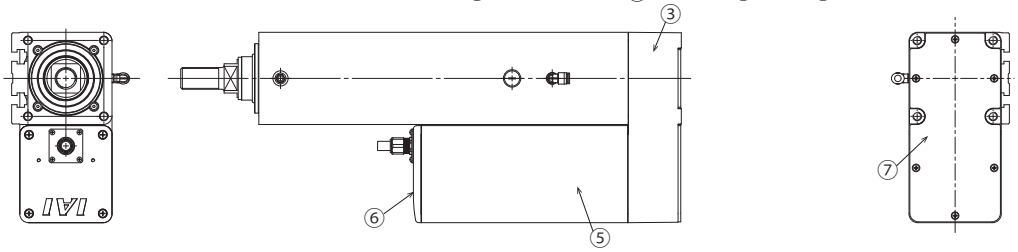


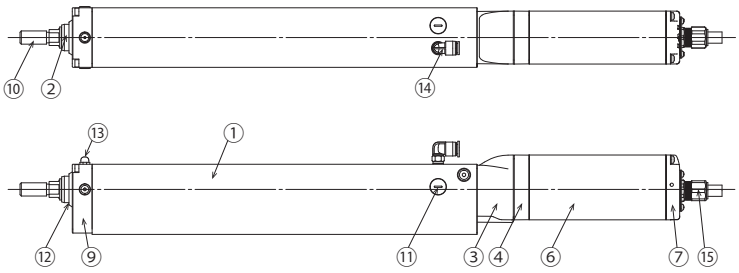
RCP6W Exterior Component Material

■ RCP6W-RRA4/RRA6/RRA7

	Name		Material	Treatment	Finish	RRA4C	RRA4R	RRA6C	RRA6R	RRA7C	RRA7R
Exterior Components	① Frame		Extruded aluminum	White alumite		○	○	○	○	○	○
	② Rod		Drawn aluminum	Hard alumite	Buffing finish	○	○	○	○	○	○
	③ Rear bracket		Aluminum die cast	Designer coating		○	○	○	○	○	○
	④ Motor bracket		Aluminum die cast	Designer coating		○		○		○	
	⑤ Reverse bracket		Aluminum die cast	Designer coating			○		○		○
	⑥ Motor cover		Extruded aluminum	White alumite		○	○	○	○	○	○
	⑦ End cover		Aluminum die cast	Designer coating		○	○	○	○	○	○
	⑧ Pulley cover		Stainless steel				○		○		○
	⑨ Front bracket IP		Aluminum	White alumite		○	○	○	○	○	○
	⑩ Rod tip bracket		Stainless steel			○	○	○	○	○	○
	⑪ Hole cap (grease nipple)		Rubber (NBR)			○	○	○	○	○	○
	⑫ Dust seal		Rubber (NBR)			○	○	○	○	○	○
	⑬ Grease nipple		Brass (C3604)	Non-electrolytic metal plating		○	○	○	○	○	○
	⑭ Intake/exhaust port		Resin (PBT, POM), brass nickel plated			○	○	○	○	○	○
	⑮ Actuator cable	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated			○	○	○	○	○	○
		Cable sheath	Vinyl chloride (PVC)			○	○	○	○	○	○
	Exterior bolts/screws		Stainless steel			○	○	○	○	○	○
	Hex nut		Stainless steel			○	○	○	○	○	○
	Square nut		Stainless steel			○	○	○	○	○	○
	Gaskets		Rubber (NBR)			○	○	○	○	○	○

RRA4

[Coupling Type]



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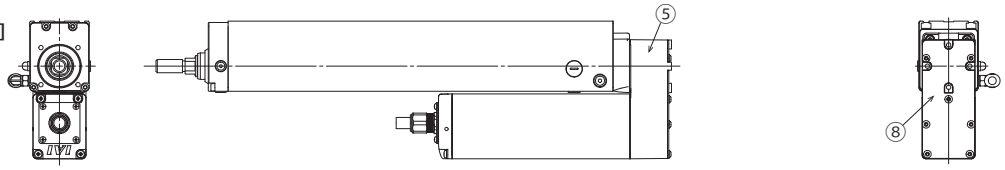

RRA6

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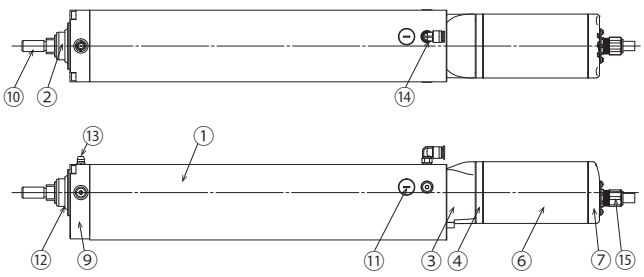

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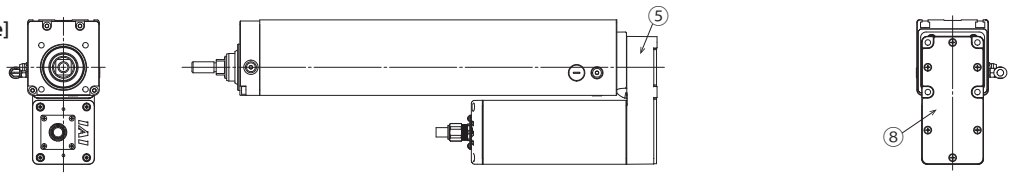
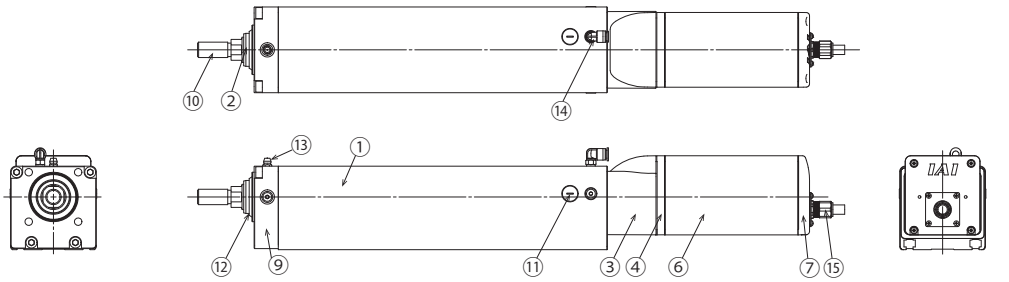


■ RCP6W-RRA8

	Name		Material	Treatment	Finish	RRA8C	RRA8R
Exterior Components	① Frame		Extruded aluminum	White alumite		○	○
	② Rod		Drawn aluminum	Hard alumite	Buffing finish	○	○
	③ Base		Extruded aluminum	White alumite		○	○
	④ Rear bracket		Aluminum die cast	Designer coating		○	○
	⑤ Reverse bracket		Aluminum die cast	Designer coating			○
	⑥ Motor cover		Extruded aluminum	White alumite		○	○
	⑦ End cover		Aluminum die cast	Designer coating		○	○
	⑧ Pulley cover		Stainless steel				○
	⑨ Front bracket IP		Aluminum die cast	Designer coating		○	○
	⑩ Rod tip bracket		Stainless steel			○	○
	⑪ Hole cap (grease nipple)		Rubber (NBR)			○	○
	⑫ Dust seal		Rubber (NBR)			○	○
	⑬ Grease nipple		Brass (C3604)	Non-electrolytic metal plating		○	○
	⑭ Intake/exhaust port		Resin (PBT, POM), brass nickel plated			○	○
	⑮ Actuator cable	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated			○	○
		Cable sheath	Vinyl chloride (PVC)			○	○
	Exterior bolts/screws		Stainless steel			○	○
	Hex nut		Stainless steel			○	○
	Gaskets		Rubber (NBR)			○	○

RRA7

[Coupling Type]



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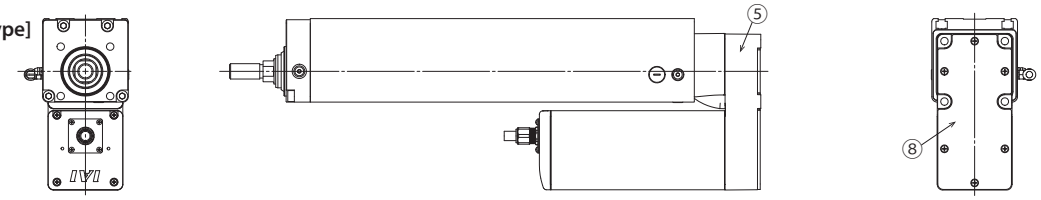
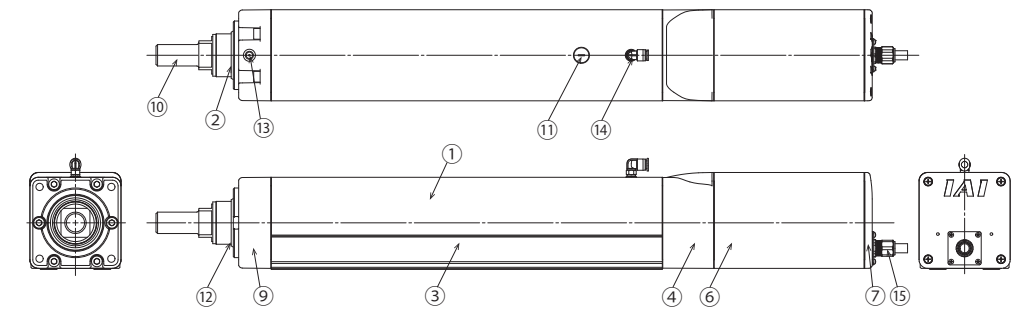


RRA8

[Coupling Type]



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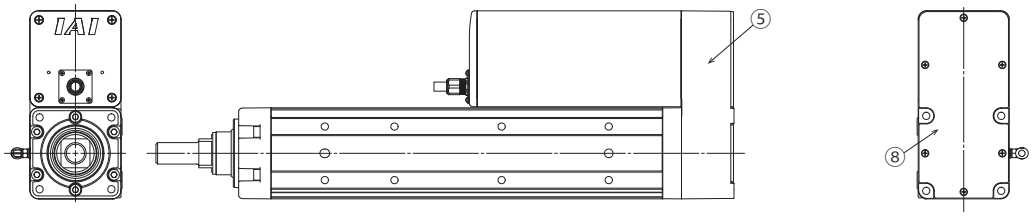


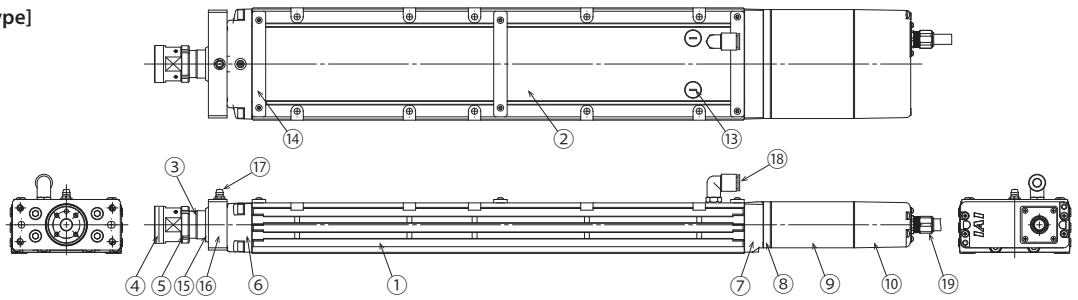
RCP6W Exterior Component Material

■ RCP6W-WRA10

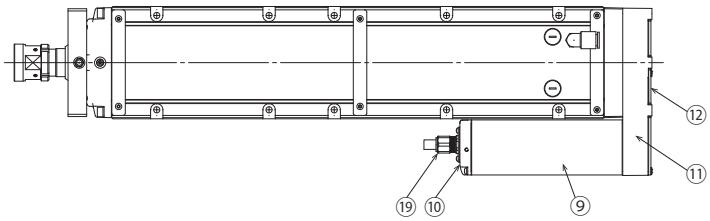
	Name		Material	Treatment	Finish	WRA10C	WRA10R
Exterior Components	① Base		Extruded aluminum	White alumite		○	○
	② Frame cover		Extruded aluminum	White alumite		○	○
	③ Rod		Stainless steel tube	Hard chrome plating	Buffing finish	○	○
	④ Tip bracket		Stainless steel			○	○
	⑤ Locking nut		Stainless steel			○	○
	⑥ Front bracket		Aluminum die cast	Designer coating		○	○
	⑦ Rear bracket		Aluminum die cast	Designer coating		○	○
	⑧ Motor bracket		Aluminum die cast	Designer coating		○	
	⑨ Motor cover		Extruded aluminum	White alumite		○	○
	⑩ End cover		Aluminum die cast	Designer coating		○	○
	⑪ Reverse bracket		Aluminum die cast	Designer coating			○
	⑫ Pulley cover		Stainless steel				○
	⑬ Cap		Rubber (NBR)			○	○
	⑭ Frame cover		Aluminum	White alumite		○	○
	⑮ Dust seal		Rubber (NBR)			○	○
	⑯ Dust seal housing		Aluminum	White alumite		○	○
	⑰ Grease nipple		Brass (C3604)	Non-electrolytic metal plating		○	○
	⑱ Intake/exhaust port		Resin (PBT), brass nickel plated			○	○
	⑲ Actuator cable	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated			○	○
		Cable sheath	Vinyl chloride (PVC)			○	○
	Exterior bolts/screws		Stainless steel			○	○
	Gaskets		Rubber (NBR)			○	○

WRA10

[Coupling Type]



[Side-Mounted Type]

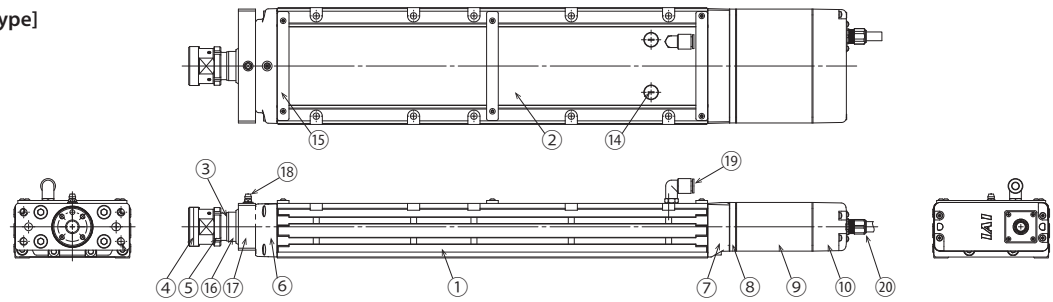


■ RCP6W-WRA12/WRA14/WRA16

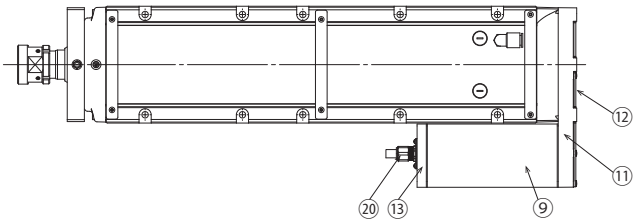
	Name		Material	Treatment	Finish	WRA12C	WRA12R	WRA14C	WRA14R	WRA16C	WRA16R
Exterior Components	① Base		Extruded aluminum	White alumite		○	○	○	○	○	○
	② Frame cover		Extruded aluminum	White alumite		○	○	○	○	○	○
	③ Rod		Stainless steel tube	Hard chrome plating	Buffing finish	○	○	○	○	○	○
	④ Tip bracket		Stainless steel			○	○	○	○	○	○
	⑤ Locking nut		Stainless steel			○	○	○	○	○	○
	⑥ Front bracket		Aluminum die cast	Designer coating		○	○	○	○	○	○
	⑦ Rear bracket		Aluminum die cast	Designer coating		○	○	○	○	○	○
	⑧ Motor bracket		Aluminum die cast	Designer coating		○		○		○	
	⑨ Motor cover		Extruded aluminum	White alumite		○	○	○	○	○	○
	⑩ Motor end cover (Coupling)		Aluminum die cast	Designer coating		○		○		○	
	⑪ Reverse bracket		Aluminum die cast	Designer coating			○		○		○
	⑫ Pulley cover		Stainless steel				○		○		○
	⑬ Motor end cover (Side-mounted)		Aluminum	White alumite			○		○		○
	⑭ Cap		Rubber (NBR)			○	○	○	○	○	○
	⑮ Frame cover retainer		Aluminum	White alumite		○	○	○	○	○	○
	⑯ Dust seal		Rubber (NBR)			○	○	○	○	○	○
	⑰ Dust seal housing		Aluminum	White alumite		○	○	○	○	○	○
	⑱ Grease nipple		Brass (C3604)	Non-electrolytic metal plating		○	○	○	○	○	○
	⑲ Intake/exhaust port		Resin (PBT), brass nickel plated			○	○	○	○	○	○
	⑳ Actuator cable length	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated			○	○	○	○	○	○
		Cable sheath	Vinyl chloride (PVC)			○	○	○	○	○	○
	Exterior bolts/screws		Stainless steel			○	○	○	○	○	○
	Gaskets		Rubber (NBR)			○	○	○	○	○	○

WRA12/14/16

[Coupling Type]



[Side-Mounted Type]



PCON-CB/CFB

Position Controller for RCP6/RCP5/ RCP4 (PowerCon Applicable) /RCP3/RCP2

Features

1 High-resolution battery-less absolute encoder compatible

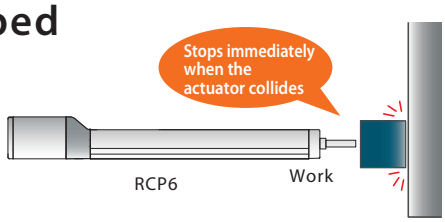
The RCP6 equipped with a high-resolution battery-less absolute encoder is supported. Since no battery is needed to retain position data, less space is required in the control panel, which in turn leads to lower cost of your equipment. The resolution is increased from 800 pulses /rev to 8192 pulses/rev.

2 PowerCon Equipped

PowerCon (high-output driver) which can enable the pulse motor to perform at its maximum capacity is now installed. By using PowerCon, the output of the pulse motor is increased by 50%. It contributes to cycle time reduction and productivity improvement.

3 Collision Detection Function Equipped

This function stops the operation immediately when the actuator comes into contact with an object.
The actuator stops without crashing, so that damage to the actuator can be minimized.



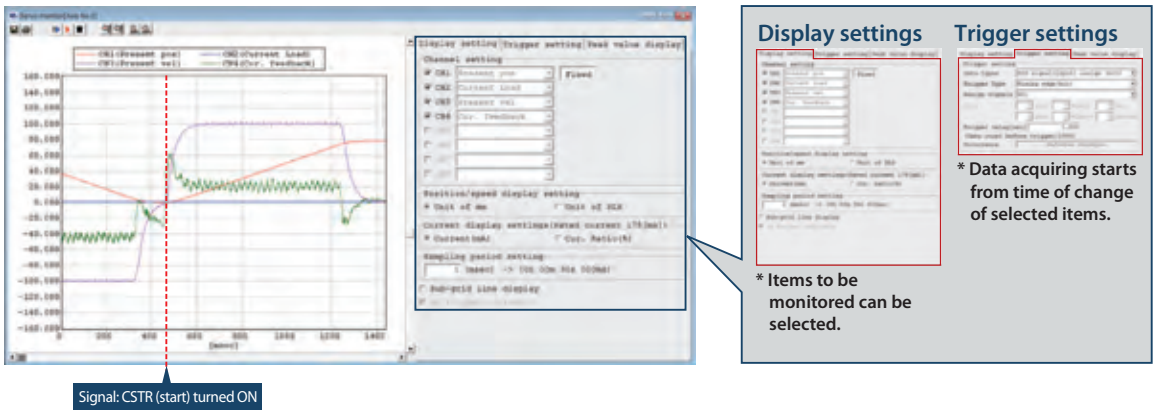
4 Enhanced Monitor Functions

The PC compatible software can display information about the actuator and controller in operation as waveforms.

*Information that can be displayed: Command current value, current speed/position, and PIO signals (start, positioning completion, alarm, etc.)

Using the trigger function, the end user can specify a particular moment, either a change in PIO signals or a designated moment during the actuator's operation time, to begin displaying the waveforms.

Monitor function screen (example)



List of Models

Model number			PCON-CB/CGB, CFB/CGFB						
External view									
I/O type			Positioner type	Pulse-train type	Field network type				
					DeviceNet	CC-Link	PROFIBUS-DP	CompoNet	EtherCAT	EtherNet/IP	PROFINET IO
I/O type model number			NP/PN	PLN/PLP	DV	CC	PR	CN	EC	EP	PRT
PCON-CB/CGB	Battery-less absolute specification Incremental specification		○	○	○	○	○	○	○	○	○
	Simple absolute spec.	With absolute battery	○	—	○	○	○	○	○	○	○
		With absolute battery unit	○	—	○	○	○	○	○	○	○
		Without absolute battery	○	—	○	○	○	○	○	○	○
PCON-CFB/CGFB	Battery-less absolute specification Incremental specification		○	○	○	○	○	○	○	○	○

Model Specification Items

< Controller>

PCON — [Type] — [Motor Type] [Encoder Type] — [I/O Type] — [I/O Cable Length] — **0** — [Simple Absolute Specification] — [Controller Mounting Specification]

Series | Type | Motor Type | Encoder Type | I/O Type | I/O Cable Length | Power Supply Voltage | Simple Absolute Specification | Controller Mounting Specification

Type	
CB	Standard
CGB	Safety category compliant type
CFB	56SP/60P/86P motor-compatible type
CGFB	Safety category compliant, 56SP/60P/86P motor-compliant type

Motor Type	
20P	20□ Pulse motor
20SP	20□ High-thrust pulse motor
28P	28□ Pulse motor
28SP	28□ High-thrust pulse motor
35P	35□ Pulse motor
42P	42□ Pulse motor
42SP	42□ High-thrust pulse motor
56P	56□ Pulse motor
56SP	56□ High-thrust pulse motor
60P	60□ High-thrust pulse motor
86P	86□ High-thrust pulse motor

(e.g.) 20P : For 20□ pulse motor

Encoder Type	
WAI	Battery-less absolute specification Incremental specification
SA	Simple absolute speficication

I/O Type	
NP	PIO (NPN)
PLN	Pulse train (NPN)
PN	PIO (PNP)
PLP	Pulse train (PNP)
DV	DeviceNet
CC	CC-Link
PR	PROFIBUS-DP
CN	CompoNet
EC	EtherCAT
EP	EtherNet/IP
PRT	PROFINET IO

I/O Cable Length	
0	No cable
2	2m
3	3m
5	5m

* When a field network specification is selected, the I/O cable length is "O".

Power Supply Voltage	
0	24VDC

Simple Absolute Specification	
(Blank)	Battery-less absolute specification Incremental specification
AB	Simple absolute specification (With absolute battery. No battery unit included)
ABU	Simple absolute specification (With absolute battery and battery unit)
ABUN	Simple absolute specification (Without absolute battery and battery unit)

* PCON-CFB/CGFB does not support a simple absolute specification.

Controller Mounting Specification	
(Blank)	Screw mounting specification
DN	DIN rail mounting specification

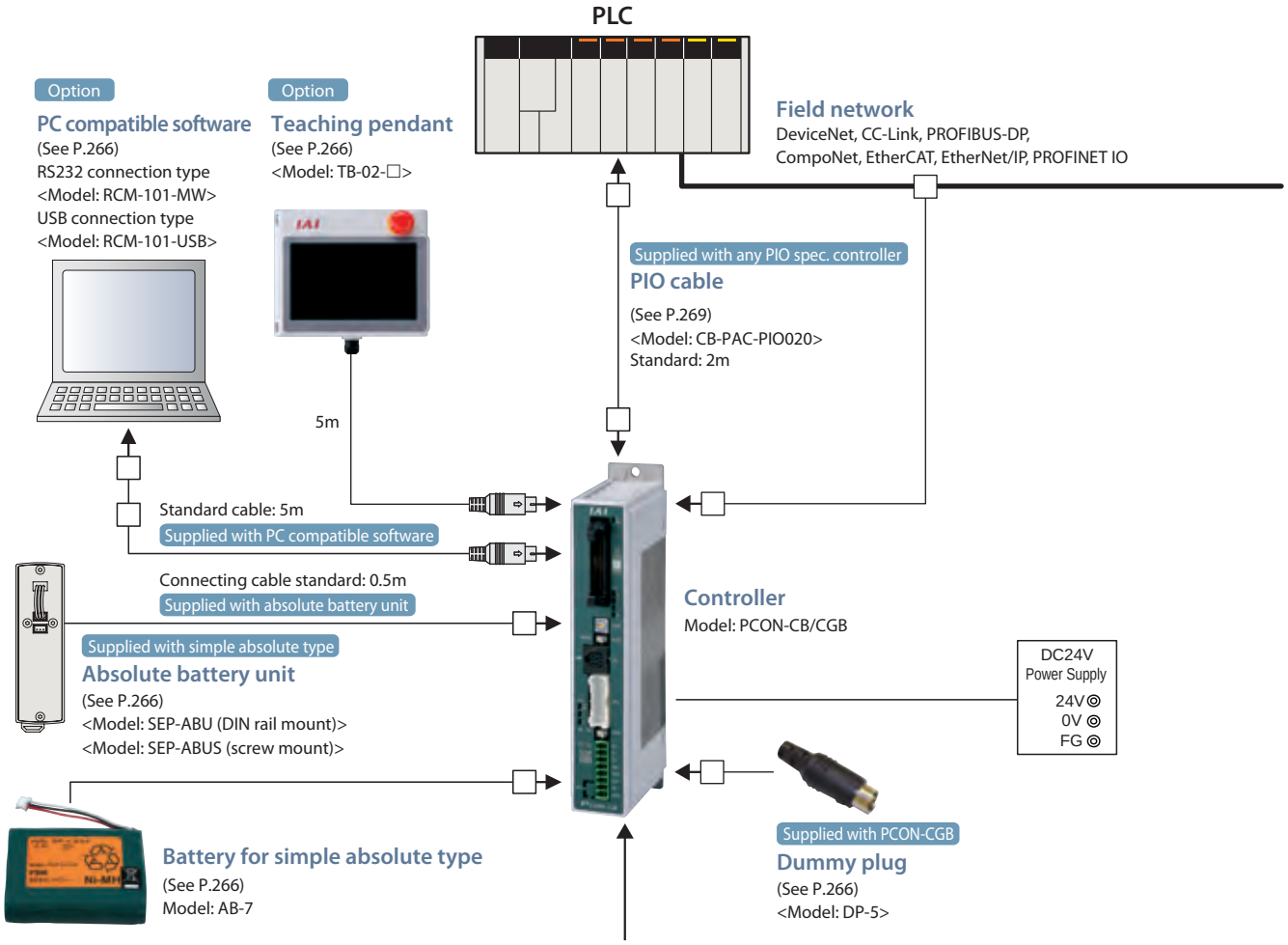
* The mounting type (screw or DIN rail) of the absolute battery unit and the controller must be the same.

Note

In general, the model number for motor type will be the same as the model number of the actuator's motor, but there is a few exceptions which the model number of controller and actuator do not match. Below is the list of those models. Please be careful when these item(s) are selected.
<28SP applicable actuator> • Controller Motor Type [28SP] RCP2-RA3C

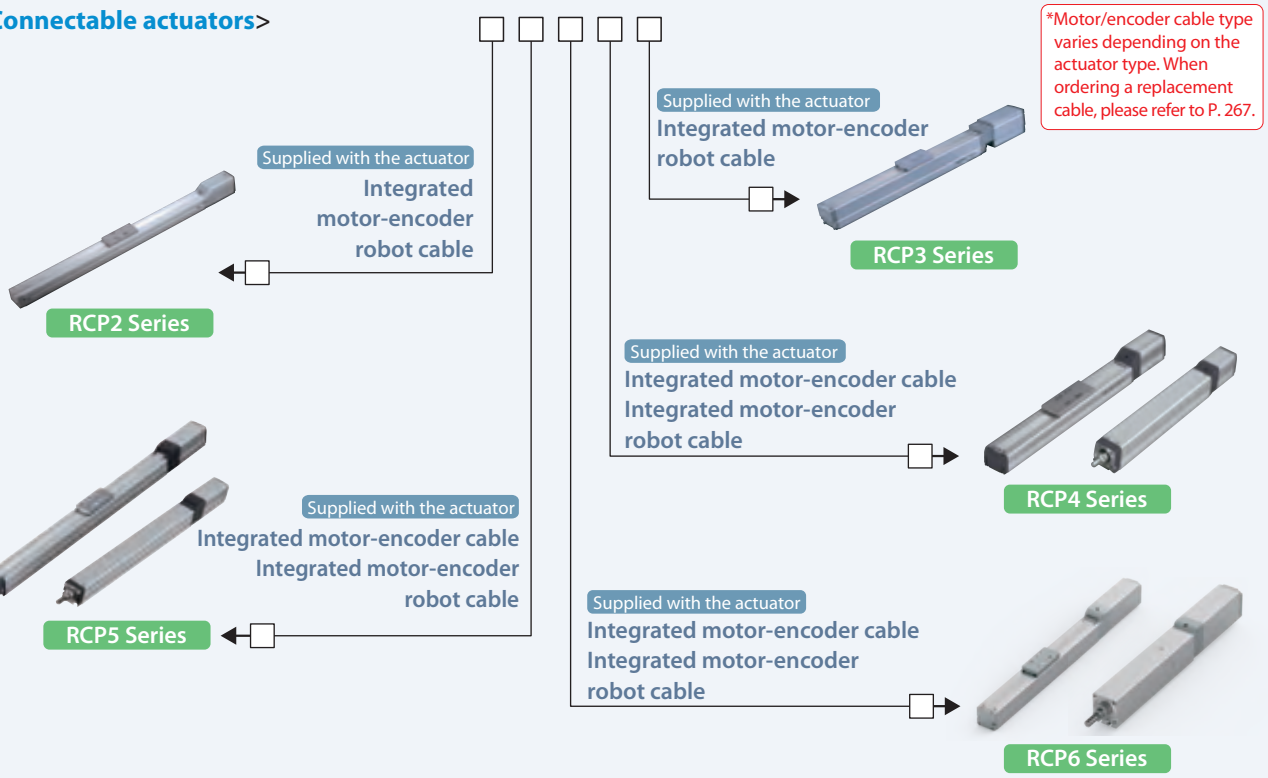
System Configuration

■ PowerCON150 <PCON-CB/CGB>



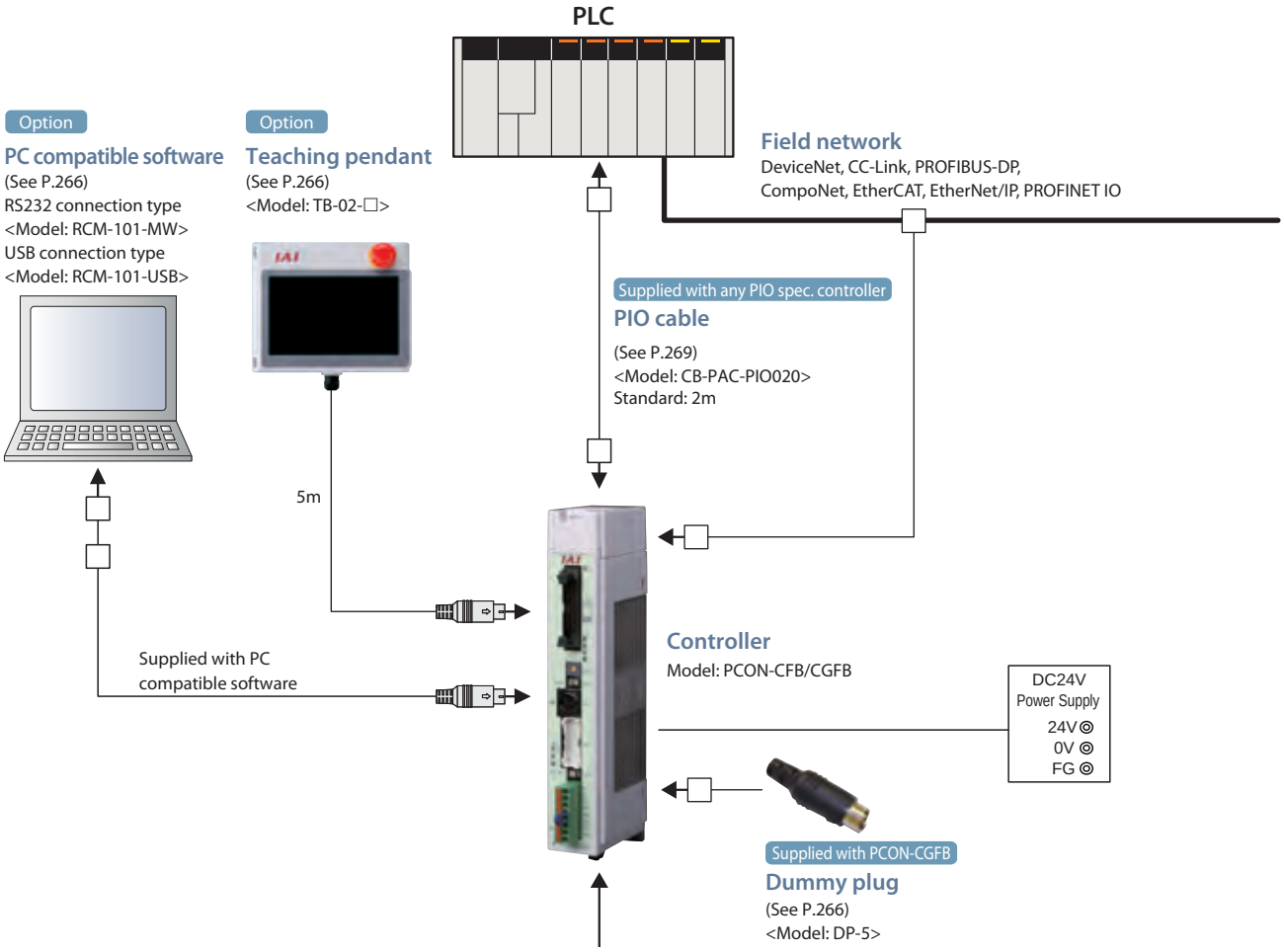
< Connectable actuators>

*Motor/encoder cable type varies depending on the actuator type. When ordering a replacement cable, please refer to P. 267.



System Configuration

■ 56SP/60P/86P Motor Compatible <PCON-CFB/CGFB>



< Connectable actuators>

*Motor/encoder cable type varies depending on the actuator type. When ordering a replacement cable, please refer to P. 267.

RCP2 Series	RCP4 Series	RCP5 Series	RCP6 Series
Supplied with the actuator Integrated motor-encoder cable Integrated motor-encoder robot cable	Supplied with the actuator Integrated motor-encoder cable Integrated motor-encoder robot cable	Supplied with the actuator Integrated motor-encoder cable Integrated motor-encoder robot cable	Supplied with the actuator Integrated motor-encoder cable Integrated motor-encoder robot cable

PIO I/O Interface

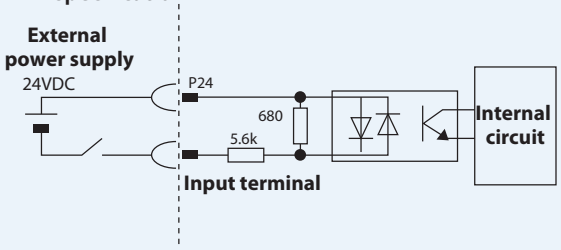
■ Input part External input specification

Item	Specification
Input voltage	24VDC ±10%
Input current	5mA, 1 circuit
ON/OFF voltage	ON voltage, 18VDC min. OFF voltage, 6VDC max.

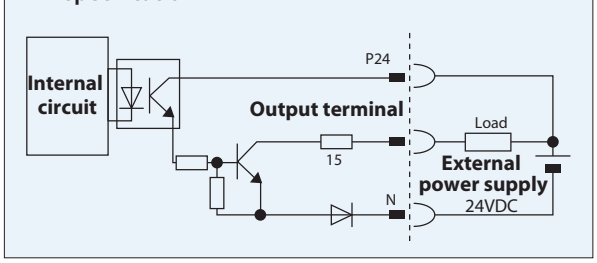
■ Output part External output specification

Item	Specification
Load voltage	24VDC
Maximum load current	50mA, 1 circuit
Leak current	2mA max. /point

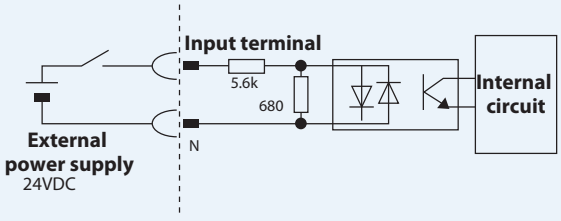
NPN specification



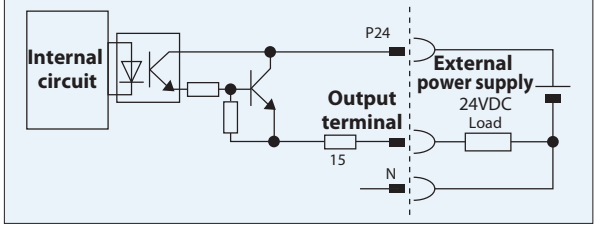
NPN specification



PNP specification



PNP specification



Types of PIO Patterns (Control Patterns)

This controller has eight different control methods.
Please select the PIO pattern that best suits your application in Parameter No.25, "PIO Pattern Selection".

Type	Set value of parameter No.25	Mode	Overview
PIO Pattern 0	0 (Factory setting)	Positioning mode (Standard type)	• Number of positioning points: 64 points • Position number command: Binary Coded Decimal (BCD) • Zone signal output*1 : 1 point • Position zone signal output*2 : 1 point
PIO Pattern 1	1	Teaching mode (Teaching type)	• Number of positioning points: 64 points • Position number command: Binary Coded Decimal (BCD) • Position zone signal output*2 : 1 point • Jog (inching) operation using PIO signals is supported. • Current position data can be written to the position table using PIO signals.
PIO Pattern 2	2	256-point mode (256 positioning points)	• Number of positioning points: 256 points • Position number command: Binary Coded Decimal (BCD) • Position zone signal output*2 : 1 point
PIO Pattern 3	3	512-point mode (512 positioning points)	• Number of positioning points: 512 points • Position number command: Binary Coded Decimal (BCD) • No zone signal output
PIO Pattern 4	4	Solenoid valve mode 1 (7-point type)	• Number of positioning points: 7 points • Zone signal output*1 : 1 point • Position number command: Individual number signal ON • Position zone signal output*2 : 1 point
PIO Pattern 5	5	Solenoid valve mode 2 (3-point type)	• Number of positioning points: 3 points • Position number command: Individual number signal ON • Completion signal: A signal equivalent to a LS (limit switch) signal can be output. • Zone signal output*1 : 1 point • Position zone signal output*2 : 1 point
PIO Pattern 6 (Note 1)	6	Pulse-train control mode for incremental	• Differential pulse input (200 kpps max.) • Home return function • Zone signal output*1 : 2 points • No feedback pulse output
PIO Pattern 7 (Note 1)	7	Pulse-train control mode for absolute	• Reference point setting (1 point) • Home return function • Differential pulse input (200 kpps max.) • No feedback pulse output • Zone signal output*1 : 2 points

*1 Zone signal output: Please set the desired zone range in Parameter No.1/2 or 23/24, and it will remain effective once home return is completed.
*2 Position zone signal output: This command function relates to the position number. Set the desired zone range in the position table, and this function will only become enabled when the corresponding position is specified; it will be disabled for all other position commands.
(Note 1) Pulse train control mode is available only the pulse train control type is specified (PCON-CB-PLN and PLP) at the time of purchase.

PIO Patterns and Signal Assignments

The table below lists the signal assignments for the I/O flat cable under different PIO patterns. Connect an external device (such as a PLC) according to this table.

Pin No.	Category	PIO function	Parameter No.25, "PIO Pattern Selection"					
			0	1	2	3	4	5
			Positioning mode	Teaching mode	256-point mode	512-point mode	Solenoid valve mode 1	Solenoid valve mode 2
	Input	Number of positioning points	64 points	64 points	256 points	512 points	7 points	3 points
		Home return signal	○	○	○	○	○	—
		Jog signal	—	○	—	—	—	—
		Teaching signal (writing of current position)	—	○	—	—	—	—
		Brake release	○	—	○	○	○	○
	Output	Moving signal	○	○	—	—	—	—
		Zone signal	○	△ (Note 1)	△ (Note 1)	—	○	○
		Position zone signal	○	○	○	—	○	○
1A	24V	P24						
2A	24V	P24						
3A	Pulse Input	-						
4A		-						
5A	Input	IN0	PC1	PC1	PC1	PC1	ST0	ST0
6A		IN1	PC2	PC2	PC2	PC2	ST1	ST1(JOG+)
7A		IN2	PC4	PC4	PC4	PC4	ST2	ST2 (Non-Functional)
8A		IN3	PC8	PC8	PC8	PC8	ST3	-
9A		IN4	PC16	PC16	PC16	PC16	ST4	-
10A		IN5	PC32	PC32	PC32	PC32	ST5	-
11A		IN6	-	MODE	PC64	PC64	ST6	-
12A		IN7	-	JISL	PC128	PC128	-	-
13A		IN8	-	JOG+	-	PC256	-	-
14A		IN9	BKRL	JOG-	BKRL	BKRL	BKRL	BKRL
15A		IN10	RMOD	RMOD	RMOD	RMOD	RMOD	RMOD
16A		IN11	HOME	HOME	HOME	HOME	HOME	-
17A		IN12	*STP	*STP	*STP	*STP	*STP	-
18A		IN13	CSTR	CSTR/PWRT	CSTR	CSTR	-	-
19A		IN14	RES	RES	RES	RES	RES	RES
20A		IN15	SON	SON	SON	SON	SON	SON
1B	Output	OUT0	PM1 (ALM1)	PM1 (ALM1)	PM1 (ALM1)	PM1 (ALM1)	PE0	LSO
2B		OUT1	PM2 (ALM2)	PM2 (ALM2)	PM2 (ALM2)	PM2 (ALM2)	PE1	LS1(TRQS)
3B		OUT2	PM4 (ALM4)	PM4 (ALM4)	PM4 (ALM4)	PM4 (ALM4)	PE2	LS2 (Note2)
4B		OUT3	PM8 (ALM8)	PM8 (ALM8)	PM8 (ALM8)	PM8 (ALM8)	PE3	-
5B		OUT4	PM16	PM16	PM16	PM16	PE4	-
6B		OUT5	PM32	PM32	PM32	PM32	PE5	-
7B		OUT6	MOVE	MOVE	PM64	PM64	PE6	-
8B		OUT7	ZONE1	MODES	PM128	PM128	ZONE1	ZONE1
9B		OUT8	PZONE/ZONE2	PZONE/ZONE1	PZONE/ZONE1	PM256	PZONE/ZONE2	PZONE/ZONE2
10B		OUT9	RMDS	RMDS	RMDS	RMDS	RMDS	RMDS
11B		OUT10	HEND	HEND	HEND	HEND	HEND	HEND
12B		OUT11	PEND	PEND/WEND	PEND	PEND	PEND	-
13B		OUT12	SV	SV	SV	SV	SV	SV
14B		OUT13	*EMGS	*EMGS	*EMGS	*EMGS	*EMGS	*EMGS
15B		OUT14	*ALM	*ALM	*ALM	*ALM	*ALM	*ALM
16B		OUT15	LOAD/TRQS *ALML	*ALML	LOAD/TRQS *ALML	LOAD/TRQS *ALML	LOAD/TRQS *ALML	*ALML
17B	Pulse Input	-						
18B		-						
19B	0V	N						
20B	0V	N						

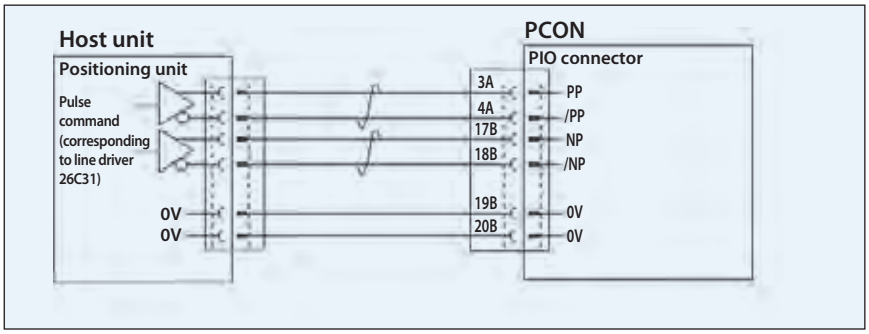
(Note) In the table above, asterisk * symbol accompanying each code indicates a negative logic signal. PM1~PM8 are alarm binary code output signals that are used when an alarm generates.
(Note 1) In all PIO patterns other than 3, this signal can be switched with PZONE by setting Parameter No. 149 accordingly.
(Note 2) The setting will not become effective until the home return is completed.

Reference) Negative logic signal

Signals denoted by * are negative logic signals. Negative logic input signals are processed when turned OFF. Negative logic output signals normally remain ON while the power is supplied, and turn OFF when the signal is output.

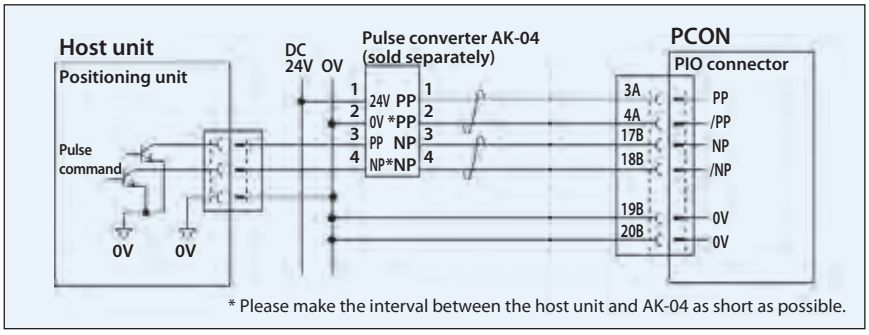
Pulse-train Control Circuit

■ Host Unit = Differential Type



■ Host Unit = Open Collector Type

The AK-04 (optional) is needed to input pulses.



⚠ Caution: Use the same power supply for open collector input/output to/from the host and for the AK-04.

Command Pulse Input Patterns

	Command pulse-train pattern	Input terminal	Forward	Reverse
Negative logic	Forward pulse-train	PP•/PP		
	Reverse pulse-train	NP•/NP		
	A forward pulse-train indicates the amount of motor rotation in the forward direction, while a reverse pulse-train indicates the amount of motor rotation in the reverse direction.			
	Pulse-train	PP•/PP		
	Sign	NP•/NP	Low	High
	The command pulses indicate the amount of motor rotation, while the sign indicates the rotating direction.			
	Phase A/B pulse-train	PP•/PP		
		NP•/NP		
	Command phases A and B having a 90° phase difference (multiplier is 4) indicate the amount of rotation and the rotating direction.			
Positive logic	Forward pulse-train	PP•/PP		
	Reverse pulse-train	NP•/NP		
	Pulse-train	PP•/PP		
	Sign	NP•/NP	High	Low
	Phase A/B pulse-train	PP•/PP		
		NP•/NP		

I/O Signals in Pulse-train Control Mode

The table below lists the signal assignments for the flat cable in the pulse-train control mode. Connect an external device (such as PLC) according to this table.

Pin number	Category	I/O number	Signal abbreviation	Signal name	Parameter No.25, "PIO pattern 6/7"
1A	24V		P24	Power supply	I/O power supply +24V
2A	24V		P24	Power supply	I/O power supply +24V
3A	Pulse Input		PP	Differential pulse-train input (+)	Differential pulses are input from the host. Up to 200kpps can be input.
4A			/PP	Differential pulse-train input (-)	
5A	Input	IN0	SON	Servo ON	The servo is ON while this signal is ON, and OFF while the signal is OFF.
6A		IN1	RES	Reset	Present alarms are reset when this signal is turned ON.
7A		IN2	HOME	Home return	Home return operation is performed when this signal is turned ON.
8A		IN3	TL	Torque limit selection	When this signal is turned ON, the motor torque is limited to the value set by the parameter.
9A		IN4	CSTP	Forced stop	The actuator is forcibly stopped when this signal has remained ON for 16ms or more. The actuator decelerates to a stop at the torque set in the controller and the servo turns OFF.
10A		IN5	DCLR	Deviation counter clear	This signal clears the deviation counter.
11A		IN6	BKRL	Forced brake release	The brake is forcibly released.
12A		IN7	RMOD	Operation mode switching	The operation mode can be switched when the MODE switch on the controller is set to AUTO. (AUTO when this signal is OFF, and to MANU when the signal is ON.)
13A		IN8	RSTR*1	Reference position movement command	When this signal turns on, the actuator moves to the reference position set in parameter No.167. *1: Used only in PIO Pattern 7.
14A		IN9	NC	-	Not used
15A		IN10	NC	-	Not used
16A		IN11	NC	-	Not used
17A		IN12	NC	-	Not used
18A		IN13	NC	-	Not used
19A		IN14	NC	-	Not used
20A		IN15	NC	-	Not used
1B	Output	OUT0	PWR	System ready	This signal turns ON when the controller becomes ready after the main power supply has been turned on.
2B		OUT1	SV	Servo ON status	This signal turns ON when the servo is ON.
3B		OUT2	INP	Positioning complete	This signal turns ON when the amount of remaining travel pulses in the deviation counter falls within the in-position band.
4B		OUT3	HEND	Home return complete	This signal turns ON upon completion of home return.
5B		OUT4	TLR	Torque limited	This signal turns ON upon reaching the torque limit while the torque is limited.
6B		OUT5	#ALM	Controller alarm status	This signal turns ON when the controller is normal, and turns OFF when an alarm generates.
7B		OUT6	#EMGS	Emergency stop status	This signal turns ON when the emergency stop of the controller is cancelled, and turns OFF when an emergency stop is actuated.
8B		OUT7	RMDS	Operation mode status	The operation mode status is output. This signal turns ON when the controller is in the manual mode.
9B		OUT8	ALM1	Alarm code output signal	An alarm code is output when an alarm generates. For details, refer to the operation manual.
10B		OUT9	ALM2		
11B		OUT10	ALM4		
12B		OUT11	ALM8		
13B		OUT12	#ALML	Minor failure alarm	This signal turns ON when the controller is normal, and turns OFF when a message-level alarm has been generated.
14B		OUT13	REND*1	Reference position movement complete	This signal turns ON when movement to the reference point set in parameter No. 167 is completed. *1: Used only in PIO Pattern 7.
15B		OUT14	ZONE1	Zone signal 1	This signal turns ON when the current position of the actuator falls within the parameter-set range.
16B		OUT15	ZONE2	Zone signal 2	
17B	Pulse Input		NP	Differential pulse-train input (+)	Differential pulses are input from the host. Up to 200kpps can be input.
18B			/NP	Differential pulse-train input (-)	
19B	0V		N	Power supply	I/O power supply 0V
20B	0V		N	Power supply	I/O power supply 0V

Note) # indicates a negative logic signal. Negative logic signals are normally ON while the power is supplied, and turn OFF when the signal is output.

Field Network Specification: Explanation of Operation Modes

If the PCON-CB is controlled via a field network, you can select one of the following five modes to operate the actuator. Please note that the data areas required on the PLC side will vary depending on the mode.

■ Mode Description

	Mode	Description
0	Remote I/O mode	Similarly to the PIO specification, this mode operates by directing bytes to ON/OFF via a network. The number of positioning points and functions will vary depending on the operation patterns (PIO patterns) set by the controller's parameters.
1	Position/simple direct value mode	The target position value is directly input, while all other operational conditions (speed, acceleration, etc) are set by indicating the position number corresponding to the desired operating conditions from the position data table.
2	Half direct value mode	The actuator is operated by directly inputting values for speed, acceleration rate and push current, as well as the target position.
3	Full direct value mode	The actuator is operated by directly inputting values for the target position, speed, acceleration rate and push current, etc. In addition, you are able to read the current position, current speed, and the specified current, etc.
4	Remote I/O mode 2	This mode is the same as the remote I/O mode above, with the added functionality of reading current position and the command motor current.

■ Required Data Size for Each Network

		DeviceNet	CC-Link	PROFIBUS-DP	CompoNet	EtherCAT	EtherNet/IP	PROFINET IO
0	Remote I/O mode	2 bytes	1 station	2 bytes	2 bytes	2 bytes	2 bytes	2 bytes
1	Position/simple direct value mode	8 bytes	1 station	8 bytes	8 bytes	8 bytes	8 bytes	8 bytes
2	Half direct value mode	16 bytes	2 stations	16 bytes	16 bytes	16 bytes	16 bytes	16 bytes
3	Full direct value mode	32 bytes	4 stations	32 bytes	32 bytes	32 bytes	32 bytes	32 bytes
4	Remote I/O mode 2	12 bytes	1 station	12 bytes	12 bytes	12 bytes	12 bytes	12 bytes

■ List of Functions by Operation Mode

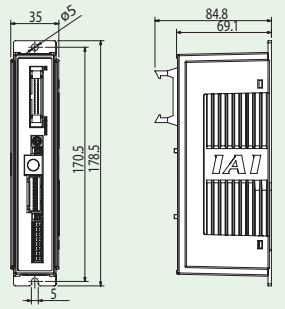
	Remote I/O mode	Position/simple direct value mode	Half direct value mode	Full direct value mode	Remote I/O mode 2
Number of positioning points	512 points	768 points	Unlimited	Unlimited	512 points
Operation by direct position data input	—	○	○	○	—
Direct speed/ acceleration input	—	—	○	○	—
Push-motion operation	○	○	○	○	○
Current position read	—	○	○	○	○
Current speed read	—	—	○	○	—
Operation by position number input	○	○	—	—	○
Completed position number read	○	○	—	—	○

* ○ indicates that the operation is supported, and — indicates that it is not supported.

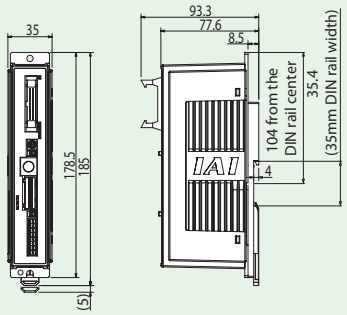
External Dimensions

<PCON-CB/CGB>

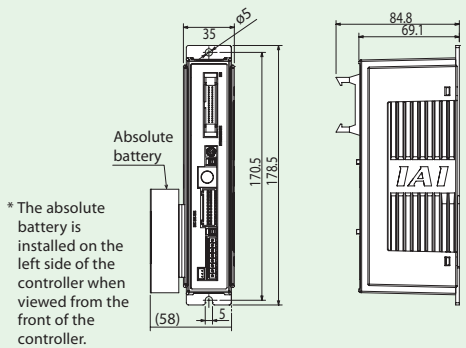
Battery-less Absolute/Incremental Specifications | Screw Mounting Spec.



Battery-less Absolute/Incremental Specifications | DIN Rail Mounting Spec.

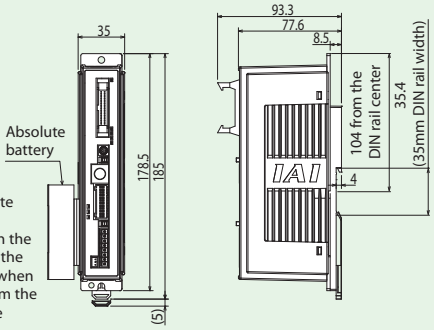


Simple Absolute Specification w/ Absolute Battery | Screw Mounting Spec.



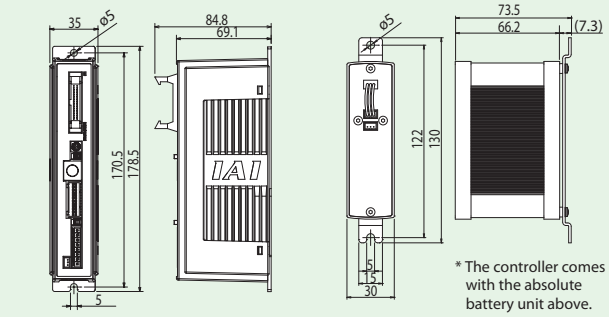
* The absolute battery is installed on the left side of the controller when viewed from the front of the controller.

Simple Absolute Specification w/ Absolute Battery | DIN Rail Mounting Spec.



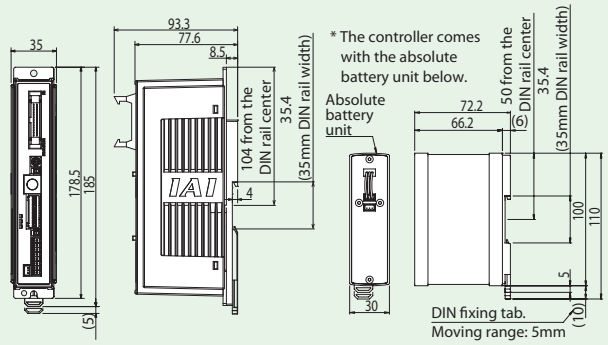
* The absolute battery is installed on the left side of the controller when viewed from the front of the controller.

Simple Absolute Specification w/ Absolute Battery Unit | Screw Mounting Spec.



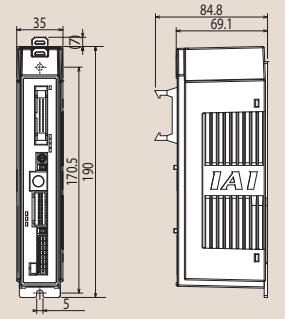
* The controller comes with the absolute battery unit above.

Simple Absolute Specification w/ Absolute Battery Unit | DIN Rail Mounting Spec.

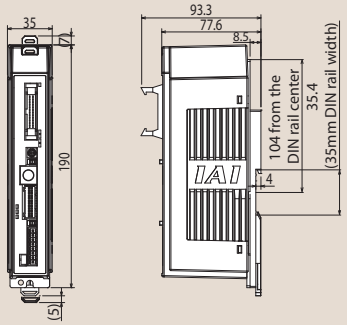


<PCON-CFB/CGFB>

Battery-less Absolute/Incremental Specifications | Screw Mounting Spec.



Battery-less Absolute/Incremental Specifications | DIN Rail Mounting Spec.



Specification List

Item				Description	
				PCON-CB/CGB	PCON-CFB/CGFB
Number of controlled axes				1 axis	
Power supply voltage				24VDC±10%	
Load current (including control-side current consumption) (Note 1)	RCP2 RCP3	Motor type	20P, 28P, 28SP	1A max.	
			35P, 42P, 56P	2.2A max.	
			60P, 86P		6A max.
	RCP4 RCP5	Motor type	28P, 35P, 42P, 42SP, 56P	High-output setting disabled: 2.2A max.	
				High-output setting enabled: 3.5A rated/4.2A max.	
			56SP, 60P, 86P		6A max.
	RCP6	Motor type	28P, 35P, 42P, 56P	High-output setting disabled: 2.2A max.	
				High-output setting enabled: 3.5A rated/4.2A max.	
			56SP, 60P		5.7A max.
Electromagnetic brake power (for actuator with brake)				24VDC±10% 0.15A max.	24VDC±10% 0.5A max.
Inrush current (Note 2)				8.3A	10A
Momentary power failure resistance				500μs max.	
Compatible encoder				High-resolution battery-less absolute encoder: Resolution 8192 pulses/rev	
				Battery-less absolute encoder: Resolution 800 pulses/rev	
				Incremental encoder: Resolution 800 pulses/rev	
Actuator cable length				20m max.	
External interface	PIO specification			Dedicated 24VDC signal input/output (NPN/PNP selection) ... Input max. of 16 points, output max. of 16 points, cable length max. of 10m	
	Field network specification			DeviceNet, CC-Link, PROFIBUS-DP, CompoNet, EtherCAT, EtherNet/IP, PROFINET IO	
Data setting, input method				PC compatible software, touch panel teaching pendant	
Data retention memory				Position data and parameters are saved in non-volatile memory. (No limit to rewrite)	
Operation mode				Positioner mode / pulse-train control mode (selectable by parameter setting)	
Number of positioner-mode positions				Up to 512 points for positioner type or up to 768 points for network type *The total number of positioning points varies depending on which PIO pattern is selected.	
Pulse-train interface	Input pulse			Differential type (line-driver type): 200kpps max., cable length up to 10m	
				Open-collector method: Not supported * If the host uses open-collector outputs, use AK-04 (optional, sold separately) to change them to differential outputs.	
	Command pulse magnification (Electronic gear: A/B)			1/50 < A/B < 50/1 Setting range of A and B (set by parameters): 1~4096	
	Feedback pulse output			None	
Insulation resistance				Not less than 10MΩ at 500VDC	
Electric shock protection mechanism				Class I, basic insulation	
Mass (Note 3)	Battery-less absolute specification / Incremental specification			Screw mounting type: Not more than 250g DIN rail mounting type: Not more than 285g	Screw mounting type: Not more than 270g DIN rail mounting type: Not more than 305g
	Simple absolute specification (including 190g for battery)			Screw mounting type: Not more than 450g DIN rail mounting type: Not more than 485g	
Cooling method				Natural air cooling	Forced air cooling
Environment	Ambient operating temperature			0~40°C	
	Ambient operating humidity			Not more than 85% RH (non-condensing)	
	Operating ambience			Free from corrosive gases	
	Degree of protection			IP20	

Note 1) 0.3A higher for the field network specification.
Note 2) Inrush current flows for approx. 5msec after the power is input (at 40°C). Please note that the inrush current value varies depending on the impedance of the power line.
Note 3) 30g heavier for the field network specification.

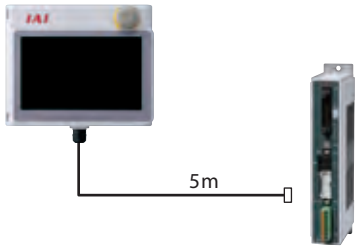
Options

Touch panel teaching pendant

Features A teaching device equipped with functions such as position teaching, trial operation, and monitoring.

Model **TB-02-□**

Configuration



Specifications

Rated voltage	24VDC
Power consumption	3.6W or less (150mA or less)
Ambient operating temperature	0~40°C
Ambient operating humidity	20~ 85% RH (Non-condensing)
Environmental resistance	IP20
Weight	470g (TB-02 unit only)

PC compatible software (Windows only)

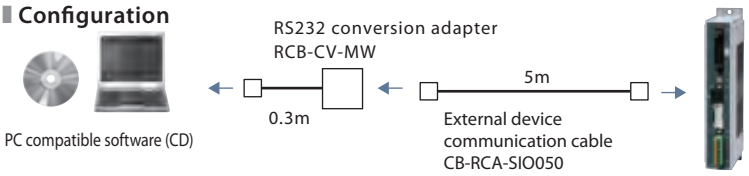
Features The start-up support software which comes equipped with functions such as position teaching, trial operation, and monitoring.
A complete range of functions needed for making adjustments contributes to a reduced start-up time.

Supported Windows versions:
7 / 8 / 10

Model **RCM-101-MW** (with an external device communication cable + RS232 conversion unit)

Please contact IAI for the current supported versions.

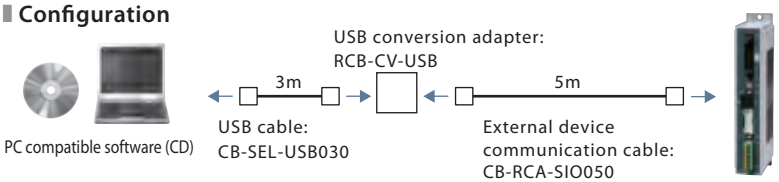
Configuration



Model **RCM-101-USB** (with an external device communication cable +USB conversion adapter + USB cable)

Please contact IAI for the current supported versions.

Configuration



Absolute battery unit

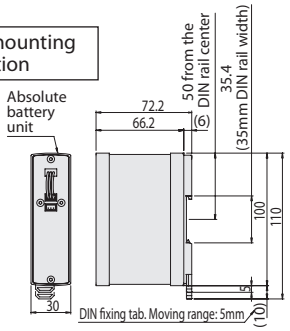
Overview A battery unit, supplied as an accessory for the simple absolute specification, which serves to back up the current position of the controller.

Model **SEP-ABU** (DIN rail mounting specification)
SEP-ABUS (Screw mounting specification)

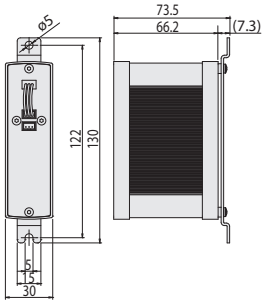
Specification

Item	Specification
Ambient operating temp. & humidity	0~40°C (around 20°C is desirable), 95% RH or less (non-condensing)
Operating ambience	Free from corrosive gases
Absolute battery	Model: AB-7 (Ni-MH battery/Life: approx. 3 years)
Absolute battery unit connecting cable	Model: CB-APSEP-AB005 (length: 0.5m)
Weight	Standard type: approx.230g/Dust-proof type: approx.260g

DIN rail mounting specification



Screw mounting specification



Replacement battery

Overview Replacement battery used with the absolute battery box.

Model **AB-7**

Dummy plug

Overview This plug is required when the safety category specification (PCON-CGB/CGFB) is used.

Model **DP-5**

Maintenance Parts

When placing an order for the replacement cable, please use the model number shown below.

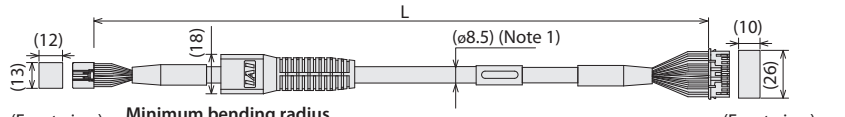
■Table of Applicable Cables

	Model Number		Integrated Motor-encoder Cable	Integrated Motor-encoder Robot Cable
①	RCP6/RCP6CR/RCP6W/RCP5/RCP5CR/RCP5W (Models other than ③)		CB-CAN-MPA□□□	CB-CAN-MPA□□□-RB
②	RCP4	SA3/RA3/GR		
③	RCP6/RCP6CR RCP6W/RCP5 RCP5W	SA8/RRA8 RA7 (High-thrust specification)/RA8/RA10 WSA16/WRA16	CB-CFA3-MPA□□□	CB-CFA3-MPA□□□-RB
④	RCP4/RCP4CR/RCP4W (Models other than ② , ⑤ , ⑥)		CB-CA-MPA□□□	CB-CA-MPA□□□-RB
⑤	RCP4	RA6C (High-thrust specification)	CB-CFA2-MPA□□□	CB-CFA2-MPA□□□-RB
⑥	RCP4W	RA7C (High-thrust specification)		
⑦	RCP3		-	CB-APSEP-MPA□□□
⑧	RCP2	GRSS/GRLS/GRST/GRHM/GRHB SRA4R/SRGS4R/SRGD4R		
⑨		RTBS/RTBSL RTCS/RTCSL	-	CB-RPSEP-MPA□□□
⑩	RCP2CR RCP2W	GRS/GRM GR3SS/GR3SM	CB-CAN-MPA□□□	CB-CAN-MPA□□□-RB
⑪		RTBS/RTBSL RTCS/RTCSL/RTB/RTBL/RTC/RTCL RTBB/RTBBL/RTCB/RTCBL		
⑫	RCP2 RCP2CR RCP2W	RA10/HS8 RA8	CB-CFA-MPA□□□	CB-CFA-MPA□□□-RB
⑬	RCP2W	SA16C		
⑭	RCP2 (Models other than ⑧ ~ ⑬)		-	CB-PSEP-MPA□□□

	Model Number	PIO Flat Cable
⑮	PCON-CB/CGB, CFB/CGFB	CB-PAC-PIO□□□

Model Number CB-CAN-MPA□□□/CB-CAN-MPA□□□-RB

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



(Front view) 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)

(Front view) Controller side

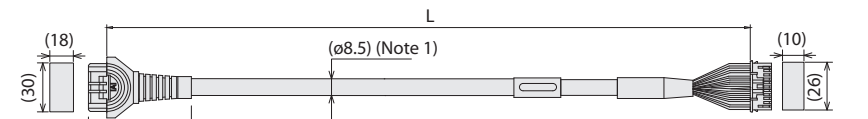
* The robot cable is designed for flex-resistance: Please use the robot cable if the cable has to be installed through the cable track.

(Note 1) If the cable length is 5m or more, ø9.1 cable diameter applies for both non-robot cables and robot cables.

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

Model Number CB-CFA3-MPA□□□/ CB-CFA3-MPA□□□-RB

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



(Front view) Actuator side

Minimum bending radius
3m or less length: r= 68mm or more (Dynamic bending condition)
Longer than 3m: r= 73mm or more (Dynamic bending condition)

(Front view) Controller side

* 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
(J.S.T.MFG.CO.,LTD.)

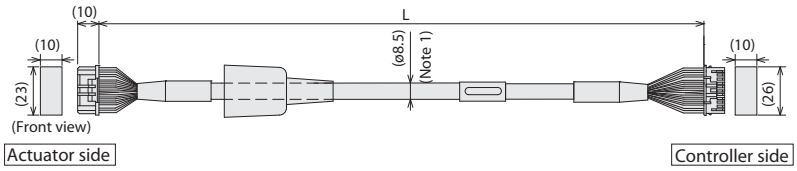
Pin No	Signal name	Pin No	Signal name
A1	ϕA	1	ϕA
B1	VMM	2	VMM
A2	ϕ A	5	ϕ A
B2	ϕB	3	ϕB
A3	VMM	4	VMM
B3	ϕ B	6	ϕ B
A4	LS+	7	LS+
B4	LS-	8	LS-
A6	SA[mABS]	11	SA[mABS]
B6	SB[mABS]	12	SB[mABS]
A7	A+	13	A+
B7	A-	14	A-
A8	B+	15	B+
B8	B-	16	B-
A5	BK+	9	BK+
B5	BK-	10	BK-
A9	LS_GND	20	LS_GND
B9	VPS	18	VPS
A10	VCC	21	VCC
B10	GND	19	GND
A11	-	17	-
B11	FG	22	-
		23	-
		24	FG

Maintenance Parts

When placing an order for the replacement cable, please use the model number shown below.

Model Number CB-CA-MPA□□□/ CB-CA-MPA□□□-RB

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



Minimum bending radius r= 80mm 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)

Pin No	Signal name	Color
A1	ϕA/U	Blue (Black)
B1	VMM/V	Orange (White)
A2	ϕ A/W	Green (Brown)
B2	ϕB/-	Brown (Green)
A3	VMM/-	Gray (Yellow)
B3	ϕ B/-	Red (Red)
A4	LS+/BK+	Black (Orange)
B4	LS-/BK-	Yellow (Gray)
A6	-/A+	Blue (White)
B6	-/A-	Orange (Yellow)
A7	A+/B+	Green (Red)
B7	A-/B-	Brown (Green)
A8	B+/Z+	Gray (Black)
B8	B-/Z-	Red (Brown)
A5	BK+/LS+	Blue (Black)
B5	BK-/LS-	Orange (Brown)
A9	LS_GND	Green (Green)
B9	VPS	Brown (Red)
A10	VCC	Gray (White)
B10	GND	Red (Yellow)
A11	-	-
B11	FG	Black (-)

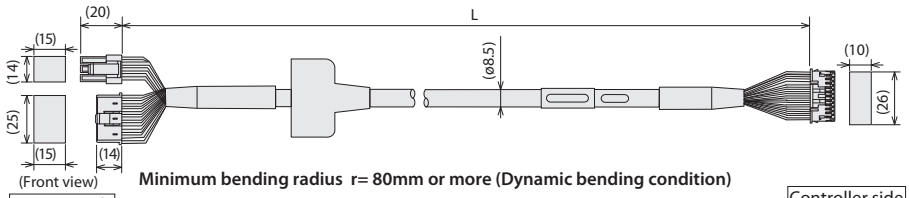
Controller side
PADP-24V-1-S
(J.S.T.MFG.CO.,LTD.)

Pin No	Signal name	Color
1	ϕA/U	Blue (Black)
2	VMM/V	Orange (White)
5	ϕ A/W	Green (Brown)
3	ϕB/-	Brown (Green)
4	VMM/-	Gray (Yellow)
6	ϕ B/-	Red (Red)
7	LS+/BK+	Black (Orange)
8	LS-/BK-	Yellow (Gray)
11	-/A+	Blue (White)
12	-/A-	Orange (Yellow)
13	A+/B+	Green (Red)
14	A-/B-	Brown (Green)
15	B+/Z+	Gray (Black)
16	B-/Z-	Red (Brown)
9	BK+/LS+	Blue (Black)
10	BK-/LS-	Orange (Brown)
20	LS_GND	Green (Green)
18	VPS	Brown (Red)
17	VCC	Gray (White)
19	GND	Red (Yellow)
21	-	-
22	-	-
23	-	-
24	FG	Black (-)

* ( ) indicates the color of the robot cable.

Model Number CB-CFA-MPA□□□/CB-CFA-MPA□□□-RB

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



Minimum bending radius r= 80mm 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 3m or longer, ø9.1 cable diameter applies for a non-robot cable and ø10 for a robot cable.

Actuator side
SLP-06V
(NICHIATSU)

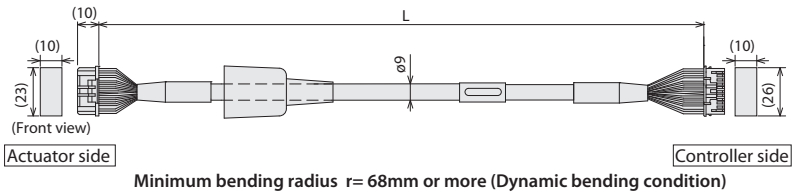
Pin No	Signal name
1	ϕA
2	VMM
4	ϕB
5	VMM
3	ϕ/A
6	ϕ/B
5	NC
6	NC
13	LS+
14	LS-
1	A+
2	A-
3	B+
4	B-
16	BK+
17	BK-
12	VCC
9	GND
11	VPS
10	NC
18	FG
15	NC
7	NC
8	NC

Controller side
PADP-24V-1-S
(J.S.T.MFG.CO.,LTD.)

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

Model Number CB-CFA2-MPA□□□/ CB-CFA2-MPA□□□-RB

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



Minimum bending radius r= 68mm 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.

Actuator side
1-1827863-1
(AMP)

Pin No	Signal name
A1	ϕA
B1	VMM
A2	ϕ A
B2	ϕB
A3	VMM
B3	ϕ B
A4	LS+
B4	LS-
A6	-
B6	-
A7	A+
B7	A-
A8	B+
B8	B-
A5	BK+
B5	BK-
A9	LS_GND
B9	VPS
A10	VCC
B10	GND
A11	-
B11	FG

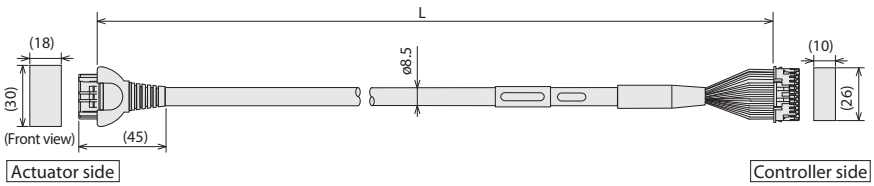
Controller side
PADP-24V-1-S
(J.S.T.MFG.CO.,LTD.)

Pin No	Signal name
1	ϕA
2	VMM
5	ϕ A
3	ϕB
4	VMM
6	ϕ B
7	LS+
8	LS-
11	-
12	-
13	A+
14	A-
15	B+
16	B-
9	BK+
10	BK-
20	LS_GND
18	VPS
17	VCC
19	GND
21	-
22	-
23	-
24	FG

Model Number CB-APSEP-MPA□□□

*** Robot cable is standard.**

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



Minimum bending radius r= 68mm or more (Dynamic bending condition)

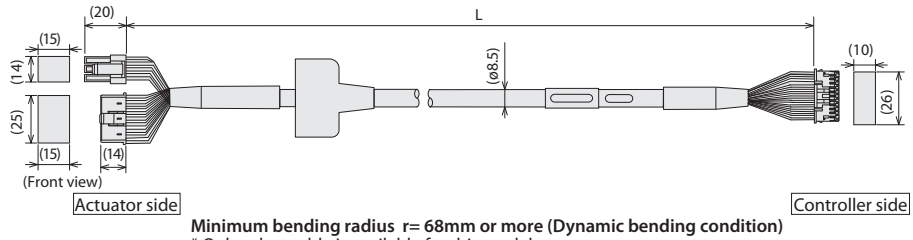
* Only robot cable is available for this model.

Actuator side Terminal number		Controller side Terminal number
A1	[PCON] (ACON) Black [ϕA] (U)	1
B1	White [VMM] (V)	2
A2	Brown [ϕ/A] (W)	5
B2	Green [ϕB] (-)	3
A3	Yellow [VMM] (-)	4
B3	Red [ϕ/B] (-)	6
A4	Orange [LS+] (BK+)	7
B4	Gray [LS-] (BK-)	8
A6	White [-] (A+)	11
B6	Yellow [-] [A-]	12
A7	Red [A+] (B+)	13
B7	Green [A-] (B-)	14
A8	Black [B+] (Z+)	15
B8	Brown [B-] (Z-)	16
A5	Black (identification tape) [BK+] (LS+)	9
B5	Brown (identification tape) [BK-] (LS-)	10
A9	Green (identification tape) [GNDLS] (GNDLS)	20
B9	Red (identification tape) [VPS] (VPS)	18
A10	White (identification tape) [VCC] (VCC)	17
B10	Yellow (identification tape) [GND] (GND)	19
A11	NC	21
B11	Shield [FG] (FG)	24
	NC	22
	NC	23

Maintenance Parts

Model Number CB-PSEP-MPA□□□

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

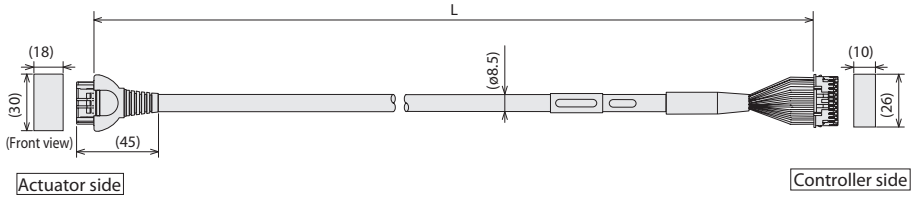


Minimum bending radius r= 68mm or more (Dynamic bending condition)
* Only robot cable is available for this model.

Actuator side Terminal number		Controller side Terminal number
1	Black [φA]	1
2	White [VMM]	2
4	Red [φB]	3
5	Green [VMM]	4
3	Brown [φ/A]	5
6	Yellow [φ/B]	6
16	Orage [BK+]	9
17	Gray [BK-]	10
5	NC	11
6	NC	12
13	Black [LS+]	7
14	Brown [LS-]	8
1	White [A+]	13
2	Yellow [A-]	14
3	Red [B+]	15
4	Green [B-]	16
10	White (identification tape) [VCC]	17
11	Yellow (identification tape) [VPS]	18
9	Red (identification tape) [GND]	19
12	Green (identification tape) [reserve]	20
15	NC	21
7	NC	22
8	NC	23
18	Shield [FG]	24

Model Number CB-RPSEP-MPA□□□

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

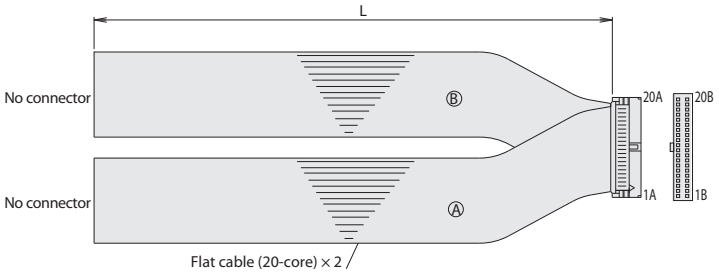


Minimum bending radius r= 68mm or more (Dynamic bending condition)
* Only robot cable is available for this model.

Actuator side Terminal number		Controller side Terminal number
A1	Black [φA]	1
B1	White [VMM]	2
A2	Brown [φ/A]	5
B2	Green [φB]	3
A3	Yellow [VMM]	4
B3	Red [φ/B]	6
A6	Orange [LS+]	7
B6	Gray [LS-]	8
A7	Red [A+]	13
B7	Gren [A-]	14
A8	Black [B+]	15
B8	Brown [B-]	16
A4	NC	-
B4	NC	-
A5	Black (identification tape) [BK+]	9
B5	Brown (identification tape) [BK-]	10
A9	Green (identification tape) [GNDLS]	20
B9	Red (identification tape) [VPS]	18
A10	White (identification tape) [VCC]	17
B10	Yellow (identification tape) [GND]	19
A11	NC	21
B11	Shield [FG] (FG)	24
	NC	22
	NC	23

Model Number CB-PAC-PIO□□□

* Please indicate the cable length (L) in □□□, maximum 10m, e.g.) 080 = 8m



HIF6-40D-1.27R

No.	Signal name	Cable color	Wiring
1A	24V	Brown-1	Flat cableⒶ (pressure-welded)
2A	24V	Red-1	
3A	Pulse	Orange-1	
4A	Input	Yellow-1	
5A	IN0	Green-1	
6A	IN1	Blue-1	
7A	IN2	Purple-1	
8A	IN3	Gray-1	
9A	IN4	White-1	
10A	IN5	Black-1	
11A	IN6	Brown-2	
12A	IN7	Red-2	
13A	IN8	Orange-2	
14A	IN9	Yellow-2	
15A	IN10	Green-2	
16A	IN11	Blue-2	
17A	IN12	Purple-2	
18A	IN13	Gray-2	
19A	IN14	White-2	
20A	IN15	Black-2	

No.	Signal name	Cable color	Wiring
1B	OUT0	Brown-3	Flat cableⒷ (pressure-welded) AWG28
2B	OUT1	Red-3	
3B	OUT2	Orange-3	
4B	OUT3	Yellow-3	
5B	OUT4	Green-3	
6B	OUT5	Blue-3	
7B	OUT6	Purple-3	
8B	OUT7	Gray-3	
9B	OUT8	White-3	
10B	OUT9	Black-3	
11B	OUT10	Brown-4	
12B	OUT11	Red-4	
13B	OUT12	Orange-4	
14B	OUT13	Yellow-4	
15B	OUT14	Green-4	
16B	OUT15	Blue-4	
17B	Pulse input	Purple-4	
18B		Gray-4	
19B	0V	White-4	
20B	0V	Black-4	

RCP6S with Built-in Controller

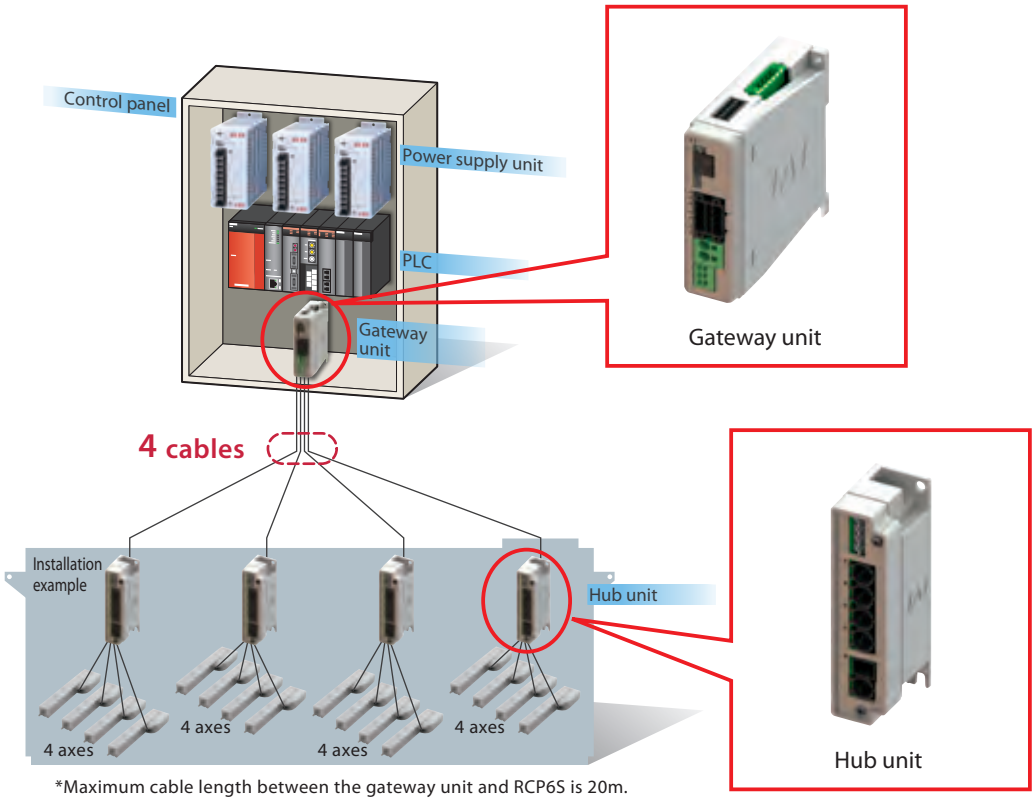
Built-in controller for RCP6S

Features

By using the gateway unit, a maximum of 16 axes* of RCP6S (relayed through a hub unit) can be operated via a field network with less wiring.
Hub unit allows us to keep the cable connected to the actuator of each axis short, and motor power supply and control signal lines can be connected as one cable between the hub unit and the RCP6S.

*The number of connectable axes will vary depending on the type of field network and its mode. Please refer to P. 272 for more information.

Control Panel for the RCP6S Built-in Controller Actuator



*Maximum cable length between the gateway unit and RCP6S is 20m.
If there is a hub unit in between, the maximum length is still 20m.
The cable length from the gateway unit to the hub unit needs to be 10m or less.

RCP6S Peripheral Equipment

Gateway unit is required in order to operate RCP6S.

○ Gateway unit:	This unit is used in order to connect RCP6S to the field network.	See P. 272
○ Hub unit:	This unit can expand the number of axes connected to the gateway unit.	See P. 275
○ PLC connection unit:	This unit is used to connect RCP6S directly to the PLC using Modbus serial communication.	See P. 276

Basic Controller Specification List

Specification			Specification Description
Number of controlled axes			1 axis
Power supply voltage			24VDC±10%
Control power capacity			0.3A (Built-in controller only)
Load current (including control-side current consumption)	Motor type	28P, 35P, 42P, 56P	Maximum 3.2A (High-output Enabled) Maximum 1.7A (High-output Disabled)
		56SP, 60P	5.7A max.
Electromagnetic brake power (for actuator with brake)			24VDC±10% 0.15A (Note) For releasing brake, 0.7A for 0.2 sec is required.
Heat output			5W (Motor type 28P, 35P, 42P, 56P) 19.2W (Motor type 56SP, 60P)
Inrush current (Note 1)	Motor type	28P, 35P, 42P, 56P	8.3A (With inrush current protection circuitry)
		56SP, 60P	10A (With inrush current protection circuitry)
Motor control method			Weak field vector control
Compatible encoder			Resolution of battery-less absolute encoder: 8,192 pulses/rev
Serial communication interface (SIO port)			RS485: 1CH (Modbus protocol RTU/ASCII compliant) Speed: 9.6~230.4Kbps 1CH (Modbus protocol RTU)
External interface			Field bus connection: DeviceNet, CC-Link, PROFIBUS-DP, EtherCAT, EtherNet/IP, PROFINET-IO. (Note) Additional gateway unit connection is required.
Data setting, input method			PC compatible software, touch panel teaching pendant
Data retention memory			Position data and parameters are saved in non-volatile memory. (No limit to rewrite)
LED display			SV (green) / ALM (red): Servo ON / Alarm triggered and emergency stop
Insulation resistance			Not less than 10MΩ at 500VDC
Electric shock protection mechanism			Class I basic insulation
Cooling method			Natural air cooling

Note1: Inrush current will flow for approximately 5msec after the power is turned on (at 40°C).
Inrush current value differs depending on the impedance on the power supply line.

<The Calculation of Number of Connectable Axes and Power Capacity>

To calculate the number of axes connectable to one gateway unit and the current amperage of 24VDC, figure out (1) to (4) below and follow (5).

(1) The Calculation of Number of Connectable Axes, and Motor Current Consumption

Condition 1: Sum of motor current consumption connectable to one hub unit: 12.8A or less

Condition 2: Number of controlled axes connectable to corresponding 1 unit: 4 axes or less

* By adjusting the number of connected axes or motor type, select the connected axes so each hub unit satisfies the formulas below.

● Sum of motor current consumption for hub unit = Motor current consumption of 1st axis + Motor current consumption of 2nd axis (if connected)
+ Motor current consumption of 3rd axis (if connected)
+ Motor current consumption of 4th axis (if connected) ≤ 12.8A ·····①

● Sum of motor current consumption = Motor current consumption of hub unit 1st unit
+ Motor current consumption of 2nd hub unit (if connected)
+ Motor current consumption of 3rd hub unit (if connected)
+ Motor current consumption of 4th hub unit (if connected) ·····②

(2) Control Power Current Consumption: 0.3A × Number of actuator + 0.6A (gateway unit) + 0.3A × Number of hub unit ·····③

(3) Inrush Current: 8.3A (RCP6S Motor type 28P, 35P, 42P, 56P, RCM-P6PC)
10A (RCP6S Motor type 56SP, 60P, RCM-P6AC, RCM-P6DC) ·····④

(4) Current Consumption of Brake Release(RCP6, RCP6S) : Number of actuators with brake × 0.7A ·····⑤

* When servo is on, it should be 0.5sec or less, after that retaining of released status should be 0.1A / axis.
When using control power and motor power in common, calculate by the number of actuators x 0.1A.

(5) Selection of Power Supply:

Usually, the rated current is to be approximately 1.2 times higher than the total of Control Power ② + ③ + ⑤ above considering approximately 20% of margin to the load current.

However, although it is for a short time, current of ④ will flow, so please take this into account and select a "peak load support" specification or select a power supply that has sufficient headroom. Avoid having all of the current from ④ from flowing at the same time by turning the servos on at different times from each other (Note 1).

If a power supply with insufficient headroom is selected, voltage may drop instantaneously. Be careful especially when selecting a power source equipped with remote sensing.

Note 1: The timing to turn the servo on can be tuned in Parameter No. 165 [Latency after Shutdown Release].

(Note) Ensure motor and control power supplies reference the same potential when using multiple power supplies.

Options

Gateway Unit (RCM-P6GW)

Features:

This unit is used in order to connect RCP6S to the field network.

Details:

- Compatible with many field networks.
  (Applicable networks: CC-Link, DeviceNet, PROFIBUS-DP, EtherCAT, EtherNet/IP, PROFINET-IO)
- Motor power and control power for all of the connected axes can be supplied through the gateway unit.
- Monitoring during AUTO is possible.
- A mini-USB connection comes standard.
- Each channel has MPO/MPI for drive source cutoff.
- Brake can be forcibly released by supplying power to the brake release input terminal for each channel. (In the case that the actuator is directly connected)
- When RCP6S is directly connected to the gateway unit, the communication time is 10msec. When RCP6S is connected to the gateway unit through the hub unit, the communication time is 40msec.
  The communication time does not become longer even if the connected axes increase.

Model Configuration

RCM — P6GW □ — □

RCM: Series; P6GW: Type; Field network

(Blank)	Standard (Separate controller)
G	Safety category compliant

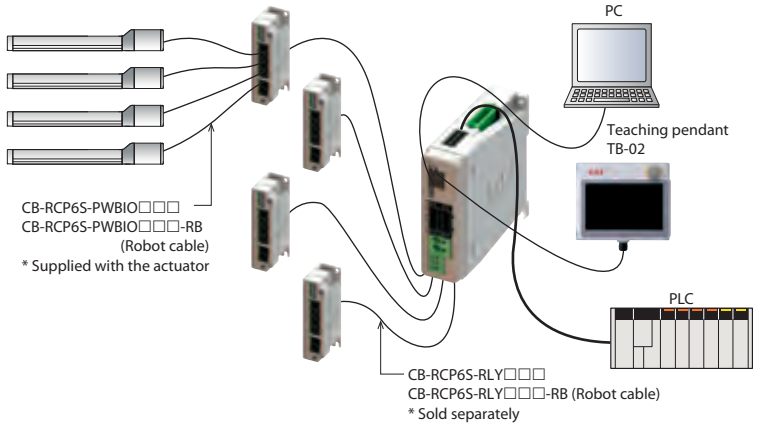
CC	CC-Link connection specification
DV	DeviceNet connection specification
PR	PROFIBUS-DP connection specification
EC	EtherCAT connection specification
EP	EtherNet/IP connection specification
PRT	PROFINET IO connection specification

Available Models

Models
CC-Link specification
DeviceNet specification
PROFIBUS-DP specification
EtherCAT specification
EtherNet/IP specification
PROFINET IO specification
Safety category CC-Link specification
Safety category DeviceNet specification
Safety category PROFIBUS-DP specification
Safety category EtherCAT specification
Safety category EtherNet/IP specification
Safety category PROFINET IO specification

*Dummy plug DP-5 is supplied with the safety category specification.

Connection Image



Up to 16 axes (*1) of RCP6S can be connected per gateway unit with hub units. (*2)
Because both the motor power and control power for all the axes connected to the gateway unit can be supplied together, the required wiring for RCP6S can be connected as one cable between the hub and RCP6S.
Also RCP6S can be directly connected to the gateway unit.

(*1) Number of connectable axes varies depending on the type of the field network. Please see "Number of connectable axes" table for details.
(*2) Hub unit: Refer to P. 275 for the details.

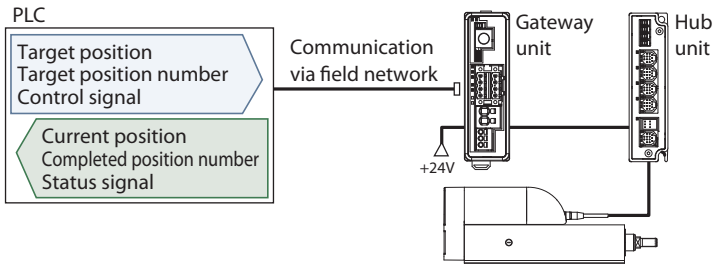
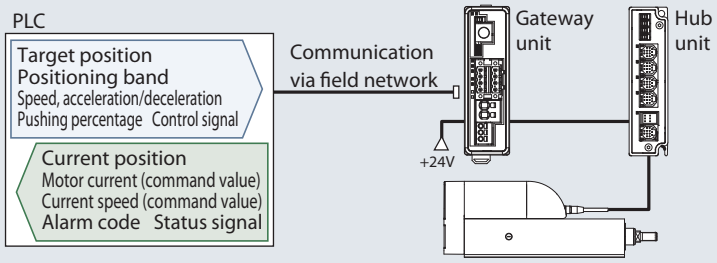
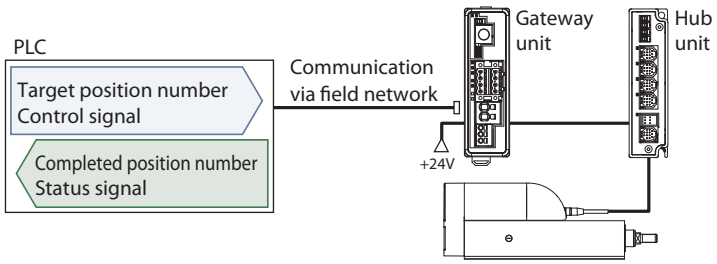
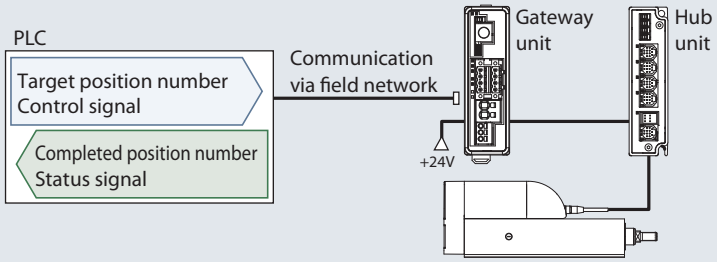
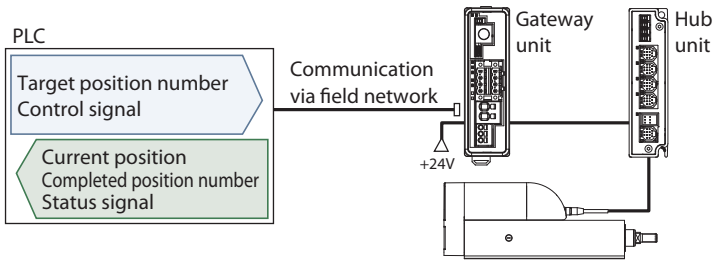
The Number of Connectable Axes:

Maximum connectable axes are as shown below.

	Direct value mode	Simple direct value mode	Positioner 1	Positioner 2	Positioner 3	Positioner 5
CC-Link	16	16	16	16	16	16
DeviceNet	8	16	16	16	16	16
PROFIBUS-DP	8	16	16	16	16	16
EtherCAT	8	16	16	16	16	16
EtherNet/IP	8	16	16	16	16	16
PROFINET IO	8	16	16	16	16	16

Field Network Control Operation Mode

These control modes are available to choose from when using the RCP6S via field network.
Data required for operation (target position, speed, acceleration, push current value, etc.) are written by a PLC or other host controller into the specified addresses.

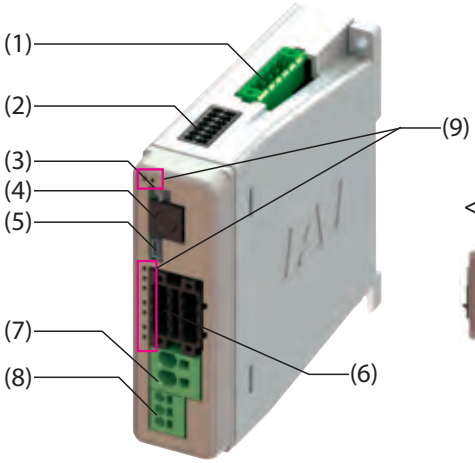
Operation mode	Description	Overview
Positioner 1/ Simple direct numerical value mode (Simple direct mode)	Positioner 1 mode can store up to 768 points of position data, and can move to the stored position. Both modes allow monitoring the current position numerically with 0.01mm increments. The simple direct numerical value mode can modify any of the stored target positions by numerical value. Both modes allow monitoring the current position numerically with 0.01mm increments.	
Direct numerical control mode (Direct indication/ Full mode)	This mode allows designating the target position, speed, acceleration/deceleration, and motor current percentage for pushing numerically. Also, it is capable of monitoring the current position, current speed, and the motor current command value with 0.01mm increments.	
Positioner 2 mode	Positioner 2 mode can store up to 768 points of position data, and can move to the stored position. This mode does not allow monitoring of the current position. This is a mode that has less in/out data transfer volume than the Positioner 1 mode.	
Positioner 3 mode	Positioner 3 mode can store up to 256 points of position data, and can move to the stored position. This mode does not allow monitoring of the current position. This is a mode that has less in/out data transfer volume than the Positioner 2 mode, and operates with a minimum number of signals.	
Positioner 5 mode	Positioner 5 mode can store up to 16 points of position data, and can move to the stored position. This is a mode that has less position table than the Positioner 2 mode, and allows monitoring the current position numerically with 0.01mm increments.	

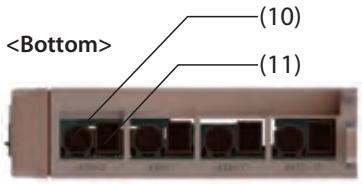
List of Functions by Operation Mode

	Simple direct value mode	Positioner 1 mode	Direct numerical control mode (Direct indication/Full mode)	Positioner 2 mode	Positioner 3 mode	Positioner 5 mode
Number of positioning points	768 points	768 points	Unlimited	768 points	256 points	16 points
Home return operation	○	○	○	○	○	○
Positioning operation	○	△	○	△	△	△
Speed, acceleration/deceleration settings	△	△	○	△	△	△
Different acceleration and deceleration settings	△	△	—	△	△	△
Pitch Feed (Incremental)	△	△	○	△	—	△
Push-motion operation	△	△	○	△	△	△
Speed changes while moving	△	△	○	△	△	△
Pausing	○	○	○	○	○	○
Zone signal output	△	△	△	△	△	△
Position zone signal output	△	△	—	△	—	—
Current position reading (Resolution)	○ (0.01mm)	○ (0.01mm)	○ (0.01mm)	—	—	○ (0.1mm)

* ○ indicates that direct setting is possible, △ indicates position data or parameter input is required, — indicates the operation is not supported.

Names and Functions of Each Part





(1) Field network connector
The connector used to connect to the field network.

(2) System I/O connector
The connector for emergency stop input, external AUTO/MANU switchover input, and brake release input in case of directly connecting RCP6S to a gateway unit.

(3) Operation mode setting switch
For switching the operation mode between automatic (AUTO) and manual (MANU).

(4) SIO connector
The connector used to connect a teaching pendant or PC software.

(5) USB connector
The connector used to connect the PC software.

(6) Drive power cut-off connector
The connector used to connect an external drive power cut-off relay to the 24VDC power supply from the motor power connector.

(7) Motor power supply connector
For 24VDC motor power supply for a gateway unit.

(8) Control power supply connector
The connector for the gateway unit 24VDC control power supply and the frame ground (FG).

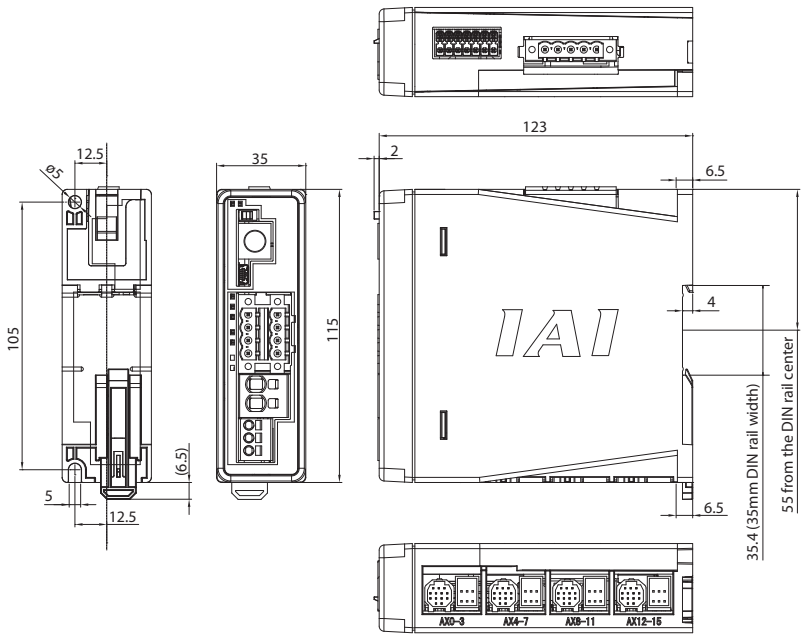
(9) Status display LED
Displays the status of the gateway unit.

Code	LED	Display color and operating status.
LED1	SYS	System status Ready (Green) Alarm (Red)
LED2	AUTO	Operation mode (AUTO/MANU) status Automatic operation mode (Green)
LED3	EMG	Emergency stop (EMG) status Emergency stop (EMG)(Red)
LED4	T. ERR	Bus communication error in the controller T.ERR (Orange)
LED5	C. ERR	Field bus network communication error C.ERR (Orange)

(10) Axis control connector
The connector used to supply power and control signals (24VDC control power, 24VDC motor power, communication line, brake release signal, emergency stop status, etc.) from the gateway unit to the hub unit or RCP6S.

(11) Axis power supply connector
The connector used to supply 24VDC motor power via gateway unit to either a RCP6S or a hub unit.

External Dimensions



Gateway Unit Basic Specifications

Specification	Description
Number of controlled axes	16 axes max. (4 axes with a single gateway unit)*1
Power supply voltage	24VDC±10%
Control power capacity	0.6A (0.3A with a single gateway unit + field bus module 0.3A)
Motor power capacity	51.2A max. from connected axes
Cooling method	Natural air cooling
Emergency stop input	B contact input
Enable input	None
T.P. enable input	Yes
Enable operation	Servo OFF
Backup memory	FRAM (256kbit), No. of overwrites: Unlimited
Calendar function	Yes (retains data for 10 days after power off)
Gateway board LED display	SYS LED × 1 (RUN/ALM), EMG LED × 1, MODE LED × 1 (AUTO/MANU), T.ERR LED × 1, C.ERR LED × 1 Field bus module status LED × 2
Tool connection	T/P connector: RS485 1ch (Modbus protocol compliant) USB connector: USB 1ch
Electromagnetic braking forced release mechanism	System I/O connector: External brake release signal input (24VDC) *Only used when an RCP6S unit is directly connected to the gateway unit. Disabled when a hub is connected.
Electric shock protection mechanism	Class 1, basic insulation
Insulation withstanding voltage	500VDC 10MΩ
Weight	250g
External dimensions	35W × 115H × 123D

*1 See P.272

Options

Hub Unit (RCM-P6HUB)

The hub unit cannot be used alone.
It must be used with a gateway unit.

Features:

The connection between gateway unit - hub unit and hub unit - RCP6S can be established using serial communication. By using a gateway unit with hub units, up to 16 axes can be controlled.

* The number of connectable axes will vary depending on the type of field networks and its mode. Please see P. 272 for the details.

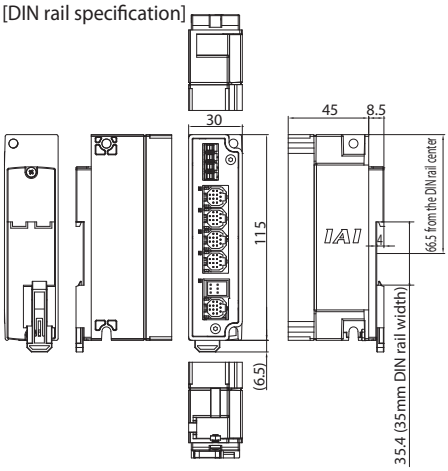
Model Configuration

RCM — P6HUB — ☐
Series / Type / Mounting specification

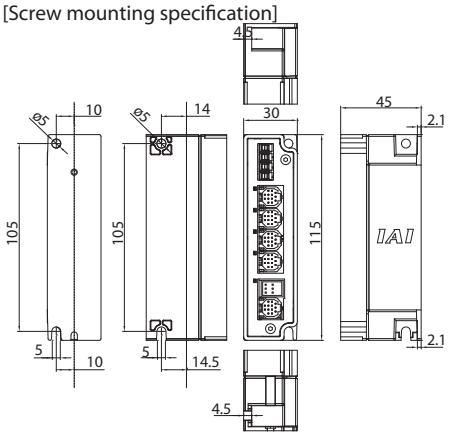
(Blank)	Screw mounting specification
DN	DIN rail mounting specification

External Dimensions

[DIN rail specification]



[Screw mounting specification]



Specification

Specification	Description
Number of controlled axes	4 axes max.
Power supply voltage	24VDC±10%
Control power capacity	0.3A (single hub unit)
Motor power capacity	12.8A max. from connected axes
Emergency stop input	None
Enable input	None
LED display	SYS LED × 1 (RUN/ALM) AXIS LED × 4 (RUN/ALM)
Electromagnetic braking forced release mechanism	External brake release switch × 4
Electric shock protection mechanism	Class 1, basic insulation
Insulation withstanding voltage	500VDC 10MΩ
Contamination	Contamination 2
Weight	80g
External dimensions	35W × 115H × 45D

Options

PLC Connection Unit (RCB-P6PLC)

Features

This is a terminal block used to connect the RCP6S and the PLC using serial communication.
The RCP6S and the PLC connection unit can be easily connected with a cable.
* Cannot be connected to the gateway unit, hub unit or RCP6S gateway controller.

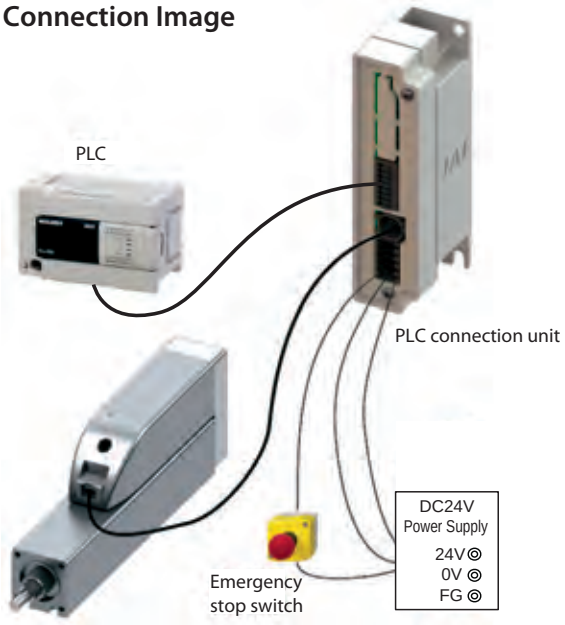
Model Configuration

RCB — P6PLC — □

	Series	Type	Mounting specification

(Blank)	Screw mounting specification
DN	DIN rail mounting specification

Connection Image

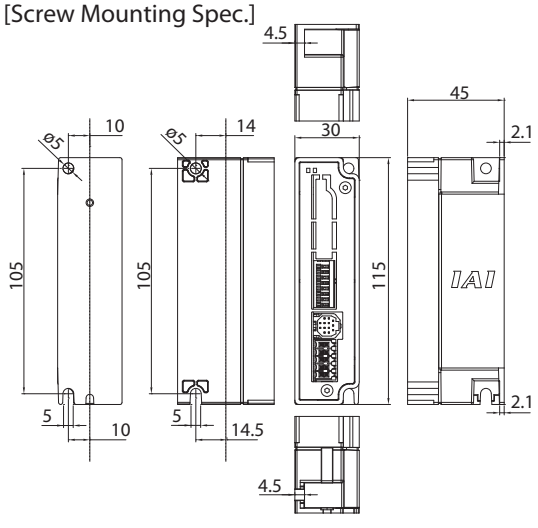


Specifications

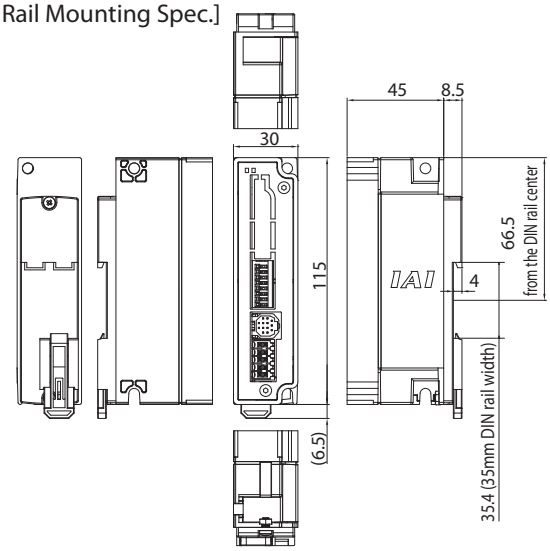
Specified	Description
Number of controlled axes	1-axis
Power supply voltage	24VDC ± 10%
Control power capacity	0A for single PLC connection unit 0.3A for connected PLC units + RCP6S built-in driver • For brake types, 0.7A for 0.2 sec is required for releasing brake
Motor power capacity	Depending on RCP6S built-in driver
Emergency stop input	B contact input
Enable input	None
LED display	None
Electromagnetic braking forced release mechanism	External brake release signal input (24VDC)
Electric shock protection mechanism	Class 1, basic insulation
Insulation withstanding voltage	500VDC 10MΩ
Contamination	Contamination 2
Weight	65g
External dimensions	35W×115H×45D

External Dimensions

[Screw Mounting Spec.]



[DIN Rail Mounting Spec.]



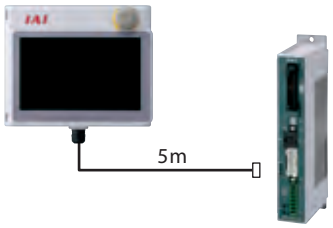
Options

Touch panel teaching pendant

■ **Features** A teaching device equipped with functions such as position teaching, trial operation, and monitoring.

■ **Model** **TB-02-□**

■ **Configuration**



■ **Specifications**

Rated voltage	24VDC
Power consumption	3.6W or less (150mA or less)
Ambient operating temperature	0 to 40°C
Ambient operating humidity	20~85% RH (Non-condensing)
Environmental resistance	IP20
Mass	470g (TB-02 unit only)

PC compatible software (Windows only)

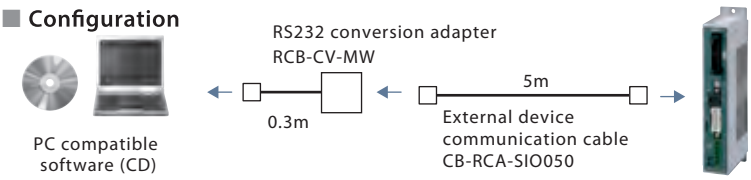
■ **Features** The start-up support software which comes equipped with functions such as position teaching, trial operation, and monitoring. A complete range of functions needed for making adjustments contributes to a reduced start-up time.

Supported Windows versions: 7/8/10

■ **Model** **RCM-101-MW** (with an external device communication cable + RS232 conversion unit)

Please contact IAI for the current supported versions.

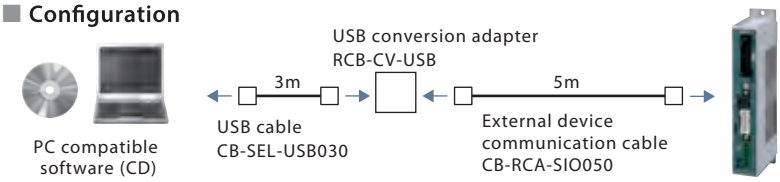
■ **Configuration**



■ **Model** **RCM-101-USB** (with an external device communication cable +USB conversion adapter + USB cable)

Please contact IAI for the current supported versions.

■ **Configuration**



Maintenance Parts

When placing an order for the replacement cable, please use the model name shown below.

*There are restrictions on the total cable length. Please check with the [Notes] on P. 270 and 278.

■ **Cable Compatibility Chart**

Connection destination		Gateway unit	Hub unit	PLC connection unit
RCP6S RCP6SCR RCP6SW	Standard cable	CB-RCP6S-PWBIO□□□		
	Robot cable	CB-RCP6S-PWBIO□□□-RB		
	<Extension> Standard cable	CB-RCP6S-PWBIO□□□-JY1		
	<Extension> Robot cable	CB-RCP6S-PWBIO□□□-JY1-RB		

Connection destination		Hub unit
Gateway unit	Standard cable	CB-RCP6S-RLY□□□
	Robot cable	CB-RCP6S-RLY□□□-RB
	<Extension> Standard cable	CB-RCP6S-RLY□□□-JY1
	<Extension> Robot cable	CB-RCP6S-RLY□□□-JY1-RB

Maintenance Parts

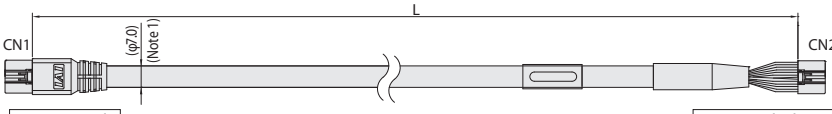
When placing an order for the replacement cable, please use the model number shown below.

*There are restrictions on the total cable length. Please check with the [Notes] on P. 2.

For connecting RCP6S to gateway unit, hub unit, or PLC connection unit.

Model number CB-RCP6S-PWBIO□□□/CB-RCP6S-PWBIO□□□-RB
Standard cable / Robot cable

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



Minimum bending radius 5m or less r= 56mm or more (Dynamic bending condition)
Longer than 5m r= 64mm 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 length of the cable is over 5m, it would be φ8.0.

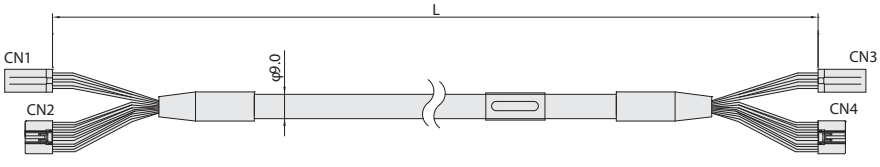
CN1 DF62C-13S-2.2C (HIROSE ELECTRIC CO., LTD.) — CN2 DF62C-13S-2.2C (HIROSE ELECTRIC CO., LTD.)

Color	Signal name	Pin No.		Pin No.	Signal name	Color
Gray (AWG22/19)	CP	1		1	CP	Gray (AWG22/19)
Blue (AWG22/19)	MP	8		8	MP	Blue (AWG22/19)
Orange (AWG22/19)	MP	9		9	MP	Orange (AWG22/19)
Green (AWG22/19)	GND	10		10	GND	Green (AWG22/19)
Brown (AWG22/19)	GND	11		11	GND	Brown (AWG22/19)
Orange (AWG26)	AM_SD+	6		6	AM_SD+	Orange (AWG26)
Light blue (AWG26)	AM_SD-	2		2	AM_SD-	Light blue (AWG26)
Red (AWG26)	CT_SD+	7		7	CT_SD+	Red (AWG26)
Gray (AWG26)	CT_SD-	3		3	CT_SD-	Gray (AWG26)
Green (AWG26)	BK	4		4	BK	Green (AWG26)
Brown (AWG26)	EMGS	5		5	EMGS	Brown (AWG26)
-	NC	13	Center Interposition	13	NC	-
Black (AWG26)	FG	12		12	FG	Black (AWG26)

For connecting a gateway unit and a hub unit

Model number CB-RCP6S-RLY□□□/CB-RCP6S-RLY□□□-RB
Standard cable / Robot cable

* Please indicate the cable length (L) in □□□, maximum 10m, e.g.) 030 = 3m
Available standard lengths: 1m/3m/5m/10m



Minimum bending radius r= 72mm 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.

*** Please contact IAI if the cable length other than above is needed.**

CN1 J11DF-06V-KX (S.T.MFG.CO.,LTD.) — CN3 J11DF-06-KX (S.T.MFG.CO.,LTD.)

Color	Signal name	Pin No.		Pin No.	Signal name	Color
Brown (AWG18)	MP	B1		B1	MP	Brown (AWG18)
Gray (AWG18)	MP	B2		B2	MP	Gray (AWG18)
Red (AWG18)	MP	B3		B3	MP	Red (AWG18)
Blue (AWG18)	GND	A1		A1	GND	Blue (AWG18)
Orange (AWG18)	GND	A2		A2	GND	Orange (AWG18)
Green (AWG18)	GND	A3		A3	GND	Green (AWG18)

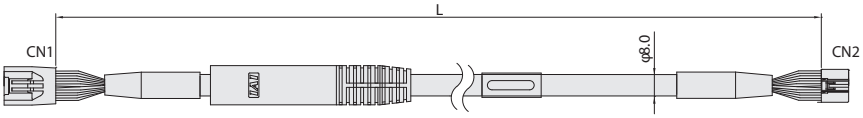
CN2 DF62C-13S-2.2C (HIROSE ELECTRIC CO., LTD.) — CN4 DF62C-13S-2.2C (HIROSE ELECTRIC CO., LTD.)

Color	Signal name	Pin No.		Pin No.	Signal name	Color
Blue (AWG22)	CP	1		1	CP	Blue (AWG22)
-	NC	8		8	NC	-
-	NC	9		9	NC	-
Orange (AWG22)	GND	10		10	GND	Orange (AWG22)
Green (AWG22)	GND	11		11	GND	Green (AWG22)
Brown (AWG26)	AM_SD+	6		6	AM_SD+	Brown (AWG26)
Green (AWG26)	AM_SD-	2		2	AM_SD-	Green (AWG26)
Red (AWG26)	CT_SD+	7		7	CT_SD+	Red (AWG26)
Gray (AWG26)	CT_SD-	3		3	CT_SD-	Gray (AWG26)
Light blue (AWG26)	NC	4		4	NC	Light blue (AWG26)
Orange (AWG26)	EMGS	5		5	EMGS	Orange (AWG26)
-	NC	13	Center Interposition	13	NC	-
Black (AWG26)	FG	12		12	FG	Black (AWG26)

Extension cable for connecting RCP6S to gateway unit, hub unit, or PLC connection unit.

Model number CB-RCP6S-PWBIO□□□-JY1/CB-RCP6S-PWBIO□□□-JY1-RB
Standard cable / Robot cable

* Please indicate the cable length (L) in □□□, maximum 20m minus basic cable length, e.g.) 030 = 3m
Available standard lengths: 1m/3m/5m



Minimum bending radius r= 64mm 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.

*** Please contact IAI if the cable length other than above is needed.**

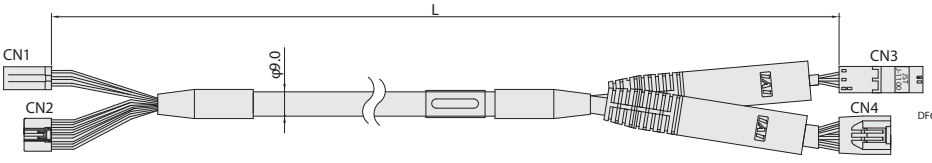
CN1 DF62B-13EP-2.2C (HIROSE ELECTRIC CO., LTD.) — CN2 DF62C-13S-2.2C (HIROSE ELECTRIC CO., LTD.)

Color	Signal name	Pin No.		Pin No.	Signal name	Color
Gray (AWG18)	CP	1		1	CP	Gray (AWG18)
Blue (AWG18)	MP	8		8	MP	Blue (AWG18)
Orange (AWG18)	MP	9		9	MP	Orange (AWG18)
Green (AWG18)	GND	10		10	GND	Green (AWG18)
Brown (AWG18)	GND	11		11	GND	Brown (AWG18)
Orange (AWG26)	AM_SD+	6		6	AM_SD+	Orange (AWG26)
Light blue (AWG26)	AM_SD-	2		2	AM_SD-	Light blue (AWG26)
Red (AWG26)	CT_SD+	7		7	CT_SD+	Red (AWG26)
Gray (AWG26)	CT_SD-	3		3	CT_SD-	Gray (AWG26)
Green (AWG26)	BK	4		4	BK	Green (AWG26)
Brown (AWG26)	EMGS	5		5	EMGS	Brown (AWG26)
-	NC	13	Center Interposition	13	NC	-
Black (AWG26)	FG	12		12	FG	Black (AWG26)

Extension cable for connecting a gateway unit and a hub unit.

Model number CB-RCP6S-RLY□□□-JY1/CB-RCP6S-RLY□□□-JY1-RB
Standard cable / Robot cable

* Please indicate the cable length (L) in □□□, maximum 10m minus basic cable length, e.g.) 030 = 3m
Available standard lengths: 1m/3m/5m



Minimum bending radius r= 72mm 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.

*** Please contact IAI if the cable length other than above is needed.**

CN1 J11DF-06V-KX (S.T.MFG.CO.,LTD.) — CN3 J11DFM-06-KX (S.T.MFG.CO.,LTD.)

Color	Signal name	Pin No.		Pin No.	Signal name	Color
Brown (AWG18)	MP	B1		B1	MP	Brown (AWG18)
Gray (AWG18)	MP	B2		B2	MP	Gray (AWG18)
Red (AWG18)	MP	B3		B3	MP	Red (AWG18)
Blue (AWG18)	GND	A1		A1	GND	Blue (AWG18)
Orange (AWG18)	GND	A2		A2	GND	Orange (AWG18)
Green (AWG18)	GND	A3		A3	GND	Green (AWG18)

CN2 DF62C-13S-2.2C (HIROSE ELECTRIC CO., LTD.) — CN4 DF62B-13EP-2.2C (HIROSE ELECTRIC CO., LTD.)

Color	Signal name	Pin No.		Pin No.	Signal name	Color
Blue (AWG22)	CP	1		1	CP	Blue (AWG22)
-	NC	8		8	NC	-
-	NC	9		9	NC	-
Orange (AWG22)	GND	10		10	GND	Orange (AWG22)
Green (AWG22)	GND	11		11	GND	Green (AWG22)
Brown (AWG26)	AM_SD+	6		6	AM_SD+	Brown (AWG26)
Green (AWG26)	AM_SD-	2		2	AM_SD-	Green (AWG26)
Red (AWG26)	CT_SD+	7		7	CT_SD+	Red (AWG26)
Gray (AWG26)	CT_SD-	3		3	CT_SD-	Gray (AWG26)
Light blue (AWG26)	NC	4		4	NC	Light blue (AWG26)
Orange (AWG26)	EMGS	5		5	EMGS	Orange (AWG26)
-	NC	13	Center Interposition	13	NC	-
Black (AWG26)	FG	12		12	FG	Black (AWG26)

RCP6(S)(CR)(W) Series V3b
Slider / Rod / Table Type
Catalogue No. 1217-E

The information contained in this catalog is subject to change without notice for the purpose of product improvement

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