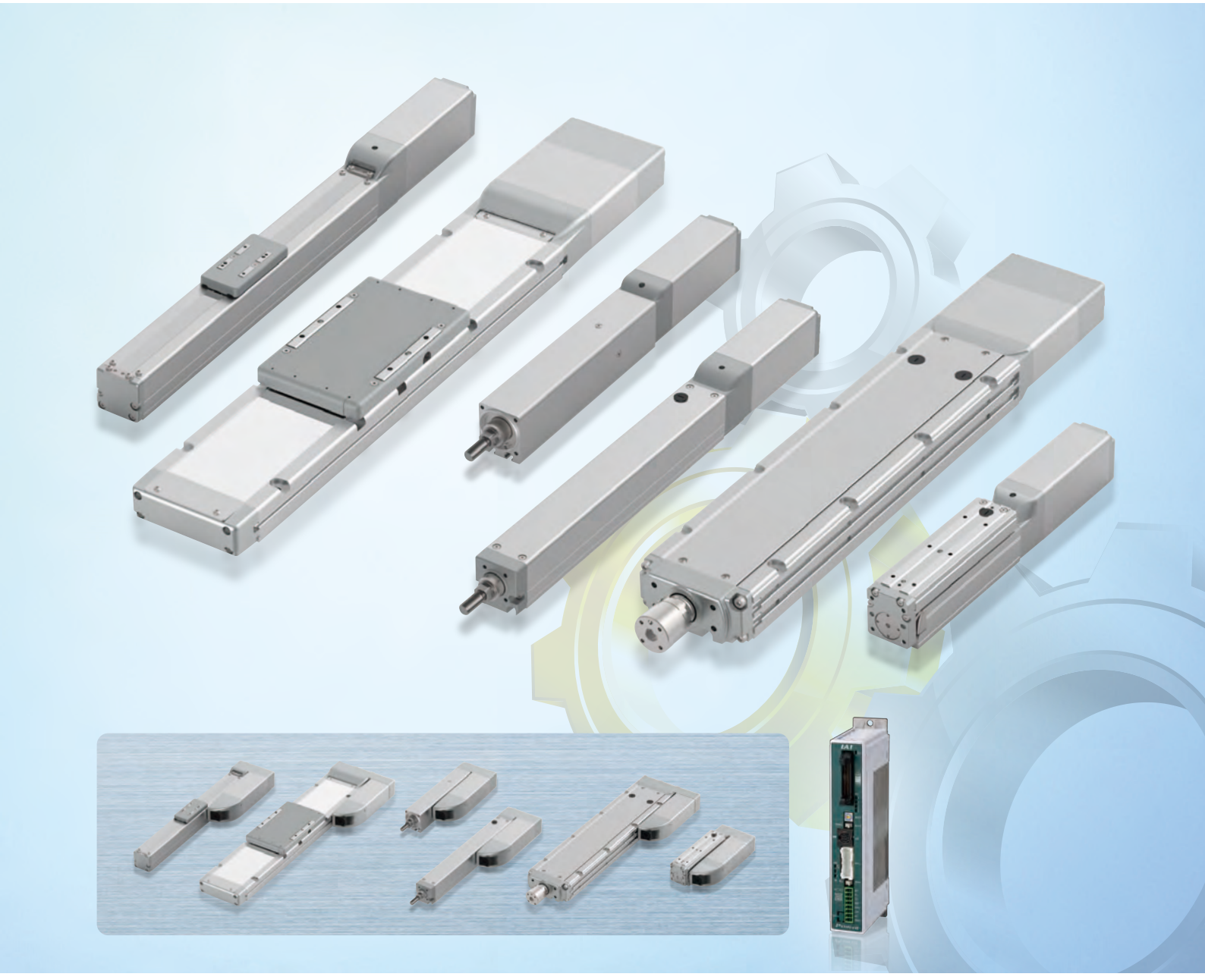
IAI
Quality and Innovation

ROBO Cylinder® with Battery-less Absolute Encoder as Standard

Standard Type **RCP6**

Built-in Controller Type **RCP6S**

Controller for ROBO Cylinder® **PCON-CB/CFB**



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IAI's Next Generation ROBO Cylinder®: RCP6

You Can Select the Product That Best Suits Your Needs from an Abundant Lineup of 92 Models.

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

Battery-less Absolute Encoder

No Battery, No Maintenance, No Homing, and No Price Increase. No Going Back to Incremental.

Built-in position memory system

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 ROBO Cylinder's positioning repeatability (±20μm) has been achieved.

Standard specification ±10μm

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

3 PowerCON® Compatible

Compatible with PowerCON® which is equipped with a high-output driver. The output of the stepper motor has increased by about 50% due to the use of PowerCON. This can reduce cycle time and help improve productivity.

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

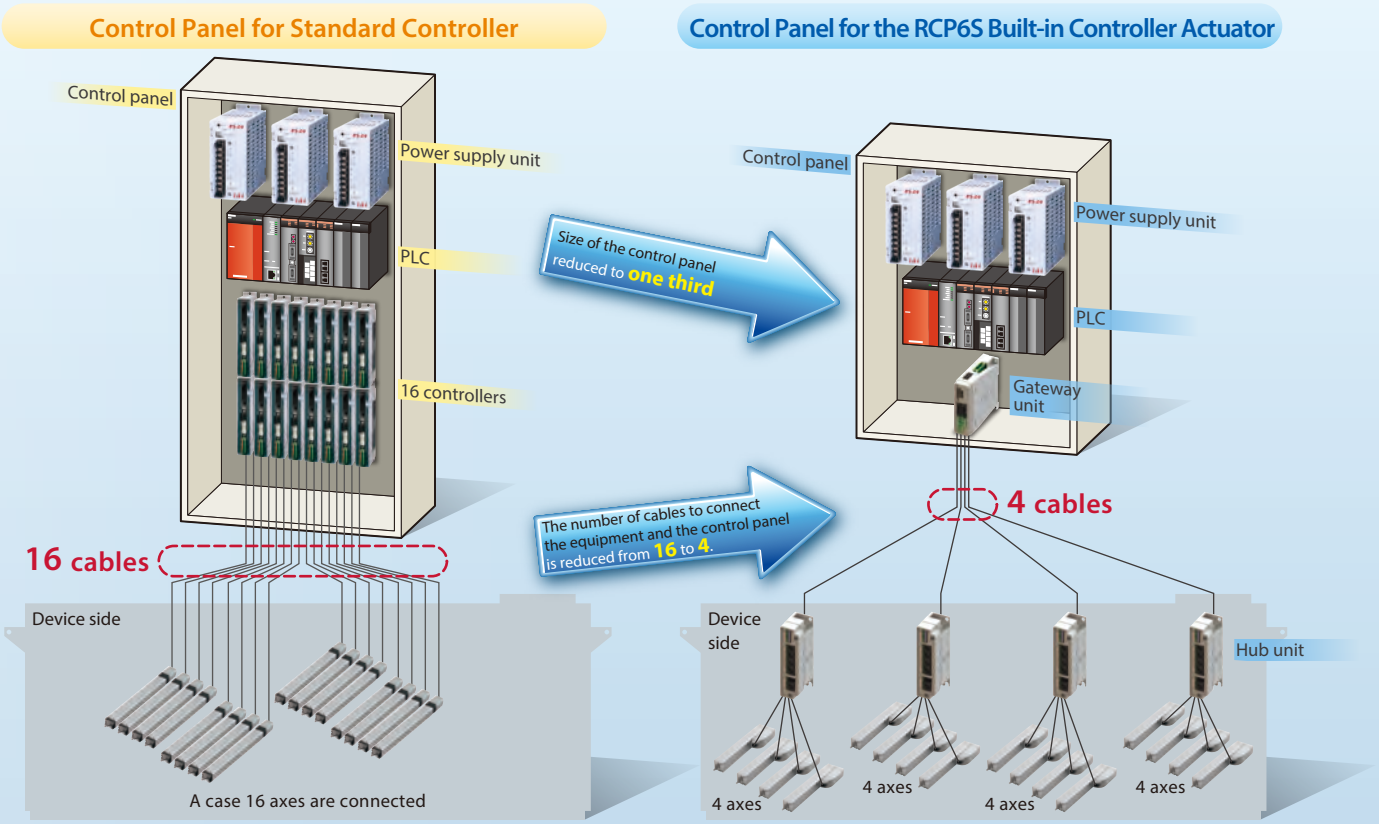
Standard/separate controller type or built-in controller type can be selected for all models.

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.6 for more information regarding the gateway unit and the hub unit.



* 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.

Applicable Controllers for RCP6 (Standard/Separate Controller Type)

NEW PCON-CB/CFB
Single-axis Position Controller

See P.128 for more details.

Max. number of controlled axes: 1 axis

Max. positioning points: 512 points (for network spec, 768 points)

MCON-C
Multi-axis Position Controller

Max. number of controlled axes: 8 axes

Max. positioning points: 256 points

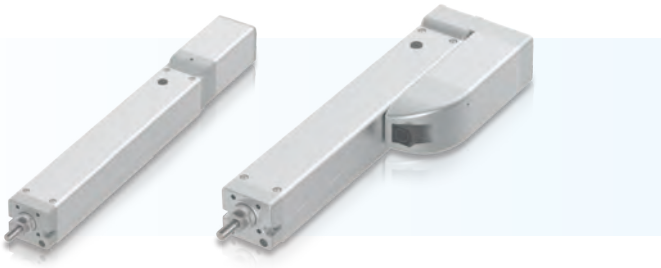
* Max. number of controlled axes is 4 axes when connected to RCP6.

MSEL
Multi-axis Program Controller

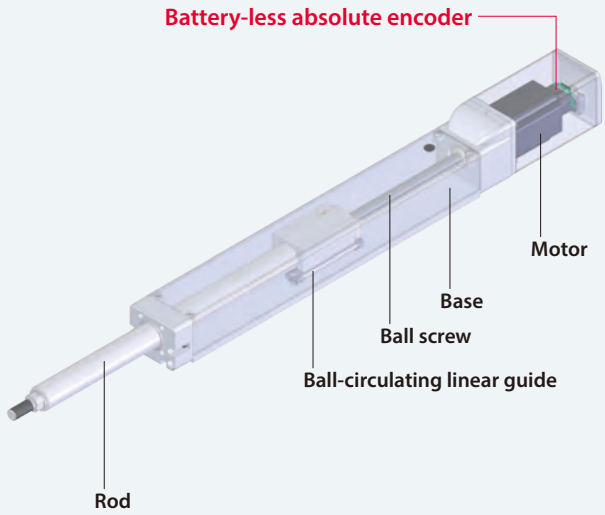
Max. number of controlled axes: 4 axes

Max. positioning points: 30,000 points

RCP6/RCP6S Series: Models and Features



Radial Cylinder: RRA



Features

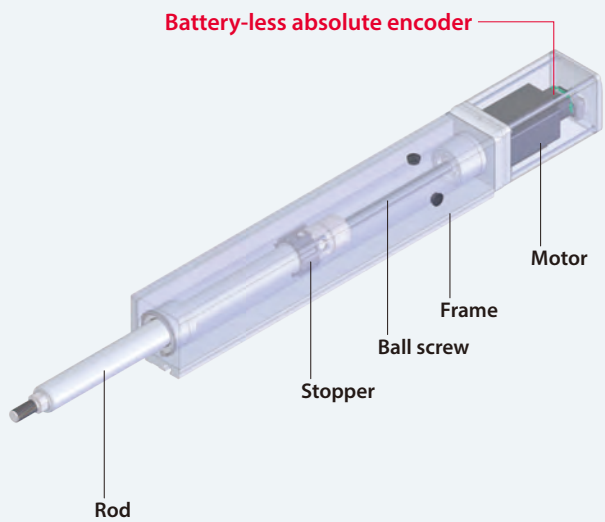
▶ Since ball circulating linear guides are built in, it can take radial loads and moment loads. The vibration upon stopping can be suppressed and a long stroke of up to 700mm has become possible. In addition, product quality has significantly increased with a non-rotating rod precision of "0 degree" 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

Rod Type: RA

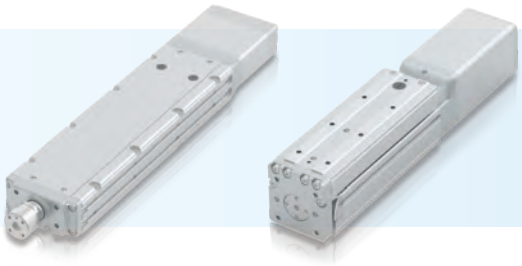


Features

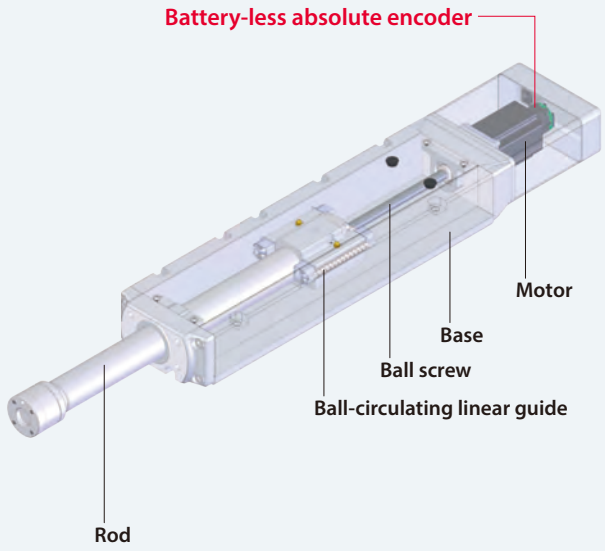
▶ This is a type that does not build in a linear guide inside of the actuator. Of the RCP6 rod-types that resemble air cylinders, this is the least expensive model.

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



Wide Radial Cylinder: WRA



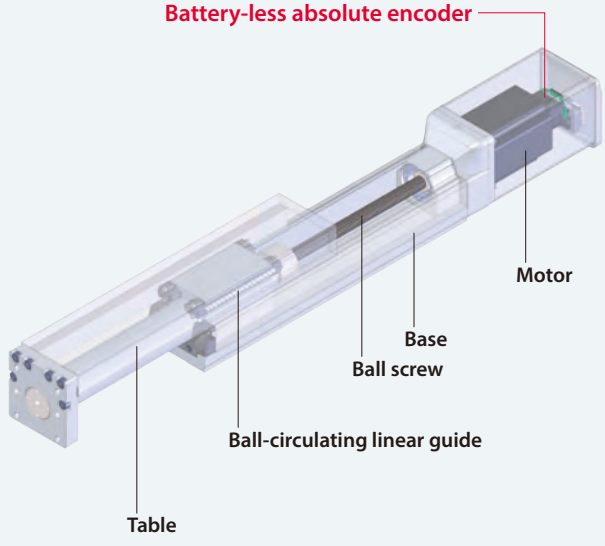
Features

- 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



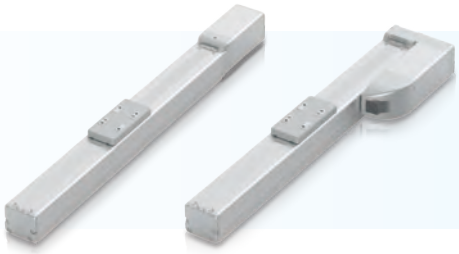
Features

- 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 by up to 4.3 times in the pitching (Ma) and yawing (Mb) directions.

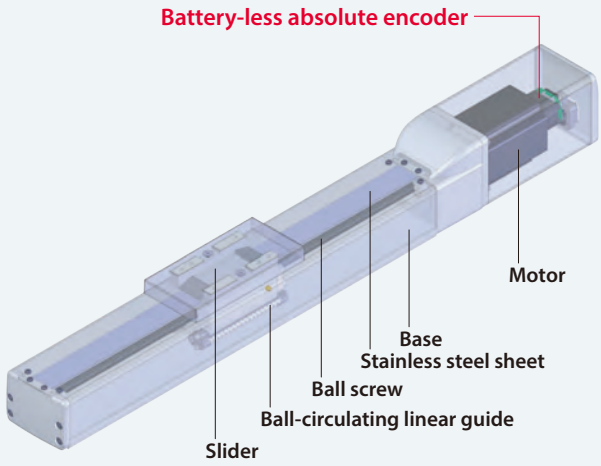
Usage examples

- 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

RCP6/RCP6S Series: Models and Features



Slider Type: SA



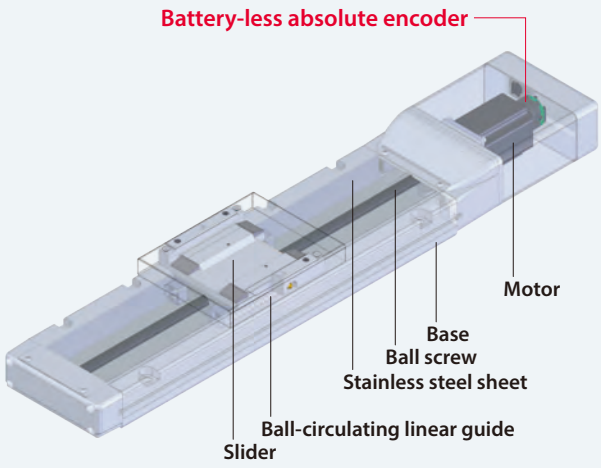
Features

- 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



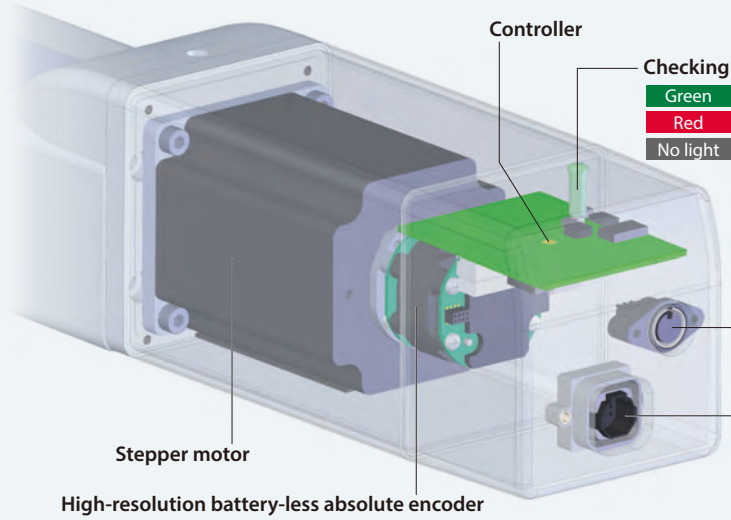
Features

- 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.

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

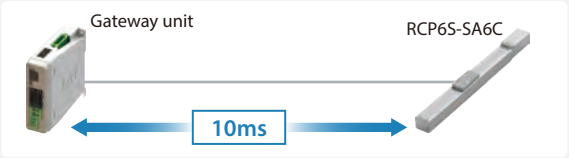
The gate unit can be used with the following 6 types of field networks.

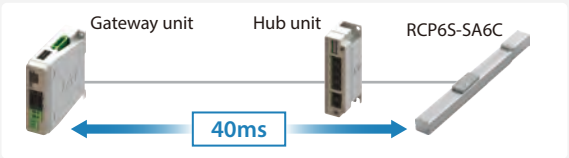
CC-Link / DeviceNet / PROFIBUS / PROFINET / EtherNet/IP / EtherCAT

▶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.

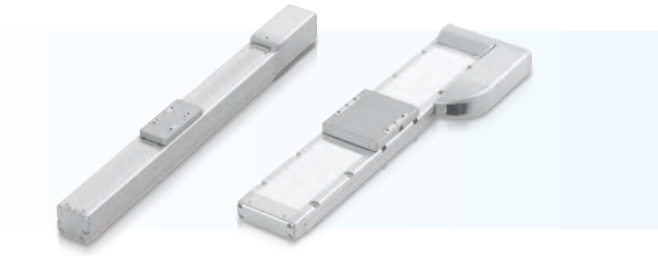
▶A maximum of 4 RCP6S' can be connected.

▶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.



Product Lineup

Slider Type: SA

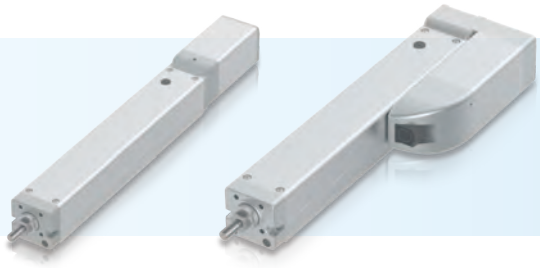
Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Stroke (mm)	Max. Speed (mm/s)	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Reference Page
Coupled Motor	SA4C		 40mm	16	±0.01	50~500 (50mm increments)	1,260	7	1.5	P.13
				10	±0.01 [±0.005]		785	12	3	
				5			390	14	5.5	
				2.5			195	18	12	
	SA6C		 58mm	20	±0.01	50~800 (50mm increments)	1,440 <1,280>	15	1	P.15
				12	±0.01 [±0.005]		900	28	2.5	
				6			450	32	6	
				3			225	40	16	
	SA7C		 70mm	24	±0.01		1,200	37	3	P.17
				16			980 <840>	46	8	
				8	±0.01 [±0.005]		490	51	16	
				4			245 <210>	55	25	
	SA8C		 85mm	30	±0.01	50~1,100 (50mm increments)	1,200 <850>	28	3	P.19
				20			1,000 <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)	1,260	7	1.5	P.21
				10			785	12	3	
				5			390	14	5.5	
				2.5			195	18	12	
	SA6R		 58mm	20	±0.01	50~800 (50mm increments)	1,280	15	1	P.23
				12			900 <800>	28	2.5	
				6			450	32	6	
				3			225	40	14	
	SA7R		 70mm	24	±0.01		1,080	37	3	P.25
				16			840 <700>	46	8	
				8			420	51	16	
				4			210	55	25	
	SA8R		 85mm	30	±0.01	50~1,100 (50mm increments)	1,200 <850>	26	3	P.27
				20			1,000 <800>	55	4	
				10			500 <450>	70	25	
				5			250 <225>	80	55	

Values in brackets < > are for 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.29
				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.31
				12	±0.01 [±0.005]		600	25	-	
				6			450 <400>	40	9	
				3			225	60	18	
	WSA14C		 140mm	24	±0.01		700	25	-	P.33
				16			560	50	-	
				8	±0.01 [±0.005]		420 <350>	65	14	
				4			210 <175>	80	26	
	WSA16C		 160mm	20	±0.01	50~1,100 (50mm increments)	720	50	-	P.35
				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.37
				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.39
				12			600	25	-	
				6			450 <400>	40	9	
				3			225	60	16	
	WSA14R		 140mm	24	±0.01		700	25	-	P.41
				16			560	50	-	
				8			420 <350>	65	14	
				4			175	80	26	
	WSA16R		 160mm	20	±0.01	50~1,100 (50mm increments)	600	30	-	P.43
				10			365 <210>	70	15	
				5			170 <145>	100	45	

Values in brackets < > are for vertical use. Values in brackets [ ] are for high-precision specification.



Rod Type: RA

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.45
				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.47
				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.49
				16			700 <560>	273	50	8	
				8			420	547	60	18	
				4			210 <175>	1,094	80	28	
	RA8C		85mm	20	±0.01	50~300 (50mm increments)	600 <450>	500	30	5	P.51
				10			300 <250>	1,000	60	40	
				5			150	2,000	100	70	
Side-mounted Motor	RA4R		40mm	16	±0.01	50~200 (50mm increments)	840 <700>	48	5	1	P.53
				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.55
				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.57
				16			560	273	50	8	
				8			420 <350>	547	60	18	
				4			175	1,094	80	28	
	RA8R		85mm	20	±0.01	50~300 (50mm increments)	400	500	30	5	P.59
				10			200	1,000	60	40	
				5			100	2,000	100	70	

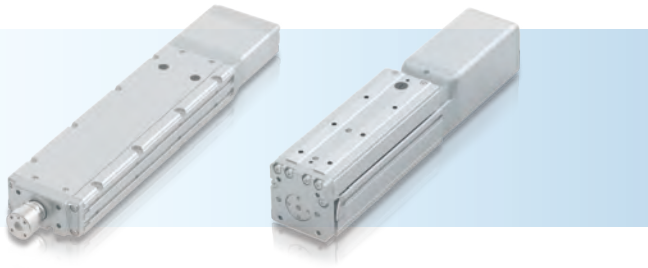
Values in brackets < > are for vertical use.

Radial Cylinder: RRA

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)	1,120	48	7	1.5	P.61
				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.63
				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.65
				16			700 <560>	273	50	8	
				8			420	547	60	18	
				4			210	1,094	80	28	
	RRA8C		85mm	20	±0.01	50~700 (50mm increments)	600 <450>	500	30	5	P.67
				10			300 <250>	1,000	60	40	
				5			150	2,000	100	70	
Side-mounted Motor	RRA4R		40mm	16	±0.01	60~410 (50mm increments)	840	48	5	1	P.69
				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.71
				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.73
				16			560	273	50	8	
				8			420 <350>	547	60	18	
				4			175	1,094	80	28	
	RRA8R		85mm	20	±0.01	50~700 (50mm increments)	400	500	30	5	P.75
				10			200	1,000	60	40	
				5			100	2,000	100	70	

Values in brackets < > are for vertical use.

Product Lineup



Wide Radial Cylinder: WRA

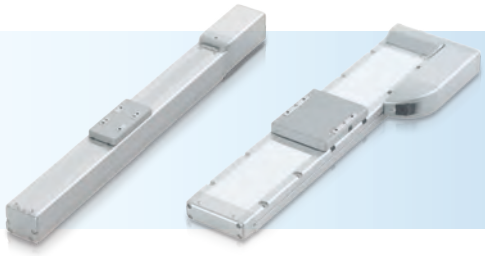
Motor	Type	External View	Body Width (mm)	Lead (mm)	Positioning Repeatability (mm)	Stroke (mm)	Max. Speed (mm/s)	Max. Push Force (N)	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Reference Page
Coupled Motor	WRA10C		100mm	16	±0.01	50~500 (50mm increments)	700	48	4	-	P.77
				10			525	77	14.5	-	
				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.79
				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.81
				16			560	273	50	-	
				8			420 <210>	547	65	15	
				4			210 <130>	1,094	85	25	
	WRA16C		160mm	20	±0.01	50~800 (50mm increments)	450	500	30	-	P.83
				10			240 <200>	1,000	60	36.5	
				5			130 <100>	2,000	100	70	
Side-mounted Motor	WRA10R		100mm	16	±0.01	50~500 (50mm increments)	700	48	4	-	P.85
				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.87
				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.89
				16			560	273	50	-	
				8			350 <210>	547	65	15	
				4			175 <130>	1,094	85	25	
	WRA16R		160mm	20	±0.01	50~800 (50mm increments)	420	500	30	-	P.91
				10			240 <180>	1,000	60	34.5	
				5			120 <100>	2,000	100	63	

Values in brackets < > are for 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
Motor Coupled Motor	TA4C		40mm	16	±0.01	Standard: 25~150 (25mm increments)	980 <700>	3[-]	1[-]	P.93
				10			785 <700>	4[8]	2.5[2.5]	
				5		DB Spec: 40, 65, 90, 140, 190, 240	390	5[10]	5[5]	
				2.5			195	5[10]	10[10]	
	TA6C		58mm	20	±0.01	Standard: 25~200 (25mm increments)	1,120 <800>	5[-]	1[-]	P.95
				12			800	8[15]	3[3]	
				6		DB Spec: 45, 70, 95, 120~320 (50mm increments)	400	10[20]	6[6]	
				3			200	10[20]	12[12]	
	TA7C		70mm	24	±0.01	Standard: 25~300	1,080 <860>	10[-]	3[-]	P.97
				16		DB Spec: 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	Standard: 25~150 (25mm increments)	980 <700>	3[-]	1[-]	P.99
				10			785 <700>	4[8]	2.5[2.5]	
				5		DB Spec: 40, 65, 90, 140, 190, 240	390	5[10]	5[5]	
				2.5			195	5[10]	10[10]	
	TA6R		58mm	20	±0.01	Standard: 25~200 (25mm increments)	1,120 <800>	5[-]	1[-]	P.101
				12			800 <680>	8[15]	3[3]	
				6		DB Spec: 45, 70, 95, 120~320 (50mm increments)	400	10[20]	6[6]	
				3			200	10[20]	12[12]	
	TA7R		70mm	24	±0.01	Standard: 25~300 (25mm increments)	1,080 <860>	10[-]	3[-]	P.103
				16			700 <560>	12[25]	7[7]	
				8		DB Spec: 40, 65, 90~390 (50mm increments)	420 <350>	15[30]	16[16]	
				4			210	15[30]	20[24]	

Values in brackets < > are for vertical use. Values in brackets [ ] are for the double-block specification.



Model Specification Items

Slider Type: SA

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

Series

RCP6	Standard (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□ Stepper motor
42P	42□ Stepper motor
56P	56□ Stepper motor
56SP	56□ Stepper 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	1,100mm

(Can be set in 50mm increments)

Applicable Controller (RCP6)

P3	PCON-CB/CGB MCON MSEL
P4	PCON-CFB/CGFB

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)
ML	Motor side-mounted to the left
MR	Motor side-mounted to the right
NM	Non-motor end specification
SS	Slider spacer
HPR	High-precision 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 — [Type] — WA — [Motor Type] — [Ball Screw Lead] — [Stroke] — [Applicable Controller (RCP6)] / [I/O Type (RCP6S)] — [Cable Length] — [Options]

Series

RCP6	Standard (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□ Stepper motor
42P	42□ Stepper motor
56P	56□ Stepper motor
56SP	56□ Stepper 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	1,100mm

(Can be set in 50mm increments)

Applicable Controller (RCP6)

P3	PCON-CB/CGB MCON MSEL
P4	PCON-CFB/CGFB

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

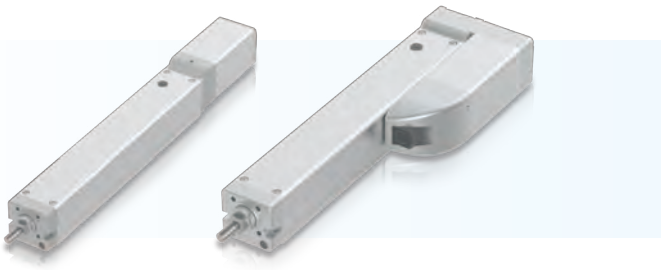
Cable Length

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)
ML	Motor side-mounted to the left
MR	Motor side-mounted to the right
NM	Non-motor end specification
HPR	High-precision 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

Rod Type: RA

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

Series

RCP6	Standard (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☐ Stepper motor
42P	42☐ Stepper motor
56P	56☐ Stepper motor
60P	60☐ Stepper 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 MCON MSEL
P4	PCON-CFB/CGFB

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

Series

RCP6	Standard (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☐ Stepper motor
42P	42☐ Stepper motor
56P	56☐ Stepper motor
60P	60☐ Stepper 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 MCON MSEL
P4	PCON-CFB/CGFB

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

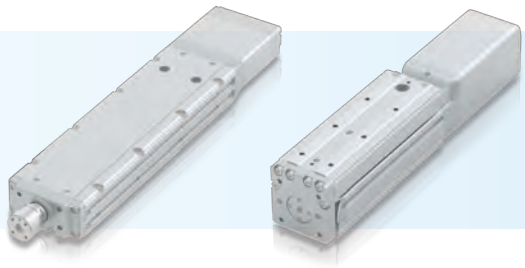
Cable Length

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.



Wide Radial Cylinder: WRA

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

Series

RCP6	Standard (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□ Stepper motor
42P	42□ Stepper motor
56P	56□ Stepper motor
60P	60□ Stepper 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 MCON MSEL
P4	PCON-CFB/CGFB

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

Series

RCP6	Standard (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□ Stepper motor
42P	42□ Stepper motor
56P	56□ Stepper 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 MCON MSEL

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.

RCP6(S)-SA4C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 40 mm | 24V Stepper 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: Stepper Motor 35□ Size	16:16mm 10:10mm 5: 5mm 2.5:2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

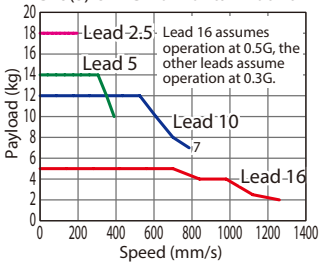
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

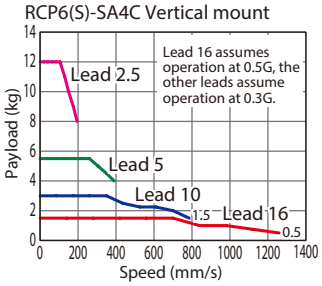
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-SA4C Horizontal mount



RCP6(S)-SA4C Vertical mount



Actuator Specifications

■ Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-SA4C-WA-35P-16-①-②-③-④	16	High-output Enabled	7	1.5	50~500 (The increment of stroke is 50mm)
RCP6(S)-SA4C-WA-35P-10-①-②-③-④	10	High-output Enabled	12	3	
RCP6(S)-SA4C-WA-35P-5-①-②-③-④	5	High-output Enabled	14	5.5	
RCP6(S)-SA4C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	18	12	

■ Stroke and Max. Speed

(Unit: mm/s)

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

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

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**300**	○	○
100	○	○	**350**	○	○
150	○	○	**400**	○	○
200	○	○	**450**	○	○
250	○	○	**500**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-precision specification *	**HPR**	See P.108
Non-motor end specification	**NM**	See P.110

* Positioning repeatability is ±5μm for high-precision specification (HPR). High-precision specification option cannot be selected for lead 16.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, 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)

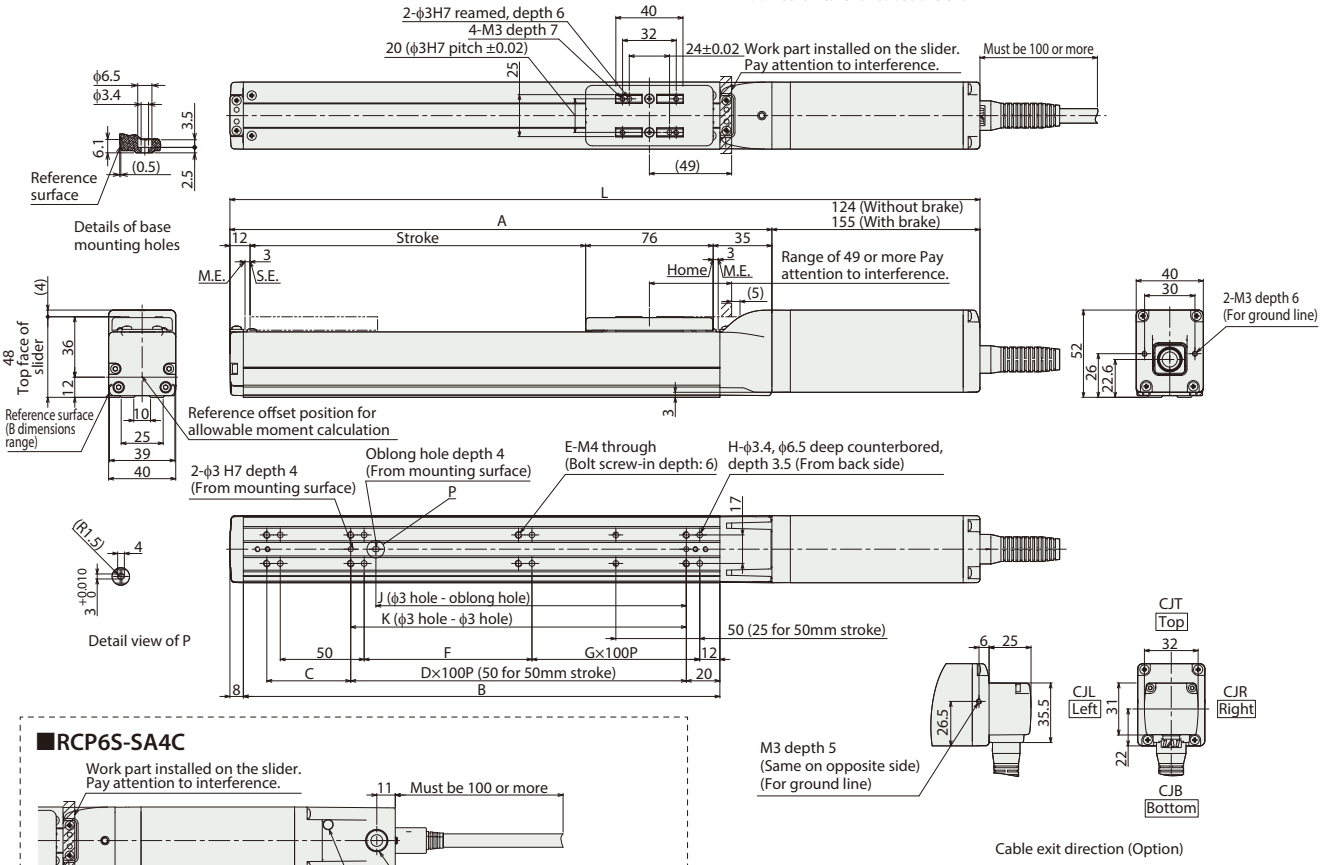
* Reference for overhang load length: Ma: 150mm or less, Mb, Mc: 150mm or less

(*1) Values in [ ] are for high-precision (for lead 2.5/5/10) specification.
(*2) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

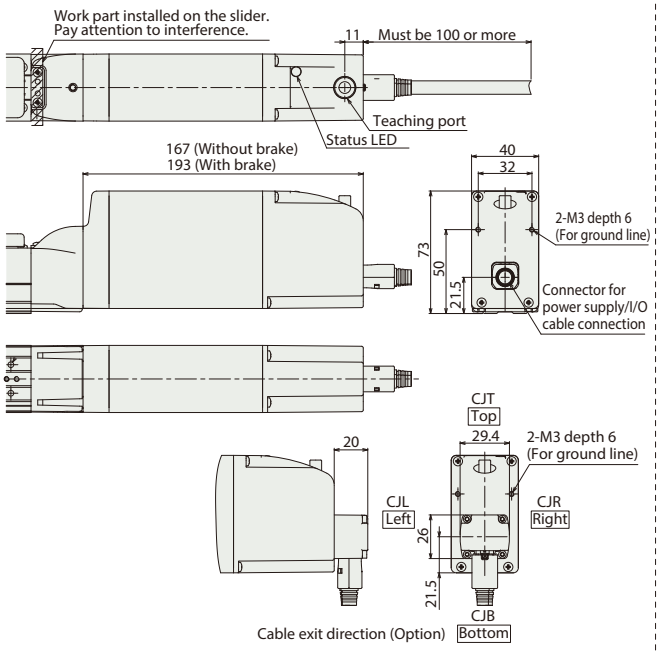
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-SA6C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 58 mm | 24V Stepper 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	SA6C	WA: Battery-less Absolute	42P: Stepper Motor 42□ Size	20:20mm 12:12mm 6: 6mm 3: 3mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

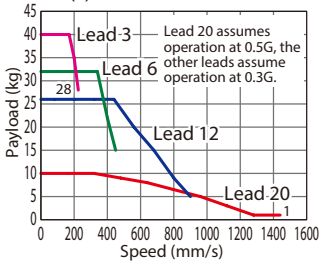
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

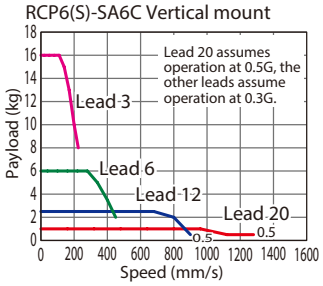
Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-SA6C Horizontal mount



RCP6(S)-SA6C Vertical mount



Actuator Specifications

Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-SA6C-WA-42P-20-①-②-③-④	20	High-output Enabled	15	1	50~800 (The increment of stroke is 50mm)
RCP6(S)-SA6C-WA-42P-12-①-②-③-④	12	High-output Enabled	28	2.5	
RCP6(S)-SA6C-WA-42P-6-①-②-③-④	6	High-output Enabled	32	6	
RCP6(S)-SA6C-WA-42P-3-①-②-③-④	3	High-output Enabled	40	16	

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	1,440 <1,280>		1,335 <1,280>	1,130	970	840	735	650	575
12	High-output Enabled	900	885	735	620	535	460	405	355	315
6	High-output Enabled	450	435	365	305	265	230	200	175	155
3	High-output Enabled	225	215	180	150	130	115	100	85	75

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**450**	○	○
100	○	○	**500**	○	○
150	○	○	**550**	○	○
200	○	○	**600**	○	○
250	○	○	**650**	○	○
300	○	○	**700**	○	○
350	○	○	**750**	○	○
400	○	○	**800**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-precision specification *	**HPR**	See P.108
Non-motor end specification	**NM**	See P.110

* Positioning repeatability is ±5μm for high-precision specification (HPR). High-precision specification option cannot be selected for lead 20.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, 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)

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

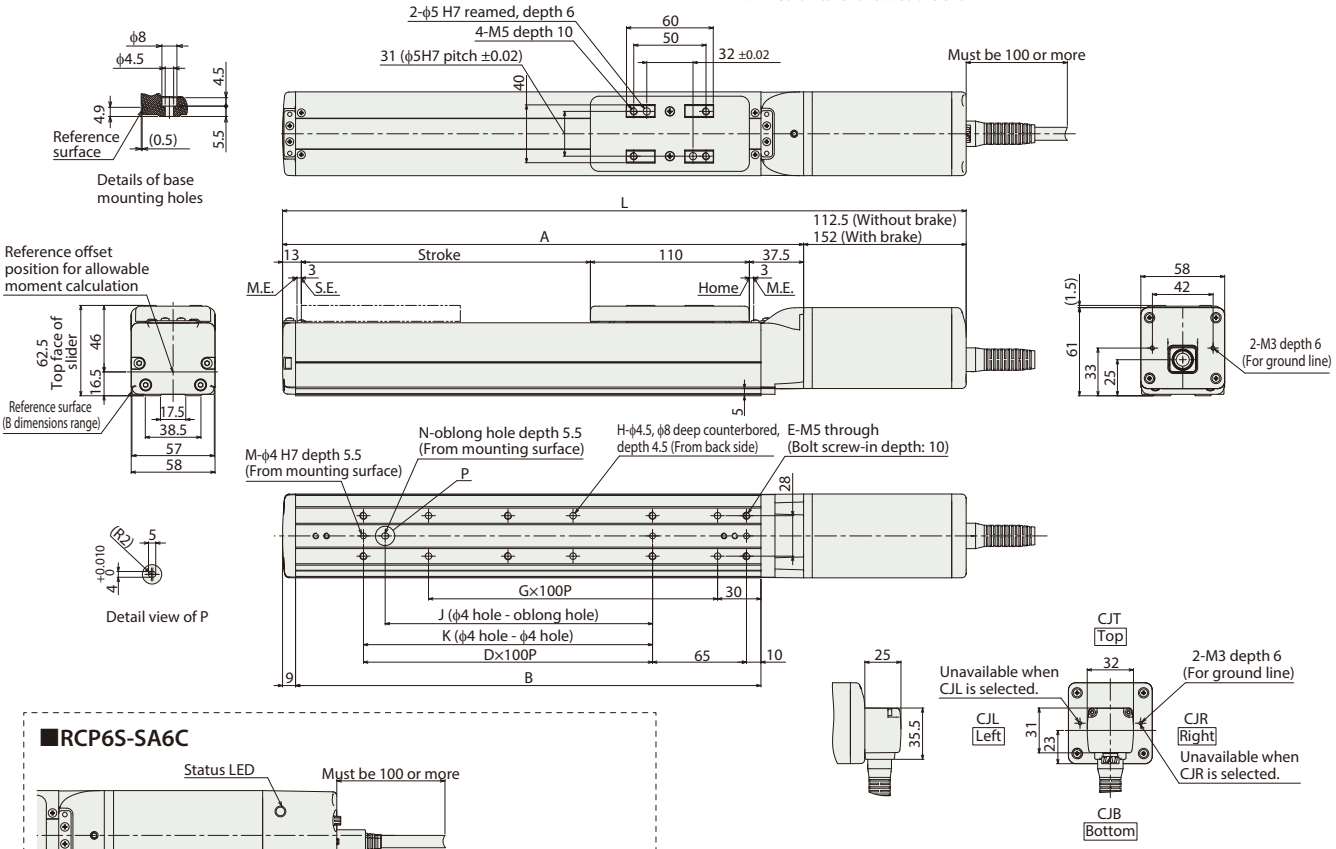
(*1) Values in [ ] are for high-precision (for lead 3/6/12) specification.
(*2) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

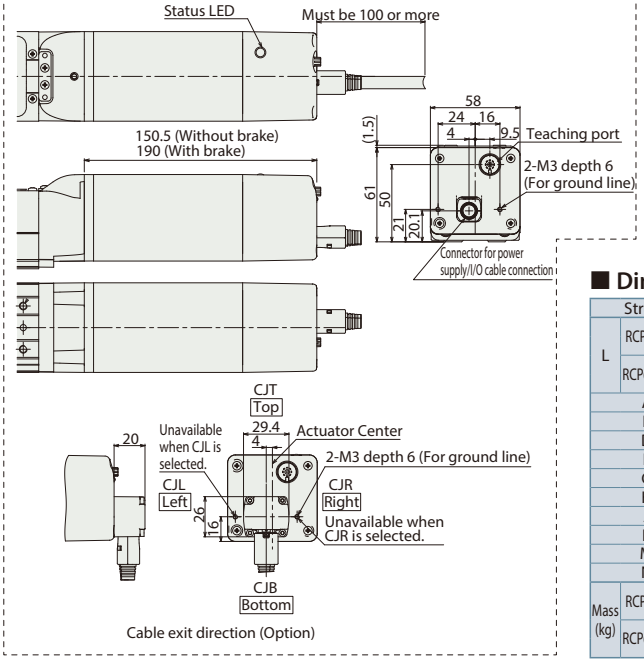
Dimensions

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

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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-SA7C

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

Model Specification Items

□ — SA7C — 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: Stepper Motor 56□ Size	24:24mm 16:16mm 8: 8mm 4: 4mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

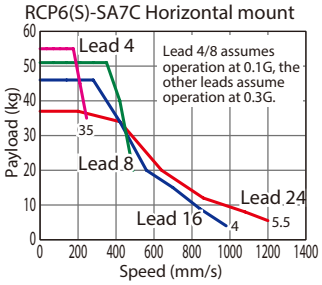
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

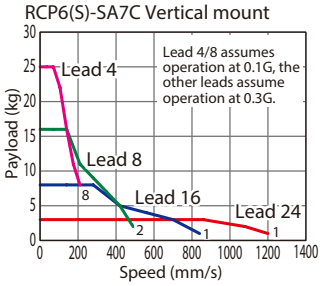
Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-SA7C Horizontal mount



RCP6(S)-SA7C Vertical mount



Actuator Specifications

Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-SA7C-WA-56P-24-①-②-③-④	24	High-output Enabled	37	3	50~800 (The increment of stroke is 50mm)
RCP6(S)-SA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	46	8	
RCP6(S)-SA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	51	16	
RCP6(S)-SA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	55	25	

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	1,200			1,095	965	850	760
16	High-output Enabled	980 <840>	965 <840>	830	720	635	560	500
8	High-output Enabled	490	475	410	355	315	275	245
4	High-output Enabled	245 <210>	235 <210>	205	175	155	135	120

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**450**	○	○
100	○	○	**500**	○	○
150	○	○	**550**	○	○
200	○	○	**600**	○	○
250	○	○	**650**	○	○
300	○	○	**700**	○	○
350	○	○	**750**	○	○
400	○	○	**800**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-precision specification *	**HPR**	See P.108
Non-motor end specification	**NM**	See P.110

* Positioning repeatability is ±5μm for high-precision specification (HPR). High-precision specification option cannot be selected for lead 16, 24.

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

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, 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)

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

(*1) Values in [ ] are for high-precision (for lead 4/8) specification .

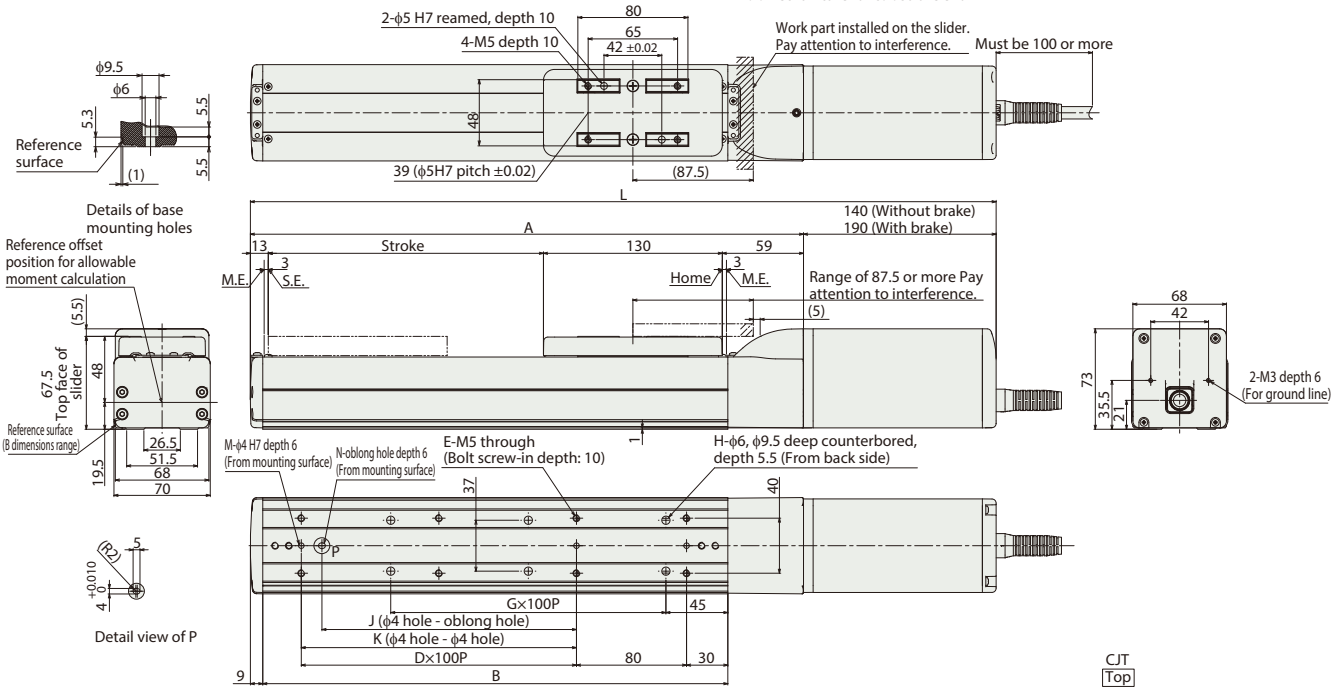
(*2) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

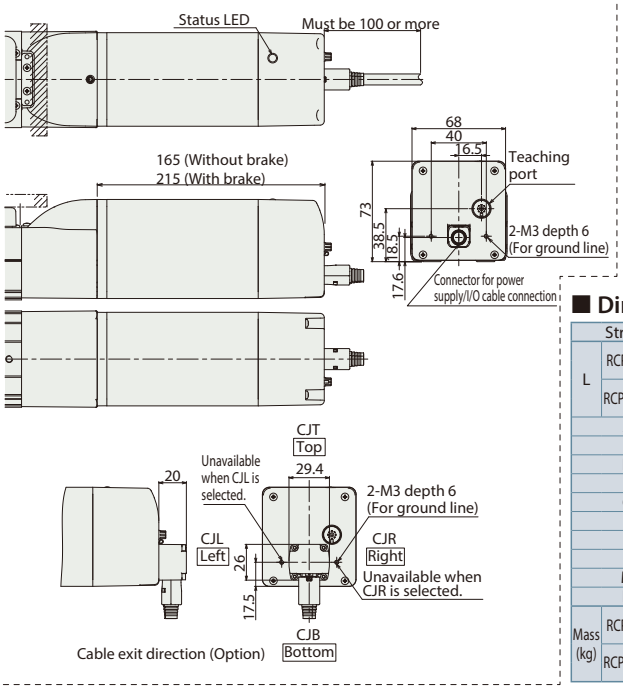
Dimensions

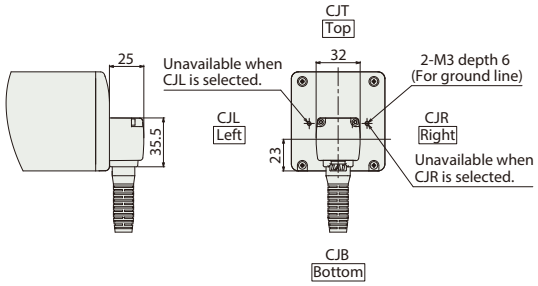
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

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



■RCP6S-SA7C





■ 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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-SA8C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 85 mm | 24V Stepper 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 Stepper Motor 56□ Size	30: 30mm 20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 1,100: 1,100mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB [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.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions

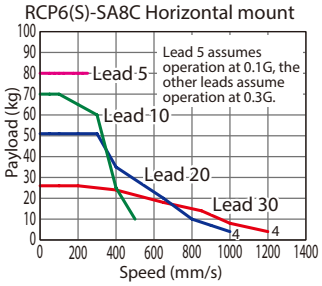
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

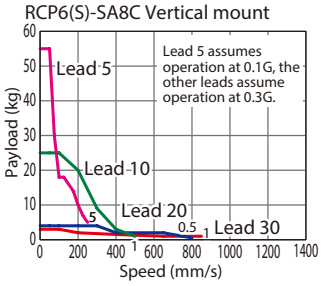
■ Correlation Diagrams of Speed and Payload

PCON connected.

RCP6(S)-SA8C Horizontal mount



RCP6(S)-SA8C Vertical mount



Actuator Specifications

■ Lead and Payload

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-SA8C-WA-56SP-30-①-②-③-④	30	28	3	50~1,100 (The increment of stroke is 50mm)
RCP6(S)-SA8C-WA-56SP-20-①-②-③-④	20	60	4	
RCP6(S)-SA8C-WA-56SP-10-①-②-③-④	10	70	25	
RCP6(S)-SA8C-WA-56SP-5-①-②-③-④	5	80	55	

■ 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)	1,000 (mm)	1,050 (mm)	1,100 (mm)
30	1,200 <850>			1,155 <850>	1,040 <850>	940 <850>	855 <850>	780	715	660
20	1,000 <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

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**600**	○	○
100	○	○	**650**	○	○
150	○	○	**700**	○	○
200	○	○	**750**	○	○
250	○	○	**800**	○	○
300	○	○	**850**	○	○
350	○	○	**900**	○	○
400	○	○	**950**	○	○
450	○	○	**1000**	○	○
500	○	○	**1050**	○	○
550	○	○	**1100**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-precision specification *	**HPR**	See P.108
Non-motor end specification	**NM**	See P.110

* Positioning repeatability is ±5μm for high-precision specification (HPR). High-precision specification option cannot be selected for lead 20, 30.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, 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)

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

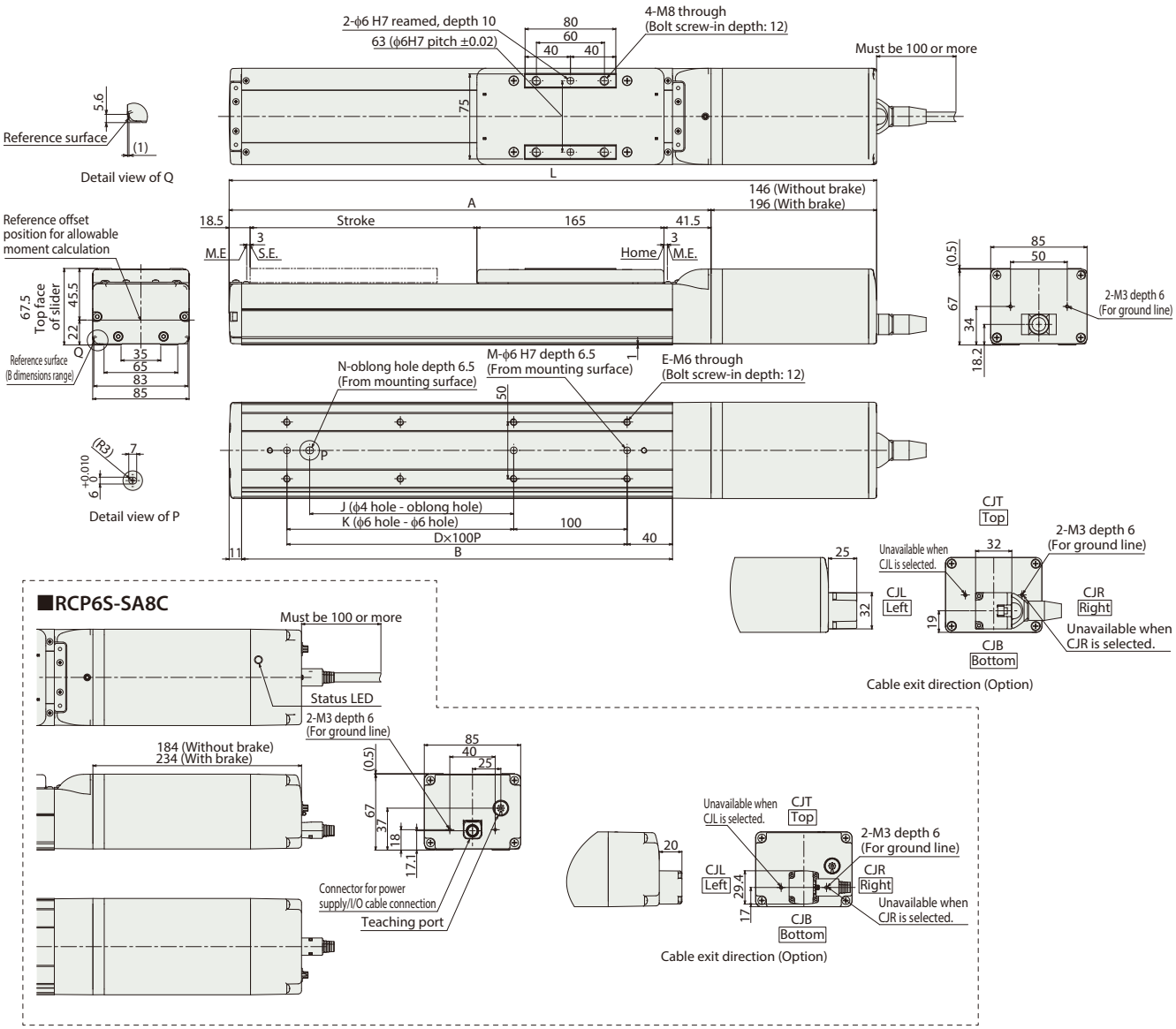
(*1) Values in [ ] are for high-precision (for lead 5/10) specification .
(*2) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

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

2D CAD 3D CAD

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

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.147 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-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet CompoNet EtherNet/IP CC-Link MECHATROLINK PROFIBUS EtherCAT. POWERLINK	512 (768 for network spec.)	Please see P.131

RCP6(S)-SA4R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 24V Stepper 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: Stepper Motor 35□ Size	16:16mm 10:10mm 5: 5mm 2.5:2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

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

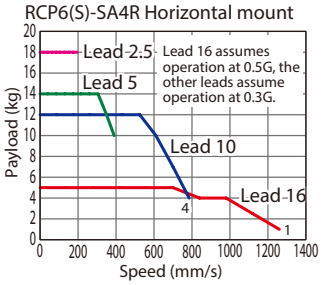
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

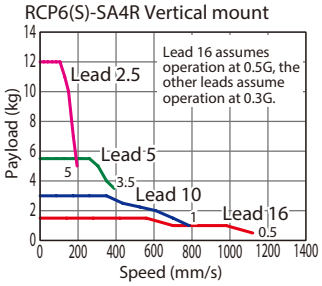
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-SA4R Horizontal mount



RCP6(S)-SA4R Vertical mount



Actuator Specifications

■ Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-SA4R-WA-35P-16-①-②-③-④	16	High-output Enabled	7	1.5	50~500 (The increment of stroke is 50mm)
RCP6(S)-SA4R-WA-35P-10-①-②-③-④	10	High-output Enabled	12	3	
RCP6(S)-SA4R-WA-35P-5-①-②-③-④	5	High-output Enabled	14	5.5	
RCP6(S)-SA4R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	18	12	

■ Stroke and Max. Speed

(Unit: mm/s)

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

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**300**	○	○
100	○	○	**350**	○	○
150	○	○	**400**	○	○
200	○	○	**450**	○	○
250	○	○	**500**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, 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 (*)	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)

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

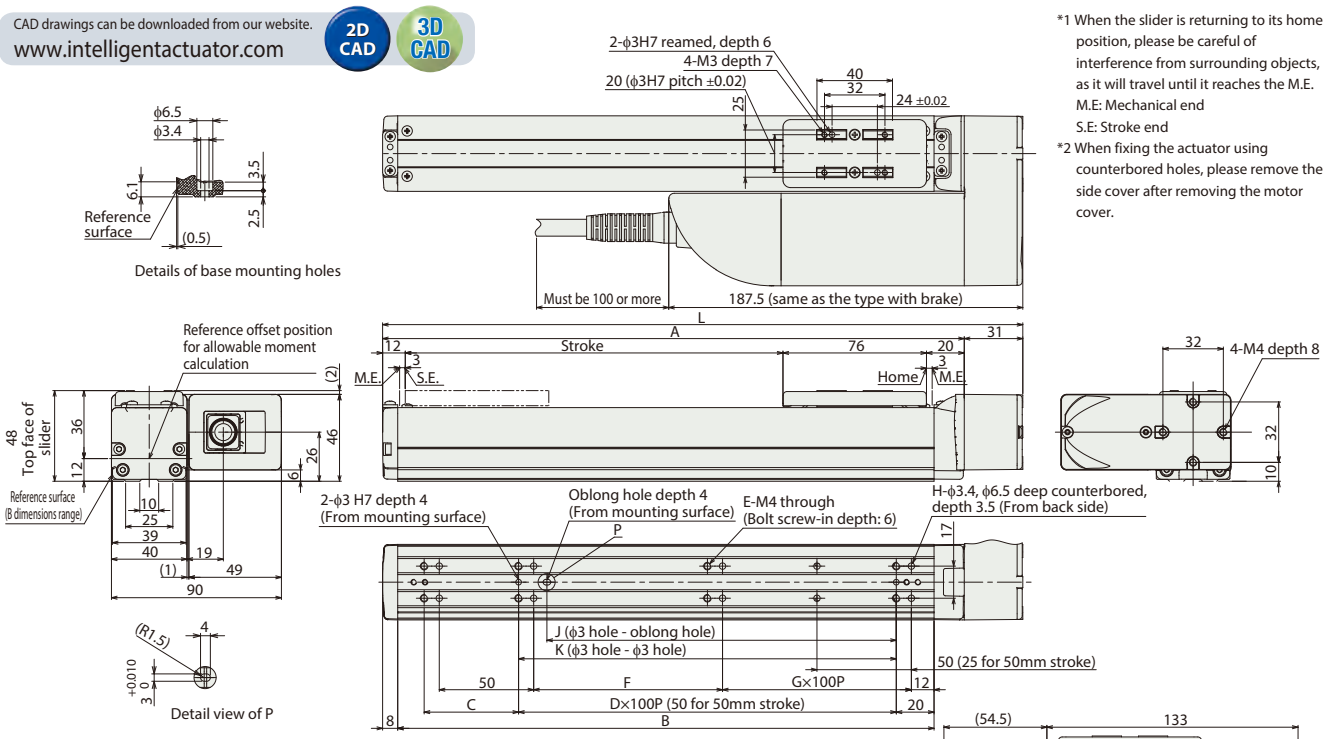
(*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

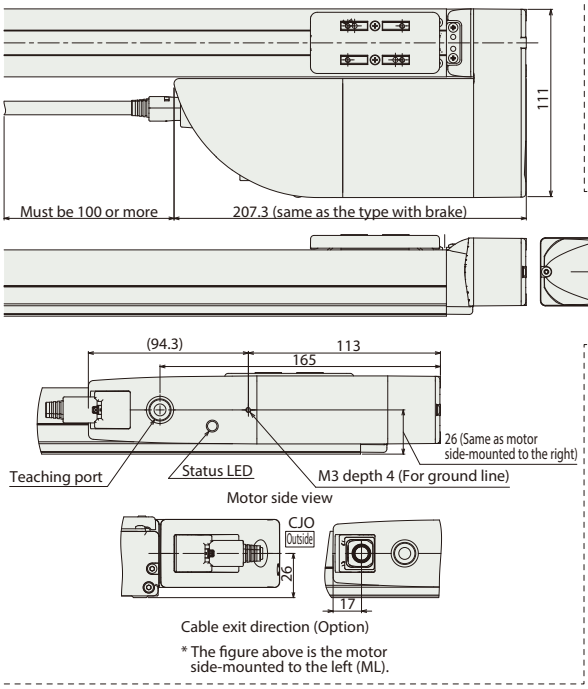
Dimensions

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

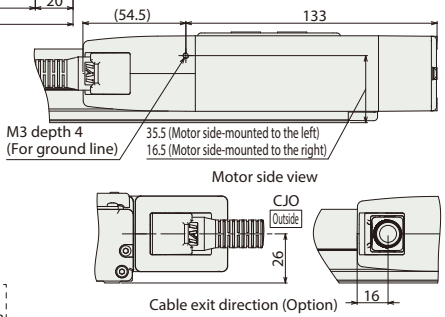
*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end
S.E: Stroke end
*2 When fixing the actuator using counterbored holes, please remove the side cover after removing the motor 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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

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

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-SA6R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 58* mm | 24V Stepper 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: Stepper Motor 42□ Size	20:20mm 12:12mm 6: 6mm 3: 3mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

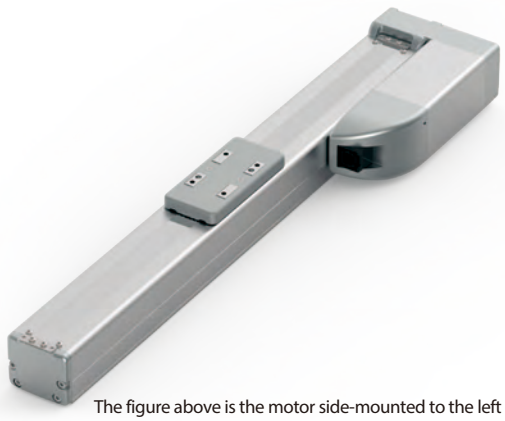
* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

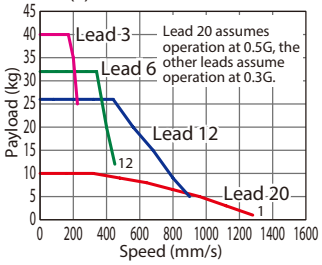
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

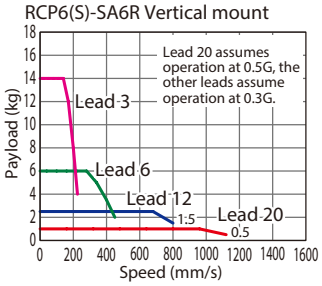
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-SA6R Horizontal mount



RCP6(S)-SA6R Vertical mount



Actuator Specifications

■ Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-SA6R-WA-42P-20-①-②-③-④	20	High-output Enabled	15	1	50~800 (The increment of stroke is 50mm)
RCP6(S)-SA6R-WA-42P-12-①-②-③-④	12	High-output Enabled	28	2.5	
RCP6(S)-SA6R-WA-42P-6-①-②-③-④	6	High-output Enabled	32	6	
RCP6(S)-SA6R-WA-42P-3-①-②-③-④	3	High-output Enabled	40	14	

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	1,280			1,130	970	840	735	650	575
12	High-output Enabled	900 <800>	885 <800>	735	620	535	460	405	355	315
6	High-output Enabled	450	435	365	305	265	230	200	175	155
3	High-output Enabled	225	215	180	150	130	115	100	85	75

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**450**	○	○
100	○	○	**500**	○	○
150	○	○	**550**	○	○
200	○	○	**600**	○	○
250	○	○	**650**	○	○
300	○	○	**700**	○	○
350	○	○	**750**	○	○
400	○	○	**800**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, 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 (*)	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)

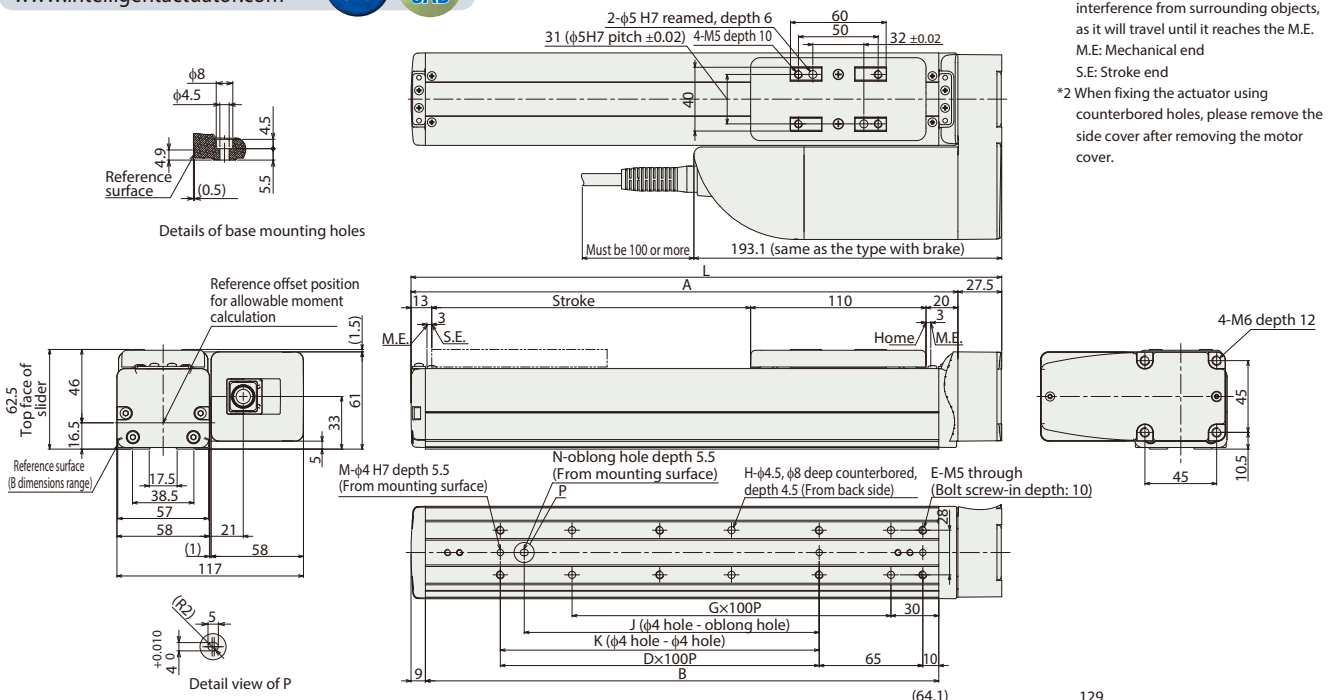
* Reference for overhang load length: Ma: 220mm or less, Mb, Mc: 220mm or less

(*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

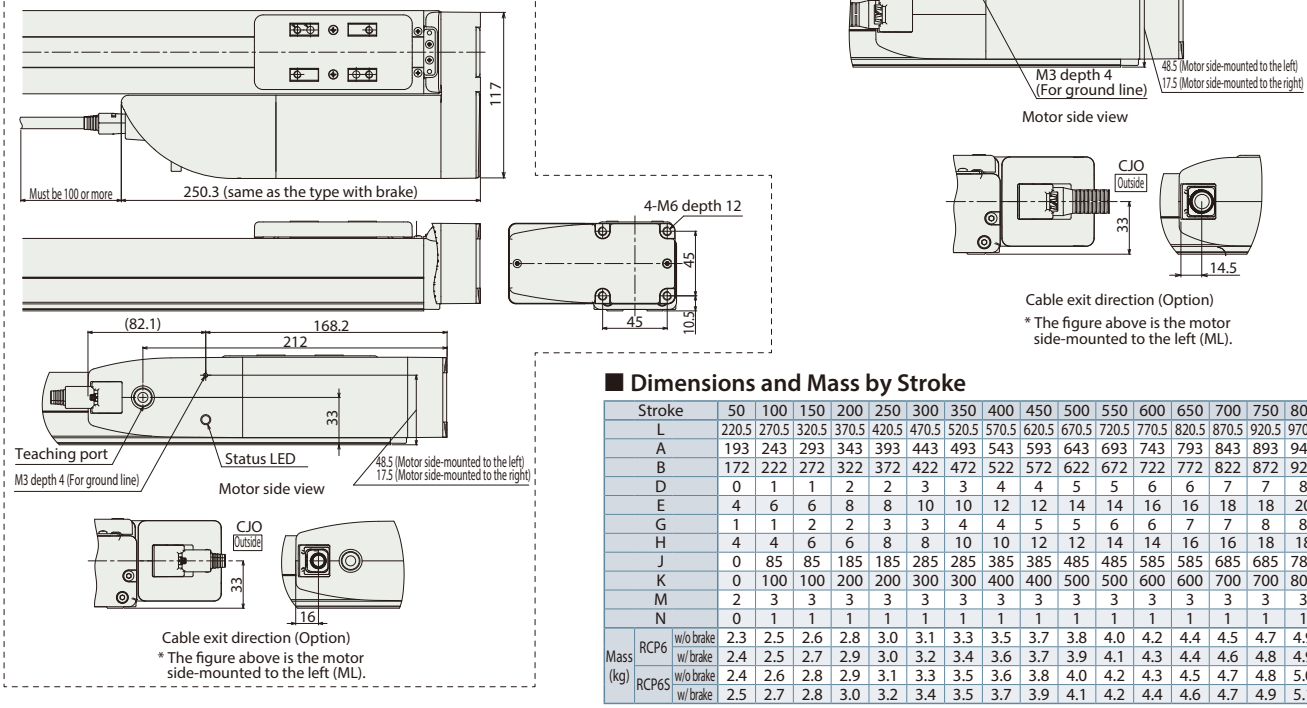
Dimensions

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

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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

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

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-SA7R

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

Model Specification Items

□ — SA7R — 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: Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

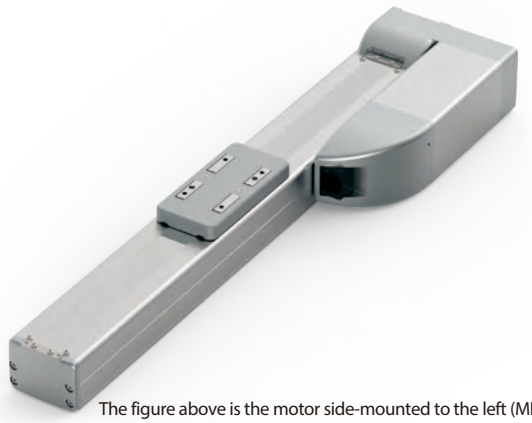
* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

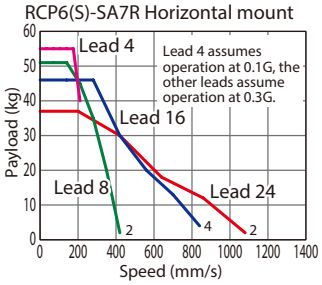
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

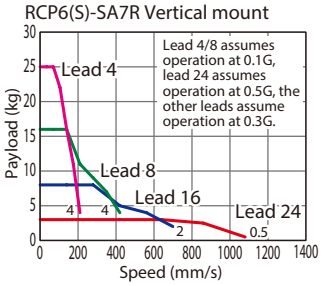
Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-SA7R Horizontal mount



RCP6(S)-SA7R Vertical mount



Actuator Specifications

Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-SA7R-WA-56P-24-①-②-③-④	24	High-output Enabled	37	3	50~800 (The increment of stroke is 50mm)
RCP6(S)-SA7R-WA-56P-16-①-②-③-④	16	High-output Enabled	46	8	
RCP6(S)-SA7R-WA-56P-8-①-②-③-④	8	High-output Enabled	51	16	
RCP6(S)-SA7R-WA-56P-4-①-②-③-④	4	High-output Enabled	55	25	

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	1,080				965	850	760
16	High-output Enabled	840 <700>		830 <700>	720 <700>	635	560	500
8	High-output Enabled	420		410	355	315	275	245
4	High-output Enabled	210		205	175	155	135	120

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**450**	○	○
100	○	○	**500**	○	○
150	○	○	**550**	○	○
200	○	○	**600**	○	○
250	○	○	**650**	○	○
300	○	○	**700**	○	○
350	○	○	**750**	○	○
400	○	○	**800**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110
Slider spacer	**SS**	See P.111

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

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, 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)

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

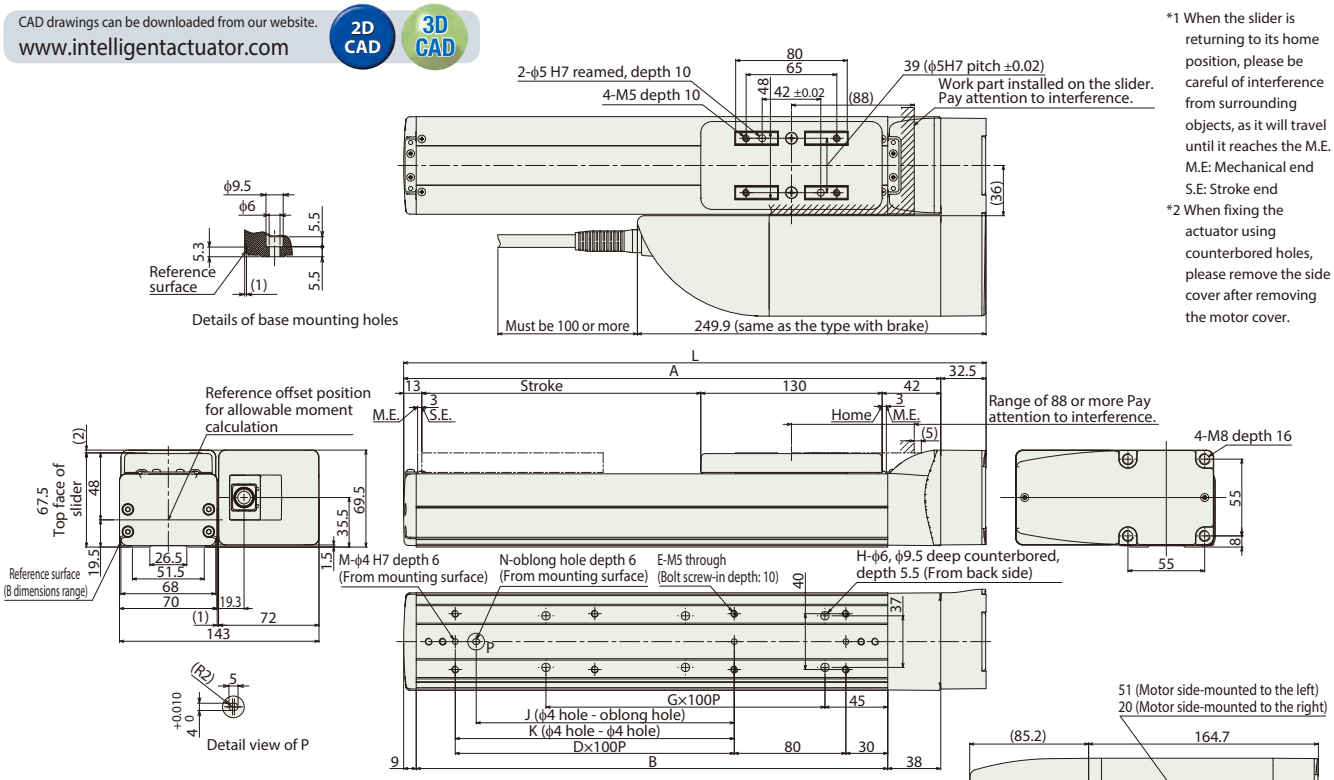
(*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

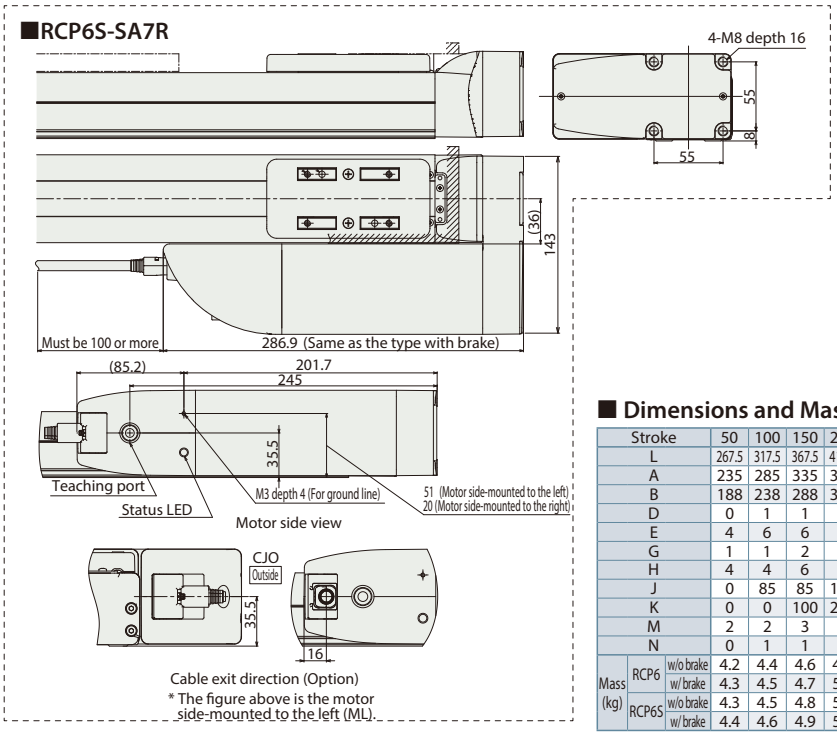
Dimensions

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

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



■ 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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

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

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-SA8R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 85* mm | 24V Stepper 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 Stepper Motor 56□ Size	30: 30mm 20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 1100: 1,100mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB [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.

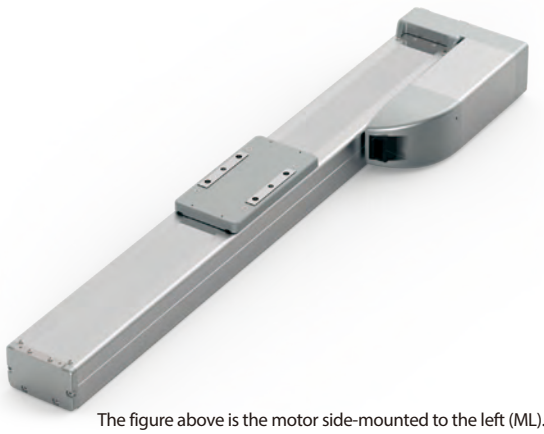
* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

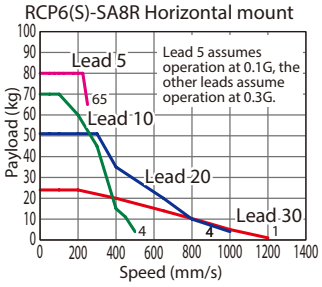
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

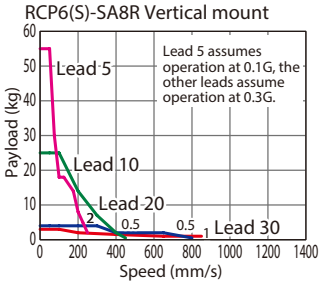
■ Correlation Diagrams of Speed and Payload

PCON connected.

RCP6(S)-SA8R Horizontal mount



RCP6(S)-SA8R Vertical mount



Actuator Specifications

■ Lead and Payload

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-SA8R-WA-56SP-30-①-②-③-④	30	26	3	50~1,100 (The increment of stroke is 50mm)
RCP6(S)-SA8R-WA-56SP-20-①-②-③-④	20	55	4	
RCP6(S)-SA8R-WA-56SP-10-①-②-③-④	10	70	25	
RCP6(S)-SA8R-WA-56SP-5-①-②-③-④	5	80	55	

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)	1,000 (mm)	1,050 (mm)	1,100 (mm)
30	1,200 <850>			1,155 <850>	1,040 <850>	940 <850>	855 <850>	780	715	660
20	1,000 <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 <225>	240 <225>	215	190	175	155	145	130	120	110

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**600**	○	○
100	○	○	**650**	○	○
150	○	○	**700**	○	○
200	○	○	**750**	○	○
250	○	○	**800**	○	○
300	○	○	**850**	○	○
350	○	○	**900**	○	○
400	○	○	**950**	○	○
450	○	○	**1000**	○	○
500	○	○	**1050**	○	○
550	○	○	**1100**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110
Slider spacer	**SS**	See P.111

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

Actuator Specifications

Item	Description
Drive system	Ball screw φ16mm, 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 (*)	Ma: 77.0N•m, Mb: 77.0N•m, Mc: 146N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

(*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

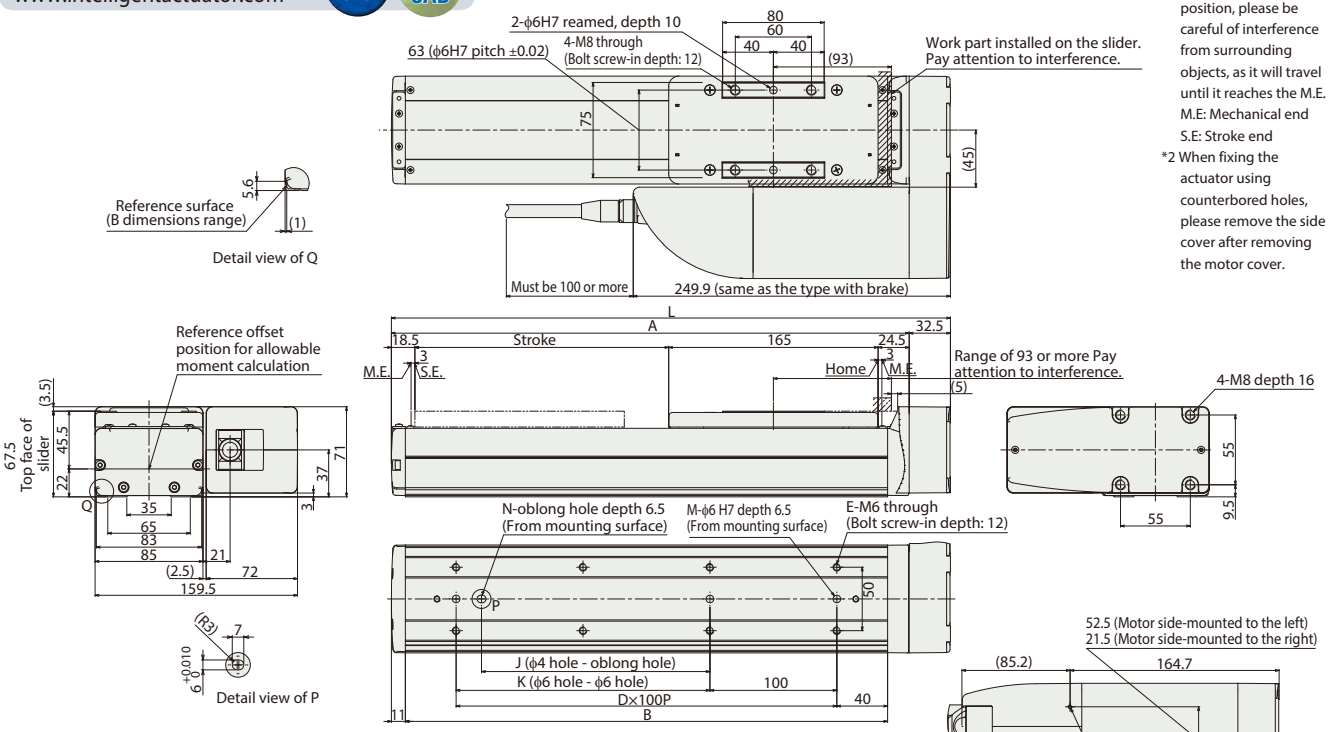
Dimensions

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

2D CAD 3D CAD

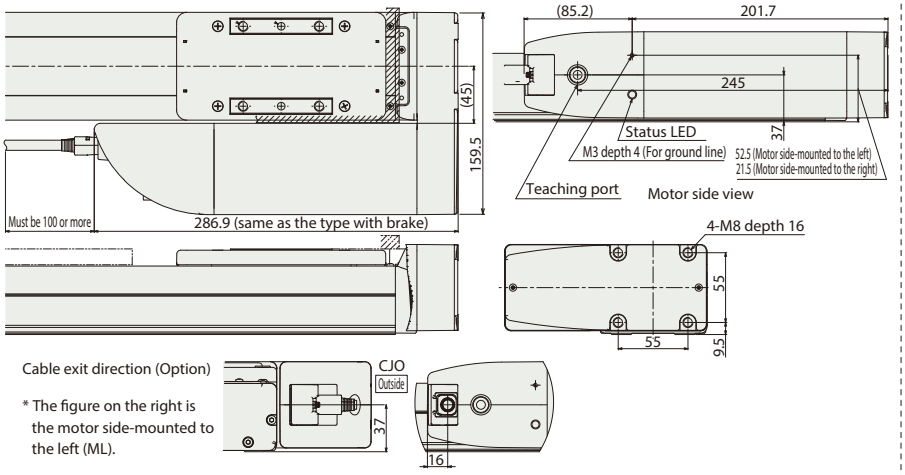
*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end
S.E: Stroke end

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



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

■RCP6S-SA8R



* The figure on the right 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			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
		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
		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

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.147 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-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet CompoNet EtherNet/IP CC-Link MECHATROLINK PROFIBUS EtherCAT POWERLINK	512 (768 for network spec.)	Please see P.131

RCP6(S)-WSA10C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 100 mm | 24V Stepper 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: Stepper Motor 35□ Size	16:16mm 10:10mm 5: 5mm 2.5: 2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

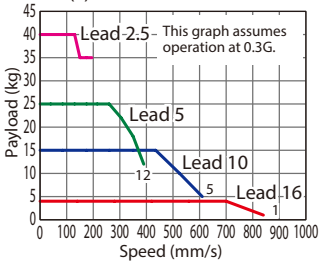
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

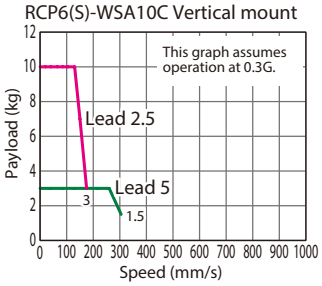
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-WSA10C Horizontal mount



RCP6(S)-WSA10C Vertical mount



Actuator Specifications

■ Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WSA10C-WA-35P-16-①-②-③-④	16	High-output Enabled	4	-	50~500 (The increment of stroke is 50mm)
RCP6(S)-WSA10C-WA-35P-10-①-②-③-④	10	High-output Enabled	15	-	
RCP6(S)-WSA10C-WA-35P-5-①-②-③-④	5	High-output Enabled	28	3	
RCP6(S)-WSA10C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	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	50~300 (Every 50mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)
16	High-output Enabled	840			775	660
10	High-output Enabled	610		590	490	415
5	High-output Enabled	390 <350>	355 <350>	290	245	205
2.5	High-output Enabled	195 <175>	175	145	120	100

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**300**	○	○
100	○	○	**350**	○	○
150	○	○	**400**	○	○
200	○	○	**450**	○	○
250	○	○	**500**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-precision specification *	**HPR**	See P.108
Non-motor end specification	**NM**	See P.110

* Positioning repeatability is ±5μm for high-precision specification (HPR). High-precision specification option cannot be selected for lead 16.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, 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)

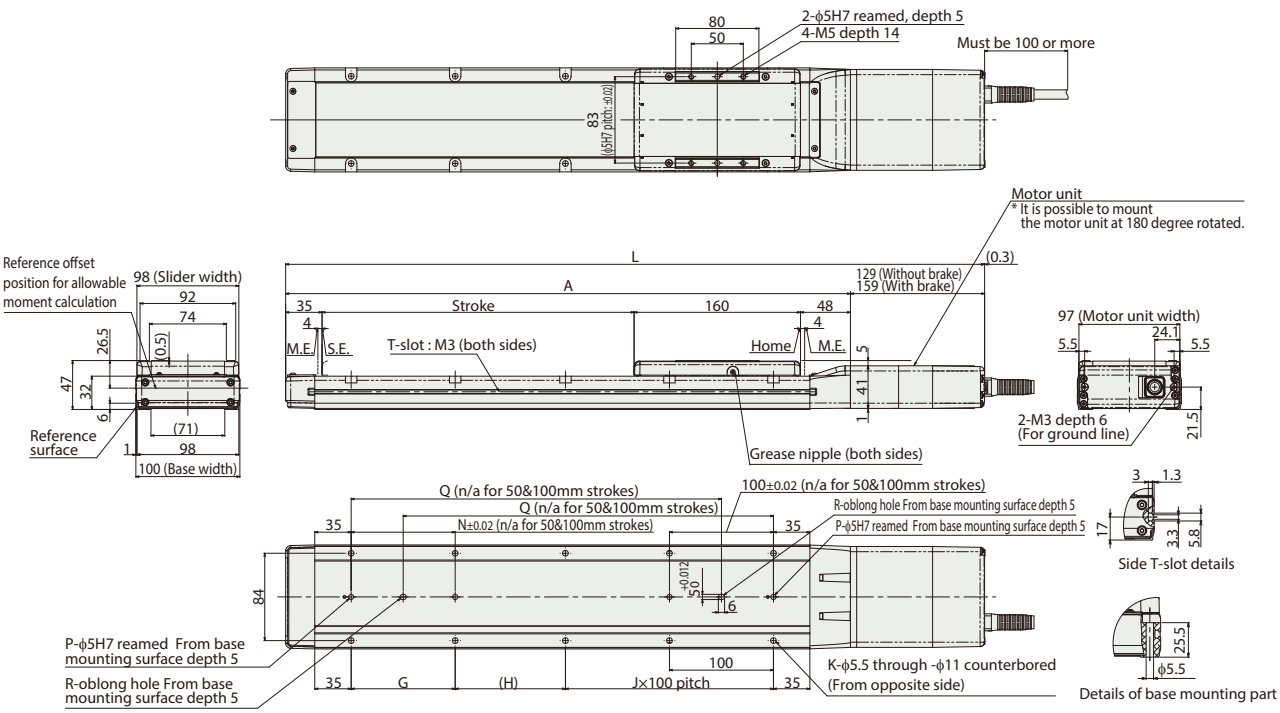
* Reference for overhang load length: Ma: 500mm or less, Mb, Mc: 500mm or less

(*1) Values in [ ] are for high-precision (for lead 2.5/5/10) specification.
(*2) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

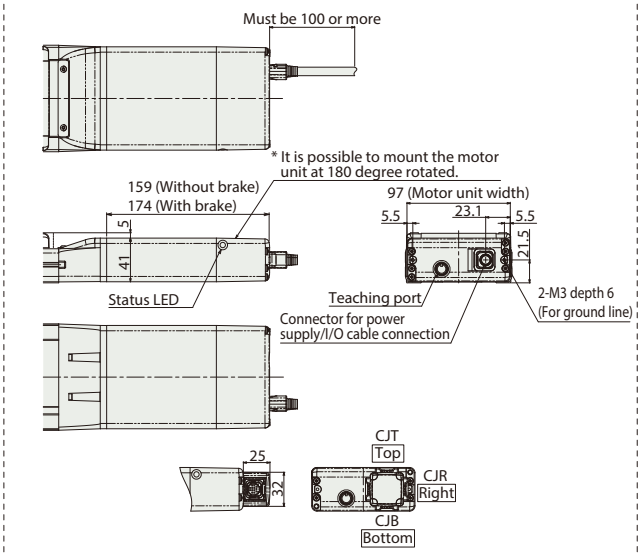
Dimensions

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

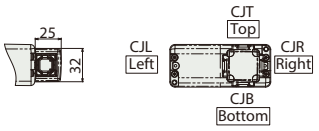
*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WSA12C

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

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	WSA12C	WA	42P					
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	42P: Stepper Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

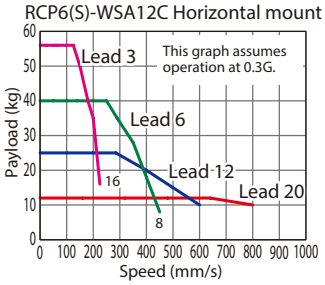
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

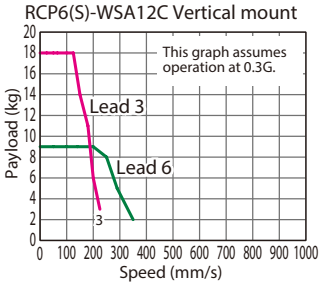
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-WSA12C Horizontal mount



RCP6(S)-WSA12C Vertical mount



Actuator Specifications

■ Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WSA12C-WA-42P-20-①-②-③-④	20	High-output Enabled	12	-	50~800 (The increment of stroke is 50mm)
RCP6(S)-WSA12C-WA-42P-12-①-②-③-④	12	High-output Enabled	25	-	
RCP6(S)-WSA12C-WA-42P-6-①-②-③-④	6	High-output Enabled	40	9	
RCP6(S)-WSA12C-WA-42P-3-①-②-③-④	3	High-output Enabled	60	18	

■ 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
12	High-output Enabled	600				535	465	405	355	315	285
6	High-output Enabled	450 <400>	435 <400>	365	310	265	230	200	175	155	140
3	High-output Enabled	225	215	180	150	130	115	100	85	75	70

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**450**	○	○
100	○	○	**500**	○	○
150	○	○	**550**	○	○
200	○	○	**600**	○	○
250	○	○	**650**	○	○
300	○	○	**700**	○	○
350	○	○	**750**	○	○
400	○	○	**800**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-precision specification *	**HPR**	See P.108
Non-motor end specification	**NM**	See P.110

* Positioning repeatability is ±5μm for high-precision specification (HPR). High-precision specification option cannot be selected for lead 20.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, 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)

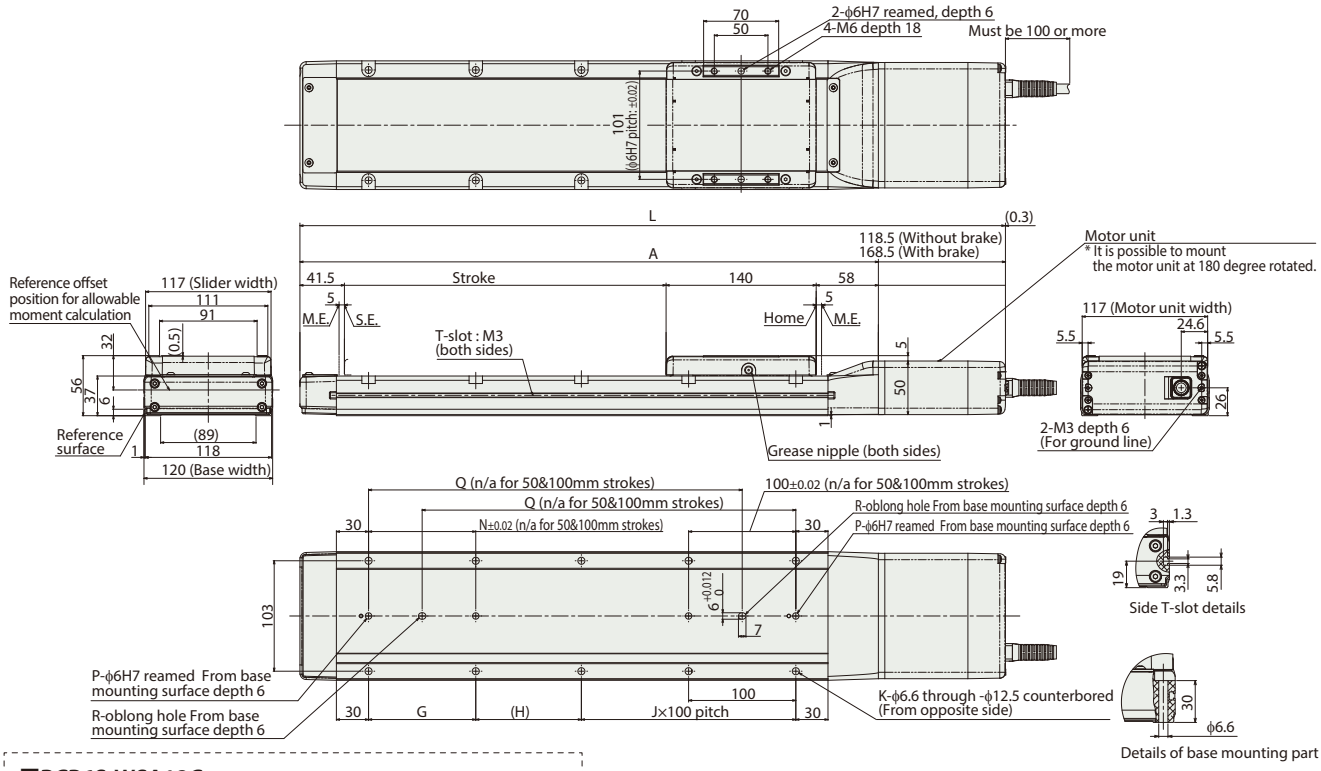
* Reference for overhang load length: Ma: 450mm or less, Mb, Mc: 450mm or less

(*1) Values in [ ] are for high-precision (for lead 3/6/12) specification.
(*2) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

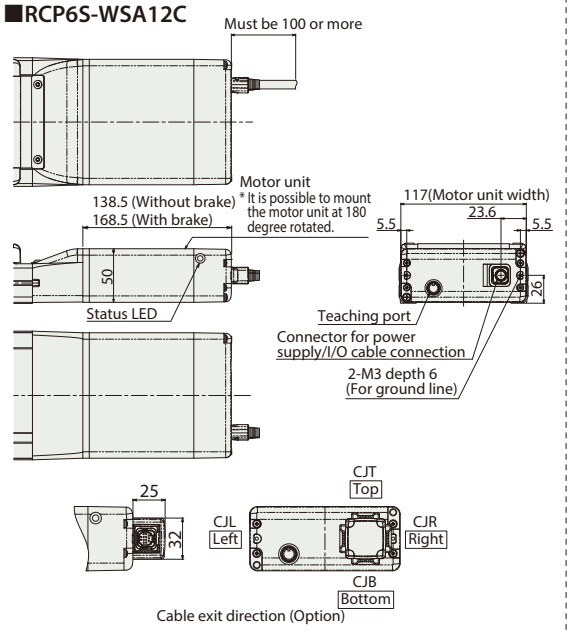
Dimensions

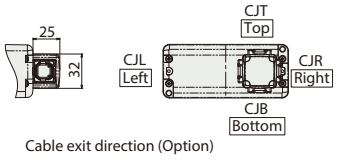
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

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



■RCP6S-WSA12C





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	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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WSA14C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 140 mm | 24V Stepper 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: Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

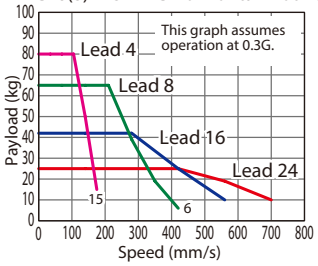
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

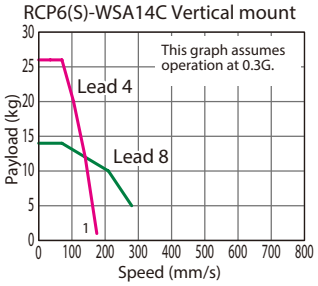
Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-WSA14C Horizontal mount



RCP6(S)-WSA14C Vertical mount



Actuator Specifications

Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WSA14C-WA-56P-24-①-②-③-④	24	High-output Enabled	25	-	50~800 (The increment of stroke is 50mm)
RCP6(S)-WSA14C-WA-56P-16-①-②-③-④	16	High-output Enabled	50	-	
RCP6(S)-WSA14C-WA-56P-8-①-②-③-④	8	High-output Enabled	65	14	
RCP6(S)-WSA14C-WA-56P-4-①-②-③-④	4	High-output Enabled	80	26	

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
16	High-output Enabled	560				550	490	440
8	High-output Enabled	420 <350>	400 <350>	350	305	270	240	215
4	High-output Enabled	210 <175>	200 <175>	170	150	135	120	105

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**450**	○	○
100	○	○	**500**	○	○
150	○	○	**550**	○	○
200	○	○	**600**	○	○
250	○	○	**650**	○	○
300	○	○	**700**	○	○
350	○	○	**750**	○	○
400	○	○	**800**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-precision specification *	**HPR**	See P.108
Non-motor end specification	**NM**	See P.110

* Positioning repeatability is ±5μm for high-precision specification (HPR). High-precision specification option cannot be selected for lead 16, 24.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, 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)

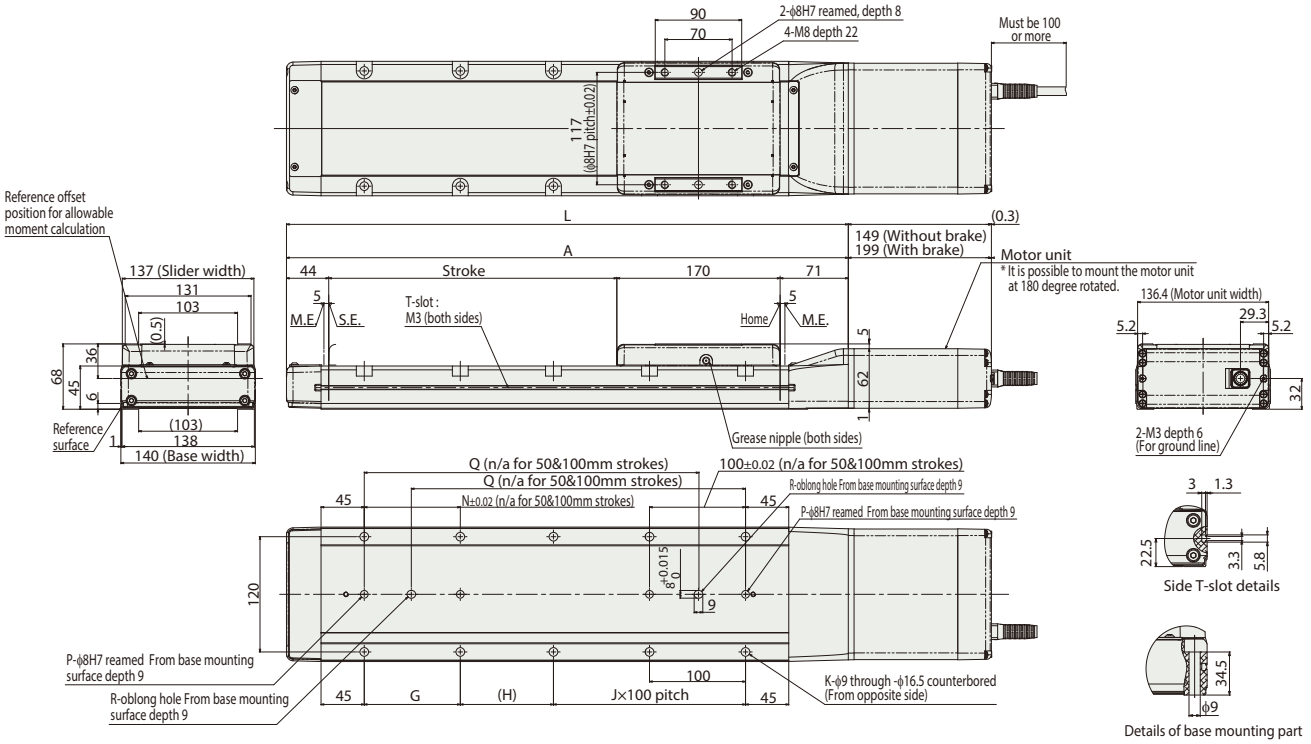
* Reference for overhang load length: Ma: 550mm or less, Mb, Mc: 550mm or less

(*1) Values in [ ] are for high-precision (for lead 4/8) specification .
(*2) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

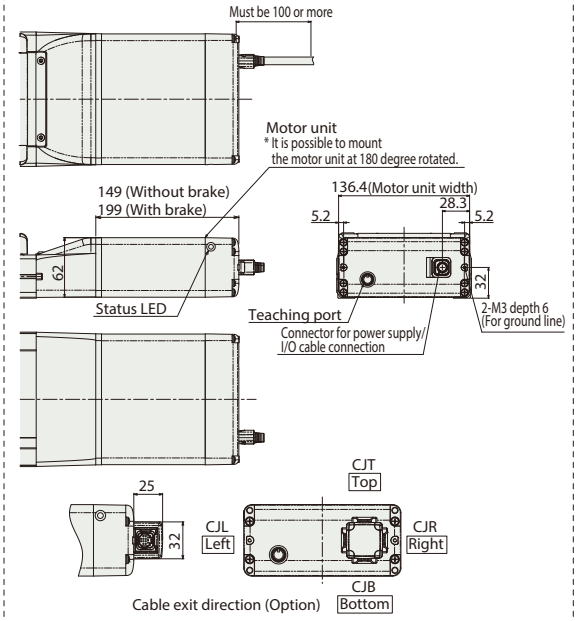
Dimensions

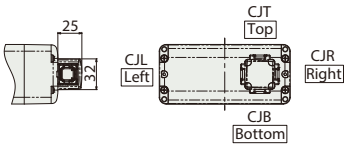
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WSA16C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 160 mm | 24V Stepper 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 Stepper Motor 56□ Size	20:20mm 10:10mm 5: 5mm	50: 50mm ~ 1100: 1,100mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB [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.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

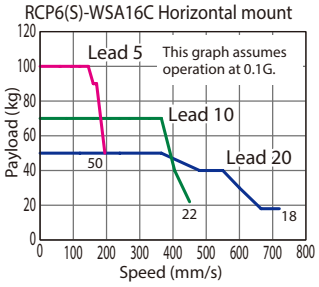
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(4) The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P. 114 for more information.

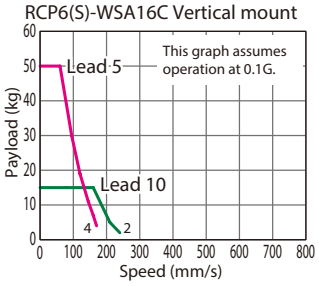
Correlation Diagrams of Speed and Payload

PCON connected.

RCP6(S)-WSA16C Horizontal mount



RCP6(S)-WSA16C Vertical mount



Actuator Specifications

Lead and Payload

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WSA16C-WA-56SP-20-①-②-③-④	20	50	-	50~1,100 (The increment of stroke is 50mm)
RCP6(S)-WSA16C-WA-56SP-10-①-②-③-④	10	70	15	
RCP6(S)-WSA16C-WA-56SP-5-①-②-③-④	5	100	50	

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)	1,000 (mm)	1,050 (mm)	1,100 (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.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**600**	○	○
100	○	○	**650**	○	○
150	○	○	**700**	○	○
200	○	○	**750**	○	○
250	○	○	**800**	○	○
300	○	○	**850**	○	○
350	○	○	**900**	○	○
400	○	○	**950**	○	○
450	○	○	**1000**	○	○
500	○	○	**1050**	○	○
550	○	○	**1100**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-precision specification *	**HPR**	See P.108
Non-motor end specification	**NM**	See P.110

* Positioning repeatability is ±5μm for high-precision specification (HPR). High-precision specification option cannot be selected for lead 20.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, 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
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

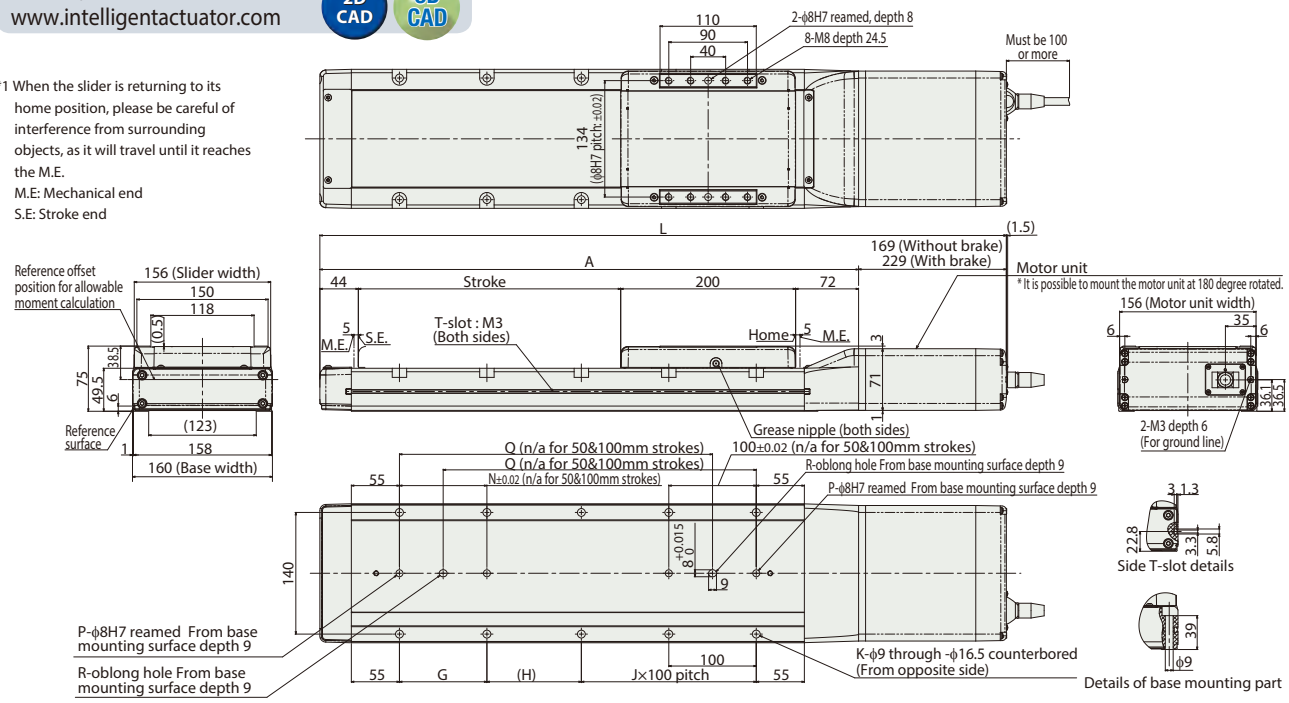
* Reference for overhang load length: Ma: 650mm or less, Mb, Mc: 650mm or less

(*1) Values in [ ] are for high-precision (for lead 5/10) specification .
(*2) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

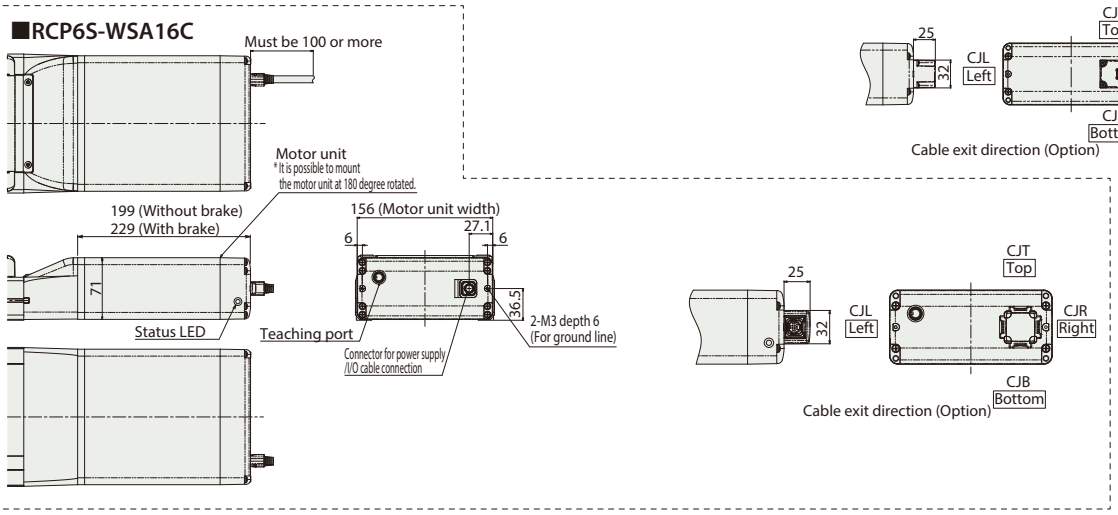
Dimensions

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

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the 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	8.7	9.3	9.9	10.5	11.1	11.7	12.3	12.9	13.4	14.0	14.6	15.2	15.8	16.4	17.0	17.6	18.1	18.7	19.3	19.9	20.5	21.1
		w/ brake	9.6	10.1	10.7	11.3	11.8	12.4	13.0	13.5	14.1	14.7	15.2	15.8	16.3	16.9	17.5	18.1	18.6	19.2	19.7	20.3	20.9	21.4
	RCP6S	w/o brake	8.9	9.5	10.1	10.7	11.2	11.8	12.4	13.0	13.6	14.2	14.8	15.4	15.9	16.5	17.1	17.7	18.3	18.9	19.5	20.1	20.6	21.2
		w/ brake	9.6	10.2	10.7	11.3	11.9	12.5	13.0	13.6	14.1	14.7	15.3	15.8	16.4	17.0	17.5	18.1	18.7	19.2	19.8	20.4	20.9	21.5

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.147 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-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet CompoNet EtherNet/IP CC-Link MECHATROLINK PROFIBUS EtherCAT. POWERLINK	512 (768 for network spec.)	Please see P.131

RCP6(S)-WSA10R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 100* mm | 24V Stepper 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: Stepper Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

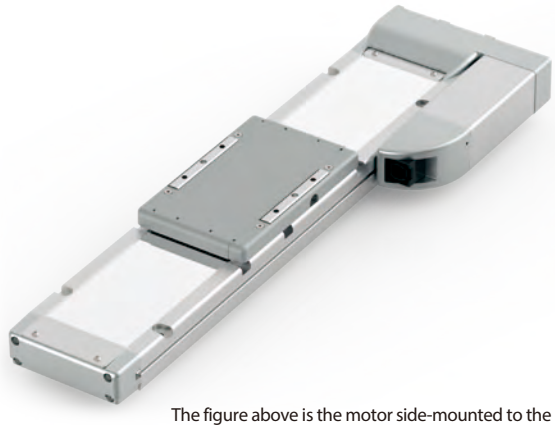
* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

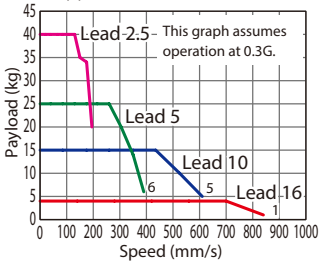
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

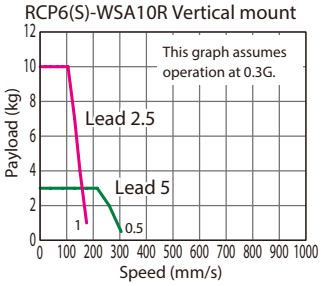
Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-WSA10R Horizontal mount



RCP6(S)-WSA10R Vertical mount



Actuator Specifications

Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WSA10R-WA-35P-16-①-②-③-④	16	High-output Enabled	4	-	50~500 (The increment of stroke is 50mm)
RCP6(S)-WSA10R-WA-35P-10-①-②-③-④	10	High-output Enabled	15	-	
RCP6(S)-WSA10R-WA-35P-5-①-②-③-④	5	High-output Enabled	28	3	
RCP6(S)-WSA10R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	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	50~300 (Every 50mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)
16	High-output Enabled	840			775	660
10	High-output Enabled	610		590	490	415
5	High-output Enabled	390 <305>	355 <305>	290	245	205
2.5	High-output Enabled	195 <175>	175	145	120	100

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**300**	○	○
100	○	○	**350**	○	○
150	○	○	**400**	○	○
200	○	○	**450**	○	○
250	○	○	**500**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, 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)

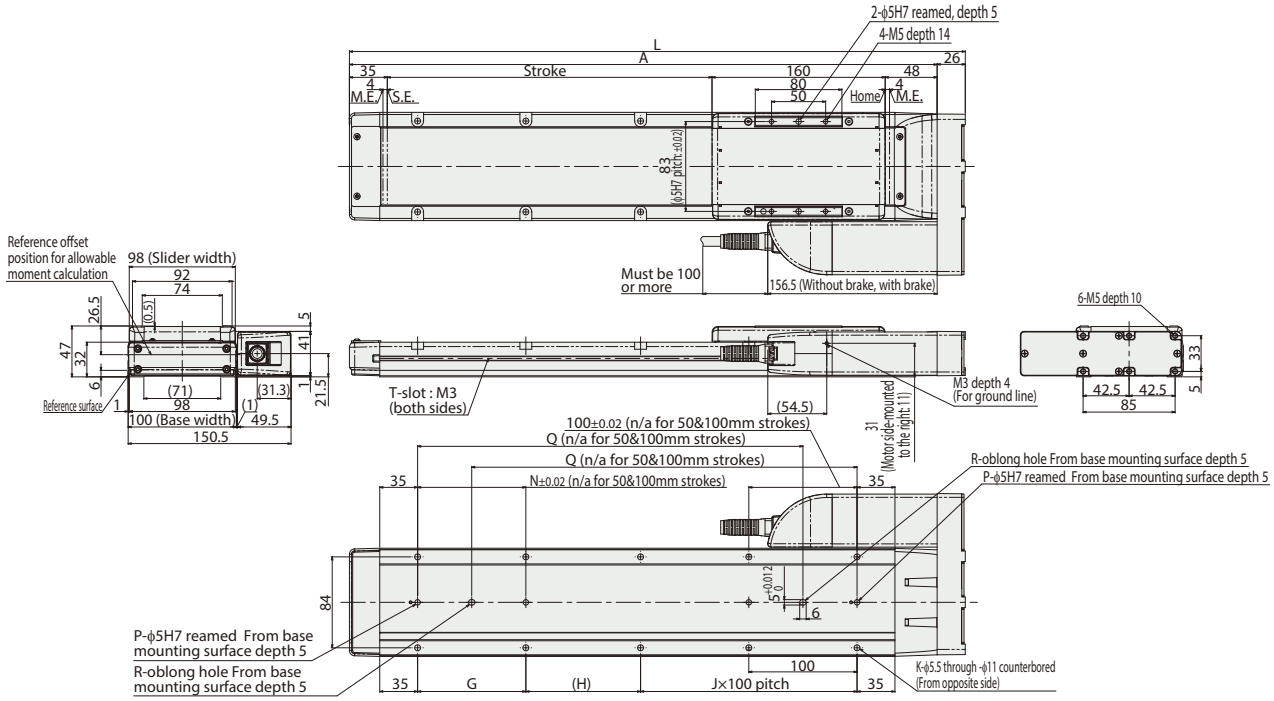
* Reference for overhang load length: Ma: 500mm or less, Mb, Mc: 500mm or less

(*1) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

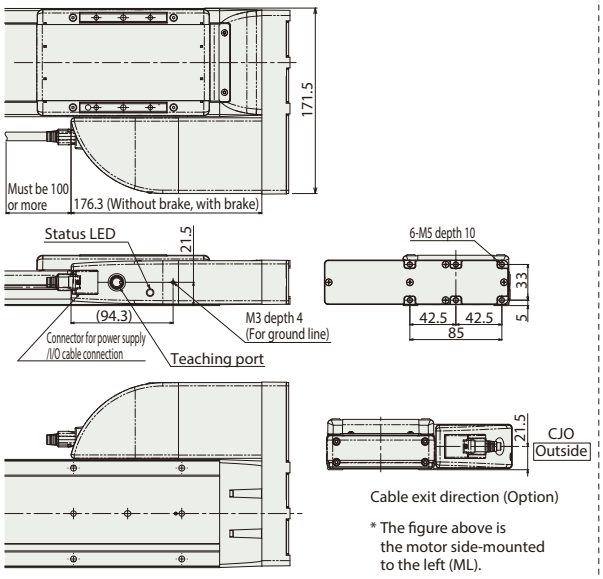
Dimensions

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

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

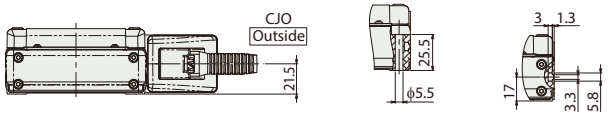


■RCP6S-WSA10R



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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WSA12R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 120* mm | 24V Stepper 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	WSA12R	WA: Battery-less Absolute	42P: Stepper Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

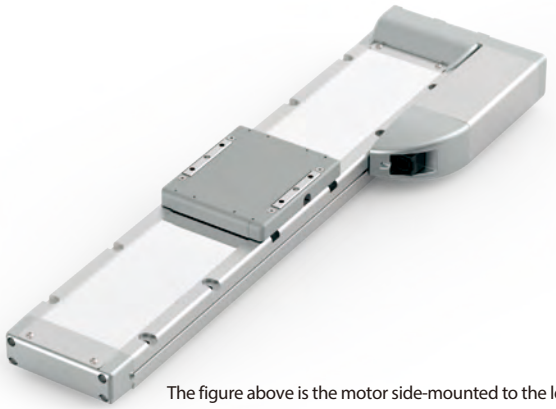
* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

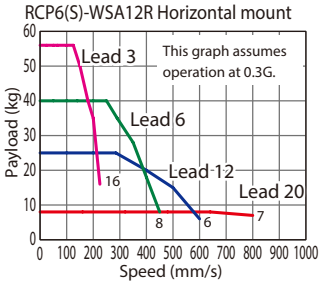
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

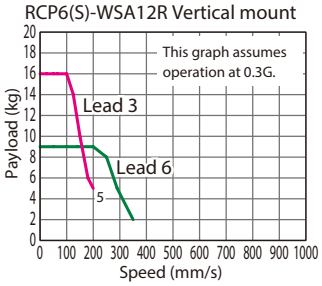
Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-WSA12R Horizontal mount



RCP6(S)-WSA12R Vertical mount



Actuator Specifications

Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WSA12R-WA-42P-20-①-②-③-④	20	High-output Enabled	12	-	50~800 (The increment of stroke is 50mm)
RCP6(S)-WSA12R-WA-42P-12-①-②-③-④	12	High-output Enabled	25	-	
RCP6(S)-WSA12R-WA-42P-6-①-②-③-④	6	High-output Enabled	40	9	
RCP6(S)-WSA12R-WA-42P-3-①-②-③-④	3	High-output Enabled	60	16	

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
12	High-output Enabled	600				535	465	405	355	315	285
6	High-output Enabled	450 <400>	435 <400>	365	310	265	230	200	175	155	140
3	High-output Enabled	225	215	180	150	130	115	100	85	75	70

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**450**	○	○
100	○	○	**500**	○	○
150	○	○	**550**	○	○
200	○	○	**600**	○	○
250	○	○	**650**	○	○
300	○	○	**700**	○	○
350	○	○	**750**	○	○
400	○	○	**800**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, 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)

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

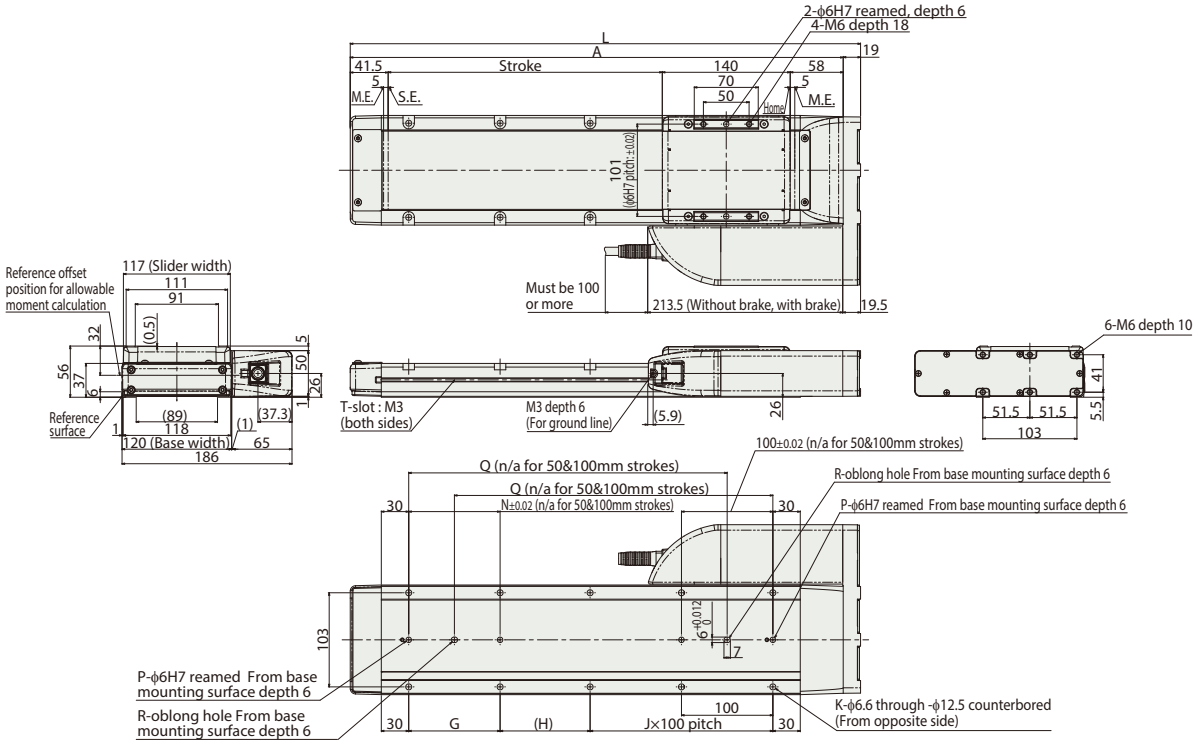
(*1) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

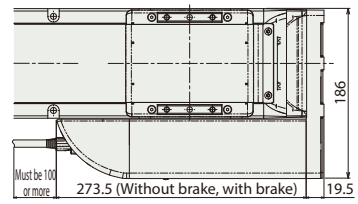
Dimensions

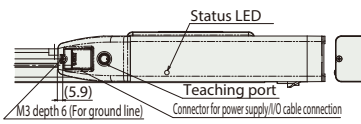
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

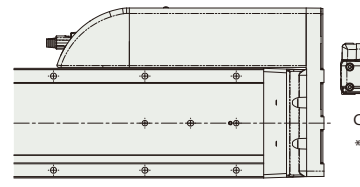
*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■RCP6S-WSA12R

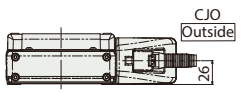




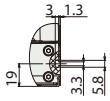


Cable exit direction (Option)

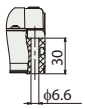
* The figure above is the motor side-mounted to the left (ML).



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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WSA14R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 140* mm | 24v Stepper 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:Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

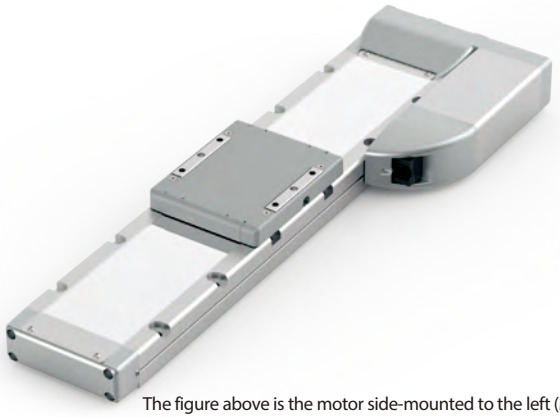
* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

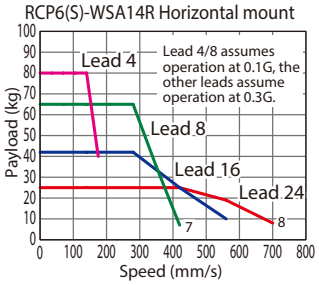
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

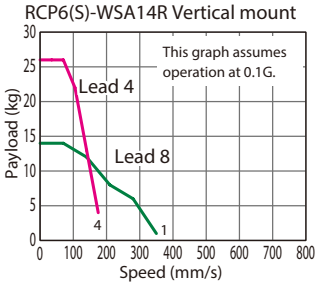
Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-WSA14R Horizontal mount



RCP6(S)-WSA14R Vertical mount



Actuator Specifications

Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WSA14R-WA-56P-24-①-②-③-④	24	High-output Enabled	25	-	50~800 (The increment of stroke is 50mm)
RCP6(S)-WSA14R-WA-56P-16-①-②-③-④	16	High-output Enabled	50	-	
RCP6(S)-WSA14R-WA-56P-8-①-②-③-④	8	High-output Enabled	65	14	
RCP6(S)-WSA14R-WA-56P-4-①-②-③-④	4	High-output Enabled	80	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	50~500 (Every 50mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
24	High-output Enabled	700						665
16	High-output Enabled	560				550	490	440
8	High-output Enabled	420 <350>	400 <350>	350	305	270	240	215
4	High-output Enabled	175		170	150	135	120	105

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**450**	○	○
100	○	○	**500**	○	○
150	○	○	**550**	○	○
200	○	○	**600**	○	○
250	○	○	**650**	○	○
300	○	○	**700**	○	○
350	○	○	**750**	○	○
400	○	○	**800**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

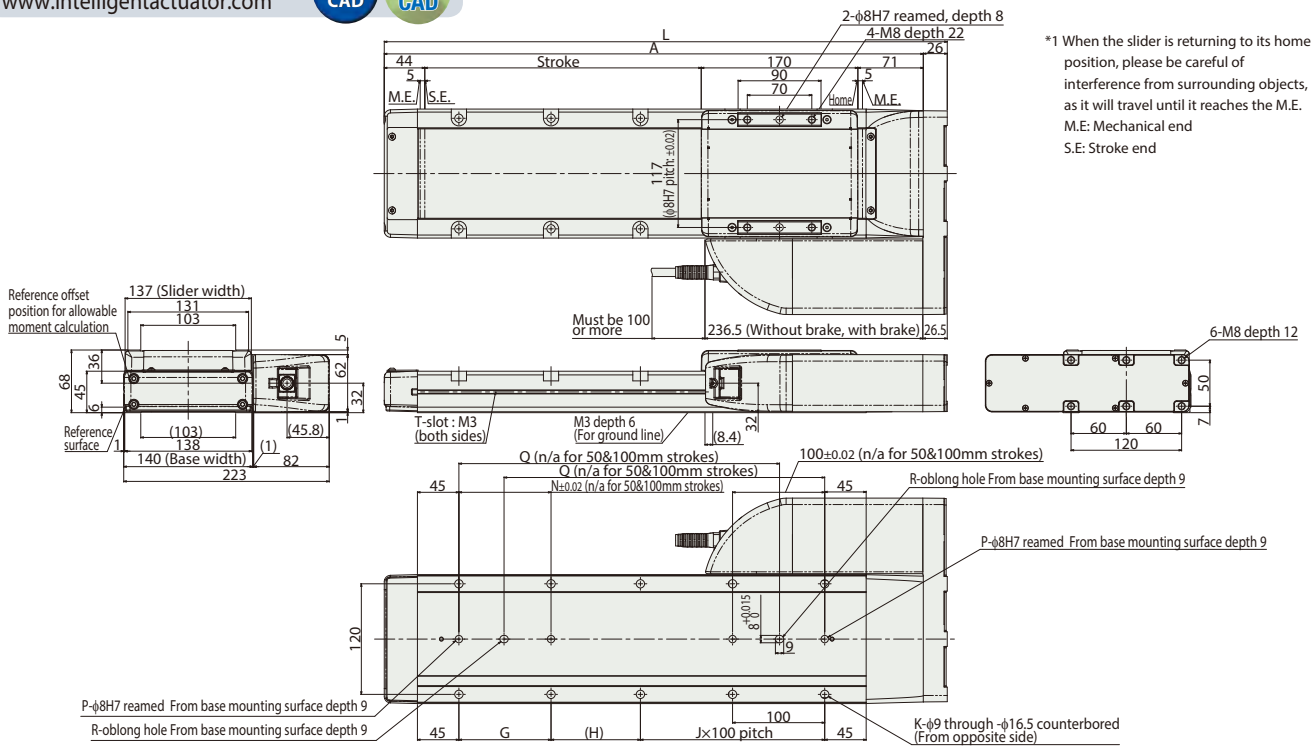
Item	Description
Drive system	Ball screw φ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 462N•m, Mb: 462N•m, Mc: 1,170N•m
Dynamic allowable moment (*1)	Ma: 122N•m, Mb: 122N•m, Mc: 308N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

(*1) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

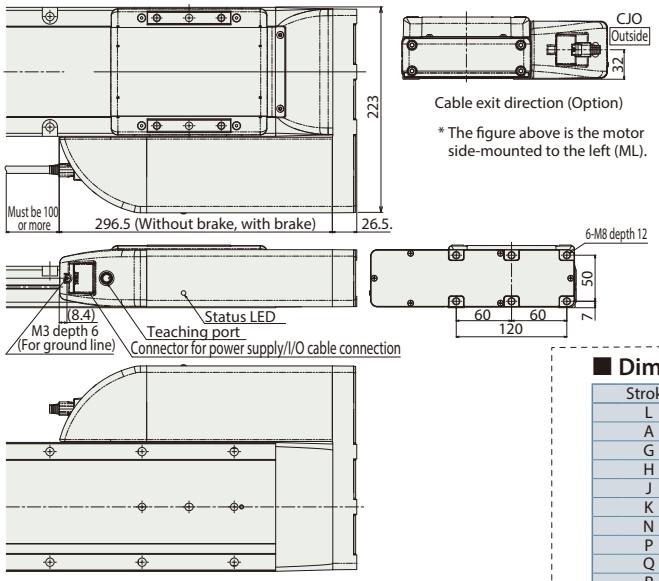
Dimensions

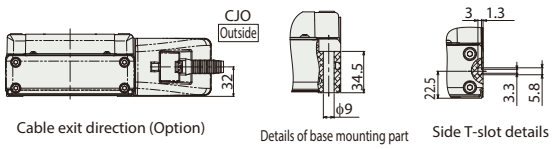
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



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

■RCP6S-WSA14R





* 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			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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WSA16R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 160* mm | 24v Stepper 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	WSA16R	WA: Battery-less Absolute	56SP: High-thrust Stepper Motor 56□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 1100: 1,100mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB [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.

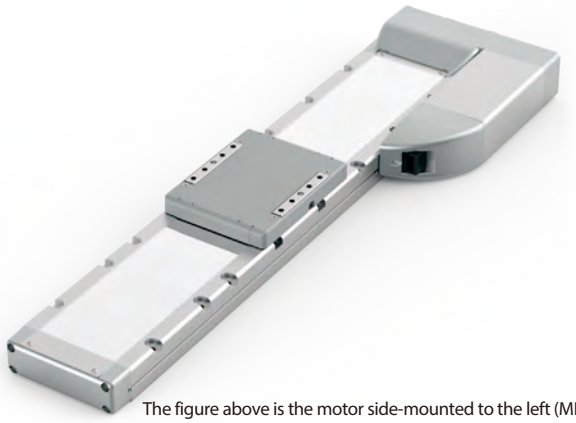
* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

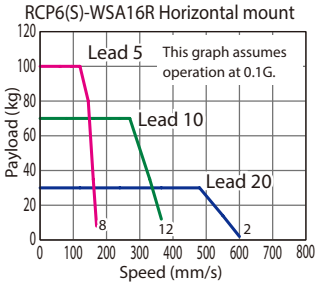
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(4) The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P. 114 for more information.

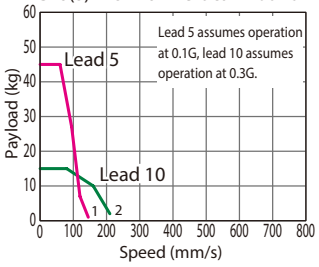
■ Correlation Diagrams of Speed and Payload

PCON connected.

RCP6(S)-WSA16R Horizontal mount



RCP6(S)-WSA16R Vertical mount



Actuator Specifications

■ Lead and Payload

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WSA16R-WA-56SP-20-①-②-③-④	20	30	-	50~1,100 (The increment of stroke is 50mm)
RCP6(S)-WSA16R-WA-56SP-10-①-②-③-④	10	70	15	
RCP6(S)-WSA16R-WA-56SP-5-①-②-③-④	5	100	45	

■ 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)	1,000 (mm)	1,050 (mm)	1,100 (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.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**600**	○	○
100	○	○	**650**	○	○
150	○	○	**700**	○	○
200	○	○	**750**	○	○
250	○	○	**800**	○	○
300	○	○	**850**	○	○
350	○	○	**900**	○	○
400	○	○	**950**	○	○
450	○	○	**1000**	○	○
500	○	○	**1050**	○	○
550	○	○	**1100**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, 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)

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

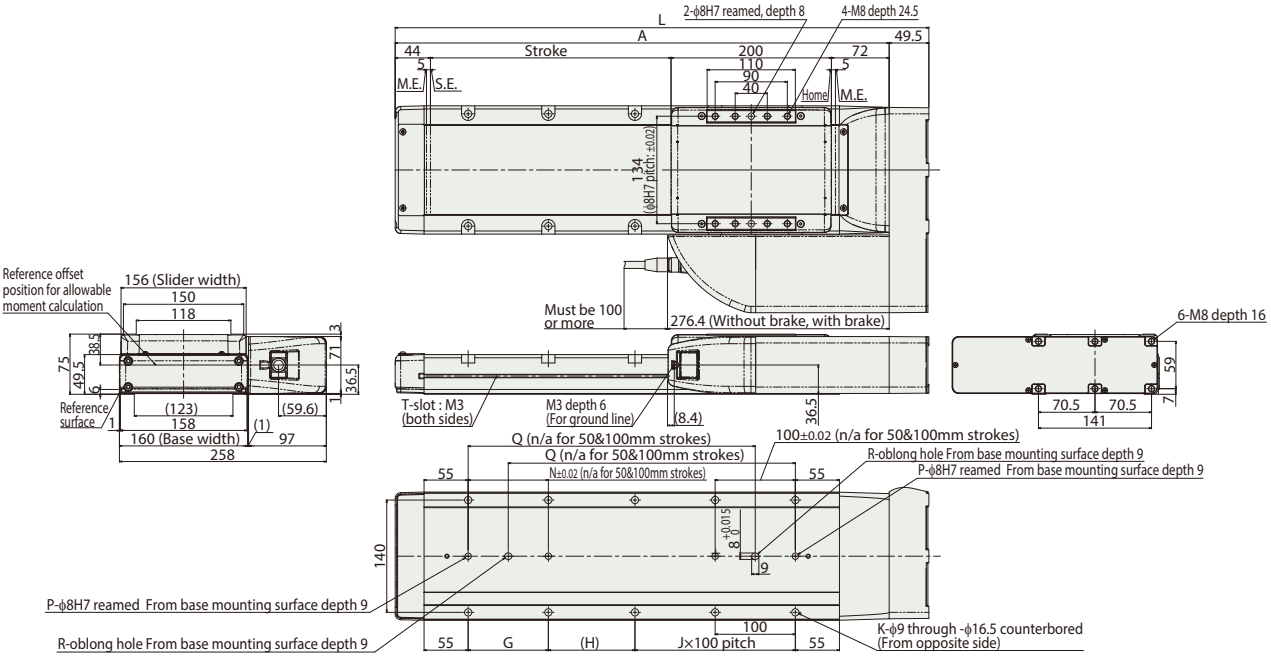
(*1) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

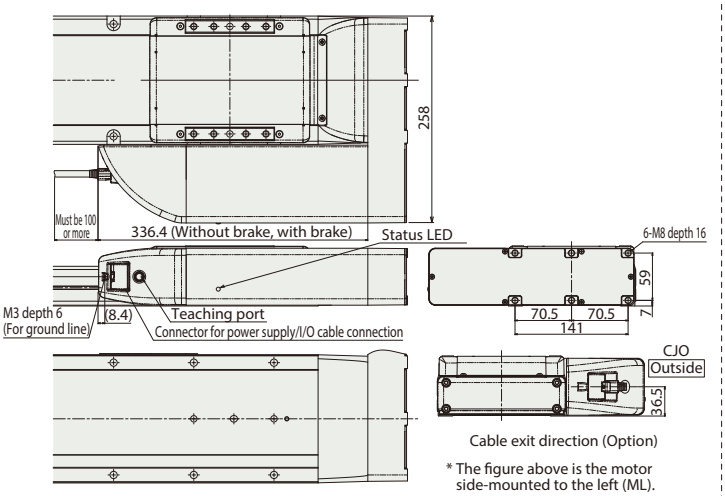
Dimensions

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

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

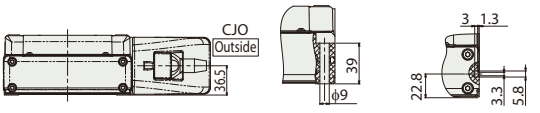


■RCP6S-WSA16R



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

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.147 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-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet CompoNet EtherNet/IP CC-Link MECHATROLINK PROFIBUS EtherCAT. POWERLINK	512 (768 for network spec.)	Please see P.131

RCP6(S)-RA4C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 40 mm | 24V Stepper 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: Stepper Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm	50: 50mm ~ 200: 200mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.11 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

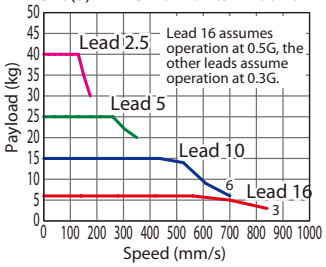
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 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) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

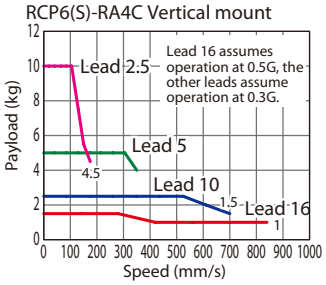
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RA4C Horizontal mount



RCP6(S)-RA4C Vertical mount



Actuator Specifications

■ Lead and Payload

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

■ Stroke and Max. Speed

(Unit: mm/s)

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

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

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**150**	○	○
100	○	○	**200**	○	○

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Foot bracket	**FT**	See P.107
Tip adapter (Internal thread)	**NFA**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar	**NTB**	See P.110

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

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

Actuator Specifications

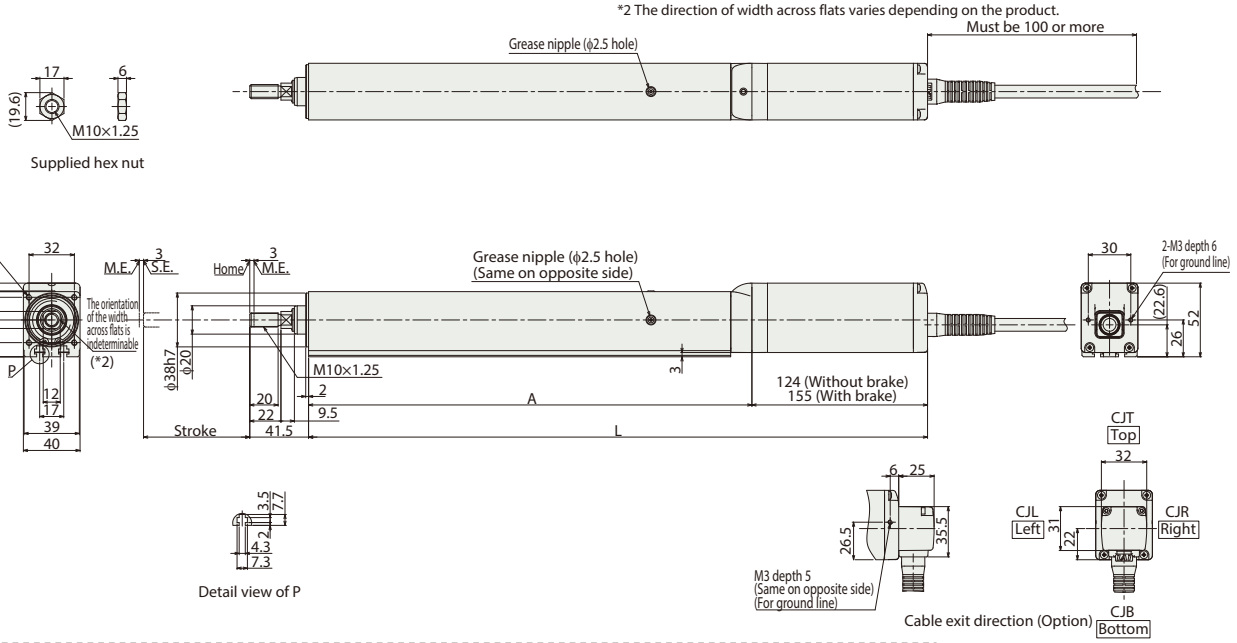
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ20mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	1.0N•m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Ambient operating temp. & humidity	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.

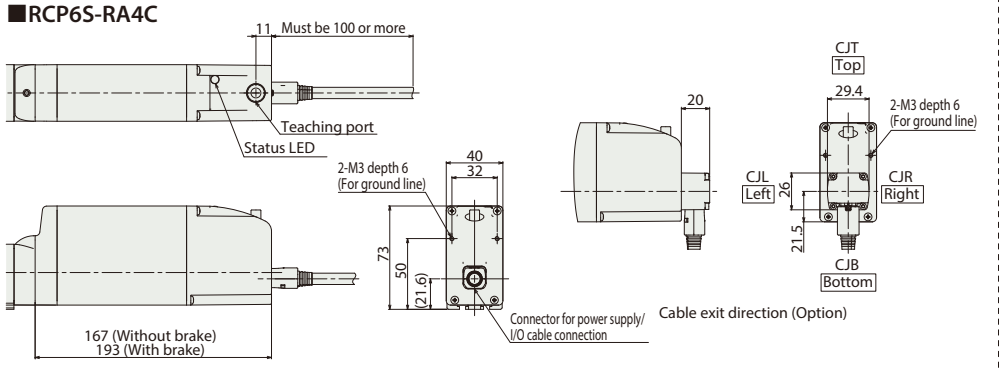
Dimensions

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

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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RA6C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 58 mm | 24V Stepper 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	RA6C	WA: Battery-less Absolute	42P: Stepper Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.11 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

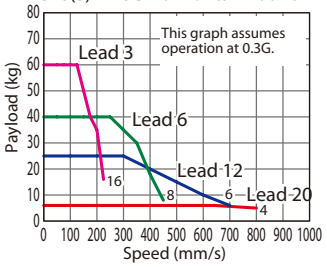
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 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) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

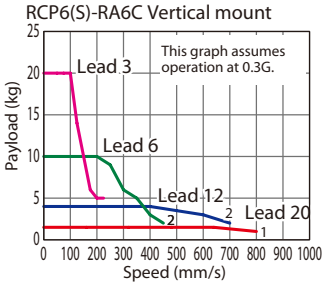
Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RA6C Horizontal mount



RCP6(S)-RA6C Vertical mount



Actuator Specifications

Lead and Payload

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

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~300 (Every 50mm)
20	High-output Enabled	800
12	High-output Enabled	700
6	High-output Enabled	450
3	High-output Enabled	225

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

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**200**	○	○
100	○	○	**250**	○	○
150	○	○	**300**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Foot bracket	**FT**	See P.107
Tip adapter (Internal thread)	**NFA**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar	**NTB**	See P.110

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

Actuator Specifications

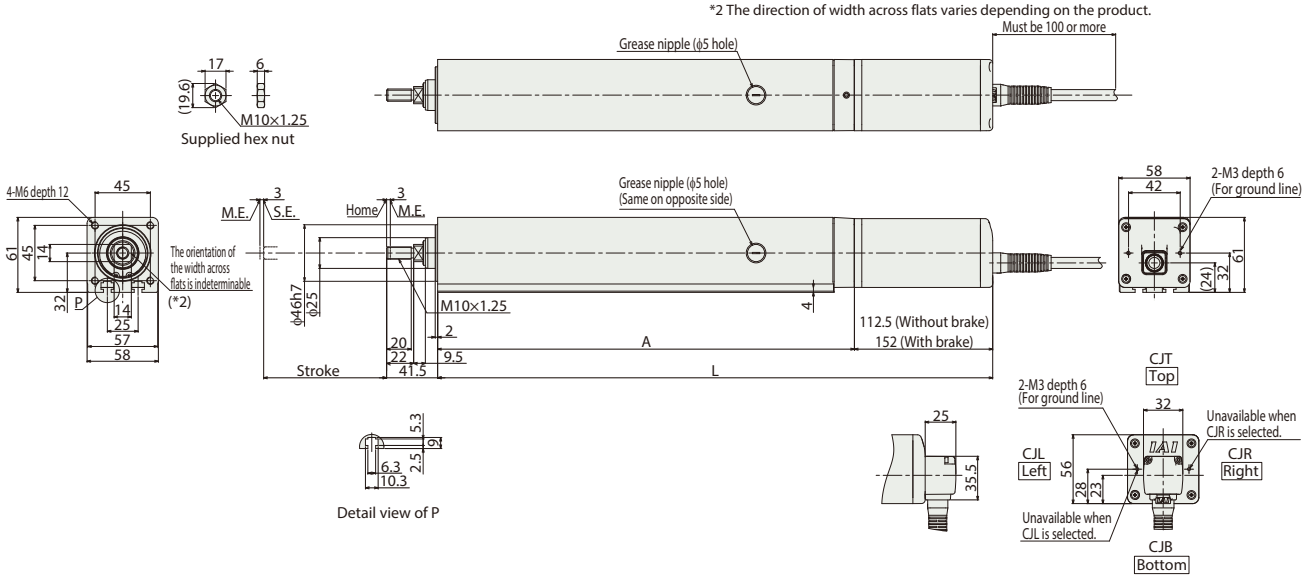
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	1.5N•m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Ambient operating temp. & humidity	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.

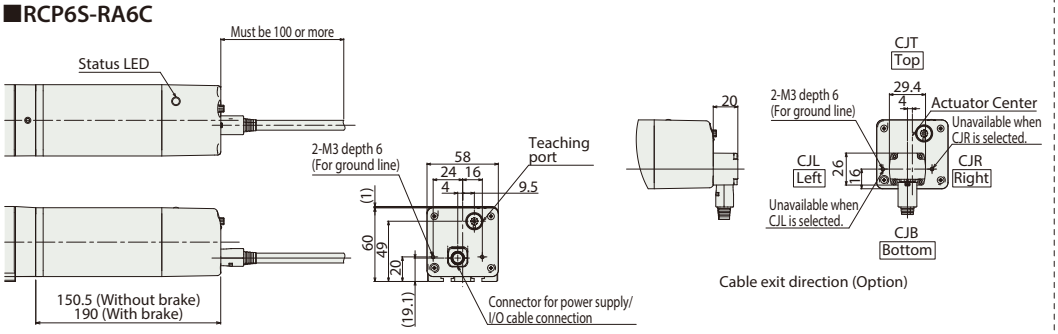
Dimensions

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

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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RA7C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 70 mm | 24V Stepper 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: Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.11 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

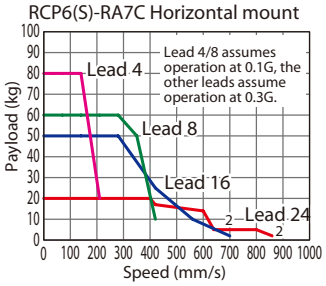
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 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) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

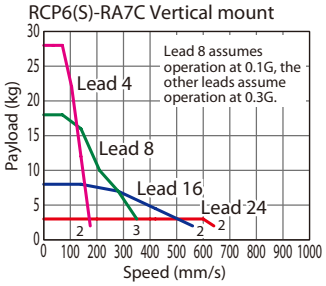
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RA7C Horizontal mount



RCP6(S)-RA7C Vertical mount



Actuator Specifications

■ Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-RA7C-WA-56P-24-①-②-③-④	24	High-output Enabled	20	3	50~300 (The increment of stroke is 50mm)
RCP6(S)-RA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	50	8	
RCP6(S)-RA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	60	18	
RCP6(S)-RA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	80	28	

■ Stroke and Max. Speed

(Unit: mm/s)

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

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**200**	○	○
100	○	○	**250**	○	○
150	○	○	**300**	○	○

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Foot bracket	**FT**	See P.107
Tip adapter (Internal thread)	**NFA**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar	**NTB**	See P.110

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

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

Actuator Specifications

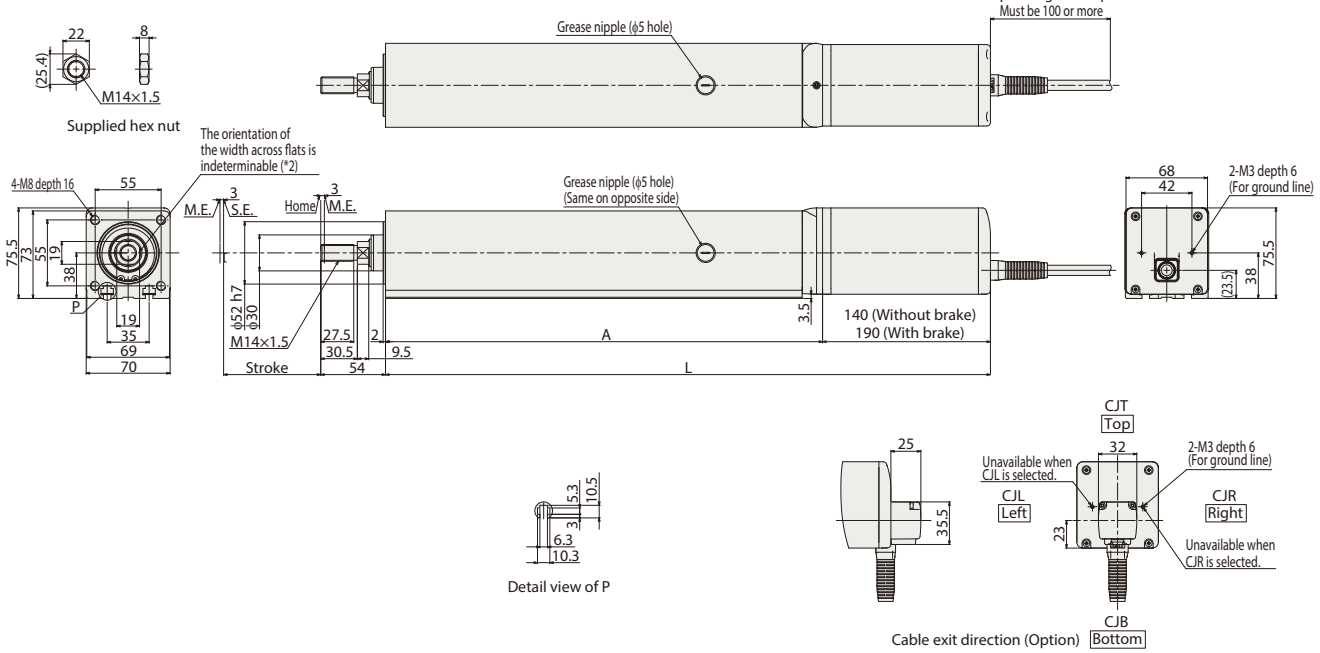
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	2.5N•m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Ambient operating temp. & humidity	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.

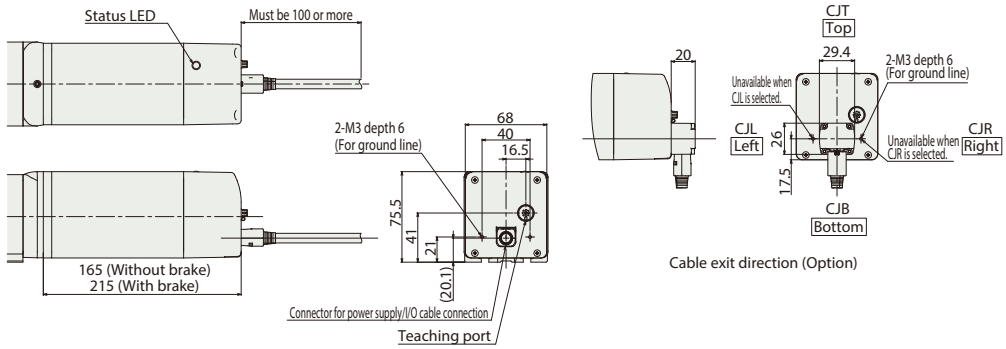
Dimensions

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

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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RA8C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 85 mm | 24V Stepper 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	RA8C	WA: Battery-less Absolute	60P: Stepper Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB [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.11 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

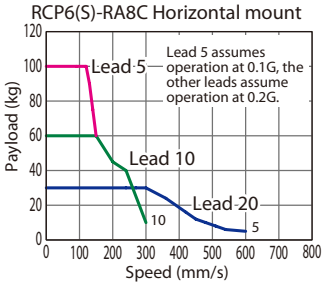
*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

POINT Selection Notes

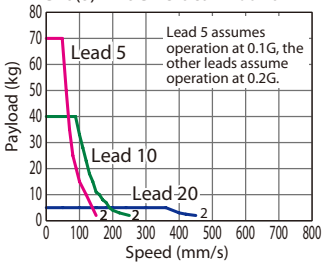
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 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) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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. 114 for more information.

■ Correlation Diagrams of Speed and Payload

PCON connected.
RCP6(S)-RA8C Horizontal mount



RCP6(S)-RA8C Vertical mount



Actuator Specifications

■ Lead and Payload

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

■ 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.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**200**	○	○
100	○	○	**250**	○	○
150	○	○	**300**	○	○

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Foot bracket	**FT**	See P.107
Tip adapter (Internal thread)	**NFA**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar	**NTB**	See P.110

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

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

Actuator Specifications

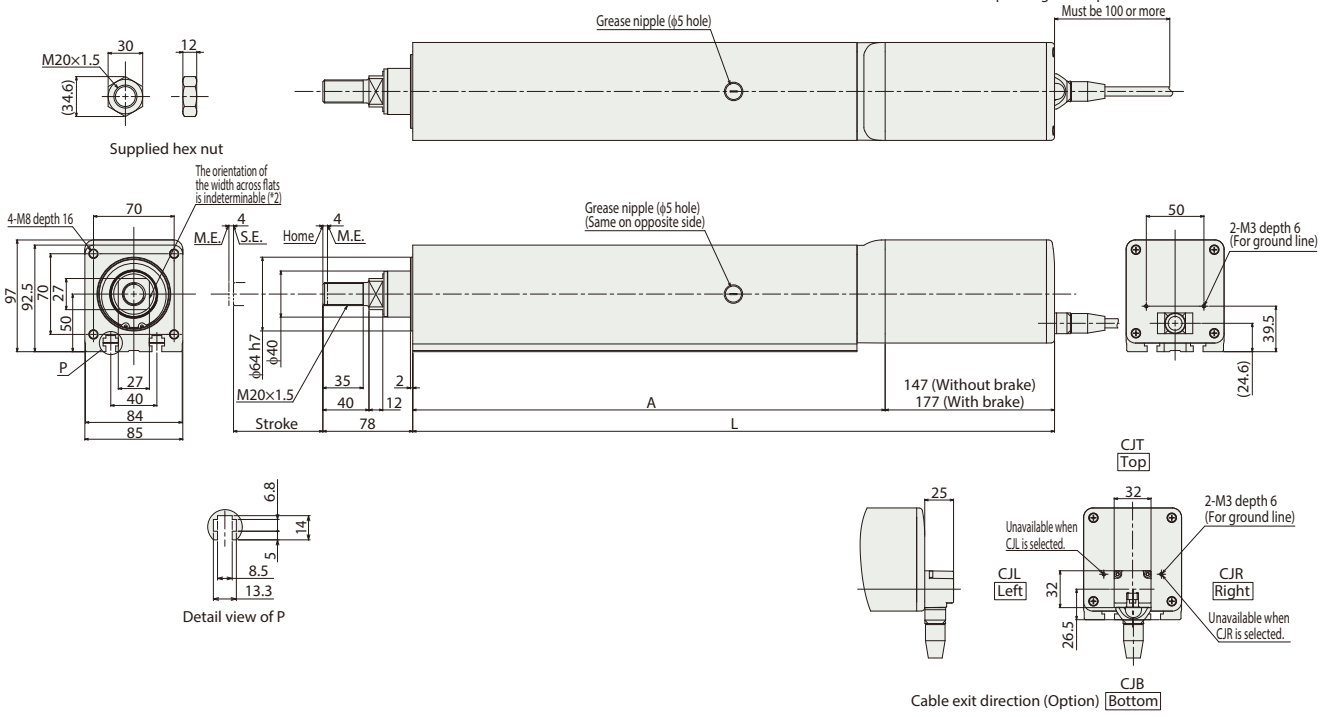
Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	5N•m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Ambient operating temp. & humidity	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.

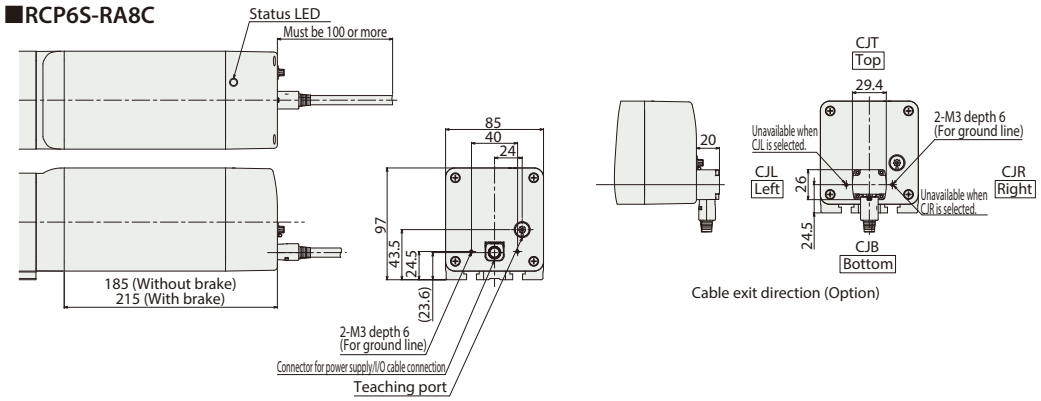
Dimensions

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

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

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.147 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-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet CompoNet EtherNet/IP CC-Link MECHATROLINK PROFIBUS EtherCAT. POWERLINK	512 (768 for network spec.)	Please see P.131

RCP6(S)-RA4R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 24v Stepper 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: Stepper Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ~ 200: 200mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

* 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.11 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

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

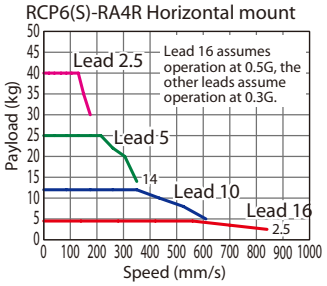
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 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) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

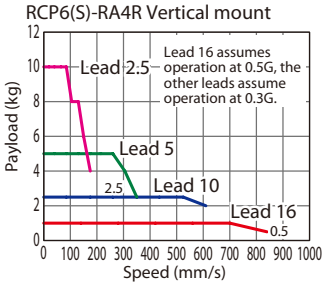
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RA4R Horizontal mount



RCP6(S)-RA4R Vertical mount



Actuator Specifications

■ Lead and Payload

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

■ Stroke and Max. Speed

(Unit: mm/s)

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

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

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**150**	○	○
100	○	○	**200**	○	○

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Foot bracket	**FT**	See P.107
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Motor side-mounted to the top	**MT**	See P.109
Tip adapter (Internal thread)	**NFA**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar	**NTB**	See P.110

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

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

Actuator Specifications

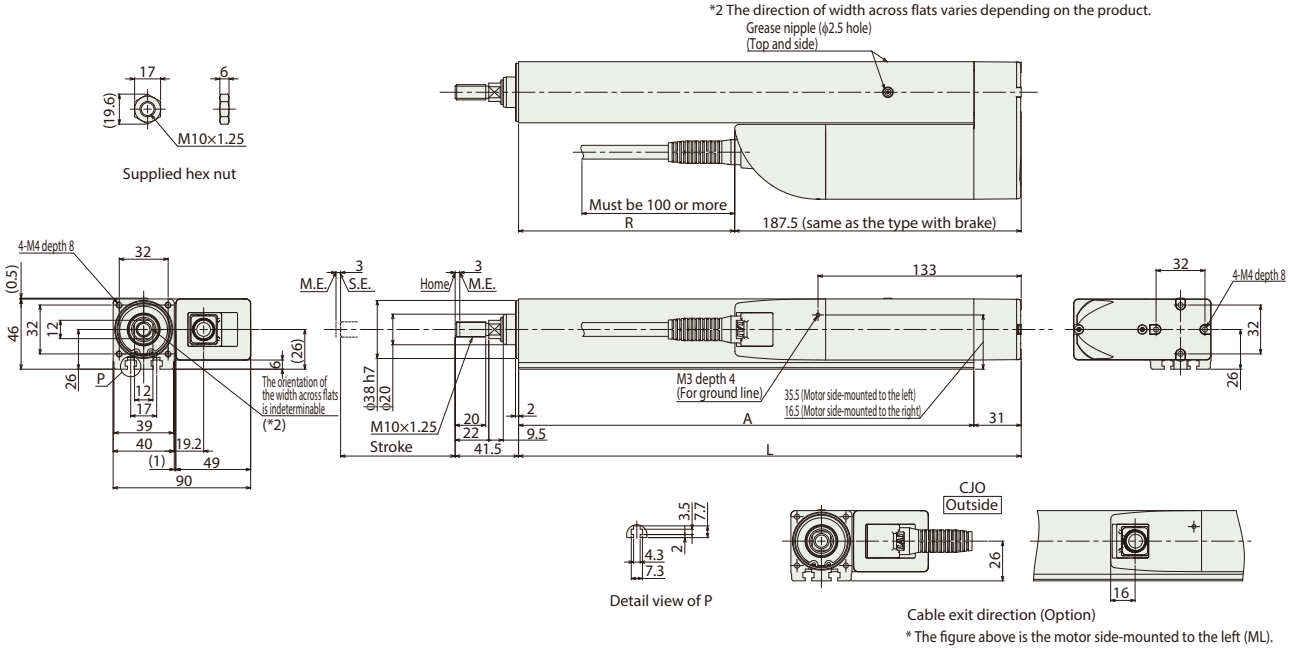
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ20mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	1.0N•m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Ambient operating temp. & humidity	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.

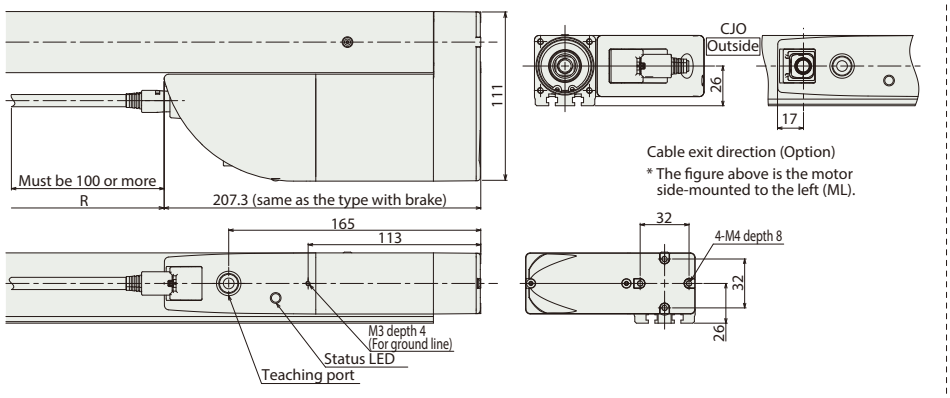
Dimensions

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

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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

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

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RA6R

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

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

■ Model Specification Items

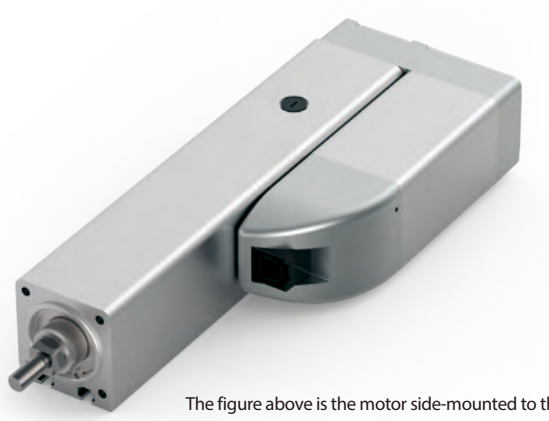
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	RA6R	WA: Battery-less Absolute	42P: Stepper Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.11 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

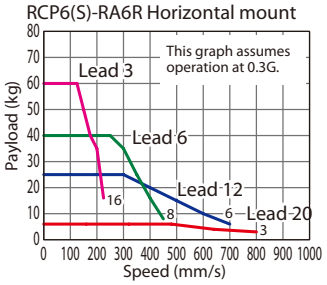
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 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) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

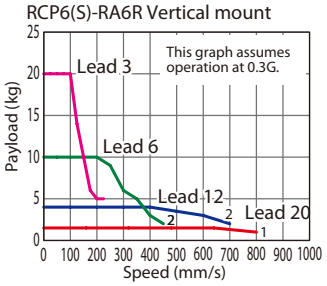
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RA6R Horizontal mount



RCP6(S)-RA6R Vertical mount



Actuator Specifications

■ Lead and Payload

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

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~300 (Every 50mm)
20	High-output Enabled	800
12	High-output Enabled	700
6	High-output Enabled	450
3	High-output Enabled	225

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

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**200**	○	○
100	○	○	**250**	○	○
150	○	○	**300**	○	○

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Foot bracket	**FT**	See P.107
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Motor side-mounted to the top	**MT**	See P.109
Tip adapter (Internal thread)	**NFA**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar	**NTB**	See P.110

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

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

Actuator Specifications

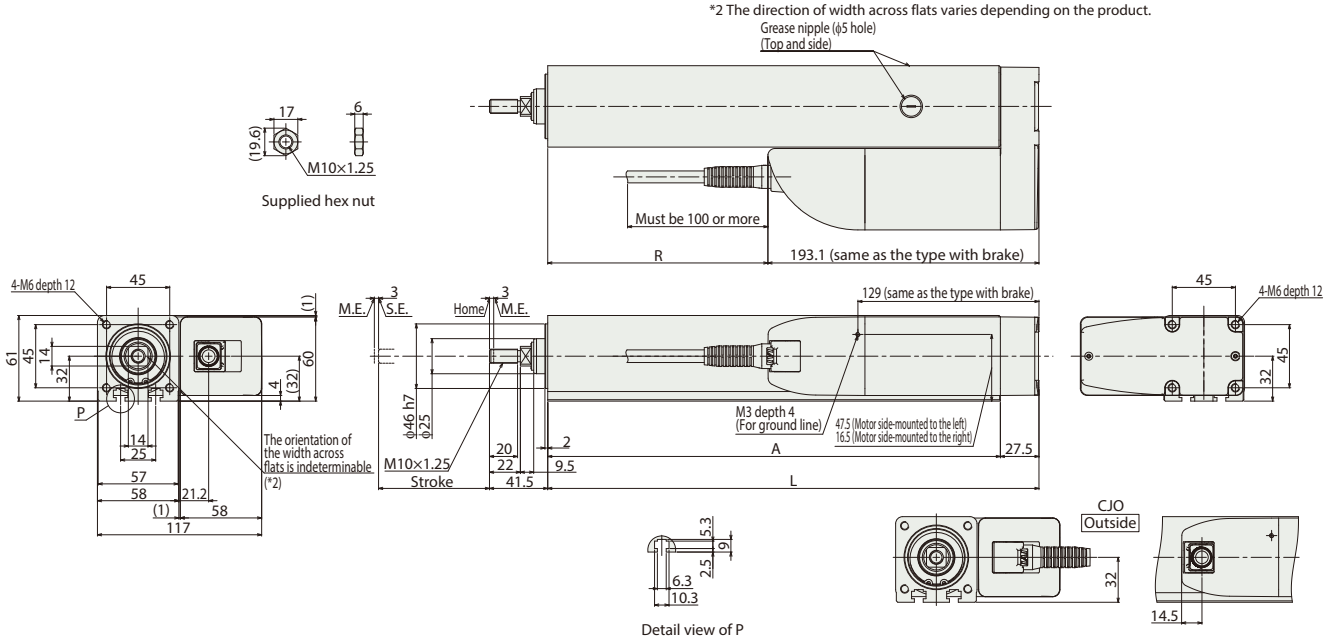
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	1.5N•m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Ambient operating temp. & humidity	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.

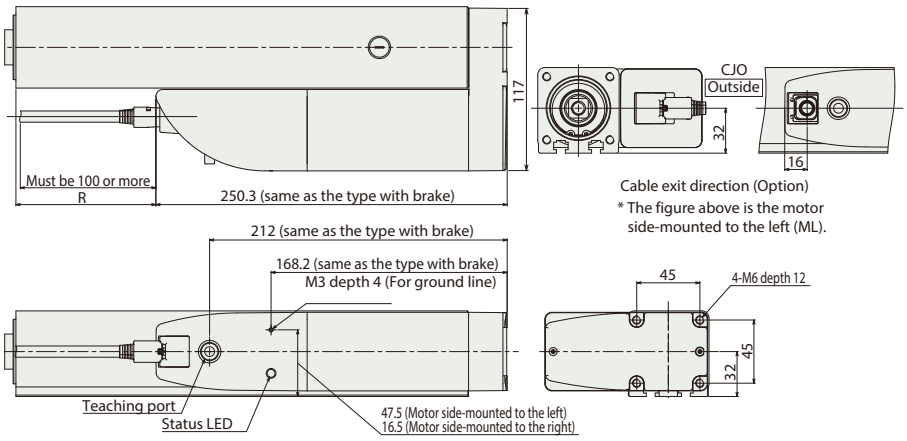
Dimensions

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

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■RCP6S-RA6R



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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RA7R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 24v Stepper 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: Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

* 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.11 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

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

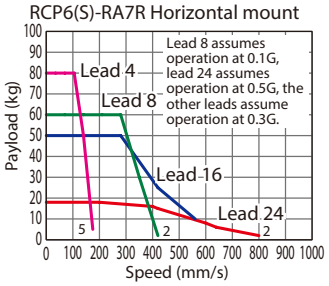
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 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) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

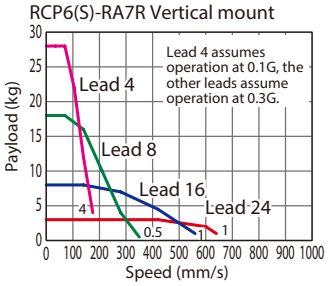
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RA7R Horizontal mount



RCP6(S)-RA7R Vertical mount



Actuator Specifications

■ Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-RA7R-WA-56P-24-①-②-③-④	24	High-output Enabled	20	3	50~300 (The increment of stroke is 50mm)
RCP6(S)-RA7R-WA-56P-16-①-②-③-④	16	High-output Enabled	50	8	
RCP6(S)-RA7R-WA-56P-8-①-②-③-④	8	High-output Enabled	60	18	
RCP6(S)-RA7R-WA-56P-4-①-②-③-④	4	High-output Enabled	80	28	

■ Stroke and Max. Speed

(Unit: mm/s)

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

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**200**	○	○
100	○	○	**250**	○	○
150	○	○	**300**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Foot bracket	**FT**	See P.107
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Motor side-mounted to the top	**MT**	See P.109
Tip adapter (Internal thread)	**NFA**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar	**NTB**	See P.110

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

Actuator Specifications

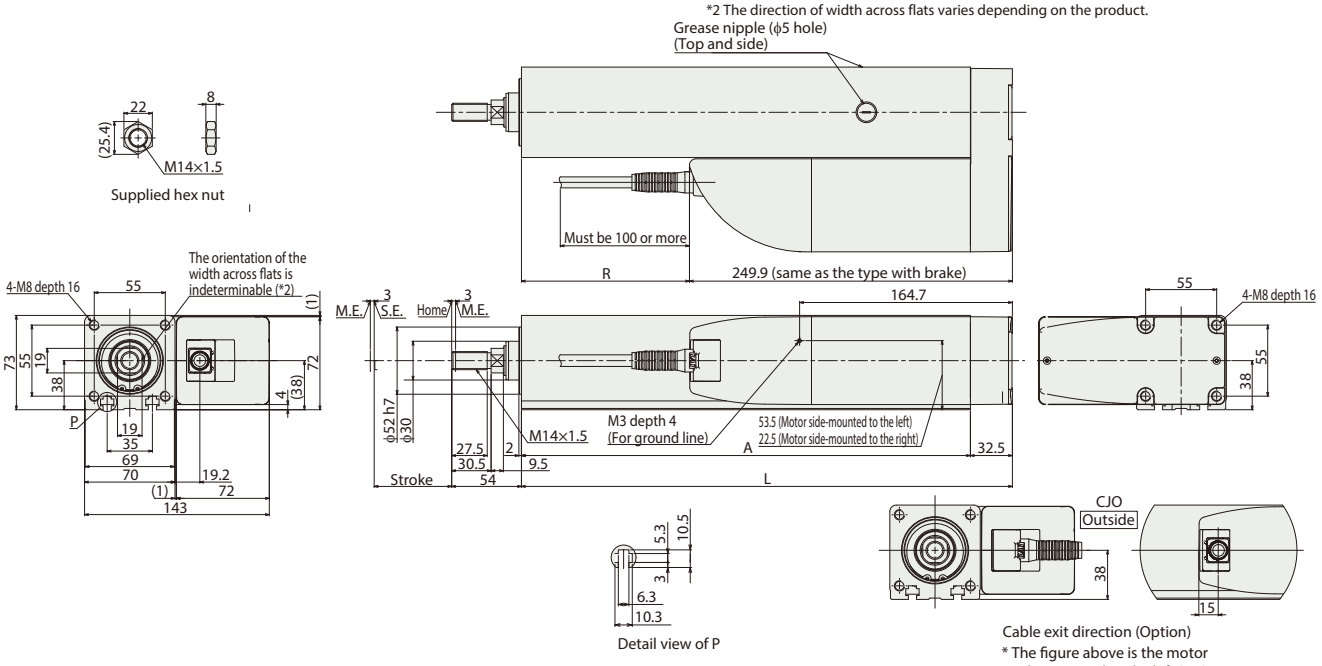
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	2.5N•m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Ambient operating temp. & humidity	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.

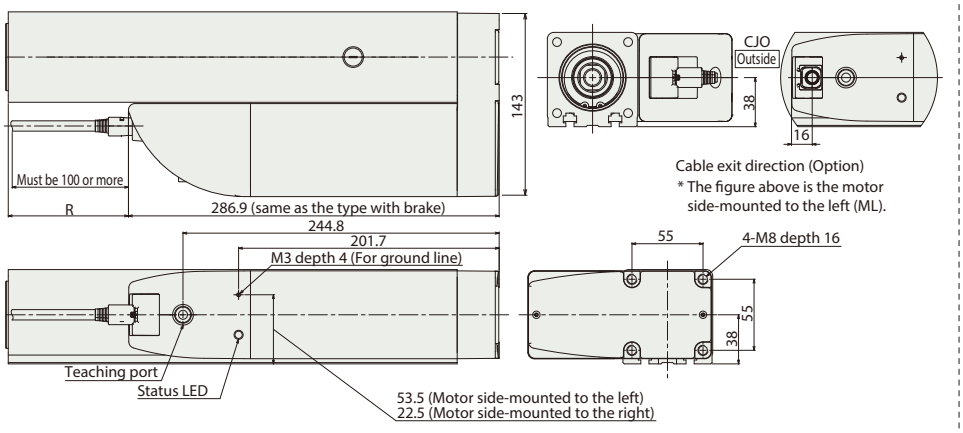
Dimensions

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

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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

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

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RA8R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 85* mm | 24v Stepper 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: Stepper Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 300: 300mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB [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.11 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

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

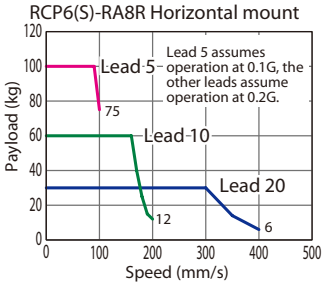
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 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) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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. 114 for more information.

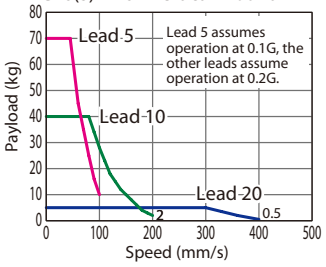
Correlation Diagrams of Speed and Payload

PCON connected.

RCP6(S)-RA8R Horizontal mount



RCP6(S)-RA8R Vertical mount



Actuator Specifications

Lead and Payload

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

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

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**200**	○	○
100	○	○	**250**	○	○
150	○	○	**300**	○	○

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Foot bracket	**FT**	See P.107
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Motor side-mounted to the top	**MT**	See P.109
Tip adapter (Internal thread)	**NFA**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar	**NTB**	See P.110

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

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

Actuator Specifications

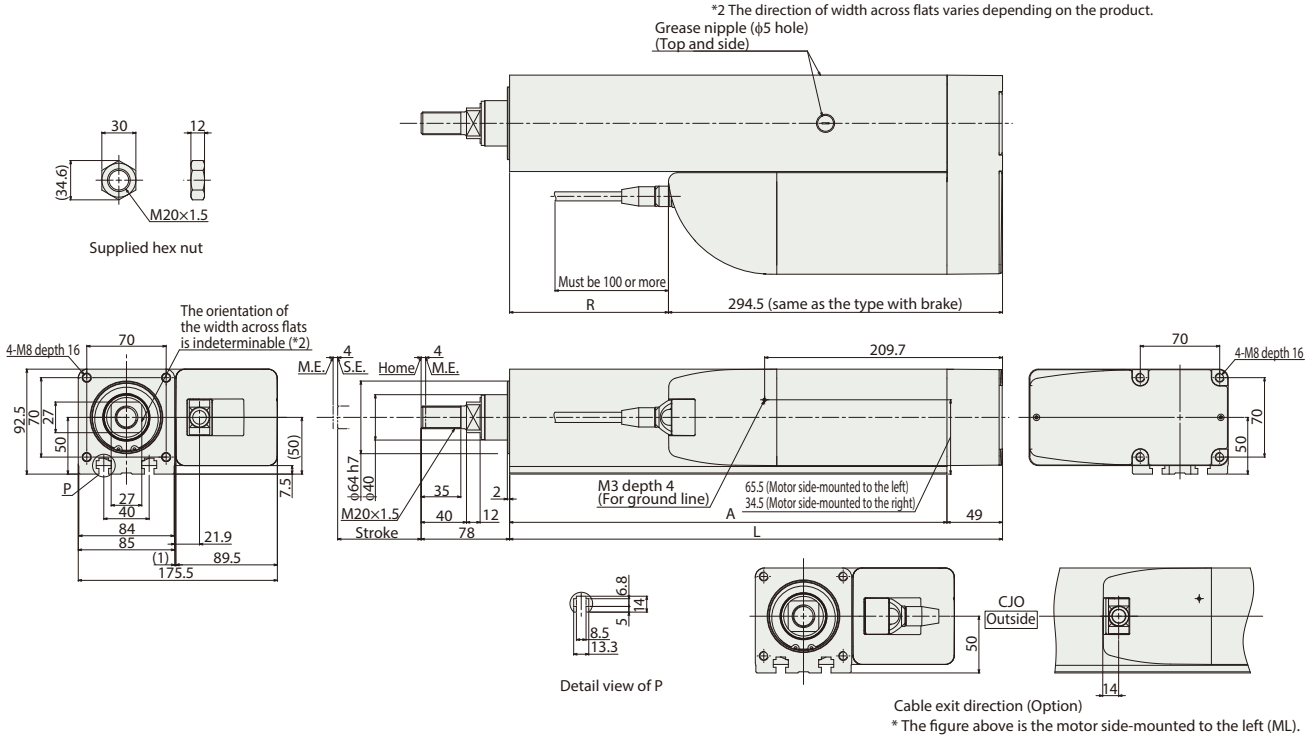
Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	5N•m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Ambient operating temp. & humidity	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.

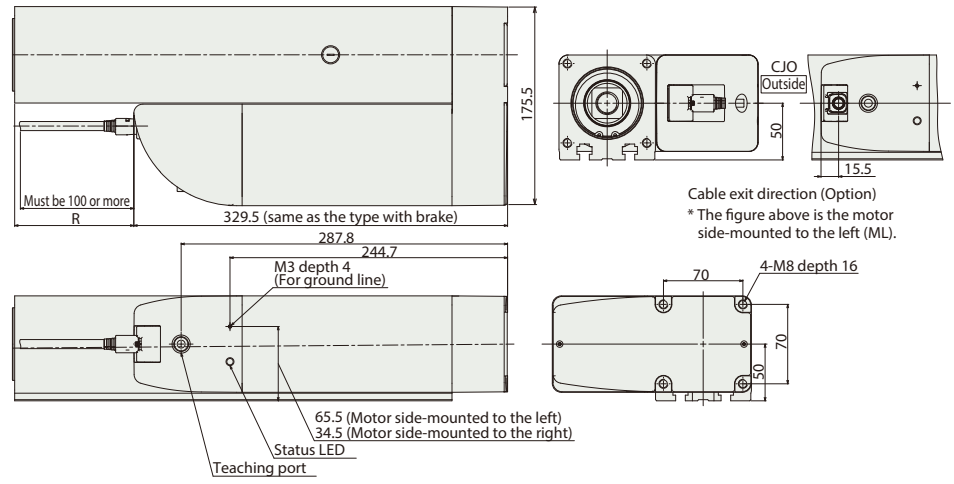
Dimensions

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

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

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.147 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-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet CompoNet EtherNet/IP CC-Link MECHATROLINK PROFIBUS EtherCAT. POWERLINK	512 (768 for network spec.)	Please see P.131

RCP6(S)-RRA4C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 40 mm | 24v Stepper 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: Stepper Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	60: 60mm ~ 410: 410mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.11 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

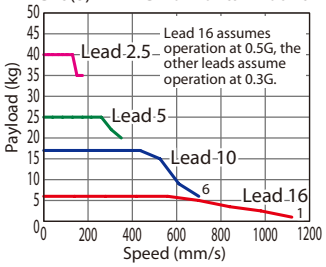
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

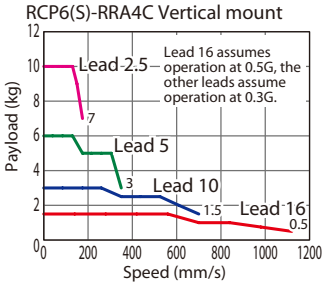
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RRA4C Horizontal mount



RCP6(S)-RRA4C Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

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

■ Stroke and Max. Speed

(Unit: mm/s)

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

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

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
60	○	○	**260**	○	○
110	○	○	**310**	○	○
160	○	○	**360**	○	○
210	○	○	**410**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Tip adapter (Flange)	**FFA**	See P.105
Tip adapter (Internal thread)	**NFA**	See P.109
Tip adapter (Keyway)	**KFA**	See P.108
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

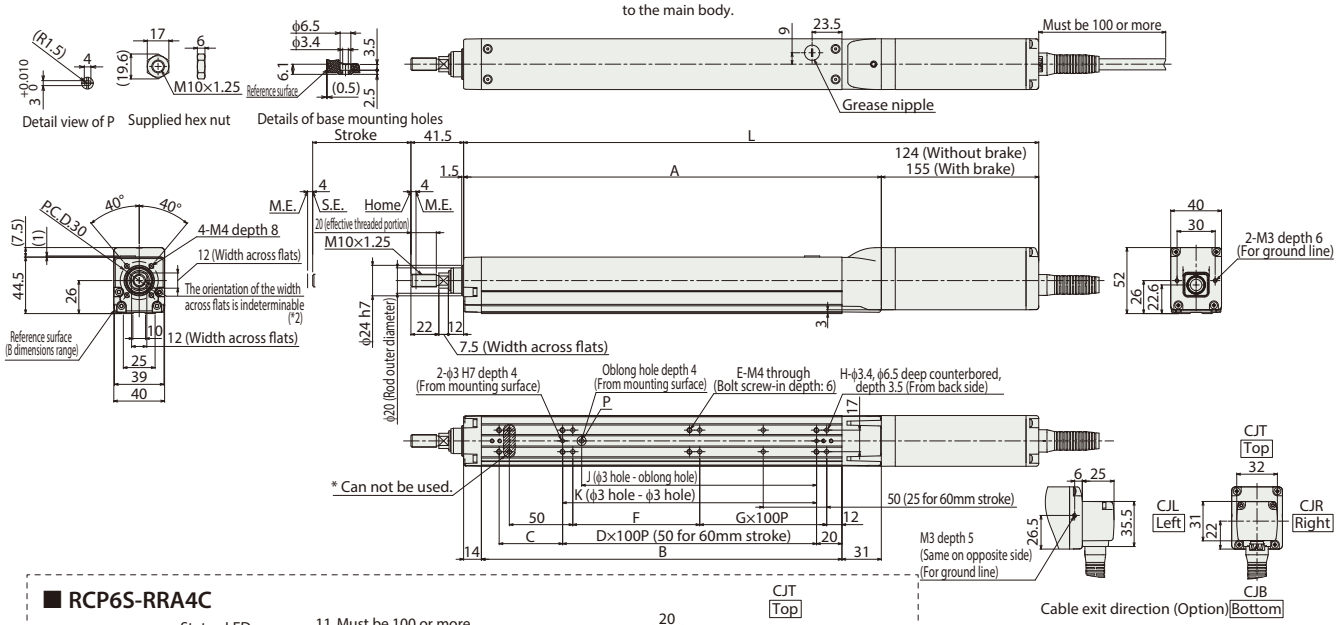
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ20mm Aluminum
Rod non-rotation precision*	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Rod's angular displacement in rotational direction with no load applied to the rod.

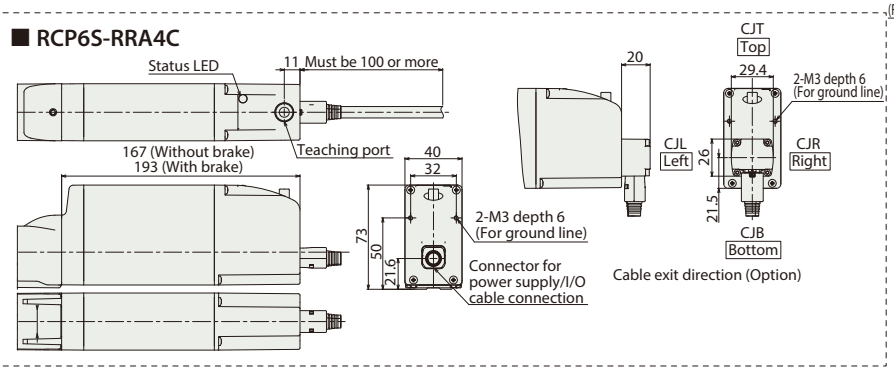
Dimensions

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

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

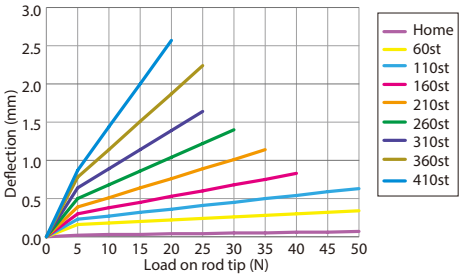


* The two mounting holes (H) on the rod side of the top surface of the base can not be used. The number of the holes (H) in the table does not include these holes that cannot be used.

■ 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 (kg)	Load offset 0mm		2.9	2.3	1.8	1.5	1.3	1.1	1.0	0.8
	Load offset 100mm		1.8	1.6	1.4	1.2	1.0	0.9	0.8	0.7
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)



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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RRA6C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 58 mm | 24V Stepper Motor

■ Model Specification Items

□ — RRA6C — 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: Stepper Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	65: 65mm ~ 415: 415mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.11 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

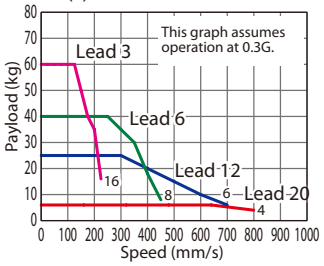
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

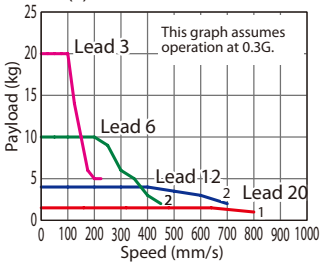
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RRA6C Horizontal mount



RCP6(S)-RRA6C Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg) (Note 1)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-RRA6C-WA-42P-20-①-②-③-④	20	High-output Enabled	6	1.5	65~415 (The increment of stroke is 50mm)
RCP6(S)-RRA6C-WA-42P-12-①-②-③-④	12	High-output Enabled	25	4	
RCP6(S)-RRA6C-WA-42P-6-①-②-③-④	6	High-output Enabled	40	10	
RCP6(S)-RRA6C-WA-42P-3-①-②-③-④	3	High-output Enabled	60	20	

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	65~365 (Every 50mm)	415 (mm)
20	High-output Enabled	800	
12	High-output Enabled	700	
6	High-output Enabled	450	
3	High-output Enabled	225	220

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

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
65	○	○	**265**	○	○
115	○	○	**315**	○	○
165	○	○	**365**	○	○
215	○	○	**415**	○	○

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Tip adapter (Flange)	**FFA**	See P.105
Tip adapter (Internal thread)	**NFA**	See P.109
Tip adapter (Keyway)	**KFA**	See P.108
Non-motor end specification	**NM**	See P.110

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

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Aluminum
Rod non-rotation precision*	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

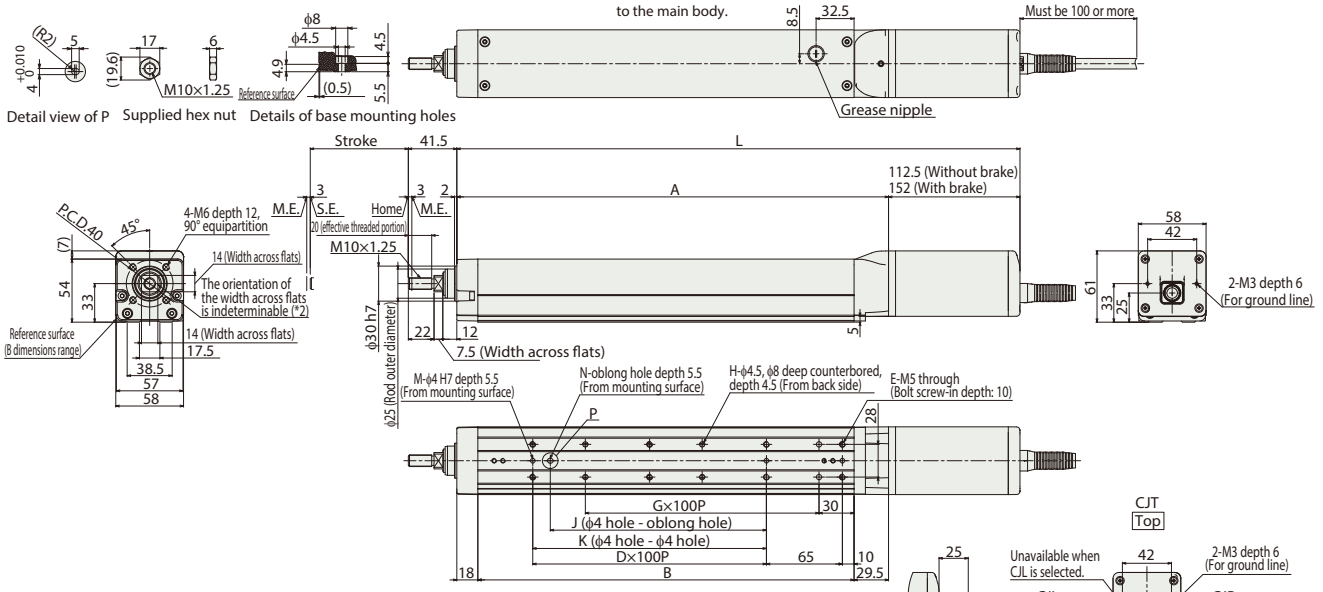
* Rod's angular displacement in rotational direction with no load applied to the rod.

Dimensions

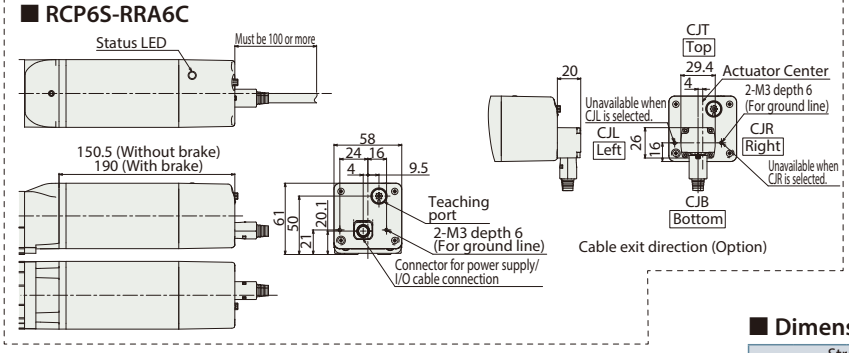
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

2D CAD 3D CAD

*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.



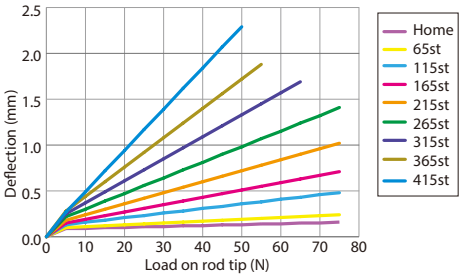
■ RCP6S-RRA6C



■ 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 (kg)		Load offset 0mm	5.9	4.7	3.9	3.3	2.8	2.5	2.2	2.0
		Load offset 100mm	4.0	3.5	3.0	2.7	2.4	2.1	1.9	1.7
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)



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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RRA7C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 70 mm | 24V Stepper 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: Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	70: 70mm ~ 520: 520mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

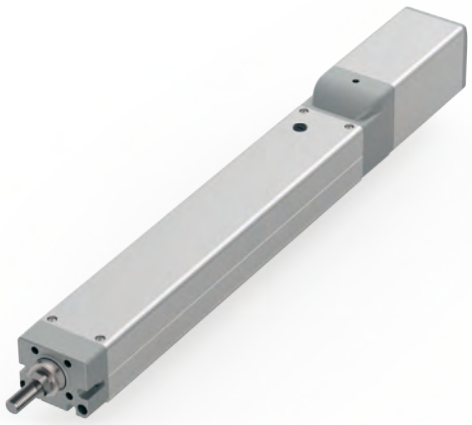
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.11 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



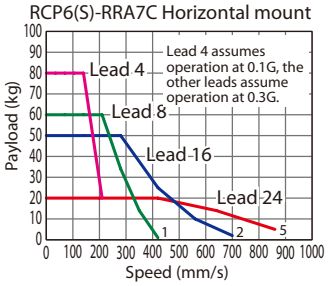
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

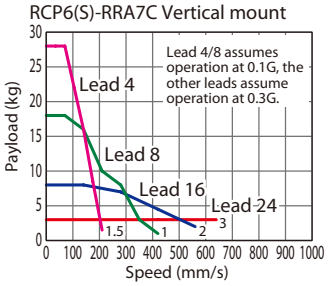
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RRA7C Horizontal mount



RCP6(S)-RRA7C Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg) (Note 1)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-RRA7C-WA-56P-24-①-②-③-④	24	High-output Enabled	20	3	70~520 (The increment of stroke is 50mm)
RCP6(S)-RRA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	50	8	
RCP6(S)-RRA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	60	18	
RCP6(S)-RRA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	80	28	

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	70~520 (Every 50mm)
24	High-output Enabled	860 <640>
16	High-output Enabled	700 <560>
8	High-output Enabled	420
4	High-output Enabled	210

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
70	○	○	**320**	○	○
120	○	○	**370**	○	○
170	○	○	**420**	○	○
220	○	○	**470**	○	○
270	○	○	**520**	○	○

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Tip adapter (Flange)	**FFA**	See P.105
Tip adapter (Internal thread)	**NFA**	See P.109
Tip adapter (Keyway)	**KFA**	See P.108
Non-motor end specification	**NM**	See P.110

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

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

Actuator Specifications

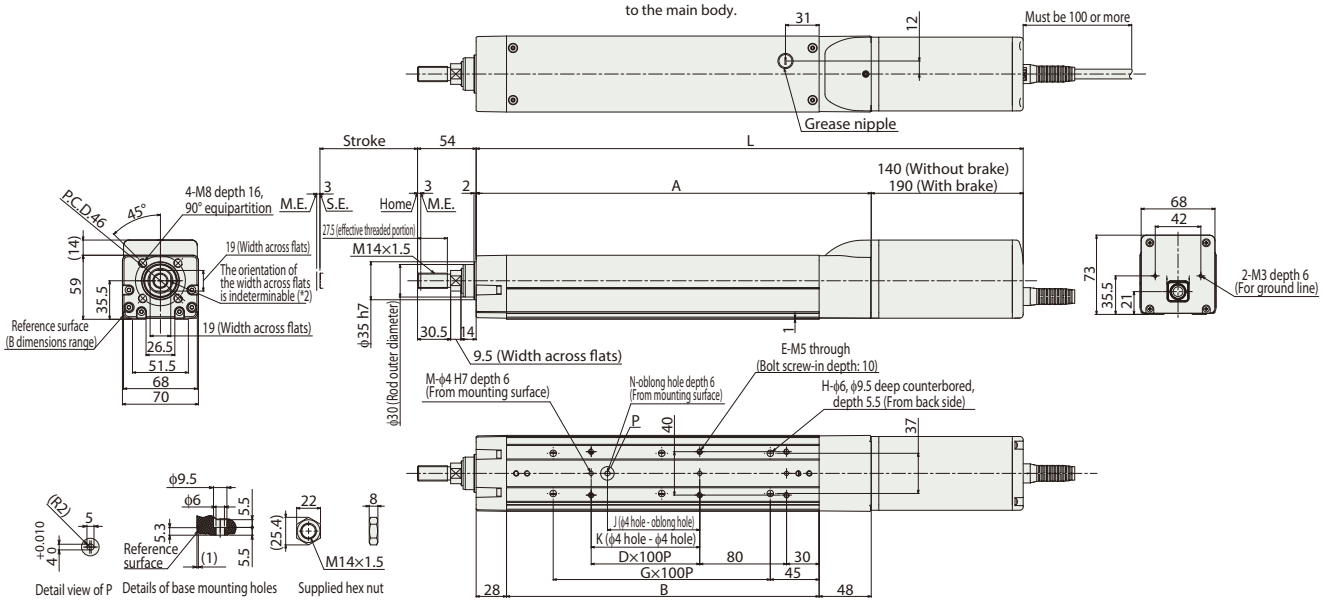
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Aluminum
Rod non-rotation precision*	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

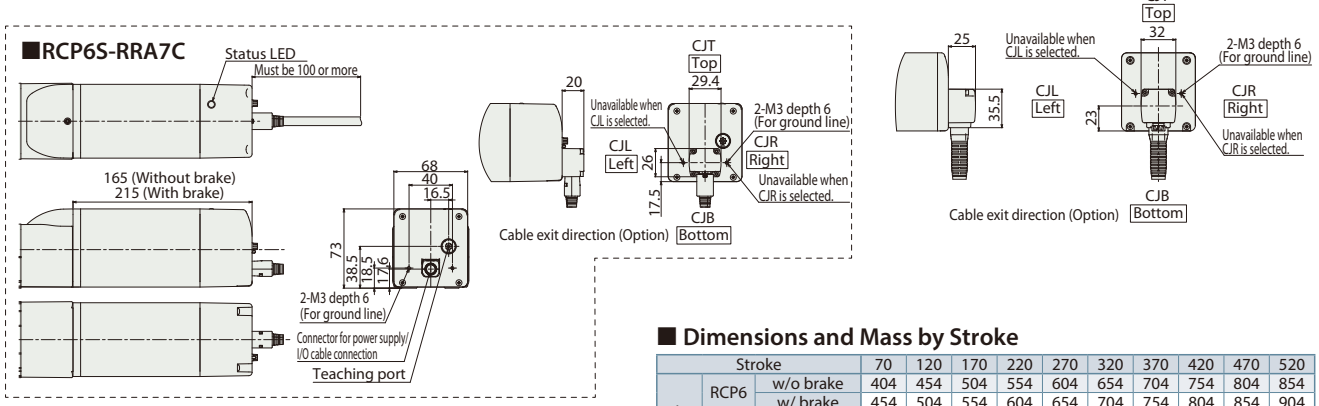
* Rod's angular displacement in rotational direction with no load applied to the rod.

Dimensions

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

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

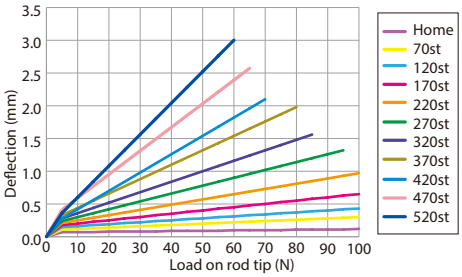




■ Dimensions and Mass by Stroke

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 (kg)		Load offset 0mm	7.7	6.4	5.4	4.7	4.1	3.7	3.3	3.0	2.7	2.5
		Load offset 100mm	5.1	4.6	4.1	3.7	3.4	3.1	2.8	2.6	2.4	2.2
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)



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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RRA8C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 85 mm | 24V Stepper 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: Stepper Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 700: 700mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB [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.

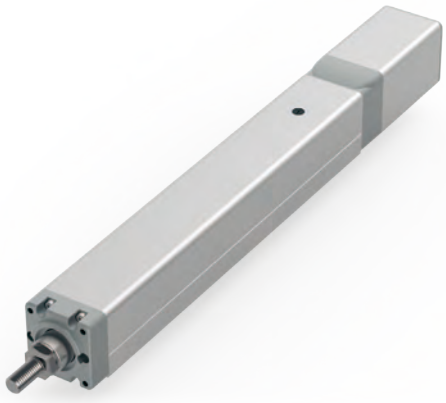
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.11 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

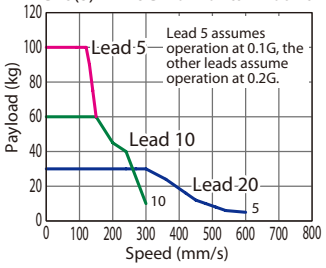


POINT Selection Notes

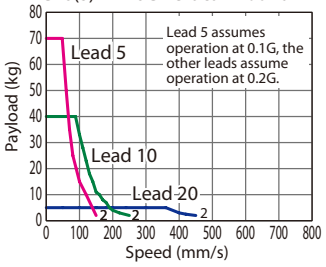
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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. 114 for more information.

■ Correlation Diagrams of Speed and Payload

PCON connected.
RCP6(S)-RRA8C Horizontal mount



RCP6(S)-RRA8C Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Max. Payload Horizontal (kg) (Note 1)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-RRA8C-WA-60P-20-①-②-③-④	20	30	5	50~700 (The increment of stroke is 50mm)
RCP6(S)-RRA8C-WA-60P-10-①-②-③-④	10	60	40	
RCP6(S)-RRA8C-WA-60P-5-①-②-③-④	5	100	70	

■ 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.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**400**	○	○
100	○	○	**450**	○	○
150	○	○	**500**	○	○
200	○	○	**550**	○	○
250	○	○	**600**	○	○
300	○	○	**650**	○	○
350	○	○	**700**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Tip adapter (Internal thread)	**NFA**	See P.109
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

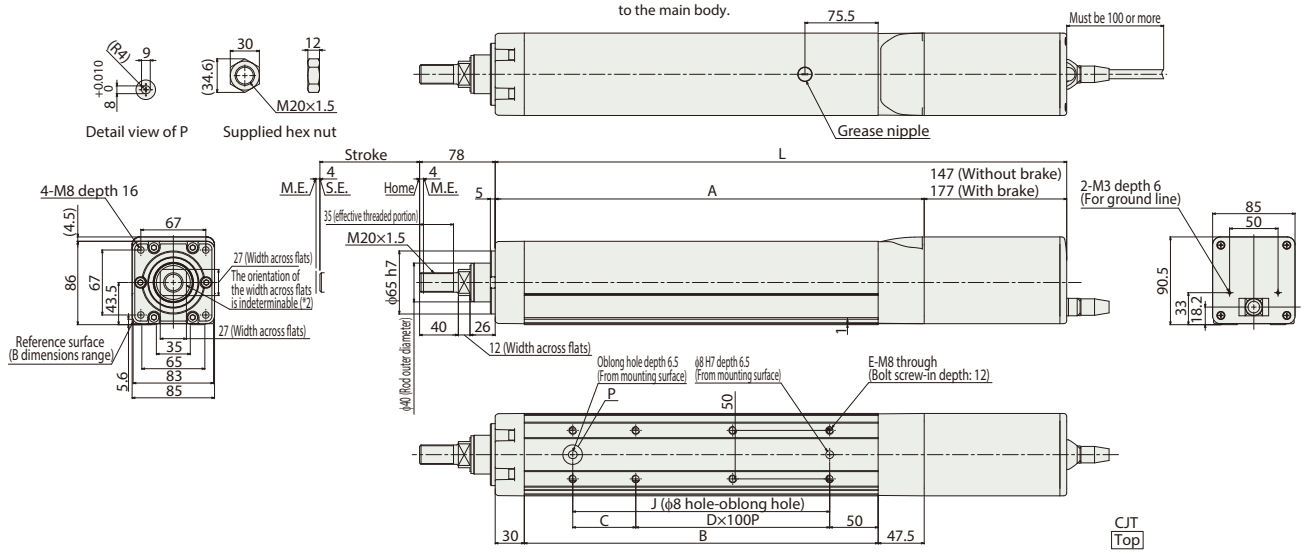
Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm Aluminum
Rod non-rotation precision*	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

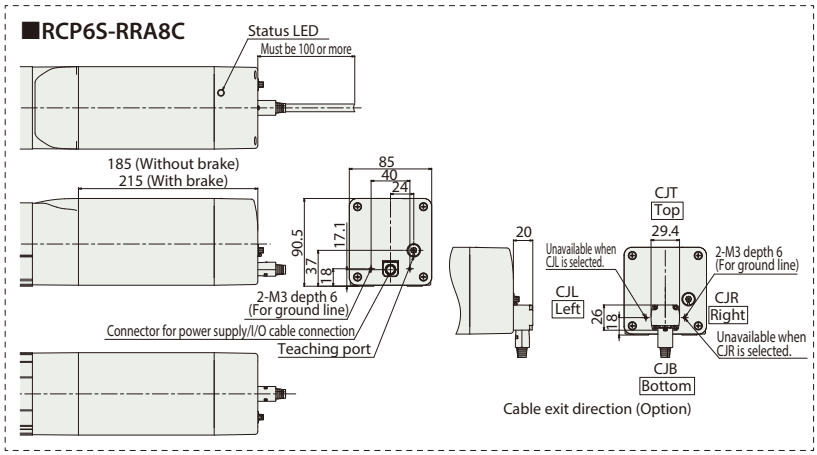
* Rod's angular displacement in rotational direction with no load applied to the rod.

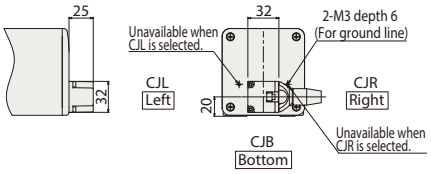
Dimensions

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

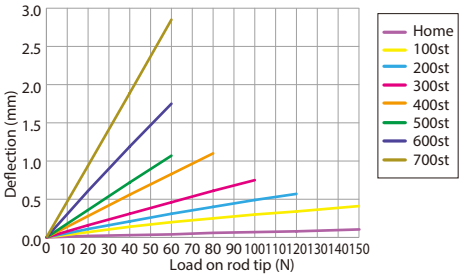
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E. M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.







■ 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 (kg)		Load offset 0mm	9.5	7.8	6.6	5.7	5.0	4.5	4.0	3.6	3.3	3.0	2.8	2.6	2.4	2.2
		Load offset 100mm	7.4	6.3	5.5	4.9	4.4	4.0	3.6	3.3	3.0	2.8	2.6	2.4	2.2	2.1
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

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.147 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-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet CompoNet EtherNet/IP CC-Link MECHATROLINK PROFIBUS EtherCAT POWERLINK	512 (768 for network spec.)	Please see P.131

RCP6(S)-RRA4R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 24v Stepper 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	RRA4R	WA: Battery-less Absolute	35P: Stepper Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm	60: 60mm ~ 410: 410mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

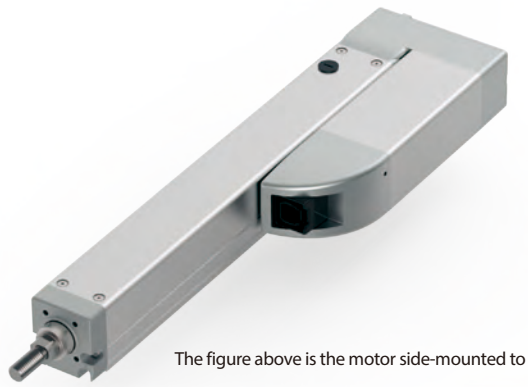
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.11 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

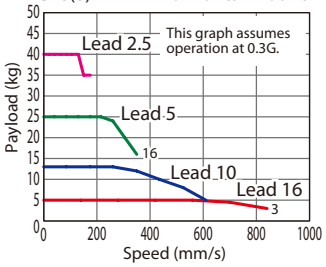
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

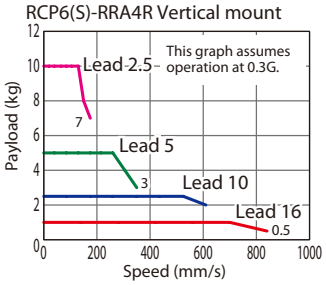
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RRA4R Horizontal mount



RCP6(S)-RRA4R Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-RRA4R-WA-35P-16-①-②-③-④	16	High-output Enabled	5	1	60~410 (The increment of stroke is 50mm)
RCP6(S)-RRA4R-WA-35P-10-①-②-③-④	10	High-output Enabled	13	2.5	
RCP6(S)-RRA4R-WA-35P-5-①-②-③-④	5	High-output Enabled	28	5	
RCP6(S)-RRA4R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	60~360 (Every 50mm)	410 (mm)
16	High-output Enabled	840	
10	High-output Enabled	610	
5	High-output Enabled	350	340
2.5	High-output Enabled	175	170

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

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
60	○	○	**260**	○	○
110	○	○	**310**	○	○
160	○	○	**360**	○	○
210	○	○	**410**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Tip adapter (Flange)	**FFA**	See P.105
Tip adapter (Internal thread)	**NFA**	See P.109
Tip adapter (Keyway)	**KFA**	See P.108
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Knuckle joint*	**NJ**	See P.110
Non-motor end specification	**NM**	See P.110
Clevis bracket*	**QR**	See P.111

* The clevis (QR) and knuckle joint (NJ) are sold as a set. The assembly is to be performed by the customer.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

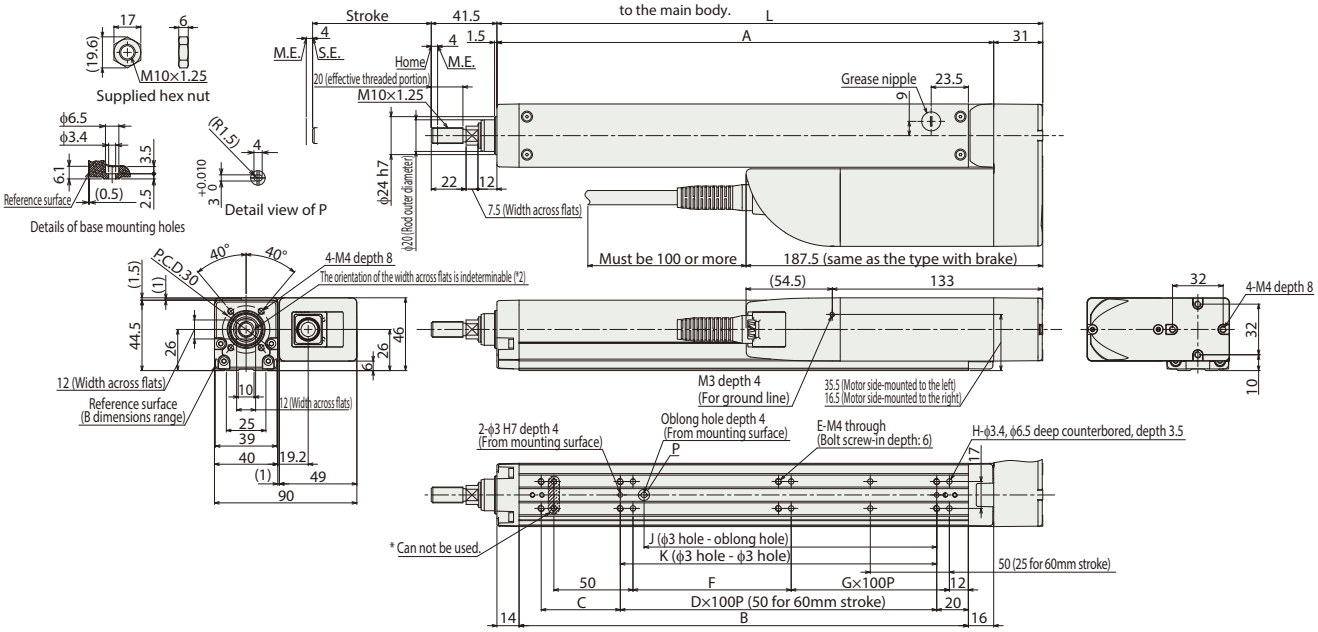
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ20mm Aluminum
Rod non-rotation precision*	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Rod's angular displacement in rotational direction with no load applied to the rod.

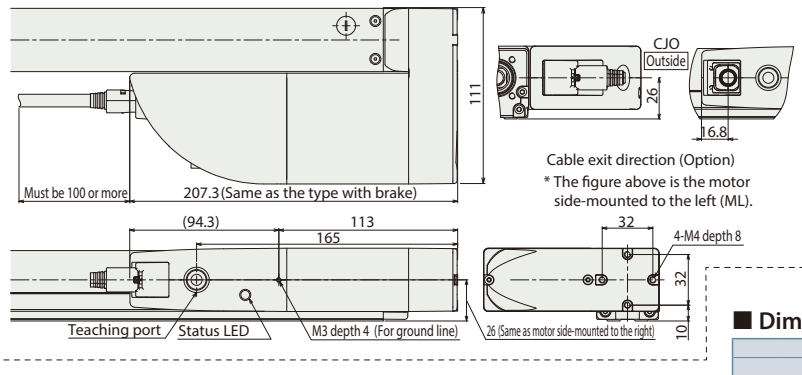
Dimensions

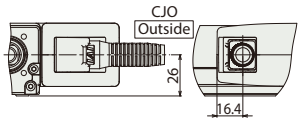
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

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



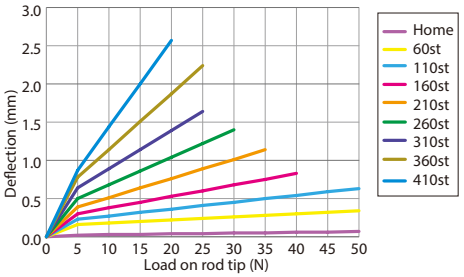
■RCP6S-RRA4R





* 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.

■ Rod Deflection of RCP6(S)-RRA4R (Reference Values)



■ 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 (kg)	Load offset 0mm		2.9	2.3	1.8	1.5	1.3	1.1	1.0	0.8
	Load offset 100mm		1.8	1.6	1.4	1.2	1.0	0.9	0.8	0.7
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
		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
		w/ brake	1.6	1.7	1.8	1.9	2.1	2.2	2.3	2.4

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RRA6R

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

■ Model Specification Items

□ — RRA6R — 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: Stepper Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	65: 65mm ~ 415: 415mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

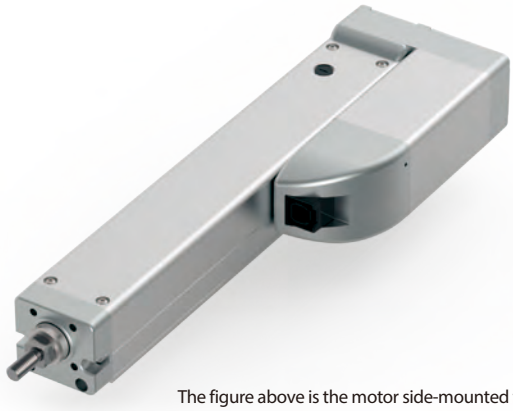
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.11 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

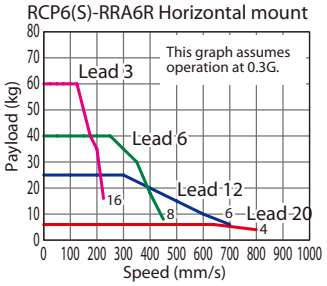
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

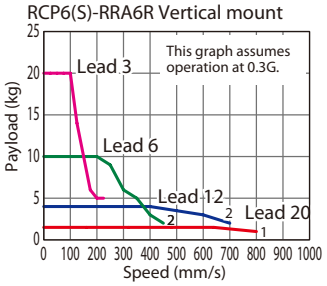
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RRA6R Horizontal mount



RCP6(S)-RRA6R Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-RRA6R-WA-42P-20-①-②-③-④	20	High-output Enabled	6	1.5	65~415 (The increment of stroke is 50mm)
RCP6(S)-RRA6R-WA-42P-12-①-②-③-④	12	High-output Enabled	25	4	
RCP6(S)-RRA6R-WA-42P-6-①-②-③-④	6	High-output Enabled	40	10	
RCP6(S)-RRA6R-WA-42P-3-①-②-③-④	3	High-output Enabled	60	20	

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	65~365 (Every 50mm)	415 (mm)
20	High-output Enabled	800	
12	High-output Enabled	700	
6	High-output Enabled	450	
3	High-output Enabled	225	220

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

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
65	○	○	**265**	○	○
115	○	○	**315**	○	○
165	○	○	**365**	○	○
215	○	○	**415**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Tip adapter (Flange)	**FFA**	See P.105
Tip adapter (Internal thread)	**NFA**	See P.109
Tip adapter (Keyway)	**KFA**	See P.108
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Knuckle joint*	**NJ**	See P.110
Non-motor end specification	**NM**	See P.110
Clevis bracket*	**QR**	See P.111

* The clevis (QR) and knuckle joint (NJ) are sold as a set. The assembly is to be performed by the customer.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

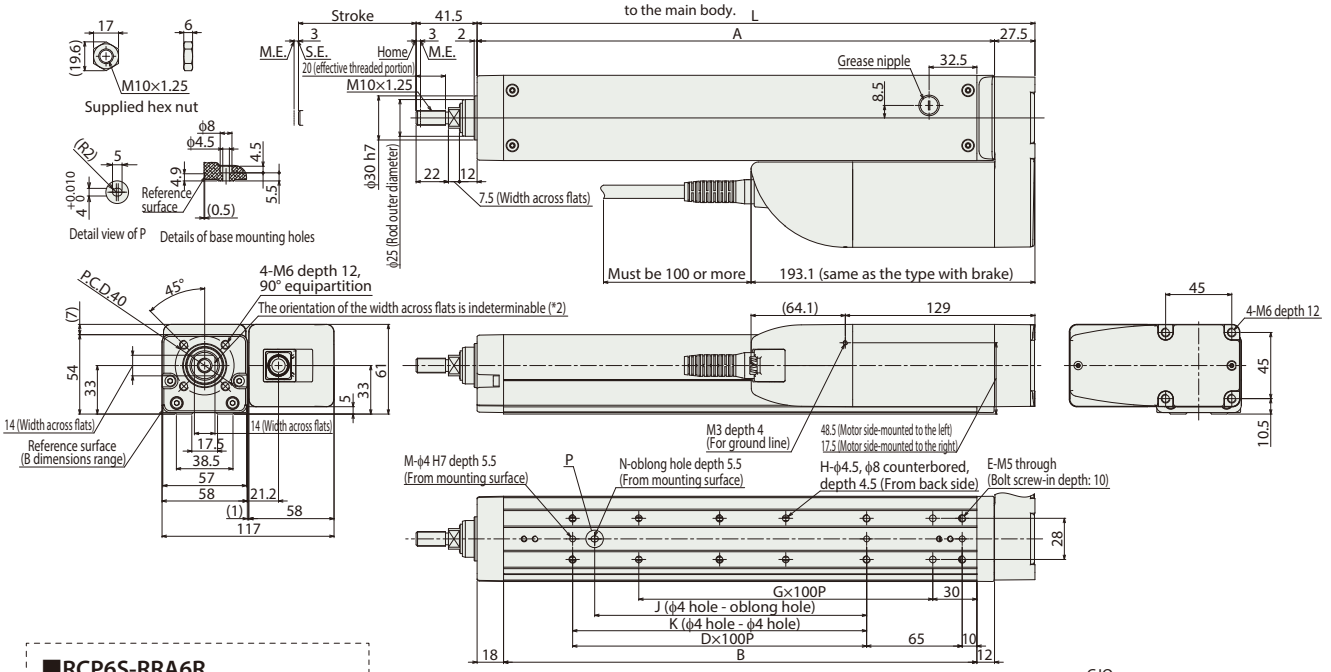
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Aluminum
Rod non-rotation precision*	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Rod's angular displacement in rotational direction with no load applied to the rod.

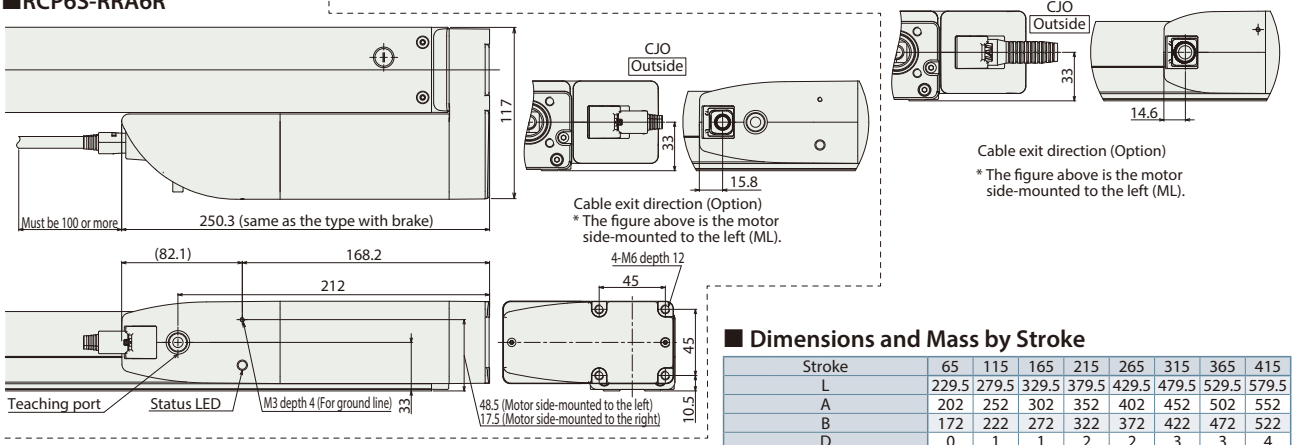
Dimensions

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

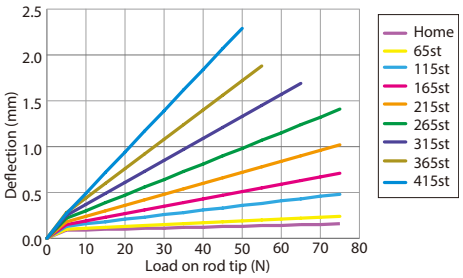
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E. M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.
*3 When fixing the actuator using a front 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 (kg)	Load offset 0mm	5.9	4.7	3.9	3.3	2.8	2.5	2.2	2.0
	Load offset 100mm	4.0	3.5	3.0	2.7	2.4	2.1	1.9	1.7
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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

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

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RRA7R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 24v Stepper 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	RRA7R	WA: Battery-less Absolute	56P: Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	70: 70mm ~ 520: 520mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

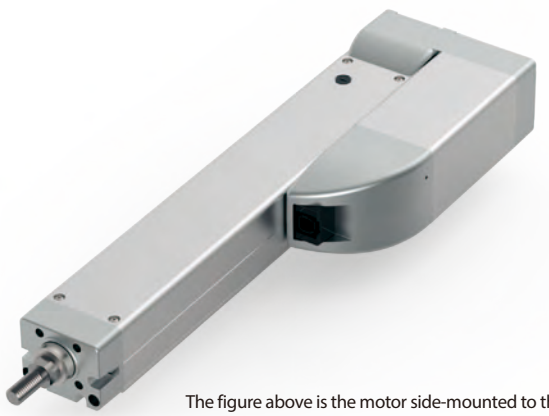
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.11 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

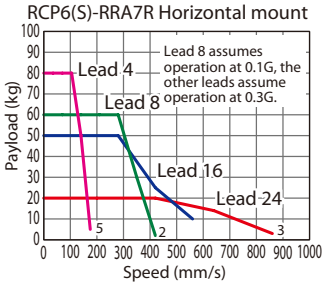
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

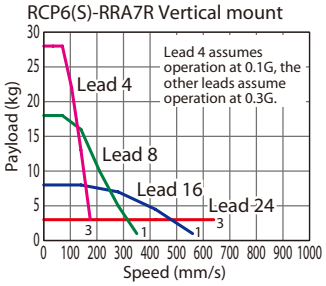
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-RRA7R Horizontal mount



RCP6(S)-RRA7R Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-RRA7R-WA-56P-24-①-②-③-④	24	High-output Enabled	20	3	70~520 (The increment of stroke is 50mm)
RCP6(S)-RRA7R-WA-56P-16-①-②-③-④	16	High-output Enabled	50	8	
RCP6(S)-RRA7R-WA-56P-8-①-②-③-④	8	High-output Enabled	60	18	
RCP6(S)-RRA7R-WA-56P-4-①-②-③-④	4	High-output Enabled	80	28	

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	70~520 (Every 50mm)
24	High-output Enabled	860 <640>
16	High-output Enabled	560
8	High-output Enabled	420 <350>
4	High-output Enabled	175

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
70	○	○	**320**	○	○
120	○	○	**370**	○	○
170	○	○	**420**	○	○
220	○	○	**470**	○	○
270	○	○	**520**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Tip adapter (Flange)	**FFA**	See P.105
Tip adapter (Internal thread)	**NFA**	See P.109
Tip adapter (Keyway)	**KFA**	See P.108
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Knuckle joint*	**NJ**	See P.110
Non-motor end specification	**NM**	See P.110
Clevis bracket*	**QR**	See P.111

* The clevis (QR) and knuckle joint (NJ) are sold as a set. The assembly is to be performed by the customer.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

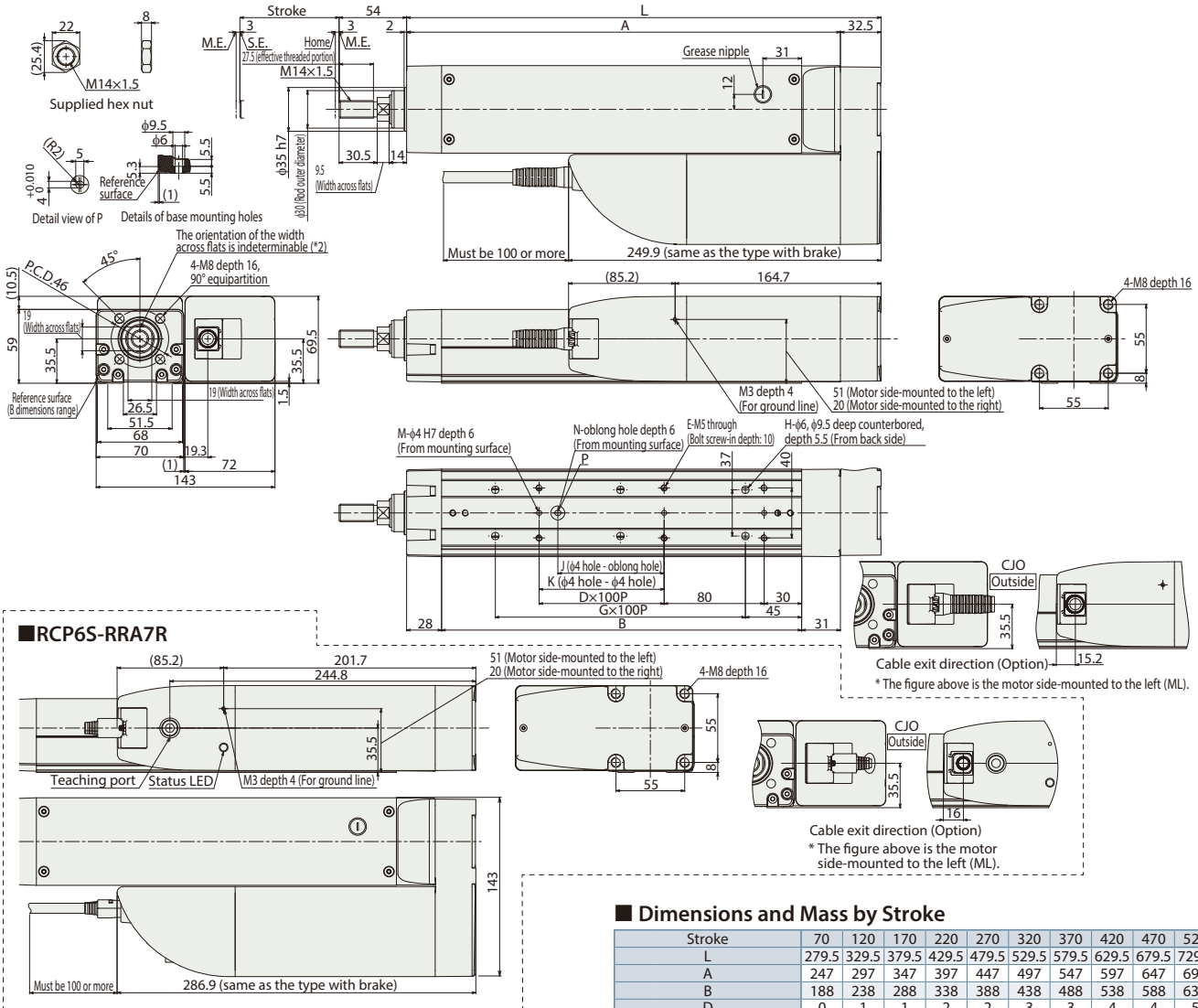
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Aluminum
Rod non-rotation precision*	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Rod's angular displacement in rotational direction with no load applied to the rod.

Dimensions

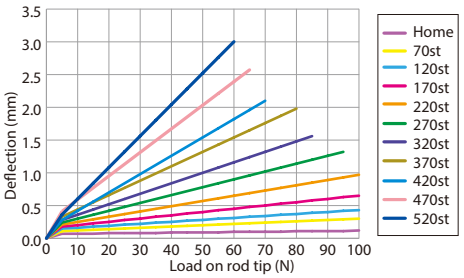
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the 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 (kg)	Load offset 0mm	7.7	6.4	5.4	4.7	4.1	3.7	3.3	3.0	2.7	2.5
	Load offset 100mm	5.1	4.6	4.1	3.7	3.4	3.1	2.8	2.6	2.4	2.2
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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-RRA8R

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

Model Specification Items

□ — RRA8R — 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: Stepper Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 700: 700mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB [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.

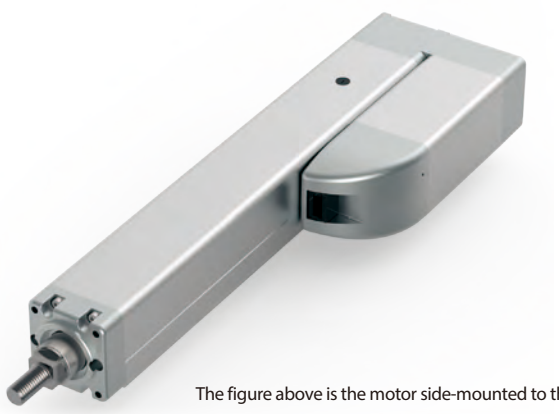
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.11 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

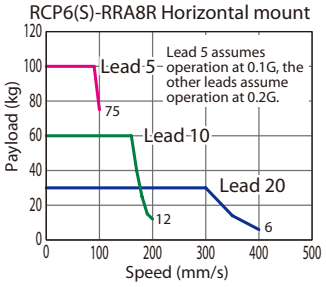
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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. 114 for more information.

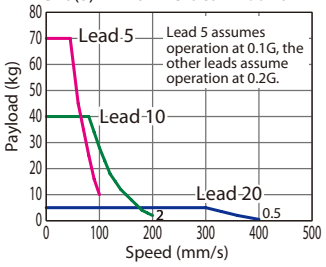
Correlation Diagrams of Speed and Payload

PCON connected.

RCP6(S)-RRA8R Horizontal mount



RCP6(S)-RRA8R Vertical mount



Actuator Specifications

Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-RRA8R-WA-60P-20-①-②-③-④	20	30	5	50~700 (The increment of stroke is 50mm)
RCP6(S)-RRA8R-WA-60P-10-①-②-③-④	10	60	40	
RCP6(S)-RRA8R-WA-60P-5-①-②-③-④	5	100	70	

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

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**400**	○	○
100	○	○	**450**	○	○
150	○	○	**500**	○	○
200	○	○	**550**	○	○
250	○	○	**600**	○	○
300	○	○	**650**	○	○
350	○	○	**700**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Tip adapter (Internal thread)	**NFA**	See P.109
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Knuckle joint*	**NJ**	See P.110
Non-motor end specification	**NM**	See P.110
Clevis bracket*	**QR**	See P.111

* The clevis (QR) and knuckle joint (NJ) are sold as a set. The assembly is to be performed by the customer.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

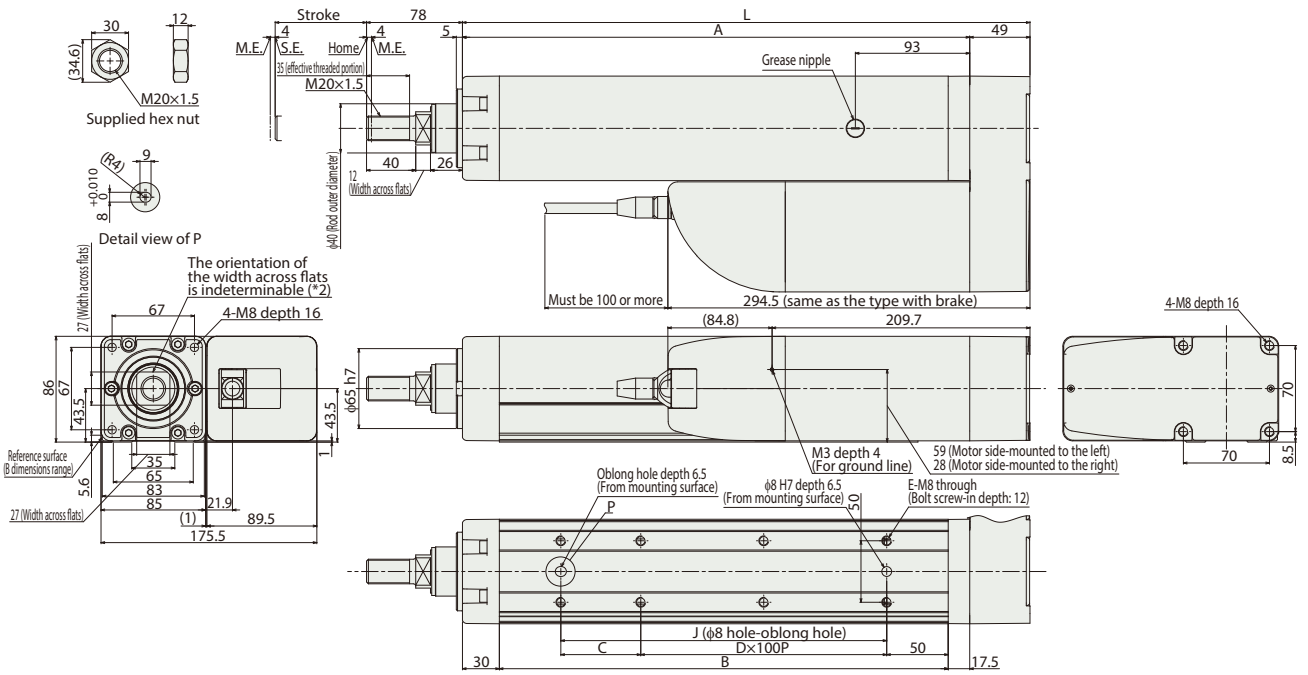
Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm Aluminum
Rod non-rotation precision*	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Rod's angular displacement in rotational direction with no load applied to the rod.

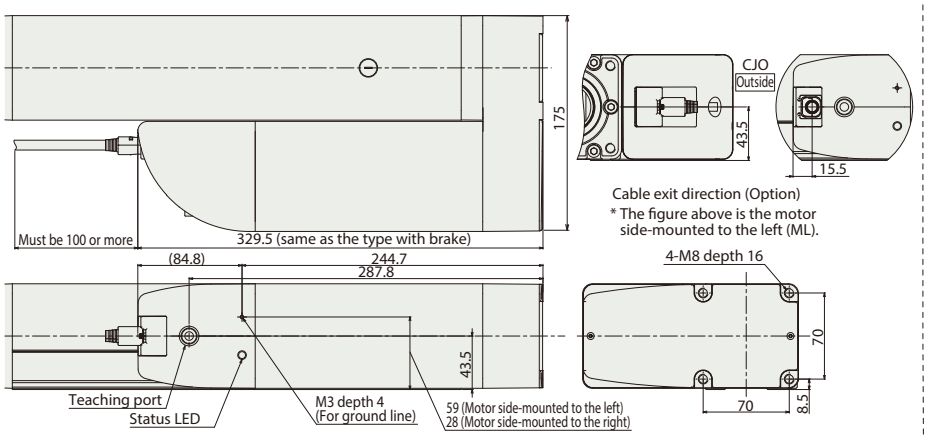
Dimensions

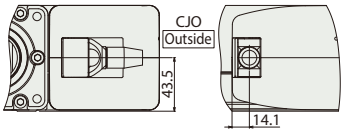
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

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

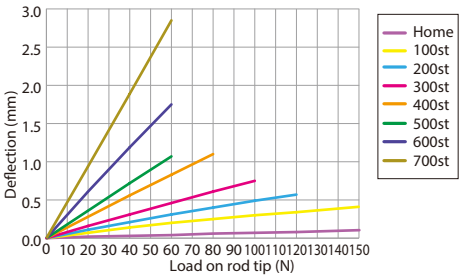


■RCP6S-RRA8R





■ 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 (kg)		Load offset 0mm	9.5	7.8	6.6	5.7	5.0	4.5	4.0	3.6	3.3	3.0	2.8	2.6	2.4	2.2
		Load offset 100mm	7.4	6.3	5.5	4.9	4.4	4.0	3.6	3.3	3.0	2.8	2.6	2.4	2.2	2.1
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

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.147 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-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet, CompoNet, EtherNet/IP, CC-Link, MECHATROLINK, PROFIBUS, EtherCAT, POWERLINK	512 (768 for network spec.)	Please see P.131

RCP6(S)-WRA10C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 100 mm | 24V Stepper 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: Stepper Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

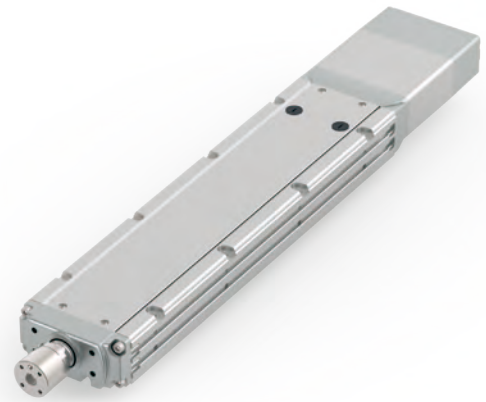
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.12 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

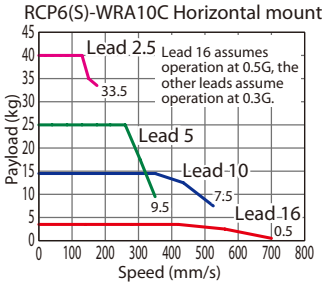


POINT Selection Notes

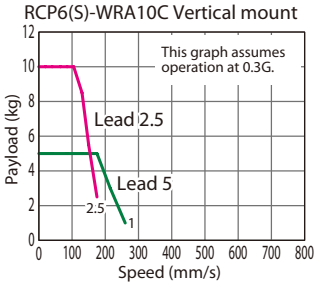
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.
RCP6(S)-WRA10C Horizontal mount



RCP6(S)-WRA10C Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WRA10C-WA-35P-16-①-②-③-④	16	High-output Enabled	4	-	50~500 (The increment of stroke is 50mm)
RCP6(S)-WRA10C-WA-35P-10-①-②-③-④	10	High-output Enabled	14.5	-	
RCP6(S)-WRA10C-WA-35P-5-①-②-③-④	5	High-output Enabled	28	5	
RCP6(S)-WRA10C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
16	High-output Enabled	700		
10	High-output Enabled	525		490
5	High-output Enabled	350 <260>	290 <260>	240
2.5	High-output Enabled	175	145	120

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**300**	○	○
100	○	○	**350**	○	○
150	○	○	**400**	○	○
200	○	○	**450**	○	○
250	○	○	**500**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Non-motor end specification	**NM**	See P.110
T-slot nut bar (Left)	**NTBL**	See P.110
T-slot nut bar (Right)	**NTBR**	See P.110

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

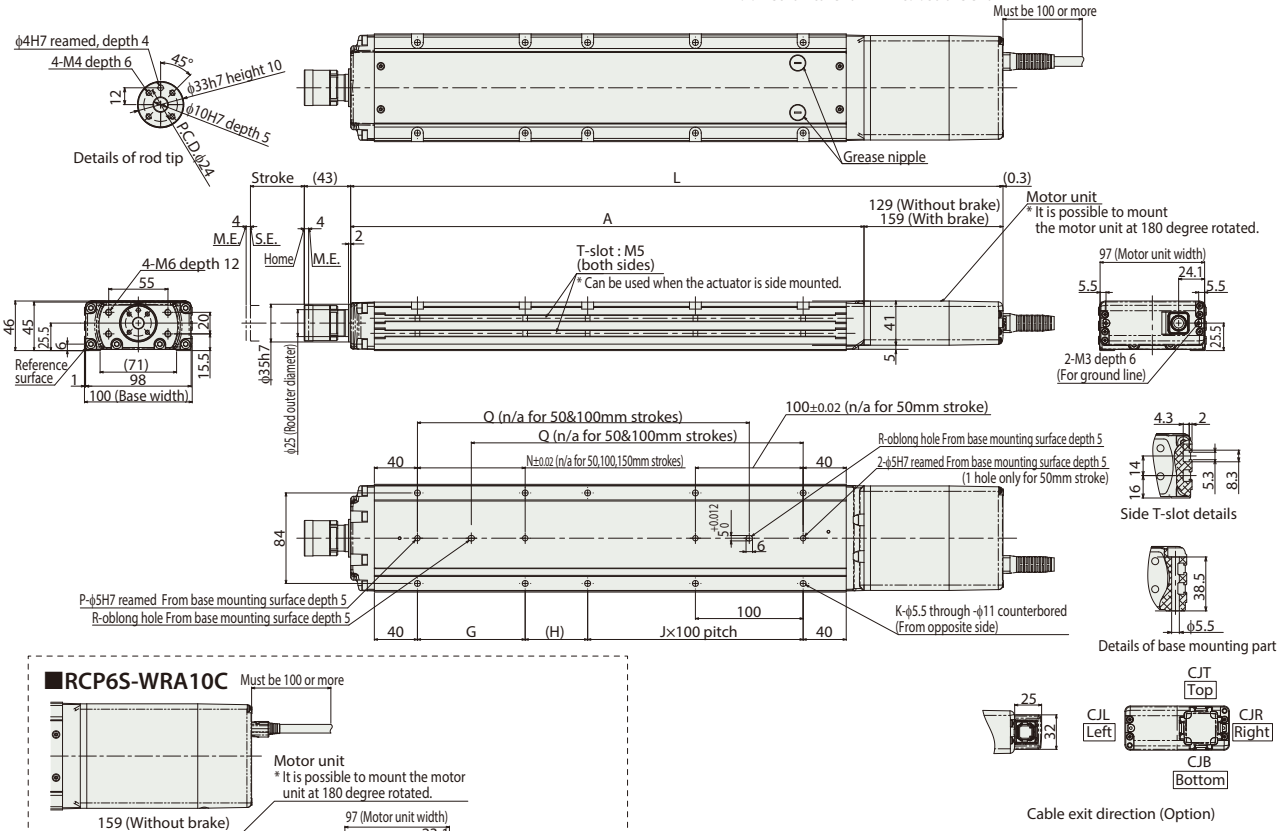
Actuator Specifications

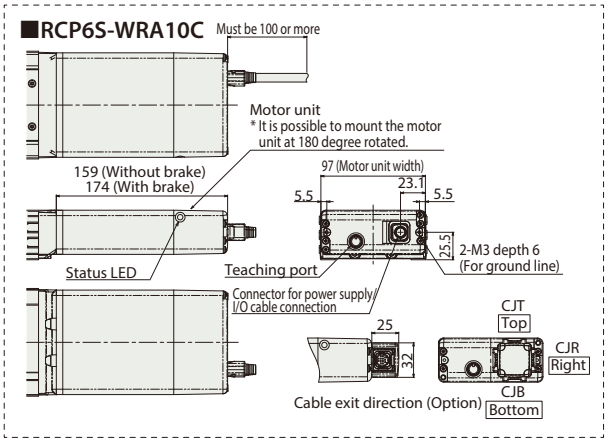
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Stainless steel
Rod non-rotation precision	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

Dimensions

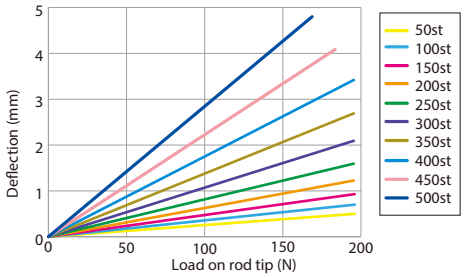
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

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





■ 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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WRA12C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 120 mm | 24V Stepper 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: Stepper Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

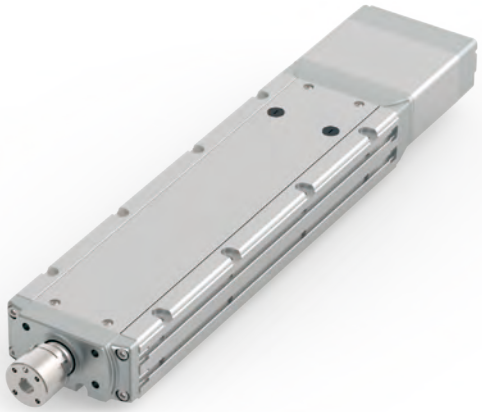
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.12 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



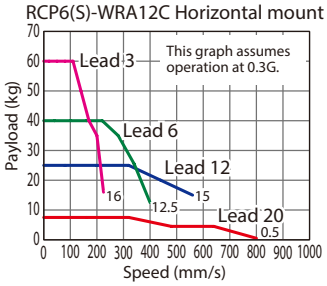
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

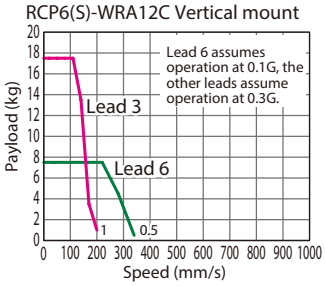
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-WRA12C Horizontal mount



RCP6(S)-WRA12C Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WRA12C-WA-42P-20-①-②-③-④	20	High-output Enabled	7.5	-	50~500 (The increment of stroke is 50mm)
RCP6(S)-WRA12C-WA-42P-12-①-②-③-④	12	High-output Enabled	30	-	
RCP6(S)-WRA12C-WA-42P-6-①-②-③-④	6	High-output Enabled	55	7.5	
RCP6(S)-WRA12C-WA-42P-3-①-②-③-④	3	High-output Enabled	70	17.5	

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
20	High-output Enabled	800		
12	High-output Enabled	560		
6	High-output Enabled	400 <340>		375 <340>
3	High-output Enabled	225 <200>	220 <200>	185

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**300**	○	○
100	○	○	**350**	○	○
150	○	○	**400**	○	○
200	○	○	**450**	○	○
250	○	○	**500**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Non-motor end specification	**NM**	See P.110
T-slot nut bar (Left)	**NTBL**	See P.110
T-slot nut bar (Right)	**NTBR**	See P.110

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

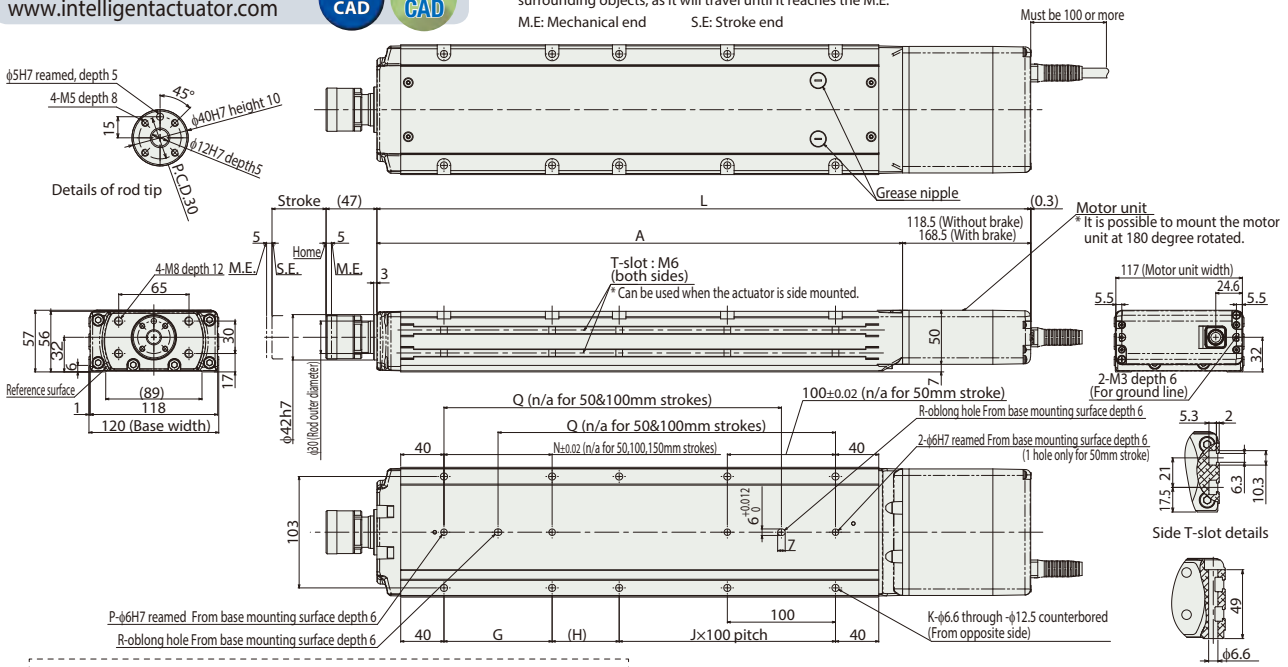
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Stainless steel
Rod non-rotation precision	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

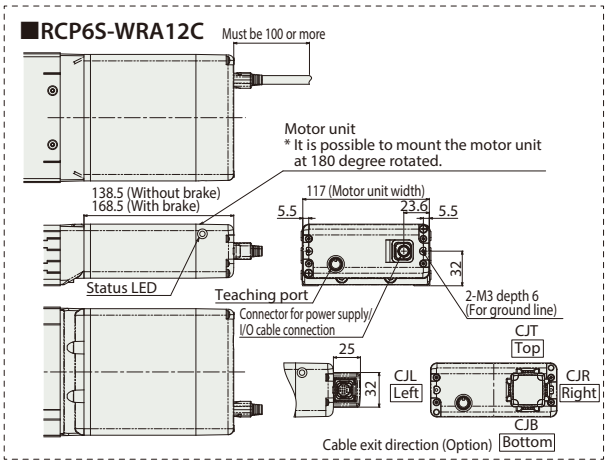
Dimensions

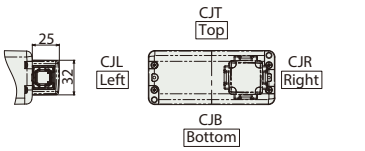
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

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

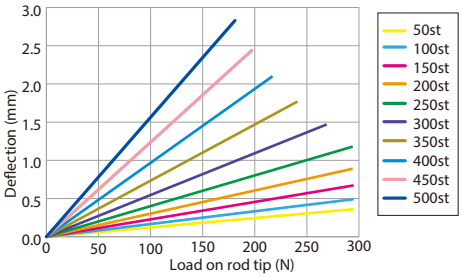


■RCP6S-WRA12C





■ 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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WRA14C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 140 mm | 24V Stepper Motor

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
—	WRA14C	WA	56P	—	—	—	—	—
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	56P: Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ~ 600: 600mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.12 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

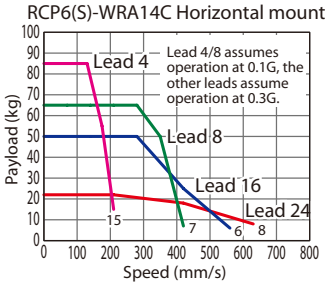
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

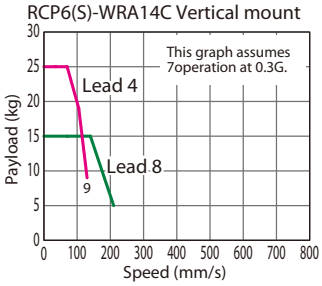
Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-WRA14C Horizontal mount



RCP6(S)-WRA14C Vertical mount



Actuator Specifications

Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WRA14C-WA-56P-24-①-②-③-④	24	High-output Enabled	25	-	50~600 (The increment of stroke is 50mm)
RCP6(S)-WRA14C-WA-56P-16-①-②-③-④	16	High-output Enabled	50	-	
RCP6(S)-WRA14C-WA-56P-8-①-②-③-④	8	High-output Enabled	65	15	
RCP6(S)-WRA14C-WA-56P-4-①-②-③-④	4	High-output Enabled	85	25	

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~550 (Every 50mm)	600 (mm)
24	High-output Enabled	630	
16	High-output Enabled	560	
8	High-output Enabled	420 <210>	395 <210>
4	High-output Enabled	210 <130>	195 <130>

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**350**	○	○
100	○	○	**400**	○	○
150	○	○	**450**	○	○
200	○	○	**500**	○	○
250	○	○	**550**	○	○
300	○	○	**600**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Non-motor end specification	**NM**	See P.110
T-slot nut bar (Left)	**NTBL**	See P.110
T-slot nut bar (Right)	**NTBR**	See P.110

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

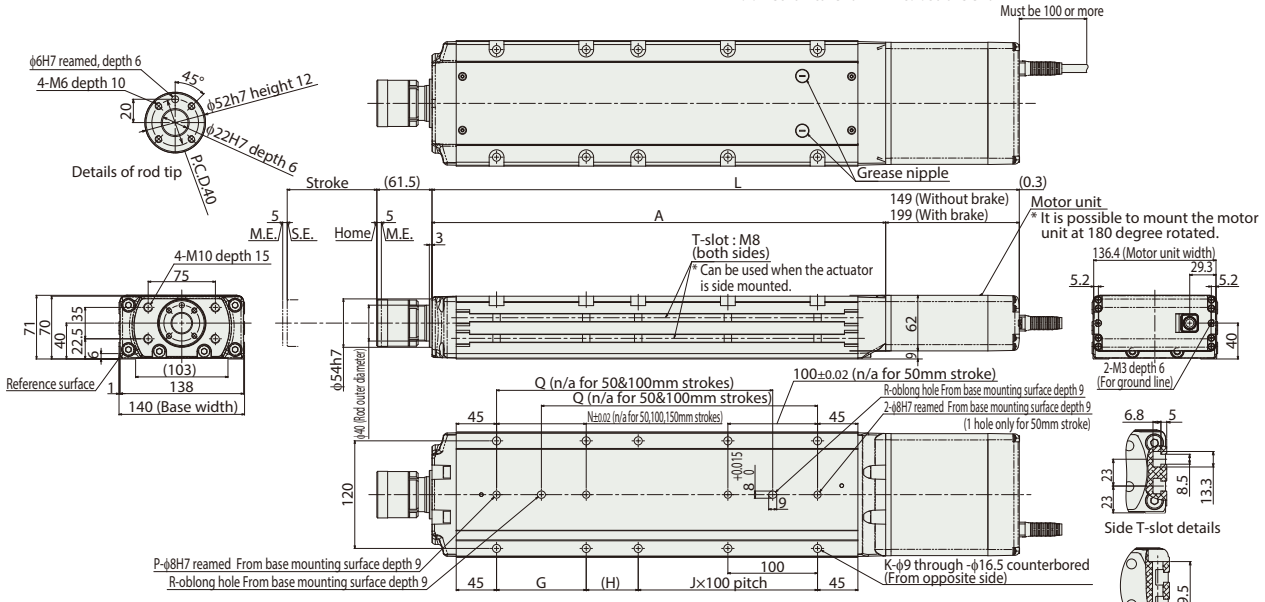
Actuator Specifications

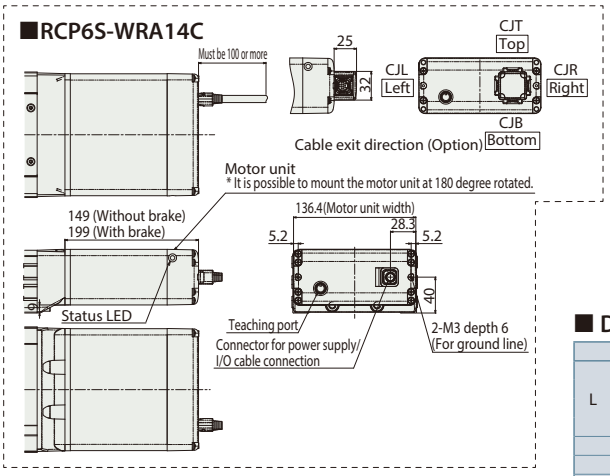
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm Stainless steel
Rod non-rotation precision	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

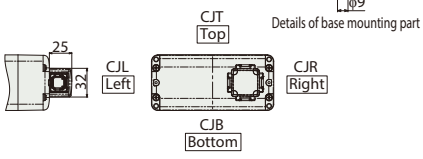
Dimensions

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

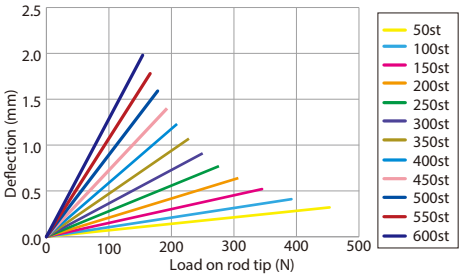
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end







■ 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 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)	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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WRA16C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 160 mm | 24V Stepper Motor

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	WRA16C	WA	60P					
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	60P: Stepper Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB [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.12 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

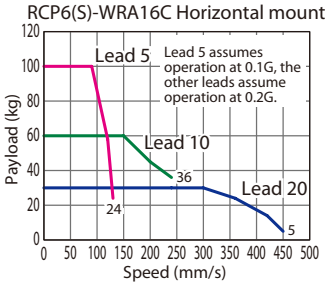
*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

POINT Selection Notes

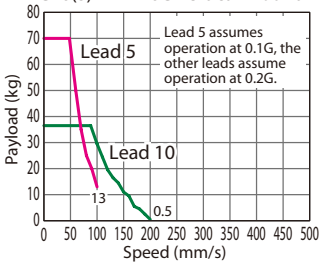
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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. 114 for more information.

Correlation Diagrams of Speed and Payload

PCON connected.
RCP6(S)-WRA16C Horizontal mount



RCP6(S)-WRA16C Vertical mount



Actuator Specifications

Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WRA16C-WA-60P-20-①-②-③-④	20	30	-	50~800 (The increment of stroke is 50mm)
RCP6(S)-WRA16C-WA-60P-10-①-②-③-④	10	60	36.5	
RCP6(S)-WRA16C-WA-60P-5-①-②-③-④	5	100	70	

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.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**450**	○	○
100	○	○	**500**	○	○
150	○	○	**550**	○	○
200	○	○	**600**	○	○
250	○	○	**650**	○	○
300	○	○	**700**	○	○
350	○	○	**750**	○	○
400	○	○	**800**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
Flange	**FL**	See P.106
Non-motor end specification	**NM**	See P.110
T-slot nut bar (Left)	**NTBL**	See P.110
T-slot nut bar (Right)	**NTBR**	See P.110

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

Actuator Specifications

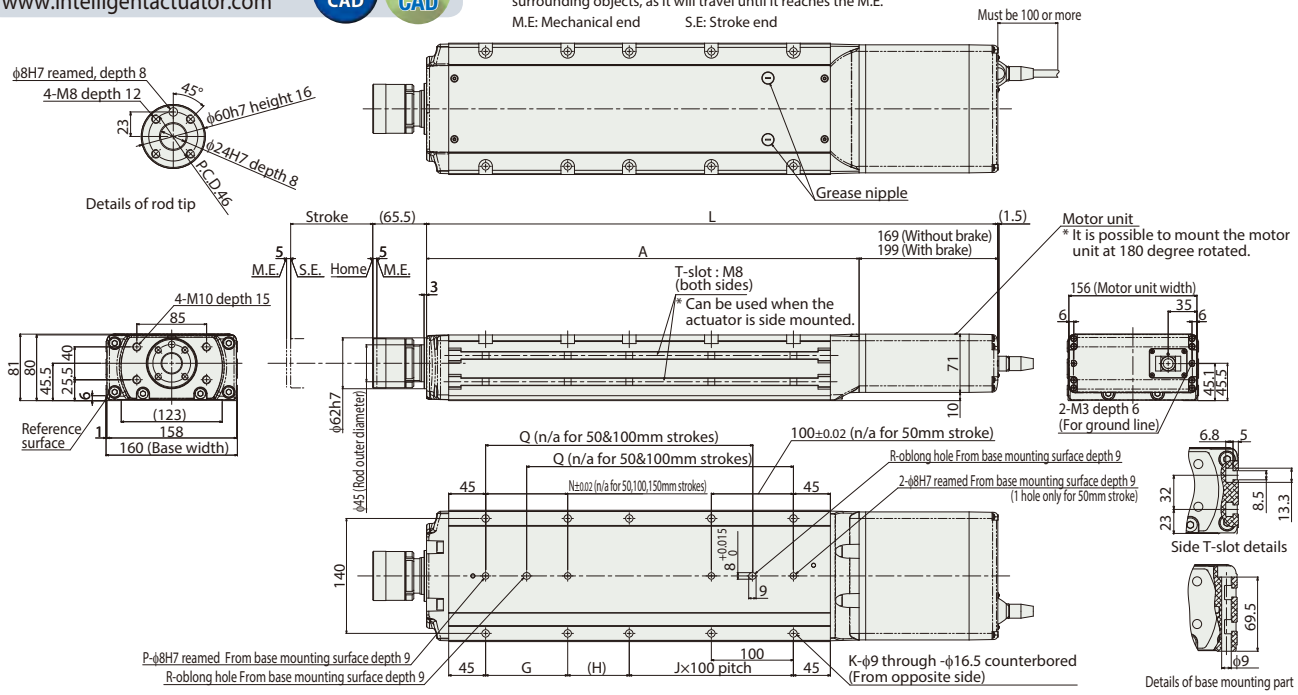
Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ45mm Stainless steel
Rod non-rotation precision	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

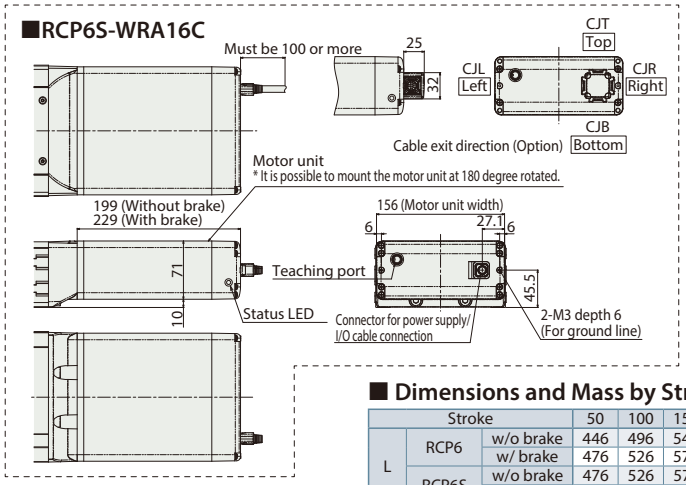
Dimensions

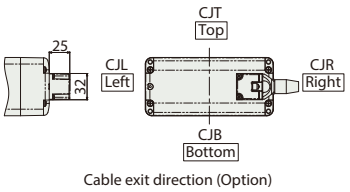
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

2D CAD 3D CAD

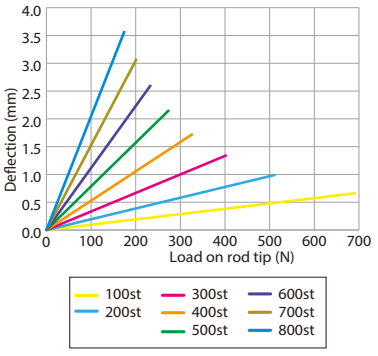
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end







■ 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 100mm	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 100mm	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

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.147 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-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet CompoNet EtherNet/IP CC-Link MECHATROLINK PROFIBUS EtherCAT. POWERLINK	512 (768 for network spec.)	Please see P.131

RCP6(S)-WRA10R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 100* mm | 24v Stepper Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	WRA10R	WA	35P					
RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	35P: Stepper Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

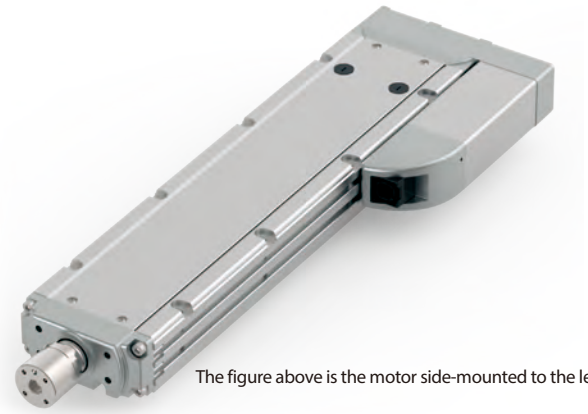
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.12 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



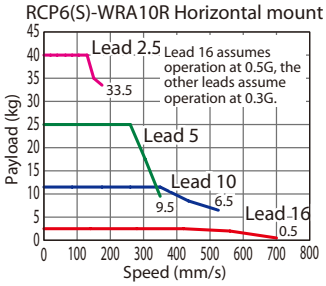
The figure above is the motor side-mounted to the left (ML).

POINT Selection Notes

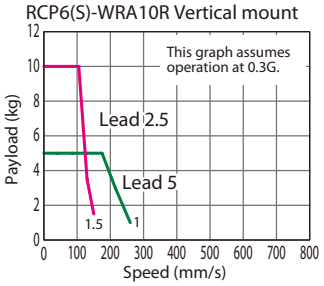
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.
RCP6(S)-WRA10R Horizontal mount



RCP6(S)-WRA10R Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WRA10R-WA-35P-16-①-②-③-④	16	High-output Enabled	4	-	50~500 (The increment of stroke is 50mm)
RCP6(S)-WRA10R-WA-35P-10-①-②-③-④	10	High-output Enabled	11.5	-	
RCP6(S)-WRA10R-WA-35P-5-①-②-③-④	5	High-output Enabled	28	5	
RCP6(S)-WRA10R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
16	High-output Enabled	700		
10	High-output Enabled	525		490
5	High-output Enabled	350 <260>	290 <260>	240
2.5	High-output Enabled	175 <150>	145	120

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**300**	○	○
100	○	○	**350**	○	○
150	○	○	**400**	○	○
200	○	○	**450**	○	○
250	○	○	**500**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar (Left)	**NTBL**	See P.110
T-slot nut bar (Right)	**NTBR**	See P.110

* When selecting T-slot nut bar option with a side-mounted motor model, please choose NTBR when the motor is side-mounted to the left, and NTBL when the motor is side-mounted to the right.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

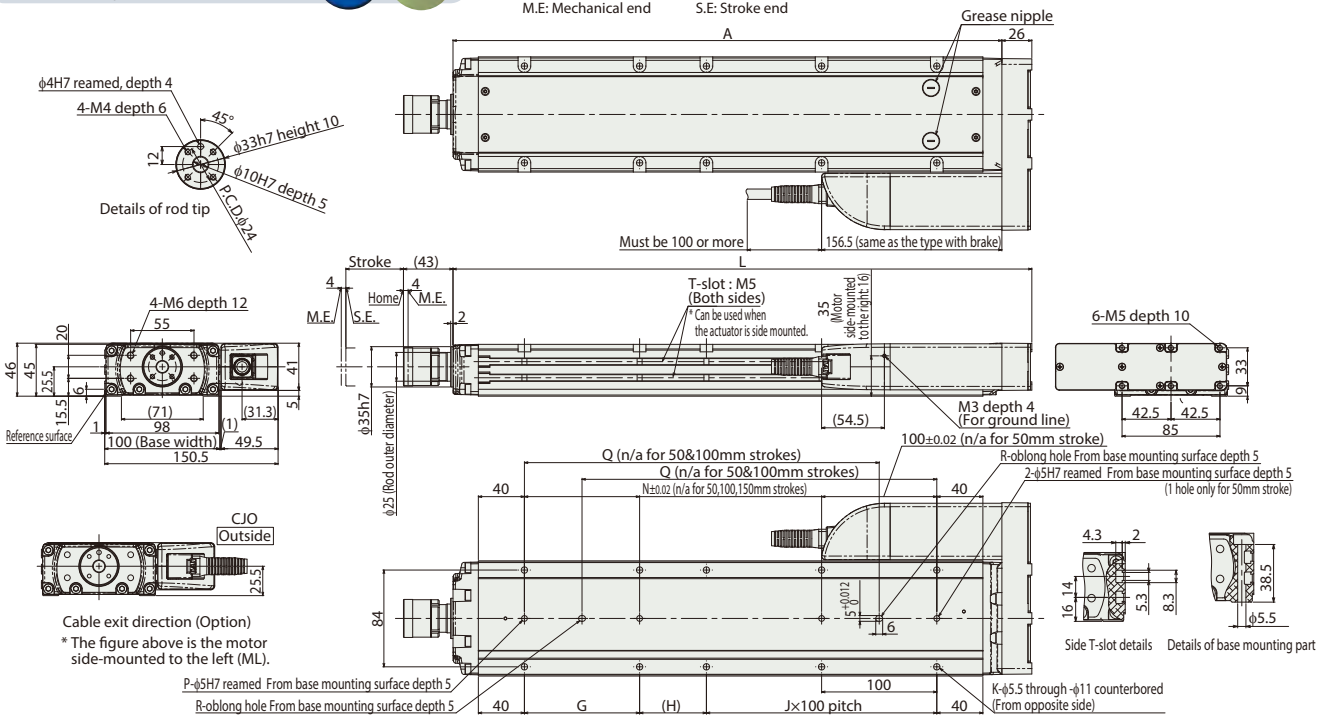
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Stainless steel
Rod non-rotation precision	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

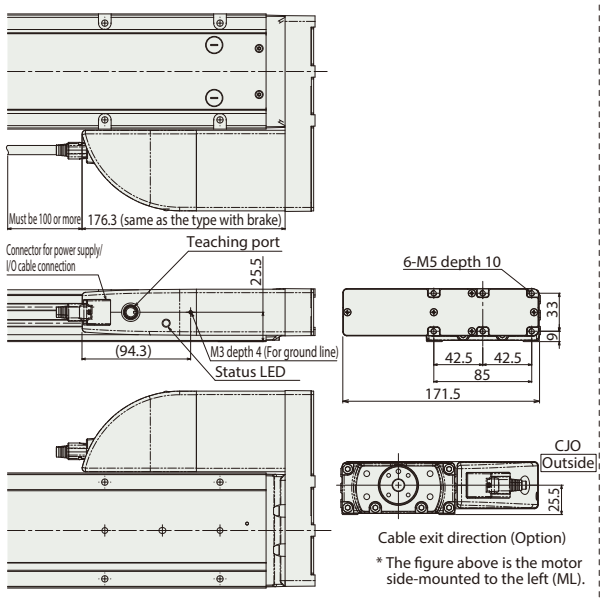
Dimensions

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

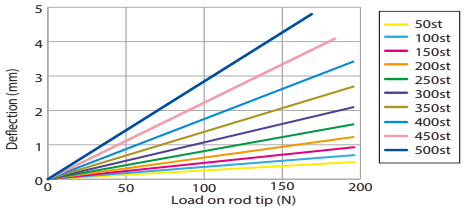
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WRA12R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 120* mm | 24v Stepper 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: Stepper Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	50: 50mm ↕ 500: 500mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

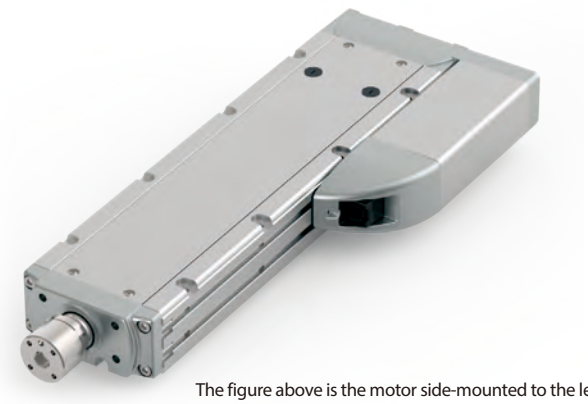
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.12 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

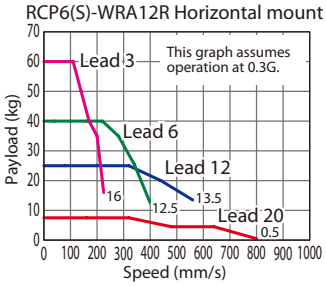
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

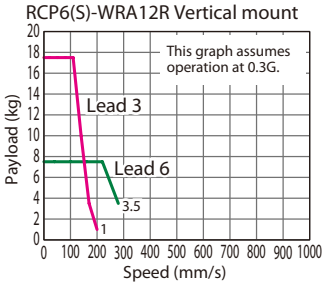
Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-WRA12R Horizontal mount



RCP6(S)-WRA12R Vertical mount



Actuator Specifications

Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WRA12R-WA-42P-20-①-②-③-④	20	High-output Enabled	7.5	-	50~500 (The increment of stroke is 50mm)
RCP6(S)-WRA12R-WA-42P-12-①-②-③-④	12	High-output Enabled	30	-	
RCP6(S)-WRA12R-WA-42P-6-①-②-③-④	6	High-output Enabled	55	7.5	
RCP6(S)-WRA12R-WA-42P-3-①-②-③-④	3	High-output Enabled	70	17.5	

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
20	High-output Enabled	800		
12	High-output Enabled	560		
6	High-output Enabled	400 <280>		375 <280>
3	High-output Enabled	225 <200>	220 <200>	185

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**300**	○	○
100	○	○	**350**	○	○
150	○	○	**400**	○	○
200	○	○	**450**	○	○
250	○	○	**500**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar (Left)	**NTBL**	See P.110
T-slot nut bar (Right)	**NTBR**	See P.110

* When selecting T-slot nut bar option with a side-mounted motor model, please choose NTBR when the motor is side-mounted to the left, and NTBL when the motor is side-mounted to the right.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

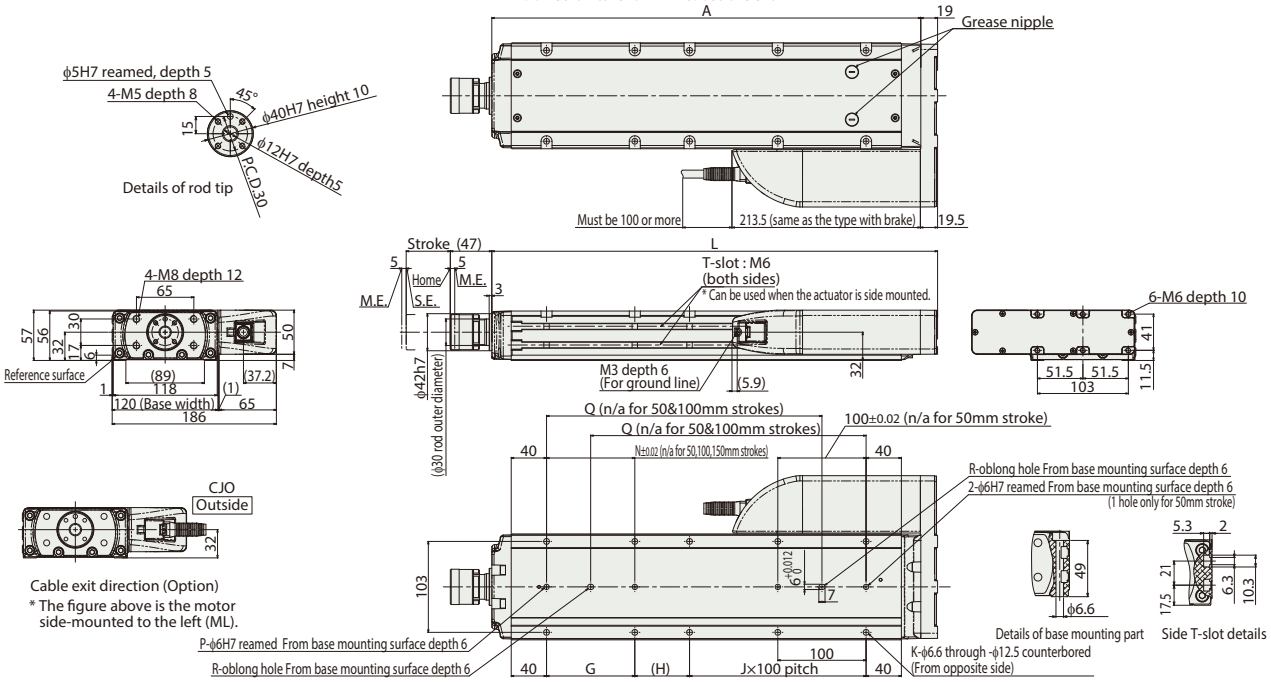
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Stainless steel
Rod non-rotation precision	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

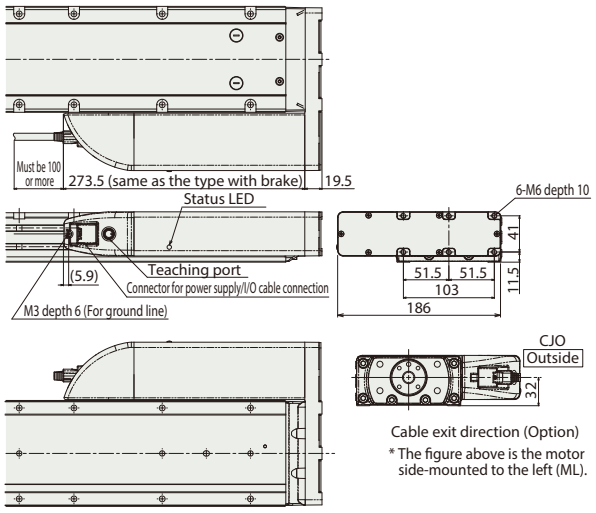
Dimensions

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

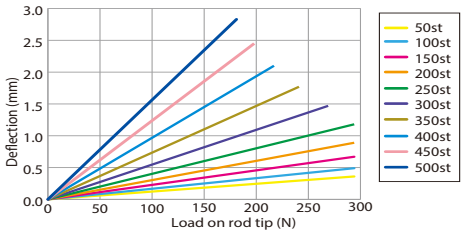
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WRA14R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 140* mm | 24V Stepper 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	WRA14R	WA: Battery-less Absolute	56P: Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ↓ 600: 600mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [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.

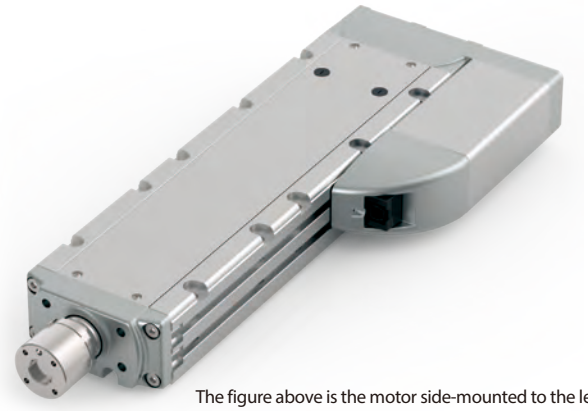
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.12 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

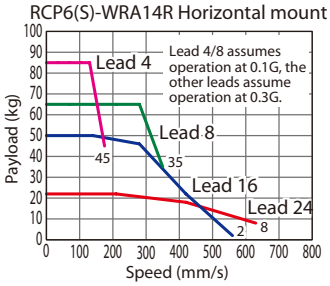
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.

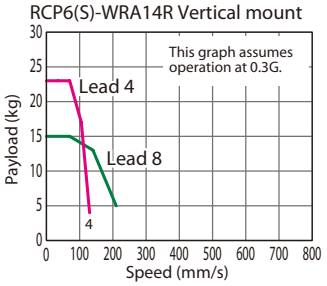
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-WRA14R Horizontal mount



RCP6(S)-WRA14R Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WRA14R-WA-56P-24-①-②-③-④	24	High-output Enabled	25	-	50~600 (The increment of stroke is 50mm)
RCP6(S)-WRA14R-WA-56P-16-①-②-③-④	16	High-output Enabled	50	-	
RCP6(S)-WRA14R-WA-56P-8-①-②-③-④	8	High-output Enabled	65	15	
RCP6(S)-WRA14R-WA-56P-4-①-②-③-④	4	High-output Enabled	85	25	

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~600 (Every 50mm)
24	High-output Enabled	630
16	High-output Enabled	560
8	High-output Enabled	350 <210>
4	High-output Enabled	175 <130>

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

Values in brackets < > are for vertical use.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**350**	○	○
100	○	○	**400**	○	○
150	○	○	**450**	○	○
200	○	○	**500**	○	○
250	○	○	**550**	○	○
300	○	○	**600**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar (Left)	**NTBL**	See P.110
T-slot nut bar (Right)	**NTBR**	See P.110

* When selecting T-slot nut bar option with a side-mounted motor model, please choose NTBR when the motor is side-mounted to the left, and NTBL when the motor is side-mounted to the right.

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

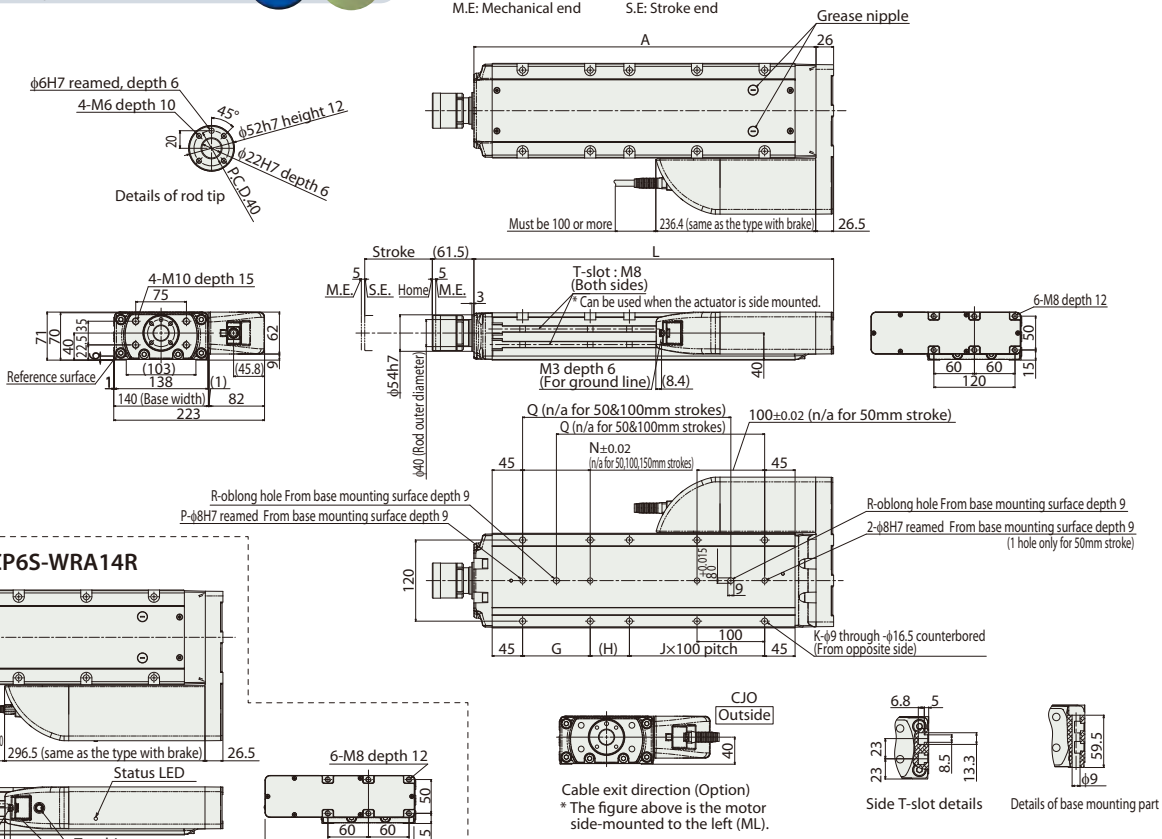
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm Stainless steel
Rod non-rotation precision	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

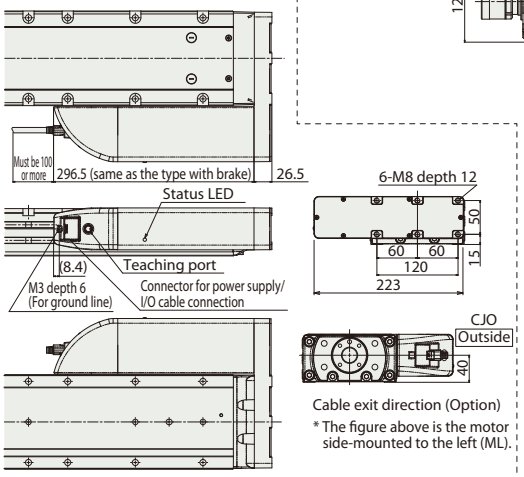
Dimensions

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

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



■RCP6S-WRA14R

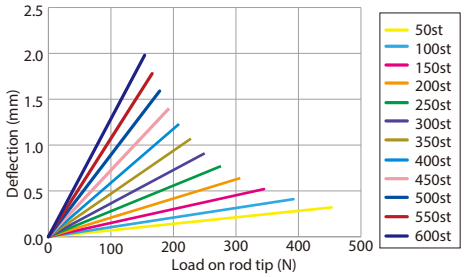


Cable exit direction (Option)
* The figure above is the motor side-mounted to the left (ML).

Side T-slot details

Details of base mounting part

■ 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 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)	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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-WRA16R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 160* mm | 24v Stepper 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: Stepper Motor 60□ Size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ~ 800: 800mm (50mm increments)	[RCP6] P4: PCON-CFB/CGFB [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.

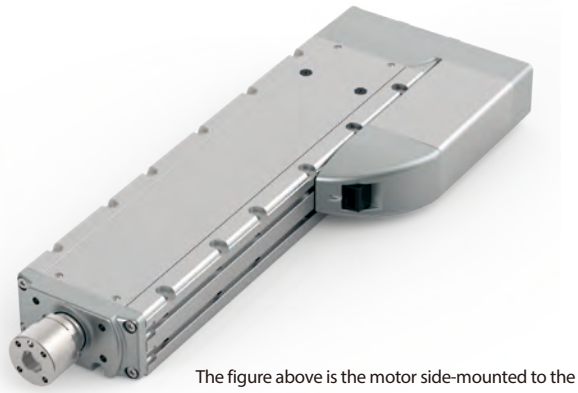
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.12 for more information about the model specification items.

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



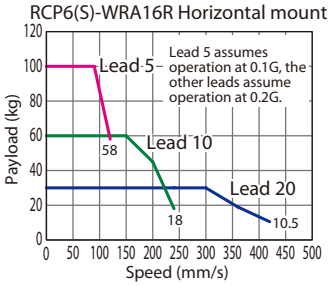
The figure above is the motor side-mounted to the left (ML).

POINT Selection Notes

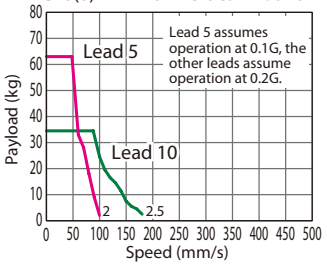
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
(4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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. 114 for more information.

■ Correlation Diagrams of Speed and Payload

PCON connected.
RCP6(S)-WRA16R Horizontal mount



RCP6(S)-WRA16R Vertical mount



Actuator Specifications

■ Lead and Payload

(Note 1) The payload assumes that there is an external guide.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-WRA16R-WA-60P-20-①-②-③-④	20	30	-	50~800 (The increment of stroke is 50mm)
RCP6(S)-WRA16R-WA-60P-10-①-②-③-④	10	60	34.5	
RCP6(S)-WRA16R-WA-60P-5-①-②-③-④	5	100	63	

■ 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.

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**450**	○	○
100	○	○	**500**	○	○
150	○	○	**550**	○	○
200	○	○	**600**	○	○
250	○	○	**650**	○	○
300	○	○	**700**	○	○
350	○	○	**750**	○	○
400	○	○	**800**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Flange	**FL**	See P.106
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110
T-slot nut bar (Left)	**NTBL**	See P.110
T-slot nut bar (Right)	**NTBR**	See P.110

* When selecting T-slot nut bar option with a side-mounted motor model, please choose NTBR when the motor is side-mounted to the left, and NTBL when the motor is side-mounted to the right.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

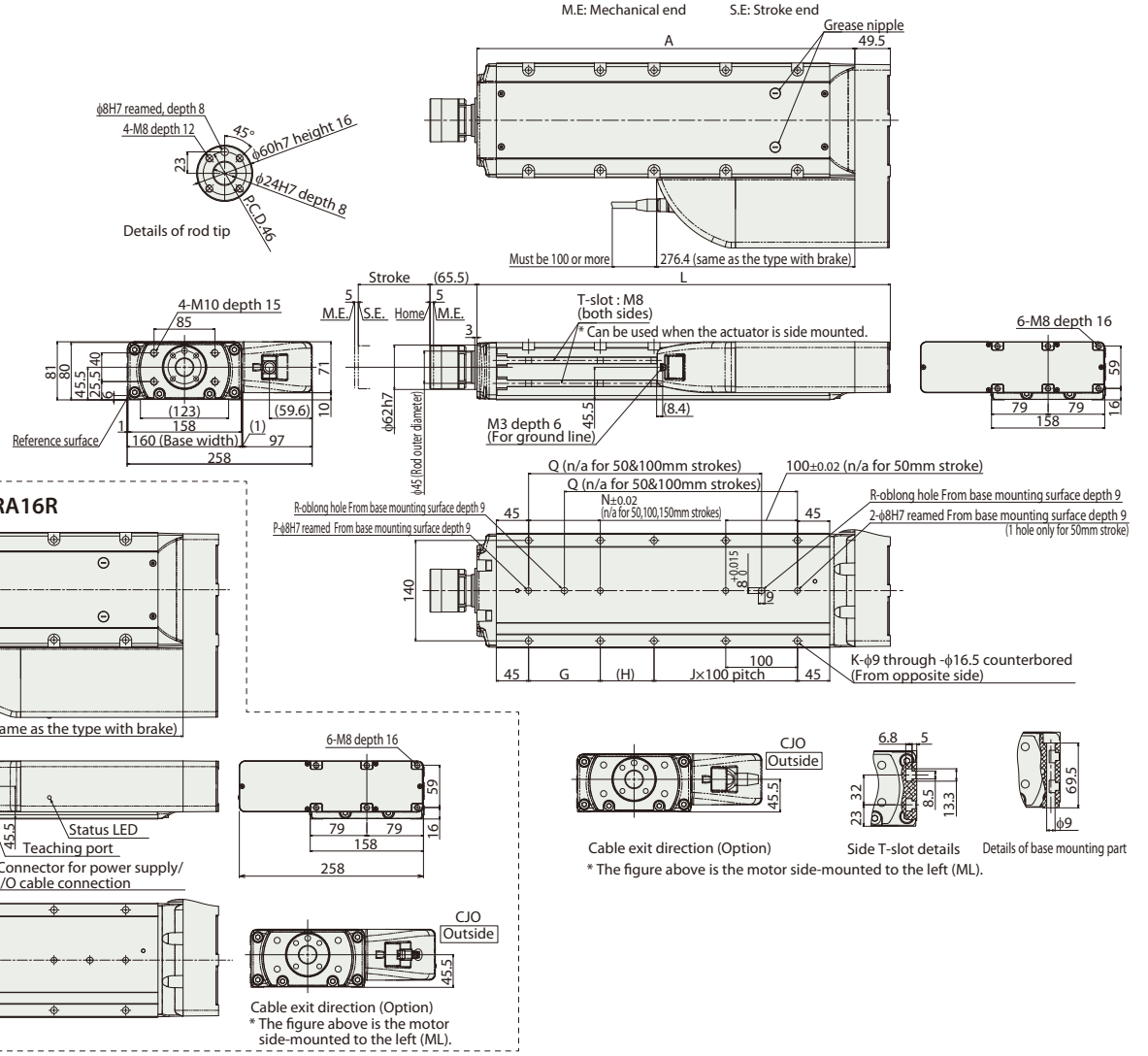
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ45mm Stainless steel
Rod non-rotation precision	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

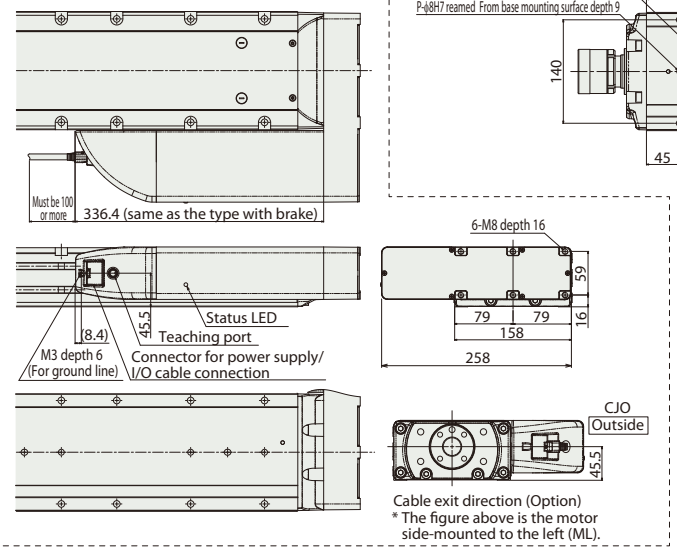
Dimensions

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

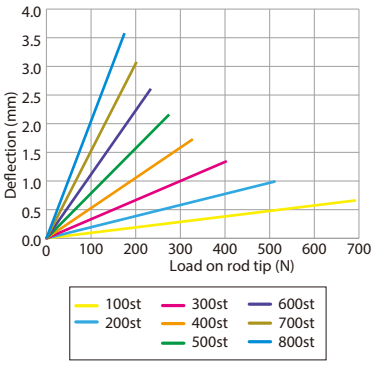
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■RCP6S-WRA16R



■ 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 100mm	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 100mm	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

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.147 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-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet CompoNet EtherNet/IP CC-Link MECHATROLINK PROFIBUS EtherCAT POWERLINK	512 (768 for network spec.)	Please see P.131

RCP6(S)-TA4C

Table Type | Motor Unit Type | Coupled Motor | Body Width 40 mm | 24V Stepper 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: Stepper Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm	25: 25mm ↕ 240: 240mm	[RCP6] P3: PCON MCON MSEL [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.12 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

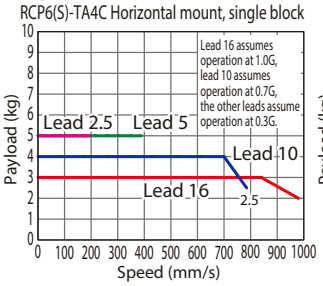
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(4) High-rigidity (double-block) specification can be selected as an option.

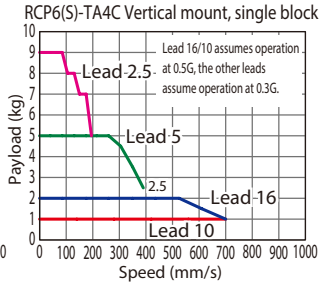
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

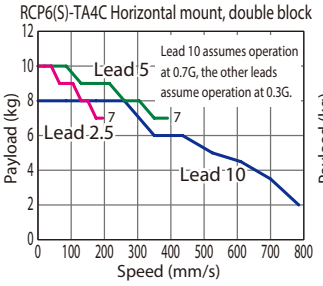
RCP6(S)-TA4C Horizontal mount, single block



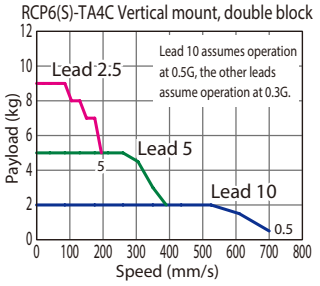
RCP6(S)-TA4C Vertical mount, single block



RCP6(S)-TA4C Horizontal mount, double block



RCP6(S)-TA4C Vertical mount, double block



Actuator Specifications

■ Lead and Payload

	Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
Single Block	RCP6(S)-TA4C-WA-35P-16-①-②-③-④	16	High-output Enabled	3	1	25~150 (The increment of stroke is 50mm)
Single Block	RCP6(S)-TA4C-WA-35P-10-①-②-③-④	10	High-output Enabled	4	2.5	
Single Block	RCP6(S)-TA4C-WA-35P-5-①-②-③-④	5	High-output Enabled	5	5	
Single Block	RCP6(S)-TA4C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	5	10	
Double Block	RCP6(S)-TA4C-WA-35P-10-①-②-③-④	10	High-output Enabled	8	2.5	40~240
Double Block	RCP6(S)-TA4C-WA-35P-5-①-②-③-④	5	High-output Enabled	10	5	
Double Block	RCP6(S)-TA4C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	10	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	Single Block 25~150	Double Block 40~190	Double Block 240
16	High-output Enabled	980 <700>	-	
10	High-output Enabled	785 <700>	785 <700>	680
5	High-output Enabled	390	390	340
2.5	High-output Enabled	195	195	170

Values in brackets < > are for vertical use.

① Stroke

Single Block Stroke (mm)	RCP6	RCP6S	Double Block Stroke (mm)	RCP6	RCP6S
25	○	○	**40**	○	○
50	○	○	**65**	○	○
75	○	○	**90**	○	○
100	○	○	**140**	○	○
125	○	○	**190**	○	○
150	○	○	**240**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-rigidity (Double-block guide)	**DB**	See P.105
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

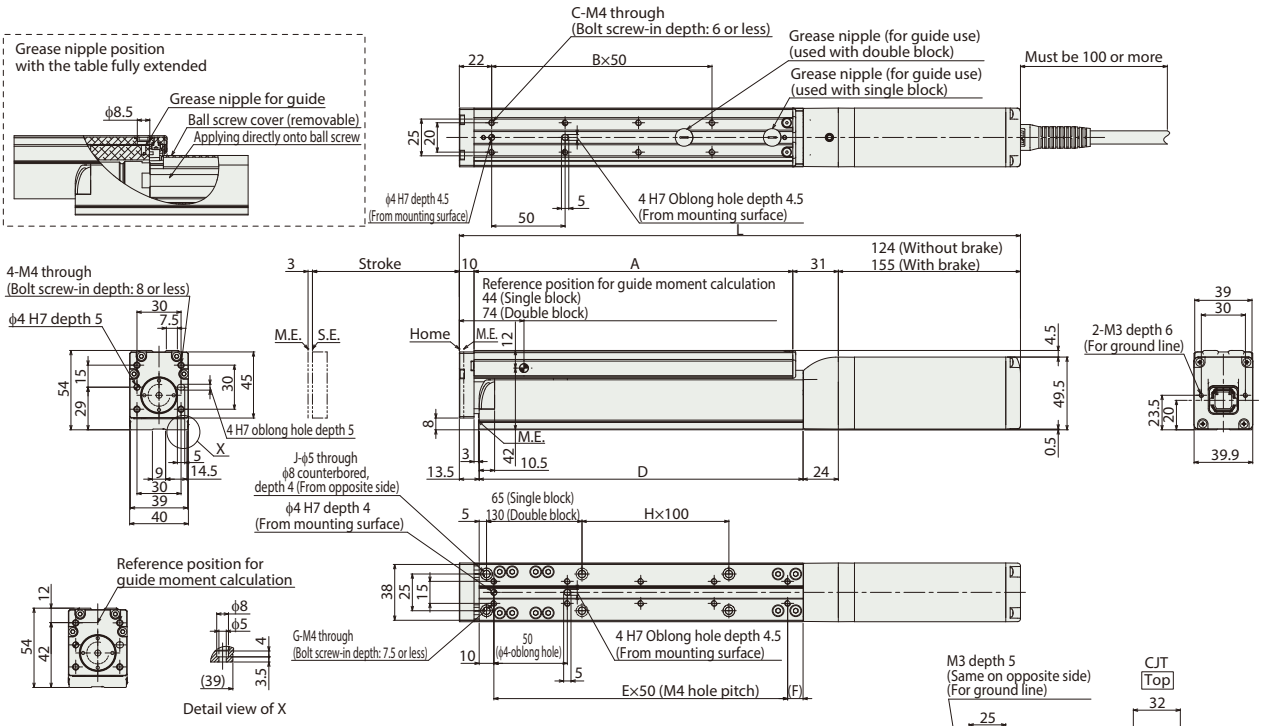
Item		Description
Drive system		Ball screw φ8mm, rolled C10
Positioning repeatability		±0.01mm
Lost motion		0.1mm or less
Base		Material: Aluminum with white alumite treatment
Static allowable moment	Single block	Ma: 13N•m, Mb: 18.6N•m, Mc: 25.3N•m
	Double block	Ma: 76.8N•m, Mb: 110N•m, Mc: 50.5N•m
Dynamic allowable moment (*)	Single block	Ma: 4.98N•m, Mb: 7.11N•m, Mc: 9.68N•m
	Double block	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 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.
Please refer to RCP6 instruction manual regarding the displacement of the table.

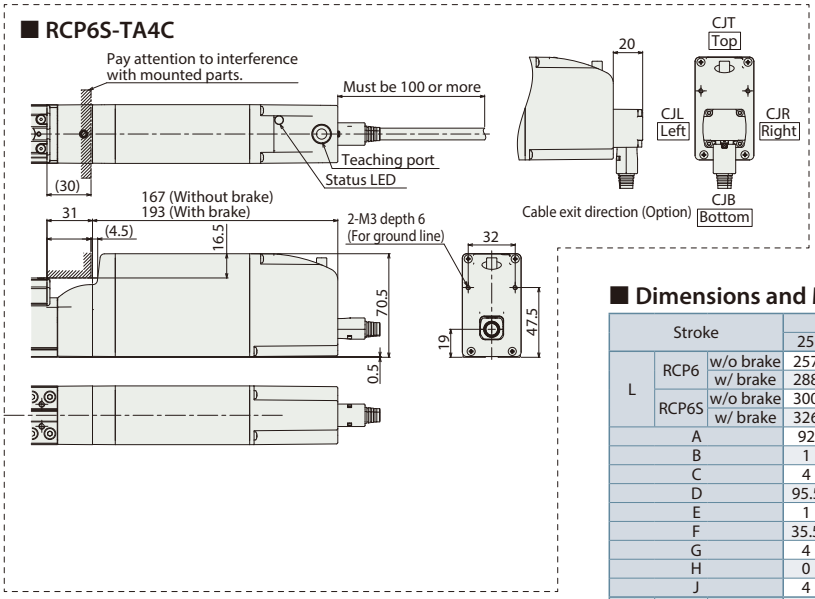
Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.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			Single Block						Double Block					
			25	50	75	100	125	150	40	65	90	140	190	240
L	RCP6	w/o brake	257	282	307	332	357	382	332	357	382	432	482	532
		w/ brake	288	313	338	363	388	413	363	388	413	463	513	563
	RCP6S	w/o brake	300	325	350	375	400	425	375	400	425	475	525	575
		w/ brake	326	351	376	401	426	451	401	426	451	501	551	601
A			92	117	142	167	192	217	167	192	217	267	317	367
B			1	1	2	2	3	3	2	3	3	4	5	6
C			4	4	6	6	8	8	6	8	8	10	12	14
D			95.5	120.5	145.5	170.5	195.5	220.5	170.5	195.5	220.5	270.5	320.5	370.5
E			1	2	2	3	3	4	3	3	4	5	6	7
F			35.5	10.5	35.5	10.5	35.5	10.5	10.5	35.5	10.5	10.5	10.5	10.5
G			4	6	6	8	8	10	8	8	10	12	14	16
H			0	0	0	0	1	1	0	0	0	1	1	2
J			4	4	4	4	6	6	4	4	4	6	6	8
Mass (kg)	RCP6	w/o brake	1.2	1.3	1.4	1.5	1.6	1.6	1.5	1.6	1.7	1.9	2.1	2.2
		w/ brake	1.4	1.4	1.5	1.6	1.7	1.8	1.7	1.8	1.9	2.0	2.2	2.4
	RCP6S	w/o brake	1.4	1.5	1.6	1.7	1.7	1.8	1.7	1.8	1.9	2.1	2.3	2.4
		w/ brake	1.5	1.6	1.7	1.8	1.9	2.0	1.9	2.0	2.1	2.2	2.4	2.6

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-TA6C

Table Type | Motor Unit Type | Coupled Motor | Body Width 58 mm | 24v Stepper 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	TA6C	WA: Battery-less Absolute	42P: Stepper Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	25: 25mm ~ 320: 320mm	[RCP6] P3: PCON MCON MSEL [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.12 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

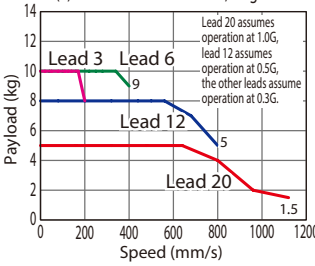
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.
(5) High-rigidity (double-block) specification can be selected as an option.

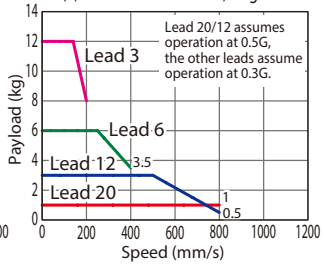
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

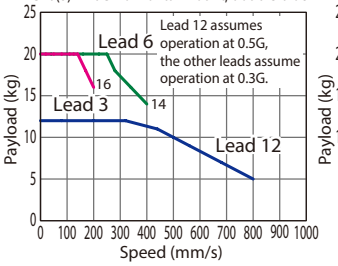
RCP6(S)-TA6C Horizontal mount, single block



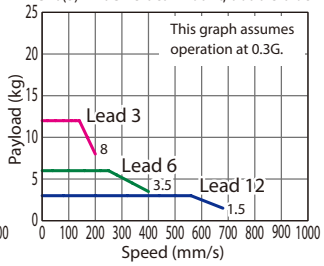
RCP6(S)-TA6C Vertical mount, single block



RCP6(S)-TA6C Horizontal mount, double block



RCP6(S)-TA6C Vertical mount, double block



Actuator Specifications

■ Lead and Payload

	Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
Single Block	RCP6(S)-TA6C-WA-42P-20-①-②-③-④	20	High-output Enabled	5	1	25~200 (The increment of stroke is 50mm)
Single Block	RCP6(S)-TA6C-WA-42P-12-①-②-③-④	12	High-output Enabled	8	3	
Single Block	RCP6(S)-TA6C-WA-42P-6-①-②-③-④	6	High-output Enabled	10	6	
Single Block	RCP6(S)-TA6C-WA-42P-3-①-②-③-④	3	High-output Enabled	10	12	
Double Block	RCP6(S)-TA6C-WA-42P-12-①-②-③-④	12	High-output Enabled	15	3	45~320
Double Block	RCP6(S)-TA6C-WA-42P-6-①-②-③-④	6	High-output Enabled	20	6	
Double Block	RCP6(S)-TA6C-WA-42P-3-①-②-③-④	3	High-output Enabled	20	12	

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	Single Block 25~200	Double Block 45~220	Double Block 270	Double Block 320
20	High-output Enabled	1,120 <800>	-		
12	High-output Enabled	800	800 <680>	735 <680>	575
6	High-output Enabled	400	400	365	285
3	High-output Enabled	200	200	185	140

Values in brackets < > are for vertical use.

① Stroke

Single Block Stroke (mm)	RCP6	RCP6S	Double Block Stroke (mm)	RCP6	RCP6S
25	○	○	**45**	○	○
50	○	○	**70**	○	○
75	○	○	**95**	○	○
100	○	○	**120**	○	○
125	○	○	**170**	○	○
150	○	○	**220**	○	○
175	○	○	**270**	○	○
200	○	○	**320**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-rigidity (Double-block guide)	**DB**	See P.105
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

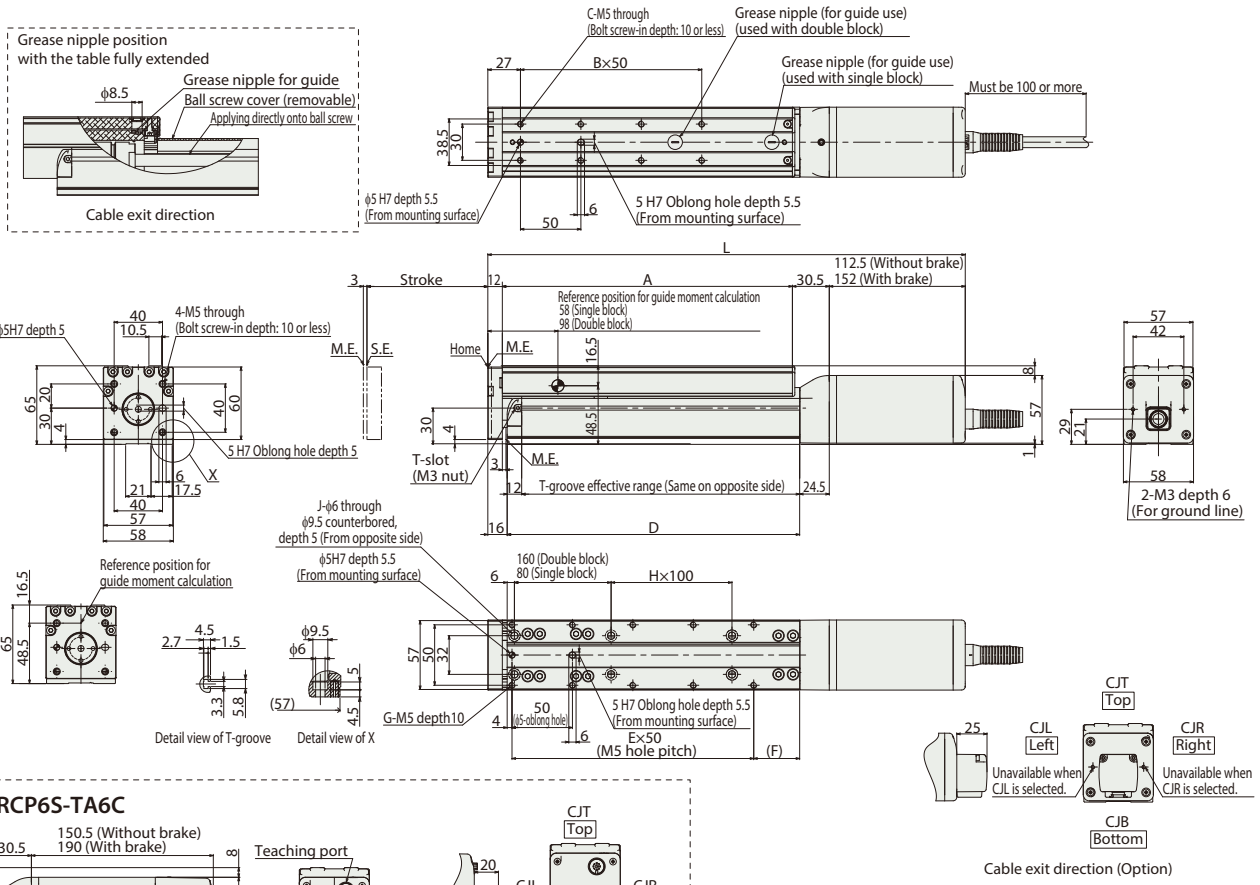
Item		Description
Drive system		Ball screw ϕ10mm, rolled C10
Positioning repeatability		±0.01mm
Lost motion		0.1mm or less
Base		Material: Aluminum with white alumite treatment
Static allowable moment	Single Block	Ma: 32.3N•m, Mb: 46.2N•m, Mc: 68.3N•m
	Double Block	Ma: 169N•m, Mb: 242N•m, Mc: 137N•m
Dynamic allowable moment (*)	Single block	Ma: 11.6N•m, Mb: 16.6N•m, Mc: 24.6N•m
	Double block	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 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.
Please refer to RCP6 instruction manual regarding the displacement of the table.

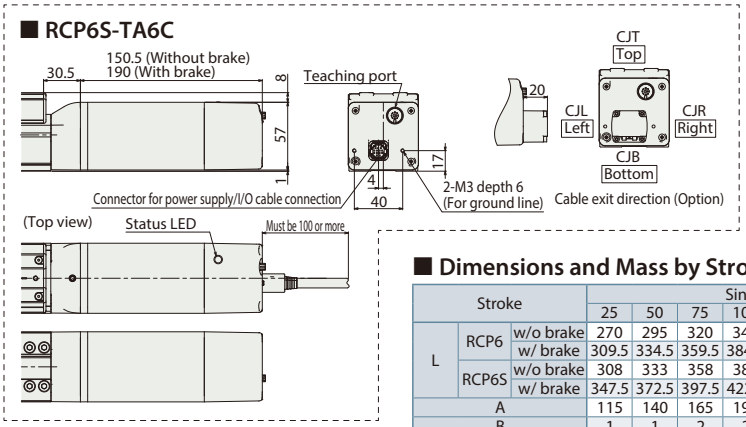
Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.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			Single Block								Double Block							
			25	50	75	100	125	150	175	200	45	70	95	120	170	220	270	320
L	RCP6	w/o brake	270	295	320	345	370	395	420	445	370	395	420	445	495	545	595	645
		w/ brake	309.5	334.5	359.5	384.5	409.5	434.5	459.5	484.5	409.5	434.5	459.5	484.5	534.5	584.5	634.5	684.5
	RCP6S	w/o brake	308	333	358	383	408	433	458	483	408	433	458	483	533	583	633	683
		w/ brake	347.5	372.5	397.5	422.5	447.5	472.5	497.5	522.5	447.5	472.5	497.5	522.5	572.5	622.5	672.5	722.5
A			115	140	165	190	215	240	265	290	215	240	265	290	340	390	440	490
B			1	1	2	2	3	3	4	4	3	3	4	4	5	6	7	8
C			4	4	6	6	8	8	10	10	8	8	10	10	12	14	16	18
D			117	142	167	192	217	242	267	292	217	242	267	292	342	392	442	492
E			2	2	3	3	4	4	5	5	4	4	5	5	6	7	8	9
F			13	38	13	38	13	38	13	38	13	38	13	38	38	38	38	38
G			6	6	8	8	10	10	12	12	10	10	12	12	14	16	18	20
H			0	0	0	0	1	1	1	1	0	0	0	0	1	1	2	2
J			4	4	4	4	6	6	6	6	4	4	4	4	6	6	8	8
Mass (kg)	RCP6	w/o brake	2.1	2.2	2.4	2.5	2.7	2.9	3.0	3.2	2.9	3.0	3.2	3.3	3.7	4.0	4.3	4.6
		w/ brake	2.3	2.5	2.6	2.8	2.9	3.1	3.3	3.4	3.1	3.3	3.4	3.6	3.9	4.2	4.5	4.9
	RCP6S	w/o brake	2.2	2.4	2.5	2.7	2.8	3.0	3.2	3.3	3.0	3.2	3.3	3.5	3.8	4.1	4.4	4.8
		w/ brake	2.4	2.6	2.8	2.9	3.1	3.2	3.4	3.6	3.2	3.4	3.6	3.7	4.0	4.4	4.7	5.0

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

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

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-TA7C

Table Type | Motor Unit Type | Coupled Motor | Body Width 70 mm | 24V Stepper 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: Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	25: 25mm ~ 390: 390mm	[RCP6] P3: PCON MCON MSEL [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.12 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

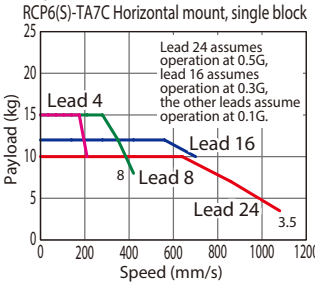
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.
(5) High-rigidity (double-block) specification can be selected as an option.

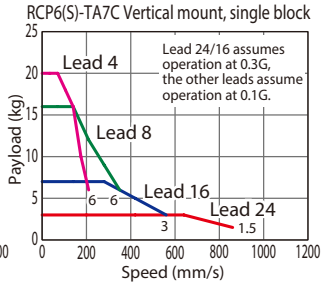
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

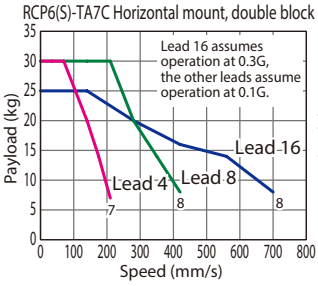
RCP6(S)-TA7C Horizontal mount, single block



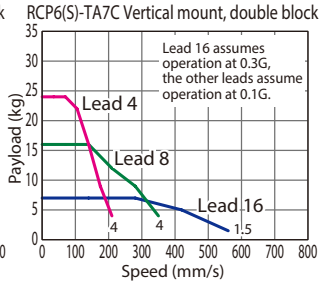
RCP6(S)-TA7C Vertical mount, single block



RCP6(S)-TA7C Horizontal mount, double block



RCP6(S)-TA7C Vertical mount, double block



Actuator Specifications

■ Lead and Payload

	Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
Single Block	RCP6(S)-TA7C-WA-56P-24-①-②-③-④	24	High-output Enabled	10	3	25~300
Single Block	RCP6(S)-TA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	12	7	
Single Block	RCP6(S)-TA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	15	16	
Single Block	RCP6(S)-TA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	15	20	
Double Block	RCP6(S)-TA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	25	7	40~390
Double Block	RCP6(S)-TA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	30	16	
Double Block	RCP6(S)-TA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	30	24	

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	Single Block 25~300	Double Block 40~290	Double Block 340	Double Block 390
24	High-output Enabled	1,080 <860>	-		
16	High-output Enabled	700 <560>	700 <560>		600 <560>
8	High-output Enabled	420 <350>	420 <350>	365 <350>	300
4	High-output Enabled	210	210	180	150

Values in brackets < > are for vertical use.

① Stroke

Single Block Stroke (mm)	RCP6	RCP6S	Double Block Stroke (mm)	RCP6	RCP6S
25	○	○	40	○	○
50	○	○	65	○	○
75	○	○	90	○	○
100	○	○	140	○	○
125	○	○	190	○	○
150	○	○	240	○	○
175	○	○	290	○	○
200	○	○	340	○	○
250	○	○	390	○	○
300	○	○			

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-rigidity (Double-block guide)	**DB**	See P.105
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

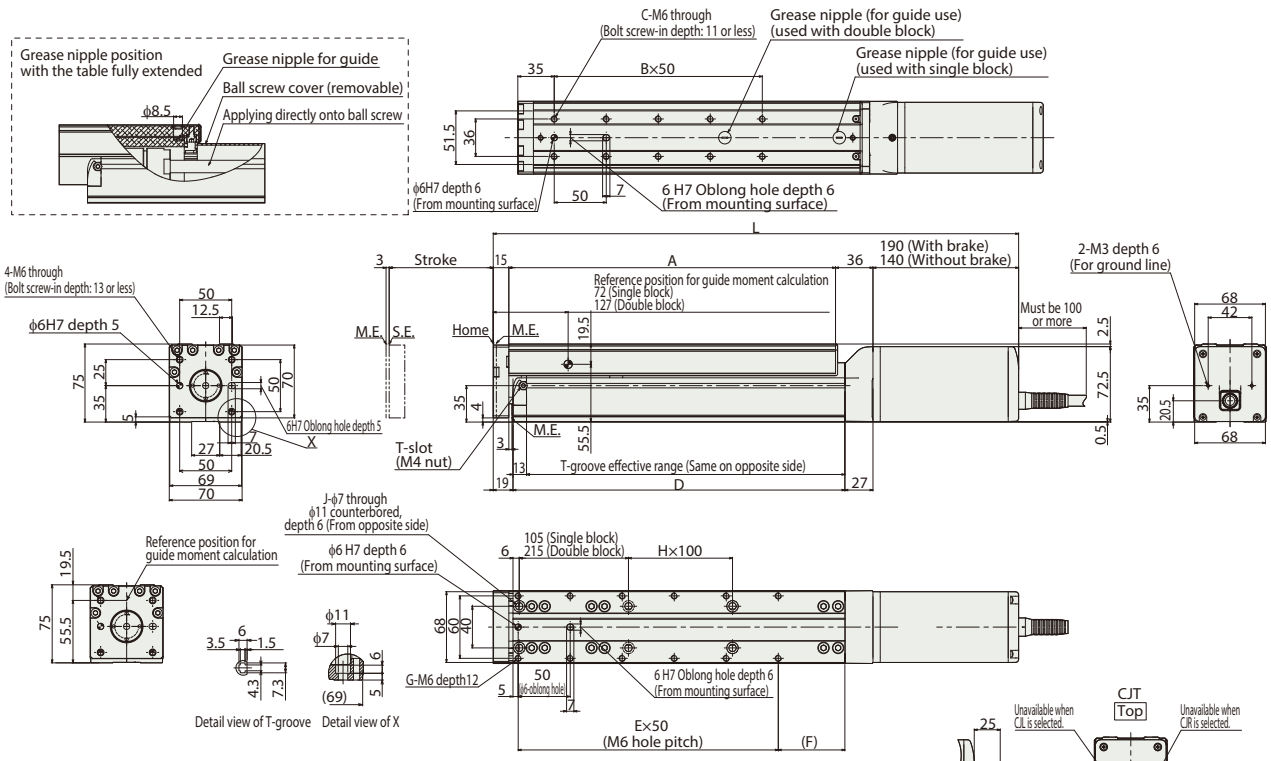
Item		Description
Drive system		Ball screw φ12mm, rolled C10
Positioning repeatability		±0.01mm
Lost motion		0.1mm or less
Base		Material: Aluminum with white alumite treatment
Static allowable moment	Single block	Ma: 115N•m, Mb: 115N•m, Mc: 229N•m
	Double block	Ma: 620N•m, Mb: 620N•m, Mc: 458N•m
Dynamic allowable moment (*)	Single block	Ma: 44.7N•m, Mb: 44.7N•m, Mc: 89.1N•m
	Double block	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 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.
Please refer to RCP6 instruction manual regarding the displacement of the table.

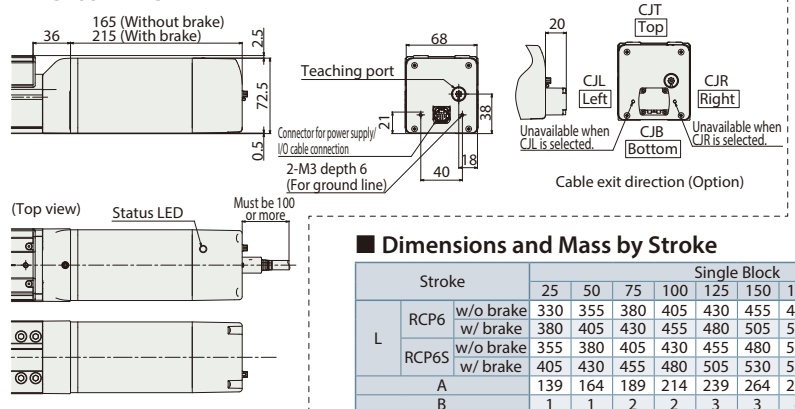
Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.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			Single Block										Double Block								
			25	50	75	100	125	150	175	200	250	300	40	65	90	140	190	240	290	340	390
L	RCP6	w/o brake	330	355	380	405	430	455	480	505	555	605	455	480	505	555	605	655	705	755	805
		w/ brake	380	405	430	455	480	505	530	555	605	655	505	530	555	605	655	705	755	805	855
	RCP6S	w/o brake	355	380	405	430	455	480	505	530	580	630	480	505	530	580	630	680	730	780	830
		w/ brake	405	430	455	480	505	530	555	580	630	680	530	555	580	630	680	730	780	830	880
A			139	164	189	214	239	264	289	314	364	414	264	289	314	364	414	464	514	564	614
B			1	1	2	2	3	3	4	4	5	6	3	4	4	5	6	7	8	9	10
C			4	4	6	6	8	8	10	10	12	14	8	10	10	12	14	16	18	20	22
D			144	169	194	219	244	269	294	319	369	419	269	294	319	369	419	469	519	569	619
E			2	2	3	3	4	4	5	5	6	7	4	5	5	6	7	8	9	10	11
F			39	64	39	64	39	64	39	64	64	64	64	39	64	64	64	64	64	64	64
G			6	6	8	8	10	10	12	12	14	16	10	12	12	14	16	18	20	22	24
H			0	0	0	0	1	1	1	1	2	2	0	0	0	1	1	2	2	3	3
J			4	4	4	4	6	6	6	6	8	8	4	4	4	6	6	8	8	10	10
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	5.3	5.6	5.8	6.2	6.6	7.1	7.5	8.0	8.4
		w/ brake	4.3	4.5	4.7	5.0	5.2	5.4	5.6	5.8	6.3	6.7	5.8	6.0	6.2	6.6	7.1	7.5	8.0	8.4	8.8
	RCP6S	w/o brake	4.0	4.3	4.5	4.7	4.9	5.1	5.3	5.6	6.0	6.4	5.5	5.7	5.9	6.4	6.8	7.3	7.7	8.1	8.6
		w/ brake	4.5	4.7	4.9	5.1	5.3	5.6	5.8	6.0	6.4	6.9	5.9	6.2	6.4	6.8	7.3	7.7	8.1	8.6	9.0

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

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

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-TA4R

Table Type | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 24v Stepper 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
	—	TA4R	WA	35P					
	RCP6: Separate Controller RCP6S: Built-in Controller		WA: Battery-less Absolute	35P: Stepper Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	25: 25mm ~ 240: 240mm	[RCP6] P3: PCON MCON MSEL [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.12 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

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

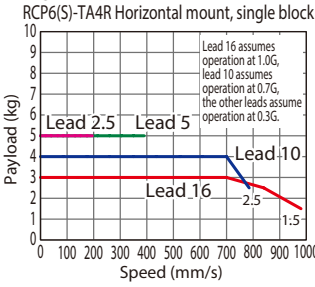
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(4) High-rigidity (double-block) specification can be selected as an option.

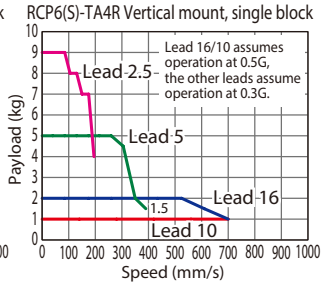
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

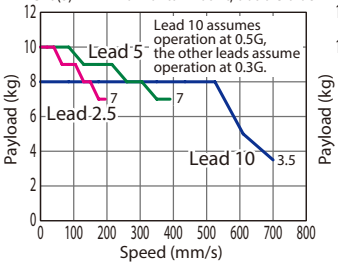
RCP6(S)-TA4R Horizontal mount, single block



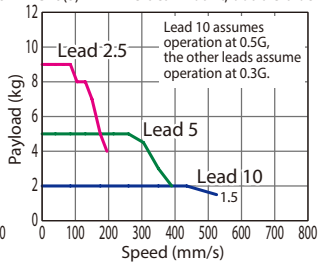
RCP6(S)-TA4R Vertical mount, single block



RCP6(S)-TA4R Horizontal mount, double block



RCP6(S)-TA4R Vertical mount, double block



Actuator Specifications

■ Lead and Payload

	Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
Single Block	RCP6(S)-TA4R-WA-35P-16-①-②-③-④	16	High-output Enabled	3	1	25~150 (The increment of stroke is 50mm)
Single Block	RCP6(S)-TA4R-WA-35P-10-①-②-③-④	10	High-output Enabled	4	2.5	
Single Block	RCP6(S)-TA4R-WA-35P-5-①-②-③-④	5	High-output Enabled	5	5	
Single Block	RCP6(S)-TA4R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	5	10	
Double Block	RCP6(S)-TA4R-WA-35P-10-①-②-③-④	10	High-output Enabled	8	2.5	40~240
Double Block	RCP6(S)-TA4R-WA-35P-5-①-②-③-④	5	High-output Enabled	10	5	
Double Block	RCP6(S)-TA4R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	10	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	Single Block 25~150	Double Block 40~190	Double Block 240
16	High-output Enabled	980 <700>	-	
10	High-output Enabled	785 <700>	700 <525>	680 <525>
5	High-output Enabled	390	390	340
2.5	High-output Enabled	195	195	170

Values in brackets < > are for vertical use.

① Stroke

Single Block Stroke (mm)	RCP6	RCP6S	Double Block Stroke (mm)	RCP6	RCP6S
25	○	○	**40**	○	○
50	○	○	**65**	○	○
75	○	○	**90**	○	○
100	○	○	**140**	○	○
125	○	○	**190**	○	○
150	○	○	**240**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
High-rigidity (Double-block guide)	**DB**	See P.105
Non-motor end specification	**NM**	See P.110

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

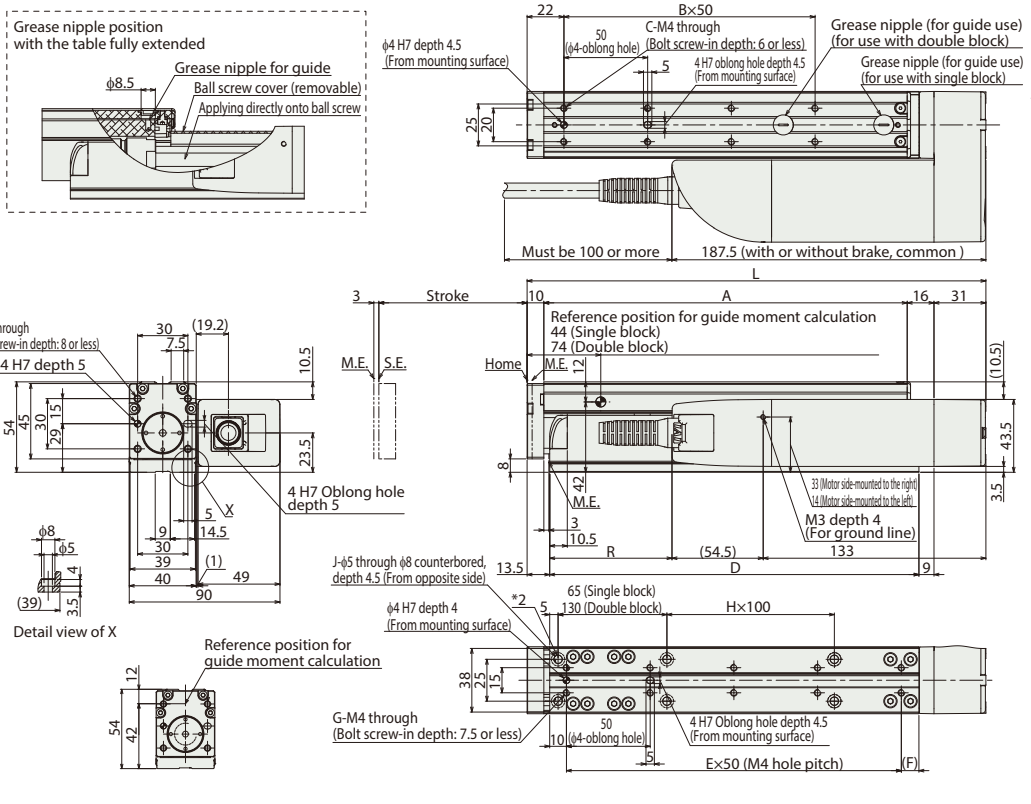
Actuator Specifications

Item		Description
Drive system		Ball screw ϕ8mm, rolled C10
Positioning repeatability		±0.01mm
Lost motion		0.1mm or less
Base		Material: Aluminum with white alumite treatment
Static allowable moment	Single block	Ma: 13N•m, Mb: 18.6N•m, Mc: 25.3N•m
	Double block	Ma: 76.8N•m, Mb: 110N•m, Mc: 50.5N•m
Dynamic allowable moment (*)	Single block	Ma: 4.98N•m, Mb: 7.11N•m, Mc: 9.68N•m
	Double block	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 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.
Please refer to RCP6 instruction manual regarding the displacement of the table.

Dimensions

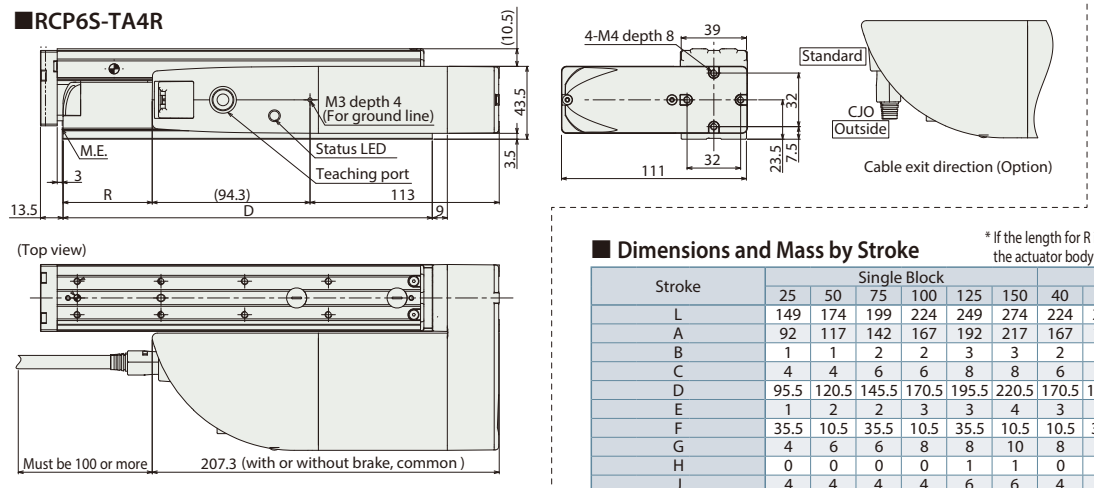
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



*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 ϕ5 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

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

Stroke			Single Block						Double Block					
			25	50	75	100	125	150	40	65	90	140	190	240
L			149	174	199	224	249	274	224	249	274	324	374	424
A			92	117	142	167	192	217	167	192	217	267	317	367
B			1	1	2	2	3	3	2	3	3	4	5	6
C			4	4	6	6	8	8	6	8	8	10	12	14
D			95.5	120.5	145.5	170.5	195.5	220.5	170.5	195.5	220.5	270.5	320.5	370.5
E			1	2	2	3	3	4	3	3	4	5	6	7
F			35.5	10.5	35.5	10.5	35.5	10.5	10.5	35.5	10.5	10.5	10.5	10.5
G			4	6	6	8	8	10	8	8	10	12	14	16
H			0	0	0	0	1	1	0	0	0	1	1	2
J			4	4	4	4	6	6	4	4	4	6	6	8
R*	RCP6		-52	-27	-2	23	48	73	23	48	73	123	173	223
	RCP6S		-71.8	-46.8	-21.8	3.2	28.2	53.2	3.2	28.2	53.2	103.2	153.2	203.2
Mass (kg)	RCP6	w/o brake	1.3	1.4	1.5	1.6	1.7	1.8	1.7	1.8	1.9	2.1	2.2	2.4
		w/ brake	1.4	1.5	1.6	1.7	1.8	1.8	1.8	1.9	1.9	2.1	2.3	2.5
	RCP6S	w/o brake	1.5	1.6	1.6	1.7	1.8	1.9	1.8	1.9	2.0	2.2	2.4	2.5
		w/ brake	1.5	1.6	1.7	1.8	1.9	2.0	1.9	2.0	2.1	2.2	2.4	2.6

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-TA6R

Table Type | Motor Unit Type | Side-mounted Motor | Body Width 58* mm | 24v Stepper Motor

■ Model Specification Items

□ — TA6R — 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: Stepper Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	25: 25mm 〃 320: 320mm	[RCP6] P3: PCON MCON MSEL [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.12 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

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

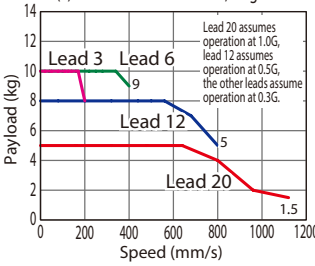
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.
(5) High-rigidity (double-block) specification can be selected as an option.

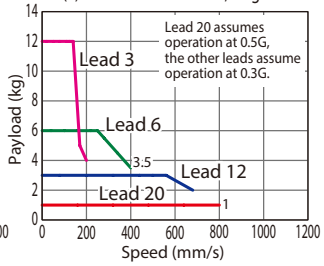
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

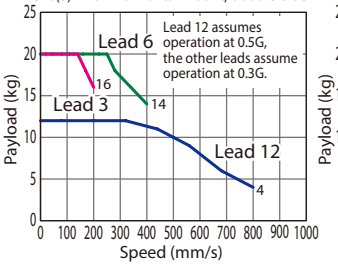
RCP6(S)-TA6R Horizontal mount, single block



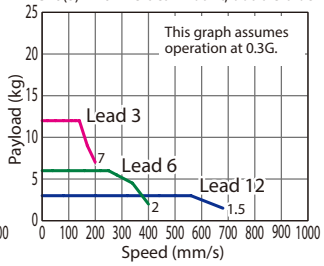
RCP6(S)-TA6R Vertical mount, single block



RCP6(S)-TA6R Horizontal mount, double block



RCP6(S)-TA6R Vertical mount, double block



Actuator Specifications

■ Lead and Payload

	Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
Single Block	RCP6(S)-TA6R-WA-42P-20-①-②-③-④	20	High-output Enabled	5	1	25~200 (The increment of stroke is 50mm)
Single Block	RCP6(S)-TA6R-WA-42P-12-①-②-③-④	12	High-output Enabled	8	3	
Single Block	RCP6(S)-TA6R-WA-42P-6-①-②-③-④	6	High-output Enabled	10	6	
Single Block	RCP6(S)-TA6R-WA-42P-3-①-②-③-④	3	High-output Enabled	10	12	
Double Block	RCP6(S)-TA6R-WA-42P-12-①-②-③-④	12	High-output Enabled	15	3	45~320
Double Block	RCP6(S)-TA6R-WA-42P-6-①-②-③-④	6	High-output Enabled	20	6	
Double Block	RCP6(S)-TA6R-WA-42P-3-①-②-③-④	3	High-output Enabled	20	12	

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	Single Block 25~200	Double Block 45~220	Double Block 270	Double Block 320
20	High-output Enabled	1,120 <800>	-		
12	High-output Enabled	800 <680>	800 <680>	735 <680>	575
6	High-output Enabled	400	400	365	285
3	High-output Enabled	200	200	185	140

Values in brackets < > are for vertical use.

① Stroke

Single Block Stroke (mm)	RCP6	RCP6S	Double Block Stroke (mm)	RCP6	RCP6S
25	○	○	**45**	○	○
50	○	○	**70**	○	○
75	○	○	**95**	○	○
100	○	○	**120**	○	○
125	○	○	**170**	○	○
150	○	○	**220**	○	○
175	○	○	**270**	○	○
200	○	○	**320**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
High-rigidity (Double-block guide)	**DB**	See P.105
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

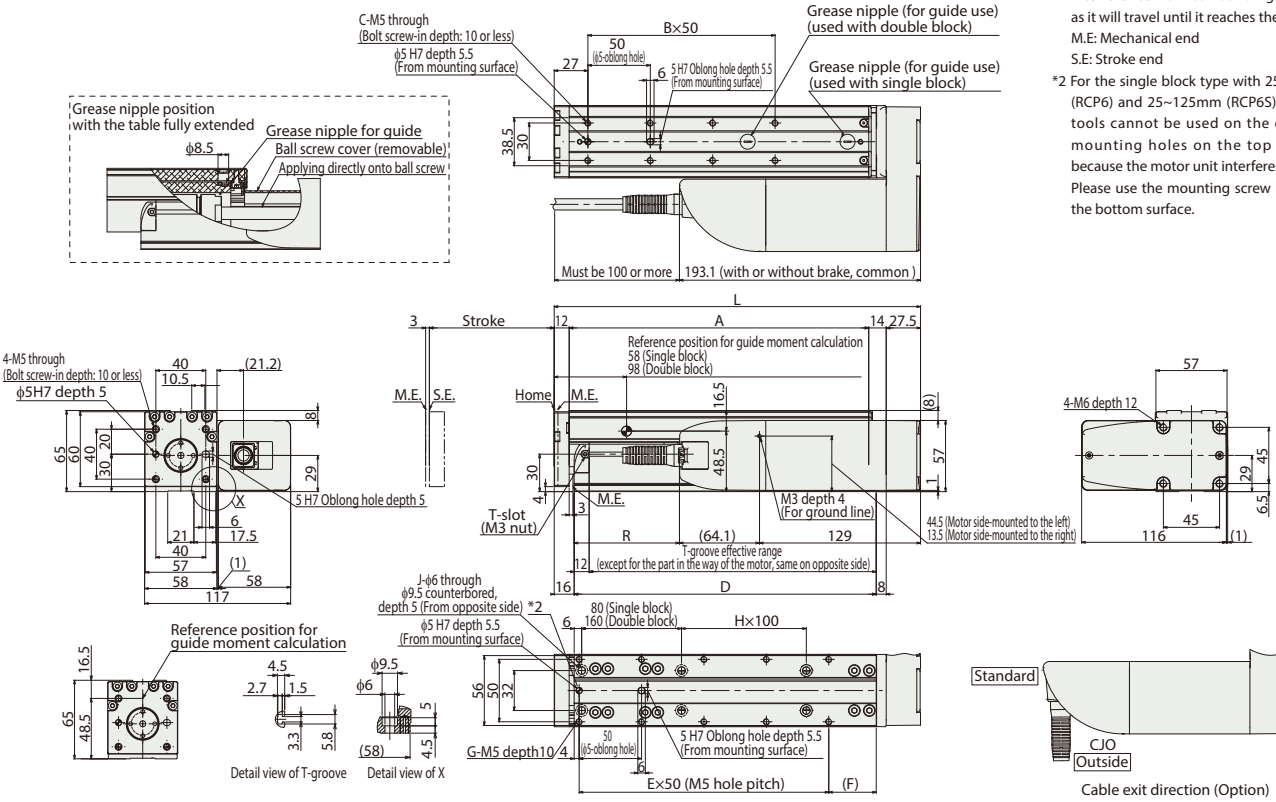
Item		Description
Drive system		Ball screw ϕ10mm, rolled C10
Positioning repeatability		±0.01mm
Lost motion		0.1mm or less
Base		Material: Aluminum with white alumite treatment
Static allowable moment	Single block	Ma: 32.3N•m, Mb: 46.2N•m, Mc: 68.3N•m
	Double block	Ma: 169N•m, Mb: 242N•m, Mc: 137N•m
Dynamic allowable moment (*)	Single block	Ma: 11.6N•m, Mb: 16.6N•m, Mc: 24.6N•m
	Double block	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 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.
Please refer to RCP6 instruction manual regarding the displacement of the table.

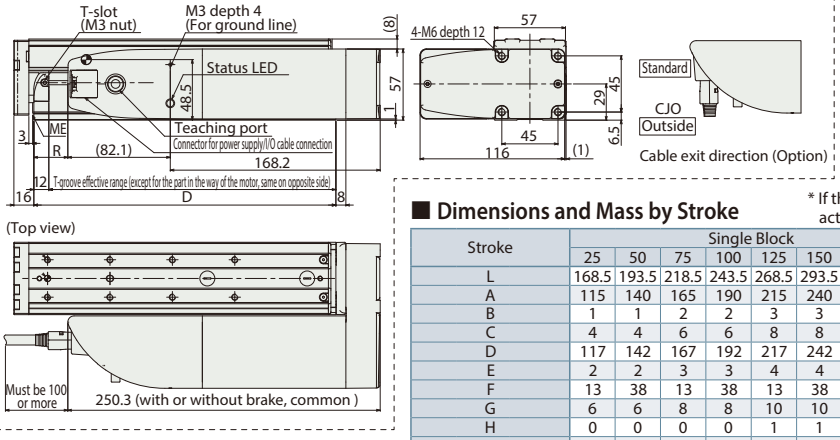
Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.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 ϕ6 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

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

Stroke			Single Block								Double Block							
			25	50	75	100	125	150	175	200	45	70	95	120	170	220	270	320
L			168.5	193.5	218.5	243.5	268.5	293.5	318.5	343.5	268.5	293.5	318.5	343.5	393.5	443.5	493.5	543.5
A			115	140	165	190	215	240	265	290	215	240	265	290	340	390	440	490
B			1	1	2	2	3	3	4	4	3	3	4	4	5	6	7	8
C			4	4	6	6	8	8	10	10	8	8	10	10	12	14	16	18
D			117	142	167	192	217	242	267	292	217	242	267	292	342	392	442	492
E			2	2	3	3	4	4	5	5	4	4	5	5	6	7	8	9
F			13	38	13	38	13	38	13	38	13	38	13	38	38	38	38	38
G			6	6	8	8	10	10	12	12	10	10	12	12	14	16	18	20
H			0	0	0	0	1	1	1	1	0	0	0	0	1	1	2	2
J			4	4	4	4	6	6	6	6	4	4	4	4	6	6	8	8
R*	RCP6		-40.6	-15.6	9.4	34.4	59.4	84.4	109.4	134.4	59.4	84.4	109.4	134.4	184.4	234.4	284.4	334.4
	RCP6S		-97.8	-72.8	-47.8	-22.8	2.2	27.2	52.2	77.2	2.2	27.2	52.2	77.2	127.2	177.2	227.2	277.2
Mass (kg)	RCP6	w/o brake	2.3	2.5	2.7	2.8	3.0	3.1	3.3	3.5	3.2	3.4	3.5	3.7	4.0	4.3	4.7	5.0
		w/ brake	2.4	2.6	2.7	2.9	3.0	3.2	3.4	3.5	3.3	3.4	3.6	3.8	4.1	4.4	4.7	5.0
	RCP6S	w/o brake	2.5	2.6	2.8	3.0	3.1	3.3	3.4	3.6	3.3	3.5	3.7	3.8	4.1	4.5	4.8	5.1
		w/ brake	2.5	2.7	2.9	3.0	3.2	3.3	3.5	3.7	3.4	3.6	3.7	3.9	4.2	4.5	4.9	5.2

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

*Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6(S)-TA7R

Table Type | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 24V Stepper 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	TA7R	WA: Battery-less Absolute	56P: Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	25: 25mm ~ 390: 390mm	[RCP6] P3: PCON MCON MSEL [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.

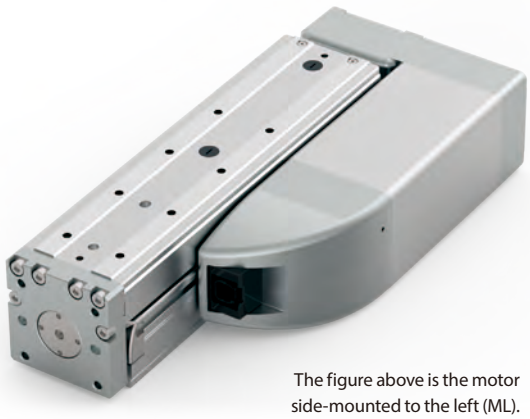
* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.12 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



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

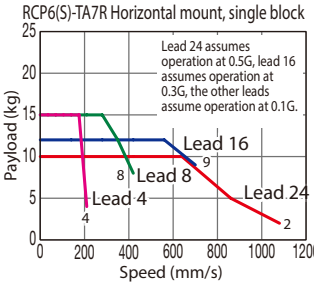
POINT Selection Notes

(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" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(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.130 for more information.
(5) High-rigidity (double-block) specification can be selected as an option.

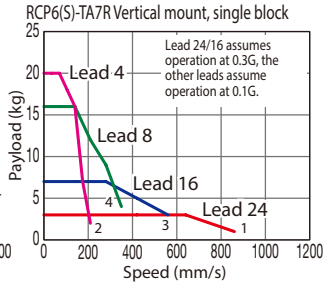
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

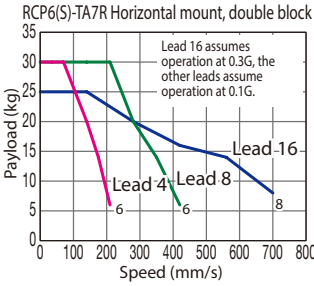
RCP6(S)-TA7R Horizontal mount, single block



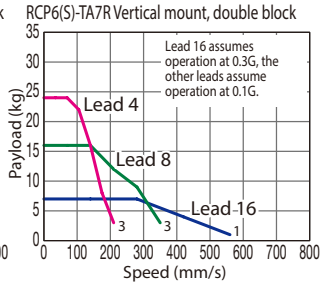
RCP6(S)-TA7R Vertical mount, single block



RCP6(S)-TA7R Horizontal mount, double block



RCP6(S)-TA7R Vertical mount, double block



Actuator Specifications

■ Lead and Payload

	Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
Single Block	RCP6(S)-TA7R-WA-56P-24-①-②-③-④	24	High-output Enabled	10	3	25~300
Single Block	RCP6(S)-TA7R-WA-56P-16-①-②-③-④	16	High-output Enabled	12	7	
Single Block	RCP6(S)-TA7R-WA-56P-8-①-②-③-④	8	High-output Enabled	15	16	
Single Block	RCP6(S)-TA7R-WA-56P-4-①-②-③-④	4	High-output Enabled	15	20	
Double Block	RCP6(S)-TA7R-WA-56P-16-①-②-③-④	16	High-output Enabled	25	7	40~390
Double Block	RCP6(S)-TA7R-WA-56P-8-①-②-③-④	8	High-output Enabled	30	16	
Double Block	RCP6(S)-TA7R-WA-56P-4-①-②-③-④	4	High-output Enabled	30	24	

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	Single Block 25~300	Double Block 40~290	Double Block 340	Double Block 390
24	High-output Enabled	1,080 <860>	-		
16	High-output Enabled	700 <560>	700 <560>		600 <560>
8	High-output Enabled	420 <350>	420 <350>	365 <350>	300
4	High-output Enabled	210	210	180	150

Values in brackets < > are for vertical use.

① Stroke

Single Block Stroke (mm)	RCP6	RCP6S	Double Block Stroke (mm)	RCP6	RCP6S
25	○	○	40	○	○
50	○	○	65	○	○
75	○	○	90	○	○
100	○	○	140	○	○
125	○	○	190	○	○
150	○	○	240	○	○
175	○	○	290	○	○
200	○	○	340	○	○
250	○	○	390	○	○
300	○	○			

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified Length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X20** (20m)	○	○
Robot Cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R20** (20m)	○	○

* Please refer to P. 144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
High-rigidity (Double-block guide)	**DB**	See P.105
Non-motor end specification	**NM**	See P.110

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

Actuator Specifications

Item		Description
Drive system		Ball screw ϕ12mm, rolled C10
Positioning repeatability		±0.01mm
Lost motion		0.1mm or less
Base		Material: Aluminum with white alumite treatment
Static allowable moment	Single block	Ma: 115N•m, Mb: 115N•m, Mc: 229N•m
	Double block	Ma: 620N•m, Mb: 620N•m, Mc: 458N•m
Dynamic allowable moment (*)	Single block	Ma: 44.7N•m, Mb: 44.7N•m, Mc: 89.1N•m
	Double block	Ma: 196N•m, Mb: 196N•m, Mc: 145N•m
Ambient operating temp. & humidity		0~40°C, 85% RH or less (Non-condensing)

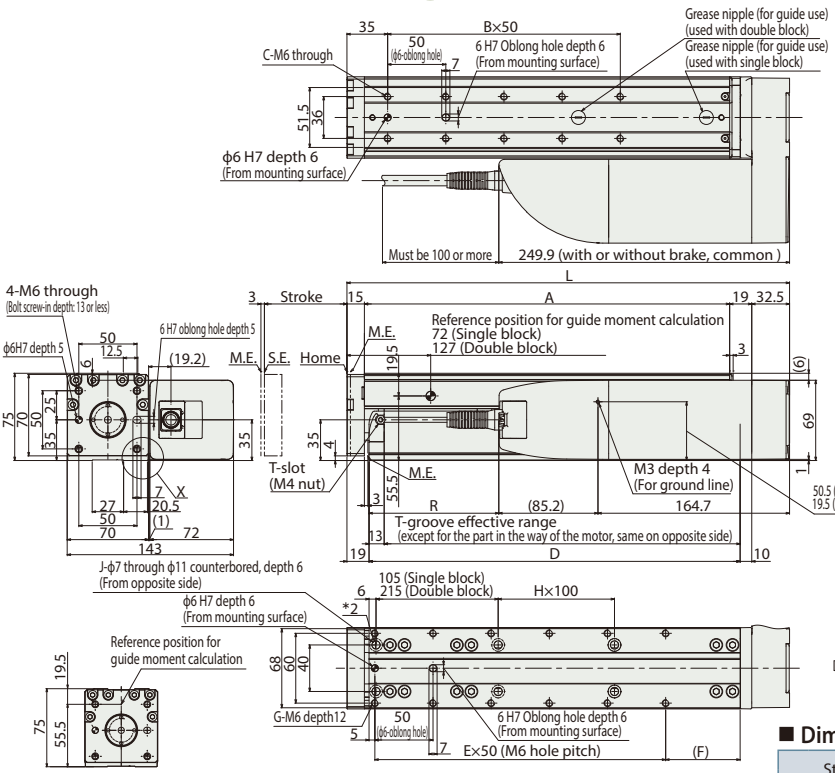
(*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.
Please refer to RCP6 instruction manual regarding the displacement of the table.

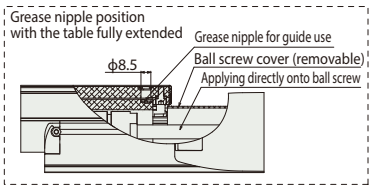
Dimensions

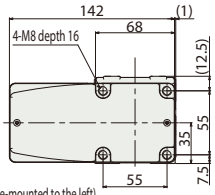
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

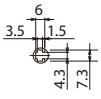
*1 When the table is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end

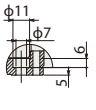
*2 For the single block type with 25~75mm (RCP6) and 25~125mm (RCP6S) strokes, tools cannot be used on the ϕ7 front mounting holes on the top surface because the motor unit interferes.
Please use the mounting screw holes on the bottom surface.

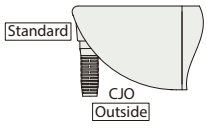







Detail view of T-groove

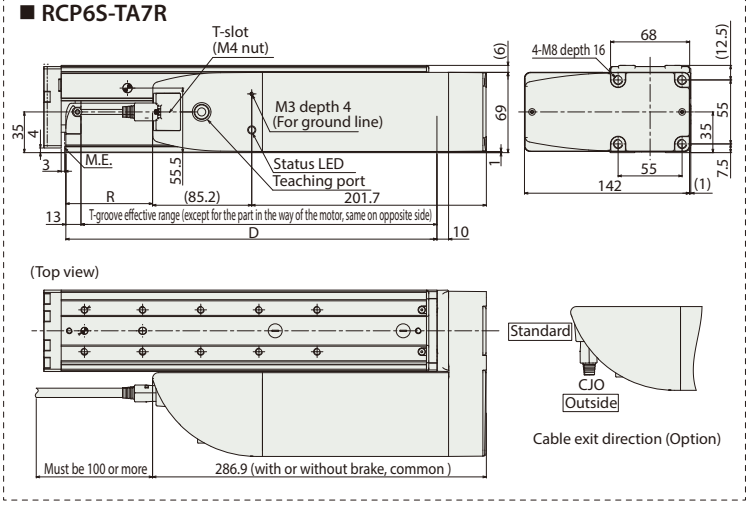

Detail view of X



Cable exit direction (Option)

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

■ RCP6S-TA7R



Cable exit direction (Option)

■ Dimensions and Mass by Stroke

Stroke			Single Block									
			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

Stroke			Double Block								
			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

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.147 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-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.

RCP6 Series Options

Brake

Option Code **B** Applicable Models **All Models**

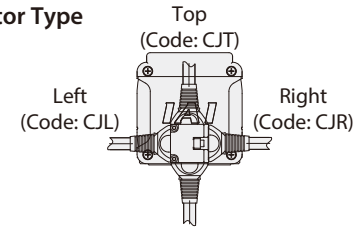
Description This is a holding mechanism that prevents the slider from falling and damaging any attached fittings when the power or servo is turned off.

Cable Exit Direction

Option Code **CJT / CJR / CJL / CJB / CJO** Applicable Models **All Models**

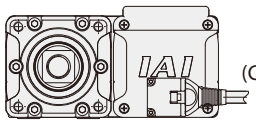
Description This option allows you to change the exit direction of the motor-encoder cable to top, bottom, left, or right.

Coupled Motor Type



* When viewed from the actuator rear side (motor side).

Side-mounted Motor Type

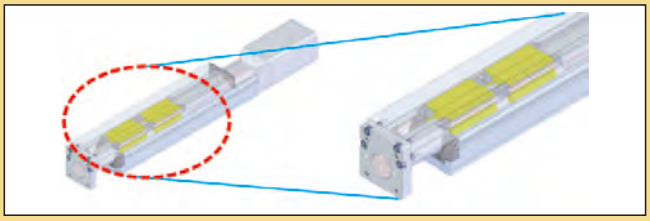


* When viewed from the actuator front side.

Double-block Guide

Option Code **DB** Applicable Models **RCP6(S)-TA4□/TA6□/TA7□**

Description This option allows the actuator to equip 2 internal guide blocks.
The dynamic allowable load moment in the Ma and Mb directions will be increased, and when horizontally mounted, its payload will be doubled.

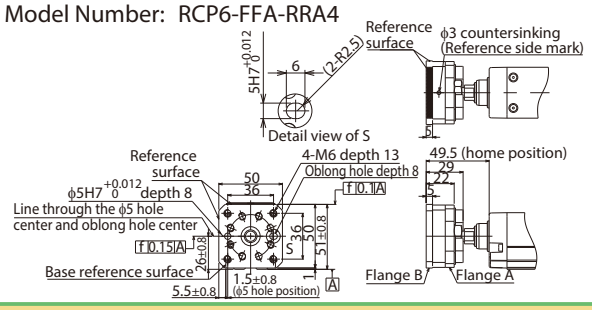


Tip Adapter (Flange)

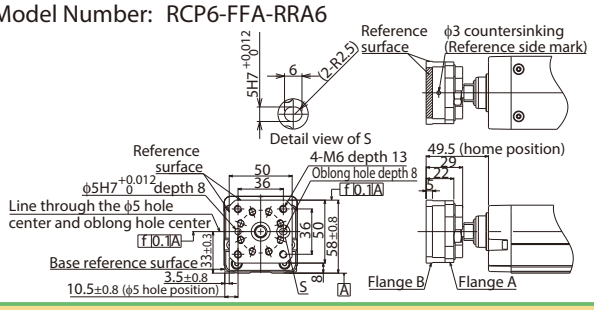
Option Code **FFA** Applicable Models **RCP6(S)-RRA4□/RRA6□/RRA7□**

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

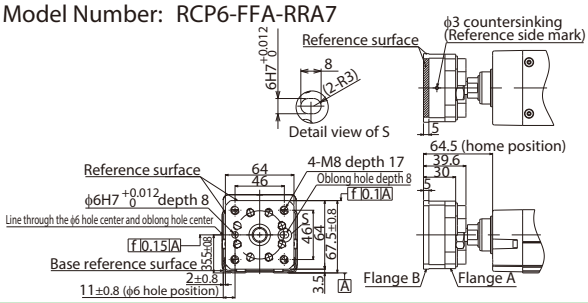
For RCP6(S)-RRA4□
Model Number: RCP6-FFA-RRA4



For RCP6(S)-RRA6□
Model Number: RCP6-FFA-RRA6



For RCP6(S)-RRA7□
Model Number: RCP6-FFA-RRA7



Flange (Front)

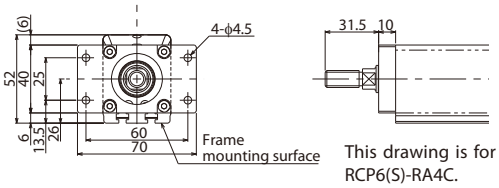
Option Code **FL** Applicable Models **RCP6(S)-RA4□/RA6□/RA7□/RA8□/RRA4□/RRA6□/RRA7□/RRA8□/WRA10□/WRA12□/WRA14□/WRA16□**

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

For RCP6(S)-RA4□

Model Number: RCP6-FL-RA4

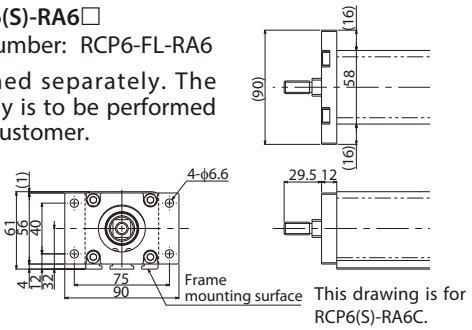
*Furnished separately. The assembly is to be performed by the customer.



For RCP6(S)-RA6□

Model Number: RCP6-FL-RA6

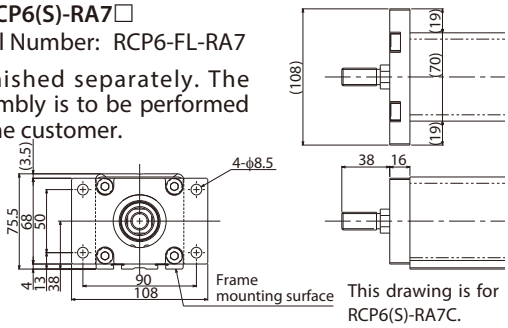
*Furnished separately. The assembly is to be performed by the customer.



For RCP6(S)-RA7□

Model Number: RCP6-FL-RA7

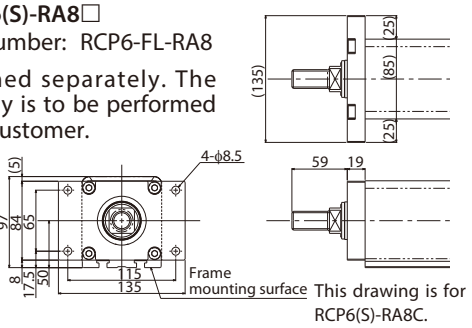
*Furnished separately. The assembly is to be performed by the customer.



For RCP6(S)-RA8□

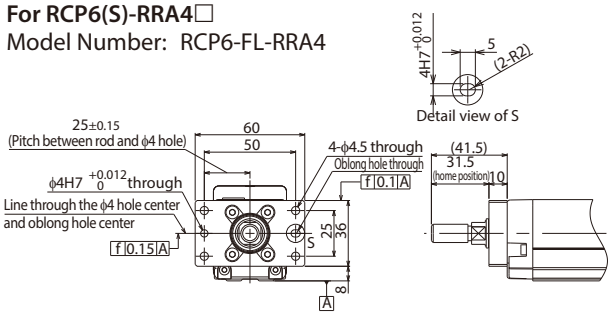
Model Number: RCP6-FL-RA8

*Furnished separately. The assembly is to be performed by the customer.



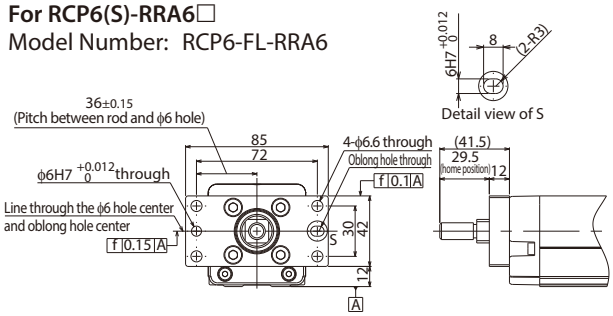
For RCP6(S)-RRA4□

Model Number: RCP6-FL-RRA4



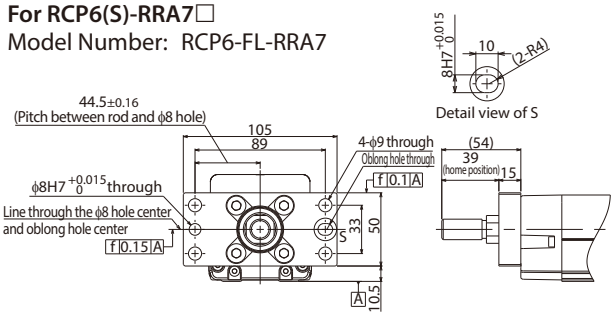
For RCP6(S)-RRA6□

Model Number: RCP6-FL-RRA6



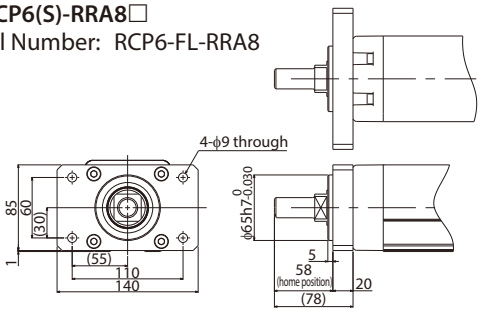
For RCP6(S)-RRA7□

Model Number: RCP6-FL-RRA7



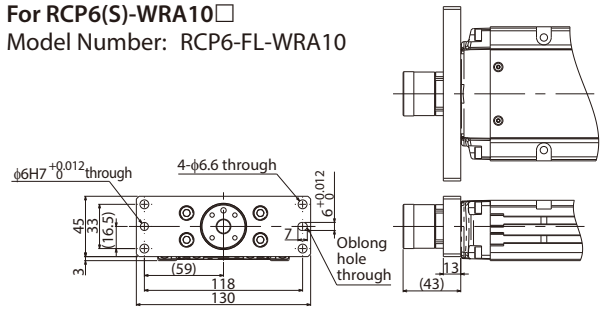
For RCP6(S)-RRA8□

Model Number: RCP6-FL-RRA8



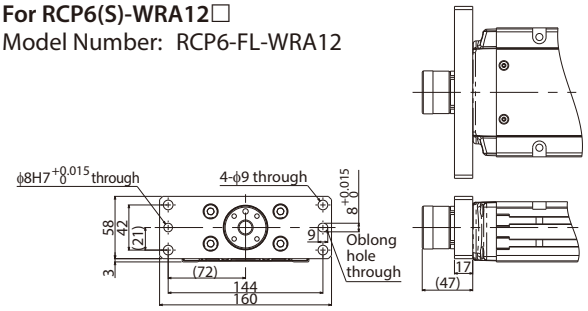
For RCP6(S)-WRA10□

Model Number: RCP6-FL-WRA10

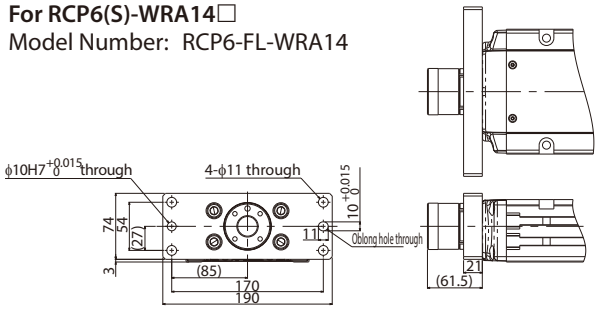


For RCP6(S)-WRA12□

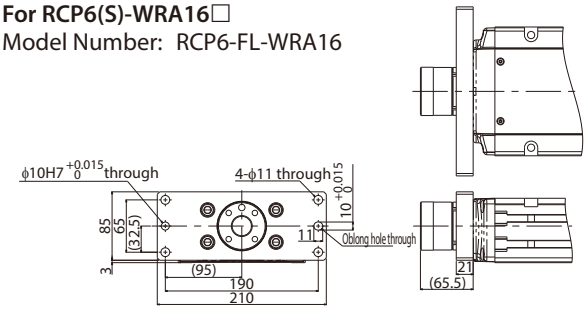
Model Number: RCP6-FL-WRA12



For RCP6(S)-WRA14□
Model Number: RCP6-FL-WRA14



For RCP6(S)-WRA16□
Model Number: RCP6-FL-WRA16

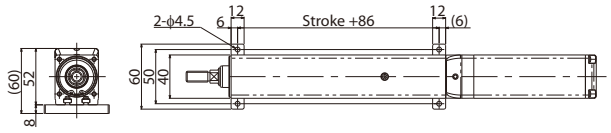


Foot Bracket

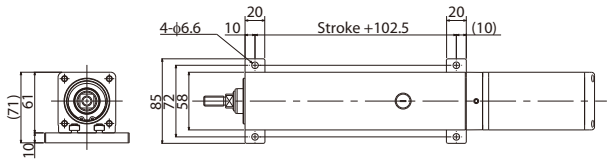
Option Code **FT** Applicable Models **RCP6(S)-RA4□/RA6□/RA7□/RA8□**

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.

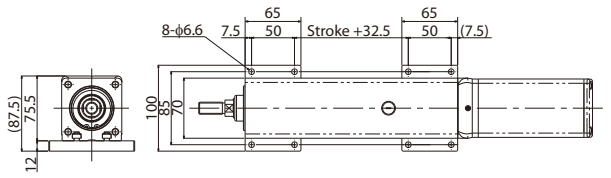
For RCP6(S)-RA4C
Model Number: RCP6-FT-RA4C
(Sold as a set of 2)



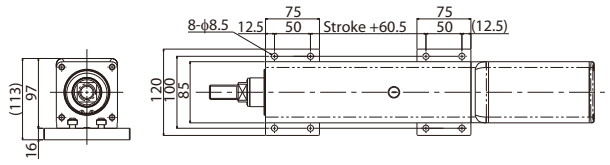
For RCP6(S)-RA6C
Model Number: RCP6-FT-RA6C
(Sold as a set of 2)



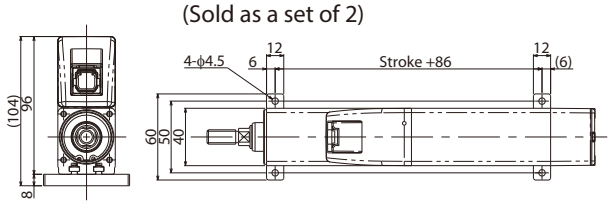
For RCP6(S)-RA7C
Model Number: RCP6-FT-RA7C
(Sold as a set of 2)



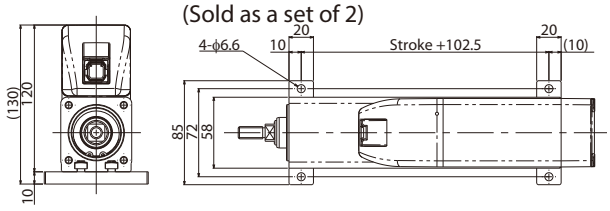
For RCP6(S)-RA8C
Model Number: RCP6-FT-RA8C
(Sold as a set of 2)



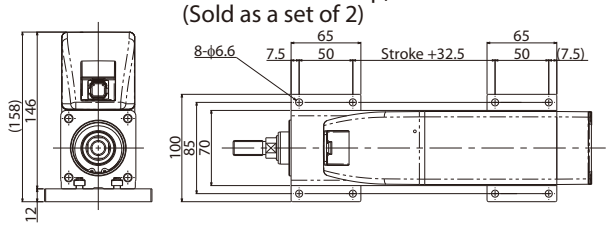
For RCP6(S)-RA4R
Model Number: RCP6-FT-RA4R-1 (For the motor side-mounted to the top)
(Sold as a set of 2)



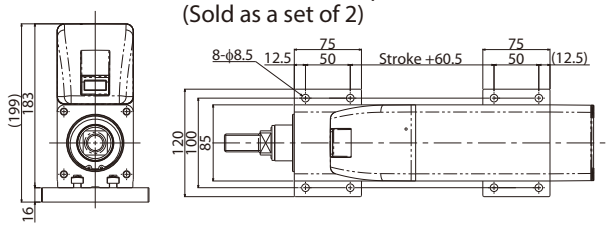
For RCP6(S)-RA6R
Model Number: RCP6-FT-RA6R-1 (For the motor side-mounted to the top)
(Sold as a set of 2)



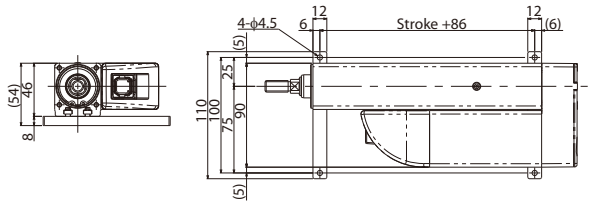
For RCP6(S)-RA7R
Model Number: RCP6-FT-RA7R-1 (For the motor side-mounted to the top)
(Sold as a set of 2)



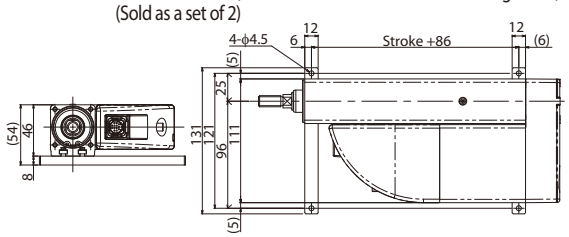
For RCP6(S)-RA8R
Model Number: RCP6-FT-RA8R-1 (For the motor side-mounted to the top)
(Sold as a set of 2)



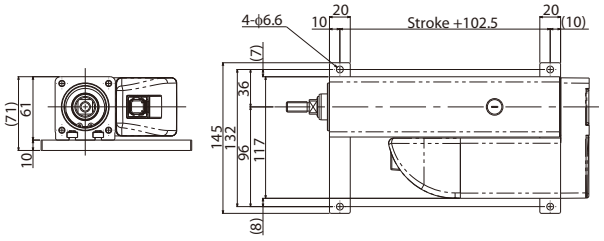
For RCP6-RA4R
Model Number: RCP6-FT-RA4R-2 (For the motor side-mounted to the right/left)
(Sold as a set of 2)



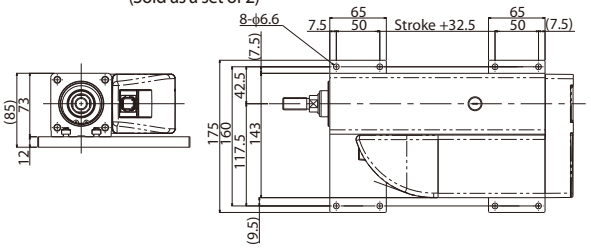
For RCP6S-RA4R
Model Number: RCP6-FT-RA4R-3 (For the motor side-mounted to the right/left)
(Sold as a set of 2)



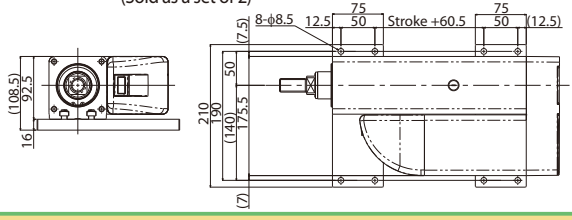
For RCP6(S)-RA6R
Model Number: RCP6-FT-RA6R-2 (For the motor side-mounted to the right/left)
(Sold as a set of 2)



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)-SA□C/WSA□C**

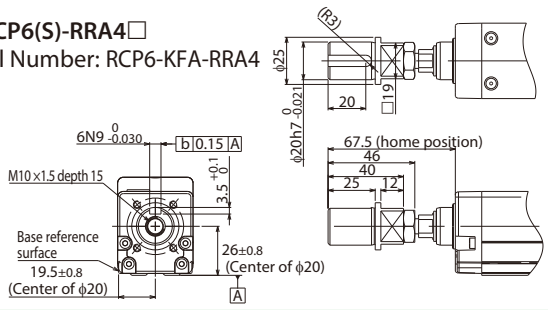
Description The positioning repeatability of the standard type of the RCP6(S) slider and wide slider models is ±0.01mm.
If this option is selected, the positioning repeatability can be ±0.005mm. * This option can be selected for actuators with lead 12mm or less.

Tip Adapter (Keyway)

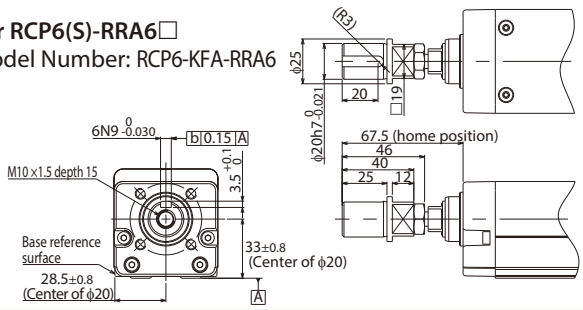
Option Code **KFA** Applicable Models **RCP6(S)-RRA4□/RRA6□/RRA7□**

Description A female threaded tip adapter with a parallel keyway.

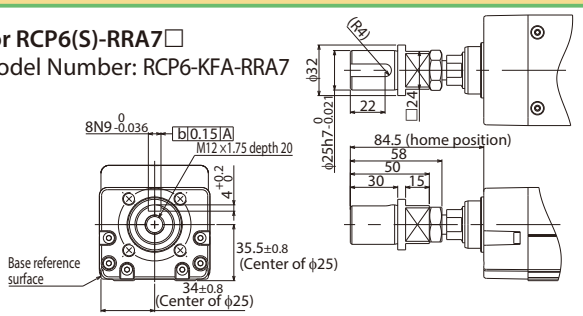
For RCP6(S)-RRA4□
Model Number: RCP6-KFA-RRA4



For RCP6(S)-RRA6□
Model Number: RCP6-KFA-RRA6



For RCP6(S)-RRA7□
Model Number: RCP6-KFA-RRA7

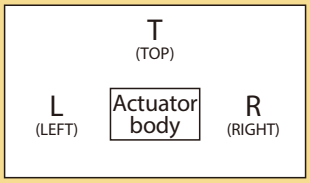


Side-mounted Motor Direction

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.

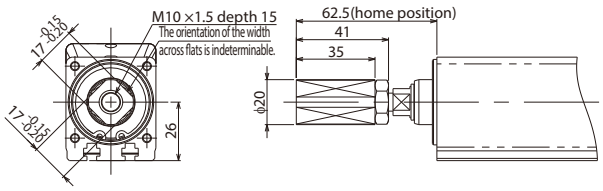


Tip Adapter (Internal Thread)

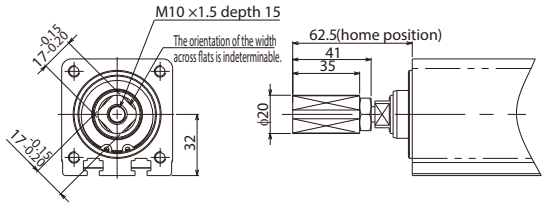
Option Code **NFA** Applicable Models **RCP6(S)-RA4□/RA6□/RA7□/RA8□/RRA4□/RRA6□/RRA7□/RRA8□**

Description A rod-end tooling adapter with 1 threaded hole.

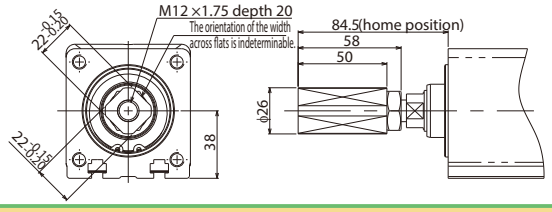
For RCP6(S)-RA4□
Model Number: RCP6-NFA-RA4



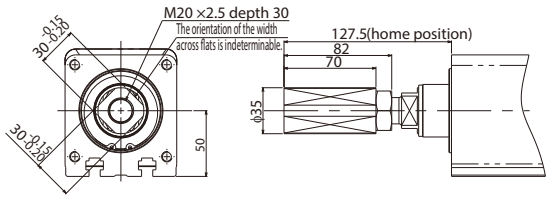
For RCP6(S)-RA6□
Model Number: RCP6-NFA-RA6



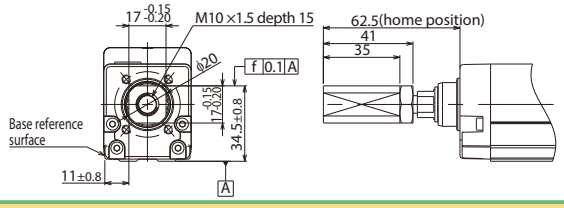
For RCP6(S)-RA7□
Model Number: RCP6-NFA-RA7



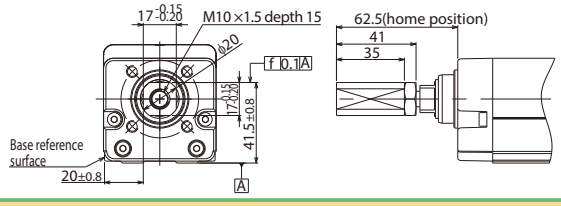
For RCP6(S)-RA8□
Model Number: RCP6-NFA-RA8



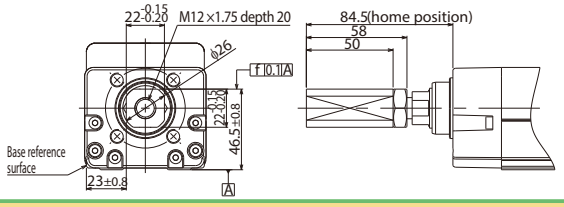
For RCP6(S)-RRA4□
Model Number: RCP6-NFA-RRA4



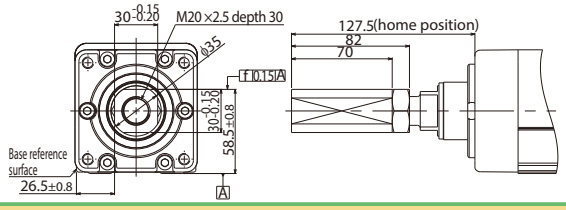
For RCP6(S)-RRA6□
Model Number: RCP6-NFA-RRA6



For RCP6(S)-RRA7□
Model Number: RCP6-NFA-RRA7



For RCP6(S)-RRA8□
Model Number: RCP6-NFA-RRA8

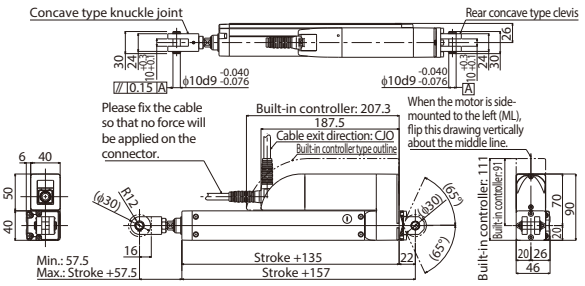


Knuckle Joint

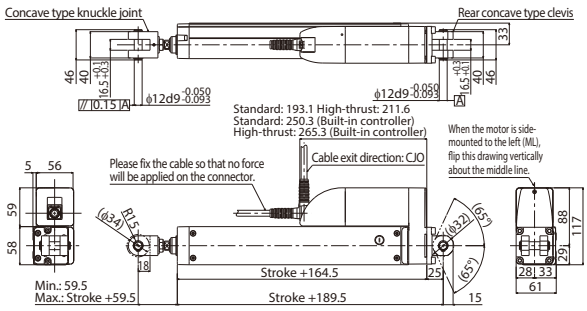
Option Code **NJ** Applicable Models **RCP6(S)-RRA□R**

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.

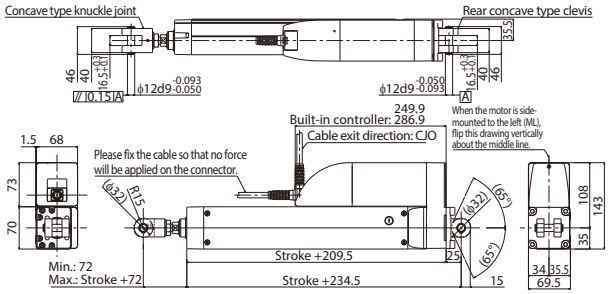
For RCP6(S)-RRA4R
Model Number: RCP6-NJ-RRA4R



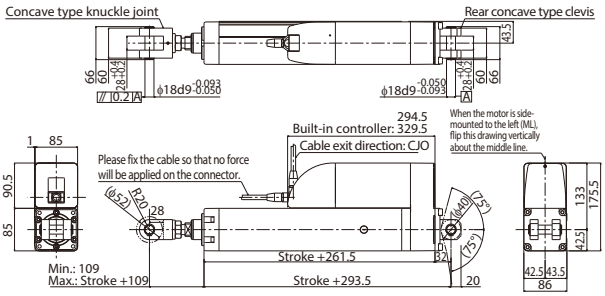
For RCP6(S)-RRA6R
Model Number: RCP6-NJ-RRA6R



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**

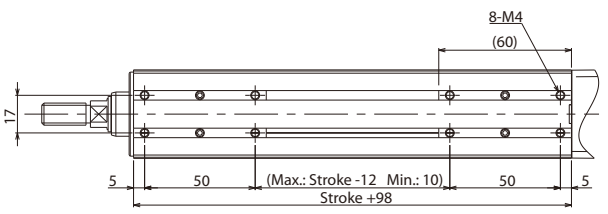
Description The normal home position is set by the slider and rod on the motor side, but there is the option for the home position to be on the other side to accommodate variations in equipment layout, etc. (Please note that changing the home position after the actuators are shipped may require the products to be sent back to IAI for re-setting.)

T-slot Nut Bar

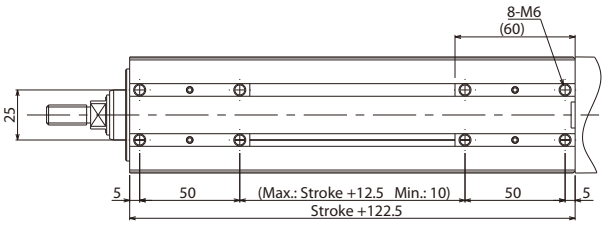
Option Code **NTB / NTBL / NTBR** Applicable Models **RCP6(S)-RA4□/RA6□/RA7□/RA8□/WRA10□/WRA12□/WRA14□/WRA16□**

Description T-slot nut bar is a bar-shaped bracket which is to be inserted into the actuator's T-slot. There are fixed 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).

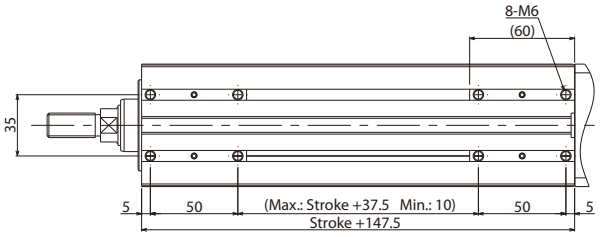
For RCP6(S)-RA4□
Model Number: RCP6-NTB-RA4



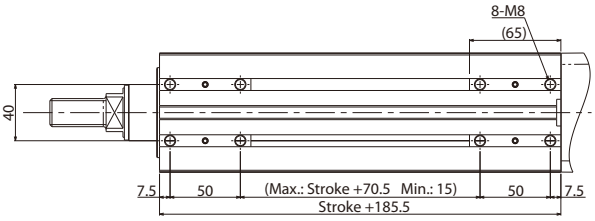
For RCP6(S)-RA6□
Model Number: RCP6-NTB-RA6



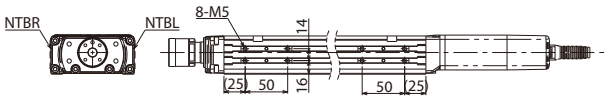
For RCP6(S)-RA7□
Model Number: RCP6-NTB-RA7



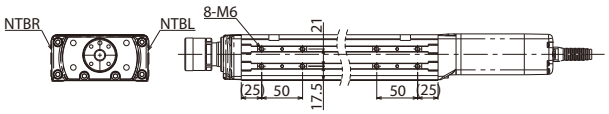
For RCP6(S)-RA8□
Model Number: RCP6-NTB-RA8



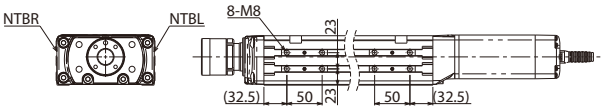
For RCP6(S)-WRA10□
Model Number: RCP6-NTB-WRA10



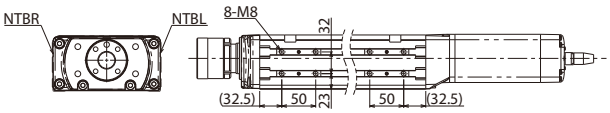
For RCP6(S)-WRA12□
Model Number: RCP6-NTB-WRA12



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.

Caution If the rod is moved with a clevis bracket attached to it, please use an external guide to prevent the rod from receiving any load other than from its moving direction.

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

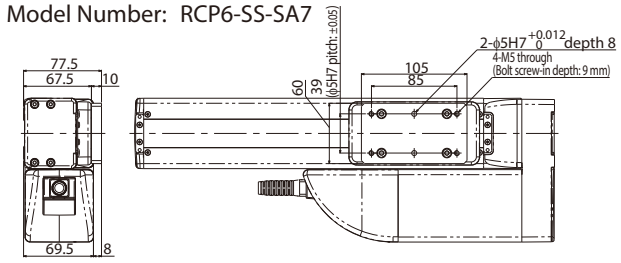
* Knuckle joint and clevis brackets for RCP6(S) radial cylinders are furnished separately. The assembly is to be performed by the customer with reference to the mechanical drawings. When making adjustments, we recommend that the parallelism fall within the level mentioned on the mechanical drawings provided.
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.110.

Slider Spacer

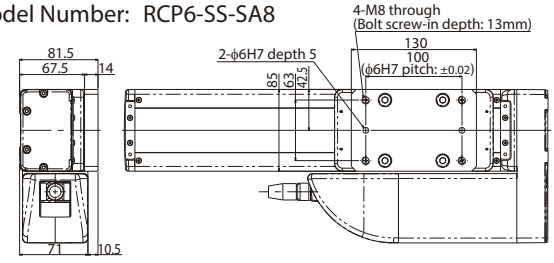
Option Code **SS** Applicable Models **RCP6(S) -SA7R/SA8R**

Description 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



Selection Notes for RCP6(S) Series

■ Warnings When Selecting the Rod Attachment Option

● The front flange (FL) rod attachment option cannot be selected when the following strokes are selected for RCP6(S)-RA4R/RA6R/RA7R/RA8R/RRA4R/RRA6R/RRA7R;

- RCP6-RA4R 50mm (Standard/With a brake)
- RCP6-RA6R 50mm (Standard/With a brake)
- RCP6-RA7R 50~100mm (Standard/With a brake)
- RCP6-RA8R 50~100mm (Standard/With a brake)
- RCP6-RRA4R 60mm (Standard/With a brake)
- RCP6-RRA6R 65mm (Standard/With a brake)
- RCP6-RRA7R 70mm (Standard/With a brake)
- RCP6S-RA4R 50~100mm (Standard/With a brake)
- RCP6S-RA6R 50~100mm (Standard/With a brake)
- RCP6S-RA7R 50~150mm (Standard/With a brake)
- RCP6S-RA8R 50~150mm (Standard/With a brake)
- RCP6S-RRA4R 60~110mm (Standard/With a brake)
- RCP6S-RRA6R 65~115mm (Standard/With a brake)
- RCP6S-RRA7R 70~120mm (Standard/With a brake)

● The front flange (FL) rod attachment option cannot be used on side mounting position for RCP6(S)-RRA8R when the following strokes are selected.

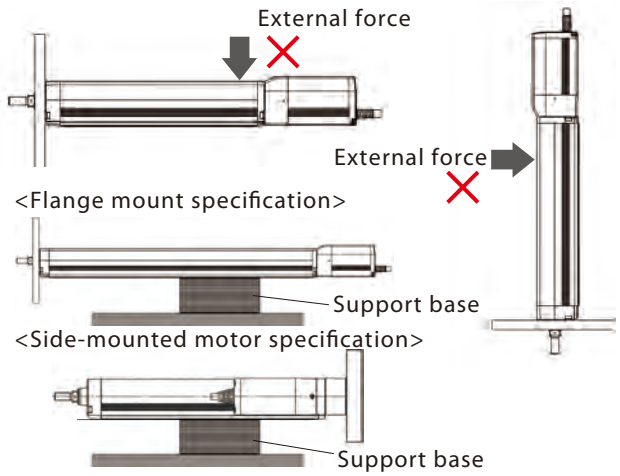
- RCP6(S)-RRA8R 50~100mm (Standard/With a brake)

● Please be careful of nearby objects when selecting the front flange (FL) option for the RCP6(S)-RRA□R models, there may be some interference between the cable and installation 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.

Correlation Diagrams of Push Force and Current Limit

RCP6 Series Slider Type/Rod Type

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

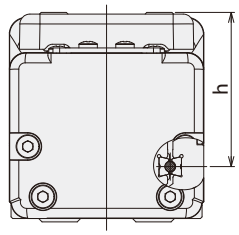
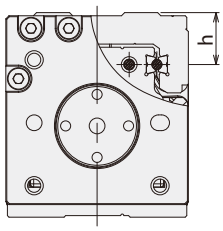


Table type



Working point of the guide moment

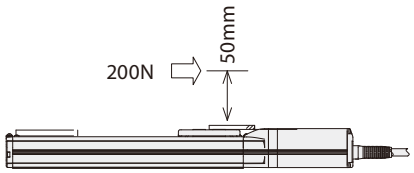
h dimension			
Slider type		Table type	
SA4	36	TA4	12
SA6	46	TA6	16.5
SA7	48	TA7	19.5
SA8	45.5		
WSA10	26.5		
WSA12	32		
WSA14	36		
WSA16	38.5		

* 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 = 19,600 (N•mm)
= 19.6 (N•m)

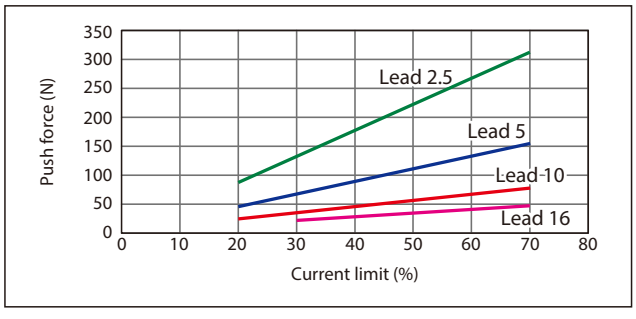


Since the dynamic allowable moment of the SA7C is Ma = 44.7 (N•m), so 44.7×0.8 = 35.76 > 19.6, this is an acceptable selection.
Also, should an Mb moment occur due to the push operation, calculate the moment from the overhang and ensure that it is within range of the dynamic allowable moment.

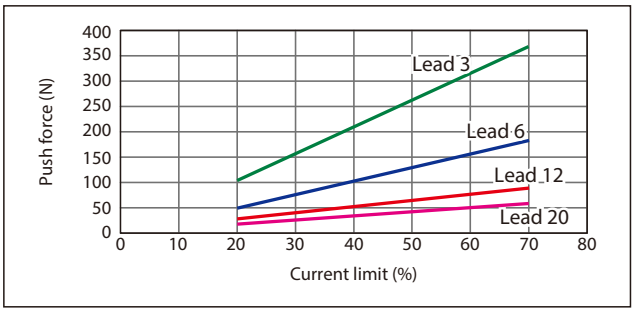
Correlation Diagrams of Push Force and Current Limit

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

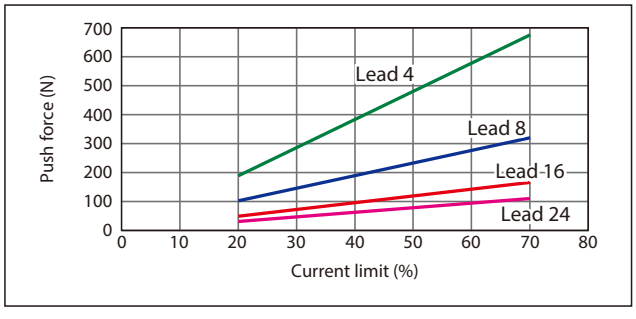
SA4/RA4/RRA4/TA4 Type



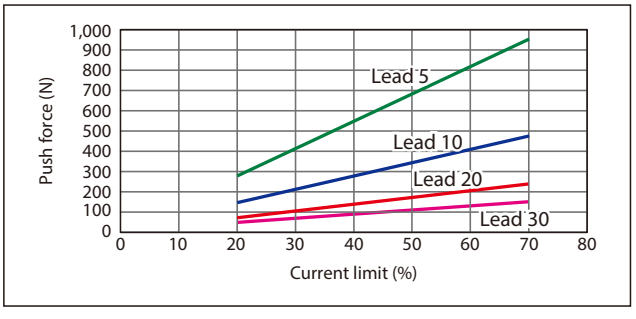
SA6/RA6/RRA6/TA6 Type



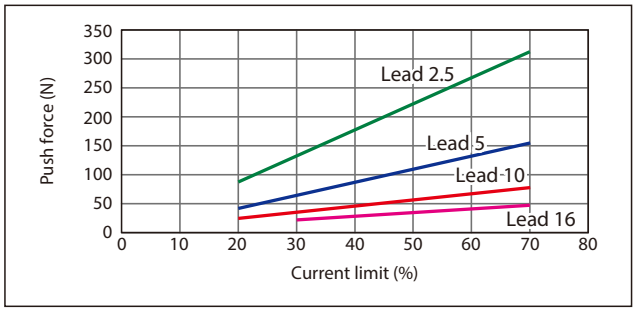
SA7/TA7/WSA14 Type



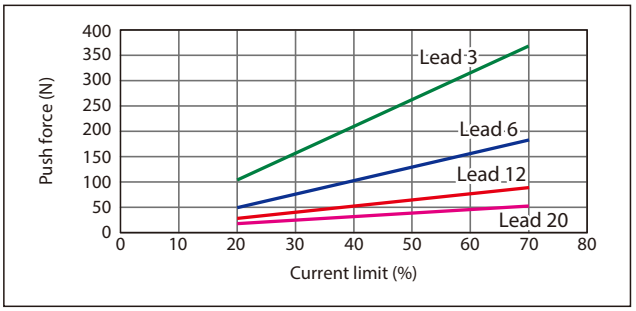
SA8/WSA16 Type



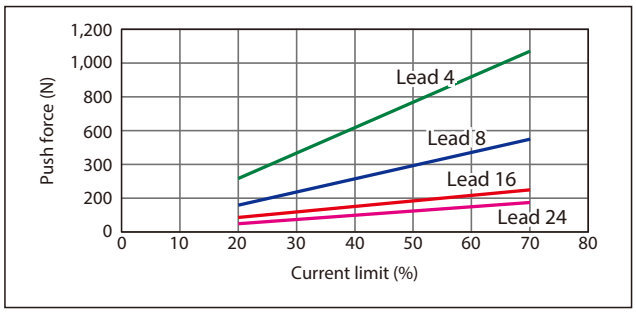
WSA10/WRA10 Type



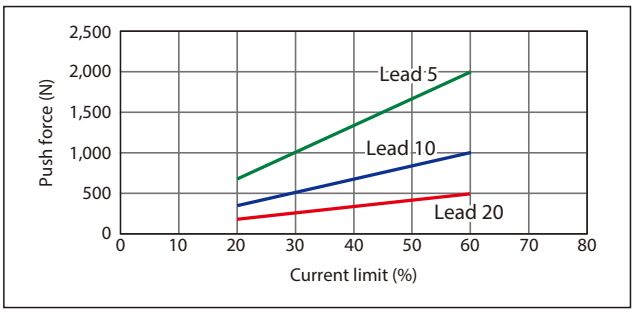
WSA12/WRA12 Type



RA7/RRA7/WRA14 Type



WRA16 Type

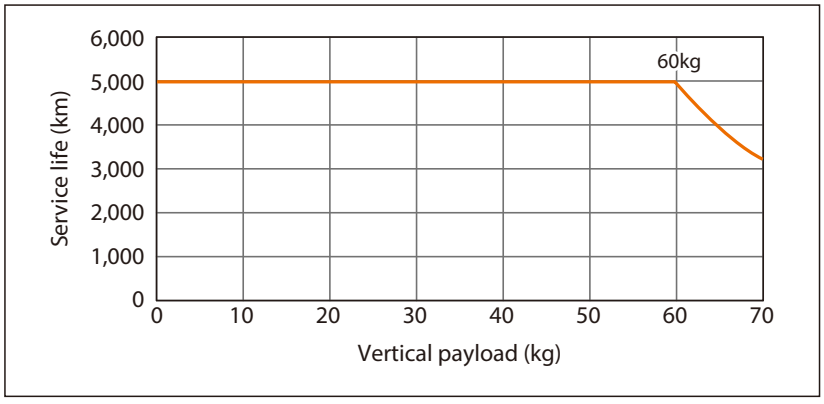


Vertical Payload and Service Life

* 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) 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

High-output Setting Enabled

RCP6 Series — SA: Slider Type, Motor Coupled Specification

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 MSEP-C/LC controller, high-output enabled operation is only available if "high-output setting" is selected as an option.

■ 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
1,120			2.5	2	1.5		1	0.75
1,260			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
1,120		6.5	3	2	1.5		0.5	0.5
1,280			1	1	1			0.5
1,440			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
1,080		8	4.5	4	2		2	1
1,200		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							

High-output Setting Disabled

■ RCP6/RCP6S-SA8C

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
1,000		8	6	3	2			
1,200		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				
1,000		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
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		

High-output Setting Enabled

RCP6 Series — SA: Slider Type, Side-mounted Motor Specification

■ 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
1,120			2.5	1	1			0.5
1,260			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
1,120		6	3	2	1.5		0.5	0.5
1,280			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
1,080		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		

High-output Setting Disabled

■ RCP6/RCP6S-SA8R

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
1,000		5	3	2	1			
1,200		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					
1,000		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
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		

Tables of Payload by Speed/Acceleration

High-output Setting Enabled

RCP6 Series — WSA: Wide Slider Type, Motor Coupled Specification

■ RCP6/RCP6S-WSA10C

Lead 16

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	4	4	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					
980								
1,120								
1,260								

Lead 10

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	15	15	13	13	12			
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				
700								
785								

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					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	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					
960								
1,120								
1,280								
1,440								

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			
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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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							

High-output Setting Disabled

■ RCP6/RCP6S-WSA16C

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	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							

High-output Setting Enabled

RCP6 Series — WSA: Wide Slider Type, Side-mounted Motor Specification

■ RCP6/RCP6S-WSA10R

Lead 16

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	4	4	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					
980								
1,120								
1,260								

Lead 10

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	15	15	13	13	12			
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				
700								
785								

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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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					
960								
1,120								
1,280								
1,440								

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	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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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		
210								

High-output Setting Disabled

■ RCP6/RCP6S-WSA16R

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	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							
665								
720								

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							
405								
450								

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							
195								

Tables of Payload by Speed/Acceleration

High-output Setting Enabled

RCP6 Series | RRA: Radial Cylinder Type, Motor Coupled Specification

■ 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
1,120			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		

High-output Setting Disabled

■ RCP6/RCP6S-RRA8C

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

High-output Setting Enabled

RCP6 Series — RRA: Radial Cylinder Type, Side-mounted Motor Specification

■ 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
960								
1,120								
1,280								
1,440								

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		

High-output Setting Disabled

■ RCP6/RCP6S-RRA8R

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

Tables of Payload by Speed/Acceleration

High-output Setting Enabled

RCP6 Series | WRA: Wide Radial Cylinder Type, Motor Coupled Specification

■ RCP6/RCP6S-WRA10C

Lead 16

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	4	4	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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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 (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	28	25	22	20	20	5	5	5
40	28	25	22	20	20	5	5	5
85	28	25	22	20	20	5	5	5
130	28	25	22	20	20	5	5	5
175	28	25	22	20	20	5	5	5
215	28	25	22	20	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 (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	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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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 (mm/s)	Acceleration (G)							
	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 (mm/s)	Acceleration (G)							
	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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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					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			
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 (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	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 (mm/s)	Acceleration (G)							
	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							

High-output Setting Disabled

■ RCP6/RCP6S-WRA16C

Lead 20

Orientation	Horizontal
Speed (mm/s)	Acceleration (G)
	0.2
0	30
240	30
300	30
360	24
420	14
450	5

Lead 10

Orientation	Horizontal
Speed (mm/s)	Acceleration (G)
	0.2
0	60
150	60
200	45
240	36

Orientation	Vertical
Speed (mm/s)	Acceleration (G)
	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 (mm/s)	Acceleration (G)
	0.1
0	100
90	100
120	58
130	24

Orientation	Vertical
Speed (mm/s)	Acceleration (G)
	0.1
0	70
48	70
60	50
70	35
80	25
90	20
100	13

High-output Setting Enabled

RCP6 Series — WRA: Wide Radial Cylinder Type, Side-mounted Motor Specification

■ RCP6/RCP6S-WRA10R

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	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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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 (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	28	25	22	20	20	5	5	5
40	28	25	22	20	20	5	5	5
85	28	25	22	20	20	5	5	5
130	28	25	22	20	20	5	5	5
175	28	25	22	20	20	5	5	5
215	28	25	22	20	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 (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	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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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 (mm/s)	Acceleration (G)							
	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 (mm/s)	Acceleration (G)							
	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					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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					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			
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 (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	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 (mm/s)	Acceleration (G)							
	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							

High-output Setting Disabled

■ RCP6/RCP6S-WRA16R

Lead 20

Orientation	Horizontal
Speed (mm/s)	Acceleration (G)
	0.2
0	30
240	30
300	30
360	19
420	10.5

Lead 10

Orientation	Horizontal
Speed (mm/s)	Acceleration (G)
	0.2
0	60
150	60
200	45
240	18

Orientation	Vertical
Speed (mm/s)	Acceleration (G)
	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 (mm/s)	Acceleration (G)
	0.1
0	100
90	100
120	58

Orientation	Vertical
Speed (mm/s)	Acceleration (G)
	0.1
0	63
48	63
60	33
70	28
80	18
90	9
100	2

Tables of Payload by Speed/Acceleration

High-output Setting Enabled

RCP6 Series | RA: Rod Type, Motor Coupled Specification

■ RCP6/RCP6S-RA4C

Lead 16

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	6	6	6	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 (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	15	15	13	13	12	2.5	2.5	2.5
85	15	15	13	13	12	2.5	2.5	2.5
175	15	15	13	13	12	2.5	2.5	2.5
260	15	15	13	13	12	2.5	2.5	2.5
350	15	15	13	13	10	2.5	2.5	2.5
435	15	15	13	11	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 (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	28	25	22	20	20	5	5	5
40	28	25	22	20	20	5	5	5
85	28	25	22	20	20	5	5	5
130	28	25	22	20	20	5	5	5
175	28	25	22	20	20	5	5	5
215	28	25	22	20	20	5	5	5
260	28	25	22	20	18	5	5	5
305	28	22	20	18	15	5	5	4.5
350	28	20	15	13	11	5	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	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 (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	6	3	2		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
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 (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	20	20	18	15	12	3	3	3
200	20	20	18	15	12	3	3	3
400	20	20	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 (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		10	5	3	2		2	1
700		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	20	15	11	7	5	4
350	50	12	4	1		3	2	1
420	10							

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	22	18
140	80	50	30	20	15	14	12	10
175	50	15				5	2	
210	20							

High-output Setting Disabled

■ RCP6/RCP6S-RA8C

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	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 (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

High-output Setting Enabled

RCP6 Series — RA: Rod Type, Side-mounted Motor Specification

■ RCP6/RCP6S-RA4R

Lead 16

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
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 (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	12	12	10	10	8	2.5	2.5	2.5
85	12	12	10	10	8	2.5	2.5	2.5
175	12	12	10	10	6	2.5	2.5	2.5
260	12	12	10	10	5	2.5	2.5	2.5
350	12	12	10	8	5	2.5	2.5	2.5
435	12	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 (mm/s)	Acceleration (G)							
	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 (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	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 (mm/s)	Acceleration (G)							
	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 (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
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 (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	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 (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-RA7R

Lead 24

Orientation	Horizontal					Vertical		
Speed (mm/s)	Acceleration (G)							
	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	20	20	18	15	12	3	3	3
200	20	20	18	15	12	3	3	3
400	20	20	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 (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	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 (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	8	4	3
350	30	3				2	0.5	
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	12	8	3
175	40	5				4		

High-output Setting Disabled

■ RCP6/RCP6S-RA8R

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

Tables of Payload by Speed/Acceleration

High-output Setting Enabled

RCP6 Series — TA: Table Type (Single Block), Motor Coupled Specification

■ 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			
1,120								
1,260								

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	4			2
610			4	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			
1,120					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
1,080			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		

RCP6 Series — TA: Table Type (Double Block), Motor Coupled Specification

■ 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 Enabled

RCP6 Series — TA: Table Type (Single Block), Side-mounted Specification

■ 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			
1,120								
1,260								

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	4			2
610			4	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			
1,120					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
1,080			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		

RCP6 Series — TA: Table Type (Double Block), Side-mounted Specification

■ 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			
785								

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

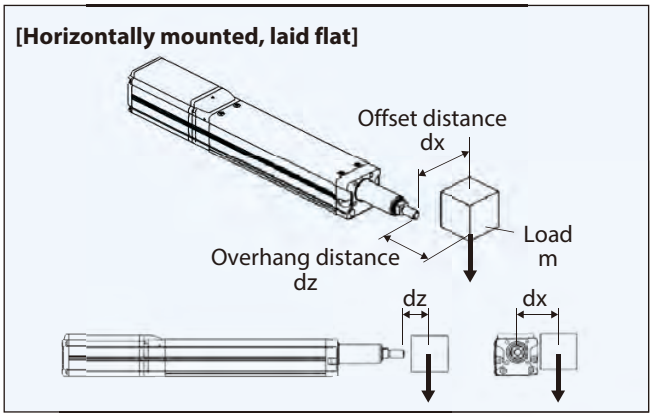
Orientation	Horizontal					Vertical		
Speed	Acceleration (G)							
(mm/s)	0.1	0.3	0.5	0.7	1	0.1	0.3	0.5
0	30	30	28	26	24	24	24	24
35	30	30	28	26	24	24	24	24
70	30	28	24	22	20	24	22	20
105	25	22	20	18	16	22	20	16
140	20	18	16	12	10	16	14	10
175	14	10	5			8	3	
210	6					3		

Selection Guideline for Allowable Load Mass

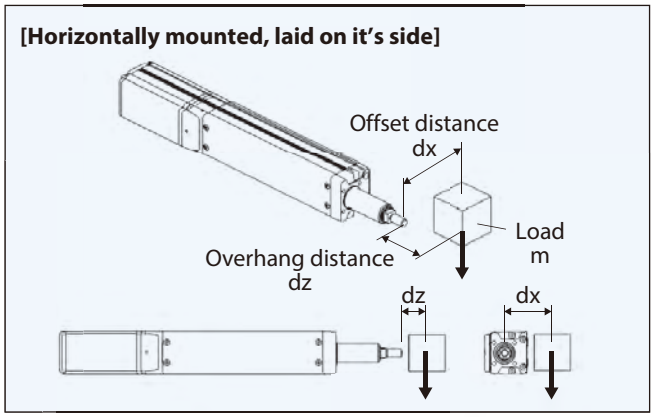
The radial cylinder has a built-in guide, so loads up to a certain level can be applied to the rod without using an external guide. Refer to the graphs below for the allowable load mass. If the allowable load will be exceeded under the required operating conditions, add an external guide.

■ Allowable Load Mass for Horizontally Mounted RCP6-RRA Series

[Horizontally mounted, laid flat]

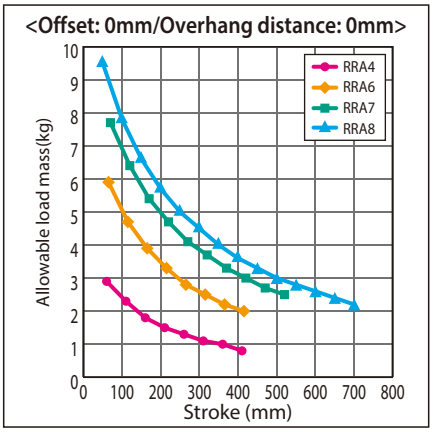


[Horizontally mounted, laid on it's side]

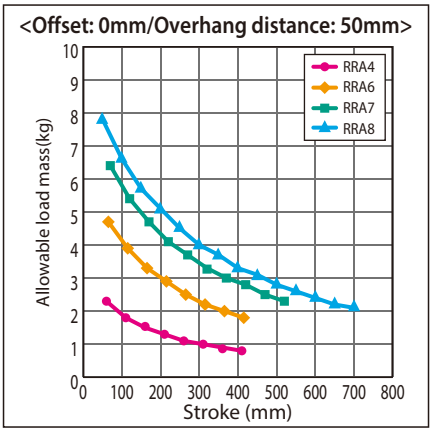


■ RCP6-RRA4/RRA6/RRA7/RRA8

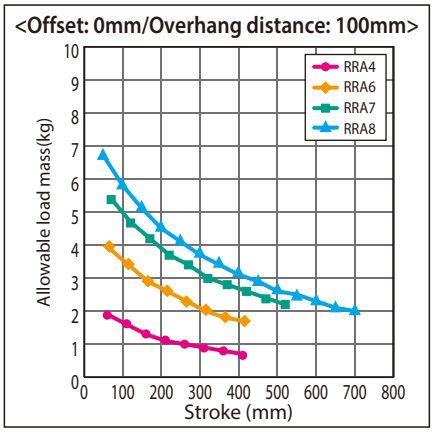
<Offset: 0mm/Overhang distance: 0mm>



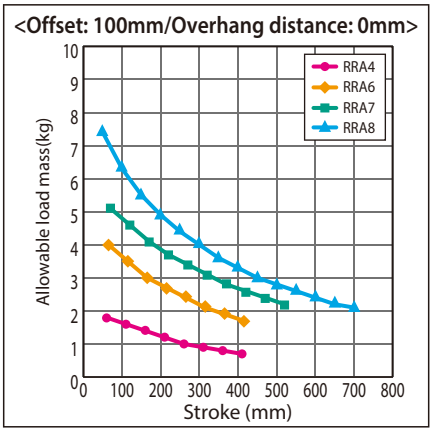
<Offset: 0mm/Overhang distance: 50mm>



<Offset: 0mm/Overhang distance: 100mm>



<Offset: 100mm/Overhang distance: 0mm>



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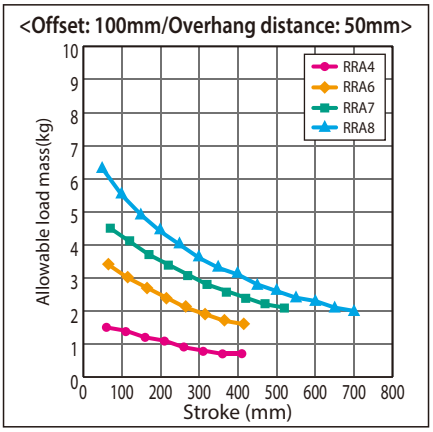

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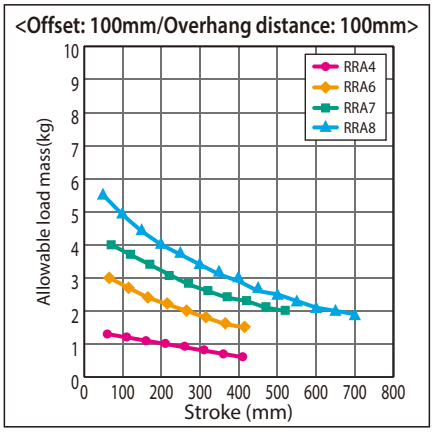
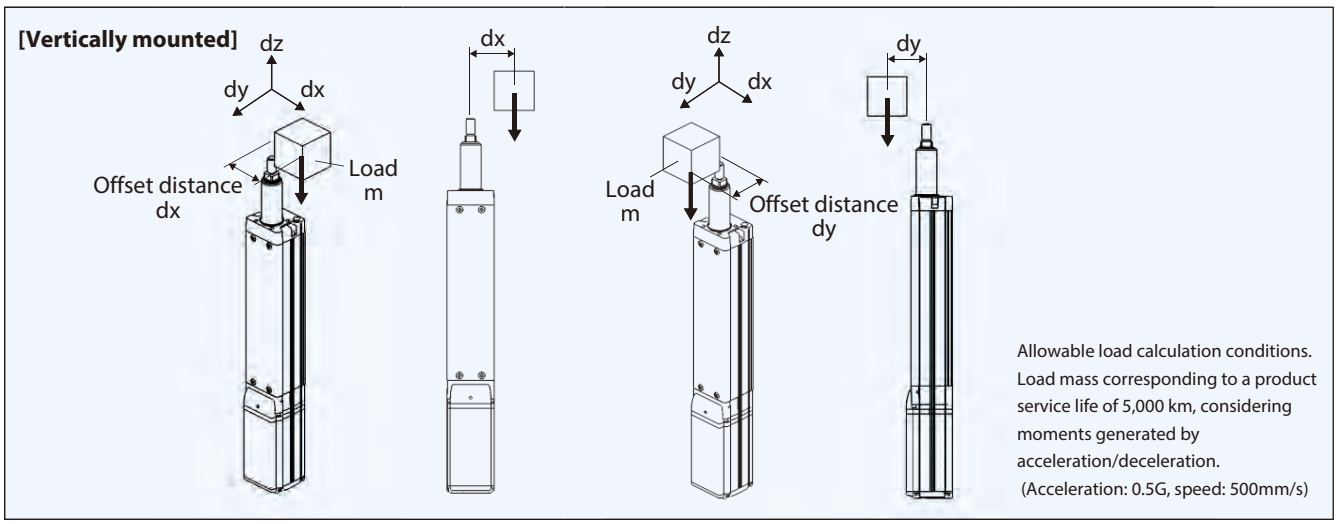


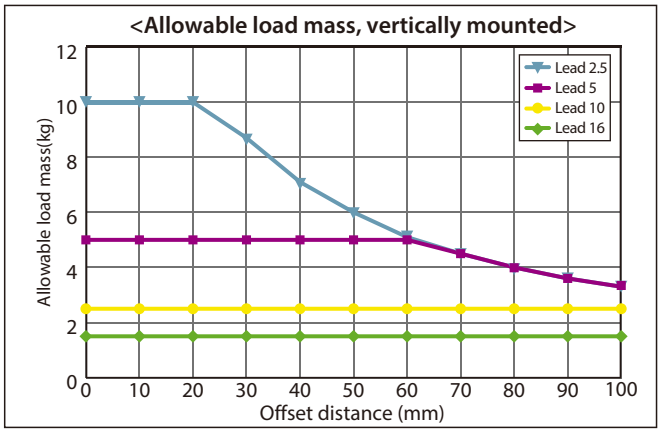
Allowable load calculation conditions.

Load mass corresponding to a product service life of 5,000 km, considering moments generated by acceleration/deceleration. (Acceleration: 1G, speed 500mm/s)

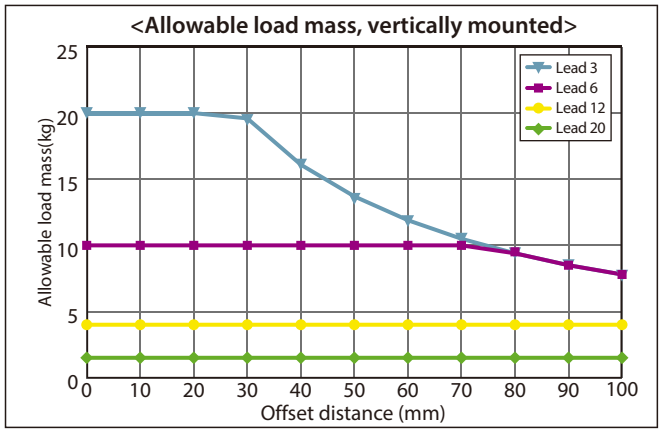
■ Allowable Load Mass for Vertically Mounted RCP6-RRA Series



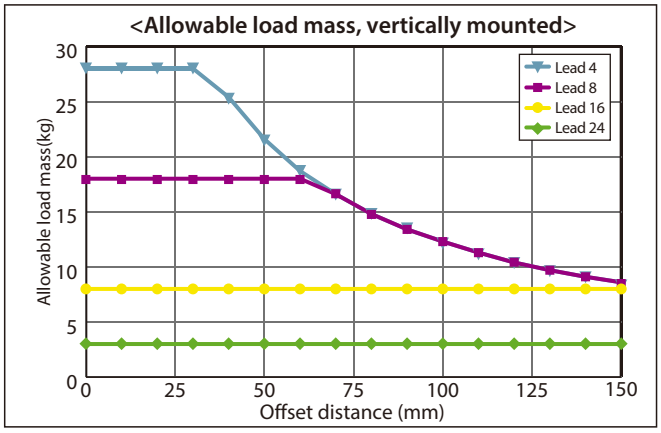
■ RCP6-RRA4



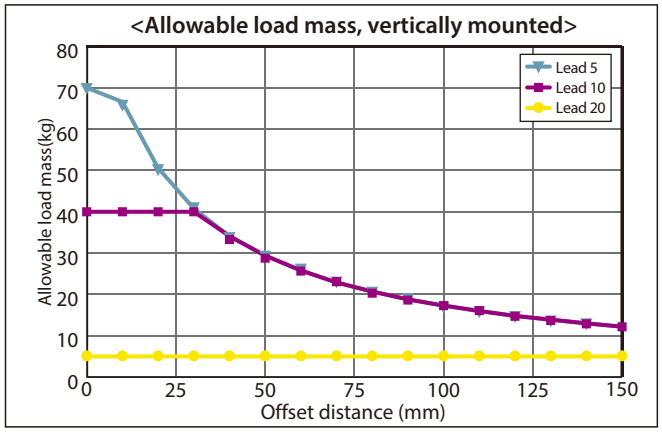
■ RCP6-RRA6



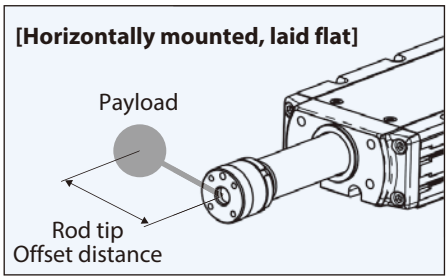
■ RCP6-RRA7

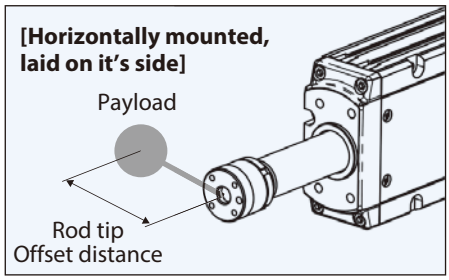


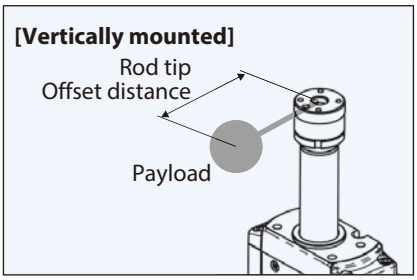
■ RCP6-RRA8



■ Allowable Load Mass for RCP6-WRA Series

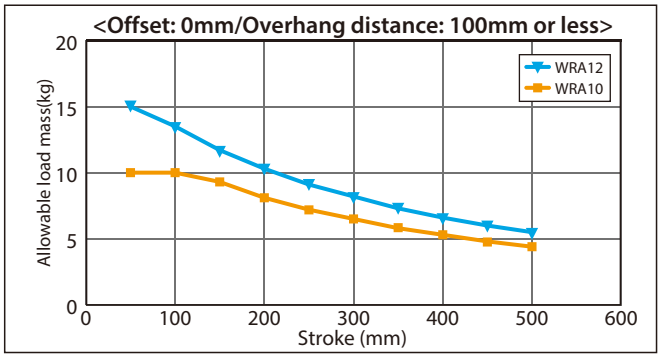


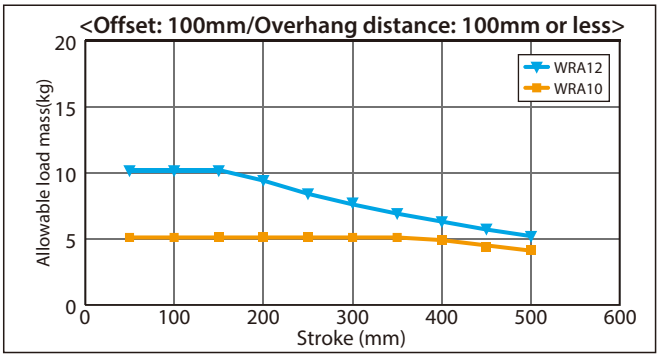




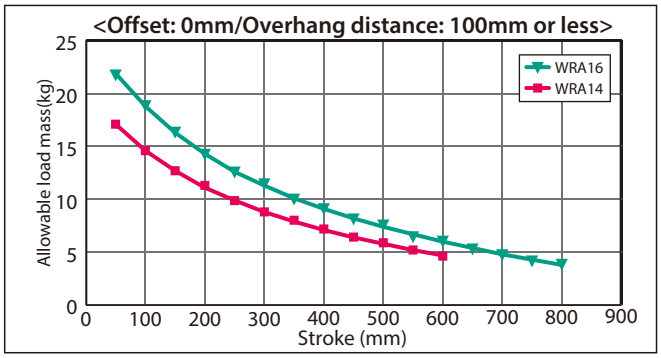
Selection Guideline for Allowable Load Mass

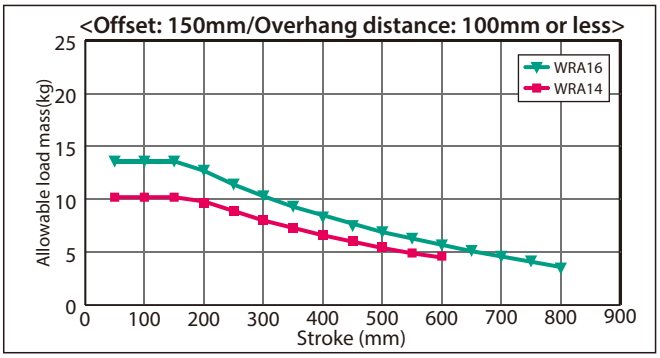
■ **RCP6-WRA10/WRA12**





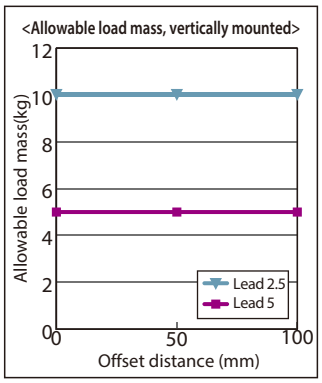
■ **RCP6-WRA14/WRA16**



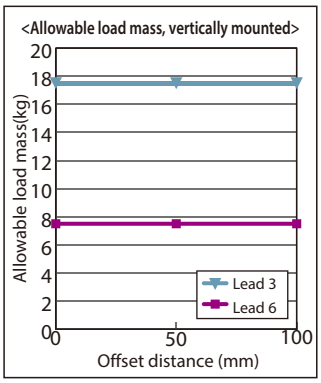


Allowable load calculation conditions: Load mass corresponding to a product service life of 5,000km, considering moments generated by acceleration/deceleration.
(Acceleration: 1G, speed: 500mm/s. *For WRA16 type, acceleration: 0.2G, speed: 500mm/s)

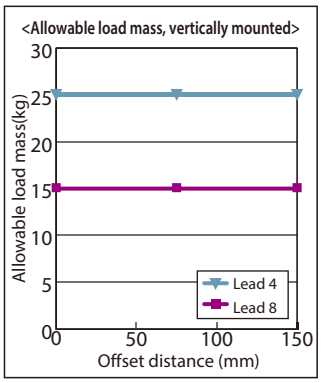
■ **RCP6-WRA10**



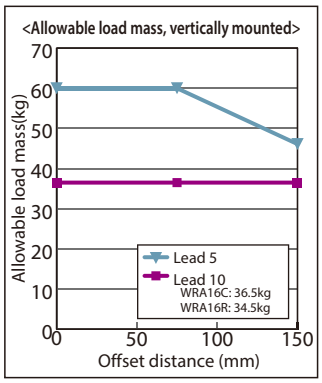
■ **RCP6-WRA12**



■ **RCP6-WRA14**

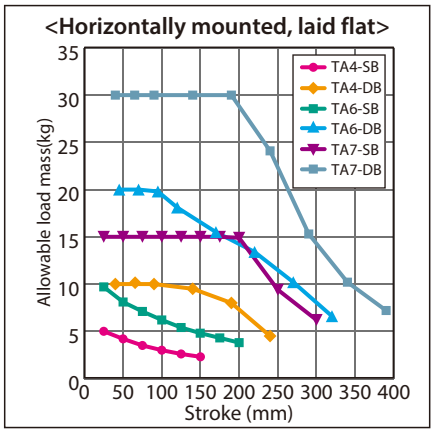


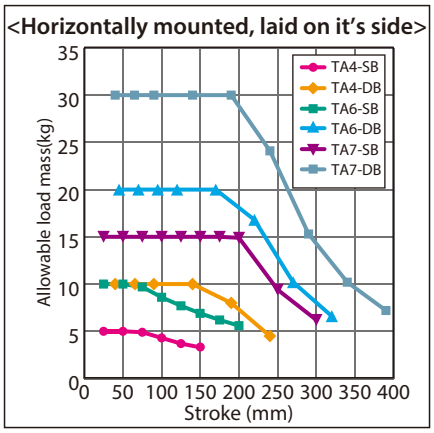
■ **RCP6-WRA16**

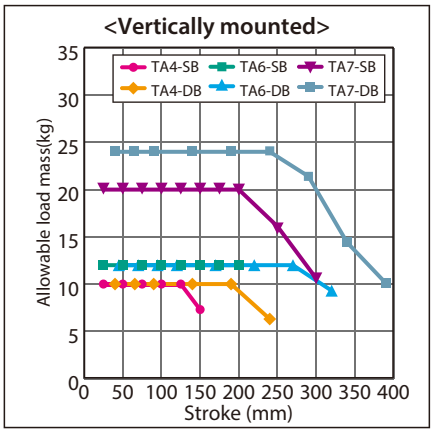


■ Allowable Load Mass for RCP6-TA Series (Table Type)

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 5,000km, considering moments generated by acceleration/deceleration.
(Acceleration: 0.5G, speed: 500mm/s. *For WRA16 type, acceleration: 0.2G, speed: 500mm/s)

Duty Cycle

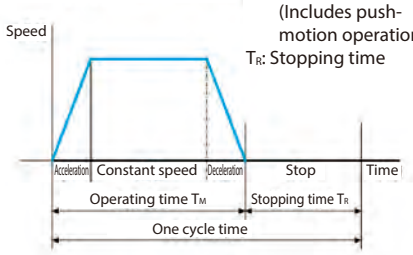
Duty cycle is the percentage of the actuator's active operation time in each cycle.
Please note that the way to calculate duty cycle for the stepper motor and AC servo motor differs.

<Stepper Motor>
For stepper motor type, an actuator can be operated at 100% of its duty cycle.
RCP6S is the model that requires the duty cycle to be limited.

[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 cycle
T_M: Operation time (Includes push-motion operation)
T_R: Stopping time

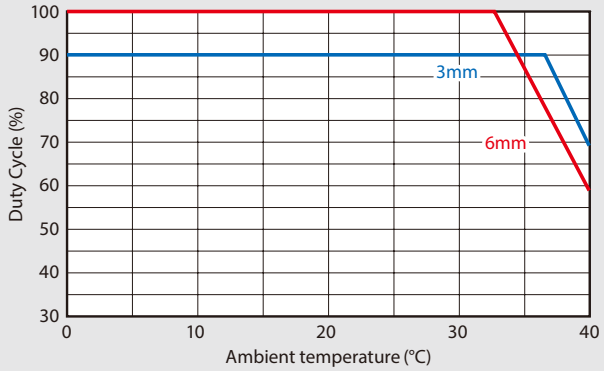


For RCP6S Series

Duty Cycle by Models

RCP6S Series	Duty Cycle
☐35 stepper motor type SA4/RRA4/RA4/TA4/WSA10/WRA10 (Common to coupled motor/side-mounted motor)	100%
☐42 stepper motor type SA6/RRA6/RA6/TA6/WSA12/WRA12 (Common to coupled motor/side-mounted motor)	Please see the graph below.
☐56 stepper motor type SA7/RRA7/RA7/TA7/WSA14/WRA14 (Common to coupled motor/side-mounted motor)	Please see the graph below.
☐56 high-thrust stepper motor type SA8/WSA16 (Common to coupled motor/side-mounted motor)	100%
☐60 high-thrust stepper motor type RRA8/RA8/WRA16 (Common to coupled motor/side-mounted motor)	70%

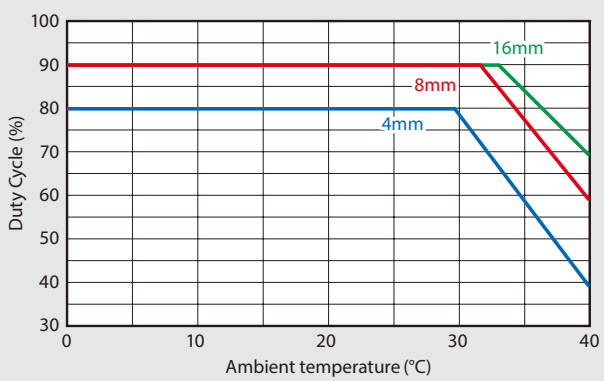
■ Correlation diagram of ambient temperature and duty cycle for ☐42 stepper motor type.



☐42 stepper motor type
SA6/RRA6/RA6/TA6/WSA12/WRA12
(Common to coupled motor/side-mounted motor)

Lead	3mm	6mm	12mm/20mm
Duty Cycle Limit	90% at 37°C or below 70% or less at 40°C	100% at 33°C or below 60% or less at 40°C	100%

■ Correlation diagram of ambient temperature and duty cycle for ☐56 stepper motor type (Excludes the high-thrust motor)



☐56 stepper 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 30°C or below 40% or less at 40°C	90% at 32°C or below 60% or less at 40°C	90% at 33°C or below 70% or less at 40°C	100%

PCON-CB/CFB

**Position Controller for RCP6/RCP5/
RCP4 (PowerCON Applicable) /RCP3/RCP2**

Features

1 High-resolution battery-less absolute encoder compatible

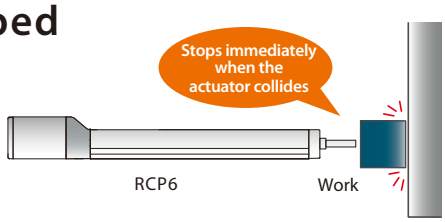
The RCP6 equipped with a high-resolution battery-less absolute encoder is supported. Since no battery is needed to retain position data, less space is required in the control panel, which in turn leads to lower cost of your equipment. The resolution is increased from 800 pulses /rev to 8,192 pulses/rev.

2 PowerCON Equipped

PowerCON (high-output driver), which can enable the stepper motor to perform at its maximum capacity, is now installed on a small controller. By using PowerCON, the output of the stepper 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.



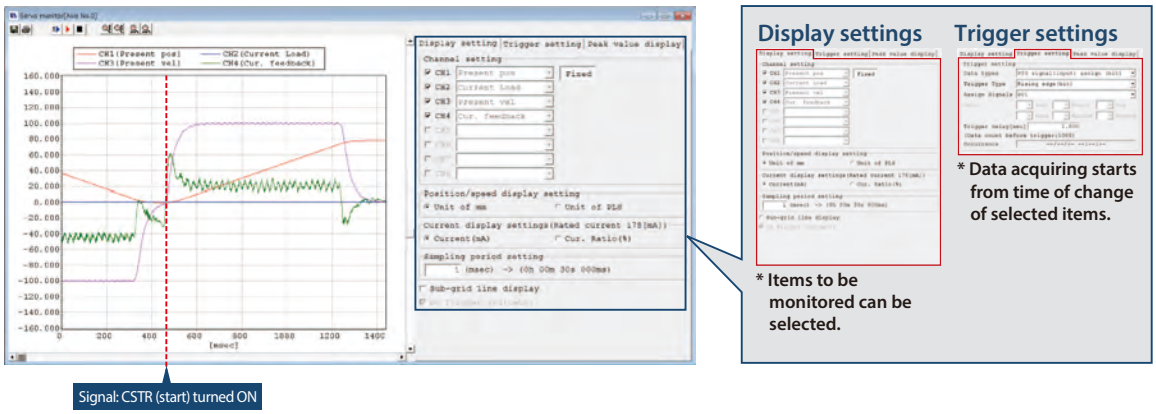
4 Enhanced Monitor Functions

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	MECHATROLINK I,II	EtherCAT	EtherNet/IP	PROFINET IO
I/O type model number			NP/PN	PLN/PLP	DV	CC	PR	CN	ML	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

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☐ Stepper motor
20SP	20☐ High-thrust stepper motor
28P	28☐ Stepper motor
28SP	28☐ High-thrust stepper motor
35P	35☐ Stepper motor
42P	42☐ Stepper motor
42SP	42☐ High-thrust stepper motor
56P	56☐ Stepper motor
56SP	56☐ High-thrust stepper motor
60P	60☐ High-thrust stepper motor
86P	86☐ High-thrust stepper 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
ML	MECHATROLINK-I/II
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.

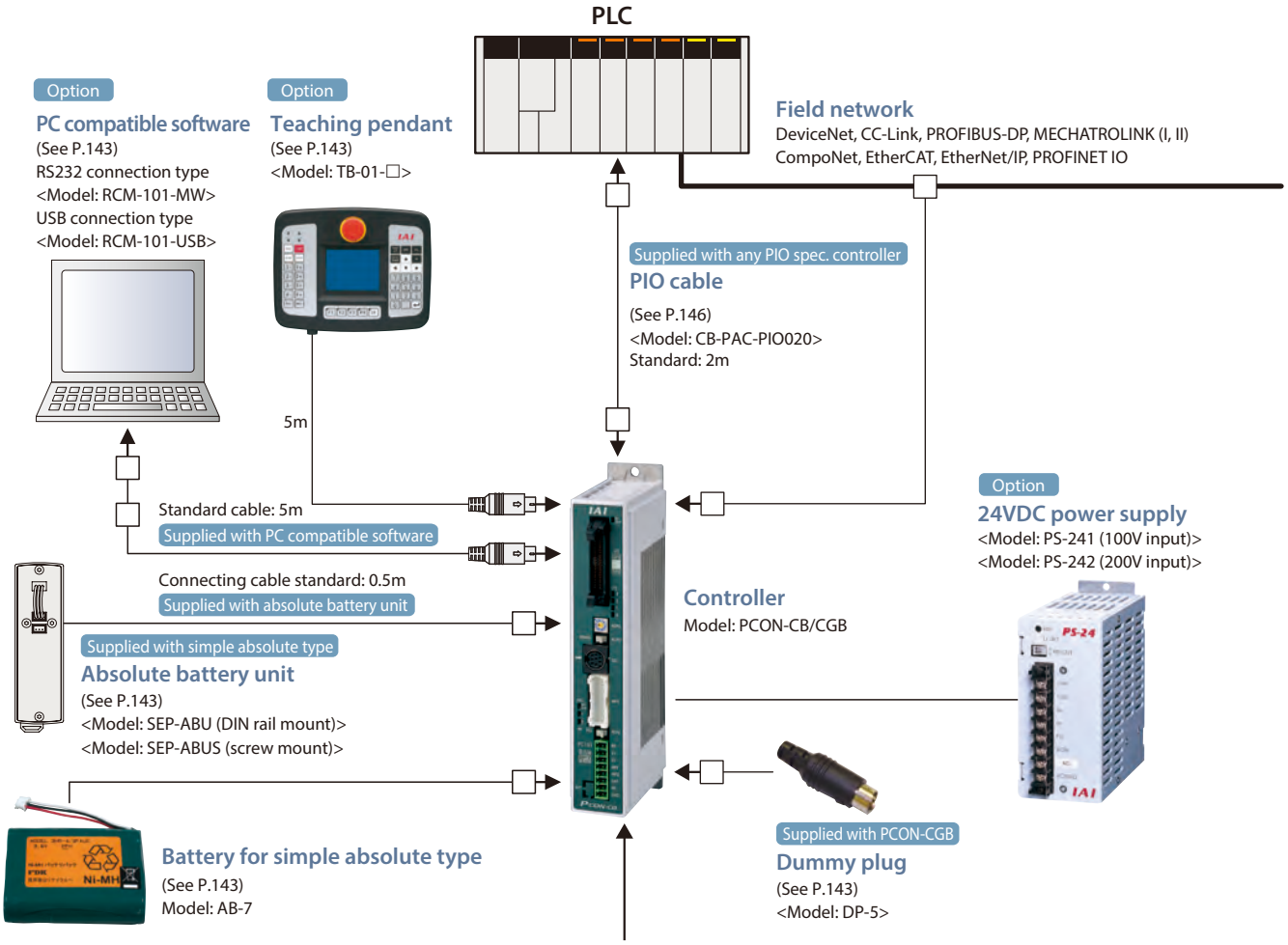
Controller Mounting Specification

(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.

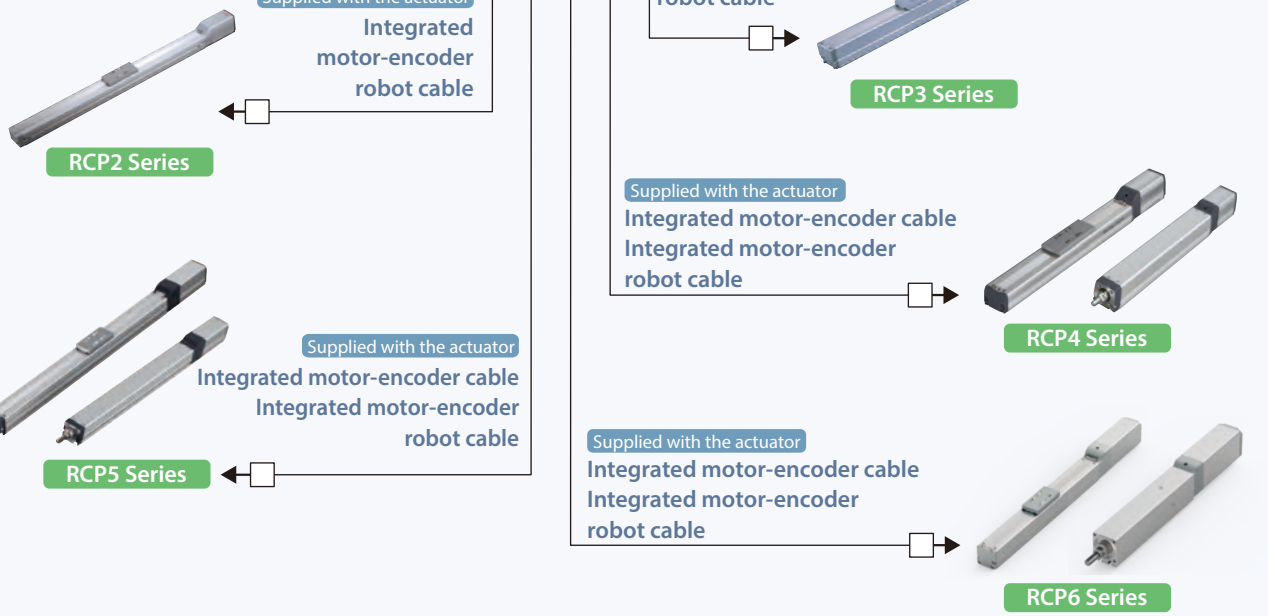
System Configuration

■ PowerCON150 <PCON-CB/CGB>



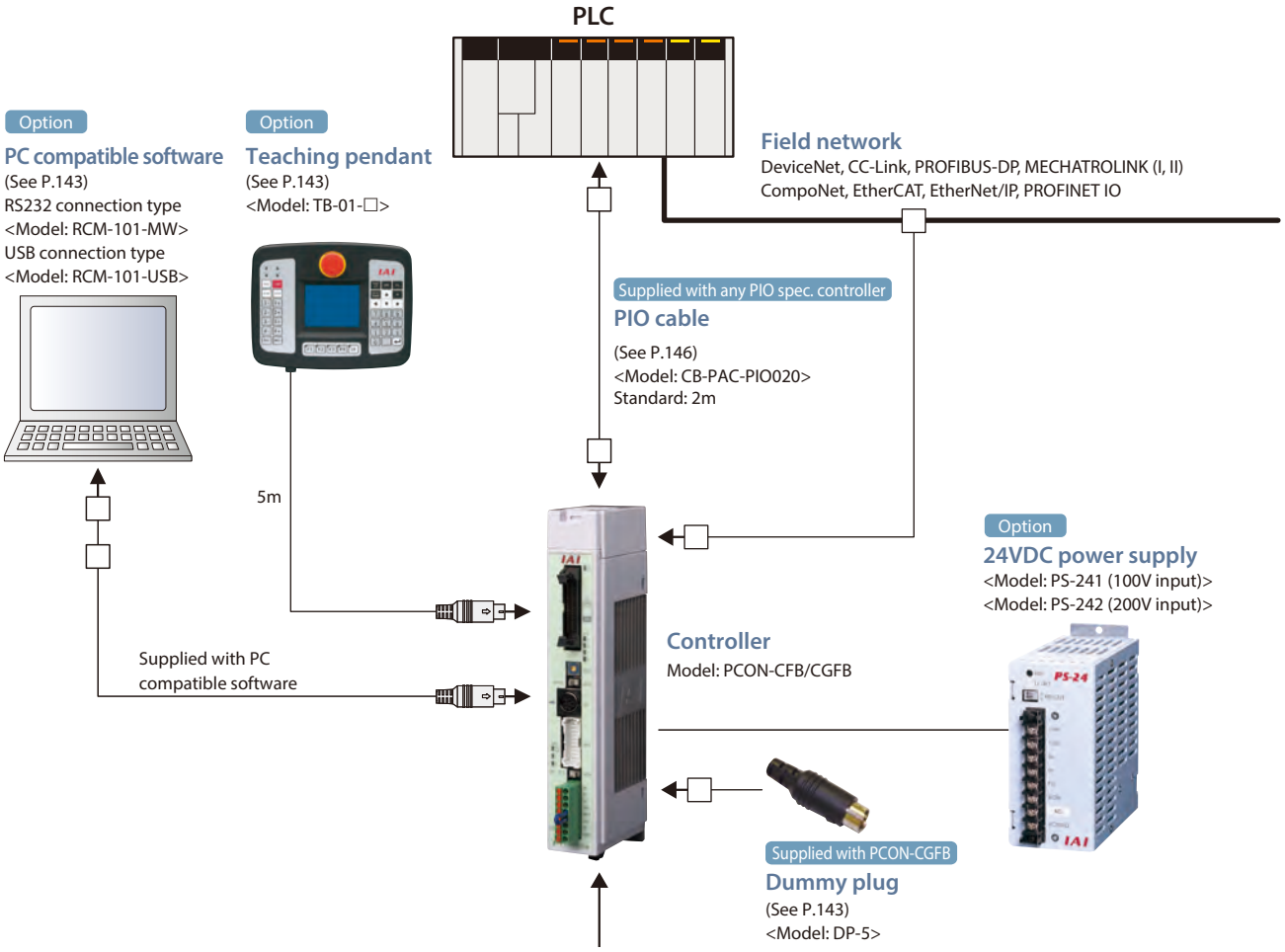
< Connectable actuators>

*Motor/encoder cable type varies depending on the actuator type. When ordering a replacement cable, please refer to P. 144.

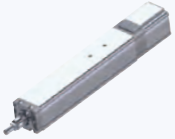


System Configuration

■ 56SP/60P/86P Motor Compatible <PCON-CFB/CGFB>



< Connectable actuators>

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
 ROBO Cylinder High-thrust type RCP2-RA8C/RA8R	 ROBO Cylinder High-thrust type RCP4W-RA7C Motor type: 56SP	 ROBO Cylinder High-thrust type RCP5-RA8C/RA8R	 ROBO Cylinder RCP6-SA8C/SA8R/WSA16C/WSA16R
 ROBO Cylinder High-thrust type RCP2-RA10C			
 ROBO Cylinder High-speed type RCP2(CR)- HS8C/HS8R	 ROBO Cylinder High-thrust type RCP4-RA6C Motor type: 56SP	 ROBO Cylinder High-thrust type RCP5-RA10C/RA10R	 ROBO Cylinder RCP6-RA8C/RA8R/WRA16C/WRA16R
 ROBO Cylinder Splash-proof type RCP2W-SA16C			

PIO I/O Interface

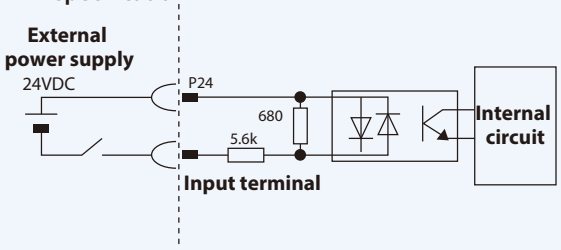
■ Input part External input specification

Item	Specification
Input voltage	24VDC ±10%
Input current	5mA, 1 circuit
ON/OFF voltage	ON voltage, 18VDC min. OFF voltage, 6VDC max.

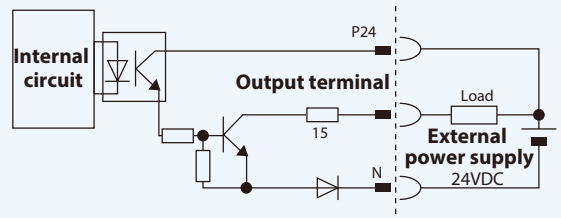
■ Output part External output specification

Item	Specification
Load voltage	24VDC
Maximum load current	50mA, 1 circuit
Leak current	2mA max. /point

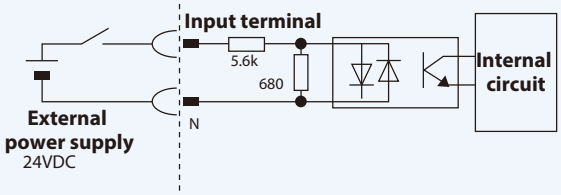
NPN specification



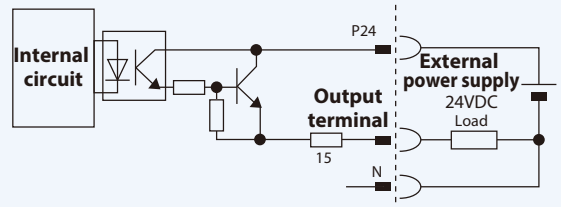
NPN specification



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						

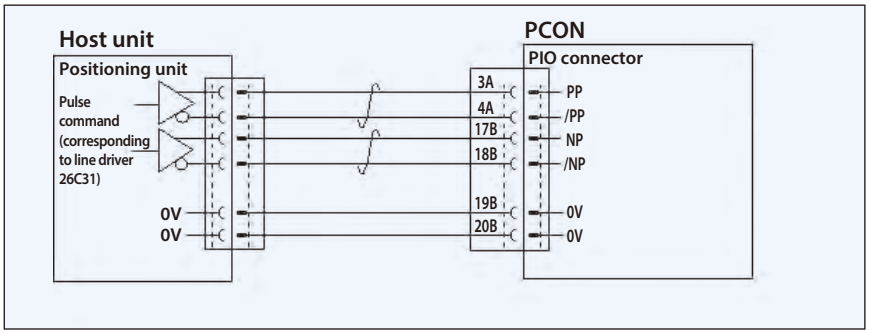
(Note) In the table above, asterisk * symbol accompanying each code indicates a negative logic signal. PM1~PM8 are alarm binary code output signals that are used when an alarm generates.
(Note 1) In all PIO patterns other than 3, this signal can be switched with PZONE by setting Parameter No. 149 accordingly.
(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.

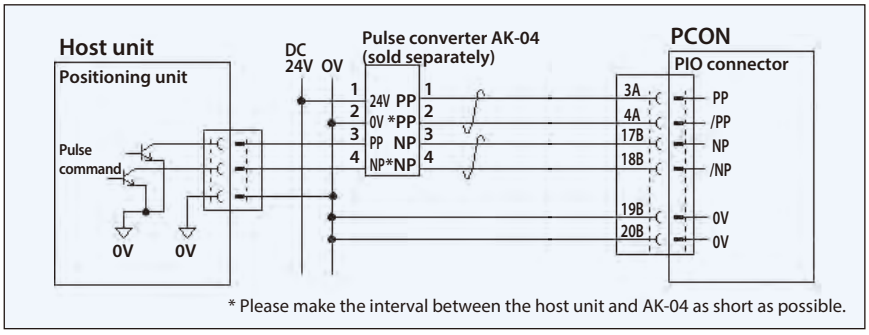
Pulse-train Control Circuit

■ 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	MECHATROLINK I, II	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	× (Note 1)	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

* No required data size is set for MECHATROLINK I & II.

(Note 1) Please note that the MECHATROLINK specification does not support the full direct value mode.

■ List of Functions by Operation Mode

	Remote I/O mode	Position/simple direct value mode	Half direct value mode	Full direct value mode (Note 1)	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	○	○	×	×	○

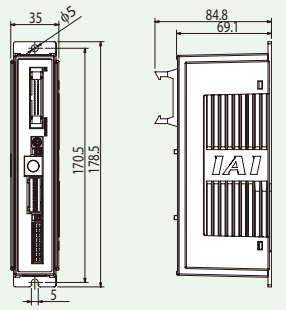
* ○ indicates that the operation is supported, and X indicates that it is not supported.

(Note 1) Please note that the MECHATROLINK specification does not support the full direct value mode.

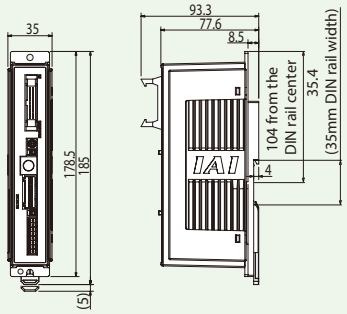
External Dimensions

<PCON-CB/CGB>

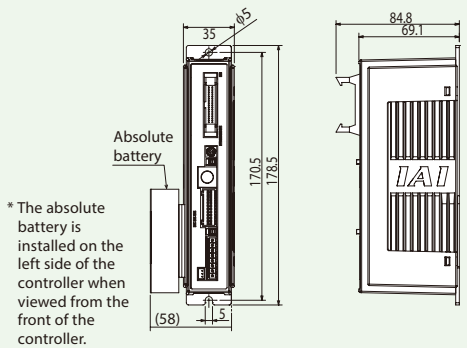
Battery-less Absolute/Incremental Specifications | Screw Mounting Spec.



Battery-less Absolute/Incremental Specifications | DIN Rail Mounting Spec.

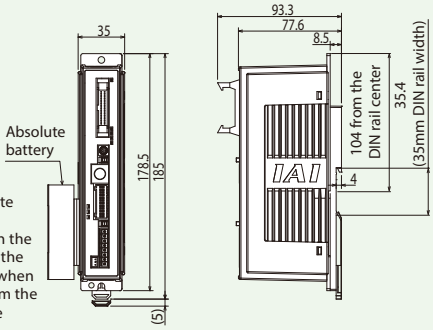


Simple Absolute Specification w/ Absolute Battery | Screw Mounting Spec.



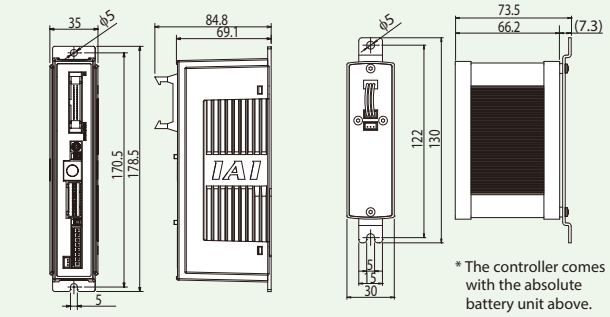
* The absolute battery is installed on the left side of the controller when viewed from the front of the controller.

Simple Absolute Specification w/ Absolute Battery | DIN Rail Mounting Spec.



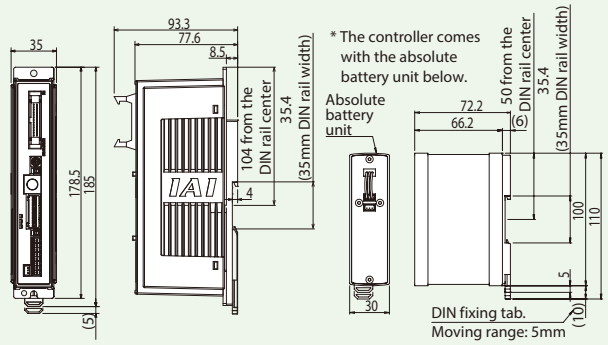
* The absolute battery is installed on the left side of the controller when viewed from the front of the controller.

Simple Absolute Specification w/ Absolute Battery Unit | Screw Mounting Spec.



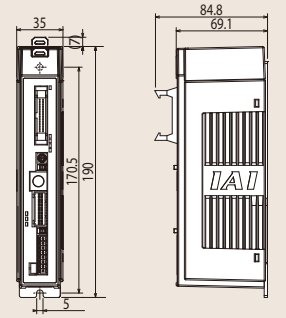
* The controller comes with the absolute battery unit above.

Simple Absolute Specification w/ Absolute Battery Unit | DIN Rail Mounting Spec.

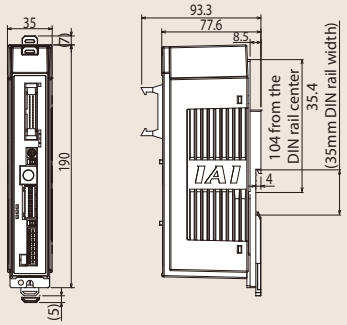


<PCON-CFB/CGFB>

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 8,192 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, MECHATROLINK-I/II, 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): 1~4,096	
	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.

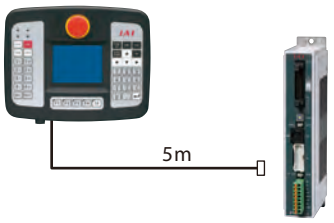
Options

Touch panel teaching pendant

Features A teaching device equipped with functions such as position teaching, trial operation, and monitoring.

Model **TB-01-C**

Configuration



Specifications

Rated voltage	24VDC
Power consumption	3.6W or less (150mA or less)
Ambient operating temperature	0~50°C
Ambient operating humidity	20~ 85% RH (Non-condensing)
Environmental resistance	IP40 (initial state)
Weight	507g (TB-01-N unit only)

PC compatible software (Windows only)

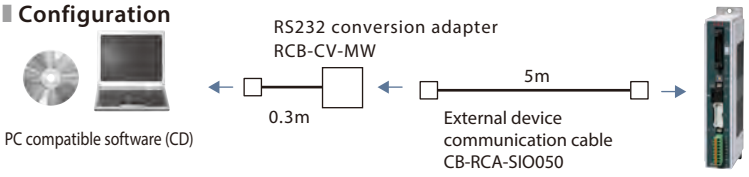
Features The start-up support software which comes equipped with functions such as position teaching, trial operation, and monitoring.
A complete range of functions needed for making adjustments contributes to a reduced start-up time.

Supported Windows versions:
XP SP2 or later / Vista / 7 / 8

Model **RCM-101-MW** (with an external device communication cable + RS232 conversion unit)

Please contact IAI for the current supported versions.

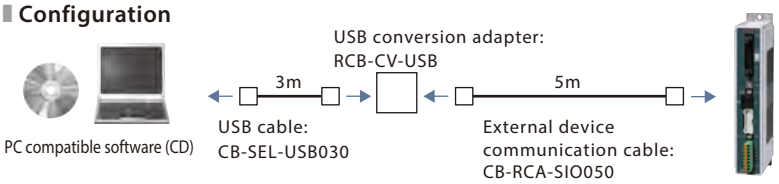
Configuration



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

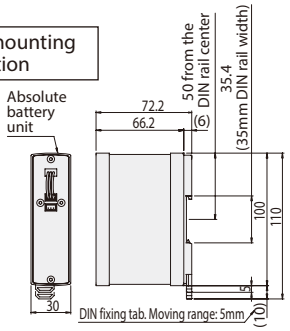
Overview A battery unit, supplied as an accessory for the simple absolute specification, which serves to back up the current position of the controller.

Model **SEP-ABU** (DIN rail mounting specification)
SEP-ABUS (Screw mounting specification)

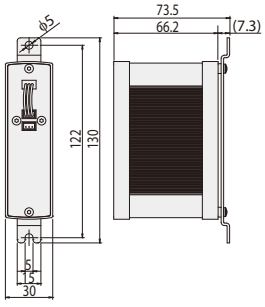
Specification

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.

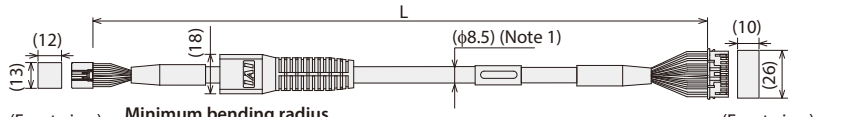
■Table of Applicable Cables

	Model Number		Integrated Motor-encoder Cable	Integrated Motor-encoder Robot Cable
①	RCP6/RCP5/RCP5CR/RCP5W (Models other than ③)		CB-CAN-MPA□□□	CB-CAN-MPA□□□-RB
②	RCP4	SA3/RA3/GR		
③	RCP6 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

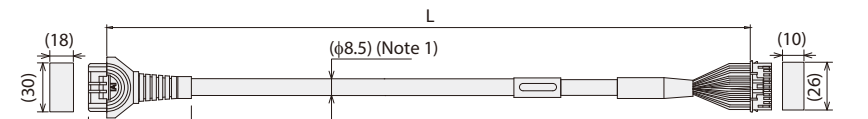
* The robot cable is designed for flex-resistance: Please use the robot cable if the cable has to be installed through the cable track.

(Note 1) If the cable is 5m or longer, ϕ9.1 cable diameter applies for a non-robot cable and ϕ10 for a robot cable.

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, ϕ9.1 cable diameter applies for a non-robot cable and ϕ10 for a robot cable.

Actuator side
1-1827863-1
(AMP)

Controller side
PADP-24V-1-S
(J.S.T.MFG.CO.,LTD.)

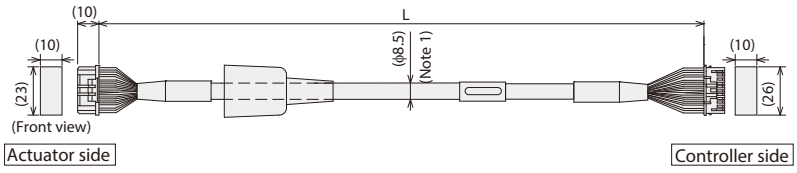
Pin No	Signal name	Pin No	Signal name
A1	ϕA	1	ϕA
B1	VMM	2	VMM
A2	ϕ A	5	ϕ A
B2	ϕB	3	ϕB
A3	VMM	4	VMM
B3	ϕ B	6	ϕ B
A4	LS+	7	LS+
B4	LS-	8	LS-
A6	SA[mABS]	11	SA[mABS]
B6	SB[mABS]	12	SB[mABS]
A7	A+	13	A+
B7	A-	14	A-
A8	B+	15	B+
B8	B-	16	B-
A5	BK+	9	BK+
B5	BK-	10	BK-
A9	LS_GND	20	LS_GND
B9	VPS	18	VPS
A10	VCC	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.

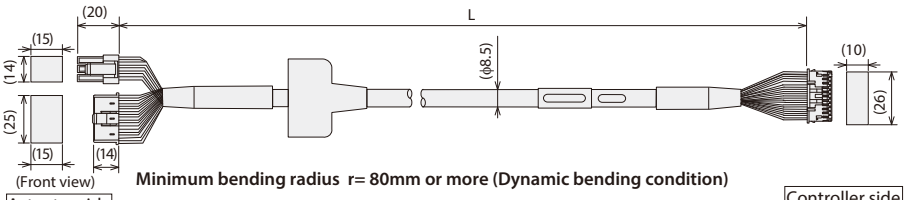
(Note 1) If the cable is 5m or longer, ϕ9.1 cable diameter applies for a non-robot cable and ϕ10 for a robot cable.

Actuator side 1-1827863-1 (AMP)			Controller side PADP-24V-1-S (J.S.T.MFG.CO.,LTD.)		
Pin No	Signal name	Color	Pin No	Signal name	Color
A1	ϕA/U	Blue (Black)	1	ϕA/U	Blue (Black)
B1	VMM/V	Orange (White)	2	VMM/V	Orange (White)
A2	ϕ A/W	Green (Brown)	5	ϕ A/W	Green (Brown)
B2	ϕB/-	Brown (Green)	3	ϕB/-	Brown (Green)
A3	VMM/-	Gray (Yellow)	4	VMM/-	Gray (Yellow)
B3	ϕ B/-	Red (Red)	6	ϕ B/-	Red (Red)
A4	LS+/BK+	Black (Orange)	7	LS+/BK+	Black (Orange)
B4	LS-/BK-	Yellow (Gray)	8	LS-/BK-	Yellow (Gray)
A6	-/A+	Blue (White)	11	-/A+	Blue (White)
B6	-/A-	Orange (Yellow)	12	-/A-	Orange (Yellow)
A7	A+/B+	Green (Red)	13	A+/B+	Green (Red)
B7	A-/B-	Brown (Green)	14	A-/B-	Brown (Green)
A8	B+/Z+	Gray (Black)	15	B+/Z+	Gray (Black)
B8	B-/Z-	Red (Brown)	16	B-/Z-	Red (Brown)
A5	BK+/LS+	Blue (Black)	9	BK+/LS+	Blue (Black)
B5	BK-/LS-	Orange (Brown)	10	BK-/LS-	Orange (Brown)
A9	LS_GND	Green (Green)	20	LS_GND	Green (Green)
B9	VPS	Brown (Red)	18	VPS	Brown (Red)
A10	VCC	Gray (White)	17	VCC	Gray (White)
B10	GND	Red (Yellow)	19	GND	Red (Yellow)
A11	-	-	21	-	-
B11	FG	Black (-)	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)

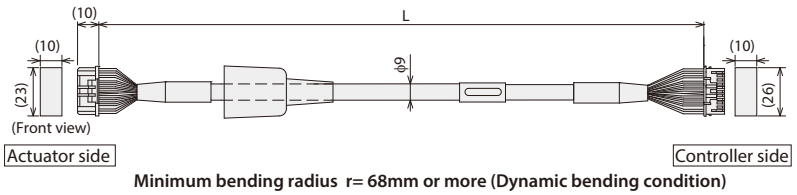
* The robot cable is designed for flex-resistance: Please use the robot cable if the cable has to be installed through the cable track.

(Note 1) If the cable is 3m or longer, ϕ9.1 cable diameter applies for a non-robot cable and ϕ10 for a robot cable.

Actuator side SLP-06V (NICHIATSU)		Controller side PADP-24V-1-S (J.S.T.MFG.CO.,LTD.)	
Pin No	Signal name	Pin No	Signal name
1	ϕA	1	ϕA
2	VMM	2	VMM
4	ϕB	3	ϕB
5	VMM	4	VMM
3	ϕ/A	5	ϕ/A
6	ϕ/B	6	ϕ/B
		11	NC
5	NC	12	NC
6	NC	7	LS+
13	LS+	8	LS-
14	LS-	13	A+
1	A+	14	A-
2	A-	15	B+
3	B+	16	B-
4	B-	9	BK+
16	BK+	10	BK-
17	BK-	21	VCC
12	VCC	19	GND
9	GND	18	VPS
11	VPS	20	NC
10	NC	24	FG
18	FG	17	NC
15	NC	22	NC
7	NC	23	NC
8	NC		

Model Number CB-CFA2-MPA□□□/ CB-CFA2-MPA□□□-RB

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



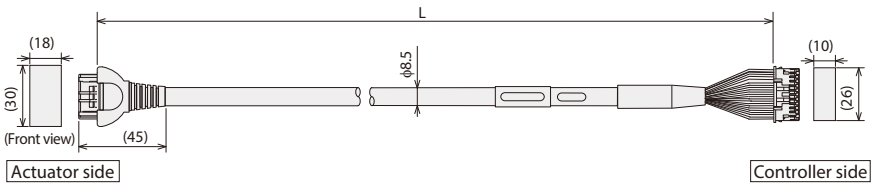
Minimum bending radius r= 68mm or more (Dynamic bending condition)

* 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)		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	-	11	-
B6	-	12	-
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	17	VCC
B10	GND	19	GND
A11	-	21	-
B11	FG	22	—
		23	—
		24	FG

Model Number CB-APSEP-MPA□□□

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



Minimum bending radius r= 68mm or more (Dynamic bending condition)

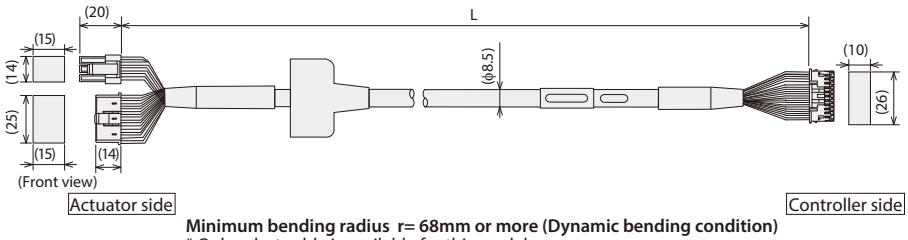
* Only robot cable is available for this model.

Actuator side Terminal number	[PCON] (ACON)	Controller side Terminal number
A1	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) [GND/LS] (GND/LS)	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

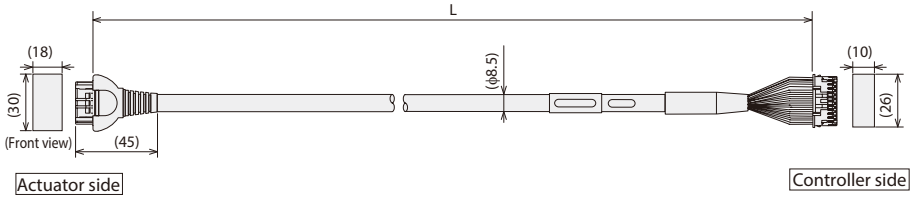


Minimum bending radius r= 68mm or more (Dynamic bending condition)
* Only robot cable is available for this model.

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

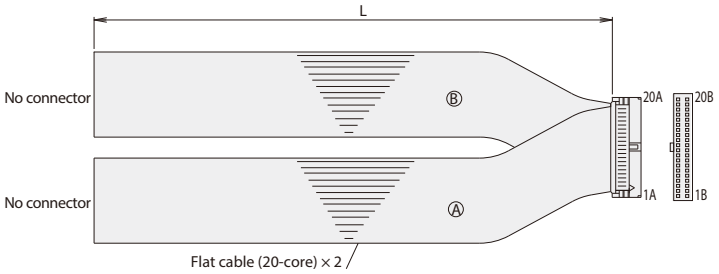


Minimum bending radius r= 68mm or more (Dynamic bending condition)
* Only robot cable is available for this model.

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

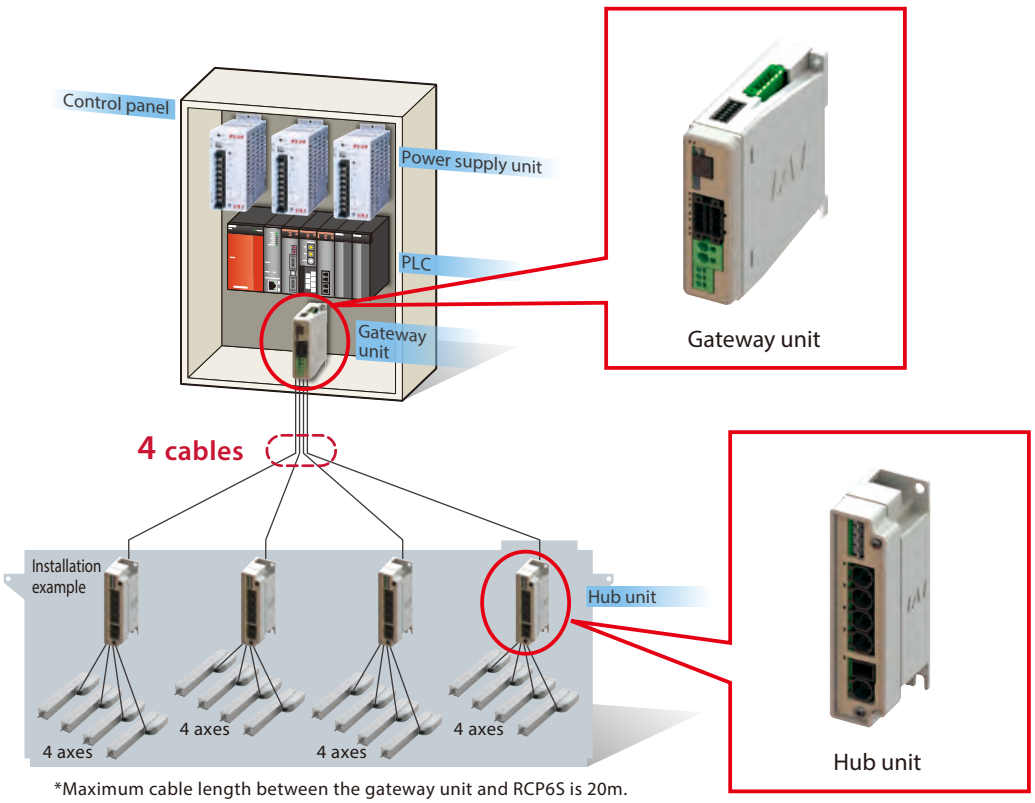
Built-in controller for RCP6S

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. 149 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. 149
○ Hub unit:	This unit can expand the number of axes connected to the gateway unit.	See P. 152
○ PLC connection unit:	This unit is used to connect RCP6S directly to the PLC using Modbus serial communication.	See P. 153

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	3.2A max.
		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
Actuator cable length			20m max.
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 (5) below and follow (6).

(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) Consumption current when excited phase detected: The maximum current value of the total motor consumption current when servos are turned on at the same time ····· ④

(4) Inrush Current: 8.3A (Motor type 28P, 35P, 42P, 56P) 10A (Motor type 56SP, 60P) ·····⑤

(5) Current Consumption of Brake Release: Number of actuators with brake × 0.7A ·····⑥

* When servo is on, it should be 0.5sec or less, after that retaining of released status should be 0.1A / axis.

(6) Selection of Power Supply:

Usually, the rated current is to be approximately 1.2 times higher than the total of Control Power ② + ③ + ⑥ above considering approximately 20% of margin to the load current.

However, although it is for a short time, current of ④ and ⑤ 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 and ⑤ 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

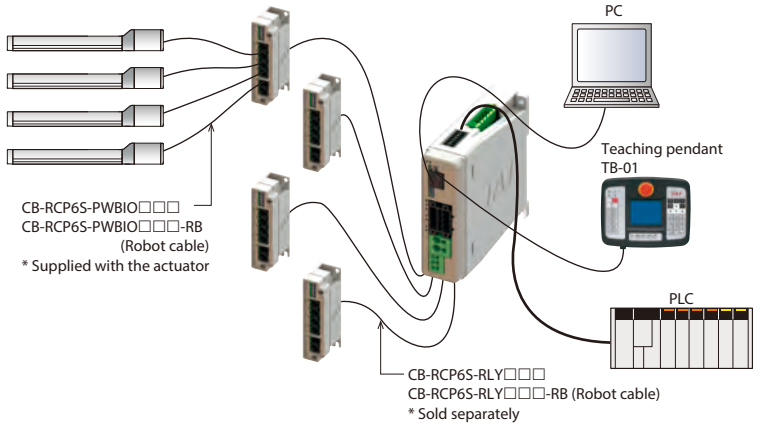
CC	CC-Link connection specification
DV	DeviceNet connection specification
PR	PROFIBUS-DP connection specification
EC	EtherCAT connection specification
EP	EtherNet/IP connection specification
PRT	PROFINET IO connection specification

Available Models

Models
CC-Link specification
DeviceNet specification
PROFIBUS 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

*For safety category compliant specification, DP-5 will be included.

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. 152 for the details.

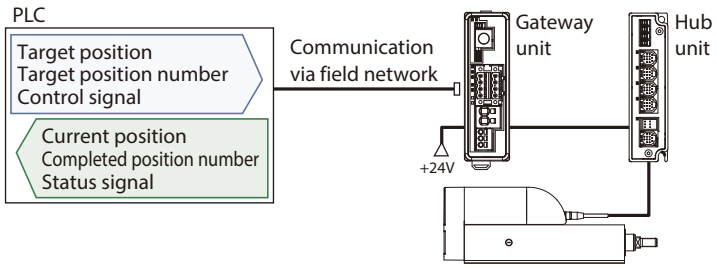
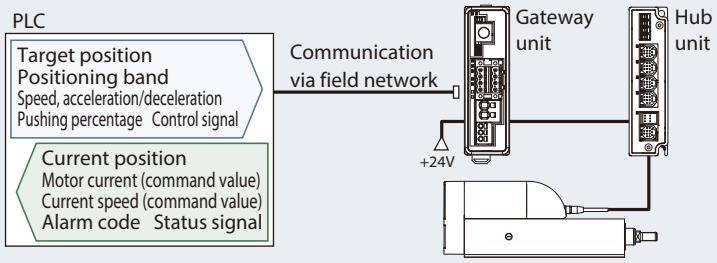
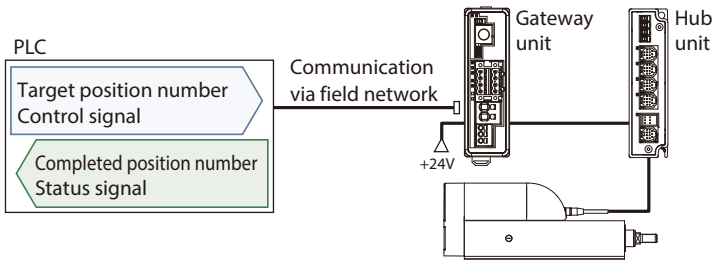
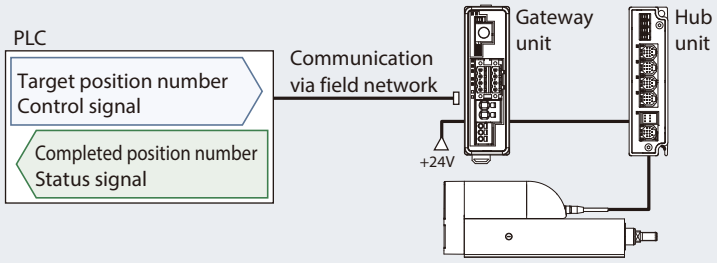
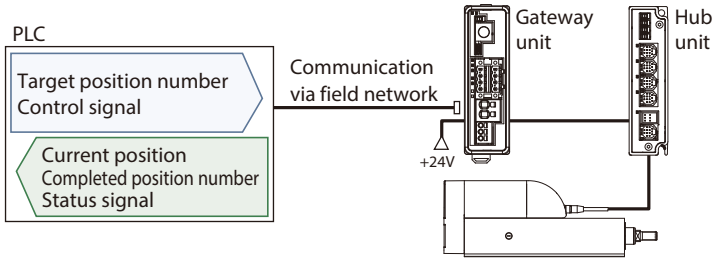
The Number of Connectable Axes:

Maximum connectable axes for RCP6GW 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	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.

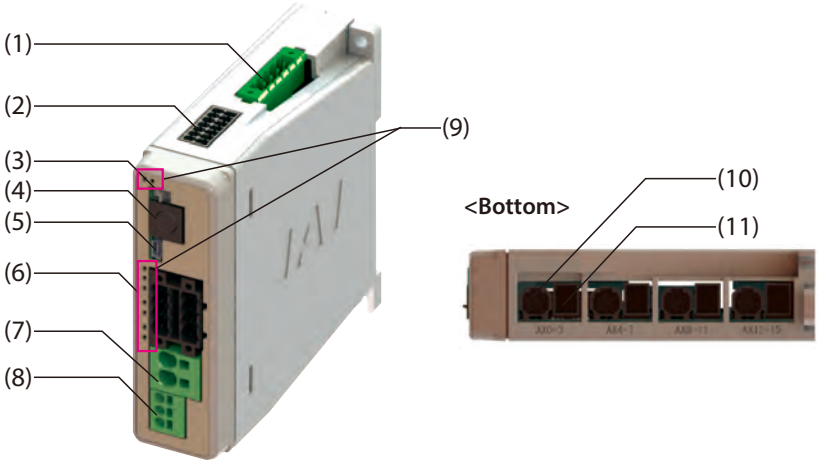
Operation mode	Description	Overview
Positioner 1/ Simple direct numerical value mode (Simple direct mode)	Positioner 1 mode can store up to 256 points of position data, and can move to the stored position. Both modes allow monitoring the current position numerically with 0.01mm increments. The simple 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 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 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 in/out data transfer volume 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	256 points	256 points	Unlimited	256 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, x 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).

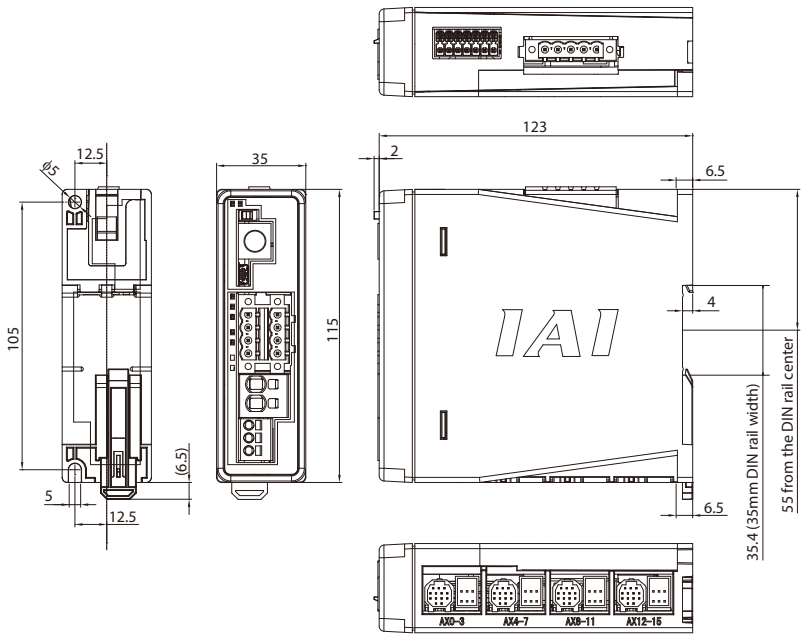
(9) Status display LED
Displays the status of the gateway unit.

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)
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	External 24V power supply Consumption current 56.6A (40A effective)*
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

*The amount limited by the connectors rated current and PCB trace widths through to the actual 40A value. $40 \times \sqrt{2} = 56.6A$

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. 149 for the details.

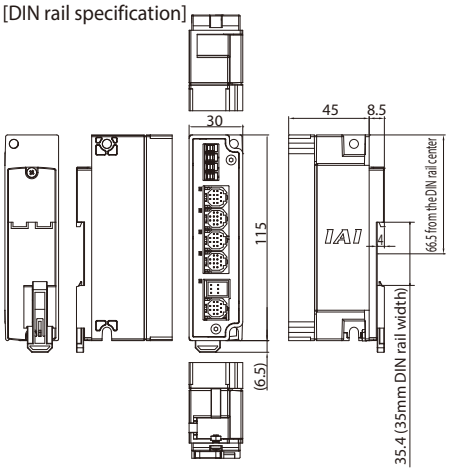
Model Configuration

RCM — P6HUB — ☐
Series Type Mounting specification

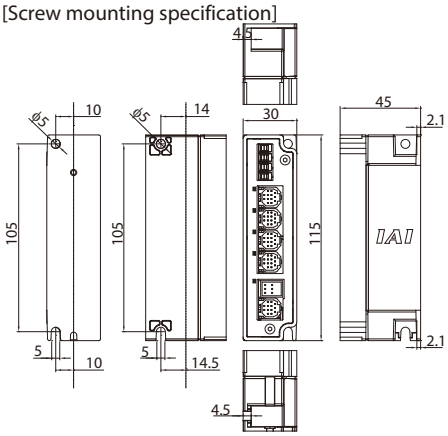
(Blank)	Screw mounting specification
DN	DIN rail mounting specification

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.

* The gateway unit and the hub unit cannot be connected to this PLC connection unit.

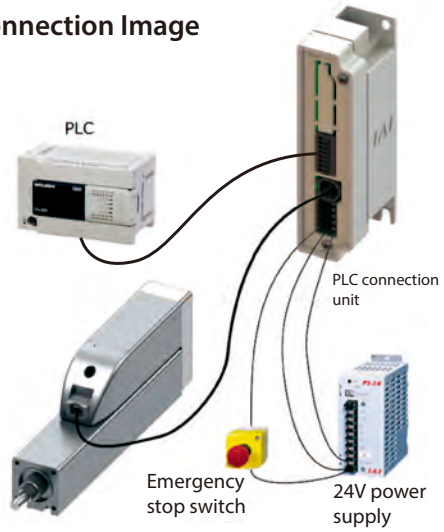
Model Configuration

RCB — P6PLC — □

	Series	Type	Mounting specification

(Blank)	Screw mounting specification
DN	DIN rail mounting specification

Connection Image

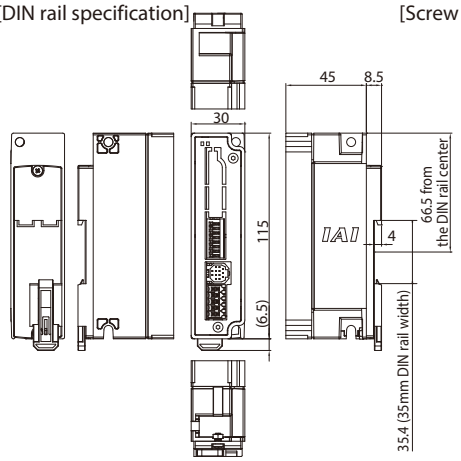


Specification

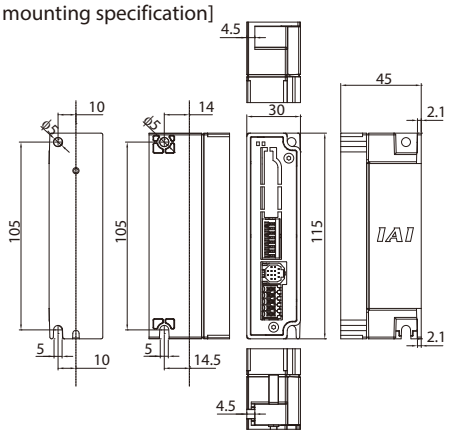
Specification	Description
Number of controlled axes	1 axis
Power supply voltage	24VDC±10%
Control power capacity	0A for single PLC connection unit 0.3A for connected PLC units + RCP6S built-in driver • For brake type, 0.7A for 0.2 sec is required for releasing brake
Motor power capacity	Depending on 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

[DIN rail specification]



[Screw mounting specification]



Options

Touch Panel Teaching Pendant

Features

A teaching device equipped with functions such as position teaching, trial operation, and monitoring.

Model **TB-01-C**

PC Compatible Software (for Windows)

Features

This is start-up support software which comes equipped with functions such as position input, trial operation, monitoring, etc. A complete range of functions needed for making adjustments contributes to a reduced start-up time.

Model **RCM-101-MW**
(with an external device communication cable + RS232 conversion unit)

Model **RCM-101-USB**
(with an external device communication cable +USB conversion adapter + USB cable)

Maintenance Parts

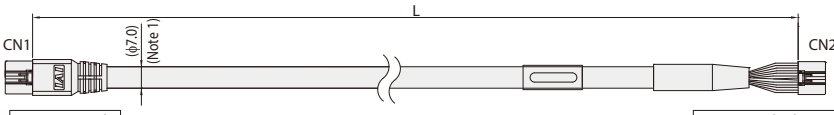
When placing an order for the replacement cable, please use the model number shown below.

*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



Actuator side

Minimum bending radius 5m or less r= 56mm or more (Dynamic bending condition)
Longer than 5m r= 64mm or more (Dynamic bending condition)

Gateway, hub or PLC conn. unit 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 length of the cable is over 5m, it would be ϕ8.0.

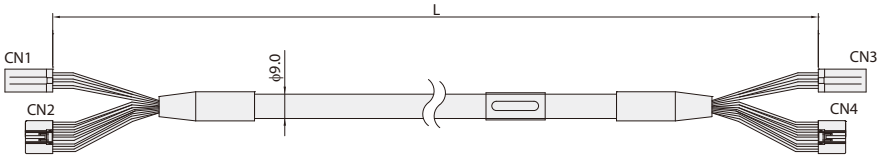
CN1 DF62C-13S-2.2C (HIROSE ELECTRIC CO., LTD.) — CN2 DF62C-13S-2.2C (HIROSE ELECTRIC CO., LTD.)

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 lengths: 1m/3m/5m/10m



Hub unit side

Minimum bending radius r= 72mm or more (Dynamic bending condition)

Gateway unit 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.

*** 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)

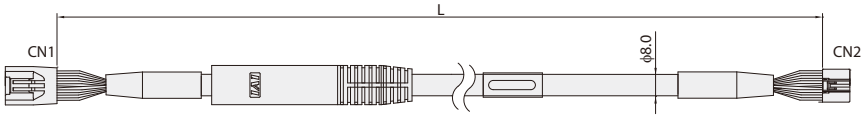
CN2 DF62C-13S-2.2C (HIROSE ELECTRIC CO., LTD.) — CN4 DF62C-13S-2.2C (HIROSE ELECTRIC CO., LTD.)

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 5m, e.g.) 030 = 3m
Available lengths: 1m/3m/5mm



Actuator side

Minimum bending radius r= 64mm or more (Dynamic bending condition)

Gateway, hub or PLC conn. unit 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.

*** Please contact IAI if the cable length other than above is needed.**

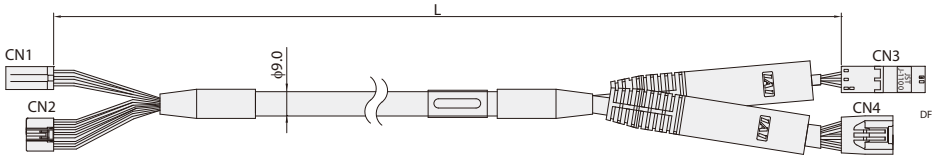
CN1 DF62B-13EP-2.2C (HIROSE ELECTRIC CO., LTD.) — CN2 DF62C-13S-2.2C (HIROSE ELECTRIC CO., LTD.)

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 5m, e.g.) 030 = 3m
Available lengths: 1m/3m/5mm



Hub unit side

Minimum bending radius r= 72mm or more (Dynamic bending condition)

Gateway unit 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.

*** 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)

Catalog No. CE0238-1A (0716)

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