

**Cleanroom Slider Type**

**RCP6(S)CR-SA/WSA**

**Dust/Splash-Proof Rod Type & Radial Cylinder**

**RCP6(S)W-RA/RRA/WRA**

● **Cleanroom Specification Is Now Available**

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



There are 2 standards that represent the cleanliness.

**1. ISO Standard 14644-1:2015**

The number of particles 0.1µm or larger in 1m<sup>3</sup> is expressed in exponents when expressed in power of 10.

**2. US FED Standard 209D**

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



● **Dust/Splash-Proof Specification Is Now Available**

Dust-proof/splash-proof specification is now available. 24 rod types or 72 models, including the Radial Cylinder and Wide Radial Cylinder, are available in total. Can be used for equipment that comes in contact with water.



Protection Degree Display



**First Indicative Number**

Protection against human bodies and solid foreign matter

**Second Indicative Number**

Protection against ingress of water

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

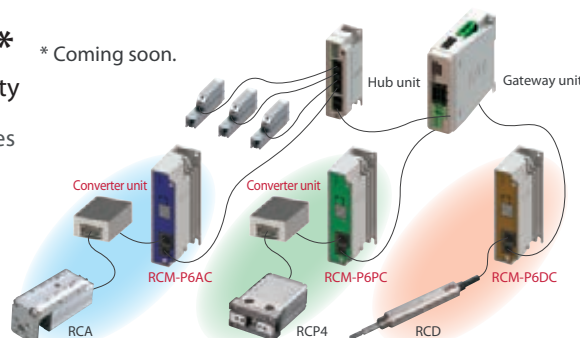
\* IEC 60529

● **RCP6S Gateway Controller\***

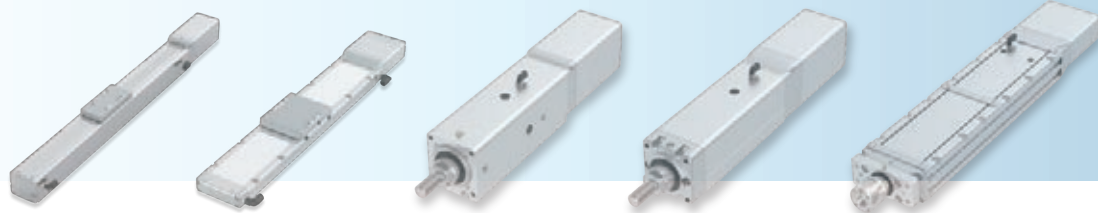
Gateway unit and hub unit connection capability

This controller can connect RCP, RCA, and RCD series actuators to an RCP6S gateway unit and hub unit. Mini RoboCylinders and gripper type actuators can be added to the RCP6S network. Please see P.280 for information on connectable models.

\* Coming soon.



# Product Lineup



## Slider Type SA <Cleanroom Specification>

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

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

## Wide Slider Type WSA <Cleanroom Specification>

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

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

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

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

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

Motor	Type	External View	Body Width (mm)	Lead (mm)		Positioning Repeatability (mm)	Max speed (mm/s)		Max. Push Force (N)*	Max. Payload (kg)		Ingress Protection	Reference Page
				10	5		Ambient Temperature Exceeding 5°C	Ambient Temperature 5°C or Below		Horizontal	Vertical		
Side-mounted Motor	RA4R		40mm	10	±0.01	525 <435>	435	77	11	2	IP65 (IEC 60529 Std.)	P149	
				5			350	155	23	4			
				2.5			175 <150>	310	40	10			
	RA6R		58mm	12	±0.01	630 <525>	525	93	25	4		P151	
				6			420 <370>	315	185	40			10
				3			210	105	370	60			20
	RA7R		70mm	16	±0.01	420 <280>	280	273	50	8		P153	
				8			350 <280>	140	547	60			18
				4			140	105	1094	80			28
	RA8R		85mm	20	±0.01	350 <330>	300	500	30	3		P155	
				10			200	170	1000	60			35
				5			100	80	2000	100			70

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

## Radial Cylinder **RRA** <Dust/Splash-Proof Specification>

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

Motor	Type	External View	Body Width (mm)	Lead (mm)		Positioning Repeatability (mm)	Max speed (mm/s)		Max. Push Force (N)*	Max. Payload (kg)		Ingress Protection	Reference Page
				10	5		Ambient Temperature Exceeding 5°C	Ambient Temperature 5°C or Below		Horizontal	Vertical		
Coupled Motor	RRA4C		45mm	10	±0.01	525 <435>	435	77	11	2	IP65 (IEC 60529 Std.)	P157	
				5			350	260	155	23			4
				2.5			175 <150>	105	310	40			10
	RRA6C		65mm	12	±0.01	630 <525>	525	93	25	4		P159	
				6			420 <370>	315	185	40			10
				3			210	105	370	60			20
	RRA7C		78mm	16	±0.01	420 <280>	280	273	50	8		P161	
				8			350 <280>	140	547	60			18
				4			140	105	1094	80			28
	RRA8C		85mm	20	±0.01	350 <330>	210	500	30	3		P163	
				10			200	130	1000	60			35
				5			100	60	2000	100			70
Side-mounted Motor	RRA4R		45mm	10	±0.01	525 <435>	435	77	11	2	IP65 (IEC 60529 Std.)	P165	
				5			350	260	155	23			4
				2.5			175 <150>	105	310	40			10
	RRA6R		65mm	12	±0.01	630 <525>	525	93	25	4		P167	
				6			420 <370>	315	185	40			10
				3			210	105	370	60			20
	RRA7R		78mm	16	±0.01	420 <280>	280	273	50	8		P169	
				8			350 <280>	140	547	60			18
				4			140	105	1094	80			28
	RRA8R		85mm	20	±0.01	350 <330>	210	500	30	3		P171	
				10			200	130	1000	60			35
				5			100	60	2000	100			70

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

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

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

Motor	Type	External View	Body Width (mm)	Lead (mm)		Positioning Repeatability (mm)	Max speed (mm/s)		Max. Push Force (N)*	Max. Payload (kg)		Ingress Protection	Reference Page
				10	5		Ambient Temperature Exceeding 5°C	Ambient Temperature 5°C or Below		Horizontal	Vertical		
Coupled Motor	WRA10C		100mm	10	±0.01	525 <->	350	77	11.5	-	IP65 (IEC 60529 Std.)	P173	
				5			350 <215>	215	155	28			4
				2.5			175 <150>	65	310	40			10
	WRA12C		120mm	12	±0.01	560 <->	320	93	30	-		P175	
				6			400 <220>	220	185	55			4
				3			225 <140>	80	370	70			14
	WRA14C		140mm	16	±0.01	420 <->	280	273	50	-		P177	
				8			280 <210>	140	547	65			11.5
				4			130	70	1094	85			21.5
	WRA16C		160mm	20	±0.01	360 <->	240	500	30	-		P179	
				10			220 <160>	120	1000	60			30.5
				5			110 <90>	80	2000	100			59
Side-mounted Motor	WRA10R		100mm	10	±0.01	525 <->	350	77	11.5	-	IP65 (IEC 60529 Std.)	P181	
				5			350 <215>	215	155	28			4
				2.5			175 <150>	65	310	40			10
	WRA12R		120mm	12	±0.01	560 <->	320	93	30	-		P183	
				6			400 <220>	220	185	55			4
				3			225 <140>	80	370	70			14
	WRA14R		140mm	16	±0.01	420 <->	280	273	50	-		P185	
				8			280 <210>	140	547	65			11.5
				4			130	70	1094	85			21.5
	WRA16R		160mm	20	±0.01	360 <->	240	500	30	-		P187	
				10			220 <160>	120	1000	60			30.5
				5			110 <90>	80	2000	100			59

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

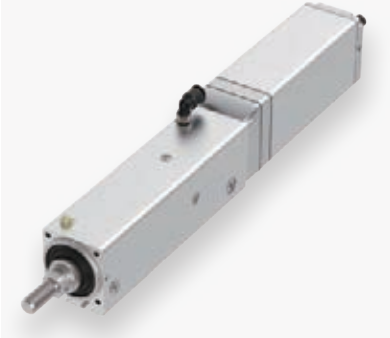
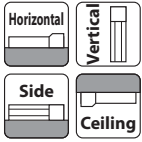
Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

# RCP6(S)W-RA4C

- Dust/Splash-Proof Spec
- Battery-less Absolute
- Motor Unit Type
- Coupled Motor
- Body Width 40mm
- 24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	RA4C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm 200:200mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [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.19 for more information about the model specification items.



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

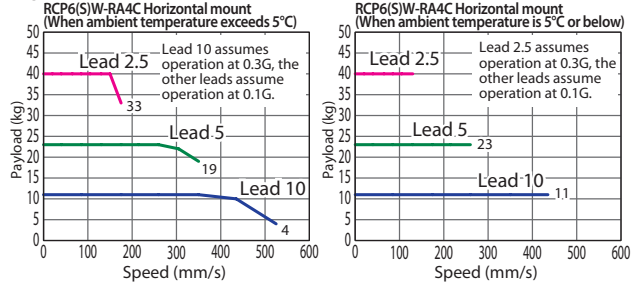


- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
- (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.231 for more details.
- (3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
- (4) Please refer to P.205 for performing push-motion operation.
- (5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

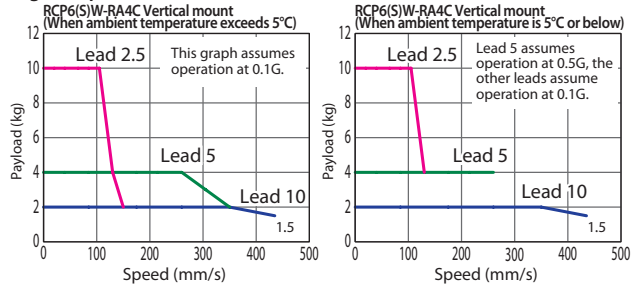
## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

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



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



## Actuator Specifications

### Lead and Payload

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

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)*	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP6(S)W-RA4C-WA-35P-10-①-②-③-④	10	11	2	77	50~200 (Every 50mm)
RCP6(S)W-RA4C-WA-35P-5-①-②-③-④	5	23	4	155	
RCP6(S)W-RA4C-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

### Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50~200 (Every 50mm)
10	525 <435> [435]
5	350 [260]
2.5	175 <150> [130]

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

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

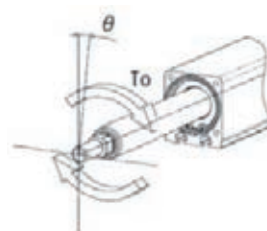
## Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Tip adapter (Internal thread)	NFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

## Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm
Allowable static torque on rod tip	To: 1.0N·m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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





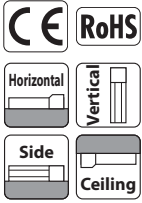


# RCP6(S)W-RA6C

Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 58 mm
24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	RA6C	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12: 12mm 6: 6mm 3: 3mm	50: 50mm 300: 300mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [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.19 for more information about the model specification items.

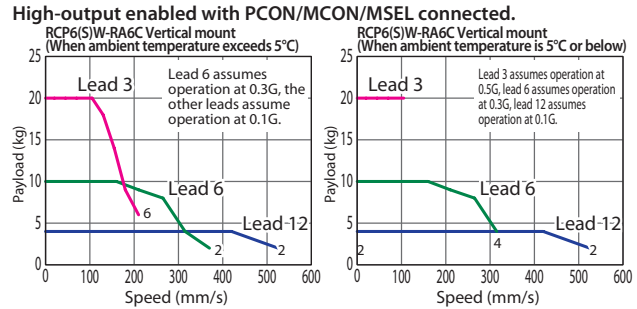
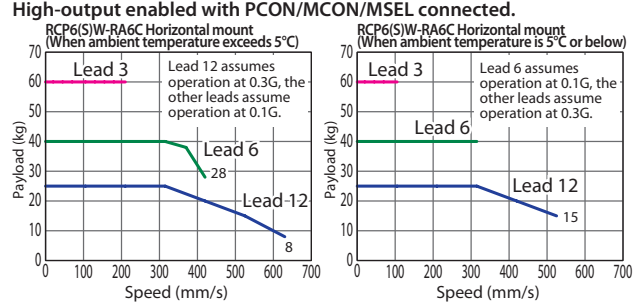


\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.231 for more details.
  - (3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
  - (4) Please refer to P205 for performing push-motion operation.
  - (5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
  - (6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



Actuator Specifications						Stroke and Max Speed (Unit: mm/s)	
Lead and Payload		* Push force only available during push mode w/ limited speed.				Lead (mm)	50~300 (Every 50mm)
Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)		
RCP6(S)W-RA6C-WA-42P-12-①-②-③-④	12	25	4	93	50~300 (Every 50mm)	12	630 <525> [525]
RCP6(S)W-RA6C-WA-42P-6-①-②-③-④	6	40	10	185		6	420 <370> [315]
RCP6(S)W-RA6C-WA-42P-3-①-②-③-④	3	60	20	370		3	210 [105]

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

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

### Cable Length

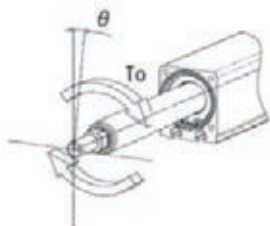
Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

### Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Allowable static torque on rod tip	To: 1.5N·m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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



### Options

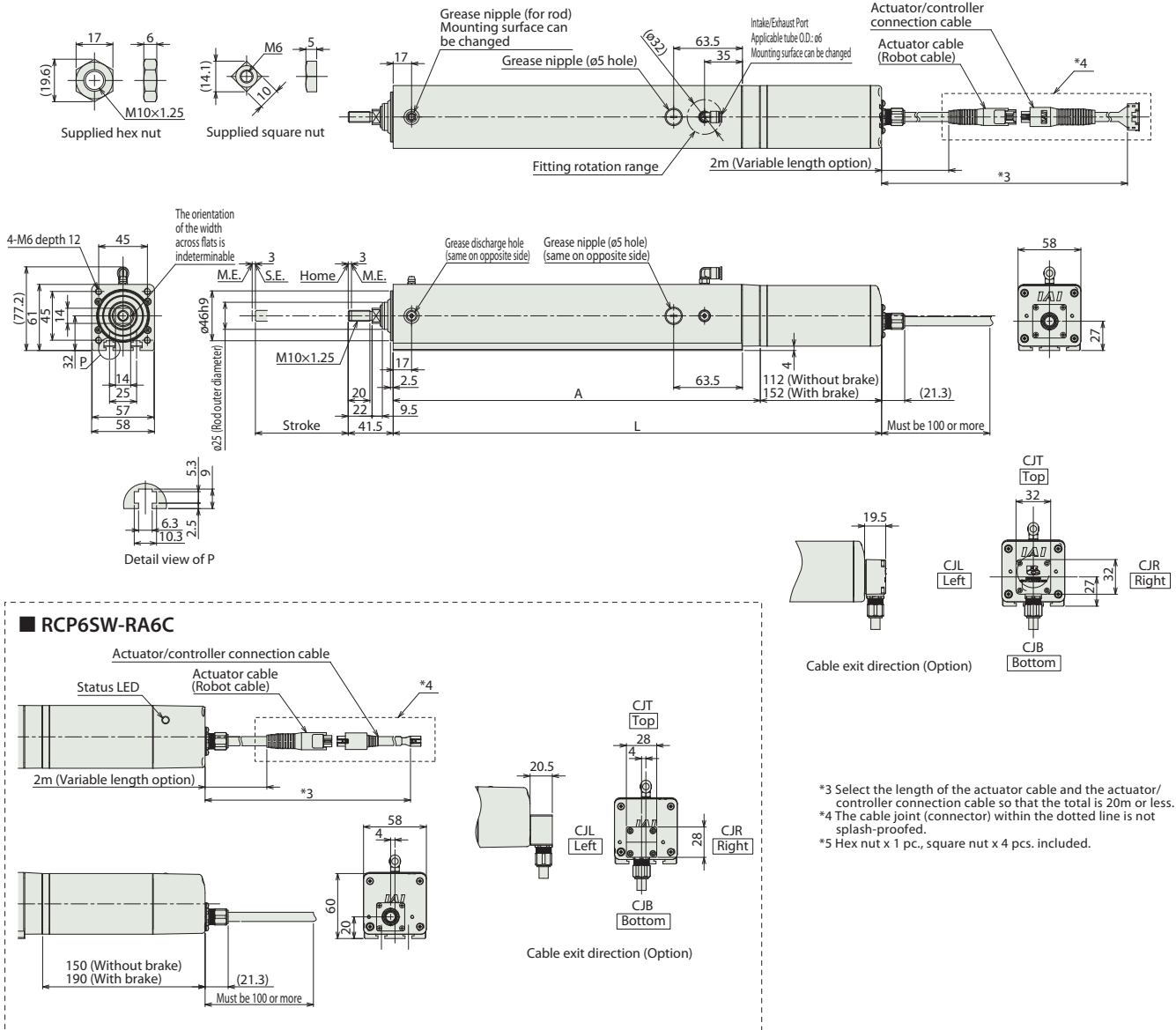
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Tip adapter (Internal thread)	NFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

## Dimensions

CAD drawings can be downloaded from our website.  
[www.robocylinder.de](http://www.robocylinder.de)



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



### Dimensions and Mass by Stroke

L	Stroke	50	100	150	200	250	300	
		RCP6W	w/o brake 301	w/ brake 341	w/o brake 339	w/ brake 379	w/o brake 429	w/ brake 479
A	RCP6SW	189	239	289	339	389	439	
	Mass (kg)	2.5	2.9	3.3	3.6	4.0	4.4	
RCP6W	w/o brake	2.8	3.2	3.6	3.9	4.3	4.7	
	w/ brake	2.7	3.1	3.5	3.8	4.2	4.6	
RCP6SW	w/o brake	2.9	3.3	3.7	4.0	4.4	4.8	
	w/ brake							

\* Please refer to P.249 and P.250 for more information on component materials.

### Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	—	Network cannot be selected	64	—
PCON-CB/CGB		1		* Option	* Option	—	DeviceNet CC-Link EtherCAT EtherNet/IP CompoNet	512	Please see P.255 (768 for network spec.)
MCON-C/CG (**)		8		This model is network-compatible only.				256	
MCON-LC/LCG (*) (**)		6		—	—	●	256	—	
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	—	—	●	30000	Please see the MSEL catalog or manual.	
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.				768	Please see P.277	

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

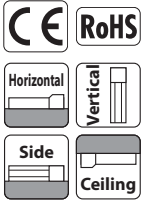
Foreword  
 Slider Type  
 Wide Slider Type  
 Rod Type  
 Radial Cylinder  
 Wide Radial Cylinder  
 Table Type  
 Cleanroom Slider  
 Cleanroom Wide Slider  
 Dust/Splash-Proof Rod  
 Dust/Splash-Proof Radial Cylinder  
 Dust/Splash-Proof Wide Radial Cylinder  
 Options  
 Reference Data  
 Controller

# RCP6(S)W-RA7C

- Dust/Splash-Proof Spec
- Battery-less Absolute
- Motor Unit Type
- Coupled Motor
- Body Width 70 mm
- 24v Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	RA7C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 : 16mm 8 : 8mm 4 : 4mm	50:50mm 300:300mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [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.19 for more information about the model specification items.

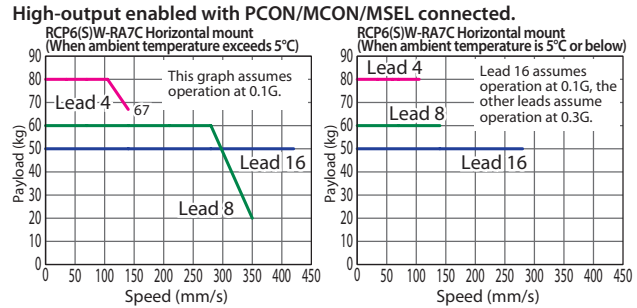


\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

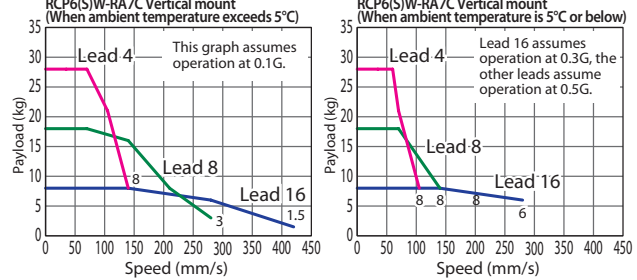
- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.232 for more details.
  - 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.
  - Please refer to P205 for performing push-motion operation.
  - Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



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



### Actuator Specifications

#### Lead and Payload

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

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)*	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP6(S)W-RA7C-WA-56P-16-①-②-③-④	16	50	8	273	50~300 (Every 50mm)
RCP6(S)W-RA7C-WA-56P-8-①-②-③-④	8	60	18	547	
RCP6(S)W-RA7C-WA-56P-4-①-②-③-④	4	80	28	1094	

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

#### Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
16	420 [280]
8	350 <280> [140]
4	140 [105]

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

### Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

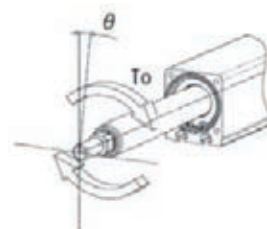
### Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Tip adapter (Internal thread)	NFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

### Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Allowable static torque on rod tip	To: 2.5N·m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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



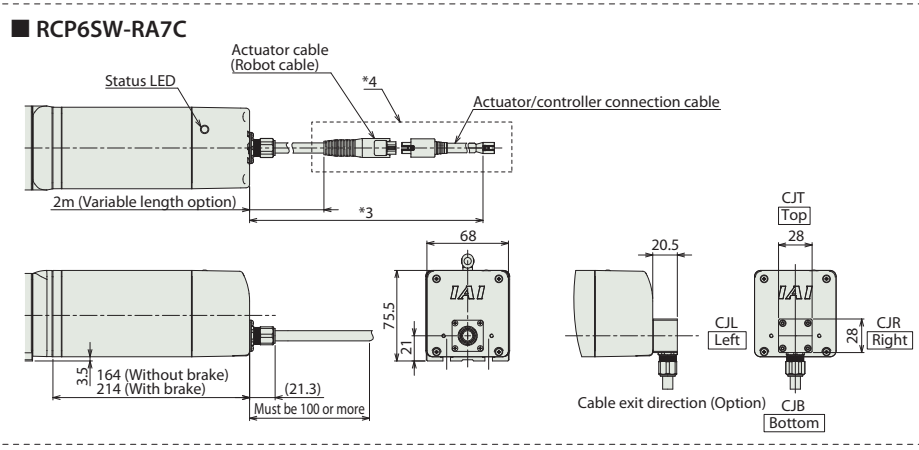
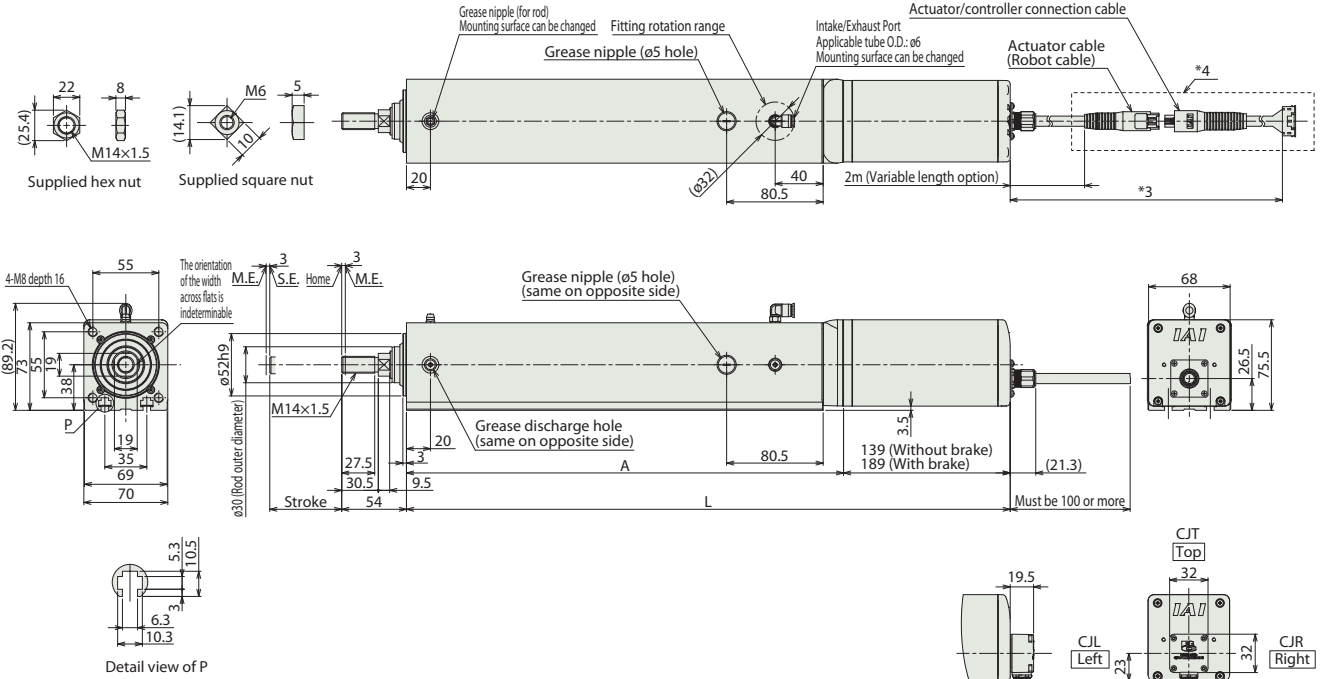


Dimensions

CAD drawings can be downloaded from our website.  
www.robocylinder.de



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



\*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.  
\*4 The cable joint (connector) within the dotted line is not splash-proofed.  
\*5 Hex nut x 1 pc., square nut x 6 pcs. included.

Dimensions and Mass by Stroke

L	Stroke	50	100	150	200	250	300
		RCP6W	353.5	403.5	453.5	503.5	553.5
A	RCP6SW	378.5	428.5	478.5	528.5	578.5	628.5
		428.5	478.5	528.5	578.5	628.5	678.5
Mass (kg)	RCP6W	4.5	5.1	5.7	6.3	6.8	7.4
	RCP6SW	5.0	5.6	6.2	6.8	7.3	7.9
		4.7	5.3	5.9	6.5	7.0	7.6
		5.1	5.7	6.3	6.9	7.4	8.0

\* Please refer to P.250 for more information on component materials.

Applicable Controllers									
The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.									
Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	—	Network cannot be selected	64	—
PCON-CB/CGB		1		* Option	* Option	—		512	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	
MCON-LC/LCG (**)(**)		6		—	—	●	256	—	
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	—	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.					768	

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

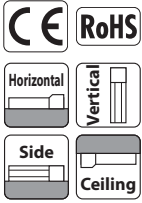
Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

# RCP6(S)W-RA8C

Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 85 mm
24v Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA8C	WA	60P	20 :20mm 10 :10mm 5 : 5mm	50:50mm 300:300mm (Every 50mm)	[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.19 for more information about the model specification items.

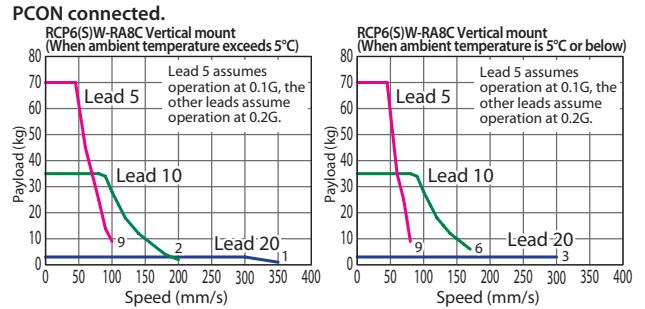
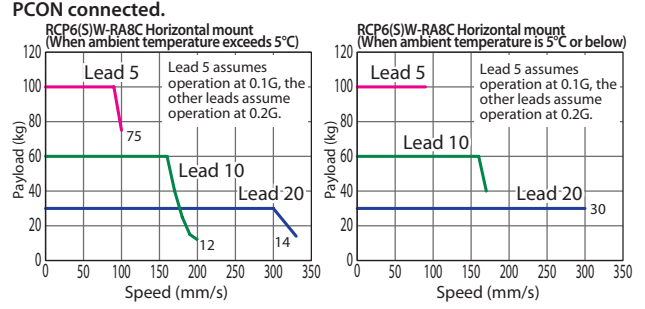


\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.232 for more details.
  - 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.
  - Please refer to P205 for performing push-motion operation.
  - For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
  - The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



### Actuator Specifications

#### Lead and Payload

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

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)*	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP6(S)W-RA8C-WA-60P-20-①-②-③-④	20	30	3	500	50~300 (Every 50mm)
RCP6(S)W-RA8C-WA-60P-10-①-②-③-④	10	60	35	1000	
RCP6(S)W-RA8C-WA-60P-5-①-②-③-④	5	100	70	2000	

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

#### Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
20	350 <330> [300]
10	200 [170]
5	100 [80]

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

### Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

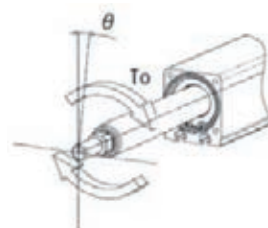
### Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Tip adapter (Internal thread)	NFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

### Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Allowable static torque on rod tip	To: 5.0N·m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

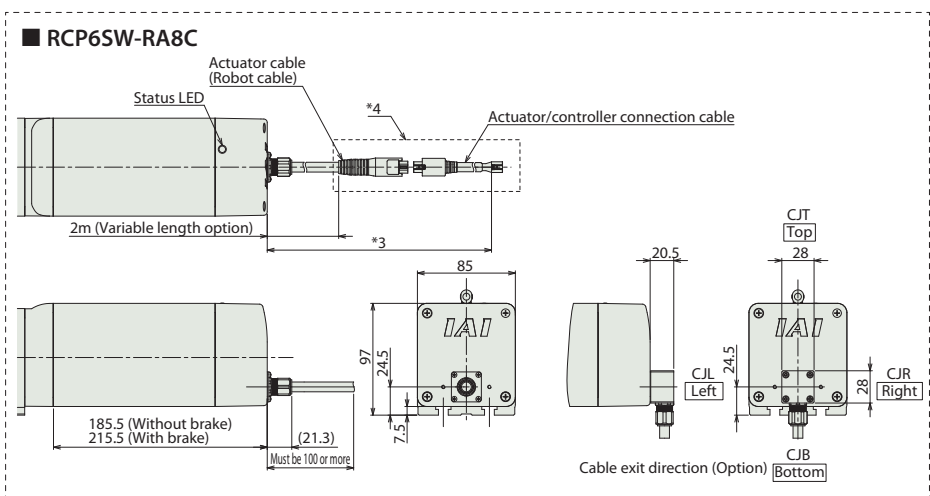
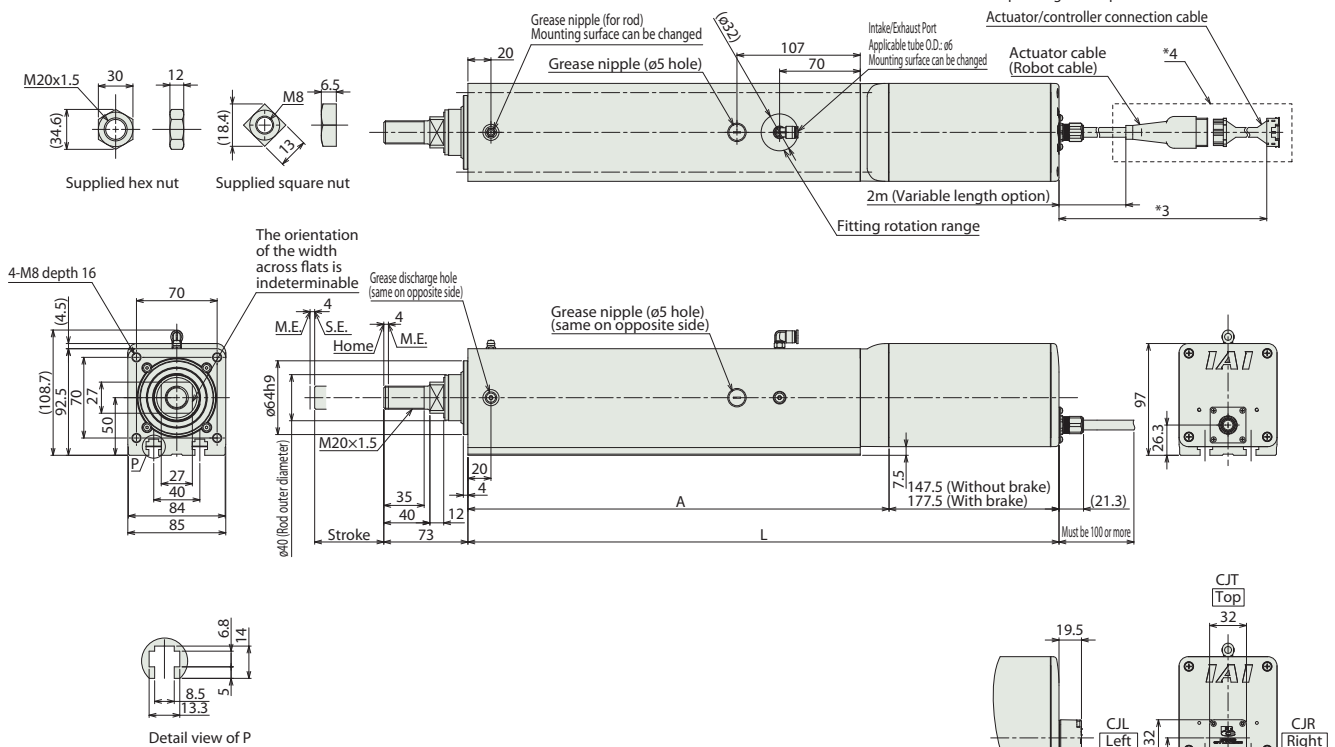


## Dimensions

CAD drawings can be downloaded from our website.  
[www.robocylinder.de](http://www.robocylinder.de)



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



\*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.  
 \*4 The cable joint (connector) within the dotted line is not splash-proofed.  
 \*5 Hex nut x 1 pc., square nut x 8 pcs. included.

\* Please refer to P.250 for more information on component materials.

### Dimensions and Mass by Stroke

L	Stroke	50	100	150	200	250	300
		RCP6W w/o brake	413	463	513	563	613
	RCP6W w/ brake	443	493	543	593	643	693
	RCP6SW w/o brake	451	501	551	601	651	701
	RCP6SW w/ brake	481	531	581	631	681	731
	A	265.5	315.5	365.5	415.5	465.5	515.5
Mass (kg)	RCP6W w/o brake	8.0	8.8	9.7	10.5	11.4	12.2
	RCP6W w/ brake	8.6	9.4	10.3	11.1	12.0	12.8
	RCP6SW w/o brake	8.3	9.1	10.0	10.8	11.7	12.5
	RCP6SW w/ brake	8.9	9.7	10.6	11.4	12.3	13.1

### Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Positioner	Pulse train	Program	Control method	Maximum number of positioning points	Reference page
PCON-CFB/CGFB		1	DC24V	● * Option	● * Option	-	DeviceNet CompoNet EtherNet/IP CC-Link EtherCAT	512 (768 for network spec.)	See P.255

Foreword  
 Slider Type  
 Wide Slider Type  
 Rod Type  
 Radial Cylinder  
 Wide Radial Cylinder  
 Table Type  
 Cleanroom Slider  
 Cleanroom Wide Slider  
 Dust/Splash-Proof Rod  
 Dust/Splash-Proof Radial Cylinder  
 Dust/Splash-Proof Wide Radial Cylinder  
 Options  
 Reference Data  
 Controller

# RCP6(S)W-RA4R

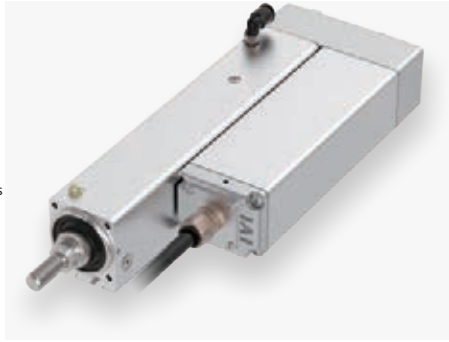
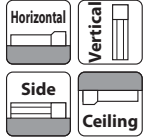
Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Side-mounted Motor
Body Width 40\* mm
24V Pulse Motor

**Model Specification Items**

**Series**: RCP6W: Separate Controller / RCP6SW: Built-in Controller  
**Type**: RA4R  
**Encoder Type**: WA: Battery-less Absolute  
**Motor Type**: 35P: Pulse Motor 35□ Size  
**Lead**: 10: 10mm / 5: 5mm / 2.5: 2.5mm  
**Stroke**: 50:50mm / 200:200mm (Every 50mm)  
**Applicable Controller/I/O Type**: [RCP6] P3: PCON / MCON / MSEL / P5: RCM-P6PC (Coming soon) / [RCP6S] SE: SIO Type  
**Cable Length**: N: None / P: 1m / S: 3m / M: 5m / X□□: Specified Length / R□□: Robot Cable  
**Options**: Please refer to the options table below. \* Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

\* RCP6 does not include a controller. RCP6S includes a built-in controller.  
\* Please refer to P.19 for more information about the model specification items.

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



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

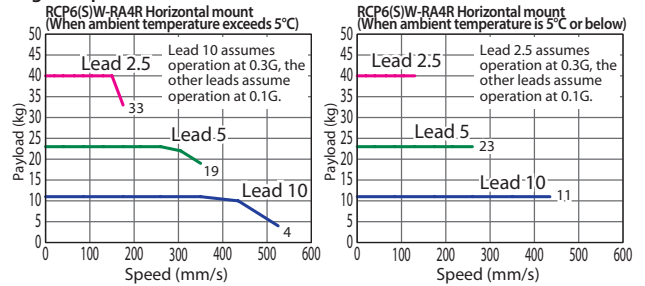
The figure above is the motor side-mounted to left (ML).

- POINT Selection Notes**
- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.233 for more details.
  - (3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
  - (4) Please refer to P.205 for performing push-motion operation.
  - (5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

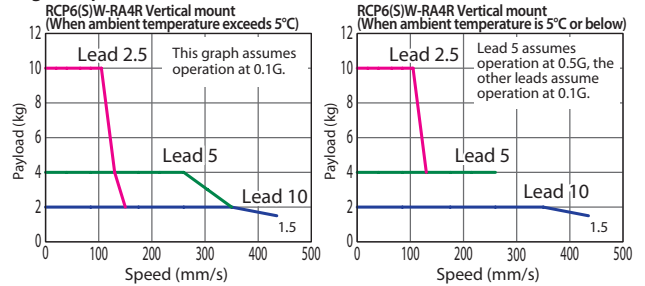
## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

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



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



## Actuator Specifications

### Lead and Payload

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

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)*	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP6(S)W-RA4R-WA-35P-10-①-②-③-④	10	11	2	77	50~200 (Every 50mm)
RCP6(S)W-RA4R-WA-35P-5-①-②-③-④	5	23	4	155	
RCP6(S)W-RA4R-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

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

### Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50~200 (Every 50mm)
10	525 <435> [435]
5	350 [260]
2.5	175 <150> [130]

Values in brackets < > are for vertical use. Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

## Options

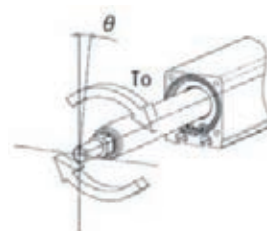
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Motor side-mounted to left (standard)	ML	See P.201
Motor side-mounted to right	MR	See P.201
Motor side-mounted on top	MT	See P.201
Tip adapter (Internal thread)	NFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

## Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm
Allowable static torque on rod tip	To: 1.0N·m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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







# RCP6(S)W-RA6R

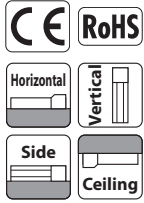
Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Side-mounted Motor
Body Width 58\* mm
24v Pulse Motor

**Model Specification Items**

**Series**: RCP6W: Separate Controller, RCP6SW: Built-in Controller  
**Type**: RA6R  
**Encoder Type**: WA: Battery-less Absolute  
**Motor Type**: 42P: Pulse Motor, 42□ Size  
**Lead**: 12: 12mm, 6: 6mm, 3: 3mm  
**Stroke**: 50: 50mm, 300: 300mm (Every 50mm)  
**Applicable Controller/I/O Type**: [RCP6] P3: PCON, MCON, MSEL; P5: RCM-P6PC (Coming soon); [RCP6S] SE: SIO Type  
**Cable Length**: N: None, P: 1m, S: 3m, M: 5m, X□□: Specified Length, R□□: Robot Cable  
**Options**: Please refer to the options table below. \* Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

\* RCP6 does not include a controller. RCP6S includes a built-in controller.  
\* Please refer to P.19 for more information about the model specification items.

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



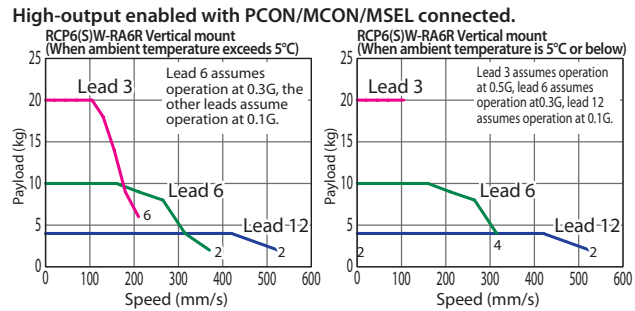
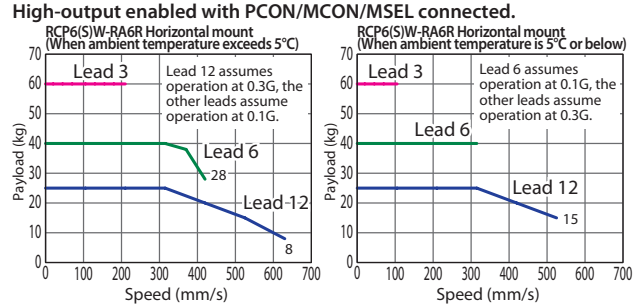
\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

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

- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.233 for more details.
  - 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.
  - Please refer to P.205 for performing push-motion operation.
  - Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



### Actuator Specifications

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)*	Stroke (mm)	Stroke and Max Speed (Unit: mm/s)	
		Horizontal (kg)	Vertical (kg)			Lead (mm)	50~300 (Every 50mm)
RCP6(S)W-RA6R-WA-42P-12-①-②-③-④	12	25	4	93	50~300 (Every 50mm)	12	630 <525> [525]
RCP6(S)W-RA6R-WA-42P-6-①-②-③-④	6	40	10	185		6	420 <370> [315]
RCP6(S)W-RA6R-WA-42P-3-①-②-③-④	3	60	20	370		3	210 [105]

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

Values in brackets < > are for vertical use. Values in brackets [ ] are when ambient temperature is 5°C or below.

### Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

### Options

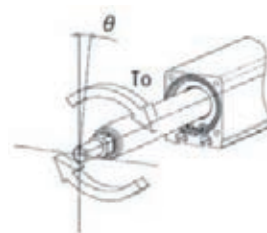
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Motor side-mounted to left (standard)	ML	See P.201
Motor side-mounted to right	MR	See P.201
Motor side-mounted on top	MT	See P.201
Tip adapter (Internal thread)	NFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

### Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Allowable static torque on rod tip	To: 1.5N·m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

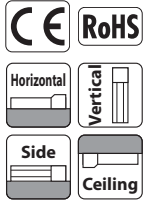




# RCP6(S)W-RA7R

- Dust/Splash-Proof Spec
- Battery-less Absolute
- Motor Unit Type
- Side-mounted Motor
- Body Width 70\* mm
- 24v Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6S W: Built-in Controller	RA7R	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 : 16mm 8 : 8mm 4 : 4mm	50:50mm 300:300mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [RCP6S] SE: SIO Type	N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable	* Body width does not include the width of the side-mounted motor. Please refer to the options table below. * Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.



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

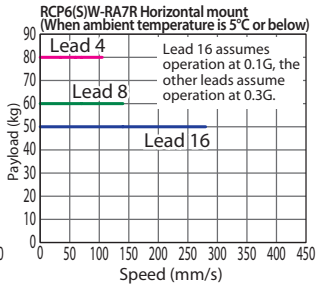
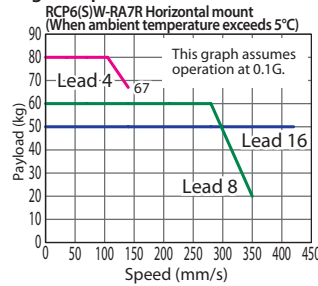
The figure above is the motor side-mounted to left (ML).

- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.234 for more details.
  - 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.
  - Please refer to P205 for performing push-motion operation.
  - Depending on the ambient operating temperature, duty control is necessary for the RCP6S W (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.

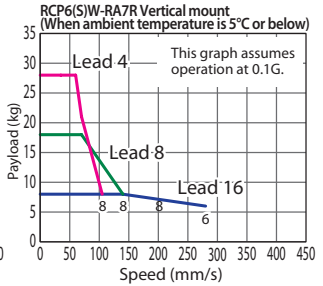
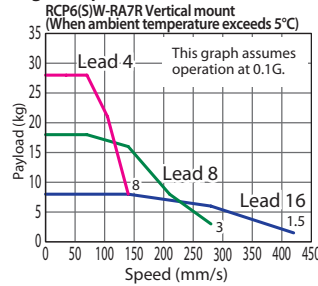
## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

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



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



## Actuator Specifications

### Lead and Payload

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

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)*	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP6(S)W-RA7R-WA-56P-16-①-②-③-④	16	50	8	273	50~300 (Every 50mm)
RCP6(S)W-RA7R-WA-56P-8-①-②-③-④	8	60	18	547	
RCP6(S)W-RA7R-WA-56P-4-①-②-③-④	4	80	28	1094	

### Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
16	420 [280]
8	350 <280> [140]
4	140 [105]

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

Values in brackets < > are for vertical use. Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

## Options

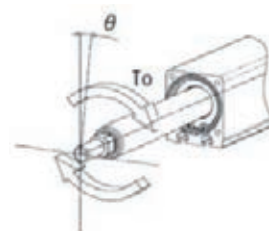
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Motor side-mounted to left (standard)	ML	See P.201
Motor side-mounted to right	MR	See P.201
Motor side-mounted on top	MT	See P.201
Tip adapter (Internal thread)	NFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

## Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Allowable static torque on rod tip	To: 2.5N·m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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



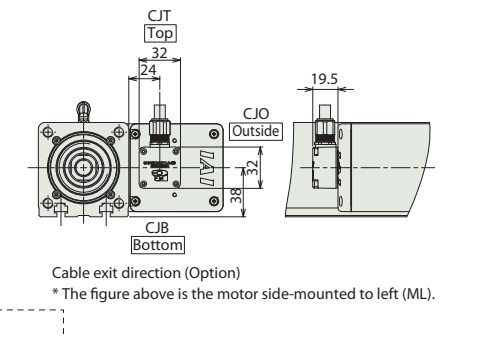
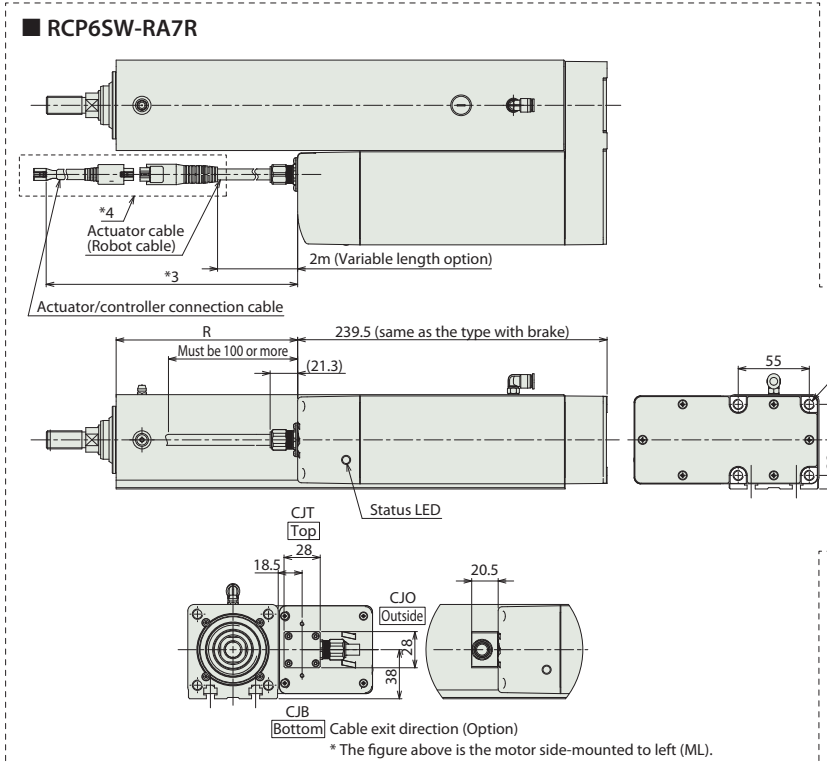
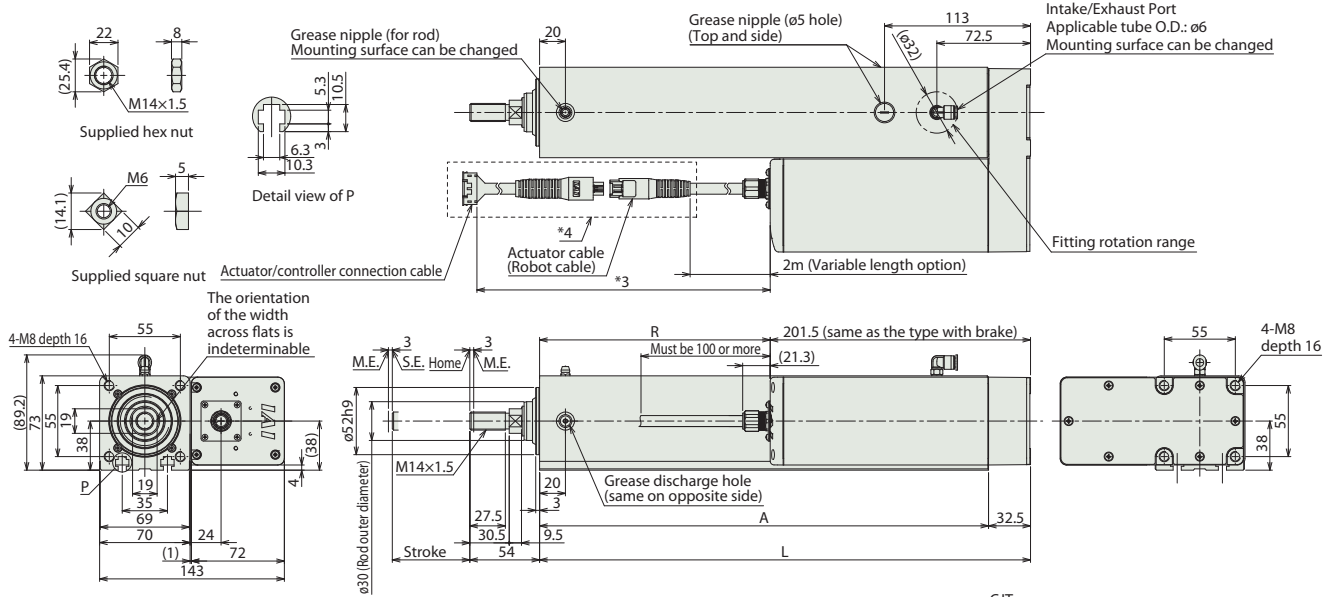


Dimensions

CAD drawings can be downloaded from our website.  
www.robocylinder.de



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



\*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.  
\*4 The cable joint (connector) within the dotted line is not splash-proofed.  
\*5 Hex nut x 1 pc., square nut x 6 pcs. included.

■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	
L	230	280	330	380	430	480	
A	197.5	247.5	297.5	347.5	397.5	447.5	
R	RCP6W	26.5	76.5	126.5	176.5	226.5	276.5
	RCP6SW	-9.5	40.5	90.5	140.5	190.5	240.5
Mass (kg)	RCP6W w/o brake	5.2	5.8	6.4	7.0	7.5	8.1
	RCP6W w/ brake	5.3	5.9	6.5	7.1	7.6	8.2
	RCP6SW w/o brake	5.4	6.0	6.6	7.2	7.7	8.3
	RCP6SW w/ brake	5.5	6.1	6.7	7.3	7.8	8.4

\* Please refer to P.250 for more information on component materials.

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

■ Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	—	Network cannot be selected	64	—
PCON-CB/CGB		1		●	●	—	DeviceNet CC-Link EtherCAT EtherNet/IP CompoNet	512	Please see P.255 (768 for network spec.)
MCON-C/CG (**)		8		—	—	—		This model is network-compatible only.	
MCON-LC/LCG (*) (**)		6		—	—	●	—	256	—
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	—	—	●	—	30000	Please see the MSEL catalog or manual.
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.				—	768	Please see P.277

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

Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

# RCP6(S)W-RA8R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 85\* mm | 24V Pulse Motor

**Model Specification Items**

Series: RCP6W: Separate Controller, RCP6SW: Built-in Controller

Type: **RA8R**

Encoder Type: **WA** (Battery-less Absolute)

Motor Type: **60P** (Pulse Motor 60□ Size)

Lead: 20 : 20mm, 10 : 10mm, 5 : 5mm

Stroke: 50:50mm, 300:300mm (Every 50mm)

Applicable Controller/I/O Type: [RCP6] P4: PCON-CFB/CGFB, [RCP6S] SE: SIO Type

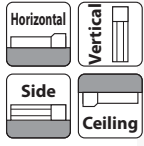
Cable Length: N: None, P: 1m, S: 3m, M: 5m

Options: X□□: Specified Length, R□□: Robot Cable

\* RCP6 does not include a controller. RCP6S includes a built-in controller. \* Please refer to P.19 for more information about the model specification items.

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

Please refer to the options table below. \* Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.



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

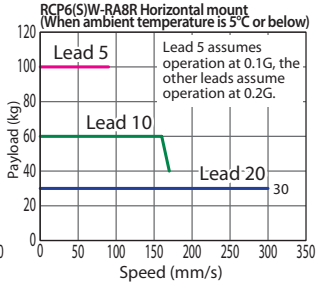
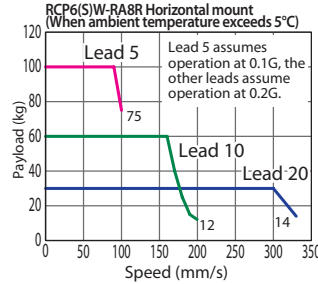
\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.234 for more details.
  - 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.
  - Please refer to P205 for performing push-motion operation.
  - For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
  - The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.

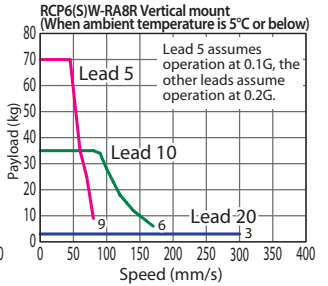
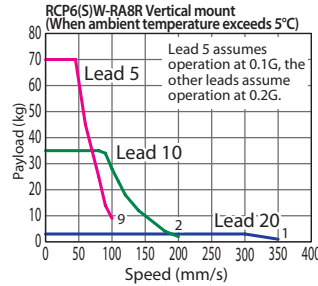
## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

### PCON connected.



### PCON connected.



## Actuator Specifications

### Lead and Payload

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

Model Number	Lead (mm)	Max. Payload (kg)		Max. Push Force (N)*	Stroke (mm)
		Horizontal	Vertical		
RCP6(S)W-RA8R-WA-60P-20-①-②-③-④	20	30	3	500	50~300 (Every 50mm)
RCP6(S)W-RA8R-WA-60P-10-①-②-③-④	10	60	35	1000	
RCP6(S)W-RA8R-WA-60P-5-①-②-③-④	5	100	70	2000	

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

### Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
20	350 <330> [300]
10	200 [170]
5	100 [80]

Values in brackets < > are for vertical use. Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m. \* Please refer to P.267 and 281 for more information regarding the maintenance cables.

## Options

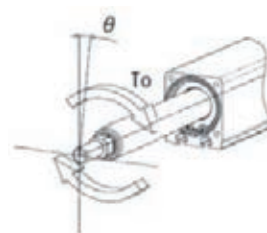
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Motor side-mounted to left (standard)	ML	See P.201
Motor side-mounted to right	MR	See P.201
Motor side-mounted on top	MT	See P.201
Tip adapter (Internal thread)	NFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

## Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Allowable static torque on rod tip	To: 5.0N·m
Max. angular displacement on rod tip (*1)	θ: ±0.8 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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





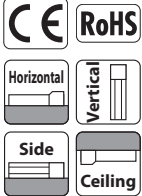
# RCP6(S)W-RAA4C

Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 45 mm
24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6S W: Built-in Controller	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 400: 400mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [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.19 for more information about the model specification items.

## Radial Load Applicable

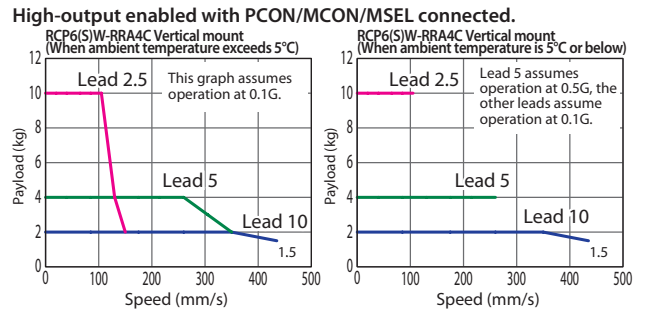
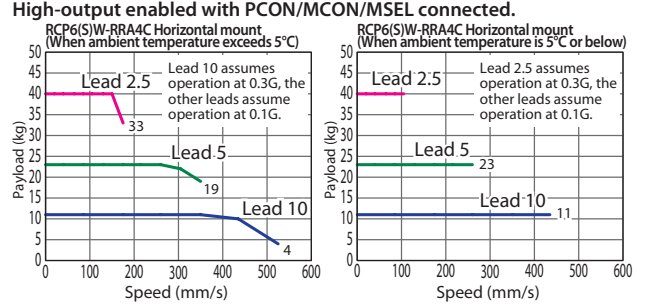


\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.235 for more details.
  - (3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
  - (4) Please refer to P.205 for performing push-motion operation.
  - (5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



## Actuator Specifications

### Lead and Payload

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-RAA4C-WA-35P-10-①-②-③-④	10	11	2	77	50~400 (Every 50mm)
RCP6(S)W-RAA4C-WA-35P-5-①-②-③-④	5	23	4	155	
RCP6(S)W-RAA4C-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

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

### Stroke and Max Speed

Lead (mm)	50~350 (Every 50mm)		400
	Unit: mm/s		
10	525 <435> [435]		
5	350 [260]	340 [260]	
2.5	175 <150> [105]	170 <150> [105]	

Values in brackets <> are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

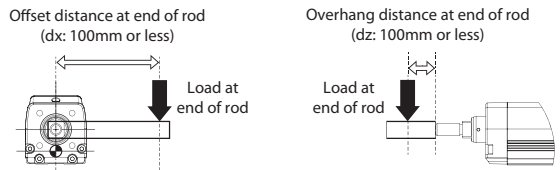
## Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Tip adapter (Flange)	FFA	See P.197
Tip adapter (Internal thread)	NFA	See P.201
Tip adapter (Keyway)	KFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

## Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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







# RCP6(S)W-RAA6C

Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 65 mm
24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	RRA6C	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12: 12mm 6: 6mm 3: 3mm	50: 50mm 400: 400mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [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.19 for more information about the model specification items.

## Radial Load Applicable

CE
RoHS

Horizontal
Vertical

Side
Ceiling



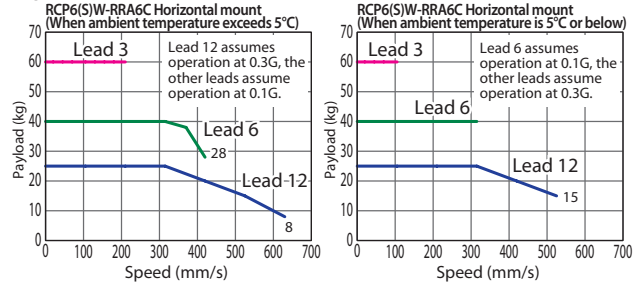
\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.235 for more details.
  - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
  - Please refer to P.205 for performing push-motion operation.
  - Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.

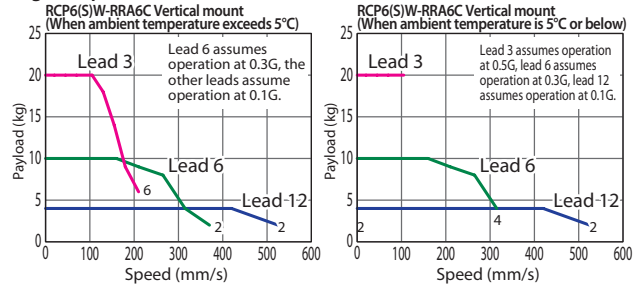
## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

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



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



## Actuator Specifications

### Lead and Payload

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-RAA6C-WA-42P-12-①-②-③-④	12	25	4	93	50~400 (Every 50mm)
RCP6(S)W-RAA6C-WA-42P-6-①-②-③-④	6	40	10	185	
RCP6(S)W-RAA6C-WA-42P-3-①-②-③-④	3	60	20	370	

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

### Stroke and Max Speed

Lead (mm)	50~400 (Every 50mm)
12	630 <525> [525]
6	420 <370> [315]
3	210 [105]

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

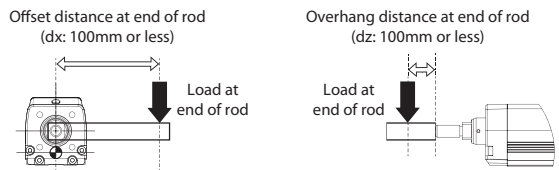
## Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Tip adapter (Flange)	FFA	See P.197
Tip adapter (Internal thread)	NFA	See P.201
Tip adapter (Keyway)	KFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

## Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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





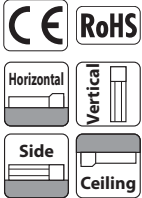
# RCP6(S)W-RAA7C

Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 78 mm
24v Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	RRA7C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 : 16mm 8 : 8mm 4 : 4mm	50:50mm 500:500mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [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.19 for more information about the model specification items.

## Radial Load Applicable



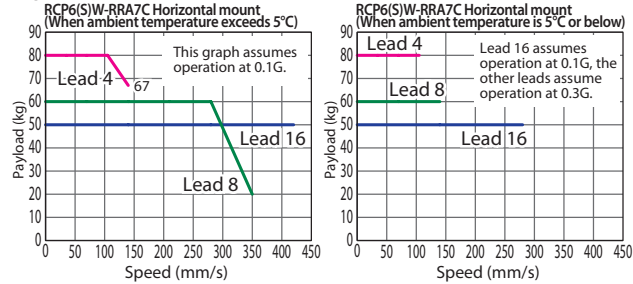
\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.236 for more details.
  - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
  - Please refer to P.205 for performing push-motion operation.
  - Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.

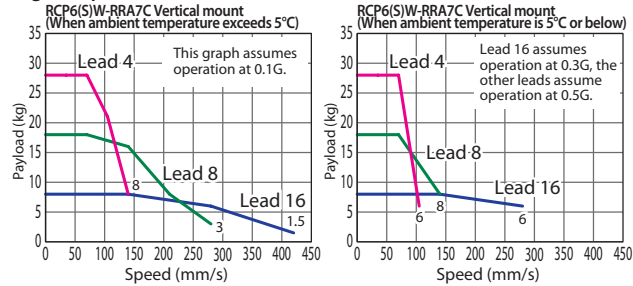
## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

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



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



## Actuator Specifications

### Lead and Payload

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-RAA7C-WA-56P-16-①-②-③-④	16	50	8	273	50~500 (Every 50mm)
RCP6(S)W-RAA7C-WA-56P-8-①-②-③-④	8	60	18	547	
RCP6(S)W-RAA7C-WA-56P-4-①-②-③-④	4	80	28	1094	

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

### Stroke and Max Speed

Lead (mm)	50~500 (Every 50mm)
16	420 [280]
8	350 <280> [140]
4	140 [105]

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

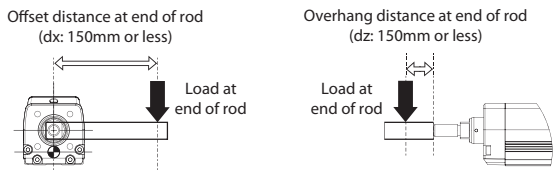
## Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Tip adapter (Flange)	FFA	See P.197
Tip adapter (Internal thread)	NFA	See P.201
Tip adapter (Keyway)	KFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

## Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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





Dimensions

CAD drawings can be downloaded from our website.

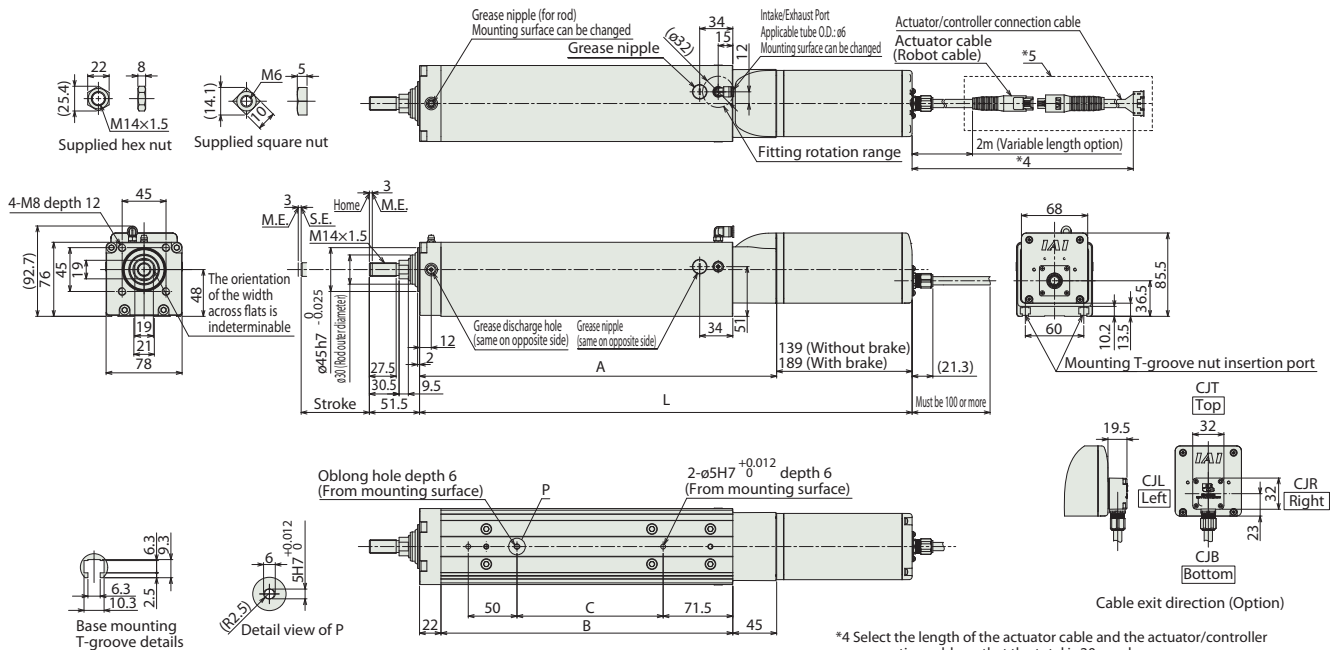
www.robocylinder.de



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

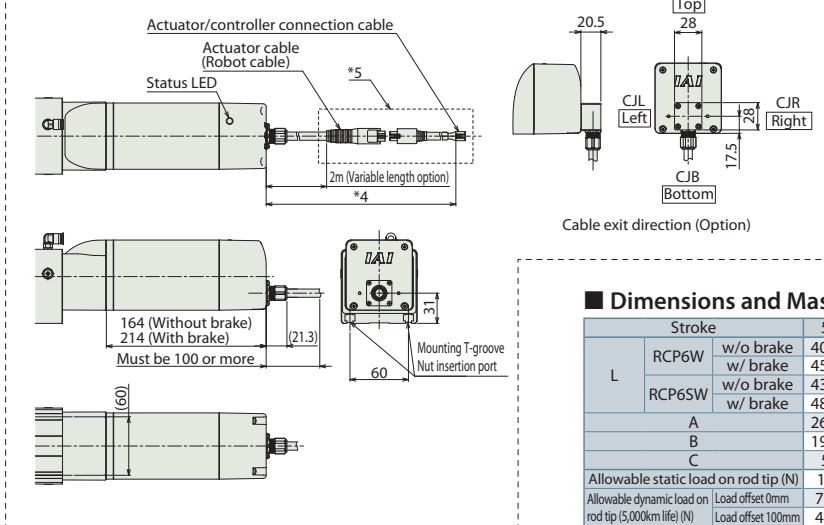
\*2 The direction of width across flats varies depending on the product.

\*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.

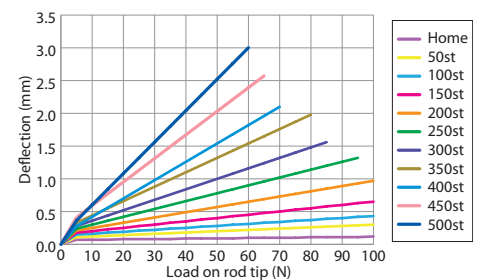


- \*4 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
- \*5 The cable joint (connector) within the dotted line is not splash-proofed.
- \*6 Part of the gasket lifts up, but this does not affect splash-proof performance.
- \*7 Hex nut x 1 pc., square nut x 8 pcs. included.

■ RCP6SW-RRR7C



■ Rod Deflection of RCP6(S)W-RRR7C (Reference Values)



■ Dimensions and Mass by Stroke

L	Stroke	Stroke									
		50	100	150	200	250	300	350	400	450	500
RCP6W	w/o brake	405.5	455.5	505.5	555.5	605.5	655.5	705.5	755.5	805.5	855.5
	w/ brake	455.5	505.5	555.5	605.5	655.5	705.5	755.5	805.5	855.5	905.5
RCP6SW	w/o brake	430.5	480.5	530.5	580.5	630.5	680.5	730.5	780.5	830.5	880.5
	w/ brake	480.5	530.5	580.5	630.5	680.5	730.5	780.5	830.5	880.5	930.5
A		266.5	316.5	366.5	416.5	466.5	516.5	566.5	616.5	666.5	716.5
B		199.5	249.5	299.5	349.5	399.5	449.5	499.5	549.5	599.5	649.5
C		50	100	150	200	250	300	350	400	450	500
Allowable static load on rod tip (N)		175	147	126	111	98.6	88.7	80.6	73.8	68	63
Allowable dynamic load on rod tip (5,000km life) (N)		75.7	62.6	53.1	46.0	40.5	36.1	32.5	29.4	26.9	24.7
Load offset 100mm		49.8	45.1	40.5	36.5	33.1	30.2	27.7	25.5	23.6	21.9
Allowable static torque on rod tip (N·m)		17.6	14.7	12.7	11.2	9.9	9.0	8.2	7.5	6.94	6.45
Allowable dynamic torque on rod tip (N·m)		5.0	4.5	4.0	3.6	3.3	3.0	2.8	2.5	2.32	2.16
Mass (kg)	w/o brake	5.0	5.5	6.0	6.5	6.9	7.4	7.9	8.4	8.9	9.4
	w/ brake	5.4	5.9	6.4	6.9	7.3	7.8	8.3	8.8	9.3	9.8
RCP6SW		5.2	5.7	6.2	6.7	7.1	7.6	8.1	8.6	9.1	9.6
w/ brake		5.6	6.1	6.6	7.1	7.5	8.0	8.5	9.0	9.5	10.0

\* Please refer to P.251 and P.252 for more information on component materials.

Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	—	Network cannot be selected	64	—
PCON-CB/CGB		1		* Option	* Option	—	DeviceNet CC-Link EtherCAT/IP EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
MCON-LC/LCG (*) (**)		6		—	—	●	CompoNet	256	—
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	—	—	●	30000	Please see the MSEL catalog or manual.	
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.				768	Please see P.277	

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

Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

# RCP6(S)W-RRA8C

Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 85 mm
24v Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	RRA8C	WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20 :20mm 10 :10mm 5 : 5mm	50:50mm 700:700mm (Every 50mm)	[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.19 for more information about the model specification items.

## Radial Load Applicable

CE
RoHS

Horizontal
Vertical

Side
Ceiling

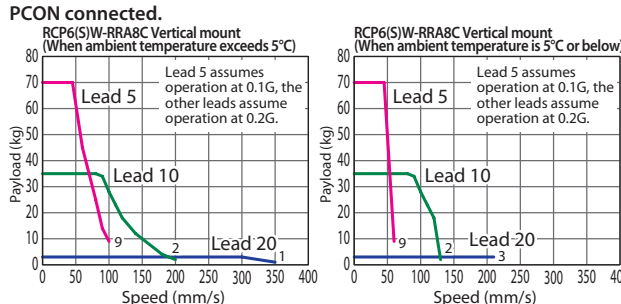
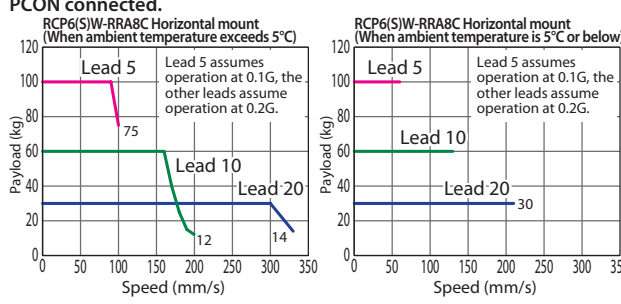


\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.236 for more details.
  - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
  - Please refer to P.205 for performing push-motion operation.
  - For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
  - The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



## Actuator Specifications

**Lead and Payload**

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

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-RRA8C-WA-60P-20-①-②-③-④	20	30	3	500	50~700 (Every 50mm)
RCP6(S)W-RRA8C-WA-60P-10-①-②-③-④	10	60	35	1000	
RCP6(S)W-RRA8C-WA-60P-5-①-②-③-④	5	100	70	2000	

**Stroke and Max Speed** (Unit: mm/s)

Lead (mm)	50	100~450 (Every 50mm)	500	550	600	650	700
20	280 [210]	350<330> [210]		320 [210]	280 [210]	240 [210]	220 [210]
10		200 [130]	180 [130]	160 [130]	140 [130]	120 [120]	110 [110]
5		100 [60]	90 [60]	80 [60]	70 [60]	60 [60]	55 [55]

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options  
Values in brackets < > are for vertical use. Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

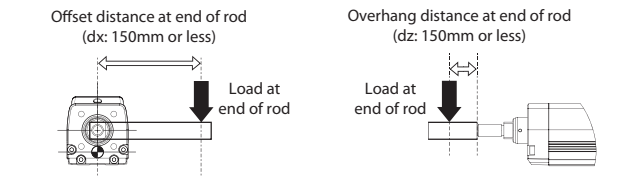
## Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Tip adapter (Internal thread)	NFA	See P.201
Non-motor end specification	NM	See P.202

## Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

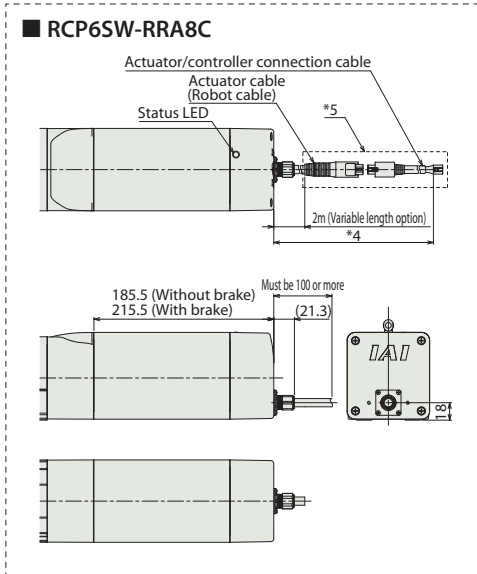
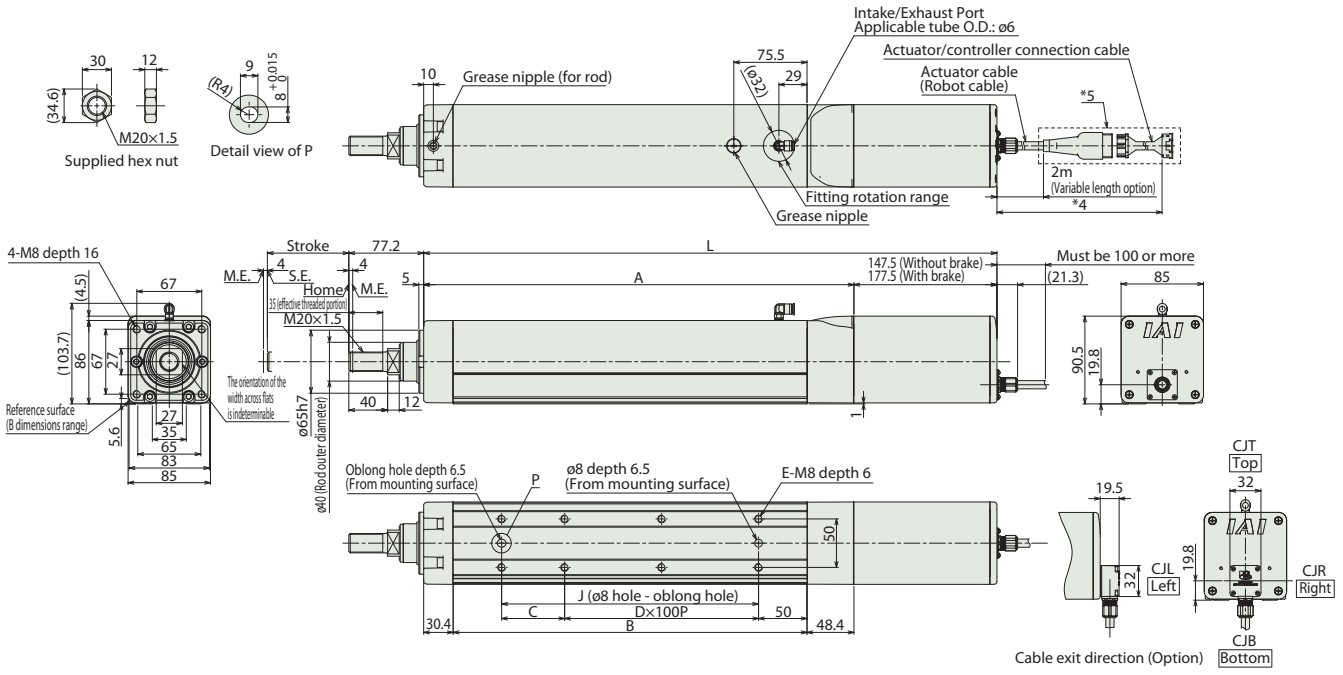


Dimensions

CAD drawings can be downloaded from our website.  
www.robocylinder.de

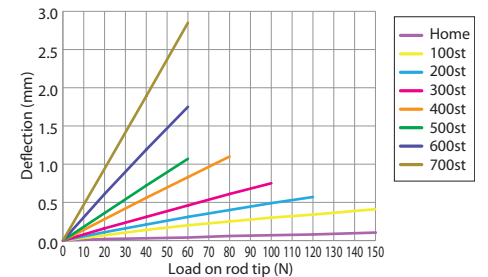


- \*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
- M.E: Mechanical end S.E: Stroke end
- \*2 The direction of width across flats varies depending on the product.
- \*3 When fixing the actuator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



- \*4 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
- \*5 The cable joint (connector) within the dotted line is not splash-proofed.

■ Rod Deflection of RCP6(S)W-RRR8C (Reference Values)



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700
L	RCP6W w/o brake	441.3	491.3	541.3	591.3	641.3	691.3	741.3	791.3	841.3	891.3	941.3	991.3	1041.3	1091.3
	RCP6W w/ brake	471.3	521.3	571.3	621.3	671.3	721.3	771.3	821.3	871.3	921.3	971.3	1021.3	1071.3	1121.3
L	RCP6SW w/o brake	479.3	529.3	579.3	629.3	679.3	729.3	779.3	829.3	879.3	929.3	979.3	1029.3	1079.3	1129.3
	RCP6SW w/ brake	509.3	559.3	609.3	659.3	709.3	759.3	809.3	859.3	909.3	959.3	1009.3	1059.3	1109.3	1159.3
A		293.8	343.8	393.8	443.8	493.8	543.8	593.8	643.8	693.8	743.8	793.8	843.8	893.8	943.8
B		215	265	315	365	415	465	515	565	615	665	715	765	815	865
C		115	65	115	65	115	65	115	65	115	65	115	65	115	65
D		0	1	1	2	2	3	3	4	4	5	5	6	6	7
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18
J		115	165	215	265	315	365	415	465	515	565	615	665	715	765
Allowable static load on rod tip (N)		222	186	159	139	124	111	101	92.1	84.7	78.4	72.8	68	63.7	59.8
Allowable dynamic load on rod tip (5,000km life) (N)		93.0	76.3	64.7	56.0	49.2	43.8	39.3	35.6	32.4	29.7	27.3	25.2	23.3	21.7
Allowable static torque on rod tip (N·m)		22.3	18.7	16.1	14.1	12.6	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.3
Allowable dynamic torque on rod tip (N·m)		7.2	6.2	5.4	4.8	4.3	3.9	3.5	3.2	3.0	2.7	2.5	2.4	2.2	2.0
Mass (kg)	RCP6W w/o brake	6.8	7.3	7.8	8.3	8.8	9.2	9.7	10.2	10.7	11.2	11.7	12.1	12.6	13.1
	RCP6W w/ brake	7.4	7.9	8.4	8.9	9.4	9.8	10.3	10.8	11.3	11.8	12.3	12.7	13.2	13.7
	RCP6SW w/o brake	7.1	7.6	8.1	8.6	9.1	9.5	10.0	10.5	11.0	11.5	12.0	12.4	12.9	13.4
	RCP6SW w/ brake	7.7	8.2	8.7	9.2	9.7	10.1	10.6	11.1	11.6	12.1	12.6	13.0	13.5	14.0

\* Please refer to P.252 for more information on component materials.

Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Positioner	Pulse train	Program	Control method			Maximum number of positioning points	Reference page
							Network * Option				
PCON-CFB/CGFB		1	DC24V	● Option	● Option	-	DeviceNet	CompoNet	EtherNet/IP	512 (768 for network spec.)	See P.255

# RCP6(S)W-RAA4R

Dust/Splash-Proof Spec

Battery-less Absolute

Motor Unit Type

Side-mounted Motor

Body Width 45\* mm

24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6S W: Built-in Controller	—	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 400: 400mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [RCP6S] SE: SIO Type	N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable	* Body width does not include the width of the side-mounted motor. Please refer to the options table below. * Please make sure to specify MT when ordering the side-mounted motor type.

\* RCP6 does not include a controller. RCP6S includes a built-in controller.  
\* Please refer to P.19 for more information about the model specification items.

## Radial Load Applicable

CE

RoHS

Horizontal

Vertical

Side

Ceiling

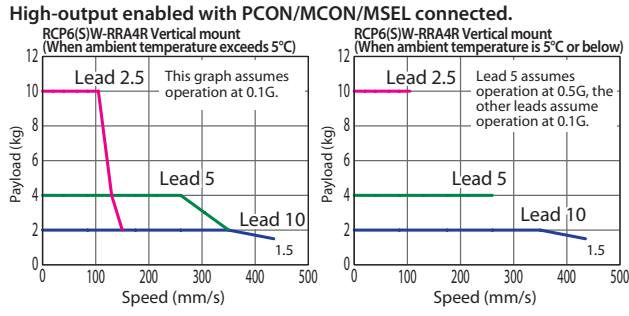
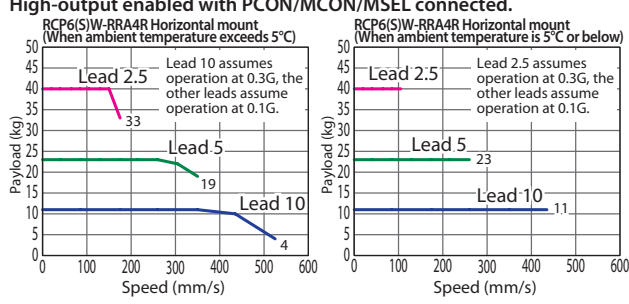


\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes
- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.237 for more details.
  - (3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
  - (4) Please refer to P.205 for performing push-motion operation.
  - (5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



Actuator Specifications					
<b>Lead and Payload</b>					
* Horizontal external guide rail required for horizontal payload. ** Push force only available during push mode w/ limited speed.	Model Number	Lead (mm)	Max. Payload Horizontal (kg)* Vertical (kg)	Max. Push Force (N)**	Stroke (mm)
	RCP6(S)W-RAA4R-WA-35P-10-①-②-③-④	10	11      2	77	50~400 (Every 50mm)
	RCP6(S)W-RAA4R-WA-35P-5-①-②-③-④	5	23      4	155	
	RCP6(S)W-RAA4R-WA-35P-2.5-①-②-③-④	2.5	40      10	310	
Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options					

Stroke and Max Speed (Unit: mm/s)		
Lead (mm)	50~350 (Every 50mm)	400
10	525 <435> [435]	
5	350 [260]	340 [260]
2.5	175 <150> [105]	170 <150> [105]

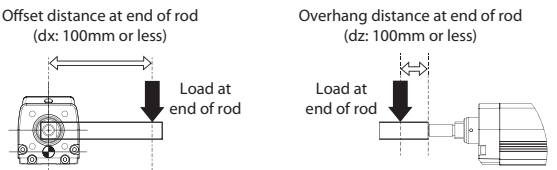
Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

Cable Length			
Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

Actuator Specifications	
Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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



Options		
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Right)	CJR	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Tip adapter (Flange)	FFA	See P.197
Tip adapter (Internal thread)	NFA	See P.201
Tip adapter (Keyway)	KFA	See P.201
Motor side-mounted on top	MT	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

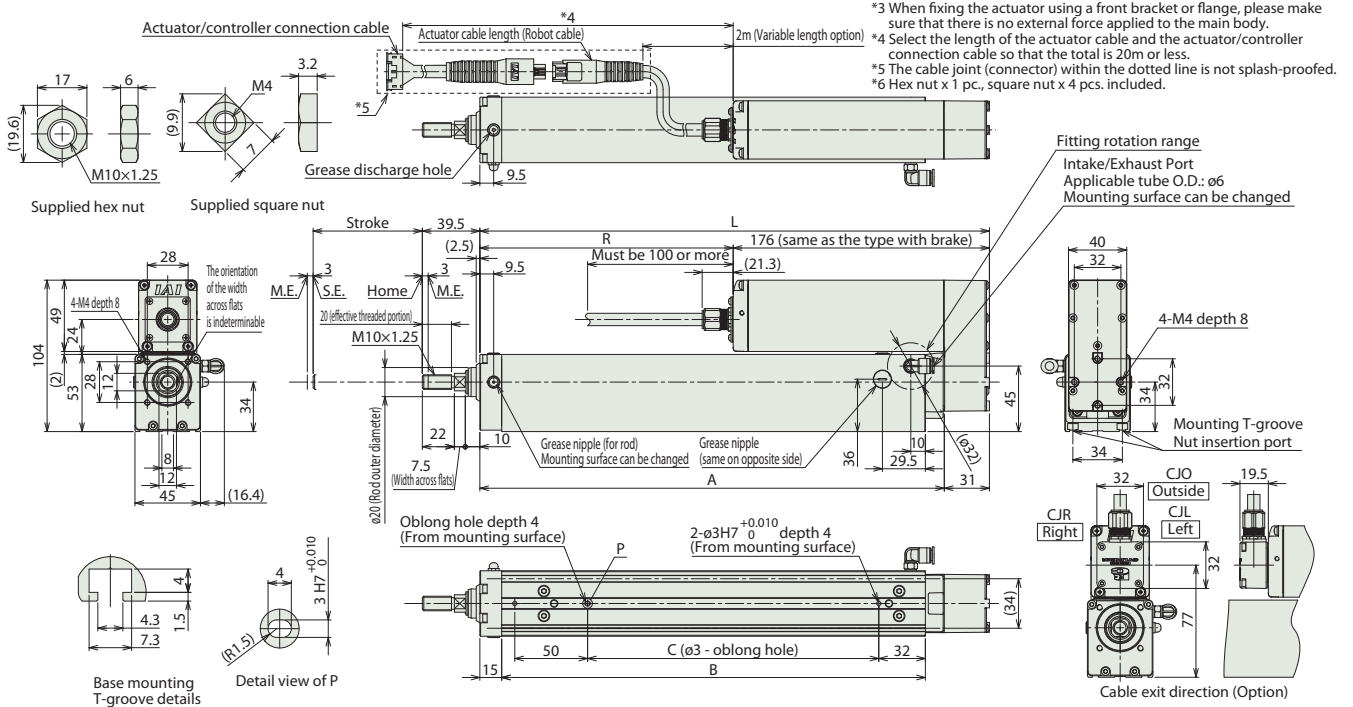


## Dimensions

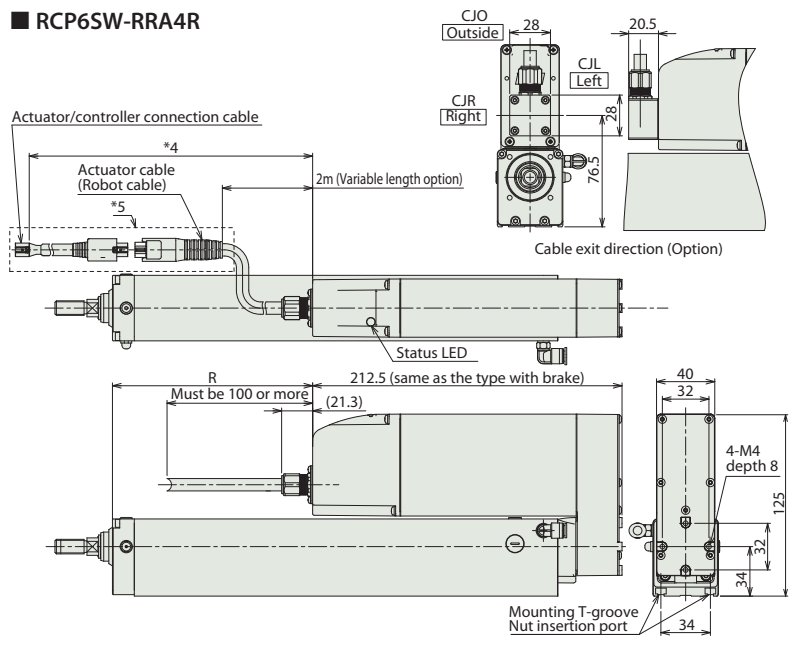
CAD drawings can be downloaded from our website.  
www.robocylinder.de



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

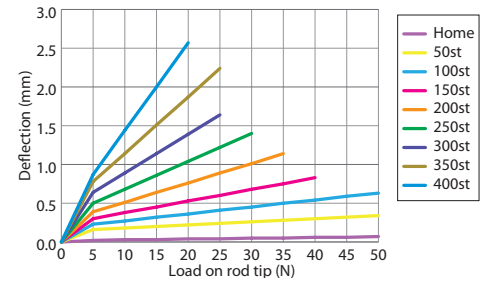


### RCP6SW-RR4R



\* Please refer to P.251 for more information on component materials.

### ■ Rod Deflection of RCP6(S)W-RR4R (Reference Values)



### ■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400
L	200	250	300	350	400	450	500	550
A	169	219	269	319	369	419	469	519
B	141	191	241	291	341	391	441	491
C	50	100	150	200	250	300	350	400
R	RCP6W	24	74	124	174	224	274	324
	RCP6SW	-12.5	37.5	87.5	137.5	187.5	237.5	287.5
Allowable static load on rod tip (N)	RCP6W	63.4	50.7	42.1	36	31.3	27.6	24.6
	RCP6SW	-	-	-	-	-	-	-
Allowable dynamic load on rod tip (5,000km life) (N)	Offset 0mm	28.9	22.2	17.9	14.8	12.6	10.8	9.4
	Offset 100mm	17.9	15.5	13.4	11.6	10.2	9.0	8.0
Allowable static torque on rod tip (N·m)	RCP6W	6.4	5.1	4.3	3.7	3.2	2.9	2.6
	RCP6SW	-	-	-	-	-	-	-
Allowable dynamic torque on rod tip (N·m)	w/o brake	1.7	1.5	1.3	1.1	1.0	0.9	0.7
	w/ brake	1.6	1.8	2.0	2.2	2.4	2.6	2.8
Mass (kg)	w/o brake	1.7	1.9	2.1	2.3	2.5	2.7	2.9
	w/ brake	1.8	2.0	2.2	2.4	2.6	2.8	3.0
RCP6SW	w/o brake	1.9	2.1	2.3	2.5	2.7	2.9	3.1
	w/ brake	-	-	-	-	-	-	-

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

## Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	-	Network cannot be selected	64	-
PCON-CB/CGB		1		* Option	* Option	-	DeviceNet CC-Link EtherCAT EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
MCON-LC/LCG (*) (**)		6		-	-	●	CompoNet	256	-
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	-	-	●	Note: The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.				768	Please see P.277	

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

# RCP6(S)W-RAA6R

Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Side-mounted Motor
Body Width 65\* mm
24v Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	RRA6R	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12: 12mm 6: 6mm 3: 3mm	50: 50mm 400: 400mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [RCP6S] SE: SIO Type	N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable	* Body width does not include the width of the side-mounted motor. Please refer to the options table below. * Please make sure to specify MT when ordering the side-mounted motor type.

\* RCP6 does not include a controller. RCP6S includes a built-in controller.  
\* Please refer to P.19 for more information about the model specification items.

## Radial Load Applicable

CE
RoHS

Horizontal
Vertical

Side
Ceiling

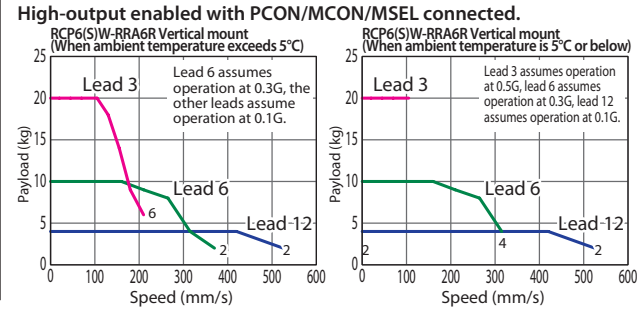
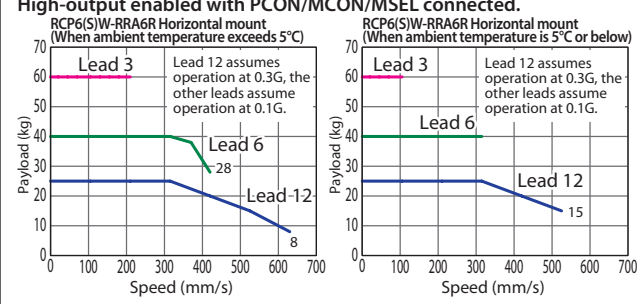


\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.237 for more details.
  - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
  - Please refer to P.205 for performing push-motion operation.
  - Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



## Actuator Specifications

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-RAA6R-WA-42P-12-①-②-③-④	12	25	4	93	50~400 (Every 50mm)
RCP6(S)W-RAA6R-WA-42P-6-①-②-③-④	6	40	10	185	
RCP6(S)W-RAA6R-WA-42P-3-①-②-③-④	3	60	20	370	

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

### Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~400 (Every 50mm)
12	630 <525> [525]
6	420 <370> [315]
3	210 [105]

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

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

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

## Options

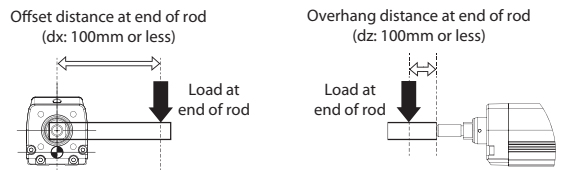
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Right)	CJR	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Tip adapter (Flange)	FFA	See P.197
Tip adapter (Internal thread)	NFA	See P.201
Tip adapter (Keyway)	KFA	See P.201
Motor side-mounted on top	MT	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

## Actuator Specifications

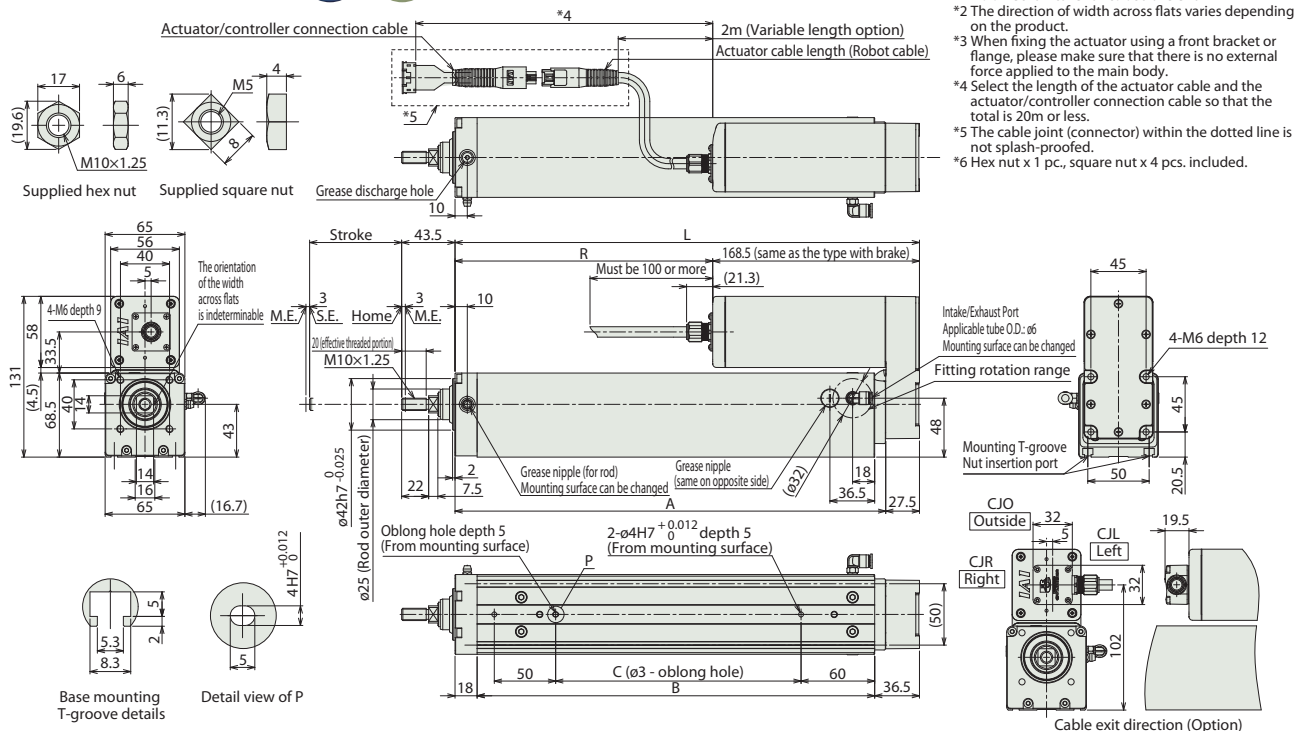
Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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



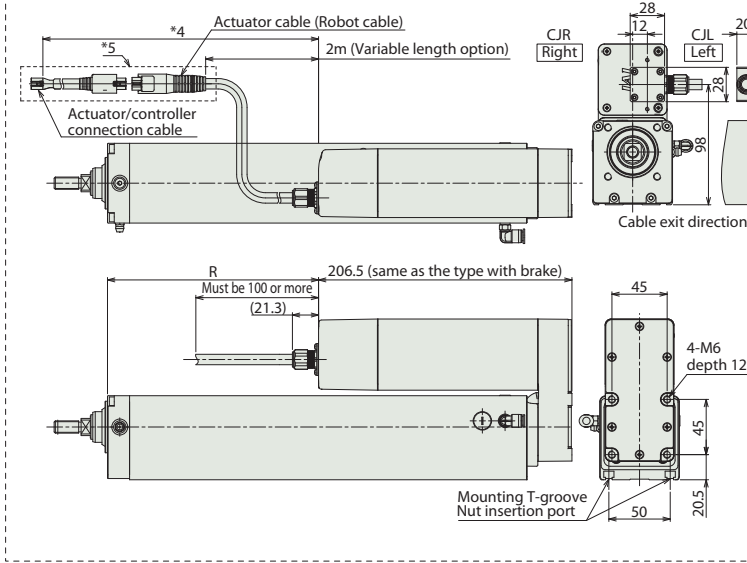
Dimensions

CAD drawings can be downloaded from our website.  
www.robocylinder.de

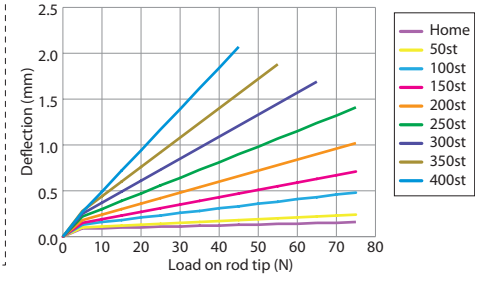


- \*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.  
M.E: Mechanical end S.E: Stroke end
- \*2 The direction of width across flats varies depending on the product.
- \*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.
- \*4 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
- \*5 The cable joint (connector) within the dotted line is not splash-proofed.
- \*6 Hex nut x 1 pc., square nut x 4 pcs. included.

RCP6SW-RR6R



Rod Deflection of RCP6(S)W-RR6R (Reference Values)



Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400
L	228.5	278.5	328.5	378.5	428.5	478.5	528.5	578.5
A	201	251	301	351	401	451	501	551
B	174	224	274	324	374	424	474	524
C	50	100	150	200	250	300	350	400
R	RCP6W	60	110	160	210	260	310	360
	RCP6SW	22	72	122	172	222	272	322
Allowable static load on rod tip (N)	Offset 0mm	144	117	99.0	85.4	75.0	66.7	59.9
	Offset 100mm	38.8	34.0	29.7	26.2	23.2	20.8	18.7
Allowable dynamic load on rod tip (5,000km life) (N)	Offset 0mm	58.1	46.4	38.3	32.4	27.9	24.4	21.5
	Offset 100mm	38.8	34.0	29.7	26.2	23.2	20.8	18.7
Allowable static torque on rod tip (N·m)	Offset 0mm	14.5	11.8	10.0	8.7	7.6	6.8	6.2
	Offset 100mm	3.8	3.3	2.9	2.6	2.3	2.0	1.8
Allowable dynamic torque on rod tip (N·m)	Offset 0mm	3.1	3.4	3.8	4.2	4.5	4.9	5.2
	Offset 100mm	3.2	3.5	3.9	4.3	4.6	5.0	5.3
Mass (kg)	RCP6W w/o brake	3.3	3.6	4.0	4.4	4.7	5.1	5.4
	RCP6SW w/o brake	3.4	3.7	4.1	4.5	4.8	5.2	5.5

\* Please refer to P.251 for more information on component materials.

Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	—	Network cannot be selected	64	—
PCON-CB/CGB		1		* Option	* Option	—	DeviceNet CC-Link EtherCAT EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
MCON-LC/LCG (*) (**)		6		—	—	●	CompoNet	256	—
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	—	—	●	30000	30000	Please see the MSEL catalog or manual.
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.				768	768	Please see P.277

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

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

Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

# RCP6(S)W-RAA7R

Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Side-mounted Motor
Body Width 78\* mm
24v Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16: 16mm 8: 8mm 4: 4mm	50: 50mm 500: 500mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [RCP6S] SE: SIO Type	N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable	* Body width does not include the width of the side-mounted motor. Please refer to the options table below. * Please make sure to specify MT when ordering the side-mounted motor type.	

\* RCP6 does not include a controller. RCP6S includes a built-in controller.  
\* Please refer to P.19 for more information about the model specification items.

## Radial Load Applicable

CE
RoHS

Horizontal
Vertical

Side
Ceiling



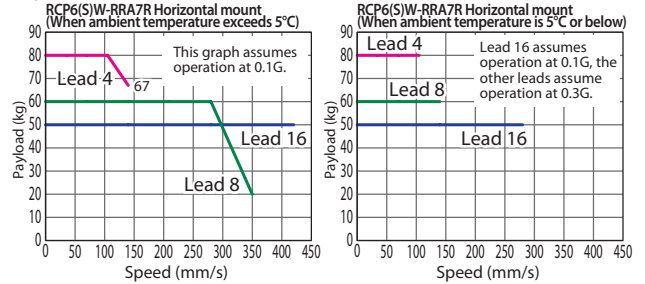
\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.238 for more details.
  - (3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
  - (4) Please refer to P.205 for performing push-motion operation.
  - (5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
  - (6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

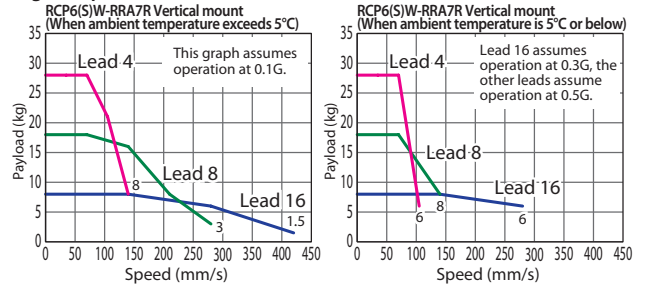
## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

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



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



## Actuator Specifications

### Lead and Payload

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-RAA7R-WA-56P-16-①-②-③-④	16	50	8	273	50~500 (Every 50mm)
RCP6(S)W-RAA7R-WA-56P-8-①-②-③-④	8	60	18	547	
RCP6(S)W-RAA7R-WA-56P-4-①-②-③-④	4	80	28	1094	

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

### Stroke and Max Speed

Lead (mm)	50~500 (Every 50mm)
16	420 [280]
8	350 <280> [140]
4	140 [105]

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

## Options

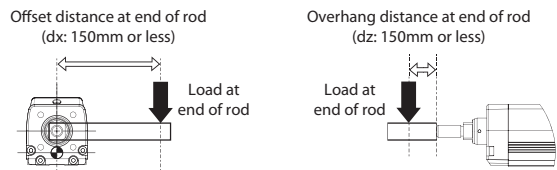
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Right)	CJR	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Tip adapter (Flange)	FFA	See P.197
Tip adapter (Internal thread)	NFA	See P.201
Tip adapter (Keyway)	KFA	See P.201
Motor side-mounted on top	MT	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

## Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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



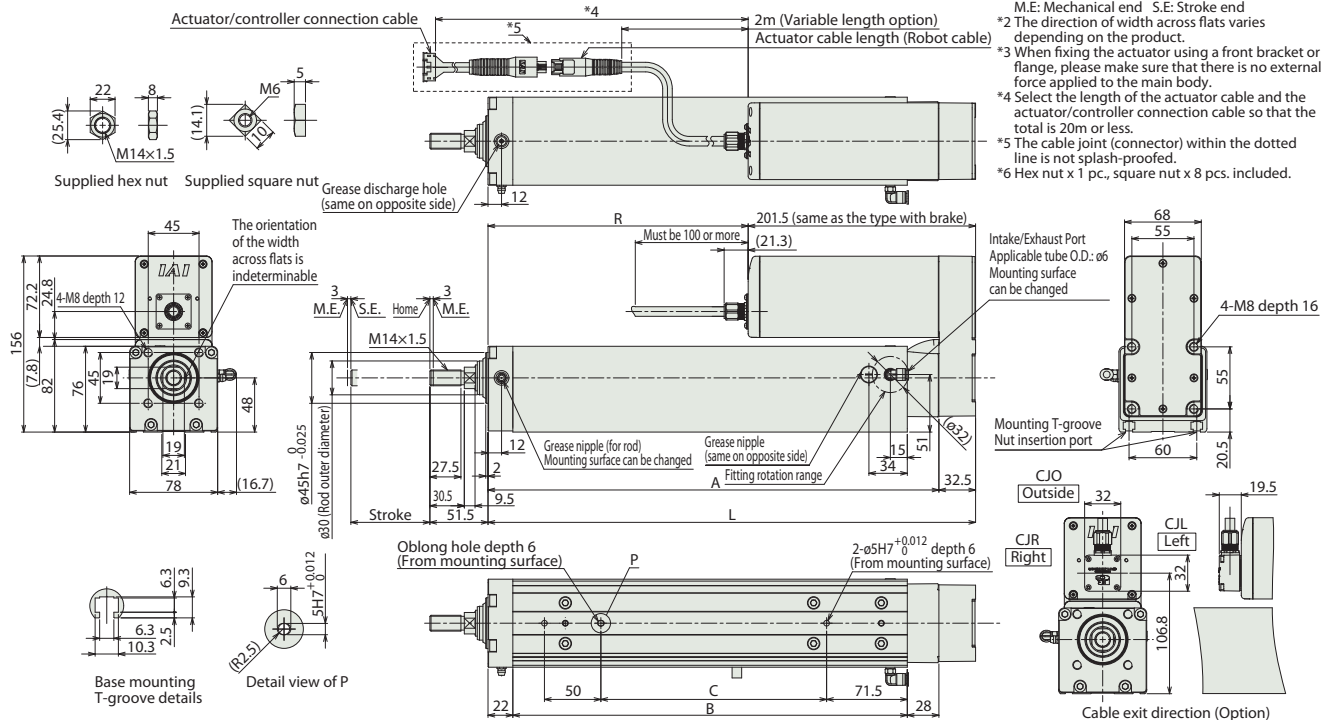


## Dimensions

CAD drawings can be downloaded from our website.  
www.robocylinder.de

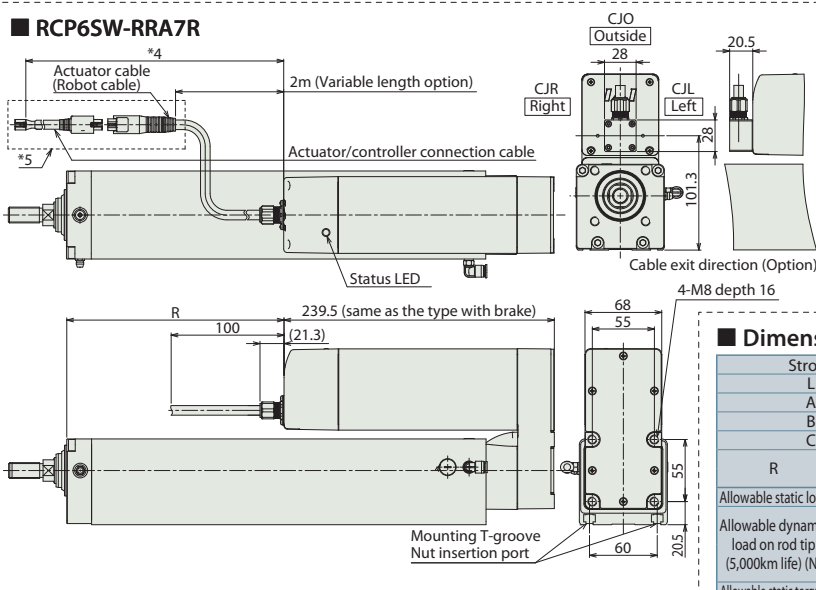
2D CAD

3D CAD

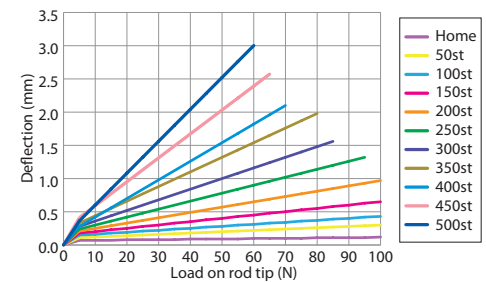


- \*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
- \*2 The direction of width across flats varies depending on the product.
- \*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.
- \*4 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
- \*5 The cable joint (connector) within the dotted line is not splash-proofed.
- \*6 Hex nut x 1 pc., square nut x 8 pcs. included.

### RCP6SW-RRR7R



### Rod Deflection of RCP6(S)W-RRR7R (Reference Values)



### Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	
L	282	332	382	432	482	532	582	632	682	732	
A	249.5	299.5	349.5	399.5	449.5	499.5	549.5	599.5	649.5	699.5	
B	199.5	249.5	299.5	349.5	399.5	449.5	499.5	549.5	599.5	649.5	
C	50	100	150	200	250	300	350	400	450	500	
R	RCP6W	80.5	130.5	180.5	230.5	280.5	330.5	380.5	430.5	480.5	530.5
	RCP6SW	42.5	92.5	142.5	192.5	242.5	292.5	342.5	392.5	442.5	492.5
Allowable static load on rod tip (N)	175	147	126	111	98.6	88.7	80.6	73.8	68.0	63.0	
Allowable dynamic load on rod tip (5,000km life) (N)	Offset 0mm	75.7	62.6	53.1	46.0	40.5	36.1	32.5	29.4	26.9	24.7
	Offset 100mm	49.8	45.1	40.5	36.5	33.1	30.2	27.7	25.5	23.6	21.9
Allowable static torque on rod tip (N·m)	17.6	14.7	12.7	11.2	9.9	9.0	8.2	7.5	6.94	6.45	
Allowable dynamic torque on rod tip (N·m)	w/o brake	5.0	4.5	4.0	3.6	3.3	3.0	2.8	2.5	2.32	2.16
	w/ brake	5.6	6.1	6.6	7.1	7.5	8.0	8.5	9.0	9.5	10.0
Mass (kg)	RCP6W	5.7	6.2	6.7	7.2	7.6	8.1	8.6	9.1	9.6	10.1
	RCP6SW	5.8	6.3	6.8	7.3	7.7	8.2	8.7	9.2	9.7	10.2
	w/ brake	5.9	6.4	6.9	7.4	7.8	8.3	8.8	9.3	9.8	10.3

\* Please refer to P.251 and P.252 for more information on component materials.

## Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	—	Network cannot be selected	64	—
PCON-CB/CGB		1		* Option	* Option	—	DeviceNet CC-Link EtherCAT EtherNet/IP CompoNet	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
MCON-LC/LCG (**)(**)		6		—	—	●	—	256	—
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	—	—	●	—	30000	Please see the MSEL catalog or manual.
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.				—	768	Please see P.277

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

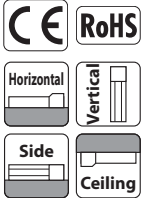
# RCP6(S)W-RRA8R

Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Side-mounted Motor
Body Width 85\* mm
24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	<b>RRA8R</b>	<b>WA</b>	<b>60P</b>	20 :20mm 10 :10mm 5 : 5mm	50:50mm 700:700mm (Every 50mm)	[RCP6] P4 : PCON-CF/ CGFB [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	* Body width does not include the width of the side-mounted motor. 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.18 for more information about the model specification items.

## Radial Load Applicable



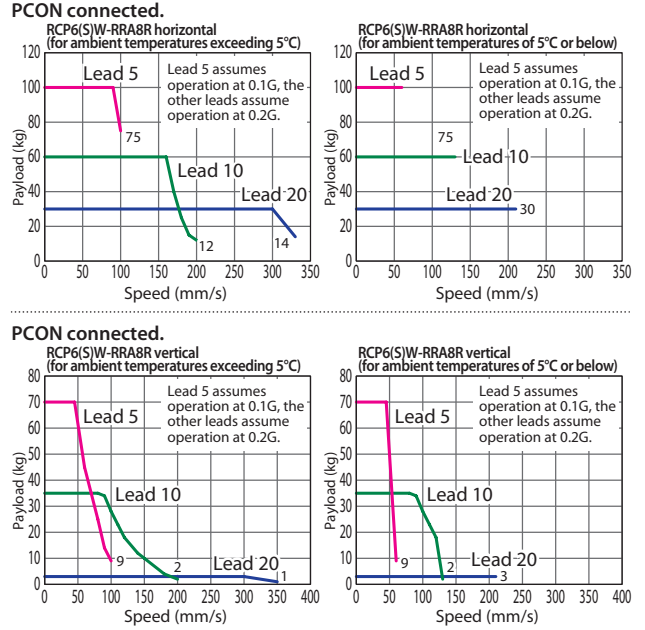
The figure above is the motor side-mounted to left (ML).

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

- POINT Selection Notes**
- The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.238 for more details.
  - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.243 and after for the allowable load mass.
  - Please refer to P205 for performing push-motion operation.
  - For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
  - The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.
  - Install the cable joint connector in locations where it will not be exposed to water, as it is not splash-proofed.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



## Actuator Specifications

### Lead and Payload

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

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-RRA8R-WA-60P-20-①-②-③-④	20	30	3	500	50~700 (Every 50mm)
RCP6(S)W-RRA8R-WA-60P-10-①-②-③-④	10	60	35	1000	
RCP6(S)W-RRA8R-WA-60P-5-①-②-③-④	5	100	70	2000	

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

### Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50	100~450 (Every 50mm)	500	550	600	650	700
20	280 [210]	350 <330> [210]		320 [210]	280 [210]	240 [210]	220 [210]
10		200 [130]	180 [130]	160 [130]	140 [130]	120 [120]	110 [110]
5		100 [60]	90 [60]	80 [60]	70 [60]	60 [60]	55 [55]

Values in brackets < > are for vertical use.  
Values in brackets [ ] are for ambient temperatures of 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

## Options

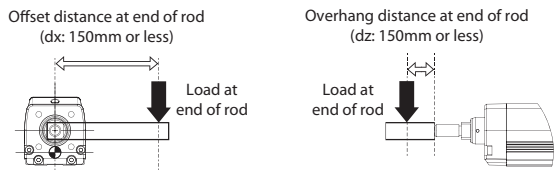
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Tip adapter (Internal thread)	NFA	See P.201
Motor side-mounted to left (standard)	ML	See P.201
Motor side-mounted to right	MR	See P.201
Non-motor end specification	NM	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

## Actuator Specifications

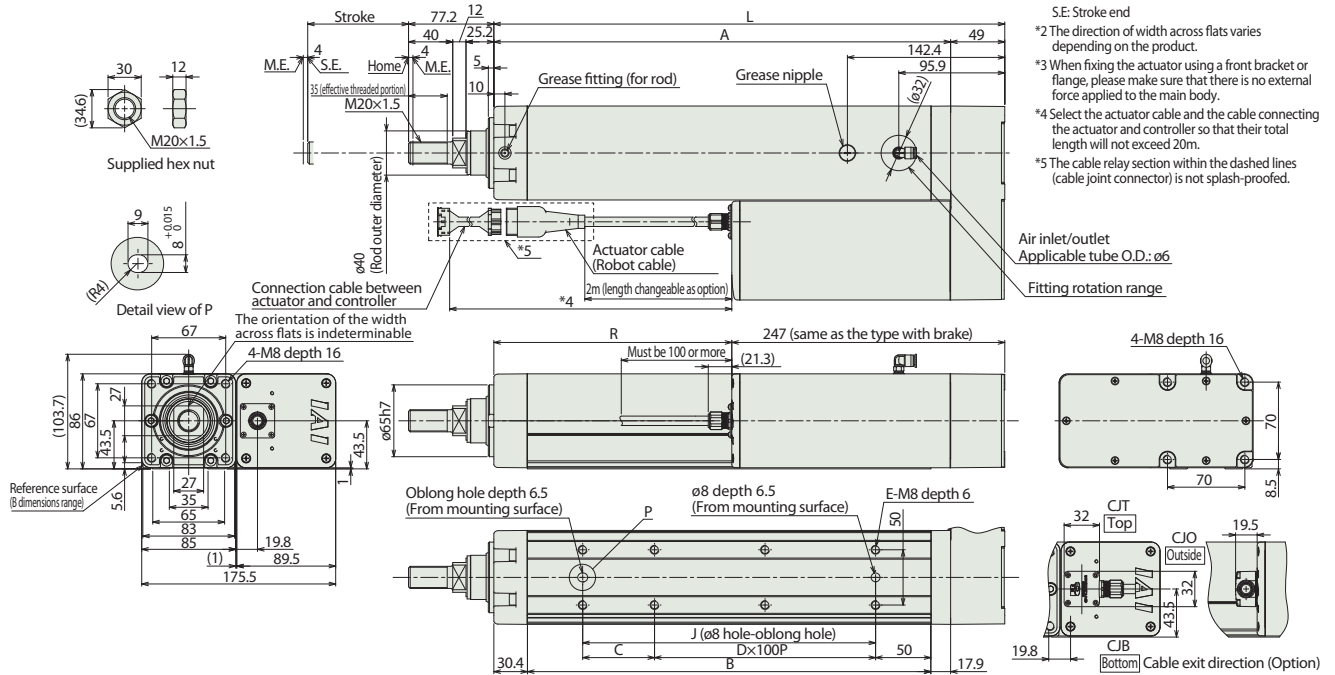
Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 243
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

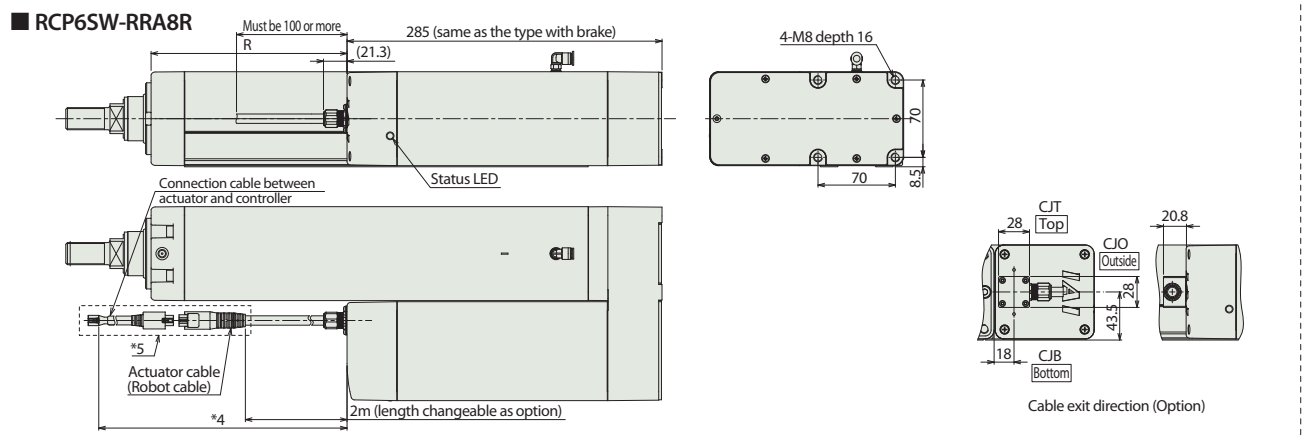


Dimensions

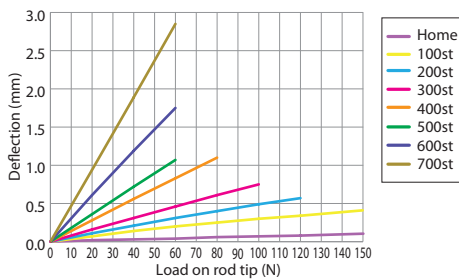
CAD drawings can be downloaded from our website.  
www.robocylinder.de



- \*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.  
M.E: Mechanical end  
S.E: Stroke end
- \*2 The direction of width across flats varies depending on the product.
- \*3 When fixing the actuator using a front bracket or flange, please make sure that there is no external force applied to the main body.
- \*4 Select the actuator cable and the cable connecting the actuator and controller so that their total length will not exceed 20m.
- \*5 The cable relay section within the dashed lines (cable joint connector) is not splash-proofed.



■ Rod Deflection of RCP6(S)W-RRR8R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	
L	312.3	362.3	412.3	462.3	512.3	562.3	612.3	662.3	712.3	762.3	812.3	862.3	912.3	962.3	
A	263.3	313.3	363.3	413.3	463.3	513.3	563.3	613.3	663.3	713.3	763.3	813.3	863.3	913.3	
B	215	265	315	365	415	465	515	565	615	665	715	765	815	865	
C	115	65	115	65	115	65	115	65	115	65	115	65	115	65	
D	0	1	1	2	2	3	3	4	4	5	5	6	6	7	
E	4	6	6	8	8	10	10	12	12	14	14	16	16	18	
J	115	165	215	265	315	365	415	465	515	565	615	665	715	765	
R	RCP6W	65.3	115.3	165.3	215.3	265.3	315.3	365.3	415.3	465.3	515.3	565.3	615.3	665.3	
	RCP6SW	27.3	77.3	127.3	177.3	227.3	277.3	327.3	377.3	427.3	477.3	527.3	577.3	627.3	
Allowable static load on rod tip (N)	222	186	159	139	124	111	101	92.1	84.7	78.4	72.8	68.0	63.7	59.8	
Allowable dynamic load on rod tip (5,000km life) (N)	93.0	76.3	64.7	56.0	49.2	43.8	39.3	35.6	32.4	29.7	27.3	25.2	23.3	21.7	
Allowable static torque on rod tip (N·m)	22.3	18.7	16.1	14.1	12.6	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.3	
Allowable dynamic torque on rod tip (N·m)	7.2	6.2	5.4	4.8	4.3	3.9	3.5	3.2	3.0	2.7	2.5	2.4	2.2	2.0	
Mass (kg)	RCP6W	w/o brake	8.0	8.5	9.0	9.5	10.0	10.4	10.9	11.4	11.9	12.4	12.9	13.3	13.8
		w/ brake	8.3	8.8	9.3	9.8	10.3	10.7	11.2	11.7	12.2	12.7	13.2	13.6	14.1
	RCP6SW	w/o brake	8.4	8.9	9.4	9.9	10.4	10.8	11.3	11.8	12.3	12.8	13.3	13.7	14.2
		w/ brake	8.6	9.1	9.6	10.1	10.6	11.0	11.5	12.0	12.5	13.0	13.5	13.9	14.4

\* Please refer to P.252 for part materials.

Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Positioner	Pulse train	Program	Control method			Maximum number of positioning points	Reference page
							Network	* Option			
PCON-CFB/CGFB		1	DC24V	● *Option	● *Option	-	DeviceNet	CompoNet	EtherNet/IP	512 (768 for network spec.)	See P.255

Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

# RCP6(S)W-WRA10C

Dust/Splash-Proof Spec

Battery-less Absolute

Motor Unit Type

Coupled Motor

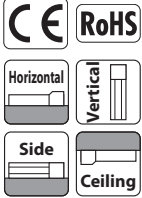
Body Width 100 mm

24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA10C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 500: 500mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [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.20 for more information about the model specification items.

## Radial Load Applicable



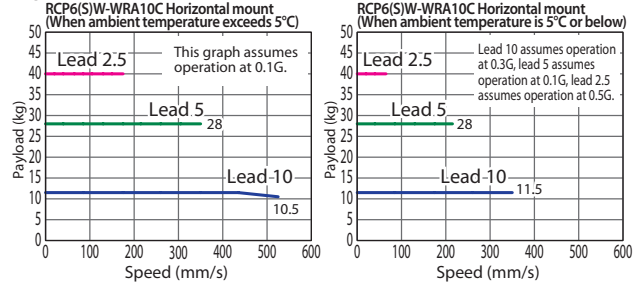
\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.239 for more details.
  - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
  - Please refer to P.205 for performing push-motion operation.
  - The cable joint connector is not splash-protected, so it should be located where there is no splash.
  - The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

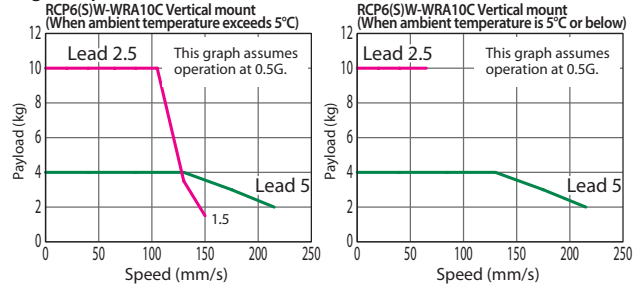
## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

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



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



## Actuator Specifications

### Lead and Payload

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-WRA10C-WA-35P-10-①②③④	10	11.5	-	77	50~500 (Every 50mm)
RCP6(S)W-WRA10C-WA-35P-5-①②③④	5	28	4	155	
RCP6(S)W-WRA10C-WA-35P-2.5-①②③④	2.5	40	10	310	

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

### Stroke and Max Speed

Lead (mm)	50~400 (Every 50mm)			450	500
	50	100	150		
10	525	350	290	490	350
5	350	<215>	<215>	240	<215>
2.5	175	<150>	[65]	145	120

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		-

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

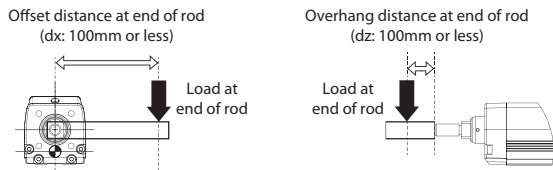
## Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Non-motor end specification	NM	See P.202
T-slot nut bar (Left)	NTBL	See P.202
T-slot nut bar (Right)	NTBR	See P.202

## Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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



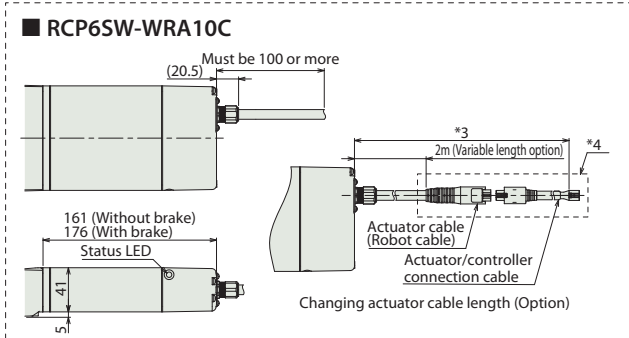
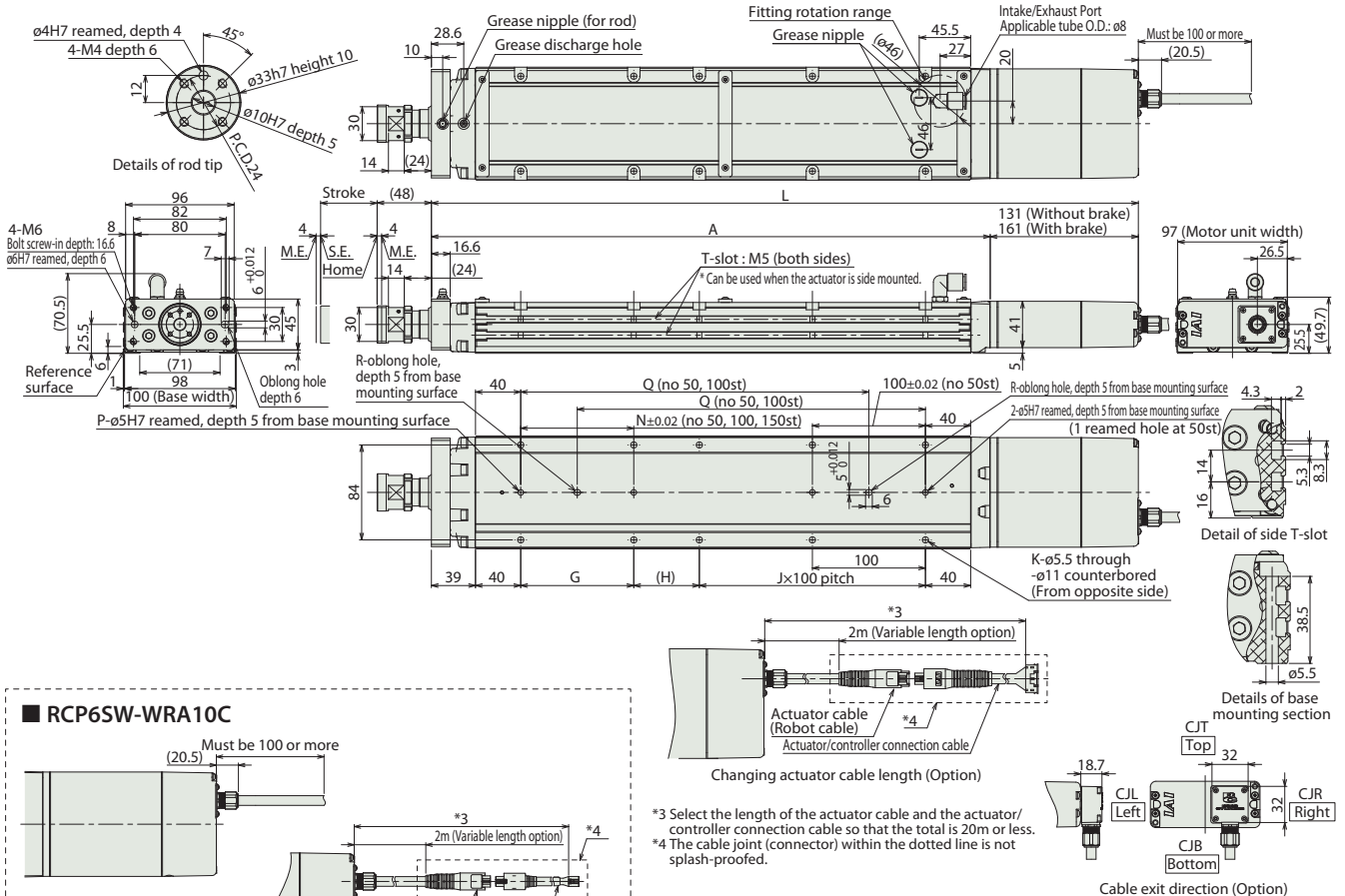


## Dimensions

CAD drawings can be downloaded from our website.  
www.robocylinder.de



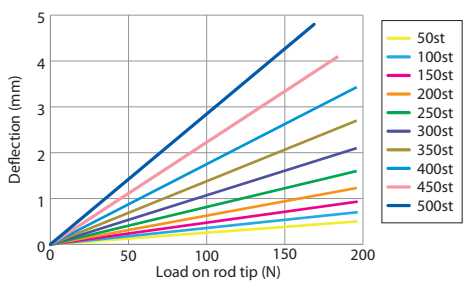
- \*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.  
M.E: Mechanical end S.E: Stroke end
- \*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



### Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	
L	RCP6W w/o brake	375.3	425.3	475.3	525.3	575.3	625.3	675.3	725.3	775.3	825.3	
	RCP6W w/ brake	405.3	455.3	505.3	555.3	605.3	655.3	705.3	755.3	805.3	855.3	
	RCP6SW w/o brake	405.3	455.3	505.3	555.3	605.3	655.3	705.3	755.3	805.3	855.3	
	RCP6SW w/ brake	420.3	470.3	520.3	570.3	620.3	670.3	720.3	770.3	820.3	870.3	
A		244.3	294.3	344.3	394.3	444.3	494.3	544.3	594.3	644.3	694.3	
G		-	-	100	100	100	100	100	100	100	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)	98	98	98	95	85	76	68	62	57	52
		Load offset 100mm	50	50	50	50	50	50	50	50	50	49
5,000km	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	
	Allowable dynamic load on rod tip (N)	98	98	91	80	71	63	57	52	47	43	
	Load offset 100mm	50	50	50	50	50	50	50	48	44	40	
	Allowable dynamic torque on rod tip (N·m)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.8	4.4	4.0	
Mass (kg)	RCP6W w/o brake	3.7	4.1	4.6	5.0	5.5	5.9	6.4	6.8	7.3	7.7	
	RCP6W w/ brake	3.9	4.3	4.8	5.2	5.7	6.1	6.6	7.0	7.5	7.9	
RCP6SW	w/o brake	3.8	4.2	4.7	5.1	5.6	6.0	6.5	6.9	7.4	7.8	
	w/ brake	4.0	4.4	4.9	5.3	5.8	6.2	6.7	7.1	7.6	8.0	

### Rod Deflection of RCP6(S)W-WRA10C (Reference Values)



\* Please refer to P.253 for more information on component materials.

### Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	-	Network cannot be selected	64	-
PCON-CB/CGB		1		* Option	* Option	-	DeviceNet CC-Link EtherCAT/IP CompoNet	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
MCON-LC/LCG (*) (**)		6		-	-	●	256	-	
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	-	-	●	30000	Please see the MSEL catalog or manual.	
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.				768	Please see P.277	

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

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

Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

# RCP6(S)W-WRA12C

Dust/Splash-Proof Spec

Battery-less Absolute

Motor Unit Type

Coupled Motor

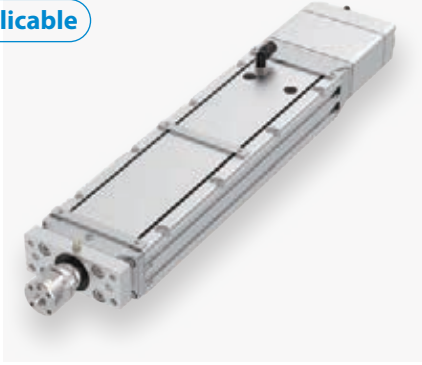
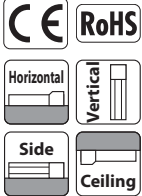
Body Width 120 mm

24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA12C	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	12: 12mm 6: 6mm 3: 3mm	50: 50mm 500: 500mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [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.20 for more information about the model specification items.

## Radial Load Applicable

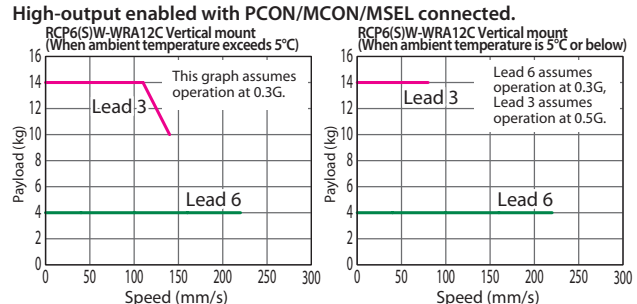
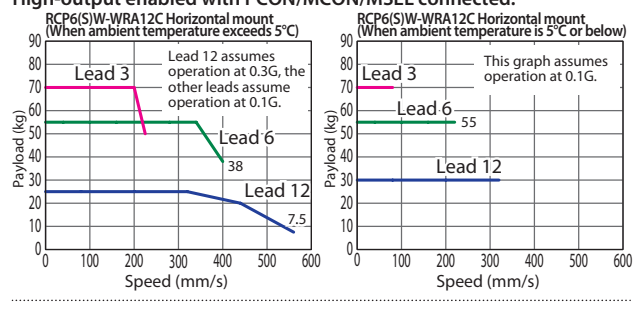


\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.239 for more details.
  - (3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
  - (4) Please refer to P.205 for performing push-motion operation.
  - (5) Depending on the ambient temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
  - (6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.
  - (7) The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



## Actuator Specifications

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-WRA12C-WA-42P-12-①-②-③-④	12	30	-	93	50~500 (Every 50mm)
RCP6(S)W-WRA12C-WA-42P-6-①-②-③-④	6	55	4	185	
RCP6(S)W-WRA12C-WA-42P-3-①-②-③-④	3	70	14	370	

Lead (mm)	Stroke and Max Speed (Unit: mm/s)	
	50~400 (Every 50mm)	450 500
12	560 [320]	
6	400 <220> [220]	375 <220> [220]
3	225 <140> [80]	220 <140> [80] 185 <140> [80]

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options  
\* Horizontal external guide rail required for horizontal payload. \*\* Push force only available during push mode w/ limited speed. Values in brackets <> are for vertical use. Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		-

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

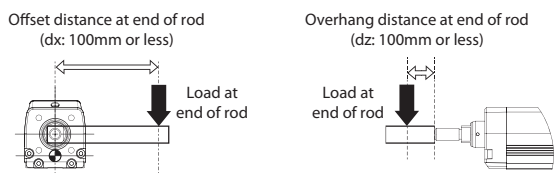
## Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Non-motor end specification	NM	See P.202
T-slot nut bar (Left)	NTBL	See P.202
T-slot nut bar (Right)	NTBR	See P.202

## Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

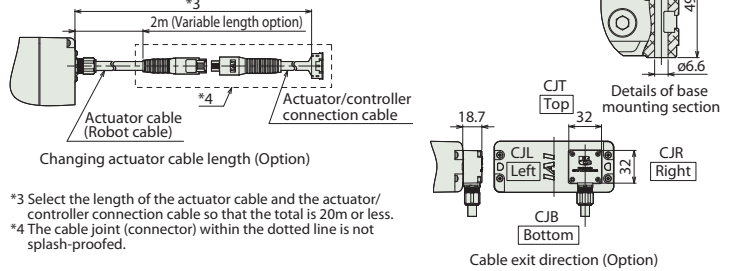
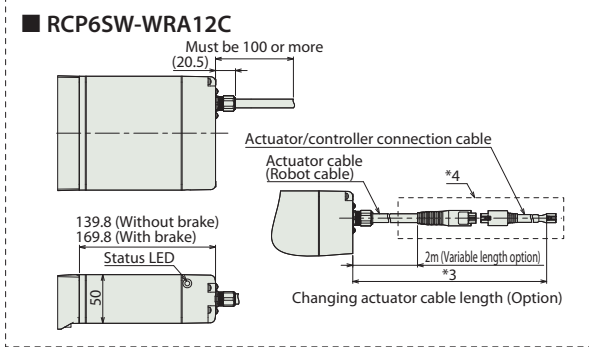
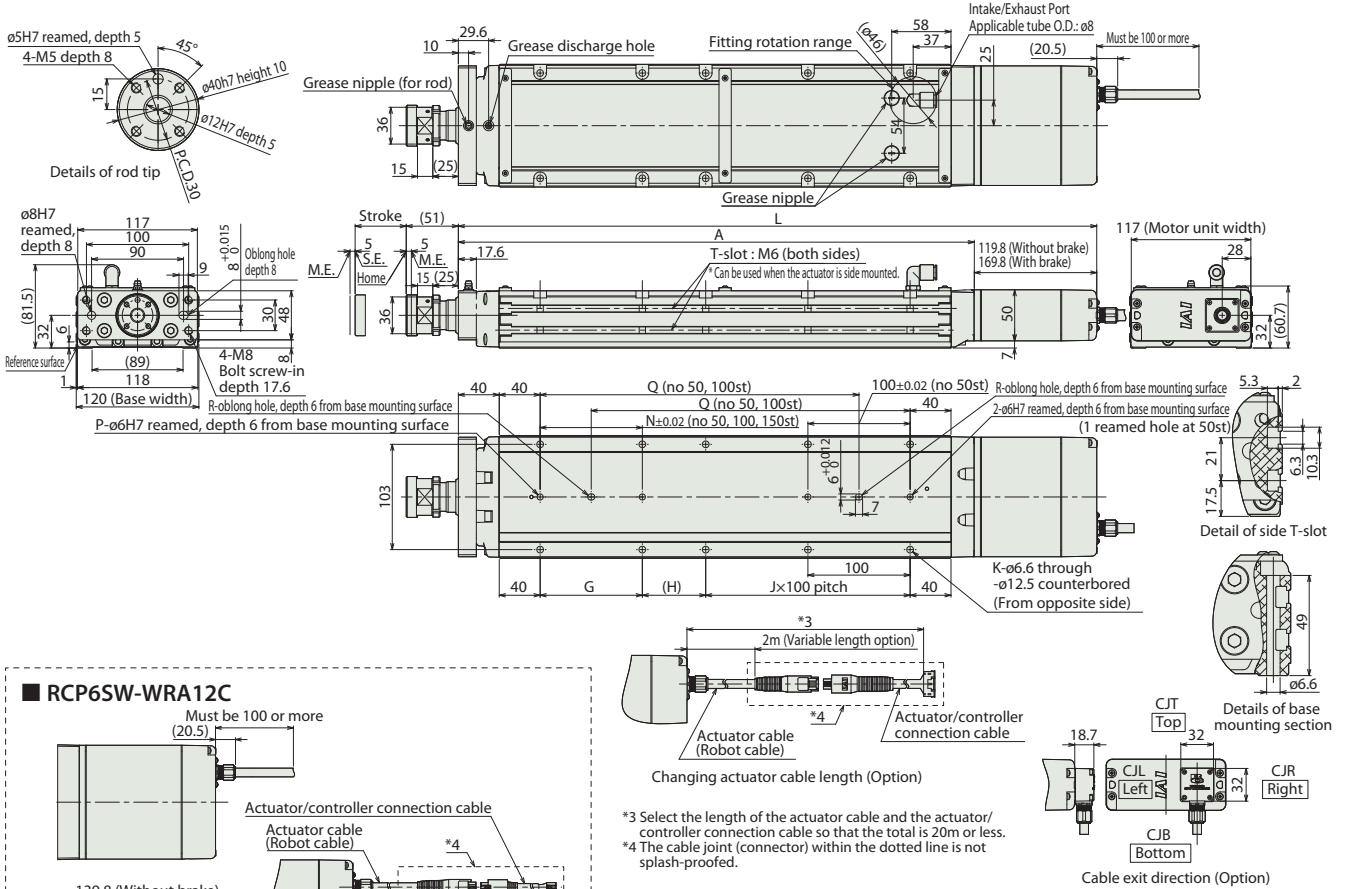


Dimensions

CAD drawings can be downloaded from our website.  
www.robocylinder.de

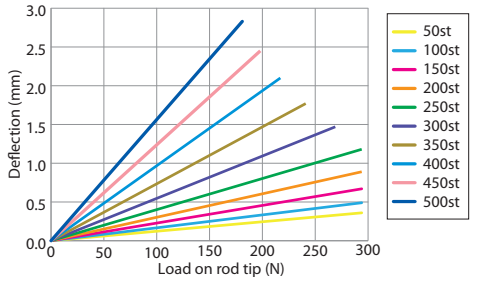


- \*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.  
M.E: Mechanical end S.E: Stroke end
- \*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



- \*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
- \*4 The cable joint (connector) within the dotted line is not splash-proofed.

■ Rod Deflection of RCP6(S)W-WRA12C (Reference Values)



\* Please refer to P.254 for more information on component materials.

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	
L	RCP6W w/o brake	374.6	424.6	474.6	524.6	574.6	624.6	674.6	724.6	774.6	824.6	
	RCP6W w/ brake	424.6	474.6	524.6	574.6	624.6	674.6	724.6	774.6	824.6	874.6	
	RCP6SW w/o brake	394.6	444.6	494.6	544.6	594.6	644.6	694.6	744.6	794.6	844.6	
	RCP6SW w/ brake	424.6	474.6	524.6	574.6	624.6	674.6	724.6	774.6	824.6	874.6	
A		254.8	304.8	354.8	404.8	454.8	504.8	554.8	604.8	654.8	704.8	
G		-	-	-	100	100	100	100	100	100	100	
H		112	62	112	62	112	62	112	62	112	62	
J		0	1	1	1	1	2	2	3	3	4	
K		4	6	6	8	8	10	10	12	12	14	
N		-	-	-	100	100	100	100	100	100	100	
P		1	1	1	2	2	2	2	2	2	2	
Q		-	-	162	212	262	312	362	412	462	512	
R		0	0	1	1	1	1	1	1	1	1	
Allowable static load on rod tip (N)		294	294	294	294	294	269	241	218	198	181	
	Allowable static torque on rod tip (N·m)	20	20	20	20	20	20	20	20	20	20	
	3,000km	Allowable dynamic load on rod tip (N)	147	147	137	121	107	96	87	79	72	65
		Load offset 100mm	100	100	100	100	99	90	82	75	68	63
5,000km	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	
	Allowable dynamic load on rod tip (N)	147	133	115	101	90	80	72	65	59	54	
	Load offset 100mm	100	100	100	92	83	75	68	62	56	51	
	Allowable dynamic torque on rod tip (N·m)	10.0	10.0	10.0	9.2	8.3	7.5	6.8	6.2	5.6	5.1	
Mass (kg)	RCP6W w/o brake	5.2	5.8	6.5	7.1	7.8	8.4	9.1	9.7	10.4	11.0	
	RCP6W w/ brake	5.5	6.1	6.8	7.4	8.1	8.7	9.4	10.0	10.7	11.3	
	RCP6SW w/o brake	5.3	5.9	6.6	7.2	7.9	8.5	9.2	9.8	10.5	11.1	
	RCP6SW w/ brake	5.6	6.2	6.9	7.5	8.2	8.8	9.5	10.1	10.8	11.4	

Applicable Controllers									
The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.									
Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	-	Network cannot be selected	64	-
PCON-CB/CGB		1		* Option	* Option	-	DeviceNet EtherCAT EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		-	-	●		CC-Link PROFINET EtherCAT EtherNet/IP CompoNet	256
MCON-LC/LCG (**)		6		-	-	●	256		-
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	-	-	●	Note: The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30000	Please see the MSEL catalog or manual.
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.					768	Please see P.277

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

Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

# RCP6(S)W-WRA14C

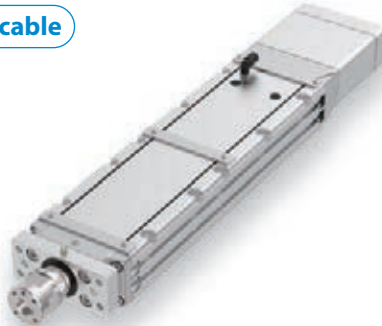
- Dust/Splash-Proof Spec
- Battery-less Absolute
- Motor Unit Type
- Coupled Motor
- Body Width 140 mm
- 24v Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA14C	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16: 16mm 8: 8mm 4: 4mm	50: 50mm 600: 600mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [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.20 for more information about the model specification items.

## Radial Load Applicable

- CE
- RoHS
- Horizontal
- Vertical
- Side
- Ceiling

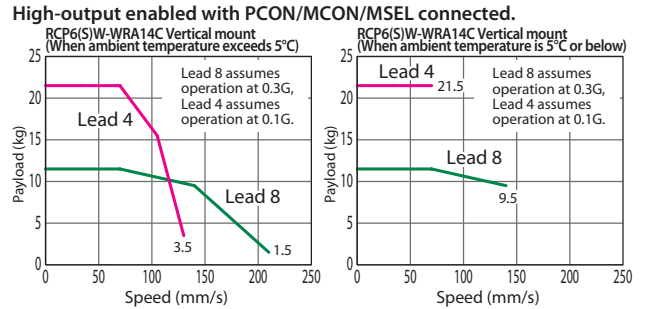
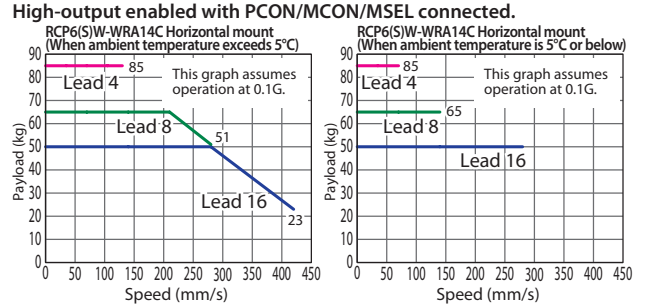


\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.240 for more details.
  - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
  - Please refer to P.205 for performing push-motion operation.
  - Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.
  - The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



## Actuator Specifications

### Lead and Payload

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-WRA14C-WA-56P-16-①-②-③-④	16	50	-	273	50~600 (Every 50mm)
RCP6(S)W-WRA14C-WA-56P-8-①-②-③-④	8	65	11.5	547	
RCP6(S)W-WRA14C-WA-56P-4-①-②-③-④	4	85	21.5	1094	

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

### Stroke and Max Speed

Lead (mm)	Stroke and Max Speed (Unit: mm/s)
50~600 (Every 50mm)	
16	420 [280]
8	280 <210> [140]
4	130 [70]

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		-

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

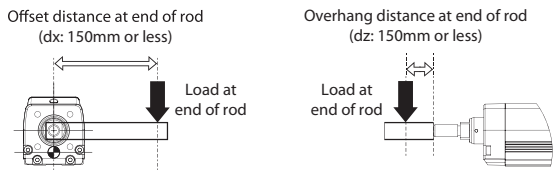
## Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Non-motor end specification	NM	See P.202
T-slot nut bar (Left)	NTBL	See P.202
T-slot nut bar (Right)	NTBR	See P.202

## Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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



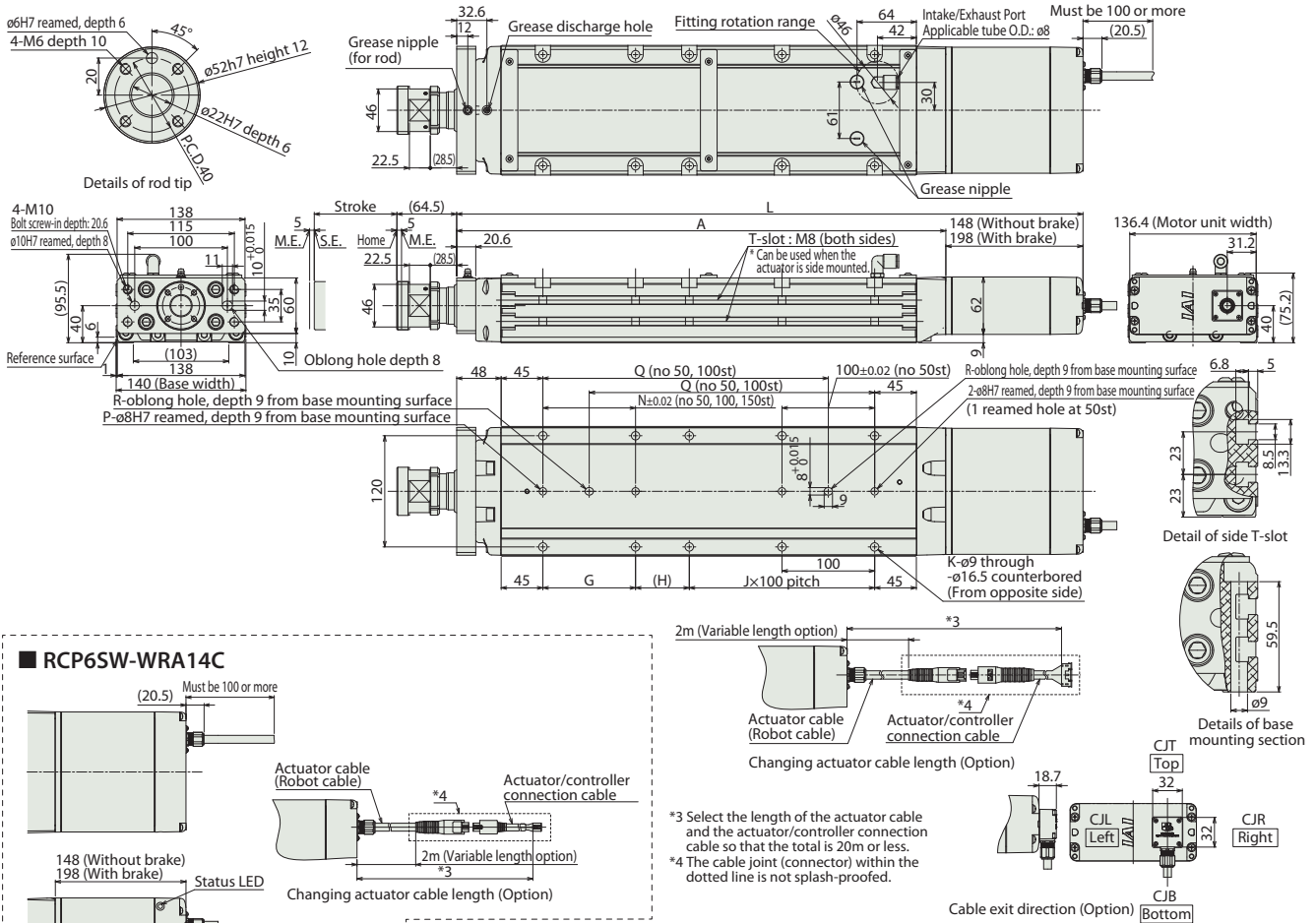


## Dimensions

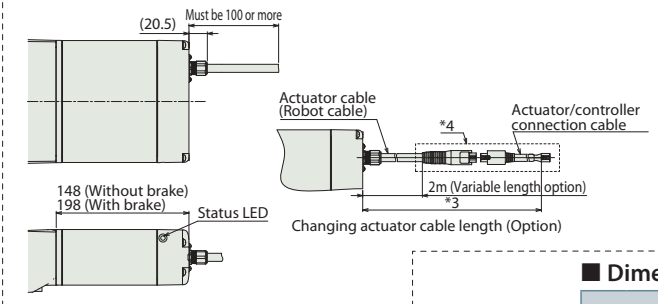
CAD drawings can be downloaded from our website.  
www.robocylinder.de



\*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.  
M.E: Mechanical end S.E: Stroke end  
\*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



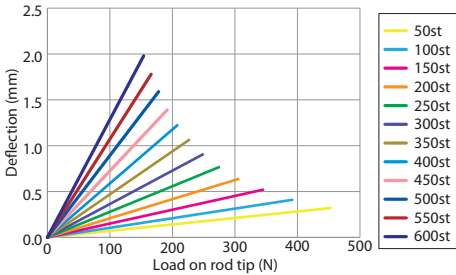
### RCP6SW-WRA14C



### Dimensions and Mass by Stroke

Stroke	Mass (kg)												
	50	100	150	200	250	300	350	400	450	500	550	600	
L	w/o brake	425.8	475.8	525.8	575.8	625.8	675.8	725.8	775.8	825.8	875.8	925.8	975.8
	w/ brake	475.8	525.8	575.8	625.8	675.8	725.8	775.8	825.8	875.8	925.8	975.8	1025.8
A		277.8	327.8	377.8	427.8	477.8	527.8	577.8	627.8	677.8	727.8	777.8	827.8
G		-	-	100	100	100	100	100	100	100	100	100	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)	3,000km	454	392	345	307	276	251	229	210	193	179	166	154
	5,000km	30	30	30	30	30	30	30	30	30	30	30	30
	Allowable dynamic load on rod tip (N)	199	170	148	131	117	104	94	85	77	70	64	58
	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
Allowable dynamic load on rod tip (N)	3,000km	167	143	124	109	97	87	78	70	63	57	51	46
	5,000km	100	100	100	96	87	79	71	65	59	53	48	44
	Allowable dynamic torque on rod tip (N·m)	15.0	15.0	15.0	14.4	13.0	11.8	10.7	9.7	8.8	8.0	7.3	6.6
	Mass (kg)	RCP6W	8.9	9.7	10.6	11.5	12.4	13.3	14.2	15.1	16.0	16.9	17.8
	RCP6SW	9.4	10.2	11.1	12.0	12.9	13.8	14.7	15.6	16.5	17.4	18.3	19.2
	RCP6SW	9.0	9.8	10.7	11.6	12.5	13.4	14.3	15.2	16.1	17.0	17.9	18.8
	RCP6SW	9.4	10.2	11.1	12.0	12.9	13.8	14.7	15.6	16.5	17.4	18.3	19.2

### Rod Deflection of RCP6(S)W-WRA14C (Reference Values)



\* Please refer to P.254 for more information on component materials.

### Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	-	Network cannot be selected	64	-
PCON-CB/CGB		1		* Option	* Option	-	DeviceNet CC-Link EtherCAT EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				256	Please see the MCON-C catalog or manual.
MCON-LC/LCG (**)(**)		6		-	-	●	CompoNet	256	-
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	-	-	●	-	30000	Please see the MSEL catalog or manual.
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.				-	768	Please see P.277

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

Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

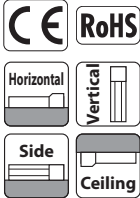
# RCP6(S)W-WRA16C

Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 160 mm
24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA16C	WA	60P	20 :20mm 10 :10mm 5 : 5mm	50:50mm 800:800mm (Every 50mm)	[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.20 for more information about the model specification items.

## Radial Load Applicable

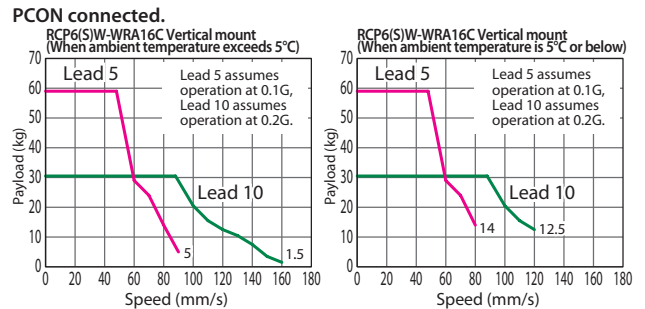
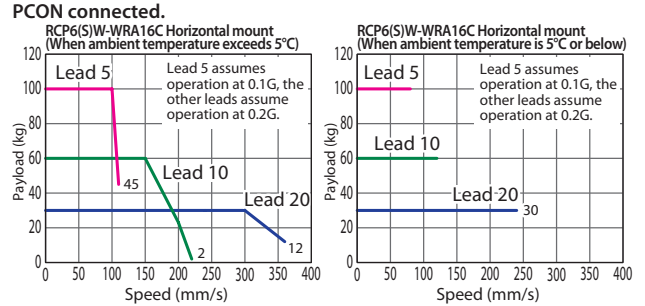


\*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**
- The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.240 for more details.
  - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
  - Please refer to P.205 for performing push-motion operation.
  - For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
  - The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P. 206 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.
  - The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



## Actuator Specifications

### Lead and Payload

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

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-WRA16C-WA-60P-20-①-②-③-④	20	30	-	500	50~800 (Every 50mm)
RCP6(S)W-WRA16C-WA-60P-10-①-②-③-④	10	60	30.5	1000	
RCP6(S)W-WRA16C-WA-60P-5-①-②-③-④	5	100	59	2000	

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

### Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50	100~450 (Every 50mm)	500	550	600	650	700	750	800
20	280 [240]	360 [240]	340 [240]	295 [240]	260 [240]	225 [225]	200 [200]	180 [180]	
10	220 [160] [120]	195 [160] [120]	165 [160] [120]	145 [120]	125 [110]	110 [110]	100 [100]	90 [90]	
5	110 [90] [80]	95 [90] [80]	80 [80]	70 [70]	60 [60]	55 [55]	50 [50]	45 [45]	

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

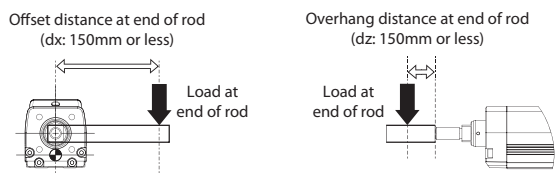
## Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Non-motor end specification	NM	See P.202
T-slot nut bar (Left)	NTBL	See P.202
T-slot nut bar (Right)	NTBR	See P.202

## Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø45mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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





# RCP6(S)W-WRA10R

Dust/Splash-Proof Spec

Battery-less Absolute

Motor Unit Type

Side-mounted Motor

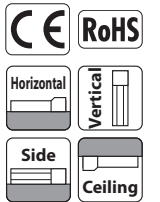
Body Width 100\* mm

24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6W: Separate Controller RCP6SW: Built-in Controller	WRA10R	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 500: 500mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [RCP6S] SE: SIO Type	N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable	* Body width does not include the width of the side-mounted motor. 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.20 for more information about the model specification items.

## Radial Load Applicable



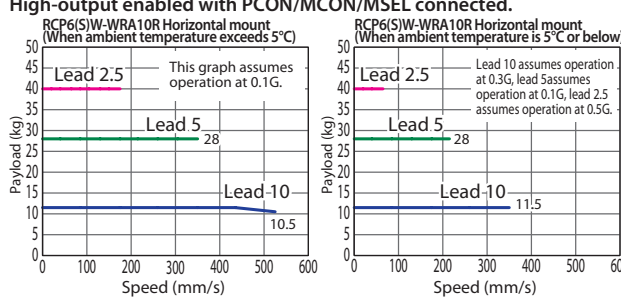
The figure above is the motor side-mounted to left (ML).

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

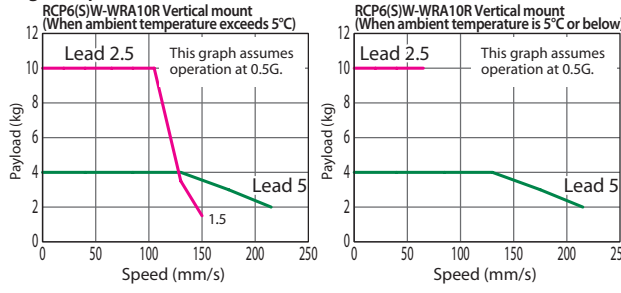
- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.241 for more details.
  - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
  - Please refer to P.205 for performing push-motion operation.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.
  - The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



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



## Actuator Specifications

### Lead and Payload

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-WRA10R-WA-35P-10-①-②-③-④	10	11.5	-	77	50~500 (Every 50mm)
RCP6(S)W-WRA10R-WA-35P-5-①-②-③-④	5	28	4	155	
RCP6(S)W-WRA10R-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

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

### Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~400 (Every 50mm)			450	500
	50	100	150		
10	525	350	290	490	350
5	350	<215>	<215>	240	<215>
2.5	175	<150>	[65]	145	120

Values in brackets < > are for vertical use. Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		-

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

## Options

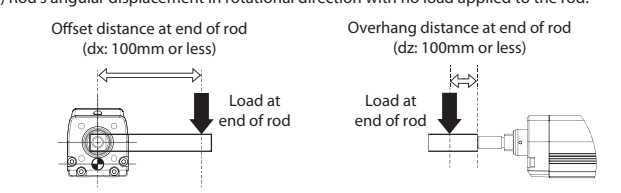
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Motor side-mounted to left (standard)	ML	See P.201
Motor side-mounted to right	MR	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar (Left)	NTBL	See P.202
T-slot nut bar (Right)	NTBR	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

## Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø25mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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



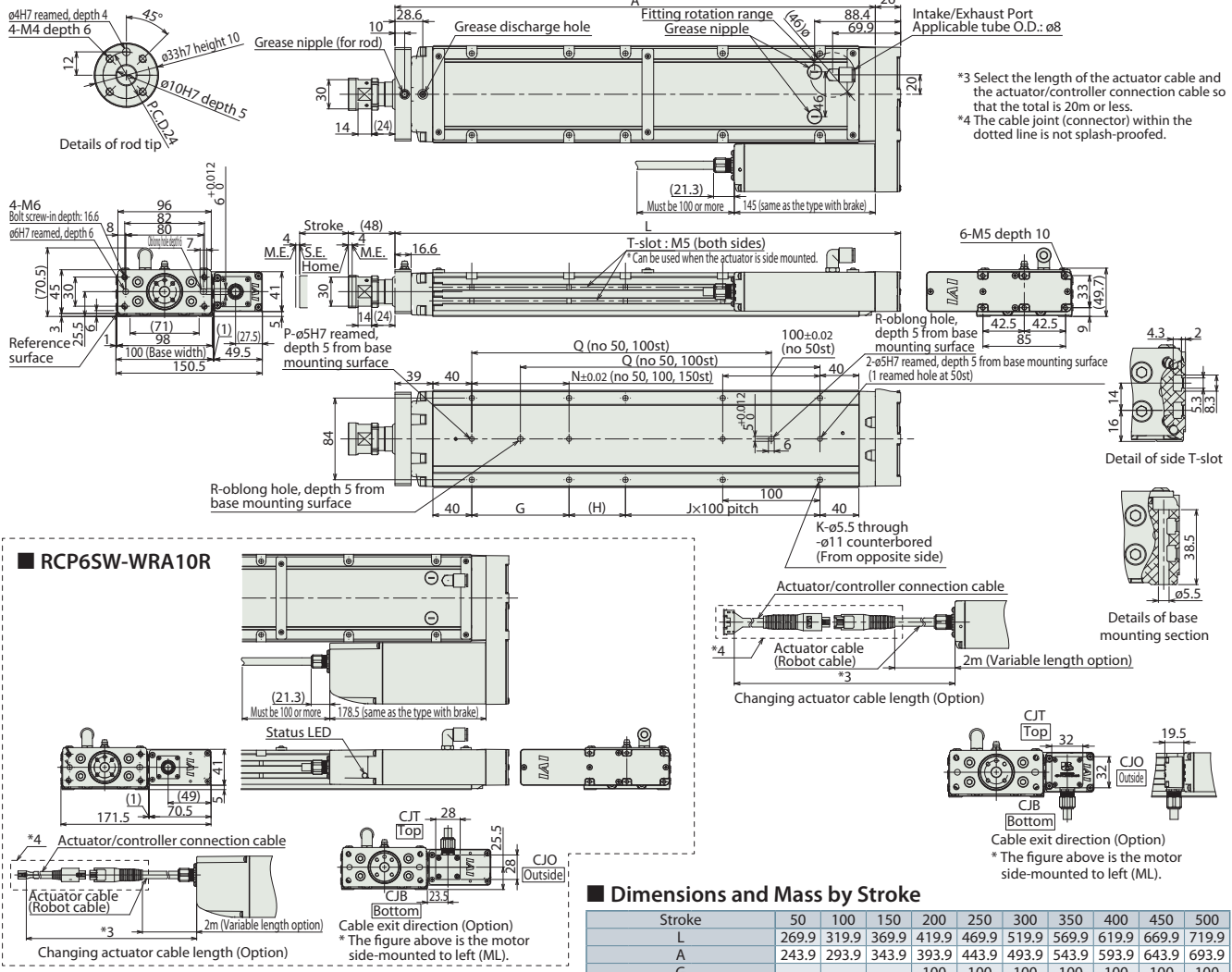


Dimensions

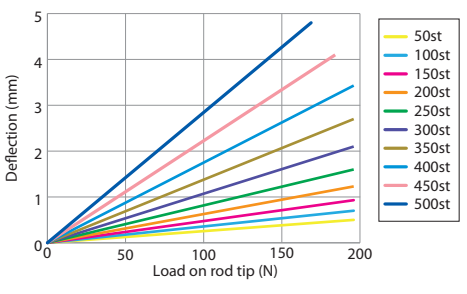
CAD drawings can be downloaded from our website.  
www.robocylinder.de



\*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.  
M.E: Mechanical end S.E: Stroke end  
\*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



■ Rod Deflection of RCP6(S)W-WRA10R (Reference Values)



\* Please refer to P.253 for more information on component materials.

Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	-	Network cannot be selected	64	-
PCON-CB/CGB		1		* Option	* Option	-	DeviceNet CC-Link EtherCAT EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.					
MCON-LC/LCG (*) (**)		6		-	-	●	256	-	
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	-	-	●	30000	Please see the MSEL catalog or manual.	
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.				768	Please see P.277	

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

Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

# RCP6(S)W-WRA12R

Dust/Splash-Proof Spec
Battery-less Absolute
Motor Unit Type
Side-mounted Motor
Body Width 120\* mm
24V Pulse Motor

**Model Specification Items**

Series — **WRA12R** — Type — **WA** — Encoder Type — **42P** — Motor Type — **42□□** — Lead — **□□□□** — Stroke — **□□□□** — Applicable Controller/I/O Type — **□□□□** — Cable Length — **□□□□** — Options — **□□□□**

RCP6W: Separate Controller  
 RCP6SW: Built-in Controller

WA: Battery-less Absolute  
 42P: Pulse Motor 42□□ Size

12: 12mm  
 6: 6mm  
 3: 3mm

50: 50mm  
 500: 500mm (Every 50mm)

[RCP6]  
 P3: PCON  
 MCON  
 MSEL  
 P5: RCM-P6PC (Coming soon)  
 [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.

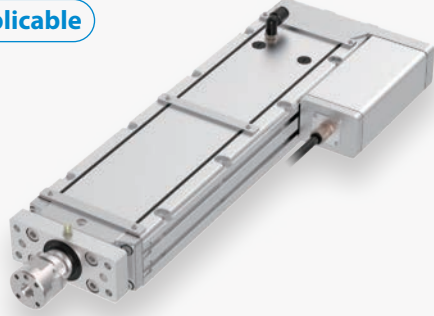
\* RCP6 does not include a controller. RCP6S includes a built-in controller.  
 \* Please refer to P.20 for more information about the model specification items.

## Radial Load Applicable

CE
RoHS

Horizontal  
Vertical

Side  
Ceiling



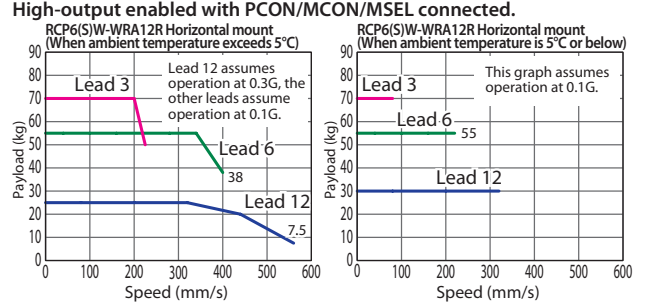
The figure above is the motor side-mounted to left (ML).

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

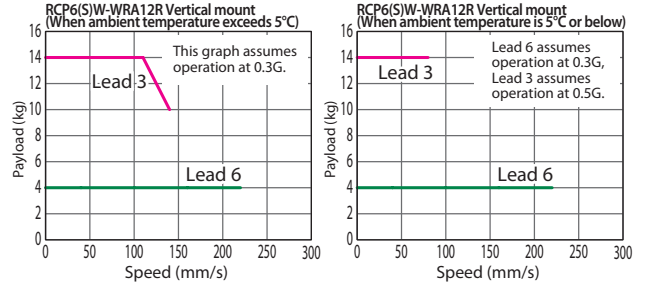
- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.241 for more details.
  - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.246 and after for the allowable load mass.
  - Please refer to P.205 for performing push-motion operation.
  - Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.
  - The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



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



## Actuator Specifications

### Lead and Payload

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-WRA12R-WA-42P-12-①-②-③-④	12	30	—	93	50~500 (Every 50mm)
RCP6(S)W-WRA12R-WA-42P-6-①-②-③-④	6	55	4	185	
RCP6(S)W-WRA12R-WA-42P-3-①-②-③-④	3	70	14	370	

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

### Stroke and Max Speed

Lead (mm)	50~400 (Every 50mm)		450	500
	400	375		
12	560 [320]	—	—	—
6	400 <220> [220]	375 <220> [220]	—	—
3	225 <140> [80]	220 <140> [80]	185 <140> [80]	—

Values in brackets < > are for vertical use.  
 Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
 \* Please refer to P.267 and 281 for more information regarding the maintenance cables.

## Options

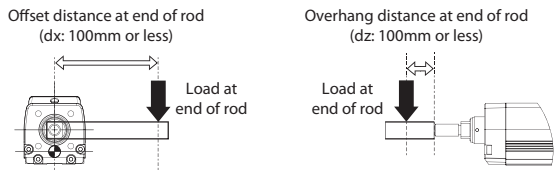
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Motor side-mounted to left (standard)	ML	See P.201
Motor side-mounted to right	MR	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar (Left)	NTBL	See P.202
T-slot nut bar (Right)	NTBR	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

## Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø30mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 100mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

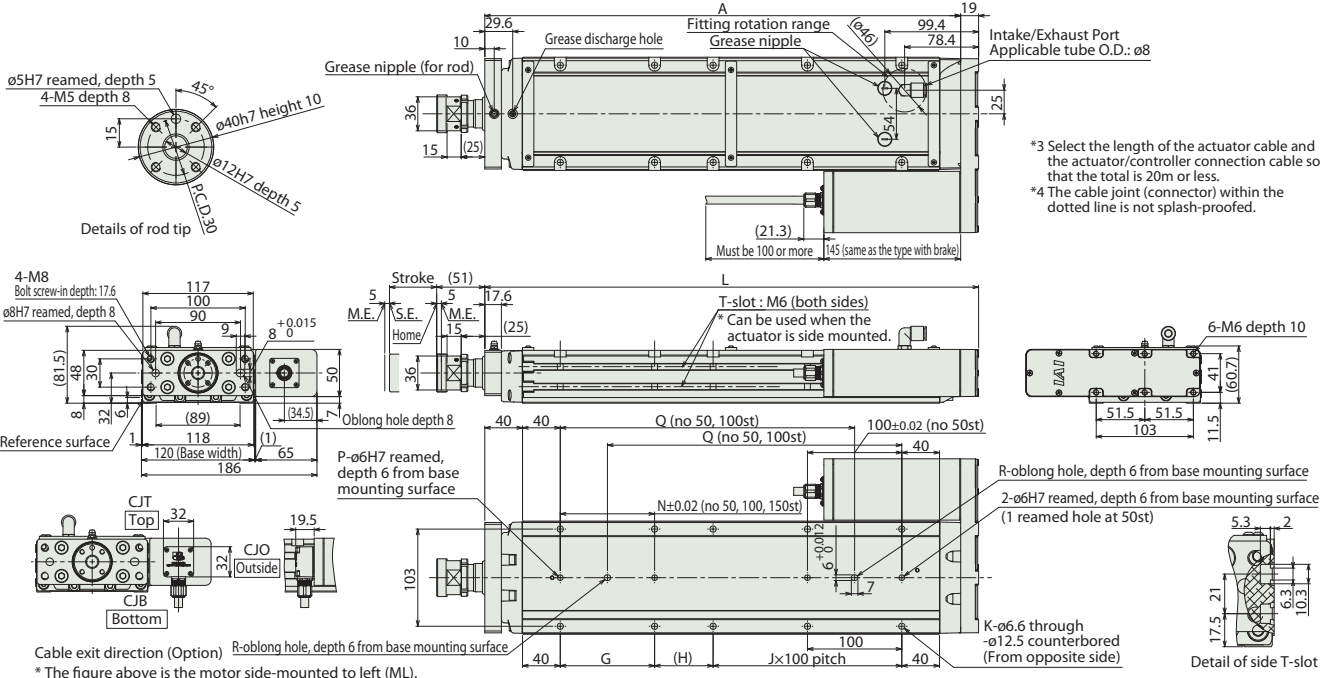


Dimensions

CAD drawings can be downloaded from our website.  
www.robocylinder.de

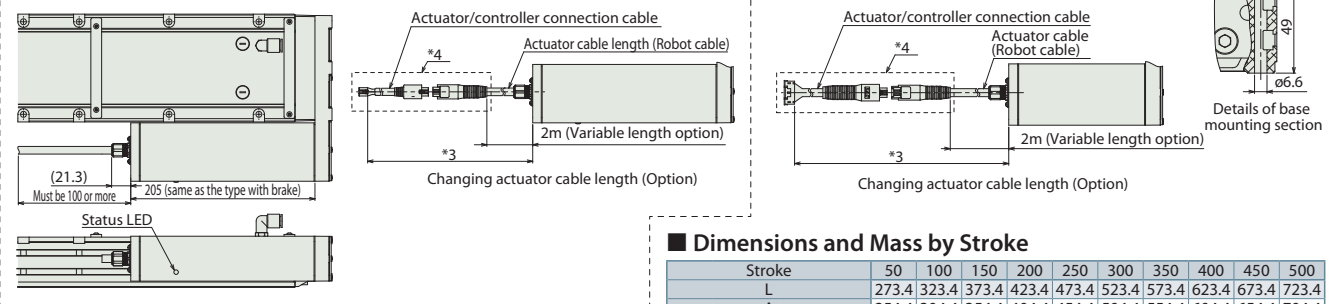


\*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.  
M.E: Mechanical end S.E: Stroke end  
\*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



\*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.  
\*4 The cable joint (connector) within the dotted line is not splash-proofed.

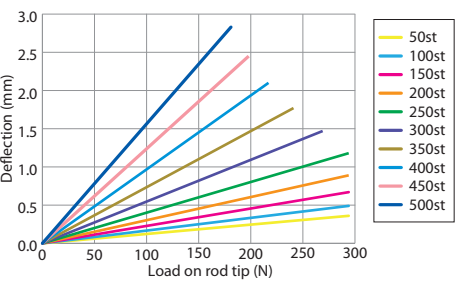
RCP6SW-WRA12R



Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	
L	273.4	323.4	373.4	423.4	473.4	523.4	573.4	623.4	673.4	723.4	
A	254.4	304.4	354.4	404.4	454.4	504.4	554.4	604.4	654.4	704.4	
G	-	-	-	100	100	100	100	100	100	100	
H	112	62	112	62	112	62	112	62	112	62	
J	0	1	1	1	1	2	2	3	3	4	
K	4	6	6	8	8	10	10	12	12	14	
N	-	-	-	100	100	100	100	100	100	100	
P	1	1	1	2	2	2	2	2	2	2	
Q	-	-	162	212	262	312	362	412	462	512	
R	0	0	1	1	1	1	1	1	1	1	
Allowable static load on rod tip (N)	294	294	294	294	294	294	269	241	218	198	
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)	147	147	137	121	107	96	87	79	72	65	
3,000km Allowable dynamic torque on rod tip (N-m)	100	100	100	100	99	90	82	75	68	63	
5,000km Allowable dynamic load on rod tip (N)	147	133	115	101	90	80	72	65	59	54	
5,000km Allowable dynamic torque on rod tip (N-m)	100	100	100	92	83	75	68	62	56	51	
Mass (kg)	RCP6W	w/o brake	5.4	6.0	6.7	7.3	8.0	8.6	9.3	9.9	10.6
	RCP6SW	w/ brake	5.5	6.1	6.8	7.4	8.1	8.7	9.4	10.0	10.7
	RCP6W	w/o brake	5.5	6.1	6.8	7.4	8.1	8.7	9.4	10.0	10.7
	RCP6SW	w/ brake	5.6	6.2	6.9	7.5	8.2	8.8	9.5	10.1	10.8

Rod Deflection of RCP6(S)W-WRA12R (Reference Values)



\* Please refer to P.254 for more information on component materials.

Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	-	Network cannot be selected	64	-
PCON-CB/CGB		1		* Option	* Option	-	DeviceNet CC-Link EtherCAT EtherNet/IP CompoNet	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.					256
MCON-LC/LCG (*) (**)		6		-	-	●		256	-
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	-	-	●		30000	Please see the MSEL catalog or manual.
RCM-P6PC (*)		1		Usable within the RCP6S Gateway system.				768	Please see P.277

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

Foreword  
 Slider Type  
 Wide Slider Type  
 Rod Type  
 Radial Cylinder  
 Wide Radial Cylinder  
 Table Type  
 Cleanroom Slider  
 Cleanroom Wide Slider  
 Dust/Splash-Proof Rod  
 Dust/Splash-Proof Radial Cylinder  
 Dust/Splash-Proof Wide Radial Cylinder  
 Options  
 Reference Data  
 Controller

# RCP6(S)W-WRA14R

Dust/Splash-Proof Spec

Battery-less Absolute

Motor Unit Type

Side-mounted Motor

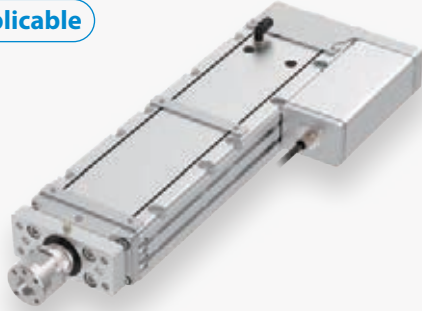
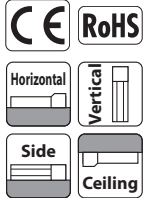
Body Width 140\* mm

24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	—	WRA14R	—	WA	—	56P	—	—	—
	RCP6W: Separate Controller RCP6SW: Built-in Controller		WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	16 : 16mm 8 : 8mm 4 : 4mm	50:50mm 600:600mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [RCP6S] SE: SIO Type	N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable	* Body width does not include the width of the side-mounted motor. 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.20 for more information about the model specification items.

## Radial Load Applicable



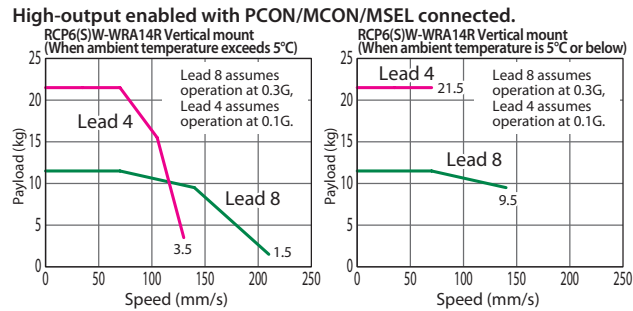
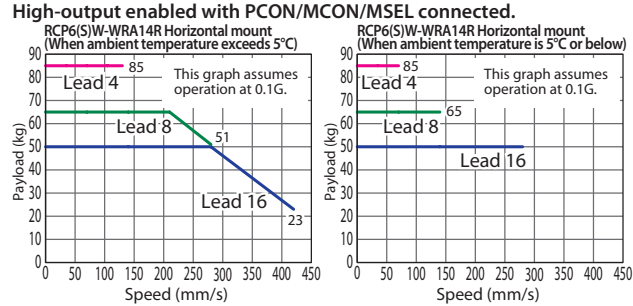
The figure above is the motor side-mounted to left (ML).

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

- POINT Selection Notes**
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
  - The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.242 for more details.
  - The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.245 and after for the allowable load mass.
  - Please refer to P.205 for performing push-motion operation.
  - Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
  - The cable joint connector is not splash-proofed, so it should be located where there is no splash.
  - The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



## Actuator Specifications

### Lead and Payload

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

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-WRA14R-WA-56P-16-①-②-③-④	16	50	—	273	50~600 (Every 50mm)
RCP6(S)W-WRA14R-WA-56P-8-①-②-③-④	8	65	11.5	547	
RCP6(S)W-WRA14R-WA-56P-4-①-②-③-④	4	85	21.5	1094	

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

### Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	50~600 (Every 50mm)
16	420 [280]
8	280 <210> [140]
4	130 [70]

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

## Options

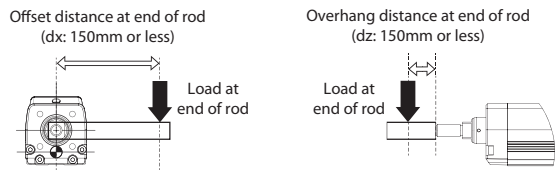
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Motor side-mounted to left (standard)	ML	See P.201
Motor side-mounted to right	MR	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar (Left)	NTBL	See P.202
T-slot nut bar (Right)	NTBR	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

## Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø40mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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





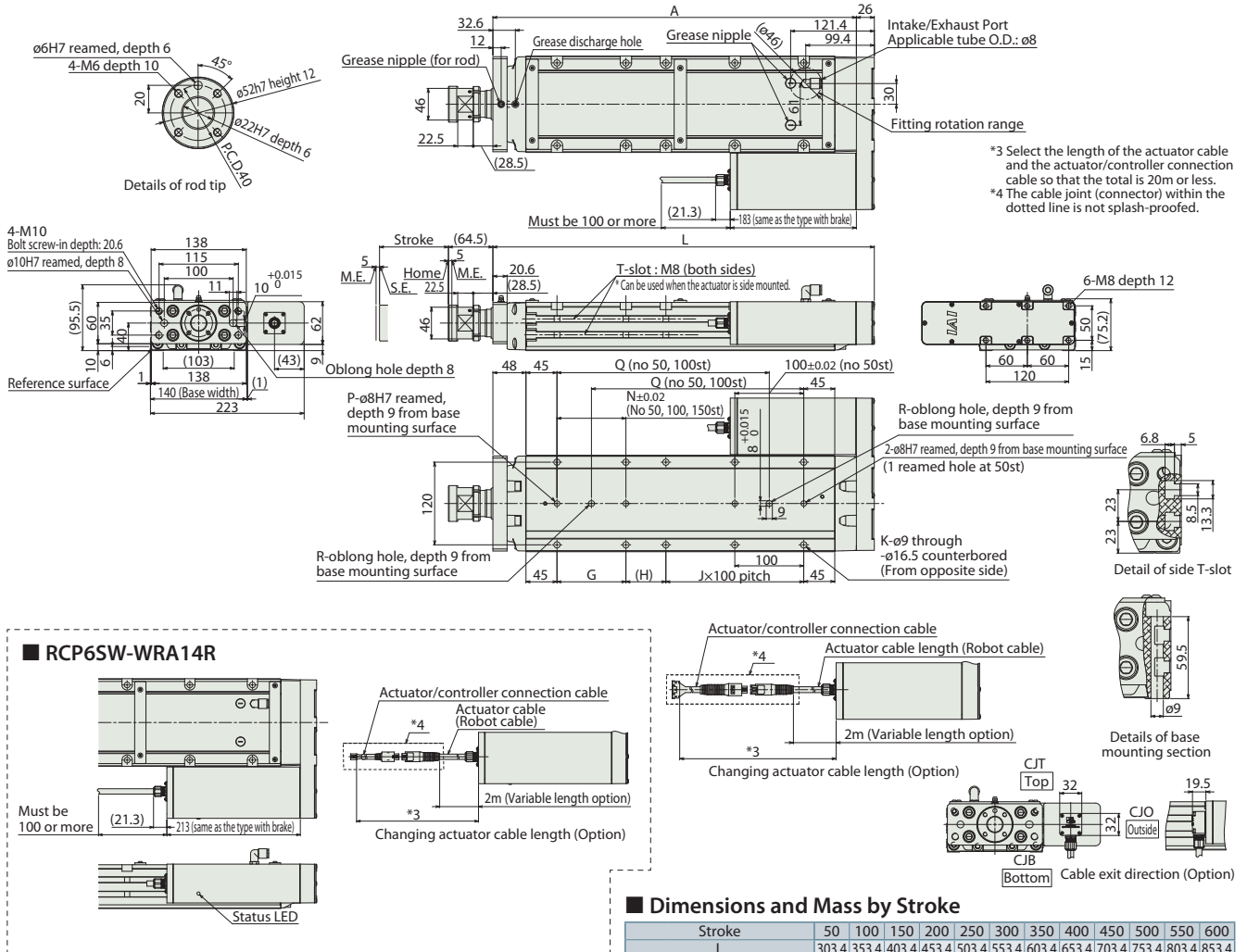
## Dimensions

CAD drawings can be downloaded from our website.

[www.robocylinder.de](http://www.robocylinder.de)

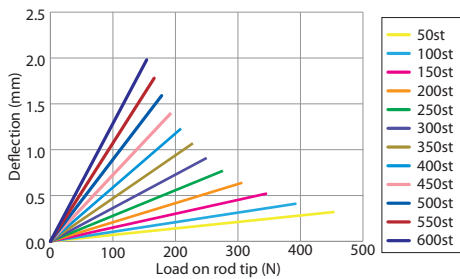


- \*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.  
M.E: Mechanical end S.E: Stroke end
- \*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



- \*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
- \*4 The cable joint (connector) within the dotted line is not splash-proofed.

## Rod Deflection of RCP6(S)W-WRA14R (Reference Values)



\* Please refer to P.254 for more information on component materials.

## Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	303.4	353.4	403.4	453.4	503.4	553.4	603.4	653.4	703.4	753.4	803.4	853.4
A	277.4	327.4	377.4	427.4	477.4	527.4	577.4	627.4	677.4	727.4	777.4	827.4
G	-	-	100	100	100	100	100	100	100	100	100	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)	199	170	148	131	117	104	94	85	77	70	64	58
3,000km Allowable dynamic torque on rod tip (N·m)	100	100	100	100	100	95	87	79	72	66	60	55
5,000km Allowable dynamic load on rod tip (N)	15.0	15.0	15.0	15.0	14.3	13.0	11.8	10.8	9.9	9.0	8.2	7.6
5,000km Allowable dynamic torque on rod tip (N·m)	167	143	124	109	97	87	78	70	63	57	51	46
5,000km Allowable dynamic torque on rod tip (N·m)	100	100	100	96	87	79	71	65	59	53	48	44
Mass (kg) RCP6W w/o brake	9.4	10.2	11.1	12.0	12.9	13.8	14.7	15.6	16.5	17.4	18.3	19.2
Mass (kg) RCP6W w/ brake	9.5	10.3	11.2	12.1	13.0	13.9	14.8	15.7	16.6	17.5	18.4	19.3
Mass (kg) RCP6SW w/o brake	9.6	10.4	11.3	12.2	13.1	14.0	14.9	15.8	16.7	17.6	18.5	19.4
Mass (kg) RCP6SW w/ brake	9.7	10.5	11.4	12.3	13.2	14.1	15.0	15.9	16.8	17.7	18.6	19.5

## Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	-	Network cannot be selected	64	-
PCON-CB/CGB		1		* Option	* Option	-	DeviceNet CC-Link EtherCAT EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.				CompoNet	256
MCON-LC/LCG (*) (**)		6		-	-	●	256		-
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	-	-	●	30000	Please see the MSEL catalog or manual.	
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.				768	Please see P.277	

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

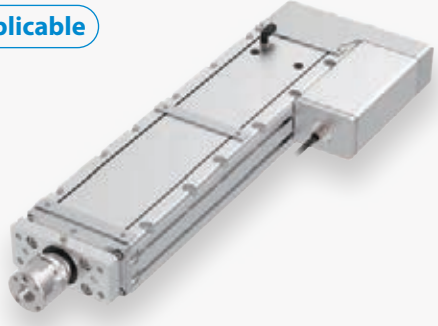
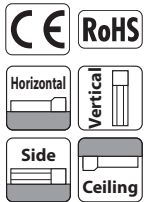
# RCP6(S)W-WRA16R

- Dust/Splash-Proof Spec
- Battery-less Absolute
- Motor Unit Type
- Side-mounted Motor
- Body Width 160\* mm
- 24V Pulse Motor

<b>Model Specification Items</b>	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	— RCP6W —	— WRA16R —	— WA —	— 60P —	—	—	—	—	—
	RCP6W: Separate Controller RCP6SW: Built-in Controller		WA: Battery-less Absolute	60P: Pulse Motor 60□ Size	20 :20mm 10 :10mm 5 : 5mm	50:50mm 800:800mm (Every 50mm)	[RCP6] P4: PCON-CFB/ CGFB [RCP6S] SE: SIO Type	N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable	* Body width does not include the width of the side-mounted motor. 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.20 for more information about the model specification items.

## Radial Load Applicable



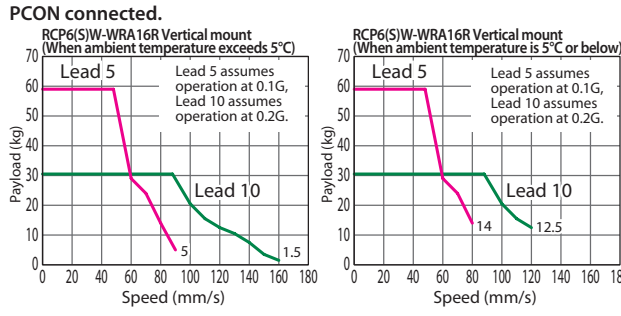
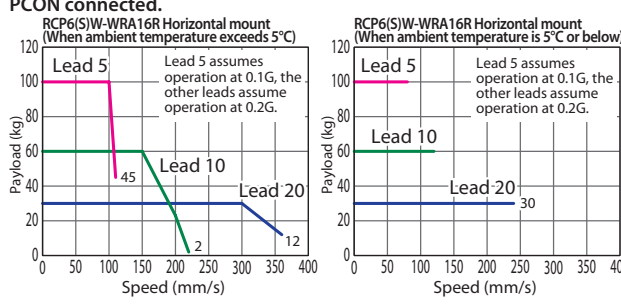
The figure above is the motor side-mounted to left (ML).

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

- POINT Selection Notes**
- (1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
  - (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.242 for more details.
  - (3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.245 and after for the allowable load mass.
  - (4) Please refer to P.205 for performing push-motion operation.
  - (5) For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
  - (6) The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P. 206 for more information.
  - (7) The cable joint connector is not splash-protected, so it should be located where there is no splash.
  - (8) The RCP6SW with built-in controller does not have a teaching tool connection port. Connect the teaching tool to the gateway unit and configure parameter data etc. via the gateway unit.

## Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.



## Actuator Specifications

**Lead and Payload**

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

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)**	Stroke (mm)
		Horizontal (kg)*	Vertical (kg)		
RCP6(S)W-WRA16R-WA-60P-20-①-②-③-④	20	30	—	500	50~800 (Every 50mm)
RCP6(S)W-WRA16R-WA-60P-10-①-②-③-④	10	60	30.5	1000	
RCP6(S)W-WRA16R-WA-60P-5-①-②-③-④	5	100	59	2000	

**Stroke and Max Speed** (Unit: mm/s)

Lead (mm)	50	100~450 (Every 50mm)	500	550	600	650	700	750	800
20	280 [240]	360 [240]	340 [240]	295 [240]	260 [240]	225 [225]	200 [200]	180 [180]	180 [180]
10	220 [120]	<160> [120]	195 [120]	165 [120]	145 [120]	125 [110]	110 [110]	100 [100]	90 [90]
5	110 [80]	<90> [80]	95 [80]	80 [80]	70 [70]	60 [60]	55 [55]	50 [50]	45 [45]

Values in brackets < > are for vertical use.  
Values in brackets [ ] are when ambient temperature is 5°C or below.

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

## Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

\* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.  
\* Please refer to P.267 and 281 for more information regarding the maintenance cables.

## Options

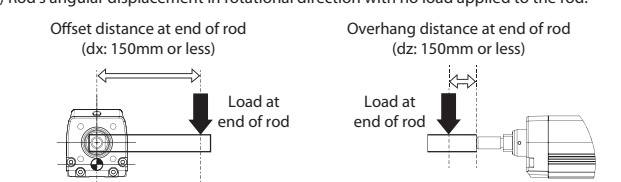
Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Motor side-mounted to left (standard)	ML	See P.201
Motor side-mounted to right	MR	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar (Left)	NTBL	See P.202
T-slot nut bar (Right)	NTBR	See P.202

\* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

## Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø45mm
Rod non-rotation precision (*)	0 deg.
Allowable load and torque on rod tip	See P. 246
Rod tip offset/overhang distance	dx/dz: 150mm or less
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

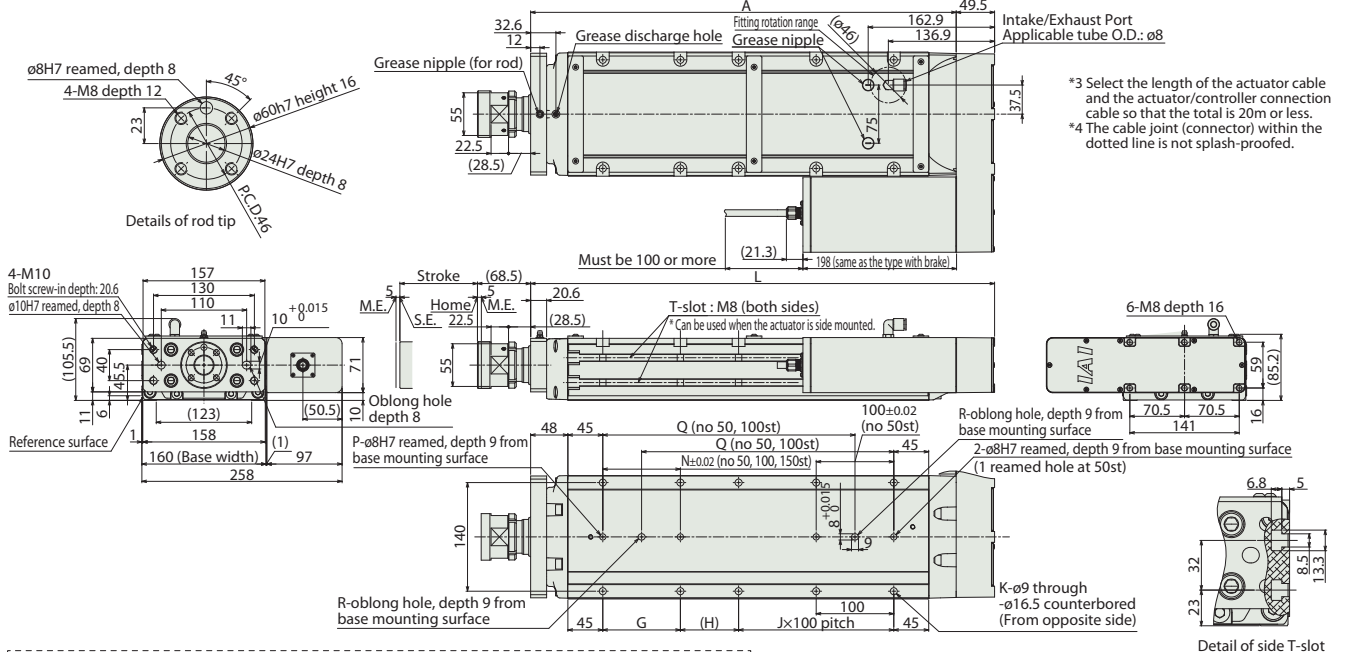


## Dimensions

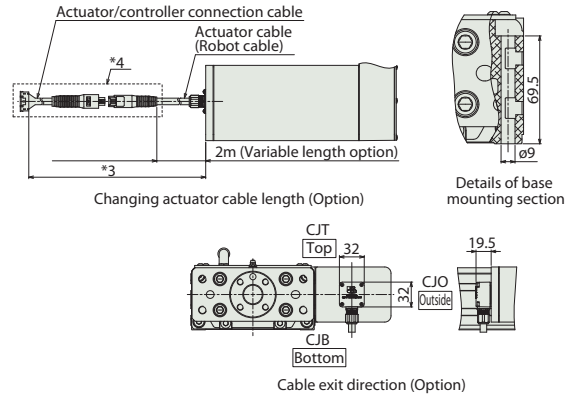
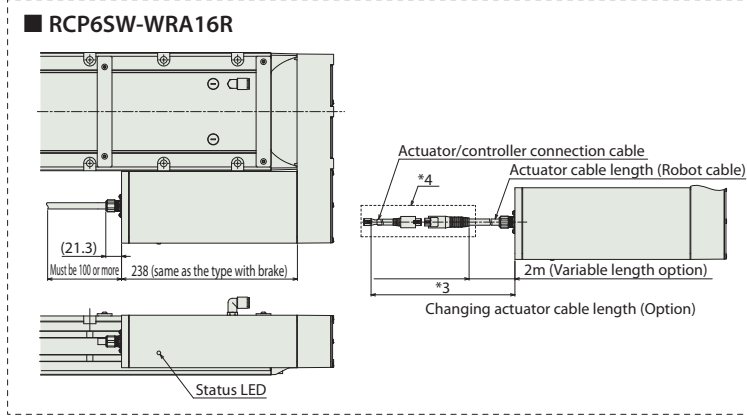
CAD drawings can be downloaded from our website.  
www.robocylinder.de



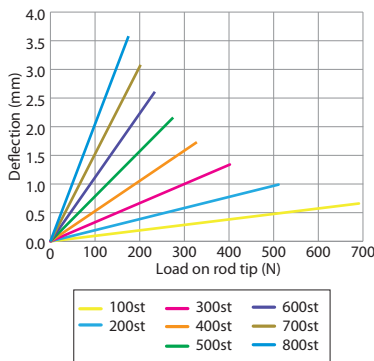
- \*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.  
M.E: Mechanical end S.E: Stroke end
- \*2 If the object attached to the rod has a long overhang length, or precise angular adjustment of the object is required, please do not use the reamed hole when the object is attached to the rod.



- \*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
- \*4 The cable joint (connector) within the dotted line is not splash-proofed.



## Rod Deflection of RCP6(S) W-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	347.9	397.9	447.9	497.9	547.9	597.9	647.9	697.9	747.9	797.9	847.9	897.9	947.9	997.9	1047.9	1097.9
A	298.4	348.4	398.4	448.4	498.4	548.4	598.4	648.4	698.4	748.4	798.4	848.4	898.4	948.4	998.4	1048.4
G	-	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100
H	125	75	125	75	125	75	125	75	125	75	125	75	125	75	125	75
J	0	1	1	1	1	2	2	3	3	4	4	5	5	6	6	7
K	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
N	-	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100
P	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Q	-	-	175	225	275	325	375	425	475	525	575	625	675	725	775	825
R	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)	588	588	588	511	451	402	362	329	300	275	254	235	217	202	188	176
Allowable static torque on rod tip (N-m)	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
3,000km Allowable dynamic load on rod tip (N)	255	220	191	168	149	134	120	109	99	90	81	74	67	61	55	50
3,000km Allowable dynamic torque on rod tip (N-m)	133	133	133	133	133	122	111	101	92	84	77	70	64	58	53	48
5,000km Allowable dynamic load on rod tip (N)	214	184	160	140	124	111	99	89	80	72	65	59	53	47	42	37
5,000km Allowable dynamic torque on rod tip (N-m)	133	133	133	124	112	101	91	83	75	68	62	56	50	45	40	36
Mass (kg) RCP6W w/o brake	13.5	14.7	15.9	17.0	18.1	19.3	20.4	21.6	22.7	23.9	25.0	26.2	27.3	28.5	29.6	30.8
Mass (kg) RCP6W w/ brake	13.8	15.0	16.2	17.3	18.4	19.6	20.7	21.9	23.0	24.2	25.3	26.5	27.6	28.8	29.9	31.1
Mass (kg) RCP6SW w/o brake	13.7	14.9	16.1	17.2	18.3	19.5	20.6	21.8	22.9	24.1	25.2	26.4	27.5	28.7	29.8	31.0
Mass (kg) RCP6SW w/ brake	14.0	15.2	16.4	17.5	18.6	19.8	20.9	22.1	23.2	24.4	25.5	26.7	27.8	29.0	30.1	31.3

\* Please refer to P.254 for more information on component materials.

## Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method			Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program		
PCON-CFB/CGFB		1	DC24V	●	●	-	512 (768 for network spec.)	See P.255
				Control method: Network * Option				
			DeviceNet CompoNet EtherNet/IP 					

Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

## Dust/Splash-Proof Specification Options

### Changing Actuator Cable Length

**Model** AC5 / AC10 / AC15

**Description** Specify when changing the actuator cable (pigtail cable) length longer than 2m (standard). AC5: 5m, AC10: 10m, AC15: 15m.

### Brake

**Model** B

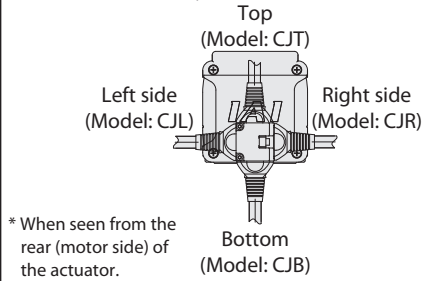
**Description** When the actuator is mounted vertically, this works as a holding mechanism that prevents the rod from falling and damaging any attachments when the power or servo is turned off.

### Cable Exit Direction

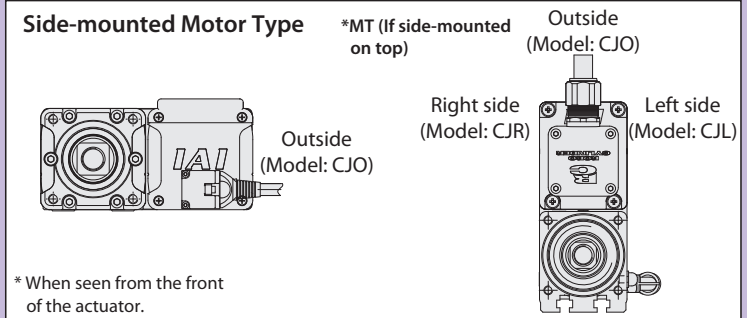
**Model** CJT / CJR / CJL / CJB / CJO

**Description** This option allows you to change the exit direction of the motor-encoder cable to top, bottom, left, or right.  
\* Be sure to confirm with the Selection Notes (P.204).

#### Coupled Motor Type



#### Side-mounted Motor Type

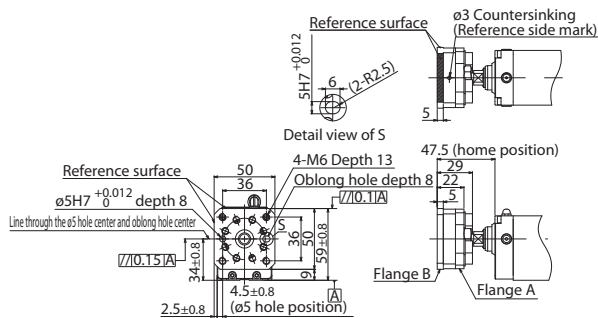


### Tip Adapter (Flange)

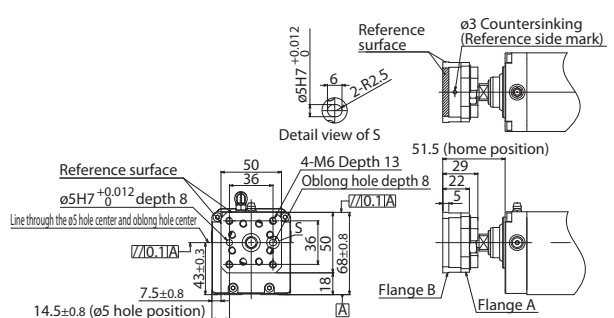
**Model** FFA

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

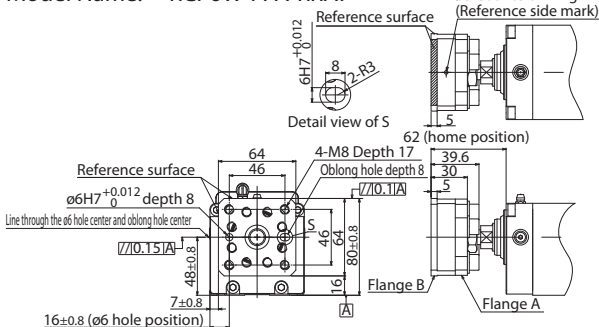
RCP6(S)W-RR4□  
Model Name: RCP6W-FFA-RR4



RCP6(S)W-RR6□  
Model Name: RCP6W-FFA-RR6



RCP6(S)W-RR7□  
Model Name: RCP6W-FFA-RR7



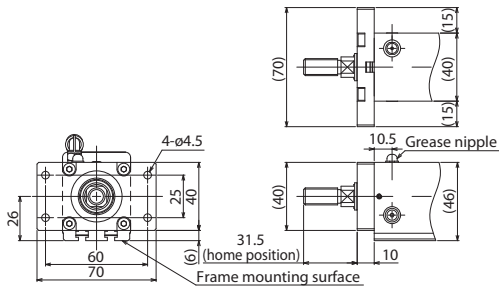


Flange

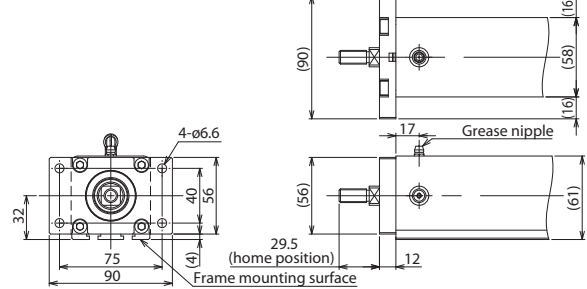
Model **FL**

Description A bracket that attaches to the actuator body with bolts. \* Be sure to confirm with the Selection Notes (P.204).

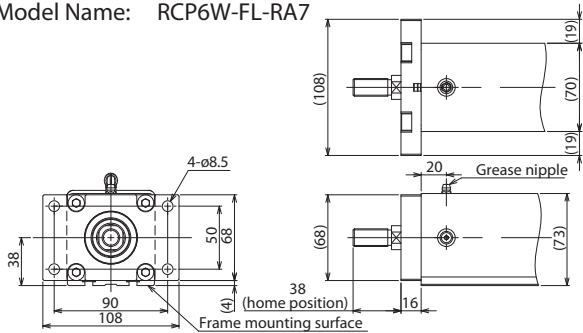
RCP6(S)W-RA4□  
Model Name: RCP6W-FL-RA4



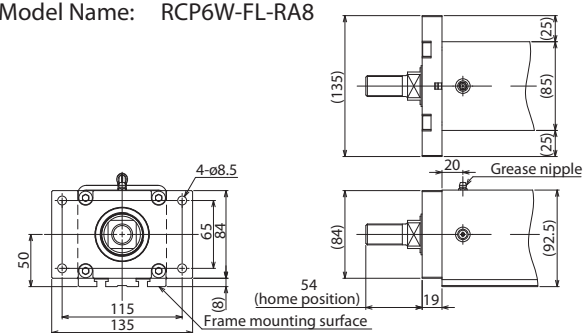
RCP6(S)W-RA6□  
Model Name: RCP6W-FL-RA6



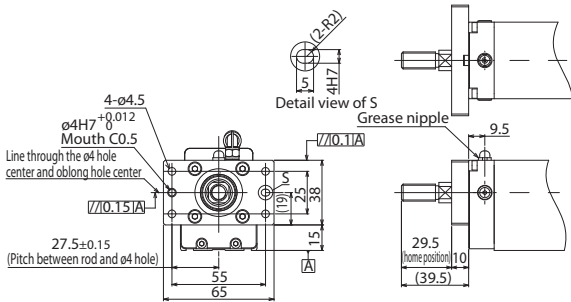
RCP6(S)W-RA7□  
Model Name: RCP6W-FL-RA7



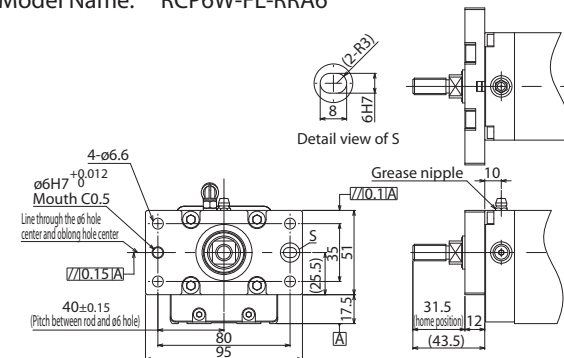
RCP6(S)W-RA8□  
Model Name: RCP6W-FL-RA8



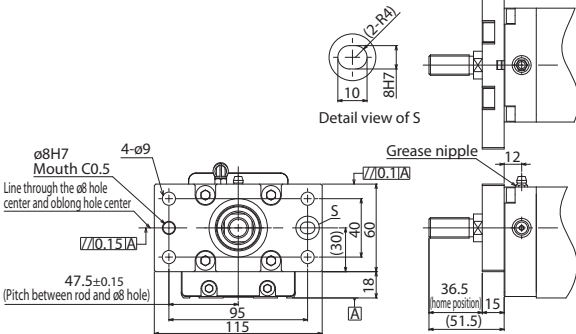
RCP6(S)W-RAA4□  
Model Name: RCP6W-FL-RAA4



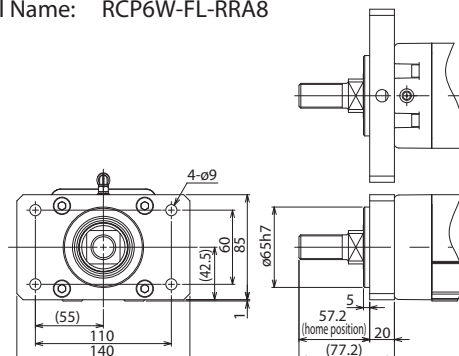
RCP6(S)W-RAA6□  
Model Name: RCP6W-FL-RAA6



RCP6(S)W-RAA7□  
Model Name: RCP6W-FL-RAA7



RCP6(S)W-RAA8□  
Model Name: RCP6W-FL-RAA8



Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

Foreword

Slider Type

Wide Slider Type

Rod Type

Radial Cylinder

Wide Radial Cylinder

Table Type

Cleanroom Slider

Cleanroom Wide Slider

Dust/Splash-Proof Rod

Dust/Splash-Proof Radial Cylinder

Dust/Splash-Proof Wide Radial Cylinder

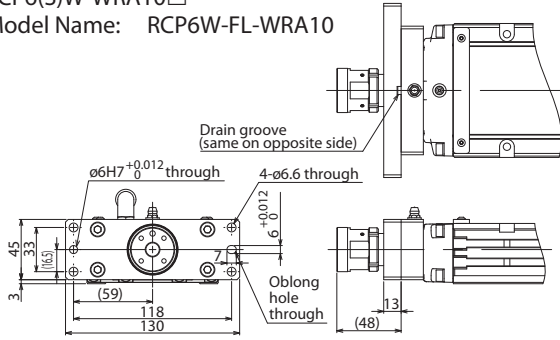
Options

Reference Data

Controller

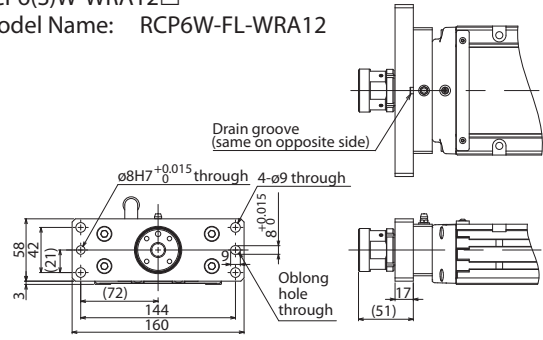
## RCP6(S)W-WRA10□

Model Name: RCP6W-FL-WRA10



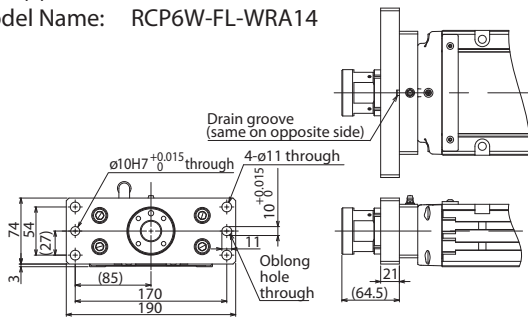
## RCP6(S)W-WRA12□

Model Name: RCP6W-FL-WRA12



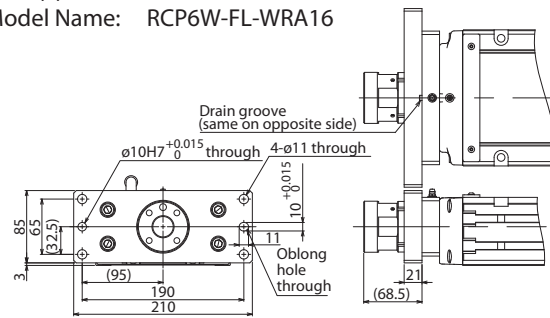
## RCP6(S)W-WRA14□

Model Name: RCP6W-FL-WRA14



## RCP6(S)W-WRA16□

Model Name: RCP6W-FL-WRA16



## Foot Bracket

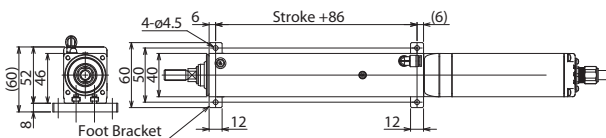
### Model FT

#### Description

This is a bracket used to fix the actuator with bolts from the top side. (Bolts are tightened from the top, not from the bottom) For slider type actuators, when the moment load is large, please attach the foot brackets on all the mounting holes on the actuator. The actuator body may be twisted or deformed if insufficient number of mounting foot brackets are used. Actuator life could also be shortened. \* Refer to the installation dimensions in the actuator drawing for the installation pitch between the foot brackets.

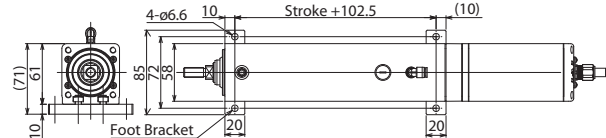
## RCP6(S)W-RA4C

Model Name: RCP6W-FT-RA4C



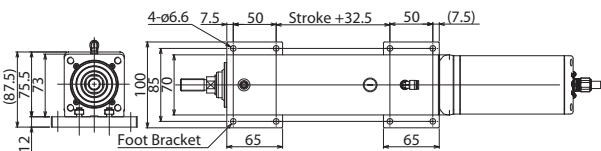
## RCP6(S)W-RA6C

Model Name: RCP6W-FT-RA6C



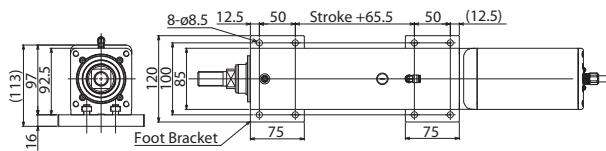
## RCP6(S)W-RA7C

Model Name: RCP6W-FT-RA7C



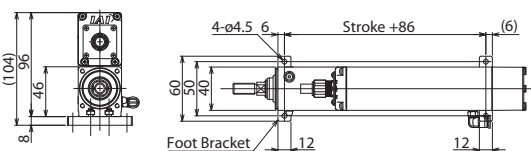
## RCP6(S)W-RA8C

Model Name: RCP6W-FT-RA8C



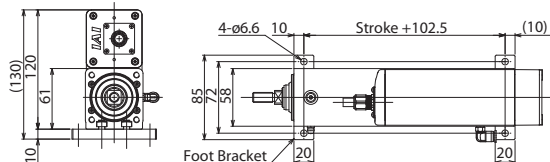
## RCP6(S)W-RA4R

Model Name: RCP6W-FT-RA4R-1 (For the motor side-mounted to the top)



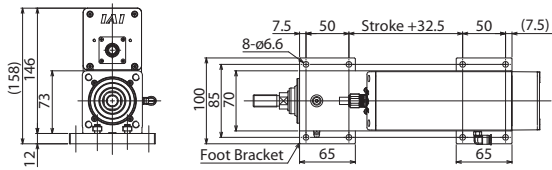
## RCP6(S)W-RA6R

Model Name: RCP6W-FT-RA6R-1 (For the motor side-mounted to the top)



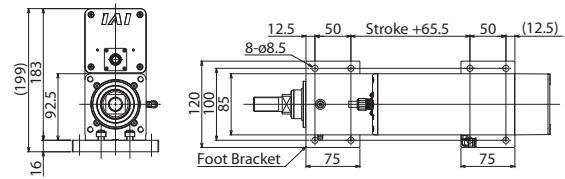
RCP6(S)W-RA7R

Model Name: RCP6W-FT-RA7R-1 (For the motor side-mounted to the top)



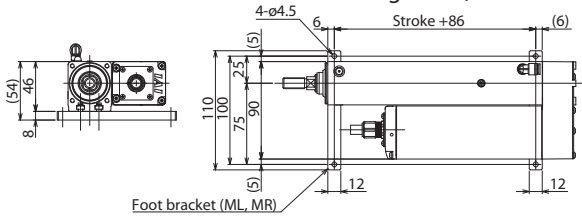
RCP6(S)W-RA8R

Model Name: RCP6W-FT-RA8R-1 (For the motor side-mounted to the top)



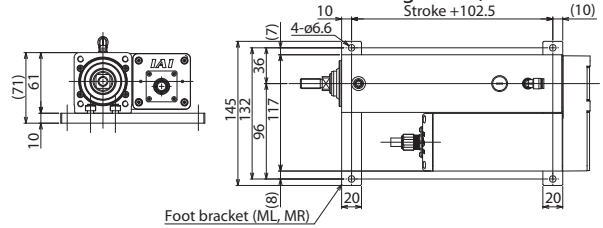
RCP6(S)W-RA4R

Model Name: RCP6W-FT-RA4R-2 (For the motor side-mounted to the right/left)



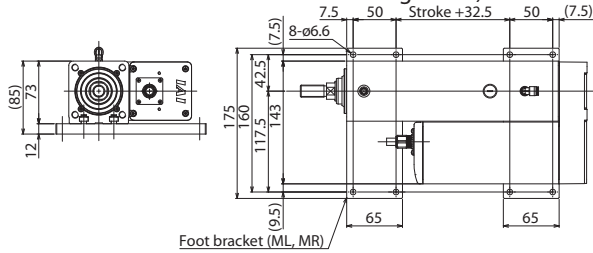
RCP6(S)W-RA6R

Model Name: RCP6W-FT-RA6R-2 (For the motor side-mounted to the right/left)



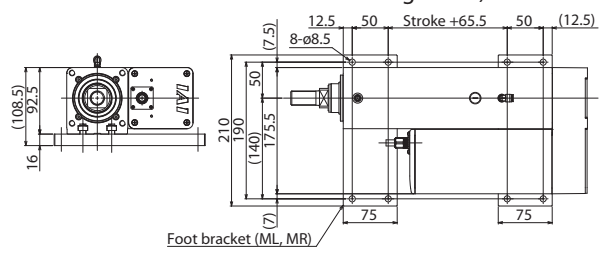
RCP6(S)W-RA7R

Model Name: RCP6W-FT-RA7R-2 (For the motor side-mounted to the right/left)



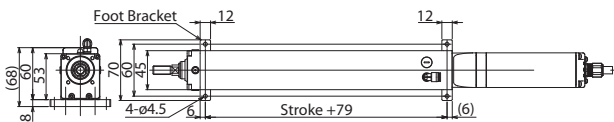
RCP6(S)W-RA8R

Model Name: RCP6W-FT-RA8R-2 (For the motor side-mounted to the right/left)



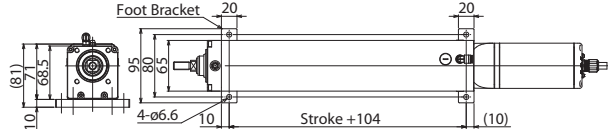
RCP6(S)W-RAA4C

Model Name: RCP6W-FT-RAA4



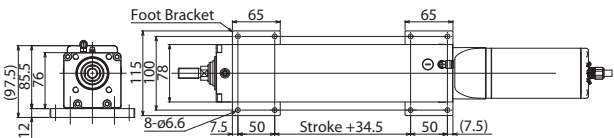
RCP6(S)W-RAA6C

Model Name: RCP6W-FT-RAA6



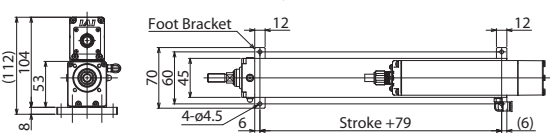
RCP6(S)W-RAA7C

Model Name: RCP6W-FT-RAA7



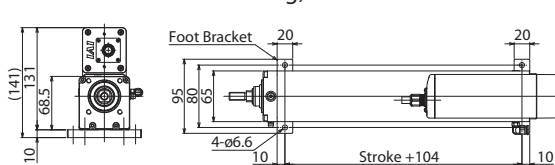
RCP6(S)W-RAA4R

Model Name: RCP6W-FT-RAA4 (For motor side-mounting)



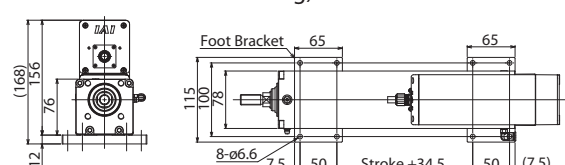
RCP6(S)W-RAA6R

Model Name: RCP6W-FT-RAA6 (For motor side-mounting)



RCP6(S)W-RAA7R

Model Name: RCP6W-FT-RAA7 (For motor side-mounting)



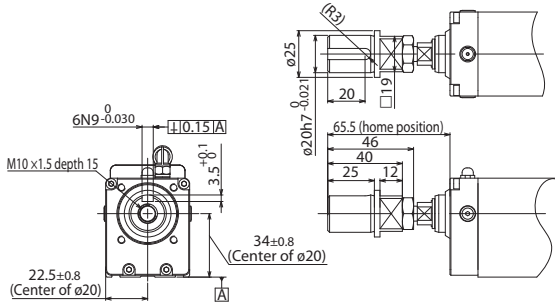
Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

## Tip Adapter (Keyway)

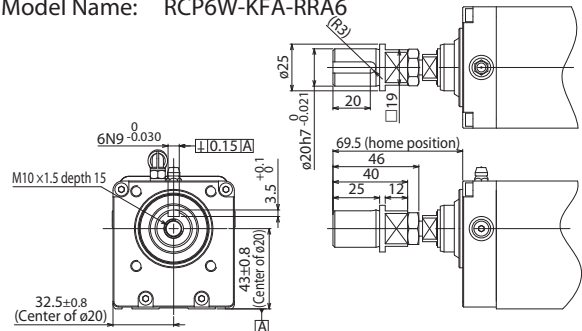
**Model** KFA

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

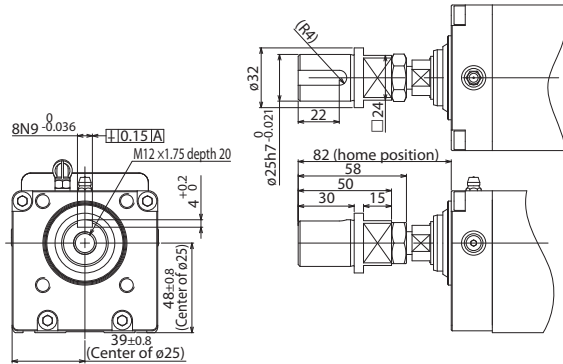
RCP6(S)W-RAA4□  
Model Name: RCP6W-KFA-RAA4



RCP6(S)W-RAA6□  
Model Name: RCP6W-KFA-RAA6



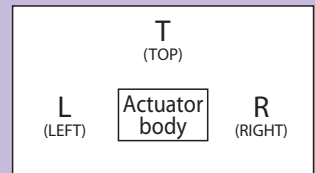
RCP6(S)W-RAA7□  
Model Name: RCP6W-KFA-RAA7



## Side-mounted Motor Direction

**Model** ML / MR / MT

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

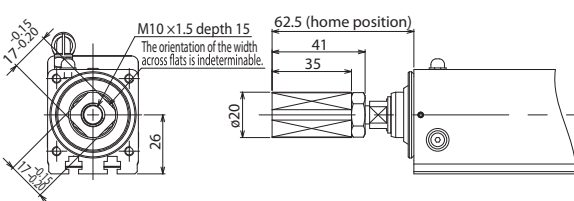


## Tip Adapter (Internal Thread)

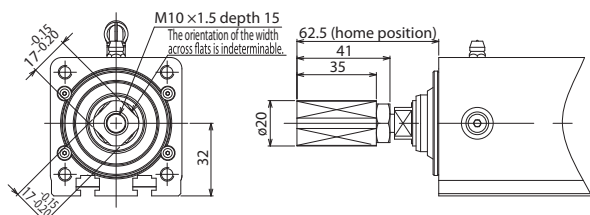
**Model** NFA

**Description** A rod-end tooling adapter with 1 threaded hole.

RCP6(S)W-RA4□  
Model Name: RCP6W-NFA-RA4



RCP6(S)W-RA6□  
Model Name: RCP6W-NFA-RA6







Foreword

Slider Type

Wide Slider Type

Rod Type

Radial Cylinder

Wide Radial Cylinder

Table Type

Cleanroom Slider

Cleanroom Wide Slider

Dust/Splash-Proof Rod

Dust/Splash-Proof Radial Cylinder

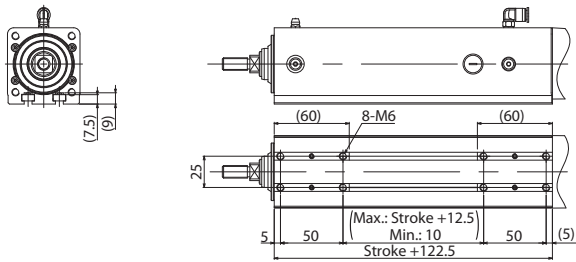
Dust/Splash-Proof Wide Radial Cylinder

Options

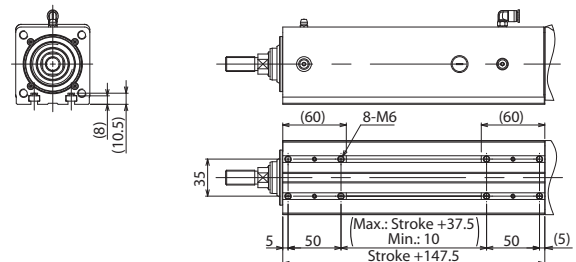
Reference Data

Controller

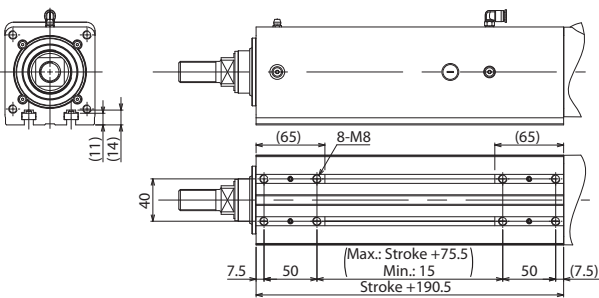
RCP6(S)W-RA6□  
Model Name: RCP6W-NTB-RA6



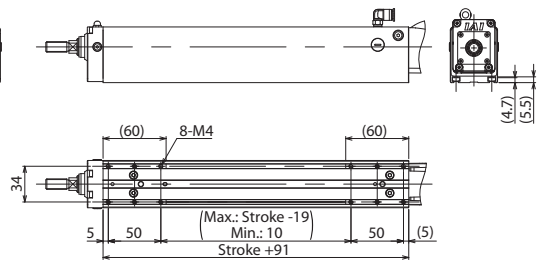
RCP6(S)W-RA7□  
Model Name: RCP6W-NTB-RA7



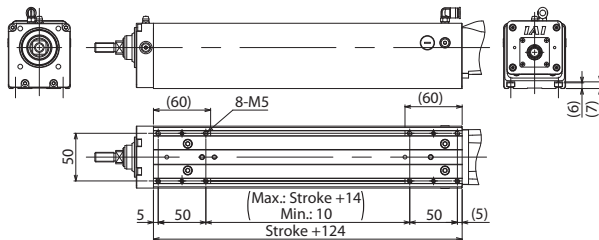
RCP6(S)W-RA8□  
Model Name: RCP6W-NTB-RA8



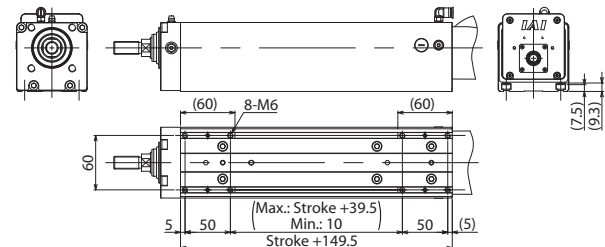
RCP6(S)W-RA4□  
Model Name: RCP6W-NTB-RA4



RCP6(S)W-RA6□  
Model Name: RCP6W-NTB-RA6

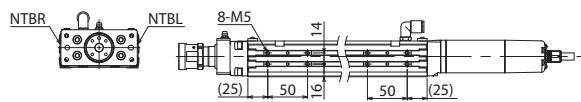


RCP6(S)W-RA7□  
Model Name: RCP6W-NTB-RA7



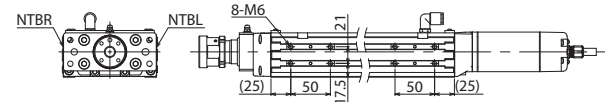
RCP6(S)W-WRA10□  
Model Name: RCP6W-NTB-WRA10

\* As replacement by the customer is not possible, it cannot be purchased alone.



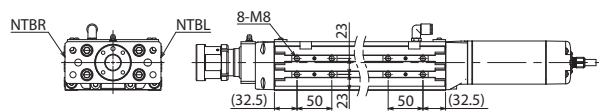
RCP6(S)W-WRA12□  
Model Name: RCP6W-NTB-WRA12

\* As replacement by the customer is not possible, it cannot be purchased alone.



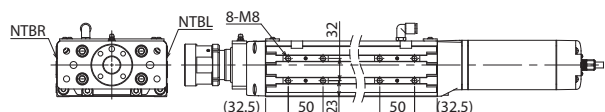
RCP6(S)W-WRA14□  
Model Name: RCP6W-NTB-WRA14

\* As replacement by the customer is not possible, it cannot be purchased alone.



RCP6(S)W-WRA16□  
Model Name: RCP6W-NTB-WRA16

\* As replacement by the customer is not possible, it cannot be purchased alone.



# Selection Notes for RCP6W Series

## ■ Cautions When Selecting the Rod Attachment Option

Model	Options							
	CJB	CJL	CJO	CJR	CJT	FL	NTBL	NTBR
RA4R	①	②	○	②	①	③④	—	—
RA6R	①	②	○	②	①	③④	—	—
RA7R	①	②	○	②	①	③④	—	—
RA8R	①	②	○	②	①	③④	—	—
RRA4R	—	○	○	○	—	③④	—	—
RRA6R	—	○	○	○	—	③④	—	—
RRA7R	—	○	○	○	—	③④	—	—
RRA8R	○	—	○	—	○	③④	—	—
WRA10R	○	—	○	—	○	③④	⑤	⑥
WRA12R	○	—	○	—	○	③④	⑤	⑥
WRA14R	○	—	○	—	○	③④	⑤	⑥
WRA16R	○	—	○	—	○	③④	⑤	⑥

Be sure to check the following conditions when selecting options.

- ① : Can be selected when ML or MR is selected.
- ② : Can be selected when MT is selected.
- ③ : Cannot be selected for 50ST.
- ④ : Always select CJ□ when using 100ST.
- ⑤ : Can only be selected when MR is selected.
- ⑥ : Can only be selected when ML is selected.

Note: NTBL and NTBR cannot be installed by the customer after delivery.

Model	Options							
	CJB	CJL	CJO	CJR	CJT	FL	NTBL	NTBR
RCP6SW								
RA4R	①	②	○	②	①	③④	—	—
RA6R	①	②	○	②	①	③④	—	—
RA7R	①	②	○	②	①	③④	—	—
RA8R	①	②	○	②	①	③④	—	—
RRA4R	—	○	○	○	—	③④	—	—
RRA6R	—	○	○	○	—	③④	—	—
RRA7R	—	○	○	○	—	③④	—	—
RRA8R	○	—	○	—	○	③④	—	—
WRA10R	○	—	○	—	○	③④	⑤	⑥
WRA12R	○	—	○	—	○	③④	⑤	⑥
WRA14R	○	—	○	—	○	③④	⑤	⑥
WRA16R	○	—	○	—	○	③④	⑤	⑥

Be sure to check the following conditions when selecting options.

- ① : Can be selected when ML or MR is selected.
- ② : Can be selected when MT is selected.
- ③ : Cannot be selected for 50ST or 100ST.
- ④ : Always select CJ□ when using 150ST.
- ⑤ : Can only be selected when MR is selected.
- ⑥ : Can only be selected when ML is selected.

- The front flange (FL) rod attachment option cannot be used on side mounting position for RCP6(S)W-RRA8R when the following strokes are selected.

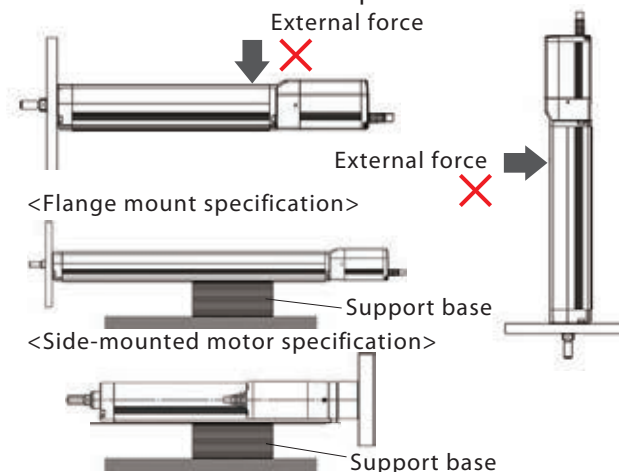
• RCP6(S)W-RRA8R Stroke 50~100 (standard/with brake)

- Please be careful of nearby objects when selecting the front flange (FL) option for the RCP6(S)W-RRA□R models, as there may be some interference between the cable and flange surface for certain strokes. Please also be careful of nearby objects when selecting the tip adapter option (FFA, NFA, KFA) for the RCP6(S)W-RRA4R/RRA6R/RRA7R models, as there may be some interference between the cable and work piece for certain strokes.

## ■ Notes When Installing the Rod Type

When installing the front bracket or flange (optional), please be careful that the actuator does not experience any external force. (External force may cause malfunctions or damaged parts)  
If the actuator will experience external force or is being used in conjunction with a Cartesian robot, etc., please use the mounting holes on the base of the actuator to secure it into place.

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



## ■ About the Mounting Orientation

- When mounting the motor coupled type vertically, please set the motor on the top if possible. While installing the motor on the bottom will not cause problems during normal operation, long periods of inactivity may cause the grease to separate, flow into the motor unit, and cause problems in rare occasions.

# Duty Cycle

Duty cycle is the percentage of the actuator's active operation time in each cycle.

Please note that the way to calculate duty cycle for the pulse motor and AC servo motor types differs.

### <Pulse motor>

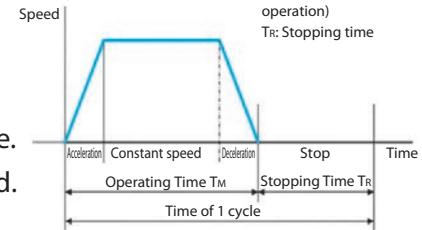
For pulse motor type, an actuator can be operated at 100% of its duty cycle. RCP6SCR/RCP6SW is the model that requires the duty cycle to be limited.

[Duty Cycle]

Duty cycle is the percentage of the actuator's active operation time in each cycle.

$$D = \frac{T_M}{T_M + T_R} \times 100(\%)$$

D: Duty  
 T<sub>M</sub>: Operating time  
 (including push-motion  
 operation)  
 T<sub>R</sub>: Stopping time

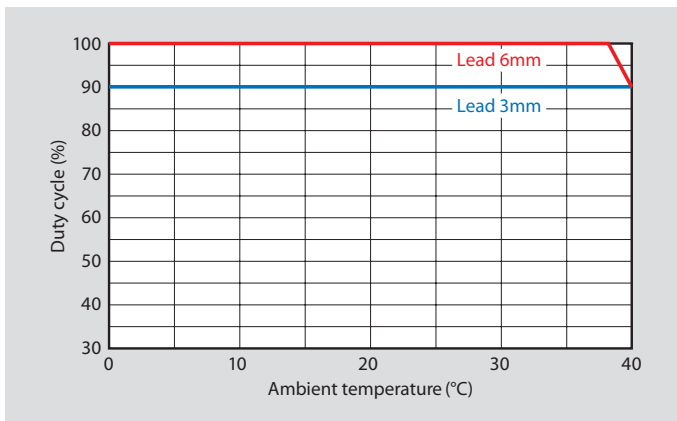


### For RCP6SCR/W

### Duty Cycle by Models

RCP6S Series	Duty Cycle
<input type="checkbox"/> 35 pulse motor type SA4/RRA4/RA4/TA4/WSA10/WRA10 (Common to coupled motor/side-mounted motor)	100%
<input type="checkbox"/> 42 pulse motor type SA6/RRA6/RA6/TA6/WSA12/WRA12 (Common to coupled motor/side-mounted motor)	Please see the graph below.
<input type="checkbox"/> 56 pulse motor type SA7/RRA7/RA7/TA7/WSA14/WRA14 (Common to coupled motor/side-mounted motor)	Please see the graph below.
<input type="checkbox"/> 56 high thrust pulse motor type SA8/WSA16 (Common to coupled motor/side-mounted motor)	100%
<input type="checkbox"/> 60 high thrust pulse motor type RRA8/RA8/WRA16 (Common to coupled motor/side-mounted motor)	70%

### ■ Correlation diagram of ambient temperature and duty cycle for 42 pulse motor type



42 pulse motor type

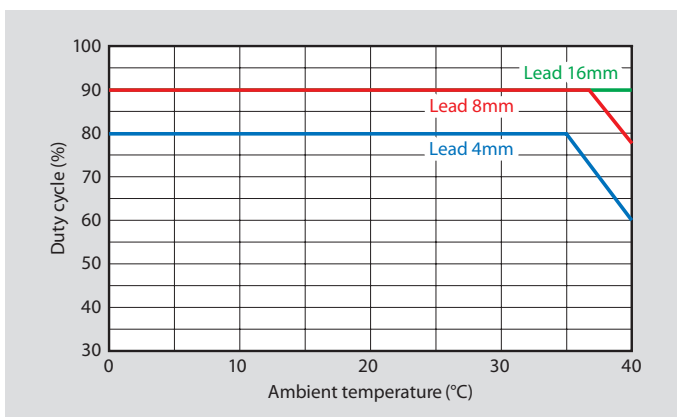
SA6/RRA6/RA6/TA6/WSA12/WRA12

(Common to coupled motor/side-mounted motor)

Lead	3mm	6mm	12mm/20mm
Duty Cycle Limit	90% or less	100% at 38°C or less 90% or less at 40°C	100%

\* RCP6W does not have a 20mm lead.

### ■ Correlation diagram of ambient temperature and duty cycle for 56 pulse motor type (Excludes the high thrust motor)



56 pulse motor type

SA7/RRA7/RA7/TA7/WSA14/WRA14

(Common to coupled motor/side-mounted motor)

Lead	4mm	8mm	16mm	24mm
Duty Cycle Limit	80% at 35°C or less 60% or less at 40°C	90% at 37°C or less 78% or less at 40°C	90% or less	100%

\* RCP6W does not have a 24mm lead.



# Double Slider Selection Notes

Be sure to check the following specifications when selecting a double slider.

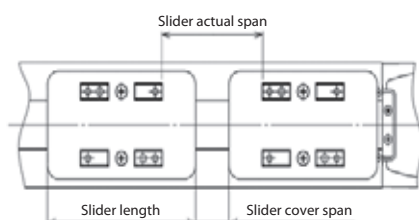
## RCP6(S)(CR) Double Slider Specification

Series name	Type name	Lead (mm)	Allowable dynamic moment						Overhang load length (mm)	Cleanroom specification suction amount (N <sub>e</sub> /min)	*1 Payload compensation A (kg)	*1 Payload compensation B (kg)	*1 Payload compensation speed (mm/s)	Slider length (mm)	Double slider minimum stroke (mm)
			Reference rated life (km)	Slider span (mm)		Ma direction (N·m)	Mb direction (N·m)	Mc direction (N·m)							
				Slider actual span	Slider cover span										
RCP6(S)	SA4C(R)	10	5000	60	24	44.6	63.6	15.7	420	-	0.6	2	350	76	150
		5											215		
		2.5											105		
	SA6C(R)	12	5000	90	40	106	152	40	630	-	1.2	2	320	110	200
		6											280		
		3											140		
	SA7C(R)	16	5000	70	20	285	285	145	810	-	1.7	5	280	130	200
		8											140		
		4											70		
	SA8C(R)	20	5000	120	35	565	565	237	1200	-	7 (*2)	-	-	165	250
		10											-		
		5											-		
RCP6(S)CR	SA4C	10	5000	60	24	44.6	63.6	15.7	420	60	0.6	2	350	76	150
		5											30		
		2.5											20		
	SA6C	12	5000	90	40	106	152	40	630	110	1.2	2	320	110	200
		6											60		
		3											35		
	SA7C	16	5000	70	20	285	285	145	810	100	1.7	5	280	130	200
		8											50		
		4											40		
	SA8C	20	5000	120	35	565	565	237	1200	170	7 (*2)	-	-	165	250
		10											90		
		5											40		

### [List of Options Unavailable for Double Slider]

Series name	Type name	Lead (mm)	Double Slider Selection Not Possible ("•")	
			Horizontal mount	Vertical mount
RCP6(S)	SA4C(R)	16	•	•
		10		•
	SA6C(R)	20	•	•
		12		•
	SA7C(R)	24	•	•
		16		•
SA8C(R)	30	•	•	
	20		•	
RCP6(S)CR	SA4C	16	•	•
		10		•
	SA6C	20	•	•
		12		•
	SA7C	24	•	•
		16		•
SA8C	30	•	•	
	20		•	

### [Double Slider Span Diagram]



\*1 Double slider specification (other than RCP6(CR)-SA8) values obtained by subtracting the payload compensation mass A from the standard specification payload are the payload specification values up to the payload compensation speed. When operating at a speed exceeding the payload compensation speed, the value obtained by subtracting the payload compensation mass B from the standard specification payload is the payload specification value. Moreover, refer to the nominal stroke specification value for the maximum speed.

\*2 RCP6(CR)-SA8 double slider specification values obtained by subtracting the payload compensation mass A from the standard specification payload are the payload specification values at the full speed range. Moreover, refer to the nominal stroke specification value for the maximum speed.

Notes: Calculate the double slider load capacity using the specification table above and the "Payload by Speed /Acceleration Table" (P207~). Check the maximum speed from the calculated payload quantity. (Refer to the instruction manual for details.)

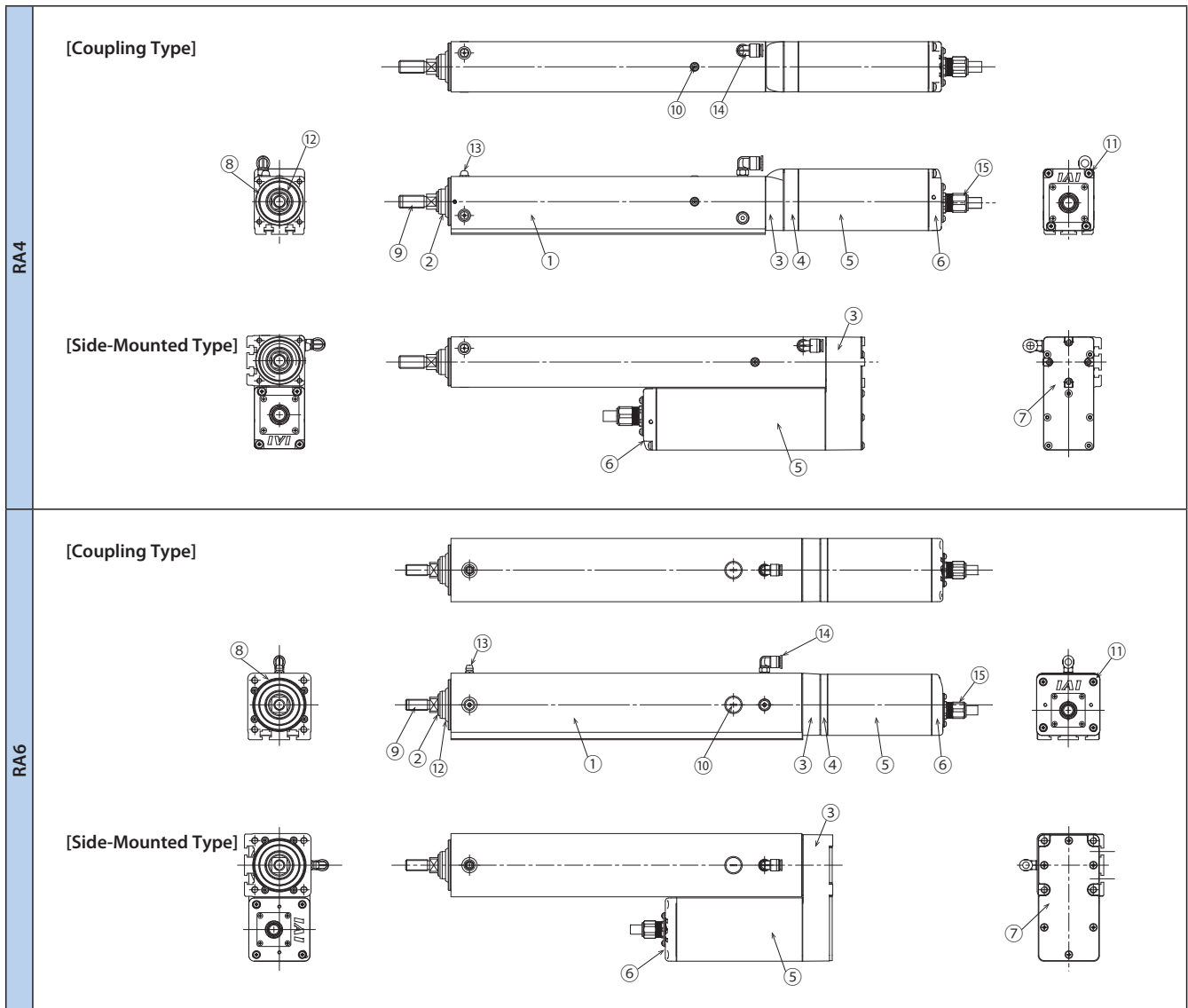
· The double slider cannot be selected in some cases depending on the lead. Check with the [List of Options Unavailable for Double Slider].

· When selecting the double slider specification and non-motor end specification at the same time, always check that the home return motion functions correctly after connecting the drive slider and the free slider.

# RCP6W Exterior Component Material

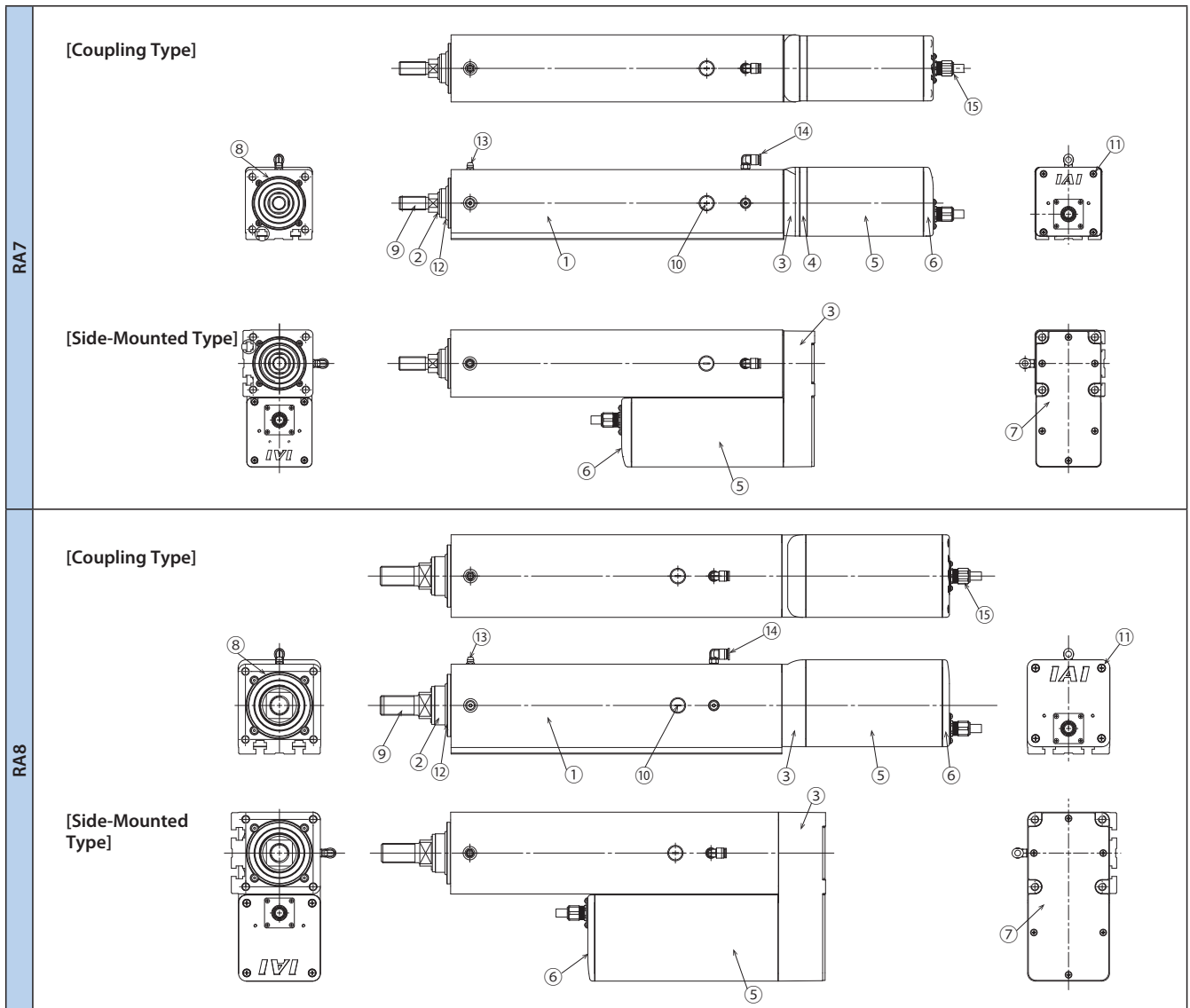
■ RCP6W-RA4

Name		Material	Treatment	Finish	RA4C	RA4R
Exterior Components	① Body frame	Extruded aluminum	White alumite		○	○
	② Rod	Drawn aluminum	Hard alumite	Buffing finish	○	○
	③ Rear bracket	Aluminum die cast	Designer coating		○	○
	④ Motor bracket	Aluminum die cast	Designer coating		○	○
	⑤ Motor cover	Extruded aluminum	White alumite		○	○
	⑥ End cover	Aluminum die cast	Designer coating		○	○
	⑦ Pulley cover	Stainless steel			○	○
	⑧ Rod seal housing IP	Aluminum	White alumite		○	○
	⑨ Tip bracket	Stainless steel			○	○
	⑩ Cap	Stainless steel			○	○
	⑪ Exterior bolts/screws	Stainless steel			○	○
	⑫ Dust seal	Rubber (NBR)			○	○
	⑬ Grease nipple	Brass (C3604)	Non-electrolytic metal plating		○	○
	⑭ Intake/exhaust port	Resin (PBT, POM), brass nickel plated			○	○
	⑮ Actuator cable	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated			○
Cable sheath		Vinyl chloride (PVC)			○	○
Hex nut	Stainless steel			○	○	
Square nut	Stainless steel			○	○	
Gaskets	Rubber (NBR)			○	○	



■ RCP6W-RA6/RA7/RA8

Name		Material	Treatment	Finish	RA6C	RA6R	RA7C	RA7R	RA8C	RA8R
Exterior Components	① Body frame	Extruded aluminum	White alumite		○	○	○	○	○	○
	② Rod	Drawn aluminum	Hard alumite	Buffing finish	○	○	○	○	○	○
	③ Rear bracket	Aluminum die cast	Designer coating		○	○	○	○	○	○
	④ Motor bracket	Aluminum die cast	Designer coating		○		○			
	⑤ Motor cover	Extruded aluminum	White alumite		○	○	○	○	○	○
	⑥ End cover	Aluminum die cast	Designer coating		○	○	○	○	○	○
	⑦ Pulley cover	Stainless steel				○		○		○
	⑧ Rod seal housing IP	Aluminum	White alumite		○	○	○	○	○	○
	⑨ Tip bracket	Stainless steel			○	○	○	○	○	○
	⑩ Cap	Rubber (NBR)			○	○	○	○	○	○
	⑪ Exterior bolts/screws	Stainless steel			○	○	○	○	○	○
	⑫ Dust seal	Rubber (NBR)			○	○	○	○	○	○
	⑬ Grease nipple	Brass (C3604)	Non-electrolytic metal plating		○	○	○	○	○	○
	⑭ Intake/exhaust port	Resin (PBT, POM), brass nickel plated			○	○	○	○	○	○
⑮ Actuator cable	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated			○	○	○	○	○	○
	Cable sheath	Vinyl chloride (PVC)			○	○	○	○	○	○
Hex nut		Stainless steel			○	○	○	○	○	○
Square nut		Stainless steel			○	○	○	○	○	○
Gaskets		Rubber (NBR)			○	○	○	○	○	○

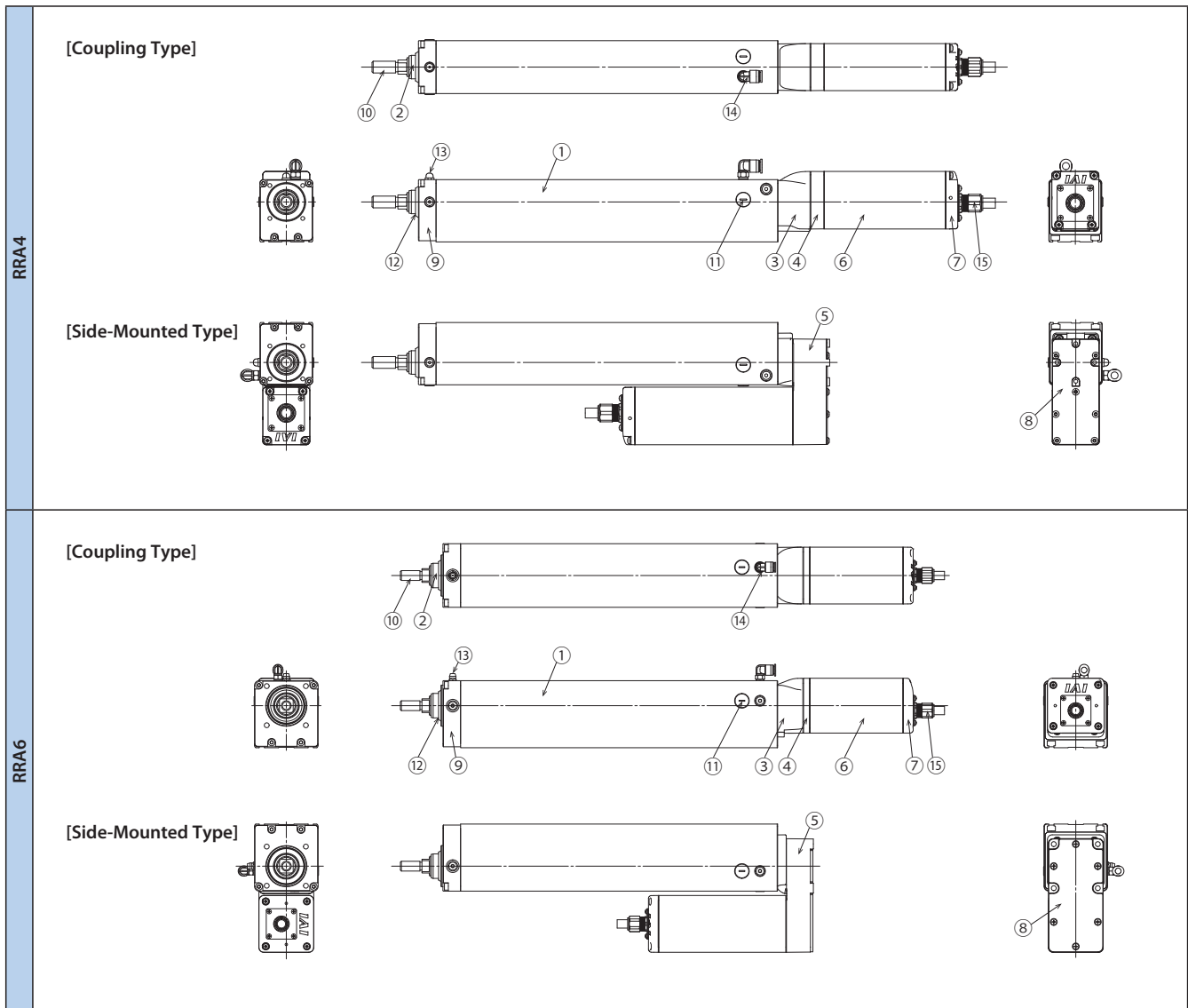


Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

# RCP6W Exterior Component Material

■ RCP6W-RAA4/RAA6/RAA7

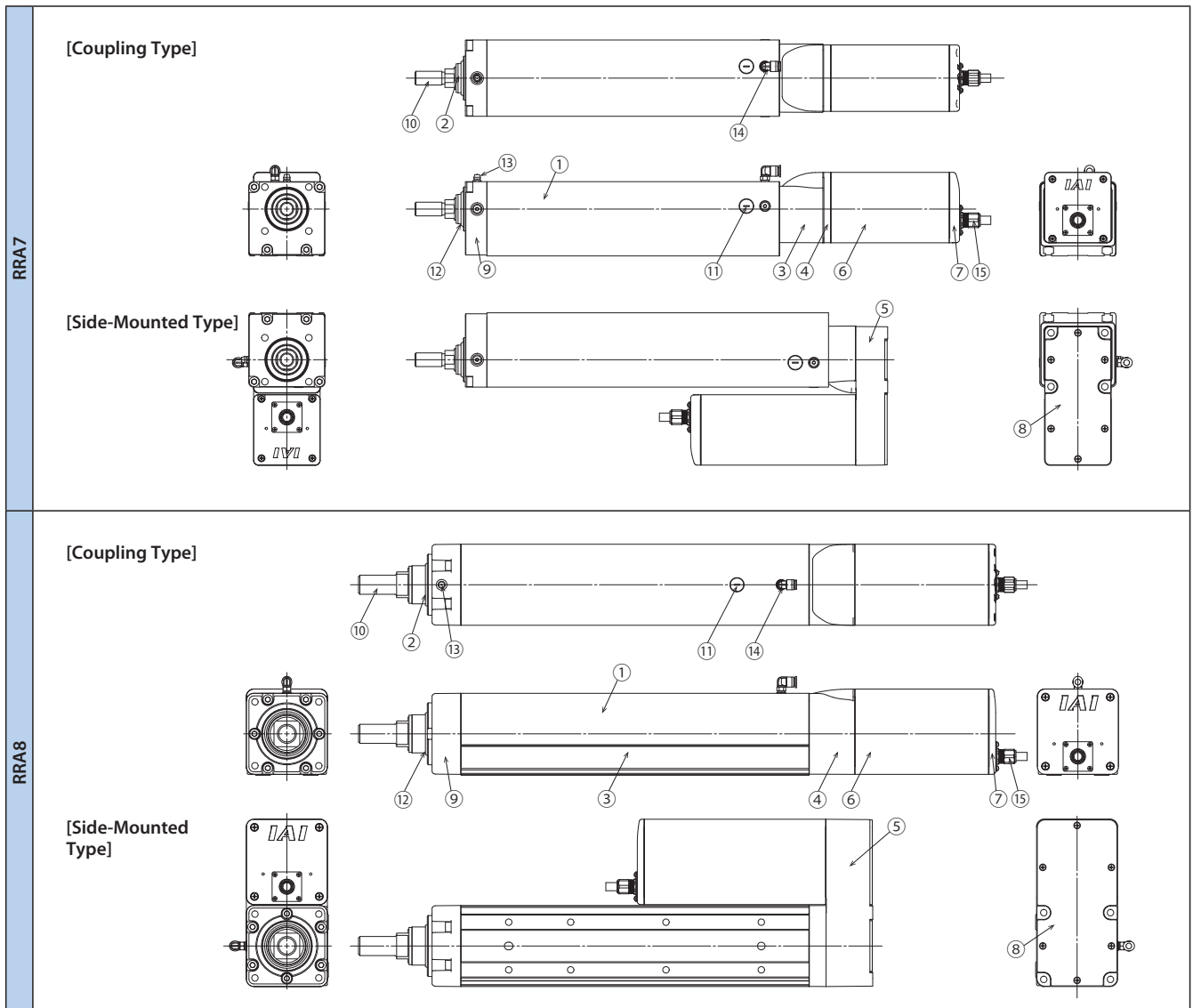
Name		Material	Treatment	Finish	RRA4C	RRA4R	RRA6C	RRA6R	RRA7C	RRA7R
①	Frame	Extruded aluminum	White alumite		○	○	○	○	○	○
②	Rod	Drawn aluminum	Hard alumite	Buffing finish	○	○	○	○	○	○
③	Rear bracket	Aluminum die cast	Designer coating		○	○	○	○	○	○
④	Motor bracket	Aluminum die cast	Designer coating		○	○	○	○	○	○
⑤	Reverse bracket	Aluminum die cast	Designer coating		○	○	○	○	○	○
⑥	Motor cover	Extruded aluminum	White alumite		○	○	○	○	○	○
⑦	End cover	Aluminum die cast	Designer coating		○	○	○	○	○	○
⑧	Pulley cover	Stainless steel			○	○	○	○	○	○
⑨	Front bracket IP	Aluminum	White alumite		○	○	○	○	○	○
⑩	Rod tip bracket	Stainless steel			○	○	○	○	○	○
⑪	Hole cap (grease nipple)	Rubber (NBR)			○	○	○	○	○	○
⑫	Dust seal	Rubber (NBR)			○	○	○	○	○	○
⑬	Grease nipple	Brass (C3604)	Non-electrolytic metal plating		○	○	○	○	○	○
⑭	Intake/exhaust port	Resin (PBT, POM), brass nickel plated			○	○	○	○	○	○
⑮	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated			○	○	○	○	○	○
	Cable sheath	Vinyl chloride (PVC)			○	○	○	○	○	○
Exterior bolts/screws		Stainless steel			○	○	○	○	○	○
Hex nut		Stainless steel			○	○	○	○	○	○
Square nut		Stainless steel			○	○	○	○	○	○
Gaskets		Rubber (NBR)			○	○	○	○	○	○





■ RCP6W-RAA8

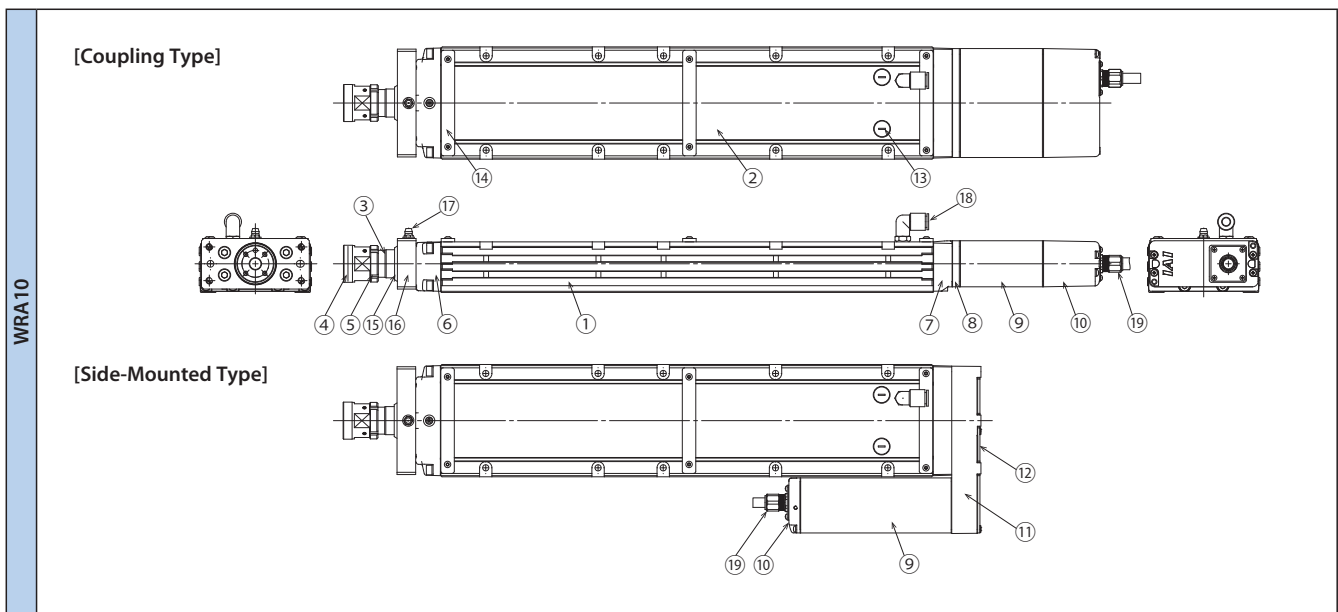
Name		Material	Treatment	Finish	RRA8C	RRA8R
Exterior Components	① Frame	Extruded aluminum	White alumite		○	○
	② Rod	Drawn aluminum	Hard alumite	Buffing finish	○	○
	③ Base	Extruded aluminum	White alumite		○	○
	④ Rear bracket	Aluminum die cast	Designer coating		○	○
	⑤ Reverse bracket	Aluminum die cast	Designer coating		○	○
	⑥ Motor cover	Extruded aluminum	White alumite		○	○
	⑦ End cover	Aluminum die cast	Designer coating		○	○
	⑧ Pulley cover	Stainless steel			○	○
	⑨ Front bracket IP	Aluminum die cast	Designer coating		○	○
	⑩ Rod tip bracket	Stainless steel			○	○
	⑪ Hole cap (grease nipple)	Rubber (NBR)			○	○
	⑫ Dust seal	Rubber (NBR)			○	○
	⑬ Grease nipple	Brass (C3604)	Non-electrolytic metal plating		○	○
	⑭ Intake/exhaust port	Resin (PBT, POM), brass nickel plated			○	○
		Rubber (NBR), resin (PBT), brass nickel plated			○	○
⑮ Actuator cable	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated		○	○	
	Cable sheath	Vinyl chloride (PVC)		○	○	
Exterior bolts/screws		Stainless steel			○	○
Hex nut		Stainless steel			○	○
Gaskets		Rubber (NBR)			○	○



# RCP6W Exterior Component Material

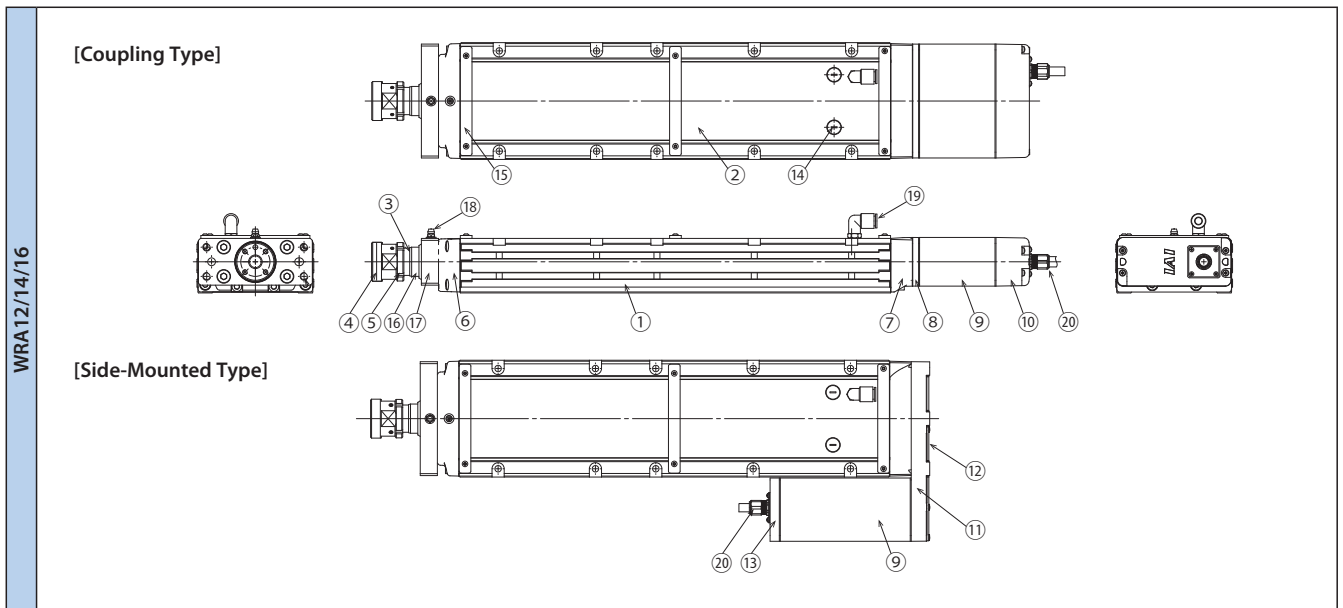
■ RCP6W-WRA10

Name		Material	Treatment	Finish	WRA10C	WRA10R
① Base		Extruded aluminum	White alumite		○	○
② Frame cover		Extruded aluminum	White alumite		○	○
③ Rod		Stainless steel tube	Hard chrome plating	Buffing finish	○	○
④ Tip bracket		Stainless steel			○	○
⑤ Locking nut		Stainless steel			○	○
⑥ Front bracket		Aluminum die cast	Designer coating		○	○
⑦ Rear bracket		Aluminum die cast	Designer coating		○	○
⑧ Motor bracket		Aluminum die cast	Designer coating		○	○
⑨ Motor cover		Extruded aluminum	White alumite		○	○
⑩ End cover		Aluminum die cast	Designer coating		○	○
⑪ Reverse bracket		Aluminum die cast	Designer coating		○	○
⑫ Pulley cover		Stainless steel			○	○
⑬ Cap		Rubber (NBR)			○	○
⑭ Frame cover		Aluminum	White alumite		○	○
⑮ Dust seal		Rubber (NBR)			○	○
⑯ Dust seal housing		Aluminum	White alumite		○	○
⑰ Grease nipple		Brass (C3604)	Non-electrolytic metal plating		○	○
⑱ Intake/exhaust port		Resin (PBT), brass nickel plated			○	○
⑲ Actuator cable	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated			○	○
	Cable sheath	Vinyl chloride (PVC)			○	○
Exterior bolts/screws		Stainless steel			○	○
Gaskets		Rubber (NBR)			○	○



■ RCP6W-WRA12/WRA14/WRA16

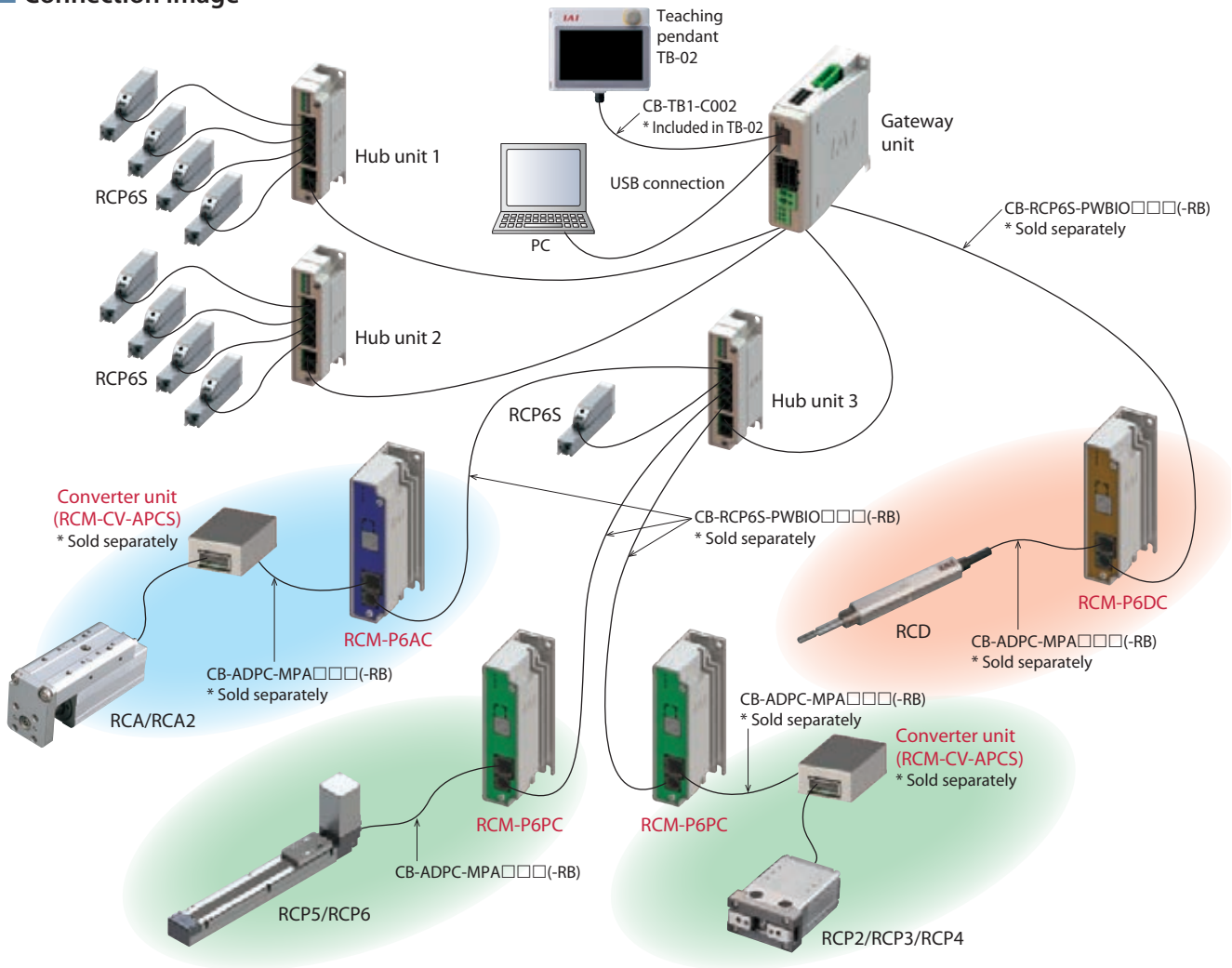
Name		Material	Treatment	Finish	WRA12C	WRA12R	WRA14C	WRA14R	WRA16C	WRA16R
Exterior Components	① Base	Extruded aluminum	White alumite		○	○	○	○	○	○
	② Frame cover	Extruded aluminum	White alumite		○	○	○	○	○	○
	③ Rod	Stainless steel tube	Hard chrome plating	Buffing finish	○	○	○	○	○	○
	④ Tip bracket	Stainless steel			○	○	○	○	○	○
	⑤ Locking nut	Stainless steel			○	○	○	○	○	○
	⑥ Front bracket	Aluminum die cast	Designer coating		○	○	○	○	○	○
	⑦ Rear bracket	Aluminum die cast	Designer coating		○	○	○	○	○	○
	⑧ Motor bracket	Aluminum die cast	Designer coating		○	○	○	○	○	○
	⑨ Motor cover	Extruded aluminum	White alumite		○	○	○	○	○	○
	⑩ Motor end cover (Coupling)	Aluminum die cast	Designer coating		○	○	○	○	○	○
	⑪ Reverse bracket	Aluminum die cast	Designer coating		○	○	○	○	○	○
	⑫ Pulley cover	Stainless steel			○	○	○	○	○	○
	⑬ Motor end cover (Side-mounted)	Aluminum	White alumite		○	○	○	○	○	○
	⑭ Cap	Rubber (NBR)			○	○	○	○	○	○
	⑮ Frame cover retainer	Aluminum	White alumite		○	○	○	○	○	○
	⑯ Dust seal	Rubber (NBR)			○	○	○	○	○	○
	⑰ Dust seal housing	Aluminum	White alumite		○	○	○	○	○	○
	⑱ Grease nipple	Brass (C3604)	Non-electrolytic metal plating		○	○	○	○	○	○
	⑲ Intake/exhaust port	Resin (PBT), brass nickel plated			○	○	○	○	○	○
	⑳ Actuator cable length	Cable gland	Rubber (NBR), resin (PBT), brass nickel plated		○	○	○	○	○	○
Cable sheath		Vinyl chloride (PVC)		○	○	○	○	○	○	○
Exterior bolts/screws		Stainless steel		○	○	○	○	○	○	○
Gaskets		Rubber (NBR)		○	○	○	○	○	○	○







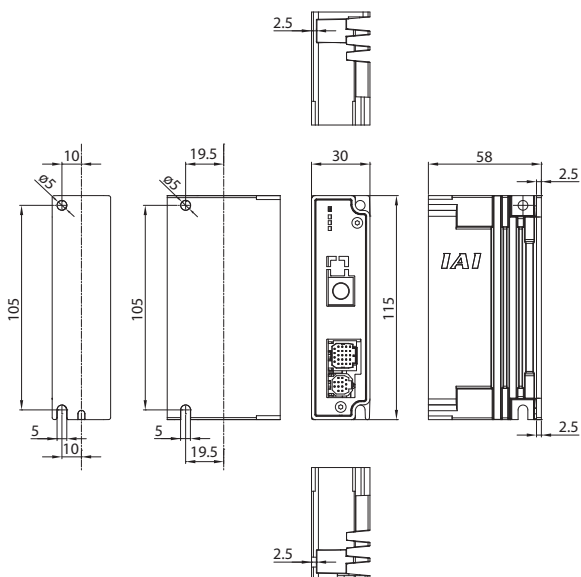
■ Connection Image



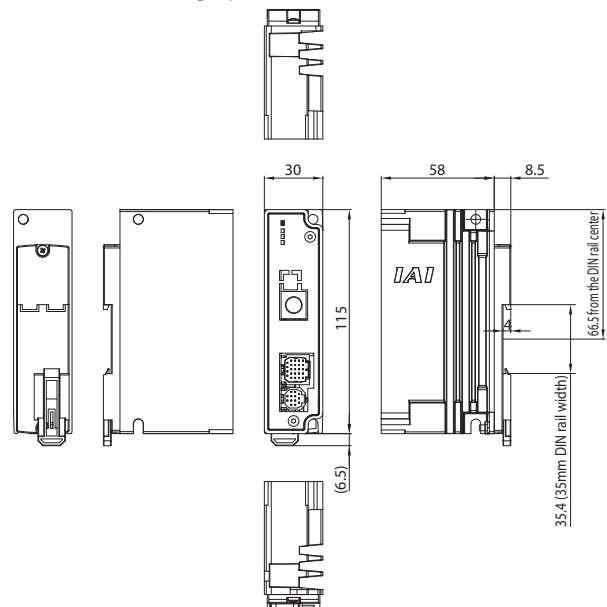
- \* The field network can be used by connecting to a gateway unit.
- \* Please contact IAI if you require a simple absolute encoder specification type.
- \* Maximum cable length between the gateway unit and actuator is 20m for RCM-P6PC and RCM-P6AC, and 10m for RCM-P6DC.

■ External Dimensions

[Screw Mounting Spec.]



[DIN Rail Mounting Spec.]



Foreword  
 Slider Type  
 Wide Slider Type  
 Rod Type  
 Radial Cylinder  
 Wide Radial Cylinder  
 Table Type  
 Cleanroom Slider  
 Cleanroom Wide Slider  
 Dust/Splash-Proof Rod  
 Dust/Splash-Proof Radial Cylinder  
 Dust/Splash-Proof Wide Radial Cylinder  
 Options  
 Reference Data  
 Controller

Options

Specifications

Specified Items	Specification Content		
Model number	RCM-P6PC	RCM-P6AC	RCM-P6DC
Number of controlled axes	1-axis		
Controller power	24VDC ± 10%		
Control power capacity	0.3A · For RCP6 types with brakes only, 0.7A for 0.2 sec is required for releasing brake	0.3A	
Motor power capacity	External 24V 28□ (for RCP2-RA3C), 35□, 42□, 56□ · When using the PowerCON, power consumption is 3.2A, peaking at 4.2A · When not using the PowerCON, power consumption is 1.7A 20□, 28□ Power consumption is 1.0A	<RCA2/RCA> (Parentheses indicate saving energy) · 10W/20W Rated 1.3A, Max. 4.4A (Max. 2.5A) · 20W (20S) Rated 1.7A, Max. 5.1A (Max. 3.4A) · 30W Rated 1.3A, Max. 4.0A (Max. 2.2A)	0.7A Rated, 1.5A Max.
Inrush current	8.3A	10A	
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	None (unless connected to a GW unit)		
Cooling method	Natural air cooling		
Supported encoders	· High-resolution battery-less absolute encoder: 8192 pulses/rev · Battery-less absolute encoder: 800 pulses/rev · Incremental encoder: 800 pulses/rev	· Battery-less absolute encoder: 16384 pulses/rev · Other than for incremental specification RCA, RCA2-***N: 800 pulses/rev, RCA2-***N, RCA2-***NA: 1048 pulses/rev	· Incremental encoder: 480 pulses/rev
LED display	SV/ALM LED×1		
Electromagnetic forced brake release mechanism	Brake release input (inside I/F connector)		
Electric shock protection mechanism	Class 1 basic insulation		
Insulation withstanding voltage	500VDC 10MΩ		
Contamination	Contamination 2		
Weight	Screw mounting specification: 200g, DIN rail mounting specification: 215g		
External dimensions	Screw mounting specification: 30W x 115H x 58D, DIN rail mounting specification: 30W x 115H x 66.5D		

Compatible Actuator List

RCM-P6PC Compatible Actuators

Slider Type	Rod Type	Table Type	Cleanroom	Dust/Splash-Proof
RCP6-SA4C	RCP6-RA4C	RCP6-TA4C	RCP6CR-SA4C	RCP6W-RA4C
RCP6-SA6C	RCP6-RA6C	RCP6-TA6C	RCP6CR-SA6C	RCP6W-RA6C
RCP6-SA7C	RCP6-RA7C	RCP6-TA7C	RCP6CR-SA7C	RCP6W-RA7C
RCP6-SA4R	RCP6-RA4R	RCP6-TA4R	RCP6CR-WSA10C	RCP6W-RA4R
RCP6-SA6R	RCP6-RA6R	RCP6-TA6R	RCP6CR-WSA12C	RCP6W-RA6R
RCP6-SA7R	RCP6-RA7R	RCP6-TA7R	RCP6CR-WSA14C	RCP6W-RA7R
RCP6-WSA10C	RCP6-RAA4C	RCP3-TA3C	RCP5CR-SA4C	RCP6W-RAA4C
RCP6-WSA12C	RCP6-RAA6C	RCP3-TA4C	RCP5CR-SA6C	RCP6W-RAA6C
RCP6-WSA14C	RCP6-RAA7C	RCP3-TA5C	RCP5CR-SA7C	RCP6W-RAA7C
RCP6-WSA10R	RCP6-RAA4R	RCP3-TA6C	RCP4CR-SA3C	RCP6W-RAA4R
RCP6-WSA12R	RCP6-RAA6R	RCP3-TA7C	RCP4CR-SA5C	RCP6W-RAA6R
RCP6-WSA14R	RCP6-RAA7R	RCP3-TA3R	RCP4CR-SA6C	RCP6W-RAA7R
RCP5-SA4C	RCP6-WRA10C	RCP3-TA4R	RCP4CR-SA7C	RCP6W-WRA10C
RCP5-SA6C	RCP6-WRA12C	RCP3-TA5R	RCP2CR-GRSS	RCP6W-WRA12C
RCP5-SA7C	RCP6-WRA14C	RCP3-TA6R	RCP2CR-GRLS	RCP6W-WRA14C
RCP5-SA4R	RCP6-WRA10R	RCP3-TA7R	RCP2CR-GRS	RCP6W-WRA10R
RCP5-SA6R	RCP6-WRA12R		RCP2CR-GRM	RCP6W-WRA12R
RCP5-SA7R	RCP6-WRA14R	<b>Gripper Type</b>	RCP2CR-GR3SS	RCP6W-WRA14R
RCP5-BA4	RCP5-RA4C	<b>Rotary Type</b>	RCP2CR-GR3SM	RCP5W-RA6C
RCP5-BA6	RCP5-RA6C	RCP4-GRSML	RCP2CR-RTBS	RCP5W-RA7C (Note)
RCP5-BA7	RCP5-RA7C	RCP4-GRSLL	RCP2CR-RTBSL	RCP4W-SA5C
RCP5-BA4U	RCP5-RA4R	RCP4-GRSWL	RCP2CR-RTCS	RCP4W-SA6C
RCP5-BA6U	RCP5-RA6R	RCP4-GRLM	RCP2CR-RTCSL	RCP4W-SA7C
RCP5-BA7U	RCP5-RA7R	RCP4-GRLL	RCP2CR-RTB	RCP4W-RA6C
RCP4-SA3C	RCP4-RA3C	RCP4-GRLW	RCP2CR-RTBL	RCP4W-RA7C (Note)
RCP4-SA5C	RCP4-RA5C	RCP2-GRSS	RCP2CR-RTC	RCP2W-RA4C
RCP4-SA6C	RCP4-RA6C (Note)	RCP2-GRLS	RCP2CR-RTCL	RCP2W-RA6C
RCP4-SA7C	RCP4-RA3R	RCP2-GRS	RCP2CR-RTBB	RCP2W-GRSS
RCP4-SA3R	RCP4-RA5R	RCP2-GRM	RCP2CR-RTBBL	RCP2W-GRLS
RCP4-SA5R	RCP4-RA6R	RCP2-GRHM	RCP2CR-RTCB	RCP2W-GRS
RCP4-SA6R	RCP3-RA2AC	RCP2-GRHB	RCP2CR-RTCBL	RCP2W-GRM
RCP4-SA7R	RCP3-RA2AR	RCP2-GR3LS		RCP2W-GR3SS
RCP3-SA2AC	RCP3-RA2BC	RCP2-GR3LM		RCP2W-GR3SM
RCP3-SA2AR	RCP3-RA2BR	RCP2-GR3SS		RCP2W-RTBS
RCP3-SA2BC	RCP2-RA2C	RCP2-GR3SM		RCP2W-RTBSL
RCP3-SA2BR	RCP2-RA3C	RCP2-RTBS		RCP2W-RTCS
RCP3-SA3C	RCP2-SRA4R	RCP2-RTBSL		RCP2W-RTCSL
RCP3-SA4C	RCP2-SRGD4R	RCP2-RTCS		RCP2W-RTB
RCP3-SA5C	RCP2-SRGS4R	RCP2-RTCSL		RCP2W-RTBL
RCP3-SA6C		RCP2-RTB		RCP2W-RTC
RCP3-SA3R		RCP2-RTBL		RCP2W-RTCL
RCP3-SA4R		RCP2-RTC		RCP2W-RTBB
RCP3-SA5R		RCP2-RTCL		RCP2W-RTBBL
RCP3-SA6R		RCP2-RTBB		RCP2W-RTCB
		RCP2-RTBBL		RCP2W-RTCBL
		RCP2-RTCB		
		RCP2-RTCBL		

(Note) Excluding 565P motor specifications.

Other
RCP4-ST68E
RCP4-ST615E
RCP4-ST4525E

- \* Converter unit (RCM-CV-APCS) is required if using RCP2, RCP3 or RCP4 actuators. (CR, W included)
- \* Please contact IAI if you require a simple absolute encoder specification type.
- \* Please check the "RCP6S Gateway Controller Compatible Actuator List" on the IAI website if connecting to an older model.

RCM-P6AC Compatible Actuators

Slider Type	Rod Type	Table Type	Cleanroom
RCA2-SA3C	RCA2-RN3NA	RCA2-TCA3NA	RCACR-SA4C
RCA2-SA4C	RCA2-RN4NA	RCA2-TCA4NA	RCACR-SA5C
RCA2-SA5C	RCA2-RP3NA	RCA2-TWA3NA	RCACR-SA6C
RCA2-SA6C	RCA2-RP4NA	RCA2-TWA4NA	
RCA2-SA3R	RCA2-GS3NA	RCA2-TFA3NA	<b>Dust/Splash-Proof</b>
RCA2-SA4R	RCA2-GS4NA	RCA2-TFA4NA	RCAW-RA3C
RCA2-SA5R	RCA2-GD3NA	RCA2-TA4C	RCAW-RA3D
RCA2-SA6R	RCA2-GD4NA	RCA2-TA5C	RCAW-RA3R
RCA-SA4C	RCA2-SD3NA	RCA2-TA6C	RCAW-RA4C
RCA-SA5C	RCA2-SD4NA	RCA2-TA7C	RCAW-RA4D
RCA-SA6C	RCA-RA3C	RCA2-TA4R	RCAW-RA4R
RCA-SA4D	RCA-RA4C	RCA2-TA5R	
RCA-SA5D	RCA-RA3D	RCA2-TA6R	
RCA-SA6D	RCA-RA4D	RCA2-TA7R	
RCA-SA4R	RCA-RA3R		
RCA-SA5R	RCA-RA4R		
RCA-SA6R	RCA-SRA4R		
	RCA-RGS3C		
	RCA-RGS4C		
	RCA-RGS3D		
	RCA-RGS4D		
	RCA-SRGS4R		
	RCA-RGD3C		
	RCA-RGD4C		
	RCA-RGD3D		
	RCA-RGD4D		
	RCA-RGD3R		
	RCA-RGD4R		
	RCA-SGD4R		

- \* Converter unit (RCM-CV-APCS) is required.
- \* Please contact IAI if you require a simple absolute encoder specification type.
- \* RCA/RCAW series encoder types cannot be connected to "A: Absolute" types.

RCM-P6DC Compatible Actuators

Rod Type	Gripper Type
RCD-RA1DA	RCD-GRSNA

Foreword  
Slider Type  
Wide Slider Type  
Rod Type  
Radial Cylinder  
Wide Radial Cylinder  
Table Type  
Cleanroom Slider  
Cleanroom Wide Slider  
Dust/Splash-Proof Rod  
Dust/Splash-Proof Radial Cylinder  
Dust/Splash-Proof Wide Radial Cylinder  
Options  
Reference Data  
Controller

## Options

### Touch panel teaching pendant

#### ■ Features

A teaching device equipped with functions such as position teaching, trial operation, and monitoring.

#### ■ Model **TB-02-C** (See RCP6/RCP6S Cat. V1, P.143)



### PC compatible software (Windows only)

#### ■ 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** (See RCP6/RCP6S Cat. V1, P.143) (with an external device communication cable + RS232 conversion unit)

#### ■ Model **RCM-101-USB** (See RCP6/RCP6S Cat. V1, P.143) (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 name shown below. \*There are restrictions on the total cable length. Please check with the [Notes] on P. 270 and 278.

#### ■ Cable Compatibility Chart

Connection destination	Gateway unit	Hub unit	PLC connection unit
RCP6S RCP6SCR RCP6SW	Standard cable	CB-RCP6S-PWBIO□□□	
	Robot cable	CB-RCP6S-PWBIO□□□-RB	
	<Extension> Standard cable	CB-RCP6S-PWBIO□□□-JY1	
	<Extension> Robot cable	CB-RCP6S-PWBIO□□□-JY1-RB	

(Cables see RCP6/RCP6S Catalogue V1, P.154)

Connection destination	Hub unit	PLC connection unit
Gateway unit	Standard cable	CB-RCP6S-RLY□□□
	Robot cable	CB-RCP6S-RLY□□□-RB
	<Extension> Standard cable	CB-RCP6S-RLY□□□-JY1
	<Extension> Robot cable	CB-RCP6S-RLY□□□-JY1-RB

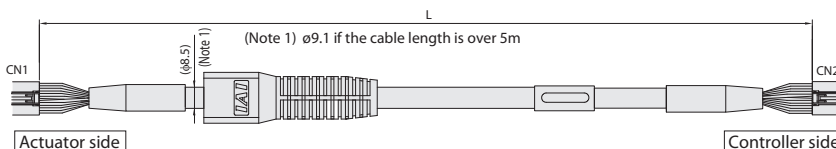
(Cables see RCP6/RCP6S Catalogue V1, P.154)

Connection destination	Converter unit	Actuator connecting to RCM-P6□C
RCM-P6□C	Standard cable	CB-ADPC-MPA□□□
	Robot cable	CB-ADPC-MPA□□□-RB

(Cables see below)

Model Number **CB-ADPC-MPA□□□/CB-ADPC-MPA□□□-RB**  
 Standard cable                      Robot cable

\*Please indicate the cable length (L) in □□□, e.g.) 030 = 3m



Minimum bending radius R 5m or less  $r = 68\text{mm}$  or more (Dynamic bending condition)  
 Longer than 5m  $r = 73\text{mm}$  or more (Dynamic bending condition)

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

\* Please contact IAI if the cable length other than above is needed.

CN1					CN2				
Color	Signal name	Pin No.	Color	Signal name	Pin No.				
Blue (AWG2/19)	U	1	Blue (AWG2/19)	U	1				
Orange (AWG2/19)	V	2	Orange (AWG2/19)	V	2				
Brown (AWG2/19)	-	3	Brown (AWG2/19)	-	3				
Gray (AWG2/19)	-	4	Gray (AWG2/19)	-	4				
Green (AWG2/19)	W	5	Green (AWG2/19)	W	5				
Red (AWG2/19)	-	6	Red (AWG2/19)	-	6				
Black (AWG2/6)	BK+	7	Black (AWG2/6)	BK+	7				
Yellow (AWG2/6)	BK-	8	Yellow (AWG2/6)	BK-	8				
Blue (AWG2/6)	A+	9	Blue (AWG2/6)	A+	9				
Orange (AWG2/6)	A-	10	Orange (AWG2/6)	A-	10				
Green (AWG2/6)	B+	11	Green (AWG2/6)	B+	11				
Brown (AWG2/6)	B-	12	Brown (AWG2/6)	B-	12				
Gray (AWG2/6)	HS1_IN	13	Gray (AWG2/6)	HS1_IN	13				
Red (AWG2/6)	HS2_IN	14	Red (AWG2/6)	HS2_IN	14				
Blue (AWG2/6)	LS+	15	Blue (AWG2/6)	LS+	15				
Orange (AWG2/6)	LS-	16	Orange (AWG2/6)	LS-	16				
Gray (AWG2/6)	VCC	17	Gray (AWG2/6)	VCC	17				
Red (AWG2/6)	GND	18	Red (AWG2/6)	GND	18				
Brown (AWG2/6)	VPS/BAT	19	Brown (AWG2/6)	VPS/BAT	19				
Green (AWG2/6)	HS3_IN	20	Green (AWG2/6)	HS3_IN	20				
Pink (AWG2/6)	BAT+	21	Pink (AWG2/6)	BAT+	21				
Black (AWG2/6)	FG	22	Black (AWG2/6)	FG	22				