

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.

ISO Cleanliness Class 2.5	US FED Cleanliness Class 10
-------------------------------------	---------------------------------------

There are 2 standards that represent the cleanliness.

1. ISO Standard 14644-1:2015

The number of particles 0.1µm or larger in 1m³ is expressed in exponents when expressed in power of 10.

2. US FED Standard 209D

Displays the number of particles in 1ft³ 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.

IP
65



Protection Degree Display



First Indicative Number

Protection against human bodies and solid foreign matter

Second Indicative Number

Protection against ingress of water

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

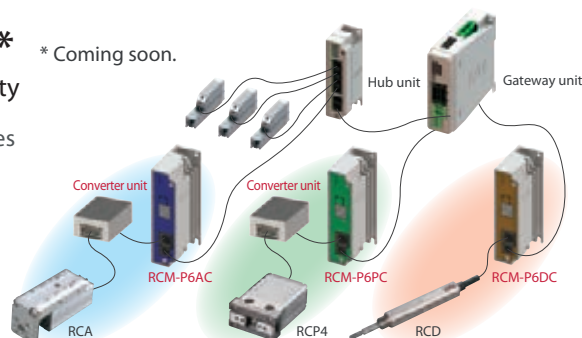
* IEC 60529

● **RCP6S Gateway Controller***

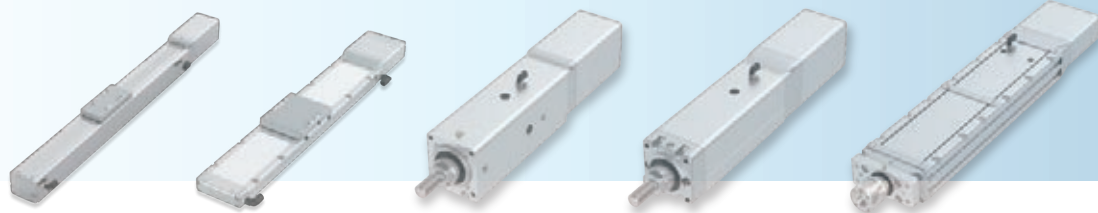
Gateway unit and hub unit connection capability

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		
	RA7C		70mm	3	±0.01	210	105	370	60	20		P.145
				16		420	280	273	50	8		
				8		350 <280>	140	547	60	18		
	RA8C		85mm	4	±0.01	140	105	1094	80	28		P.147
				20		350 <330>	300	500	30	3		
				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	10	525 <435>	435	77	11	2	IP65 (IEC 60529 Std.)	P149	
				5			350	260		23	4			
				2.5			175 <150>	130		310	40			10
	RA6R		58mm	12	±0.01	10	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	10	420	280	273	50	8		P153	
				8			350 <280>	140		547	60			18
				4			140	105		1094	80			28
	RA8R		85mm	20	±0.01	10	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	10	525 <435>	435	77	11	2	IP65 (IEC 60529 Std.)	P157	
				5			350	260		23	4			
				2.5			175 <150>	105		310	40			10
	RRA6C		65mm	12	±0.01	10	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	10	420	280	273	50	8		P161	
				8			350 <280>	140		547	60			18
				4			140	105		1094	80			28
	RRA8C		85mm	20	±0.01	10	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	10	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	10	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	10	420	280	273	50	8		P169	
				8			350 <280>	140		547	60			18
				4			140	105		1094	80			28
	RRA8R		85mm	20	±0.01	10	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	10	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	10	560 <->	320	93	30	-		P175	
				6			400 <220>	220		185	55			4
				3			225 <140>	80		370	70			14
	WRA14C		140mm	16	±0.01	10	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	10	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	10	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	10	560 <->	320	93	30	-		P183	
				6			400 <220>	220		185	55			4
				3			225 <140>	80		370	70			14
	WRA14R		140mm	16	±0.01	10	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	10	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)CR-SA4C

±10μm
Standard

±5μm
Optional

Cleanroom
Spec

Battery-less
Absolute

Motor
Unit Type

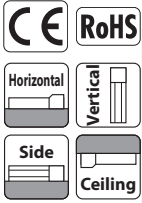
Coupled
Motor

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
	SA4C	WA	35P						
	RCP6CR: Separate Controller RCP6SCR: Built-in Controller	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 500: 500mm (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.18 for more information about the model specification items.

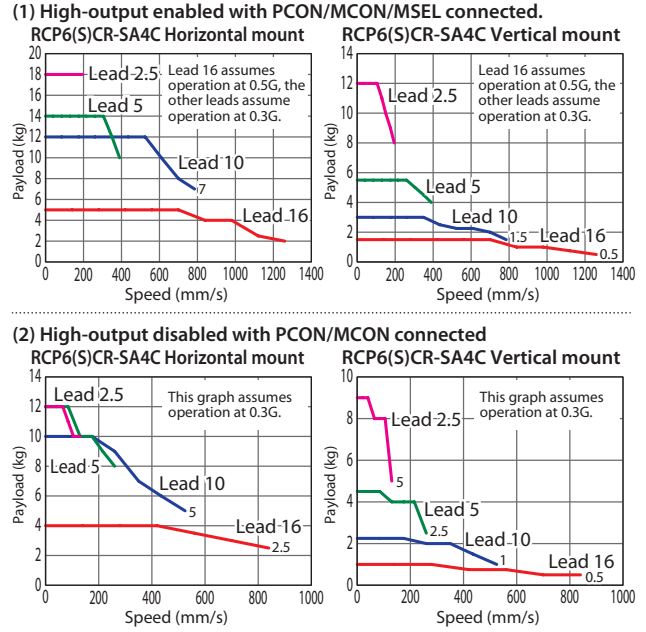


*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



- 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.207 for more details.
 - When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.

Correlation Diagrams of Speed and Payload



Actuator Specifications

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

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

Lead (mm)	Connected Controller	50~400 (Every 50mm)			Suction amount (N/mm)
		450 (mm)	500 (mm)	500 (mm)	
16	High-output Enabled	1260	1060	875	60
	High-output Disabled	840			
10	High-output Enabled	785	675	555	40
	High-output Disabled	525			
5	High-output Enabled	390	330	275	20
	High-output Disabled	260			
2.5	High-output Enabled	195	165	135	10
	High-output Disabled	130			

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

Cable Length

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

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

Options

Name	Option Code	Reference Page
Brake	B	See P.189
Cable exit direction (Top)	CJT	See P.189
Cable exit direction (Right)	CJR	See P.189
Cable exit direction (Left)	CJL	See P.189
Cable exit direction (Bottom)	CJB	See P.189
Designated grease coating specification	G3/G4	
High-precision specification (*1)	HPR	See P.192
Non-motor end specification	NM	See P.194
Air suction joint in opposite position	VR	See P.195
Double slider specification (*2)	W	See P.196

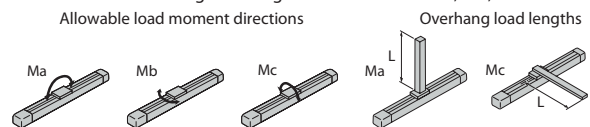
(*1) When the lead is 16, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (See P. 248)

Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 13.0N·m, Mb: 18.6N·m, Mc: 25.3N·m
Dynamic allowable moment (*2)	Ma: 5.0N·m, Mb: 7.1N·m, Mc: 9.7N·m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

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



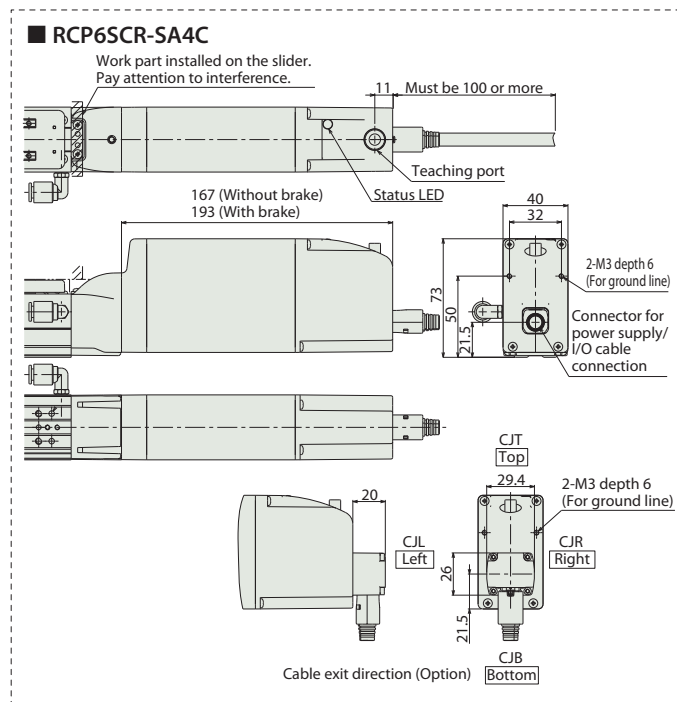
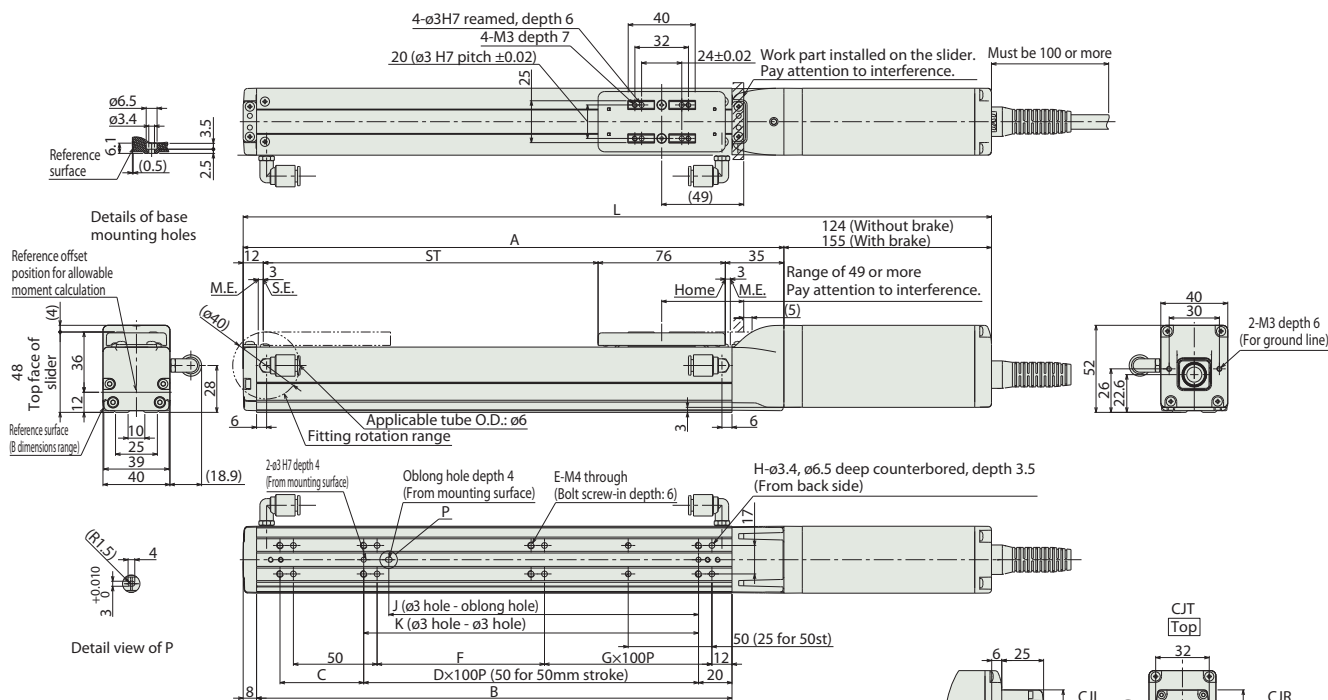
Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

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



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



■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	RCP6CR w/o brake	297	347	397	447	497	547	597	647	697
	RCP6CR w/ brake	328	378	428	478	528	578	628	678	728
	RCP6SCR w/o brake	340	390	440	490	540	590	640	690	740
	RCP6SCR w/ brake	366	416	466	516	566	616	666	716	766
A	173	223	273	323	373	423	473	523	573	623
B	134	184	234	284	334	384	434	484	534	584
C	50	50	100	50	100	50	100	50	100	50
D	-	1	1	2	2	3	3	4	4	5
E	6	6	6	8	8	10	10	12	12	14
F	50	100	50	100	50	100	50	100	50	100
G	0	0	1	1	2	2	3	3	4	4
H	8	8	10	10	12	12	14	14	16	16
J	35	85	85	185	185	285	285	385	385	485
K	50	100	100	200	200	300	300	400	400	500
Mass (kg)	RCP6CR w/o brake	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
	RCP6CR w/ brake	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0
	RCP6SCR w/o brake	1.3	1.4	1.5	1.6	1.7	1.8	1.8	1.9	2.0
	RCP6SCR w/ brake	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.2

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.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	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.

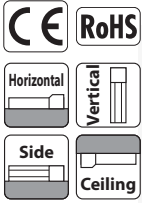
Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Dust/Splash-Proof Rod
Dust/Splash-Proof Radial Cylinder
Dust/Splash-Proof Wide Radial Cylinder
Options
Reference Data
Controller

RCP6(S)CR-SA6C

±10µm Standard
±5µm Optional
Cleanroom Spec
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 58mm
24V Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	SA6C	WA	42P						
	RCP6CR: Separate Controller RCP6SCR: Built-in Controller	WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20 :20mm 12 :12mm 6 : 6mm 3 : 3mm	50:50mm 800:800mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: 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.	

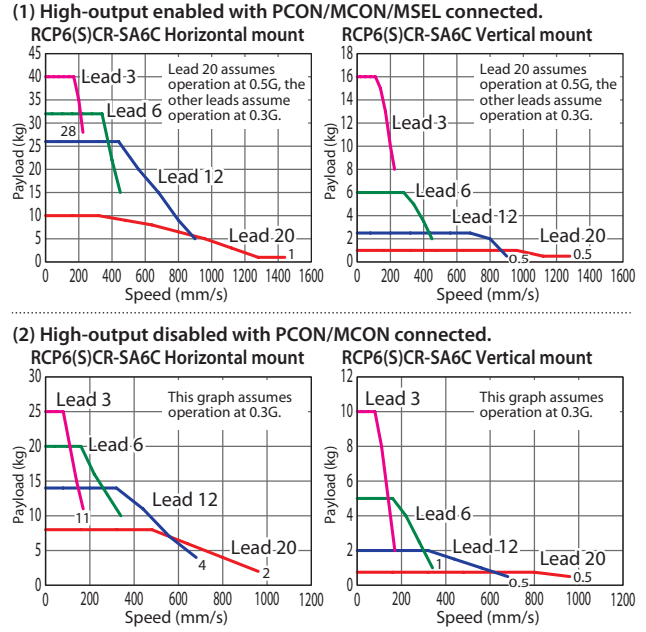
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.



*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.207 for more details.
 - (3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.
 - (4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

Correlation Diagrams of Speed and Payload



Actuator Specifications

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

H: Horizontal V: Vertical
* Push force only available during push mode w/ limited speed.

Stroke and Max Speed/Section Amount

Lead (mm)	Connected Controller	Stroke (mm)								Section amount (N/mm)		
		50-400 (Every 50mm)	450	500	550	600	650	700	750		800	
20	High-output Enabled	1440 <1280>	1335 <1280>	1130	970	840	735	650	575	100		
	High-output Disabled	960						840	735		650	575
	High-output Disabled	900	885	735	620	535	460	405	355		315	
12	High-output Enabled	680		620	535	460	405	355	315	70		
	High-output Disabled	680		620	535	460	405	355	315			
	High-output Disabled	450	435	365	305	265	230	200	175		155	
6	High-output Enabled	340		305	265	230	200	175	155	30		
	High-output Disabled	340		305	265	230	200	175	155			
	High-output Disabled	225	215	180	150	130	115	100	85		75	
3	High-output Enabled	170		150	130	115	100	85	75	15		
	High-output Disabled	170		150	130	115	100	85	75			
	High-output Disabled	170		150	130	115	100	85	75			

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options
Values in brackets < > are for vertical use.

Cable Length

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

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

Options

Name	Option Code	Reference Page
Brake	B	See P.189
Cable exit direction (Top)	CJT	See P.189
Cable exit direction (Right)	CJR	See P.189
Cable exit direction (Left)	CJL	See P.189
Cable exit direction (Bottom)	CJB	See P.189
Designated grease coating specification	G3/G4	
High-precision specification (*1)	HPR	See P.192
Non-motor end specification	NM	See P.194
Air suction joint in opposite position	VR	See P.195
Double slider specification (*2)	W	See P.196

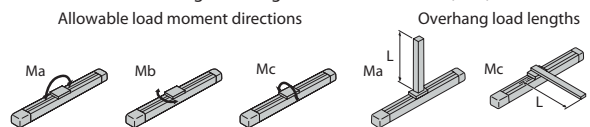
(*1) When the lead is 20, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (See P. 248)

Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 48.5N·m, Mb: 69.3N·m, Mc: 103N·m
Dynamic allowable moment (*2)	Ma: 11.6N·m, Mb: 16.6N·m, Mc: 24.6N·m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

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



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

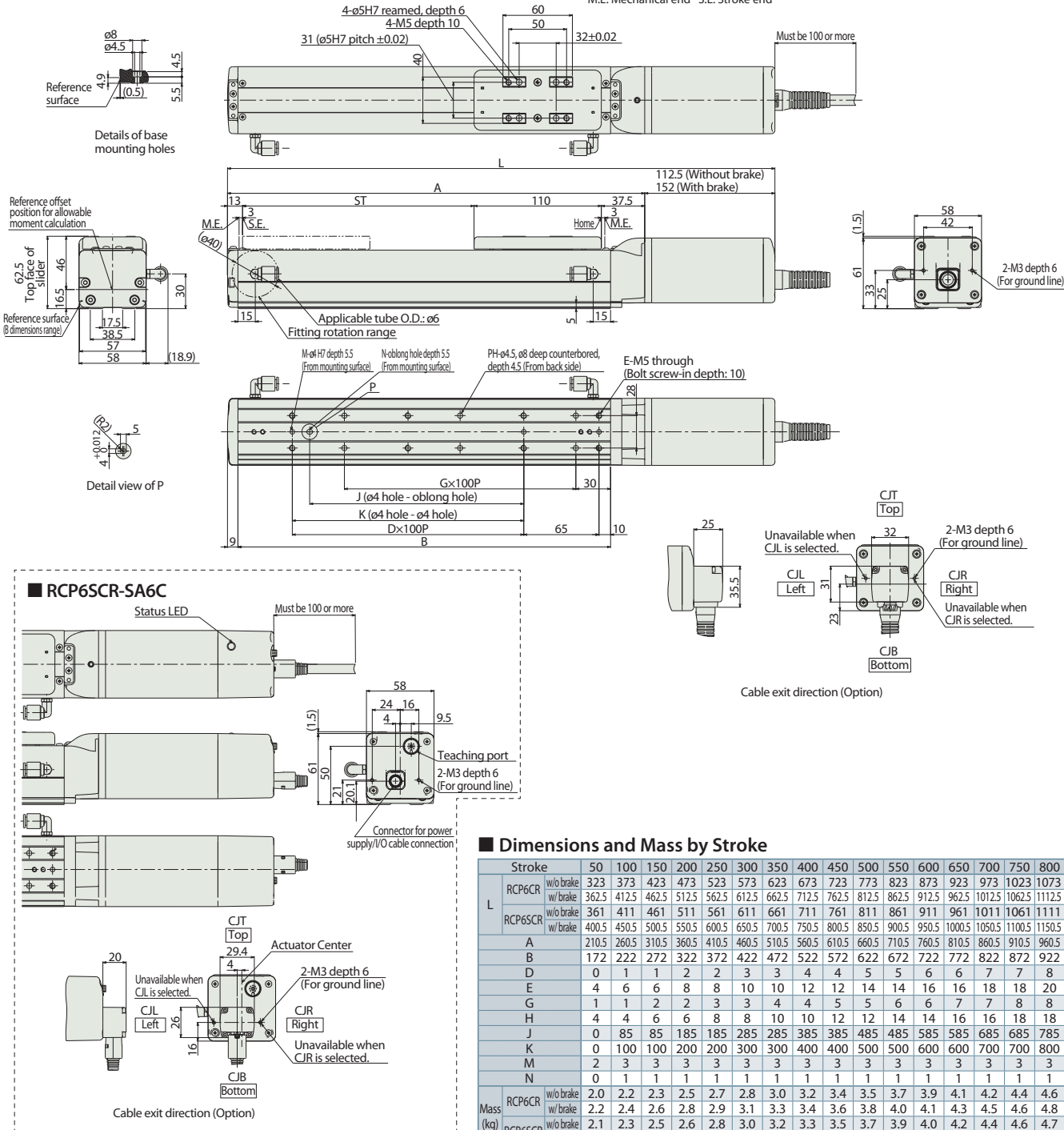
Dimensions

CAD drawings can be downloaded from our website.

www.robocylinder.de



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



Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
L	RCP6CR w/o brake	323	373	423	473	523	573	623	673	723	773	823	873	923	973	1023	1073
	RCP6CR w/ brake	361.5	411.5	461.5	511.5	561.5	611.5	661.5	711.5	761.5	811.5	861.5	911.5	961.5	1011.5	1061.5	1111.5
A	RCP6SCR w/o brake	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5	1050.5	1100.5	1150.5
	RCP6SCR w/ brake	210.5	260.5	310.5	360.5	410.5	460.5	510.5	560.5	610.5	660.5	710.5	760.5	810.5	860.5	910.5	960.5
B		172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
D		0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H		4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J		0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K		0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
M		2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N		0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6CR w/o brake	2.0	2.2	2.3	2.5	2.7	2.8	3.0	3.2	3.4	3.5	3.7	3.9	4.1	4.2	4.4	4.6
	RCP6CR w/ brake	2.2	2.4	2.6	2.8	2.9	3.1	3.3	3.4	3.6	3.8	4.0	4.1	4.3	4.5	4.6	4.8
RCP6SCR	w/o brake	2.1	2.3	2.5	2.6	2.8	3.0	3.2	3.3	3.5	3.7	3.9	4.0	4.2	4.4	4.6	4.7
	w/ brake	2.4	2.5	2.7	2.9	3.1	3.2	3.4	3.6	3.8	3.9	4.1	4.3	4.4	4.6	4.8	4.9

Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				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	512	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		—	—	●	CC-Link, EtherCAT, EtherNet/IP, 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.

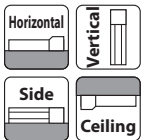
Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Dust/Splash-Proof Rod
Dust/Splash-Proof Radial Cylinder
Dust/Splash-Proof Wide Radial Cylinder
Options
Reference Data
Controller

RCP6(S)CR-SA7C

±10μm Standard
±5μm High-precision Optional
Cleanroom Spec
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 70mm
24V Pulse Motor

Model Specification Items	Series: SA7C	Type: WA	Encoder Type: 56P	Motor Type: 56P	Lead: 24	Stroke: 50	Applicable Controller/I/O Type: [RCP6] P3: PCON MCON MSEL P5: RCM-P6PC (Coming soon) [RCP6S] SE: SIO Type	Cable Length: N	Options: Please refer to the options table below.
	RCP6CR: Separate Controller RCP6SCR: Built-in Controller	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm 800: 800mm (Every 50mm)		N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable		

* 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.



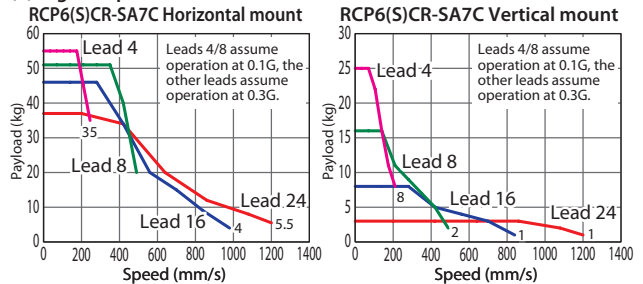
*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



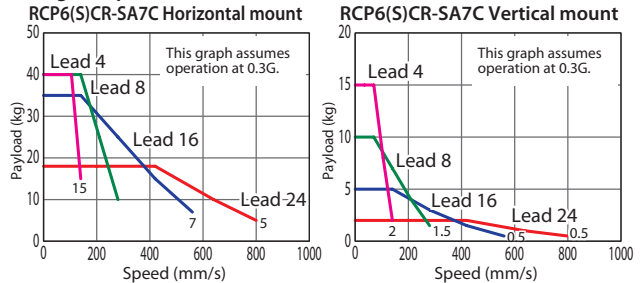
- The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
- The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.207 for more details.
- When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.
- Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

Correlation Diagrams of Speed and Payload

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



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



Actuator Specifications

Lead and Payload

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

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

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

Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead (mm)	Connected Controller	50~500 (Every 50mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction amount (N2mm)
24	High-output Enabled	1200	1095	965	850	760			90
	High-output Disabled		800					760	
16	High-output Enabled	980<840>	965<840>	830	720	635	560	500	70
	High-output Disabled		560					500	
8	High-output Enabled	490	475	410	355	315	275	245	40
	High-output Disabled		280					275	
4	High-output Enabled	245<210>	235<210>	205	175	155	135	120	30
	High-output Disabled		140					135	

Values in brackets <> are for vertical use.

Cable Length

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

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

Options

Name	Option Code	Reference Page
Brake	B	See P.189
Cable exit direction (Top)	CJT	See P.189
Cable exit direction (Right)	CJR	See P.189
Cable exit direction (Left)	CJL	See P.189
Cable exit direction (Bottom)	CJB	See P.189
Designated grease coating specification	G3/G4	
High-precision specification (*1)	HPR	See P.192
Non-motor end specification	NM	See P.194
Air suction joint in opposite position	VR	See P.195
Double slider specification (*2)	W	See P.196

(*1) When the lead is 16/24, it cannot be selected. Double slider specification cannot be selected.

(*2) Some leads cannot be selected. (See P. 248)

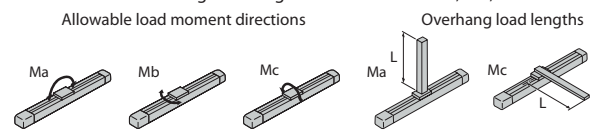
Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 115N·m, Mb: 115N·m, Mc: 229N·m
Dynamic allowable moment (*2)	Ma: 44.7N·m, Mb: 44.7N·m, Mc: 89.1N·m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

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

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



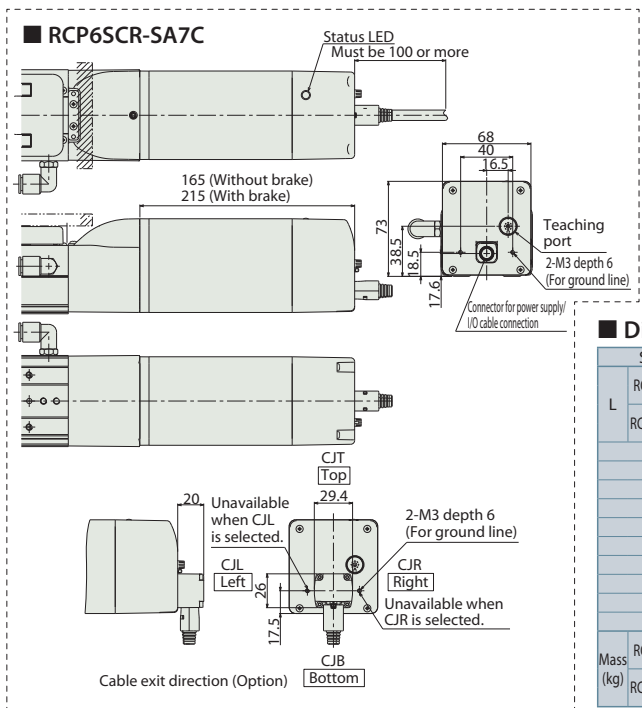
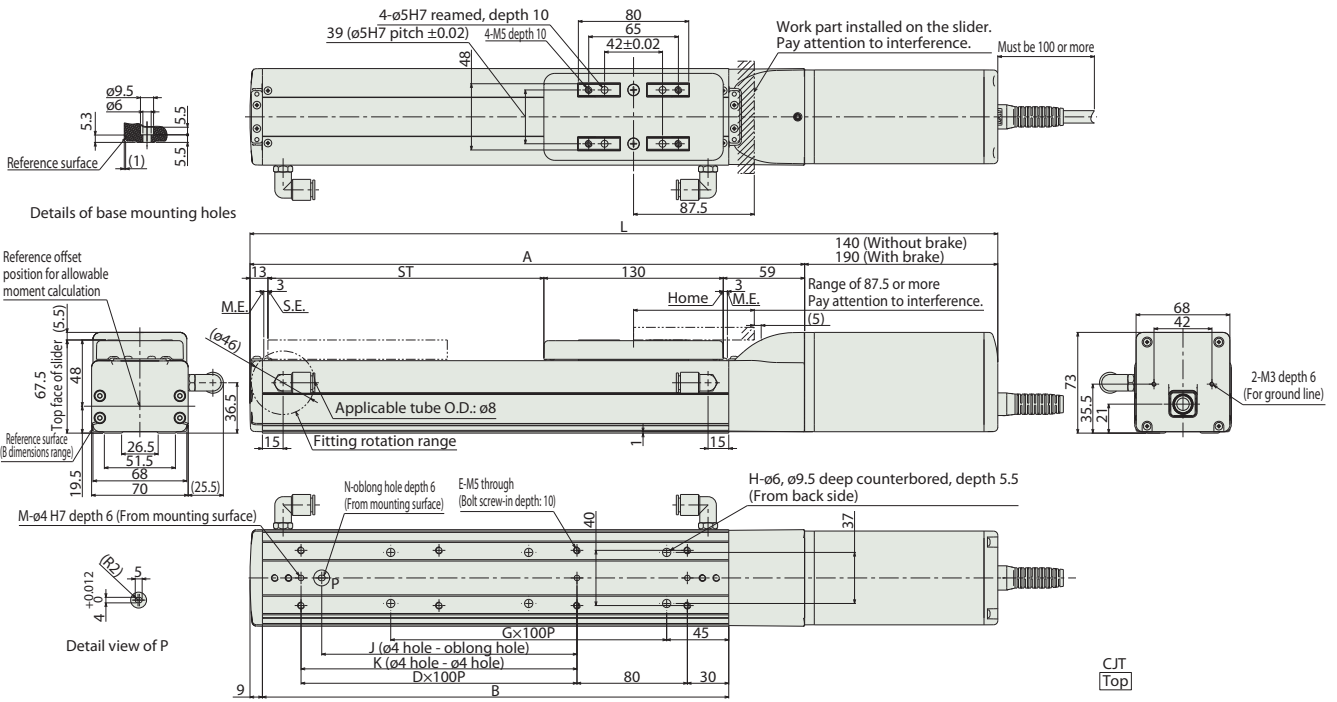
Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

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



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



Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
L	RCP6CR w/o brake	392	442	492	542	592	642	692	742	792	842	892	942	992	1042	1092	1142
	RCP6CR w/ brake	442	492	542	592	642	692	742	792	842	892	942	992	1042	1092	1142	1192
R	RCP6SCR w/o brake	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167
	RCP6SCR w/ brake	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217
A	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	
B	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	
D	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	
E	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	
G	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	
H	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	
J	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785	
K	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800	
M	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
N	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mass (kg)	RCP6CR w/o brake	3.6	3.8	4.0	4.3	4.5	4.7	4.9	5.2	5.4	5.6	5.9	6.1	6.3	6.5	6.8	7.0
	RCP6CR w/ brake	4.0	4.2	4.5	4.7	4.9	5.1	5.4	5.6	5.8	6.1	6.3	6.5	6.7	7.0	7.2	7.4
RCP6SCR	w/o brake	3.8	4.0	4.2	4.4	4.7	4.9	5.1	5.3	5.6	5.8	6.0	6.3	6.5	6.7	6.9	7.2
	w/ brake	4.2	4.4	4.6	4.9	5.1	5.3	5.6	5.8	6.0	6.2	6.5	6.7	6.9	7.1	7.4	7.6

Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				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	512	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		-	-	●	CC-Link EtherCAT IP	256	
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	-	-	●	CompoNet	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)CR-SA8C

±10µm
Standard

±5µm
Optional

Cleanroom
Spec

Battery-less
Absolute

Motor
Unit
Type

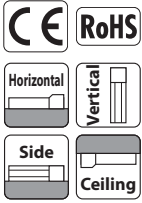
Coupled
Motor

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
	SA8C	WA	56SP						
	RCP6CR: Separate Controller RCP6SCR: Built-in Controller	WA: Battery-less Absolute	56SP: High Thrust Pulse Motor 56□ Size	30 :30mm 20 :20mm 10 :10mm 5 : 5mm	50:50mm 1100:1100mm (Every 50mm)	[RCP6] P4: PCON-CFB/ CGFB [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.	

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.

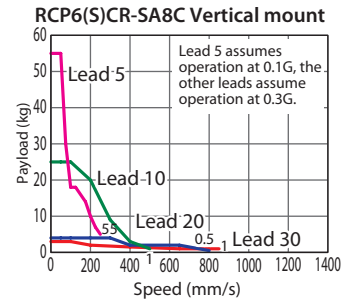
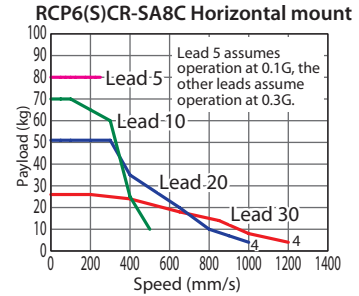


*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

- POINT Selection Notes**

 - (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
 - (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.207 for more details.
 - (3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.

Correlation Diagrams of Speed and Payload PCON 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)*
		Horizontal (kg)	Vertical (kg)	
RCP6(S)CR-SA8C-WA-56SP-30-①-②-③-④	30	28	3	159
RCP6(S)CR-SA8C-WA-56SP-20-①-②-③-④	20	60	4	239
RCP6(S)CR-SA8C-WA-56SP-10-①-②-③-④	10	70	25	478
RCP6(S)CR-SA8C-WA-56SP-5-①-②-③-④	5	80	55	956

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

Stroke and Max Speed/Suction Amount (Unit: mm/s)

Lead (mm)	50~650 (Every 50mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)	Suction amount (N/min)
30	1200 <850>			1155 <850>	1040 <850>	940 <850>	855 <850>	780	715	660	160
20	1000 <800>	950 <800>	860 <800>	770	695	630	570	520	480	440	110
10	500	480	430	385	345	310	285	260	235	220	60
5	250	240	215	190	175	155	140	130	120	110	30

Values in brackets <> are for vertical use.

Cable Length

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

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

Options

Name	Option Code	Reference Page
Brake	B	See P.189
Cable exit direction (Top)	CJT	See P.189
Cable exit direction (Right)	CJR	See P.189
Cable exit direction (Left)	CJL	See P.189
Cable exit direction (Bottom)	CJB	See P.189
Designated grease coating specification	G3/G4	
High-precision specification (*1)	HPR	See P.192
Non-motor end specification	NM	See P.194
Air suction joint in opposite position	VR	See P.195
Double slider specification (*2)	W	See P.196

(*1) When the lead is 20/30, it cannot be selected. Double slider specification cannot be selected.

(*2) Some leads cannot be selected. (See P. 248)

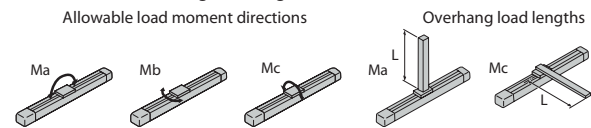
Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 219N·m, Mb: 219N·m, Mc: 414N·m
Dynamic allowable moment (*2)	Ma: 77.0N·m, Mb: 77.0N·m, Mc: 146N·m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) Values in [] are for high-precision (for lead 5/10) specification.

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

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



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

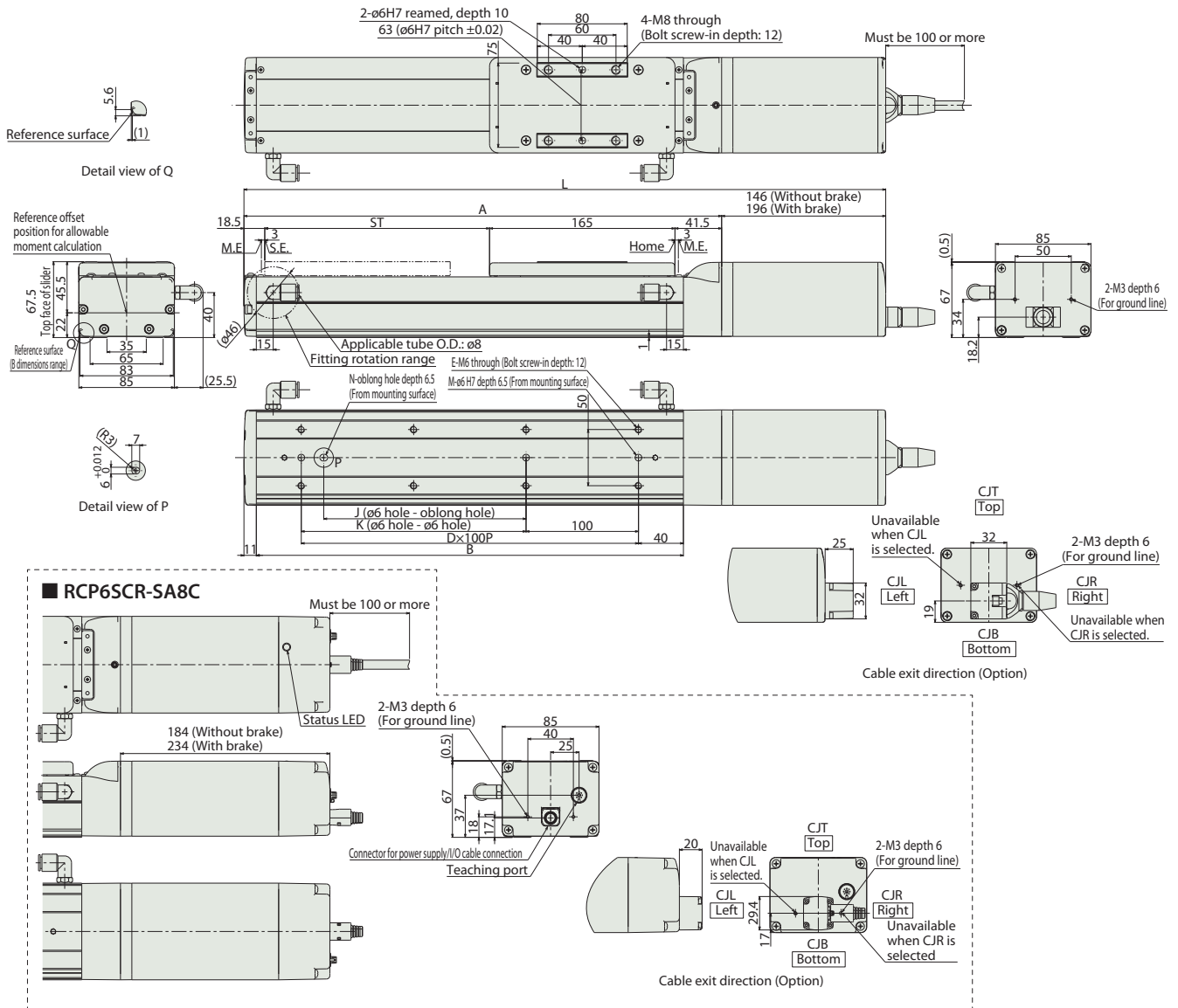
Dimensions

CAD drawings can be downloaded from our website.

www.robocylinder.de



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



■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100		
L	RCP6CR	w/o brake	421	471	521	571	621	671	721	771	821	871	921	971	1021	1071	1121	1171	1221	1271	1321	1371	1421	1471
		w/ brake	471	521	571	621	671	721	771	821	871	921	971	1021	1071	1121	1171	1221	1271	1321	1371	1421	1471	1521
	RCP6SCR	w/o brake	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109	1159	1209	1259	1309	1359	1409	1459	1509
		w/ brake	509	559	609	659	709	759	809	859	909	959	1009	1059	1109	1159	1209	1259	1309	1359	1409	1459	1509	1559
A	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	
B	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1325	
D	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	11	12	
E	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	24	26	
J	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080	1080	
K	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100	1100	
M	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
N	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mass (kg)	RCP6CR	w/o brake	4.5	4.7	5.0	5.3	5.5	5.8	6.1	6.4	6.6	6.9	7.2	7.5	7.7	8.0	8.3	8.5	8.8	9.1	9.4	9.6	9.9	10.2
		w/ brake	5.0	5.2	5.5	5.8	6.1	6.3	6.6	6.9	7.1	7.4	7.7	8.0	8.2	8.5	8.8	9.1	9.3	9.6	9.9	10.1	10.4	10.7
	RCP6SCR	w/o brake	4.7	4.9	5.2	5.5	5.8	6.0	6.3	6.6	6.9	7.1	7.4	7.7	7.9	8.2	8.5	8.8	9.0	9.3	9.6	9.9	10.1	10.4
		w/ brake	5.2	5.5	5.7	6.0	6.3	6.5	6.8	7.1	7.4	7.6	7.9	8.2	8.5	8.7	9.0	9.3	9.5	9.8	10.1	10.4	10.6	10.9

Applicable Controllers

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

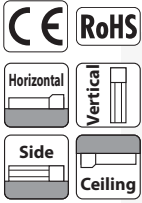
Name	External view	Max. number of controlled axes	Input power	Positioner	Pulse train	Program	Control method	Maximum number of positioning points	Reference page
PCON-CFB/CGFB		1	DC24V	● Option	● * Option	-	Network * Option	512 (768 for network spec.)	See P.255
							DeviceNet CompoNet EtherNet/IP CC-Link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

RCP6(S)CR-WSA10C

±10μm Standard
±5μm Optional
Cleanroom Spec
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 100mm
24v Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	RCP6CR: Separate Controller RCP6SCR: Built-in Controller	WSA10C	WA: Battery-less Absolute	35P: Pulse Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 500: 500mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: 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.18 for more information about the model specification items.



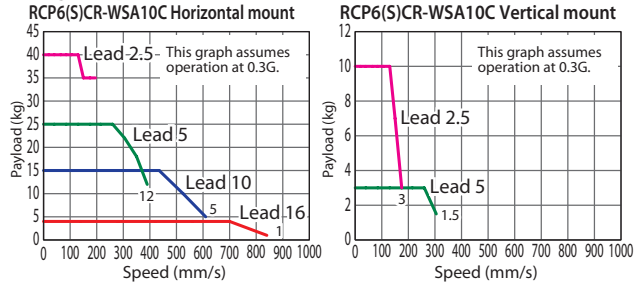
*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



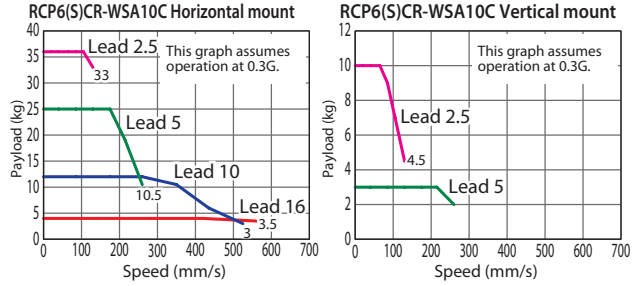
- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
- (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.211 for more details.
- (3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.

Correlation Diagrams of Speed and Payload

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



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



Actuator Specifications

Lead and Payload

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

Model Number	Lead (mm)	Connected Controller	Max. Payload		Max. Push Force (N)*
			Horizontal (kg)	Vertical (kg)	
RCP6(S)CR-WSA10C-WA-35P-16-①②③④	16	High-output Enabled	4	-	48
		High-output Disabled	4	-	
RCP6(S)CR-WSA10C-WA-35P-10-①②③④	10	High-output Enabled	15	-	77
		High-output Disabled	12	-	
RCP6(S)CR-WSA10C-WA-35P-5-①②③④	5	High-output Enabled	28	3	155
		High-output Disabled	25	3	
RCP6(S)CR-WSA10C-WA-35P-2.5-①②③④	2.5	High-output Enabled	40	10	310
		High-output Disabled	36	10	

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

Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead (mm)	Connected Controller	Stroke					Suction amount (N/Lmin)	
		50~300 (Every 50mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)		
16	High-output Enabled	840	775	660			105	
	High-output Disabled	560						
10	High-output Enabled	610	590	490	415			60
	High-output Disabled	525						
5	High-output Enabled	390<350>	355<350>	290	245	205	30	
	High-output Disabled	260						
2.5	High-output Enabled	195<175>	175	145	120	100	25	
	High-output Disabled	130						

Values in brackets <> are for vertical use.

Cable Length

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

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

Options

Name	Option Code	Reference Page
Brake	B	See P.189
Cable exit direction (Top)	CJT	See P.189
Cable exit direction (Right)	CJR	See P.189
Cable exit direction (Left) (*1)	CJL	See P.189
Cable exit direction (Bottom)	CJB	See P.189
Designated grease coating specification	G3/G4	
High-precision specification (*2)	HPR	See P.192
Non-motor end specification	NM	See P.194
Air suction joint in opposite position	VR	See P.195

(*1) RCP6SCR cannot be selected.

(*2) When the lead is 16, it cannot be selected.

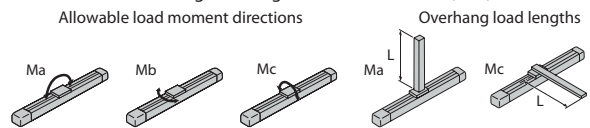
Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 271N·m, Mb: 271N·m, Mc: 553N·m
Dynamic allowable moment (*2)	Ma: 65.4N·m, Mb: 65.4N·m, Mc: 134N·m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) Values in [] are for high-precision (for lead 2.5/5/10) specification.

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

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



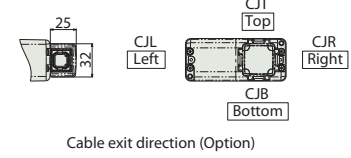
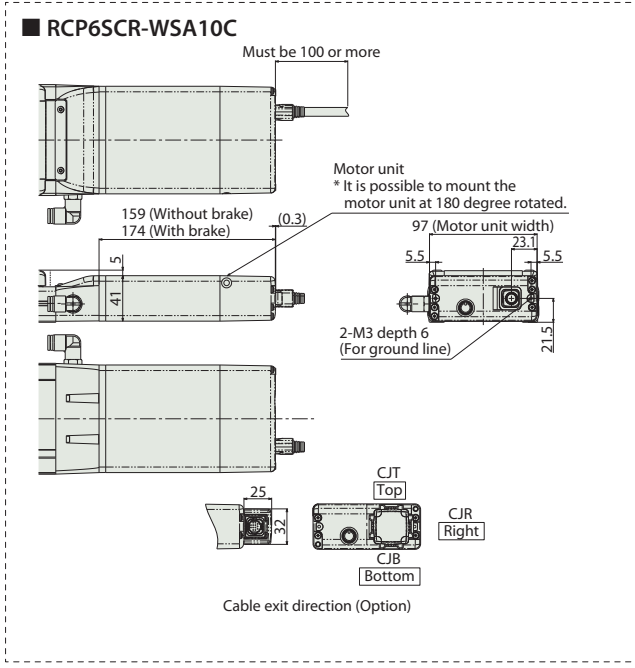
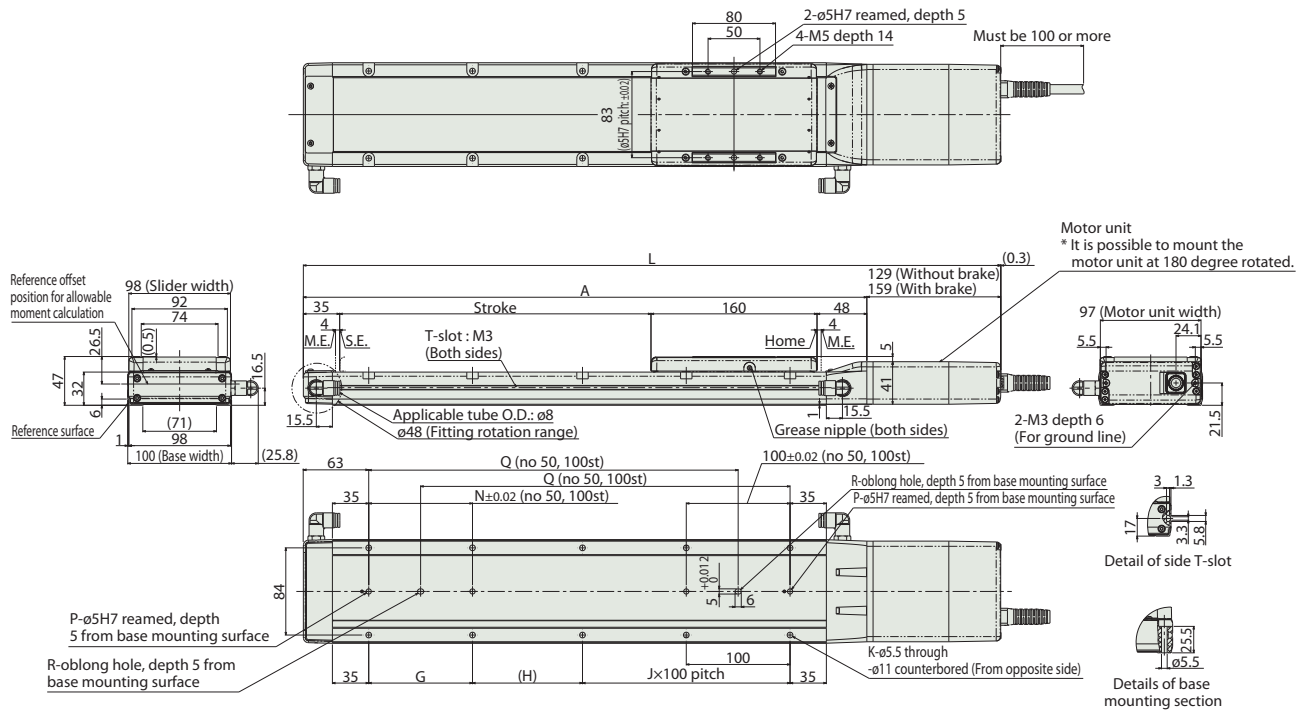
Please refer to the RoboCylinder General Catalog for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

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



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



■ Dimensions and Mass by Stroke

L	Stroke	50	100	150	200	250	300	350	400	450	500
		RCP6CR w/o brake	422	472	522	572	622	672	722	772	822
RCP6CR w/ brake	452	502	552	602	652	702	752	802	852	902	
RCP6SCR w/o brake	452	502	552	602	652	702	752	802	852	902	
RCP6SCR w/ brake	467	517	567	617	667	717	767	817	867	917	
A		293	343	393	443	493	543	593	643	693	743
G		-	-	100	100	100	100	100	100	100	100
H		156	206	256	306	356	406	456	506	556	
J		0	0	1	1	2	2	3	3	4	4
K		4	4	8	8	10	10	12	12	14	14
N		-	-	100	100	100	100	100	100	100	100
P		1	1	2	2	2	2	2	2	2	2
Q		-	-	206	256	306	356	406	456	506	556
R		0	0	1	1	1	1	1	1	1	1
Mass (kg)	RCP6CR w/o brake	2.9	3.1	3.4	3.6	3.8	4.1	4.3	4.6	4.8	5.0
	RCP6CR w/ brake	3.1	3.3	3.6	3.8	4.0	4.3	4.5	4.8	5.0	5.2
	RCP6SCR w/o brake	3.0	3.2	3.5	3.7	3.9	4.2	4.4	4.7	4.9	5.1
	RCP6SCR w/ brake	3.1	3.4	3.6	3.9	4.1	4.3	4.6	4.8	5.1	5.3

Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				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	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.

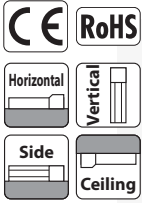
Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Dust/Splash-Proof Rod
Dust/Splash-Proof Radial Cylinder
Dust/Splash-Proof Wide Radial Cylinder
Options
Reference Data
Controller

RCP6(S)CR-WSA12C

±10μm Standard
±5μm Optional
Cleanroom 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
	—	WSA12C	—	WA	—	42P	—	—	—
	RCP6CR: Separate Controller RCP6SCR: Built-in Controller		WA: Battery-less Absolute	42P: Pulse Motor 42□ Size	20 :20mm 12 :12mm 6 : 6mm 3 : 3mm	50:50mm 800:800mm (Every 50mm)	[RCP6] P3: PCON MCON MSEL P5: 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.

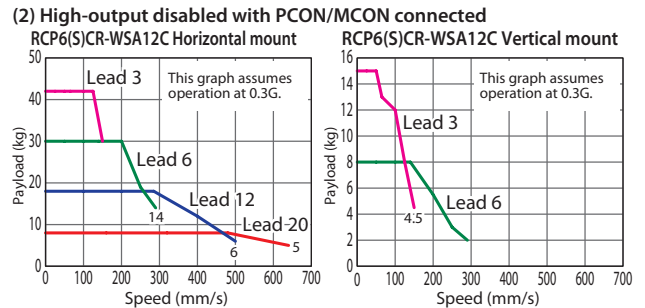
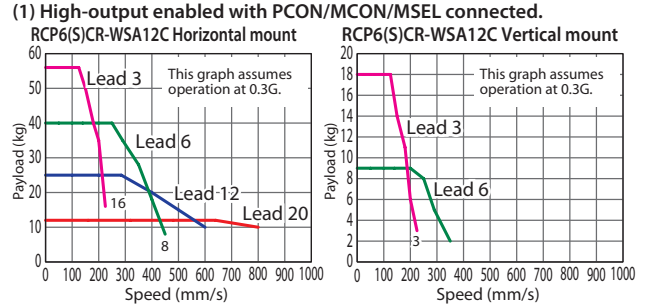
* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.18 for more information about the model specification items.



*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.211 for more details.
 - (3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.
 - (4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.247 for more information.

Correlation Diagrams of Speed and Payload



Actuator Specifications

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

H: Horizontal V: Vertical
* Push force only available during push mode w/ limited speed.

Stroke and Max Speed/Suction Amount

Lead (mm)	Connected Controller	Stroke (mm)										Suction amount (N/mm)
		50~350 (Every 50mm)	400	450	500	550	600	650	700	750	800	
20	High-output Enabled	800				740 650 580 520						130
	High-output Disabled	640				580 520						
12	High-output Enabled	600	535	465	405	355	315	285				80
	High-output Disabled	500	465	405	355	315	285					
6	High-output Enabled	450<400>	435<400>	365	310	265	230	200	175	155	140	40
	High-output Disabled	290	265	230	200	175	155	140				
3	High-output Enabled	225	215	180	150	130	115	100	85	75	70	25
	High-output Disabled	150	130	115	100	85	75	70				

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options
Values in brackets <> are for vertical use.

Cable Length

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

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

Options

Name	Option Code	Reference Page
Brake	B	See P.189
Cable exit direction (Top)	CJT	See P.189
Cable exit direction (Right)	CJR	See P.189
Cable exit direction (Left)	CJL	See P.189
Cable exit direction (Bottom)	CJB	See P.189
Designated grease coating specification	G3/G4	
High-precision specification*	HPR	See P.192
Non-motor end specification	NM	See P.194
Air suction joint in opposite position	VR	See P.195

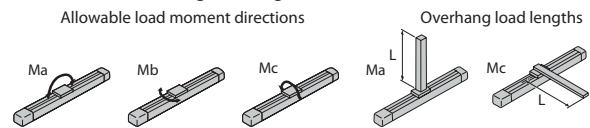
* When the lead is 20, it cannot be selected.

Actuator Specifications

Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 311N·m, Mb: 311N·m, Mc: 827N·m
Dynamic allowable moment (*2)	Ma: 87.5N·m, Mb: 87.5N·m, Mc: 233N·m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

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



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

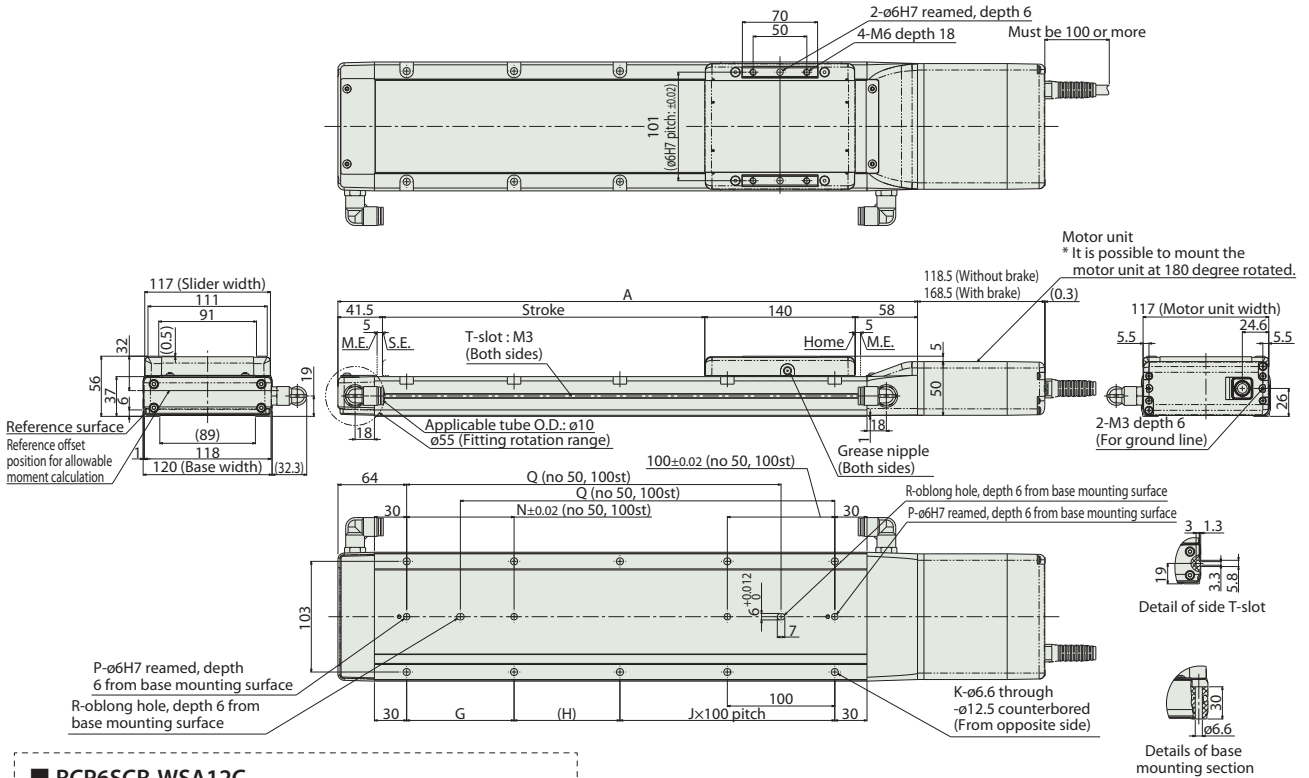
Dimensions

CAD drawings can be downloaded from our website.

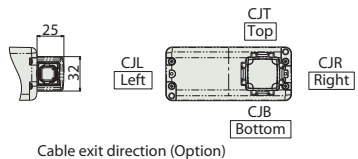
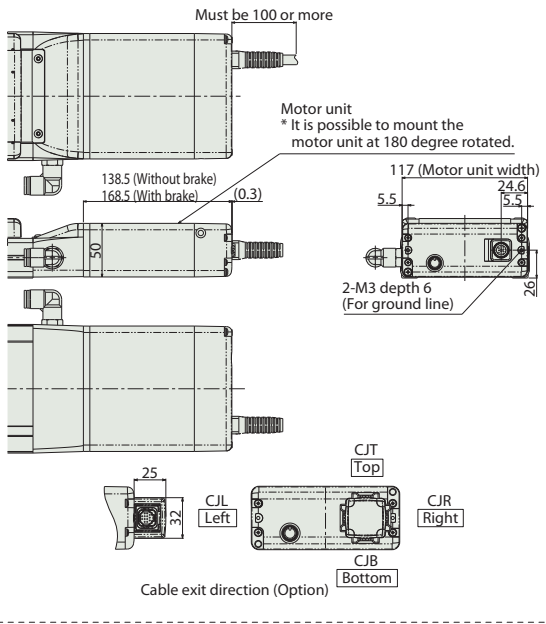
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*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



RCP6SCR-WSA12C



Dimensions and Mass by Stroke

Stroke	Stroke																	
	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800		
L	RCP6CR	w/o brake	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
	w/ brake	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1208
L	RCP6SCR	w/o brake	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178
	w/ brake	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1208
A	RCP6CR	w/o brake	289.5	339.5	389.5	439.5	489.5	539.5	589.5	639.5	689.5	739.5	789.5	839.5	889.5	939.5	989.5	1039.5
	w/ brake	339.5	389.5	439.5	489.5	539.5	589.5	639.5	689.5	739.5	789.5	839.5	889.5	939.5	989.5	1039.5	1089.5	1139.5
G	RCP6CR	w/o brake	—	—	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	w/ brake	—	—	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
H	RCP6CR	w/o brake	148.5	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5	898.5
	w/ brake	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5	898.5	948.5	998.5
J	RCP6CR	w/o brake	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
	w/ brake	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
K	RCP6CR	w/o brake	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
	w/ brake	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22
N	RCP6CR	w/o brake	—	—	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	w/ brake	—	—	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P	RCP6CR	w/o brake	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	w/ brake	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Q	RCP6CR	w/o brake	—	—	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5
	w/ brake	—	—	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5	898.5
R	RCP6CR	w/o brake	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	w/ brake	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mass (kg)	RCP6CR	w/o brake	3.8	4.1	4.4	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.8	8.1	8.4	8.8
	w/ brake	4.0	4.4	4.7	5.0	5.4	5.7	6.0	6.4	6.7	7.1	7.4	7.7	8.1	8.4	8.7	9.1	9.1
Mass (kg)	RCP6SCR	w/o brake	3.8	4.2	4.5	4.8	5.2	5.5	5.8	6.2	6.5	6.8	7.2	7.5	7.8	8.2	8.5	8.8
	w/ brake	4.1	4.4	4.7	5.1	5.4	5.7	6.1	6.4	6.7	7.1	7.4	7.8	8.1	8.4	8.8	9.1	9.1

Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	●	●	—	Network cannot be selected	64	—
PCON-CB/CGB		1		* Option	* Option	—	DeviceNet	512	Please see P.255
MCON-C/CG (**)		8		—	—	—	CC-Link, EtherCAT, EtherNet/IP	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.

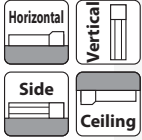
Foreword
Slider Type
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Dust/Splash-Proof Rod
Dust/Splash-Proof Radial Cylinder
Dust/Splash-Proof Wide Radial Cylinder
Options
Reference Data
Controller

RCP6(S)CR-WSA14C

±10µm Standard
±5µm Optional
Cleanroom Spec
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 140mm
24v Pulse Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
	— WSA14C —	— WA —	— 56P —						
	RCP6CR: Separate Controller RCP6SCR: Built-in Controller	WA: Battery-less Absolute	56P: Pulse Motor 56□ Size	24 : 24mm 16 : 16mm 8 : 8mm 4 : 4mm	50 : 50mm 800 : 800mm (Every 50mm)	[RCP6] P3 : PCON MCON MSEL P5 : 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.18 for more information about the model specification items.

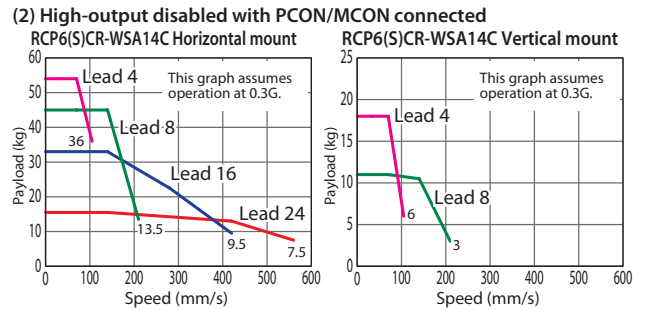
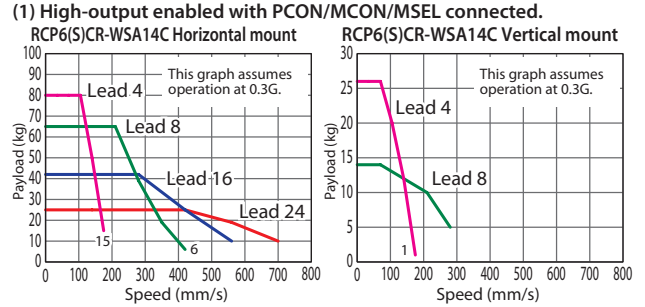


*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



- 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.211 for more details.
 - When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.
 - Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.

Correlation Diagrams of Speed and Payload



Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed. H: Horizontal V: Vertical

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

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

Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead (mm)	Connected Controller	50~500 (Every 50mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction amount (N/L/min)
24	High-output Enabled	700						665	105
	High-output Disabled	560							
16	High-output Enabled	560			550	490	440	80	
	High-output Disabled	420							
8	High-output Enabled	420<350>	400<350>	350	305	270	240	215	45
	High-output Disabled	210							
4	High-output Enabled	210<175>	200<175>	170	150	135	120	105	25
	High-output Disabled	105							

Values in brackets <> are for vertical use.

Cable Length

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

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

Options

Name	Option Code	Reference Page
Brake	B	See P.189
Cable exit direction (Top)	CJT	See P.189
Cable exit direction (Right)	CJR	See P.189
Cable exit direction (Left)	CJL	See P.189
Cable exit direction (Bottom)	CJB	See P.189
Designated grease coating specification	G3/G4	
High-precision specification*	HPR	See P.192
Non-motor end specification	NM	See P.194
Air suction joint in opposite position	VR	See P.195

* When the lead is 16/24, it cannot be selected.

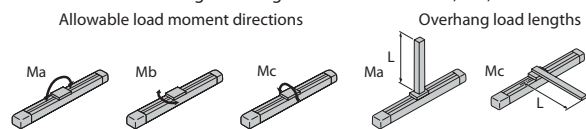
Actuator Specifications

Item	Description
Drive system	Ball screw ø12mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 462N·m, Mb: 462N·m, Mc: 1,170N·m
Dynamic allowable moment (*2)	Ma: 122N·m, Mb: 122N·m, Mc: 308N·m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

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

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

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



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

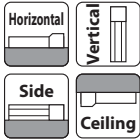
RCP6(S)CR-WSA16C



Model Specification Items

Series	— WSA16C —	Type	— WA —	Encoder Type	— 56SP —	Lead	— 20 : 20mm —	Stroke	— 50 : 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 X□□ : Specified Length R□□ : Robot Cable —	Options	— Please refer to the options table below. —
RCP6CR: Separate Controller RCP6SCR: Built-in Controller		WA: Battery-less Absolute		56SP: Hig Thrust Pulse Motor 56□ Size		20 : 20mm 10 : 10mm 5 : 5mm	50 : 50mm 1100 : 1100mm (Every 50mm)								

* 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.



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

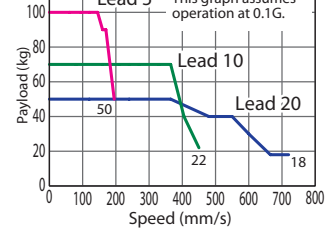


- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
- (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.211 for more details.
- (3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagrams of push force and current limit" on P.205.
- (4) The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P. 206 for more information.

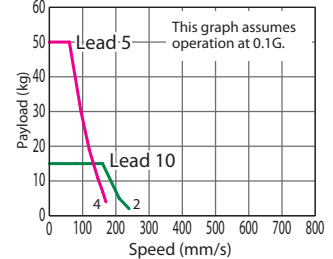
Correlation Diagrams of Speed and Payload

PCON connected.

RCP6(S)CR-WSA16C Horizontal mount



RCP6(S)CR-WSA16C Vertical mount



Actuator Specifications

Lead and Payload

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

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)*
		Horizontal (kg)	Vertical (kg)	
RCP6(S)CR-WSA16C-WA-56SP-20-①②③④	20	50	—	239
RCP6(S)CR-WSA16C-WA-56SP-10-①②③④	10	70	15	478
RCP6(S)CR-WSA16C-WA-56SP-5-①②③④	5	100	50	956

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

Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead (mm)	Stroke (mm)										Suction amount (N/mm)
	50-650 (Every 50mm)	700	750	800	850	900	950	1000	1050	1100	
20	720			715	645	590	535	490	450	415	65
10	450 <240>	440 <240>	395 <240>	355 <240>	320 <240>	290 <240>	265 <240>	240	225	205	30
5	195 <170>			175 <170>	160	145	130	120	110	100	20

Values in brackets <> are for vertical use.

Cable Length

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

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

Options

Name	Option Code	Reference Page
Brake	B	See P.189
Cable exit direction (Top)	CJT	See P.189
Cable exit direction (Right)	CJR	See P.189
Cable exit direction (Left)	CJL	See P.189
Cable exit direction (Bottom)	CJB	See P.189
Designated grease coating specification	G3/G4	
High-precision specification *	HPR	See P.192
Non-motor end specification	NM	See P.194
Air suction joint in opposite position	VR	See P.195

* When the lead is 20, it cannot be selected.

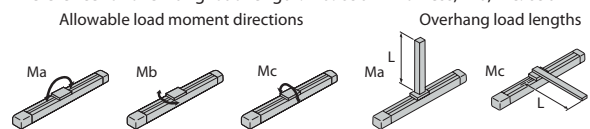
Actuator Specifications

Item	Description
Drive system	Ball screw ø16mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 642N·m, Mb: 642N·m, Mc: 1,610N·m
Dynamic allowable moment (*2)	Ma: 161N·m, Mb: 161N·m, Mc: 404N·m
Cleanliness	ISO class 2.5 or equiv. (ISO STD 14644-1:2015), US class 10 (FED STD 209D)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) Values in [] are for high-precision (for lead 5/10) specification.

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

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



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

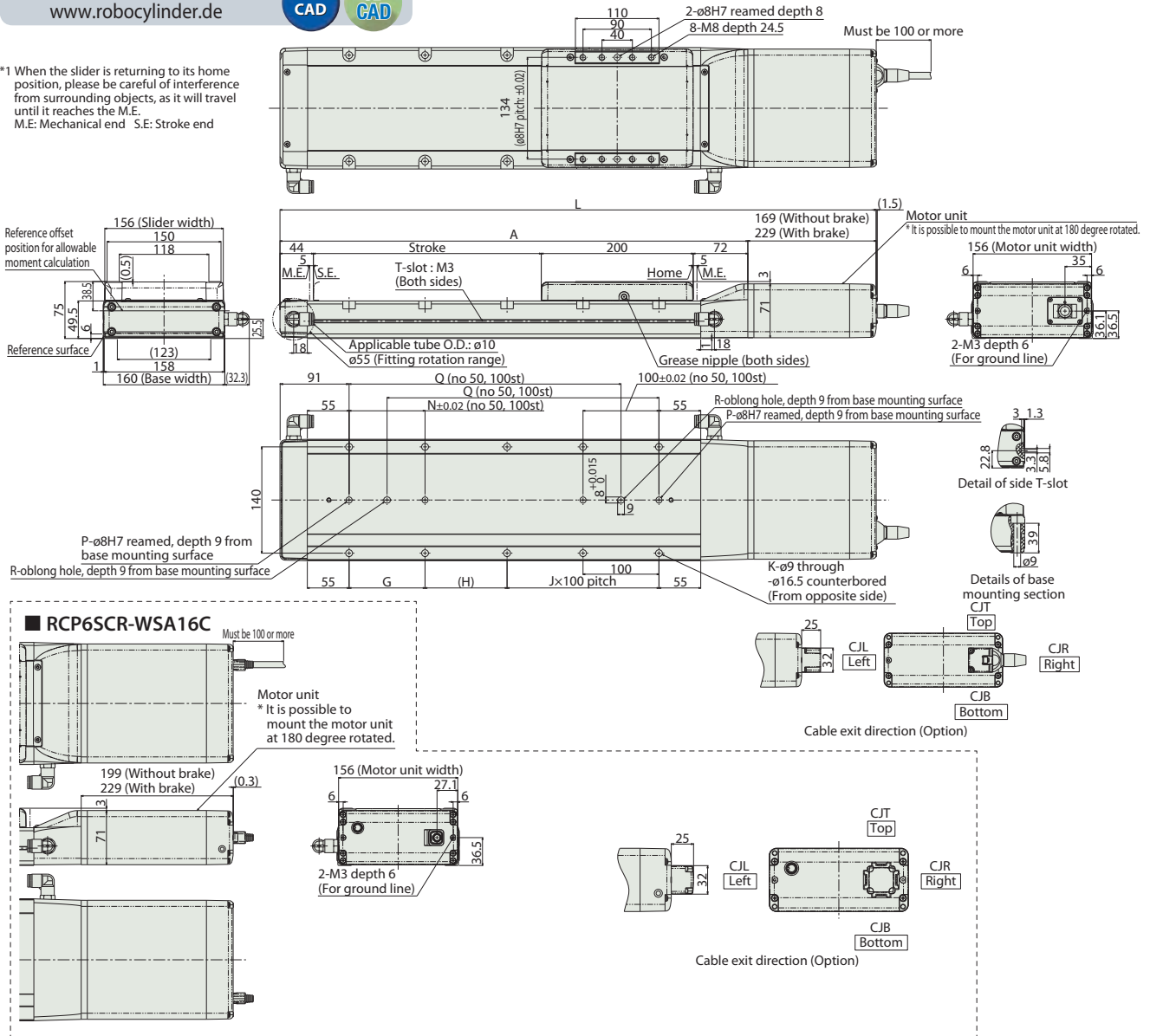
Dimensions

CAD drawings can be downloaded from our website.

www.robocylinder.de



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



■ Dimensions and Mass by Stroke

Stroke	Stroke																							
	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100		
L	RCP6CR	w/o brake	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385	1435	1485	1535	1585
		w/ brake	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195	1245	1295	1345	1395	1445	1495	1545	1595	1645
	RCP6SCR	w/o brake	565	615	665	715	765	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415	1465	1515	1565	1615
		w/ brake	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195	1245	1295	1345	1395	1445	1495	1545	1595	1645
A		366	416	466	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	
G		—	—	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
H		158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	
J		0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	
K		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	
N		—	—	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
P		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Q		—	—	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	
R		0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mass (kg)	RCP6CR	w/o brake	9.0	9.6	10.2	10.8	11.4	12.0	12.6	13.2	13.8	14.4	15.0	15.7	16.2	16.9	17.4	18.1	18.7	19.3	19.9	20.5	21.1	21.7
		w/ brake	9.5	10.1	10.7	11.3	11.9	12.5	13.1	13.7	14.3	14.9	15.5	16.1	16.7	17.3	17.9	18.5	19.1	19.7	20.3	21.0	21.5	22.2
	RCP6SCR	w/o brake	9.2	9.8	10.4	11.0	11.6	12.2	12.8	13.4	14.0	14.6	15.2	15.8	16.4	17.0	17.6	18.2	18.8	19.4	20.0	20.6	21.2	21.8
		w/ brake	9.5	10.2	10.7	11.4	11.9	12.6	13.2	13.8	14.4	15.0	15.6	16.2	16.8	17.4	18.0	18.6	19.2	19.8	20.4	21.0	21.6	22.2

Applicable Controllers

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

Name	External view	Max. number of controlled axes	Input power	Positioner	Pulse train	Program	Control method		Maximum number of positioning points	Reference page	
							Network * Option	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