

RCP6(S)-WRA14C

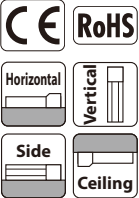
Battery-less Absolute
Motor Unit Type
Coupled Motor
Body Width 140 mm
24v Stepper Motor

Model Specification Items

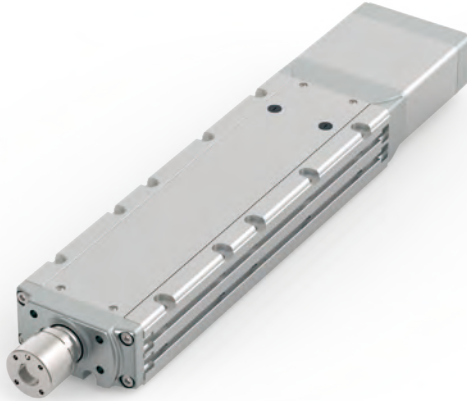
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WRA14C	WA	56P	24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm 600: 600mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M : 5m X□ : Specified Length R□ : Robot Cable	Please refer to the options table below.

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

Radial Load OK



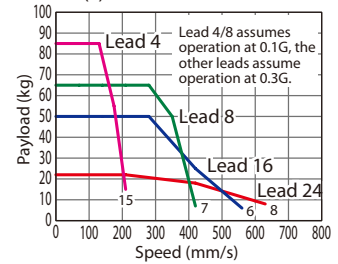
*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



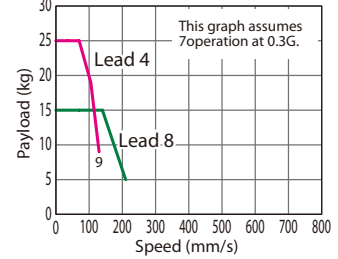
- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
- (2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
- (3) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P.127 and after for the allowable load mass.
- (4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
- (5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.130 for more information.

Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.
RCP6(S)-WRA14C Horizontal mount



RCP6(S)-WRA14C Vertical mount



Actuator Specifications

Lead and Payload

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

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

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

Stroke and Max. Speed

(Unit: mm/s)

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

Values in brackets < > are for vertical use.

① Stroke

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

④ Options

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

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

③ Cable Length

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

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

Actuator Specifications

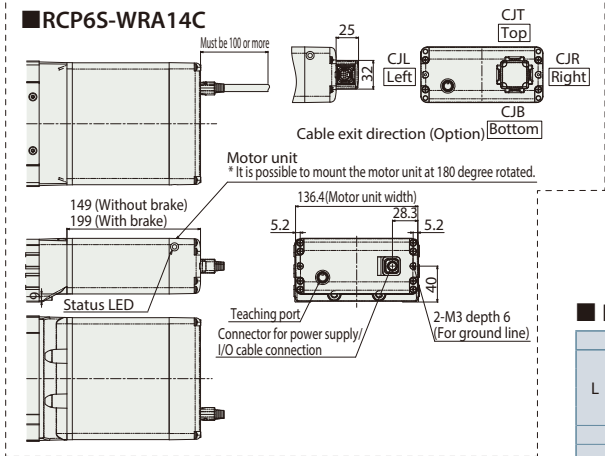
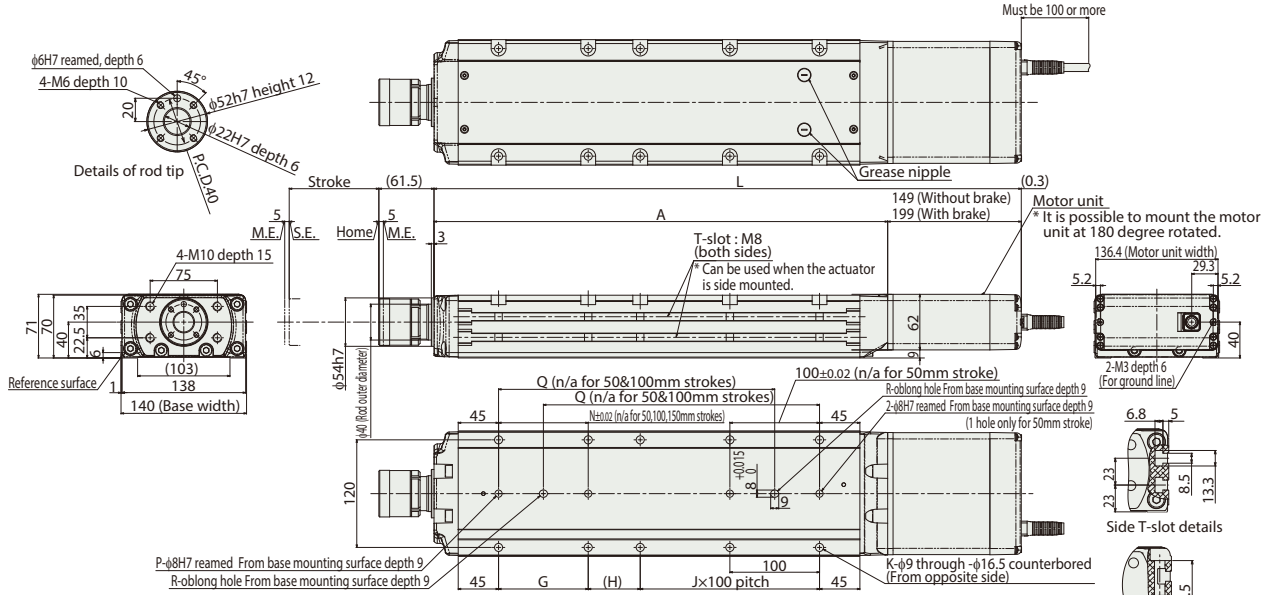
Item	Description
Drive system	Ball screw φ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	φ40mm Stainless steel
Rod non-rotation precision	0 deg.
Allowable load and torque on rod tip	See P. 127
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C,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

Dimensions

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



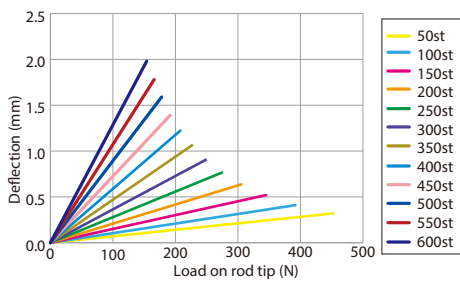
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

		Stroke												
		50	100	150	200	250	300	350	400	450	500	550	600	
L	RCP6	w/o brake	405	455	505	555	605	655	705	755	805	855	905	955
	RCP6S	w/o brake	455	505	555	605	655	705	755	805	855	905	955	1,005
		w/ brake	455	505	555	605	655	705	755	805	855	905	955	1,005
		w/ brake	455	505	555	605	655	705	755	805	855	905	955	1,005
A			256	306	356	406	456	506	556	606	656	706	756	806
G			-	-	-	100	100	100	100	100	100	100	100	100
H			108	58	108	58	108	58	108	58	108	58	108	58
J			0	1	1	1	1	2	2	3	3	4	4	5
K			4	6	6	8	8	10	10	12	12	14	14	16
N			-	-	-	100	100	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2	2	2
Q			-	-	158	208	258	308	358	408	458	508	558	608
R			0	0	1	1	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			454	392	345	307	276	251	229	210	193	179	166	154
Allowable dynamic load on rod tip (N)			30	30	30	30	30	30	30	30	30	30	30	30
3,000km	Allowable dynamic torque on rod tip (N·m)		199	170	148	131	117	104	94	85	77	70	64	58
	Load offset 100mm		100	100	100	100	100	95	87	79	72	66	60	55
5,000km	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)		167	143	124	109	97	87	78	70	63	57	51	46
	Load offset 0mm		100	100	100	96	87	79	71	65	59	53	48	44
	Load offset 100mm		15.0	15.0	15.0	14.4	13.0	11.8	10.7	9.7	8.8	8.0	7.3	6.6
Mass (kg)	RCP6	w/o brake	8.0	8.9	9.8	10.6	11.5	12.4	13.3	14.2	15.0	15.9	16.8	17.7
	RCP6S	w/o brake	8.5	9.4	10.2	11.1	12.0	12.9	13.8	14.6	15.5	16.4	17.3	18.2
		w/ brake	8.0	8.9	9.8	10.7	11.6	12.4	13.3	14.2	15.1	16.0	16.8	17.7
		w/ brake	8.5	9.4	10.3	11.2	12.0	12.9	13.8	14.7	15.6	16.4	17.3	18.2

■ Rod Deflection of RCP6(S)-WRA14C (Reference Values)



② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.147 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network *Option		
PCON-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, CC-link, EtherCAT, EtherNet/IP, CompoNet	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●	Note: The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please see the MSEL-PC/PG catalog.

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