RCP6(S)-WRA10C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 100 mm | 24V Stepper Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	WRA10C	WA: Battery-less Absolute	35P: Stepper Motor 35□ Size	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

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

Radial Load OK

CE RoHS

Horizontal | Vertical | Side | Ceiling

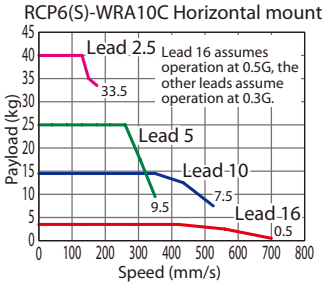
*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

POINT Selection Notes

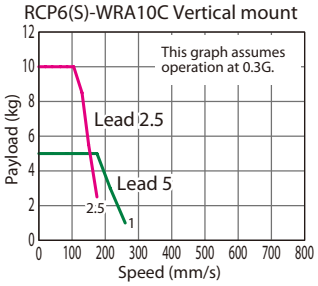
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration)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

■ Correlation Diagrams of Speed and Payload

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



RCP6(S)-WRA10C Vertical mount



Actuator Specifications

■ Lead and Payload

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

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

■ Stroke and Max. Speed

(Unit: mm/s)

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

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

Values in brackets < > are for vertical use.

① Stroke

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

③ Cable Length

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

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

④ Options

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

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

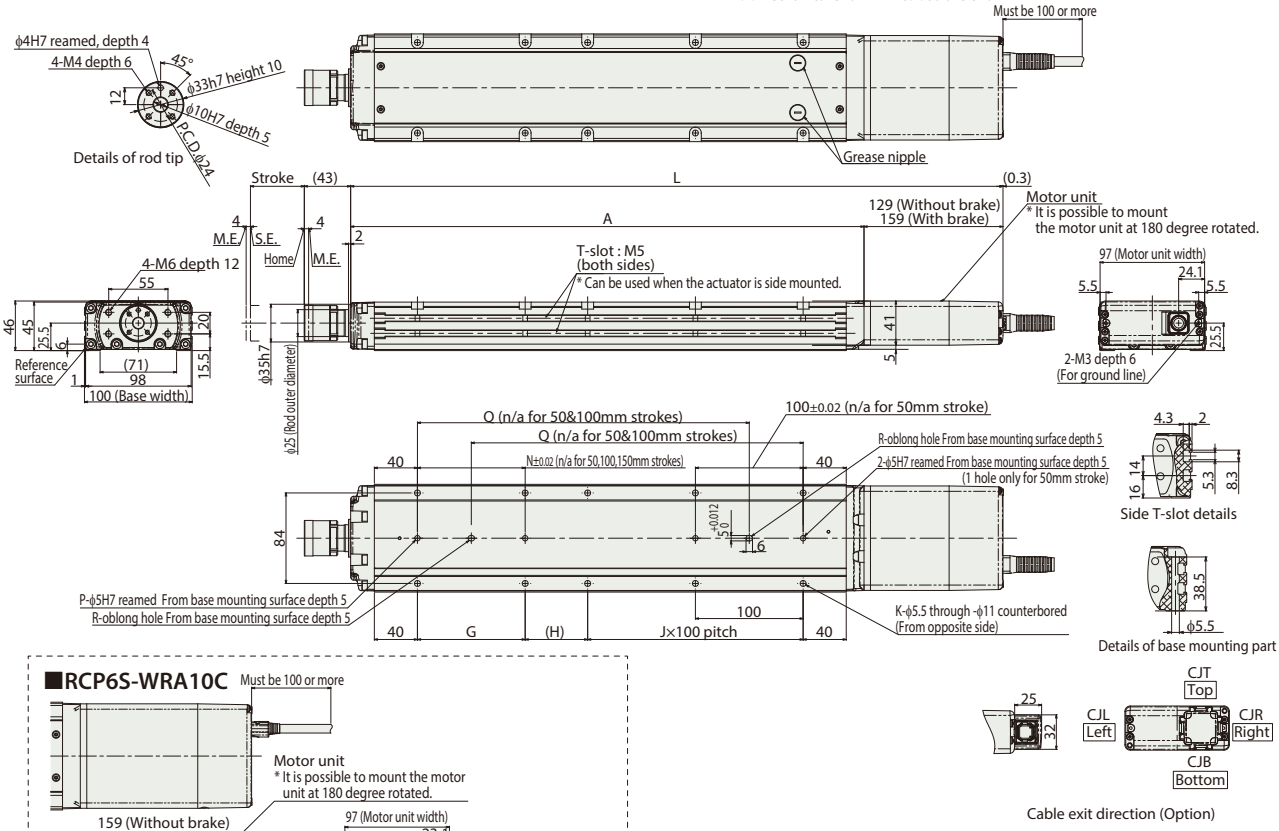
Actuator Specifications

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

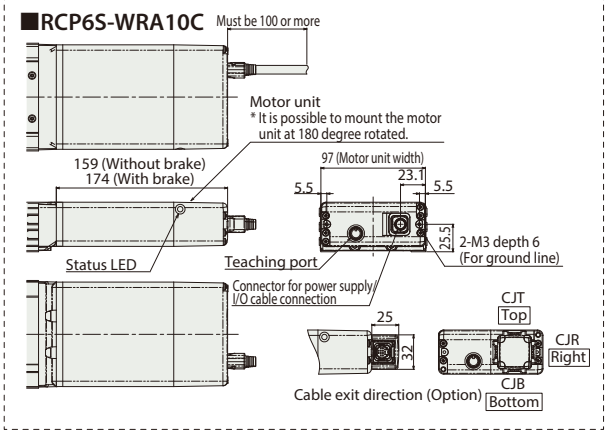
Dimensions

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

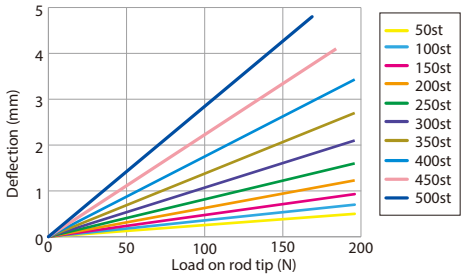
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■RCP6S-WRA10C



■ Rod Deflection of RCP6(S)-WRA10C (Reference Values)



■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L	RCP6	w/o brake	355.5	405.5	455.5	505.5	555.5	605.5	655.5	705.5	755.5	805.5
		w/ brake	385.5	435.5	485.5	535.5	585.5	635.5	685.5	735.5	785.5	835.5
	RCP6S	w/o brake	385.5	435.5	485.5	535.5	585.5	635.5	685.5	735.5	785.5	835.5
		w/ brake	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5
A			226.5	276.5	326.5	376.5	426.5	476.5	526.5	576.5	626.5	676.5
G			-	-	-	100	100	100	100	100	100	100
H			108	58	108	58	108	58	108	58	108	58
J			0	1	1	1	1	2	2	3	3	4
K			4	6	6	8	8	10	10	12	12	14
N			-	-	-	100	100	100	100	100	100	100
P			1	1	1	2	2	2	2	2	2	2
Q			-	-	158	208	258	308	358	408	458	508
R			0	0	1	1	1	1	1	1	1	1
Allowable static load on rod tip (N)			196	196	196	196	196	196	196	196	184	169
Allowable static torque on rod tip (N•m)			10	10	10	10	10	10	10	10	10	10
3,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	98	98	98	95	85	76	68	62	57	52
		Load offset 100mm	50	50	50	50	50	50	50	50	50	49
	Allowable dynamic torque on rod tip (N•m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.9
5,000km	Allowable dynamic load on rod tip (N)	Load offset 0mm	98	98	91	80	71	63	57	52	47	43
		Load offset 100mm	50	50	50	50	50	50	50	48	44	40
	Allowable dynamic torque on rod tip (N•m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.8	4.4	4.0
Mass (kg)	RCP6	w/o brake	3.3	3.8	4.2	4.7	5.1	5.6	6.0	6.5	6.9	7.4
		w/ brake	3.5	4.0	4.4	4.9	5.3	5.8	6.2	6.7	7.1	7.6
	RCP6S	w/o brake	3.4	3.9	4.3	4.8	5.2	5.7	6.1	6.6	7.0	7.5
		w/ brake	3.6	4.1	4.5	4.9	5.4	5.8	6.3	6.7	7.2	7.6

② Applicable Controllers

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

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

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