RCP6(S)-TA6C

Table Type | Motor Unit Type | Coupled Motor | Body Width 58 mm | 24V Stepper Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	TA6C	WA: Battery-less Absolute	42P: Stepper Motor 42□ Size	20: 20mm 12: 12mm 6: 6mm 3: 3mm	25: 25mm ~ 320: 320mm	[RCP6] P3: PCON MCON MSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

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

CE RoHS

Horizontal | Vertical | Side | Ceiling

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

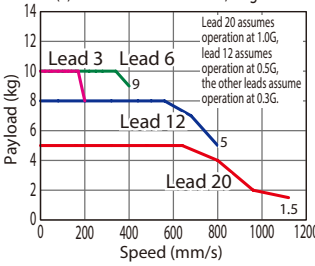
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
(4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 3/6. Please refer to P.130 for more information.
(5) High-rigidity (double-block) specification can be selected as an option.

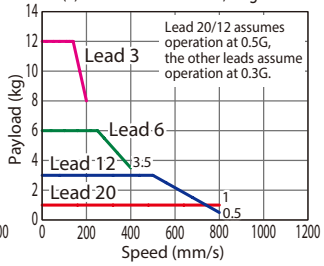
■ Correlation Diagrams of Speed and Payload

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

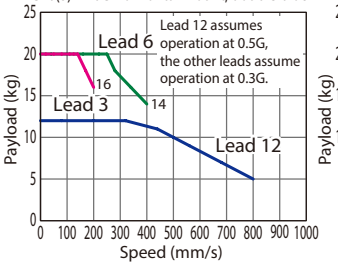
RCP6(S)-TA6C Horizontal mount, single block



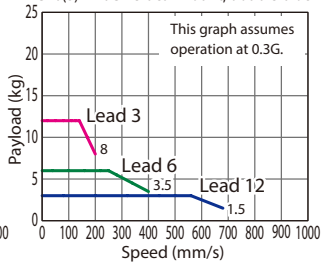
RCP6(S)-TA6C Vertical mount, single block



RCP6(S)-TA6C Horizontal mount, double block



RCP6(S)-TA6C Vertical mount, double block



Actuator Specifications

■ Lead and Payload

	Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
Single Block	RCP6(S)-TA6C-WA-42P-20-①-②-③-④	20	High-output Enabled	5	1	25~200 (The increment of stroke is 50mm)
Single Block	RCP6(S)-TA6C-WA-42P-12-①-②-③-④	12	High-output Enabled	8	3	
Single Block	RCP6(S)-TA6C-WA-42P-6-①-②-③-④	6	High-output Enabled	10	6	
Single Block	RCP6(S)-TA6C-WA-42P-3-①-②-③-④	3	High-output Enabled	10	12	
Double Block	RCP6(S)-TA6C-WA-42P-12-①-②-③-④	12	High-output Enabled	15	3	45~320
Double Block	RCP6(S)-TA6C-WA-42P-6-①-②-③-④	6	High-output Enabled	20	6	
Double Block	RCP6(S)-TA6C-WA-42P-3-①-②-③-④	3	High-output Enabled	20	12	

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

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	Single Block 25~200	Double Block 45~220	Double Block 270	Double Block 320
20	High-output Enabled	1,120 <800>	-		
12	High-output Enabled	800	800 <680>	735 <680>	575
6	High-output Enabled	400	400	365	285
3	High-output Enabled	200	200	185	140

Values in brackets < > are for vertical use.

① Stroke

Single Block Stroke (mm)	RCP6	RCP6S	Double Block Stroke (mm)	RCP6	RCP6S
25	○	○	**45**	○	○
50	○	○	**70**	○	○
75	○	○	**95**	○	○
100	○	○	**120**	○	○
125	○	○	**170**	○	○
150	○	○	**220**	○	○
175	○	○	**270**	○	○
200	○	○	**320**	○	○

③ Cable Length

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

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

④ Options

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

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

Actuator Specifications

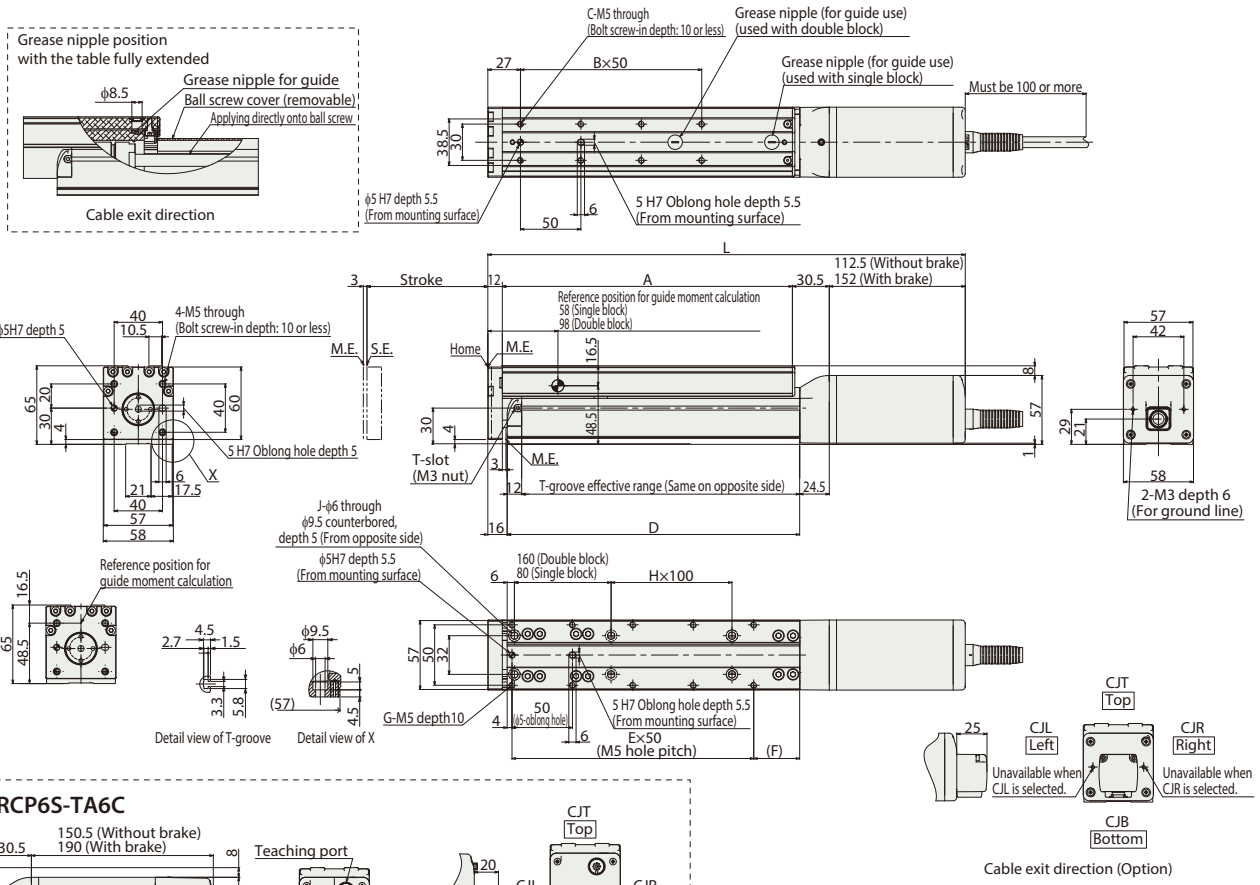
Item		Description
Drive system		Ball screw ϕ10mm, rolled C10
Positioning repeatability		±0.01mm
Lost motion		0.1mm or less
Base		Material: Aluminum with white alumite treatment
Static allowable moment	Single Block	Ma: 32.3N•m, Mb: 46.2N•m, Mc: 68.3N•m
	Double Block	Ma: 169N•m, Mb: 242N•m, Mc: 137N•m
Dynamic allowable moment (*)	Single block	Ma: 11.6N•m, Mb: 16.6N•m, Mc: 24.6N•m
	Double block	Ma: 49.5N•m, Mb: 70.7N•m, Mc: 40N•m
Ambient operating temp. & humidity		0~40°C, 85% RH or less (Non-condensing)

(*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.
Please refer to RCP6 instruction manual regarding the displacement of the table.

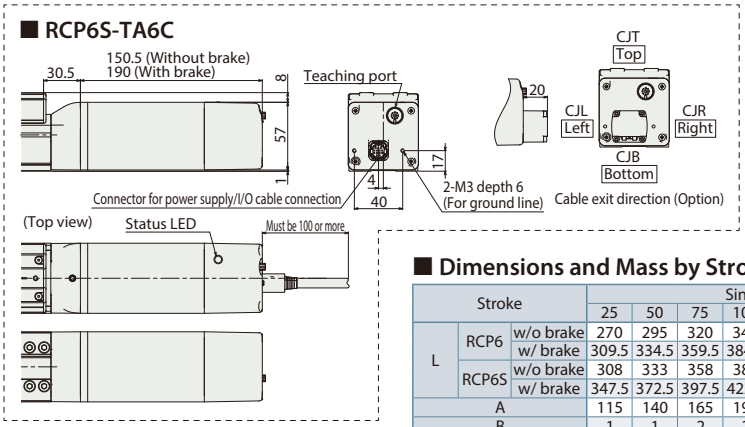
Dimensions

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

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



■ RCP6S-TA6C



■ Dimensions and Mass by Stroke

Stroke			Single Block								Double Block							
			25	50	75	100	125	150	175	200	45	70	95	120	170	220	270	320
L	RCP6	w/o brake	270	295	320	345	370	395	420	445	370	395	420	445	495	545	595	645
		w/ brake	309.5	334.5	359.5	384.5	409.5	434.5	459.5	484.5	409.5	434.5	459.5	484.5	534.5	584.5	634.5	684.5
	RCP6S	w/o brake	308	333	358	383	408	433	458	483	408	433	458	483	533	583	633	683
		w/ brake	347.5	372.5	397.5	422.5	447.5	472.5	497.5	522.5	447.5	472.5	497.5	522.5	572.5	622.5	672.5	722.5
A			115	140	165	190	215	240	265	290	215	240	265	290	340	390	440	490
B			1	1	2	2	3	3	4	4	3	3	4	4	5	6	7	8
C			4	4	6	6	8	8	10	10	8	8	10	10	12	14	16	18
D			117	142	167	192	217	242	267	292	217	242	267	292	342	392	442	492
E			2	2	3	3	4	4	5	5	4	4	5	5	6	7	8	9
F			13	38	13	38	13	38	13	38	13	38	13	38	38	38	38	38
G			6	6	8	8	10	10	12	12	10	10	12	12	14	16	18	20
H			0	0	0	0	1	1	1	1	0	0	0	0	1	1	2	2
J			4	4	4	4	6	6	6	6	4	4	4	4	6	6	8	8
Mass (kg)	RCP6	w/o brake	2.1	2.2	2.4	2.5	2.7	2.9	3.0	3.2	2.9	3.0	3.2	3.3	3.7	4.0	4.3	4.6
		w/ brake	2.3	2.5	2.6	2.8	2.9	3.1	3.3	3.4	3.1	3.3	3.4	3.6	3.9	4.2	4.5	4.9
	RCP6S	w/o brake	2.2	2.4	2.5	2.7	2.8	3.0	3.2	3.3	3.0	3.2	3.3	3.5	3.8	4.1	4.4	4.8
		w/ brake	2.4	2.6	2.8	2.9	3.1	3.2	3.4	3.6	3.2	3.4	3.6	3.7	4.0	4.4	4.7	5.0

② Applicable Controllers

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

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

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

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