RCP6(S)-TA7C

Table Type | Motor Unit Type | Coupled Motor | Body Width 70 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	TA7C	WA: Battery-less Absolute	56P: Stepper Motor 56□ Size	24: 24mm 16: 16mm 8: 8mm 4: 4mm	25: 25mm ~ 390: 390mm	[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.

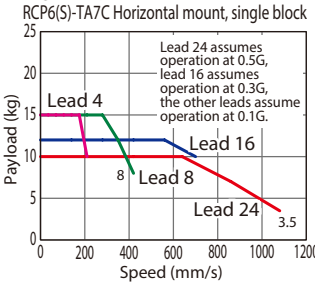
POINT Selection Notes

(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 4/8/16. Please refer to P.130 for more information.
(5) High-rigidity (double-block) specification can be selected as an option.

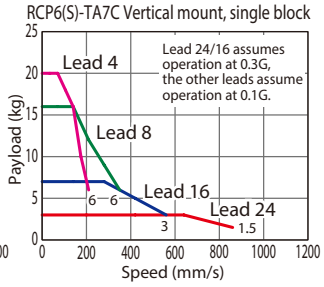
■ Correlation Diagrams of Speed and Payload

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

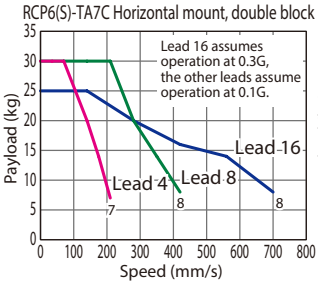
RCP6(S)-TA7C Horizontal mount, single block



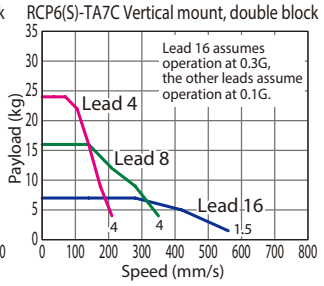
RCP6(S)-TA7C Vertical mount, single block



RCP6(S)-TA7C Horizontal mount, double block



RCP6(S)-TA7C 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)-TA7C-WA-56P-24-①-②-③-④	24	High-output Enabled	10	3	25~300
Single Block	RCP6(S)-TA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	12	7	
Single Block	RCP6(S)-TA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	15	16	
Single Block	RCP6(S)-TA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	15	20	
Double Block	RCP6(S)-TA7C-WA-56P-16-①-②-③-④	16	High-output Enabled	25	7	40~390
Double Block	RCP6(S)-TA7C-WA-56P-8-①-②-③-④	8	High-output Enabled	30	16	
Double Block	RCP6(S)-TA7C-WA-56P-4-①-②-③-④	4	High-output Enabled	30	24	

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 25~300	Double Block 40~290	Double Block 340	Double Block 390
24	High-output Enabled	1,080 <860>	-		
16	High-output Enabled	700 <560>	700 <560>		600 <560>
8	High-output Enabled	420 <350>	420 <350>	365 <350>	300
4	High-output Enabled	210	210	180	150

Values in brackets < > are for vertical use.

① Stroke

Single Block Stroke (mm)	RCP6	RCP6S	Double Block Stroke (mm)	RCP6	RCP6S
25	○	○	40	○	○
50	○	○	65	○	○
75	○	○	90	○	○
100	○	○	140	○	○
125	○	○	190	○	○
150	○	○	240	○	○
175	○	○	290	○	○
200	○	○	340	○	○
250	○	○	390	○	○
300	○	○			

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

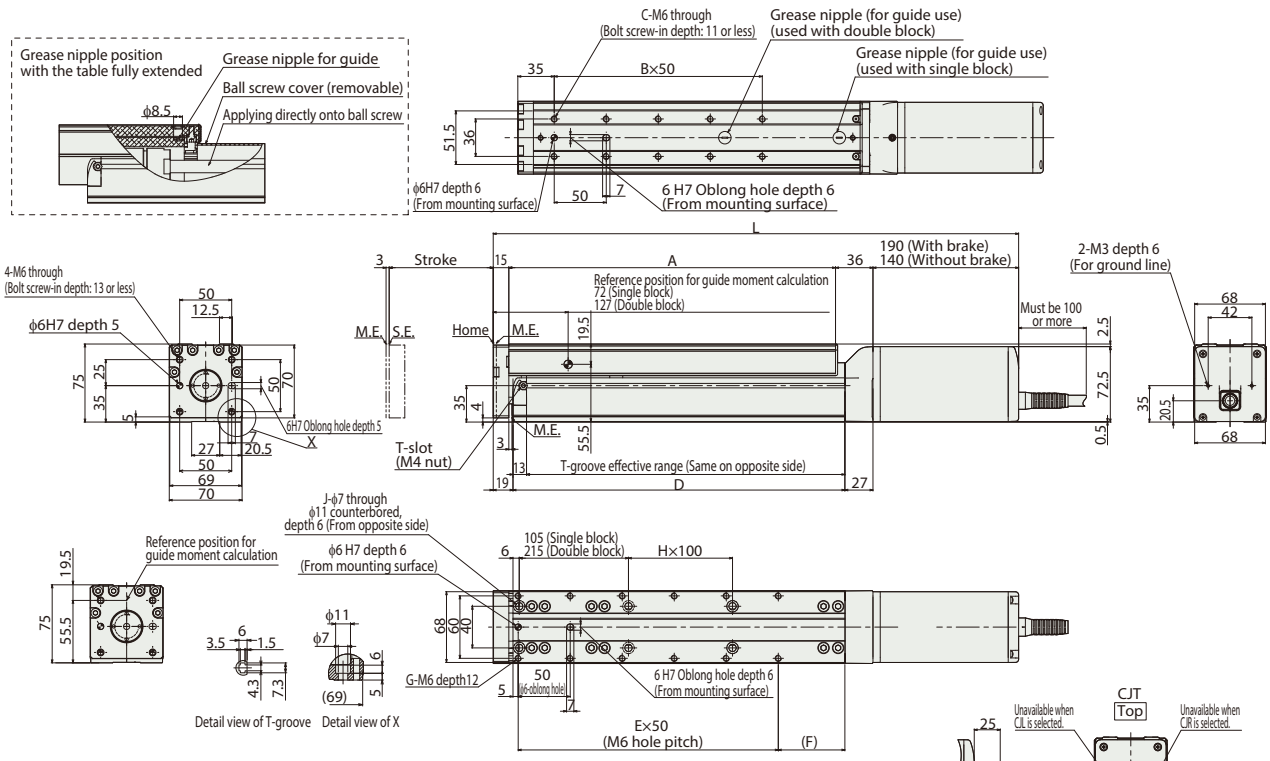
Item		Description
Drive system		Ball screw φ12mm, rolled C10
Positioning repeatability		±0.01mm
Lost motion		0.1mm or less
Base		Material: Aluminum with white alumite treatment
Static allowable moment	Single block	Ma: 115N•m, Mb: 115N•m, Mc: 229N•m
	Double block	Ma: 620N•m, Mb: 620N•m, Mc: 458N•m
Dynamic allowable moment (*)	Single block	Ma: 44.7N•m, Mb: 44.7N•m, Mc: 89.1N•m
	Double block	Ma: 196N•m, Mb: 196N•m, Mc: 145N•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.

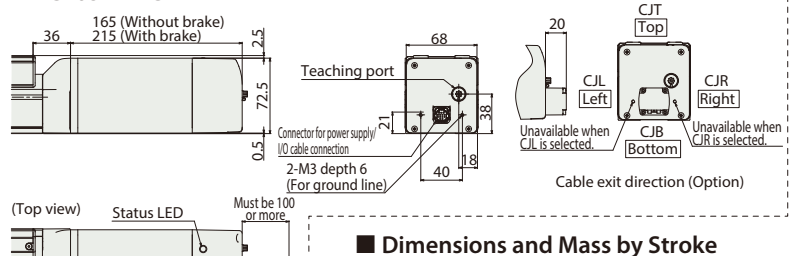
Dimensions

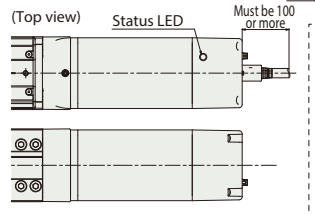
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

*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-TA7C





■ Dimensions and Mass by Stroke

Stroke			Single Block										Double Block								
			25	50	75	100	125	150	175	200	250	300	40	65	90	140	190	240	290	340	390
L	RCP6	w/o brake	330	355	380	405	430	455	480	505	555	605	455	480	505	555	605	655	705	755	805
		w/ brake	380	405	430	455	480	505	530	555	605	655	505	530	555	605	655	705	755	805	855
	RCP6S	w/o brake	355	380	405	430	455	480	505	530	580	630	480	505	530	580	630	680	730	780	830
		w/ brake	405	430	455	480	505	530	555	580	630	680	530	555	580	630	680	730	780	830	880
A			139	164	189	214	239	264	289	314	364	414	264	289	314	364	414	464	514	564	614
B			1	1	2	2	3	3	4	4	5	6	3	4	4	5	6	7	8	9	10
C			4	4	6	6	8	8	10	10	12	14	8	10	10	12	14	16	18	20	22
D			144	169	194	219	244	269	294	319	369	419	269	294	319	369	419	469	519	569	619
E			2	2	3	3	4	4	5	5	6	7	4	5	5	6	7	8	9	10	11
F			39	64	39	64	39	64	39	64	64	64	64	39	64	64	64	64	64	64	64
G			6	6	8	8	10	10	12	12	14	16	10	12	12	14	16	18	20	22	24
H			0	0	0	0	1	1	1	1	2	2	0	0	0	1	1	2	2	3	3
J			4	4	4	4	6	6	6	6	8	8	4	4	4	6	6	8	8	10	10
Mass (kg)	RCP6	w/o brake	3.9	4.1	4.3	4.5	4.7	5.0	5.2	5.4	5.8	6.3	5.3	5.6	5.8	6.2	6.6	7.1	7.5	8.0	8.4
		w/ brake	4.3	4.5	4.7	5.0	5.2	5.4	5.6	5.8	6.3	6.7	5.8	6.0	6.2	6.6	7.1	7.5	8.0	8.4	8.8
	RCP6S	w/o brake	4.0	4.3	4.5	4.7	4.9	5.1	5.3	5.6	6.0	6.4	5.5	5.7	5.9	6.4	6.8	7.3	7.7	8.1	8.6
		w/ brake	4.5	4.7	4.9	5.1	5.3	5.6	5.8	6.0	6.4	6.9	5.9	6.2	6.4	6.8	7.3	7.7	8.1	8.6	9.0

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.