

# RCP6(S)-TA7R

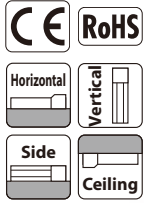
Table Type Motor Unit Type Side-mounted Motor Body Width 70\* mm 24v Stepper Motor

**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	TA7R	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.  *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

\* 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.

\* Body width does not include the width of the side-mounted motor.



\*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.

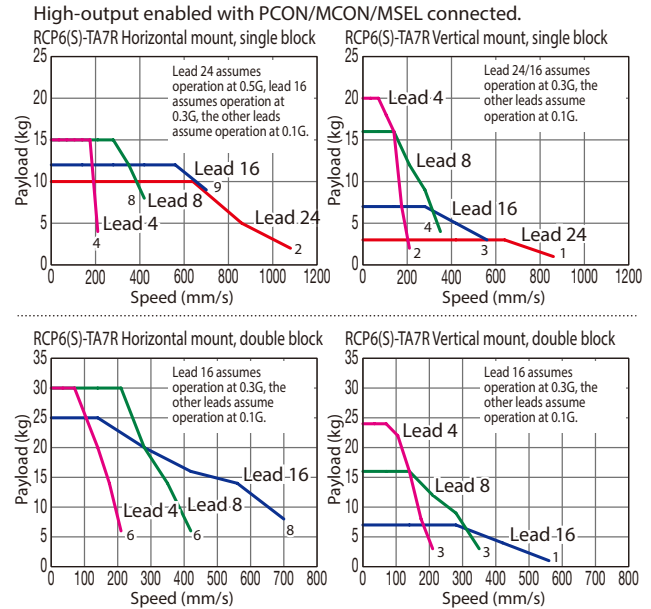


The figure above is the motor side-mounted to the left (ML).



- (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



## Actuator Specifications

### Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload		Stroke (mm)
			Horizontal (kg)	Vertical (kg)	
RCP6(S)-TA7R-WA-56P-24-①-②-③-④	24	High-output Enabled	10	3	25~300
RCP6(S)-TA7R-WA-56P-16-①-②-③-④	16	High-output Enabled	12	7	
RCP6(S)-TA7R-WA-56P-8-①-②-③-④	8	High-output Enabled	15	16	
RCP6(S)-TA7R-WA-56P-4-①-②-③-④	4	High-output Enabled	15	20	
RCP6(S)-TA7R-WA-56P-16-①-②-③-④	16	High-output Enabled	25	7	40~390
RCP6(S)-TA7R-WA-56P-8-①-②-③-④	8	High-output Enabled	30	16	
RCP6(S)-TA7R-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

Lead (mm)	Connected Controller	Max. Speed (mm/s)			
		Single Block 25~300	Double Block 40~290	340	390
24	High-output Enabled	1,080 <860>	-	-	-
16	High-output Enabled	700 <560>	700 <560>	365 <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

Stroke (mm)	Single Block		Double Block		
	RCP6	RCP6S	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)	○	○
	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.

### ④ Options

Name	Option Code	Reference Page
Brake	B	See P.105
Cable exit direction (Outside)	CJO	See P.105
Motor side-mounted to the left	ML	See P.109
Motor side-mounted to the right	MR	See P.109
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)

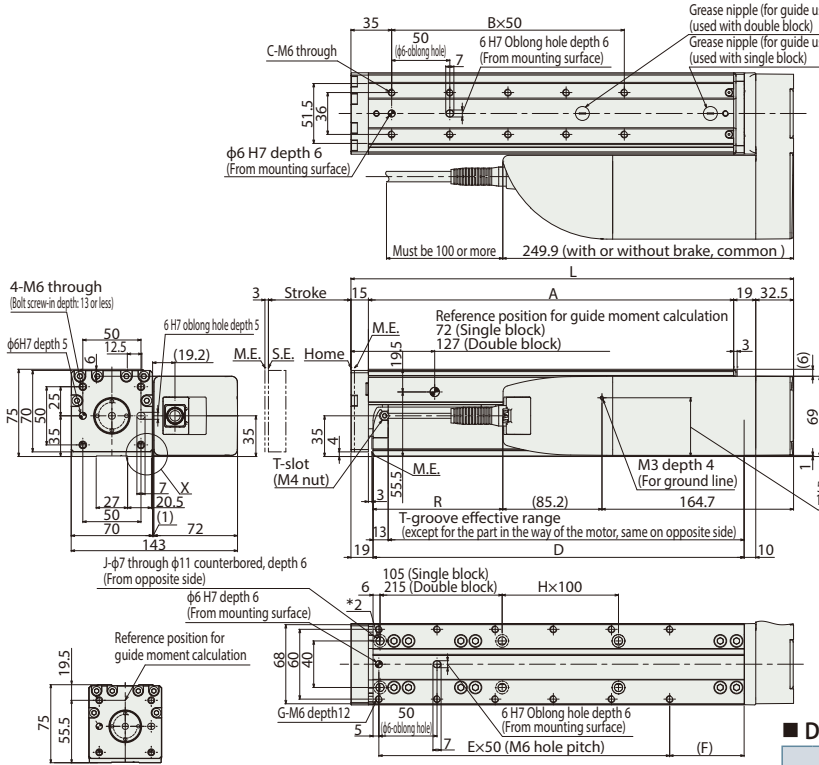
(\*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

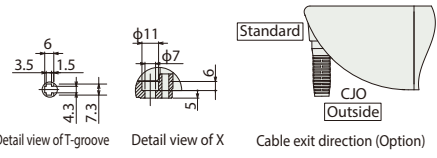
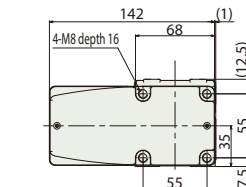
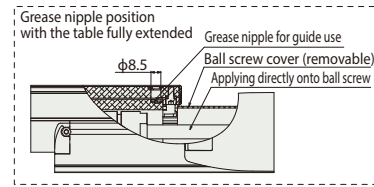
Please refer to RCP6 instruction manual regarding the displacement of the table.

Dimensions

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

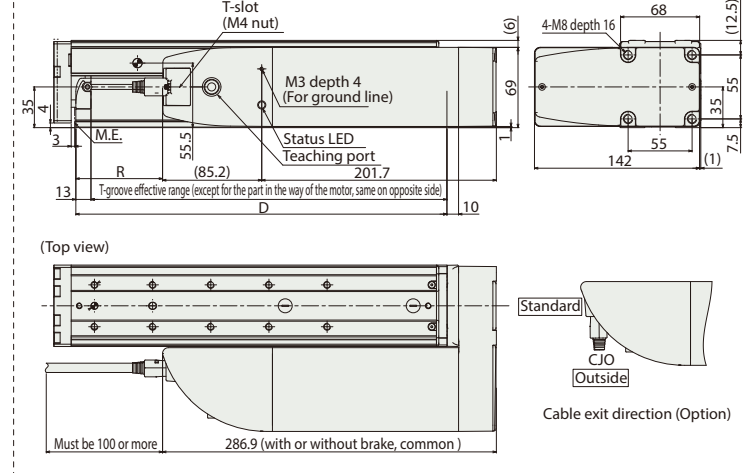


\*1 When the table is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.  
M.E: Mechanical end S.E: Stroke end  
\*2 For the single block type with 25~75mm (RCP6) and 25~125mm (RCP6S) strokes, tools cannot be used on the φ7 front mounting holes on the top surface because the motor unit interferes. Please use the mounting screw holes on the bottom surface.



\* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

RCP6S-TA7R



■ Dimensions and Mass by Stroke

Stroke	Single Block										
	25	50	75	100	125	150	175	200	250	300	
L	205.5	230.5	255.5	280.5	305.5	330.5	355.5	380.5	430.5	480.5	
A	139	164	189	214	239	264	289	314	364	414	
B	1	1	2	2	3	3	4	4	5	6	
C	4	4	6	6	8	8	10	10	12	14	
D	144	169	194	219	244	269	294	319	369	419	
E	2	2	3	3	4	4	5	5	6	7	
F	39	64	39	64	39	64	39	64	64	64	
G	6	6	8	8	10	10	12	12	14	16	
H	0	0	0	0	1	1	1	1	2	2	
J	4	4	4	4	6	6	6	6	8	8	
R *	RCP6	-63.4	-38.4	-13.4	11.6	36.6	61.6	86.6	111.6	161.6	
	RCP6S	-100.4	-75.4	-50.4	-25.4	-0.4	24.6	49.6	74.6	124.6	
Mass (kg)	RCP6	w/o brake	4.4	4.6	4.9	5.1	5.3	5.5	5.7	5.9	6.4
		w/ brake	4.5	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.5
	RCP6S	w/o brake	4.5	4.8	5.0	5.2	5.4	5.6	5.8	6.1	6.5
		w/ brake	4.6	4.9	5.1	5.3	5.5	5.7	5.9	6.2	6.6

Stroke	Double Block									
	40	65	90	140	190	240	290	340	390	
L	330.5	355.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5	
A	264	289	314	364	414	464	514	564	614	
B	3	4	4	5	6	7	8	9	10	
C	8	10	10	12	14	16	18	20	22	
D	269	294	319	369	419	469	519	569	619	
E	4	5	5	6	7	8	9	10	11	
F	64	39	64	64	64	64	64	64	64	
G	10	12	12	14	16	18	20	22	24	
H	0	0	0	1	1	2	2	3	3	
J	4	4	4	6	6	8	8	10	10	
R	RCP6	61.6	86.6	111.6	161.6	211.6	261.6	311.6	361.6	
	RCP6S	24.6	49.6	74.6	124.6	174.6	224.6	274.6	324.6	
Mass (kg)	RCP6	w/o brake	6.0	6.2	6.4	6.9	7.3	7.7	8.2	8.6
		w/ brake	6.1	6.3	6.5	7.0	7.4	7.8	8.3	8.7
	RCP6S	w/o brake	6.1	6.3	6.5	7.0	7.4	7.8	8.3	8.7
		w/ brake	6.2	6.4	6.6	7.1	7.5	8.0	8.4	8.8

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.					
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.