

RCP6(S)-TA6R

Table
TypeMotor
Unit
TypeSide-mounted
MotorBody Width
58*
mm24v
Stepper
Motor

* Body width does not include the width of the side-mounted 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

WA: Battery-less Absolute

42P: Stepper Motor
42□ Size

20: 20mm
12: 12mm
6: 6mm
3: 3mm

25: 25mm
320: 320mm

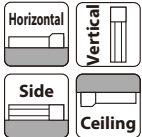
[RCP6]
P3: PCON
MCON
MSEL
[RCP6S]
SE: SIO Type

N : None
P : 1m
S : 3m
M : 5m
X□□ : Specified Length
R□□ : Robot Cable

Please refer to the options table below.
* 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.



*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).

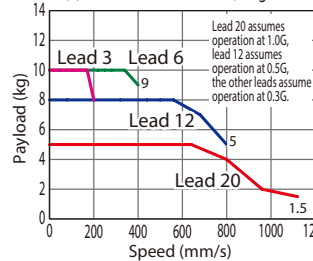


- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
- (2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) 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 3/6. Please refer to P.130 for more information.
- (5) High-rigidity (double-block) specification can be selected as an option.

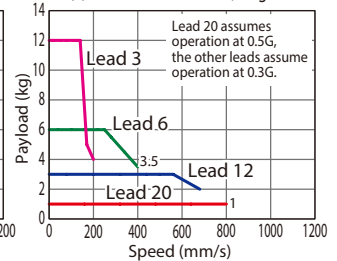
Correlation Diagrams of Speed and Payload

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

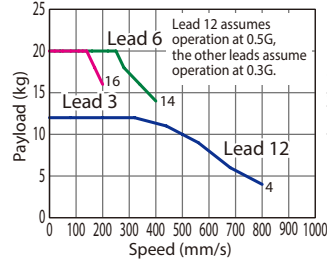
RCP6(S)-TA6R Horizontal mount, single block



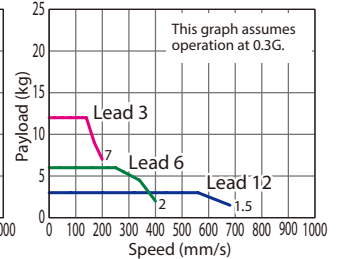
RCP6(S)-TA6R Vertical mount, single block



RCP6(S)-TA6R Horizontal mount, double block



RCP6(S)-TA6R Vertical mount, double block



Actuator Specifications

Lead and Payload

	Model Number	Lead (mm)	Connected Controller	Max. Payload		Stroke (mm)
				Horizontal (kg)	Vertical (kg)	
Single Block	RCP6(S)-TA6R-WA-42P-20-①-②-③-④	20	High-output Enabled	5	1	25~200 (The increment of stroke is 50mm)
	RCP6(S)-TA6R-WA-42P-12-①-②-③-④	12	High-output Enabled	8	3	
	RCP6(S)-TA6R-WA-42P-6-①-②-③-④	6	High-output Enabled	10	6	
	RCP6(S)-TA6R-WA-42P-3-①-②-③-④	3	High-output Enabled	10	12	
Double Block	RCP6(S)-TA6R-WA-42P-12-①-②-③-④	12	High-output Enabled	15	3	45~320
	RCP6(S)-TA6R-WA-42P-6-①-②-③-④	6	High-output Enabled	20	6	
	RCP6(S)-TA6R-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	270	320
20	High-output Enabled	1,120 <800>	-	-	-
12	High-output Enabled	800 <680>	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			Double Block		
Stroke (mm)	RCP6	RCP6S	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 (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 ϕ 10mm, rolled C10
Positioning repeatability	± 0.01 mm
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.

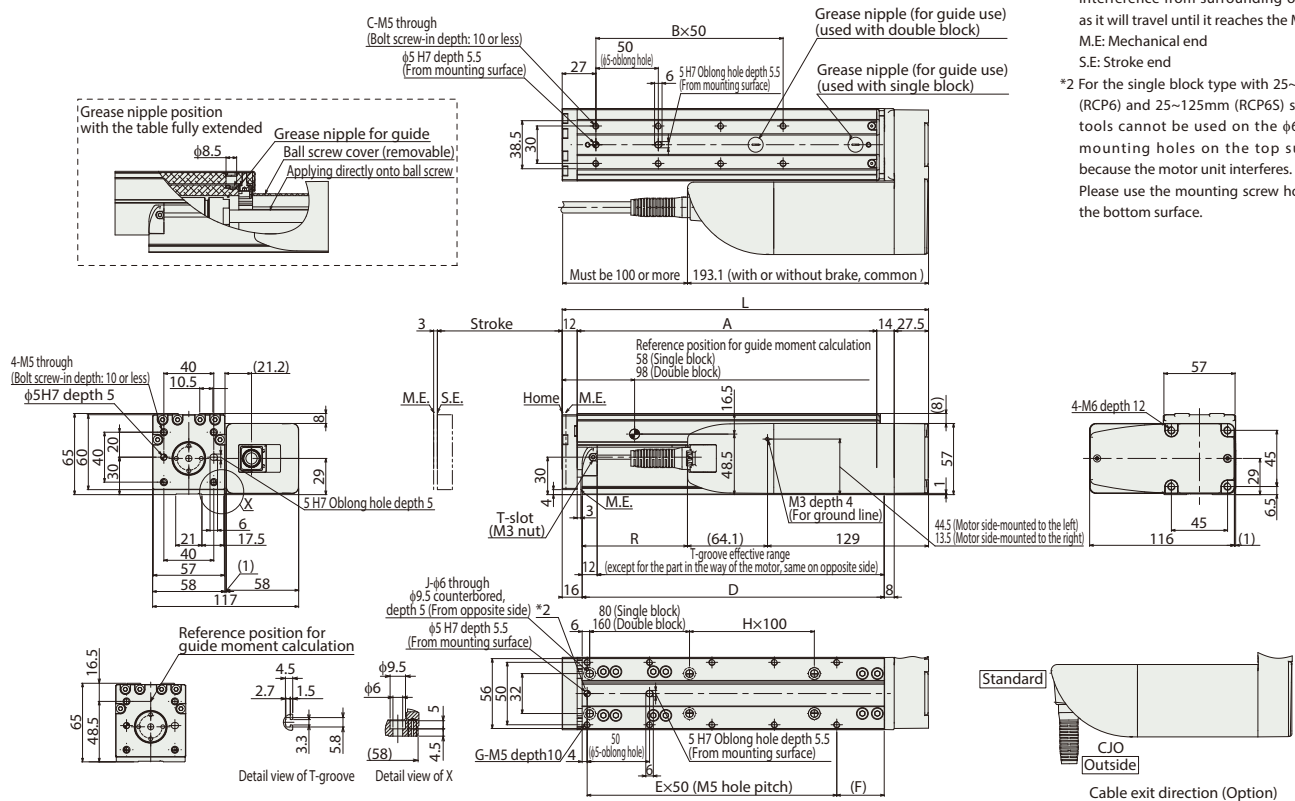
Dimensions

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

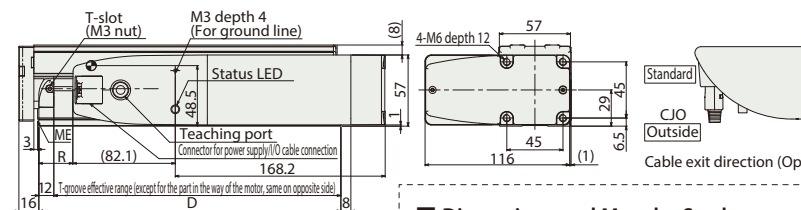


*1 When the table is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end
S.E: Stroke end

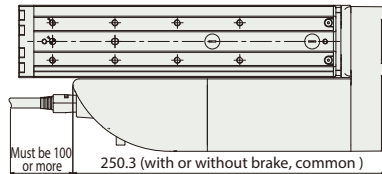
*2 For the single block type with 25~50mm (RCP6) and 25~125mm (RCP6S) strokes, tools cannot be used on the $\phi 6$ front mounting holes on the top surface because the motor unit interferes.
Please use the mounting screw holes on the bottom surface.



RCP6S-TA6R



(Top view)



Dimensions and Mass by Stroke

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

Stroke		Single Block												Double Block											
		25	50	75	100	125	150	175	200	45	70	95	120	170	220	270	320								
R*	L	168.5	193.5	218.5	243.5	268.5	293.5	318.5	343.5	268.5	293.5	318.5	343.5	368.5	393.5	418.5	443.5	468.5	493.5	518.5	543.5				
	A	115	140	165	190	215	240	265	290	215	240	265	290	315	340	365	390	415	440	465	490				
	B	1	1	2	2	3	3	4	4	3	3	4	4	5	5	6	6	7	7	8	8				
	C	4	4	6	6	8	8	10	10	8	8	10	10	12	12	14	14	16	16	18	18				
	D	117	142	167	192	217	242	267	292	217	242	267	292	317	342	367	392	417	442	467	492				
	E	2	2	3	3	4	4	5	5	4	4	5	5	6	6	7	7	8	8	9	9				
	F	13	38	13	38	13	38	13	38	13	38	13	38	13	38	13	38	13	38	38	38				
	G	6	6	8	8	10	10	12	12	10	10	12	12	14	14	16	16	18	18	20	20				
	H	0	0	0	0	1	1	1	1	0	0	0	0	0	1	1	2	2	2	2	2				
	J	4	4	4	4	6	6	6	6	4	4	4	4	6	6	8	8	8	8	10	10				
RCP6	RCP6S	-40.6	-15.6	9.4	34.4	59.4	84.4	109.4	134.4	59.4	84.4	109.4	134.4	159.4	184.4	209.4	234.4	259.4	284.4	309.4					
		-97.8	-72.8	-47.8	-22.8	2.2	27.2	52.2	77.2	2.2	27.2	52.2	77.2	102.2	127.2	152.2	177.2	202.2	227.2	252.2					
Mass (kg)	RCP6	2.3	2.5	2.7	2.8	3.0	3.1	3.3	3.5	3.2	3.4	3.5	3.7	4.0	4.3	4.7	5.0	5.3	5.7	6.0					
	w/o brake	2.4	2.6	2.7	2.9	3.0	3.2	3.4	3.5	3.3	3.4	3.5	3.8	4.1	4.4	4.7	5.0	5.3	5.7	6.0					
	RCP6S	2.5	2.6	2.8	3.0	3.1	3.3	3.4	3.6	3.3	3.5	3.7	3.8	4.1	4.5	4.8	5.1	5.4	5.8	6.1					
	w/ brake	2.5	2.7	2.9	3.0	3.2	3.3	3.5	3.7	3.4	3.6	3.7	3.9	4.2	4.5	4.9	5.2	5.5	5.9	6.2					

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.