#### Body Width Battery-Motor **24**<sub>v</sub> 70 mm Coupled Motor Steppe Absolute Type ■ Model RA7C WA **56P** Specification Motor Type Applicable Controller/I/O Type Encoder Type — Stroke Cable Length Options Items [RCP6] P3: PCON N : None P : 1m Please refer to the options table below RCP6: Separate Controller WA: Battery-less 56P: Stepper 24: 24mm 50: 50mm RCP6S: Built-in Controller Absolute Motor 16: 16mm MCON MSEL [RCP6S] S : 3m M: 5m 56□ Size 8mm 300: 300mm (50mm increments) 4: 4mm \* RCP6 does not include a controller. RCP6S includes a built-in controller.



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



(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.



- (3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
- 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.
- (5) 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.

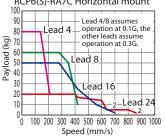
Enabled

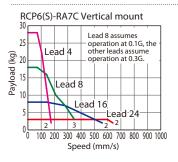
# Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected. RCP6(S)-RA7C Horizontal mount

 $X\square\square$ : Specified Length  $R\square\square$ : Robot Cable

SE: SIO Type





## Actuator Specifications

### ■ Lead and Payload Max. Payload Connected Lead Model Number Controller Horizontal (kg) Vertical (kg High-output RCP6(S)-RA7C-WA-56P-24-①-②-③-④ 24 20 3 Enabled High-output RCP6(S)-RA7C-WA-56P-16-10-12-13-14 16 50 8 50~300 Enabled The increment of stroke is 50mm) High-output RCP6(S)-RA7C-WA-56P-8-①-②-③-④ 60 18 Fnabled High-output RCP6(S)-RA7C-WA-56P-4-①-②-③-④ 80

Legend: Stroke Applicable controller/I/O type	Cable le	ength 4 Opt	ions

	■ Str	(Unit: mm/s)		
	Lead (mm)	Connected Controller	50~300 (Every 50mm)	
	24	High-output Enabled	860 <640>	
nt	16	High-output Enabled	700 <560>	
nt	8	High-output Enabled	420 <350>	
	4	High-output Enabled	210 <175>	

Values in brackets < > are for vertical use.

U Stroke	U Stroke								
Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S				
50	0	0	200	0	0				
100	0	0	250	0	0				
150	0	0	300	0	0				

④ Options		
		2.6
Name	Option Code	Reference Page
Brake	В	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
Flange	FL	See P.106
Foot bracket	FT	See P.107
Tip adapter (Internal thread)	NFA	See P.109
Non-motor end specification	NM	See P.110
T-slot nut bar	NTB	See P.110

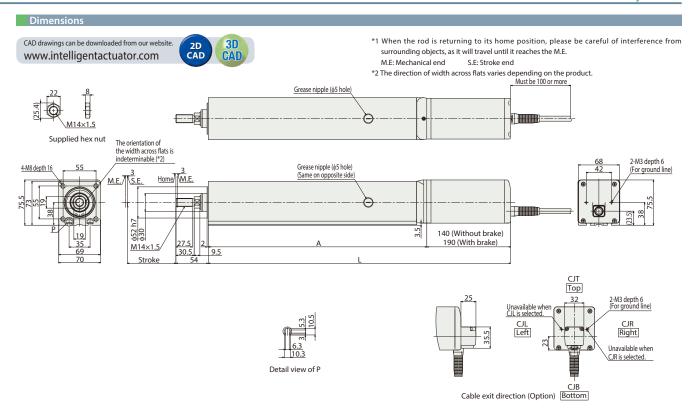
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

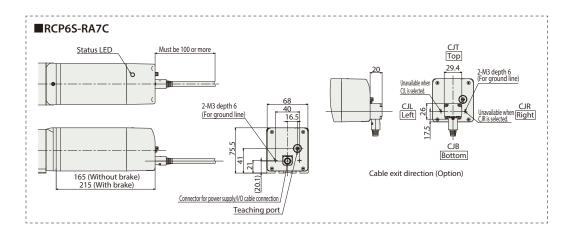
③ Cable Len	gth		
Cable Type	Cable Code	RCP6	RCP6S
	<b>P</b> (1m)	0	0
Standard	<b>S</b> (3m)	0	0
	<b>M</b> (5m)	0	0
	X06 (6m) ~X10 (10m)	0	0
Specified Length	X11 (11m) ~X15 (15m)	0	0
	X16 (16m) ~X20 (20m)	0	0
	R01 (1m) ~R03 (3m)	0	0
	R04 (4m) ~R05 (5m)	0	0
Robot Cable	R06 (6m) ~R10 (10m)	0	0
	R11 (11m) ~R15 (15m)	0	0
	R16 (16m) ~R20 (20m)	0	0

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

Actuator Specifications	
ltem	Description
Drive system	Ball screw \( \psi 12mm, \text{ rolled C10} \)
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	\$30mm Material: Aluminum with hard alumite treatment
Static allowable torque on rod tip	2.5N•m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Ambient operating temp & humidity	0~40°C 85% RH or less (Non-condensing)

(\*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.





### ■ Dimensions and Mass by Stroke

Strok	e	50	100	150	200	250	300
DCD6	w/o brake	354.5	404.5	454.5	504.5	554.5	604.5
KCPO							
DCDCC	w/o brake	379.5	429.5	479.5	529.5	579.5	629.5
KCP03	w/brake	429.5	479.5	529.5	579.5	629.5	679.5
A		214.5	264.5	314.5	364.5	414.5	464.5
DCD6	w/o brake	4.5	5.1	5.6	6.2	6.7	7.3
KCPO	w/brake	4.9	5.5	6.0	6.6	7.2	7.7
DCD4C	w/o brake	4.7	5.2	5.8	6.3	6.9	7.5
nCF03	w/brake	5.1	5.7	6.2	6.8	7.3	7.9
	RCP6 RCP6S A RCP6	RCP6S W/o brake W/o brake A RCP6 W/o brake W/o brake W/o brake W/o brake W/o brake W/o brake	RCP66 W/o brake 354.5 w/b brake 404.5 RCP65 w/o brake 379.5 A 214.5 RCP6 w/o brake 4.5 w/o brake 4.9 RCP65 w/o brake 4.7	RCP65 w/o brake 354.5 404.5 w/o brake 404.5 454.5 w/o brake 379.5 429.5 w/o brake 4.5 5.1 RCP6 w/o brake 4.5 5.2 RCP6S w/o brake 4.5 5.2 RCP6S w/o brake 4.7 5.2	RCP6         W/o brake w/ brake W/o brake AC         34.5.4.5.4.5.504.5.5         404.5.45.504.5.5         454.5.504.5.5         504.5.6 <th< td=""><td>RCP6         w/o brake w/ brake w/ brake         354.5 404.5 454.5 504.5 529.5 479.5 529.5 579.5           RCP65         w/o brake w/o brake w/o brake         429.5 429.5 479.5 529.5 479.5 529.5 579.5 54.5 51.1 5.6 6.2 4.7 5.2 5.8 6.3</td><td>RCP6         W/o brake w/ brake w/o brake dv0.5         354.5 404.5         454.5 454.5         504.5 504.5         554.5 504.5         504.5 504.5         564.5 504.5         504.5 504.5         564.5 504.5         504.5 529.5         579.5 579.5         629.5 629.5         579.5 579.5         629.5 629.5         579.5 629.5         629.5 414.5         414.5 62.2         6.2 6.2         6.7 6.2         6.7 6.7         7.2 6.9         80.5 6.9         6.9         6.9         6.9         6.9</td></th<>	RCP6         w/o brake w/ brake w/ brake         354.5 404.5 454.5 504.5 529.5 479.5 529.5 579.5           RCP65         w/o brake w/o brake w/o brake         429.5 429.5 479.5 529.5 479.5 529.5 579.5 54.5 51.1 5.6 6.2 4.7 5.2 5.8 6.3	RCP6         W/o brake w/ brake w/o brake dv0.5         354.5 404.5         454.5 454.5         504.5 504.5         554.5 504.5         504.5 504.5         564.5 504.5         504.5 504.5         564.5 504.5         504.5 529.5         579.5 579.5         629.5 629.5         579.5 579.5         629.5 629.5         579.5 629.5         629.5 414.5         414.5 62.2         6.2 6.2         6.7 6.2         6.7 6.7         7.2 6.9         80.5 6.9         6.9         6.9         6.9         6.9

ne RCP6 series actuators o	an be operated by	the controlle	ers indicated below	. Please select tl	he type depend	ing on your inte	nded use. * Please	refer to P.147 for mo	ore information about the buil	t-in controller of RCP6S series
Name		Max. number of		Control met					Maximum number	Reference page
	view	controlled axes		Positioner	Pulse train	Program	Networ	k *Option	of positioning points	
PCON-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet		512 (768 for network spec.)	Please see P.131
MCON-C/CG	m	4	DC24V		his model is c-compatible only.  Note:		CompoNet Man		256	Please see the MCO catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	_	-	•	will vary deper controller.	ding on the reference page for	30,000	Please see the MSEL PC/PG catalog.