## ROBO Cylinder, High-thrust Rod Type, Side-mounted Motor Type, Actuator Width 88mm, 24V Pulse Motor ■Model RCP5—RA8R— WA Applicable controllers Specification Туре Encoder type Motor type Stroke Cable length Options Items WA: Battery-less 60P: Pulse motor, 20: 20mm 50: 50mm N: No cable Please refer to P4: PCON-CFB/CGFB size 60□ 10: 10mm P: 1m the options MSEL-PCF/PGF S: 3m specification 700: 700mm table below. 5: 5mm (Every 50mm) P6: RCON/RSEL M: 5m X□□: Specified length

# **Radial Load Applicable**

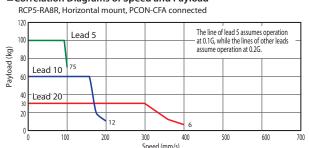
\*Controller is not included.



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

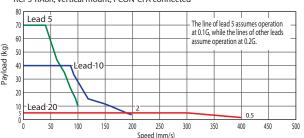
- (1) The payload assumes operation at an acceleration of 0.1G for lead 5 and operation at an acceleration of 0.2G for lead 10 and lead 20. The above values are the upper limits of acceleration/ deceleration.
- Please note that the RA8R requires a dedicated controller (high-thrust model).
- The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown in P. 65 and after for the allowable load mass.

# ■Correlation Diagrams of Speed and Payload



R□□: Robot cable





# Actuator Specifications

# ■Lead and Payload

Model number	Lead	Connected	Maximun	n payload	Maximum	Stroke	
Model Hullibel	(mm)	controller	Horizontal (kg)	Vertical (kg)	push force (N)	(mm)	
RCP5-RA8R-WA-60P-20-①-P4-②-③	20	PCON-CFB	30	5	500		
RCP5-RA8R-WA-60P-10-①-P4-②-③	10	PCON-CFB	60	40	1,000	50~700 (Every 50mm)	
RCP5-RA8R-WA-60P-5-①-P4-②-③	5	PCON-CFB	100	70	2,000	30(1111)	

Legend: Tstroke Cable length Options \*Please refer to P. 59 for push-motion operation.

# ■Stroke and Maximum Speed

② Cable Length

(Unit:	mm/s
(0,	

\* PCON-CFA is a

previous model. Current model is PCON-CFB.

Lead (mm)	50 (mm)	100~450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)
20	280	280 400		320	280	240	220
10	200		180	160	140	120	110
5	10	00	90	80	70	60	55

① Stroke			
Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	400	-
100	-	450	-
150	-	500	-
200	-	550	-
250	-	600	-
300	-	650	-
350	_	700	_

Туре	Cable code	Standard price
	<b>P</b> (1m)	-
Standard type	<b>S</b> (3m)	-
	<b>M</b> (5m)	-
	X06 (6m) ~X10 (10m)	-
Special length	X11 (11m)~X15 (15m)	-
	X16 (16m)~X20 (20m)	-
	R01 (1m) ~R03 (3m)	-
	R04 (4m) ~R05 (5m)	-
Robot cable	R06 (6m) ~R10 (10m)	-
	R11 (11m)~R15 (15m)	-

R16 (16m)~R20 (20m) \*Please refer to P. 89 for maintenance cables.

③ Options			
Name	Option code	Reference page	Standard price
Brake	В	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Outside)	CJO	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Motor side-mounted to the left (Standard)	ML	→P. 11	-
Motor side-mounted to the right	MR	→P. 11	-
Flange	FL	→P. 12	-
Non-motor end specification	NM	→P. 11	-

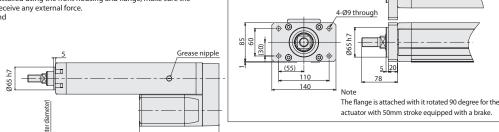
Actuator Specifications	
ltem	Description
Drive system	Ball screw Ø16mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	Ø40mm Aluminum
Rod non-rotation precision (*1)	0 deg.
Allowable load and torque on rod tip	Refer to table in the page on the right, refer to P. 65
Rod tip overhang distance	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(\*1) Rod's angular displacement in rotational direction with no applied load is shown.

# M20x1.5

# om our website. www.intelligentactuator.com \*1 When the rod is returning to its home position, please be careful of interference

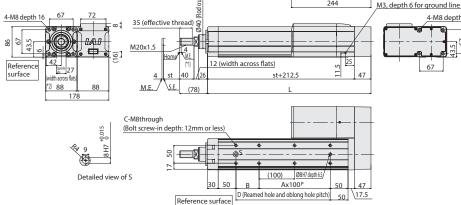
- from surrounding objects, as it will travel until it reaches the ME.
  \*2 The direction of width across flats varies depending on the product.
- \*3 If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force. ME: Mechanical end



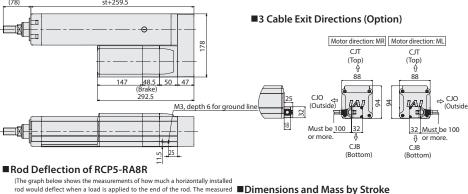
(Option)

**■**Dimensions with Flange

4-M8 depth 16

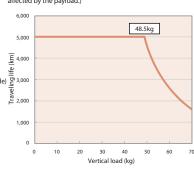


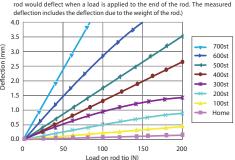
# ■Dimensions with Brake (Option)



If an actuator with lead 5 is installed vertically, the service life  $\,$ of the actuator varies significantly depending on its payload. Please refer to the correlation diagram of vertical load and traveling life shown below.

(If the actuator is installed horizontally, its service life is not affected by the payload.)





=Differsions and wass by stroke															
	Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700
	L	309.5	359.5	409.5	459.5	509.5	559.5	609.5	659.5	709.5	759.5	809.5	859.5	909.5	959.5
	A	0	1	1	2	2	3	3	4	4	5	5	6	6	7
	В	115	65	115	65	115	65	115	65	115	65	115	65	115	65
	С	4	6	6	8	8	10	10	12	12	14	14	16	16	18
D		115	165	215	265	315	365	415	465	515	565	615	665	715	765
	atic load on rod tip (N)	180	150.3	128.9	112.7	99.9	89.7	81.3	74.3	68.3	63.1	58.6	54.6	51.1	47.9
Allowable dynamic load	Load offset 0mm	73.6	60.3	51.0	44.1	38.7	34.3	30.7	27.7	25.2	23.0	21.1	19.4	17.8	16.5
on rod tip (N)		57.0	48.6	42.5	37.8	33.8	30.5	27.6	25.2	23.1	21.2	19.5	18.1	16.7	15.5
Allowable stati	ic torque on rod tip (N•m)	18.1	15.2	13.0	11.4	10.2	9.2	8.4	7.7	7.1	6.6	6.1	5.8	5.4	5.1
Allowable dynamic torque on rod tip (N·m)		5.7	4.9	4.3	3.8	3.4	3.0	2.8	2.5	2.3	2.1	2.0	1.8	1.7	1.5
Mass (kg)	Without brake	8.6	9.0	9.4	9.8	10.3	10.7	11.1	11.6	12.0	12.4	12.9	13.3	13.7	14.1
iviass (kg)	With brake	9.6	10.0	10.4	10.9	11.3	11.7	12.2	12.6	13.0	13.4	13.9	14.3	14.7	15.2

# Applicable Controllers

\* Controller for RCP6 series is PCON, MSEL, RCON or RSEL. Please refer our Controller General Catalog and/or contact IAI.