

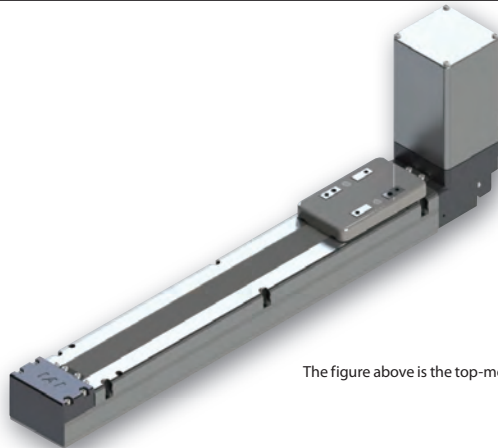
RCP5-BA7/BA7U ROBO Cylinder, Belt Type, Actuator Width 70mm, Pulse Motor, Top-mounted Motor/Bottom-mounted Motor

Model	RCP5	WA	56P	48	P3				
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
Items		BA7: Belt type Top-mounted motor BA7U: Belt type Bottom-mounted motor	WA: Battery-less absolute specification	56P: Pulse motor, size 56□ 48: Equiv. to 48mm		300: 300mm 2600: 2,600mm (Every 100mm)	P3: PCON-CA MSEP MSEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Please refer to the options table below.

*Controller is not included.



* Depending on the model, there may be some limitations to using the side and ceiling mount positions. Please refer to P.59 for details.

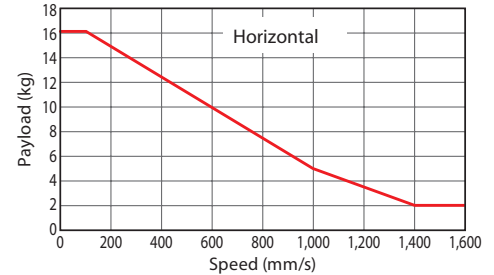


The figure above is the top-mounted motor type.

- POINT**
Note on selection
- Please set the operation speed at 100mm/s or higher for the belt type as it may cause vibration or noise when used at lower speed.
 - Due to a pulse motor used for RCP5 series, its payload gets lower when operated at higher speed. Please refer to the correlation diagram of speed and payload on this page to make sure that the required payload will be met at the operation speed you desire.
 - The payload assumes operation at an acceleration of 0.5G. 0.5G is the upper limit of the acceleration.
 - Push-motion operation cannot be performed.

Correlation Diagram of Speed and Payload

Due to a pulse motor used for RCP5 series, its payload gets lower when operated at higher speed. Please refer to this diagram below to make sure that the required payload will be met at the operation speed you desire.



Warnings

- This model cannot be installed in the vertical mount position.
- Horizontal and ceiling mount specifications cannot be installed in the side position. Similarly, side mount specification cannot be installed in a horizontal or ceiling mount position.
- The maximum stroke for the side and ceiling mount positions is 1,000mm.

Actuator Specifications

Lead and Payload

Model number	Motor attached side	Lead (mm)	Maximum payload		Stroke (mm)
			Horizontal (kg)		
RCP5-BA7-WA-56P-48-①-P3-②-③	Top	Equiv. to 48mm	16		300~2,600 (Every 100mm)
RCP5-BA7U-WA-56P-48-①-P3-②-③	Bottom				

Legend: ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

(Unit: mm/s)

Lead (mm)	300 (mm)	400 (mm)	500 (mm)	600 (mm)	700 (mm)	800 (mm)	900 (mm)	1,000~2,600 (Every 100mm)
Equiv. to 48mm	890	1,070	1,220	1,340	1,450	1,520	1,550	1,600

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
300	-	1,500	-
400	-	1,600	-
500	-	1,700	-
600	-	1,800	-
700	-	1,900	-
800	-	2,000	-
900	-	2,100	-
1,000	-	2,200	-
1,100	-	2,300	-
1,200	-	2,400	-
1,300	-	2,500	-
1,400	-	2,600	-

② Cable Length

Type	Cable code	Standard price
Standard type	P (1m)	-
	S (3m)	-
	M (5m)	-
Special 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. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	B	→P. 11	-
Cable exit direction (Top)	CJT	→P. 11	-
Cable exit direction (Right)	CJR	→P. 11	-
Cable exit direction (Left)	CJL	→P. 11	-
Cable exit direction (Bottom)	CJB	→P. 11	-
Ceiling mount type	CIM	→P. 59	-
Left side-mount type	SIL	→P. 59	-
Right side-mount type	SIR	→P. 59	-
Non-motor end specification	NM	→P. 11	-

Actuator Specifications

Item	Description
Drive system	Timing belt
Positioning repeatability	±0.08mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic allowable moment (*1)	Ma: 33.2N·m, Mb: 33.2N·m, Mc: 72.3N·m
Static allowable moment	Ma: 80.7N·m, Mb: 80.7N·m, Mc: 175N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

*Reference for overhang load length/Ma: 180mm or less, Mb, Mc: 180mm or less

(*1) Assumes a standard rated life of 5,000km.

(*2) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

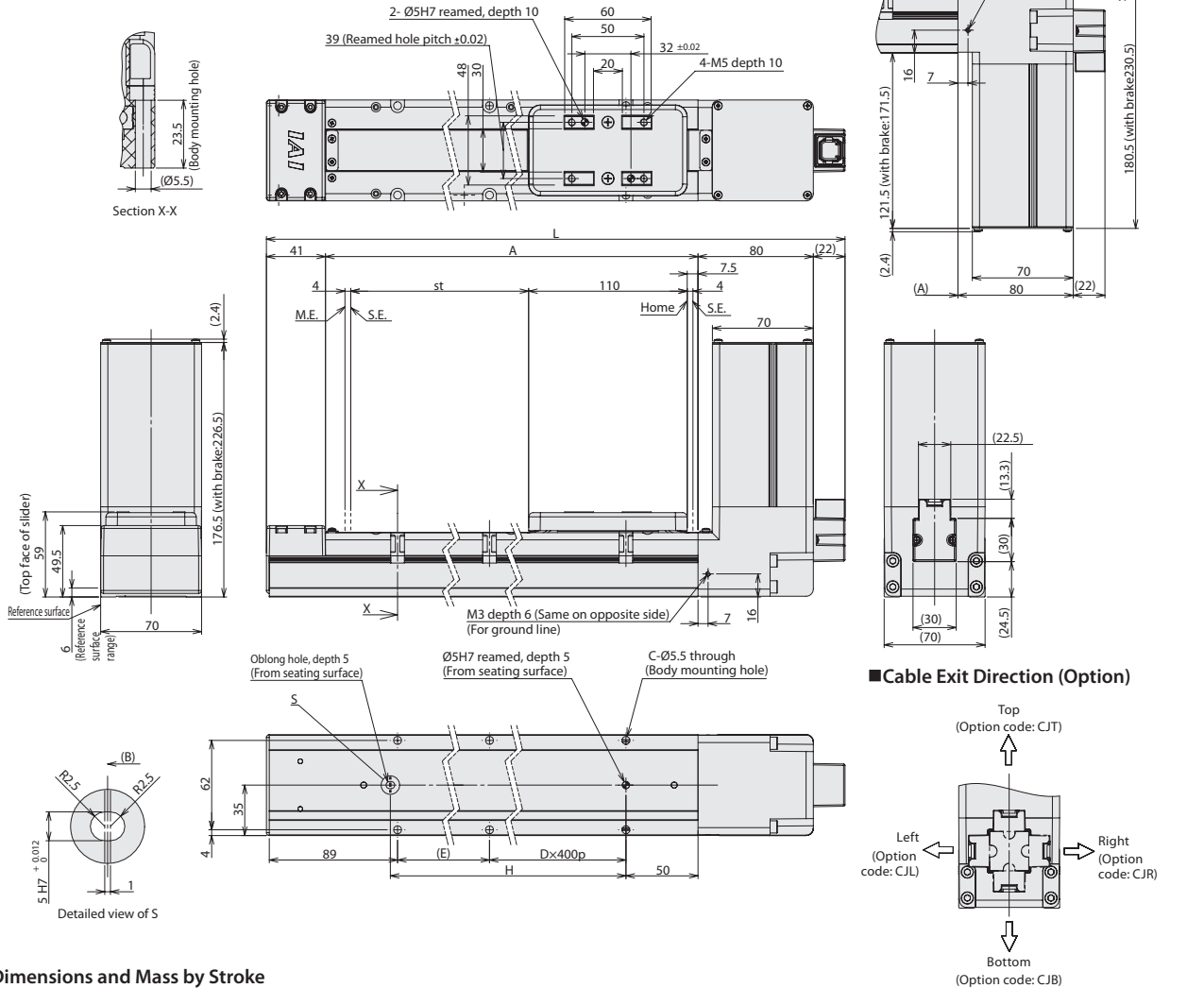
CAD drawings can be downloaded from our website. www.intelligentactuator.com



*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

ME: Mechanical end
SE: Stroke end

*The way to attach the actuator is to fix with screws from the top only.



Dimensions and Mass by Stroke

Stroke	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600	1,700	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500	2,600	
L	578	678	778	878	978	1,078	1,178	1,278	1,378	1,478	1,578	1,678	1,778	1,878	1,978	2,078	2,178	2,278	2,378	2,478	2,578	2,678	2,778	2,878	
A	435	535	635	735	835	935	1,035	1,135	1,235	1,335	1,435	1,535	1,635	1,735	1,835	1,935	2,035	2,135	2,235	2,335	2,435	2,535	2,635	2,735	
B	340	440	540	640	740	840	940	1,040	1,140	1,240	1,340	1,440	1,540	1,640	1,740	1,840	1,940	2,040	2,140	2,240	2,340	2,440	2,540	2,640	
C	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	
D	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	
E	335	435	535	635	735	835	935	1,035	1,135	1,235	1,335	1,435	1,535	1,635	1,735	1,835	1,935	2,035	2,135	2,235	2,335	2,435	2,535	2,635	
Mass (kg)																									
Without brake	3.8	4.1	4.4	4.8	5.1	5.4	5.8	6.1	6.5	6.8	7.1	7.5	7.8	8.1	8.5	8.8	9.1	9.5	9.8	10.2	10.5	10.8	11.2	11.5	
With brake	4.4	4.7	5	5.4	5.7	6	6.4	6.7	7.1	7.4	7.7	8.1	8.4	8.7	9.1	9.4	9.7	10.1	10.4	10.8	11.1	11.4	11.8	12.1	

*The weights shown in the table above are for BA7. The weight increases by 0.2kg for BA7U.

Applicable Controllers

The RCP5 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Model number	Max. number of controlled axes	Maximum number of positioning points	Input power	Standard price	Reference page
Positioner type (High-output specification)		PCON-CA-56PWAI-①-2-0	1	512 points	DC24V	-	→P. 69
Pulse train type (High-output specification)		PCON-CA-56PWAI-PL②-2-0				-	
Network type (High-output specification)		PCON-CA-56PWAI-③-0-0				-	
Solenoid valve multi-axis type (PIO specification)		MSEL-④-⑤-⑥-⑦-⑧-2-0	4 (when high-output enabled) LC: 6 (3 when high-output enabled)	3 points	Single-phase AC 100V~230V	-	→P. 77
Solenoid valve multi-axis type (Network specification)		MSEL-④-⑤-⑥-⑦-⑧-0-0				256 points	
Program control multi-axis type		MSEL-PC-1-56PWAI-①-2-4	4	30,000 points	Single-phase AC 100V~230V	-	→P. 87
Program control multi-axis type (w/network board)		MSEL-PC-1-56PWAI-②-0-4				-	
Program control multi-axis type (Safety category compliant spec.)		MSEL-PG-1-56PWAI-③-2-4				-	
Program control multi-axis type (Safety category compliant spec. w/network board)		MSEL-PG-1-56PWAI-④-0-4				-	

*Above MSEL models are for single-axis specification *① I/O type (NP/PN) *② Number of axes
 *③ Field network specification code *④ C or LC *⑤ N (NPN specification) or P (PNP specification) code
 *The high output enabled operation is only available when the "High-output setting specs" is selected in the MSEL-C/LC.