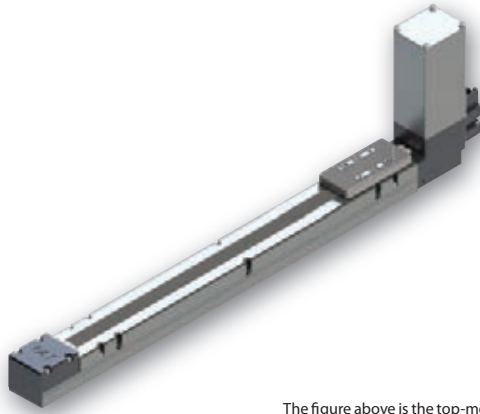


RCP5-BA4/BA4U RoboCylinder, Belt Type, Actuator Width 40mm, Pulse Motor, Top-mounted Motor/Bottom-mounted Motor

Model	RCP5	WA	35P	48		P3			
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
Items		BA4: Belt type Top-mounted motor BA4U: Belt type Bottom-mounted motor	WA: Battery-less absolute specification	35P: Pulse motor, size 35□	48: Equiv. to 48mm	300: 300mm 1200: 1200mm (Every 100mm)	P3: PCON-CA MSEP MSEL (Note)	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	Please refer to the options table below.

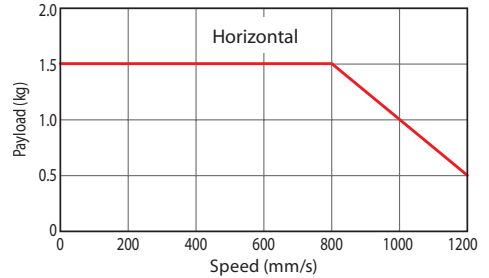
(Note) For the dedicated controller (not included) please refer to P. 12 or to the controller brochure.



The figure above is the top-mounted motor type.

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.



- Please set the operation speed at 150mm/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 or to the selection table on P. 16-8 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.

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 1000mm.

Actuator Specifications

Lead and Payload

Model number	Motor attached side	Lead (mm)	Maximum payload		Stroke (mm)
			Horizontal (kg)		
RCP5-BA4-WA-35P-48-①-P3-②-③	Top	Equiv. to 48mm	1.5		300~1200 (Every 100mm)
RCP5-BA4U-WA-35P-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)	700~1200 (Every 100mm)
Equiv. to 48mm	890	1040	1120	1160	1200

Cable Length

Type	Cable code
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)
	R16 (16m) ~R20 (20m)

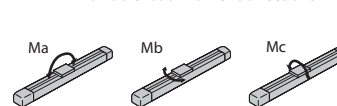
Actuator Specifications

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: 6.14N·m, Mb: 6.14N·m, Mc: 11.9N·m
Static allowable moment	Ma: 16N·m, Mb: 16N·m, Mc: 31.2N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

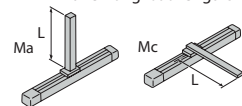
(*1) Assumes a standard rated life of 5000km.

• Reference for overhang load lengths / Ma: 120mm or less, Mb, Mc: 120mm or less

Allowable load moment directions



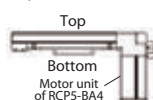
Overhang load lengths



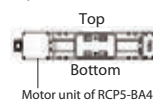
Options

Name	Option code	Reference page
Brake	B	→P. 10
Cable exit direction (Top)	CJT	→P. 10
Cable exit direction (Right)	CJR	→P. 10
Cable exit direction (Left)	CJL	→P. 10
Cable exit direction (Bottom)	CJB	→P. 10
Ceiling mount type	CIM	(See figure on the right)
Left side-mount type	SIL	(See figure on the right)
Right side-mount type	SIR	(See figure on the right)
Non-motor end specification	NM	→P. 10

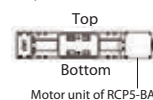
Ceiling mount type (Option code: CIM)



Left side-/wall mount type (Option code: SIL)



Right side-/wall mount type (Option code: SIR)



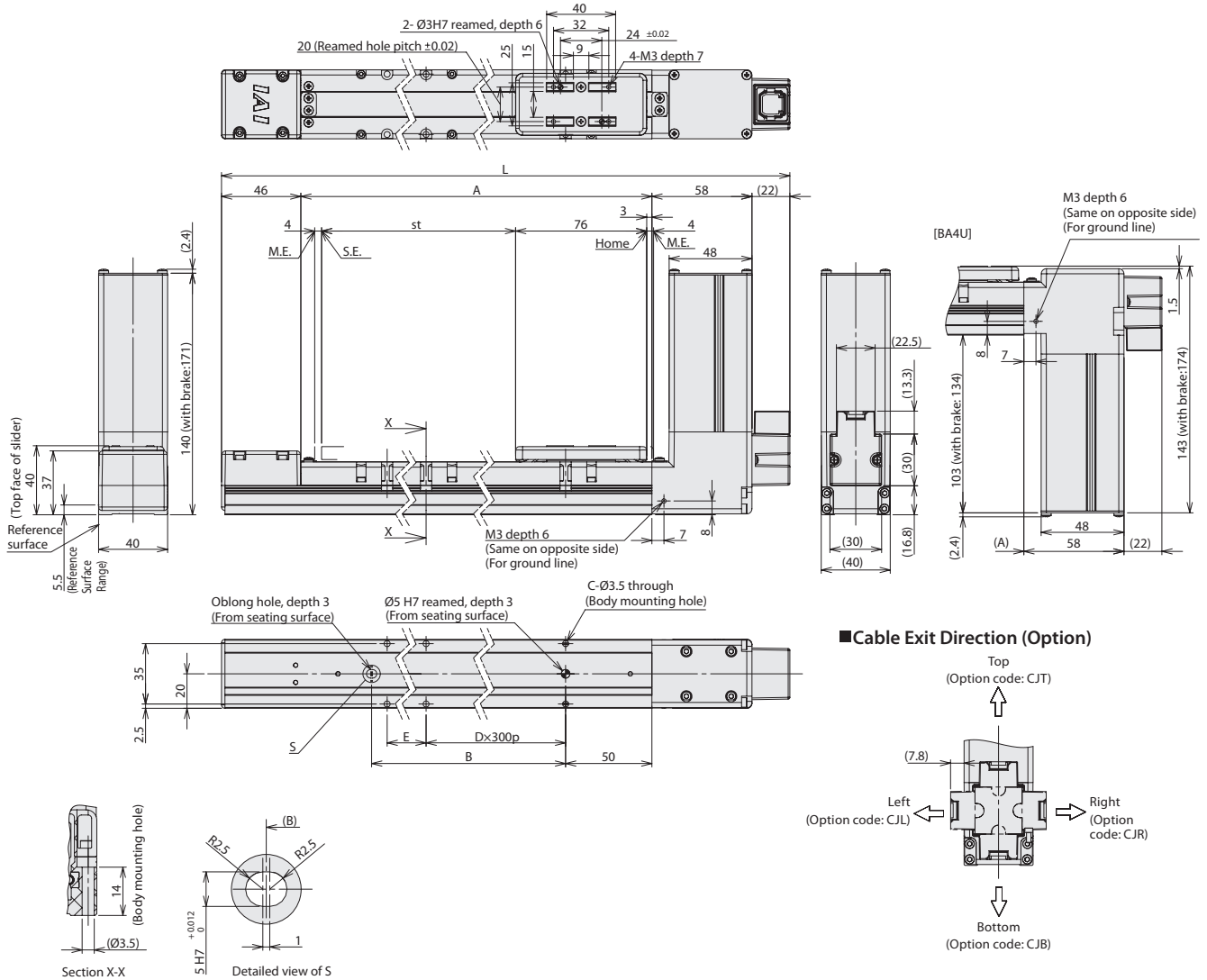
Dimensions

CAD drawings can be downloaded from the website. www.robocylinder.de



*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
L	517	617	717	817	917	1,017	1,117	1,217	1,317	1,417
A	391	491	591	691	791	891	991	1,091	1,191	1,291
B	300	400	500	600	700	800	900	1,000	1,100	1,200
C	4	6	6	6	8	8	8	10	10	10
D	0	1	1	1	2	2	2	3	3	3
E	291	91	191	291	91	191	291	91	191	291
Mass (kg)										
Without brake	1.7	1.8	2	2.1	2.3	2.4	2.5	2.7	2.8	2.9
With brake	1.9	2	2.2	2.3	2.5	2.6	2.7	2.9	3	3.1

*The weights shown in the table above are for BA4. The weight increases by 0.2kg for BA4U.

Table for Payload by Acceleration and Speed

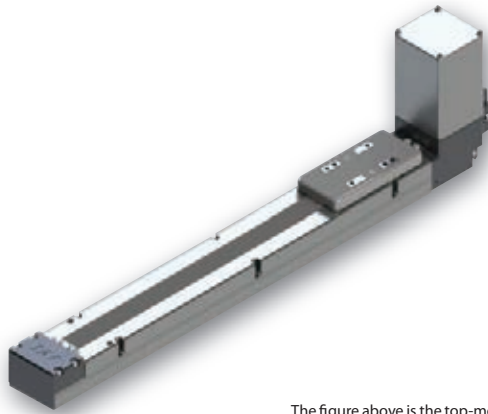
High output enabled		Lead 48 (or equivalent)			
Orientation	Horizontal				
Acceleration (G)	0.5 G				
Speed (mm/s)	0	200	800	1000	1200
Payload (kg)	1.5	1.5	1.5	1	0.5

(Note) MSEP-C/LC is available for high output only if "High-Output Specification" (PowerCon) is selected in the options.

RCP5-BA6/BA6U RoboCylinder, Belt Type, Actuator Width 58mm, Pulse Motor, Top-mounted Motor/Bottom-mounted Motor

Model	RCP5	WA	42P	48	P3				
Specification	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
Items		BA6: Belt type Top-mounted motor BA6U: Belt type Bottom-mounted motor	WA: Battery-less absolute specification	42P: Pulse motor, size 42□	48: Equiv. to 48mm	300: 300mm 2200: 2200mm (Every 100mm)	P3: PCON-CA MSEP MSEL (Note)	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	Please refer to the options table below.

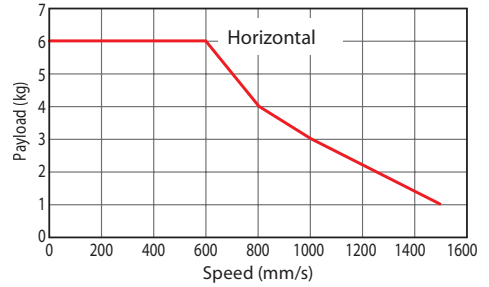
(Note) For the dedicated controller (not included) please refer to P. 14 or to the controller brochure.



The figure above is the top-mounted motor type.

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.



- 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 or to the selection table on P. 16-10 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.

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 1000mm.

Actuator Specifications

Lead and Payload

Model number	Motor attached side	Lead (mm)	Maximum payload Horizontal (kg)	Stroke (mm)
RCP5-BA6-WA-42P-48-①-P3-②-③	Top	Equiv. to 48mm	6	300~2200 (Every 100mm)
RCP5-BA6U-WA-42P-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)	900~2,200 (Every 100mm)
Equiv. to 48mm	890	1070	1220	1340	1400	1440	1500

Cable Length

Type	Cable code
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)
	R16 (16m) ~R20 (20m)

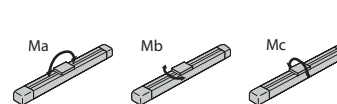
Actuator Specifications

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: 15.7N·m, Mb: 15.7N·m, Mc: 31.6N·m
Static allowable moment	Ma: 44.5N·m, Mb: 44.5N·m, Mc: 89.2N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

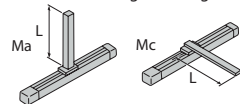
(*1) Assumes a standard rated life of 5000km.

• Reference for overhang load lengths / Ma: 150mm or less, Mb, Mc: 150mm or less

Allowable load moment directions

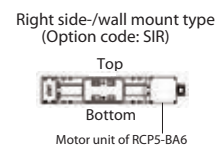
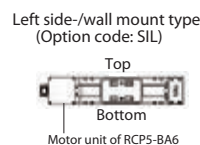
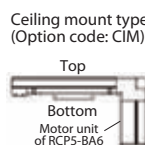


Overhang load lengths



Options

Name	Option code	Reference page
Brake	B	→P. 10
Cable exit direction (Top)	CJT	→P. 10
Cable exit direction (Right)	CJR	→P. 10
Cable exit direction (Left)	CJL	→P. 10
Cable exit direction (Bottom)	CJB	→P. 10
Ceiling mount type	CIM	(See figure on the right)
Left side-mount type	SIL	(See figure on the right)
Right side-mount type	SIR	(See figure on the right)
Non-motor end specification	NM	→P. 10



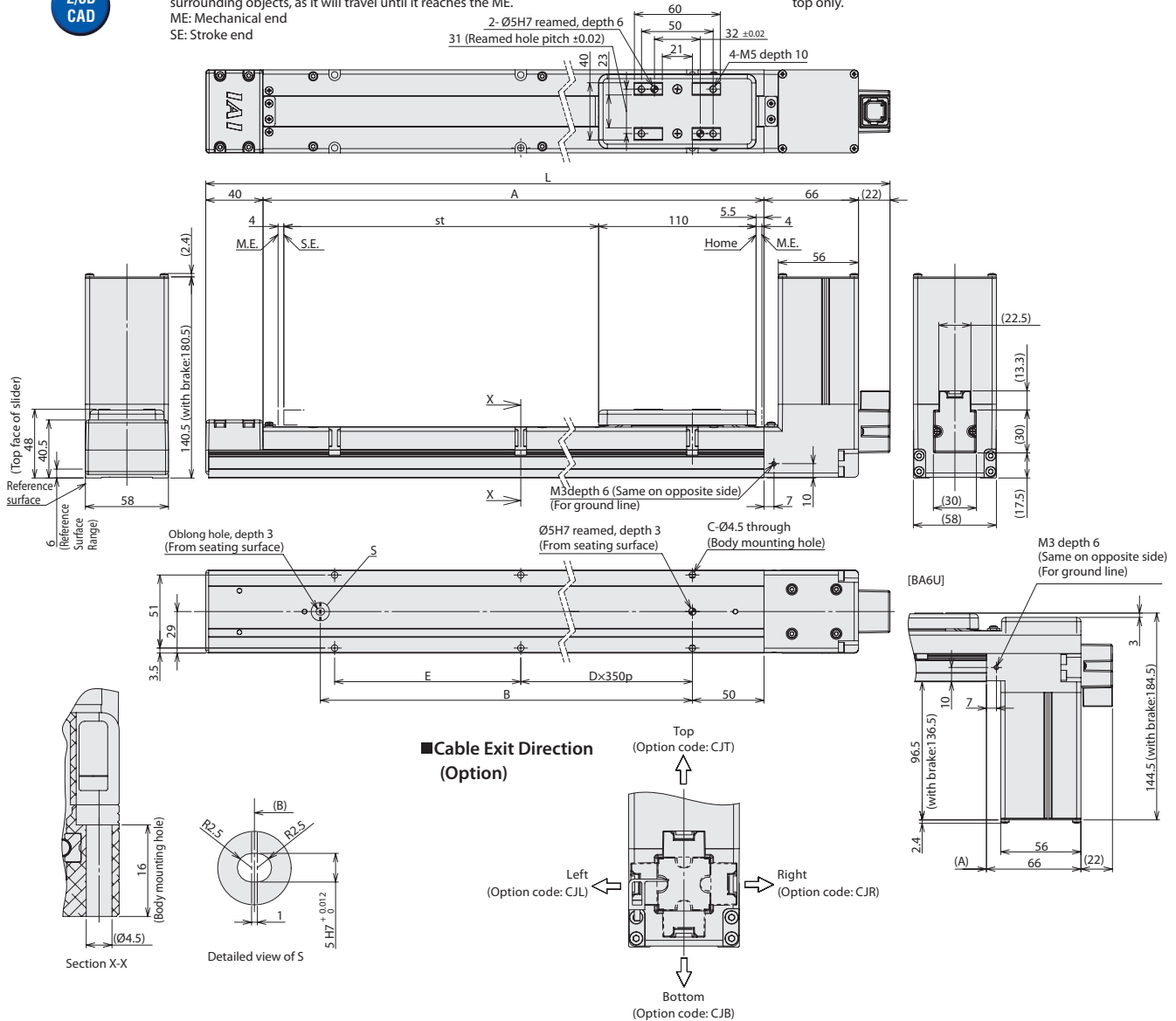
Dimensions

CAD drawings can be downloaded from the website. www.robocylinder.de



*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	
L	558	658	758	858	958	1,058	1,158	1,258	1,358	1,458	1,558	1,658	1,758	1,858	1,958	2,058	2,158	2,258	2,358	2,458	
A	430	530	630	730	830	930	1,030	1,130	1,230	1,330	1,430	1,530	1,630	1,730	1,830	1,930	2,030	2,130	2,230	2,330	
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	
C	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	14	14	14	14	14	16
D	0	1	1	1	1	2	2	2	3	3	3	3	4	4	4	5	5	5	5	5	6
E	330	80	180	280	380	130	230	330	80	180	280	380	130	230	330	80	180	280	380	130	130
Mass (kg)	Without brake	2.2	2.4	2.7	2.9	3.1	3.3	3.5	3.7	3.9	4.2	4.4	4.6	4.8	5	5.2	5.4	5.6	5.9	6.1	6.3
	With brake	2.6	2.8	3.1	3.3	3.5	3.7	3.9	4.1	4.3	4.6	4.8	5	5.2	5.4	5.6	5.8	6	6.3	6.5	6.7

*The weights shown in the table above are for BA6. The weight increases by 0.2kg for BA6U.

Table for Payload by Acceleration and Speed

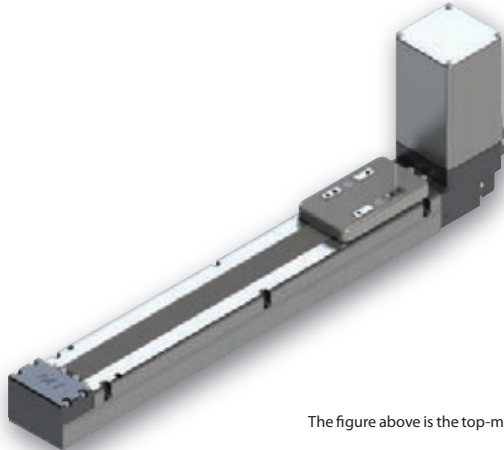
High output enabled		Lead 48 (or equivalent)			
Orientation	Horizontal				
Acceleration (G)	0.5G				
Speed (mm/s)	0	600	800	1000	1500
Payload (kg)	6	6	4	3	1

(Note) MSEP-C/LC is available for high output only if "High-Output Specification" (PowerCon) is selected in the options.

RCP5-BA7/BA7U RoboCylinder, 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: 2600mm (Every 100mm)	P3: PCON-CA MSEP MSEL (Note)	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	Please refer to the options table below.

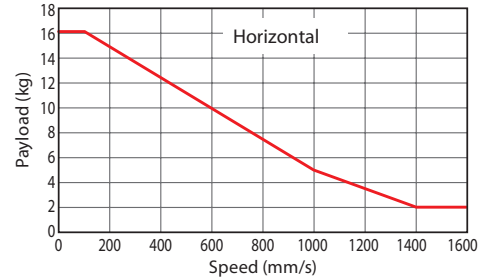
(Note) For the dedicated controller (not included) please refer to P. 16 or to the controller brochure.



The figure above is the top-mounted motor type.

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.



- 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 or to the selection table on P. 16-12 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.

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 1000mm.

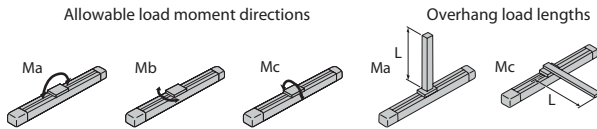
Actuator Specifications					Stroke and Maximum Speed (Unit: mm/s)								
Lead and Payload					Stroke and Maximum Speed (Unit: mm/s)								
Model number	Motor attached side	Lead (mm)	Maximum payload Horizontal (kg)	Stroke (mm)	Lead (mm)	300 (mm)	400 (mm)	500 (mm)	600 (mm)	700 (mm)	800 (mm)	900 (mm)	1000~2600 (Every 100mm)
RCP5-BA7-WA-56P-48-①-P3-②-③	Top	Equiv. to 48mm	16	300~2600 (Every 100mm)	Equiv. to 48mm	890	1070	1220	1340	1450	1520	1550	1600
RCP5-BA7U-WA-56P-48-①-P3-②-③	Bottom												

Legend: ① Stroke ② Cable length ③ Options

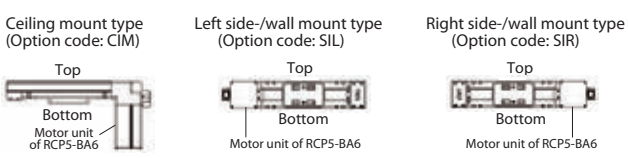
Type	Cable code
Standard type	P (1m)
	S (3m)
	M (5m)
Special length	X06 (6m) ~X10 (10m)
	X11 (11m) ~X15 (15m)
	X16 (16m) ~X20 (20m)
	R01 (1m) ~R03 (3m)
Robot cable	R04 (4m) ~R05 (5m)
	R06 (6m) ~R10 (10m)
	R11 (11m) ~R15 (15m)
	R16 (16m) ~R20 (20m)

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)

(*1) Assumes a standard rated life of 5000km.
• Reference for overhang load lengths / Ma: 180mm or less, Mb, Mc: 180mm or less



Name	Option code	Reference page
Brake	B	→P. 10
Cable exit direction (Top)	CJT	→P. 10
Cable exit direction (Right)	CJR	→P. 10
Cable exit direction (Left)	CJL	→P. 10
Cable exit direction (Bottom)	CJB	→P. 10
Ceiling mount type	CIM	(See figure on the right)
Left side-mount type	SIL	(See figure on the right)
Right side-mount type	SIR	(See figure on the right)
Non-motor end specification	NM	→P. 10

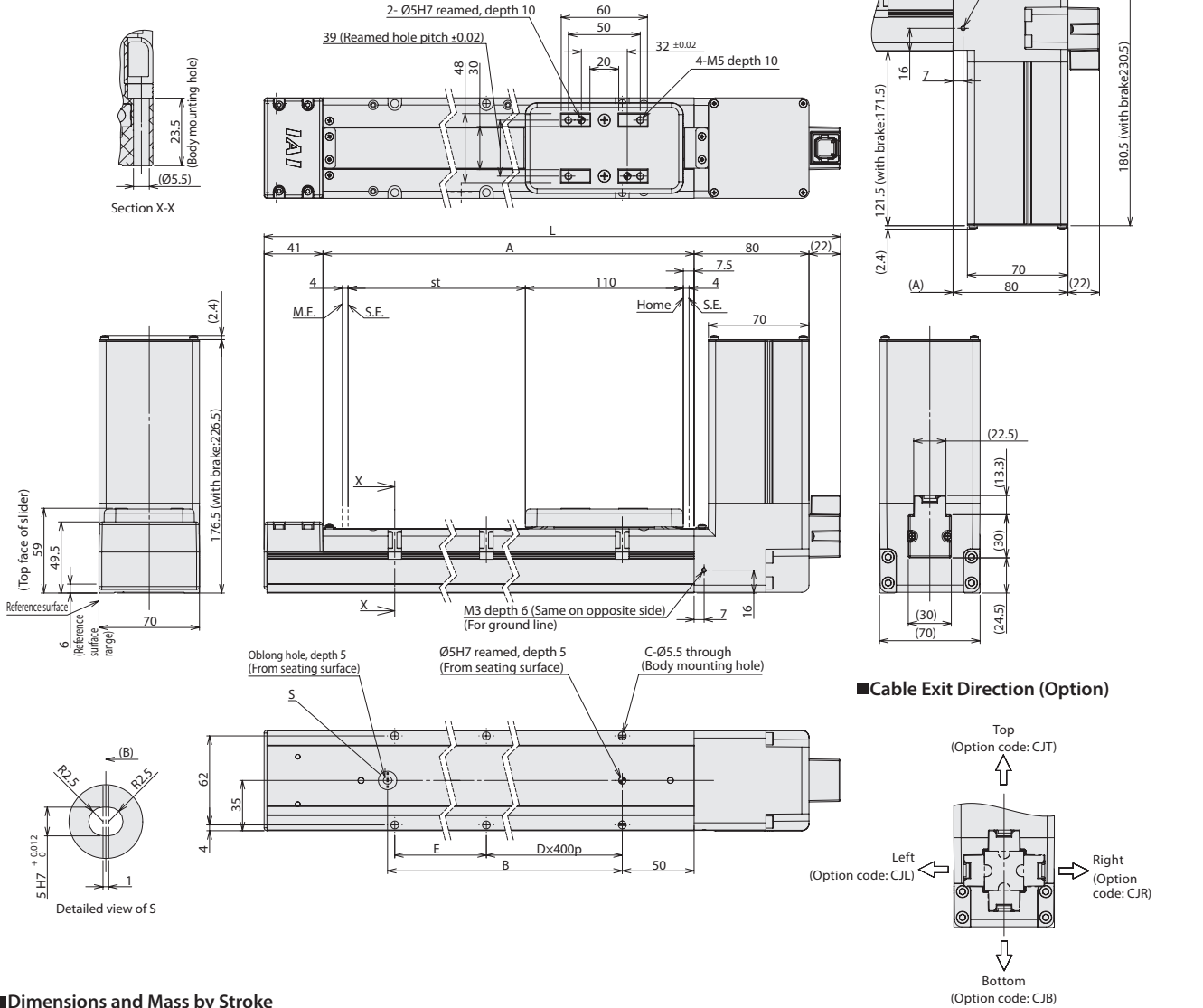


Dimensions

CAD drawings can be downloaded from the website. www.robocylinder.de



*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.

Table for Payload by Acceleration and Speed

High output enabled		Lead 48 (or equivalent)			
Orientation	Horizontal				
Acceleration (G)	0.5 G				
Speed (mm/s)	0	100	1000	1400	1600
Payload (kg)	16	16	5	2	2

(Note) MSEP-C/LC is available for high output only if "High-Output Specification" (PowerCon) is selected in the options.