Mechanically Jointed Rodless Cylinder
Basic Type
Series MY1B
ø10, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

How to Order

Basic type **MY1B** **20** □ □ – **300** □ □ – **M9BW** □ – □

Basic type

Bore size (mm)

10	10 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Port thread type

Symbol	Type	Bore size
Nil	M thread	ø10, ø16, ø20
	Rc	ø25, ø32, ø40, ø50, ø63, ø80, ø100
TN	NPT	
TF	G	

Piping

Nil	Standard type
G	Centralized piping type

Note) For ø10, only G is available.

Cylinder stroke (mm)
Refer to "Standard Stroke" on page 957.

Stroke adjusting unit

Nil	Without adjusting unit
A	With adjusting bolt
L	With low load shock absorber + Adjusting bolt
H	With high load shock absorber + Adjusting bolt
AL	With one A unit and one L unit
AH	With one A unit and one H unit each
LH	With one L unit and one H unit each

Only the A unit is available for ø16. Stroke adjusting unit is not available for ø50, ø63, ø80 and ø100. For detailed information on stroke adjusting unit specifications, refer to page 957.

Auto switch

Nil	Without auto switch (Built-in magnet)

For ø10 cylinders without an auto switch, the cylinder configuration is for the reed auto switch.
Contact SMC when the solid state auto switch is retrofitted.

Applicable auto switches vary depending on the bore size. Select an applicable one referring to the table below.

Suffix for stroke adjusting unit

Nil	Both sides
S	One side

Note) "S" is applicable for stroke adjusting units A, L and H.

Made to Order
Refer to page 957 for details.

Number of auto switches

Nil	2 pcs.
S	1 pc.
n	"n" pcs.

Shock Absorbers for L and H Units

Bore size (mm) / Unit no.	10	20	25	32	40
L unit	—	RB0806	RB1007	RB1412	
H unit	RB0805	RB1007	RB1412	RB2015	

The shock absorber service life is different from that of the MY1B cylinder depending on operating conditions. Refer to the RB Series Specific Product Precautions for the replacement period.

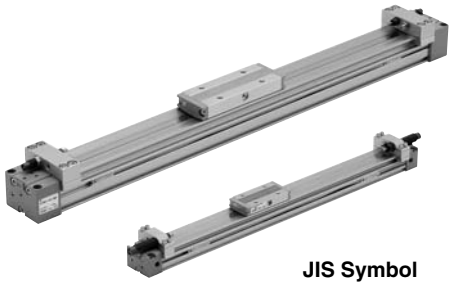
Applicable Auto Switch/Refer to pages 1263 to 1371 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage DC		Load voltage AC	Auto switch model: Perpendicular ø10 to ø20	Perpendicular ø25 to ø100	In-line ø10 to ø20	In-line ø25 to ø100	Lead wire length (m): 0.5 (Nil)	1 (M)	3 (L)	5 (Z)	Pre-wired connector	Applicable load	
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24V	5V, 12V	—	**M9NV** ** [**Y69A**]		**M9N** ** [**Y59A**]		●	● [—]	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)				**M9PV** ** [**Y7PV**]		**M9P** ** [**Y7P**]		●	● [—]	●	○	○		
				2-wire		12V		**M9BV** ** [**Y69B**]		**M9B** ** [**Y59B**]		●	● [—]	●	○	○	—	
	Diagnostic indication (2-color indication)			3-wire (NPN)		5V, 12V		**M9NWV** ** [**Y7NWV**]		**M9NW** ** [**Y7NW**]		●	● [—]	●	○	○	IC circuit	
				3-wire (PNP)				**M9PWV** ** [**Y7PWV**]		**M9PW** ** [**Y7PW**]		●	● [—]	●	○	○		
				2-wire		12V		**M9BWV** ** [**Y7BWV**]		**M9BW** ** [**Y7BW**]		●	● [—]	●	○	○	—	
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5V	—	**A96V**	—	**A96**	**Z76**	●	—	●	—	—	IC circuit	—
				2-wire	24V	12V	100V	**A93V**	—	**A93**	—	●	—	●	—	—	—	Relay, PLC
								—	—	—	**Z73**	●	—	●	●	—		
			No				100V or less	**A90V**	—	**A90**	**Z80**	●	—	●	—	—	IC circuit	

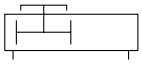
∗ Lead wire length symbols: 0.5 m ····· Nil (Example) M9NW
1 m ····· M (Example) M9NWM
3 m ····· L (Example) M9NWL
5 m ····· Z (Example) M9NWZ

∗ Solid state auto switches marked with "○" are produced upon receipt of order.
∗∗ D-M9□□□type cannot be mounted on ø50. Select auto switches in brackets.

∗ There are other applicable auto switches than listed above. For details, refer to page 1053.
∗ For details about auto switches with pre-wired connector, refer to pages 1328 and 1329.
∗ Auto switches are shipped together (not assembled).



JIS Symbol



Specifications

Bore size (mm)		10	16	20	25	32	40	50	63	80	100
Fluid		Air									
Action		Double acting									
Operating pressure range		0.2 to 0.8MPa	0.1 to 0.8 MPa								
Proof pressure		1.2 MPa									
Ambient and fluid temperature		5 to 60°C									
Cushion		Rubber bumper	Air cushion								
Lubrication		Non-lube									
Stroke length tolerance		1000 or less $^{+1.8}_{0}$ 1001 to 3000 $^{+2.8}_{0}$	2700 or less $^{+1.8}_{0}$, 2701 to 5000 $^{+2.8}_{0}$								
Piping Port size	**Front/Side port**	M5 x 0.8			Rc 1/8		Rc 1/4	Rc 3/8		Rc 1/2	
	Bottom port		ø4		ø5	ø6	ø8	ø10	ø11	ø16	ø18

Stroke Adjusting Unit Specifications

Bore size (mm)	10		16	20			25			32			40		
Unit symbol	A	H	A	A	L	H	A	L	H	A	L	H	A	L	H
Configuration Shock absorber model	With adjusting bolt	RB 0805 + with adjusting bolt	With adjusting bolt	With adjusting bolt	RB 0806 + with adjusting bolt	RB 1007 + with adjusting bolt	With adjusting bolt	RB 1007 + with adjusting bolt	RB 1412 + with adjusting bolt	With adjusting bolt	RB 1412 + with adjusting bolt	RB 2015 + with adjusting bolt	With adjusting bolt	RB 1412 + with adjusting bolt	RB 2015 + with adjusting bolt
Fine stroke adjustment range (mm)	0 to –5		0 to –5.6	0 to –6			0 to –11.5			0 to –12			0 to –16		
Stroke adjustment range	When exceeding the stroke fine adjustment range: Utilize a made-to-order specifications "-X416" and "-X417".														

∗ Stroke adjustment range is applicable for one side when mounted on a cylinder.

Shock Absorber Specifications

Model		RB 0805	RB 0806	RB 1007	RB 1412	RB 2015
Max. energy absorption (J)		1.0	2.9	5.9	19.6	58.8
Stroke absorption (mm)		5	6	7	12	15
Max. collision speed (mm/s)		1000	1500	1500	1500	1500
Max. operating frequency(cycle/min)		80	80	70	45	25
Spring force (N)	**Extended**	1.96	1.96	4.22	6.86	8.34
	Retracted	3.83	4.22	6.86	15.98	20.50
Operating temperature range (°C)		5 to 60				

The shock absorber service life is different from that of the MY1B cylinder depending on operating conditions. Refer to the RB Series Specific Product Precautions for the replacement period.

Piston Speed

Bore size (mm)		10	16 to 100
Without stroke adjusting unit		100 to 500 mm/s	100 to 1000 mm/s
Stroke adjusting unit	A unit	100 to 200 mm/s	100 to 1000 mm/s (1)
	L unit and H unit	100 to 1000 mm/s	100 to 1500 mm/s (2)

Note 1) Be aware that when the stroke adjusting range is increased by manipulating the adjusting bolt, the air cushion capacity decreases. Also, when exceeding the air cushion stroke ranges on page 960, **the piston speed should be 100 to 200 mm per second.**
Note 2) The piston speed is 100 to 1000 mm/s for centralized piping.
Note 3) Use at a speed within the absorption capacity range. Refer to page 959.

Made to Order Specifications

(For details, refer to pages 1395 to 1565.)

Symbol	Specifications
—XB11	Long stroke type
—XC67	NBR rubber lining in dust seal band
—X168	Helical insert thread specifications
—X416	Holder mounting bracket I
—X417	Holder mounting bracket II

Standard Stroke

Bore size (mm)	Standard stroke (mm)∗	Maximum manufacturable stroke (mm)
10, 16	100, 200, 300, 400, 500, 600, 700 800, 900, 1000, 1200, 1400, 1600 1800, 2000	3000
20, 25, 32, 40 50, 63, 80, 100		5000

∗ Strokes are manufacturable in 1 mm increments, up to the maximum stroke. However, when exceeding a 2000 mm stroke, specify "-XB11" at the end of the model number.