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

How to Order

ø10, ø16, ø20, ø50, ø63, ø80, ø100: **MY1B 20 ❶ ❷ ❸ – 300 ❹ ❺ – M9BW ❻ ❼ – ❽**

ø25, ø32, ø40: **MY1B 25 ❶ ❷ ❸ – 300 ❹ ❺ Z – M9BW ❻ ❼ – ❽**

Basic type

❶ Bore size

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

❷ 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	

❸ Piping

Nil	Standard type
G	Centralized piping type

Note) For ø10, only G is available.

❹ Cylinder stroke (mm)

Bore size	Standard stroke*1	Long stroke (-XB11)	Maximum manufacturable stroke
10, 16	100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1200, 1400, 1600, 1800, 2000	Strokes of 2001 to 3000 mm (1 mm increments) exceeding the standard stroke	3000
20, 25, 32, 40, 50, 63, 80, 100	*1 The stroke can be manufactured in 1 mm increments from 1 mm stroke.	Strokes of 2001 to 5000 mm (1 mm increments) exceeding the standard stroke	5000

Ordering example

* Add "-XB11" to the end of the part number for long strokes. MY1B20-3000L-M9BW-XB11

Note) Please be advised that with stroke 49 or less, there are cases where auto switch mounting is not possible and the performance of the air cushion may decline.

❺ Stroke adjustment unit symbol

Refer to "Stroke adjustment unit" on page 1239.

❻ 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.

❼ Number of auto switches

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

❽ Made to Order: Individual Specifications (For details, refer to page 1334.)

Symbol	Specifications
-X168	Helical insert thread specifications

Made to Order Specifications

Click here for details

Symbol	Specifications
-XB11	Long stroke type
-XB22	Shock absorber soft type RJ series type
-XC67*	NBR rubber lining in dust seal band

* Only ø16, ø20, ø50, and ø63 are available for the -XC67.

Applicable Auto Switches/Refer to pages 1575 to 1701 for further information on auto switches.

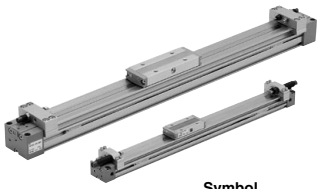
Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage DC		Load voltage AC	Auto switch model: Perpendicular ø10 to ø40	Perpendicular ø50 to ø100	In-line ø10 to ø40	In-line ø50 to ø100	Lead wire length (m): 0.5 (Nil)	1 (M)	3 (L)	5 (Z)	Pre-wired connector	Applicable load	
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV[Y69A]**		M9N[Y59A]**		●	●[—]	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)				M9PV[Y7PV]**		M9P[Y7P]**		●	●[—]	●	○	○		
				2-wire		12 V		M9BV[Y69B]**		M9B[Y59B]**		●	●[—]	●	○	○	—	
	Diagnostic indication (2-color indicator)			3-wire (NPN)		5 V, 12 V		M9NWV[Y7NWV]**		M9NW[Y7NW]**		●	●[—]	●	○	○	IC circuit	
				3-wire (PNP)				M9PWV[Y7PWV]**		M9PW[Y7PW]**		●	●[—]	●	○	○		
				2-wire		12 V		M9BWV[Y7BWV]**		M9BW[Y7BW]**		●	●[—]	●	○	○	—	
	Water resistant (2-color indicator)			3-wire (NPN)		5 V, 12 V		M9NAV[—]**[*1]		M9NA[—]**[*1]		○	○	●	○	○	IC circuit	
				3-wire (PNP)				M9PAV[—]**[*1]		M9PA[—]**[*1]		○	○	●	○	○		
				2-wire		12 V		M9BAV[—]**[*1]		M9BA[Y7BA]**[*1]		○	○	●	○	○	—	
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	—	A96	Z76	●	—	●	—	—	IC circuit	—
			No	2-wire	24 V	12 V	100 V	A93V*3	—	A93	Z73	●	●	●	●	—	—	Relay, PLC
							100 V or less	A90V	—	A90	Z80	●	—	●	—	—	IC circuit	

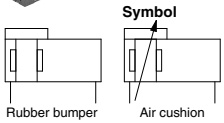
*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance. Consult with SMC regarding water resistant types with the above model numbers.
*2 For details on switch mounting brackets and part numbers, refer to "Switch Mounting Bracket: Part No." on page 1333-1.
*3 1 m type lead wire is only applicable to D-A93.

* 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 1333-1.
* Auto switches are shipped together (not assembled).





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 0.8 MPa	0.15 to 0.8 MPa		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			1/8		1/4	3/8		1/2	
	Bottom port		ø4		ø6		ø8	ø10		ø18	

Piston Speed

Bore size (mm)		10	16	20 to 40	50 to 100
Without stroke adjustment unit		100 to 500 mm/s	100 to 1000 mm/s		
Stroke adjustment 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 (1)	—

Note 1) Be aware that when the stroke adjustment range is increased by manipulating the adjustment bolt, the air cushion capacity decreases. Also, when exceeding the air cushion stroke ranges on page 1241, **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 1241.
Note 4) Due to the construction of this product, it may have more fluctuation in operating speed compared to a rod type air cylinder. For applications that require constant speed, select the equipment corresponding to the required level.

Stroke Adjustment 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 adjustment bolt	RB 0805 + with adjustment bolt	With adjustment bolt	With adjustment bolt	RB 0806 + with adjustment bolt	RB 1007 + with adjustment bolt	With adjustment bolt	RB 1007 + with adjustment bolt	RB 1412 + with adjustment bolt	With adjustment bolt	RB 1412 + with adjustment bolt	RB 2015 + with adjustment bolt	With adjustment bolt	RB 1412 + with adjustment bolt	RB 2015 + with adjustment bolt
Stroke adjustment range by intermediate fixing spacer (mm)	**Without spacer**	0 to –5		0 to –5.6	0 to –6			0 to –11.5			–12 to –24			0 to –16		
	With short spacer	—	—	–5.6 to –11.2	–6 to –12			–11.5 to –23			–12 to –24			–16 to –32		
	With long spacer	—	—	–11.2 to –16.8	–12 to –18			–23 to –34.5			–24 to –36			–32 to –48		

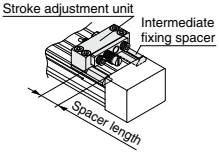
Note) Intermediate fixing spacer is not available for ø10.
∗ Stroke adjustment range is applicable for one side when mounted on a cylinder.

Stroke Adjustment Unit Symbol

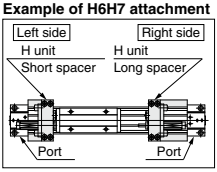
		Right side stroke adjustment unit									
		Without unit	A: With adjustment bolt			L: With low load shock absorber + Adjustment bolt			H: With high load shock absorber + Adjustment bolt		
				With short spacer	With long spacer		With short spacer	With long spacer		With short spacer	With long spacer
Left side stroke adjustment unit	**Without unit**	**Nil**	**SA**	**SA6**	**SA7**	**SL**	**SL6**	**SL7**	**SH**	**SH6**	**SH7**
	A: With adjustment bolt	**AS**	**A**	**AA6**	**AA7**	**AL**	**AL6**	**AL7**	**AH**	**AH6**	**AH7**
	With short spacer	**A6S**	**A6A**	**A6**	**A6A7**	**A6L**	**A6L6**	**A6L7**	**A6H**	**A6H6**	**A6H7**
	With long spacer	**A7S**	**A7A**	**A7A6**	**A7**	**A7L**	**A7L6**	**A7L7**	**A7H**	**A7H6**	**A7H7**
	L: With low load shock absorber + Adjustment bolt	**LS**	**LA**	**LA6**	**LA7**	**L**	**LL6**	**LL7**	**LH**	**LH6**	**LH7**
	With short spacer	**L6S**	**L6A**	**L6A6**	**L6A7**	**L6L**	**L6**	**L6L7**	**L6H**	**L6H6**	**L6H7**
	With long spacer	**L7S**	**L7A**	**L7A6**	**L7A7**	**L7L**	**L7L6**	**L7**	**L7H**	**L7H6**	**L7H7**
	H: With high load shock absorber + Adjustment bolt	**HS**	**HA**	**HA6**	**HA7**	**HL**	**HL6**	**HL7**	**H**	**HH6**	**HH7**
	With short spacer	**H6S**	**H6A**	**H6A6**	**H6A7**	**H6L**	**H6L6**	**H6L7**	**H6H**	**H6**	**H6H7**
	With long spacer	**H7S**	**H7A**	**H7A6**	**H7A7**	**H7L**	**H7L6**	**H7L7**	**H7H**	**H7H6**	**H7**

∗ Spacers are used to fix the stroke adjustment unit at an intermediate stroke position.
For details on spacers and stroke adjustment units, refer to "Accessory Bracket (Option)" on page 1251-1.

Stroke adjustment unit mounting diagram



Example of H6H7 attachment



Refer to pages 1331 to 1333-1 for the specifications with auto switch.