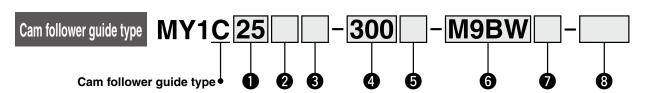
Mechanically Jointed Rodless Cylinder Cam Follower Guide Type

MY1C Series

Ø16, Ø20, Ø25, Ø32, Ø40, Ø50, Ø63

How to Order



Bore size

16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm

2 Port thread type

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

Nil	Standard type
G	Centralized piping type

4 Cylinder stroke [mm]

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

Ordering example

- * Long stroke can be ordered the same as the standard stroke. MY1C20-3000L-M9BW
- Please be advised that with a stroke of 49 mm or less, there are cases where auto switch mounting is not possible, and the performance of the air cushion may decline.

Stroke adjustment unit symbol For stroke adjustment units, refer to page 62.



NII	without auto switch (Built-in magnet)
	ole auto switches vary depending on the e. Select an applicable one referring to

Number of auto switches

Nil	2
S	1
n	n

Made to Order Common Specifications Refer to page 62 for details.

Applicable Auto Switches/Refer to the Web Catalog for further information on auto switches.

		- 1	light	145	L	oad volta	ge		Auto swit	ch mode		Lead wire length [m]							
Туре	Special function	Electrical entry	dicator light	Wiring (Output)	,	DC		Perpendicular		In-line		0.5	1	3	h	Pre-wired connector	Applicat	ole load	
		Citily	ndi	(Output)	U	C	AC	ø16, ø20	ø25 to ø63	ø16, ø20	ø25 to ø63	(Nil)	(M)	(L)	(Z)	COLLIGECTOL			
Ę				3-wire (NPN)		5 V, 12 V		M9	NV	MS	N	•	•	•	0	0	IC circuit		
switch	_			3-wire (PNP)		3 V, 12 V		M9	PV	MS	PP	•	•	•	0	0	IC CITCUIT		
				2-wire	12 V		M9	BV	MS)B	•	•	•	0	0	_			
auto	Diamaratia in diamatan			3-wire (NPN)		5 V, 12 V 12 V 5 V, 12 V	E V 10 V		M9N	1MA	M9	NW		•	•	0	0	IC circuit	D-1
	Diagnostic indication (2-color indicator)	Grommet	Yes	3-wire (PNP)	24 V		<u> </u>	M9PWV		M9	PW		•	•	0			Relay, PLC	
state	(2-color indicator)			2-wire				M9E	3WV	M9	BW	•	•	•	0	0	_	FLO	
ळ				3-wire (NPN)				M9NAV*1		M9NA*1		0	0	•	0	0	IC circuit		
Solid	Water resistant (2-color indicator)			3-wire (PNP)				M9PAV*1		M9PA*1		0	0		0	0	IC CITCUIT		
	`			2-wire		12 V		M9BAV*1		M9E	3A*1	0	0	•	0	0	_		
eed switch		·	Yes	3-wire (NPN equivalent)	_	5 V	_	A96V	_	A96	Z76		_				IC circuit	_	
Reed o swit		Grommet	No	2-wire	24 V	12 V	100 V	A93V*2	_	A93	Z73	•	•	•	•		_	Relay,	
anto				2-WIIE	24 V	12 V	100 V or less	A90V	_	A90	Z80		_			_	IC circuit	PLC	

- *1 Water-resistant type auto switches can be mounted on the above models, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the above model numbers.
- *2 The 1 m lead wire is only applicable to the D-A93
- * For details on auto switch mounting brackets and part numbers, refer to page 112.
- * Lead wire length symbols: 0.5 m (Example) M9NW 1 m M (Example) M9NWM (Example) M9NWL 3 m L
 - (Example) M9NWZ
- * Solid state auto switches marked with "O" are produced upon receipt of order.
- Auto switch mounting brackets (BMG2-012) are separately required to retrofit auto switches (M9 type) on ø25 to ø63 cylinders. Since there are applicable auto switches other than those listed above, refer to page 112 for details.
- Auto switches are shipped together with the product but do not come assembled. (Refer to page 109 for the details of auto switch mounting.)



Intermediate fixing spacer

Right side

Port

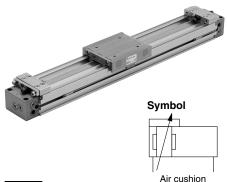
Stroke adjustment unit

mounting diagram

Example of H6H7 attachment

H unit

Long spacer



Made to Order Common Specifications (For details, refer to page 114.)

Symbol	Specifications
-,	
-XB22*1	Shock absorber soft type RJ series mounted
-XC56	With knock pin hole
-XC67	NBR rubber lining in dust seal band
-X168	Helical insert thread specifications

^{*1} Excludes ø50 and ø63 for the -XB22

Specifications

Bore si	ze [mm]	16	20	25	32	40	50	63					
Fluid		Air											
Action		Double acting											
Operating pr	essure range	0.15 to 0.8 M	Pa		0.1	1 to 0.8 M	Pa						
Proof pres	sure	1.2 MPa											
Ambient and flu	uid temperatures	5 to 60°C											
Cushion		Air cushion											
Lubrication	n	Non-lube											
Stroke leng	th tolerance	1000 or less ^{+1.8} 1001 to 3000 ^{+2.8} 0	2700 or less ^{+1.8} ₀ , 2701 to 5000 ^{+2.8} ₀										
Piping	Front/Side port	M5 x 0.8		1/	/8	1/4	3/	/8					
port size	Bottom port	ø4		ø	6	ø1	10						

Piston Speed

В	ore size [mm]	16 to 63
Without stroke a	djustment unit	100 to 1000 mm/s
Stroke	A unit	100 to 1000 mm/s*1
adjustment unit	L unit and H unit	100 to 1500 mm/s*2

- Be aware that when the stroke adjustment range is increased with the adjustment bolt, the air cushion capacity decreases. Also, when exceeding the air cushion stroke ranges on page 64, the piston speed should be 100 to 200 mm/s.
- *2 The piston speed is 100 to 1000 mm/s for centralized piping
- Use at a speed within the absorption capacity range. Refer to page 64.
 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] Unit symbol		1	6	20			25			32			40			50			63		
		Α	L	Α	L	Н	Α	L	Н	Α	L	Н	Α	L	Н	Α	L	Н	Α	L	Н
Configura Shock ab model	sorber	With adjustment bolt	RB 0806 + 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	With adjustment bolt	RB 2015 + with adjustment bolt	RB 2725 + with adjustment bolt	With adjustment bolt	RB 2015 + with adjustment bolt	RB 2725 + with adjustment bolt
Stroke adjust- ment range by	Without spacer	0 to	-5.6	(0 to -6		0 to -11.5		0 to -12		2	0 to -16		0 to -20		0 to -25		5			
intermediate	With short spacer	-5.6 to	-11.2	-6	−6 to −12		-11	–11.5 to –23		-12 to -24		-16 to -32		−20 to −40		−25 to −50		50			
fixing spacer [mm]	With long spacer	-11.2 to	0 –16.8	-1	−12 to −18		-23 to -34.5		-2	24 to –≎	36	-32 to -48			-40 to -60			-50 to -75		75	

^{*} Stroke adjustment range is applicable for one side when mounted on a cylinder.

Stroke Adjustment Unit Symbol

	Stroke A	ajustment t	Jill S	loamy									, mounting dia
						Right s	ide stroke	e adjustm	ent unit				Stroke adjustment unit
			Without	A: With	: With adjustment bolt			L: With low load shock absorber + Adjustment bolt			gh load shoo ent bolt	k absorber	
			unit		With short spacer	With long spacer		With short spacer	With long spacer		With short spacer	With long spacer	
ĺ	별 Wit	hout unit	Nil	SA	SA6	SA7	SL	SL6	SL7	SH	SH6	SH7	Sh. 1
	A: With a	djustment bolt	AS	Α	AA6	AA7	AL	AL6	AL7	AH	AH6	AH7	Spacer length
	me	With short spacer	A6S	A6A	A6	A6A7	A6L	A6L6	A6L7	A6H	A6H6	A6H7	Example of H6H7 a
	ustme	With long spacer	A7S	A7A	A7A6	A7	A7L	A7L6	A7L7	A7H	A7H6	A7H7	Left side
	도 With low lo	oad shock absorber +	LS	LA	LA6	LA7	L	LL6	LL7	LH	LH6	LH7	Hunit Hu
	Adjustment	With short spacer	L6S	L6A	L6A6	L6A7	L6L	L6	L6L7	L6H	L6H6	L6H7	Short spacer Lon
	sto	With long spacer	L7S	L7A	L7A6	L7A7	L7L	L7L6	L7	L7H	L7H6	L7H7	
	용 H: With high	load shock absorber +	HS	HA	HA6	HA7	HL	HL6	HL7	Н	HH6	HH7	* + +
	Adjustment	With short spacer	H6S	H6A	H6A6	H6A7	H6L	H6L6	H6L7	Н6Н	H6	Н6Н7	+ +
	polt	With long spacer	H7S	H7A	H7A6	H7A7	H7L	H7L6	H7L7	H7H	H7H6	H7	Port

- 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 Brackets (Option)" on page 70.
- * For precautions, refer to page 121.

Accessory Brackets (Option)

	<u> </u>
Stroke adjustment unit	p. 70
Side support	p. 71

Refer to pages 109 to 112 for the specifications with auto switch.



Shock Absorbers for L and H Units

Туре	Stroke adjustment	Bore size [mm]										
	unit	16	20	25	32	40	50	63				
Standard (Shock absorber/	L	RB0806		RB1007	RB1412		RB2015					
RB series)	Н	— RB1007		RB1412	RB2	2015	RB2	725				
Shock absorber/	L	RJ0806H		RJ1007H	RJ1412H		_	_				
soft type RJ series mounted (-XB22)	Н	_	RJ1007H	RJ1412H	_	_	_	_				

^{*} The shock absorber service life is different from that of the MY1C cylinder depending on operating conditions. Refer to the RB/RJ Series Specific Product Precautions for the replacement period.

Shock Absorber Specifications

Мо	del	RB 0806	RB 1007	RB 1412	RB 2015	RB 2725				
Max. absorb	ed energy [J]	2.9	5.9	19.6	58.8	147				
Stroke abso	rption [mm]	6	7	12	15	25				
Max. collision	speed [mm/s]			12 15 25 1500 45 25 10 2 6.86 8.34 8.83						
Max. operating fre	quency [cycle/min]	80	70	45	25	10				
Spring	Extended	1.96	4.22	6.86	8.34	8.83				
force [N]	Retracted	4.22	6.86	15.98	20.50	20.01				
Operating tempe	rature range [°C]			5 to 60						

^{*} The shock absorber service life is different from that of the MY1C cylinder depending on operating conditions. Refer to the RB Series Specific Product Precautions for the replacement period.

Theoretical Output

								[N]					
Bore size	Piston area	Operating pressure [MPa]											
[mm]	[mm ²]	0.2	0.3	0.4	0.5	0.6	0.7	0.8					
16	200	40	60	80	100	120	140	160					
20	314	62	94	125	157	188	219	251					
25	490	98	147	196	245	294	343	392					
32	804	161	241	322	402	483	563	643					
40	1256	251	377	502	628	754	879	1005					
50	1962	392	588	784	981	1177	1373	1569					
63	3115	623	934	1246	1557	1869	2180	2492					

^{*} Theoretical output [N] = Pressure [MPa] x Piston area [mm²]

Weight

								[kg]		
_	Bore size	Basic	Additional weight	Weight	Side support bracket weight (per set)	Stroke adjustment unit weight (per unit)				
	mm]	weight	per each 50 mm of stroke	of moving parts	Type A and B	A unit weight	L unit weight	H unit weight		
	16	0.67	0.12	0.22	0.01	0.03	0.04	_		
	20 1.06 0.15		0.31	0.02	0.04	0.05	0.08			
	25	1.58	0.24	0.41	0.02	0.07	0.11	0.18		
	32	3.14	0.37	0.86	0.04	0.14	0.23	0.39		
	40	5.60	.60 0.52 1.49		0.08	0.25	0.34	0.48		
	50	10.14	0.76	2.59	0.08	0.36	0.51	0.81		
	63 16.67 1.10		4.26	0.17	0.68	0.83	1.08			

Calculation: (Example) MY1C25-300A

 $1.58 + 0.24 \times 300/50 + 0.07 \times 2 \approx 3.16 \text{ kg}$

• Weight of A unit----- 0.07 kg

APrecautions

For details on the MY1C Series Mechanically Jointed Rodless Cylinder, refer to "Specific Product Precautions" on pages 119 to 122.



Shock absorber soft type RJ series mounted (-XB22) is made-to-order common specifications. For details, refer to page 115.

Cushion Capacity

Cushion Selection

<Air cushion>

Air cushions are a standard feature on mechanically jointed rodless cylinders.

The air cushion mechanism is incorporated to prevent excessive impact of the piston with high kinetic energy at the stroke end. The purpose of air cushion, thus, is not to decelerate the piston near the stroke end.

The ranges of load and speed that air cushions can absorb are within the air cushion limit lines shown in the graphs.

<Stroke adjustment unit with shock absorber>

Use this unit when operating with a load and speed exceeding the air cushion limit line, or when cushioning is required outside of the effective air cushion stroke range due to stroke adjustment.

L unit

Use this unit when cushioning is required outside of the effective air cushion range even if the load and speed are within the air cushion limit line, or when the cylinder is operated in a load and speed range above the air cushion limit line and below the L unit limit line.

H unit

Use this unit when the cylinder is operated in a load and speed range above the L unit limit line and below the H unit limit line.

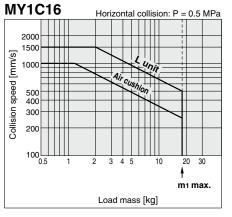
 For details on stroke adjustment using the adjustment bolt, refer to page 121.

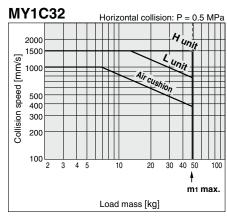
[mm]

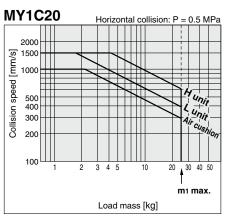
Air Cushion Stroke

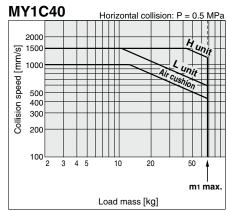
Bore size [mm]	Cushion stroke
16	12
20	15
25	15
32	19
40	24
50	30
63	37

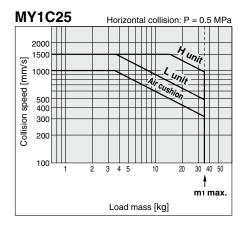
Absorption Capacity of Air Cushion and Stroke Adjustment Units

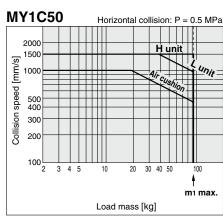


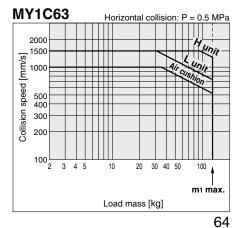












Model Selection

MY1

MY1M

MY1C

MY1H

MY1HT

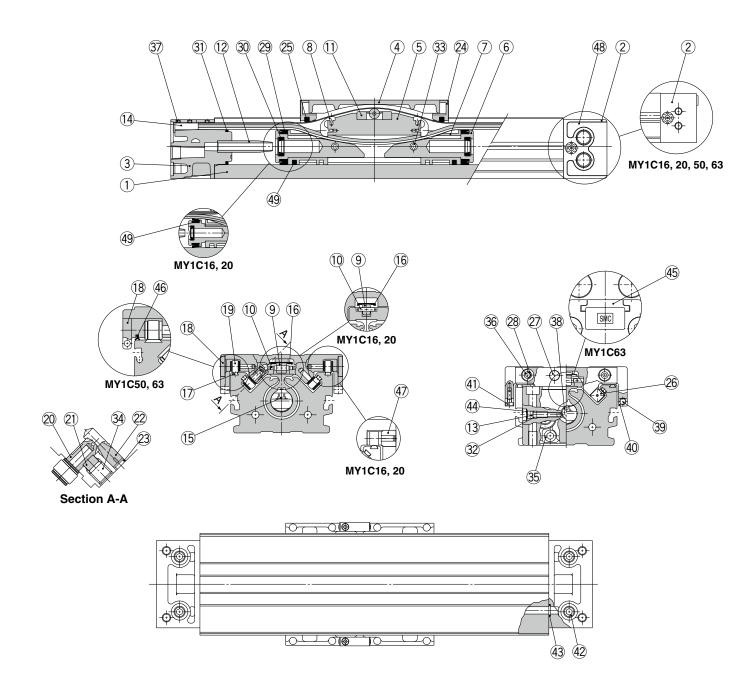
Auto Switch Mounting

Made to Order Common Specifications

Specific Product Precautions

Construction: Ø16 to Ø63

MY1C16 to 63



MY1C16 to 63

Component Parts

No.	Description	Material	Note
1	Cylinder tube	Aluminum alloy	Hard anodized
2	Head cover WR	Aluminum alloy	Painted
3	Head cover WL	Aluminum alloy	Painted
4	Slide table	Aluminum alloy	Electroless nickel plating
5	Piston yoke	Aluminum alloy	Chromated
6	Piston	Aluminum alloy	Chromated
7	Wear ring	Special resin	
8	Belt separator	Special resin	
9	Guide roller	Special resin	
10	Guide roller shaft	Stainless steel	
11	Coupler	Sintered iron material	
12	Cushion ring	Aluminum alloy	Anodized
13	Cushion needle	Rolled steel	Nickel plating
14	Belt clamp	Special resin	
17	Rail	Hard steel wire	
18	Cam follower cap	Special resin	(ø25 to ø40)
19	Cam follower	_	
20	Eccentric gear	Stainless steel	
21	Gear bracket	Stainless steel	
22	Adjustment gear	Stainless steel	
23	Retaining ring	Stainless steel	

No.	Description	Material	Note
24	End cover	Special resin	
26	Backup plate	Special resin	
27	Stopper	Carbon steel	Nickel plating
28	Spacer	Stainless steel	
33	Spring pin	Carbon tool steel	
34	Hexagon socket head set screw	Chromium molybdenum steel	Black zinc chromated
35	Hexagon socket head cap screw	Chromium molybdenum steel	Chromated
36	Hexagon socket button head screw	Chromium molybdenum steel	Chromated
37	Hexagon socket head set screw	Chromium molybdenum steel	Black zinc chromated/Chromated
38	Hexagon socket head taper plug	Carbon steel	Chromated
39	Magnet		
40	Magnet holder	Special resin	
41	Hexagon socket head cap screw	Chromium molybdenum steel	Chromated
42	Hexagon socket head taper plug	Carbon steel	Chromated
44	Type CR retaining ring	Spring steel	
45	Head plate	Aluminum alloy	Hard anodized (ø63)
46	Side scraper	Special resin	(ø50 to ø63)
47	Bushing	Aluminum alloy	(ø16 to ø20)
48	Port cover	Special resin	(ø25 to ø40)
49	Lube-retainer	Special resin	

Mechanically Jointed Rodless Cylinder Cam Follower Guide Type MY1C Series

Replacement Parts/Seal Kit

No.	Description	Qty.	MY1C16	MY1C20	MY1C25	MY1C32	MY1C40	MY1C50	MY1C63
15	Seal belt	1	MY16-16C-Stroke	MY20-16C-Stroke	MY25-16C-Stroke	MY32-16C-Stroke	MY40-16C-Stroke	MY50-16C-Stroke	MY63-16A-Stroke
16	Dust seal band	1	MY16-16B-Stroke	MY20-16B-Stroke	MY25-16B-Stroke	MY32-16B-Stroke	MY40-16B-Stroke	MY50-16B-Stroke	MY63-16B-Stroke
32	O rime	_	KA00309	KA00311	KA00311	KA00320	KA00402	KA00777	KA00777
32	O-ring	2	(ø4 x ø1.8 x ø1.1)	(ø5.1 x ø3 x ø1.05)	(ø5.1 x ø3 x ø1.05)	(ø7.15 x ø3.75 x ø1.7)	(ø8.3 x ø4.5 x ø1.9)	_	_
46	Side scraper	2	_	_	_	_	_	MYM50-15CK0502B	MYM63-15CK0503B
25	Scraper	2							
29	Piston seal	2							
30	Cushion seal	2	MY1M16-PS	MY1M20-PS	MY1M25-PS	MY1M32-PS	MY1M40-PS	MY1M50-PS	MY1M63-PS
31	Tube gasket	2							
43	O-ring	4							

- Seal kit includes 25, 29, 30, 31, and 43. Order the seal kit based on each bore size.
- Seal kit includes a grease pack (10 g).

When 5 and 6 are shipped independently, a grease pack is included. (10 g per 1000 mm stroke)

Order with the following part number when only the grease pack is needed.

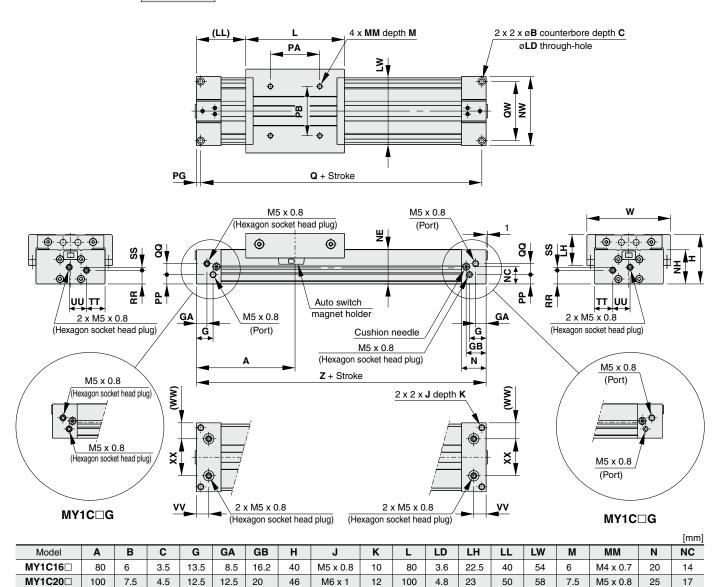
Grease pack part number: GR-S-010 (10 g), GR-S-020 (20 g)

- * Two types of dust seal bands are available. Since the part number varies depending on the treatment of the hexagon socket head set screw ③, please check a proper dust seal band carefully.
 - A: Black zinc chromated \rightarrow MY \square -16B-stroke, B: Chromated \rightarrow MY \square -16BW-stroke

Standard Type/Centralized Piping Type Ø16, Ø20

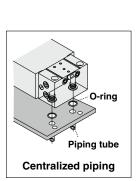
The stroke adjustment unit for the MY1C is the same as that of the MY1M. For external dimensions, refer to pages 52 and 53.

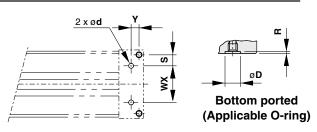
MY1C16□/20□ - Stroke



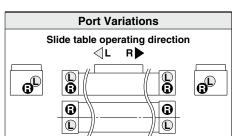
																			[mm]
Model	NE	NH	NW	PA	PB	PG	PP	Q	QQ	QW	RR	SS	TT	UU	VV	W	WW	XX	Z
MY1C16□	28	27.7	56	40	40	3.5	7.5	153	9	48	11	2.5	15	14	10	68	13	30	160
MY1C20□	34	33.7	60	50	40	4.5	11.5	191	10	45	14.5	5	18	12	12.5	72	14	32	200

Centralized Piping on the Bottom





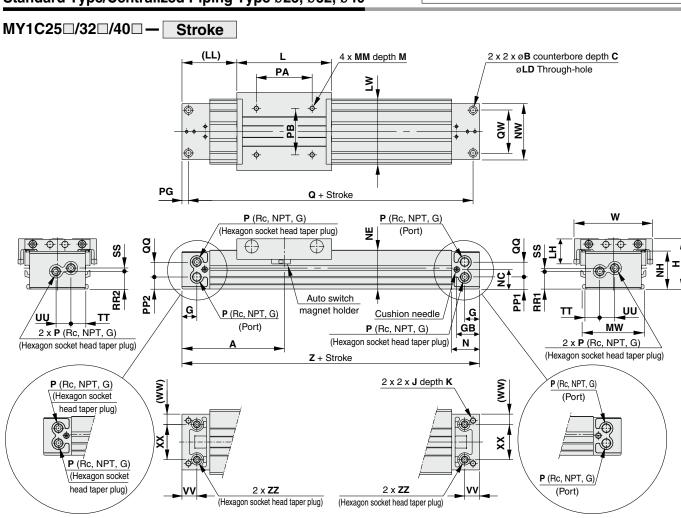
							[mm]
Model	WX	Υ	S	d	D	R	Applicable O-ring
MY1C16□	30	6.5	9	4	8.4	1.1	00
MY1C20□	32	8	6.5	4	8.4	1.1	- C6





The stroke adjustment unit for the MY1C is the same as that of the MY1M. For external dimensions, refer to pages 52 and 53.

Model Selection



																							[mm]
Model	Α	В	С	G	GB	Н	J	K	L	LD	LH	LL	LW	М	ММ	MW	N	NC	NE	NH	NW	Р	PA
MY1C25□	110	9	5.5	17	24.5	54	M6 x 1	9.5	102	5.6	27	59	70	10	M5 x 0.8	66	30	21	41.8	40.5	60	1/8	60
MY1C32□	140	11	6.5	19	30	68	M8 x 1.25	16	132	6.8	35	74	88	13	M6 x 1	80	37	26	52.3	50	74	1/8	80
MY1C40□	170	14	8.5	23	36.5	84	M10 x 1.5	15	162	8.6	38	89	104	13	M6 x 1	96	45	32	65.3	63.5	94	1/4	100

"P" indicates cylinder supply ports.

Port Variations

Slide table operating direction \triangleleft L

O

0

⊕_D

R▶

MY1C□G

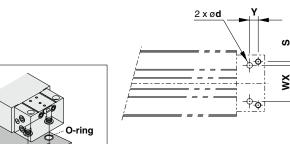
																		[mm]
Model	PB	PG	PP1	PP2	Q	QQ	QW	RR1	RR2	SS	TT	UU	VV	W	ww	XX	Z	ZZ
MY1C25□	50	7	12.7	12.7	206	15.5	46	18.9	17.9	4.1	15.5	16	16	84	11	38	220	Rc1/16
MY1C32□	60	8	15.5	18.5	264	16	60	22	24	4	21	16	19	102	13	48	280	Rc1/16
MY1C40□	80	9	17.5	20	322	26	72	25.5	29	9	26	21	23	118	20	54	340	Rc1/8

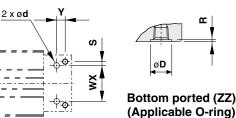
Centralized Piping on the Bottom

Piping tube

Centralized piping

MY1C□G





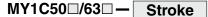
							[mm]
Model	WX	Υ	S	d	D	R	Applicable O-ring
MY1C25□	38	9	4	6	11.4	1.1	C9
MY1C32□	48	11	6	6	11.4	1.1	C9
MY1C40□	54	14	9	8	13.4	1.1	C11.2

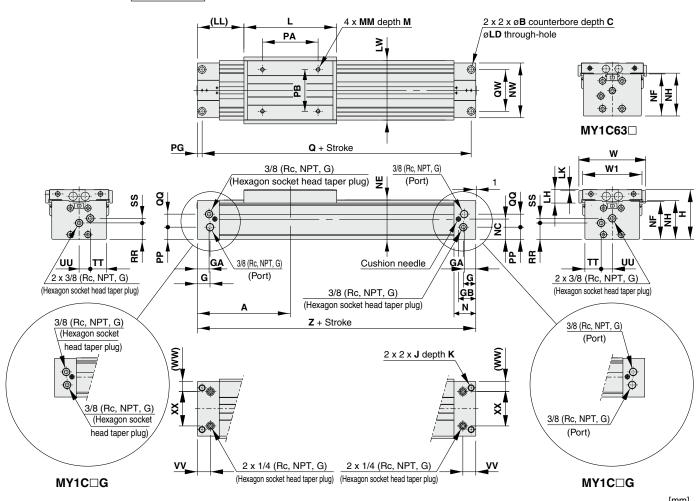
6

0 **(3**)

Standard Type/Centralized Piping Type Ø50, Ø63

The stroke adjustment unit for the MY1C is the same as that of the MY1M. For external dimensions, refer to pages 52 and 53.

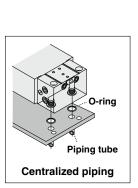


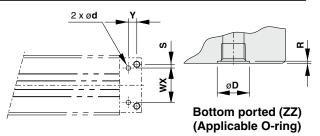


																				[iiiiii]
Model	Α	В	С	G	GA	GB	Н	J	K	L	LD	LH	LK	LL	LW	М	MM	N	NC	NE
MY1C50□	200	17	10.5	27	25	37.5	107	M14 x 2	28	200	11	29	2	100	128	15	M8 x 1.25	47	43.5	84.5
MY1C63□	230	19	12.5	29.5	27.5	39.5	130	M16 x 2	32	230	13.5	32.5	5.5	115	152	16	M10 x 1.5	50	60	104

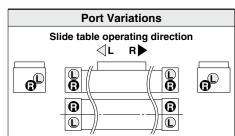
																				[mm]
Model	NF	NH	NW	PA	РВ	PG	PP	Q	QQ	QW	RR	SS	TT	UU	VV	W	W1	ww	XX	Z
MY1C50□	81	83.5	118	120	90	10	26	380	28	90	35	10	35	24	28	144	128	22	74	400
MY1C63□	103	105	142	140	110	12	42	436	30	110	49	13	43	28	30	168	152	25	92	460

Centralized Piping on the Bottom





							[mm]
Model	wx	Υ	S	d	D	R	Applicable O-ring
MY1C50□	74	18	8	10	17.5	1.1	C15
MY1C63□	92	18	9	10	17.5	1.1	U15



Accessory Brackets (Option)

Stroke Adjustment Units

MYM-A 25 L2-6N

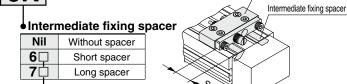
Stroke adjustment unit

	Bore size
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm

Unit no.

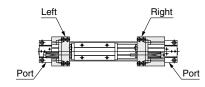
Symbol	Stroke adjustment unit	Mounting position
A1	A unit	Left
A2	A unii	Right
L1	lit	Left
L2	L unit	Right
H1	11	Left
H2	H unit	Right

* A and L unit only for ø16



Spacer delivery type												
Nil	Nil Unit installed											
N	Spacer only											

- Spacers are used to fix the stroke adjustment unit at an intermediate stroke position.
- Spacers are shipped for a set of two.

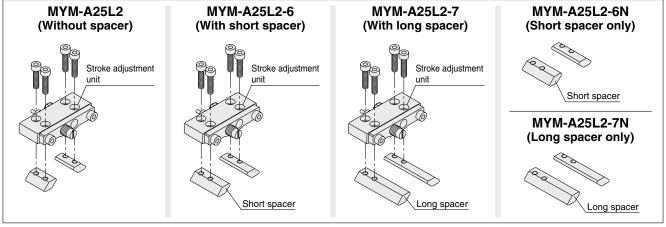


Stroke adjustment range

Bore size	Bore size 16			20			25			32			40			50			63	
Unit symbol	Α	L	Α	L	Н	Α	L	Н	Α	L	Н	Α	L	Н	Α	L	Н	Α	L	Н
Without spacer	0 to -5.6			0 to -6	3	0	to -11	.5	() to -1	2	() to -1	6	C	to -2	0	() to -2	5
With short spacer	-5.6 to -11.2		_	6 to -	12	-1	1.5 to -	-23	-1	12 to -	-24	-1	16 to –	32	-2	20 to -	40	-2	25 to –	50
With long spacer	-11.2 t	o –16.8	-1	12 to –	18	-2	3 to -3	4.5	-2	24 to -	-36	-3	32 to –	48	-4	0 to –	60	_;	50 to –	75

Spacer length							[mm]
Bore size	16	20	25	32	40	50	63
Short spacer	5.6	6	11.5	12	16	20	25
Long spacer	11.2	12	23	24	32	40	50

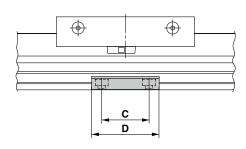
Component Parts

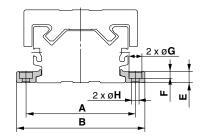


Stroke adjustment unit

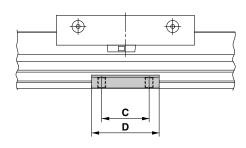
Side Supports

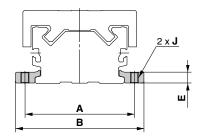
Side support A MY-S□A





Side support B MY-S□B





										[mmj
Model	Applicable cylinder	Α	В	С	D	E	F	G	Н	J
MY-S16A	MY1C16	61	71.6	15	26	4.9	3	6.5	3.4	M4 x 0.7
MY-S20 ^A	MY1C20	67	79.6	25	38	6.4	4	8	4.5	M5 x 0.8
MY-S25A	MY1C25	81	95	35	50	8	5	9.5	5.5	M6 x 1
MY-S32Å	MY1C32	100	118	45	64	11.7	6	11	6.6	M8 x 1.25
MY-S40A	MY1C40	120	142	EE	80	14.8	0.5	14	_	M10 x 1.5
IVI Y - 340B	MY1C50	142	164	55	80	14.8	8.5	14	9	IVIIU X I.5
MY-S63A	MY1C63	172	202	70	100	18.3	10.5	17.5	11.5	M12 x 1.75

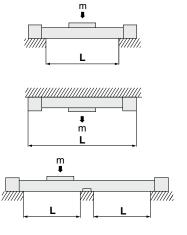
 $[\]ast\,$ Side supports consist of a set of right and left brackets.

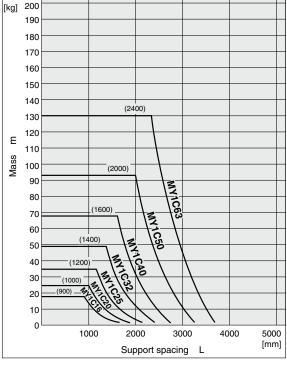
Guide for Side Support Application

For long stroke operation, the cylinder tube may be deflected depending on its own weight and the load. In such a case, use a side support in the middle section. The spacing (L) of the support must be no more than the values shown in the graph on the right.

⚠ Caution

- 1. If the cylinder mounting surfaces are not measured accurately, using a side support may cause poor operation. Therefore, be sure to level the cylinder tube when mounting it. Also, for long stroke operation involving vibration and impact, the use of a side support is recommended even if the spacing value is within the allowable limits shown in the graph.
- **2.** Support brackets are not for mounting; use them solely for providing support.

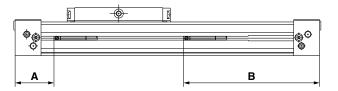




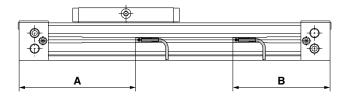
Auto Switch Mounting

Proper Auto Switch Mounting Position (Detection at Stroke End)

MY1B (Basic type) ø10 to ø20



ø25 to ø100



Proper Auto Switch Mounting Position

[mm]

[mm]

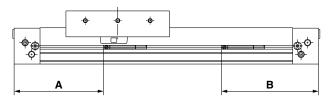
Auto switch model	D-IVI9		D-A9□ D-A9□V		D-Y59[D-Y69[D-Y7] D-Y7] D-Y7B/ D-Z7]	□/Y7PV W WV A
Bore size \	Α	В	Α	В	Α	В
10	24	86	20	90		_
16	31.5	128.5	27.5	132.5	_	_
20	39	161	35	165	_	_
25	138	82	134	86	_	_
32	186.5	93.5	182.5	97.5		_
40	222.5	117.5	218.5	212.5	_	_
50	_	_	_	_	272.5	127.5
63	322.5	137.5	_	_	317.5	142.5
80	489.5	200.5	_	_	484.5	205.5
100	574.5	225.5	_	_	569.5	230.5

D-M9□□□ type cannot be mounted on ø50.

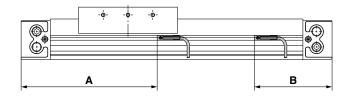
328.5

Adjust the auto switch after confirming the operating condition in the actual setting.

MY1M (Slide bearing guide type) ø16, ø20



ø25 to ø63

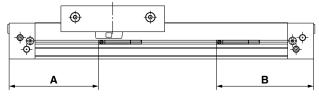


Proper Auto Switch Mounting Position

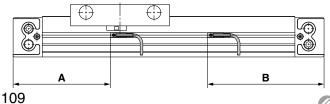
Auto switch model	D-M9 U D-M9 UV D-M9 UW D-M9 UW D-M9 A D-M9 AV		D-A9□ D-A9□V		D-Y59[D-Y69[D-Y7[]' D-Y7[]'	⊒Y7PV W WV
Bore size \	Α	В	Α	В	Α	В
16	74	86	70	90	_	_
20	94	106	90	110	_	_
25	143.5	75.5	_	_	139.5	80.5
32	189.5	90.5	_	_	184.5	95.5
40	234.5	105.5	_	_	229.5	110.5
50	000 5	110 -			070.5	101 5

Adjust the auto switch after confirming the operating condition in the actual setting.

MY1C (Cam follower guide type) ø16, ø20



ø25 to ø63



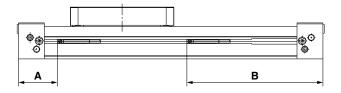
Proper Auto Switch Mounting Position

Proper Auto Switch Mounting Position [mm]								
Auto switch model	D-M9 D-M9 D-M9 D-M9	D-M9		D-Y59□/Y7P D-Y69□/Y7PV D-Y7□W D-Y7□WV D-Z7□/Z80				
Bore size \	Α	В	A B		Α	В		
16	74	86	70	90		_		
20	94	106	90	110	_	_		
25	102	118	_	_	97	123		
32	132	148	_	_	127	153		
40	162.5	175.5	_	_	157.5	182.5		
50	283.5	116.5			278.5	121.5		
63	328.5	131.5	_	_	323.5	136.5		

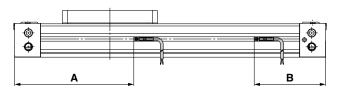
^{*} Adjust the auto switch after confirming the operating condition in the actual setting.

Proper Auto Switch Mounting Position (Detection at Stroke End)

MY1H (Linear guide type) Ø10 to Ø20



ø**25 to** ø**40**

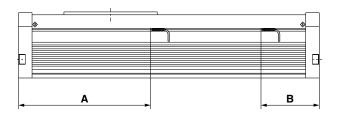


Proper Auto Switch Mounting Position

Auto switch model	D-M9	□V □W □WV □A	D-A9□ D-A9□V		D-Y59[D-Y69[D-Y7[]' D-Y7[]'	□/Y7PV W WV
Bore size \	Α	В	Α	В	Α	В
10	24	86	20	90		_
16	31.5	128.5	27.5	132.5	_	_
20	39	161	35	165	_	_
25	138	82	134	86	_	_
32	186.5	93.5	182.5	97.5	_	_
40	222.5	117.5	218.5 121.5		_	_

^{*} Adjust the auto switch after confirming the operating condition in the actual setting.

MY1HT (High rigidity/Linear guide type) ø50, ø63



Proper Auto Switch Mounting Position [mm]

<u> </u>							
Auto switch model	D-Y59[D-Y69[D-Y7] D-Y7] D-Y7B/ D-Z7]	⊒/Y7PV W WV A					
Bore size \	Α	В					
50	290.5	123.5					
63	335.5	138.5					

Adjust the auto switch after confirming the operating condition in the actual setting.

[mm]

Operating Range

st Values which include hysteresis are for reference purpose only. They are not a guarantee (assuming approximately $\pm 30\%$ dispersion) and may change substantially depending on the ambient environment.

MY1B (Basic type) [mm								[mm]		
A		Bore size								
Auto switch model	10	16	20	25	32	40	50	63	80	100
D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV	3.5	4	5.5	5.0	5.5	5.5	_	12	12	11.5
D-A9□/A9□V	6	6.5	8.5	7.0	10.0	9.0	_	_	_	_
D-Z7□/Z80	_	_	-	_	_	_	11.5	11.5	11.5	11.5
D-Y59□/Y69□ D-Y7P/Y7PV D-Y7□W/Y7□WV	_	_	_	_	_	_	3.5	3.5	3.5	3.5

^{*} D-M9 $\square\square$ type cannot be mounted on ø50.

MY1M (Slide bearing guide type) [mm								
A		Bore size						
Auto switch model	16	20	25	32	40	50	63	
D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV	7.5	7.5	8.5	8.5	9.5	7	6	
D-A9□/A9□V	11	7.5	_	_	_	_	-	
D-Z7□/Z80	_	_	12	12	12	11.5	11.5	
D-Y59□/Y69□ D-Y7P/Y7PV D-Y7□W/Y7□WV	_	_	5	5	5	5.5	5.5	

MY1C (Cam follower guide type) [mm									
A		Bore size							
Auto switch model	16	20	25	32	40	50	63		
D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV	7.5	7.5	7	8	8.5	7	6		
D-A9□/A9□V	11	7.5	_	_	_	-	_		
D-Z7□/Z80	_	_	12	12	12	11.5	11.5		
D-Y59□/Y69□ D-Y7P/Y7PV D-Y7□W/Y7□WV	_	_	5	5	5	5.5	5.5		

MY1H (Linear guide type) [mm]									
		Bore size							
Auto switch model	10	16	20	25	32	40			
D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV	3	4.5	5	5.0	5.5	5.5			
D-A9□/A9□V	11	6.5	8.5	7.0	10.0	9.0			
D-Z7□/Z80	_	_	_	_	_	_			
D-Y59□/Y69□ D-Y7P/Y7PV D-Y7□W/Y7□WV	_	_	_	_		_			

MY1HT (High rigidity/Linear guide type) [mm] Auto switch model Bore size 50 63 D-Z7□/Z80 11 11 D-Y59□/Y69□ D-Y7P/Y7PV D-Y7PW/Y7□WV D-Y7BA 5 5

Auto Switch Mounting Bracket/Part No.

Bore size	MY1B,	MY1H
Auto switch model [mm]	ø10 to ø20	ø50 to ø100
D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV D-A9□/A9□V	_	BMG2-012

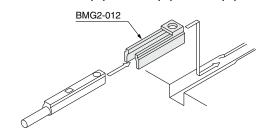
- The D-M9 \square (V)/M9 \square W(V)/M9 \square A(V) are not available for bore size ø50 of the
- The D-A9□(V) is not available for bore sizes ø50 to ø100 of the MY1B.
- There are no bore sizes ø50 to ø100 for the MY1H.

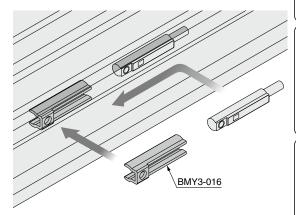
Bore size	MY1B-Z, MY1H-Z
Auto switch model [mm]	ø25 to ø40
D-A9□/A9□V D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV	BMY3-016

Bore size	MY1M, MY1C				
Auto switch model [mm]	ø10 to ø20	ø 25 to ø 63			
D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV D-A9□/A9□V	_	BMG2-012			

* The D-A9□(V) is not available for bore sizes ø25 to ø63.

Ø25 to Ø100: M9□(V)/M9□W(V)/M9□A(V)





Auto switch

When tightening an auto switch mounting screw, use a watchmaker's screwdriver with a handle diameter of about 5 to 6 mm. Also, tighten with a torque of about 0.05 to 0.1 N·m. As a guide, it should be turned about 90° past the point at

Switch mounting groove

which tightening can be felt.

Model Selection

Specific Product

Switch Spacer No.

Culindar agrica	Applicable bo	ore size [mm]			
Cylinder series	50	63			
MY1HT	BMP1-032				

When attaching an auto switch, first take a switch spacer between your fingers and press it into a switch mounting groove. When doing this, confirm that it is set in the correct mounting orientation, or reattach if necessary.

Next, insert an auto switch into the groove and slide it until it is positioned under the switch spacer.

After establishing the mounting position, use a watchmaker's flat head screwdriver to tighten the auto switch mounting screw which is included.



Correct

Incorrect

Other than the applicable auto switches listed in "How to Order," the following auto switches are mountable. For detailed specifications, refer to the Web Catalog.

-			
Model	Electrical entry	Features	Applicable bore size
D-Y69A, Y69B, Y7PV		_	
D-Y7NWV, Y7PWV, Y7BWV	Grommet (Perpendicular)	Diagnostic indication (2-color indicator)	MY1B ø50 to ø100 MY1M ø25 to ø63
D-Y59A, Y59B, Y7P	Crammat (In line)	_	MY1C Ø25 to Ø63
D-Y7NW, Y7PW, Y7BW	Grommet (m-iine)	Diagnostic indication (2-color indicator)	
	D-Y69A, Y69B, Y7PV D-Y7NWV, Y7PWV, Y7BWV D-Y59A, Y59B, Y7P	D-Y69A, Y69B, Y7PV D-Y7NWV, Y7PWV, Y7BWV D-Y59A, Y59B, Y7P Grommet (In-line)	D-Y69A, Y69B, Y7PV D-Y7NWV, Y7PWV, Y7BWV D-Y59A, Y59B, Y7P Grommet (In-line) — Diagnostic indication (2-color indicator) — — —

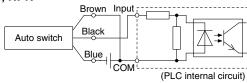
- With pre-wired connector is also available for solid state auto switches. For details, refer to the Web Catalog.
- Normally closed (NC = b contact) solid state auto switches (D-M9□E(V)/Y7G/Y7H) are also available. For details, refer to the Web Catalog.

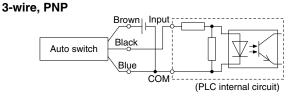
Prior to Use Auto Switch Connections and Examples

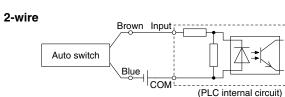
Sink Input Specifications

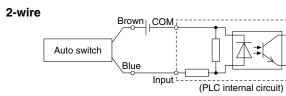
Source Input Specifications









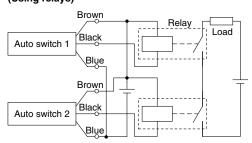


Connect according to the applicable PLC input specifications, as the connection method will vary depending on the PLC input specifications.

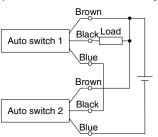
Examples of AND (Series) and OR (Parallel) Connections

When using solid state auto switches, ensure the application is set up so the signals for the first 50 ms are invalid. Depending on the operating environment, the product may not operate properly.

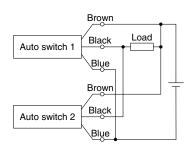
3-wire AND connection for NPN output (Using relays)



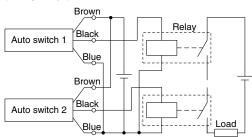
(Performed with auto switches only)



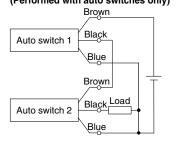
3-wire OR connection for NPN output



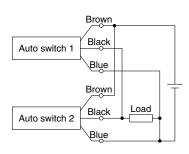
3-wire AND connection for PNP output (Using relays)



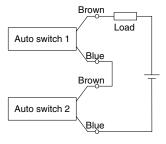
(Performed with auto switches only)



3-wire OR connection for PNP output



2-wire AND connection



When two auto switches are connected in series, a load may malfunction because the load voltage will decline when in the ON state.

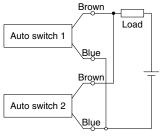
The indicator lights will light up when both of the auto switches are in the ON state. Auto switches with a load voltage less than 20 V cannot be used.

Load voltage at ON = Power supply voltage -Residual voltage x 2 pcs. = 24 V - 4 V x 2 pcs. = 16 V

Example: Power supply is 24 VDC

Internal voltage drop in auto switch is 4 V.

2-wire OR connection

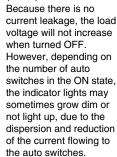


(Solid state) When two auto switches are connected in parallel, malfunction may occur because the load voltage will increase when in the OFF state.

Load voltage at OFF = Leakage current x 2 pcs. x Load impedance = 1 mA x 2 pcs. x 3 $k\Omega$

Example: Load impedance is $3 \text{ k}\Omega$. Leakage current from auto switch is 1 mA.

(Reed)





Made to Order Common Specifications

Please contact SMC for detailed specifications, delivery, and prices.



■ Made to Order Common Specifications

		MY1B (Basic type)	MY1M (Slide bearing guide type)	MY1C (Cam follower guide type)	MY1H (Linear guide type)	MY1HT (High rigidity/Linear guide type)	
Symbol	Specifications	Ø10, Ø16, Ø20, Ø25, Ø32, Ø40, Ø50, Ø63, Ø80, Ø100	Ø16, Ø20, Ø25, Ø32, Ø40, Ø50, Ø63	ø16, ø20, ø25, ø32, ø40, ø50, ø63	ø10, ø16, ø20, ø25, ø32, ø40	ø 50 , ø 63	Page
-XB22	Shock absorber Soft type RJ series mounted	*1	*5	*5	_		115
-XC56	With knock pin holes			-	-		117
-XC67	Dust seal band NBR lining specifications	*2	-	•	*6	-	118
-X168	Helical insert thread specifications	*3	-ullet	—	*3	*7	118
-X1810	Magnet for ø10 solid state auto switch specifications	*4			*4		118

- *1 Only applicable to ø10 to ø40
- *2 Only applicable to ø16, ø20, ø50, and ø63
- *3 Ø10 is only available as a special product.
- *4 Only applicable to ø10
- *5 Only applicable to ø16 to ø40
- $*6\,$ Only applicable to ø16 and ø20 $\,$
- *7 Produced upon receipt of order.

Model

MY1B

MY1M

MY1C

MY1H



Made to Order Common Specifications





1 Shock Absorber Soft Type RJ Series Mounted

Symbol -XB22

The standard cylinder has been equipped with shock absorber soft type RJ series type to enable soft stopping at the stroke end. Two different shock absorbers are available in accordance with the operating conditions.

Applicable Series

1-1							
Description	Model	Bearing type	Applicable bore size				
Mechanically jointed rodless cylinder	MY1B		ø10 to ø40				
	MY1M	Slide bearing guide	ø16 to ø40				
	MY1C	Cam follower guide	ø16 to ø40				
	MY1H	Single-axis linear guide	ø10 to ø40				

How to Order

Standard model no. -XB22

Shock absorber soft type RJ series mounted

How to Order a Stroke Adjustment Unit for MY Itself

Stroke adjustment unit part no. -XB22

Specifications

Absorbed energy	For the impact mass graph, refer to page 116.
Specifications other than the above and dimensions	Same as the standard type

Cylinders

Model	Type	Type Stroke Bore size						
iviodei	Type	adjustment unit	ø 10	ø 16	ø 20	ø 25	ø 32	ø 40
	-XB22	L			RJ0806H	RJ1007H	RJ14	112H
MY1B	-ADZZ	Н	RJ0805		RJ1007H	RJ1412H	_	_
WITIB	Standard	L		RJ0604*1	RB0806	RB1007	RB1	412
	Stariuaru	Н	RB0805		RB1007	RB1412	RB2	2015
	-XB22	L		RJ0806H		RJ1007H	RJ14	112H
MY1M	-XDZZ	Н			RJ1007H	RJ1412H	_	_
MY1C	Standard	L		RB0	806	RB1007	RB1	412
	Stariuaru	Н			RB1007	RB1412	RB2	2015
	-XB22	L		RJ08	306H	RJ1007H	RJ14	112H
MY1H	-7022	Н	RJ0805		RJ1007H	RJ1412H	_	_
IVITIO	Standard	L		RB0	806	RB1007	RB1	412
	Standard	Н	RB0805		RB1007	RB1412	RB2	2015

^{*1} The MY1B16 standard model uses an RJ0604.

- * Refer to the **Web Catalog** for the details of the shock absorber RJ and RB series.
- * The shock absorber service life is different from that of each cylinder.

 Refer to the "Specific Product Precautions" of the RJ series for the replacement period.



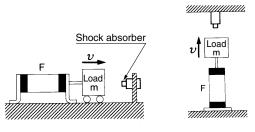
1 Shock Absorber Soft Type RJ Series Mounted

Impact Mass Graph (Shock Absorber Performance Line Graph)

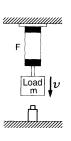
* Values in the impact mass graph are at room temperature (20 to 25°C).

Ensure that the impact mass and the collision speed are within the absorbed energy graphs below. Refer to each cylinder selection calculation for load factors and guide load factors.

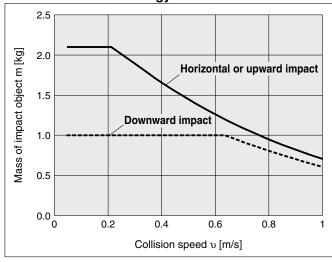
■ Type of collision Horizontally-applied impact Air cylinder impact (horizontal/upward)



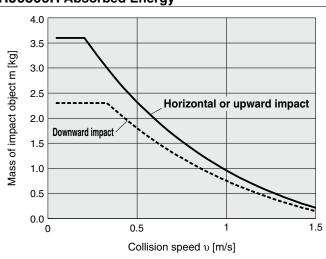
Air cylinder impact (downward)



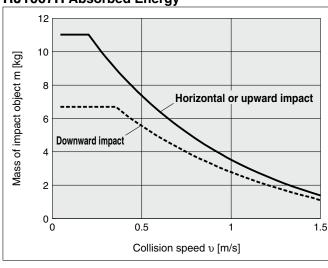
RJ0805 Absorbed Energy



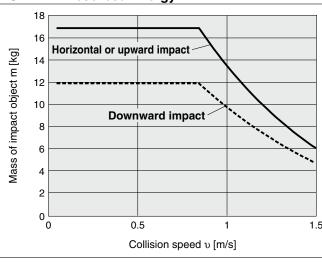
RJ0806H Absorbed Energy



RJ1007H Absorbed Energy



RJ1412H Absorbed Energy



^{*} Be sure to read "Handling Precautions for SMC Products" (M-E03-3) and "Shock Absorber Soft Type RJ Series" (Web Catalog) before use.

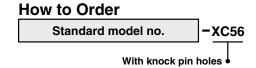
2 With Knock Pin Holes

Symbol -XC56

Cylinder with knock positioning pin hole

Applicable Series

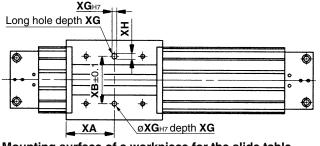
Description	Model	Action
Mechanically jointed	MY1C	Cam follower guide
rodless cylinder	MY1H	Linear guide



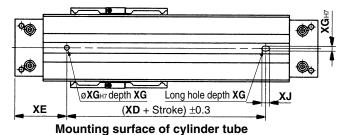
Specifications: Same as the standard type

Dimensions (Dimensions other than specified below are the same as the standard type.)

MY1C series

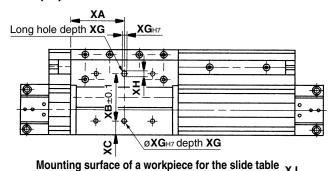


Mounting surface of a workpiece for the slide table



							[mm]
Bore size [mm]	XA	ХВ	XD	XE	XG	ХН	XJ
16	40	40	80	40	4	5	9
20	50	40	100	50	4	5	9
25	51	50	110	55	5	6	10
32	66	60	140	70	6	7	11
40	81	80	180	80	6	7	11
50	100	90	230	85	8	9	13
63	115	110	280	90	10	10	15

MY1H(-Z) series



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	•					•	
× L	•					● § S X	
<u> </u>				, t	 		¥ •
	_ x	Œ_	ØXGH7 depth XG Long hole depth XG / (XD + Stroke) ±0.3			•	'
		M	ounting surface of cylinder tube				

					[mm]
Bore size [mm]	XA	ХВ	хс	XD	XE
10	25	33	3.5	70	20
16	40	40	7.5	80	40
20	50	40	14.5	100	50
25	57	50	14.5	110	55
32	70	60	15	140	70
40	85	80	20.5	180	80

Bore size [mm]	XF	XG	хн	XJ
10	21.5	3	4	5
16	30	4	5	7
20	39	4	5	7
25	45	5	6	8
32	60	6	7	9
40	60.5	6	7	9



Symbol

-X168

Symbol

X1810

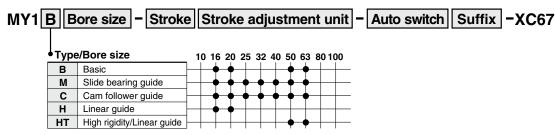
Specific Product Precautions

3 Dust Seal Band NBR Lining Specifications

The standard vinyl chloride lining specification is changed to NBR lining.

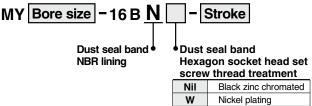
Oil resistance and peeling resistance are improved.

* Please consult with SMC for specific details on oil resistance.



Example) MY1B40G-300L-Z73-XC67

For ordering dust seal band (NBR lining) only



Example) MY25-16BNW-300

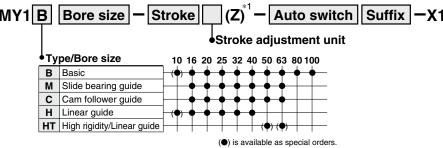
Applicable Series

100.00.00							
Description	Model	Type					
	MY1B	Basic					
Machaniaally injuted	MY1M	Slide bearing guide					
Mechanically jointed rodless cylinder	MY1C	Cam follower guide					
rodioco cylinaen	MY1H	Linear guide					
	MY1HT	High rigidity/Linear guide					

For details, refer to "Dust seal band" in the construction of each series.

4 Helical Insert Thread Specifications

Helical insert thread is used for the slide table mounting thread, the thread size is the same as the standard model.



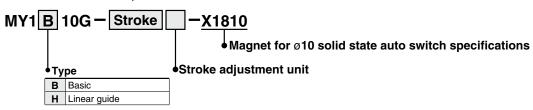
Example) MY1B20G-300L-M9BW-X168

*1 Please specify "Z" for the MY1B25 to 40 and the MY1H25 to 40.

5 Magnet for Ø10 Solid State Auto Switch Specifications

By incorporating the use of the magnet for solid state auto switches, switch operation stability can be achieved.

If you are using, or planning to use, the cylinder in combination with a solid state auto switch, but are currently only ordering the cylinder, please add the "-X1810" suffix to the end of the product number.



If an auto switch is included in the product number, the "-X1810" suffix does not need to be added to the end of the product number. Example) MY1B10G-300H-M9BL

