

Mechanically Jointed Rodless Cylinder Cam Follower Guide Type Series **MY2C** ø16, ø25, ø40

How to Order

MY2 C 16 G 300 L M9N

Guide type

C	Cam follower guide
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Bore size

16	16 mm
25	25 mm
40	40 mm

Thread type

Symbol	Type	Bore size
Nil	M thread	ø16
	Rc	
TN	NPT	ø25, ø40
TF	G	

Piping

G	Centralized piping type (Standard)
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Stroke

Refer to "Standard Stroke" table.

Number of auto switches

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

Auto switch

Nil	Without auto switch
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* For the applicable auto switch model, refer to the table below.

Stroke adjusting unit position

Nil	Both ends
S	One end

* "S" is applicable for stroke adjusting units L and H.

Stroke adjusting unit

Nil	Without adjusting unit
L	With low load shock absorber
H	With high load shock absorber
LH	With one L unit and one H unit each

Shock absorbers for L and H units

Unit type	Bore size (mm)		
	16	25	40
L unit	RB0806	RB1007	RB1412
H unit	—	RB1412	RB2015

Applicable Auto Switch/Refer to page 8-30-1 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage			Auto switch model		Lead wire length (m)*			Applicable load	
					DC	AC		Electrical entry direction		0.5 (Nil)	3 (L)	5 (Z)		
						5 V	100 V or less	Perpendicular	In-line					
Reed switch	—	Grommet	No	2-wire	24 V	5 V	100 V	A90V	A90	●	●	—	IC circuit	Relay, PLC
			12 V			100 V	A93V	A93	●	●	—			
			Yes	3-wire (NPN equiv.)	—	5 V	—	A96V	A96	●	●	—	IC circuit	—
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	12 V	—	M9NV	M9N	●	●	—	—	Relay, PLC
				3-wire (PNP)				M9PV	M9P	●	●	—		
				2-wire				M9BV	M9B	●	●	—		
				3-wire (NPN)				F9NWV	F9NW	●	●	○		
				3-wire (PNP)				F9PWV	F9PW	●	●	○		
				2-wire				F9BWW	F9BW	●	●	○		

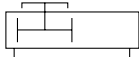
* Lead wire length symbols: 0.5 m..... Nil (Example)F9NW
 3 m..... L F9NWL
 5 m..... Z F9NWZ

* Solid state switches marked "○" are produced upon receipt of order.

Mechanically Jointed Rodless Cylinder Cam Follower Guide Type **Series MY2**



JIS Symbol



Specifications

Bore size (mm)	16	25	40
Fluid	Air		
Action	Double acting		
Operating pressure range	0.1 to 0.8 MPa		
Proof pressure	1.2 MPa		
Ambient and fluid temperature	5 to 60°C		
Cushion	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 $^{+2.8}_0$	
Port size	M5 x 0.8	1/8	1/4

Shock Absorber Specifications

Model	RB 0806	RB 1007	RB 1412	RB 2015
Max. energy absorption (J)	2.9	5.9	19.6	58.8
Stroke absorption (mm)	6	7	12	15
Max. impact speed (mm/s)	1500	1500	1500	1500
Max. operating frequency (cycles/min)	80	70	45	25
Spring force (N)	Extended	4.22	6.86	8.34
	Compressed	4.22	6.86	15.98
Operating temperature range (°C)	5 to 60			

Stroke Adjusting Unit Specifications

Bore size (mm)	16	25	40
Unit symbol	L	L, H	L, H
Shock absorber model	RB0806	RB1007, RB1412	RB1412, RB2015
Stroke fine adjusting range (mm)	0 to -5.6	0 to -11.5	0 to -16
Stroke adjusting range	When exceeding the stroke fine adjusting range: Use the Made to Order Specifications "-X416" and "-X417". (Refer to page 8-13-33 for details.)		

Piston Speed

Bore size (mm)	16	25	40
Without stroke adjusting unit	100 to 1000 mm/s ^{Note 1)}		
Stroke adjusting unit	L unit and H unit	100 to 1500 mm/s	

Note 1) When exceeding the air cushion stroke ranges on page 8-13-10, the **piston speed** should be **100 to 200 mm/s**.

Note 2) Use at a piston speed within the absorption capacity range. Refer to page 8-13-10.

Standard Stroke

Bore size (mm)	Standard stroke (mm) *	Maximum manufacturable stroke (mm)
16	100, 200, 300, 400, 500, 600, 700, 800, 900	3000
25, 40	1000, 1200, 1400, 1600, 1800, 2000	5000



* Strokes are manufacturable in 1 mm increments, up to the maximum stroke.
When exceeding a 2000 mm stroke, specify "-XB11" at the end of the model number.
Refer to the Made to Order Specifications on page 8-13-31.



Made to Order Specifications

Refer to pages 8-13-31 to 8-13-33 for details.

MX

MTS

MY

CY

MG

CX

D-

-X

20-

Data

Series MY2

Theoretical Output

Unit: N

Bore size (mm)	Piston area (mm ²)	Operating pressure (MPa)						
		0.2	0.3	0.4	0.5	0.6	0.7	0.8
16	200	40	60	80	100	120	140	160
25	490	98	147	196	245	294	343	392
40	1256	251	377	502	628	754	879	1005

Note) Theoretical output (N) = Pressure (MPa) x Piston area (mm²)

Option

Stroke Adjusting Unit No.

Unit type	Bore size (mm)	16	25	40
	L unit		MY2H-A16L	MY2H-A25L
H unit		—	MY2H-A25H	MY2C-A40H

Weight

Unit: kg

Bore size (mm)	Basic weight	Additional weight per 50mm of stroke	Side support bracket weight (per set)	Stroke adjusting unit weight (per unit)	
				L unit	H unit
16	1.05	0.13	0.01	0.03	—
25	2.59	0.29	0.02	0.06	0.09
40	8.78	0.67	0.04	0.17	0.23

Calculation method

Example: MY2C25G-300L

Basic weight 2.59 kg

Additional weight 0.29/50 mm

Weight of L unit 0.06 kg

Cylinder stroke 300 mm

$2.59 + 0.29 \times 300 \div 50 + 0.06 \times 2 =$ Approx. 4.45 kg

Replacement Parts

Drive Unit (Cylinder) Replacement Part No.

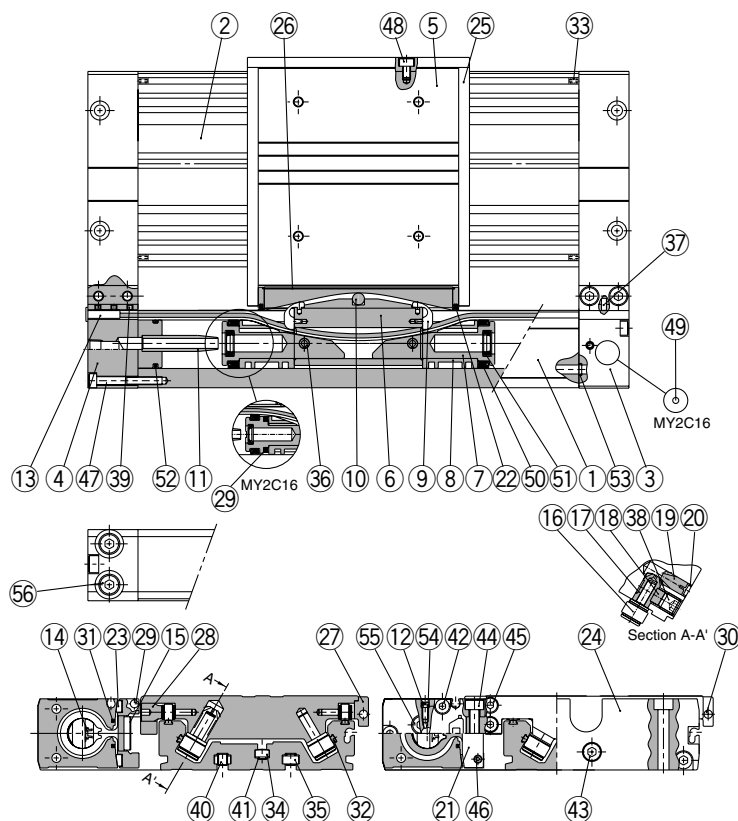
Bore size (mm)	Model	MY2C
	16	
25		MY2BH25□G- <input type="text" value="Stroke"/>
40		MY2BH40□G- <input type="text" value="Stroke"/>

Enter a symbol for port thread type inside .

Mechanically Jointed Rodless Cylinder Cam Follower Guide Type Series MY2

Construction

MY2C



- MX
- MTS
- MY
- CY
- MG
- CX
- D-
- X
- 20-
- Data

Component Parts

No.	Description	Material	Note
①	Cylinder tube	Aluminium alloy	Hard anodized
②	Body	Aluminium alloy	Hard anodized
③	Head cover WR	Aluminium alloy	Hard anodized
④	Head cover WL	Aluminium alloy	Hard anodized
⑤	Slide table	Aluminium alloy	Hard anodized
⑥	Piston yoke	Aluminium alloy	Hard anodized
⑦	Piston	Aluminium alloy	Chromate
⑧	Wear ring	Special resin	
⑨	Belt separator	Special resin	
⑩	Parallel pin	Stainless steel	
⑪	Cushion ring	Brass	
⑫	Cushion needle	Rolled steel	Nickel plated
⑬	Belt clamp	Special resin	
⑭	Cam follower	—	
⑮	Eccentric gear	Stainless steel	
⑯	Gear fixture	Stainless steel	
⑰	Adjustment gear	Stainless steel	
⑱	Retaining ring	Stainless steel	
⑲	End cover	Aluminium alloy	Hard anodized
⑳	Bearing	Special resin	
㉑	End plate	Aluminium alloy	Hard anodized
㉒	Stopper screw	Carbon steel	Nickel plated after quenching
㉓	Top cover	Stainless steel	
㉔	Side cover	Aluminium alloy	Hard anodized

No.	Description	Material	Note
㉕	Cam follower cap	Aluminium alloy	Hard anodized
㉖	Magnet	Rare earth magnet	
㉗	Magnet	Rare earth magnet	
㉘	Seal magnet	Rubber magnet	
㉙	Rail	Hard steel wire material	
㉚	End spacer	Special resin	
㉛	Square nut	Carbon steel	Nickel plated
㉜	Square nut	Carbon steel	Nickel plated
㉝	Spring pin	Carbon tool steel	Black zinc chromate
㉞	Parallel pin	Stainless steel	
㉟	Hexagon socket head set screw	Chrome molybdenum steel	Black zinc chromate
㊱	Hexagon socket head set screw	Chrome molybdenum steel	Black zinc chromate
㊲	Hexagon socket head set screw	Chrome molybdenum steel	Nickel plated
㊳	Hexagon socket head button bolt	Chrome molybdenum steel	Nickel plated
㊴	Hexagon socket head button bolt	Chrome molybdenum steel	Nickel plated
㊵	Hexagon socket head button bolt	Chrome molybdenum steel	Nickel plated
㊶	Hexagon socket head button bolt	Chrome molybdenum steel	Nickel plated
㊷	Hexagon socket head button bolt	Chrome molybdenum steel	Nickel plated
㊸	Hexagon socket head button bolt	Chrome molybdenum steel	Nickel plated
㊹	Steel ball	Spring steel	Nickel plated
㊺	Hexagon socket head taper plug	Carbon steel	Nickel plated (Ø16: hexagon socket head plug)
㊻	Hexagon socket head taper plug	Carbon steel	Nickel plated (Ø16: hexagon socket head plug)

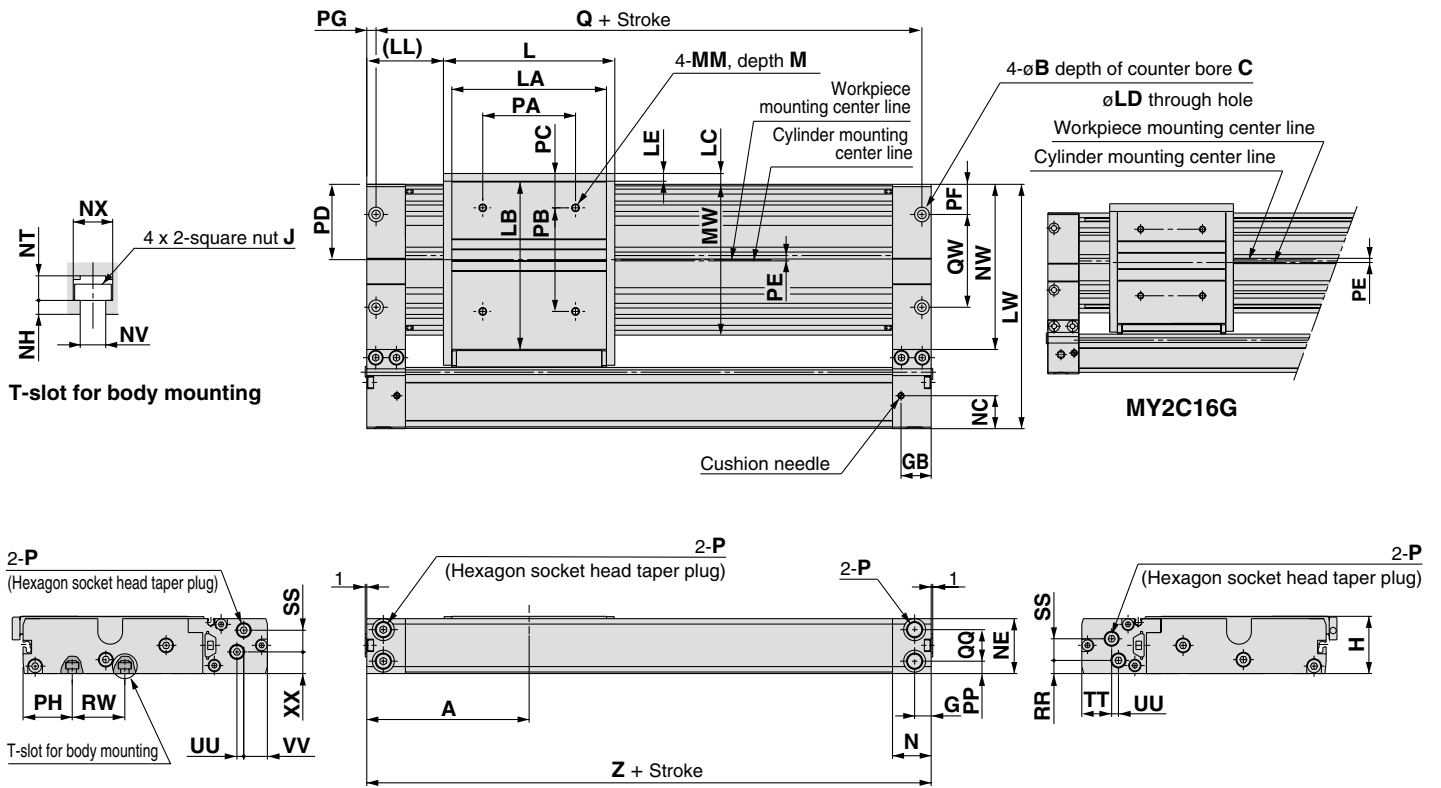
Replacement Parts: Seal Kit

No.	Description	Material	Qty.	MY2C16G	MY2C25G	MY2C40G
⑭	Seal belt	Special resin	1	MY16-16A- [Stroke]	MY2H25-16A- [Stroke]	MY2H40-16A- [Stroke]
⑮	Dust seal band	Stainless steel	1	MY2H16-16B- [Stroke]	MY2H25-16B- [Stroke]	MY2H40-16B- [Stroke]
⑳	Scraper	Special resin	2	MYH16-15AR4900	MYH25-15AR4901	MYH40-15AR4902
㉑	Piston seal	NBR	2	GMYP16	GMYP25	GMYP40
㉒	Cushion seal	NBR	2	MYB16-15-A7163	RCS-8	RCS-12
㉓	Tube gasket	NBR	2	P12	TMY-25	TMY-40
㉔	O-ring	NBR	4	ø6.2 x ø3 x ø1.6	P-5	C-9
㉕	O-ring	NBR	2	ø4 x ø1.8 x ø1.1	ø4 x ø1.8 x ø1.1	ø7.15 x ø3.75 x ø1.7

Series MY2

ø16, ø25, ø40

MY2C Bore size G — Stroke



(mm)

Model	A	B	C	G	GB	H	L	J	LA	LB	LC	LD	LE	(LL)	LW	M	MM	MW	N	NC	NE	NH	NT
MY2C16G	80	6.5	3.3	8.5	17	28	80	M3 x 0.5	70	72.4	6	3.4	5	40	104	7	M4 x 0.7	64.6	20	14	27	2	3.5
MY2C25G	105	9.5	5.4	10.7	19.5	37	110.8	M5 x 0.8	100	108.7	7	5.5	5	49.6	158	9	M5 x 0.8	97.5	25	21.3	35.5	3	5.3
MY2C40G	165	14	8.6	15.5	31.5	58	180	M6 x 1	158	135.3	7	9	5	75	214	13	M6 x 1	121.5	40	32.4	56.5	4	6.5

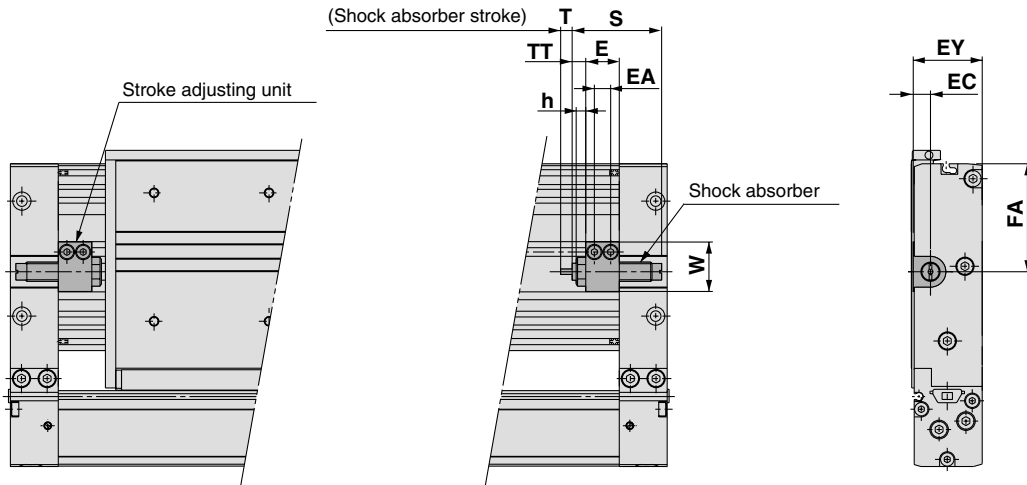
Model	NV	NW	NX	P	PA	PB	PC	PD	PE	PF	PG	PH	PP	Q	QQ	QW	RR	RW	SS	TT	UU	VV	XX	Z
MY2C16G	3.4	69.2	5.8	M5 x 0.8	40	43	16.5	32	2.2	9.8	4	21.3	5.3	152	16.4	40	5.3	22	9.7	12.5	3	10.5	12	160
MY2C25G	5.5	106.8	8.5	1/8	60	67	22.2	48.7	0.8	19.5	6	31.8	8	198	20.4	60	8.5	34	14	19.3	4.4	15.3	14	210
MY2C40G	6.6	135.1	10.5	1/4	100	77	29	60.5	8.5	40.5	9	38	16	312	25.5	57	11	45	21.5	35.4	2	29	23	330

"P" indicates cylinder supply ports. * The plug for "P" MY2C16G is a hexagon socket head plug.

Stroke adjusting unit

Low load shock absorber

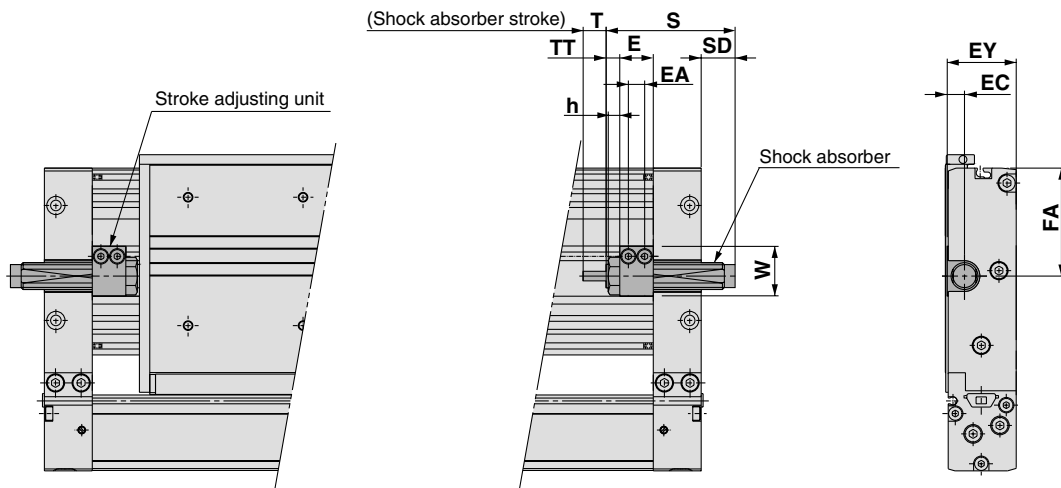
MY2C **Bore size G** — **Stroke L**



Applicable cylinder	E	EA	EC	EY	FA	h	S	T	TT	W	Shock absorber model
MY2C16	14.4	7	6	27	38.5	4	40.8	6	5.6(MAX 11.2)	16.5	RB0806
MY2C25	17.5	8.5	9	36	56.4	5	46.7	7	7.1(MAX 18.6)	25.8	RB1007
MY2C40	25	13	13.5	56.5	67.8	6	67.3	12	10 (MAX 26)	38	RB1412

High load shock absorber

MY2C **Bore size G** — **Stroke H**



Applicable cylinder	E	EA	EC	EY	FA	h	S	SD	T	TT	W	Shock absorber model
MY2H25	17.5	8.5	9	36	56.4	6	67.3	17.7	12	7.1 (MAX 18.6)	25.8	RB1412
MY2H40	25	13	13.5	56.5	67.8	6	73.2	—	15	10 (MAX 26)	38	RB2015

MX□

MTS

MY□

CY□

MG□

CX□

D-

-X

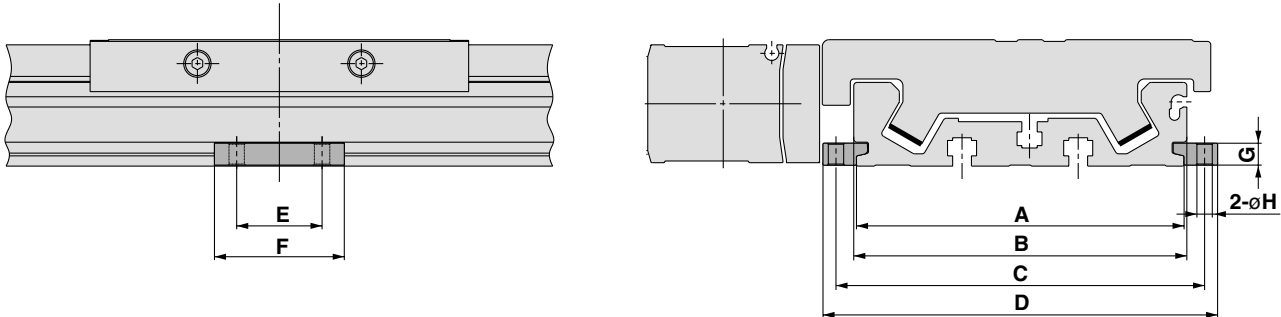
20-

Data

Series MY2

Side Support

Side support MYC-S□A



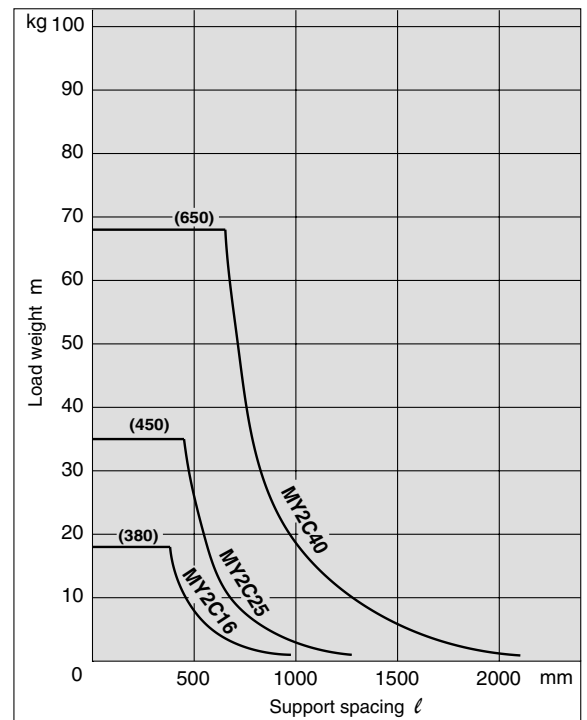
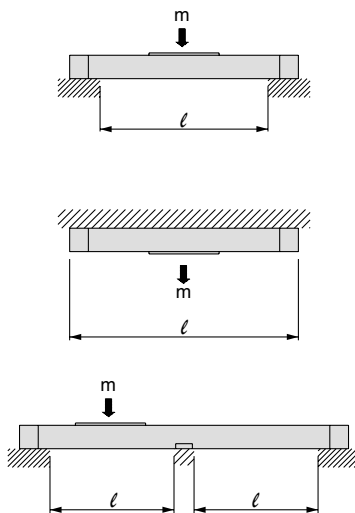
Model	Applicable cylinder	A	B	C	D	E	F	G	øH
MYC-S16A	MY2C16	60.6	64.6	70.6	77.2	15	26	4.9	3.4
MYC-S25A	MY2C25	95.9	97.5	107.9	115.5	25	38	6.4	4.5
MYC-S40A	MY2C40	121.5	121.5	134.5	145.5	45	64	11.7	6.6

Guide for Using Side Support

For long stroke operation, the cylinder tube may deflect due to its own weight and/or load weight. In such cases, install a side support at the intermediate stroke position. The spacing (l) of the side support must be no more than the values shown in the graph at right.

⚠ Caution

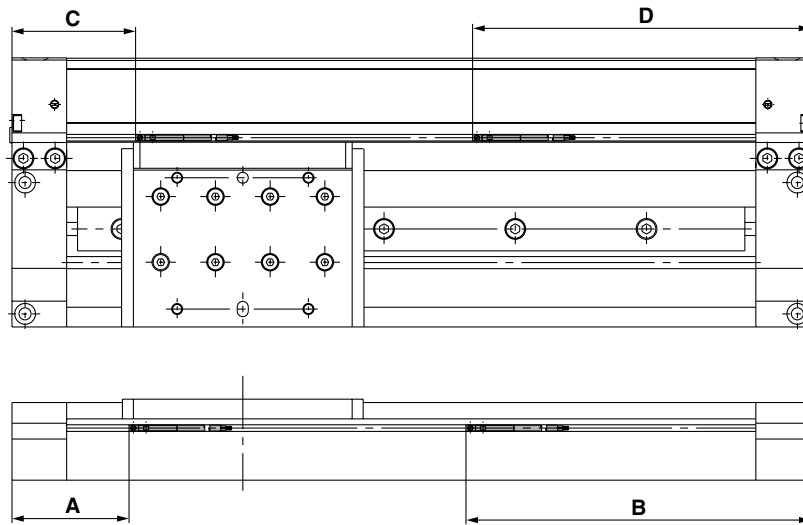
- ① If the cylinder mounting surfaces are not measured accurately, using a side support may cause poor operation. Make sure to level the cylinder tube when mounting the cylinder. For long stroke operation involving vibration and impact, the use of side supports is recommended even if the support spacing is within the allowable limits shown in the graph.
- ② Support brackets are not for mounting. They should be used only to provide support.



Series MY2

Proper Auto Switch Mounting Position (Detection at stroke end)

Note) The operating range is a standard including hysteresis, and is not guaranteed. There may be large variations depending on the surrounding environment (variations on the order of $\pm 30\%$).



Series MY2C

D-M9, D-M9□V (mm)			
Bore size	A	B	Operating range
16	58	102	3.0
25	58	152	8.0
40	89	241	6.5

(mm)			
Bore size	C	D	Operating range
16	31	129	3.4
25	61	149	3.5
40	94.2	235.8	5.0

Series MY2H

D-M9, D-M9□V (mm)			
Bore size	A	B	Operating range
16	58	102	3.5
25	58	152	9.0
40	89	241	7.0

(mm)			
Bore size	C	D	Operating range
16	31	129	3.5
25	61	149	4.0
40	94.2	235.8	

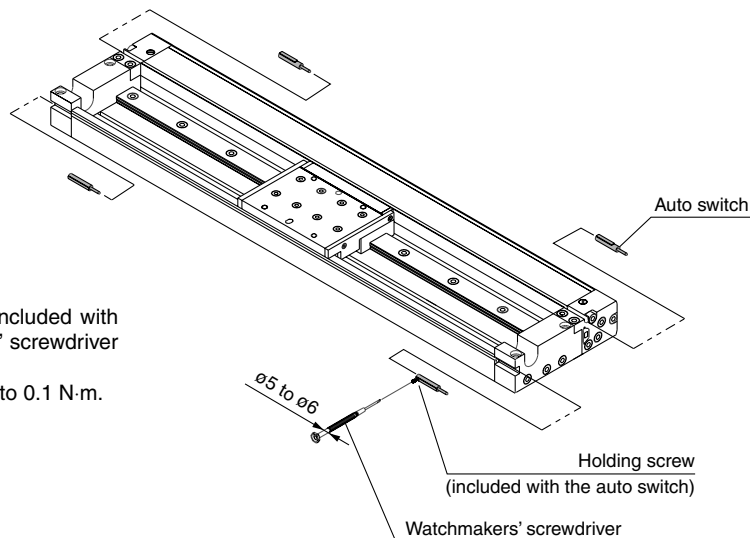
Series MY2HT

D-M9, D-M9□V (mm)			
Bore size	A	B	Operating range
16	58	102	3.5
25	58	152	11.0
40	89	241	7.5

(mm)			
Bore size	C	D	Operating range
16	31	129	4.0
25	61	149	3.5
40	94.2	235.8	3.0

Mounting of Auto Switch

When mounting an auto switch, insert it into the cylinder's switch groove from the direction shown in the drawing to the right. After placing it in the mounting position, use a flat head watchmakers' screwdriver to tighten the mounting screw which is included.



Note) When tightening the holding screw (included with the auto switch), use a watchmakers' screwdriver with a handle 5 to 6 mm in diameter. The tightening torque should be 0.05 to 0.1 N·m.

Series MY2

Made to Order Specifications:

Please contact with SMC for further information on specifications, dimensions and delivery.

Made to Order Combinations

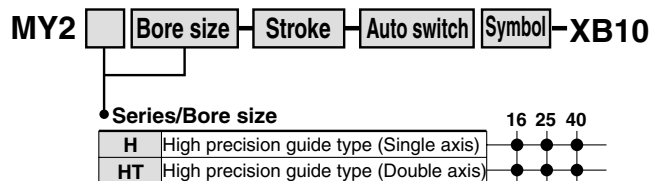
		Intermediate stroke XB10	Long stroke XB11	Helical insert threads X168	Holder mounting bracket X416/X417	Copper-free 20-
MY2C	Cam follower guide type	Standardized	●	●	●	●
MY2H	High precision guide type (Single axis)	●	●	●	●	●
MY2HT	High precision guide type (Double axis)	●	●	●	●	●

- MX
- MTS
- MY
- CY
- MG
- CX
- D-
- X
- 20-
- Data

1 Intermediate Stroke Symbol **-XB10**

Intermediate strokes are available within the standard stroke range. The stroke can be set in 1 mm increments.

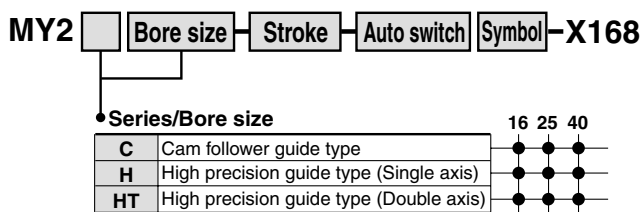
■ Stroke range: 51 to 599 mm



(Example) MY2H40G-599L-A93-XB10

3 Helical Insert Thread Specifications Symbol **-X168**

The mounting threads of the slider are changed to helical insert threads. The thread size is the same as standard.

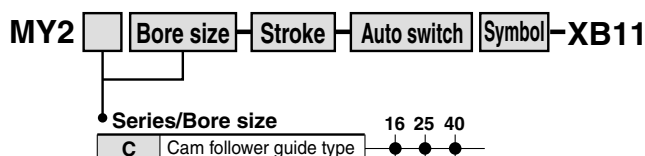


(Example) MY2H40G-300L-A93-X168

2 Long Stroke Symbol **-XB11**

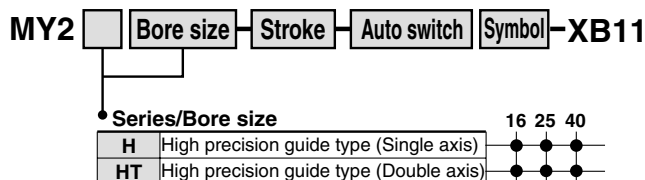
Available with long strokes exceeding the standard strokes. The stroke can be set in 1 mm increments.

■ Stroke range: 2001 to 5000 mm (2001 to 3000 mm for ø16)



(Example) MY2C40G-4999L-A93-XB11

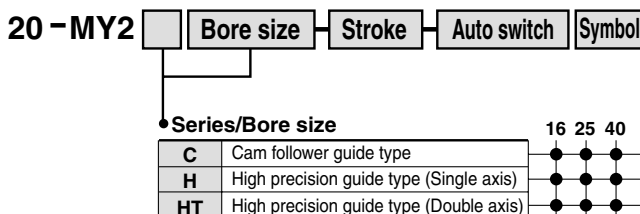
■ Stroke range: 601 to 1500 mm (601 to 1000 mm for ø16)



(Example) MY2H40G-999L-A93-XB11

4 Copper-free Symbol **20-**

For copper-free applications



Series MY2

5 Holder Mounting Bracket ①, ② -X416/X417

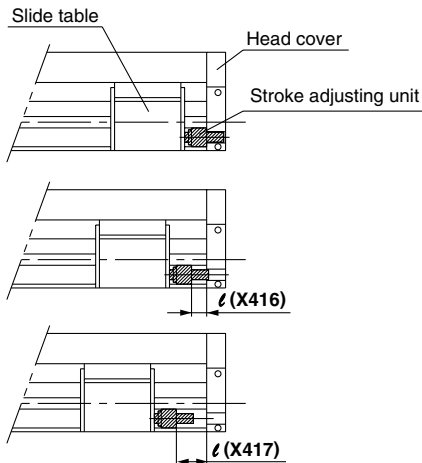
Holder mounting brackets are used to fasten the stroke adjusting unit at an intermediate stroke position.

Holder mounting bracket ① -X416 Holder mounting bracket ② -X417

Fine stroke adjustment range

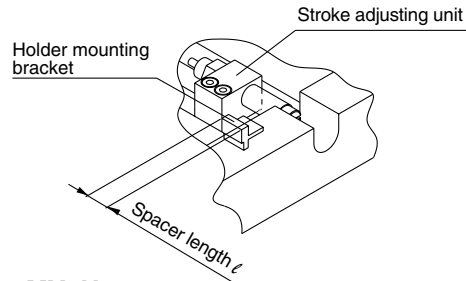
(Treated as a special order when exceeding the adjustment ranges shown below.) Unit: mm

Bore size (mm)	-X416 (one side)		-X417 (one side)	
	Spacer length ℓ	Adjustment range	Spacer length ℓ	Adjustment range
16	5.6	-5.6 to -11.2	11.2	-11.2 to -16.8
25	11.5	-11.5 to -23	23	-23 to -34.5
40	16	-16 to -32	32	-32 to -48

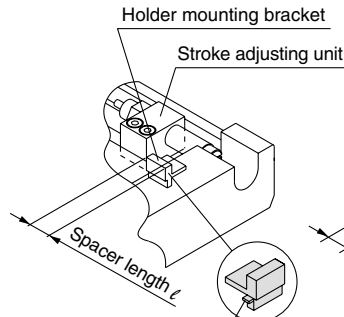


Holder Mounting Bracket Illustration

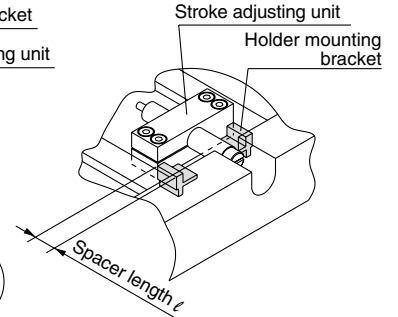
MY2C



MY2H



MY2HT



MY2 Bore size - 300 L - X416

Combination symbol

Refer to the table below for applicable symbols.

Holder mounting bracket

Refer to the table below for applicable symbols.

Stroke adjusting unit

Refer to the table below for applicable symbols.

Stroke

(Note) Indicates the stroke prior to mounting the stroke adjusting unit.

Series/Bore size

C	Cam follower guide type	●	●	●
H	High precision guide type (Single axis)	●	●	●
HT	High precision guide type (Double axis)	●	●	●

Stroke adjusting unit	Holder mounting bracket	Suffix	Mounting pcs.		Combination description	
			X416	X417		
L, H, LS, HS	X416	Nil	1	—	X416 on one side	
		W	2	—	X416 on both sides (one on each side)	
Z		1	1	X416 on one side, X417 on the other side		
L		1	—	X416 on L unit side		
H		1	—	X416 on H unit side		
LZ		1	1	X416 on L unit side, X417 on the other side		
HZ		1	1	X416 on H unit side, X417 on the other side		
L, H, LS, HS		X417	Nil	—	1	X417 on one side
L, H			W	—	2	X417 on both sides (one on each side)
LH			L	—	1	X417 on L unit side
LH	H		—	1	X417 on H unit side	

(Note) For LS and HS, the stroke adjusting unit is mounted on one side only.

Series MY2

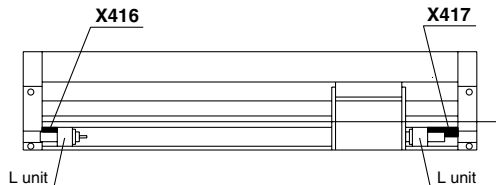
Made to Order Specifications:

Please contact with SMC for further information on specifications, dimensions and delivery.

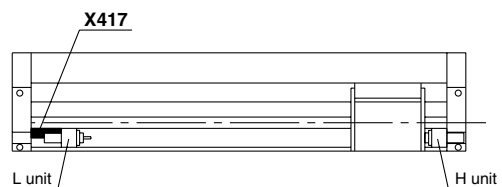
5 Holder Mounting Bracket..... ①, ② -X416/X417

Example

- L units with one each of X416 and X417
MY2H25G-300L-X416Z



- L and H units, where X417 is mounted on L unit only and nothing on H unit
MY2H25G-300LH-X417L



How to order single pieces of stroke adjusting unit and holder mounting bracket

MY2H-A16L
MY2HT-A16L

- **X417** □

• **Combination symbol**

Nil	Stroke adjusting unit + Holder mounting bracket
N	Holder mounting bracket only

• **Holder mounting bracket**

X416	Holder mounting bracket 1
X417	Holder mounting bracket 2

- **Stroke adjusting unit model**

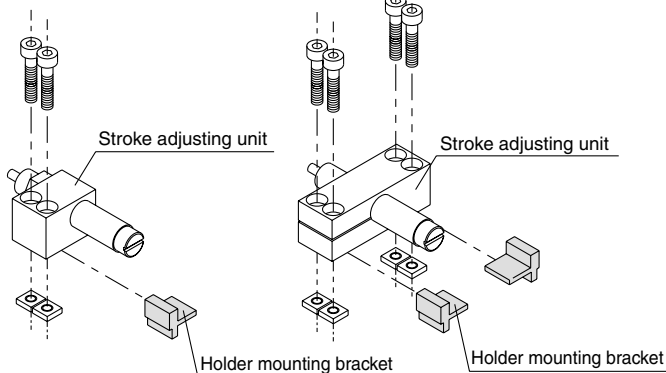
Note) Refer to "Option" table on pages 8-13-16 and 8-13-23.

Example

- **Stroke adjusting unit with holder mounting bracket**
MY2H-A25L-X416 (L unit for MY2H25 and X416 bracket)
- **Holder mounting bracket only**
MY2H-A25L-X416N (MY2H25 and X416 bracket for L unit)

MY2C, MY2H

MY2HT



Note) For MY2H, the parts are packed together when shipped.

- MX □
- MTS
- MY □
- CY □
- MG □
- CX □
- D-
- X
- 20-
- Data