Compact Slide

ø6, ø10, ø16, ø20

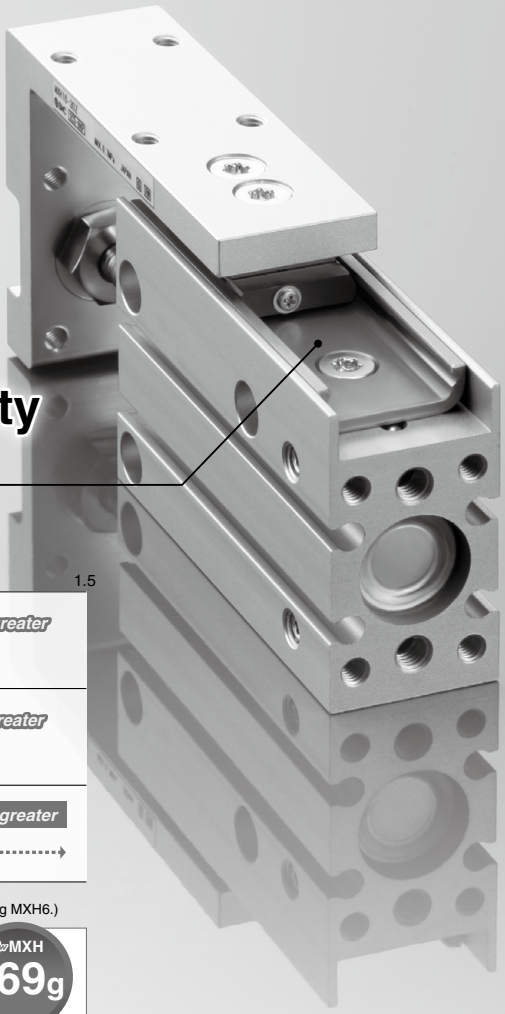
New

RoHS

Allowable moment

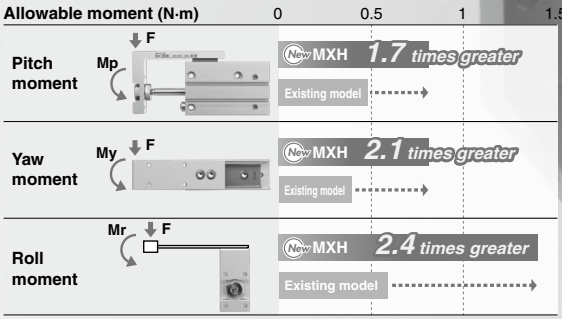
Improved by up to

240%



With new high rigidity linear guide

Allowable moment improvement illustrated below*



* Allowable moment caused by static load
(The above graph is a comparison between the new MXH and the existing MXH6.)

Weight **19% reduced** (ø20-10 stroke) Existing model 455g ▶ New MXH 369g

The weight has been reduced by incorporating a new high rigidity linear guide and piston.

Series MXH

High rigidity achieved with new circulating type linear guide

High allowable moment

Pitch Moment (N·m)

Bore size (mm)	New MXH	MXH existing model
6	**0.81**	0.47
10	**1.69**	0.96
16	**3.49**	1.88
20	**5.86**	3.14

Yaw Moment (N·m)

Bore size (mm)	New MXH	MXH existing model
6	**0.81**	0.39
10	**1.69**	0.82
16	**3.49**	1.59
20	**5.86**	2.75

Roll Moment (N·m)

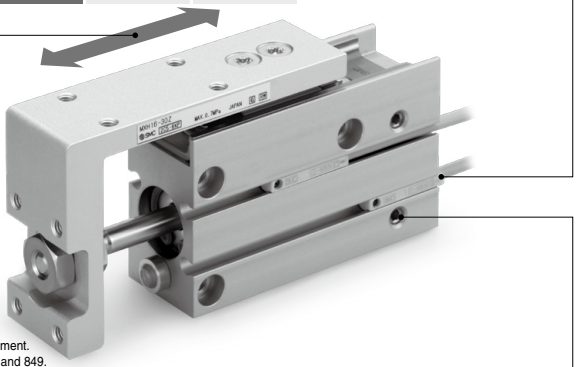
Bore size (mm)	New MXH	MXH existing model
6	**1.4**	0.59
10	**3.19**	1.37
16	**6.47**	2.75
20	**11.66**	5.49

∗ Selection of a bore size cannot be made only with above allowable moment. Select a bore size in accordance with "Model Selection" on pages 848 and 849.

Traveling parallelism is the same as the existing model.

Deflection at the extended position of the table is the same as the existing model.

Traveling parallelism	Stroke (mm)	
	5 to 30	40 to 60
	0.05 mm or less	0.1 mm or less



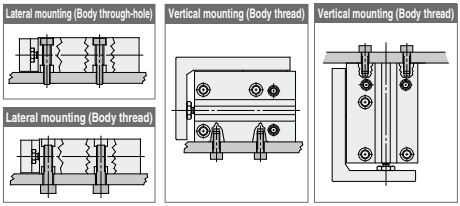
Small auto switches capable

(D-M9□, D-A9□)

Mounting is completely interchangeable with existing model.

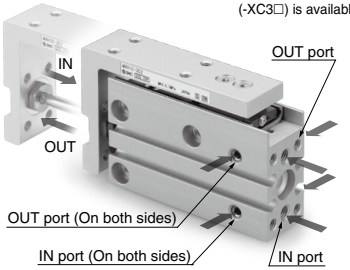
Dimensions including workpiece mounting dimensions and cylinder mounting dimensions are the same as the existing model.

Mounting is possible in 4 directions.

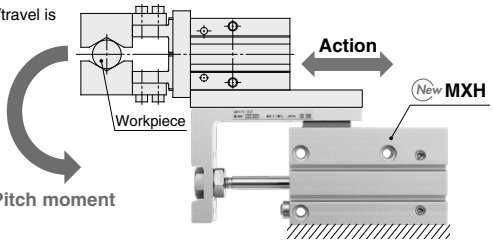


Piping is possible in 3 directions.

If changing the port location, "Made to Order" model (-XC3□) is available.



Application Example Useful when long stroke/travel is required



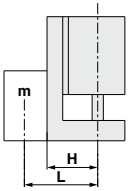
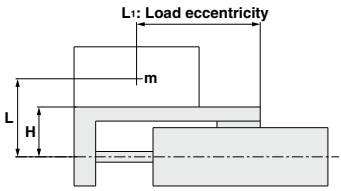
Series Variations

Model	Standard stroke (mm)									Made to Order
	5	10	15	20	25	30	40	50	60	
MXH6	●	●	●	●	●	●	●	●	●	-XC79 : Machining tapped hole, drilled hole and pin hole additionally
MXH10	●	●	●	●	●	●	●	●	●	-XB13 : Low speed cylinder (5 to 50 mm/s)
MXH16	●	●	●	●	●	●	●	●	●	-XC3□: Special port location
MXH20	●	●	●	●	●	●	●	●	●	-XC19 : Intermediate stroke (Spacer type)
										-XC22 : Fluororubber seal

Model Selection

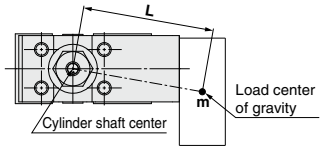
⚠ Caution Confirmation of theoretical output is required separately. Refer to "Theoretical Output" on page 851.

Selection Conditions: Follow the tables below in order to determine selection conditions and choose one selection graph.

Mounting orientation	Vertical			Horizontal								
												
Maximum speed (mm/s)	Up to 100	Up to 300	Up to 500	Up to 100			Up to 300			Up to 500		
Load eccentricity L_1 (mm)	—			50	100	200	50	100	200	50	100	200
Selection graph	1	2	3	4	5	6	7	8	9	10	11	12

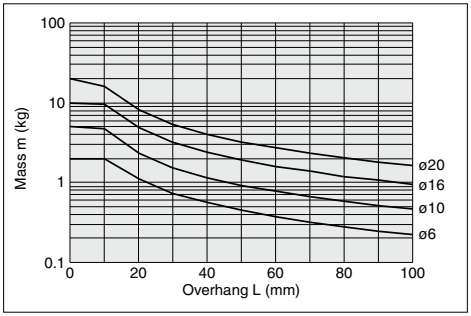
∗ L: Overhang (the distance from the cylinder shaft center to the load center of gravity)
The direction of L can also be a diagonal direction. (Refer to the drawing at right.)
∗ H: Distance from the cylinder center axis to the mounting surface for the table

	MXH6	MXH10	MXH16	MXH20
H dimension (mm)	24.5	30.5	34.5	41.5

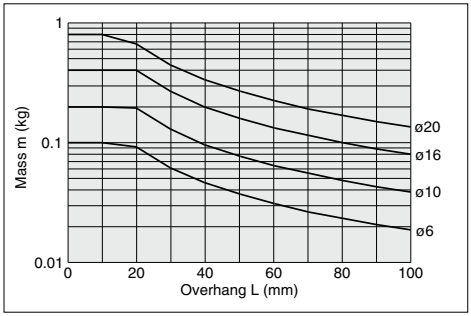


Selection Graph 1 to 3 (Vertical Mounting)

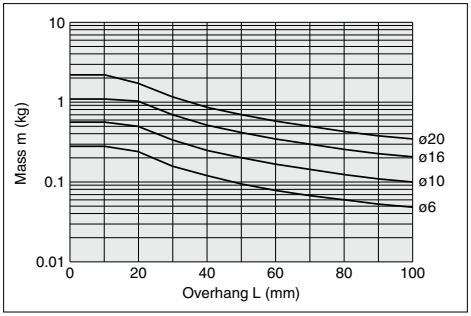
Graph 1 Maximum Speed 100 mm/s or Less



Graph 3 Maximum Speed 500 mm/s or Less



Graph 2 Maximum Speed 300 mm/s or Less



Selection Example (Vertical Mounting)

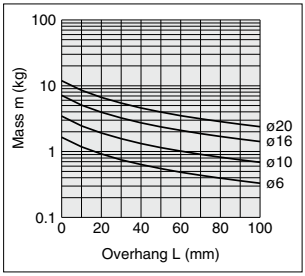
1. Selection conditions
- Mounting: Vertical
- Maximum speed: 500 mm/s
- Overhang **L**: 40 mm
- Load mass **m**: 0.1 kg

Refer to Graph 3 based on vertical mounting and a speed of 500 mm/s.
In Graph 3, find the intersection of a 40 mm overhang **L** and load mass **m** of 0.1 kg, which results in a determination of ø16.

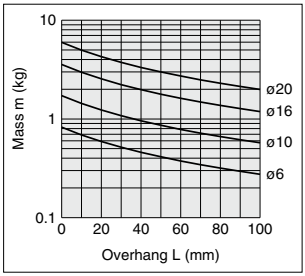
Selection Graph 4 to 12 (Horizontal Mounting)

Maximum Speed 100 mm/s or Less

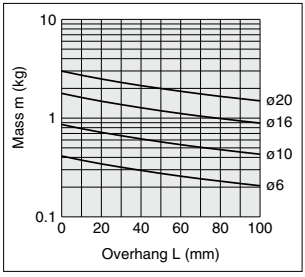
Graph 4 Load Eccentricity 50 mm



Graph 5 Load Eccentricity 100 mm

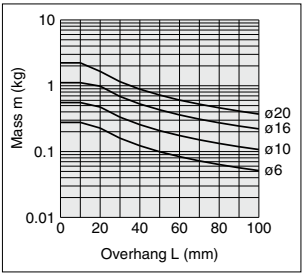


Graph 6 Load Eccentricity 200 mm

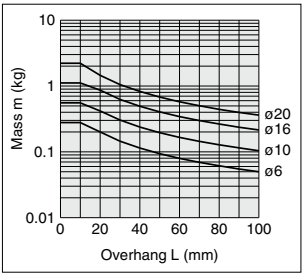


Maximum Speed 300 mm/s or Less

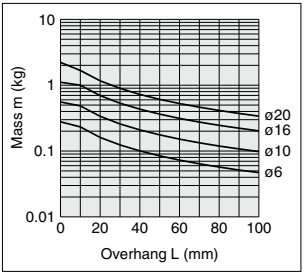
Graph 7 Load Eccentricity 50 mm



Graph 8 Load Eccentricity 100 mm

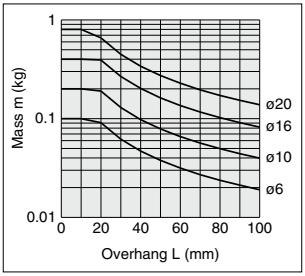


Graph 9 Load Eccentricity 200 mm

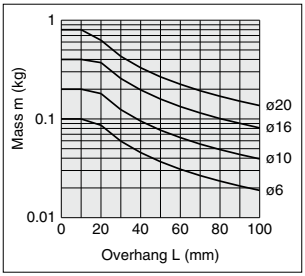


Maximum Speed 500 mm/s or Less

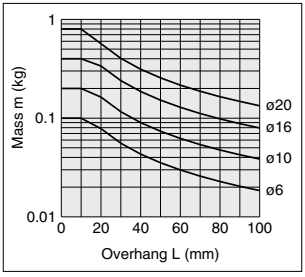
Graph 10 Load Eccentricity 50 mm



Graph 11 Load Eccentricity 100 mm



Graph 12 Load Eccentricity 200 mm



Selection Example (Horizontal Mounting)

2. Selection conditions
- Mounting: Horizontal
- Maximum speed: 500 mm/s
- Load eccentricity **L1**: 50 mm
- Overhang **L**: 30 mm
- Load mass **m**: 0.1 kg

Refer to Graph 10 based on horizontal mounting, a speed of 500 mm/s and load eccentricity **L1** of 50 mm.
In Graph 10, find the intersection of a 30 mm overhang **L** and load mass **m** of 0.1 kg, which results in a determination of ø10.

Compact Slide
Series MXH
ø6, ø10, ø16, ø20

RoHS

How to Order

MXH 10 – 60 Z – M9BW □ – □

Compact Slide

Bore size

6	6 mm
10	10 mm
16	16 mm
20	20 mm

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

Auto switch

Nil	Without auto switch (Built-in magnet)

∗ For applicable auto switch model, refer to the table below.

Number of auto switches

Nil	2 pcs.
S	1 pc.

Made to Order
∗ Refer to page 851 for details.

Applicable Auto Switches/Refer to **the WEB catalog** or the Best Pneumatics No.3 catalog for further information on auto switches.

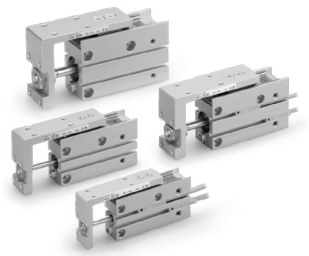
Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage DC	Load voltage AC	Auto switch model Perpendicular	Auto switch model In-line	Lead wire length (m) 0.5 (Nil)	1 (M)	3 (L)	5 (Z)	Pre-wired connector	Applicable load	
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	**M9NV**	**M9N**	●	●	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)			**M9PV**	**M9P**	●	●	●	○	○		
				2-wire	12 V		**M9BV**	**M9B**	●	●	●	○	○	—	
	Diagnostic indication (2-color indication)			3-wire (NPN)	5 V, 12 V		**M9NWV**	**M9NW**	●	●	●	○	○	IC circuit	
				3-wire (PNP)			**M9PWV**	**M9PW**	●	●	●	○	○		
				2-wire	12 V		**M9BWV**	**M9BW**	●	●	●	○	○	—	
	Water resistant (2-color indication)			3-wire (NPN)	5 V, 12 V		**M9NAV**∗∗	**M9NA**∗∗	○	○	●	○	○	IC circuit	
				3-wire (PNP)			**M9PAV**∗∗	**M9PA**∗∗	○	○	●	○	○		
				2-wire	12 V		**M9BAV**∗∗	**M9BA**∗∗	○	○	●	○	○	—	
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	**A96V**	**A96**	●	—	●	—	—	IC circuit	—
			No	2-wire	24 V	12 V	100 V	**A93V**	**A93**	●	—	●	●	—	—	Relay, PLC
							100 V or less	**A90V**	**A90**	●	—	●	—	—	IC circuit	

∗∗ Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance. Please consult with SMC regarding water resistant type with the above model numbers.

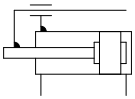
∗ Lead wire length symbols: 0.5 m ·····Nil (Example) M9NW
1 m ····· M (Example) M9NWM
3 m ·····L (Example) M9NWL
5 m ·····Z (Example) M9NWZ

∗ Solid state auto switches marked with "○" are produced upon receipt of order.

∗ Refer to page 859 for applicable auto switches other than listed above.
∗ For details about auto switches with pre-wired connector, refer to **the WEB catalog** or the Best Pneumatics No.3 catalog.
∗ Auto switches are shipped together, (but not assembled).



Symbol
Rubber bumper



Made to Order

Made to Order
(Refer to pages 862 to 864 for details.)

Symbol	Specifications
-XC79	Machining tapped hole, drilled hole and pin hole additionally
-XB13	Low speed cylinder (5 to 50 mm/s)
-XC3	Special port location
-XC19	Intermediate stroke (Spacer type)
-XC22	Fluororubber seal

Specifications

Bore size (mm)	6	10	16	20
Fluid	Air			
Action	Double acting			
Piping port size	M5 x 0.8			
Minimum operating pressure	0.15 MPa	0.06 MPa		0.05 MPa
Maximum operating pressure	0.7 MPa			
Proof pressure	1.05 MPa			
Ambient and fluid temperature	Without auto switch: –10 to 70°C With auto switch: –10 to 60°C (No freezing)			
Piston speed	50 to 500 mm/s			
Allowable kinetic energy (J)	0.0125	0.025	0.05	0.1
Lubrication	Non-lube			
Cushion	Rubber bumper on both ends			
Stroke length tolerance	$^{+1.0}_{0}$			
Auto switch (Option)	Solid state auto switch D-M9□, M9□W Reed auto switch D-A9□			

Standard Stroke

Bore size (mm)	Standard stroke (mm)
6, 10, 16, 20	5, 10, 15, 20, 25, 30, 40, 50, 60

Note) Intermediate strokes are available with “Made to Order” model (-XC19).
(For details, refer to page 864.)

Theoretical Output

(N)

Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm^2)	Operating pressure (MPa)		
				0.3	0.5	0.7
6	3	OUT	28	8	14	19
		IN	21	6	10	14
10	4	OUT	78	23	39	55
		IN	66	19	33	46
16	6	OUT	201	60	101	141
		IN	172	51	86	121
20	8	OUT	314	94	157	220
		IN	264	79	132	185

Weight

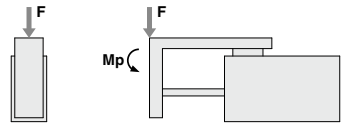
(g)

Model	Stroke (mm)								
	5	**10**	**15**	**20**	**25**	**30**	**40**	**50**	**60**
MXH6	61	66	75	80	88	93	107	120	134
MXH10	104	112	125	133	146	153	174	195	216
MXH16	194	204	222	232	250	260	288	316	343
MXH20	352	369	400	417	448	466	514	562	610

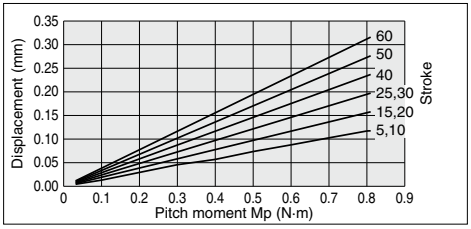
Table Displacement

Table Displacement due to Pitch Moment (Reference)

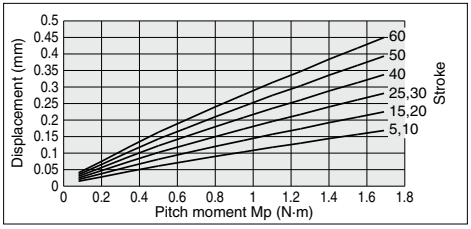
Table displacement (arrow) when a load acts upon the section marked with the arrow at the full stroke of the Compact Slide



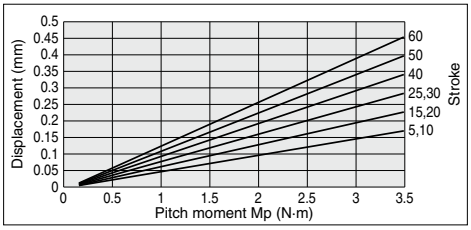
MXH6



MXH10



MXH16



MXH20

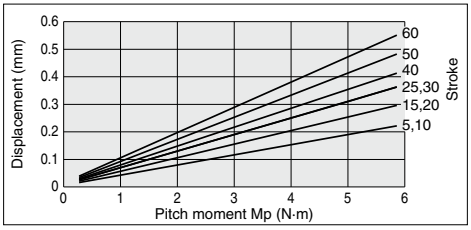
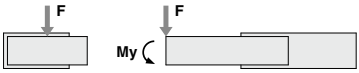
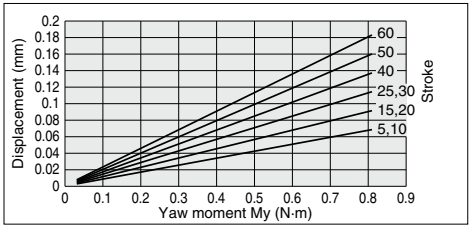


Table Displacement due to Yaw Moment (Reference)

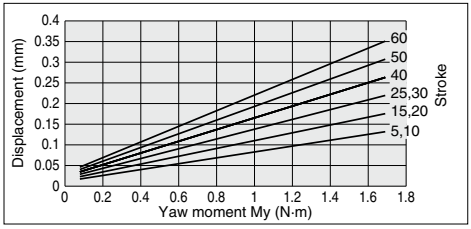
Table displacement (arrow) when a load acts upon the section marked with the arrow at the full stroke of the Compact Slide



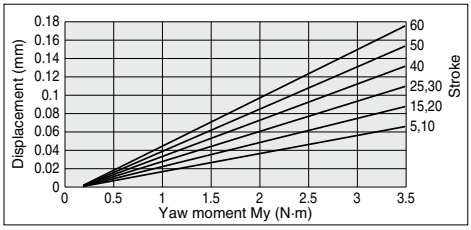
MXH6



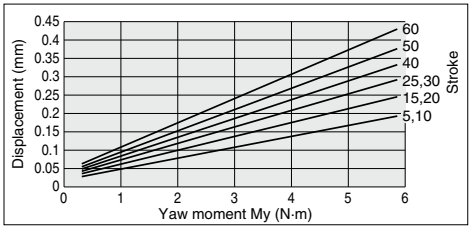
MXH10



MXH16



MXH20



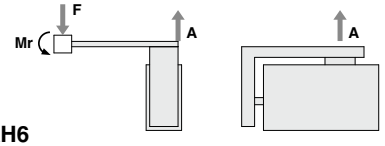
⚠Caution Design

1. Selection of a bore size cannot be made only with above graphs. Select a bore size in accordance with "Model Selection" on page 848 and 849.
2. Displacement may increase after an impact load has been applied. When the table is subjected to an impact load, there may be permanent distortion of the guide unit and increased displacement.

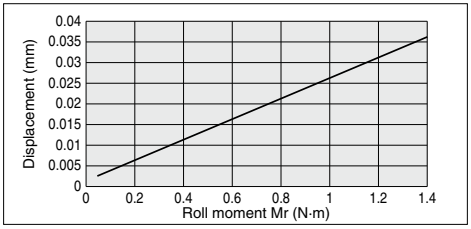
Table Displacement

Table Displacement due to Roll Moment (Reference)

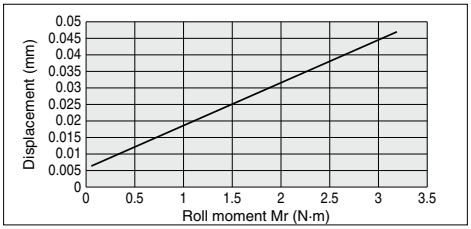
Table displacement (at A) when a load acts upon section F at the full stroke of the Compact Slide



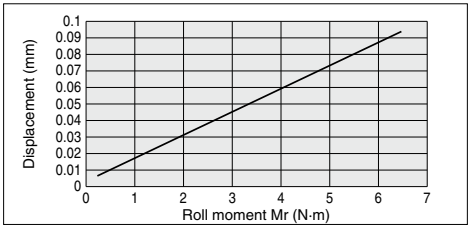
MXH6



MXH10



MXH16



MXH20

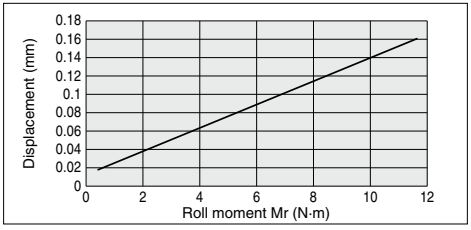


Table Accuracy

Traveling parallelism	Stroke (mm)	
	5 to 30	40 to 60
	0.05 mm or less	0.1 mm or less

Allowable Moment

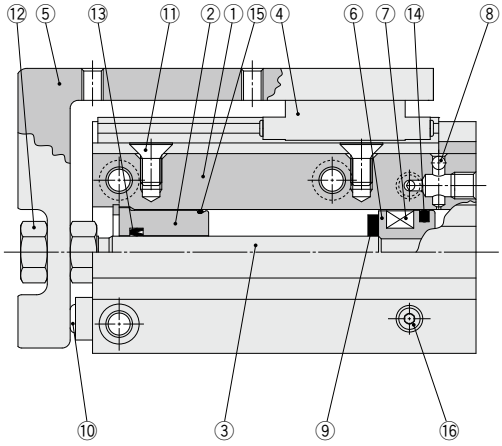
Model	Allowable moment (N·m)		
	Pitch moment	Yaw moment	Roll moment
	Mp	My	Mr
MXH6	0.81	0.81	1.40
MXH10	1.69	1.69	3.19
MXH16	3.49	3.49	6.47
MXH20	5.86	5.86	11.66

Design

⚠ Caution

Selection of a bore size cannot be made only with above allowable moment. Select a bore size in accordance with "Model Selection" on pages 848 and 849.

Construction

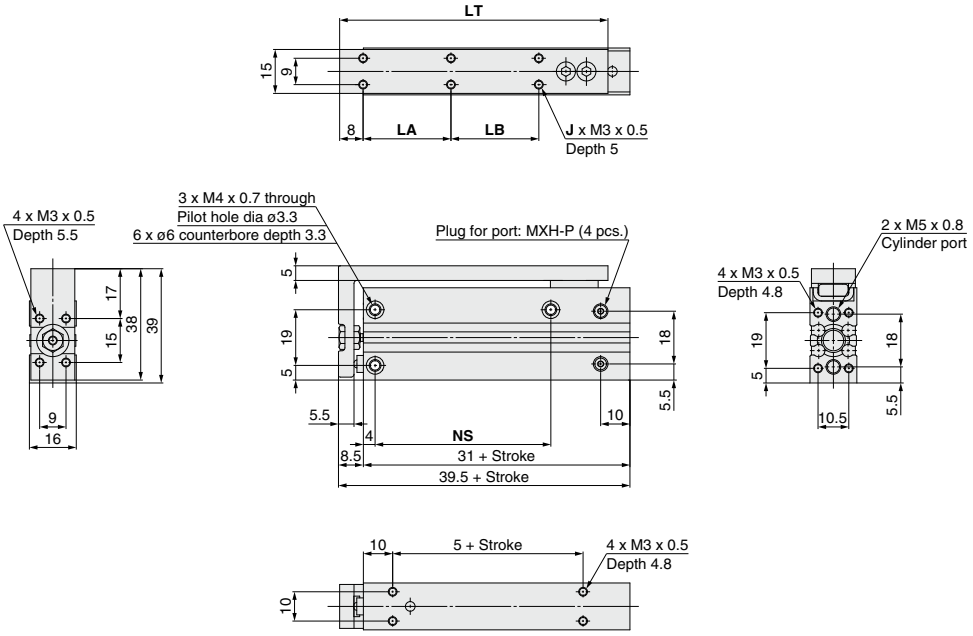


Component Parts

No.	Description	Material	Note
1	**Cylinder tube**	Aluminum alloy	Hard anodized
2	**Rod cover**	Aluminum alloy	Hard anodized
3	**Piston rod**	Stainless steel	
4	**Guide**	The main parts are made of stainless steel.	
5	**Table**	Aluminum alloy	Hard anodized
6	**Piston**	Aluminum alloy	Chromated
7	**Magnet**	Magnetic material	
8	**Steel ball**	Carbon steel	
9	**Bumper**	Urethane	
10	**Bumper**	Urethane	
11	Countersunk head screw	Carbon steel	Nickel plating
12	**Nut**	Brass	Nickel plating
13	**Rod seal**	NBR	
14	**Piston seal**	NBR	
15	**Gasket**	NBR	
16	**Plug**	Carbon steel	Zinc chromated

Note) The MXH series cannot be disassembled.

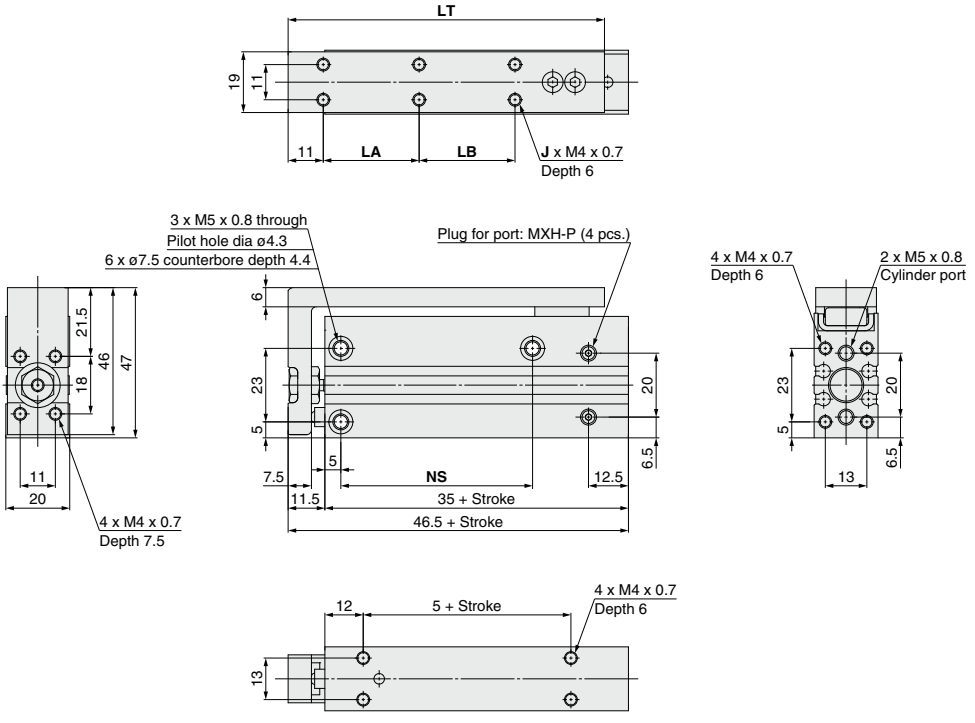
Dimensions: Ø6



Note 1) Refer to "Specific Product Precautions" for mounting of the Compact Slide and a workpiece.
Note 2) When changing the port location, please order a new port plug: MXH-P (2 pcs.)

Stroke (mm)	J	LA	LB	LT	NS
5	4	10	—	42	14
10	4	10	—	42	14
15	4	20	—	52	24
20	4	20	—	52	24
25	4	30	—	62	30
30	4	30	—	62	30
40	6	20	20	72	45
50	6	25	25	82	55
60	6	30	30	92	60

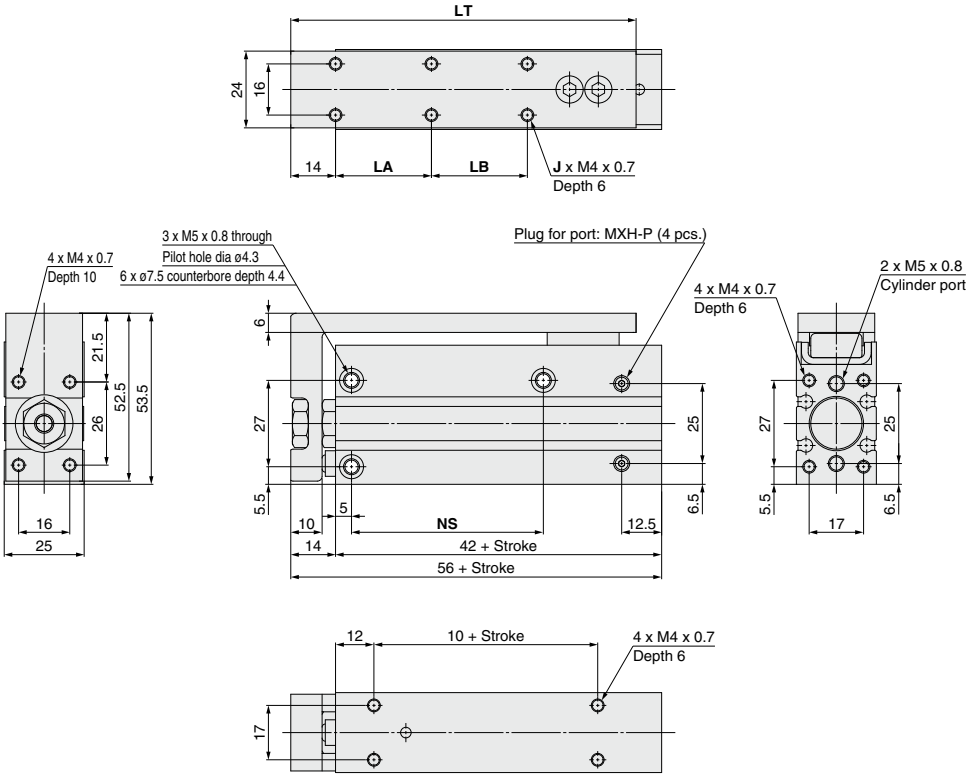
Dimensions: Ø10



Note 1) Refer to "Specific Product Precautions" for mounting of the Compact Slide and a workpiece.
Note 2) When changing the port location, please order a new port plug: MXH-P (2 pcs.)

Stroke (mm)	J	LA	LB	LT	NS
5	4	10	—	49	14
10	4	10	—	49	14
15	4	20	—	59	24
20	4	20	—	59	24
25	4	30	—	69	30
30	4	30	—	69	30
40	6	20	20	79	45
50	6	25	25	89	55
60	6	30	30	99	60

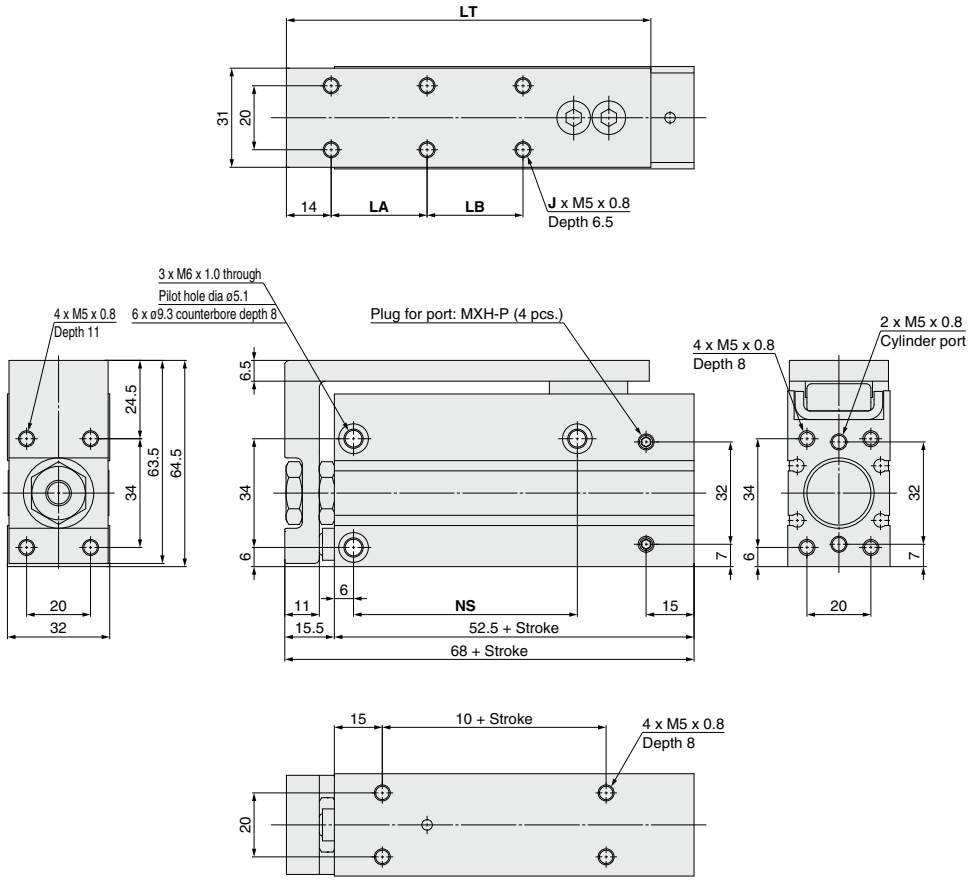
Dimensions: Ø16



Note 1) Refer to "Specific Product Precautions" for mounting of the Compact Slide and a workpiece.
Note 2) When changing the port location, please order a new port plug: MXH-P (2 pcs.)

Stroke (mm)	J	LA	LB	LT	NS
5	4	10	—	58	20
10	4	10	—	58	20
15	4	20	—	68	30
20	4	20	—	68	30
25	4	30	—	78	40
30	4	30	—	78	40
40	6	20	20	88	50
50	6	25	25	98	60
60	6	30	30	108	60

Dimensions: Ø20



Note 1) Refer to "Specific Product Precautions" for mounting of the Compact Slide and a workpiece.
Note 2) When changing the port location, please order a new port plug: MXH-P (2 pcs.)

Stroke (mm)	J	LA	LB	LT	NS
5	4	10	—	64	20
10	4	10	—	64	20
15	4	20	—	74	25
20	4	20	—	74	25
25	4	30	—	84	40
30	4	30	—	84	40
40	6	20	20	94	50
50	6	25	25	104	70
60	6	30	30	114	70

Auto Switch Mounting

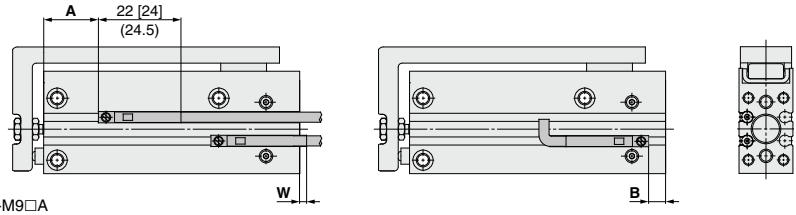
Minimum Stroke for Auto Switch Mounting

(mm)

Number of auto switches mounted	Applicable auto switch model		
	D-M9□, M9□V	**D-M9□W, M9□WV D-M9□A, M9□AV**	**D-A9□, A9□V**
1 pc.	5	5	5
2 pcs.	5	10	10

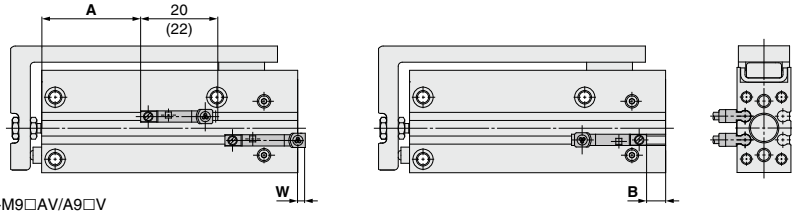
Auto Switch Proper Mounting Position (Detection at Stroke End) and Its Mounting Height

D-M9□
D-M9□W
D-M9□A
D-A9□



[ ]: Value of the D-M9□A
( ): Value of the D-A90/A93

D-M9□V
D-M9□WV
D-M9□AV
D-A9□V



( ): Value of the D-M9□AV/A9□V

(mm)

Bore size (mm)	D-M9□W, D-M9□			D-M9□WV, D-M9□V			D-M9□A			D-M9□AV			D-A9□, D-A9□V		
	A	**W**	**B**	**A**	**W**	**B**	**A**	**W**	**B**	**A**	**W**	**B**	**A**	**W**	**B**
6	16.5	7.5	2.5	16.5	5.5	2.5	16.5	9.5	2.5	16.5	7.5	2.5	12.5	3.5 (6)	—
10	15.0	2.0	7.5	15.0	0	7.5	15.0	4.0	7.5	15.0	2.0	7.5	11.0	–2.0 (0.5)	3.5
16	22.0	2.0	8.0	22.0	0	8.0	22.0	4.0	8.0	22.0	2.0	8.0	18.0	–2.0 (0.5)	4.0
20	30.0	–0.5	10.5	30.0	–2.5	10.5	30.0	1.5	10.5	30.0	–0.5	10.5	26.0	–4.5 (–2)	6.5

Note 1) Negative figures in the table W indicate that an auto switch is mounted inward from the edge of the cylinder body.
Note 2) In the case of models with 5 and 10 strokes, the auto switch may not turn off due to operating range or two auto switches may turn on simultaneously. Fix auto switches outside 1 to 4 mm further than the values in the table above. (If one auto switch is used, make sure that it turns ON and OFF properly; If two auto switches are used, make sure that both auto switches turn ON.)
Note 3) ( ) in column W denotes the D-A90/A93 dimensions.

Operating Range

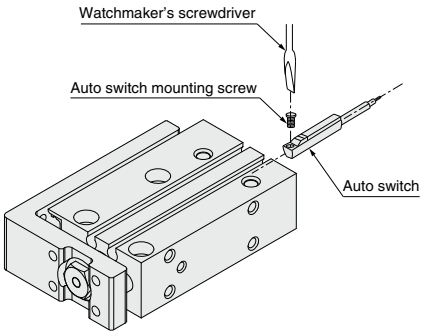
(mm)

Auto switch model	Bore size			
	6	**10**	**16**	**20**
D-M9□, M9□V D-M9□W, M9□WV D-M9□A, M9□AV	3	3.5	5	6
D-A9□, A9□V	5	6	9	11

∗ Values which include hysteresis are for guideline purposes only, they are not a guarantee (assuming approximately ±30% dispersion) and may change substantially depending on the ambient environment.

Other than the applicable auto switches listed in "How to Order", the following auto switches can be mounted.
∗ Normally closed (NC = b contact) solid state auto switches (D-F9G/F9H) are also available. Refer to page 1911 in the Best Pneumatics No.3 catalog for details.

Auto Switch Mounting



• When tightening the auto switch mounting screw, use a watchmaker's screwdriver with a handle 5 to 6 mm in diameter.

Tightening Torque of Auto Switch Mounting Screw (N·m)

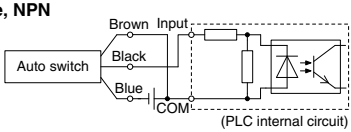
Auto switch model	Tightening torque
D-A9□(V)	0.10 to 0.20
D-M9□(V) **D-M9□W(V)** **D-M9□A(V)**	0.05 to 0.15

Note) When used with side ported type, it is not possible to mount the D-A9□V/M9□V type on the side to which the piping is connected.

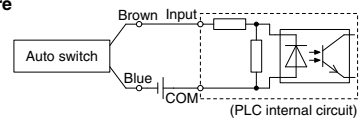
Prior to Use
Auto Switch Connection and Example

Sink Input Specifications

3-wire, NPN

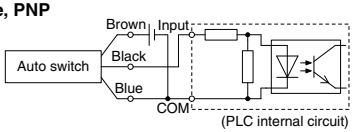


2-wire

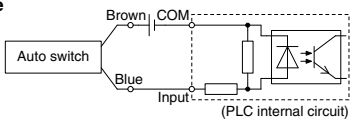


Source Input Specifications

3-wire, PNP



2-wire

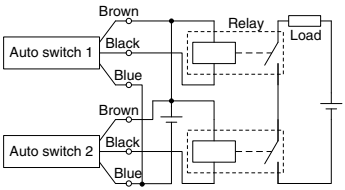


Connect according to the applicable PLC input specifications, as the connection method will vary depending on the PLC input specifications.

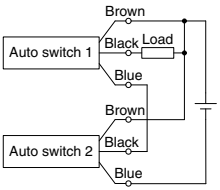
Example of AND (Series) and OR (Parallel) Connection

∗ When using solid state auto switches, ensure the application is setup so the signals for the first 50 ms are invalid.

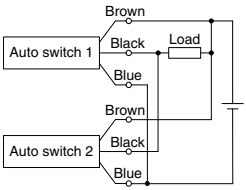
3-wire AND connection for NPN output
(Using relays)



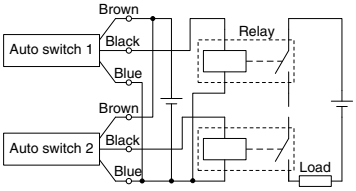
(Performed with auto switches only)



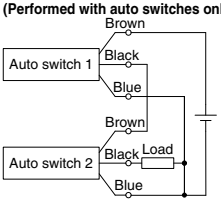
3-wire OR connection for NPN output



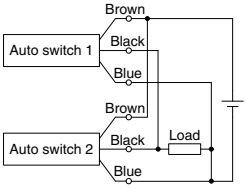
3-wire AND connection for PNP output
(Using relays)



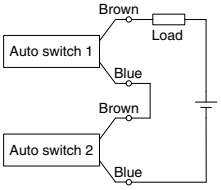
(Performed with auto switches only)



3-wire OR connection for PNP output



2-wire AND connection

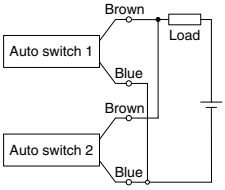


When two auto switches are connected in series, a load may malfunction because the load voltage will decline when in the ON state.
The indicator lights will light up when both of the auto switches are in the ON state.
Auto switches with load voltage less than 20V cannot be used.

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.

(Reed)
Because there is no current leakage, the load voltage will not increase when turned OFF. However, depending on the number of auto switches in the ON state, the indicator lights may sometimes grow dim or not light up, due to the dispersion and reduction of the current flowing to the auto switches.

Load voltage at OFF = Leakage current x 2 pcs. x Load impedance
= 1 mA x 2 pcs. x 3 kΩ
= 6 V

Example: Load impedance is 3 kΩ.
Leakage current from auto switch is 1 mA.

Simple Specials

These changes are dealt with Simple Specials System.

Symbol **-XC79**

1 Machining tapped hole, drilled hole and pin hole additionally

This simple special is meant for machining additionally tapped hole, drilled hole and pin hole, as requested from users, on parts designed largely for mounting a workpiece etc., in the combined air cylinders. Note that there are some areas where additional machining is not allowed, so please refer to the additional machining restriction section below.

Applicable Series and Component Parts Applicable for Additional Machining

Series		Model	Type	Component parts applicable for additional machining
MXH	Compact Slide	MXH	Standard type	Table

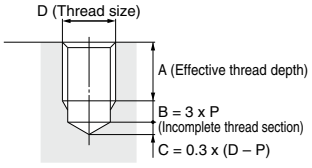
Precautions

- We cannot take any responsibility as for the intensity of holes machined additionally and the effects of decreased intensity for the product itself.
- Areas where additional machining was done will not be plated again.
- Be sure to fill in “through” for through-hole, and “effective depth” for blind hole.
- When using by machining through-hole additionally, ensure that the tip of the bolt etc., for mounting a workpiece should not stick into the cylinder side. It may result in an unexpected problem.
- Use caution not to interfere the existing mounting hole on the standard products with the hole to be machined additionally. But it is possible to drill additionally the larger size of hole at the same position as the existing hole.

Supplementary Explanation/Holes which can be additionally machined are the following 3 types.

Tapped hole

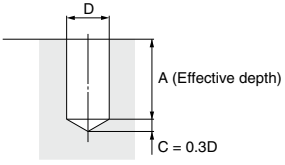
Designated nominal diameter and tapped hole of a pitch are machined additionally. (Maximum nominal thread diameter M20) Blind hole is deep into the bottom of prepared hole which sums up A to C in the figure below in contrast to the effective depth of tapped hole. When there is a condition which does not allow through-hole etc., leave sufficient thickness in the inner part of hole.



Note) P stands for thread pitch.

Drilled hole

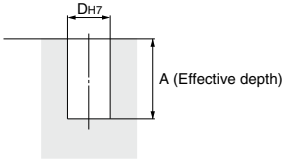
Drilled hole of a designated internal diameter is machined.
(Maximum hole diameter 20 mm)
If you wish for blind hole, instruct us with effective depth. (Refer to the figure below.)
Besides, dimensional accuracy for internal diameter will be ±0.2 mm.



Pin hole

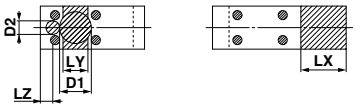
Pin hole of a designated diameter (reamer hole) is machined. (Maximum hole diameter 20 mm)
Internal dimension tolerates H7 tolerance to the designated hole diameter. (Refer to the table below.)

Hole dia.	3 or less	Over 3 to 6	Over 6 to 10	Over 10 to 18	Over 18 to 20
Tolerance	+0.01 0	+0.012 0	+0.015 0	+0.018 0	+0.021 0



Additional Machining Restriction/Since the slant lines denote the additional machining restriction section, design the dimensions, referring to below.

Table material: Aluminum



Dimensions of areas where additional machining is not allowed (mm)

Model	D1	D2	LY	LX	LZ
MXH6	11	5.8	9	20	5.5
MXH10	14	6	11	22	6.5
MXH16	18	7.5	16	29	6.5
MXH20	22	9.7	22	32	7

Made to Order

Please contact SMC for detailed dimensions, specifications and lead times.

Made to Order

Symbol
-XB13

1 Low speed cylinder (5 to 50 mm/s)

Even if driving at lower speeds 5 to 50 mm/s, there would be no stick-slip phenomenon and it can run smoothly.

How to Order

MXH | **Standard model no.** | **– XB13**

Low speed cylinder

Specifications

Piston speed	5 to 50 mm/s
Additional specifications	Same as standard type
Dimensions	Same as standard type

Note 1) Operate without lubrication from a pneumatic system lubricator.
Note 2) For speed adjustment, use speed controllers for controlling at lower speeds. (Series AS-FM/AS-M)

⚠ Warning

Operating Precautions

Be aware that smoking cigarettes etc., after your hands have come into contact with the grease used in this cylinder can create a gas that is hazardous to humans.

Symbol
-XC3

2 Special port location

Change to the standard port location

How to Order

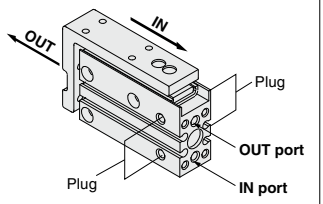
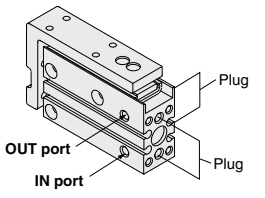
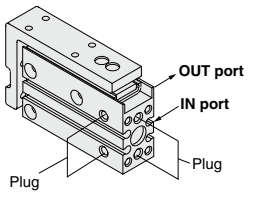
MXH | **Standard model no.** | **– XC3□**

Change of port location

Specifications: Same as standard type

The port location of a standard product is in the axial direction, and it is shipped as plugged on both sides.
However, side ported type can be ordered. A shifting of plugs is not required by users.

Relationship between Port Location and Plug Position

Standard	-XC3A	-XC3B
		

Symbol
-XC19

3 Intermediate stroke (Spacer type)

Dealing with the intermediate stroke by installing a spacer with the standard stroke cylinder

How to Order

MXH [Standard model no.] **– XC19**

Intermediate stroke (Spacer type)

Applicable Stroke (mm)

ø6, ø10, ø16, ø20	35, 45, 55

- Dealing with it by installing a 5 mm width spacer with the standard stroke cylinder
- Please contact SMC when stroke other than applicable stroke is required.

Specifications: Same as standard type

Dimensions: External dimensions are the same as standard stroke products added by 5 mm for the required stroke.

Symbol
-XC22

4 Fluororubber seal

How to Order

MXH [Standard model no.] **– XC22**

Fluororubber seal

Note 1) Please contact SMC, as the type of chemical and the operating temperature may not allow the use of this product.
Note 2) Cylinders with auto switches can also be produced; however, auto switch related parts (auto switch units, mounting brackets, built-in magnets) are the same as standard products.
Before using these, please contact SMC regarding their suitability for the operating environment.

Specifications

Seal material	Fluororubber
Ambient temperature range	Note) With auto switch: –10°C to 60°C Without auto switch: –10°C to 70°C (No freezing)
Additional specifications	Same as standard type
Dimensions	Same as standard type

Specific Product Precautions 1

Be sure to read this before handling. Refer to page 1574 for Safety Instructions, "Handling Precautions for SMC Products" and the Operation Manual for Actuator and Auto Switch Precautions. http://www.smcworld.com

Auto Switch Mounting

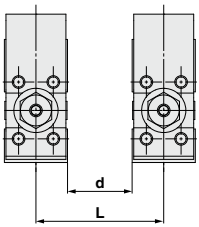
When installing in close proximity to each other

⚠ Caution

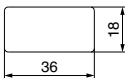
1. When the Compact Slide with the D-A9□ or D-M9□ auto switch is used, the auto switches could activate unintentionally if the installed distance is less than the dimension shown in Table (1). Therefore, make sure to provide at least this much clearance. Due to unavoidable circumstances, if they must be used with less distance than the dimensions given in the table below, the cylinders must be shielded. Therefore, affix a steel plate or a magnetic shielding plate (MU-S025) to the area on the cylinder that corresponds to the adjacent auto switch. (Please contact SMC for details.) The auto switch could activate unintentionally if a shielding plate is not used.

Table (1) (mm)

Bore size (mm)	d	L
MXH6	5	21
MXH10	5	25
MXH16	10	35
MXH20	15	47



Dimensions of a shielding plate (MU-S025) that is sold separately are indicated as reference.



Material: Ferrite stainless steel, Thickness: 0.3 mm
Since the back side is treated with adhesive, it is possible to attach to the cylinder.

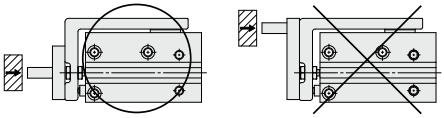
Operating Precautions

⚠ Warning

Be aware that smoking cigarettes etc., after your hands have come into contact with the grease used in this cylinder can create a gas that is hazardous to humans.

⚠ Caution

1. Do not place your fingers in the clearance between the non-rotating plate and the cylinder tube. Your fingers could get caught between the table and the cylinder tube when the piston rod retracts.
   If fingers are caught in a cylinder, there is a danger of injury due to the strong cylinder output, and therefore, caution must be exercised.
2. In terms of the work load and moment, operate the cylinder below the maximum work load and allowable moment.
3. If the output of the Compact Slide is applied directly to the table, make sure it is applied along the rod axial line. (Refer to the figure below.)



Operating Precautions

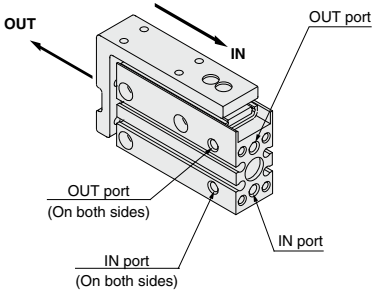
4. Make sure to connect a speed controller and adjust it to a speed of 500 mm/s or less to operate the cylinder.

5. If the vibration of the workpiece due to cylinder operation is clearly noticeable, recheck the operating conditions. Even when the moment applied to the product is under the allowable moment, the vibration width may be increased if a large amount of eccentric load is applied.

Operating Direction with Different Pressure Ports

⚠ Caution

1. The Compact Slide can be piped in 3 directions.
   Check the pressure port and the operating direction. (Refer to the figure below.)
   Change the plug location depending on the application. Confirm that there is no air leakage after changing the plug location. If there is slight leakage, remove the plug, check the seat surface and reassemble.

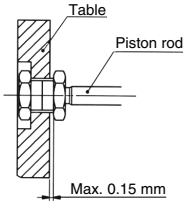


When changing the port location, please order the following plug. Replacement port plug part number: MXH-P (2 pcs.)

Backlash in the Stroke Direction

⚠ Caution

- Since the connection between the piston rod and table is a floating mechanism, the table has backlash of 0.15 mm or less in the stroke direction. (Refer to the figure below.)



Connecting part of piston rod and table

Specific Product Precautions 2

Be sure to read this before handling. Refer to page 1574 for Safety Instructions, "Handling Precautions for SMC Products" and the Operation Manual for Actuator and Auto Switch Precautions. http://www.smcworld.com

Mounting

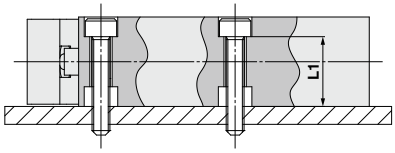
⚠ Caution

1. When tightening threads for the Compact Slide, properly tighten within the specified torque.

How to Mount the Compact Slide

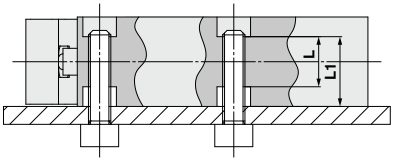
The Compact Slide can be mounted in 4 directions. Make a selection suitable for the applicable machinery and work pieces, etc.

Lateral Mounting (Body through-hole)



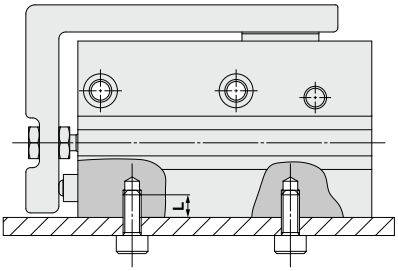
Model	Bolt	Maximum tightening torque (N·m)	**L1**
MXH6	M3 x 0.5	1.1	12.7
MXH10	M4 x 0.7	2.5	15.6
MXH16	M4 x 0.7	2.5	20.6
MXH20	M5 x 0.8	5.1	24.0

Lateral Mounting (Body thread)



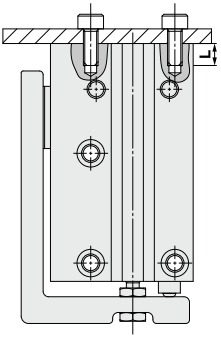
Model	Bolt	Maximum tightening torque (N·m)	**L1**	**L**
MXH6	M4 x 0.7	2.5	12.7	9.4
MXH10	M5 x 0.8	5.1	15.6	11.2
MXH16	M5 x 0.8	5.1	20.6	16.2
MXH20	M6 x 1	8.1	24.0	16.0

Vertical Mounting (Body thread)



Model	Bolt	Maximum tightening torque (N·m)	**L**
MXH6	M3 x 0.5	1.1	4.8
MXH10	M4 x 0.7	2.5	6
MXH16	M4 x 0.7	2.5	6
MXH20	M5 x 0.8	5.1	8

Axial Mounting (Body thread)



Model	Bolt	Maximum tightening torque (N·m)	**L**
MXH6	M3 x 0.5	1.1	4.8
MXH10	M4 x 0.7	2.5	6
MXH16	M4 x 0.7	2.5	6
MXH20	M5 x 0.8	5.1	8

Specific Product Precautions 3

Be sure to read this before handling. Refer to page 1574 for Safety Instructions, "Handling Precautions for SMC Products" and the Operation Manual for Actuator and Auto Switch Precautions. http://www.smcworld.com

Mounting

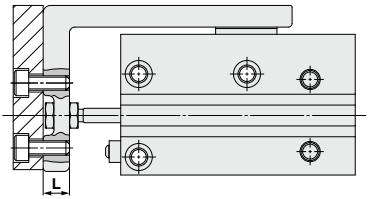
⚠ Caution

1. When tightening threads for the Compact Slide, properly tighten within the specified torque.
2. When mounting a workpiece on the top of the table, do not screw a bolt in more deeper than the below table L dimension.
   If screwing a bolt in more deeper than the L dimension, the edge of the bolt could reach the linear guide and might damage the linear guide.

How to Mount a Workpiece

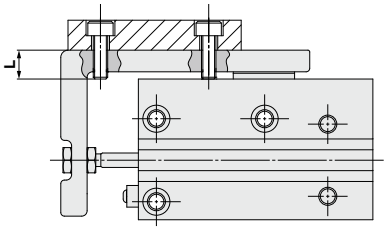
Work pieces can be mounted on 2 surfaces of the Compact Slide.

Front Mounting



Model	Bolt	Maximum tightening torque (N·m)	L
MXH6	M3 x 0.5	1.1	5.5
MXH10	M4 x 0.7	2.5	7.5
MXH16	M4 x 0.7	2.5	10
MXH20	M5 x 0.8	5.1	11

Top Mounting

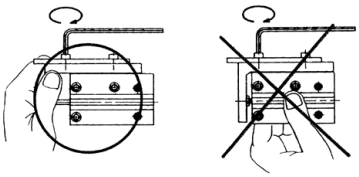


Model	Bolt	Maximum tightening torque (N·m)	L
MXH6	M3 x 0.5	1.1	6.5
MXH10	M4 x 0.7	2.5	8
MXH16	M4 x 0.7	2.5	9
MXH20	M5 x 0.8	5.1	9.5

How to Mount a Workpiece

Work pieces can be mounted on 2 surfaces of the Compact Slide.

- Since the table is supported by the linear guide, take care not to apply strong impact or large moment, etc., when mounting work pieces.
- Hold the table when fastening work pieces to it with bolts etc. If the body is held while tightening bolts etc., the guide section will be subjected to a large moment, and there may be a loss of precision.



- For connection with a load having an external support/guide mechanism, select an appropriate connection method and perform careful alignment.
- Use caution, as scratches or nicks, etc., on the sliding parts of the piston rod can cause a malfunction and air leakage.