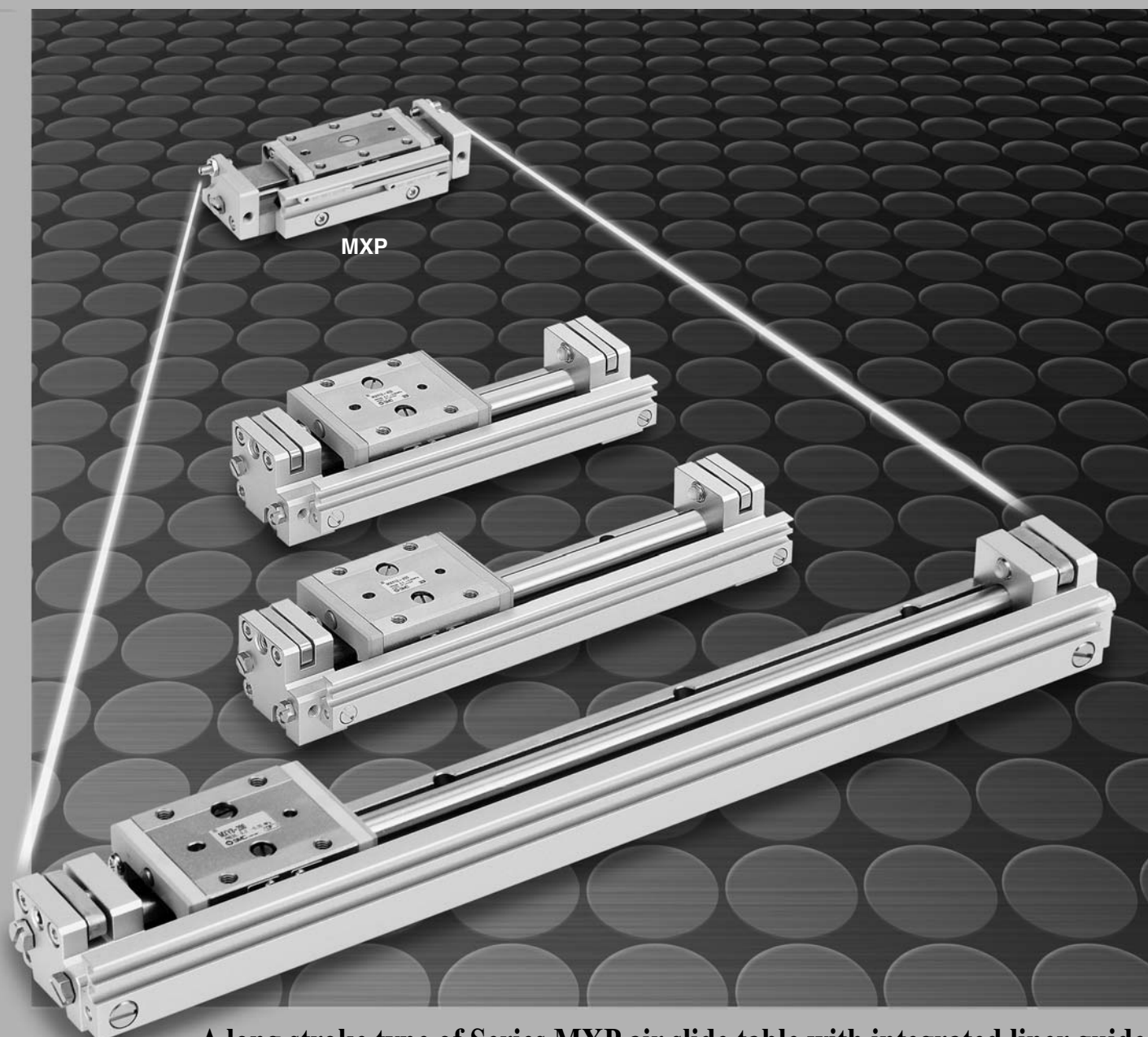


Air Slide Table/Long Stroke Type

Series *MX*Y

ø6, ø8, ø12



A long stroke type of Series MXP air slide table with integrated liner guide.

MXH

MXU

MXS

MXQ

MXF

MXW

MXJ

MXP

MXY

MTS

D-□

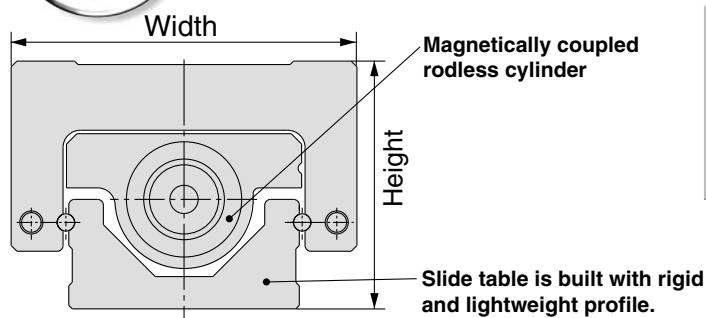
-X□

Individual
-X□

Use of linear guide provides rigid, The slide table comes with a built-in

Rigid, compact, and lightweight

Compact design with higher allowable moment compared to MXY8/MXW8



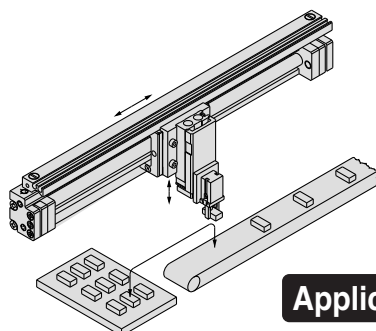
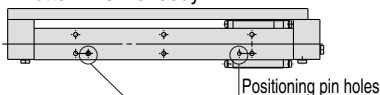
Model	Height mm	Width mm	Mass g	Allowable moment N·m	
				Pitch, Yaw	Roll
MXY8-50	25	47	420	5.7	13
MXW8-50	30	49	610	5	3
MXY/MXW	0.8 times	0.95 times	0.7 times	1.14 times	4 times

Model	Height mm	Width mm	Mass g*
MXY6	21.5	30	270
MXY8	25	38	420
MXY12	36	50	930

*Values for 50 mm stroke

Positioning pin hole

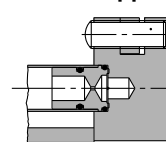
Improved mounting repeatability of the workpiece and body
<Bottom view of body>



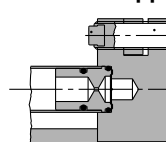
Application Example

Adjuster options

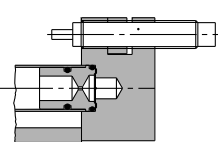
Metal stopper



Rubber stopper



Shock absorber



compact, and lightweight design. magnetically coupled rodless cylinder.

Long stroke

MXY12—Max. stroke 400 mm

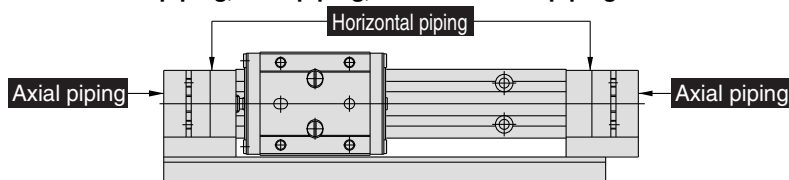
Series variations

Bore size (mm)	Stroke								Adjuster options			Function options
	50	100	150	200	250	300	350	400	Rubber stopper	Shock absorber	Metal stopper	Piping concentrated on one side of the switch rail
6												
8												
12												

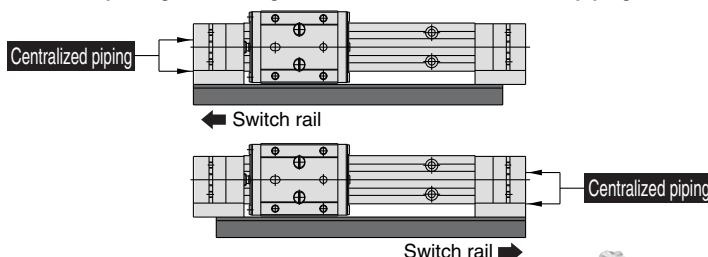
Auto switch mounting
Three types of auto switches can be mounted.
Solid state switch: M9 type
Reed switch: A9 type
2-color indication solid state switch: M9□W type

Flexible Piping

3 different piping directions are available:
Horizontal piping, axial piping, and centralized piping



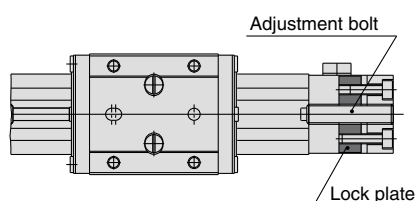
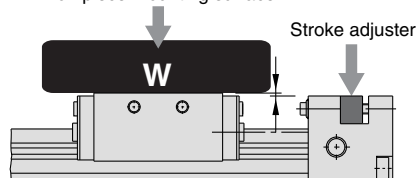
Changing the mounting position of the switch rail, which also used as an air passage can change the direction of the centralized piping.



Stroke adjuster

The stroke adjuster does not protrude from the mounting surface of the workpiece mounting surface, allowing high flexibility in workpiece mounting.

Workpiece mounting surface



Using lock plates to securely lock the adjustment bolt with minimal force.

Series MXP

Compact air slide table that comes with linear guide with built-in cylinder.

Series	Stroke (mm)						Stroke adjusters			Auto switch
	5	10	15	20	25	30	Rubber stopper	Metal stopper	Shock absorber	
MXP 6										
MXP 8										
MXP10										
MXP12										
MXP16										

MXH

MXU

MXS

MXQ

MXF

MXW

MXJ

MXP

MXY

MTS

D-□

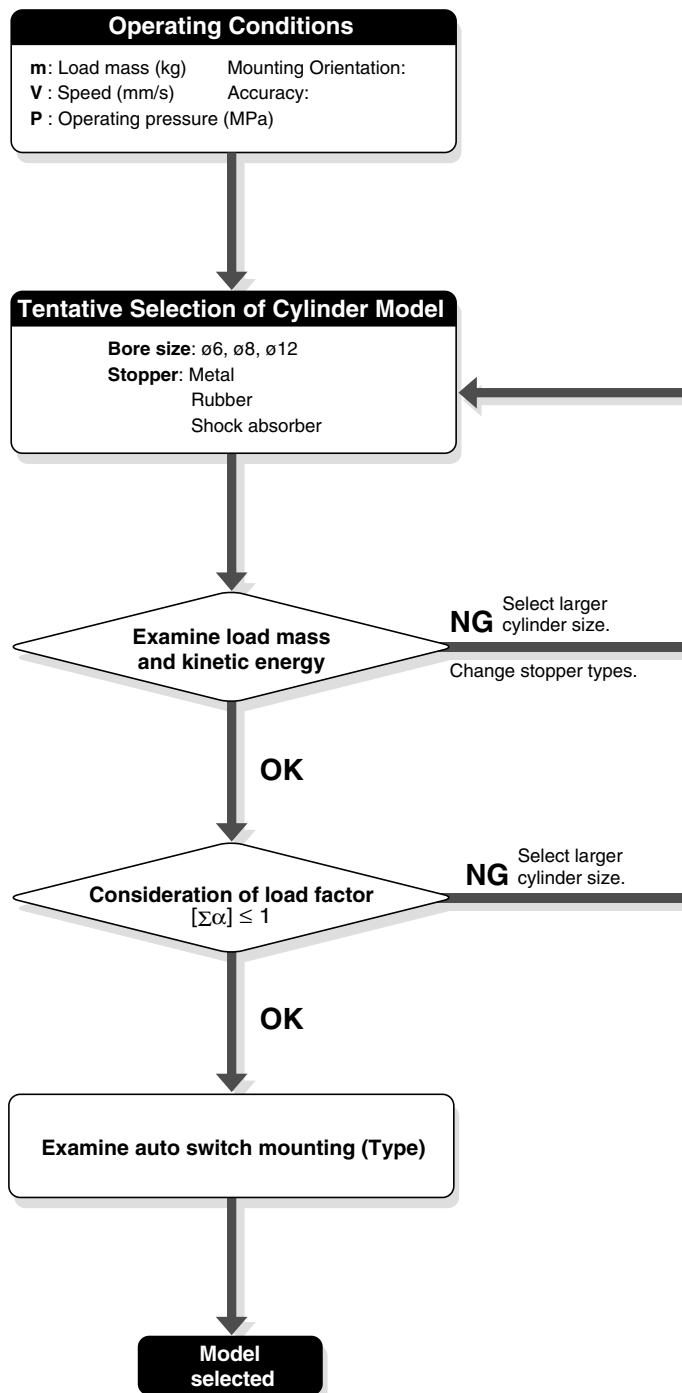
-X□

Individual
-X□

Model Selection 1

The following are the steps for selection of the series MXY best suited to your application,

Conditions and Calculation Flow for Selection



MXH

MXU

MXS

MXQ

MXF

MXW

MXJ

MXP

MXY

MTS

D-□

-X□

Individual
-X□

Series MXY

Model Selection 2

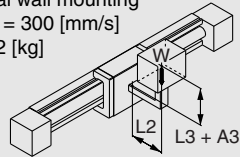
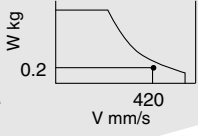
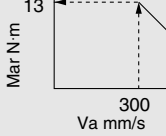
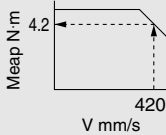
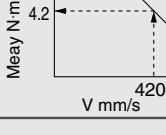
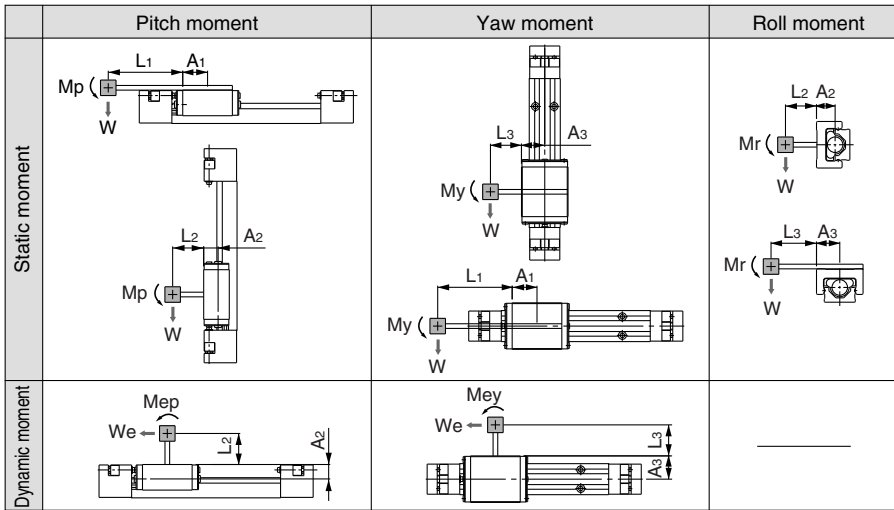
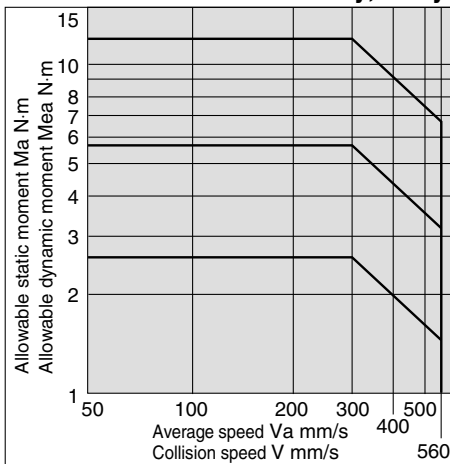
Model Selection Step	Formula/Data	Selection Example
1 Operating Conditions Enumerate the operating conditions considering the mounting position and workpiece configuration.	- Model to be used - Type of cushion - Mounting orientation - Average speed V_a (mm/s) - Load mass W (kg) - Overhang L_n (mm)	Cylinder: MXY8-100 Cushion: Rubber stopper Mounting: Horizontal wall mounting Average speed: $V_a = 300$ [mm/s] Load mass: $W = 0.2$ [kg] $L_2 = 40$ mm $L_3 = 50$ mm 
2 Load Mass Find the collision speed V (mm/S) Confirm that the load mass W (kg) does not exceed the value in the graph.	$V = \frac{1.4 \cdot V_a}{*}$ * Correction factor (Reference value) Graph (1)	$V = 1.4 \times 300 = 420$ Confirm that $V = 420$ and $W = 0.2$ do not exceed the values in Graph (1). Applicable because it does not exceed the value in Graph (1). 
3 Load Factor		
3-1 Load Factor of Static Moment Find the static moment M (N·m). Find the allowable static moment M_a (N·m). Find the load factor α_1 of the static moment.	$M = W \times 9.8 (L_n + A_n)/1000$ Corrected value of moment center position distance A_n : Table (1) Pitch, Yaw moment: Graph (2) Roll moment: Graph (3) $\alpha_1 = M/M_a$	Examine M_r . $M_r = 0.2 \times 9.8 (40 + 15.5)/1000 = 0.1$ $A_2 = 15.5$ Obtain $M_{ar} = 13$ from $V_a = 300$ in Graph (3). $\alpha_1 = 0.1/13 = 0.008$ 
3-2 Load Factor of Dynamic Moment Find the dynamic moment M_e (N·m). Find the allowable dynamic moment M_{ea} (N·m). Find the load factor α_2 of the dynamic moment.	$M_e = 1/3 \cdot W_e \times 9.8 (L_n + A_n)/1000$ Mass equivalent to impact $W_e = \delta \cdot W \cdot V$ δ : Bumper coefficient Rubber stopper screw: 4/100 Shock absorber: 1/100 Metal stopper screw: 16/100 Corrected value of moment center position distance A_n : Table (1) Pitch, yaw moment: Graph (2) $\alpha_2 = M_e/M_{ea}$	Examine M_{ep} . $M_{ep} = 1/3 \times 3.36 \times 9.8 \times (40+15.5)/1000 = 0.61$ $W_e = 4/100 \times 0.2 \times 420 = 3.36$ $A^2 = 15.5$ Obtain $M_{eap} = 4.2$ from $V = 420$ in Graph (2). $\alpha_2 = 0.61/4.2 = 0.15$  Examine M_{ey} . $M_{ey} = 1/3 \times 3.36 \times 9.8 \times (50+19)/1000 = 0.76$ $W_e = 3.36$ $A^3 = 19$ Obtain $M_{eay} = 4.2$ from $V = 420$ in Graph (2). $\alpha_2' = 0.76/4.2 = 0.18$ 
3-3 Sum of the Load Factors Use is possible if the sum of the load factors does not exceed 1.	$\alpha_1 + \alpha_2 < 1$	$\alpha_1 + \alpha_2 + \alpha_2' =$ Applicable because $0.008 + 0.15 + 0.18 = 0.34 < 1$

Fig. (1) Overhang: L_n (mm), Correction Value of Moment Center Position Distance: A_n (mm)


Note) Static moment: Moment generated by gravity
Dynamic moment: Moment generated by impact when colliding with stopper

Graph (2) Allowable Moment
Pitch Moment: M_{ap} , M_{eap}
Yaw Moment: M_{ay} , M_{eay}


Note) Use the average speed when calculating static moment.
Use the collision speed when calculating dynamic moment.

Table (1) Correction Value of Moment Center Position Distance: A_n (mm)

Model	Corrected value of moment center position distance (Refer to Figure 2.)		
	A_1	A_2	A_3
MX6	16	14	15
MX8	20	15.5	19
MX12	26	23.5	25

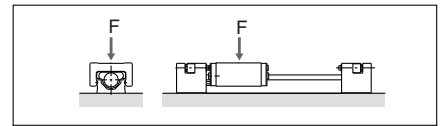
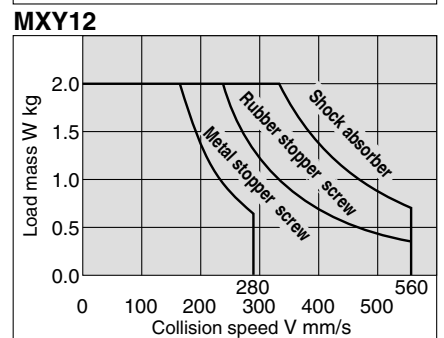
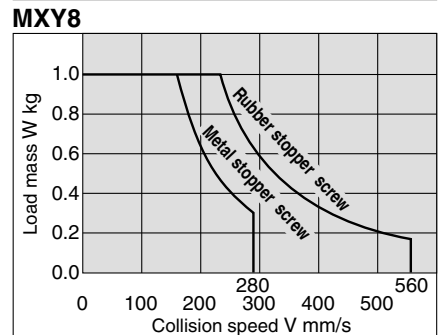
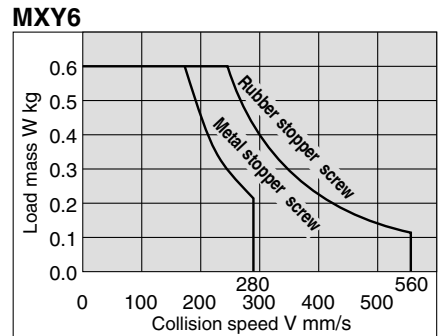
Table (3) Maximum Allowable Moment: M_{max} (N·m)

Model	Pitch/Yaw moment: M_{pmax}/M_{ymax}	Roll moment: M_{rmax}
MX6	2.6	6.2
MX8	5.7	13
MX12	12	28

The above value represents the maximum value of allowable moment. For the maximum allowable moment for each piston speed, please refer to Graph (2) and (3).

Symbol

Symbol	Definition	Unit	Symbol	Definition	Unit
A_n ($n = 1$ to 3)	Corrected value of moment center position distance	mm	F	Allowable static load	N
L_n ($n = 1$ to 3)	Overhang	mm	V	Collision speed	mm/s
M (M_p, M_y, M_r)	Static moment (pitch, yaw, roll)	N·m	V_a	Average speed	mm/s
M_a (M_{ap}, M_{ay}, M_{ar})	Allowable static moment (pitch, yaw, roll)	N·m	W	Load mass	kg
M_e (M_{ep}, M_{ey})	Dynamic moment (pitch, yaw)	N·m	W_a	Allowable load mass	kg
M_{ea} (M_{eap}, M_{eay})	Allowable dynamic moment (pitch, yaw)	N·m	W_{max}	Max. allowable load mass	kg
M_{max} ($M_{pmax}, M_{ymax}, M_{rmax}$)	Max. allowable moment (pitch, yaw, roll)	N·m	α	Load factor	—

Fig. (2) Allowable Static Load: F (N)

Graph (1) Load Mass: W

Table (4) Allowable Static Load: F (N)

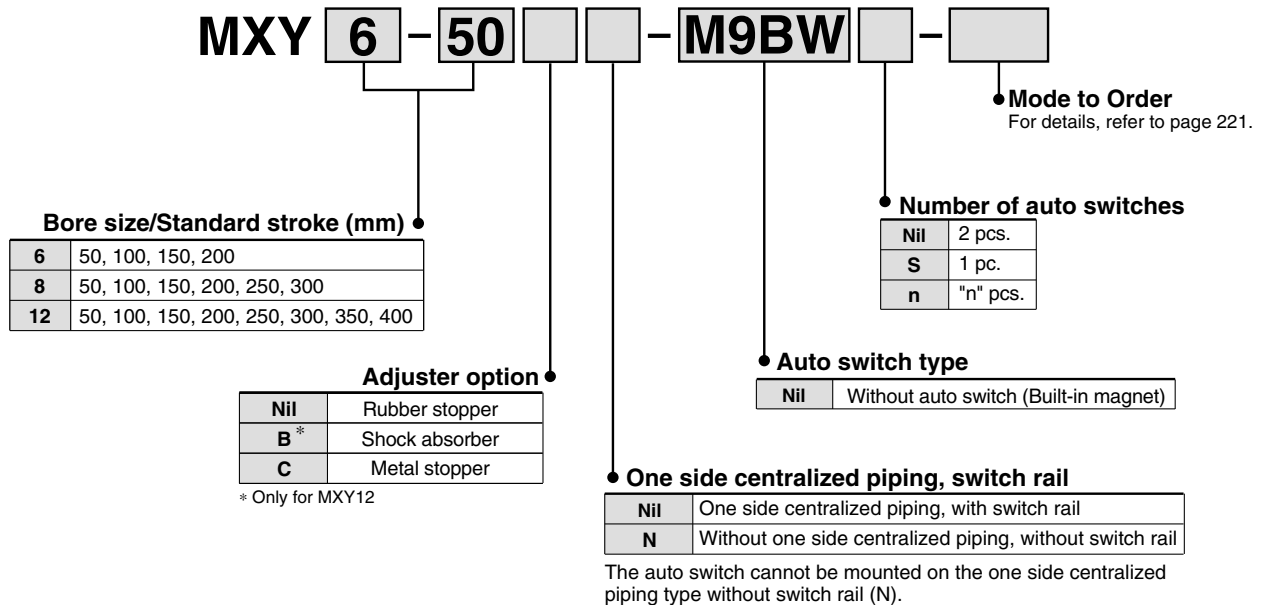
Model	Allowable static load
MX6	580
MX8	980
MX12	1600

The above value represents the applicable load at the position where the moment does not work at the time of stop. Factors such as impact, etc. are not in consideration with the value.

Air Slide Table Long Stroke Type Series MXY

ø6, ø8, ø12

How to Order



Applicable Auto Switch/Refer to pages 1719 to 1827 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)				Pre-wired connector	Applicable load			
					DC		AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)		5 (Z)			
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV	M9N	●	●	●	○	○	IC circuit	Relay PLC	
	3-wire (PNP)			M9PV				M9P	●	●	●	○	○				
	2-wire			M9BV				M9B	●	●	●	○	○	—			
	3-wire (NPN)			5 V, 12 V		M9N WV		M9N W	●	●	●	○	○	IC circuit			
	3-wire (PNP)					M9P WV		M9P W	●	●	●	○	○				
	2-wire					M9B WV		M9B W	●	●	●	○	○		—		
Reed switch	—	Grommet	Yes	3-wire (NPN equiv.)	—	5 V	—	A96V	A96	●	—	●	—	—	IC circuit	—	
				No	2-wire	24 V	12 V	100 V	A93V	A93	●	—	●	—	—	—	—
								100 V or less	A90V	A90	●	—	●	—	—	—	IC circuit

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

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

* Refer to page 225 for applicable auto switches in addition to those listed above.

* For details on auto switches with a pre-wired connector, refer to pages 1784 and 1785.

* Auto switches are shipped together (not assembled).



Specifications

Model		MXY6	MXY8	MXY12
Bore size (mm)		6	8	12
Port size		M5 x 0.8		
Fluid		Air		
Action		Double acting (type)		
Operating pressure		0.2 to 0.55 MPa		
Proof pressure		0.83 MPa		
Ambient and fluid temperature		−10 to 60°C		
Piston speed		50 to 400 mm/S Metal stopper: 50 to 200 mm/S		
Cushion		Rubber bumper Shock absorber (option, not available on MXY6, MXY8) None (with metal stopper)		
Lubrication		Non-lube (equipment), unlubricated		
Stroke adjuster		Standard		
Stroke adjustment range	Rubber stopper	One side 0 to 5 mm		
	Shock absorber	—	—	One side 0 to 15 mm
	Metal stopper	One side 0 to 5 mm		
Auto switch		Reed auto switches (2-wire, 3-wire) Solid state auto switches (2-wire, 3-wire) 2-color display solid state auto switches (2-wire, 3-wire)		
Stroke length tolerance		+ ₀ mm		

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

Theoretical Output

(N)

Cylinder bore (mm)	Piston area (mm ²)	Operating pressure (MPa)				
		0.2	0.3	0.4	0.5	0.55
6	28	6	8	11	14	15
8	50	10	15	20	25	28
12	113	23	34	45	57	62



Made to Order Specifications
(Refer to pages 1955 to 2021 for details.)

Symbol	Specifications
-X7	PTFE grease
-X9	Grease for food
-X11	Adjusting bolt, long specification (Adjustment range: 15 mm)
-X12	Adjusting bolt, long specification (Adjustment range: 25 mm)
-X39	Fluororubber seal
-X42	Anti-corrosive guide unit
-X45	EPDM seal

Standard Stroke

(mm)

Model	Standard stroke
MXY6	50, 100, 150, 200
MXY8	50, 100, 150, 200, 250, 300
MXY12	50, 100, 150, 200, 250, 300, 350, 400

Magnetic Holding Force

(N)

Model	Magnetic holding force
MXY6	19
MXY8	34
MXY12	77

Mass

(g)

Model	One side centralized piping, with switch rail								One side centralized piping, without switch rail							
	Stroke (mm)								Stroke (mm)							
	50	100	150	200	250	300	350	400	50	100	150	200	250	300	350	400
MXY6	270	330	390	450	—	—	—	—	230	280	330	380	—	—	—	—
MXY8	420	510	600	690	780	870	—	—	410	480	550	620	690	760	—	—
MXY12	930	1060	1190	1320	1450	1580	1710	1840	910	1020	1130	1240	1350	1460	1570	1680

D-☐

-X☐

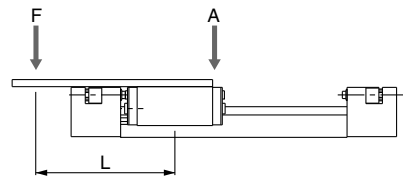
Individual
-X☐

Table Deflection (Reference Values)

The graphs below show the table displacement when the static moment load is applied to the table. The graphs do not show the loadable mass. Refer to the Model Selection for the loadable mass.

Table deflection due to pitch moment load

Displacement at "A" when load is applied "F"



L dimension	mm
MX Y6	100
MX Y8	100
MX Y12	140

Pitch moment

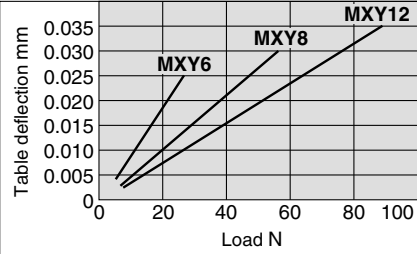
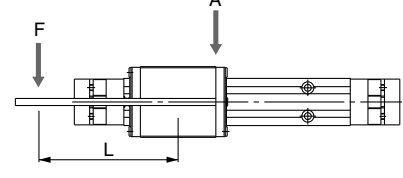


Table deflection due to yaw moment load

Displacement at "A" when load is applied "F"



L dimension	mm
MX Y6	100
MX Y8	100
MX Y12	140

Yaw moment

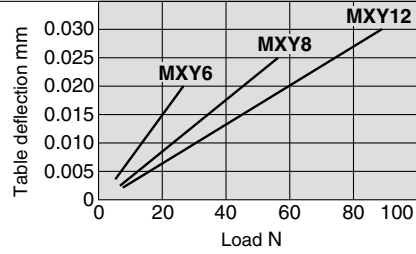
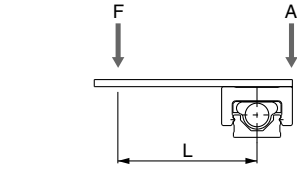


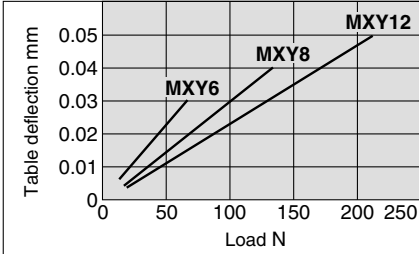
Table deflection due to roll moment load

Displacement at "A" when load is applied "F"

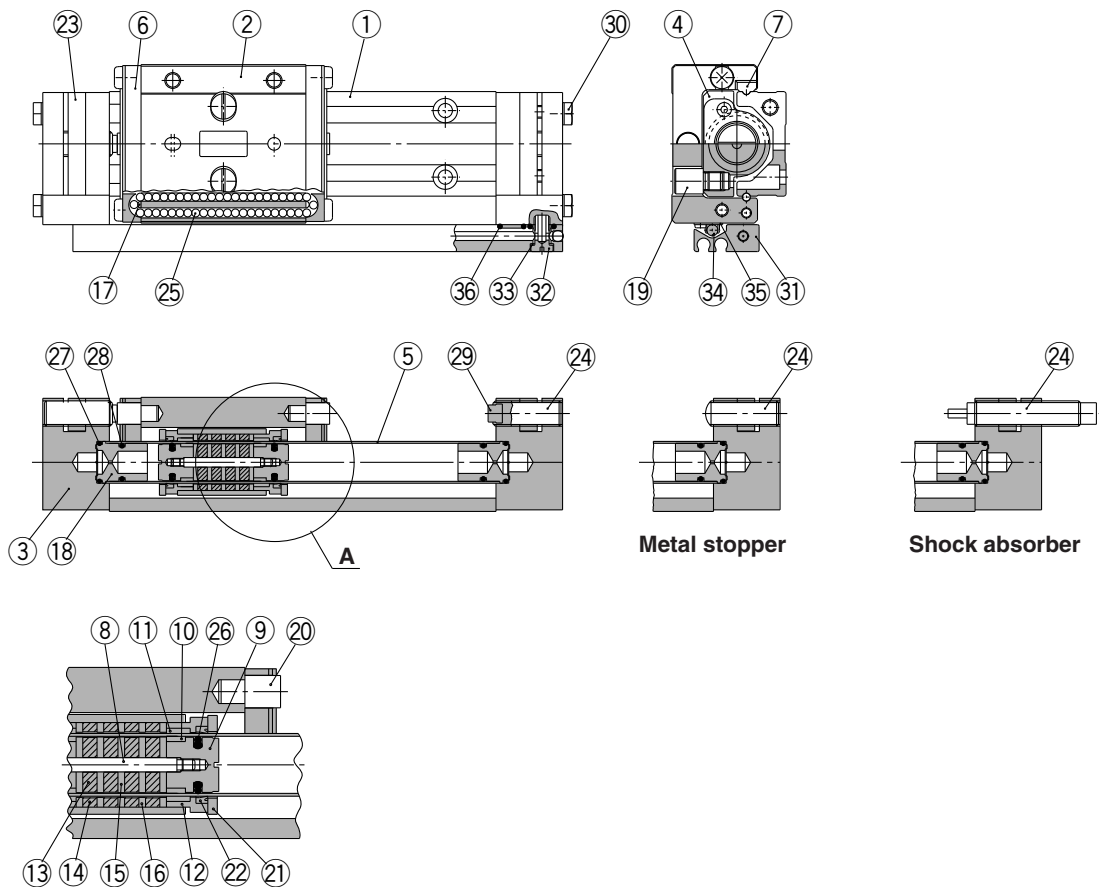


L dimension	mm
MX Y6	100
MX Y8	100
MX Y12	140

Roll moment



Construction



Detail drawing of part A

Component Parts

No.	Description	Material	Note
1	Rail	Stainless steel	Heat treatment, electroless nickel plated
2	Guide block	Stainless steel	Heat treatment, electroless nickel plated
3	End plate	Aluminium alloy	Hard anodized
4	Body	Aluminium alloy	Hard anodized
5	Tube	Stainless steel	
6	Cover	Resin	
7	Scraper	Stainless steel, NBR	
8	Shaft	Stainless steel	
9	Piston	Brass	Electroless nickel plated
10	Wear ring A	Resin	
11	Wear ring B	Resin	
12	Spacer	Brass	Electroless nickel plated
13	Magnet A	—	Nickel plated
14	Magnet B	—	Nickel plated
15	Yoke A	Steel	Electroless nickel plated
16	Yoke B	Steel	Electroless nickel plated
17	Return guide	Resin	
18	End cap	Resin	
19	Stud	Stainless steel	Heat treatment

No.	Description	Material	Note
20	Stopper screw	Stainless steel	Heat treatment
21	External magnet fix plate	Stainless steel	
22	Cylinder scraper	NBR	
23	Lock plate	Stainless steel	
24	Adjustment bolt	Steel	Nickel plated Rubber stopper
	Shock absorber	Stainless steel	Metal stopper
25	Steel ball	Copper	
26	Piston seal	NBR	
27	O-ring	NBR	
28	O-ring	NBR	Rubber stopper
29	Adjustment bumper	Polyurethane	
30	Plug	Brass	Electroless nickel plated
31	Switch rail	Aluminium alloy	Hard anodized
32	Stud	Brass	Electroless nickel plated
33	Gasket	NBR	
34	Magnet	—	Electroless nickel plated
35	Magnet holder	Steel	
36	O-ring	NBR	

Replacement Parts

Bore size (mm)	Kit no.	Contents
6	MXY6-PS	Set consists of 2 pieces of above ⑩, ⑪, ⑫ and ⑳ each.
8	MXY8-PS	
12	MXY12-PS	

Replacement Parts: Grease Pack

Grease pack part no.
GR-S-005(5g)
GR-S-010(10g)
GR-S-020(20g)
GR-S-050(50g)

MXH

MXU

MXS

MXQ

MXF

MXW

MXJ

MXP

MXY

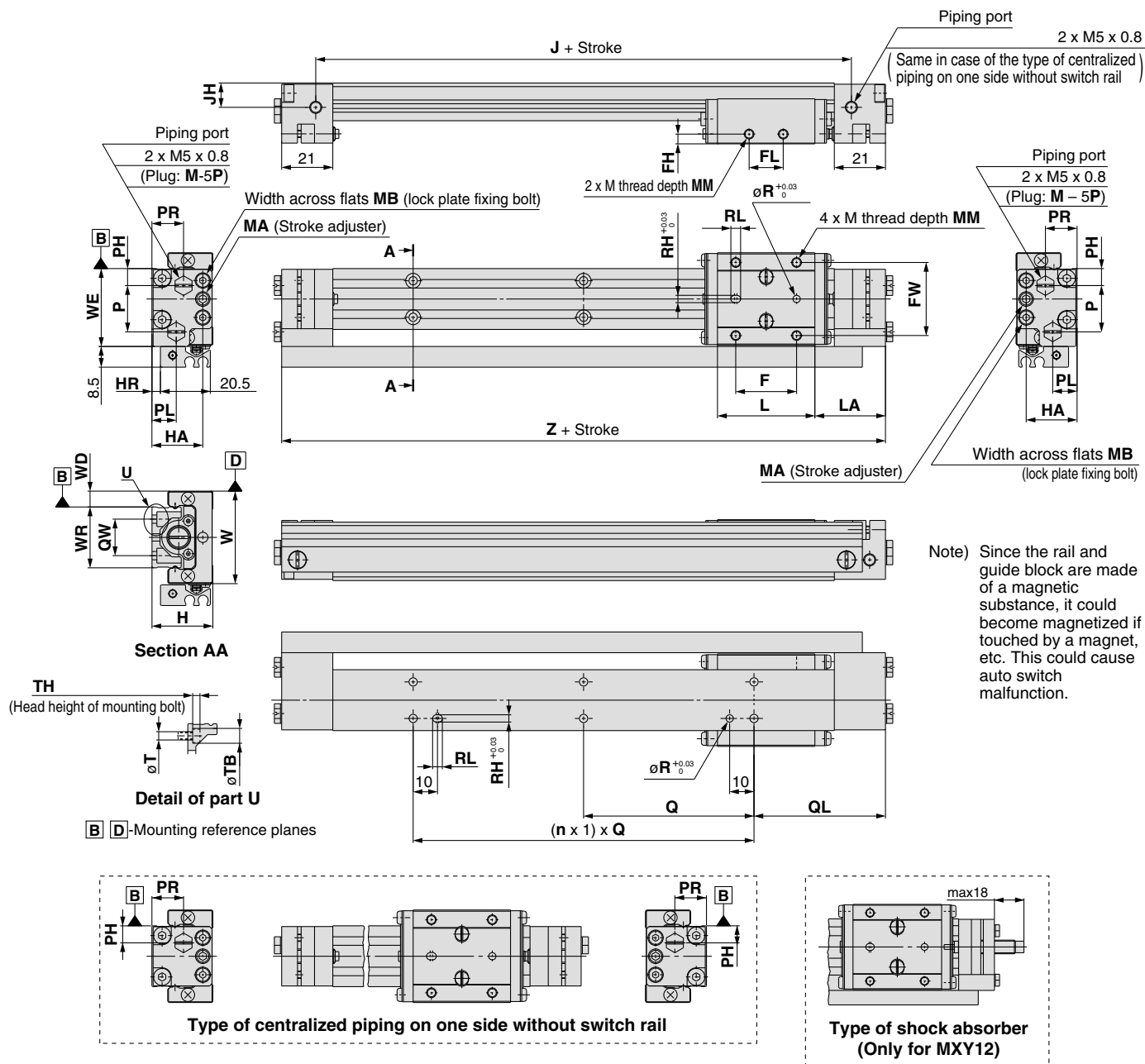
MTS

D-□

-X□

Individual
-X□

Dimensions



Model	F	FH	FL	FW	H	HA	HR	J	JH	L	LA	M	MM	MA	MB
MXY6	20	3	12	24	21.5	18	0.5	60	8.5	32	28	M3 x 0.5	4	M5 x 0.8 (Width across flats 2.5)	2
MXY8	25	4	14	30	25	20.9	3.5	70	10	40	29	M4 x 0.7	5	M6 x 1 (Width across flats 3)	2.5
MXY12	32	5	18	40	36	30.9	8.5	86	15	52	31	M5 x 0.8	6	M8 x 1 (Width across flats 4)	3

Model	P	PH	PL	PR	Q	QW	R	RH	RL	T	TB	TH	W	WD	WE	WR	Z
MXY6	13	7	9	11	60	12	3(depth 3)	3(depth 3)	4	2.9	5.1	2.5	30	5	25.5	20	88
MXY8	19	7	10	13	70	15	3(depth 3)	3(depth 3)	4	3.4	6.1	3	38	6.5	32	25	98
MXY12	29	7	13	18	90	21	4(depth 4)	4(depth 4)	5	4.5	7.8	4	50	8.5	42	33	114

Model	n								QL							
Stroke	50	100	150	200	250	300	350	400	50	100	150	200	250	300	350	400
MXY6	2	3	3	4	—	—	—	—	39	34	59	54	—	—	—	—
MXY8	2	2	3	4	5	5	—	—	39	64	54	44	34	59	—	—
MXY12	2	2	3	3	4	4	5	5	37	62	42	67	47	72	52	77

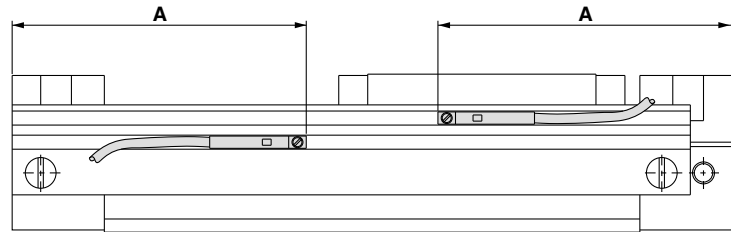
Auto Switch Proper Mounting Position (Detection at Stroke End)

Reed Auto Switch

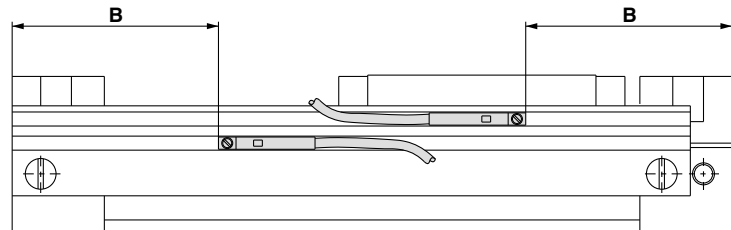
D-A90(V), D-A93(V), D-A96(V) (mm)

Model	Mounting	Auto switch operating range
MXY6	A	54
	B	34
MXY8	A	59
	B	39
MXY12	A	67
	B	47

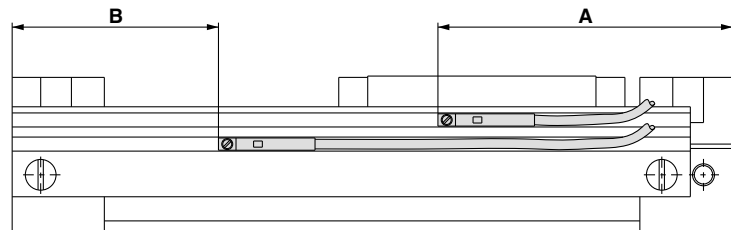
Lead wire entries outside



Lead wire entries inside



Lead wire entries parallel



Solid State Auto Switch

D-M9B(V), D-M9N(V), D-M9P(V) (mm)

Model	Mounting	Auto switch operating range
MXY6	A	50
	B	38
MXY8	A	55
	B	43
MXY12	A	63
	B	51

2-Color Display Solid State Auto Switch

D-M9BW(V), D-M9NW(V), D-M9PW (mm)

Model	Mounting	Auto switch operating range
MXY6	A	50
	B	38
MXY8	A	55
	B	43
MXY12	A	63
	B	51

* Adjust the auto switch after confirming the operating conditions in the actual setting.

MXH

MXU

MXS

MXQ

MXF

MXW

MXJ

MXP

MXY

MTS

Auto Switch Mounting

⚠ Caution

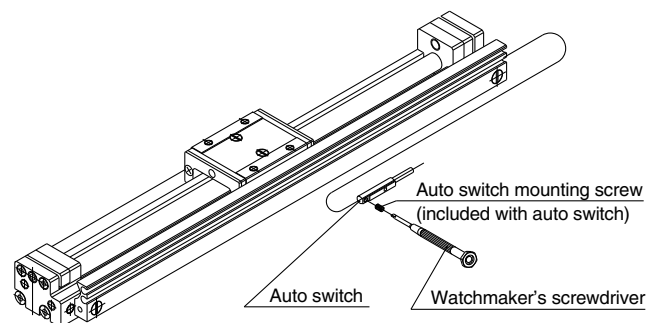
Auto Switch Mounting Tool

- When tightening the auto switch mounting screw (included with auto switch), use a watchmaker's screwdriver with a handle diameter of about 5 to 6 mm.

Tightening Torque

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)	0.05 to 0.15



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 types) and a solid state auto switch (D-F8) are also available. Refer to pages 1745 and 1746 for details.

D-□

-X□

Individual
-X□



Series MXY Specific Product Precautions 1

Be sure to read before handling.

Refer to front matters 42 and 43 for Safety Instructions and pages 3 to 11 for Actuator and Auto Switch Precautions.

Selection

⚠ Caution

1. Use a load within a range that does not exceed the operating limit.

Select models based on the maximum load weight and the allowable moment. Refer to model selection on pages 217 to 219 for detailed methods. If operated beyond the operating limit, the eccentric load applied to the guide section will be excessive. This can have an adverse effect on service life due to vibration in the guide unit and loss of accuracy, etc.

2. When performing intermediate stops with an external stopper, employ measures to prevent lurching.

If lurching occurs damage can result. When making a stop with an external stopper to be followed by continued forward movement, first supply pressure to momentarily reverse the table, then retract the intermediate stopper, and finally apply pressure to the opposite port to operate the table again.

3. In vertical operation, it is not possible to stop the piston at an intermediate position using a closed center solenoid valve, etc.

In vertical operation, it is not possible to stop the piston at an intermediate position using a closed center solenoid valve because it can cause dislocation of the magnet coupling. The only available option in such cases is use of an external stopper for an intermediate stop.

4. When stopping the piston using a closed center solenoid valve in horizontal operation, do not allow the kinetic energy exceed the allowable kinetic energy.

When stopping the piston using a closed center solenoid valve in horizontal operation, do not allow the kinetic energy of the load to exceed the values shown below. If the allowable value is exceeded, it can cause dislocation of the magnet coupling.

Model	Allowable kinetic energy for intermediate stop (J)
MXY6	0.007
MXY8	0.014
MXY12	0.047

5. Do not operate in such a way that excessive external forces or impact forces are applied to the product.

This can cause damage.

6. Be careful in an application which requires precision in the middle of a stroke.

If straightness is required in the middle of a stroke, fix the entire rail mounting surface on the base.

Mounting

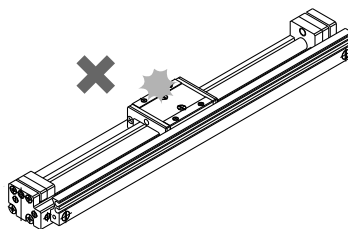
⚠ Caution

1. Do not scratch or gouge the mounting surfaces of the body, table and end plate.

This can cause loss of parallelism in the mounting surfaces, vibration in the guide unit and increased operating resistance, etc.

2. Do not scratch or gouge the transfer surfaces of the rail and guide.

This can cause vibration and increased operating resistance, etc.



3. Do not apply strong impacts or excessive moment when mounting workpieces.

Application of external forces greater than the allowable moment can cause vibration in the guide unit and increased operating resistance, etc.

4. Ensure that the parallelism of the mounting surface is 0.02 mm or less.

Poor parallelism of the workpiece mounted on the body, the base, and other parts can cause vibration of the guide unit and increased operating resistance, etc.

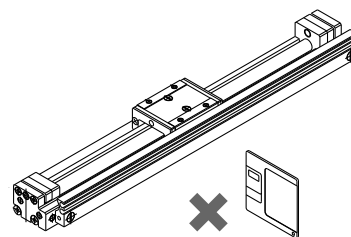
Mounting

⚠ Caution

5. For connection to a load that has an external support or guide mechanism, select an appropriate connection method and perform careful alignment.

6. Keep away objects which can be influenced by magnets.

A magnet is built inside the body or, in case of a type with auto switch, on the side of the guide lock. Please keep away magnetic disks, cards or tapes. Otherwise, the data can be deleted.



7. Do not attach magnets to the rail and guide block.

Since the body and table (guide block) are made of a magnetic substance, it could become magnetized if touched by a magnet, etc. This could cause auto switch malfunction.



Series MXY

Specific Product Precautions 2

Be sure to read before handling.

Refer to front matters 42 and 43 for Safety Instructions and pages 3 to 11 for Actuator and Auto Switch Precautions.

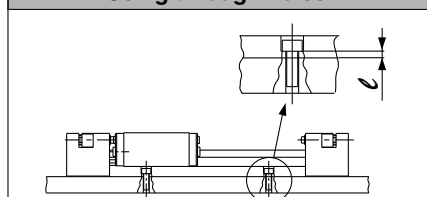
Mounting

⚠ Caution

8. When mounting the body, use screws of an appropriate length and do not exceed the maximum tightening torque.

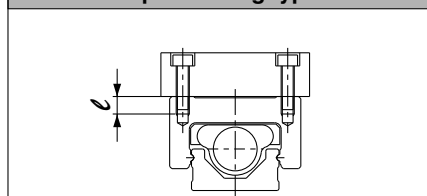
Tightening with a torque above the limit could cause malfunction. Whereas tightening insufficiently could result in misalignment or dropping.

Using through holes



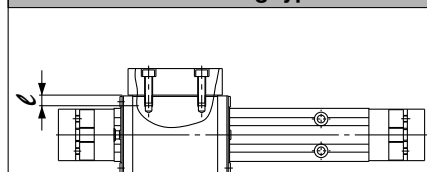
Model	Bolt	Max. tightening torque N·m	Rail thickness ℓ (mm)
MX6	M2.5 x 0.45	0.65	1.5
MX8	M3 x 0.5	1.14	2
MX12	M4 x 0.7	2.7	2

Top mounting type



Model	Bolt	Max. tightening torque N·m	Max. screw-in depth ℓ (mm)
MX6	M3 x 0.5	1.14	3
MX8	M4 x 0.7	2.7	4
MX12	M5 x 0.8	5.4	5

Side mounting type



Model	Bolt	Max. tightening torque N·m	Max. screw-in depth ℓ (mm)
MX6	M3 x 0.5	1.14	3
MX8	M4 x 0.7	2.7	4
MX12	M5 x 0.8	5.4	5

9. Be careful not to bruise the outer surface of the cylinder tube. If can damage the scraper and wear ring and result in malfunction.

10. Make sure that the magnet coupling is in position when operating.

In case it is displaced, please return it to the right position by pushing the external mover by hand (or pushing the piston mover with air pressure).

11. In vertical operation, be careful about dislocation of the magnet coupling.

Note that the mover may drop off due to dislocation of the magnet coupling if pressure or load beyond the specification is applied.

12. The positioning holes on the top surface of the guide block and those on the bottom of the rail are not aligned.

These holes are used when re-mounting the same product after having removed it for maintenance.

Operating Environment

⚠ Caution

1. Do not use in environments where there is direct exposure to liquids such as cutting oil.

Operation in environments where the body is exposed to cutting oil, coolant or oil mist can cause vibration, increased operating resistance and air leakage, etc.

2. Do not use in environments where there is direct exposure to foreign matter such as dust, dirt, chips and spatter.

This can cause vibration, increased operating resistance and air leakage, etc.

Do not use the product in the following conditions.

3. Provide shade in locations exposed to direct sunlight.

4. Block off sources of heat located near by.

When there are heat sources in the surrounding area, radiated heat may cause the product's temperature to rise and exceed the operating temperature range. Block off the heat with a cover, etc.

Operating Environment

⚠ Caution

5. Do not use in locations where vibration or impact occurs.

Do not use the product in such an environment as is can result in damage or malfunction.

6. Be careful about the corrosion resistance of the linear guide.

Be careful the rail and guide block use martensitic stainless steel, which is inferior to austenitic stainless steel in terms of corrosion resistance. Rust may result especially in an environment that allows water drops from condensation to stay on the surface.

Handling of Adjuster Options

Stroke adjuster

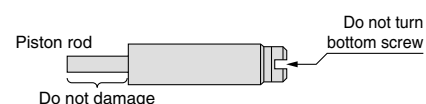
⚠ Caution

1. Do not replace the special adjusting bolt with other bolts.

This may cause looseness and damage due to impact forces, etc.

2. Use the tightening torque in the table below for the lock nut.

Insufficient torque will cause a decrease in the positioning accuracy.



Service Life and Replacement Period of Shock Absorber

⚠ Caution

1. Allowable operating cycle under the specifications set in this catalog is shown below.

1.2 million cycles RB08□□

Note) Specified service life (suitable replacement period) is the value at room temperature (20 to 25°C). The period may vary depending on the temperature and other conditions. In some cases the absorber may need to be replaced before the allowable operating cycle above.

Applicable size	Shock absorber model
MX12	RB0806

MXH

MXU

MXS

MXQ

MXF

MXW

MXJ

MXP

MXV

MTS

D-□

-X□

Individual
-X□



Series MXY Specific Product Precautions 3

Be sure to read before handling.

Refer to front matters 42 and 43 for Safety Instructions and pages 3 to 11 for Actuator and Auto Switch Precautions.

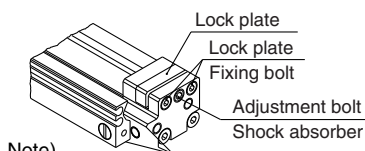
Stroke Adjustment

⚠ Caution

1. Adjustment method

Loosen the 2 lock plate fixing bolts (or shock absorbers) and rotate the adjustment bolt (or shock absorber) to adjust the stroke. Then tighten the lock plate fixing bolts evenly to secure the adjustment bolt (or shock absorber). Be careful not to tighten the lock plate adjusting bolts too firmly.

Model	Tightening torque of lock plate fixing bolt
MXY6	0.1 N·m
MXY8	0.2 N·m
MXY12	0.4 N·m



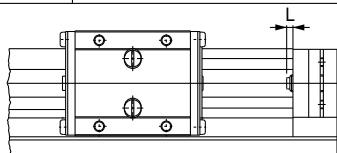
Note)

The lock plate may bend slightly due to tightening of the lock plate fixing bolts but it will not affect the adjustment bolt or shock absorber that has been secured.

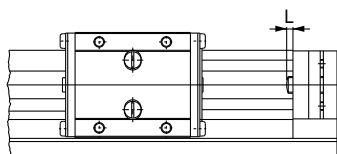
2. Adjustment range

Adjust the stroke within the range where the stopper or shock absorber works effectively. As a guideline, keep the stroke within the range where the L dimension in the figure below is larger than the value in the table. If the stroke exceeds this range, the guide lock will bump into the end plate, affecting the life time.

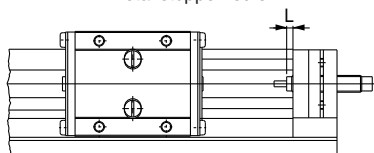
Model	L
MXY6	2 mm
MXY8	2 mm
MXY12	2.5 mm



Rubber stopper screw



Metal stopper screw

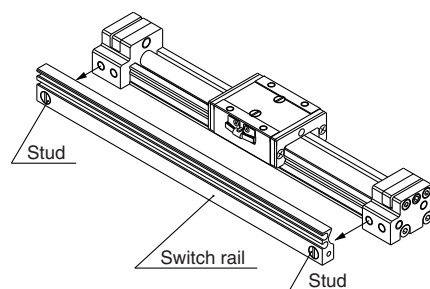


Shock absorber

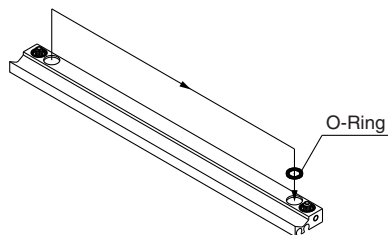
How to Change Concentrated Piping

The piping is concentrated on the left side at the time of shipment. To switch to the right side piping, follow the steps below.

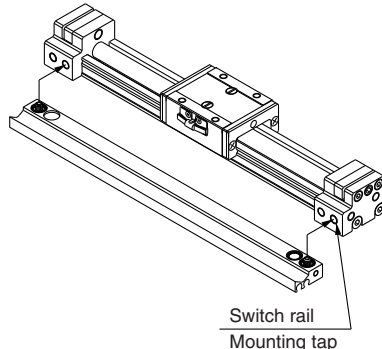
1. Loosen the 2 studs to remove the switch rail.



2. Change the position of the O-ring shown in the figure.

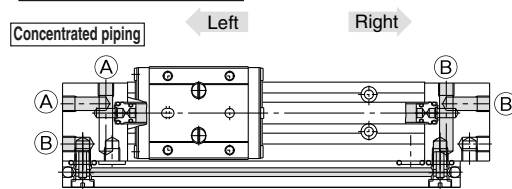


3. Fasten the stud onto the tap at the right side of the end plate and secure the switch rail.



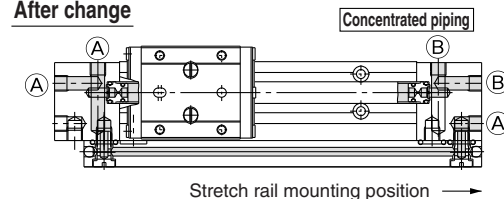
* Stud fastening: After a temporary tightening, tighten an additional 1/4 turn.

At the time of shipment



← Stretch rail mounting position

After change



Port	Actuation Direction
(A)	Right
(B)	Left

Disassembly and Maintenance

⚠ Warning

Be careful the magnets have a large absorption force.

Please pay enough attention when the external mover and piston mover are removed from the cylinder tube for maintenance, etc. Because the magnet mounted on each mover has a large adsorption force. Please refer to the disassembly instructions when disassembling the product.

⚠ Caution

1. Be careful if the external mover is removed in the normal condition, it will directly absorb the piston mover.

When removing the external mover or piston mover, first force the magnet coupling to go off the position to disable the holding power and then remove them separately. If they are removed in the normal condition, the magnets will directly absorb each other and will not go apart.

2. Never disassemble the magnet constructions

(piston mover and external mover).

If can cause a drop of the holding power or malfunction.