

**High Durability Series**



# Dust Resistant Cylinder

ø6, ø8, ø12, ø16, ø20, ø25

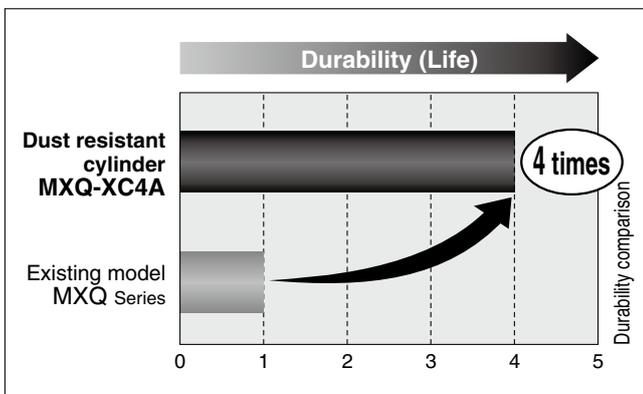
- Compatible with environments where powder particles of 20 to 50 μm in diameter, such as ceramic powder, toner powder, paper powder, metal powder (excluding welding spatter), etc., are present



**High Durability Series**  
 High Durability Series is the series name for the "special specification" that offers superior durability and environmental resistance compared to standard products.

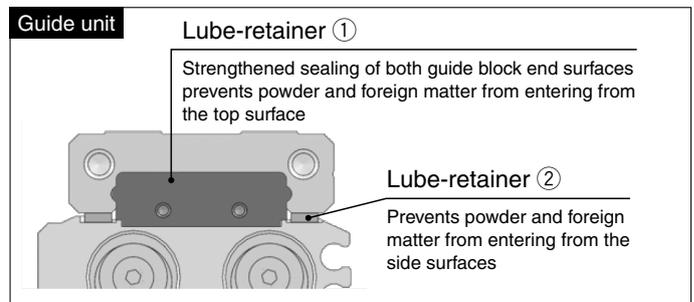
**4 times more durable than the standard model**

Comparison with the standard model



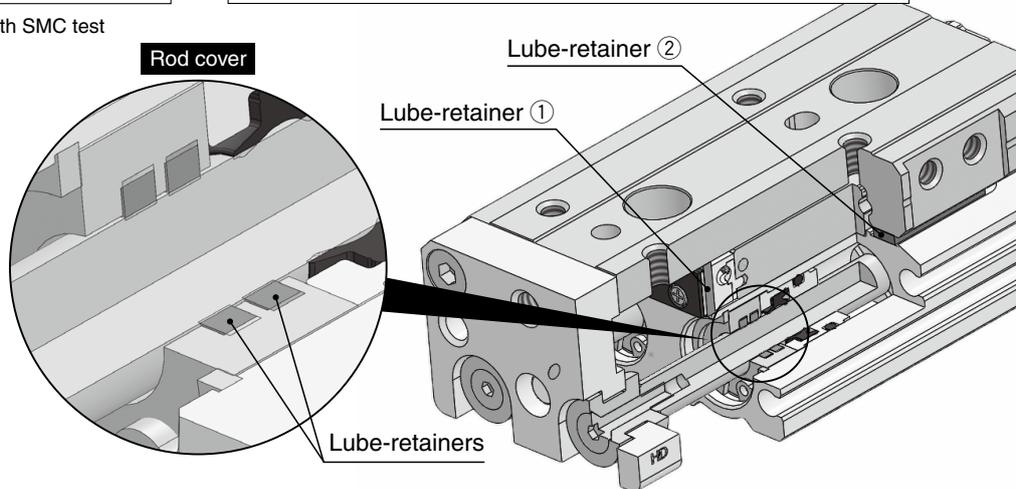
\* The durability test was conducted in accordance with SMC test conditions.

- Lube-retainers are installed on the guide unit and rod cover. This prevents the entry of dust and foreign matter.



- Dimensions and workpiece mounting dimensions are interchangeable with the standard product.

\* Refer to the precautions on page 2 for measures to prevent dust from entering the product when mounting a workpiece and for the max. screw-in depth of the end plate. For further details, refer to the **Web Catalog**.



**Variations**

Type	Bore size [mm]	Standard stroke [mm]								Adjuster option				Made to Order			
		10	20	30	40	50	75	100	125	150	Rubber stopper		Metal stopper				
Standard MXQ□-XC4A  Symmetric MXQ□L-XC4A	6	●	●	●	●	●					●	●	●	●	●	●	· Anti-corrosive guide unit (-X42) · Long adjustment bolt (10 mm longer adjustment range) (-X11) · Long adjustment bolt (20 mm longer adjustment range) (-X12)
	8	●	●	●	●	●	●				●	●	●	●	●	●	
	12	●	●	●	●	●	●	●			●	●	●	●	●	●	
	16	●	●	●	●	●	●	●	●		●	●	●	●	●	●	
	20	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

**MXQ-XC4A**



## High Durability Series

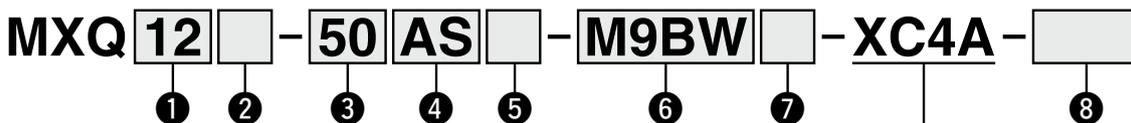
# Dust Resistant Cylinder

# MXQ-XC4A

∅6, ∅8, ∅12, ∅16, ∅20, ∅25

RoHS

## How to Order



• Dust resistant cylinder specifications

### ① Bore size/③ Stroke [mm]

Bore size		Stroke
<b>6</b>	6 mm	10, 20, 30, 40, 50
<b>8</b>	8 mm	10, 20, 30, 40, 50, 75
<b>12</b>	12 mm	10, 20, 30, 40, 50, 75, 100
<b>16</b>	16 mm	10, 20, 30, 40, 50, 75, 100, 125
<b>20</b>	20 mm	10, 20, 30, 40, 50, 75, 100, 125, 150
<b>25</b>	25 mm	10, 20, 30, 40, 50, 75, 100, 125, 150

### ② Symmetric type

<b>Nil</b>	Standard type
<b>L</b>	Symmetric type

### ④ Adjuster options

Refer to **Table 1**

<b>Nil</b>	Without adjuster
<b>AS</b>	Extension end rubber stopper
<b>AT</b>	Retraction end rubber stopper
<b>A</b>	Rubber stopper on both ends
<b>CS</b>	Extension end metal stopper
<b>CT</b>	Retraction end metal stopper
<b>C</b>	Metal stopper on both ends
<b>ASCT</b>	Extension end rubber stopper + Retraction end metal stopper
<b>CSAT</b>	Extension end metal stopper + Retraction end rubber stopper

### ⑤ Functional option

Refer to **Table 1**

<b>Nil</b>	Standard type
<b>P</b>	Axial piping type

### ⑥ Auto switch

<b>Nil</b>	Without auto switch (Built-in magnet)
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\* For applicable auto switch models, refer to the table below.

### ⑦ Number of auto switches

<b>Nil</b>	2
<b>S</b>	1
<b>n</b>	n

### ⑧ Made to order Refer to **Table 1**

<b>Nil</b>	None
<b>-X11</b>	Long adjustment bolt (10 mm longer adjustment range)
<b>-X12</b>	Long adjustment bolt (20 mm longer adjustment range)
<b>-X42</b>	Anti-corrosive guide unit
<b>-X42A</b>	Anti-corrosive guide unit + Long adjustment bolt (10 mm longer adjustment range)
<b>-X42B</b>	Anti-corrosive guide unit + Long adjustment bolt (20 mm longer adjustment range)

\* The "-X12" and "-X42B" are not available for ∅6.

**Table 1** Adjuster options/Functional option/Made-to-order combinations

⑤ Functional option	Nil						P					
	Nil	X11	X12	X42	X42A	X42B	Nil	X11	X12	X42	X42A	X42B
⑧ Made to order	○	—	○	○	○	○	○	—	○	○	○	○
④ Adjuster option type	<b>AS</b>	○	○	○	○	○	○	○	○	○	○	○
	<b>AT</b>	○	○	○	○	○	○	○	○	○	○	○
	<b>A</b>	○	○	○	○	○	○	○	○	○	○	○
	<b>CS</b>	○	○	○	○	○	○	○	○	○	○	○
	<b>CT</b>	○	○	○	○	○	○	○	○	○	○	○
	<b>C</b>	○	○	○	○	○	○	○	○	○	○	○
	<b>ASCT</b>	○	○	○	○	○	○	○	○	○	○	○
<b>CSAT</b>	○	○	○	○	○	○	○	○	○	○	○	

\* The "-X12" and "-X42B" are not available for ∅6.

## Applicable Auto Switches/Refer to the **Web Catalog** 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	—	<b>M9NV</b>	<b>M9N</b>	●	●	●	○	○	IC circuit	Relay, PLC	
				3-wire (PNP)				<b>M9PV</b>	<b>M9P</b>	●	●	●	○	○			
				2-wire				<b>M9BV</b>	<b>M9B</b>	●	●	●	○	○			
				3-wire (NPN)				<b>M9NVV</b>	<b>M9NV</b>	●	●	●	○	○			
	Diagnostic indication (2-color indicator)			3-wire (PNP)	<b>M9PWV</b>	<b>M9PW</b>	●	●	●	○	○	○	○	○	○		○
				2-wire	<b>M9BWV</b>	<b>M9BW</b>	●	●	●	○	○	○	○	○	○		
				3-wire (NPN)	<b>M9NAV</b> *1	<b>M9NA</b> *1	○	○	●	○	○	○	○	○	○		
				3-wire (PNP)	<b>M9PAV</b> *1	<b>M9PA</b> *1	○	○	●	○	○	○	○	○	○		
Water resistant (2-color indicator)	2-wire	<b>M9BAV</b> *1	<b>M9BA</b> *1	○	○	●	○	○	○	○	○	○	○				
	—	Grommet	No	3-wire (NPN equivalent)	24 V	5 V	—	<b>A96V</b>	<b>A96</b>	●	—	●	—	—	IC circuit	—	
				2-wire				<b>A93V</b> *2	<b>A93</b>	●	●	●	●	—	—	—	Relay, PLC
								<b>A90V</b>	<b>A90</b>	●	—	●	—	—	IC circuit	PLC	

\*1 Water-resistant type auto switches can be mounted on the above models, but SMC cannot guarantee water resistance.

\*2 The 1 m lead wire is only applicable to the D-A93.

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

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

\* Since there are applicable auto switches other than those listed above, refer to the **Web Catalog** for details.

\* For details on auto switches with pre-wired connectors, refer to the **Web Catalog**.

\* Auto switches are shipped together with the product but do not come assembled.

### Specifications



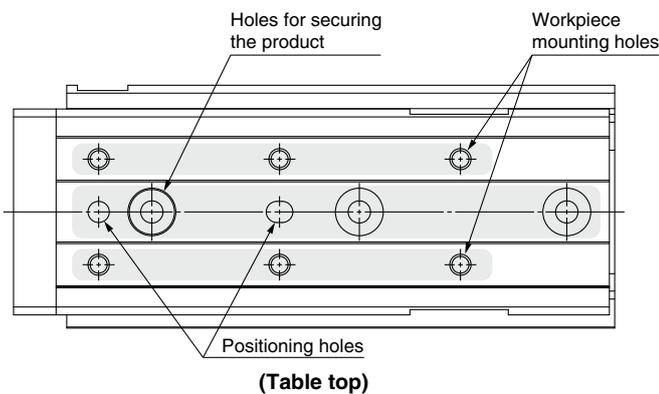
Bore size [mm]	6	8	12	16	20	25
Piping port size	M5 x 0.8			Rc1/8		
Fluid	Air					
Action	Double acting					
Operating pressure	0.3 to 0.7 MPa			0.15 to 0.7 MPa		
Proof pressure	1.05 MPa					
Ambient and fluid temperatures	-10 to 60°C					
Operating speed range (Average operating speed)*1	50 to 200 mm/s					
Applicable powder particle size	20 to 50 μm					
Lubrication	Non-lube					
Stroke length tolerance	+1 0 mm					

\*1 Average operating speed: The speed when the stroke is divided by the time it takes to operate the stroke from start to end

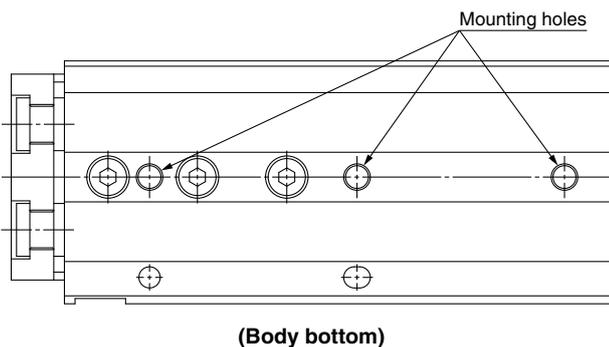
### Operating Precautions

#### ⚠ Caution

1. When mounting the body or a workpiece, be sure to seal all holes on the table with tape, bolts, etc. If there are any unsealed holes, dust may enter the guide unit, resulting in a reduced service life.

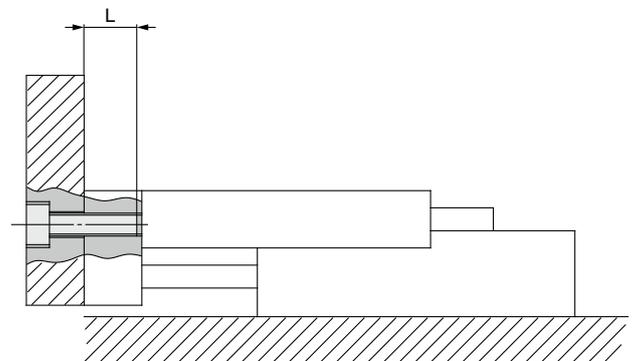


2. When mounting the body, be sure to use all mounting holes on the bottom of the body so that they are not exposed. If there are any unused holes, dust may enter the guide unit, resulting in a reduced service life.



3. The workpiece mounting position of the end plate is the same as that of the standard product, but note that the max. screw-in depth ("L" dimension) will change.

#### Front mounting



Model	Bolt	Max. tightening torque [N·m]	Max. screw-in depth [Lmm]	Ref.) Max. screw-in depth of standard product [Lmm]
<b>MXQ 6(L)</b>	M3 x 0.5	0.9	3.5	4.5
<b>MXQ 8(L)</b>	M4 x 0.7	2.1	4.5	5.5
<b>MXQ12(L)</b>	M5 x 0.8	4.4	6.5	7.5
<b>MXQ16(L)</b>	M6 x 1	7.4	8.5	9.5
<b>MXQ20(L)</b>	M6 x 1	7.4	11.5	12.5
<b>MXQ25(L)</b>	M8 x 1.25	18.0	13.5	14.5

 **Safety Instructions** | Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and "Operation Manual" before use.

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