

High Durability Series



Dust Resistant Cylinder



Up to 6 times more durable in dusty environments

Applicable powder particle size: 20 to 100 μm
 Suitable for environments with ceramic powder, toner powder, paper powder, and metallic powder
 * Excludes weld spatter

Can be selected according to the application

A Lube-retainer (stable lubrication function) and a heavy-duty scraper can be mounted on the piston rod.
 For the MGP series compact guide cylinder, they can also be mounted on the guide rod (one or both sides).

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.

Description	Applicable powder particle size	Structure (CQ2)	Durability
With 2 Lube-retainers XC4A	20 to 50 μm		Standard model → 4 times
With heavy-duty scraper + Lube-retainer XC4B	30 to 100 μm		Standard model → 6 times
With heavy-duty scraper XC4C	50 to 100 μm		Standard model → 2 times

The rod cover assembly can be replaced according to the operating environment. (For details [p.9](#)) * Only for bore sizes ø20, ø25, and ø32 of the CQ2-XC4

Applicable Cylinders

Series	Bore size [mm]										Cushion	Page
	12	16	20	25	32	40	50	63	80	100		
CM2-XC4			●	●	●	●					Rubber	p. 1
CG1-XC4			●	●	●	●	●	●	●	●	Rubber	p. 3
MB-XC4					●	●	●	●	●	●	Air or Rubber	p. 5
CQ2-XC4			●	●	●	●	●	●			None or Rubber	p. 7
MGP-XC4	●	●	●	●	●	●	●	●	●	●	Rubber	p. 11

CM2/CG1/MB/CQ2/MGP-XC4



High Durability Series

Dust Resistant Cylinder

CM2-XC4□

∅20, ∅25, ∅32, ∅40

RoHS

How to Order



Without auto switch

CM2 B 40 □ - 150 □ Z1 - □ □ - XC4B

With auto switch

CDM2 B 40 □ - 150 □ Z1 - □ □ - M9BW □ - XC4B

With auto switch
(Built-in magnet)

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Mounting

B	Basic (Double-side bossed)	T	Head trunnion
L	Axial foot bracket	E	Integrated clevis
F	Rod flange	V	Integrated clevis (90°)
G	Head flange	BZ	Boss-cut/Basic
C	Single clevis	FZ	Boss-cut/Rod flange
D	Double clevis	UZ	Boss-cut/Rod trunnion
U	Rod trunnion		

② Bore size

20	20 mm
25	25 mm
32	32 mm
40	40 mm

③ Port thread type

Nil	Rc
TN	NPT
TF	G

* The available port thread types vary slightly from those of the standard product. For details, refer to the "Dimensions" section.

④ Cylinder stroke [mm]

Bore size [mm]	Standard stroke [mm]*1	Max. manufacturable stroke [mm]
20		1000
25	25, 50, 75, 100, 125,	
32	150, 200, 250, 300	
40		

*1 Intermediate strokes not listed above are produced upon receipt of order. The manufacturing of intermediate strokes in 1 mm increments is possible. (Spacers are not used.)

⑤ Rod end thread

Nil	Male rod end
F	Female rod end

⑥ Pivot bracket

Nil	No bracket
N	Pivot bracket

* Only for "C," "T," "U," "E," "V," and "UZ" mounting types

* The pivot bracket is shipped together with the product but does not come assembled.

⑦ Rod end bracket

Nil	No bracket	W	Double knuckle joint
V	Single knuckle joint	Q	Rod end

* No bracket is provided for the female rod end.
* A knuckle joint pin is not provided with the single knuckle joint.
* The rod end bracket is shipped together with the product but does not come assembled.

⑧ Auto switch

Nil	Without auto switch
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* For applicable auto switches, refer to the Web Catalog.

⑨ Number of auto switches

Nil	2
S	1
n	n

⑩ Dust resistant specifications

Model	Specifications	Diagram
XC4A	With 2 Lube-retainers (Applicable powder particle size: 20 to 50 μm)	
XC4B	With heavy-duty scraper + Lube-retainer (Applicable powder particle size: 30 to 100 μm)	
XC4C	With heavy-duty scraper (Applicable powder particle size: 50 to 100 μm)	

Specifications

Bore size [mm]		20	25	32	40
Type		Pneumatic			
Action		Double acting, Single rod			
Fluid		Air			
Proof pressure		1.5 MPa			
Max. operating pressure		1.0 MPa			
Min. operating pressure	XC4A	0.1 MPa			
	XC4B				
	XC4C				
Ambient and fluid temperatures		Without auto switch: -10°C to 70°C With auto switch: -10°C to 60°C (No freezing)			
Lubrication		Not required (Non-lube)			
Stroke length tolerance*1		+1.4 0 mm			
Piston speed		50 to 750 mm/s			
Cushion		Rubber bumper			

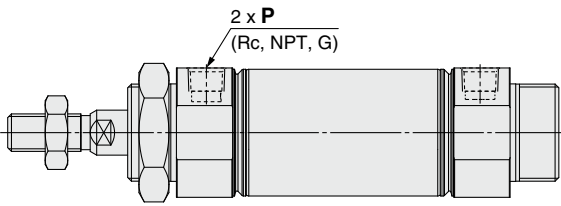
*1 Does not include the amount of bumper change

Dust Resistant Cylinder **CM2-XC4** □

For the mounting bracket dimensions, refer to the standard CM2 series cylinder (double acting, single rod).

Dimensions (Dimensions other than those shown below are the same as those of the standard model.)

CM2-XC4 □



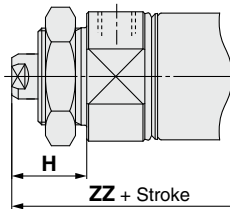
Bore size	XC4A, XC4B			XC4C		
	P			P		
	Rc	NPT	G	Rc	NPT	G
20	(1/8)	M5 x 0.8		(1/8)		
25	(1/8)			(1/8)		
32	(1/8)			(1/8)		
40	(1/4)			(1/4)		

* The dimensions in () are the same as those of the standard type.

CM2-XC4B/4C

- * The "-XC4A" has the same dimensions as the standard model.
- * The male rod end type has the same dimensions as the standard model.

Female rod end



Bore size	[mm]	
	H	ZZ
20	24	99
25	24	99
32	24	101
40	26	130

High Durability Series

Dust Resistant Cylinder

CG1-XC4

RoHS

∅20, ∅25, ∅32, ∅40, ∅50, ∅63, ∅80, ∅100

How to Order

Without auto switch

CG1 **B** **N** **20** - **100** **Z1** - **XC4B**

With auto switch

CDG1 **B** **N** **20** - **100** **Z1** - **M9BW** - **XC4B**

With auto switch (Built-in magnet)



1 Mounting

B	Basic (Without trunnion mounting female thread)
Z*1	Basic (With trunnion mounting female thread)
L	Axial foot bracket
F	Rod flange
G	Head flange
U*1	Rod trunnion
T*1	Head trunnion
D	Clevis

- *1 Not available for bore sizes ∅80 and ∅100
- * Mounting brackets are shipped together with the product but do not come assembled.
- * The cylinder for "L," "F," "G," and "D" mounting types is the basic type ("B" Without trunnion mounting female thread).
- * Only the "-XC4C" can be selected for mounting type.
- * For the "-XC4A" and "-XC4B," the trunnion mounting female thread for mounting types "Z" and "T" is only provided on the head side.

The presence (mounting type "Z") or absence (mounting type "B") of the trunnion mounting female thread differs from the existing CG1 series product. Choose "Z" when mounting a trunnion afterward.

7 Rod end bracket

Nil	No bracket
V	Single knuckle joint
W	Double knuckle joint
Q	Rod end

- * No bracket is provided for the female rod end.
- * The rod end bracket is shipped together with the product but does not come assembled.
- * A knuckle joint pin is not provided with the single knuckle joint.

2 Bore size

Symbol	Bore size	XC4A	XC4B	XC4C
20	20 mm	●	—	—
25	25 mm	●	—	—
32	32 mm	●	●	●
40	40 mm	●	●	●
50	50 mm	●	●	●
63	63 mm	●	●	●
80	80 mm	●	—	—
100	100 mm	●	—	—

3 Port thread type

Rubber bumper		
Nil	M5 x 0.8	∅20, ∅25
	Rc	
TN	NPT*2	∅32 to ∅100
TF	G*2	

- *2 Not available for bore sizes ∅20 and ∅25

8 Auto switch

Nil	Without auto switch
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- * For applicable auto switches, refer to the [Web Catalog](#).

9 Number of auto switches

Nil	2
S	1
n	n

4 Cylinder stroke [mm]

Bore size	Standard stroke*3	Manufacturable stroke
20	25, 50, 75, 100, 125, 150, 200	1 to 1000
25	25, 50, 75, 100, 125, 150, 200, 250, 300	
32		
40		
50, 63		
80		
100		

- *3 Intermediate strokes not listed above are produced upon receipt of order. The manufacturing of intermediate strokes in 1 mm increments is possible. (Spacers are not used.)

5 Rod end thread

Nil	Male rod end
F	Female rod end

6 Pivot bracket

Nil	No bracket
N	Pivot bracket

- * Only for "D" and "T" mounting types
- * The pivot bracket is shipped together with the product but does not come assembled.

10 Dust resistant specifications

Model	Specifications	Diagram
XC4A	With 2 Lube-retainers (Applicable powder particle size: 20 to 50 μm)	
XC4B	With heavy-duty scraper + Lube-retainer (Applicable powder particle size: 30 to 100 μm)	
XC4C	With heavy-duty scraper (Applicable powder particle size: 50 to 100 μm)	

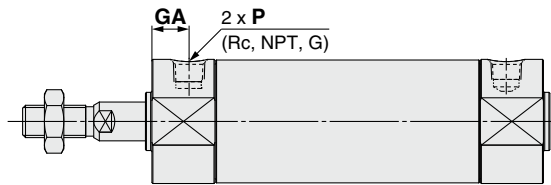
Specifications

Bore size [mm]	XC4A	20	25	32	40	50	63	80	100
	XC4B, XC4C	—	—	32	40	50	63	—	—
Type	Pneumatic								
Action	Double acting, Single rod								
Fluid	Air								
Proof pressure	1.5 MPa								
Max. operating pressure	1.0 MPa								
Min. operating pressure	XC4A, XC4B	0.1 MPa							
	XC4C	0.05 MPa							
Ambient and fluid temperatures	Without auto switch: -10°C to 70°C (No freezing)								
	With auto switch: -10°C to 60°C (No freezing)								
Lubricant	Not required (Non-lube)								
Stroke length tolerance	+1.4 0 mm								
Piston speed	50 to 1000 mm/s							50 to 700 mm/s	
Cushion	Rubber bumper								

For the mounting bracket dimensions, refer to the standard CG1 series cylinder (double acting, single rod).

Dimensions (Dimensions other than those shown below are the same as those of the standard model.)

XC4A



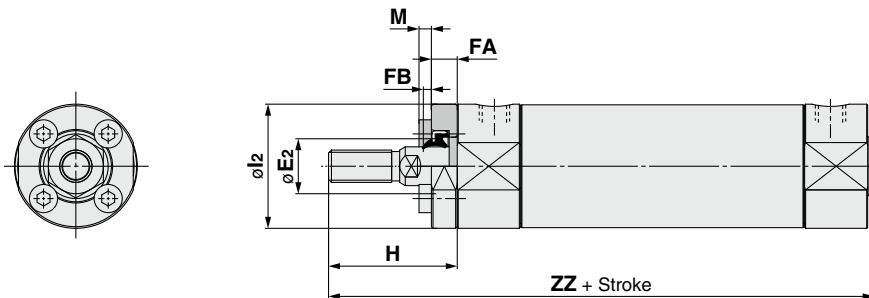
[mm]					
Bore size	GA	P	Bore size	GA	P
20	(11.5)	M5 x 0.8	50	(14)	(1/4)
25	12	M5 x 0.8	63	(14)	(1/4)
32	(11.5)	(1/8)	80	(20)	(3/8)
40	(13)	(1/8)	100	(16)	(1/2)

* When a female thread is used, depending on the material of the workpiece, use a washer, etc., to prevent the contact part at the rod end from being deformed.

(): Same as the standard model.

* The mounting dimensions with a mounting bracket are the same as those of the standard model.

XC4B/XC4C



Bore size	E ₂	FA	FB	M	I ₂	H		ZZ	
						H		ZZ	
						Female thread	Male thread	Female thread	Male thread
32	17	8	3	5	38	48	28	121	101
40	21	8	3	3.5	47	58	29	138	109
50	26	9	3	4.5	58	66	30	158	122
63	26	9	3	5.5	72	66	30	158	122

* For the axial foot bracket type and the rod flange type, the mounting bracket is wedged and bolted between the cylinder and the scraper at the time of shipment. For other types, it is placed in the same package but does not come assembled.

* øE₂ and FB are the scraper protrusion dimensions.

High Durability Series

Dust Resistant Cylinder

MB-XC4

∅32, ∅40, ∅50, ∅63, ∅80, ∅100

RoHS



How to Order

Without auto switch

MB B 32 [] - 50 [] Z - [] [] - XC4B

With auto switch

MDB B 32 [] - 50 [] Z - [] [] - M9BW [] - XC4B

With auto switch
(Built-in magnet)

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Mounting

B	Basic
L	Axial foot bracket
F	Rod flange
G	Head flange
C	Single clevis
D	Double clevis
T	Center trunnion

- * Trunnion type is mounted before shipment.
- * Other mounting brackets: Shipped together

② Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

③ Port thread type

Nil	Rc
TN	NPT
TF	G

④ Cylinder stroke [mm]

Bore size	Standard stroke	
	Stroke range ①	Stroke range ②
32	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500	Up to 1000
40	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500	Up to 1800
50, 63	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 600	
80, 100	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800	

- * Manufacture of intermediate strokes is possible. (Spacers are not used.)
- * Applicable strokes should be confirmed according to the usage. For details, refer to "Air Cylinders Model Selection" in the **Web Catalog**. In addition, the products that exceed the stroke range ① might not be able to fulfill the specifications due to the deflection etc.
- * Please consult with SMC for manufacturability and the part numbers when exceeding the stroke range ②.

⑤ Suffix (Cushion)

Nil	Air cushion
N	Rubber bumper

⑥ Accessories 1

Nil	No bracket
N	Pivot bracket

- * Only for "D" and "T" mounting types
- * Pivot bracket is shipped together with the product.
- * For details, refer to the **Web Catalog**.

⑦ Accessories 2

Nil	No bracket
V	Single knuckle joint
W	Double knuckle joint

- * A knuckle joint pin is not provided with the single knuckle joint.
- * Rod end bracket is shipped together with the product.

⑨ Number of auto switches

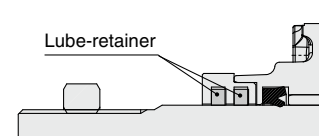
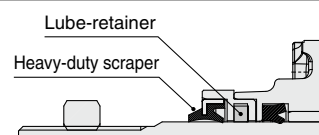
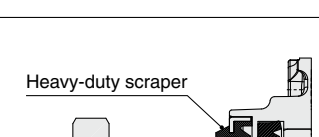
Nil	2
S	1
3	3
n	n

⑧ Auto switch

Nil	Without auto switch
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- * The applicable auto switches are the same as those for the standard model. Refer to the **Web Catalog**.

⑩ Dust resistant specifications

Model	Specifications	Diagram
XC4A	With 2 Lube-retainers (Applicable powder particle size: 20 to 50 μm)	
XC4B	With heavy-duty scraper + Lube-retainer (Applicable powder particle size: 30 to 100 μm)	
XC4C	With heavy-duty scraper (Applicable powder particle size: 50 to 100 μm)	

Specifications

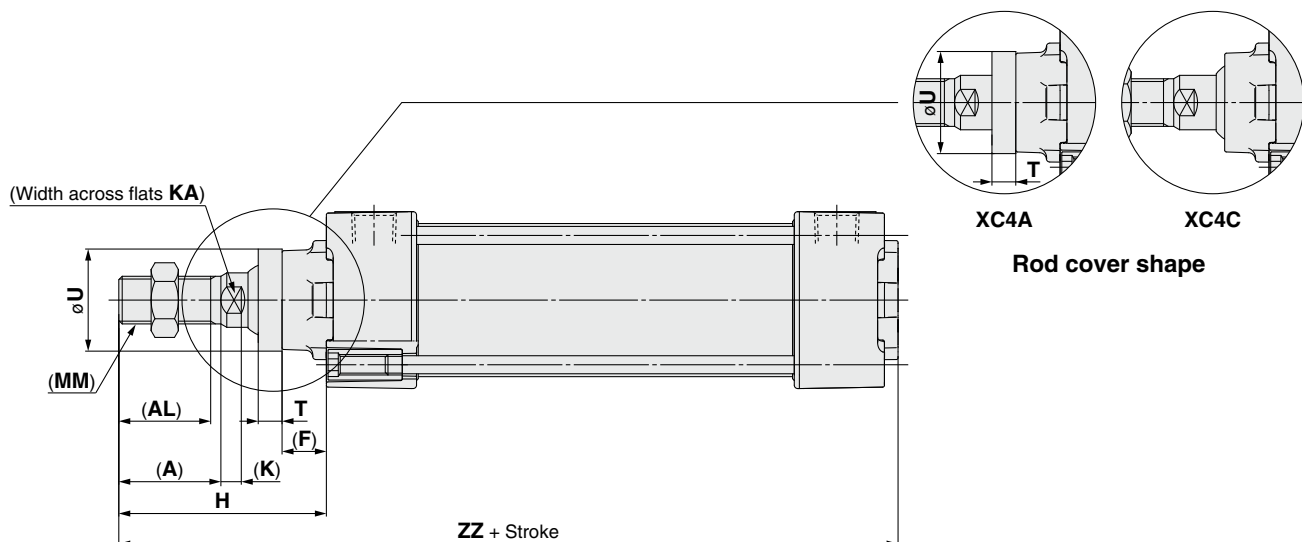
Bore size [mm]	32	40	50	63	80	100
Action	Double acting, Single rod					
Fluid	Air					
Proof pressure	1.5 MPa					
Max. operating pressure	1.0 MPa					
Min. operating pressure	0.05 MPa					
Applicable powder particle size	XC4A	20 to 50 μm				
	XC4B	30 to 100 μm*1				
	XC4C	50 to 100 μm				
Lubrication	Not required (Non-lube)					
Piston speed	50 to 1000 mm/s					
Stroke length tolerance	Up to 250 : $^{+1.0}_0$, 251 to 1000 : $^{+1.4}_0$, 1001 to 1500 : $^{+1.8}_0$, 1501 to 1800 : $^{+2.2}_0$					
Cushion	Air cushion or Rubber bumper					

*1 It can also be used in fine powder environments of less than 30 μm.

For the mounting bracket dimensions, refer to the standard MB series cylinder (double acting, single rod.)

Dimensions (Dimensions other than those shown below are the same as those of the standard type, double acting, single rod.)

MB-XC4B



Air Cushion

Bore size	XC4A, XC4B										XC4C	
	A	AL	F	H	K	KA	MM	T	U	ZZ	H	ZZ
32	(22)	(19.5)	(13)	52	(6)	(10)	(M10 x 1.25)	6.5	25	140	47	135
40	(30)	(27)	(13)	61	(6)	(14)	(M14 x 1.5)	7	30	149	58	146
50	(35)	(32)	(14)	73	(7)	(18)	(M18 x 1.5)	8	36	171	67	165
63	(35)	(32)	(14)	73	(7)	(18)	(M18 x 1.5)	8	36	171	67	165
80	(40)	(37)	(20)	87	(10)	(22)	(M22 x 1.5)	8	41	205	81	199
100	(40)	(37)	(20)	87	(10)	(26)	(M26 x 1.5)	8	46	205	81	199

* The dimensions in () are the same as those of the standard type (double acting, single rod).

Rubber Bumper

Bore size	XC4A, XC4B		XC4C
	ZZ	ZZ	ZZ
32	146	141	
40	155	152	
50	179	173	
63	179	173	
80	215	209	
100	215	209	

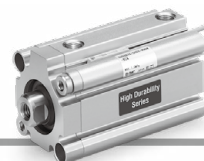
High Durability Series

Dust Resistant Cylinder

CQ2-XC4□

ø20, ø25, ø32, ø40, ø50, ø63

RoHS



How to Order

Without auto switch
ø20, ø25

CQ2 B 20 □ - 30 D □

- XC4B

Without auto switch
ø32 to ø63

CQ2 B 32 □ - 30 D □ Z

- XC4B

With auto switch

CDQ2 B 32 □ - 30 D □ Z - M9BW □ - XC4B

With auto switch magnet

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Mounting

B	Through-hole
A	Both ends tapped
L	Foot bracket
LC	Compact foot bracket
G	Head flange
D	Double clevis

* Mounting brackets are shipped together with the product but do not come assembled.

* For bore sizes 20 to 32, the body is the same for both the "B" type (through-hole) and the "A" type (both ends tapped), so the "A" type cannot be selected.
Example) CQ2A32-10DZ-XC4□

② Bore size

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

③ Port thread type

Nil	M thread	ø20, ø25
	Rc	ø32 to ø63
TN	NPT	
TF	G	

* M threads are only compatible with bore size ø32 at a 5 mm stroke for cylinders without an auto switch magnet.

④ Cylinder stroke [mm]

Bore size	Standard stroke
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100
50, 63	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

⑤ Action

D	Double acting
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⑥ Body option

Nil	Rod end female thread
F	With boss on head end
C	With rubber bumper
M	Rod end male thread

* Combined body options, such as "FC," "FM," "FCM," and "CM," can be selected.

⑦ Auto switch mounting groove

Z	ø20 to ø63	4 surfaces
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⑧ Auto switch

Nil	Without auto switch
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* The applicable auto switches are the same as those for the standard model. Refer to the Web Catalog.

⑨ Number of auto switches

Nil	2
S	1
n	n

⑩ Dust resistant specifications

XC4A	With 2 Lube-retainers (Applicable powder particle size: 20 to 50 µm)	Lube-retainer	
XC4B	With heavy-duty scraper + Lube-retainer (Applicable powder particle size: 30 to 100 µm)	Lube-retainer Heavy-duty scraper	
XC4C	With heavy-duty scraper (Applicable powder particle size: 50 to 100 µm)	Heavy-duty scraper	

Specifications

Bore size [mm]	20	25	32	40	50	63
Action	Double acting, Single rod					
Fluid	Air					
Proof pressure	1.5 MPa					
Max. operating pressure	1.0 MPa					
Min. operating pressure	0.1 MPa					
Applicable powder particle size	XC4A	20 to 50 µm				
	XC4B	30 to 100 µm*1				
	XC4C	50 to 100 µm				
Lubrication	Not required (Non-lube)					
Piston speed	50 to 500 mm/s			50 to 300 mm/s		
Stroke length tolerance	0 to +1.0 mm*2					

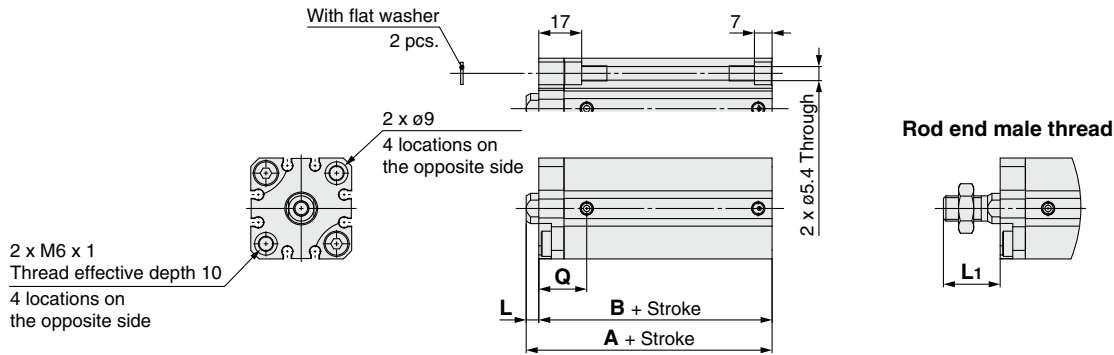
*1 It can also be used in fine powder environments of less than 30 µm.

*2 The stroke length tolerance does not include the amount of bumper change.

For the mounting bracket dimensions, refer to the standard CQ2 series cylinder (double acting, single rod).

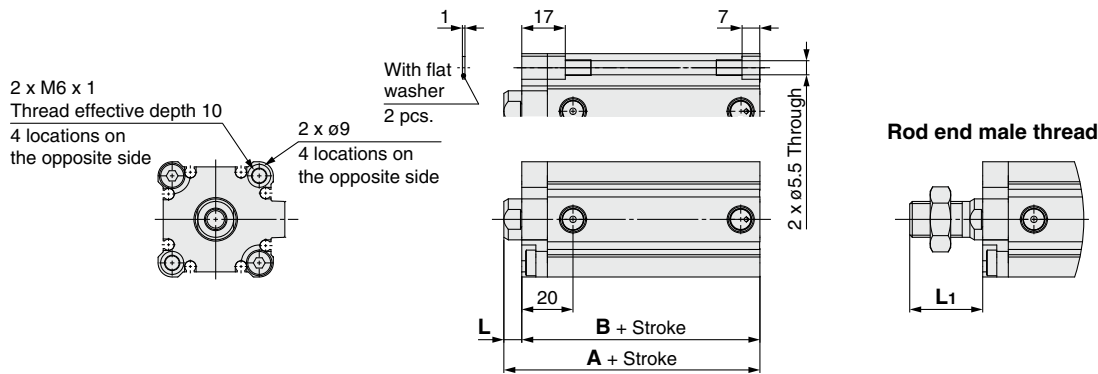
Dimensions (Dimensions other than those shown below are the same as those of the standard type, double acting, single rod.)

ø20, ø25



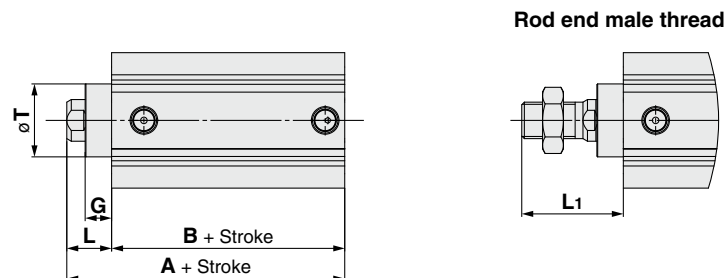
Bore size [mm]	XC4A, XC4C							XC4B						
	Without auto switch		With auto switch		L	L ₁	Q	Without auto switch		With auto switch		L	L ₁	Q
	A	B	A	B				A	B	A	B			
20	34	29.5	44	39.5	4.5	18.5	18	39	29.5	49	39.5	9.5	23.5	18
25	37.5	32.5	47.5	42.5	5	22.5	19	42.5	32.5	52.5	42.5	10	27.5	19

ø32



Bore size [mm]	Stroke range [mm]	XC4A, XC4C										XC4B									
		Without auto switch				With auto switch				L	L ₁	Without auto switch				With auto switch					
		A	B	F	P	A	B	F	P			A	B	F	P	A	B	F	P		
32	5	40	33	5.5	M5 x 0.8	50	43	7.5	1/8	7	28.5	45	33	5.5	M5 x 0.8	55	43	7.5	1/8	12	33.5
	10 to 50	48.5	30.5	7.5	1/8	50	43	7.5	1/8	7	28.5	45	33	5.5	M5 x 0.8	55	43	7.5	1/8	12	33.5
	75, 100	50	43	7.5	1/8	50	43	7.5	1/8	7	28.5	55	43	7.5	1/8	55	43	7.5	1/8	12	33.5

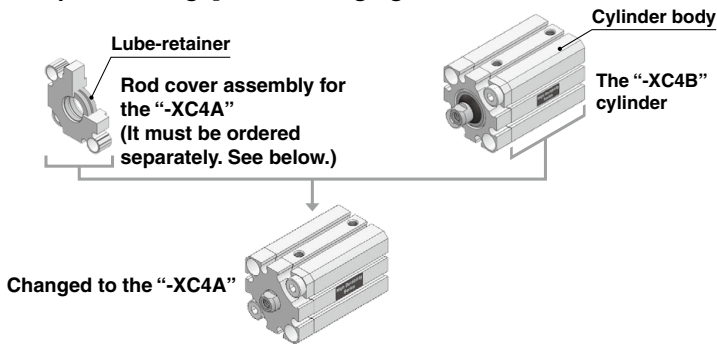
ø40 to ø63



Bore size [mm]	Stroke range [mm]	XC4A								XC4B								XC4C							
		Without auto switch		With auto switch		G	L	L ₁	T	Without auto switch		With auto switch		G	L	L ₁	T	Without auto switch		With auto switch		G	L	L ₁	T
		A	B	A	B					A	B	A	B					A	B	A	B				
40	5 to 50	46.5	29.5	56.5	39.5	10	17	38.5	28	51.5	29.5	61.5	39.5	10	22	43.5	28	46.5	29.5	56.5	39.5	5	17	38.5	28
	75, 100	56.5	39.5	56.5	39.5	10	17	38.5	28	61.5	39.5	61.5	39.5	10	22	43.5	28	56.5	39.5	56.5	39.5	5	17	38.5	28
50	10 to 50	48.5	30.5	58.5	40.5	10	18	43.5	35	53.5	30.5	63.5	40.5	10	23	48.5	35	48.5	30.5	58.5	40.5	5	18	43.5	35
	75, 100	58.5	40.5	58.5	40.5	10	18	43.5	35	63.5	40.5	63.5	40.5	10	23	48.5	35	58.5	40.5	58.5	40.5	5	18	43.5	35
63	10 to 50	54	36	64	46	10	18	43.5	35	59	36	69	46	10	23	48.5	35	54	36	64	46	5	18	43.5	35
	75, 100	64	46	64	46	10	18	43.5	35	69	46	69	46	10	23	48.5	35	64	46	64	46	5	18	43.5	35

Rod Cover Assembly Replacement Procedure (Only for $\phi 20$, $\phi 25$, and $\phi 32$)

[Example of change] When changing from the “-XC4B” to the “-XC4A”



<Rod Cover Assembly Replacement Comparison Chart>

Before replacement		After replacement
XC4A	➔	XC4C
XC4B	➔	XC4A*1
		XC4C*1
XC4C	➔	XC4A

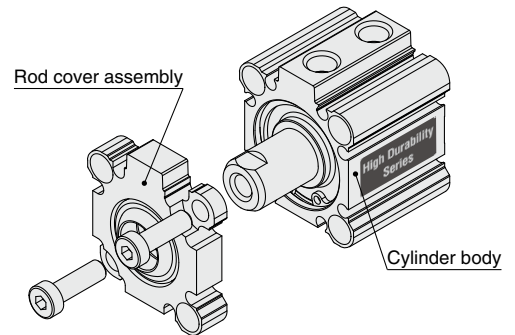
*1 The overall length after replacement remains the same as that of the “-XC4B.”

When replacing the rod cover assembly for maintenance or specification changes, follow the instructions below. If the assembly is not replaced using the correct procedure, its performance may decline significantly.

Additionally, if the rod cover assembly is replaced, it will no longer be covered by the product warranty.

1. Remove the 2 hexagon socket head cap screws (M6 x 1), and remove the rod cover assembly from the cylinder.

* At this time, be careful not to scratch or dent the surface of the piston rod.



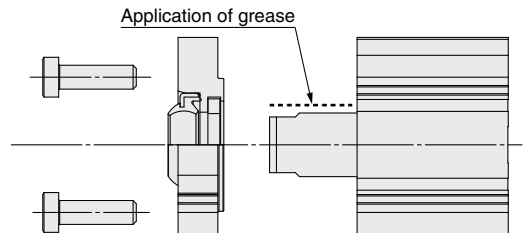
2. Apply grease to the surface of the piston rod, and install the new rod cover assembly without scratching the Lube-retainer or scraper.

* At this time, make sure that the Lube-retainer does not fall out.

* Scratching the Lube-retainer or scraper during the installation of the rod cover assembly may seriously impair the performance of the product.

3. After confirming that the rod cover assembly is secured in the correct position (direction), tighten the 2 hexagon socket head cap screws removed in step 1 with the proper tightening torque (5.2 N·m).

* The application of adhesive to prevent looseness is not necessary.



Rod Cover Assembly Part Nos.

Bore size [mm]	XC4A	XC4B	XC4C
$\phi 20$	CQ2B20-XC4A	CQ2B20-XC4B	CQ2B20-XC4C
$\phi 25$	CQ2B25-XC4A	CQ2B25-XC4B	CQ2B25-XC4C
$\phi 32$	CQ2B32-XC4A	CQ2B32-XC4B	CQ2B32-XC4C

* The rod cover assembly includes a cover and a seal.

* A grease pack is not included. Please order one with the part numbers below.

Grease Pack Part Nos.

Kit no.	Grease weight
GR-S-005	5 g
GR-S-010	10 g
GR-S-020	20 g

High Durability Series

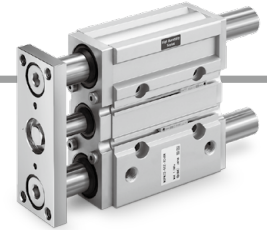
Dust Resistant Cylinder

MGP-XC4

ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

RoHS

How to Order



MGP M 25 - 30 Z - M9BW - XC4B

Compact Guide Cylinder ① ② ③ ④ ⑤ ⑥ ⑦

② Bore size	① Bearing type					
	M: MGPM (Slide bearing)			L: MGPL (Ball bushing)		
	Dust resistant specifications			Dust resistant specifications		
	XC4A	XC4B	XC4C	XC4A	XC4B	XC4C
12	●	—	—	—	—	—
16	●	—	—	—	—	—
20	●	●	●	—	●	●
25	●	●	●	—	●	●
32	●	●	●	—	●	●
40	●	●	●	—	●	●
50	●	●	●	—	●	●
63	●	●	●	—	●	●
80	●	●	●	—	●	●
100	●	●	●	—	●	●

③ Port thread type

	M5 x 0.8	ø12 to ø16
	Nil	Rc
TN	NPT	
TF	G	

④ Cylinder stroke

Bore size [mm]	Standard stroke [mm]	
	XC4A	XC4B, XC4C
12, 16	10, 20, 30, 40, 50, 75, 100	—
20, 25	20, 30, 40, 50, 75, 100, 125, 150, 175, 200	20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400
32 to 100	25, 50, 75, 100, 125, 150, 175, 200	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400

⑤ Auto switch

Nil	Without auto switch (Built-in magnet)
-----	---------------------------------------

* The applicable auto switches are the same as those for the standard model. Refer to the **Web Catalog**.

⑥ Number of auto switches

	Number of auto switches
Nil	2
S	1
n	n

Click [here](#) for details.

7 Dust resistant specifications

With single side (Rod end side mounting)			With both sides (Rod/Head end side mounting)	
Symbol	Description	Construction	Symbol	Construction
XC4A	[Piston rod] With 2 Lube-retainers [Guide rod] With 1 Lube-retainer (Applicable powder particle size: 20 to 50 μm)	Rod end side 	XC4AW	Rod end side Head end side
XC4B	[Piston rod] With heavy-duty scraper + Lube-retainer [Guide rod] With heavy-duty scraper + Lube-retainer (Applicable powder particle size: 30 to 100 μm)		XC4BW	
XC4C	[Piston rod] With heavy-duty scraper (Outer lip type) + Lube-retainer [Guide rod] With heavy-duty scraper (Outer lip type) + Lube-retainer (Applicable powder particle size: 50 to 100 μm)		XC4CW	

Specifications (Specifications other than those shown below are the same as those of the standard model.)

MGPM (Slide bearing)

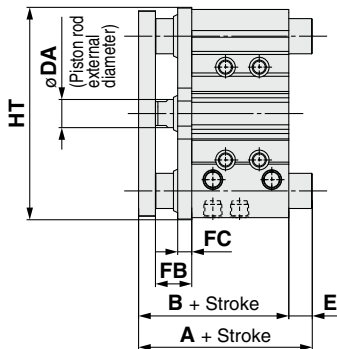
Item	Dust resistant specifications	Bore size [mm]									
		12	16	20	25	32	40	50	63	80	100
Min. operating pressure	XC4A	0.15 MPa									
	XC4B	—	—	0.2 MPa							
	XC4C	—	—	0.12 MPa							
	XC4AW	0.2 MPa									
	XC4BW	—	—	0.3 MPa							
	XC4CW	—	—	0.14 MPa							
Piston speed	XC4A(W)	50 to 500 mm/s								50 to 400 mm/s	
	XC4B(W)	—	—	100 to 500 mm/s				100 to 400 mm/s			
	XC4C(W)	—	—	50 to 500 mm/s							

MGPL (Ball bushing)

Item	Dust resistant specifications	Bore size [mm]									
		12	16	20	25	32	40	50	63	80	100
Min. operating pressure	XC4A	—									
	XC4B	—	—	0.2 MPa							
	XC4C	—	—	0.12 MPa							
	XC4AW	—									
	XC4BW	—	—	0.3 MPa							
	XC4CW	—	—	0.14 MPa							
Piston speed	XC4A(W)	—									
	XC4B(W)	—	—	100 to 500 mm/s				100 to 400 mm/s			
	XC4C(W)	—	—	50 to 500 mm/s							

Dimensions (Dimensions other than those shown below are the same as those of the standard model.)

With single side scraper



MGPM-XC4A: "A," "E," and "HT" Dimensions [mm]

Bore size [mm]	A		E		HT*1
	50 st or less	Over 50 st to 200 st*1	50 st or less	Over 50 st to 200 st*1	
12	52	70.5	0	18.5	57
16	56	74.5	0	18.5	63
20	63	93	0	30	(83)
25	63.5	93.5	0	30	(93)
32	92	110.5	22.5	41	(112)
40	92	110.5	16	34.5	(120)
50	105.5	126.5	23.5	44.5	(148)
63	105.5	126.5	18.5	39.5	(162)
80	123.5	150.5	17	44	(202)
100	145.5	170.5	19.5	44.5	(240)

*1 Over 50 st to 100 st for bore sizes $\phi 12$ and $\phi 16$

* The dimensions in () are the body dimensions of the standard model.

Common Dimensions: MGPM, MGPL [mm]

Bore size [mm]	B	DA	FB	FC		
				XC4A	XC4B, XC4C	
				MGPM	MGPM	MGPL
12*1	52	6	16	5	—	—
16*1	56	8	16	5	—	—
20	63	10	18	0	9	5
25	63.5	10	17	0	9	5
32	69.5	14	22	0	9	5
40	76	14	22	0	9	5
50	82	20	26	0	10	8
63	87	20	26	0	10	5
80	106.5	25	34	0	15	6
100	126	30	41	0	15	6

*1 Only applicable to the "-XC4A"

MGPM-XC4B, -XC4C: "A," "E," and "HT" Dimensions [mm]

Bore size [mm]	A			E			HT
	50 st or less	Over 50 st to 200 st	Over 200 st	50 st or less	Over 50 st to 200 st	Over 200 st	
20	63	87.5	120	0	24.5	57	80
25	63.5	87.5	119.5	0	24	56	93
32	85	103.5	139.5	15.5	34	70	111.5
40	85	103.5	139.5	9	27.5	63.5	119
50	98.5	119.5	160.5	16.5	37.5	78.5	151
63	98.5	119.5	160.5	11.5	32.5	73.5	165
80	114.5	141.5	190.5	8	35	84	202
100	136.5	161.5	200.2	10.5	35.5	74.5	240

MGPL-XC4B, -XC4C: "A," "E," and "HT" Dimensions [mm]

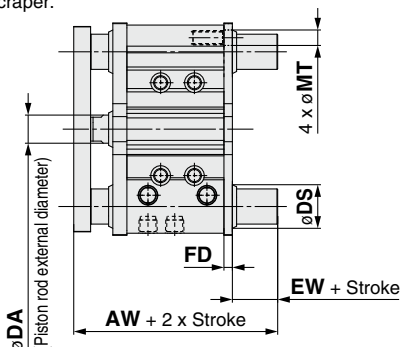
Bore size [mm]	A				E				HT
	30 st or less	Over 30 st to 100 st	Over 100 st to 200 st	Over 200 st	30 st or less	Over 30 st to 100 st	Over 100 st to 200 st	Over 200 st	
20	69	86	110	127.5	6	23	47	64.5	80
25	75.5	91.5	110.5	127.5	12	28	47	64	93

Bore size [mm]	A				E				HT
	50 st or less	Over 50 st to 100 st	Over 100 st to 200 st	Over 200 st	50 st or less	Over 50 st to 100 st	Over 100 st to 200 st	Over 200 st	
32	89.5	106.5	126.5	148.5	20	37	57	79	110
40	89.5	106.5	126.5	148.5	13.5	30.5	50.5	72.5	118
50	101.5	122.5	142.5	169.5	19.5	40.5	60.5	87.5	146
63	101.5	122.5	142.5	169.5	14.5	35.5	55.5	82.5	160

Bore size [mm]	A				E				HT
	25 st or less	Over 25 st to 100 st	Over 100 st to 200 st	Over 200 st	50 st or less	Over 50 st to 100 st	Over 100 st to 200 st	Over 200 st	
80	114.5	138.5	168.5	201.5	8	32	62	95	199
100	129.5	155.5	188.5	211.5	3.5	29.5	62.5	85.5	236

With scraper on both sides


* Dimensions other than those shown to the right are the same as those of the type with a single side scraper.



Dimensions: "AW," "EW," "FD," "MT," and "DS" [mm]

Bore size [mm]	AW	EW	FD	MT	DS (Bypass port for guide rod)		
					XC4A	XC4B, XC4C	
					MGPM	MGPM	MGPL
12*1	63	6	5	5	10	—	—
16*1	67	6	5	6	12	—	—
20	74	6	5	6	14	17	15
25	74.5	6	5	7	18	21	19
32	82.5	7	6	8.5	22	26	21
40	89	7	6	8.5	22	26	21
50	95	7	6	11	27	31	26
63	100	7	6	11	27	31	26
80	120.5	8	6	14	33	36	31
100	143	8	9	16	39	44	36

*1 Only applicable to the "-XC4A"

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

SMC Corporation

