

Made to Order Common Specifications: -XC4: With Heavy Duty Scraper



16 With Heavy Duty Scraper

Symbol
-XC4

Cylinders with a heavy duty scraper on the wiper ring are suitable for use in extremely dusty environments and those where they will be exposed to earth or sand, such as in die-casted equipment, construction machinery, and industrial vehicles.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
CM2	Air cylinder	CM2-Z	Double acting, Single rod		
		CM2W-Z	Double acting, Double rod		
	Centralized piping type	CM2□□P	Double acting, Single rod		
	End lock cylinder	CBM2	Double acting, Single rod	Head side locking type only (Except w/ air cushion)	
CG1	Air cylinder	CG1-Z1	Double acting, Single rod	Applicable to ø32 to ø63	
		CG1-Z	Double acting, Single rod	Applicable to ø32 to ø63	
MB	Air cylinder	MB-Z	Double acting, Single rod	Except ø125	
		MBW-Z	Double acting, Double rod	Except ø125	
MB1	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125	
		MB1W-Z	Double acting, Double rod	Except ø125	
CA2 *	Air cylinder	CA2-Z	Double acting, Single rod		
		CA2W-Z	Double acting, Double rod		
	End lock cylinder	CBA2	Double acting, Single rod	Head side locking type only	
CS1	Air cylinder	CS1	Double acting, Single rod		
		CS1W	Double acting, Double rod		
CS2	Air cylinder	CS2	Double acting, Single rod		
		CS2W	Double acting, Double rod		
CQ2	Air cylinder	CQ2-Z	Double acting, Single rod	Applicable to ø20 to ø100 The only mounting option selectable for sizes ø20 to ø32 is the (B) through-hole.	Web Catalog
		CQ2W-Z	Double acting, Double rod	Applicable to ø40 to ø100	
	Axial piping type (Centralized piping type)	CQP2	Double acting, Single rod	Applicable to ø32 to ø100	
	Long stroke	CQ2-Z	Double acting, Single rod		
RQ	Compact cylinder with air cushion	RQ	Double acting, Single rod		
CV	Valve mounted air cylinder	CVM5	Double acting, Single rod		
		CV3	Double acting, Single rod		
		CVS1	Double acting, Single rod		
MGP	Compact guide cylinder	MGPM-Z	Double acting	Applicable to ø20 to ø100	
		MGPL-Z	Double acting	Applicable to ø20 to ø100	
		MGPA-Z	Double acting	Applicable to ø20 to ø100	
MGG	Guide cylinder	MGG	Double acting	Applicable to ø32 to ø100	
MGC	Guide cylinder	MGC	Double acting	Applicable to ø32 to ø50	
CNA2	Cylinder with lock	CNA2	Double acting, Single rod		
CNG	Cylinder with lock	CNG	Double acting, Single rod	Applicable to ø32, ø40	
MK	Rotary clamp cylinder	MK-Z	Double acting	Applicable to ø16 to ø63 (Rod flange type only applicable to ø32 to ø63)	

* CA2□H (Air-hydro type) comes with a heavy duty scraper as standard.

How to Order

Standard model no.	-XC4
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With heavy duty scraper ●

* For the MGP series, refer to page 1482.

⚠ Caution

Do not replace heavy duty scrapers.

- Since heavy duty scrapers are press-fit, do not replace the cover only, but rather the entire rod cover assembly. The CM2 series cannot replace either heavy duty scraper or rod seal. It goes for replacing retainer assembly for the CS1 series. Replace the CNA2 series with the lock unit.

Specifications: Same as standard type

Made to Order Common Specifications: -XC4: With Heavy Duty Scraper



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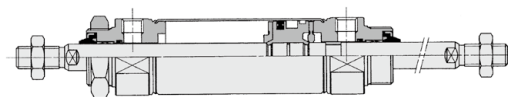
Symbol
-XC4

Construction (Dimensions are the same as standard.)

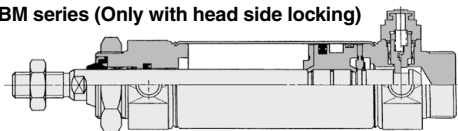
CM2 series Refer to page 1479 for the female rod end.



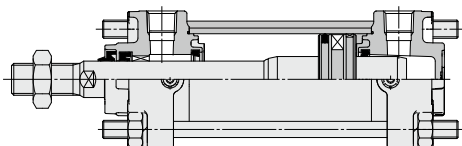
CM2W series Refer to page 1479 for the female rod end.



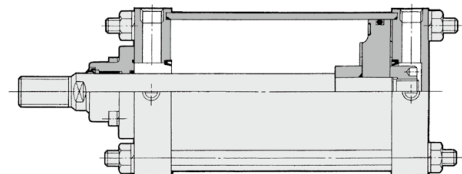
CBM series (Only with head side locking)



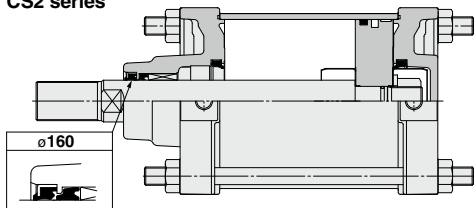
CA2 series



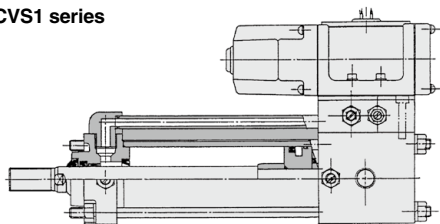
CS1 series



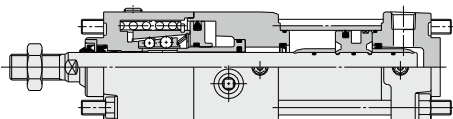
CS2 series



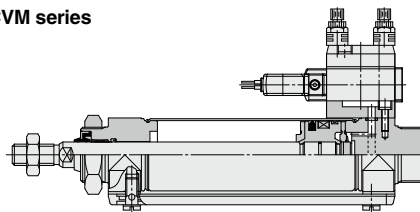
CVS1 series



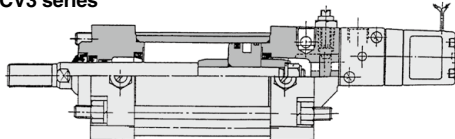
CNA2 series



CVM series



CV3 series



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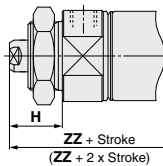
Symbol
-XC4

Dimensions (Dimensions other than below are the same as standard type.)

CM2 series CM2W series

* (): Denotes the dimensions for the CM2W series.

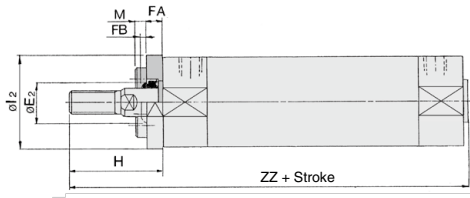
Female rod end



Bore size	CM2 series		CM2W series (mm)	
	H	ZZ	H	ZZ
20	24	99	24	110
25	24	99	24	110
32	24	101	24	112
40	26	130	26	140

CG1-Z1 series

CG1 series



CG1 Series

(mm)

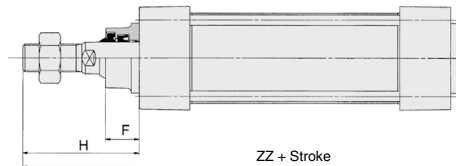
Bore size	Stroke range		E ₂	FA	FB	M	l ₂	H		ZZ	
	CG1-Z1	CG1-Z						Male thread	Female thread	Male thread	Female thread
32	Up to 1000	Up to 300 (Up to 1500)	17	8	3	5	38	48	28	121 (129)	101 (109)
40			21	8	3	3.5	47	58	29	138 (147)	109 (118)
50			26	9	3	4.5	58	66	30	158 (170)	122 (134)
63			26	9	3	5.5	72	66	30	158 (170)	122 (134)

Note) (): Long stroke

* On the axial foot and rod side flange types, the mounting bracket is wedged and bolted between the cylinder and the scraper at the time of shipment. Others are shipped together (but not assembled).

MB series

MB1 series



MB,MB1 Series

(mm)

Bore size	F	H	ZZ
32	13	47	135
40	13	58	146
50	14	67	165
63	14	67	165
80	20	81	199
100	20	81	199

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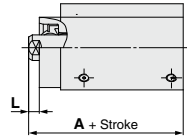
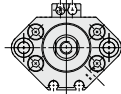
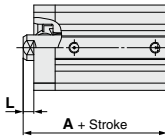
Symbol
-XC4

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

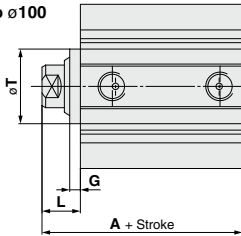
Double acting, Single rod

∅20, ∅25 (Without auto switch magnet), ∅32

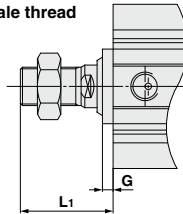
∅20, ∅25 (With auto switch magnet)



∅40 to ∅100



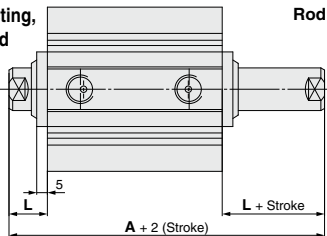
Rod end male thread



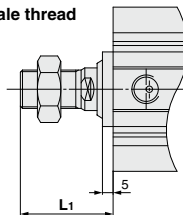
Bore size [mm]	A		G		L		L ₁		T	
	50 mm stroke or less	75, 100 mm stroke	125 to 300 mm stroke	100 mm stroke or less	125 mm stroke or more	100 mm stroke or less	125 to 300 mm stroke	100 mm stroke or less		125 to 300 mm stroke
20	34 (46)	—	—	—	—	4.5	—	18.5	—	—
25	37.5 (47.5)	—	—	—	—	5	—	22.5	—	—
32	40 (50)	50	67.5	—	—	7	12	28.5	33.5	—
40	46.5 (56.5)	56.5	77	5	10	17	22	38.5	43.5	28
50	48.5 (58.5)	58.5	78.5	5	10	18	23	43.5	48.5	35
63	54 (64)	64	80	5	10	18	23	43.5	48.5	35
80	63.5 (73.5)	73.5	91	5	10	20	25	53.5	58.5	43
100	75 (85)	85	102.5	5	10	22	27	53.5	58.5	59

(): Dimensions with auto switch magnet

Double acting, Double rod



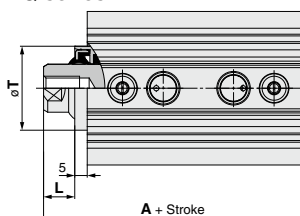
Rod end male thread



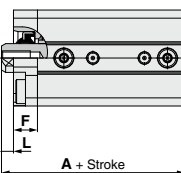
Bore size [mm]	A		L	L ₁
	Up to 50 mm stroke	75, 100 mm stroke		
40	46.5 (56.5)	56.5	17	38.5
50	48.5 (58.5)	58.5	18	43.5
63	54 (64)	64	18	43.5
80	63.5 (73.5)	73.5	20	53.5
100	75 (85)	85	22	53.5

(): Dimensions with auto switch magnet

RQ series



Bore size 20, 25



Bore size (mm)	A	F	L	T
20	46.5	10	4.5	—
25	51.5	10	5	—
32	54	10	7	—
40	61	—	17	28
50	67.5	—	18	35
63	73	—	18	35
80	83.5	—	20	43
100	98	—	22	59

- Please contact SMC for bore size 20 to 32 with both ends tapped and mounting brackets.
- Only standard strokes are applicable.

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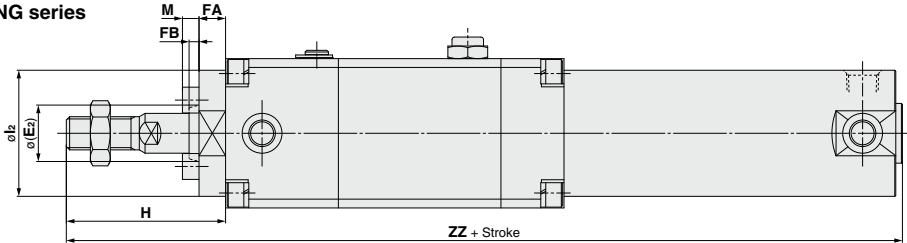


16 With Heavy Duty Scraper

Symbol
-XC4

Dimensions (Dimensions other than below are the same as standard type.)

CNG series

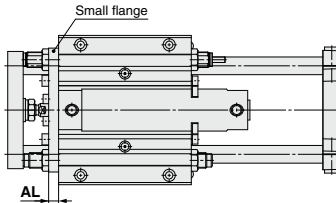


Bore size	E ₂	FA	FB	M	l ₂	H	ZZ
32	17	8	3	5	38	48	204
40	21	8	3	3.5	47	58	229

	ZZ
Long strokes	212
	238

- * The above figure shows the rubber bumper type.
- * On the axial foot type and the rod side flange type, the mounting bracket is wedged and bolted between the cylinder and the scraper at the time of shipment.

MGG□B series
ø32 to ø50

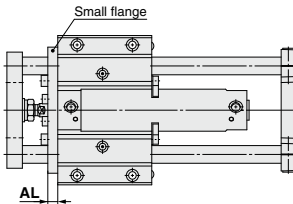


(mm)	
Bore size (mm)	AL
32	9
40	12
50	12

Specifications: Same as standard type

- Note 1) Except ø20 and ø25
- Note 2) Heavy duty scrapers are attached to the piston rod and guide rods (front and back).
- Note 3) Rod side heavy duty scrapers for ø32 to ø50 are press-fit to large and small flanges.

MGC□B series
ø32 to ø50



(mm)	
Bore size (mm)	AL
32	9
40	12
50	12

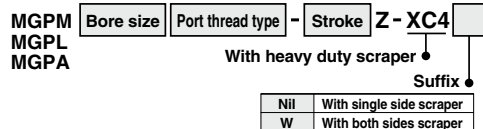
Made to Order Common Specifications: -XC4: With Heavy Duty Scraper



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-XC4

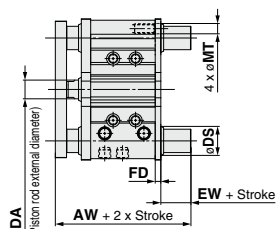
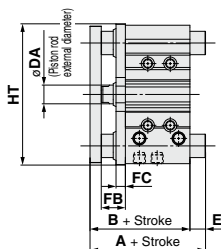
How to Order/MGP



Specifications

Applicable series	MGPM	MGPL/MGPA
Bearing type	Slide bearing	Ball bushing bearing
Bore size (mm)	20, 25, 32, 40, 50, 63, 80, 100	
Minimum operating pressure	0.12 MPa	
	0.14 MPa	
Specifications other than above	Same as standard type	

Dimensions (Dimensions other than below are the same as standard type.)



For cylinder with both sides scraper

Common Dimensions:

MGPM, MGPL, MGPA (mm)

Bore size (mm)	B	DA	FB	FC	
				MGPM	MGPL/MGPA
20	63	10	18	9	5
25	63.5	10	17	9	5
32	69.5	14	22	9	5
40	76	14	22	9	5
50	82	20	26	10	8
63	87	20	26	10	5
80	106.5	25	34	15	6
100	126	30	41	15	6

With Both Sides Scraper

Dimensions: AW, EW, FD, MT, DS (mm)

Bore size (mm)	AW	EW	FD	MT	DS*	
					MGPM	MGPL/MGPA
20	74	6	5	6	17	15
25	74.5	6	5	7	21	19
32	82.5	7	6	8.5	26	21
40	89	7	6	8.5	26	21
50	95	7	6	11	31	26
63	100	7	6	11	31	26
80	120.5	8	6	14	36	31
100	143	8	9	16	44	36

* Bypass port size for guide rod with bottom mounting

MGPM (Slide bearing) A, E, 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	200.5	10.5	35.5	74.5	240

MGPL, MGPA (Ball bushing bearing) A, E, HT Dimensions (mm)

Bore size (mm)	A			E			HT	
	50 st or less	Over 50 st to 100 st	Over 100 st to 200 st	50 st or less	Over 50 st to 100 st	Over 100 st to 200 st		
20	69	86	110	127.5	6	23	47	80
25	75.5	91.5	110.5	127.5	12	28	47	93

Bore size (mm)	A			E			HT		
	50 st or less	Over 50 st to 50 st	Over 200 st	50 st or less	Over 50 st to 50 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 50 st	Over 200 st	25 st or less	Over 25 st to 50 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

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Symbol
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How to Order/MK

MKB
MKF Bore size Port thread type - Clamp stroke Rotary direction Body option Z - Auto switch - **XC4**
MKG * MKF only applicable to ø32 to ø63
With heavy duty scraper

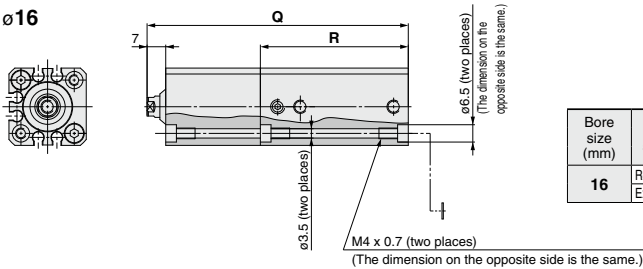
Specifications

Bore size (mm)	16	20	25	32	40	50	63
Minimum operating pressure	0.15 MPa			(0.1 MPa)			
Specifications other than above	Same as standard type						

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

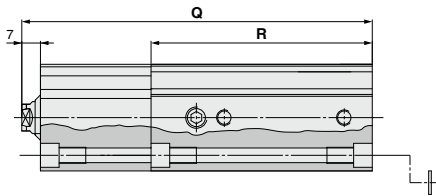
Dimensions (Dimensions other than below are the same as standard type.)

ø16



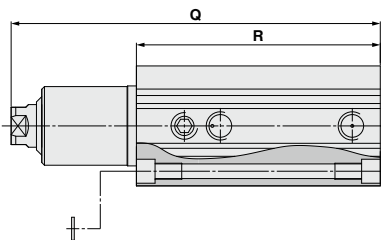
Bore size (mm)	Rod state	Clamp stroke					
		10 mm		20 mm		30 mm	
		Q	R	Q	R	Q	R
16	Retracted	78	45.5	98	55.5	118	65.5
	Extended	95.5		125.5		155.5	

ø20, ø25



Bore size (mm)	Rod state	Clamp stroke					
		10 mm		20 mm		30 mm	
		Q	R	Q	R	Q	R
20	Retracted	99	72	119	82	139	92
	Extended	118.5		148.5		178.5	
25	Retracted	111.5	73	131.5	83	151.5	93
	Extended	131		161		191	

ø32 to ø63



Bore size (mm)	Rod state	Clamp stroke							
		10 mm		20 mm		30 mm		50 mm	
		Q	R	Q	R	Q	R	Q	R
32	Retracted	118.5	81.5	138.5	91.5	158.5	101.5	198.5	121.5
	Extended	143.5		173.5		203.5		263.5	
40	Retracted	119	75	139	85	159	95	199	115
	Extended	144		174		204		264	
50	Retracted	137	86.5	157	96.5	177	106.5	217	126.5
	Extended	166		196		226		286	
63	Retracted	140	90	160	100	180	110	220	130
	Extended	169		199		229		289	