

	-XB5	Oversized rod cylinder	Ρ.	1445
2	-XB6	Heat resistant cylinder (-10 to 150°C)	P.1	1446
3	-XB7	Cold resistant cylinder (-40 to 70°C)		
4	-XB9	Low speed cylinder (10 to 50 mm/s)	P.1	1449
5	-XB10	Intermediate stroke (Using exclusive body)		
		Intermediate stroke (Spacer-installed type)	P.1	1455
7	-XB11	Long stroke type		
8	-XB12	External stainless steel cylinder		
	-XB13	Low speed cylinder (5 to 50 mm/s)		
	-XB14	Cylinder with heat resistant auto switch		
	-XB19	High speed type		
=	-XB20	Stroke adjustment unit with adjustment bolt-		
	-XB22	Shock absorber soft type RJ series type		
	-XC2(A)	Rod end length extended 10 mm		
=	-XC3	Special port location		
	-XC4	With heavy duty scraper		
=	-XC5	Heat resistant cylinder (-10 to 110°C)		
	-XC6	Made of stainless steel		
	-XC7	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel		
_	-XC8	Adjustable stroke cylinder/Adjustable extension type		
	-XC9	Adjustable stroke cylinder/Adjustable retraction type		
	-XC10	Dual stroke cylinder/Double rod type		
	-XC11	Dual stroke cylinder/Single rod type		
	-XC12 -XC13	Tandem cylinder		
		Auto switch rail mounting type		
	-XC17 -XC19	Intermediate stroke (Spacer type)		
	-XC19	Head cover axial port		
	-XC20	Fluororubber seals		
=	-XC22	With magnetic shielding plate		
	-XC25	No fixed throttle of connection port		
=	-XC25	With split pins for double clevis pin/double knuckle joint pin and flat washers		
		Double clevis width/Double knuckle width 12.5 mm, 16.5 mm, 19.5 mm: With double clevis, double knuckle joint.		
=	-XC27	Double clevis and double knuckle joint pins made of stainless steel		
	-XC28	Compact flange made of SS400		
	-XC29	Double knuckle joint with spring pin	Р 1	1534
	-XC30	Rod side trunnion		
	-XC34	Non-rotating plate with workpiece mounting screw (No extended part on the rod end).		
39	-XC35	With coil scraper		
40	-XC36	With boss in rod side		
41	-XC37	Larger throttle diameter of connection port	P.1	1544
42	-XC38	Vacuum (Rod through-hole)	P.1	1545
43	-XC42	Built-in shock absorber in head cover side	P.1	1546
44	-XC51	With hose nipple		
45	-XC52	Mounting nut with set screw		
46	-XC56	With knock pin holes		
47	-XC57	Rodless cylinder with floating joint		
	-XC65	Made of Stainless Steel (Combination of XC7 and XC68)		
=	-XC67	Dust seal band NBR lining specifications		
	-XC68	Made of stainless steel (with hard chrome plated piston rod)	P.1	1555
	-XC69	MGP series with shock absorber		
=	-XC71	Helical insert thread specifications		
	-XC72	Without built-in auto switch magnet		
=	-XC73	Built-in cylinder with lock (CDNG)		
	-XC74	With front plate for MGG cylinder	P.1	1562
=	-XC78	Auto switch mounting special dimensions at stroke end	۲.1	1563
5/	-XC82	Bottom mounting type	۲.1	1564



58	-XC83	Built-in cylinder with lock (MDNB)·····	Р.	1565
59	-XC85	Grease for food processing equipment	P.	1568
60	-XC86	With rod end bracket	P.	1569
61	-XC87	Cylinder with one-way lock/heavy duty specifications	P.	1570
62	-XC88	Spatter resistant coil scraper, Lube-retainer, Grease for welding (Piston rod: Stainless steel 304)	Ρ.	1571
63	-XC89	Spatter resistant coil scraper, Lube-retainer, Grease for welding (Piston rod: S45C)	P.	1571
64	-XC91	Spatter resistant coil scraper, Grease for welding (Piston rod: S45C)	P.	1572
65	-XC92	Dust resistant actuator	P.	1580
66	-XC93	With greater water resistance + stable lubrication function	P.	1583
67	-XC102	Lock release specification-	P.	1584
68	-XC103	Cylinder for the foot type or the rod flange type mounting bracket	P.	1585
69	-XC104	Built-in cylinder with lock (MWB)	P.1	585-1

How to Order When Combining Made-to-Order Specifications

How to order when combining two specifications: simple specials (XA \square) and made-to-order common specifications (XB \square , XC \square).

■How to Order Example: 1 (Enter the symbol in alphabetical order.)

CQ2B25-30D-XA7B6

Note) "X" of XB6 is not necessary.

Made to Order

Symbol	Specifications
XA7	Change of rod end shape
XB6	Heat resistant cylinder

■How to Order Example: 2 (Enter the symbol in numerical order when alphabetical letters are the same.)

CDQ2B25-30DZ-M9BW-XC4C6

Note) "X" of XC6 is not necessary.

Made to Order

Symbol	Specifications
XC4	With heavy duty scraper
XC6	Made of stainless steel

When combining special order options, the symbols should be listed in alphabetical or numerical order.
 However, due to product-specific production restrictions, it may not be possible to easily combine them.
 Contact SMC if you require a custom combination.



Made to Order Common Specifications: -XB5: Oversized Rod Cylinder



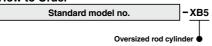
1 Oversized Rod Cylinder

Symbol -XB5

A cylinder that has been made stronger through the use of a piston rod with a larger diameter. It is used for long stroke applications that pose the risk of bending or buckling of the piston rod.

(Please contact SMC if a lateral load must be applied to it.)

How to Order

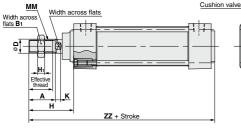


Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
МВ	Air cylinder	МВ	Double acting, Single rod		
MB1	Air cylinder	MB1	Double acting, Single rod		
CA2	Air cylinder	CA2	Double acting, Single rod		Web Catalog
CS1	Air cylinder	CS1	Double acting, Single rod		
CS2	Air cylinder	CS2	Double acting, Single rod/Double acting, Double rod	Applicable to ø180 to ø320	

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

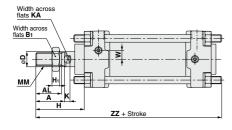
MB, MB1 series





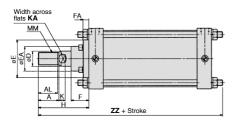
Bore size (mm)	A	Effective thread length	Вı	øD	н	H1		Width across flats	ММ	w	ZZ
32	30	27	22	16	51	8	6	14	M14 x 1.5	7.2	139
40	35	32	27	20	58	11	7	18	M18 x 1.5	9.7	146
50	40	37	32	25	68	13	10	22	M22 x 1.5	10.5	166
63	40	37	32	25	68	13	10	22	M22 x 1.5	12	166
80	40	37	41	30	74	16	10	26	M26 x 1.5	14	192
100	50	47	46	36	90	18	16	31	M30 x 1.5	15	208

CA2 series



Bore size (mm)	Α	AL	B ₁	øD	н	H1	к	KA	ММ	w	zz
40	35	32	27	20	58	11	7	18	M18 x 1.5	9	153
50	40	37	32	25	71	13	11	22	M22 x 1.5	9	172
63	40	37	32	25	71	13	11	22	M22 x 1.5	9	183
80	40	37	41	30	72	16	11	26	M26 x 1.5	0	205
100	50	47	46	36	85	18	15	31	M30 x 1.5	0	228

CS1 series



Bore size (mm)	A	AL	D	Е	EA	F	FA	н	K	KA	мм	ZZ
125	63	60	50	115	74	48	17	135	20	46	M45 x 1.5	260
140	71	67	60	140	86	60	20	160	25	56	M56 x 2.0	285
160	71	67	60	140	86	60	20	160	25	56	M56 x 2.0	296.5
180	80	76	70	140	96	60	20	175	30	65	M64 x 2.0	325
200	80	76	70	140	96	60	20	175	30	65	M64 x 2.0	325

Made to Order Common Specifications: -XB5: Oversized Rod Cylinder

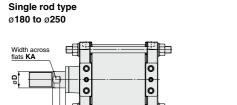


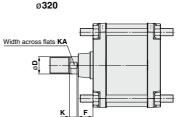
1 Oversized Rod Cylinder

Symbol -XB5

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

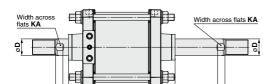
CS2 series

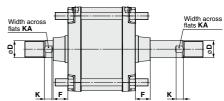




ø320

Double rod type Ø180 to Ø250





	D	F	K	KA
ø180	45	37	20	41
ø 200	50	41	20	46
ø 250	60	52	25	56
ø320	70	60	30	65

-XB6: Heat Resistant Cylinder (-10 to 150°C)



2 Heat Resistant Cylinder (-10 to 150°C)

Symbol -XB6

Air cylinder which changed the seal material and grease, so that it could be used even at higher temperature up to 150 from -10°C.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std mode		
CJP2	Pin cylinder	CJP2	Double acting, Single rod	Except clevis, trunnion type, with auto switch, ø4. Packing set (8)			
CJ2	Air cylinder	CJ2-Z	Double acting, Single rod	Except with air cushion and auto switch, rod end bracket T, U			
C02	All Cyllinder	CJ2W-Z	Double acting, Double rod	Except with air cushion and auto switch, rod end bracket T, U			
	Air cylinder	CM2-Z	Double acting, Single rod	Except with rod boot and with auto switch			
	7th Cymraci	CM2W-Z	Double acting, Double rod				
	Non-rotating rod type	CM2K-Z	Double acting, Single rod	Except with rod boot and with auto switch			
CM2		CM2KW-Z	Double acting, Double rod	Except with auto switch			
	Direct mount type	CM2R-Z	Double acting, Single rod	Except with auto switch			
	Non-rotating rod, Direct mount type	CM2RK-Z	Double acting, Single rod	Except with auto switch			
	End lock cylinder	CBM2	Double acting, Single rod	Except with rod boot and with auto switch			
	Air cylinder	CG1-Z	Double acting, Single rod	Except with auto switch. Without a bumper for cylinders with rubber bumper			
CG1	All Cylinder	CG1W-Z	Double acting, Double rod	Except with auto switch. Without a bumper for cylinders with rubber bumper			
	Direct mount type	CG1R-Z	Double acting, Single rod	Except with auto switch. Without a bumper for cylinders with rubber bumper			
МВ	Air cylinder	MB-Z	Double acting, Single rod	Except without air cushion and with auto switch			
IVID	All Cylinder	MBW-Z	Double acting, Double rod	Except without air cushion and with auto switch			
MB1	Air cylinder	MB1-Z	Double acting, Single rod	Except without air cushion and with auto switch			
MDI	Air cylinder	MB1W-Z	Double acting, Double rod	Except without air cushion and with auto switch			
	Ale audie dan	CA2-Z	Double acting, Single rod	Except with auto switch			
CA2	Air cylinder	CA2W-Z	Double acting, Double rod	Except with auto switch			
	End lock cylinder	CBA2	Double acting, Single rod	Except with auto switch			
001	Air audiadas	CS1□N	Double acting, Single rod	Freeze with a to quitely Applicable have size (#105 to #000)			
CS1	Air cylinder	CS1W□N	Double acting, Double rod	Except with auto switch. Applicable bore size (ø125 to ø200)			
CS2	Air audiadas	CS2	Double acting, Single rod	Except with auto switch	Web Catalog		
CS2	Air cylinder	CS2W	Double acting, Double rod	Except with auto switch			
CUJ	Mini free mount cylinder	CUJ	Double acting, Single rod	Except with auto switch and ø4			
	Free mount cylinder	CU	Double acting, Single rod	Except with auto switch			
CU	Non-rotating rod type	CUK	Double acting, Single rod	Except with auto switch			
CU	Long stroke	CU	Double acting, Single rod	Except with auto switch			
	Long stroke, Non-rotating rod	CUK	Double acting, Single rod	Except with auto switch			
cas	O	CQS	Double acting, Single rod	Except with rubber bumper and auto switch			
cus	Compact cylinder	cqsw	Double acting, Double rod	Except with rubber bumper and auto switch			
	O	CQ2-Z	Double acting, Single rod	Except with rubber bumper and auto switch, air-hydro type			
	Compact cylinder	CQ2W-Z	Double acting, Double rod	Except with rubber bumper and auto switch, air-hydro type			
CQ2	Axial piping type (Centralized piping type)	CQP2	Double acting, Single rod	Except with rubber bumper and auto switch, air-hydro type			
		CQ2K-Z	Double acting, Single rod	Except with rubber bumper and auto switch			
	Non-rotating rod type	CQ2KW-Z	Double acting, Double rod	Except with rubber bumper and auto switch			
CG5	Stainless cylinder	CG5	Double acting, Single rod	Except with auto switch. Without a bumper for cylinders with a rubber bumper (Grease for non-food is used.)			
		CY3B-Z		Without a bumper			
CY3	Magnetically coupled rodless cylinder	CY3B	Basic type	Without a bumper			
MK	Rotary clamp	MK-Z	Double acting	Except with auto switch, ø12 and ø16			
MGP	Compact guide cylinder	MGPM-Z	Double acting	Except with auto switch. No rubber bumper is equipped.			
MGQ	Compact guide cylinder	MGQ	Double acting	Except with auto switch, ø12 to ø25 of MGQL (Ball bushing type)			
MGG	Guide cylinder	MGG	Double acting	Except with auto switch. No shock absorber and rubber bumper are equipped.			
MGC	Guide cylinder	MGC	Double acting	Except with auto switch			
CXSJ	· ·	CXSJ	Compact type	Except with auto switch			
CXS	Dual rod cylinder	CXS	Basic type	Except with auto switch			
CAS	1		L Dasio type	LACOPI WILL AUTO SWITCH			

How to Order

-XB6 Standard model no.

Heat resistant cylinder

Specifications

Ambient temperature range	-10 to 150°C (0 to 150°C for CS1, CS2 series)
Seals materials	Fluororubber
Grease	Heat resistant grease
Specifications other than above and external dimensions	Same as standard type

⚠ Warning Precautions

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

Note 1) Operate without lubrication from a pneumatic system lubricator. Note 2) Please contact SMC for details on the maintenance intervals for

this cylinder, which differ from those of the standard cylinder. Note 3) In principle, it is impossible to make built-in magnet type and the one with auto switch. But, as for the one with auto switch, and the heat resistant cylinder with heat resistant auto switch, since it will be differed depending on the series, please contact SMC.

Note 4) Piston speed is ranged from 50 to 500 mm/s.

But, for MGQ□80, 100 and MGP□80, 100, it will be 50 to 400 mm/s. 50 to 200 mm/s for the MK series. The piston speed for the CY3B and CY3B-Z series is 50 to 400 mm/s. Note that the max. piston speed changes depending

on the ambient temperature.

Note 5) Please contact SMC for the CQ2, CQS, MGP and MGQ series with rubber bumper.

Note 6) As for the ambient temperature range of the CY3B and CY3B-Z series since the magnetic holding force will be varied depending on the operating conditions, make sure that by referring to the next page.

Note 7) The ambient temperature range of the CY3B and CY3B-Z

series is 50 to 150°C

Note 8) Refer to the construction of the standard type for the details of the packing set for CJP2□6,10 and 16.

Made to Order Common Specifications: -XB6: Heat Resistant Cylinder (-10 to 150°C)



The CY3B series is to be discontinued as of May 2025.
Please select the CY3B-Z series instead. ▶ Click here for details

Symbol -XB6

2 Heat Resistant Cylinder (-10 to 150°C)



Specifications

Model	CY3B-Z, CY3B				
Bore size (mm)	ø6 to ø63				
Ambient and fluid temperature	50 to 150°C*				
Maximum operating pressure	0.5 MPa				
Piston speed	50 to 400 mm/s*				
140 0 0					

- * When the temperature is in the less than 100°C range, operate at 200 mm/s or less.
- * External dimensions are identical to the standard model.

Operating Pressure Limit for Intermediate Stop and Vertical Operation

Maximum operating pressure at the intermediate stop	0.4 MPa*
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Use caution that the magnet coupling will be removed, if it is used to stop in an intermediate stroke by an external stopper with the operating pressure over 0.4 MPa

Magnetic Holding Force

Bore size (mm)	6	10	15	20	25	32	40	50	63
Holding force (at 150°C)	14.4	40.0	90.1	160	250	410	641	1000	1590
Holding force (at 100°C)	17.2	47.9	107	192	299	490	766	1190	1900

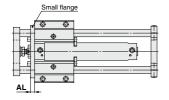
MGC series How to Order

MGC Standard model no. -XB6

Heat resistant cylinder

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

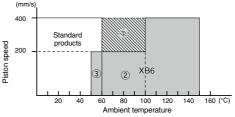
MGCLB series



	(mm)
Bore size (mm)	AL
20	9
25	9
32	9
40	12
50	12

Temperature Range for Operating Cylinder and Piston Speed

- For piston speeds of more than 200 mm/s when the operating temperature is within the 60 to 100°C range, a special order product is available separately.
- When using with the operating temperature from 50 up to 100°C, and the piston speed of less than 200 mm/s, XB6 specifications can be used.
- As for XB6, regarding the temperature range (over 50 to 60°C) which overlaps the one of standard products, consider the tendency of operating temperature (upper, lower limits), then choose a model.



When the operating temperature fluctuates between 50°C or less and 100°C or more, this may result in an unstable operating speed and a reduced service life.

<Reference>

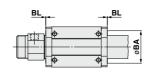
(N)

Maintenance cycle for XB6 could vary substantially, depending on the operating condition and the ambient temperature.

Even if using in our recommended range, as a guide, conduct it in around 1/2 intervals, compared to the standard products.

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

E



Bore size (mm)	BA	BL
6	_	
10	_	_
15	_	
20	_	_
25	37	0.3
32	_	_
40	_	
50	68.5	0.6
63		

(mm)

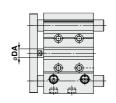
MGP series How to Order

* The cylinders other than those with a bore size of 25 or 50 have no convex shapes.

MGPM Standard model no. -XB6

Heat resistant cylinder

Dimensions



		()
12 (6) 16 (8) 20 (10) 25 (10) 32 (14) 40 (14) 50 20 63 20 80 25		(mm)
16 (8) 20 (10) 25 (10) 32 (14) 40 (14) 50 20 63 20 80 25	Bore size (mm)	DA
20 (10) 25 (10) 32 (14) 40 (14) 50 20 63 20 80 25	12	(6)
25 (10) 32 (14) 40 (14) 50 20 63 20 80 25	16	(8)
32 (14) 40 (14) 50 20 63 20 80 25	20	(10)
40 (14) 50 20 63 20 80 25	25	(10)
50 20 63 20 80 25	32	(14)
63 20 80 25	40	(14)
80 25	50	20
	63	20
100 30	80	25
	100	30

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

-XB7: Cold Resistant Cylinder (-40 to 70°C)



3 Cold Resistant Cylinder (-40 to 70°C)

Symbol -XB7

Air cylinder which changed the seal material and grease, so that it could be used even at lower temperature down to -40°C.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
CJP2	Pin cylinder	CJP2	Double acting, Single rod	Except clevis, trunnion type, with auto switch, ø4. Packing set (7)	
CJ2	Air cylinder	CJ2-Z	Double acting, Single rod	Except with air cushion and auto switch, rod end bracket, pivot bracket	
CUZ	All Cyllinder	CJ2W-Z	Double acting, Double rod	Except with air cushion and auto switch, rod end bracket, pivot bracket	
	Air cylinder	CM2-Z	Double acting, Single rod	Except with rod boot, with air cushion, with auto switch, rod end bracket, pivot bracket	
CM2	Air cylinder	CM2W-Z	Double acting, Double rod	Except with rod boot, with air cushion, with auto switch, rod end bracket, pivot bracket	
	Direct mount type	CM2R-Z	Double acting, Single rod	Except with air cushion, auto switch	
	Air cylinder	CG1-Z	Double acting, Single rod	Except with air cushion, auto switch. Cylinders with a rubber bumper have no bumper.	
CG1	Air cylinder	CG1W-Z	Double acting, Double rod	Except with air cushion, auto switch. Cylinders with a rubber bumper have no bumper.	
	Direct mount type	CG1R-Z	Double acting, Single rod	Except with air cushion, auto switch. Cylinders with a rubber bumper have no bumper.	Web Catalog
	Free mount cylinder	CU	Double acting, Single rod	Except with auto switch	
CU	Non-rotating rod type	CUK	Double acting, Single rod	Except with auto switch	
CU	Long stroke	CU	Double acting, Single rod	Except with auto switch	
	Long stroke, Non-rotating rod	CUK	Double acting, Single rod	Except with auto switch	
cas	Compact cylinder	cqs	Double acting, Single rod	Except with auto switch, with rubber bumper, with bracket	
Cus	Compact cylinder	cqsw	Double acting, Double rod	Except with auto switch, with rubber bumper, with bracket	
	Commont audinder	CQ2-Z	Double acting, Single rod	ø12 to ø40. Except with auto switch magnet, with rubber bumper, with bracket	
CQ2	Compact cylinder	CQ2W-Z	Double acting, Double rod	ø12 to ø40. Except with auto switch magnet, with rubber bumper, with bracket	
	Axial piping type (Centralized piping type)	CQP2	Double acting, Single rod	ø12 to ø40. Except with auto switch magnet, with rubber bumper, with bracket	

How to Order



Specifications

Ambient temperature range	−40 to 70°C
Seals material	Low nitrile rubber
Grease	Cold resistant grease
Auto switch	Not mountable
Dimensions	Same as standard type
Additional specifications	Same as standard type

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

- Note 1) Operate without lubrication from a pneumatic system lubricator.
- Note 2) Use dry air which is suitable for heatless air dryer, etc. not to cause the moisture to be frozen.
- Note 3) Please contact SMC for details on the maintenance intervals for this cylinder, which differ from those of the standard cylinder.
- Note 4) Mounting auto switch is impossible. Note 5) Please contact SMC for the one with
- rubber bumper for CQ2, CQS.

 Note 6) No cushion type is adopted.
 - Piston speed is ranged from 50 to 500 mm/s.
- Note 7) Refer to the construction of the standard type for the details of the packing set for CJP2□6,10 and 16.





Made to Order Common Specifications: -XB9: Low Speed Cylinder (10 to 50 mm/s)



The CY3B series is to be discontinued as of May 2025. Please select the CY3B-Z series instead.

Symbol -XB9

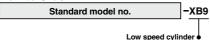
4 Low Speed Cylinder (10 to 50 mm/s)

Even if driving at lower speeds 10 to 50 mm/s, there would be no stick-slip phenomenon and it can run smoothly.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
CJ2	Air cylinder	CJ2-Z	Double acting, Single rod	Except with air cushion	
	Air cylinder	CM2-Z	Double acting, Single rod	Except air-hydro, with air cushion, with rod boot	1
CM2	Direct mount type	CM2R-Z	Double acting, Single rod	Except with air cushion	1
	End lock cylinder	CBM2	Double acting, Single rod	Except with rod boot, with air cushion	1
CG1	Air cylinder	CG1-Z	Double acting, Single rod	Except with rod boot, with air cushion	
CGI	Direct mount type	CG1R-Z	Double acting, Single rod	Except with air cushion	1
	Free mount cylinder	CU	Double acting, Single rod		1
CU	Non-rotating rod type	CUK	Double acting, Single rod		1
CO	Long stroke standard type Long stroke, Non-rotating rod type	CU	Double acting, Single rod		1
		CUK	Double acting, Single rod		1
cas	Compact cylinder	cqs	Double acting, Single rod	Except long stroke	Web Catalog
Cus	Compact cylinder	cqsw	Double acting, Double rod		1
	Compact cylinder	CQ2-Z	Double acting, Single rod	Except long stroke and large bore type	1
CQ2	Compact cylinder	CQ2W-Z	Double acting, Double rod		1
	Axial piping type (Centralized piping type)	CQP2	Double acting, Single rod		1
MGQ	Compact guide cylinder	MGQ	Double acting		1
cxs	Dual rod cylinder	cxs	Basic type		1
		CY3B-Z	Double acting		1
CY	Magnetically coupled	CY3B	Double acting		1
CT	rodless cylinder	CY1S-Z	Double acting		1
		CY1L	Double acting		1

How to Order



Note) Operate without lubrication from a pneumatic system lubricator.

Specifications

Opcomodion	•
Piston speed	10 to 50 mm/s (CY is ranged between 15 to 50 mm/s.)
Dimensions	Same as standard type
Additional specifications	Same as standard type

∆Warning Precautions

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



-XB10: Intermediate Stroke (Using exclusive body)



5 Intermediate Stroke (Using exclusive body)

Symbol -XB10

Cylinder which can reduce the mounting space by using an exclusive body which does not use a spacer to achieve that the full length dimension could be shortened when an intermediate stroke other than the standard stroke is required.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
		cos	Double acting, Single rod	Long stroke is available, too.	
cos Compact cylinder	Compact cylinder	cus	Single acting (Spring return)		
ouc		CQSW	Double acting, Double rod		
	Anti-lateral load	CQ2□S	Double acting, Single rod		
		CQ2-Z	Double acting, Single rod		
	Compact cylinder	CQ2-Z	Single acting (Spring return)		1
		CQ2W-Z	Double acting, Double rod		
	Non-rotating rod type	CQ2K-Z	Double acting, Single rod	Except ø12 to 32]
	Non-rotating rod type	CQ2KW	Double acting, Double rod]
CQ2	CQ2 Large bore size	CQ2-Z	Double acting, Single rod]
	Large bore size	CQ2W-Z	Double acting, Double rod		Web Catalog
	Long stroke	CQ2-Z	Double acting, Single rod		
	Anti-lateral load	CQ2□S-Z	Double acting, Single rod		
	Water resistant	CQ2-R/V	Double acting, Single rod	Applicable to ø40 to ø100	
	vvater resistant	CQ2W-R/V	Double acting, Double rod		
	With end lock	CBQ2	Double acting, Single rod		
MGP	Compact guide cylinder	MGP-Z	Double acting		
MGQ	Compact guide cylinder	MGQ	Double acting		
CY1	Magnetically coupled	CY1H	Linear guide type]
CII	rodless cylinder	CY1F	Low profile guide type]
REA	Sine rodless cylinder	REAH	Linear guide type		1
REB	3 Sine rouless cylinder	REBH	Linear galac type		

How to Order

Standard model no. -XB10

Specifications: Same as standard type

Intermediate stroke

Dimensions: CQ2 Series The A and B dimensions shown below are the same as those of the standard type. (Shown for reference purposes)

Double acting, Single rod

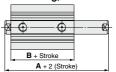


1						
D :		Applicable				
Bore size		4	E	stroke		
(mm)	49 stroke or less	51 to 99 stroke	49 stroke or less	51 to 99 stroke	range (mm)	
12	20.5 (31.5)	_	17 (28)	_	0.4 00	
16	22 (34)	_	18.5 (30.5)	_	6 to 29	
20	24 (36)	_	19.5 (31.5)	_	6 to 49	
25	27.5 (37.5)	_	22.5 (32.5)	_	6 10 49	
32	30 (40)	40 (40)	23 (33)	33 (33)	6 to 99	
40	36.5 (46.5)	46.5 (46.5)	29.5 (39.5)	39.5 (39.5)	01099	
50	38.5 (48.5)	48.5 (48.5)	30.5 (40.5)	40.5 (40.5)		
63	44 (54)	54 (54)	36 (46)	46 (46)	11 to 99	
80 53.5 (63.5)		63.5 (63.5)	43.5 (53.5)	53.5 (53.5)	111099	
100	65 (75)	75 (75)	53 (63)	63 (63)		

Single acting, Spring return

•g.e u	(111111)		
Bore size	Single rod type (Si	Applicable stroke	
(mm)	A B		range (mm)
12	20.5 (31.5)	17 (28)	6 to 9
16	22 (34)	18.5 (30.5)	0109
20	24 (36)	19.5 (31.5)	6 to 9
25	27.5 (37.5)	7.5) 22.5 (32.5)	
32	30 (40)	23 (33)	6 to 9
40	36.5 (46.5)	29.5 (39.5)	6109
50	38.5 (48.5)	30.5 (40.5)	11 to 19

Double acting, Double rod



(m	۱n	n)

D!	Double rod type				Applicable	
Bore size		Α		3	stroke	
(mm)	49 stroke or less	51 to 99 stroke	49 stroke or less	51 to 99 stroke	range (mm)	
12	32.2 (39.4)	_	25.2 (32.4)	_	C to 00	
16	33 (43)	_	26 (36)	_	6 to 29	
20	35 (47)	_	26 (38)	_	6 to 49	
25	39 (49)	_	29 (39)	_	6 10 49	
32	44.5 (54.5)	54.5 (54.5)	30.5 (40.5)	40.5 (40.5)	6 to 99	
40	54 (64)	64 (64)	40 (50)	50 (50)	01099	
50	56.5 (66.5)	66.5 (66.5)	40.5 (50.5)	50.5 (50.5)		
63	58 (68)	68 (68)	42 (52)	52 (52)	11 to 99	
80	71 (81)	81 (81)	51 (61)	61 (61)	111099	
100	84.5 (94.5)	94.5 (94.5)	60.5 (70.5)	70.5 (70.5)		

- * (): Denotes the dimensions of auto switch type.
- * Other dimensions are the same as standard type.
- Note) Applicable stroke available in 1 mm increments.

-XB10: Intermediate Stroke (Using exclusive body)



(mm)

5 Intermediate Stroke (Using exclusive body)

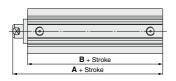
Symbol -XB10

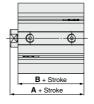
Dimensions: CQ2 Series

Double acting, Single rod/Long stroke

Double acting, Single rod/Large bore

Double acting, Double rod/Large bore





	.	
	* *	
	B + Stroke	
_	A + Stroke	

(mm)				
_	Single rod type	(Long stroke)	Analiankia strata	
Bore size (mm)	Α	В	Applicable stroke range(mm)	
32	62.5	45.5		
40	72	55		
50	73.5	55.5	101 to 299	
63	75	57	10110299	
80	86	66		
100	97.5	75.5		

^{*} Dimensions of "with auto switch" and those of

"without auto switch" are the same.

- (mm) Bore size Single rod type Applicable stroke (mm) range(mm) 125 99 83 140 99 83 160 108 91 11 to 299 180 119 102 200 126 109
- Dimensions other than listed above are the same as standard type Note) Applicable stroke available in 1 mm increments.

(mm)

- Bore size Double rod type Applicable stroke (mm) range(mm) 125 115 83 140 115 83 160 125 91 11 to 299 180 136 102 200 143 109
- Dimensions other than listed above are the same as standard type. Note) Applicable stroke available in 1 mm increments.

Double acting, Single rod/End lock With head side locking



Double acting, Single rod/End lock With rod side locking



Head Side Locking

Bore size	A		В		Applicable stroke
(mm)	24 stroke or less	26 to 99 stroke	24 stroke or less	26 to 99 stroke	range(mm)
20	65.5	80.5	61	66	
25	69	84	64	69	
32	72.5		65	i.5	6 to 99
40	82		7	5	0 10 99
50	83.5		75.5		
63	8	5	7	7	1

Bore size	A		В		Applicable stroke
(mm)	49 stroke or less	51 to 99 stroke	49 stroke or less	51 to 99 stroke	range(mm)
80	121	136	111	116	6 to 99
100	132.5	147.5	120.5	125.5	0 10 99

nou s	Rod Side Locking (mm)				
Bore size	Α		E	3	Applicable stroke
(mm)	24 stroke or less	26 to 99 stroke	24 stroke or less	26 to 99 stroke	range(mm)
20	59	80.5	54.5	66	
25	62.5	84	57.5	69	
32	6	5	5	8	6 to 99
40	71.5		64	1.5	01099
50	73.5		65.5		
63	7	9	7	1	

Bore size	A		В		Applicable stroke
(mm)	49 stroke or less	51 to 99 stroke	49 stroke or less	51 to 99 stroke	range(mm)
80	113.5	136	103.5	116	6 to 99
100	125	147.5	113	125.5	0 10 99

-XB10: Intermediate Stroke (Using exclusive body)

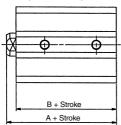


5 Intermediate Stroke (Using exclusive body)

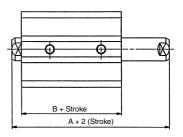
Symbol -XB10

Dimensions: CQS Series

Double acting, Single rod/Long stroke



Double acting, Double rod



Bore size	Single rod type		
(mm)	A	В	Applicable stroke
12	20.5 (25.5)	17 (22)	0.400
16	20.5 (25.5)	17 (22)	6 to 29
20	24 (34)	19.5 (29.5)	6 to 49
25	27.5 (37.5)	22.5 (32.5)	6 10 49

(mm)

	Double rod type		
Bore size (mm)	Α	В	Applicable stroke
12	29 (34)	22 (27)	0.4-00
16	29 (34)	22 (27)	6 to 29
20	35 (45)	26 (36)	6 to 49
25	39 (49)	29 (39)	0 10 49

(mm)

			(mm)
	Single rod type (Long stroke)		
Bore size (mm)	Α	В	Applicable stroke
12	45.5	32	04.4- 00
16	45.5	32	31 to 99
20	55.5	41	51 to 199
25	59	44	51 to 299

, ,

			(mm)
	Single rod type (Si	ngle acting/Return)	
Bore size (mm)	A	В	Applicable stroke
12	20.5 (25.5)	17 (22)	6 to 9
16	20.5 (25.5)	17 (22)	6109
20	24 (34)	19.5 (29.5)	C to O
25	27.5 (37.5)	22.5 (32.5)	6 to 9

(mm)

D	Single rod type (Anti-lateral load)	
Bore size (mm)	Α	В	Applicable stroke
12	25.5 (30.5)	22 (27)	0.4-00
16	25.5 (30.5)	22 (27)	6 to 29
20	29 (39)	24.5 (34.5)	6 to 49
25	32.5 (42.5)	27.5 (37.5)	6 10 49

- * (): Denotes the dimensions with auto switch.
- * In the case of long stroke, dimensions of "with auto switch" and those of "without auto switch" are the same.
- * Dimensions other than listed at left are the same as standard type. Note) Applicable stroke available in 1 mm increments.

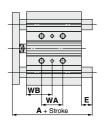
-XB10: Intermediate Stroke (Using exclusive body)



5 Intermediate Stroke (Using exclusive body)

Symbol -XB10

Dimensions: MGP Series



Stroke Range

Bore size (mm)	Stroke range (mm)
12, 16	11 to 249
20, 25	21 to 399
32, 40, 50, 63, 80, 100	26 to 399

^{*} Specifications except the stroke range are the same as standard. Note) Applicable stroke available in 1 mm increments.

MGPM-Z. MGPL-Z. MGPA-Z/WA. WB Dimensions

Bore size	Stroke range	WA				WB			
(mm)	(mm)	11 to 39 st	41 to 99 st	101 to 199 st	201 to 249 st	11 to 39 st	41 to 99 st	101 to 199 st	201 to 249 st
12	11 to 249	20	40	110	200	15	25	60	105
16		24	44	110	200	17	27	60	105

Bore size		WA				WB					
(mm)	n) (mm)	21 to 39 st	41 to 124 st	126 to 199 st	201 to 299 st	301 to 399 st	21 to 39 st	41 to 124 st	126 to 199 st	201 to 299 st	301 to 399 st
20	21 to 399	24	44	120	200	300	29	39	77	117	167
25		24	44	120	200	300	29	39	77	117	167

Bore size	Stroke range	WA				WB					
(mm)	(mm)	26 to 49 st	51 to 124 st	126 to 199 st	201 to 299 st	301 to 399 st	26 to 49 st	51 to 124 st	126 to 199 st	201 to 299 st	301 to 399 st
32		24	48	124	200	300	33	45	83	121	171
40		24	48	124	200	300	34	46	84	122	172
50	26 to 399	24	48	124	200	300	36	48	86	124	174
63	20 10 399	28	52	128	200	300	38	50	88	124	174
80		28	52	128	200	300	42	54	92	128	178
100		48	72	148	220	320	35	47	85	121	171

MGPM-Z/A, E Dimensions

Bore size		Α		E			
(mm)	11 to 74 st	76 to 99 st	101 to 249 st	11 to 74 st	76 to 99 st	101 to 249 st	
12	42	60.5	82.5	0	18.5	40.5	
16	46	64.5	92.5	0	18.5	46.5	

Bore size		Α		E			
(mm)	21 to 74 st	76 to 199 st	201 to 399 st	21 to 74 st	76 to 199 st	201 to 399 st	
20	53	77.5	110	0	24.5	57	
25	53.5	77.5	109.5	0	24	56	

Bore size		Α		E			
(mm)	26 to 74 st	76 to 199 st	201 to 399 st	26 to 74 st	76 to 199 st	201 to 399 st	
32	75	93.5	129.5	15.5	34	70	
40	75	93.5	129.5	9	27.5	63.5	
50	88.5	109.5	150.5	16.5	37.5	78.5	
63	88.5	109.5	150.5	11.5	32.5	73.5	
80	104.5	131.5	180.5	8	35	84	
100	126.5	151.5	190.5	10.5	35.5	74.5	

^{*} Dimensions except mentioned above are the same as standard type.

MGPL-Z, MGPA-Z/A, E Dimensions

Bore size		Α		E			
(mm)	11 to 39 st	41 to 99 st	101 to 249 st	11 to 39 st	41 to 99 st	101 to 249 st	
12	43	55	84.5	1	13	42.5	
16	49	65	94.5	3	19	48.5	

Bore size	Α				E			
(mm)	21 to 39 st	41 to 124 st	126 to 199 st	201 to 399 st	21 to 39 st	41 to 124 st	126 to 199 st	201 to 399 st
20	59	76	100	117.5	6	23	47	64.5
25	65.5	81.5	100.5	117.5	12	28	47	64

Bore size		Α				E			
(mm)	26 to 74 st	76 to 124 st	126 to 199 st	201 to 399 st	26 to 74 st	76 to 124 st	126 to 199 st	201 to 399 st	
32	79.5	96.5	116.5	138.5	20	37	57	79	
40	79.5	96.5	116.5	138.5	13.5	30.5	50.5	72.5	
50	91.5	112.5	132.5	159.5	19.5	40.5	60.5	87.5	
63	91.5	112.5	132.5	159.5	14.5	35.5	55.5	82.5	

Bore size		-	7			E		
(mm)	26 to 49 st	51 to 74 st	76 to 199 st	201 to 399 st	26 to 49 st	51 to 74 st	76 to 199 st	201 to 399 st
80	104.5	128.5	158.5	191.5	8	32	62	95
100	119.5	145.5	178.5	201.5	3.5	29.5	62.5	85.5

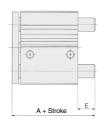
-XB10: Intermediate Stroke (Using exclusive body)



5 Intermediate Stroke (Using exclusive body)

Symbol -XB10

Dimensions: MGQ Series



Stroke Range

Bore size (mm)	Stroke range (mm)
12, 16	11 to 99
20, 25	21 to 199
32, 40, 50, 63, 80, 100	26 to 199

^{*} Specifications except the stroke range are the same as standard. Note) Applicable stroke available in 1 mm increments.

MGQM (Slide bearing) A, E Dimensions

		, ,					
Bore size		4		E			
(mm)	11 to	99 st	11 to	99 st			
12	3	9	0				
16	4	3	0				
Bore size		4	E				
(mm)	21 to 74 st	76 to 199 st	21 to 74 st	76 to 199 st			
20	47	61.5	0	14.5			
25	47.5	62	0	14.5			
Bore size		4	ı	E			
(mm)	26 to	199 st	26 to 199 st				
32	71	1.5	2	24			
40	71	1.5	17	7.5			
50	8	11	2	25			
63	8	11	2	20			
80	9	13	18	3.5			
100	10	05	2	21			

^{*} Dimensions except mentioned above are the same as standard type.

MGQL (Ball bushing bearing) A, E Dimensions

Bore size	,	Α	-	.
(mm)	11 to 39 st	41 to 99 st	11 to 39 st	41 to 99 st
12	43	55	4	16
16	49	65	6	22
Bore size		4		
(mm)	21 to 39 st	41 to 199 st	21 to 39 st	41 to 199 st
20	57	74	10	27
25	63.5	79.5	16	32
		-	_	_
Bore size		4	ı	
Bore size (mm)	26 to 74 st	76 to 199 st	26 to 74 st	76 to 199 st
(mm)	26 to 74 st	76 to 199 st	26 to 74 st	76 to 199 st
(mm) 32	26 to 74 st 53	76 to 199 st 90	26 to 74 st 5.5	76 to 199 st 42.5
(mm) 32 40	26 to 74 st 53 54	76 to 199 st 90 90	26 to 74 st 5.5 0	76 to 199 st 42.5 36
(mm) 32 40 50	26 to 74 st 53 54 60	76 to 199 st 90 90 102	26 to 74 st 5.5 0 4	76 to 199 st 42.5 36 46

^{*} Dimensions except mentioned above are the same as standard type.

REB series



Strokes

Bore size	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	650	700	750	800	850	900	950	1000
REAH10	•	0	•	0	0	0	•																				
REAH15	•	0	•	0	0	0	•	0	0	0	•	0	0	0	•										\square		\square
REAH20		$\overline{}$	•	0	0	0	•	0	0	0	•	0	0	0	•	0	0	0	•				\square		\square		\square
RE ^A H25			•	_	0	_	•	_	0	_	•	_	0	_	•	_	0	_	•	0	0	0	•				
REAHT25		$\overline{}$	•	_	0	_	•	_	0	_	•	-	0	_	•	_	0	_	•	0	0	0	•	0	0	0	•
REAHT32			•	_	0	_	•	_	0	_	•	-	0	_	•	_	0	_	•	0	0	0	•	0	0	0	•

Standard stroke

O: Strokes set for -XB10

-: No settin

-XB10A: Intermediate Stroke (Spacer-installed type)



6 Intermediate Stroke (Spacer-installed type)

Symbol -XB10A

(mm)

A spacer is installed on the exclusive body (● indication). The overall length is shorter than that of the spacer-installed type 1. The ◎ indicates the selectable stroke range. (Strokes with the ● indication are not selectable.)

The — indicates strokes supported by the spacer-installed type 1.

Bore size [mm]	Stroke range									Str	oke								
bore size [min]	Stroke range		55		60		65	\rightarrow	70	\rightarrow	75	\rightarrow	80		85	+	90		95
32 to 100	51 to 94	0	•	0	•	0	•	0	•	_	•	0	•	0	•	0	•	0	•

Ordering example

Part no.	CQ2B50-57DZ-	XB10A
Description	Uses an exclusive tube (60 mm stroke) in "3". Makes 57 mm stroke with 3 mm spacer inside. The B dimension is 100.5 mm. B = 40.5 + 60	Spacer

Specifications: Same as standard type

How to Order C□Q2 Standard model no. - XB10 A

Intermediate stroke
Spacer-installed type

Dimensions: CQ2 Series (Dimensions other than those below are the same as those of the standard type.)

Double acting, Single rod



Symbol				-	١							Е	3			
Stroke	51 to	56 to	61 to	66 to	76 to	81 to	86 to	91 to	51 to	56 to	61 to	66 to	76 to	81 to	86 to	91 to
Bore size	54	59	64	69	79	84	89	94	54	59	64	69	79	84	89	94
32	95	100	105	110	120	125	130	135	88	93	98	103	113	118	123	128
40	101.5	106.5	111.5	116.5	126.5	131.5	136.5	141.5	94.5	99.5	104.5	109.5	119.5	124.5	129.5	134.5
50	103.5	108.5	113.5	118.5	128.5	133.5	138.5	143.5	95.5	100.5	105.5	110.5	120.5	125.5	130.5	135.5
63	109	114	119	124	134	139	144	149	101	106	111	116	126	131	136	141
80	118.5	123.5	128.5	133.5	143.5	148.5	153.5	158.5	108.5	113.5	118.5	123.5	133.5	138.5	143.5	148.5
100	130	135	140	145	155	160	165	170	118	123	128	133	143	148	153	158

Made to Order Common Specifications: -XB11: Long Stroke Type



The CY3B series is to be discontinued as of May 2025. Please select the CY3B-Z series instead.

Symbol -XB11

7 Long Stroke Type

Stroke which exceeds the standard stroke length

Applicable Series

Series	Description	Model	Type	Note	Vol. no. (for std mode
CX2	Slide unit	CX2	Slide bearing type		
cxw	Slide unit	CXWM	Slide bearing type		
CAW	Slide utilit	CXWL	Ball bushing bearing type		
CXSJ		CXSJ	Standard type	Except ø6, Axial type	
cxs	Dual rod cylinder	CXS Note)	Standard type		
CXS		CXSW	Double rod type		
		CY3B-Z	Basic type		Web Catalog
CY	Magnetically coupled	CY3B	Basic type		web Catalog
C1	rodless cylinder	CY1H	Linear guide type		
		CY1F	Low profile guide type		
ML1	Hy-rodless cylinder	ML1C	Cam follower guide type		
REA	Sine rodless cylinder	REA	Basic type		
RSQ	Stopper cylinder/	RSQ-Z	Double acting	Round bar type only	
nou	Fixed mounting height	RSQ	Double acting	ø12, Round bar type only	7

Note) The product with air cushion or with end lock for retraction side is available as a special order.

How to Order

Standard model no. -XB11

Long stroke type

* Enter a symbol for stroke required.

Specifications: Same as standard type

* Refer to page 1459 for specifications and dimensions of the RSQ.

Stroke Range

Model	Bore size (mm)	Standard stroke (mm)	Long stroke (mm)
CY3B (-Z)	25, 32	100 to 800	2001 to 3000 (ø25 to ø40)
C 13B (-2)	40, 50, 63	100 to 1000	2001 to 5000 (ø50, ø63)
	10	100 to 300	301 to 500
CY1H	15	100 to 500	501 to 750
C1111	20	100 to 600	601 to 1000
	25	100 to 800	801 to 1200
CY1HT	25	100 to 1000	1001 to 1200
C1 1111	32	100 10 1000	1001 to 1500
CX2	15, 25	25 to 200	225, 250, 275, 300
			225, 250, 275, 300
CXWM			(CXWM16 to 25)
	16, 20, 25, 32	25 to 200	225, 250 (CXWM32)
	10, 20, 25, 32	25 10 200	225, 250, 275
CXWL			(CXWL16 to 25)
			225 (CXWL32)

Model	Bore size	Standard stroke	Long stroke
Wiodei	(mm)	(mm)	(mm)
	10	10 to 75	80, 90, 100, 110, 120, 125, 150
CXSJ	15	10 to 100	110, 120, 125, 150
	20, 25, 32	10 to 100	110, 120, 125, 150, 175, 200
	10	10 to 75	80, 90, 100, 110, 120, 125, 150
CXS	15	10 to 100	110, 120, 125, 150
	20, 25, 32	10 to 100	110, 120, 125, 150, 175, 200
cxsw	10, 15	10, 20, 30, 40, 50	75, 100, 125, 150
CASW	20, 25, 32	10, 20, 30, 40, 50, 75, 100	125, 150, 175, 200
ML1	25, 32, 40	100 to 1000	1001 to 2000
REA	25, 32, 40, 50, 63	200 to 1000	2001 to 3000 (ø25, ø32, ø40) 2001 to 5000 (ø50, ø63)
RSQ	12	10	15, 20
	16	10, 15	20, 30
RSQ-Z	20, 32	10, 15, 20	30, 40
	40, 50	20, 25, 30	40, 50

-XB11: Long Stroke Type

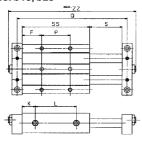


7 Long Stroke Type

Symbol -XB11

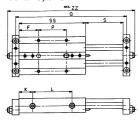
Dimensions

CX2 series: ø15, ø25



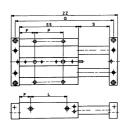
Model	F	L	K	Р	Q	S	SS	Z	ZZ
CX2N15-225	89.5	238	15.5	90	506	227	269	496	528
CX2N15-250	102	263	15.5	90	556	252	294	546	578
CX2N15-275	114.5	288	15.5	90	606	277	319	596	628
CX2N15-300	127	313	15.5	90	656	302	344	646	678
Model	F	-	.,		_				
111000	-	L	K	Р	Q	S	SS	Z	ZZ
CX2N25-225	96	241	20.5	90	Q 525	S 227	SS 282	Z 509	ZZ 553
		241 266		•					
CX2N25-225	96		20.5	90	525	227	282	509	553
CX2N25-225 CX2N25-250	96 108.5	266	20.5	90	525 575	227 252	282 307	509 559	553 603

CXWM series: Ø16, Ø25



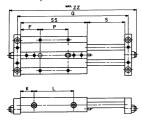
									(mm)
Model	F	L	K	Р	Q	S	SS	Z	ZZ
CXWM16-225	92.5	238	18.5	90	514	227	275	502	538
CXWM16-250	105	263	18.5	90	564	252	300	552	588
CXWM16-275	117.5	288	18.5	90	614	277	325	602	638
CXWM16-300	130	313	18.5	90	664	302	350	652	688
Model	F	L	K	P	Q	S	SS	Z	ZZ
CXWM25-225	96	241	20.5	90	525	227	282	509	553
CXWM25-250	108.5	266	20.5	90	575	252	307	559	603
CXWM25-275	121	291	20.5	90	625	277	332	609	653
CXWM25-300	133.5	316	20.5	90	675	302	357	659	703

ø**20**, ø**32**



									(mm)
Model	F	L	K	Р	Q	S	SS	Z	ZZ
CXWM20-225	94.5	239	20	90	520	227	279	506	534
CXWM20-250	107	264	20	90	570	252	304	556	584
CXWM20-275	119.5	289	20	90	620	277	329	606	634
CXWM20-300	132	314	20	90	670	302	354	656	684
Model	F	L	K	Р	Q	S	SS	Z	ZZ
CXWM32-225	38	240	28	220	543	227	296	523	563
CYWM32-250	38	265	28	245	593	252	321	573	613

CXWL series: Ø16, Ø25



									(mm
Model	F	L	K	Р	Q	S	SS	Z	ZZ
CXWL16-225	115.5	239	41	90	560	227	321	548	584
CXWL16-250	128	264	41	90	610	252	346	598	634
CXWL16-275	140.5	289	41	90	660	277	371	648	684
Model	F	L	K	Р	Q	S	SS	Z	ZZ

Model	F	L	K	Р	Q	S	SS	Z	ZZ
CXWL25-225	119	241	43.5	90	571	227	328	555	599
CXWL25-250	131.5	266	43.5	90	621	252	353	605	649
CXWL25-275	144	291	43.5	90	671	277	378	655	699

-XB11: Long Stroke Type

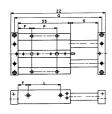


7 Long Stroke Type

Symbol -XB11

Dimensions

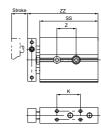
CXWL series: Ø20, Ø32

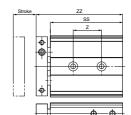


									(mm)
Model	F	L	K	Р	Q	S	SS	Z	ZZ
CXWL20-225	116.5	239	42	90	564	227	323	550	578
CXWL20-250	129	264	42	90	614	252	348	600	628
CXWL20-275	141.5	289	42	90	664	277	373	650	678
Model	F	L	K	Р	Q	s	SS	z	ZZ
CXWL32-225	41	277	30	255	584	227	337	564	604

CXSJ^M_L series: Ø15, Ø20, Ø25, Ø32

CXSJ^M series: ø10

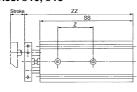


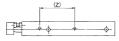


M	odel			CX	(SJ™	10			(cxs	J [™] 15	;		(cxs	J [™] 20)			(cxs	J"25	;			(cxs	J™32	2	
S	roke	80	90	100	110	120	125	150	110	120	125	150	110	120	125	150	175	200	110	120	125	150	175	200	110	120	125	150	175	200
\Box	SS	124.5	134.5	144.5	154.5	164.5	169.5	194.5	167.5	177.5	182.5	207.5	177.5	187.5	192.5	217.5	242.5	267.5	180.5	190.5	195.5	220.5	245.5	270.5	190.5	200.5	205.5	230.5	255.5	280.5
율	ZZ	136	146	156	166	176	181	206	180	190	195	220	194	204	209	234	259	284	197	207	212	237	262	287	210.5	220.5	225.5	250.5	275.5	300.5
Ě	Z	88	98	108	118	128	133	158		65		75		8	0		10	00		8	0		10	00		9	0		11	10
S	K	92	102	112	122	132	137	162		-	-				-	-					-	_					-	_		

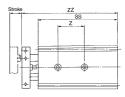
Note 1) Dimensions of each model except SS, ZZ, Z and K on the above table are the same as standard type.

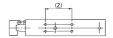
CXS^M series: ø10, ø15





CXS^M_L series: ø20, ø25, ø32





ı	Nodel			C	XSĽ1	0				CXS	115				CXS	§№20					CXS	625					CXS	₩32		
- 5	Stroke	80	90	100	110	120	125	150	110	120	125	150	110	120	125	150	175	200	110	120	125	150	175	200	110	120	125	150	175	200
_	SS	135	145	155	165	175	180	205	170	180	185	210	180	190	195	220	245	270	182	192	197	222	247	272	192	202	207	232	257	282
Ę	ZZ	152	162	172	182	192	197	222	189	199	204	229	204	214	219	244	269	294	206	216	221	246	271	296	222	232	237	262	287	312
ŝ	Z	50	6	0		70		80		65		75		8	0		10	00		8	0		10	00		9	0		1	10

Note 1) Dimensions of each model except SS, ZZ and Z on the above table are the same as standard type. Note 2) For the external dimensions of the CXSW series double rod, refer to the standard type of CXSW.

1458



-XB11: Long Stroke Type

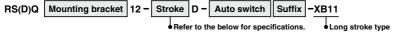


7 Long Stroke Type

Symbol -XB11

How to Order

For ø12



For ø16 to ø50

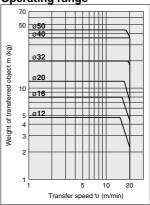


Specifications

0,000	
Applicable series	RSQ
Action	Double acting
Rod end configuration	Round bar type
Stroke range	See below.
Operating range	See below.
Specifications other than above	Same as standard type

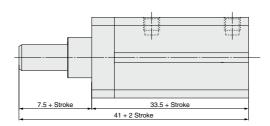
Model	Bore size (mm)	Standard stroke (mm)	Long stroke (mm)
RSQ	12	10	15, 20
	16	10, 15	20, 30
RSQ-Z	20, 32	10, 15, 20	30, 40
	40, 50	20, 25, 30	40. 50

Operating range



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

RS□QB12





Made to Order Common Specifications: -XB12: External Stainless Steel Cylinder



8 External Stainless Steel Cylinder

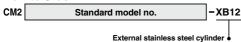
Symbol -XB12

A cylinder that uses stainless steel that excels in rust resistance for all external parts that are exposed to the surrounding environment. Its external dimensions and installation dimensions are identical to those of the standard CM2 series.

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
		CM2	Double acting, Single rod	
	Air cylinder	CIVIZ	Single acting (Spring return/extend)	
CM2		CM2W	Double acting, Double rod	Web Catalog
	Non votating and type	CM2K	Double acting, Single rod	
	Non-rotating rod type	CIVI2K	Single acting (Spring return/extend)	

How to Order



Specifications

Series	CM2, CM2K	CM2W				
Material	The rod cover, head cover, cylinder tub- seal retainer, and retaining ring are all r	e, piston rod, mounting nut, rod end nut, nade of stainless steel 304.				
Cushion	Rubber bumper (St	andard equipment)				
Mounting type	Basic, Axial foot, Rod side flange, Head side flange, Integrated clevis, Boss-cut basic, Boss-cut rod side flange	Basic, Axial foot, Flange				
Specifications other than above and external dimensions	Same as standard type					

Note) With air cushion, One-touch fitting integrated type are not available.

Mounting Bracket Part No.

Description		Bore siz	ze (mm)		
Description	20	25	32	40	
Foot (2 foot brackets + 1 mounting nut)	CM-L020B-XB12	CM-L03:	2B-XB12	CM-L040B-XB12	
Foot (1 foot bracket)	CM-L020BSUS	CM-L03	32BSUS	CM-L040BSUS	
Flange	CM-F020BSUS	CM-F03	CM-F040BSUS		
Mounting nut	SN-020BSUS	SN-03	SN-040BSUS		
Rod end nut	NT-02SUS	NT-0	3SUS	NT-04SUS	
Single knuckle joint	I-020BSUS	I-032	BSUS	I-040BSUS	
Double knuckle (1) joint	Y-020BSUS	Y-032BSUS Y-040BSU			
Pin for double (2) knuckle joint		CDP-1-XC27		CDP-3-XC27	

Note 1) With pin, retaining ring

Note 2) With retaining ring (Cotter pins for bore size ø40)



Made to Order Common Specifications: -XB13: Low Speed Cylinder (5 to 50 mm/s)



The CY3B series is to be discontinued as of May 2025. Please select the CY3B-Z series instead.

Symbol -XB13

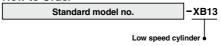
9 Low Speed Cylinder (5 to 50 mm/s)

Even if driving at lower speeds 5 to 50 mm/s (CY: 7 to 50 mm/s), there would be no stick-slip phenomenon and it can run smoothly.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std mode
CJ2	Air cylinder	CJ2	Double acting, Single rod	ø6 only	
CG1	Air cylinder	CG1-Z	Double acting, Single rod	Except with rod boot and with air cushion	
Cui	Direct mount type	CG1R-Z	Double acting, Single rod	Except with air cushion	
	Free mount cylinder	CU	Double acting, Single rod		
си	Non-rotating rod type	CUK	Double acting, Single rod		
	Long stroke, standard type	CU	Double acting, Single rod		
	Long stroke, non-rotating rod type	CUK	Double acting, Single rod		
CQS Compact cylinder CQS Double acting, Single rod Except long stroke		Except long stroke			
cus	Compact cylinder	cqsw	Double acting, Double rod		
	Commont audinder	CQ2-Z	Double acting, Single rod	Except long stroke and large bore type	
CQ2	Compact cylinder	CQ2W-Z	Double acting, Double rod		
	Axial piping type (Centralized piping type)	CQP2	Double acting, Single rod		
CX2	Slide unit	CX2	Slide bearing type		
cxw	Slide unit	CXWM	Slide bearing type		Web Catalog
CAW		CXWL	Ball bushing bearing type		Web Catalog
MXH	Compact slide	MXH-Z	Double acting, Single rod		
CXSJ	Developed and and	CXSJ	Standard type		
cxs	- Dual rod cylinder	cxs	Standard type		
	Compact guide cylinder	MGP-Z	Double acting		
MGP	With end lock	MGP L	Double acting		
	Heavy duty guide rod type	MGPS	Double acting		
MGG	Guide cylinder	MGGM	Double acting	Shock absorber cannot be mounted.	
MGC	Guide cylinder	MGCM	Double acting	With rubber bumper. Port size Rc1/8 is applicable to ø20, 25.	
		CY3B-Z	Basic type		
CY	Magnetically coupled	CY3B	Basic type		
C1	rodless cylinder	CY1S-Z	Slide bearing type		
		CY1L	Ball bushing bearing type		
СХТ	Platform cylinder	CXT	Double acting	Except long stroke. Shock absorber cannot be mounted.	

How to Order



Specifications

Piston speed	5 to 50 mm/s (CY: 7 to 50 mm/s)
Dimensions	Same as standard type
Additional specifications	Same as standard type

Note 1) Operate without lubrication from

a pneumatic system lubricator. Note 2) For the speed adjustment, use speed controllers for controlling at lower speeds. (AS-FM/AS-M series)

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



Made to Order Common Specifications: -XB14: Cylinder with Heat Resistant Auto Switch

Specifications



10 Cylinder with Heat-resistant Auto Switch

Symbol -XB14

A heat-resistant, compact cylinder which can mount a heat-resistant auto switch (Max. 150°C)

Applicable Series

Description	cription Model Action		Note	Vol. no. (for std model)
Compact cylinder	CQ2	Double acting, Single rod	Applicable to ø16 to ø63 Excludes models with a rubber bumper Excludes the air-hydro type	Web Catalog

Ambient and fluid temperature range	0 to 150°C		
Seal material	Fluororubber Heat-resistant grease 15 (Same for both 1 pc. and 2 pcs.		
Grease			
Min. stroke for auto switch mounting			
Specifications other than the above	Same as the standard type		

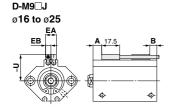
For the detailed specifications of auto switches, refer to pages 1346 and 1347

How to Order

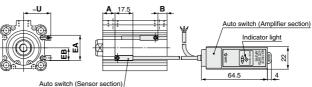
316	Standard model no Wishal						
Διιt	switch •						
Symbol							
M9NJ	NPN	Number of auto switches					
M9PJ	PNP						
F7NJ	NPN	Cylinder with heat-resistant auto switch					

- * Lead wire length symbols
- 3 m L (Example) M9NJL
- 5 m Z (Example) M9NJZ

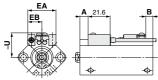
Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height



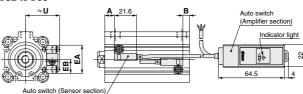




D-F7NJ ø16 to ø25



ø32 to ø63



	[]									
Auto switch model		D-	M9	J		D-F7NJ				
Bore size	Α	В	U	EΑ	EB	Α	В	U	EA	EB
16	9.5	7	21	11	5.5	8	5.5	22.5	28	14
20	9.5	8.5	23.5	11	5.5	8	7	25.5	28	14
25	9.5	9	27	11	5.5	8	7.5	28	28	14
32	11	8	29	25	12.5	9.5	6.5	36	28	14
40	15	10.5	31	30	15	13.5	9	38	33	16.5
50	13	13.5	36	34	17	11.5	12	43.5	37	18.5
63	15.5	16.5	41.5	43	21.5	14	15	48.5	46	23

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

- **Operating Range** Auto switch Bore size 16 20 25 32 40 50 63 4.5 4.5 4.5 5 4.5 5 5 D-M9□J 4.5 4.5 4.5 5 4.5 5 5
- * Since the operating range is provided as a guideline at room temperature, it cannot be guaranteed. It may change substantially depending on the ambient environment.

Auto Switch Mounting Bracket Part Nos.

Auto switch		Bore size [mm]					
model	16	20	25	32	40	50	63
D-F7NJL(Z)	BQ4-012			BQJ2-032			

Auto Switch Mounting Bracket Weight

Mounting bracket part no.	Weight [g]	
BQ4-012	1.5	
BQJ2-032	3.6	

^{*} The dimensions of the cylinder body are equivalent to those of the standard type, double acting, single rod of the CDQ2 series.

^{*} Auto switches are shipped in the same package as the product but do not come assembled for protection purposes.

Assemble them by referring to the A and B dimensions for mounting position shown above.

^{*} The tightening torque for the auto switch mounting M2.5 screw is 0.25 to 0.35 N·m.

Made to Order Common Specifications: -XB19: High Speed Type



11 High Speed Type

Symbol -XB19

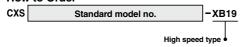
This is a high speed type of the dual rod cylinder CXS series.

The cylinder speed can reach a maximum of 1500 mm/s (1000 mm/s for ø25 and ø32) by enlarging the orifice diameter of the cylinder port. The allowable kinetic energy is approximately four times that of the standard type.

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
cxs	Dual rod cylinder	CXS	Double acting, Single rod	Web Catalog

How to Order



Specifications

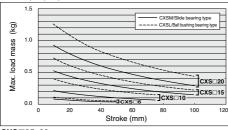
	_					
Bore size (mm)	6	10	15	20	25	32
Minimum operating pressure	0.15 MPa	0.1	MРа	(0.05 MPa	1
Maximum operating pressure			0.71	MPa		
Proof pressure	1.05 MPa					
Fluid	Air (Non-lube)					
Ambient and fluid temperature	-10 to 60°C (No freezing)					
Piston speed		30 to 15	00 mm/s		30 to 10	00 mm/s
Port size	M5 x 0.8 Rc 1/8				1/8	
Stroke adjustable range	0 to -5 mm compared to the standard stroke					
Bearing type	Slide bearing, Ball bushing bearing					
Cushion			Rubber	bumper		

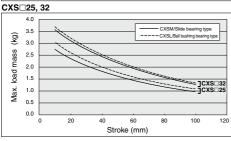
Operating Conditions

Maximum Load Mass

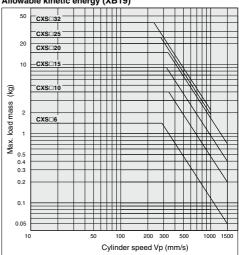
When the cylinder is mounted as shown in the diagrams on the right, the maximum load mass (m) should not exceed the values indicated in the graph below

CXS = 6, 10, 15, 20

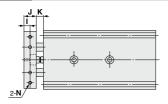




Allowable kinetic energy (XB19)



Dimensions



Bore size (mm)		J	K	N	
6	3.25	6.5	7	M3 x 0.5 through-hole	
10	5	10	7	M3 x 0.5 through-hole	
15	6	6 12 7 M3 x 0.5 through-		M3 x 0.5 through-hole	
20	7	14	10	M4 x 0.7 thread depth 6	
25	7 14 10 M5 x 0.8 thread dep		M5 x 0.8 thread depth 7.5		
32	9	18	12	M5 x 0.8 thread depth 8	

Made to Order Common Specifications: -XB20: Stroke Adjustment Unit with Adjustment Bolt



12 Stroke Adjustment Unit with Adjustment Bolt

Symbol -XB20

Stroke adjustment unit with an adjustment bolt.

Applicable Series

ı	Series	Description	Model	Action	Vol. no. (for std model)
I	MVO	Mechanically jointed	MY2H	Linear guide (Single axis)	Web Catalog
ı	MY2	rodless cylinder	MY2HT	Linear guide (Double axes)	web Catalog

How to Order

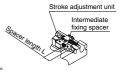
MY2H Standard model no. —XB20

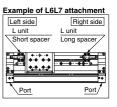
Stroke Adjustment Unit Specifications

Bore size	e (mm)	1	6	2	5	4	0
Unit symbol		L	Н	L	Н	L	Н
Shock absorber	MY2H	RB0806	RB1007	RB1007	RB1412	RB1412	RB2015
model	MY2HT	RB1007	RB1412	RB1412	RB2015	RB2015	RB2725
Stroke adjustment	Without spacer	0 to	-5.6	0 to -	-11.5	0 to	-16
range by ntermediate fixing With short spacer		−5.6 to	-11.2	-11.5 to -23		-16 to -32	
spacer (mm)	With long spacer	-11.2 to	o –16.8	–23 to	-34.5	−32 to −48	

- * Spacers are used to fix the stroke adjustment unit at an intermediate stroke position.
- * Stroke adjustment range is applicable for one side when mounted on a cylinder.

Stroke adjustment unit mounting diagram





Stroke Adjustment Unit Model

Note) Stroke adjustment unit with adjusting bolt (-XB20) cannot be mounted on the standard cylinder.

Unit part no.

40 mm

		Oint part no.
Symbol	Stroke adjustment unit	Mounting position
L1	L unit	For left
L2	L unit	For right
H1	H unit	For left
H2	n unii	For right

40

N − XB20 With adjustment bolt

Intermediate fixing spacer

Nii Without spacer
6 Short spacer
7 Long spacer

Spacer shipping method

Nii Assembled as a unit

N Spacer only

* Spacers for MY2HT are shipped

in 2 piece sets.

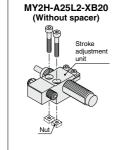
* Intermediate fixing spacers



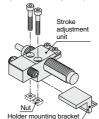
MY2H (-XB20) Stroke adjustment unit Holder mounting bracket Place the protruding section on the stroke adjustment unit side.



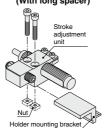
Components Parts



MY2H-A25L2-6-XB20 (With short spacer)



MY2H-A25L2-7-XB20 (With long spacer)



MY2H-A25L2-6N-XB20 (Short spacer only)



MY2H-A25L2-7N-XB20 (Long spacer only)



^{*} Nuts are installed onto the cylinder body.

-XB20: Stroke Adjustment Unit with Adjustment Bolt

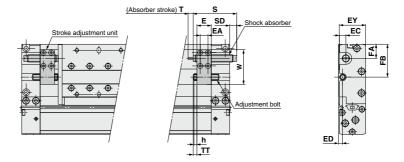


12 Stroke Adjustment Unit with Adjustment Bolt

-XB20

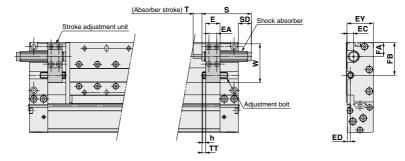
Dimensions (Dimensions other than below are the same as standard type.)

MY2H L unit

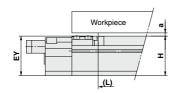


Applicable cylinder	Е	EA	EC	ED	EY	FA	FB	h	s	Т	SD	TT	W	Shock absorber model	Adjusting bolt	Adjustment range
MY2H16	15.8	8.4	6.2	5	28	12.4	30	3.2	40.8	6	1.3	4.2 (Max. 9.8)	34.5	RB0806	M5 x 0.8 x 25L	5.6
MY2H25	19.6	10.6	10	5.5	37	19.3	44.8	4	46.7	7	_	5 (Max. 16.5)	47.3	RB1007	M8 x 1.0 x 35L	11.5
MY2H40	29	16	13	8	57	17	49	5	67.3	12	_	6 (Max. 22)	59	RB1412	M10 x 1.0 x 50L	16

MY2H H unit



Applicable cylinder	E	EA	EC	ED	EY	FA	FB	h	S	SD	Т	TΤ	W	Shock absorber model	Adjustment bolt	Adjustment range
MY2H16	15.8	8.4	6.2	5	28	12.4	30	3.2	46.7	7.2	7	4.2 (Max. 9.8)	35.5	RB1007	M5 x 0.8 x 25L	5.6
MY2H25	19.6	10.6	10	5.5	37	19.3	44.8	4	67.3	18.2	12	5 (Max. 16.5)	52.8	RB1412	M8 x 1.0 x 35L	11.5
MY2H40	29	16	13	8	57	17	49	5	73.2		15	6 (Max. 22)	59	RB2015	M10 x 1.0 x 50L	16



⚠ Caution

Since the dimension EY of the unit is greater than the table top height (dimension H), when a workpiece is loaded that is larger than the full length (dimension L) of the slide table, allow a clearance of size "a" or larger at the workpiece side.

Applicable cylinder	а	EY	Н
MY2H16 L/H Unit	1	28	28
MY2H25 L/H Unit	1	37	37
MY2H40 L/H Unit	0	57	58



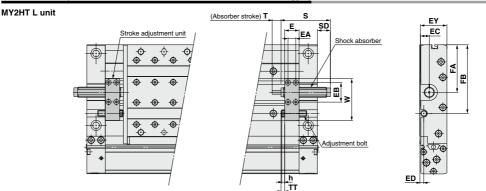
-XB20: Stroke Adjustment Unit with Adjustment Bolt



12 Stroke Adjustment Unit with Adjustment Bolt

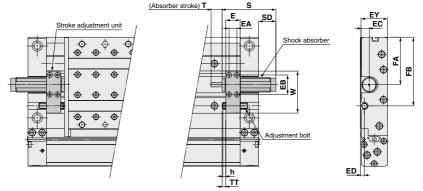
Symbol -XB20

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

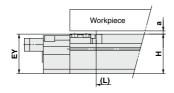


Applicable cylinder	Е	EA	EB	EC	ED	EY	FA	FB	h	S	SD	Т	TT	W	Shock absorber model	Adjustment bolt	Adjustment range
MY2HT16	15.8	8.4	21	9	5	28	46.5	67	3.2	46.7	7.2	7	4.2 (Max. 9.8)	40.6	RB1007	M5 x 0.8 x 25L	5.6
MY2HT25	19.6	10.6	26.6	12.2	5.5	37	64.8	93.6	4	67.3	18.2	12	5 (Max. 16.5)	57.2	RB1412	M8 x 1.0 x 35L	11.5
MY2HT40	29	16	37	18.2	8	58	74.5	110.5	5	73.2	_	15	6 (Max. 22)	71.6	RB2015	M10 x 1.0 x 50L	16

MY2HT H unit



Applicable cylinder	Е	EA	EB	EC	ED	EY	FA	FB	h	S	SD	Т	TT	W	Shock absorber model	Adjustment bolt	Adjustment range
MY2HT16	15.8	8.4	21	9	5	28	46.5	67	3.2	67.3	27.8	12	4.2 (Max. 9.8)	40.6	RB1412	M5 x 0.8 x 25L	5.6
MY2HT25	19.6	10.6	26.6	12.2	5.5	37	64.8	93.6	4	73.2	24.1	15	5 (Max. 16.5)	57.2	RB2015	M8 x 1.0 x 35L	11.5
MY2HT40	29	16	37	18.2	8	58	74.5	110.5	5	99	24.5	25	6 (Max .22)	71.6	RB2725	M10 x 1.0 x 50L	16



Since the dimension EY of the unit is greater than the table top height (dimension H), when a workpiece is loaded that is larger than the full length (dimension L) of the slide table, allow a clearance of size "a" or larger at the workpiece side.

	1		
Applicable cylinder	а	EY	Н
MY2HT16 L/H Unit	1	28	28
MY2HT25 L/H Unit	1	37	37
MY2HT40 L/H Unit	1	58	58

Made to Order Common Specifications: -XB20: Stroke Adjustment Unit with Adjustment Bolt



12 Stroke Adjustment Unit with Adjustment Bolt

Symbol -XB20

XB20 (Stroke Adjustment Unit with Adjustment Bolt)

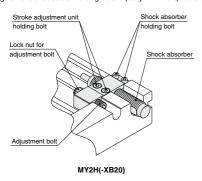
<Stroke adjustment with adjusting bolt>

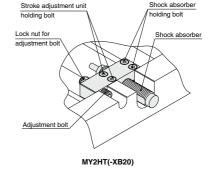
1. Loosen the lock nut for the adjustment bolt and adjust a stroke by rotating the adjustment bolt.

After adjusting the stroke, secure the adjustment bolt by tightening the lock nut.

If the effective stroke of the shock absorber is shortened by the stroke adjustment, its absorption capacity will be drastically reduced. Therefore, the adjustment bolt should be secured at a position where it projects about 0.5 mm farther than the shock absorber.

Tighten shock absorber holding bolts equally with the specified tightening torque.



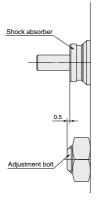


Tightening Torque for Stroke Adjustment Unit Holding Bolt

inginioning role	u	, .ujuouo		(14 111)						
Bore size	MY	′2H	MY2HT							
(mm)	L unit	H unit	L unit	H unit						
16		0	.6							
25		1.5								
40	5.0									

Tightening Torque for Shock Absorber Holding Bolt (N·m)

Bore size	MY	′2H	MY	2HT
(mm)	L unit	H unit	L unit	H unit
16		0.	.6	
25	1.5	0.6	1.	.5
40	5.0	1.5	5.	.0



2. Do not use the shock absorber and air cushion together.



-XB22: Shock Absorber Soft Type RJ Series Type



13 Shock Absorber Soft Type RJ Series Type

Symbol -XB22

- The standard cylinder has been equipped with shock absorber soft type RJ series type to enable soft stopping at the stroke end.
- Two different shock absorbers are available in accordance with the operating conditions.

Applicable Series

Series	Description	Model	Bearing type	Applicable bore size	Vol. no. (for std model)
		MY1B	Basic type	ø10, ø20 to ø40	
		MY1M	Slide bearing type	ø16 to ø40	
		MY1C	Cam follower type	ø16 to ø40	
		MY1H	Single-axis linear guide type	ø10 to ø40	
MY	Mechanically jointed	MY1□W	With protective cover	ø16 to ø40	
IVI T	rodless cylinder	MY2C	Cam follower type	ø16, ø25, ø40	
		MY2H	Single-axis linear guide type	ø16, ø25, ø40	
		MY2HT	Double-axis linear guide type	ø16, ø25	
		MY3B	Basic type	ø16 to ø50	Web Catalog
		MY3M	Slide bearing type	ø16, ø25, ø40	
	Magnetically coupled	CY1L	Ball bushing bearing type	ø6 to ø25	
CY	rodless cylinder	CY1H	Single-axis linear guide type	ø10 to ø25	
	rouless cylinder	CY1HT	Double-axis linear guide type	ø25	
MGP	Compact guide cylinder	MGP-Z	Slide bearing type, Ball bushing bearing type	ø12 to ø100	
MGG	Guide cylinder	MGG	Slide bearing type, Ball bushing bearing type	ø20 to ø32	
CX2	Slide unit	CX2N	Slide bearing type	ø10, ø15, ø25	
CXT	Platform cylinder	CXT	Slide bearing type, Ball bushing bearing type	ø12 to ø25	

How to Order

Standard model no. - XB22

Shock absorber soft type RJ series type

How to Order a Stroke Adjustment Unit for MY Itself

Stroke adjustment unit model -XB22

Specifications

Absorbed energy	For the maximum impact weight graph, refer to page 1470.
Specifications other than above and external dimensions	Same as standard type

^{*} For dimensions of the MGP series, refer to page 1471.

- * For details on shock absorber soft type RJ series, refer to the Web Catalog.
- * The shock absorber service life is different from that of each cylinder. Refer to the "Specific Product Precautions" of the RJ series for the replacement period.



-XB22: Shock Absorber Soft Type RJ Series Type



13 Shock Absorber Soft Type RJ Series Type

Symbol -XB22

Cylinders

Note) Refer to the **Web Catalog** for the details of the shock absorber RB series.

Model -	Type	Stroke			Bore size								
iviodei	туре	adjusting unit	ø10	ø16	ø 20	ø 25	ø32	ø 40	ø 50				
,	XB22	L			RJ0806H	RJ1007H	RJ14	112H					
MY1B	VD22	Н	RJ0805		RJ1007H	RJ1412H	_	_	/				
	tandard	L			RB0806	RB1007		412					
31	lanuaru	Н	RB0805		RB1007	RB1412	RB2	2015					
,	XB22	L		RJ08	306H	RJ1007H	RJ14	112H					
WITTINI	VD22	Н			RJ1007H	RJ1412H	_	_					
MY1C C	tandard	L		RBC		RB1007		412					
36	lanuaru	Н			RB1007	RB1412	RB2	2015					
,	XB22	L		RJ08	306H	RJ1007H	RJ14	112H					
MY1H -′	AD22	Н	RJ0805		RJ1007H	RJ1412H	_	_	/				
	44			RBC	806	RB1007	RB1	412					
	tandard	Н	RB0805		RB1007	RB1412	RB2015						
MY1□W -	XB22	L		RJ08	306H	RJ1007H	RJ1412H						
Sta	tandard	L		RBC	806	RB1007	RB1	412					
,	XB22	L		RJ0806H		RJ1007H		RJ1412H					
VIY2C	AD22	Н		RJ1007H Note)		RJ1412H		_	/				
MY2H		L		RB0806		RB1007		RB1412					
Sia	tandard	Н		RB1007 Note)		RB1412		RB2015					
,	XB22	L		RJ1007H		RJ1412H		_					
мү2нт	AD22	Н		RJ1412H		_		_	/				
	tandard	L		RB1007		RB1412		RB2015					
Sia	landard	Н		RB1412		RB2015		RB2725					
,	XB22	L		RJ08	806H	RJ10	07H	RJ14	12H				
иүзв	AD22	Н		RJ10	007H	RJ14	1412H —		_				
		L		RB0	806	RB1	007	RB1	412				
Sta	Standard H			RB1	007	RB1	412	RB2	015				
,	XB22	L		RJ0806H		RJ1007H		RJ1412H					
иузи	VD27	Н		RJ1007H		RJ1412H		_					
VI I SIVI		L		RB0806		RB1007		RB1412					

Note) MY2C16 is not available with H unit.

Magnetically Coupled Rodless Cylinder

Model	Time	•	Bore size									
Model Type		ø6	ø10	ø15	ø 20	ø 25						
CY1L	-XB22	RJ0805	RJ08	RJ1007H	RJ1412H							
CTIL	Standard		RB0805		RB1006	RB1411						
CY1H	-XB22		RJ08	306H	RJ1007H	RJ1412H						
CTIH	Standard		RB0805	RB0806	RB1006	RB1411						
CY1HT	-XB22					RJ1412H						
CTINI	Standard					RB1411						

RB1007

Guide Cylinder

Model	Type		Bore size											
Model	Type	ø12	ø16	ø 20	ø 25	ø32	ø 40	ø 50	ø 63	ø 80	ø100			
MGP-Z	-XB22	RJ08	RJ0806H RJ1007H			RJ14	112H	RJ2015H		RJ2725H				
WGF-Z	-XC69	_		_		_	_	RB2	015	RB2	725			
MGG	-XB22			RJ1007H	RJ14	RJ1412H					-			
MGG	Standard			RB1007	RB1	412	RB2015			RB2	725			

RB1412

Platform Cylinder

Model	Type	Bore size							
	туре	ø12	ø16	ø 20	ø 25				
CXT	-XB22	RJ08	306H	RJ1007H	RJ1412H				
CAI	Standard	RBC	0806	RB1007	RB1411				

Slide Unit/Double Rod Type

Model	Time	Bore size						
iviodei	Туре	ø10	ø15	ø 25				
CX2N -XB22		RJ08	RJ1007H					
CAZIN	Standard	RBC	BB1006					



-XB22: Shock Absorber Soft Type RJ Series Type



13 Shock Absorber Soft Type RJ Series Type

Symbol -XB22

Maximum Impact Weight Graph (Shock Absorber Performance Line Graph)

 Values in the maximum impact mass graph are at room temperature (20 to 25°C).

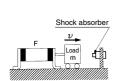
Ensure that the impact mass and the impact speed are within the absorbed energy graphs below.

Refer to each cylinder selection calculation for load factors and guide load factors.

Please consult with SMC for the MY3 series since there are restrictions on collision speed resulting from the cylinder.

■ Type of collision

Horizontally-applied impact Air cylinder impact (horizontal/upward)

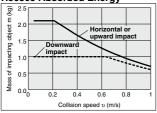




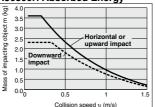
Air cylinder impact (downward)



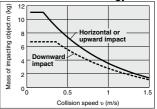




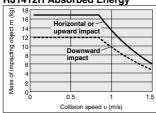




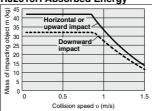
RJ1007H Absorbed Energy



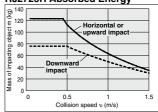
RJ1412H Absorbed Energy



RJ2015H Absorbed Energy



RJ2725H Absorbed Energy



^{*} Be sure to read "Handling Precautions for SMC Products" (Web Catalog) and "Shock Absorber Soft Type RJ Series" (Web Catalog) before using.

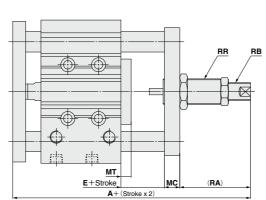
-XB22: Shock Absorber Soft Type RJ Series Type

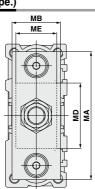


13 Shock Absorber Soft Type RJ Series Type

Symbol -XB22

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





												(mm)
ĺ	Bore size	Α	E	MA	MB	MC	MD	ME	MT	RA	RB	RR
	12	90	7	51	19	8	27	13	6	33	RJ0806H	M12 x 1.5
	16	94	7	58	19	8	28	16	6	33	RJ0806H	M12 x 1.5
	20	109	9	68	30	10	33	22	8	37	RJ1007H	M14 x 1.5
	25	109.5	9	82	30	10	41	25	8	37	RJ1007H	M14 x 1.5
	32	135.5	9	100	38	12	51	32	8	55	RJ1412H	M20 x 1.5
	40	142	9	108	38	12	60	32	8	55	RJ1412H	M20 x 1.5
	50	155	10	139	60	16	71	38	9	57	RJ2015H	M27 x 1.5
	63	160	10	153	60	16	84	50	9	57	RJ2015H	M27 x 1.5
	80	212.5	17	190	75	22	114	50	16	77	RJ2725H	M36 x 1.5
	100	232	17	228	75	25	140	65	16	7/	D 12725H	M36 v 1 5

Specifications of Extension Adjusting Mechanism

Bore size (mm)	12, 16	20, 25	32, 40	50, 63	80, 100
Shock absorber model	RJ08006H	RJ1007H	RJ1412H	RJ2015H	RJ2725H
Stroke adjustment range [mm]	0 to -15		0 to	0 to -30	

Mounting

Do not allow hands or fingers near the cylinder during its operation.

If finger, etc. were to get caught between shock absorber and body, it might damage on the human body and the peripheral equipment. Take protective measures by mounting a protective cover, etc. as necessary.

Basically, avoid bottom-mounting a cylinder.

Mounting space is limited owing to the guide rod and the end plate, etc. Mount a cylinder by the top mounting or side mounting.

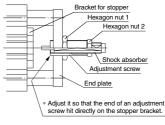
Adjustment

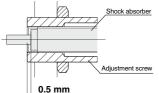
1. How to adjust an adjustment screw (Stroke adjustment)

Loosen only the hexagon nut 1, then turn the adjustment screw to adjust the stroke. After adjusting, lock it with the hexagon nut 1. Fix it at the position ejected from the end plate, so that the end face of an adjustment screw could hit the bracket for stopper directly. (Refer to the figure right above.)

2. How to replace shock absorbers

Loosen hexagon nut 2, and turn a shock absorber counterclockwise for removal. For installing a new shock absorber, fix it at the position that the end face of an adjustment screw sticks out by 0.5 mm from a shock absorber. (Refer to the figure on the right.) After adjusting the position of shock absorber, be sure to secure with hexagon nut 2.







Made to Order Common Specifications: -XC2(A): Rod End Length Extended 10 mm



14 Rod End Length Extended 10 mm

Symbol -XC2(A)

-XC2 Rod end length (L dimension) specifications of the cylinder for mounting the flange on the foot or rod side are "standard product + 10 mm" (-XC2).

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
		CQ2-Z	Double acting, Single rod	Foot type, Rod side flange only	
	Standard type	andard type CQ2-Z		Foot type, Rod side flange	
CQ2		CQ2W-Z	Double acting, Double rod	Foot type only	Web Catalog
CQZ	Non-rotating rod type	CQ2K-Z	Double acting, Single rod	Foot type, Rod side flange only	web Catalog
	Non-rotating rod type	CQ2KW-Z		Foot type only	
	Anti-lateral load	CQ2□S-Z	Double acting, Single rod	Foot type, Rod side flange	

-XC2A Rod end length (L dimension) specifications of the cylinder for mounting the double rod flange are "standard product + 10 mm" (-XC2A).

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
CQ2	Standard type	CQ2W-Z	Double acting, Double rod	Flange only	Web Catalog
CQ2	Non-rotating rod type	CQ2KW-Z	Double acting, Double rod	Flange only	web Catalog

How to Order

C(D)Q2A Standard model no. – XC2 (A)

Rod end length extended 10 mm

-XC2 Foot type, Rod side flange only
-XC2A For mounting double rod flange

Specifications: Same as standard type

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

Double acting, Single rod Double acting, Double rod (-XC2) Double acting, Double rod (-XC2A)

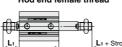


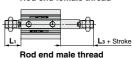
L + Stroke

L2 + Stroke

Rod end female thread

Rod end male thread





(mm)

XC2: Standard, Anti-lateral load, Non-rotating rod (mm)

Applicable series Dimensions Bore size Standard Non-rotating Female thread Male thread (mm) rod type 12 13.5 24 16 13.5 25.5 20 14.5 28.5 32.5 25 32 17 38.5 40 38.5 18 43.5 63 18 43.5 20 53.5

Rod end male thread Rod end maid (mm) XC2A: Standard, Non-rotating rod

AULA. Olui	dard, Non Totaling rod (IIIII)											
Bore size	Applicab	le series	Dimensions									
	Standard	Non-rotating	Female	thread	Male thread							
(mm)	type	rod type	L	L2	L ₁	L3						
12	0	_	13.5	3.5	24	14						
16	0	_	13.5	3.5	25.5	15.5						
20	0	_	14.5	4.5	28.5	18.5						
25	0	_	15	5	32.5	22.5						
32	0	_	17	7	38.5	28.5						
40	0	0	17	7	38.5	28.5						
50	0	0	18	8	43.5	33.5						
63	0	0	18	8	43.5	33.5						
80	0	_	20	10	53.5	43.5						
100	Ó	_	22	12	53.5	43.5						

XC2: CQ2 Single acting

	9							(111111)	
End shape		Female	thread			Male	thread		
Stidpe			_			L	.1		
Action	Spring return	g return Spring extend S				Spring extend			
Bore size Stroke	All strokes	5	10	20	All strokes	5	10	20	
12	13.5	18.5	23.5	_	24	29	34	_	
16	13.5	18.5	23.5	_	25.5	30.5	35.5	_	
20	14.5	19.5	24.5	_	28.5	33.5	38.5	_	
25	15	20	25	_	32.5	37.5	42.5	_	
32	17	22	27	_	38.5	43.5	48.5	_	
40	17	22	27	_	38.5	43.5	48.5	_	
50	18	_	28	38	43.5	_	53.5	63.5	

Made to Order Common Specifications: -XC3: Special Port Location



Part of the CM2-Z series (model highlighted in red) is to be discontinued as of the end of January 2025. Please select the CM2-Z1 series instead.

15 Special Port Location

Symbol -XC3

Compared with the standard type, a cylinder which changes the connection port location of rod/head cover and the location of cushion valve.

A	11	1		- 0		
An	ทแ	са	ท	e 5	eri	es

Series	Description	Model	Action	Note	Vol. no. (for std model
CJ2	Standard type	CJ2-Z	Double acting, Single rod	Except w/ rail mounting type auto switches, w/ air cushion	
	Non-rotating rod type	CJ2K-Z	Double acting, Single rod	Except w/ rail mounting type auto switches	
	Smooth cylinder	CJ2Y-Z	Double acting, Single rod		
	Air cylinder	CM2-Z1	Double acting, Single rod		
	Standard type	CM2-Z CM2W-Z	Double acting, Single rod		
			Single acting (Spring return/extend)		
			Double acting, Double rod		
	Air-hydro type	CM2H-Z	Double acting, Single rod		
	Non-rotating rod type	CM2K-Z	Double acting, Single rod		
			Single acting (Spring return/extend)		
CM2		CM2KW-Z	Double acting, Double rod		
	Direct mount type	CM2R-Z		Except with air cushion	
	Direct mount type, Air-hydro type	CM2HR-Z	Double acting, Single rod	·	
	Non-rotating rod, Direct mount type	CM2RK-Z	Double acting, Single rod		
	Smooth cylinder	CM2Y-Z	Double acting, Single rod		
	End lock cylinder	CBM2	Double acting, Single rod	Except with air cushion	
	Low speed cylinder	CM2X-Z	Double acting, Single rod		
CG1	Air cylinder	CG1-Z1	Double acting, Single rod		
	1 '	MB	Double acting, Single rod		
	Standard type	MBW	Double acting, Double rod		
MB	Non-rotating rod type	MBK	Double acting, Single rod		
		MBKW	Double acting, Double rod		ı
	Standard type	MB1	Double acting, Single rod		
MB1		MB1W	Double acting, Double rod		
	Non-rotating rod type	MB1K	Double acting, Single rod		Web Catalog
	Transfer in the same of the sa	CA2T-Z		It can only be selected for "-XC3BC," "-XC3CD," and "-XC3DA" products with a trunnion bracket.**	
	Standard type	CA2WT-Z		It can only be selected for "-XC3BC," "-XC3CD," and "-XC3DA" products with a trunnion bracket.**	
CA2		CA2	Double acting, Single rod	Excludes the "-XC3BC," "-XC3CD," and "-XC3DA"**	
·		CA2W	Double acting, Double rod		
	End lock cylinder	CBA2	Double acting, Single rod		
	Standard type	CS1	Double acting, Single rod		
CS1	Low friction type	CS1□Q	Double acting, Single rod	Applicable to ø125 to ø160	
	Standard type	CS2	Double acting, Single rod	7.000.00.00.00.00.00.00	
CS2	Smooth cylinder	CS2Y	Double acting, Single rod	Applicable to ø125 to ø160	
RHC	High power cylinder	RHC	Double acting, Single rod	Applicable to ø20 to ø40	
	I ngn ponor cymiaer		Double acting	7 ppiloable to 520 to 5 to	
	Stopper cylinder	RSQ-Z	Double acting with spring installed		
			Single acting		
RSQ		RSQ*	Double acting	ø12 only	
			Double acting with spring installed	ø12 only	
			Single acting	ø12 only	
	Stopper cylinder	RSG	Double acting	D12 Only	
RSG			Double acting with spring installed		
nou			Single acting		1
CL1	Locked up cylinder	CL1	Double acting, Single rod		
CLS	Cylinder with lock	CLS	Double acting, Single rod		
CNA2	Cylinder with lock	CNA2	Double acting, Single rod	Unlocking cams are on the same side as cushion valves.	
		MXH-Z	Double acting, Single rod	Onlocking cams are on the same side as cushion valves.	
MXH	Compact slide	IVIATI-Z	Liponnie acting		

^{*} The RSQ, MB, MB1, and CA2 are the same shape as the current product

How to Order

CG₁

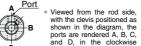
CJ2 Standard model no. Head port location seen from the rod side Specifications: Same as standard type. Special port location

 Rod port location seen from the rod side * For port location, refer to the following diagrams and show the symbols of A, B, C and D. Port Location

Corresponding symbol of mounting bracket (Positional relationships) Series Port CJ2 Viewed from the rod side the ports are rendered A, B CM₂ C, and D, in the clockwise

Position relation between clevis and port

direction



- 1. Positional relationships between port and cushion valve cannot he changed.
- 2. Cylinder with cushion of CJ2 (CJ2-A) is not available for -XC3. 3. The standard product is used for CG1-XC3AA/BB/CC/DD.



^{*} For products with a non-trunnion bracket, it can only be selected for the "-XC3BC," "-XC3CD," and "-XC3DA" if the direction of the included bracket is changed. Therefore, the part number suffix "-XC3 " is not required. For other products with a special port location, the shape and model are the same as those of the existing CA2 series product.

-XC3: Special Port Location



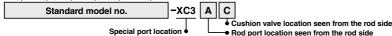
15 Special Port Location

Symbol -XC3

How to Order



Specifications: Same as standard type



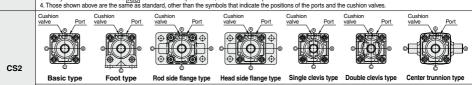
* For port location, refer to the following diagrams and show the symbols of A, B, C and D.



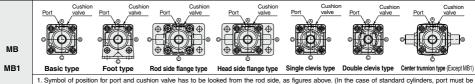
- Note) A special port location can be selected for the CA2T-Z products listed below. . For products with a trunnion bracket, it can only be selected for the "-XC3BC,"
- "-XC3CD," and "-XC3DA."
- Part no. example) CA2T50-100Z-XC3BC
- For products with a non-trunnion bracket, it can only be selected for the "-XC3BC," "-XC3CD," and "-XC3DA" if the direction of the included bracket is changed.
- * The part number suffix "-XC3 " is not required.

For products other than those listed above, the shape and model are the same as those of the existing CA2 series product.

Relation between Port Location and Cushion Valve Location Series Corresponding symbol of mounting bracket (Positional relationships) Basic Foot Rod side Head side Single Double Center type flange type flange type clevis clevis trunnion type type type type (A (A) (A) CA₂ **+** H. H. E 7,100 CS1 CNA₂ (Ċ) (C) (C) (C) Cushion valve CL1 1. As shown in the above diagram, the symbols for the positions of the ports and cushion valves are as follows: viewed from the rod side, the top position is rendered A; then, B, C, and D, in the clockwise direction. 2. The type in which the ports and the cushion valves are combined is applicable only when the rod cover and the head cover are changed to the same positions. 3. The symbol indicated as "-XC3 AB" is the standard specification, and there are no part numbers A or B.



- 1. Symbol of position for port and cushion valve has to be looked from the rod side, as figures above. (In the case of standard cylinders, port must be positioned in the upper side.) Define the upper side to be A, and then B, C, and D in a clockwise order
- 2. Model of combination between port and cushion valve is applicable only when the position of a port and a cushion valve on the rod cover and the head cover will be changed to the same position against the support bracket, as a rule
- 3. -XC3AA is not available in terms of the position between port and cushion valve, since it is available in the standard products



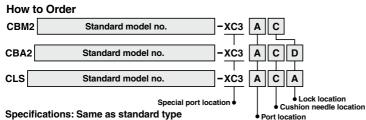
positioned in the upper side.) Define the upper side to be A, and then B, C, and D in a clockwise order. 2. Model of combination between port and cushion valve is applicable only when the position of a port and a cushion valve on the rod cover and the head cover will be changed to the same position against the support bracket, as a rule 3. XC3AA is not available in terms of the position between port and cushion valve, since it is available in the standard products Rod chamfered Rod chamfered Rod chamfered Rod chamfered In the case of standard type, the RSQ-Z symbol for port and rod-chamfered positions are on the same surface **RSQ** and positioned upward. Define the port position at right to be A, and then B, C in a clockwise order. RSG Standard type -XC3A -XC3B -XC3C



-XC3: Special Port Location

15 Special Port Location

Symbol -XC3



Relation	n between Port Location and Cushion Valve Location										
Series	Corresponding symbol of mounting bracket (Positional relationships)										
CBM2	The port and end lock positions can be specified. Rod side port and head side port are at the same location. Symbols o lock position and port location are as the following diagrams. Port Standard (AD) AC AB Except with air cushion	The figures below show typical symbol examples for the double clevis type. AD CD BD Standard (BA) CA Diagrams seen from the rod side									
CBA2	Port and cushion needle are at the same rod/head position. Symbols of port location, cushion needle position and lock position are as the following diagrams. When the mounting bracket is attached, the coplaced like below are on a basis. (A) (B) (C) (C) (C) (C) (D) (D) (A) (A) (A) (A) (A) (A										
CLS	Basic type Iflange type Iflange type Iflange type Lock location Port (A) (B) (C) (C) Cushion valve 1. Symbols of port and cushion valve, and lock positions, have to be looked at fror A, and then B, C, and D in a clockwise order. 2. The combination model of a port and a cushion valve is applicable when the rod 3. Part number of .XcGA[B][B] as not available since it indicates a standard type. 4. For the rod side flange type, lock positions Band D cannot be manufactured sin with each other. 5. Symbols excluding those that indicate the locations of ports and cushion valves	I and head covers are moved to the same position. I are the brake cylinder and the mounting hole of the flange bracket interfere									

-XC3: Special Port Location



15 Special Port Location

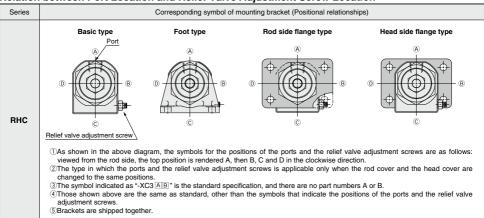
Symbol -XC3

How to Order



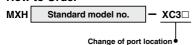
Specifications: Same as standard type

Relation between Port Location and Relief Valve Adjustment Screw Location



* For port location, refer to the following diagrams and show the symbols of A, B, C and D.

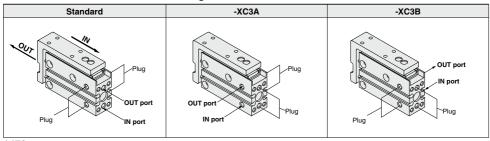
How to Order



Specifications: Same as standard type

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

Relation between Port Location and Plug Location



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



Part of the CG1 series (model highlighted in red) is to be discontinued as of the end of February 2025. Please select the CG1-Z1 series instead.

16 With Heavy Duty Scraper

Symbol -XC4

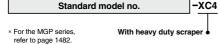
Cylinders with a heavy duty scraper on the wiper ring are suitable for use in extremely dusty environments and those where they will be exposed to earth or sand, such as in die-casted equipment, construction machinery, and industrial vehicles.

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	
МВ	Air cylinder	MB-Z	Double acting, Single rod	Except ø125	
		MBW-Z	Double acting, Double rod	Except ø125	
MD1	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125	
MB1		MB1W-Z	Double acting, Double rod	Except ø125	
	Air cylinder	CA2-Z	Double acting, Single rod		
CA2 *		CA2W-Z	Double acting, Double rod		
	End lock cylinder	CBA2	Double acting, Single rod	Head side locking type only	
CS1	Air ordindar	CS1	Double acting, Single rod		
CSI	Air cylinder	CS1W	Double acting, Double rod		
CS2	Air cylinder	CS2	Double acting, Single rod	Applicable to ø125 to ø250	
U32		CS2W	Double acting, Double rod	Applicable to ø125 to ø160	Web Catalog
	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.	
CQ2		CQ2W-Z	Double acting, Double rod	Applicable to ø40 to ø100	
CQZ	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		
	Valve mounted air cylinder	CVM5	Double acting, Single rod		
cv		CV3	Double acting, Single rod		
		CVS1	Double acting, Single rod		
	Compact guide cylinder	MGPM-Z	Double acting	Applicable to ø20 to ø100	
MGP		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



Specifications: Same as standard type

△ 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.

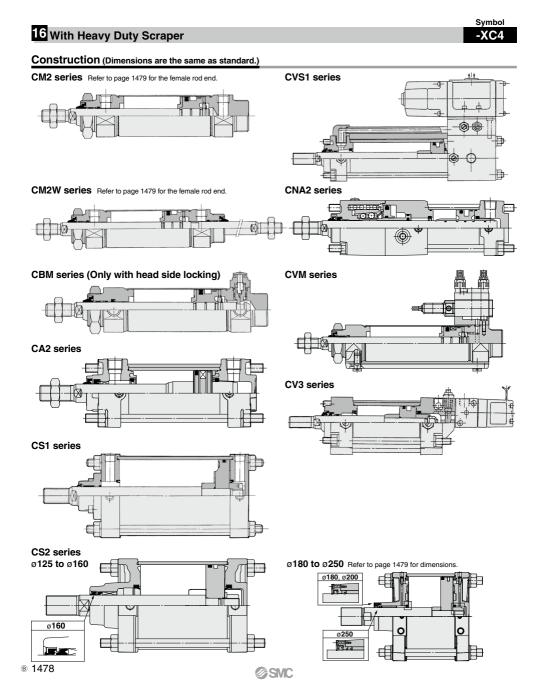
The CM2 series cannot replace either heavy duty scraper or rod seal. It goes for replacing retainer assembly for the CS1 series.

Replace the CNA2 series with the lock unit.

For CS2 series bore sizes σ 125 to σ 160, the entire rod cover assembly will need to be replaced. For bore sizes σ 180 to σ 250, a special tool is required for replacement, and therefore the product will need to be sent in for factory repair.









16 With Heavy Duty Scraper

Symbol -XC4

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

CM2 series CM2W series

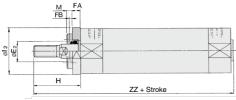
* (): Denotes the dimensions for the CM2W series.

Female rod end



(mn							
Bore size	CM2	series	CM2W series				
Dore Size	Н	ZZ	Н	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

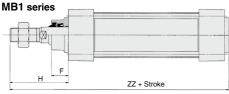


CG1 Series (mm)												
Bore size	Stroke range		E ₂ FA FB	FB	М	1.	Н		ZZ			
Bore size	CG1-Z1	CG1-Z	E2	FA	гв	I IVI	l ₂	Male thread	Female thread	Male thread	Female thread	
32			17	8	3	5	38	48	28	121 (129)	101 (109)	
40	Up to 1000	Up to 300	21	8	3	3.5	47	58	29	138 (147)	109 (118)	
50	Up to 1000	Up to 1000 (Up to 15	(Up to 1500)	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)	

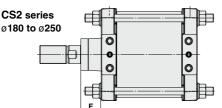
Note) (): Long stroke

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



MB,MB1 Series (mm						
Bore size	F	Н	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			



CS2 Series	(mm)
Bore size	F
ø180	42
ø 200	46
ø 250	57



16 With Heavy Duty Scraper

Symbol -XC4

[mm]

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

CQ2 series

Double acting, Single rod

ø20, ø25 (Without auto switch magnet), ø32

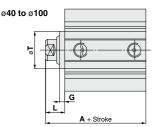


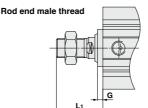


ø20, ø25 (With auto switch magnet)



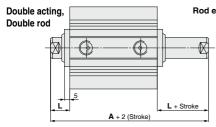


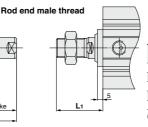




Bore size	A			(G		Ĺ		L1	
[mm]	50 mm stroke or less	75, 100 mm stroke	125 to 300 mm stroke	100 mm stroke or less	125 mm stroke or more	100 mm stroke or less	125 to 300 mm stroke	100 mm stroke or less	125 to 300 mm stroke	•
20	34 (46)	_	_	_	_	4.5	_	18.5	-	_
25	37.5 (47.5)	_	_	_	_	5	_	22.5	_	_
32	40 (50)	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

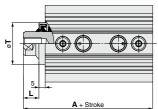




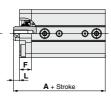
[mr							
Bore size	Bore size A						
[mm]	Up to 50 mm stroke	75, 100 mm stroke	L	L ₁			
40	46.5 (56.5)	56.5	17	38.5			
50	48.5 (58.5)	58.5	18	43.5			
63	54 (64)	64	18	43.5			
80	63.5 (73.5)	73.5	20	53.5			
100	75 (85)	85	22	53.5			

(): Dimensions with auto switch magnet

RQ series







				(111111)
Bore size (mm)	Α	F	L	Т
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.

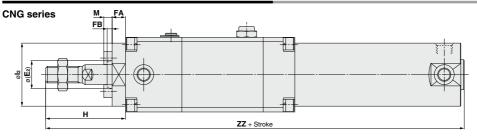
 * Only standard strokes are applicable.



16 With Heavy Duty Scraper

Symbol -XC4

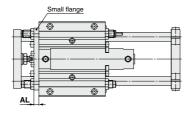
Dimensions (Dimensions other than below are the same as standard type.)



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

Long strokes 212 238

MGG□B series ø32 to ø50



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

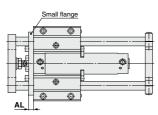
Specifications: Same as standard type

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

^{*} 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.



16 With Heavy Duty Scraper

Symbol -XC4

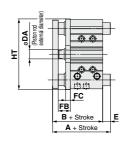
How to Order/MGP

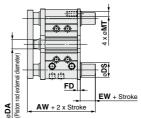


Specifications

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	With single side	0.12 MPa		
	With both sides	0.14 MPa		
Specifications other	r than above	Same as sta	andard type	

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





For cylinder with both sides scraper

Common Dimensions:

MGPI	vi, MG	(mm)			
Bore size	В	DA	FB	F	С
(mm)	В	DA	гь	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

Dime	Dimensions: AW, EW, FD, MT, DS (mm)										
Bore size	AW	EW	FD	мт	DS *						
(mm)	AW	⊏vv	רט	IVII	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					
_				141 1							

^{*} Bypass port size for guide rod with bottom mounting

Į	MGPM (Slic	de bear	le bearing) A, E, HT Dimensions									
	Bore size		Α			Е		нт				
	(mm)	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				
	90	1115	141 E	100 E	0	0.5	0.4	202				

10.5

136.5 161.5 200.5

_	MGPL, MG	iPA (B	all bus	shing	bearin	ıg) A, I	E, HT I	Dimen	sions	(mm)
	Bore size		-	١.				E		нт
	(mm)	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	ні
	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		-	١.		E				нт
(mm)	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	п
32	89.5			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 s	ize		-	١		E				
(mm)	25 st or less	Over 25 st to 50 st	Over 50 st to 200 st	Over 200 st	25 st or less	Over 25 st to 50 st	Over 50 st to 200 st	Over 200 st	HT
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



16 With Heavy Duty Scraper

Symbol -XC4

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

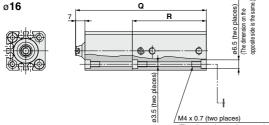
With heavy duty scraper •

Specifications

Bore size (mm)	16	20	25	32	40	50	63
Minimum operating pressure	0.15 MPa			(0.1 MPa)			
Specifications other than above		Sa	me as	stand	dard ty	ре	

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

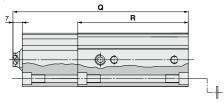
Dimensions (Dimensions other than below are the same as standard type.)



Bore	Rod		Clamp stroke							
size	state	10 mm		20 mm		30 mm				
(mm)	State	Q	R	Q	R	Q	R			
16	Retracted	78	45.5	98	55.5	118	65.5			
10	Extended	95.5	45.5	125.5	33.3	155.5	65.5			

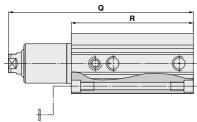
(The dimension on the opposite side is the same.)

ø20, ø25



Bore	D. d	Clamp stroke							
size	Rod state	10 mm		20	mm	30	30 mm		
(mm)	state	Q	R	Q	R	Q	R		
20	Retracted	99	72	119	82	139	92		
20	Extended	118.5	12	148.5	02	178.5	92		
OF.	Retracted	111.5	73	131.5	83	151.5	93		
25	Extended	131	/3	161	၀၁	191	93		

ø32 to ø63



Bore	D. d		Clamp stroke									
size	Rod state	10 mm		20	20 mm		mm	50 :	mm			
(mm)	State	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			
32	Extended	143.5	61.5	173.5	91.5	203.5	101.5	263.5	121.5			
40	Retracted	119	75	139	85	159	95	199	115			
40	Extended	144	/5	174	65	204	95	264				
50	Retracted	137	86.5	157	96.5	177	106.5	217	126.5			
50	Extended	166	00.5	196	96.5	226	106.5	286	126.5			
63	Retracted	140	90	160	100	180	110	220	130			
03	Extended	169	90	199	100	229	110	289	130			

-XC5: Heat Resistant Cylinder (-10 to 110°C)



17 Heat Resistant Cylinder (–10 to 110°C)

Symbol -XC5

Cylinder which changed the seal material for heat resistance (up to 110°C) in order to use under the severe ambient temperature condition which exceeds the standard specifications of –10 to 70°C (0 to 70°C for CS1, CS2 series).

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
	A to so disorders		Double acting, Single rod		
CM2	Air cylinder	CM2W-Z	Double acting, Double rod		
	Direct mount type	CM2R-Z	Double acting, Single rod		
мв	Air cylinder	MB-Z	Double acting, Single rod	Except with rubber bumper, with auto switch	
IVID	All Cyllinder	MBW-Z	Double acting, Double rod	Except with rubber bumper, with auto switch	
MB1	Air cylinder	MB1-Z	Double acting, Single rod	Except with rubber bumper, with auto switch	
WIDT	All Cyllinder	MB1W-Z	Double acting, Double rod	Except with rubber bumper, with auto switch	Web Catalog
CA2	Air cylinder	CA2-Z	Double acting, Single rod		
CAZ	All Cyllinder	CA2W-Z	Double acting, Double rod		
CS1*	Air cylinder	CS1	Double acting, Single rod		
031	All Cyllinder	CS1W	Double acting, Double rod		
CS2	CS2 Air cylinder		Double acting, Single rod	Applicable to ø125 to ø160	
032	All Cyllinder	CS2W	Double acting, Double rod	Applicable to ø125 to ø160	

How to Order



Specifications

Ambient temperature range	-10 to 110°C (0 to 110°C for CS1, CS2 series)							
Seal material	Fluororubber (In the case of CS1 cylinder, cushion seal is made of NBR.)							
With auto switch	Unavailable (2)							
Specifications other than above and external dimensions	Same as standard type							

- Note 1) Please contact SMC for details on the maintenance intervals for this cylinder, which differ from those of the standard cylinder.
- Note 2) Manufacturing built-in magnet type and the one with auto switch is impossible.
- Note 3) Material of rod boot is heat resistant tarpaulin.
- Note 4) Applicable bore size of the CS1 series Lube type: ø125 to ø300 Non-lube type: ø125 to ø200



Part of the CM2-Z series (model highlighted in red) is to be discontinued as of the end of January 2025, and part of the CG1-Z series (model highlighted in red) is to be discontinued as of the end of February 2025. Select a model from the CM2-Z1 series or the CG1-Z1 series instead.

18 Made of Stainless Steel

Symbol -XC6

The piston rod and rod end nut (male thread only) of this model are made of stainless steel.

This model is suitable for applications in which the end of the piston rod is to be immersed in water, etc., and there is concern regarding the generation of rust or corrosion.

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
		CM2-Z1	Double acting, Single rod	
	Air cylinder	CM2-Z	Double acting, Single rod	
	Air cyllrider	CIVIZ-Z	Single acting (Spring return/extend)	
		CM2W-Z	Double acting, Double rod	
		CM2K-Z	Double acting, Single rod	
	Non-rotating rod type	CIVIZIX-Z	Single acting (Spring return/extend)	
CM2		CM2KW-Z	Double acting, Double rod	
CIVIZ	Direct mount type	CM2R-Z	Double acting, Single rod	
	Non-rotating rod, Direct mount type	CM2RK-Z	Double acting, Single rod	
	Centralized piping type	CM2□□P	Double acting, Single rod	
	Smooth cylinder (5)	CM2Y-Z	Double acting, Single rod	
	Air-hydro type	CM2H-Z	Double acting, Single rod	
	Direct mount type, air-hydro type	CM2RH-Z	Double acting, Single rod	
	End lock cylinder	CBM2 (6)	Double acting, Single rod	
		CG1-Z1	Double acting, Single rod	Web Catalog
	Air cylinder	CG1-Z	Double acting, Single rod	
CG1			Single acting (Spring return/extend)	
	Double rod type	CG1W-Z	Double acting, Double rod	
	Direct mount type	CG1R-Z	Double acting, Single rod	
	Smooth cylinder (5)	CG1Y-Z	Double acting, Single rod	
MB (2)	Air cylinder	MB-Z (4)	Double acting, Single rod	
		MBW-Z (4)	Double acting, Double rod	
MB1 ⁽²⁾	Air cylinder	MB1-Z (4)	Double acting, Single rod	
	End lock cylinder	CBA2 (1)	Double acting, Single rod	
CA2 (2)	Air-hydro type	CA2□H	Double acting, Single rod	
		CA2W□H	Double acting, Double rod	
	Air cylinder	CS1	Double acting, Single rod	
CS1 (2)	,	CS1W	Double acting, Double rod	
	Air-hydro type	CS1□H	Double acting, Single rod	

Series	Description	Model	Action	Vol. no. (for std model)
		cos	Double acting, Single rod	
	Compact cylinder	٥٩٥	Single acting (Spring return/extend)	
cqs		CQSW	Double acting, Double rod	
	Non-rotating rod type	CQSK	Double acting, Single rod	
	Lateral load resisting type	CQS□S	Double acting, Single rod	
		CO2-Z	Double acting, Single rod	
	Compact cylinder	OQL Z	Single acting (Spring return/extend)	
		CQ2W-Z	Double acting, Double rod	
	Axial piping	COP2-Z	Double acting, Single rod	
CQ2	(Centralized piping) Long stroke Anti-lateral load	OGILL	Single acting (Spring return/extend)	
		CQ2-Z	Double acting, Single rod	
		CQ2□S-Z	Double acting, Single rod	Web Catalog
	Water resistant	CQ2-R/V-Z	Double acting, Single rod	
	Water resistant	CQ2W-R/V-Z	Double acting, Double rod	
MU	Plate cylinder	MU-Z	Double acting, Single rod	
MGP	Compact guide cylinder	MGP-Z	Double acting	
MGG	Guide cylinder	MGG	Double acting	
MGC	Guide cylinder	MGC	Double acting	
CXS	Dual rod cylinder	CXSM	Double acting	
CXSJ	Dual rod cylinder compact type	CXSJM	Double acting	
RHC	High power cylinder	RHC	Double acting	
cv	Valve mounted air cylinder	CVM5	Double acting, Single rod	
O.	varvo mountou all cylinder	CVS1	Double acting, Single rod	

Note 1) Head side locking type only

Note 2) There is a maximum stroke limit for CA2, MB, MB1 and CS1 cylinders.

Note 3) The MB-Z, MB1-Z, and CA2-Z made of stainless steel are applicable as "-XC68"

Note 4) Only available for ø125 type.

Note 5) Keep in mind that poor lubrication of the piston rod sliding surface

may result in the specifications stated in the catalog not being satisfied.

Note 6) Double end lock is available as a special order.

How to Order

CM2, CG1, MB, MB1, CA2, CS1, CQS. CQ2. MU. CV



Mounting brackets, accessories, and nut material: Stainless steel The following accessories need to be prepared separately. (Please order separately.) Refer to the "Accessories" page of each series for details.

Series	Bore size (mm)	Foot	Flange	Single knuckle joint	Double knuckle joint	Mounting nut	Rod end nut	Accessories page
СМ2	20, 25, 32, 40	0	0	0	0	0	0	
CG1	20, 25, 32, 40, 50, 63, 80, 100	0*	0*	0	0	_	0	Web Catalog
CQ2	20, 25, 32, 40, 50, 63, 80, 100	_	_	0	0	_	0	

^{*} Except bore size 20 and 25.

Maximum Stroke Series Double acting, Single rod Double acting single rod with rod boot CA2: 1500 CA2, MB, MB1 1000 MB·MB1: 1700 CS₁ 1200

Specifications

Parts changed to stainless steel	Piston rod, Rod end nut
Specifications other than above and external dimensions	Same as standard

Note 1) In the case of CS1 cylinder, the piston rod is only made of stainless steel. Rod end nut is not attached

Note 2) In the case of CQ cylinder, its snap ring and piston rod are made of stainless steel.

Rod end nut is also made of stainless steel for rod end male thread type.



18 Made of Stainless Steel

Symbol -XC6

Suitable for environments where rust and corrosion are likely to be generated

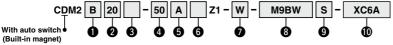
32

40

Nil

W

How to Order/CM2-Z1



No bracket

Single knuckle joint

Double knuckle joint

No bracket is provided for the female rod end

U	Mounting
В	Basic (Double-side bossed
L	Axial foot
F	Rod flange
G	Head flange
С	Single clevis*1
D	Double clevis*1
U	Rod trunnion*1
Т	Head trunnion*1
E	Integrated clevis
V	Integrated clevis (90°)
BZ	Boss-cut/Basic
FZ	Boss-cut/Rod flange
UZ	Boss-cut/Rod trunnion*1

^{*1} Only applicable to the XC6A

2 Bore size 20 mm 25

Rod end bracket

25 mm 32 mm 40 mm

3 Port thread type TN NPT TF

Refer to Table 1 for applicable strokes.

G Cushion Nil Rubber bumper Air cushion

8 Auto switch For auto switch models, refer to the table of applicable auto switches

Number of auto switches Nil 2 S n n

6 Rod end thread

Male rod end

Female rod end

Made to order

XC6A	Stainless steel rod + Stainless steel end nut
хс6В	Stainless steel rod + Stainless steel end nut + Stainless steel mounting nut + Retaining ring + Bracket

Table 1. Applicable Strokes

Bore size [mm]	Standard stroke [mm]	Max. manufacturable stroke [mm
20	05 50 75 400	
25	25, 50, 75, 100, 125, 150, 200,	1000
32	250, 300	1000
40	230, 300	

* The manufacturing of intermediate strokes in 1 mm increments is possible.

Specifications

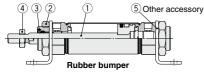
Сросписация			
Material		Stainless steel	
XC6A		Piston rod, Rod end nut	
Changed parts	хс6В	Piston rod, Rod end nut, Retaining ring, Mounting nut Bracket (Refer to the mounting brackets in the table below.)	
Specifications other than the above and dimensions		Same as those of the standard type	

- * The pivot bracket must be ordered separately. (Refer to the mounting brackets in the table below.) Rod end is not affected by this option and should be managed
- separately. The materials of the cushion needle are the same as standard. It is
- made from iron and nickel

Construction

XC6A, XC6B construction

The material of the components below will be changed from standard and those not mentioned will remain the same as standard.



No.	1	2	3	4	5
Description	Piston rod	Mounting nut	Retaining ring	Rod end nut	Bracket (Refer to the mounting brackets below.)
XC6A	Stainless steel	No change (Steel)	No change (Steel)	Stainless steel	No change (Steel)
XC6B	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel

Mounting Brackets/Part Nos.

Mounting bracket	Min. order	Bore size [mm]				Contents
Mounting bracket	quantity	20	25	32	40	(for min. order quantity)
Foot*1	2	CM-L020B-XB12	CM-L03	2B-XB12	CM-L040B-XB12	2 foot brackets, 1 mounting nut
Foot	1	CM-L020BSUS	CM-L03	32BSUS	CM-L040BSUS	1 foot bracket*2
Flange	1	CM-F020BSUS	CM-F03	32BSUS	CM-F040BSUS	1 flange*2
Rod end nut	1	NT-02SUS	NT-0	BSUS	NT-04SUS	1 rod end nut
Mounting nut	1	SN-020BSUS	SN-03	2BSUS	SN-040BSUS	1 mounting nut
Single knuckle joint	1	I-020BSUS	I-032	BSUS	I-040BSUS	1 single knuckle joint
Double knuckle joint	1	Y-020BSUS	Y-032	BSUS	Y-040BSUS	1 double knuckle joint, 1 clevis pin, 2 retaining rings (split pins)

^{*1} Order two foot brackets per cylinder.



^{*2} The mounting nut is not included. Order it separately as required.



18 Made of Stainless Steel

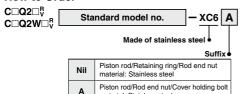
Symbol -XC6

CQ2□R Series

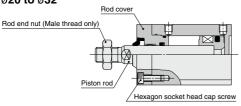
Applicable Series

Description	Model	Action
Water resistant	CQ2□ ^R	Double acting, Single rod
water resistant	CQ2W□R	Double acting, Double rod

How to Order



ø**20 to** ø**32**



material: Stainless steel

Specifications

Books also and da	XC6	Retaining ring, Piston rod, Rod end nut	
Parts changed to stainless steel	XC6Å	Piston rod, Rod end nut, Cover holding bolt	
Specifications other than the above and dimensions		Same as the standard type	
•			

^{*1 -}XC6A is only applicable to ø20, ø25, and ø32 of the double acting, single rod type.

Stainless steel rod end brackets (single knuckle joint, double knuckle joint) are also available.
For details ⇔ Web Catalog





18 Made of Stainless Steel

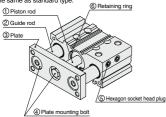
Symbol -XC6

MGP series

Specified Parts Changed to Stainless Steel

XC6A	1, 2, 3, 4, 5, 6
XC6B	1, 2, 5, 6

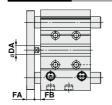
Specifications and external dimensions other than above are the same as standard type.



How to Order



Dimensions



				(mm)
Bore size		XC6A		XC6B
(mm)	DA	FA	FB	DA
12	(6)	8	5	(6)
16	(8)	8	5	(8)
20	(10)	9	7	(10)
25	(10)	10	6	(10)
32	(14)	12	10	(14)
40	(14)	12	10	(14)
50	20	16	12	20
63	20	16	12	20
80	25	19	21	25
100	30	22	28	30

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

CXSJM series

How to Order

CXSJM Standard model no. -XC

Made of stainless steel

Specifications

Parts changed to stainless steel	Piston rod, retaining ring, hexagon socket head bolt, hexagon socket head set screw, dumper bolt, hexagon nut
Specifications other than above and external dimensions	Same as standard

CXSM series

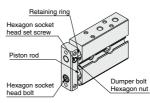
How to Order

CXSM Standard model no. -XC6

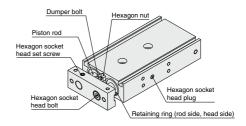
Made of stainless steel

Specifications

Parts changed to stainless steel	Piston rod, retaining ring, hexagon socket head bolt, hexagon socket head set screw, dumper bolt, hexagon nut, hexagon socket head plug	
Specifications other than above and external dimensions	Same as standard	



Note) The head cover retaining ring for ø6 is made of special steel.





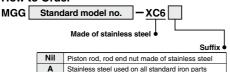
18 Made of Stainless Steel

Symbol -XC6

The piston rod, rod end nut, and other specified parts of this model are made of stainless steel. This model is suitable for applications in which the plate is to be immersed in water, etc., and there is concern regarding the generation of rust or corrosion.

MGG series How to Order

В

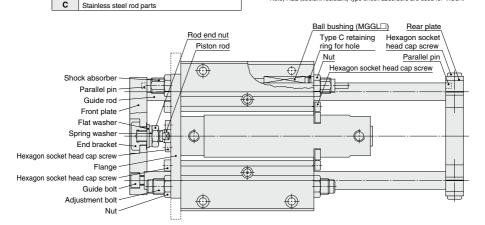


Stainless steel rod end moving parts

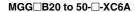
Specified Parts Changed to Stainless Steel

Symbol	Basic cylinder	Guide unit
-XC6		_
-XC6A	CDG1ZN20 to 63-□Z-XC6 CDG1BN80 to 100-□Z-XC6 (Piston rod, Rod end nut)	Flange, Front plate, Rear plate, Ball bushing (MGGLT), Guide rod, End bracket, Flat washer, Spring washer, Type C retaining ring for hole, Adjustment bolt, Nut, Parallel pin, Hexagon socket head cap screw, Guide boll
-хс6в		Front plate, Guide rod, End bracket, Flat washer, Spring washer, Parallel pin (for front plate), Guide bol
-XC6C		Guide rod
Specifications other than above Same as standard type		

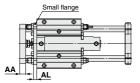
Note) RBL (coolant resistant) type shock absorbers are used for -XC6A.



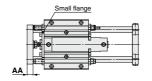
Dimensions (Dimensions other than below are the same as standard type.)



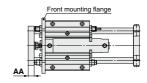
MGG□B20 to 50-□-XC6B MGG□B20 to 50-□-XC6C MGG□F20 to 50-□-XC6A MGG□F20 to 50-□-XC6B MGG□F20 to 50-□-XC6C



		(mm)
Bore size (mm)	AA	AL
20	12	9
25	16	9
32	16	9
40	19	12
50	25	12



	(mm)
Bore size (mm)	АА
20	12
25	16
32	16
40	19
50	25



	()
Bore size (mm)	AA
20	12
25	16
32	16
40	19
50	25

(mm)





18 Made of Stainless Steel

Symbol -XC6

The piston rod, rod end nut, and other specified parts of this model are made of stainless steel. This model is suitable for applications in which the plate is to be immersed in water, etc., and there is concern regarding the generation of rust or corrosion.

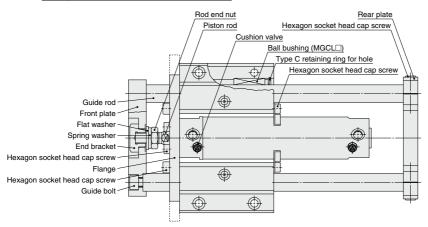
MGC series How to Order

MGC Bearing type Mounting type Bore size - Stroke - EquippedNot equipped back plate -	Auto switch - C Note - XC6
Note) For the XC6A, XC6B, and XC6C, this symbol is	
displayed when the D-A9□ or M9□ type auto switch is specified. It does not apply to other auto switches (such	Made of ♦ stainless steel
as the D-C7□ and H7□). (Nil)	Suffix

Nil	Piston rod, rod end nut made of stainless steel
Α	Stainless steel used on all standard iron parts
В	Stainless steel rod end moving parts
С	Stainless steel rod parts

Specified Parts Changed to Stainless Steel

Symbol	Basic cylinder	Guide unit
-XC6	CDG1ZA20 to 50-□Z-XC6 (Piston rod, Rod end nut)	_
-XC6A	CDG1BA20 to 50-□-X1057 (Piston rod, Rod end nut,	Flange, Front plate, Rear plate, Ball bushing (MGCL□), Guide rod, End bracket, Flat washer, Spring washer, Type C retaining ring for hole, Hexagon socket head cap screw, Guide bolt
-XC6B	Cushion valve)	Front plate, Guide rod, End bracket, Flat washer, Spring washer, Guide bolt
-XC6C		Guide rod
Specifications other than above		Same as standard type

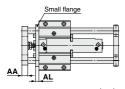


Dimensions (Dimensions other than below are the same as standard type.)

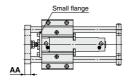
MGC□B20 to 50-□-XC6A

MGC□B20 to 50-□-XC6B

MGC□F20 to 50-□-XC6A MGC□F20 to 50-□-XC6B

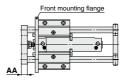


	(mm)
AA	AL
12	9
16	9
16	9
19	12
25	12
	12 16 16 19



	(mm)
Bore size (mm)	AA
20	12
25	16
32	16
40	19
50	25

SMC



	(mm)
Bore size (mm)	AA
20	12
25	16
32	16
40	19
50	25





19 Tie-rod, Cushion Valve, Tie-rod Nut, etc. Made of Stainless Steel



When using in locations where the rust generation or corrosion likelihood exists, the standard parts material have been partly changed to the stainless steel.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
	Standard type	MB-Z	Double acting, Single rod	Except ø125	
	Standard type	MBW-Z	Double acting, Double rod	Except ø125	
мв	Non-rotating rod type	MBK-Z	Double acting, Single rod		
2	Non-rotating rod type	MBKW-Z	Double acting, Double rod		
	Cylinder with end locke	MBB	Double acting, Single rod		
	Smooth cylinder	MBY-Z	Double acting, Single rod		
	Standard type	MB1-Z	Double acting, Single rod	Except ø125	
MB1	IB1	MB1W-Z	Double acting, Double rod	Except ø125	
	Non-rotating rod type	MB1K-Z	Double acting, Single rod		Web Catalog
	Otana da ad tama	CA2-Z	Double acting, Single rod		
	Standard type	CA2W-Z	Double acting, Double rod		
	Non-rotating rod type	CA2K	Double acting, Single rod		
CA2	Troit totaling for type	CA2KW	Double acting, Double rod		
CAZ	End lock cylinder	CBA2	Double acting, Single rod		
	Air levelue en die elem	CA2H	Double acting, Single rod		
	Air-hydro cylinder	CA2HW	Double acting, Double rod		
	Smooth cylinder	CA2Y-Z	Double acting, Single rod		

How to Order

Standard model no. –XC7

Tie-rod, Cushion valve, Tie-rod nut, etc. made of stainless steel

Specifications

Component parts changed to stainless steel	Tie-rod, Tie-rod nut, Mounting bracket nut, Spring washer, Cushion valve, Retaining ring
Additional specifications	Same as standard type
Dimensions	Same as standard type

Made to Order Common Specifications: -XC8: Adjustable Stroke Cylinder/Adjustable Extension Type



20 Adjustable Stroke Cylinder/Adjustable Extension Type

Symbol -XC8

It adjusts the extending stroke by the stroke adjustable mechanism equipped in the head side. (After the stroke is adjusted, with cushion on both sides is altered to single-sided, with cushion.)

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model
CJ2	Air cylinder	CJ2-Z	Double acting	Except double clevis type and with air cushion	
	Air cylinder	CM2-Z	Double acting	Except boss-cut and clevis types	1
	Non-rotating rod type	CM2K-Z	Double acting	Except boss-cut and clevis types	1
	Direct mount type	CM2R-Z	Double acting	Head cover is equipped with boss.]
CM2	End lock cylinder	CBM2	Double acting	Except clevis type Head side locking type only, Except with air cushion]
	Air-hydro type	CM2H-Z	Double acting	Except clevis type]
	Direct mount type, air-hydro type	CM2HR-Z	Double acting	Head cover is equipped with boss.	1
	Air cylinder	CG1-Z	Double acting	Except head side flange and clevis types, ø80, and ø100	1
004	Non-rotating rod type	CG1K-Z	Double acting	Except head side flange, clevis types and with air cushion	
CG1	Direct mount type	CG1R-Z	Double acting	Except with air cushion	1
	Direct mount, Non-rotating rod type	CG1KR-Z	Double acting	Except with air cushion	1
	Air cylinder	MB-Z	Double acting	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	1
MB	Non-rotating rod type	MBK-Z	Double acting	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	1
MB1	Air cylinder	MB1-Z	Double acting	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types]
MBI	Non-rotating rod type	MB1K-Z	Double acting	Except head side flange and clevis types	
	Air cylinder	CA2-Z	Double acting	Except head side flange and clevis types	
CA2	Non-rotating rod type	CA2K	Double acting	Except head side flange and clevis types	Web Catalog
	End lock cylinder	CBA2	Double acting	Except head side flange and clevis types, Locking in head side only	
CS1	Air cylinder	CS1	Double acting	Except head side flange and clevis types	1
CSI	Air-hydro type	CS1H	Double acting	Except head side flange and clevis types	1
CU	Free mount cylinder	CU	Double acting		1
CU	Long stroke	CU	Double acting		
cas	Compact cylinder	CQS	Double acting	Except with rubber bumper and with mounting bracket	
cus	Non-rotating rod	CQSK	Double acting	Except with rubber bumper and with mounting bracket	
	Compact cylinder	CQ2-Z	Double acting	Except with rubber bumper and with mounting bracket	
CQ2	Non-rotating rod type	CQ2K-Z	Double acting	Except with rubber bumper and with mounting bracket	
	Air-hydro type	CQ2H-Z	Double acting	Except with mounting bracket	
MTS	Precision cylinder	MTS	Double acting		
		MGPM-Z	Double acting]
MGP	Compact guide cylinder	MGPL-Z	Double acting]
	Compact galde cyllider	MGPA-Z	Double acting]
MGG	Guide cylinder	MGG	Double acting]
MGC	Guide cylinder	MGC	Double acting		1

How to Order

CJ2	Mounting type	Bore size	- Stroke	Z- <u>XC8</u>
CM2	Mounting type Bore size - S	Stroke Cushion Rode	end type symbol Z - XC8 Stroke adjus	tment symbol
CG1	Mounting type Type Bore	e size - Stroke Rod e	end type symbol Stroke adjustment symbol	z- <u>xc8</u>
CBM2 CBA2	Mounting type Bore size	- Stroke Stroke adjust	ment symbol -H Manual release type	_ <u>XC8</u>
MB MB1	Mounting type Bore size * Except head side flange and clevis ty		Suffix Stroke adjustment symbol	z – <u>xċs</u>
CA2	Mounting type Bore size	ze - Stroke	Suffix Stroke adjustment symbol	z – <u>xc</u> 8
	* Except head side flange and clevis ty			
CA2K	Mounting type Bore size		Suffix Stroke adjustment symbol	_ <u>XÇ8</u>
001	* Except head side flange and clevis ty		Cuffine Charles adjustment comba	 - VO0
CS1	* Except head side flange and clevis ty		roke Suffix Stroke adjustment symbol	<u> </u>
CU	Bore size - Stroke	D Stroke adjustmen	nt symbol	<u> хсв</u>
CQSB	Bore size - Stroke	D(M) ———		— xcs
CQ2B(H)	Bore size - Stroke	D(M) (Z) ———		— хсв
MTS	Bore size - Stroke	(R) —		— xcs
MGP	Bearing type Bore s	size - Stroke	Stroke adjustment symbol	z – <u>xc8</u>
MGG	Bearing type Mounting type Bo	re size Port thread type	- Stroke Stroke adjustment symbol	- <u>xc</u> 8
MGC	Bearing type Mounting type Bore size		ke Stroke adjustment symbol — Equipped/Not equipped back plat	
		Adjustat	ole stroke cylinder/Adjustable exten	u type ●

-XC8: Adjustable Stroke Cylinder/Adjustable Extension Type



20 Adjustable Stroke Cylinder/Adjustable Extension Type

Symbol -XC8

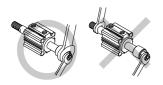
Specifications

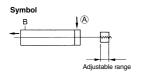
Series	Stroke adjustment symbol	Stroke adjustment range (mm)		
CJ2	_	0 to 15		
CM2 CG1 MB	А	0 to 25		
MB1 CA2 CS1	В	0 to 50		
	Α	0 to 10		
CU	В	0 to 20		
	С	0 to 30		
CQ2 CQS	_	0 to 10		
MGG	Α	0 to 25		
MGC	В	0 to 50		

Series	Stroke adjustment symbol	Stroke adjustment range (mm)					
MGP	Α	0 to 10					
WGP	В	0 to 25					
MTS		0 to 10 (ø8)					
WIS	_	0 to 25 (ø12 to ø40)					
Specifications other than above	Same as standard type						

Precautions

- When the cylinder is operating, if something gets caught between the stopper bracket for adjusting the stroke and the cylinder body, it could cause bodily injury or damage the peripheral equipment. Therefore, take preventive measures as necessary, such as installing a protective cover.
- 2. To adjust the stroke, make sure to secure the wrench flats of the stopper bracket by a wrench, etc. before loosening the lock nut. If the lock nut is loosened without securing the stopper bracket, be aware that the area that joins the load to the piston rod or the area in which the piston rod is joined with the load side and the stopper bracket side could loosen first. It may cause an accident or malfunction.







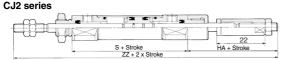
-XC8: Adjustable Stroke Cylinder/Adjustable Extension Type



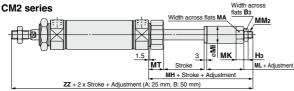
20 Adjustable Stroke Cylinder/Adjustable Extension Type

Symbol -XC8

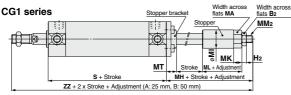
Dimensions (Dimensions other than below are the same as standard type.)



			(111111)
Bore size (mm)	HA	S	ZZ
10	37	49	114
16	37	50	115

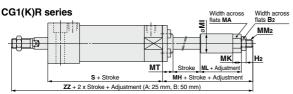


CM2 Series	CM2 Series (r														
Bore size (mm)	B ₃	Нз	MA	MI	MK	MM ₂	MT	МН	ML	ZZ					
20	10	3.6	12	14	7	M6 x 1	16.5	47	18	150					
25	13	5	17	20	9	M8 x 1.25	17.5	49	18	156					
32	13	5	17	20	9	M8 x 1.25	17.5	49	18	158					
40	17	6	19	25	10	M10 x 1 25	21.5	60	24	198					



CG1 Series											(mm)
Bore size (mm)	B ₂	H ₂	MA	МН	MI	MK	ML	MM ₂	MT	S	ZZ
20	10	3.6	12	38	14	7	18	M6 x 1	9	77	150
25	13	5	17	41	20	9	18	M8 x 1.25	11	77	158
32	13	5	17	41	20	9	18	M8 x 1.25	11	79	160
40	17	6	19	47	25	10	24	M10 x 1.25	11	87	184
50	19	8	24	60	32	13	32	M14 x 1.5	11	102	220
63	19	8	24	60	32	13	32	M14 x 1.5	13	102	220

* On the axial foot type, the foot bracket is wedged and bolted between the cylinder and the stopper bracket at the time of shipment. On other types, it is placed in the same package (not assembled).



CG1(K)R Se	CG1(K)R Series (mr														
Bore size (mm)	B ₂	H ₂	MA	МН	MI	MK	ML	MM ₂	MT	S	ZZ				
20	10	3.6	12	38	14	7	18	M6 x 1	9	83	148				
25	13	5	17	41	20	9	18	M8 x 1.25	11	85	158				
32	13	5	17	41	20	9	18	M8 x 1.25	11	91	164				
40	17	6	19	47	25	10	24	M10 x 1.25	11	103	189				
50	19	8	24	60	32	13	32	M14 x 1.5	11	120	225				
63	19	8	24	60	32	13	32	M14 x 1.5	13	126	231				

-XC8: Adjustable Stroke Cylinder/Adjustable Extension Type

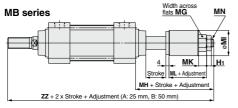


20 Adjustable Stroke Cylinder/Adjustable Extension Type

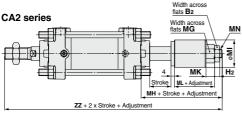
Symbol -XC8

(mm)

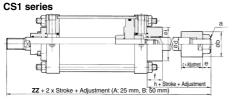
Dimensions (Dimensions other than below are the same as standard type.)



							(mm)
Bore size (mm)	MG	MH	MI	MK	ML	MN	ZZ
32	17	44	23	9	20	M8 x 1.25	175
40	19	48	32	10	22	M10 x 1.25	183
50	24	53	38	13	24	M14 x 1.5	205
63	24	53	38	13	24	M14 x 1.5	205
80	27	72	45	14	32	M16 x 1.5	258
100	32	75	55	17	35	M20 x 1.5	261
•							

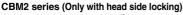


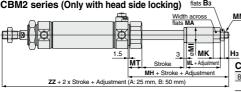
								(mm)
Bore size (mm)	H ₂	MG	МН	MI	MK	ML	MN	ZZ
40	6	19	45	32	10	22	M10 x 1.25	180
50	8	24	49	38	13	24	M14 x 1.5	197
63	8	24	49	38	13	24	M14 x 1.5	205
80	10	27	66	45	14	32	M16 x 1.5	253
100	12	32	69	55	17	35	M20 x 1.5	267



Bore size (mm)	а	øb	С	ød	е	f	h	øi	ZZ
125	M30 x 1.5	70	43	36	27	40	110	90	318
140	M30 x 1.5	70	43	36	27	40	110	90	318
160	M30 x 1.5	70	43	36	27	40	110	90	336
180	M42 x 1.5	80	50	45	37.5	45	132.5	115	378.5*
200	M42 x 1.5	80	50	50	37.5	45	132.5	115	378.5*
250	M56 x 2	110	70	60	50	55	175	140	476
300	M56 x 2	110	70	70	50	55	175	140	496

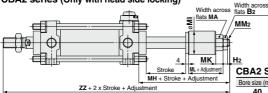
* With auto switch ø180: 382.5, ø200: 387.5





CRIVIS SE	ries									(mm)
Bore size (mm)	B 3	Нз	MA	MI	MK	MM ₂	MT	МН	ML	ZZ
20	10	3.6	12	14	7	M6 x 1	16.5	47	18	150
25	13	5	17	20	9	M8 x 1.25	17.5	49	18	156
32	13	5	17	20	9	M8 x 1.25	17.5	49	18	158
40	17	6	10	25	10	M10 v 1 25	21.5	60	24	108

CBA2 series (Only with head side locking)



CBA2 Series

ODAL OCI	103								(111111)
Bore size (mm)	B ₂	H ₂	MA	MI	MK	MM ₂	MH	ML	ZZ
40	17	6	19	32	10	M10 x 1.25	45	22	180
50	22	8	24	38	13	M14 x 1.5	51	24	199
63	22	8	24	38	13	M14 x 1.5	49	24	205
80	24	10	27	45	14	M16 x 1.5	66	32	253
100	30	12	32	55	17	M20 x 1.5	69	35	267

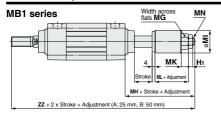
-XC8: Adjustable Stroke Cylinder/Adjustable Extension Type



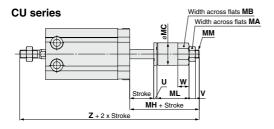
20 Adjustable Stroke Cylinder/Adjustable Extension Type

Symbol -XC8

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



							(111111)
Bore size	MG	МН	MI	MK	ML	MN	ZZ
32	17	44	23	9	20	M8 x 1.25	175
40	19	48	32	10	22	M10 x 1.25	183
50	24	53	38	13	24	M14 x 1.5	205
63	24	53	38	13	24	M14 x 1.5	205
80	27	72	45	14	32	M16 x 1.5	258
100	32	75	55	17	35	M20 x 1.5	261



_								Ac	ljustme	nt A: 0 to 10	Ad	djustme	nt B: 0 to 20	Ac	ljustme	ent C: 0 to 30
Bore size	MA	МВ	øМС	ММ	U	V	w	МН	ML	z	мн	ML	z	мн	ML	z
10	7	8	10	M4 x 0.7	1.5	2.4	5	25	19	83	35	29	93	45	39	103
16	8	12	14	M5 x 0.8	2	4	7	28.5	20	82 (92)	38.5	30	92 (102)	48.5	40	102 (112)
20	10	15	18	M6 x 1.0	2	5	7	32	22	95.8 (105.8)	42	32	105.8 (115.8)	52	42	115.8 (125.8)
25	13	17	20	M8 x 1.25	3	5	9	38	26	110 (120)	48	36	120 (130)	58	46	130 (140)
32	17	17	20	M10 x 1.25	3	6	9	37.3	24.5	118.8 (128.8)	47.3	34.5	128.8 (138.8)	57.3	44.5	138.8 (148.8)

Note1) (): Denotes the dimensions with auto switch.

-XC8: Adjustable Stroke Cylinder/Adjustable Extension Type



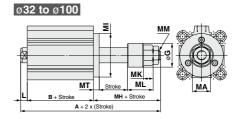
20 Adjustable Stroke Cylinder/Adjustable Extension Type

Symbol -XC8

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

CQ2, CQ2H series Ø12 to Ø25 MM B + Stroke MH + Stroke

A + 2 x (Stroke)



														(mm)
Bore	<i>I</i>		E		L	мн	мт	MA	МІ	ММ	мк	ML	øG	Stroke adjust-
size	50 mm stroke or less	75, 100 mm stroke	50 mm stroke or less	75, 100 mm stroke										ment range
12	57.7 (64.9)	_	25.2 (32.4)	_	3.5	29	5	8	□25 (ø15)	M4 x 0.7	5.5	20	14	5 to 30
16	58.5 (68.5)	_	26 (36)	_	3.5	29	5	10	□28 (ø20)	M5 x 0.8	5.5	20	14	3 10 30
20	67.5 (79.5)	_	26 (38)	_	4.5	37	8	12	□36 (ø25)	M6 x 1	7	24	20	5 to 50
25	71 (81)	_	29 (39)	_	5	37	8	12	□40 (ø30)	M6 x 1	7	24	20	3 10 30
32	78.5 (88.5)	88.5	30.5 (40.5)	40.5	7	41	6	17	ø38	M8 x 1.25	9	28.5	0.5	5 to 50
32	76.5 (66.5)	00.5	30.5 (40.5)	40.5	′	41	١ ٥	17	936	IVIO X 1.25	9	26.5	25	75,100
40	00 (00)	00	40 (50)	50	7		6	19	40	1404.05	10	27	25	5 to 50
40	88 (98)	98	40 (50)	50	′	41	١ ٥	19	ø46	M10 x 1.25	10	21	25	75,100
50	100.5 (110.5)	110.5	40.5 (50.5)	50.5	8	52	8	24	ø57	M14 x 1.5	13	31	35	10 to 50
50	100.5 (110.5)	110.5	40.5 (50.5)	50.5	ľ	32	ľ	24	037	W114 X 1.5	13	31	33	75,100
63	100 (110)	112	40 (50)	52	8	52	10	24	ø68	M14 x 1.5	13	31	35	10 to 50
03	102 (112)	112	42 (52)	52	l °	52	10	24	000	W114 X 1.5	13	31	35	75,100
80	405 (405)	405	F4 (04)	0.4	40		40	32	00	1400 4.5	10	40	45	10 to 50
80	125 (135)	135	51 (61)	61	10	64	12	32	ø90	M20 x 1.5	16	40	45	75,100
100	100 F (140 F)	148.5	CO F (70 F)	70.5	12	66	14	32	ø110	M20 x 1.5	16	40	45	10 to 50
100	138.5 (148.5)	146.5	60.5 (70.5)	70.5	12	00	14	32	0110	IVI2U X 1.5	16	40	45	75,100

Note 1) (): Denotes the dimensions with auto switch magnet Note 2) Applicable stroke available in 5 mm increments.

-XC8: Adjustable Stroke Cylinder/Adjustable Extension Type

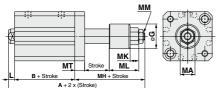


20 Adjustable Stroke Cylinder/Adjustable Extension Type

Symbol -XC8

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

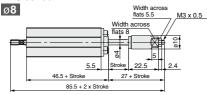
CQS series



											(mm)
Bore size	Α	В	L	МН	MT	MA	MM	MK	ML	øG	Stroke adjustment range
12	56.1 (61.1)	22 (27)	3.5	30.6	5	8	M4 x 0.7	5.5	20	14	5 to 30
16	56.5 (61.5)	22 (27)	3.5	31	5	10	M5 x 0.8	5.5	20	14	3 10 30
20	67.5 (77.5)	26 (36)	4.5	37	8	12	M6 x 1	7	24	20	5 to 50
25	71 (81)	29 (39)	5	37	8	12	M6 x 1	7	24	20	5 10 50

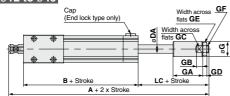
Note 1) (): Denotes the dimensions with auto switch magnet Note 2) Applicable stroke available in 5 mm increments.

MTS series



Basic 1	Basic Type (m													
Bore size (mm)	Α	В	LC	DA	G	GA	GB	GC	GD	GE	GF			
12	145	80.5	49.5	6	13.5	42.5	6	11	4	8	M5 x 0.8			
16	149.5	83	50.5	8	15.5	42.5	7	13	5	10	M6 x 1.0			
20	175	106.5	50.5	10	19.5	42.5	8.5	17	5	13	M8 x 1.25			
25	187	114.5	51.5	12	21.5	42.5	9	19	6	17	M10 x 1.25			
32	222.5	142.5	56	16	27.5	45	10.5	24	8	22	M14 x 1.5			
40	240	155	59	20	32.5	45	11.5	27	11	27	M18 x 1.5			

ø12 to ø40



With End Lo	ck	(mm)			
Bore size (mm)	Α	В			
12	163	98.5			
16	165.5	99			
20	191.5	123			
25	201.5	129			
32	238.5	158.5			
40	258.5	173.5			

-XC8: Adjustable Stroke Cylinder/Adjustable Extension Type

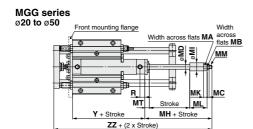
MOO C--!--



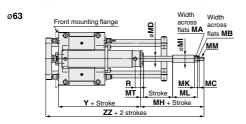
20 Adjustable Stroke Cylinder/Adjustable Extension Type

-XC8

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



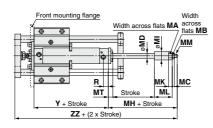
MGG Se	eries	•								(mm)
Bore size (mm)	R	Υ	МА	МВ	мс	MD	МІ	мк	ММ	мт
20	12	77	12	10	3.6	8	14	7	M6 x 1	9
25	12	77	17	13	5	10	20	9	M8 x 1.25	11
32	12	79	17	13	5	12	20	9	M8 x 1.25	11
40	13	87	19	17	6	16	25	10	M10 x 1.25	11
50	14	102	24	19	8	20	32	13	M14 x 1.5	11
63	14	117	24	19	8	20	32	13	M14 x 1.5	13



Bore size	Adjustn	nent 0 to	25 mm	Adjustment 0 to 50 mm				
(mm)	МН	ML	ZZ	МН	ML	ZZ		
20	63	43	179	88	68	204		
25	66	43	189	91	68	214		
32	66	43	191	91	68	216		
40	72	49	215	97	74	240		
50	85	57	254	110	82	279		
63	85	57	256	110	82	281		

^{*} The piston speed for the extension side is 50 to 500 mm/s.

MGC series ø20 to ø50



MGC Se	MGC Series									
Bore size (mm)	R	Υ	МА	МВ	мс	MD	МІ	мк	ММ	мт
20	12	77	12	10	3.6	8	14	7	M6 x 1	9
25	12	77	17	13	5	10	20	9	M8 x 1.25	11
32	12	79	17	13	5	12	20	9	M8 x 1.25	11
40	13	87	19	17	6	16	25	10	M10 x 1.25	11
50	14	102	24	19	8	20	32	13	M14 x 1.5	11

Bore size (mm)	Adjustn	nent 0 to	25 mm	Adjustment 0 to 50 mm		
	МН	ML	ZZ	МН	ML	ZZ
20	63	43	179	88	68	204
25	66	43	189	91	68	214
32	66	43	191	91	68	216
40	72	49	215	97	74	240
50	85	57	254	110	82	279

^{*} The piston speed for the extension side is 50 to 500 mm/s.

MGP se	ries	Width ac	ross MB
(Piston rod external diameter)	Ф Ф Ф П П П П П П П П П П П П П П П П П	MMC MK ML + Adjus	

Comn	non	Dime	ensio	ons:	MGPM-Z,	MG	PL-Z	, MG	PA-Z	(mm)
Bore size (mm)	DA	МА	МВ	мс	MD	øМG	МН	мк	ML	МР	МТ
12	6	27	13	8	M4 x 0.7	14	20	5.5	10	3	3
16	8	28	16	10	M5 x 0.8	14	21	5.5	10	3	3
20	10	33	22	12	M6 x 1	20	27	7	14	3	4
25	12	41	25	12	M6 x 1	20	28	7	14	3	5
32	16	51	32	17	M8 x 1.25	25	35	9	18.5	4	6
40	16	60	32	19	M10 x 1.25	25	34.5	10	17	4	6
50	20	71	38	24	M14 x 1.5	35	42.5	13	21	4	8
63	20	84	50	24	M14 x 1.5	35	43	13	21	4	8
80	25	114	50	32	M20 x 1.5	45	57	16	30	4	9
100	30	140	65	32	M20 x 1.5	45	60	16	30	4	12

Made to Order Common Specifications: -XC9: Adjustable Stroke Cylinder/Adjustable Retraction Type



21 Adjustable Stroke Cylinder/Adjustable Retraction Type

Symbol -XC9

The retract stroke of the cylinder can be adjusted by the adjustment bolt.

Series	Description	Model	Action	Note	Vol. no. (for std mode
	Air cylinder	CJ2-Z	Double acting, Single rod	Except double-side bossed, double clevis type, double foot, head side flange and with air cushion	
	Non-rotating rod	CJ2K-Z	Double acting, Single rod	Except double-side bossed, double clevis type, double foot and head side flange	
CJ2	Direct mount type	CJ2R-Z	Double acting, Single rod		
	Non-rotating rod/Direct mount type	CJ2RK-Z	Double acting, Single rod		
	Smooth cylinder	CJ2Y-Z	Double acting, Single rod	Except double-side bossed, double clevis type, double foot and head side flange	
	Air cylinder	CM2-Z	Double acting, Single rod	Except boss-cut and clevis types	
	Non-rotating rod	CM2K-Z	Double acting, Single rod	Except boss-cut and clevis types	
CM2	Direct mount type	CM2R-Z	Double acting, Single rod	Except the head cover with boss	
	Non-rotating rod/Direct mount type	CM2RK-Z	Double acting, Single rod	Except the head cover with boss	
	Smooth cylinder	CM2Y-Z	Double acting, Single rod	Except boss-cut and clevis types	
	Air cylinder	CG1-Z	Double acting, Single rod	Except head side flange and clevis types, ø80, and ø100	
CG1	Non-rotating rod	CG1K-Z	Double acting, Single rod	Except head side flange, clevis types and with air cushion	
CGI	Direct mount type	CG1R-Z	Double acting, Single rod	Except with air cushion	
	Non-rotating rod/Direct mount type	CG1KR-Z	Double acting	Except with air cushion	
мв	Air cylinder	MB-Z	Double acting, Single rod	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	
IVID	Non-rotating rod	MBK-Z	Double acting, Single rod	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	
MB1	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	Web Catalog
WIDI	Non-rotating rod	MB1K-Z	Double acting, Single rod	Except head side flange and clevis types	
	Air cylinder	CA2-Z	Double acting, Single rod	Except head side flange and clevis types	
CA2	Non-rotating rod	CA2K	Double acting, Single rod	Except head side flange and clevis types	
	End lock cylinder	CBA2	Double acting, Single rod	Except head side flange and clevis types	
CS1	Air cylinder	CS1	Double acting, Single rod	Except head side flange and clevis types, ø125 to ø160	
CS2	Air cylinder	CS2	Double acting, Single rod	Except head side flange and clevis types, ø125 to ø160	
U32	Smooth cylinder	CS2Y	Double acting, Single rod	Except head side flange and clevis types, ø125 to ø160	
cas	Compact cylinder	cqs	Double acting, Single rod	Except with rubber bumper and with mounting bracket	
cus	Non-rotating rod type	CQSK	Double acting, Single rod	Except with rubber bumper and with mounting bracket	
CQ2	Compact cylinder	CQ2-Z	Double acting, Single rod	Except with rubber bumper and with mounting bracket]
CUZ	Non-rotating rod	CQ2K-Z	Double acting, Single rod	Except with rubber bumper and with mounting bracket	
		MGPM-Z	Double acting		
MGP	Compact guide cylinder	MGPL-Z	Double acting]
		MGPA-Z	Double acting		
MGG	Guide cylinder	MGG	Double acting		1
MGC	Guide cylinder	MGC	Double acting		1

1100	io Oraei				
CJ2	Mounting type	В	ore size	- Stroke	z - <u>xc9</u>
CM2	Mounting type Bore siz * Except boss-cut and clevis t		shion Rod end type s	symbol Z – XC9 Stroke adjus	tment symbol
CM2R	Mounting type Bore	size - Stroke	Rod end type sy	mbol Z – XC9 Stroke adjus	tment symbol
CG1	Mounting type Type	Bore size - Strol	Rod end type symb	Stroke adjustment symbol	z - xc9
	* Except clevis type				
MB MB1		Bore size -	Stroke Suffix	Stroke adjustment symbol	z – <u>x¢9</u>
	* Except head side flange and	d clevis types			
CA2	Mounting type Type		Stroke Suf	fix Stroke adjustment symbol	Z - <u>XC9</u>
	Except head side flange and				
CA2K	Mounting type Type	Bore size -	Stroke Suf	fix Stroke adjustment symbo	<u> </u>
	* Except head side flange and				_ !
CBA2	Mounting type Type B		ke Stroke adjustment s	ymbol R Manual release type	<u> </u>
	* Except head side flange and	1 clevis types			
CS1	Mounting type Tubing ma		size - Stroke	Suffix Stroke adjustment symbol	□ <u>XÇ9</u>
	* Except head side flange and	d clevis types			
CS2	Mounting type Bore	e size Port suf	ffix - Stroke	Suffix Stroke adjustment symbo	- XC9
	* Except head side flange and	d clevis types			
CS2Y		e size Port sut	ffix - Stroke	Suffix Stroke adjustment symbol	□ <u>XC9</u>
	* Except head side flange and	d clevis types			
CQ2B	Bore size -	Stroke D (M) (z) ———		<u>жсэ</u>
CQSB	Bore size -	Stroke D (M)			<u> хсэ</u>
MGP	Bearing type	Bore size -	Stroke Strol	ke adjustment symbol	z – <u>xc9</u>
MGG	Bearing type Mounting type	e Bore size Por	t thread type	Stroke Stroke adjustment symb	ol – <u>xc9</u>
MGC	Bearing type Mounting type	Bore size Port threa	d type - Stroke	Stroke adjustment symbol — Equipped Not equipped back p	# − xc9

Adjustable stroke cylinder/Adjustable retract type

(After adjusting stroke, both-side cushion type is changed into single side cushion type. CQ2 is without cushion.)



-XC9: Adjustable Stroke Cylinder/Adjustable Retraction Type



21 Adjustable Stroke Cylinder/Adjustable Retraction Type

Symbol -XC9

Specifications

Series	Stroke adjustment symbol	Stroke adjustment range (mm)
CJ2	_	0 to 15
CM2 CG1 MB	А	0 to 25
MB1 CA2 CS1	В	0 to 50
CQ2 CQS	_	0 to 10

Series	Stroke adjustment symbol	Stroke adjustment range (mm)			
MGP	Α	0 to 10			
	В	0 to 25			
MGG	Α	0 to 25			
MGC	В	0 to 50			
Specifications other than above	Same as standard type				

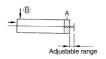
Precautions

- When air is supplied to the cylinder, if the stroke adjustment both is loosened in excess of the allowable stroke adjustment amount, be aware that the stroke adjustment both could fly out or air could be discharged, which could injure personnel or damage the peripheral equipment.
- Adjust the stroke when the cylinder is not pressurized.

pressurized. If it is adjusted in the pressurized state, the seal of the adjustment section could become deformed, leading to air leakage.





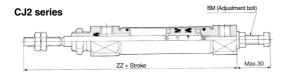




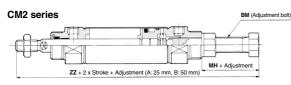




Dimensions (Dimensions other than below are the same as standard type.)



		(mm)
Bore size (mm)	ВМ	ZZ
10	M5 x 0.8	74
16	M5 x 0.8	75



			(mm)
Bore size (mm)	ВМ	MH	ZZ
20	M10 x 1.25	26.5	142.5
25	M14 x 1.5	29	149
32	M14 x 1.5	29	151
40	M16 x 1.5	32	186

-XC9: Adjustable Stroke Cylinder/Adjustable Retraction Type

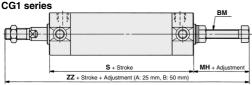


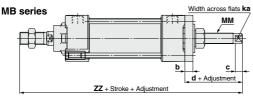
21 Adjustable Stroke Cylinder/Adjustable Retraction Type

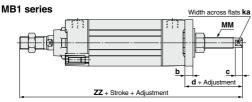
Symbol -XC9

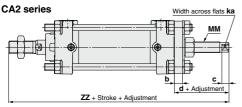
Dimensions (Dimensions other than below are the same as standard type.)

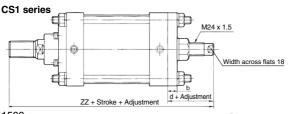












CM2R					(mm)
Bore size (mm)	ВМ	MF	МН	NN	ZZ
20	M10 x 12.5	13	26.5	M20 x 1.5	142.5
25	M14 x 1.5	13	29	M26 x 1.5	149
32	M14 x 1.5	13	29	M26 x 1.5	151
40	M16 x 1.5	16	32	M32 x 2	186

CG1						(mm)	
Bore size	ВМ	s	Rubber	bumper	Air cushion		
(mm)	DIVI	"	МН	ZZ	МН	ZZ	
20	M6 x 1	77	23	135	21	133	
25	M6 x 1	77	23	140	21	138	
32	M8 x 1.25	79	25	144	25	144	
40	M12 x 1.75	87	40	177	39	176	
50	M12 x 1.75	102	33	193	37	197	
63	M16 x 2	102	40	200	44	204	

- * In the case of axial foot type, the cushion is shipped after mounting. On other types, it is placed in the same package (not assembled).
- Dimensions other than above are the same as the CG1 series, long stroke type.

MB, MB1	MB, MB1 Common (mn										
Bore size (mm)	b	С	d	ka	ММ	ZZ					
32	9	8	40	8	M12 x 1.25	171					
40	9	8	39.5	8	M12 x 1.25	174.5					
50	11	8	46	13	M16 x 1.5	198					
63	11	8	52	17	M20 x 1.5	204					
80	15	10	61	19	M24 x 1.5	247					
100	15	10	61.5	19	M24 x 1.5	247.5					

CA2-Z						(mm)
Bore size (mm)	b	С	d	ka	ММ	ZZ
40	9	8	36	8	M12 x 1.25	171
50	11	8	42	13	M16 x 1.5	190
63	11	8	44	17	M20 x 1.5	200
80	15	10	54	19	M24 x 1.5	241
100	15	10	55.5	19	M24 x 1.5	253.5

CA2K, CE	CA2K, CBA2 (With lock on rod side only)										
Bore size (mm)	b	С	d	ka	ММ	ZZ					
40	9	8	44	11	M16 x 1.5	179					
50	11	8	42	11	M16 x 1.5	190					
63	11	8	48	14	M20 x 1.5	204					
80	15	10	55	19	M24 x 1.5	242					
100	15	10	57	19	M24 x 1.5	255					

CS1			(mm
Bore size (mm)	b	d	ZZ
125	19	66	274
140	19	66	274
160	22	62	288

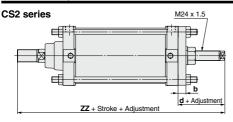
-XC9: Adjustable Stroke Cylinder/Adjustable Retraction Type



21 Adjustable Stroke Cylinder/Adjustable Retraction Type

Symbol -XC9

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

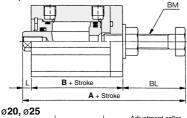




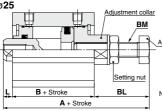
				(mm
Bore size (mm)	а	b	d	zz
125	142	19	63	271
140	155	19	63	271
160	174	19	59	285

CQS series









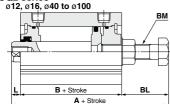
						(111111)
Bore size (mm)	A	В	L	BL	ВМ	Manufacturable stroke
12	50.5 (54.5)	22 (27)	3.5	25 (29)	M5 x 0.8	5 to 30
16	51 (56)	22 (27)	3.5	25.5	M6 x 1	5 10 30
20	61 (71)	26 (36)	4.5	30.5	M8 x 1.25	5 to 50
25	63.5 (73.5)	29 (39)	5	29.5	M8 x 1.25	5 to 50

Note 1) (): Denotes the dimensions with auto switch.

Note 2) Applicable stroke available in 5 mm increments.

Note) When securing the adjustment bolt, clamp the width across flats of the adjustment collar with a tool, such as a spanner and tighten the setting nut with a tool, such as other spanner to secure the bolt firmly.

CQ2 series



ø 20 , ø 2 5	5, ø 32		
		Adjustment collar	1
			_ \s
		Setting nut	
Ļ	B + Stroke	BL	١,
	A + Stroke		ľ

Bore size		4	E	3		DI.	DM	Manufacturable
(mm)	50 mm stroke or less	75, 100 mm stroke	50 mm stroke or less	75, 100 mm stroke	L	BL	BM	stroke
12	52 (59.2)	_	25.2 (32.4)		3.5	23.3	M5 x 0.8	5 to 30
16	53 (63)	_	26 (36)	_	3.5	23.5	M6 x 1	5 10 30
20	61 (73)	_	26 (38)	-	4.5	30.5	M8 x 1.25	5 to 50
25	63.5 (73.5)	_	29 (39)	-	5	29.5	M8 x 1.25	5 10 50
32	65.5 (75.5)	75.5	30.5 (40.5)	40.5	7	28	M8 x 1.25	5 to 50
40	84 (94)	94	40 (50)	50	7	37	M12 x 1.5	75,100
50	84.5 (94.5)	94.5	40.5 (50.5)	50.5	8	36	M12 x 1.5	
63	88.5 (98.5)	98.5	42 (52)	52	8	38.5	M16 x 1.5	10 to 50
80	109.5 (119.5)	119.5	51 (61)	61	10	48.5	M20 x 1.5	75,100
100	125 (135)	135	60.5 (70.5)	70.5	12	52.5	M24 x 1.5	

Note 1) (): Denotes the dimensions with auto switch.

Note 2) Applicable stroke available in 5 mm increments.

Note 3) The symbol is X526 for the long stroke type. ⇒ Web Catalog

Stroke adjustment bolt

Note) When securing the stroke adjustment bolt, clamp the width across flats of the adjustment collar with a tool, such as a spanner and tighten the setting nut with a tool, such as other spanner to secure the bolt firmly.



(mm)

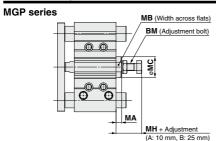
-XC9: Adjustable Stroke Cylinder/Adjustable Retraction Type



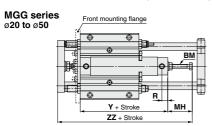
21 Adjustable Stroke Cylinder/Adjustable Retraction Type

Symbol -XC9

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

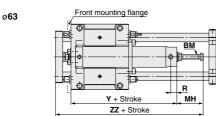


Common D	Common Dimensions: MGPM, MGPL, MGPA									
Bore size (mm)	ВМ	MA	MB	МС	МН					
12	M5 x 0.8	5	8	12.5	17					
16	M6 x 1	5	10	14	19					
20	M8 x 1.25	6.5	13	16	25					
25	M8 x 1.25	6.5	13	16	24					
32	M8 x 1.25	6.5	19	21	25					
40	M12 x 1.5	9	27	30	32.5					
50	M12 x 1.5	9	30	34	32.5					
63	M16 x 1.5	10	36	40	37					
80	M20 x 1.5	15	41	46	48.5					
100	M24 x 1.5	18	46	52	55.5					
100	IVIZ-FX 1.0	10	1 40	02	33.3					



MGG Se	MGG Series (mm											
Bore size	R	Υ	ВМ	Adjustment	0 to 25 mm	Adjustment	0 to 50 mm					
(mm)	ĸ	T	DIVI	МН	ZZ	МН	ZZ					
20	12	77	M6 x 1	48	164	73	189					
25	12	77	M6 x 1	48	171	73	196					
32	12	79	M8 x 1.25	50	175	75	200					
40	13	87	M12 x 1.75	65	208	90	233					
50	14	102	M12 x 1.75	58	227	83	252					
63	14	117	M16 x 2	65	236	90	261					

^{*} The piston speed for the retraction side is 50 to 500 mm/s.



MGC series	Front mounting flange
ø 20 to ø50	
<u> </u>	₩ BM
L III	
H	•
Γ	⊕ ⊕ R
	Y + Stroke MH
	ZZ + Stroke

MGC Sei	ries						(mm)
Bore size	R	γ	ВМ	Adjustment	0 to 25 mm	Adjustment	0 to 50 mm
(mm)	ĸ	T	DIVI	МН	ZZ	МН	ZZ
20	12	77	M6 x 1	46	162	71	187
25	12	77	M6 x 1	46	169	71	194
32	12	79	M8 x 1.25	50	175	75	200
40	13	87	M12 x 1.75	64	207	89	232
50	14	102	M12 x 1.75	62	231	87	256

^{*} The piston speed for the retraction side is 50 to 500 mm/s.



22 Dual Stroke Cylinder/Double Rod Type

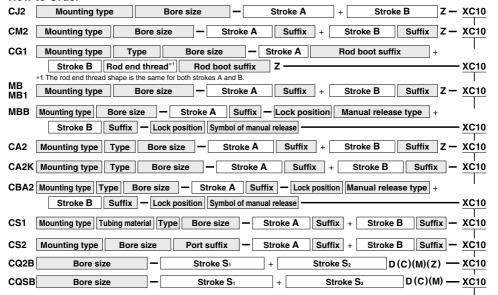
Symbol -XC10

Two cylinders are constructed as one cylinder in a back-to-back configuration allowing the cylinder stroke to be controlled in three steps.

Ap	plica	ble S	Seri	es

Series	Description	Model	Action	Note	Vol. no. (for std model
CJ2	Air cylinder	CJ2-Z	Double acting, Single rod	Excludes the type with an air cushion, a rod end bracket, or a pivot bracket as well as "E," "D," "M," and "G"	
CJZ	Non-rotating rod type	CJ2K-Z	Double acting, Single rod	Excludes the type with a rod end bracket or a pivot bracket as well as "E," "D," "M," and "G"	
	Air cylinder	CM2-Z	Double acting, Single rod	Excludes the type with an air cushion, a rod end bracket, or a pivot bracket	
CM2	Non-rotating rod type	CM2K-Z	Double acting, Single rod	Excludes the type with an air cushion, a rod end bracket, or a pivot bracket	
	Smooth cylinder	CM2Y-Z	Double acting, Single rod	Excludes the type with a rod end bracket or a pivot bracket	
CG1	Air cylinder	CG1-Z	Double acting, Single rod		
CGI	Non-rotating rod type	CG1K-Z	Double acting, Single rod	Except with air cushion and with rod boot	
	Air cylinder	MB-Z	Double acting, Single rod	Except ø125, clevis and trunnion types	
MB	Non-rotating rod type	MBK-Z	Double acting, Single rod	Except clevis and trunnion types	
	With end lock type	MBB	Double acting, Single rod	Except clevis and trunnion types	
MB1	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125, clevis and trunnion types	
IVIDI	Non-rotating rod type	MB1K-Z	Double acting, Single rod	Except clevis and trunnion types	Web Catalog
	Air cylinder	CA2-Z	Double acting, Single rod	Except clevis and trunnion types	Web Catalog
CA2	Non-rotating rod type	CA2K	Double acting, Single rod	Except clevis and trunnion types	
	End lock cylinder	CBA2	Double acting, Single rod	Except clevis and trunnion types	
CS1	Air cylinder	CS1	Double acting, Single rod	Except clevis and trunnion types	
CSI	Air-hydro cylinder	CS1H	Double acting, Single rod	Except clevis and trunnion types	
CS2	Air cylinder	CS2	Double acting, Single rod	Except clevis and trunnion types	
U32	Smooth cylinder	CS2Y	Double acting, Single rod	Except clevis and trunnion types	
cas	Compact cylinder	CQS	Double acting, Single rod	Except with bracket	
Cus	Non-rotating rod type	CQSK	Double acting, Single rod	Except with bracket	
	Compact cylinder	CQ2-Z	Double acting, Single rod	Except with bracket	
CQ2	Non-rotating rod type	CQ2K-Z	Double acting, Single rod	Except with bracket	
	Air-hydro cylinder	CQ2H-Z	Double acting, Single rod	Except with bracket	

How to Order



Dual stroke cylinder





22 Dual Stroke Cylinder/Double Rod Type

Symbol -XC10

Specifications

Series	Bore size (mm)	Maximum manufacturable stroke (mm)	
CJ2	10, 16	300 (Maximum 150 on one side)	
CM2	20 to 40	1000 (A + B stroke)	
	20	1500 (A + B stroke)	
	25	1500 (A + B stroke)	
CG1	32	1500 (A + B stroke)	
	40	1500 (A + B stroke)	
	50, 63	1500 (A + B stroke)	
MB MB1	32 to 100	1000 (A + B stroke)	
CA2	40 to 100	1000 (A + B stroke)	
CS1	125, 140	1000 (A + B stroke)	
CSI	160 to 300	1200 (A + B stroke)	

Series	Bore size (mm)	Maximum manufacturable stroke (mm)		
	125, 140	1000 (A + B stroke)		
	160, 180	1200 (A + B stroke)		
CS2	200	998 (A + B stroke)		
	250	813 (A + B stroke)		
	320	495 (A + B stroke)		
cas	12, 16	60 (Maximum 30 on one side)		
CQ2	20, 25	100 (Maximum 50 on one side)		
CQ2	32, 40	200 (Maximum 100 on one side)		
CQ2	50 to 100 200 (Maximum 100 on one s			
Specifications other than above	Same as standard type			

Symbol

Function



When air pressure is supplied to ports and **3**, both A and B strokes retract.



When air pressure is supplied to ports **3** and **4**, A out strokes.



When air pressure is supplied to ports **and b**, B out strokes.



When air pressure is supplied to ports and , both strokes A and B out strokes.





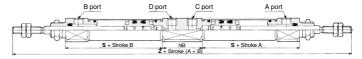
22 Dual Stroke Cylinder/Double Rod Type

Symbol -XC10

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

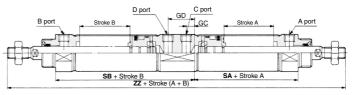
CJ2 series

			(mm)
Bore size (mm)	NB	S	Z
10	21	36.5	150
16	21	37.5	152

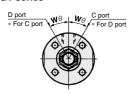


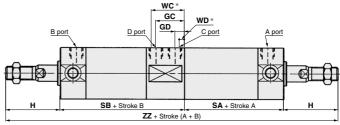
CM2 series

					(
Bore size (mm)	GC	GD	SA	SB	ZZ
20	7	24	47	78	207
25	7	24	47	78	215
32	7	24	49	80	219
40	10.5	33.5	66.5	110.5	277



CG1 series



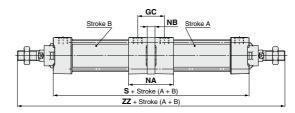


										(mm)				
Da	Bore size		GD H SA SB		C.A.	CD	Wθ	Air cu	shion	77				
ВО	re size	GC		JA JB	30	30	30	30	3B	36	SA SB	WO	wc	WD
	20	20.5 (21)	8.5 (9)	35	56.5 (56)	85.5 (86)	30°	(25)	(5)	212				
	25	21 (21.5)	9 (8.5)	40	56	86	30°	(25)	(5)	222				
	32	23	9	40	58	90	30°	(27)	(5)	228				
	40	23.5 (25)	7.5 (9)	50	66.5 (65)	97.5 (99)	20°	(29)	(5)	264				
	50	29	13	58	75	117	20°	(33)	(9)	308				
	63	28	12	58	76	116 (116)	20°	(32)	(8)	308				

^{* ():} With air cushion

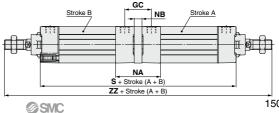
MB series

					(mm)
Bore size	GC	NA	NB	S	ZZ
32	36	64	10.6	178	272
40	38	64	10.6	178	280
50	41	73	10.6	198	314
63	43	73	10.6	198	314
80	52	90	14.6	242	386
100	52	90	14.6	242	386



MB1 series

					(
Bore size	GC	NA	NB	S	ZZ
32	36	62	10.6	178	272
40	38	62	10.6	178	280
50	41	71	10.6	198	314
63	43	71	10.6	198	314
80	52	88	14.6	242	386
100	52	88	14.6	242	386





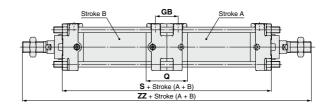
22 Dual Stroke Cylinder/Double Rod Type

Symbol -XC10

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

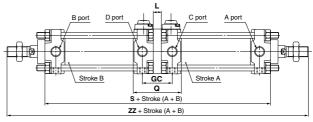
CA2 series

				(mm)
Bore size	GB	Q	S	ZZ
40	29	53	167	269
50	33	59	179	295
63	33	61	195	311
80	41	73	231	373
100	41	79	251	395



CBA2 series

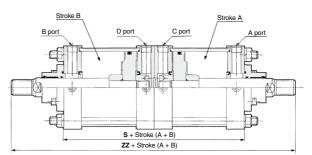
					(mm)
Bore size (mm)	GC	L	Q	S	ZZ
40	42	12	66	180	282
50	48	14	74	194	310
63	48	14	76	210	326
80	58	16	90	248	390
100	60	18	98	270	414



The above diagram shows head side lock type and manual releasing non-locking type. Dimensions of rod side locking type, both-side lock type and manual releasing lock type are the same as dimensions in the above table.

CS1 series

				(mm)
Bore size (mm)	Without a	uto switch	With au	to switch
	S	ZZ	S	ZZ
125	196	416	196	416
140	196	416	196	416
160	212	452	212	452
180	222	492	230	500
200	222	492	240	510
250	282	602	_	_
300	292	642	_	_





22 Dual Stroke Cylinder/Double Rod Type

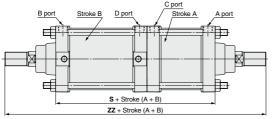
Symbol -XC10

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

CS2 series

* For rod side flange type "F", the flange bracket will be attached to the stroke A side.

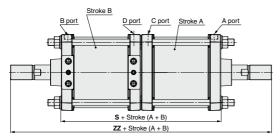
ø125 to ø160





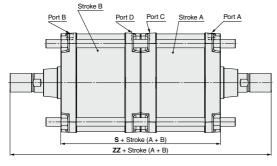
		(111111)
Bore size (mm)	s	ZZ
125	196	416
140	196	416
160	212	452

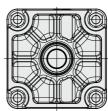
ø180 to ø250





ø320





		(mm)
Bore size (mm)	s	ZZ
180	230	500
200	240	510
250	282	602
320	350	700



22 Dual Stroke Cylinder/Double Rod Type

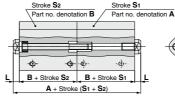
Symbol -XC10

Dimensions (Other dimensions are the same as standard.)

CQ2 series

ø12 to ø25

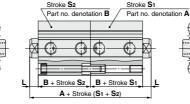
With auto switch magnet

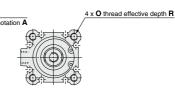


2 x O thread effective depth R

* In the case of bore sizes ø12 to ø25 with an auto switch, port directions are different







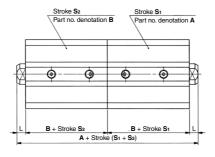
- * Secure the body with the threaded portion at the tip of the piston rod on both sides or with the cylinder tube on the stroke S1 side tapped.
- * Please contact SMC for the through-hole type and models with a mounting bracket.

								[mm]
Bore size		Α		l l	3		_	R
[mm]	50 st or less for both S1 and S2	Combination of 50 st or less, 75, 100 st	75, 100 st for both S1 and S2	50 st or less	75, 100 st	-	0	, R
12	41 (63)	_	_	17 (28)	_	3.5	M4 x 0.7	7
16	44 (68)	_	_	18.5 (30.5)	_	3.5	M4 x 0.7	7
20	48 (72)	_	_	19.5 (31.5)	_	4.5	M6 x 1.0	10
25	55 (75)	_		22.5 (32.5)	_	5	M6 x 1.0	10
32	60 (80)	70 (80)	80 (80)	23 (33)	33 (33)	7	M6 x 1.0	10
40	73 (93)	83 (93)	93 (93)	29.5 (39.5)	39.5 (39.5)	7	M6 x 1.0	10
50	77 (97)	87 (97)	97 (97)	30.5 (40.5)	40.5 (40.5)	8	M8 x 1.25	14
63	88 (108)	98 (108)	108 (108)	36 (46)	46 (46)	8	M10 x 1.5	18
80	107 (127)	117 (127)	127 (127)	43.5 (53.5)	53.5 (53.5)	10	M12 x 1.75	22
100	130 (150)	140 (150)	150 (150)	53 (63)	63 (63)	12	M12 x 1.75	22

- (): Dimensions with auto switch
- Applicable stroke available in 5 mm increments

CQS series





				(mm)
Bore size (mm)	Α	В	L	Stroke Both of S ₁ , S ₂
12	41 (51)	17 (22)	3.5	5 to 30
16	41 (51)	17 (22)	3.5	5 10 30
20	48 (68)	19.5 (29.5)	4.5	5 to 50
25	55 (75)	22.5 (32.5)	5	3 10 50

Note 1) (): Denotes the dimensions with auto switch. Note 2) Applicable stroke available in 5 mm increments.





23 Dual Stroke Cylinder/Single Rod Type

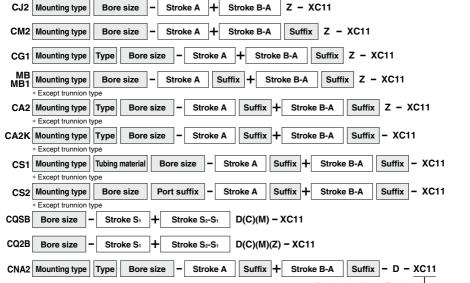
Symbol -XC11

Two cylinders can be integrated by connecting them in line, and the cylinder stroke can be controlled in two stages in both directions. Do not operate the CS1 series at twice the output.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
CJ2	Air cylinder	CJ2-Z	Double acting, Single rod	Except ø6 and with air cushion	
	Air cylinder	CM2-Z	Double acting, Single rod		1
	Non-rotating rod	CM2K-Z	Double acting, Single rod	Except with air cushion	1
CM2	Direct mount	CM2R-Z	Double acting, Single rod		1
	Non-rotating rod, Direct mount type	CM2RK-Z	Double acting, Single rod		1
CG1	Air cylinder	CG1-Z	Double acting, Single rod	Except ø80-100	
CGI	Non-rotating rod	CG1K-Z	Double acting, Single rod	Except with air cushion	
МВ	Air cylinder	MB-Z	Double acting, Single rod	* Except ø125 and trunnion type	
MB1	Air cylinder	MB1-Z	Double acting, Single rod	* Except ø125 and trunnion type	
CA2	Air cylinder	CA2-Z	Double acting, Single rod	* Except trunnion type	
CA2	Non-rotating rod	CA2K	Double acting, Single rod	* Except trunnion type	Web Catalog
CS1	Air cylinder	CS1	Double acting, Single rod	* Except trunnion type	
CS2	Air cylinder	CS2	Double acting, Single rod	* Except trunnion type	
cos	Compact cylinder	cqs	Double acting, Single rod	Except with bracket	
CQS	Non-rotating rod type	CQSK	Double acting, Single rod	Except with bracket	
	Compact cylinder	CQ2-Z	Double acting, Single rod	Except with bracket	
CQ2	Non-rotating rod type	CQ2K-Z	Double acting, Single rod	Except with bracket	
	Air-hydro cylinder	CQ2H-Z	Double acting, Single rod	Except with bracket	
CNA2	Cylinder with lock	CNA2	Double acting, Single rod	* Except trunnion type	
MGG	Guide cylinder	MGG	Double acting		
MGC	Guide cylinder	MGC	Double acting		

How to Order





23 Dual Stroke Cylinder/Single Rod Type



Specifications: The following models are the same as the standard type except for the specifications listed below. (Please contact SMC for each manufacturable stroke length.)

CJ₂

Bore size (mm)		10	16		
Piston speed		The piston speed for the stroke B retraction side is 50 to 500 r			
Allowable kinetic energy	Stroke B (Retraction side)	0.015 J 0.040 J			
Stroke tolerance		Stroke A: 0 to +2.0 mm, Stroke B is the same as that of the standard			
Specifications other than above		Same as standard type			



Bore size (mm)	20	25	32	40			
Piston speed		The piston speed for the stroke B retraction side is 50 to 500 m			50 to 500 mm/s.		
Allowable kinetic energy	Stroke B (Retraction side)	0.12 J 0.18 J 0.28 J 0.53 J					
Stroke tolerance		Stroke A: 0 to +2.0 mm, Stroke B is the same as that of the standard			the standard type.		
Specifications other than above Same as sta			andard type				

CG₁

Bore size (mm)		20	25	32	40	50	63
Piston speed		The piston speed for the stroke B retraction side is 50 to 500				500 mm/s.	
Allowable kinetic energy	Stroke B (Retraction side)	0.07 J 0.1 J 0.16 J 0.3 J 0.5 J				0.85 J	
Specifications other	than above	Same as standard type		/ре			

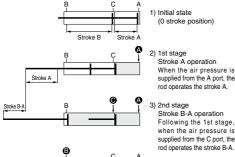


Precautions

⚠ Caution

- 1. Do not supply air until the cylinder is fixed with the attached bolt.
- 2. If air is supplied without securing the cylinder, the cylinder could lurch, posing the risk of bodily injury or damage to the peripheral equipment.

Functional description of dual stroke cylinder

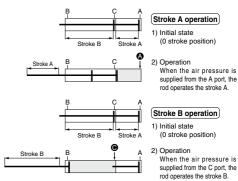


Stroke B

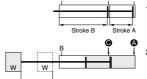
Stroke A

- 1) Initial state (0 stroke position)
- rod operates the stroke A. 3) 2nd stage Stroke B-A operation Following the 1st stage, when the air pressure is supplied from the C port, the
- 4) Cylinder retraction When the air pressure is supplied from the B port, the rod retracts completely.

Stroke A or stroke B operation can be made individually.



Double output is possible



- 1) Initial state (0 stroke position)
- 2) Double output When the air pressure is supplied to the A and C ports at the same time, the double output can be obtained in the stroke A range.





23 Dual Stroke Cylinder/Single Rod Type

Symbol -XC11

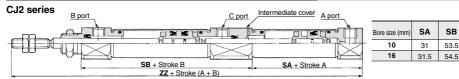
(mm)

z

112.5

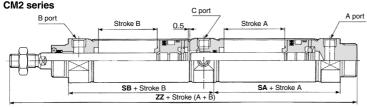
114

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

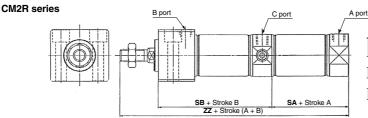


Note) When mounting an auto switch at the extended piston rod A side, the following auto switches interfere with the intermediate cover. In this case, please mount on the stroke B side. Please be aware that the auto switch defects and temporarily turns ON/OFF when passing the intermediate position of the B stroke. Solid state auto switch: D-H7ZI, D-H7ZO, D-H7ZIW, D-H7RD, D-H7BA

Reed auto switch: D-C7, D-C80, D-C73C, D-C80C, D-A80, D-A9, D-A9, D-A79W, D-A73

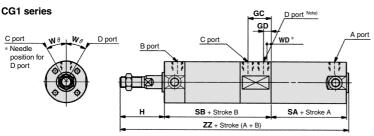


			(mm)
Bore size (mm)	SA	SB	ZZ
20	48	62	164
25	48	62	168
32	50	64	172
40	67.5	88.5	222



			(mm)
Bore size (mm)	SA	SB	ZZ
20	48	76	151
25	48	76	155
32	50	78	159
40	67.5	104.5	206

(mm)



Note) D port type Type N: Rubber bumper, Plug with fixed orifice:

Type A: Air cushion, element non-installation (Release to atmospheric pressure)

CG1,	CG1K

Bore	GC	GD	н	SA	SB	wo	Wθ ZZ	WO 77	Air cushion	Long str	oke Note)
size	GC	GD	п.	JA	30) WO 22		WD	SA	ZZ	
20	21	9	35	48	87	30°	172	5	56	180	
25	21 (21.5)	9 (8.5)	40	48	87	30°	177	6.5	56	185	
32	23	9	40	50	91	30°	183	5	58	191	
40	25	9	50	56	100	20°	208	5	65	217	
50	29	13	58	63	118	20°	241	9	75	253	
63	28	12	58	64	117	20°	241	8	76	253	

* (): With air cushion

Note) When the stroke A is a long stroke (ø20: 201 mm or more, ø25 to ø63: 301 mm or more)

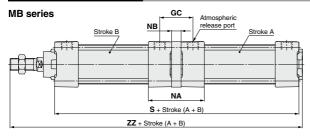




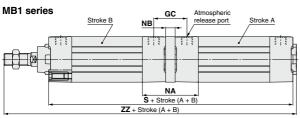
23 Dual Stroke Cylinder/Single Rod Type

Symbol -XC11

Construction/Dimensions

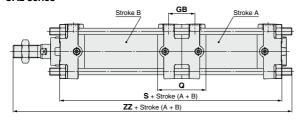


					(111111)
Bore size	GC	NA	NB	S	ZZ
32	36	64	10.6	179	230
40	38	64	10.6	179	234
50	41	73	10.6	199	261
63	43	73	10.6	199	261
80	52	90	14.6	243	319
100	52	90	14.6	243	319



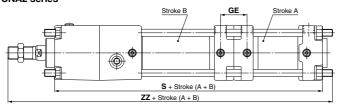
					(mm)
Bore size	GC	NA	NB	S	ZZ
32	36	62	10.6	179	230
40	38	62	10.6	179	234
50	41	71	10.6	199	261
63	43	71	10.6	199	261
80	52	88	14.6	243	319
100	52	88	14.6	243	319

CA2 series



				(mm)
Bore size	GB	Q	S	ZZ
40	29	53	168	230
50	33	59	180	249
63	33	61	196	268
80	41	73	232	320
100	41	79	252	341

CNA2 series



GE	S	ZZ
29	237	299
33	258	327
33	280	352
41	334	422
41	372	461
	29 33 33 41	29 237 33 258 33 280 41 334

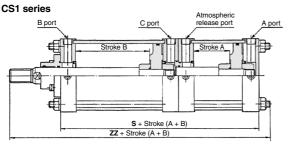
(mm)



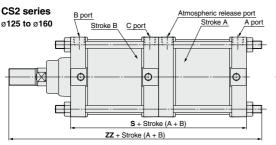
23 Dual Stroke Cylinder/Single Rod Type

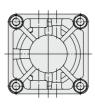
Symbol -XC11

Construction/Dimensions

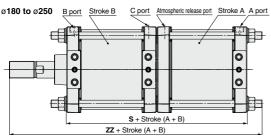


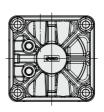
				(mm)
Bore size	Without a	uto switch	With aut	o switch
(mm)	S	ZZ	S	ZZ
125	197	334	197	334
140	197	334	197	334
160	213	363.5	213	363.5
180	223	393	231	401
200	223	393	241	411
250	283	484.5	_	_
300	293	519.5	_	



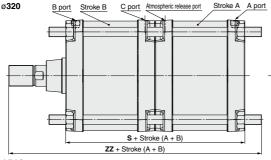


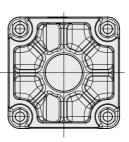
		(mm)
Bore size (mm)	s	ZZ
125	197	334
140	197	334
160	213	363.5





	(mm)
s	ZZ
231	401
241	411
283	484.5
351	577.5
	231 241 283



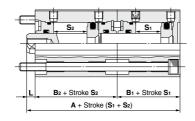




22 Dual Stroke Cylinder/Double Rod Type

Symbol -XC11

CQS series



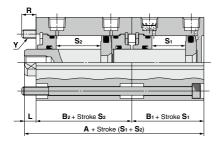
					(mm)	
Bore size (mm)	A	B ₁	B ₂	L	Stroke Both of \$1, \$2	
12	42.5 (52.5)	17 (22)	22 (27)	3.5	5 to 30	
16	42.5 (52.5)	17 (22)	22 (27)	3.5	5 10 30	
20	50 (70)	19.5 (29.5)	26 (36)	4.5	E to E0	
25	56.5 (76.5)	22.5 (32.5)	29 (39)	5	5 to 50	

Note 1) (): Denotes the dimensions with auto switch.

Note 2) Applicable stroke available in 5 mm increments.

Note 3) Please contact SMC for long stroke type.

CQ2 series



							(mm)
Bore size (mm)	Α	B ₁	B ₂	٦	R	Y	Stroke Both S1 and S2
12	45.7 (63.9)	17 (28)	25.2 (32.4)	3.5	8.3 (8.1)	M3 x 0.5	5 to 30
16	48 (70)	18.5 (30.5)	26 (36)	3.5	9 (7)	IVI3 X U.5	5 10 30
20	50 (74)	19.5 (31.5)	26 (38)	4.5	11.5 (7.5)	M5 x 0.8	
25	56.5 (76.5)	22.5 (32.5)	29 (39)	5	10.5		5 to 50
32	60.5 (80.5)	23 (33)	30.5 (40.5)	7	8.5	IVIS X U.6	5 10 50
40	76.5 (96.5)	29.5 (39.5)	40 (50)	7	7.5	1	
50	79 (99)	30.5 (40.5)	40.5 (50.5)	8	12	M6 x 1	
63	86 (106)	36 (46)	42 (52)	8	12.5	M8 x 1.25	10 40 50
80	104.5 (124.5)	43.5 (53.5)	51 (61)	10	19	M10 x 1.5	10 to 50
100	125.5 (145.5)	53 (63)	60.5 (70.5)	12	15		

- * (): Dimensions with auto switch magnet
- * Applicable stroke available in 5 mm increments
- * Please contact SMC for long stroke type.

Precautions

⚠ Caution

- Remove the temporary fixing nut and flat washer from the mounting bolt, and secure the cylinder properly with the mounting bolt.
- 2. Although the cylinder can be detached by removing the nut, do not detach it for purposes other than replacing the seal.
- 3. The removed nut and flat washer are not used to secure the body.





23 Dual Stroke Cylinder/Single Rod Type

Symbol -XC11

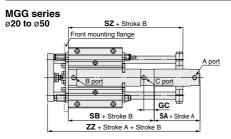
MGG series

How to Order

Specifications

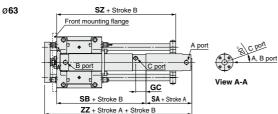
- poomouno									
Bore size	20	25 32 40		40	50	63			
Basic cylinder	020 to 050: CDG1ZN Bore size - Stroke A + Stroke B-A Z - Auto switch - X428 063: CDG1ZN Bore size - Stroke A + Stroke B-A Z - Auto switch - XC11								
Dimensions	Refer to the table below.								
Piston speed	The piston speed for the stroke B retraction side is 50 to 500 mm/s.								
Specifications other than above	Same as standard type								

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



MGG Se	ries							(mm)
Bore size (mm)	GC	SA	SB			Bracket mounting stroke / Stroke A +	Lo	
						Stroke B	SA	ZZ
20	21	50	87	118	176	35 st or more	58	184
25	21	50	87	129	183	60 st or more	58	191
32	23	52	91	155	189	80 st or more	60	197
40	25	58	100	182	214	125 st or more	67	223
50	29	65	118	218	250	160 st or more	77	262
63	28	66	132	254	252	210 st or more	78	264

Note) When the stroke A is a long stroke (ø20: 201 mm or more, ø25 to ø63: 301 mm or more)





23 Dual Stroke Cylinder/Single Rod Type

Symbol -XC11

MGG series

How to Order

MGC Bearing type Mounting type Bore size - Stroke A + Stroke B-A - Equipped/Not equipped back plate - Auto switch - XC11

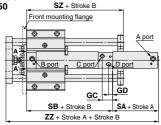
Dual stroke cylinder/Single rod type

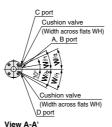
Specifications

Bore size	20 25		32	40	50				
Basic cylinder	CDG1ZA Bore size - Stroke A + Stroke B-A Z - Auto switch - XC11								
Dimensions	Refer to the table below.								
Piston speed	The piston speed for the stroke B retraction side is 50 to 500 mm/s.								
Specifications other than above		Same as standard type							

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







MGC Series (mr								(mm)	
Bore	GC	GC GD SA SB W		GD SA SB W		W∂₁	W∂₂	Lo	
(mm)							SA	ZZ	
20	21	9	50	87	25°	30°	58	184	
25	21.5	8.5	50	87	25°	30°	58	191	
32	23	9	52	91	25°	30°	60	197	
40	25	9	58	100	20°	20°	67	223	
50	29	13	65	118	20°	20°	77	262	

Bore size	s	z	ZZ	Bracket mounting stroke / Stroke A + \
(mm)	With R	Without R		Stroke B
20	101	80	176	35 st or more
25	107	85	183	60 st or more
32	115	90	189	80 st or more
40	132	100	214	125 st or more
50	174	135	250	160 st or more

Note) When the stroke A is a long stroke (ø20: 201 mm or more, ø25 to ø50: 301 mm or more)



-XC12: Tandem Cylinder



24 Tandem Cylinder

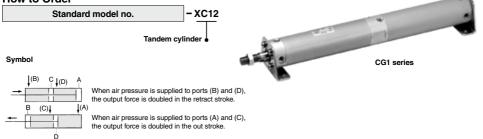
Symbol -XC12

This is a cylinder produced with two air cylinders in line allowing double the output force.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
CM2	Air cylinder	CM2-Z	Double acting, Single rod	Except with air cushion	
CIVIZ	Direct mount type	CM2R	Double acting, Single rod	Except with air cushion	
CG1	Air cylinder	CG1-Z	Double acting, Single rod	Except with air cushion	
CGI	Non-rotating rod type	CG1K-Z	Double acting, Single rod	Except with air cushion	Web Catalog
МВ	Air cylinder	MB-Z	Double acting, Single rod	Except ø125	
MB1	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125	
CA2	Air cylinder	CA2-Z	Double acting, Single rod		

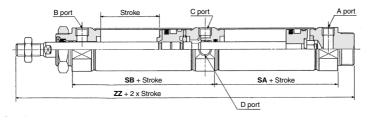




Specifications: Same as standard type

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

CM2 series



			(mm)
Bore size	SA	SB	ZZ
20	48	62	164
25	48	62	168
32	50	64	172
40	67.5	88.5	222

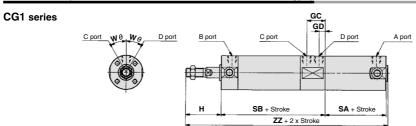
-XC12: Tandem Cylinder



24 Tandem Cylinder

Symbol -XC12

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

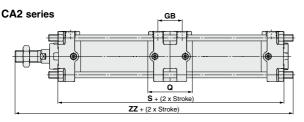


CGI (mm)												
Bore size	GC	GD		H SA SB Wθ	CD WO	CD WO	OD WO	00 1110	CD WO	ZZ	Long str	oke Note)
bore size	GC	GD	п	5A	SD WH		22	SA	ZZ			
20	21	9	35	48	87	30°	172	56	180			
25	21	9	40	48	87	30°	177	56	185			
32	23	9	40	50	91	30°	183	58	191			
40	25	9	50	56	100	20°	208	65	217			
50	29	13	58	63	118	20°	241	75	253			
63	28	12	58	64	117	20°	241	76	253			

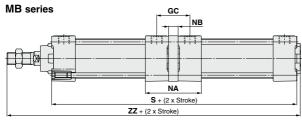
25	21	9	40	48	87	30°	177	56	185
32	23	9	40	50	91	30°	183	58	191
40	25	9	50	56	100	20°	208	65	217
50	29	13	58	63	118	20°	241	75	253
63	28	12	58	64	117	20°	241	76	253
Note) When the stroke is a long stroke (g20: 201 mm or more									

CG1K (mm) Bore size GC GD SA SB $\mathbf{W}\theta$ ΖZ 30° 30° 30° 20° 20°

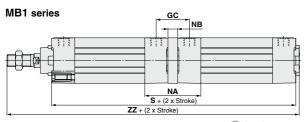
7	Please contact SMC for long stroke (301 mm or more) since SA-dimer
	sions and ZZ-dimensions are different from those in the above table.



				(111111)
Bore size	GB	Q	S	ZZ
40	29	53	169	231
50	33	59	181	250
63	33	61	197	269
80	41	73	233	321
100	41	79	253	342



					(mm)
Bore size	GC	NA	NB	S	ZZ
32	36	64	10.6	180	231
40	38	64	10.6	180	235
50	41	73	10.6	200	262
63	43	73	10.6	200	262
80	52	90	14.6	244	320
100	52	90	14.6	244	320



					(mm)
Bore size	GC	NA	NB	S	ZZ
32	36	62	10.6	180	231
40	38	62	10.6	180	235
50	41	71	10.6	200	262
63	43	71	10.6	200	262
80	52	88	14.6	244	320
100	52	88	14.6	244	320

ø25 to ø63: 301 mm or more)



25 Auto Switch Rail Mounting Type



CDG1

A cylinder on which a rail is mounted to enable auto switches, in addition to the standard method for mounting auto switches (Band mounting type).

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model
	0140.7	Double acting, Single rod			
	Air cylinder	CM2-Z	Single acting (Spring return/extend)		1
		CM2W-Z	Double acting, Double rod		1
		014014 7	Double acting, Single rod		1
	Non-rotating rod type	CM2K-Z	Single acting (Spring return/extend)		1
CM2		CM2KW	Double acting, Double rod		
	Direct mount type	CM2R-Z	Double acting, Single rod		1
	Non-rotating rod, Direct mount type	CM2RK-Z	Double acting, Single rod		
	Smooth cylinder	CM2Y-Z	Double acting, Single rod		Web Catalog
	End lock cylinder	СВМ2	Double acting, Single rod	For XC13A and XC13C only	
	Air cylinder	CG1-Z	Double acting, Single rod	Except the trunnion type]
	Double rod type	CG1W-Z	Double acting, Double rod	Except the trunnion type	
CG1	Non-rotating rod type	CG1K-Z	Double acting, Single rod	Except the trunnion type]
	Direct mount type	CG1R-Z	Double acting, Single rod	Except with air cushion]
	End lock cylinder	CBG1	Double acting, Single rod	For XC13A only]
MGG	Guide cylinder	MGG	Double acting		1
мас	Guide cylinder	MGC	Double acting		1

port

How to Order

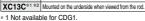
CDM2 Standard model no. — XC13A

CDG1 Standard model no. — XC13A

* Trunnion type of the CDG1 series cannot be mounted.

Rail mounting direction

XC13A Mounted on the right side when viewed from the row was the right side when viewed from the row was the row



- * 2 Not available for CBG1.
- * 3 Not available for CBM2.

CDM2 Applicable Auto Switches

ODMZ Applic	DDMZ Applicable Auto Switches						
Rail mounting	Solid state	D-F7□, D-F7□V, D-F7BA, D-F79F, D-F79W, D-F7□WV, D-J79, D-J79C, D-J79W					
Rail mounting type Reed		D-A9□/A9□V, D-A7/A8, D-A7□H/A80H, D-A73C/A80C, D-A79W					
Auto switch specifications		For detailed specifications about an auto switch for itself, refer to pages 1289 to 1383.					

CDG1 Applicable Auto Switches

Obal Applicable Auto Owitones					
Rail mounting type	Solid state	D-M9□/M9□V, D-M9□W/M9□WV, D-M9□A/M9□AV, D-F7□, D-F7□V, D-F7BA, D-F79F, D-F79W, D-F7□WV, D-J79, D-J79C, D-J79W			
	Reed	D-A7/A8, D-A7□H/A80H, D-A73C/A80C, D-A79W			
Auto switch specifications		For detailed specifications about an auto switch for itself, refer to pages 1289 to 1383.			





(mm)

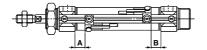
25 Auto Switch Rail Mounting Type

Symbol -XC13

Proper Auto Switch Mounting Position (Detection at stroke end) and Mounting Height

CDM2 series





									Auto Swit	ch Mou	nting F	leight
Auto switch model	D-F7□/F79F D-J79/J79C D-F7□W/J7 D-F7BA/F7E D-A72/A7□ D-A73C/A80	9W/F7□WV BAV H/A80H	D-F7NT		D-A9□ D-A9□V D-A79W		D-A7□ D-A80		D-F/LW/J/9W	D-F7□V D-F7□WV D-F7BAV	D-J79C	D-A7□ D-A80
(mm)	Α	В	Α	В	Α	В	Α	В	Hs	Hs	Hs	Hs
20	8 (5.5)	7 (4.5)	13 (10.5)	12 (9.5)	5 (2.5)	4 (1.5)	7.5 (5)	6.5 (4)	23.5	26	29	22.5
25	8 (5.5)	7 (4.5)	13 (10.5)	12 (9.5)	5 (2.5)	4 (1.5)	7.5 (5)	6.5 (4)	26.5	29	32	25.5
32	9 (6.5)	8 (5.5)	14 (11.5)	13 (10.5)	6 (3.5)	5 (2.5)	8.5 (6)	7.5 (5)	30	32.5	35.5	29

Note 1) (): With air cushion

Note 2) Adjust the auto switch after confirming the operating conditions in the actual setting.

Note 3) For the dimensions other than the proper auto switch mounting position and its mounting height, refer to standard type for CM2 series.

Minimum Auto Switch Mounting Stroke

			(mm)				
	No. of auto switch mounted						
Auto switch model	1	2 Same surface	n (n: No. of auto switches) Same surface				
D-F7□V D-J79C	5	5	10 + 10 (n-2) ^{Note)} (n=4, 6···)				
D-F7□ D-J79	5	5	15 + 15 (n-2) ^{Note)} (n=4, 6···)				
D-F7□WV D-F7BAV D-A79W	10	15	10 + 15 (n-2) ^{Note)} (n=4, 6···)				
D-F7□W/J79W D-F7BA D-F79F/F7NT	10	15	15 + 20 (n–2) ^{Note)} (n=4, 6···)				
D-A9□ D-A9□V	5	10	10 + 15 (n-2) ^{Note)} (n=4, 6···)				
D-A7□/A80 D-A7□H/A80H D-A73C/A80C	5	10	15 + 10 (n–2) ^{Note)} (n=4, 6···)				
D-A7□H D-A80H	5	10	15 + 15 (n–2) ^{Note)} (n=4, 6···)				

Note) When "n" is an odd number, an even number that is one larger than this odd number is used for the calculation. However, the minimum even number is 4. So, 4 is used for the calculation when

D-F7□W/J79W D-F7BA D-A9□/A9□V A7□H/A80H	D-F7□WV D-F7BAV	D-J79C	D-A7□ D-A80	D-A73C D-A80C	D-A79W
Hs	Hs	Hs	Hs	Hs	Hs
23.5	26	29	22.5	29.5	25
26.5	29	32	25.5	32.5	28
30	32.5	35.5	29	35	31.5
34	36.5	39.5	33	40	35.5

Operating range

				(mm)		
A 1 2.1 1.1	Bore size (mm)					
Auto switch model	20	25	32	40		
D-F7□/F79F/F7□V D-J79/J79C D-F7□W/J79W/F7□WV D-F7BA/F7BAV D-F7NTL	3.5	3.5	4	3.5		
D-A9□/D-A9□V	5.5	6	6.5	6.5		
D-A7□/A80 D-A7□H/A80H D-A73C/A80C	7.5	8	8.5	8.5		
D-A79W	10	10.5	12.5	12.5		

* Since the operating range is provided as a guideline including hysteresis, it cannot be guaranteed (assuming approximately ±30% dispersion). It may vary substantially depending on an ambient

Auto Switch Mounting Bracket: Part No.

Auto switch model	Bore size (mm)	l
Auto Switch model	ø20 to ø40	
D-A9□/A9□V	BQ2-012	l

Note 1) When adding D-A9□(V), order a set of auto switch mounting brackets BQ-1 and BQ2-012 for the CDQ2 series (ø12 to ø25) separately. When adding the auto switches other than D-A9□(V) mentioned on the left and D-F7BA(V),

order auto switch mounting brackets BQ-1 separately. Note 2) When adding the auto switch D-F7BA(V), order a stainless steel screw set BBA2 separately.





25 Auto Switch Rail Mounting Type

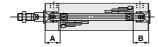
Symbol -XC13

Proper Auto Switch Mounting Position (Detection at stroke end) and Mounting Height

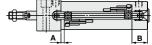
CDG1 series

CDG1R series (Ø20 to Ø63)









Proper Auto Switch Mounting Position (Detection at stroke end)

Applicable Cylinder Series: CDG1-XC13

(mm)

Auto switch model			D-F7_/F79F/F7_V D-F7BA/F7ABV D-J79/J79C D-A72/A7_H/A80H D-F7_W/J79W/F7_WV D-A73C/A80C		D-F7NT		D-A7□ D-A80		D-A79W	
Bore size	Α	В	Α	В	Α	В	Α	В	Α	В
20	31.5	22.5 (30.5)	30.5	21.5 (29.5)	35.5	26.5 (34.5)	30	21 (29)	27.5	18.5 (26.5)
25	31	23 (31)	30	22 (30)	35	27 (35)	29.5	21.5 (29.5)	27	19 (27)
32	32.5	23.5 (31.5)	31.5	22.5 (30.5)	36.5	27.5 (35.5)	31	22 (30)	28.5	19.5 (27.5)
40	37.5	25.5 (34.5)	36.5	24.5 (33.5)	41.5	29.5 (38.5)	36	24 (33)	33.5	21.5 (30.5)
50	44.5	30.5 (42.5)	43.5	29.5 (41.5)	49	34.5 (46.5)	43	29 (41)	40.5	26.5 (38.5)
63	43	32 (44)	42	31 (43)	47	36 (48)	41.5	30.5 (42.5)	39	28 (40)
80	56	37 (51)	55	36 (50)	60	41 (55)	54.5	35.5 (49.5)	52	33 (47)
100	55	38 (52)	54	37 (51)	59	42 (56)	53.5	36.5 (50.5)	51	34 (48)

Note 1) (): For long stroke type

Note 2) Adjust the auto switch after confirming the operating conditions in the actual setting.

Proper Auto Switch Mounting Position (Detection at stroke end) Applicable Cylinder Series: CDG1R-XC13

(mm)

Auto switch model			D-F7□/F79F/F7□V D-J79/J79C D-F7□W/J79W/F7□W	D-F7BA/F7ABV D-A72/A7□H/A80H V D-A73C/A80C	/A80H D-F7NT		D-A7□ D-A80		D-A79W	
Bore size	Α	В	Α	В	Α	В	Α	В	Α	В
20	10.5	22.5	9.5	21.5	14.5	26.5	9	21	6.5	18.5
25	10	23	9	22	14	27	8.5	21.5	6	19
32	11.5	23.5	10.5	22.5	15.5	27.5	10	22	7.5	19.5
40	16.5	25.5	15.5	24.5	20.5	29.5	15	24	12.5	21.5
50	18.5	30.5	17.5	29.5	22.5	34.5	17	29	14.5	26.5
63	17	32	16	31	21	36	15.5	30.5	13	28

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

Proper Auto Switch Mounting Position/Applicable Cylinder Series: CDBG1-XC13 (mm)

Proper Auto Switch Mountaing Position/Applicable Cylinder Series. CDBG1-AC13 (MM)							
Lock position	Н		F	3	W		
	(Head	l side)	(Rod	side)	(Both sides)		
Bore size	Α	B Note 2)	Α	В	Α	B Note 2)	
20	+0	+12	+11	+0	+11	+12	
25	+0.5	+11.5	+11.5	-0.5	+11.5	+11.5	
32	+0	+10	+10	+0	+10	+10	
40	+0	+14	+9	+0	+9	+14	
50	+0	+17	+12	+0	+12	+17	
63	+1.5	+15.5	+13.5	-1.5	+13.5	+15.5	
80	-1.5	+23.5	+14.5	+1.5	+14.5	+23.5	
100	-0.5	+23.5	+15.5	+0.5	+15.5	+22.5	

Note 1) For end lock cylinders, add the above values to those listed in the table for CG1-XC13. Note 2) For the head side and both sides lock, add the above values to CG1-XC13 (long stroke) to find B.

Note 3) Adjust the auto switch after confirming the operating conditions in the actual setting. Note 4) For the dimensions other than the proper auto switch mounting position and mounting height, refer to standard type for CBG1 series.

Auto Switch Mounting Height

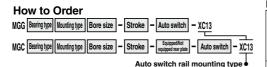
	D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV D-F7□/F79F D-J79/F7NT D-F7□W/J79W/F7BA	D-F7□V D-F7□WV D-F7BAV	D-J79C	D-A7□ D-A80	D-A73C D-A80C	D-A79W
Bore size \	Hs	Hs	Hs	Hs	Hs	Hs
20	26.5	29	32	25.5	32.5	28
25	29	31.5	34.5	28	35	30.5
32	32.5	35	38	31.5	38.5	34
40	36.5	39	42	35.5	42.5	38
50	42	44.5	47.5	41	48	43.5
63	49	51.5	54.5	48	55	50.5
80	59	61.5	64.5	58	65	60.5
100	69.5	72	75	68.5	75.5	71





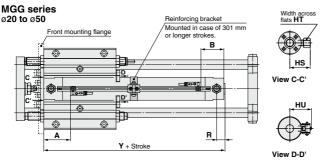
25 Auto Switch Rail Mounting Type

Symbol -XC13

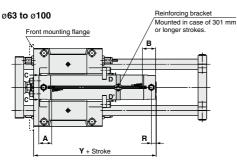




Dimensions (Dimensions other than below are the same as standard type.)



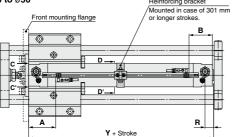
MGG Series (mm							
Bore size (mm)	R	Y	нѕ	нт	HU		
20	14	99	28.5	14	30.7		
25	14	99	31	14	33.2		
32	14	101	34.5	14	36.5		
40	15	109	39	14	41		
50	16	124	49.5	17	46.2		
63	16	139	56.5	17	53.2		
80	23	165	75.5	23	62.2		
100	23	165	86	26	72.7		







Y + Stroke	
MGC series ø20 to ø50	Reinforcing bracket
Front mounting flange	Mounted in case of 301 mm or longer strokes.



Width across flats HT
HS.
View C-C'

HU View D-D'

MGC Series								
Bore size (mm)	R	Υ	нѕ	нт	HU			
20	14	99	26	7	30.7			
25	14	99	28.5	7	33.2			
32	14	101	34.5	14	36.5			
40	15	109	39	14	41			
50	16	124	49.5	17	46.2			





25 Auto Switch Rail Mounting Type

Symbol -XC13

Proper Auto Switch Mounting Position (Detection at stroke end) and Mounting Height

Proper	r Auto Switch Mounting Position/Applicable Cylinder MGG, MGC Series (mm)										Auto Switch N	lounting	g Heigh	t		(mm)
Auto switch model Bore size	D-M9□/M D-M9□W D-M9□A/	/M9□WV	D-F7□/F79F D-J79/J79C D-F7□W/J7 D-F7BA/F7I D-A72/A7□ D-A73C/A8F	9W/F7□WV BAV H/A80H	D-F	7NT	D-A		D-A	79W	D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV D-F7□/F79F D-J79/F7NT D-F7□W/J79W/F7BA	D-F7□V D-F7□WV D-F7BAV	D-J79C		D-A73C D-A80C	D-A79W
(mm)	Α	В	Α	В	Α	В	Α	В	Α	В	Hs	Hs	Hs	Hs	Hs	Hs
20	45.5	39.5	43	37	48	42	42.5	36.5	40	34	26.5	29	31	26.5	32.5	30
25	45.5	39.5	43	37	48	42	42.5	36.5	40	34	29	31.5	33.5	29	35	32.5
32	46.5	40.5	44	38	49	43	43.5	37.5	41	35	32.5	34.5	36.5	32	38.5	35.5
40	51.5	43.5	49	41	54	46	48.5	40.5	46	38	37	39	41	36.5	43	40
50	58.5	51.5	56	49	61	54	55.5	48.5	53	46	42	44.5	46.5	42	48	45.5
63	58.5	51.5	56	49	61	54	55.5	48.5	53	46	49	51.5	53.5	49	55	52.5
80	68.5	61.5	66	59	71	64	65.5	58.5	63	56	58	60.5	62.5	58	64	61.5
100	68.5	61.5	66	59	71	64	65.5	58.5	63	56	69	71	73	68.5	74.5	72

Note 1) Adjust the auto switch after confirming the operating conditions in the actual setting.

Note 2) For dimensions other than the proper auto switch mounting position and height, refer the standard type for MGG and MGC series

Minimum Auto Switch Mounting Stroke/CDG1, MGG, MGC

			(mm)			
Auto switch	No. of auto switch mounted					
model	1	2 Same surface	n (n: No. of auto switches) Same surface			
D-M9□/M9□V D-F7□V D-J79C	5	5	10 + 10 (n-2) ^{Note)} (n=4, 6···)			
D-M9□WV D-M9□AV D-F7□WV D-F7BAV D-A79W	10	15	10 + 15 (n-2) ^{Note)} (n=4, 6···)			
D-M9□W D-M9□A	10	15	15 + 15 (n-2) ^{Note)} (n=4, 6···)			
D-F7□ D-J79	5	5	15 + 15 (n-2) ^{Note)} (n=4, 6···)			
D-F7□W/J79W D-F7BA D-F79F/F7NT	10	15	15 + 20 (n-2) ^{Note)} (n=4, 6···)			
D-A7□/A80 D-A7□H/A80H D-A73C/A80C	5	10	15 + 10 (n-2) ^{Note)} (n=4, 6···)			
D-A7□H D-A80H	5	10	15 + 15 (n-2) ^{Note)} (n=4, 6···)			

Note) When "n" is an odd number, an even number that is one larger than this odd number is used for the calculation. However, the minimum even number is 4. So, 4 is used for the calculation when "n" is 1 to 3.

Operating Range/CDG1, MGG, MGC

								(mm)
Auto switch model			Е	ore siz	ze (mn	1)		
Auto switch model	20	25	32	40	50	63	80	100
D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV	4	4	5	4	5.5	6.5	7.5	7
D-F7□/F79F/F7□V D-J79/J79C D-F7□W/J79W/F7□WV D-F7BA/F7BAV D-F7NT	4.5	4	4.5	5	5	6	6	6
D-A7□/A80 D-A7□H/A80H D-A73C/A80C	9	9	10	11	11	13.5	13	13.5
D-A79W	11	11	13	14	14	16.5	16	16.5

 Since the operating range is provided as a guideline including hysteresis, it cannot be guaranteed. (Assuming approximately ±30% dispersion.) It may vary substantially depending on an ambient environment.

Auto Switch Mounting Bracket: Part No./CDG1, MGG, MGC

		_
Auto switch model	Bore size (mm)	N
Auto switch model	ø20 to ø100	1
D-M9□/M9□V D-M9□W/M9□WV	BQ2-012	N
D-A9□A/A9□AV	BQ2-012S	

lote 1) When adding D-M9□(V) and D-A9□W(V), order a set of auto switch mounting brackets BQ-1 and BQ2-012 for the CDQ2 series (ø12 to ø25) separately.

separately
When adding the auto switch D-F7BA(V), order a stainless steel screw set BBA2 separately.



When ordering the auto switches other than D-M9□□□ mentioned on the left and D-F7BA(V), order auto switch mounting brackets BQ-1 separately.

ote 2) When adding D-M9□A(V), order a stainless steel screw set BBA2 together with BQ2-012S

-XC17: Pin Cylinder with Rod Quenched



26 Pin Cylinder with Rod Quenched

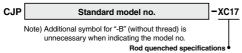
Symbol -XC17

The piston rod material is changed and the rod end is quenched.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
	CJP Pin cylinder CJPS-Z CJPB-Z CJPB		Single acting (Panel mount)	Except ø4	
CIB			Single acting (Embedded)	Except ø4	Web Catalog
CUP			Single acting (Panel mount)	Except ø4	web Catalog
		CJPS	Single acting (Embedded)	Except ø4	

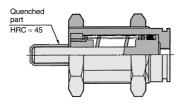
How to Order



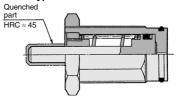
Specifications: Same as standard type

Construction (Dimensions are the same as standard.)

Panel mount type: CJPB



Embedded type: CJPS





Made to Order Common Specifications: -XC19: Intermediate Stroke (Spacer Type)



27 Intermediate Stroke (Spacer type)

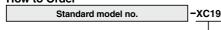
Symbol -XC19

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

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)	
	Free mount cylinder	CU	Double acting, Single rod	5 mm spacer only		
CU	Non-rotating rod type	CUK	Double acting, Single rod	5 mm spacer only		
CO	Long stroke	CU	Double acting, Single rod	5 mm spacer only		
	Long stroke, Non-rotating	CUK	Double acting, Single rod	5 mm spacer only		
CJP2	Pin cylinder	CJP2	Double acting, Single rod	Except ø4	Web Catalog	
MGP	Compact guide cylinder	MGP ^M -AZ	Double acting	Air cushion type only		
MXH	Compact slide	MXH-Z	Double acting	5 mm spacer only	1	
cxs	Dual rod cylinder	CXSౖ™	Double acting	5 mm spacer only]	
CXSJ	Dual rod cylinder compact type	CXSJౖ™	Double acting	5 mm spacer only		

How to Order



Applicable Stroke

(mm) ø6. ø10. ø16 ø20, ø25, ø32 35, 45, 55, 65, 75, 85, 95

Intermediate stroke (Spacer type

- . Dealing with it by installing a 5 mm width spacer with the standard stroke
- . Specifications other than above are the same as standard type
- External dimensions are the same as standard stroke products added by 5 mm for the required stroke
- Please consult with SMC when stroke other than applicable stroke is required.

CJP₂

Applicable Stroke

(mm)

- ø6 1 mm increments in 24 st or less 1 mm increments in 39 st or less ø10, ø16
- . Dealing with it by installing a 1 to 4 mm width spacer with the standard stroke cylinder.
- . Specifications other than above are the same as standard type.
- . External dimensions are the same as standard stroke products which is closed to the required intermediate stroke. Example: For 11 ST, to b+e dealt with 4 mm spacer for 15 st body
- . As for the one with switch, 5 st or less will not be available.

MGP(Air Cushion Type) Applicable Stroke

Applicable offore								
Description	Dealing with the stroke in 1 mm increments by changing a collar of the stand stroke cylinder. Minimum manufacturable stroke ø16 to ø63: 15 mm ø80, ø100: 20 mm Select a rubber bumper type, because the cushion effect is not obtainable less than this stroke.							
Part no.	Suffix "-XC19" to the end of standard part number.							
Applicable strate	ø16	15 to 249						
Applicable stroke (mm)	ø20 to ø63	15 to 399						
(111111)	ø80,ø100	20 to 399						
Example	Part no. MGPM20-35AZ-XC19 15 mm width collar is installed in MGPM20-50AZ. C dimension is 112 mm.							

Note) Intermediate strokes (in 1 mm increments) with a special body are available by made-to-order.

MXH

Applicable Stroke (mm) ø6, ø10, ø16, ø20 35, 45, 55

- . Dealing with it by installing a 5 mm width spacer with the standard
- . Specifications other than above are the same as standard type.
- . External dimensions are the same as standard stroke products added by 5 mm for the required stroke.
- . Please consult with SMC when stroke other than applicable stroke is

CXS

Applicable Stroke 15 25 35 45 ø6 ø10 55, 65 ø15 ø20 55, 65, 85, 95 ø**25**

- . Dealing with it by installing a 5 mm width spacer with the standard stroke cylinder.
- Specifications other than above are the same as standard type
- . External dimensions are the same as standard stroke products added by 5 mm for the required stroke
- . Please consult with SMC when stroke other than applicable stroke is required.

Applicable Stroke

rippinousie ou one	(,,,,,,
ø 6	15, 25, 35, 45
ø10	15, 25, 35, 45, 70
ø15	
ø 20	15, 25, 35, 45, 70, 95
ø 25	13, 23, 33, 43, 70, 33
ø 32	

- . Dealing with it by installing a 5 mm width spacer with the standard stroke cylinder.
- Specifications other than above are the same as standard type.
- . External dimensions are the same as standard stroke products added by 5 mm
- Please consult with SMC when stroke other than applicable stroke is required.



Made to Order Common Specifications: -XC20: Head Cover Axial Port



Part of the CG1 series (model highlighted in red) is to be discontinued as of the end of February 2025. Please select the CG1-Z1 series instead.

28 Head Cover Axial Port

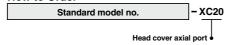
Symbol -XC20

Head side port position is changed to the axial direction. (Standard head side port is plugged with hexagon socket head screw.)

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
	Air cylinder	0140.7	Double acting, Single rod	Except with air cushion	
	All Cylinder	CM2-Z	Single acting (Spring return/extend)		
	Non-rotating rod type	014017	Double acting, Single rod	Except with air cushion	
CM2	Non-rotating rod type	CM2K-Z	Single acting (Spring return/extend)		
	Direct mount type	CM2R-Z	Double acting, Single rod	Except with air cushion	
	Non-rotating rod, Direct mount type	CM2RK-Z	K-Z Double acting, Single rod Except with air cushion		
	Smooth cylinder	CM2Y-Z	Double acting, Single rod		Web Catalog
	Air cylinder	CG1-Z1	Double acting, Single rod	Except double clevis type (D)	Web Catalog
		Air cylinder	rlinder CG1-Z	Double acting, Single rod	Except with air cushion
		001-2	Single acting (Spring return/extend)		
CG1	Non-rotating rod type	CG1K-Z	Double acting, Single rod	Except with air cushion	
	Direct mount type	nt type CG1R-Z		Except with air cushion	
	Non-rotating rod, Direct mount type	CG1KR-Z	Double acting, Single rod	Except with air cushion	
	Smooth cylinder	CG1Y-Z	Double acting, Single rod		

How to Order



Specifications: Same as standard type

* Be sure to use the speed controller since head side port has no throttle.

Construction (*Same dimensions as standard type except port size.)

CM2 series



Bore size (mm)	Port size
20, 25, 32	Rc ¹ /8
40	Rc ¹ / ₄

CG1 series CG1-Z1 series



Bore size (mm)	Port size
20, 25, 32, 40	Rc ¹ /s
50, 63	Rc ¹ / ₄
80*	Rc ³ /8
100*	Rc ¹ / ₂

^{*} CG1-Z1 only



Made to Order Common Specifications: -XC22: Fluororubber Seals



29 Fluororubber Seals

Symbol -XC22

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model	
		CJPB-Z	Single acting (Panel mounting)	Except ø4		
		CJPS-Z	Single acting (Embedded)	Except ø4		
CJP	Pin cylinder	CJP2	Double acting, Single rod	Except ø4. Packing set (6)		
		CJPB	Single acting (Panel mounting)	Except ø4		
		CJPS	Single acting (Embedded)	Except ø4		
		CJ2-Z	Double acting, Single rod	Except with air cushion		
	Air cylinder		Single acting (Spring return/extend)			
CJ2		CJ2W-Z	Double acting, Double rod	Except with air cushion		
	Non-rotating rod type	CJ2K-Z	Double acting, Single rod		Web Catalog	
	Direct mount type	CJ2R-Z	Double acting, Single rod			
	A is as disades	CM2-Z	Double acting, Single rod			
	Air cylinder	CM2W-Z	Double acting, Double rod			
	Non-rotating rod type	CM2K-Z	Double acting, Single rod			
CM2	Non-rotating rod type	CM2KW-Z	Double acting, Double rod			
	Direct mount type	CM2R-Z	Double acting, Single rod			
	Non-rotating rod, Direct mount type	CM2RK-Z	Double acting, Single rod			
	End lock cylinder	CBM2	Double acting, Single rod			
	Air cylinder	CG1-Z	Double acting, Single rod	Without a bumper for cylinders with a rubber bumper		
CG1	Double rod type	CG1W-Z	Double acting, Double rod	Without a bumper for cylinders with a rubber bumper	(4	
	Direct mount type	CG1R-Z	Double acting, Single rod	Without a bumper for cylinders with a rubber bumper		
	A la su discula a	MB-Z	Double acting, Single rod	Except ø125, Air cushion only		
MB	Air cylinder	MBW-Z	Double acting, Double rod	Except ø125, Air cushion only		
	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125, Air cushion only		
MB1		MB1W-Z	Double acting, Double rod	Except ø125, Air cushion only		
	A la sudia de a	CA2-Z	Double acting, Single rod	Air cushion only		
CA2	Air cylinder	CA2W-Z	Double acting, Double rod	Air cushion only		
	End lock cylinder	CBA2	Double acting, Single rod			
CS1	Air cylinder	CS1	Double acting, Single rod	Applicable bore: Lube type 125 to 300, Non-lube type 125 to 200		
CS2	A is as disades	CS2	Double acting, Single rod	Applicable to ø125 to ø160		
CS2	Air cylinder	CS2W	Double acting, Double rod	Applicable to ø125 to ø160	Web Catalog	
CUJ	Mini free mount cylinder	CUJ	Double acting, Single rod	Except ø4. ø12 to ø20: A bumper is a standard product.		
	From an annual and and an	CU	Double acting, Single rod			
	Free mount cylinder	CU	Single acting (Spring return/extend)			
CU	Non-set-time and the se	CUK	Double acting, Single rod			
CU	Non-rotating rod type	CUK	Single acting (Spring return/extend)			
	Long stroke	CU	Double acting, Single rod			
	Long stroke, Non-rotating	CUK	Double acting, Single rod			
		MGPM-Z	Double acting	Slide bearing only		
MGP	Heavy duty guide rod type	MGPS	Double acting			
MGQ	Compact guide cylinder	MGQM	Double acting	Slide bearing only	(5	
MGG	Guide cylinder	MGG	Double acting	Without rubber bumper		
MGC	Guide cylinder	MGC	Double acting	·		
CEP1	High precision stroke reading cylinder	CEP1	Double acting, Single rod			
MXH	Compact slide	MXH-Z	Double acting			
CXS	Dual rod cylinder	cxs	Double acting		Web Catalog	
CXSJ	Dual rod cylinder compact type	CXSJ	Double acting		1	
CX2	Slide unit	CX2	Double acting			
CXW	Slide unit	CXW	Double acting			
CAVV						

How to Order

Standard model no.

Specifications

Seal material	Fluororubber		
Ambient temperature range	eq:without auto switch in the control of t		
Specifications other than above and external dimensions	Same as standard type for each series		

Fluororubber seals

Note 1) Please confirm with SMC, as the type of chemical and the operating temperature may not allow the use of this product.

Note 2) Cylinders with auto switches can also be produced;

however, auto switch related parts (auto switch units, mounting brackets, built-in magnets) are the same as standard products. Before using these, please contact SMC regarding their suitability for the operating environment.

Note 3) The MGG series is using a shock absorber RBL type.

Note 4) No cushion is equipped for N type. Piston speed is ranged from 50 to 500 mm/s.

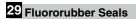
Note 5) The MGP and MGQ series are without a cushion.

Confirm the kinetic energy.

Note 6) Refer to the construction of the standard type for the details of the packing set for CJP2□6,10 and 16.

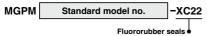
-XC22: Fluororubber Seals



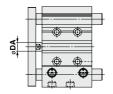


Symbol -XC22

How to Order



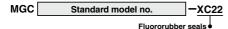
Dimensions



			(mm)
Bore size (mm)	DA	Bore size (mm)	DA
12	(6)	40	(14)
16	(8)	50	20
20	(10)	63	20
25	(10)	80	25
32	(14)	100	30

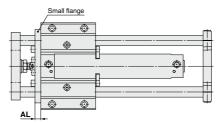
The dimensions in () are the same as standard type.

How to Order



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

MGCLB series



	(mm)
Bore size (mm)	AL
20	9
25	9
32	9
40	12
50	12

-XC24: With Magnetic Shielding Plate





30 With Magnetic Shielding Plate -XC24

Please select the CY3B-Z series instead.

24 No Fixed Throttle of Connection Port

Symbol -XC25

Shields against the magnetic leaked from external slider.

A CM2 series air cylinder with no restrictor on the rod cover and head cover ports

The CY3B series is to be discontinued as of May 2025.

Applicable Series

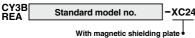
Series	Description	Model	Action	Vol. no. (for std model)	
CY3	Magnetically coupled rodless cylinder	CY3B-Z	Double acting		
C13	I wagnericary coupled rodiess cyrrider	CY3B	Double acting	Web Catalog	
REA	Sine rodless cylinder	REA	Double acting		

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
		0140.7	Double acting, Single rod	
	Air cylinder	CM2-Z	Single acting (Spring return/extend)	
		CM2W-Z	Double acting, Double rod	
	Non-rotating rod type	CM2K-Z	Double acting, Single rod	
CM2		CM2KW-Z	Double acting, Double rod	Web Catalog
			Single acting (Spring return/extend)	
	Direct mount type	CM2R-Z	Double acting, Single rod	
	Non-rotating rod, Direct mount type	CM2RK-Z	Double acting, Single rod	
	Smooth cylinder	CM2Y-Z	Double acting, Single rod	

^{*} Except with air cushion (Standard equipment)

How to Order



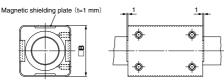
Specifications: Same as standard type

How to Order

CM2 Standard model no. -XC25

No fixed throttle in connection port

Dimensions



Bore size (m				mm)					
Dimensions	ø 6	ø10	ø15	ø 20	ø 25	ø 32	ø 40	ø 50	ø 63
□В	19	27	37	38	48	62	72	88	102
Standard external (□B)	17	25	35	36	46	60	70	86	100

- * Dimensions except mentioned above are the same as standard type.
- * REA is ø25 to ø63.

Specifications/ Dimensions: Same as standard type

∧ Caution

1. Use a shock absorber, etc.

When the piston speed exceed 750 mm/s, make sure that direct impact does not apply on the cylinder cover by using an external stopper (shock absorber, etc).

-XC26: With Split Pins for Double Clevis Pin and Double Knuckle Joint Pin and Flat Washers



32 With Split Pins for Double Clevis Pin/Double Knuckle Joint Pin and Flat Washers

Symbol -XC26

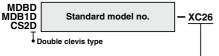
Flat washer is added for the double clevis (one of the mounting types) or double knuckle joint (one of the accessories).

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
MB	Air cylinder	MB	Double acting, Single rod	ø125 only	
MB1	Air cylinder	MB1	Double acting, Single rod	ø125 only	
IVIDI	Air cylinder	MB1W	Double acting, Double rod	ø125 only	
CS1	Standard type	CS1	Double acting, Single rod		Web Catalog
CSI	Low friction	CS1Q	Double acting, Single rod	ø125 to ø160 only	
CS2	Standard type	CS2	Double acting, Single rod		
CSZ	Smooth cylinder	CS2Y	Double acting, Single rod	ø125 to ø160 only	

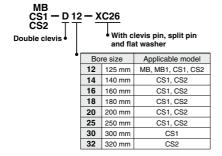
How to Order

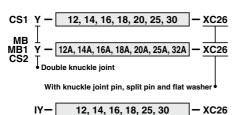
Product

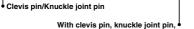


With clevis pin, split pin and flat washer

Parts assembly







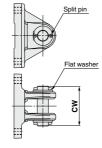
split pin, and flat washer

Specifications

Mounting type	Only double clevis type (D), Double knuckle joint
Changed parts	Clevis pin, knuckle joint pin, flat washer
Specifications other than above	Same as standard type

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

Double clevis



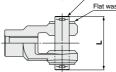
- For mounting bracket, split pin, clevis pin and flat washer are shipped together. (but not assembled).
- * Mounting method is the same as standard type.

Bore size (mm)	cw
ø125	90
ø140	104
ø160	113
ø180	136
ø 200	136
ø 250	169
ø300, ø320	207

Double knuckle joint



- For mounting bracket, split pin, knuckle joint pin and flat washer are shipped together, (but not assembled).
- Mounting method is the same as standard type.



Bore size (mm)	L
ø 125	90
ø140	104
ø160	113
ø180	136
ø 200	136
ø 250	169
ø300, ø320	207

-XC26: With Split Pins for Double Clevis Pin and Double Knuckle Joint Pin and Flat Washers



32 With Split Pins for Double Clevis Pin/Double Knuckle Joint Pin and Flat Washers

Symbol -XC26

A pin for double clevis (one of the mounting types) or double knuckle joint (one of the accessories) has been changed for a split pin, and split pins and flat washers have been added

Annlicable Series

Applicable Series								
	Series		Action	Note	Vol. no. (for std model)			
cqs	Standard	cos	Double acting, Single rod					
	Standard	cus	Single acting (Spring return/extend)					
	Long stroke	CQS	Double acting, Single rod					
	Non-rotating rod	CQSK	Double acting, Single rod					
	Anti-lateral load CQS□S		Double acting, Single rod					
CQ2	Compact cylinder	CQ2	Double acting, Single rod		Web Catalog			
	Compact cylinder	CQZ	Single acting (Spring return/extend)					
	Long stroke	CQ2	Double acting, Single rod	Double clevis (D)				
	Non-rotating rod CQ2K		Double acting, Single rod	mounting only				
	Anti-lateral load CQ2□S		Double acting, Single rod					
	With end lock	CBQ2	Double acting, Single rod					

Specifications

Mounting	Double clevis (D) only		
Changed parts	Clevis pin/Knuckle pin, Split pin, Flat washer		
Specifications other than above	Same as standard		

How to Order

Product

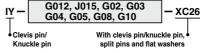


Parts assembly



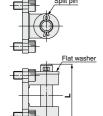
* For the CQS, only bore sizes 012 to 025 are selectable.

G012, Z015A, G02, G03 XC₂₆ G04, G05, G08, G10 Double knuckle joint With double knuckle joint pin. split pins and flat washers



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

Double clevis



* Body mounting bolts, pin, split pins, and flat washers are included.

CQ-D032-XC26

CO-D040-XC26

Double knuckle joint Split pin





* A pin, split pins, and flat washers are included.

Clevis pin/Knuckle joint pin Split pin



* Split pins and flat washers are included.

Bore size (mm)	Double clevis	Double knuckle joint	Clevis pin Knuckle joint pin	L
12	CQ-D012-XC26	Y-G012-XC26	IY-G012-XC26	21
16	CQ-D016-XC26	Y-Z015A-XC26	IY-J015-XC26	23
20	CQ-D020-XC26	Y-G02-XC26	IY-G02-XC26	31
25	CQ-D025-XC26	Y-G03-XC26	IY-G03-XC26	36.5

Y-G04-XC26

IY-G04-XC26

				(111111)
Bore size (mm)	Double clevis	Double knuckle joint	Clevis pin Knuckle joint pin	L
50	CQ-D050-XC26	Y-G05-XC26	IY-G05-XC26	66
63	CQ-D063-XC26	1-005-2020	11-G05-A020	00
80	CQ-D080-XC26	Y-G08-XC26	IY-G08-XC26	78
100	CQ-D100-XC26	Y-G10-XC26	IY-G10-XC26	86

52.5

-XC26 Double Clevis Width 12.5 mm, 16.5 mm, 19.5 mm: With Double Clevis and Double Knuckle Joint



32 mm

Symbol 33 Double Clevis Width 12.5 mm, 16.5 mm, or 19.5 mm: With Double Clevis and Double Knuckle Joint -XC26

3 different double clevis widths and double knuckle joint widths are selectable: 12.5 mm, 16.5 mm, or 19.5 mm

Series	Description	Model	Action	Note	Vol. no. (for std model)
	Compact cylinder	CQ2	Double acting.	Applicable to ø32 to ø63	
CQ2	Long stroke	CQ2	Single rod	Double clevis (D)	Web Catalog
	Anti-lateral load	CQ2□S	Sirigle rou	mounting only	

Specifications: Same as those of the standard type

How to Order XC26 A Standard model no.*1 Double clevis type With double clevis pin, split pin, and flat washer Suffix • A*2 Width 16.5 mm Made to order B*2 Width 19.5 mm Nil None C Width 12.5 mm C35 XC35 specification *2 Not available for C88*3 XC88 specification hore size 32 mm C89*3 XC89 specification C91*3 XC91 specification *3 With auto switch

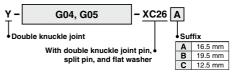


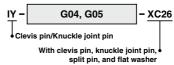
Applicable Made to Order Options

Series		Made t	o order	
Series	XC35	XC88	XC89	XC91
Compact cylinder	•	•	•	_
Long stroke	•	•	•	•
Anti-lateral load	_	_	•	•

^{*} For details on XC35 ⇒ Web Catalog For details on XC88, 89, and 91 \$\ightharpoonup \text{Web Catalog}\$

- XC26 A D032, D040, D050, D063 Double clevis Suffix A*1 Width 16.5 mm With double clevis pin, B*1 Width 19.5 mm split pin, and flat washer C Width 12.5 mm *1 Not available for bore size

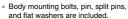




Dimensions (Dimensions other than those below are the same as those of the standard type.)

magnet only

Double clevis Split pin Flat washer



Split pin Flat washer

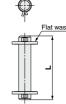
Double knuckle joint



* A pin, split pins, and flat washers are included.

5	Split pin
*	
1	Flat washer

Clevis pin/Knuckle joint pin



 Split pins and flat washers are included.

					[mm]
Bore size [mm]	Double clevis	Double knuckle joint	Clevis pin Knuckle joint pin	сх	L
32	CQ-D032-XC26C	Y-G04-XC26C		12.5	
	CQ-D040-XC26A	Y-G04-XC26A	IY-G04-XC26	16.5	52.5
40	CQ-D040-XC26B Y-G04-XC26B		11-G04-AC26	19.5	52.5
	CQ-D040-XC26C Y-G04-XC26C]	12.5	
	CQ-D050-XC26A	Y-G05-XC26A		16.5	
50	CQ-D050-XC26B	CQ-D050-XC26B Y-G05-XC26B		19.5	
	CQ-D050-XC26C	Y-G05-XC26C	IY-G05-XC26	12.5	66
	CQ-D063-XC26A	Y-G05-XC26A	11-005-8026	16.5	00
63	CQ-D063-XC26B	Y-G05-XC26B		19.5	1
	CQ-D063-XC26C	Y-G05-XC26C		12.5	



-XC27: Double Clevis and Double Knuckle Joint Pins Made of Stainless Steel



Part of the CG1 series (model highlighted in red) is to be discontinued as of the end of February 2025. Please select the CG1-Z1 series instead.

34 Double Clevis and Double Knuckle Joint Pins Made of Stainless Steel

Symbol -XC27

To prevent the oscillating portion of the double clevis or the double knuckle joint from rusting, the material of the pin and the retaining ring has been changed to stainless steel.

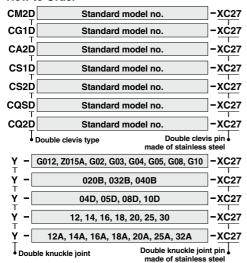
Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)	
CM2	Standard type	CM2-Z	Double acting, Single rod (1)		
	Standard type	OWIZ-Z	Single acting (Spring return/extend) (1)		
	Non-rotating rod type	CM2K-Z	Double acting, Single rod (1)		
CIVIZ	Non-rotating rod type	OWIZIT-Z	Single acting (Spring return/extend) (1)		
	End lock cylinder	CBM2	Double acting, Single rod		
	Smooth cylinder	CM2Y-Z	Double acting, Single rod		
	Air cylinder	CG1-Z1	Double acting, Single rod		
CG1	Standard type	CG1-Z	Double acting, Single rod (1)		
CGI	Otandard type	CG1-Z	Single acting (Spring return/extend) (1)		
	Non-rotating rod type	CG1K-Z (2)	Double acting, Double rod (1)		
	Standard type	MB-Z	Double acting, Double rod (1)	Web Catalog	
	Non-rotating rod type	MBK-Z	Double acting, Single rod (1)	Web Catalog	
MB	Non rotating roa type	MBKW-Z	Double acting, Double rod		
	With end lock	MBB	Double acting, Single rod		
	Smooth cylinder	MBY-Z	Double acting, Single rod (1)		
MB1	Standard type	MB1-Z	Double acting, Single rod (1)		-
IVIDI	Non-rotating rod type	MB1K-Z	Double acting, Single rod (1)		
	Standard type	CA2-Z	Double acting, Single rod (1)		
	Non-rotating rod type	CA2K	Double acting, Single rod		
CA2	End lock cylinder	CBA2	Double acting, Single rod		
	Air-hydro cylinder	CA2H	Double acting, Single rod		
	Smooth cylinder	CA2Y-Z	Double acting, Single rod		

Series	Description	Model	Action	Vol. no. (for std model)	
CS1	Standard type	CS1	Double acting, Single rod		
CSI	Low friction	CS1Q	Double acting, Single rod		
CS2	Standard type	CS2	Double acting, Single rod		
032	Smooth cylinder	CS2Y	Double acting, Single rod		
	Standard type	cos	Double acting, Single rod		
	Standard type	CQS	Single acting (Spring return/extend)		
cqs	Long stroke	CQS	Double acting, Single rod	Web Catalog	
	Anti-lateral load type	CQS□S	Double acting, Single rod	Web Catalog	
	Non-rotating rod type	CQSK	Double acting, Single rod		
	Ctandard tras	CQ2-Z	Double acting, Single rod (1)		
	Standard type	CQ2-Z	Single acting (Spring return/extend) (1)		
CQ2	Long stroke	CQ2-Z	Double acting, Single rod		
	Anti-lateral load type	CQ2□S-Z	Double acting, Single rod		
	Non-rotating rod type	CQ2K-Z	Double acting, Single rod		

Note 1) Except cylinders with double knuckle joint bracket in How to Order Note 2) Except ø20, ø25, and ø32 with air cushion

How to Order



Only double clevis type (D), Double knuckle joint only

Stainless steel 304

Same as standard type

<u>ΙΥ</u>	-	12, 14, 16, 18, 20, 25, 30	- <u>xc</u>	27			
ΙΥ	-	G012 (J015)*, G02, G03, G04, G05, G08, G10	- <u>xc</u>	27			
CD	-	M03, M05, M08	- <u>x</u> c	27			
CD	-	G02, G25, G03, G04, G05, G06	- <u>xc</u>	27			
CDP	-	1, 2, 3	- <u>xc</u>	27			
CDP	-	2A, 3A, 4A, 5A, 6A, 7A	-xc	27			
Clevis pin Knuckle pin made of stainless steel							
∳Cle	evi	s pin					
		kle pin					
		inlace stool enecification for IV IO15 is IV IO15QL	0				

Stainless steel specification for IY-J015 is IY-J015SUS.

Mounting brackets, accessories, and nut material: Stainless steel
The following accessories need to be prepared separately. (Please order separately.)
Refer to the "Accessories" page of each series for details.

Series	Bore size (mm)	Foot	Flange	Single knuckle joint	Double knuckle joint	Mounting nut	Rod end nut	Accessories page
CM2	20, 25, 32, 40	0	0	0	0	0	0	
CG1	20, 25, 32, 40, 50, 63, 80, 100	0*	0*	0	0	_	0	Web Catalog
CQ2	20, 25, 32, 40, 50, 63, 80, 100	_	_	0	0	_	0	

* Except bore size 20 and 25.



Specifications

Specifications other than above

Mounting type
Pin and retaining

ring material

-XC28: Compact Flange Made of SS400



35 Compact Flange Made of SS400

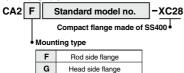
Symbol -XC28

Width of a flange bracket on the rod and head side has the same dimensions as the cylinder's rod cover to save the mounting space. (Flange shape and FV-dimensions are only different from the standard type.)

Applicable Series

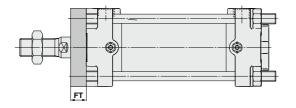
Series	Description	Model	Action	Vol. no. (for std model)
	Air audia dan	CA2-Z	Double acting, Single rod	
	Air cylinder	CA2W-Z	Double acting, Double rod	
	Non-rotating rod type	CA2K	Double acting, Single rod	
CA2	Non-rotating rod type	CA2KW	Double acting, Double rod	Web Catalog
CAZ	With end lock	CBA2	Double acting, Single rod	Web Catalog
	A in booder or disades	CA2H	Double acting, Single rod	
	Air-hydro cylinder	CA2HW	Double acting, Double rod	
	Smooth cylinder	CA2Y-Z	Double acting, Single rod	

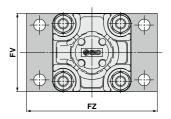
How to Order



Specifications: Same as standard type

Dimensions





			(mm)
Bore size (mm)	FT	FV	FZ
40	12	60	100
50	12	70	110
63	15	85	130
80	18	102	160
100	18	116	180

 Other dimensions are the same as flange on the rod side and head side of standard type.
 (Figure is the case of flange on the rod side.)



Made to Order Common Specifications: -XC29: Double Knuckle Joint with Spring Pin



Part of the CG1 series (model highlighted in red) is to be discontinued as of the end of February 2025. Please select the CG1-Z1 series instead.

36 Double Knuckle Joint with Spring Pin

Symbol -XC29

To prevent loosening of the double knuckle joint

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
		CM2-Z	Double acting, Single rod (1)	
	Air cylinder	CIVIZ-Z	Single acting (Spring return/extend) (1)	
		CM2W-Z	Double acting, Double rod	
CM2	Direct mount type	CM2R-Z	Double acting, Single rod (1)	
	Centralized piping type	CM2□□P	Double acting, Single rod	Web Catalog
	End lock cylinder	CBM2	Double acting, Single rod	web Catalog
	Smooth cylinder	CM2Y-Z	Double acting, Single rod	
		CG1-Z1	Double acting, Single rod	
CG1	Air cylinder	CG1-Z	Double acting, Single rod (1)	
		CG1-Z	Single acting (Spring return) (1) (2)	

	Series	Description	Model	Action	Vol. no. (for std model)
		Air cylinder	MB-Z*	Double acting, Single rod (1)	
	MB	Cylinder with end lock	MBB	Double acting, Single rod	
		Smooth cylinder	MBY-Z	Double acting, Single rod	
	MB1	Air cylinder	MB1-Z*	Double acting, Single rod (1)	
		Air cylinder	CA2-Z	Double acting, Single rod (1)	Web Catalog
	CA2	End lock cylinder	CBA2	Double acting, Single rod	
	CAZ	Air-hydro cylinder	CA2H	Double acting, Single rod	
		Smooth cylinder	CA2Y-Z	Double acting, Single rod	
	CV	Valve mounted air cylinder	CV3	Double acting, Single rod	
3	Except ø	125			

Note 2) Compatible with rubber bumper only

How to Order

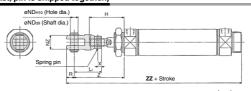
Standard model no. - XC29

Double knuckle joint with spring pin

Specifications: Same as standard type

Dimensions (For mounting bracket, pin is shipped together.)

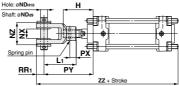
CM2 series



									(111111)
Bore size (mm)	Н	L ₁	ND _{H10}	NZ	R	Х	Z	ZZ	Spring pin
20	41	36	9+0.058	18	10	5	61	146	ø3 x 16L
25	45	38	9+0.058	18	10	5	65	150	ø3 x 16L
32	45	38	9+0.058	18	10	5	65	152	ø3 x 16L
40	50	55	12 +0.070	38	13	11	83	200	ø4 x 24L

* Other dimensions are the same as standard type.

CA2 series



												(mm)
Bore size (mm)	Н	L ₁	PX	PY	ZZ	RR1	øND	H10	d ₉	NX	NZ	Spring pin
40	51	55	11	84	192	13	12	+0.070 0	-0.050 -0.093	16 +0.3	38	ø4 x 24L
50	58	60	12	91	207	15	12	+0.070	-0.050 -0.093	16 +0.3	38	ø4 x 25L
63	58	60	12	91	218	15	12	+0.070	-0.050 -0.093	16 +0.3	38	ø4 x 25L
80	71	71	16	105	257	19	18	+0.070	-0.050 -0.093	28 +0.3	55	ø4 x 36L
100	72	83	16	118	282	21	20	+0.084	-0.065 -0.117	30 +0.3	61	ø4 x 40L

^{*} Dimensions except mentioned above are the same as standard type.



Note 1) Except cylinders with rod end bracket in How to Order

-XC30: Rod Side Trunnion



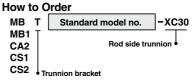
37 Rod Side Trunnion

Symbol -XC30

This cylinder shortens the distance between the fulcrum and the rod end by installing a trunnion bracket in front of the rod side cover.

Applicable Series

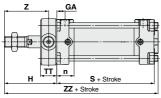
Series	Description	Model	Action	Note	Vol. no. (for std model)
	Standard type	MB-Z*1	Double acting, Single rod		
	Standard type	MBW-Z*1	Double acting, Double rod		
MB	Non-rotating rod type	MBK-Z	Double acting, Single rod		
	Cylinder with end lock	MBB	Double acting, Single rod		
	Smooth cylinder	MBY-Z	Double acting, Single rod		
	Standard tuna	MB1-Z*1	Double acting, Single rod		
MB1	Standard type	MB1W-Z*1	Double acting, Double rod		
	Non-rotating rod type	MB1K-Z	Double acting, Single rod		
	Air cylinder	CA2-Z	Double acting, Single rod		Web Catalog
CA2	End lock cylinder	CBA2*2	Double acting, Single rod		
	Smooth cylinder	CA2Y-Z	Double acting, Single rod		
	Standard type	CS1	Double acting, Single rod		
CS1	Stanuaru type	CS1W	Double acting, Double rod		
	Low friction	CS1Q	Double acting, Single rod	ø125 to ø160 only	
	Standard type	CS2	Double acting, Single rod	ø125 to ø160 only	
CS2	Stanuaru type	CS2W	Double acting, Double rod	ø125 to ø160 only	
	Smooth cylinder	CS2Y	Double acting, Single rod	ø125 to ø160 only	

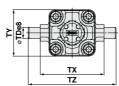


Specifications: Same as standard type

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

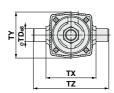


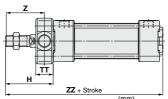




(mm) Symbol GA s TD_{e8} TT TX TY TZ z ΖZ n Bore size 15 -0.03 94.5 25 = 77.5 212.5

MB series





									(111111)
В	ore size	Н	øTDe8	TT	TX	TY	TZ	Z	ZZ
	32	47	12-0.032	17	50	49	74	38.5	135
	40	60	16-0.032	22	63	58	95	49	148
	50	66	16-0.032	22	75	71	107	55	164
	63	72	20-0.040	28	90	87	130	58	170
	80	86	20-0.040	34	110	110	150	69	204
	100	92	25-0.040	40	132	136	182	72	210

^{*} Dimensions except mentioned above are the same as standard type.



^{*1} Except ø125

^{*2} Only applicable to the type with a head side end lock

Made to Order Common Specifications: -XC30: Rod Side Trunnion

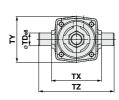


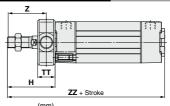
37 Rod Side Trunnion

Symbol -XC30

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

MB1 series

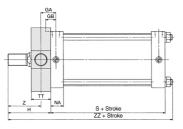


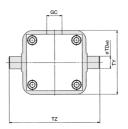


								(111111)
Bore size	Н	øTDe8	TT	TX	TY	TZ	Z	ZZ
32	47	12-0.032	17	50	49	74	38.5	135
40	60	16-0.032	22	63	58	95	49	148
50	66	16-0.032	22	75	71	107	55	164
63	72	20-0.040	28	90	87	130	58	170
80	86	20-0.040	34	110	110	150	69	204
100	92	25-0.040	40	132	136	182	72	210

* Dimensions except mentioned above are the same as standard type.

CS1 series

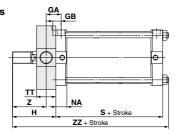


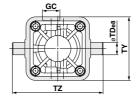


												(mm)
Bore size (mm) Symbol	GA	GB	GC	NA	S	øTDe8	TT	TY	TZ	Н	Z	ZZ
125	38	23	45	32	95	32 -0.050	50	164	234	113	88.0	227
140	40.5	23	45	32	95	36 -0.050	55	184	262	113	85.5	227
160	45.5	25.5	50	36	103	40 -0.050	60	204	292	123	93.0	248
180	45	25.5	50	36	108	45 -0.050	59	228	326	138	108.5	272
200	45	25.5	50	36	108	45 -0.050	59	257	355	138	108.5	272
250	54.5	30	60	46	138	56 -0.060 -0.106	69	325	447	163	128.5	331
300	59.5	30	70	46	143	67 -0.060	79	390	534	178	138.5	357

* Dimensions except mentioned above are the same as standard type.

CS2 series





												(mm)
Bore size (mm)	GA	GB	GC	NA	S	TDe8	TT	TY	TZ	Н	Z	ZZ
125	38	23	45	28.5	96	32 -0.050	50	164	234	112	87	221
140	40.5	23	45	28.5	96	36 -0.050	55	184	262	112	84.5	221
160	46	26	50	32.5	104	40 -0.050	60	204	292	122	92	241

-XC34: Non-rotating Plate with Workpiece Mounting Screw (No extended part on the rod end)



Symbol

-XC34

38 Non-rotating Plate with Workpiece Mounting Screw (No extended part on the rod end)

The plate has workpiece mounting screws.

The dimension FL, the distance between a non-rotating plate to piston rod end, has been eliminated.

The piston rod does not protrude from the plate.

Applicable model no. - XC34

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
	Non-rotating rod	CUK	Double acting, Single rod	
CU	Non-rotating rod	CUK	Single acting, Single rod (Spring return/extend)	Web Catalog
	Non-rotating rod/Long stroke	CUK	Double acting, Single rod	

Dimensions

Double acting, Single rod Single acting, Spring return Single acting, Spring extend 2 x KI NA O FK B T Z + stroke Z

(mm) Bore size В С FK FY ΚI NA NB Υ (mm) 13 22 11 20.5 M3 x 0 5 14 10.5 10 15 24 12 22 M3 x 0.5 11.5 16 M4 x 0.7 20 32 13 28 6 18 15.5 20 19.5 26 40 16 33 M4 x 0.7 25 32 50 20 43.5 M5 x 0.8 10 28 24.5 51.5 M5 x 0.8 30.5

																(mm)
Action			Double	acting		Single	acting (Spring	return)		Single acting (Spring extend)					
	F	н	Z			Z				Z						
Bore size	-	п	Without	With	Wit	hout sw	itch	V	ith swite	ch	Wit	hout sw	itch	W	ith switc	h
(mm)			switch	switch	5st	10st	15st	5st	10st	15st	5st	10st	15st	5st	10st	15st
6	8	9	42	42	47	52	57	47	52	57	52	62	67	52	62	67
10	8	9	45	45	50	55	65	50	55	65	55	65	80	55	65	80
16	8	9	39	49	44	49	59	54	59	69	59	69	84	69	79	94
20	8	9	45	55	50	55	65	60	65	75	55	65	80	65	75	90
25	10	11	51	61	56	61	71	66	71	81	61	71	86	71	81	96
32	12	13	55	65	60	65	75	70	75	85	65	75	90	75	85	100

^{*} Dimensions except mentioned above are the same as standard type.

Made to Order Common Specifications: -XC35: With Coil Scraper



Part of the CG1 series (model highlighted in red) is to be discontinued as of the end of February 2025. Please select the CG1-Z1 series instead.

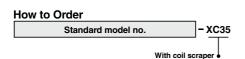
Symbol -XC35

39 With Coil Scraper

It gets rid of frost, ice, weld spatter, cutting chips adhered to the piston rod, and protects the seals, etc.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model
	Air audiadas	CM2-Z	Double acting, Single rod	Except with air cushion	
CM2	Air cylinder	CM2W-Z	Double acting, Double rod	Except with air cushion]
	Cylinder with end lock	CBM2	Double acting, Single rod	Lock in head end only (Except with air cushion)]
CG1	Air cylinder	CG1-Z1	Double acting, Single rod]
Cui	All Cylinder	CG1-Z	Double acting, Single rod]
МВ	Air cylinder	MB-Z	Double acting, Single rod	Except ø125	
WID	All Cylinder	MBW-Z	Double acting, Double rod	Except ø125]
MB1	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125	
IVIDI	Air cylinder	MBW-Z	Double acting, Double rod	Except ø125]
	Air audio de o	CA2-Z	Double acting, Single rod]
CA2	Air cylinder	CA2W-Z	Double acting, Double rod		
	Cylinder with end lock	CBA2	Double acting, Single rod		
CS1	Air audio de o	CS1	Double acting, Single rod		1
CSI	Air cylinder	CS1W	Double acting, Double rod		1
CS2	Air audio de o	CS2	Double acting, Single rod	Applicable to ø125 to ø250	1
032	Air cylinder	CS2W	Double acting, Double rod	Applicable to ø125 to ø160]
		CQ2-Z	Double acting, Single rod	Applicable to ø32 to ø100	Web Catalog
CQ2	Compact cylinder	CQ2W-Z	Double acting, Double rod	Applicable to ø32 to ø100]
CQZ		CQP2	Double acting, Single rod	Applicable to ø32 to ø100, Except with bracket]
	Long stroke	CQ2-Z	Double acting, Single rod	Applicable to ø32 to ø100]
RQ	Compact cylinder with air cushion	RQ	Double acting, Single rod	Applicable to ø32 to ø100]
	Cylinder with lock	MWB	Double acting, Single rod]
MWB	Cyllinder with lock	MWBW	Double acting, Double rod]
	Lock unit	MWB-UT	_	Both sides are equipped with a coil scraper]
CNA2	Cylinder with lock	CNA2	Double acting, Single rod]
CNG	Cylinder with lock	CNG	Double acting, Single rod]
CLS	Cylinder with lock	CLS	Double acting, Single rod	Applicable to ø125 to ø160 (ø180 to ø250 as standard)]
CLQ	Compact cylinder with lock	CLQ	Double acting, Single rod	Applicable to ø40 to ø100]
		MGPM-Z	Double acting	Applicable to ø20 to ø100]
MGP	Compact guide cylinder	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]



^{*} For MGP series, refer to page 1542.

Specifications: Same as standard type



-XC35: With Coil Scraper



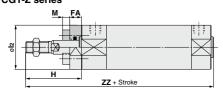
39 With Coil Scraper

Symbol -XC35

(mm)

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

CG1-Z1 series CG1-Z series



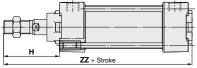
Bore	Str	oke range	FA	H	1	l ₂	М	Z	Z
size	CG1-Z1	CG1-Z	ГА	Male thread	Female thread	12	IVI	Male thread	Female thread
20		Up to 200 (up to 1500)	6	39	27	26	4	110 (118)	98 (106)
25		Up to 300 (up to 1500)	6	44	28	31	5	115 (123)	99 (107)
32	Up to		6	44	28	38	5	117 (125)	101 (109)
40	1000		7	54	29	47	3.5	134 (143)	109 (118)
50			7	62	30	58	4.5	154 (166)	122 (134)
63			7	62	30	72	5.5	154 (166)	122 (134)

Note) (): CG1-Z 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).

The dimensions of the CS2 series are the same as the standard type.

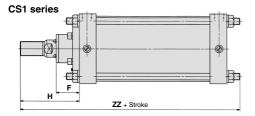
MB series



		(mm)
Bore size	Н	ZZ
32	47	135
40	58	146
50	67	165
63	67	165
80	81	199
100	81	199
63 80	67 81	165 199

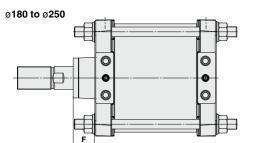
MB1 series			
	1 1 1		11114
	<u>l</u>		LF
Н		-	
٠ ,	' z	Z + Stroke	

		(mm)
Bore size	Н	ZZ
32	47	135
40	58	146
50	67	165
63	67	165
80	81	199
100	81	199



						(mm)	
Bore size	With	out auto s	switch	With auto switch			
Dole Size	F	Н	ZZ	F	Н	ZZ	
125	50	120	245	50	120	245	
140	50	120	245	50	120	245	
160	50	130	266.5	50	130	266.5	
180	55	145	291	55	145	295	
200	55	145	291	55	145	300	
250	69	175	357.5	_	_	_	
300	69	190	387.5	_	_	_	

CS2 series Bore sizes \emptyset 125 to \emptyset 160 have the same dimensions as the standard type.



	(mm)
Bore size	F
180	37
200	41
250	52

SMC

-XC35: With Coil Scraper

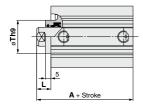


39 With Coil Scraper

Symbol -XC35

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

CQ2 series



						(mm)
		Α		L	_	
Bore size	Standard type,	Axial piping type	Long stroke	Standard type, Axial piping type	Long stroke	т
	50 stroke or less	75, 100 stroke	125 to 300 stroke	100 stroke or less	125 to 300 stroke	
32	35 (45)	45	62.5	12	17	23+0 -0.052
40	41.5 (51.5)	51.5	72	12	17	28+0
50	43.5 (53.5)	53.5	73.5	13	18	35+0
63	49 (59)	59	75	13	18	35+0.062
80	58.5 (68.5)	68.5	86	15	20	43+0.062
100	70 (80)	80	97.5	17	22	59 ⁺⁰ _{-0.074}

^{* ():} Denotes the dimensions with auto switch magnet.

-XC35: With Coil Scraper

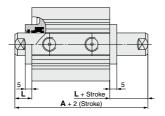


39 With Coil Scraper

Symbol -XC35

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

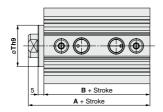
CQ2W series



Bore						
size	50 stroke or less	75, 100 stroke	L			
32	54.5 (64.5)	64.5	12			
40	64 (74)	74	12			
50	66.5 (76.5)	76.5	13			
63	68 (78)	78	13			
80	81 (91)	91	15			
100	94.5 (104.5)	104.5	17			
* (): Denote	* (): Denotes the dimensions with auto switch magnet					

* (): Denotes the dimensions with auto switch magne

RQ series



			(mm)
Bore size (mm)	Α	В	Th9
32	49	37	23 _0.052
40	56	44	28 0 -0.052
50	62.5	49.5	35 _0.062
63	68	55	35 _0.062
80	78.5	63.5	43 _0.062
100	93	76	59 _{-0.074}

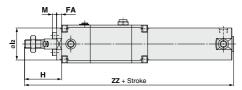
CBA2 series	

		(mm)			
Dana sina (*****)	~~	f			
Bore size (mm)	øe	With rod side locking, With both-side locking			
40	28	14.5			
50	32	16.5			
63	32	14			
80	37	16			
100	44	17.5			

The above diagram shows the rod side locking and manual releasing non-locking types.

The CBA2 series head side locking type is the same as the standard type. The dimensions of the manual releasing non-locking type are the same as indicated above.

CNG series



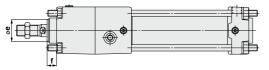
Bore size (mm)	FA	M	l ₂	Н	ZZ
20	6	4	26	39	182
25	6	5	31	44	197
32	6	5	38	44	200
40	7	3.5	47	54	225

	ZZ
Long stroke	190
	205
	208
	234

- * Other dimensions are the same as the standard type. (The figure shows a type with a rubber bumper.)
- 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.

Bore size (mm)	е	f
40	28	12
50	32	12.5
63	32	12.5
80	37	16.5
100	44	17
•		

CNA2 series



1540



-XC35: With Coil Scraper

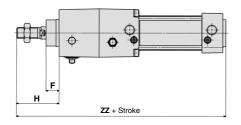


39 With Coil Scraper

Symbol -XC35

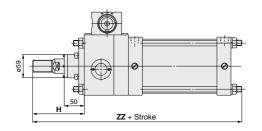
Dimensions (Dimensions other than below are the same as standard type.)

MNB series



Bore size (mm)	F	Н	ZZ
32	16	47	205
40	18	56	221
50	19	63	250
63	19	63	264
80	25	77	326
100	25	77	346

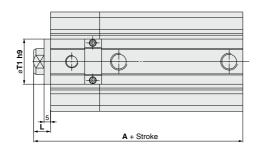
CLS series



Bore size (mm)	Н	ZZ
125	120	355
140	120	355
160	130	398.5

* Ø180 to Ø250: A coil scraper is attached as standard.

CLQ series



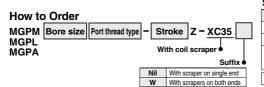
Bore size			4	L	T1 h9
(mm)	(mm)	Without auto switch	With auto switch	_	11119
40	10 to 50	75.5	85.5	12	28_0.052
40	75,100	85.5	65.5	12	20_0.052
50	10 to 50	78.5	88.5	13	35_0.062
50	75,100	88.5	00.5		35_0.062
63	10 to 50	87	97	13	35_0.062
- 03	75,100	97	97		00_0.062
80	10 to 50	101.5	111.5	15	43_0.062
80	75,100	111.5	111.5	15	43_0.062
100	10 to 50	120	130	17	59_0 _{0.074}
100	75,100	130	130	''	ິນອ _{−0.074}

-XC35: With Coil Scraper



39 With Coil Scraper

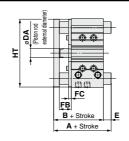
Symbol -XC35

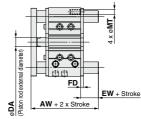


Specifications

Applicable s	series	MGPM	MGPL, MGPA	
Bearing type		Slide bearing	Ball bushing bearing	
Bore size (mm)		20, 25, 32, 40, 50, 63, 80, 100		
Minimum operating	With single end	0.12 MPa		
pressure	With both ends	0.14 MPa		
Specifications other	er than above	Same as st	andard type	

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





For cylinder with both sides scraper

Common Dimensions:

WGFW, WGFL, WGFA (IIIIII)									
Bore size	В	DA	FB	F	С				
(mm)	-		гь	MGPM	MGPL MGPA				
20	63	10	18	5	5				
25	63.5	10	17	6	5				
32	69.5	14	22	6	5				
40	76	14	22	6	5				
50	82	20	26	6	5				
63	87	20	26	6	5				
80	106.5	25	34	8	6				
100	126	30	41	9	6				

With Both Sides Scraper Dimensions:

AW, E	(mm)			
Bore size (mm)	AW	EW	FD	мт
20	74	6	5	6
25	74.5	6	5	7
32	82.5	7	6	9
40	89	7	6	8.5
50	95	7	6	11
63	100	7	6	11
80	120.5	8	6	14
100	143	8	9	16

MGPM (Slide bearing) A, E, HT Dimensions								
D'		Α			E			
Bore size (mm)	50 st	Over 50 st	Over	50 st	Over 50 st	Over	HT	
(11111)	or less	to 200 st	200 st	or less	to 200 st	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	110	
40	85	103.5	139.5	9	27.5	63.5	118	
50	98.5	119.5	160.5	16.5	37.5	78.5	146	
63	98.5	119.5	160.5	11.5	32.5	73.5	160	
80	114.5	141.5	190.5	8	35	84	199	
100	136.5	161.5	200.5	10.5	35.5	74.5	236	

MGPL, MGPA (Ball bushing bearing) A, E, HT Dimensions									(mm)	
	A E									
	Bore size (mm)	30 st	Over 30 st	Over 100 st	Over	30 st	Over 30 st	Over 100 st	Over	HT
	(11111)	or less	to 100 st	to 200 st	200 st	or less	to 100 st	to 200 st	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

		Α			E				
Bore size (mm)	50 st	Over 50 st	Over 100 st	Over	50 st	Over 50 st	Over 100 st	Over	HT
(11111)	or less	to 100 st	to 200 st	200 st	or less	to 100 st	to 200 st	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

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

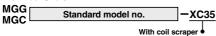
-XC35: With Coil Scraper



39 With Coil Scraper

Symbol -XC35

How to Order



Specifications: Same as the standard type of each series

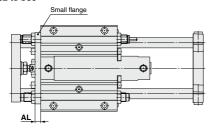
Note 1) Except ø20 and ø25

Note 2) Coil scrapers are attached to the piston rod and guide rods (front and back).

Dimensions (Dimensions other than below and the MGG□B series (Ø63 to Ø100) are the same as standard type.)

MGG□B series

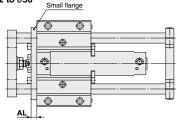
ø32 to ø50



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

MGC□B series





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

SMC

-XC36: With Boss in Rod Side

-XC37: Larger Throttle Dia. of Connection Port



Symbol

-XC37

40 With Boss in Rod Side

Symbol -XC36

Cylinder with boss in rod side

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
		coe	Double acting, Single rod	
cas	S Compact cylinder		Single acting (Spring return/extend)	
		cqsw	Double acting, Double rod	
		CO0 7	Double acting, Single rod	
	Compact cylinder	Double acting, Single rod		
		CQ2W-Z Double actin		Web Catalog
CQ2	Long stroke Note 4)	CQ2	Double acting, Single rod	
Cuz	Non-rotating rod Note 4)	CQ2K	Double acting, Single rod	
	Non-rotating rou	CQS Double acting, Single rod		
	Axial piping type			
	(Centralized piping type)	CQP2	Single acting (Spring return/extend)	

Note 1) For the double rod type, it comes with boss for both sides.

Note 2) Except with bracket

Note 3) ø125 or more is excluded in CQ2

Note 4) The standard model can be used for long strokes and non-rotating rod types (single rod or double rod).

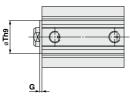
How to Order

XC36 Standard model no.

With boss in rod side

Specifications: Same as standard type

Dimensions



* Dimensions except mentioned above are the same as standard type.

				(mm)
Series	C	Q 2	cqs	
Bore size (mm)	Th9	G	Th9	G
12	15 -0.043	1.5	15 -0.043	1.5
16	20 -0.052	1.5	20 -0.052	1.5
20	13 -0.043	2	13 -0.043	2
25	15 _0.043	2	15 _0.043	2
32	21 _0.052	2	_	_
40	28 -0.052	2	_	_
50	35 -0.062	2	_	_
63	35 -0.062	2	_	_
80	43 -0.062	2	_	_
100	59 -0.074	2	_	_

41 Larger Throttle Diameter of Connection Port

This is a cylinder with a piping port larger than the standard type.

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
		CG1-Z	Double acting, Single rod	
CG1	Double rod type	CG1W-Z	Double acting, Double rod	Web Catalog
MGG	Guide Cylinder	MGG	Double acting	Web Catalog
MGC	Guide Cylinder	MGC	Double acting	

Note 1) Except ø80, 100

How to Order

CG1 Standard model no.

Larger throttle diameter of connecting port



Larger throttle diameter of connecting port

Specifications: Same as standard type

Dimensions (Throttle diameter of connection port)

Dimensions other than below are the same as standard type.

CG1 Series (mm)								
Bore size (mm)	With rubber bumper	With air cushion	Standard type					
20	5	3	(2.1)					
25	5	3.5	(2.5)					
32	6	6	(3.3)					
40	7	7	(3.9)					
50	9	9	(4.5)					
63	9	9	(5.7)					

* Use external stopper, etc. not to be damaged with cylinder cover directly if exceeding the range of kinetic energy absorption.

MGG Series (mm)						
Bore size (mm)	Throttle dia. (ø)					
20	5					
25	5					
32	6					
40	7					
50	9					
	_					

MGC Series (mm)						
Bore size (mm)	Throttle dia. (ø)					
20	3					
25	3.5					
32	6					
40	7					
50	9					

-XC38: Vacuum (Rod through-hole)



42 Vacuum (Rod through-hole)

Symbol -XC38

Through-hole of hollow rod can be used as the passage of vacuum air.

Applicable Series

Series	Description	Description Model Action		Note	Vol. no. (for std model)
CM2	M2 Air cylinder/Standard type CM2W-Z Double acting, Double rod		Double acting, Double rod		Web Catalog
MTS	Precision cylinder	MTS	Double acting, Single rod	•	

How to Order

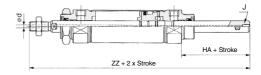


Specifications: Same as standard type

Construction/Dimensions

(Other dimensions are the same as standard.)

CM2W series



Bore size (mm)	d	J	HA	ZZ
20	3	M5 x 0.8	32	135
25	3	M5 x 0.8	32	139
32	3	M5 x 0.8	32	141
40	4	Rc1/8	36	174

Stroke (P) - XC38 MTS8 -Axial piping type Vacuum (Rod through-hole)



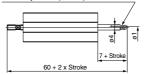
Specifications

Bore size (mm)	8
Piping direction	Standard piping type, Axial piping type
Rod end configuration	Female thread

Dimensions

MTS8 series

Use ø4/ø2.5 urethane tube (TU0425) or use soft nylon tube (TS0425).



▲ Caution

1. Blow air for through-hole.

Flush the through-hole which is a passage for air pressure and vacuum to prevent dust.



-XC42: Built-in Shock Absorber in Head Cover Side



43 Built-in Shock Absorber in Head Cover Side

Symbol -XC42

A type of the CG1 series air cylinder in which a special shock absorber is enclosed in the head portion so that its ability to absorb energy during the retraction of the cylinder is considerably greater than the current air cushion.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
CG1	CG1 Air cylinder CG		Double acting, Single rod	Except head side trunnion and clevis types	Web Catalog

How to Order



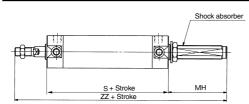


Specifications

Piston speed	50 to 1000 mm/s
Additional specifications	Same as standard type

^{*} On the axial foot and head side flange types, the bracket is mounted at the time Oof shipment. Others are shipped together (but not assembled).

Construction/Dimensions (Other dimensions are the same as CG1 long stroke cylinder.)



The shock absorber service life is different from that of the CG1 cylinder. Refer to the RB series Specific Product Precautions for the replacement period.

					(mm)
Bore (mm)	Stroke range	Shock absorber	S	МН	ZZ
20	10 to 350	RBAC0806	77	23.5	135.5
25	10 to 400	RBAC1007	77	31	148
32	15 to 450	RBAC1412	79	55	174
40	15 to 800	RBAC2015	87	62.5	199.5
50	15 to 1200	RBAC2015	102	55.5	215.5
63	25 to 1200	RBAC2725	102	92.5	252.5

^{*} Shock absorbers are consumables.

The specifications for shock absorbers are the same as RBC□□□□, but use RBAC□□□when an external pressure is applied such as for a built-in cylinder.

The maximum absorption energy may decrease depending on the operating conditions.

-XC51: With Hose Nipple

-XC52: Mounting Nut with Set Screw



44 With Hose Nipple

Symbol -XC51

45 Mounting Nut with Set Screw

Symbol -XC52

The one with hose nipple attached in order to save time for assembly at the time of shipment.

In order to prevent the mounting nut from being loosen, set screw should be tighten from the two directions to fix the mounting nut.

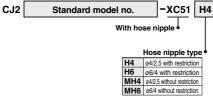
Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
		010.7	Double acting, Single rod	
	Air cylinder	CJ2-Z	Single acting (Spring return/extend)	
		CJ2W-Z	Double acting, Double rod	
	Non-rotating	CJ2K-Z	Double acting, Single rod	
	rod type	CJZK-Z	Single acting (Spring return/extend)	
CJ2	With speed	CJ2Z-Z	Double acting, Single rod	Web Catalog
	controller	CJ2ZW-Z	Double acting, Double rod	
	Direct mount type	CJ2RA-Z	Double acting, Single rod	
	Direct mount type	GJZHA-Z	Single acting, (Spring return/extend)	
	Non-rotating rod,	CJ2RK-Z	Double acting, Single rod	
	Direct mount type	OUZINEZ	Single acting, (Spring return/extend)	

Applicable Series

Series	Description	Action	Action	Vol. no. (for std model)
		0140.7	Double acting, Single rod	
	Air cylinder	CM2-Z	Single acting (Spring return/extend)	
		CM2W-Z	Double acting, Double rod	
	Non-setation	CM2K-Z	Double acting, Single rod	
CM2	Non-rotating rod type	CIVIZK-Z	Single acting (Spring return/extend)	Web Catalog
CIVIZ	31	CM2KW-Z	Double acting, Double rod	Web Catalog
	Centralized piping type	CM2□□P-Z	Double acting, Single rod	
	End lock cylinder	CBM2	Double acting, Single rod	
	Smooth cylinder	CM2Y-Z	Double acting, Single rod	
	Low speed cylinder	CM2X-Z	Double acting, Single rod	

How to Order



Mounting nut with set screw

XC52

Specifications: Same as standard type

Applicable Hose Nipple Type

- lebenesia con contrata								
Symbol	Applicable bore size (mm)	Function	Hose nipple part no.					
H4	ø4/2.5	With a fixed	CJ-5H-4					
Н6	ø6/4	orifice (ø0.8)	CJ-5H-6					
MH4	ø4/2.5	Without fixed	M-5H-4					
мн6	ø6/4	orifice	M-5H-6					

Specifications: Same as standard type

Standard model no.

Dimensions

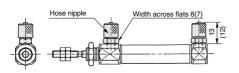
How to Order

CM₂

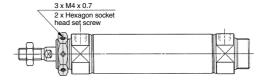
(Dimensions other than below are the same as standard type.)

Dimensions

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



* The above figure shows the Ø6/4 hose nipple mounting dimensions. The dimensions in () show those for the ø4/2.5 hose nipple.







Made to Order Common Specifications: -XC56: With Knock Pin Holes



46 With Knock Pin Holes

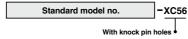
Symbol -XC56

Cylinder with knock positioning pin hole.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
MGPW	Compact guide cylinder	MGPW	Double acting		
MGG	Guide cylinder	MGG™B	Double acting	For basic type only	
MGC	Guide cylinder	MGC MB	Double acting	For basic type only	
MGQ	Compact guide cylinder	MGQ	Double acting	For basic type only	
		MY1H-Z	Linear guide		Web Catalog
		MY1C	Cam follower guide		
MY	Mechanically jointed rodless cylinder	MY1H	Linear guide		
	Tourse symmetri	MY2H	Linear guide type (Single axis)		
		MY2HT	Linear guide type (Double axis)		

How to Order

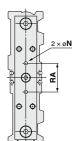


Specifications: Same as standard type

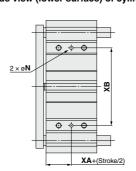
Dimensions (Dimensions other than below are the same as standard type.)

MGPW series ø20 to ø63

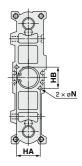
Upper view of plate



Side view (lower surface) of cylinder







MGPW S	eries					(mm)
Bore size (mm)	НА	НВ	N	RA	XA	ХВ
20	25±0.02	25±0.02	3 ^{H7} +0.010 depth 6	28±0.02	17	76±0.03
25	28±0.02	28±0.02	4 ^{H7} ^{+0.012} depth 6	34±0.02	18	92±0.03
32	34±0.02	34±0.02	4 ^{H7} ^{+0.012} depth 6	42±0.02	19	112±0.03
40	38±0.02	38±0.02	4 ^{H7} +0.012 depth 6	50±0.02	21	128±0.04
50	49±0.02	49±0.02	5H7 +0.012 depth 8	66±0.03	21	168±0.04
63	58±0.03	58±0.03	5 ^{H7} ^{+0.012} depth 8	80±0.03	25	196±0.04

Made to Order Common Specifications: -XC56: With Knock Pin Holes

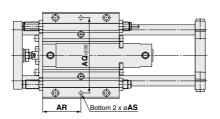


46 With Knock Pin Holes

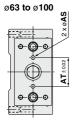
Symbol -XC56

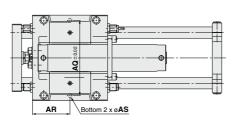
Dimensions (Dimensions other than below are the same as standard type.)



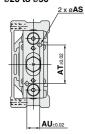


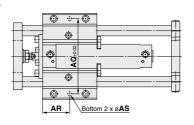
MGG Series							
AQ	AR	AS	AT				
92	45	5 ^{H7} ^{+0.012} depth 6	36				
113	50	6H7 +0.012 depth 8	45				
118	60	6 ^{H7} ^{+0.012} depth 8	48				
150	70	8 ^{H7} ^{+0.015} depth 11	56				
170	85	10 ^{H7} ^{+0.015} ₀ depth 13	68				
200	100	$10^{\text{H7}} {}^{+0.015}_{0} \text{depth} 13$	74				
234	115	12H7 +0.018 depth 15	92				
274	140	12H7 +0.018 depth 15	106				
	92 113 118 150 170 200 234	AQ AR 92 45 113 50 118 60 150 70 170 85 200 100 234 115	AQ AR AS 92 45 5 ^{1/7 + 0.012} depth 6 113 50 6 ^{1/7 + 0.012} depth 8 118 60 6 ^{1/7 + 0.012} depth 8 150 70 8 ^{1/7 + 0.015} depth 11 170 85 10 ^{1/7 + 0.015} depth 12 200 100 10 ^{1/7 + 0.015} depth 13 234 115 12 ^{1/7 + 0.016} depth 15				





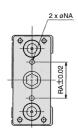
MGC series ø20 to ø50

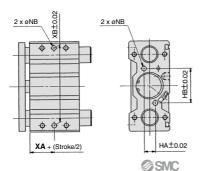




MGC Series							
Bore size (mm)	AQ	AR	AS	AT	AU		
20	90	37.5	5 ^{H7} ^{+0.012} depth 6	45	15		
25	103	40	6 ^{H7} ^{+0.012} depth 8	55	20		
32	118	42.5	6 ^{H7} ^{+0.012} depth 8	60	20		
40	140	47.5	8 ^{H7} 00015 depth 11	70	22		
50	170	65	8H7 +0.015 depth 11	85	30		

MGQ series





MGQ Series								
Bore size (mm)	на	нв	NA	NB	RA	XA	ХВ	
12	0	19	3H7+0.010 depth 4	3H7 +0.010 depth 4	21	14.5	50	
16	7	22	3H7+0.010 depth 4	3 ^{H7 +0.010} depth 4	22	16.5	54	
20	9	26	4 ^{H7+0.012} depth 5	4 ^{H7} +0.012 depth 5	28	18	64	
25	12	30	4 ^{H7+0.012} depth 5	4 ^{H7} *0.012 depth 5	34	19	76	
32	14	44	6 ^{H7+0.012} through	6 ^{H7 +0.012} depth 8	46	18.5	100	
40	14	54	6H7+0.012 through	6H7 +0.012 depth 8	50	22	110	
50	20	62	8 ^{H7+0.015} through	8 ^{H7 +0.015} depth 11	56	22	124	
63	30	74	8 ^{H7 +0.015} through	8 ^{H7 +0.015} depth 11	66	24	132	
80	36	94	10H7+0.015through	10 ^{H7+0.015} depth 13	84	28.5	166	
100	40	116	10HT+0.015through	10 ^{H7+0.015} depth 13	110	32.5	200	

-XC56: With Knock Pin Holes

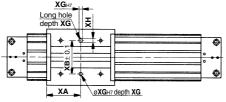


46 With Knock Pin Holes

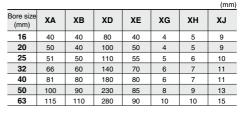
Symbol -XC56

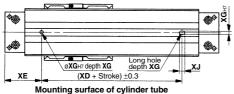
Dimensions (Dimensions other than below are the same as standard type.)

MY1C series

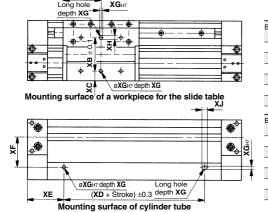


Mounting surface of a workpiece for the slide table





MY1H-Z series Ø25, Ø32, Ø40 MY1H series Ø10, Ø16, Ø20



					(mm)
Bore size (mm)	XA	ХВ	хс	XD	XE
10	25	33	3.5	70	20
16	40	40	7.5	80	40
20	50	40	14.5	100	50
25	57	50	14.5	110	55
32	70	60	15	140	70
40	85	80	20.5	180	80

Bore size (mm)	XF	XG	хн	XJ
10	21.5	3	4	5
16	30	4	5	7
20	39	4	5	7
25	45	5	6	8
32	60	6	7	9
40	60.5	6	7	a

Made to Order Common Specifications: -XC56: With Knock Pin Holes



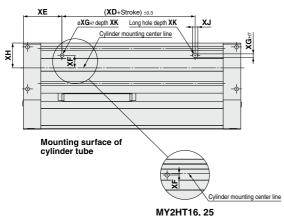
46 With Knock Pin Holes

Symbol -XC56

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

MY2H series Ø16, Ø25, Ø40 MY2HT series Ø16, Ø25, Ø40

* The workpiece mounting surface of the slide table supports knock pin holes as standard.



MY2H se	ries						(mm)
Bore size (mm)	XD	ΧE	XF	ХG	хн	ΧJ	хк
16	80	40	11.5	4	23.5	6	5
25	100	55	17.5	5	35.5	7.5	5
40	170	80	25.5	6	45.5	9	8

MY2HT series (m												
Bore size (mm)	XD	XE	XF	XG	хн	ΧJ	хк					
16	80	40	3.5	5	43	7.5	5					
25	100	55	2	6	61	9	8					
40	170	80	3	8	75	12	12					

-XC57: Rodless Cylinder with Floating Joint



The CY3B series is to be discontinued as of May 2025. Please select the CY3B-Z series instead.

Symbol -XC57

47 Rodless Cylinder with Floating Joint

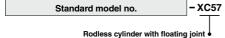
A special floating joint has been added to the CY3B series, which reduces the amount of labor that is required for connecting the cylinder to the guide of another shaft (load side).

The bolts used for joining the floating joint to the load can be secured either from above or below. (CY3B (-Z) with a ø6 or ø10 bore must be secured from above.)

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
СҮЗ		CY3B-Z	Double acting	
	Magnetically coupled rodless cylinder	CY3B	Double acting	
	Todiess cylinder	CY3R	Double acting	Web Catalog
REA	Oire and a second and an	REA	Double acting	web Catalog
	Sine rodless cylinder	REAR	Double acting	
REB	Sine rodless cylinder	REBR	Double acting	

How to Order



Note) The body of this cylinder is for connecting to the floating joint so that it cannot be connected to the body of the standard type.

Specifications: Same as standard type



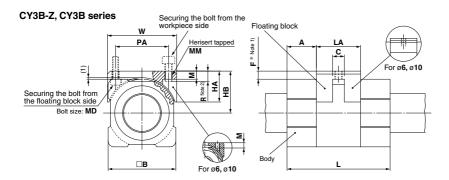
-XC57: Rodless Cylinder with Floating Joint

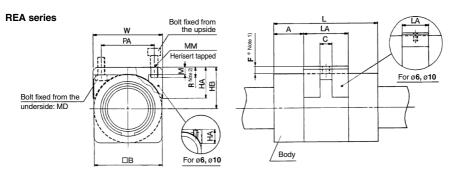


47 Rodless Cylinder with Floating Joint

Symbol -XC57

Construction/Dimensions (Other dimensions are the same as standard.)





Bore size (mm)	Α	□B	С	F*(1)	HA	НВ	L	LA	MM	MD	M	PA	R (2)	W
6	10	17	_	2.5	6.3	11	35	15	M3 x 0.5 x 3L	_	3	12	_	18
10	10	25	_	2.5	9.5	15	38	18	M3 x 0.5 x 3L	_	3.5	17	_	26
15	16	35	6.5	5.5	16.5	23	57	25	M4 x 0.7	МЗ	4.5	25	6	36
20	18	36	6.5	5.5	17	23.5	66	30	M4 x 0.7	МЗ	4.5	27	6	37
25	20	46	8.0	5.5	21	28.5	70	30	M5 x 0.8	M4	5.5	36	7	47
32	22.5	60	9.5	6.0	27.5	36	80	35	M6 x 1.0	M5	6.5	47	8	61
40	26	70	9.5	6.0	28.5	41	92	40	M6 x 1.0	M5	6.7	55	8	71
50	35	86	11	6.0	35	49	110	40	M8 x 1.25	M6	8.5	65	11	87
63	36	100	18	7.0	42	57	122	50	M8 x 1.25	M6	10	80	11	101

- Note 1) With dimension F*, the amount of clearance between the body and the floating joint is 1 mm. The self weight deflection of the cylinder tube is not taken into account. Before operating the cylinder, determine the proper value by taking the amount of self weight deflection and the amount of off-centering from the other shaft into concludation.
- Note 2) When the bolts are secured from above, be aware that if the cylinder is operated when dimension R (on 66 and o10, 3 mm or over) is exceeded, the end of the bolt could come in contact with the body, without being able to achieve the floating effect.



-XC57: Rodless Cylinder with Floating Joint

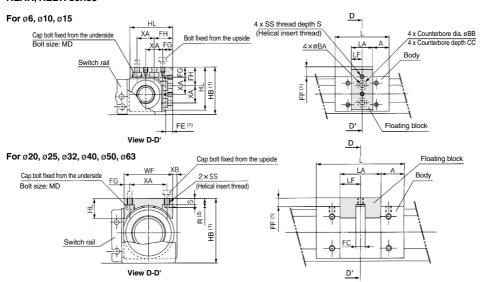


47 Rodless Cylinder with Floating Joint

Symbol -XC57

Construction/Dimensions

CY3R series REAR, REBR series



																					(mm)
Bore size (mm)	Α	BA	ВВ	СС	FC	FE ⁽¹⁾	FF ⁽¹⁾	FG	FH	HB ⁽¹⁾	HL	L	LA	LF	MD	R ⁽²⁾	S	SS	WF	XA	ХВ
6	9.5	3.4	6.5	3.3	_	5	7	5.5	10.5	26	23	34	15	7.5	М3	_	3.5	M3 x 0.5	_	10	_
10	11.5	3.4	6.5	3.3	_	5	7	7	13	33	30	38	15	7.5	МЗ	_	3.5	M3 x 0.5	_	12	_
15	18	4.5	8	4.4	_	4.5	6.5	7.5	14.5	38.5	35.5	53	17	8.5	M4	_	4.5	M4 x 0.7	_	14	_
20	16.5	_	_	_	6.5	_	6	4	_	45	14	62	29	14.5	М3	7	4.5	M4 x 0.7	34	26	3
25	20.5	_	_	_	8	_	7	4	_	51	17	70	29	14.5	M4	8	5.5	M5 x 0.8	39	31	3
32	21	_	_	_	9.5	_	7.5	4.5	_	62.5	22	76	34	17	M5	10	6.5	M6 x 1	50	41	3
40	25.5	_	_	_	9.5	_	7.5	7.5	_	74.5	28	90	39	19.5	M5	10	6.5	M6 x 1	60	45	3
50	35.5	_	_	_	11	_	7.5	9	_	92.5	38	110	39	19.5	M6	15	10	M8 x 1.25	78	60	3
63	34.5	_	_	_	18	_	7.5	10	_	104.5	39	118	49	24.5	M6	15	10	M8 x 1.25	90	70	3

Note 1) With dimension FE, FF, and HB, the amount of clearance between the body and the floating joint is 1 mm. The self weight deflection of the cylinder tube is not taken into account. Before operating the cylinder, determine the proper value by taking the amount of self weight deflection and the amount of ff-centering with the other shaft into consideration.

Note 2) When the bolts are secured from above, be aware that if the cylinder is operated when dimension R is exceeded, the end of the bolt could come in contact with the body, without being able to achieve the floating effect.



-XC65: Made of Stainless Steel (Combination of XC7 and XC68)



48 Made of Stainless Steel (Combination of XC7 and XC68)

Symbol -XC65

Suitable for the cases it is likely to generate rust by being immersed in the water and corrosion.

Applic	able	Series
--------	------	--------

Series	Description	Model	Action	Note	Vol. no. (for std model)
	Air cylinder	MB-Z	Double acting, Single rod	Except ø125	
MB	All Cylinder	MBW-Z	Double acting, Double rod	Except ø125	
	Smooth cylinder	MBY-Z	Double acting, Single rod		
MB1	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125	
IVIDI	All Cylinder	MB1W-Z		Except ø125	
	Air cylinder	CA2-Z	Double acting, Single rod		Web Catalog
	All Cylinder	CA2W-Z	Double acting, Double rod		
CA2	Air-hydro cylinder	CA2H	Double acting, Single rod		
	Air-riyaro cylinder	CA2HW	Double acting, Double rod		
	Smooth cylinder	CA2Y-Z	Double acting, Single rod		
CV	Valve mounted cylinder	CV3	Double acting, Single rod		

Specifications

Parts changed to stainless steel	Tie-rod, Tie-rod nut, Bracket mounting nut, Spring washer, Cushion valve, Retaining ring, Piston rod (with hard chrome plated), Rod end nut					
Maximum manufacturable stroke (mm)	Double acting, Single rod: 1600 Double acting single rod with rod boot: 1000					
Specifications other than above and external dimensions	Same as standard type					

How to Order

Standard model no. - XC65

Made of stainless steel (Combination of XC7 and XC68)

-XC67: Dust Seal Band NBR Lining Specifications

-XC68: Made of Stainless Steel (With Hard Chrome Plated Piston Rod)

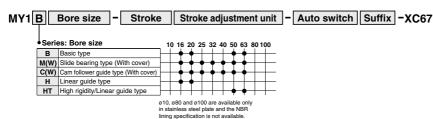


49 Dust Seal Band NBR Lining Specifications

Symbol -XC67

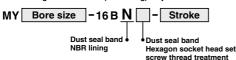
The standard vinyl chloride lining specification is changed to NBR lining Oil resistance and peeling resistance are improved.

Note) Please consult with SMC for specific details on oil resistance.



Example) MY1B40G-300L-Z73-XC67

For ordering dust seal band (NBR lining) only



Nil Black zinc chromated
W Nickel plated
For details, refer to "Dust seal band" in the construction of each series.

Applicable Series

MY1B Basic type			
Mechanically jointed MY1M(W) Slide bearing type (With cover)			
MY1C(W) Cam follower guide type (With cover) Web Ci	Web Catalog		
MY1H Linear guide type			
MY1HT High rigidity/Linear guide type			

Example) MY25-16BNW-300

Made of Stainless Steel (With Hard Chrome Plated Piston Rod)

Symbol

-XC68

Suitable for the cases it is likely to generate rust by being immersed in the water and corrosion.

Applicable Series

	10.0 001.00			
Series	Description	Model	Action	Vol. no. (for std model)
	Standard type	MB-Z	Double acting, Single rod	
MB	Standard type	MBW-Z	Double acting, Double rod	
	Smooth cylinder	MBY-Z	Double acting, Single rod	
MB1	Ctandard tuna	MB1-Z	Double acting, Single rod	
IVIDI	Standard type	MB1W-Z	Double acting, Double rod	
	Ote and a self to see	CA2-Z	Double acting, Single rod	
CA2	Standard type	CA2W-Z	Double acting, Double rod	Web Catalog
	Smooth cylinder	CA2Y-Z	Double acting, Single rod	
CS1	Standard type	CS1	Double acting, Single rod	
	Ote and and the second	CS2	Double acting, Single rod	
CS2	Standard type	CS2W	Double acting, Double rod	
	Smooth cylinder	CS2Y	Double acting, Single rod	
MWB	Lock unit	MWB-UT	_	

How to Order

Standard model no.	- XC68

Made of stainless steel (With hard chrome plated piston rod)

Specifications

Parts changed to stainless steel	Piston rod, Rod end nut
Specifications other than above and external dimensions	Same as standard

Note) A rod end nut (stainless steel) only comes with the series that indicate that a rod end nut is included.

Series De MB. MB1

Double acting single rod with rod boot

1000

(mm)

CA2		1000	1000	
			(mm)	
Series	Bore size	Double acting, Single rod	Double acting single rod with rod boot	
	125 to 160	1600	1600	
CS1	180	1569	1569	
CSI	200	908	998	

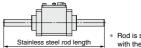
Double acting, Single rod

1600

CS1	180	1569	1569	
CS2	200	998	998	
CSZ	250	813	813	
	300, 320	495	495	
MWP LIT (Look unit) Steinless Steel Bod Longth				

MWB-UT (Lock unit) Stainless Steel Rod Length

Model	Min. length	Max. length	Note
32	250 mm	1800 mm	
40	250 mm		Can be
50	300 mm		manufactured in increments of 1 mm
63	300 mm	2500 mm	up to the maximum
80	300 mm		length.
100	300 mm		



 Rod is shipped together with the product.



Made to Order Common Specifications: -XC69: MGP Series with Shock Absorber

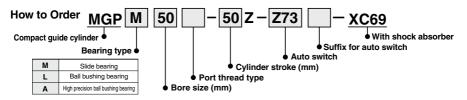


51 MGP Series with Shock Absorber

Symbol -XC69

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)	
		MGPM-Z	Double acting			
MGP	Compact guide cylinder	MGPL-Z	Double acting	Except ø12 to ø40	Web Catalog	
		MGPA-7	Double acting			



Specifications of Extension Adjusting Mechanism

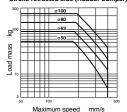
Bore size (mm)	50, 63	80, 100	
Shock absorber model	RB2015	RB2725	
Maximum energy absorpotion (J)	58.8	147	
Stroke adjustment range (mm)	0 to -25	0 to -30	
Piston speed	ton speed Refer to the graph below.		

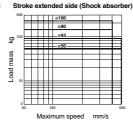
Soft type RJ series type (-XB22) is also available. For details, refer to -XB22.

Allowable Kinetic Energy

Load mass and cylinder speed should be observed within the range given in the graph below.

Stroke retracted side (Rubber bumper)





The shock absorber service life is different from that of the MGP cylinder. Refer to the RB series Specific Product Precautions for the replacement period.

Mounting

Do not allow hands or fingers near the cylinder during its operation.

If finger, etc. were to get caught between shock absorber and body, it might damage on the human body and the peripheral equipment. Take protective measures by mounting a protective cover, etc. as necessary.

Basically, avoid bottom-mounting a cylinder.

Mounting space is limited owing to the guide rod and the end plate, etc. Mount a cylinder by the top mounting or side mounting.

Adjustment

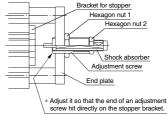
1. How to adjust an adjustment screw (Stroke adjustment)

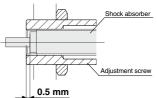
Loosen only the hexagon nut 1, then turn the adjustment screw to adjust the stroke. After adjusting, lock it with the hexagon nut 1. Fix it at the position ejected from the end plate, so that the end face of an adjustment screw could hit the bracket for stopper directly. (Refer to the figure right above.)

2. How to replace shock absorbers

Loosen hexagon nut 2, and turn a shock absorber counterclockwise for removal. For installing a new shock absorber, fix it at the position that the end face of an adjustment screw sticks out by 0.5 mm from a shock absorber. (Refer to the figure on the right.)

After adjusting the position of shock absorber, be sure to secure with hexagon nut 2.









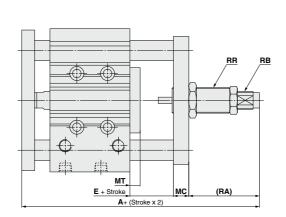
-XC69: MGP Series with Shock Absorber

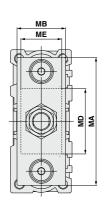


51 MGP Series with Shock Absorber

Symbol -XC69

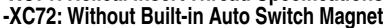
Dimensions (Dimensions other than below are the same as standard type.)





											(mm)
Bore size	Α	E	MA	MB	MC	MD	ME	MT	RA	RB	RR
50	155	10	139	60	16	71	38	9	57	RJ2015H	M27 x 1.5
63	160	10	153	60	16	84	50	9	57	RJ2015H	M27 x 1.5
80	212.5	17	190	75	22	114	50	16	77	RJ2725H	M36 x 1.5
100	232	17	228	75	25	140	65	16	74	RJ2725H	M36 x 1.5

-XC71: Helical Insert Thread Specifications





52 Helical Insert Thread Specifications

Symbol -XC71

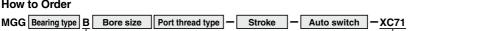
Helical insert thread specifications

The guide body mounting threads are helical insert threads.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
MGG	Guide cylinder	MGG	Double acting		Web Catalog

How to Order

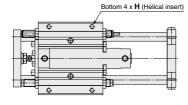


Specifications

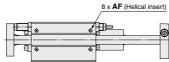
Applicable series	MGG□B
Bore size (mm)	20, 25, 32, 40, 50
Mounting type	Basic type
Specifications other than above	Same as standard type

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

ø20 to ø50



		(11111)
Bore size (mm)	н	AF
20	M6 x 1 depth 12	M5 x 0.8 depth 7.5
25	M8 x 1.25 depth 16	M6 x 1 depth 9
32	M8 x 1.25 depth 16	M6 x 1 depth 9
40	M10 x 1.5 depth 20	M8 x 1.25 depth 12
50	M12 x 1.75 depth 24	M10 x 1.5 depth 15



Symbol

53 Without Built-in Auto Switch Magnet This cylinder type does not have built-in auto switch magnet.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
MGG	Guide cylinder	MGG	Double acting		Web Catalog

How to Order

MGG Standard model no.

Without built-in auto switch magnet

Specifications

Applicable series	MGG				
Bore size (mm)	20, 25, 32, 40, 50				
Auto switch	Not mountable				
Specifications other than above and external dimensions	Same as standard type				



Made to Order Common Specifications: -XC73: Built-in Cylinder with Lock (CDNG)



54 Built-in Cylinder with Lock (CDNG)

Symbol -XC73

This type has a built-in cylinder with lock, which accommodates intermediate stops, emergency stops and drop prevention, etc.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
MGG	Guide cylinder	MGG	Double acting		Web Catalog

How to Order

MGG Bearing type Mounting type Bore size Stroke Auto switch C Note 1) **XC73**

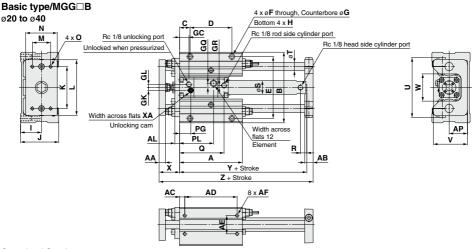
Cylllide	r Specifications	•			
Ap	plicable series		MC	GG	
В	ore size (mm)	20	25	32	40
Е	Basic cylinder	CDNGBN B	ore size - Stroke	D-Auto swit	ch - C Note 1)
Minimum	operating pressure		0.2 MPa (Horizon	ntal with no load)	
Piston sp	eed		50 to 1000	mm/s Note 2)	
	istment range (One side) ljustment bolts (2 pcs.)]		0 to -1	15 mm	
Non-rotating	Slide bearing	±0.06°	±0.	05°	±0.04°
accuracy *2	Ball bushing bearing	±0.04°	±0.	04°	±0.04°
Shock ab	sorber model	RB1412		RB2015	•
Specificat	ions other than above		Same as sta	andard type	

Built-in cylinder with lock

- Note 1) This symbol is indicated when the D-A9□ or M9□ type auto switch is specified. It does not apply to other auto switches (D-C7□ and H7□,
- auto switches (etc.) (Nil)

 Note 2) When the piston is locked, the load
 mass is limited by the mounting
 orientation and the operating orientation and the operating pressure. For details about the lock specifications, specifications, etc., refer to cylinders with lock (Web Catalog).
- Non-rotating rod accuracy must be below the values shown in the table at the retraction of the cylinder (initial value), and without loads or the conditions excluding the deflection of the guide rods.

Dimensions



Standard Stroke (mm) Bore size Stroke range GK Α AA AB AC AD ΑE AP В С D Ε F G GC GL GQ GR J (mm) (mm) 20 75 100 125 150 200 M6 x 1 denth 12 11 denth 8 M10 x 1 5 denth 18 40 73 120 12 16 10 100 35 9 35 135 20 80 118 66 18 5.5 6 8 M8 x 1.25 depth 16 6.5 25 140 16 19 10 120 40 9 45 170 20 100 150 9 25 9 10 M12 x 1.75 depth 21 50 93 75, 100, 125 32 150 200 140 16 19 10 120 40 M8 x 1.25 depth 16 9 45 170 20 100 150 9 14 depth 10 25 6.5 9 10 7 M12 x 1.75 depth 21 93 250, 300 170 19 21 10 150 45 M10x15 depth 20 12 50 194 25 120 170 11 17 depth 12 26 7

																			Long S	troke		
Bore size (mm)	к	L	М	N	0	PG	PL	Q	R	s	т	U	v	w	х	ХА	Υ	z	Bore size (mm)	Stroke range (mm)	R	Y
20	80	106	35	60	M6 x 1 depth 9	21.5	65	85	12	26	16	114	65	52	39	3	143	194	20	250 to 400	14	151
25	95	134	50	75	M8 x 1.25 depth 13	26.5	73	96	12	31	20	138	84	62	46	3	153	228	25	350 to 500	14	161
32	95	134	50	75	M8 x 1.25 depth 13	26.5	73	97	12	38	20	138	84	62	46	3	156	228	32	350 to 600	14	164
40	115	152	56	90	M10 x 1.5 depth 16	28	81	104	12	47	25	164	94	75	56	4	171	274	40	350 to 800	15	180

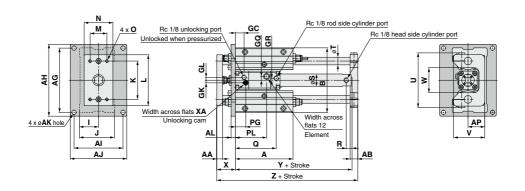
Made to Order Common Specifications: -XC73: Built-in Cylinder with Lock (CDNG)

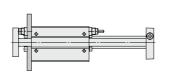


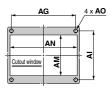
54 Built-in Cylinder with Lock (CDNG)

Symbol -XC73

Dimensions







Mounting dimensions

Standa	rd Stroke																									(mm)
Bore size (mm)	Stroke range (mm)	Α	AA	ΑВ	AG	АН	AI	AJ	AK	AL	АМ	AN	ΑО	AP	В	GC	GК	GL	GQ	GR	ı	J	κ	L	М	N
20	75, 100, 125, 150, 200	120	12	16	134	150	102	118	9	9	85	140	М8	35	135	18	5.5	6	8	4	40	73	80	106	35	60
25	75, 100, 125	140	16	19	170	186	134	150	9	9	105	175	M8	45	170	25	6.5	9	10	7	50	93	95	134	50	75
32	150, 200	140	16	19	170	186	134	150	9	9	105	175	M8	45	170	25	6.5	9	10	7	50	93	95	134	50	75
40	250, 300	170	19	21	190	210	140	160	11	12	115	200	M10	50	194	26	7	11	12	7	55	103	115	152	56	90

Bore size (mm)	0	PG	PL	Q	R	s	т	U	٧	w	х	ХА	Υ	z
20	M6 x 1 depth 9	21.5	65	85	12	26	16	114	65	52	39	3	143	194
25	M8 x 1.25 depth 13	26.5	73	96	12	31	20	138	84	62	46	3	153	228
32	M8 x 1.25 depth 13	26.5	73	97	12	38	20	138	84	62	46	3	156	228
40	M10 x 1.5 depth 16	28	81	104	12	47	25	164	94	75	56	4	171	274

Long S	troke		
Bore size (mm)	Stroke range (mm)	R	Υ
20	250 to 400	14	151
25	350 to 500	14	161
32	350 to 600	14	164
40	350 to 800	15	180

Made to Order Common Specifications: -XC73: Built-in Cylinder with Lock (CDNG)



54 Built-in Cylinder with Lock (CDNG)

Symbol -XC73

This type has a built-in cylinder with lock, which accommodates intermediate stops, emergency stops and drop prevention, etc.

How to Order

MGC	Bearing type	Mounting type	Bore size	 	Stroke	_	Equipped/Not equipped rear plate	-	Auto switch	-	C Note 1)	- <u>xc73</u>	

Cylinder Specifications

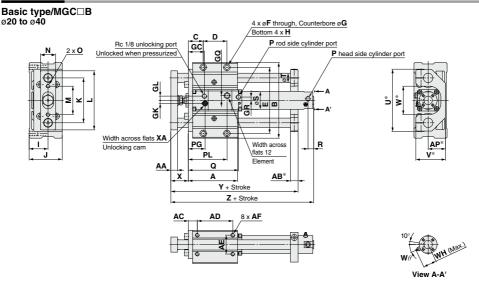
Ap	plicable series		MC	GC		N
В	ore size (mm)	20	25	32	40	
E	Basic cylinder	CDNGBA B	ore size - Stroke	– D – Auto swit	ch - C Note 1)] _N
Minimum	operating pressure		0.2 MPa (Horizo	ntal with no load)]'`
Piston sp	eed		50 to 750 i	mm/s Note 2)]
Non-rotating	Slide bearing	±0.06°	±0.	05°	±0.04°	
accuracy *2	Ball bushing bearing	±0.04°	±0.	04°	±0.04°	*
Specificat	ions other than above		Same as st	andard type		

Built-in cylinder with lock

- Note 1) This symbol is indicated when the D-A9 or M9□ type auto switch is specified. It does not apply to other auto switches (D-C7□ and H7 etc.) (Nil)
- Ll, etc./ (viii)

 Note 2) When the piston is locked, the load mass is limited by the mounting orientation and the operating pressure. For details about the lock specifications, etc., refer to the cylinders with lock (Web Catalog).
- Non-rotating rod accuracy must be below the values shown in the table at the retraction of the cylinder (initial value), and without loads or the conditions excluding the deflection of the guide rods

Dimensions



Standard	Stroke

(mm) Stroke range AC AD AF ΔΡ С F GC GK GL AA AB ΔF В D F G GO GR ı J Κ (mm) 20 75, 100, 125, 150, 200 80 11 13 16.5 70 35 M6 x 1 denth 12 32 135 26 5 50 118 6.8 11 denth 8 27 5.5 6 8 M8 x 1.25 depth 14 35 25 75, 100, 125 14 16 19 M8 x 1.25 depth 16 37 160 31.5 50 140 8.6 14 depth 10 34 6.5 9 10 7 M10 x 1.5 depth 18 95 32 150, 200 104 14 16 19 75 40 M8 x 1.25 depth 16 37 160 31.5 50 140 8.6 14 depth 10 34 6.5 9 10 7 M10 x 1.5 depth 18 40 95 250, 300 40 M12 x 1.75 depth 21 17 19 22 110 45 M10 x 1.5 depth 20 42 194 37 170 | 10.5 | 17 depth 12 | 38 11 12 7 45 82.5 115

																					Long	Stroke		
Bore size (mm)	L	М	N	0	Р	PG	PL	Q	R	S	т	U*	٧*	w*	wн	Wθ	х	ХА	Y	z	Bore size (mm)	Stroke range (mm)	R	z
20	105	50	25	M6 x 1	M5 x 0.8	30.5	74	96	12	26	16	112	53	50	23	30°	30	3	148	182	20	250 to 400	14	190
25	125	60	32	M8 x 1.25	M5 x 0.8	35.5	82	106	12	31	20	132	63	60	25	30°	37	3	169	199	25	350 to 500	14	207
32	125	60	32	M8 x 1.25	Rc 1/8	35.5	82	106	12	38	20	132	63	60	28.5	25°	37	3	169	202	32	350 to 600	14	210
40	150	75	38	M8 x 1.25	Rc 1/8	40	93	116	12	47	25	162	73	70	33	20°	44	4	210	227	40	350 to 800	15	236

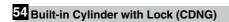
Note) Without rear plate: Dimensions with an asterisk (*) mark is not needed.



-XC73: Built-in Cylinder with Lock (CDNG)

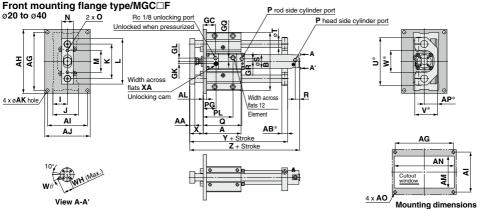






Symbol -XC73

Dimensions



Standard Stroke Bore size Stroke range AA AB AG AH AN GC GK GL GQ M N ΑI AM (mm) (mm) 20 75, 100, 125, 150, 200 11 13 134 150 92 108 9 9 75 140 M8 32 135 27 8 35 80 105 50 25 14 16 160 176 110 125 9 9 88 165 M8 37 160 34 6.5 9 10 7 40 95 125 60 32 75, 100, 125 150, 200, 250 9 14 16 160 176 110 125 9 88 165 M8 37 160 34 6.5 9 10 40 95 125 60 32 40 19 190 210 115 135 11 12 96 200 M10 42 194 38 7 12 7 45 82.5 115 150 75

ore size (mm)	0	Р	PG	PL	Q	R	s	т	U*	٧*	w*	wн	Wθ	х	ХА	Υ	z	Bore size (mm)	Stroke range (mm)	R	z
20	M6 x 1	M5 x 0.8	30.5	74	96	12	26	16	112	53	50	23	30°	30	3	148	182	20	250 to 400	14	190
25	M8 x 1.25	M5 x 0.8	35.5	82	106	12	31	20	132	63	60	25	30°	37	3	169	199	25	350 to 500	14	207
32	M8 x 1.25	Rc 1/8	35.5	82	106	12	38	20	132	63	60	28.5	25°	37	3	169	202	32	350 to 600	14	210
40	M8 x 1.25	Rc 1/8	40	93	116	12	47	25	162	73	70	33	20°	44	4	210	227	40	350 to 800	15	236

Note) Without rear plate: Dimensions with an asterisk (*) mark is not needed.

55 With Front Plate for MGG Cylinder

Symbol -XC74

This type uses a front plate equivalent to the MGG series.

How to Order

MGC Standard model no.

With front plate for MGG

Specifications

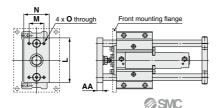
Applicable series	MGC
Bore size (mm)	20, 25, 32, 40, 50
Fluid	Air
Minimum operating pressure	0.15 MPa (Horizontal, With no load)
Piston speed	50 to 750mm/s
Auto switch	Mountable

Long Stroke

* Specifications other than above are the same as standard type.

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

ø20 to ø50



					(
Bore size (mm)	L	М	N	0	AA
20	80	25	45	M6 x 1	11
25	100	35	54	M6 x 1	14
32	106	35	60	M6 x 1	14
40	134	50	75	M8 x 1.25	17
50	152	56	90	M10 x 1.5	23

-XC78: Auto Switch Mounting Special Dimensions at Stroke End



56 Auto Switch Mounting Special Dimensions at Stroke End

Symbol -XC78

Auto switch mounting position at stroke end is assembled like below.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
MGC	Guide cylinder	MGC	Double acting		Web Catalog

How to Order

MGC Standard model no. -XC78

Auto switch mounting special dimensions at stroke end

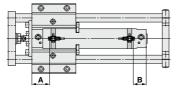
Specifications

Applicable series	MGC
Bore size (mm)	20, 25, 32, 40, 50
Applicable cylinder	Guide cylinder
Specifications other than above	Same as standard type

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

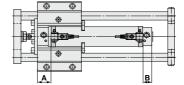
D-M9□(V)/M9□W(V)/M9□A(V) D-A9□(V)





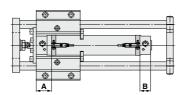
D-B5/B6 D-G5/K5





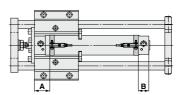
D-C7/C8 D-H7





D-B7/B8 D-G7/K7





Proper Auto Switch Mounting Position

Bore size (mm)	D-M9□A(V)		D-A9□(V)		D-B7/B8 D-B73C D-B80C D-G7/K7 D-K79C		D-C7□ D-C80 D-C73C D-C80C		D-B D-B		D-B	59W	D-H7 D-H7 D-H7 D-H7 D-H7	C NF '□W	D-G59 D-K59 D-G5 D-K59 D-G5N D-G5E	DW W
(mm) \	Α	В	Α	В	Α	В	Α	В	Α	В	Α	В	Α	В	Α	В
20	33	24 (32)	29	20 (28)	30.5	21.5 (29.5)	29.5	20.5 (28.5)	23.5	15.5 (22.5)	26.5	17.5 (25.5)	28.5	19.5 (27.5)	25	16 (24)
25	33	24 (32)	29	20 (28)	30.5	21.5 (29.5)	29.5	20.5 (28.5)	23.5	15.5 (22.5)	26.5	17.5 (25.5)	28.5	19.5 (27.5)	25	16 (24)
32	34	25 (33)	30	21 (29)	31.5	22.5 (30.5)	30.5	21.5 (29.5)	24.5	15.5 (23.5)	27.5	18.5 (26.5)	29.5	20.5 (28.5)	26	17 (25)
40	39	27 (36)	35	(-,	36.5	(00.0)		23.5 (32.5)	29.5	19 (26.5)	32	20.5 (29.5)	34.5	22.5 (31.5)	31	19 (28)
50	46	32 (36)	42	28 (40)	43.5	29.5 (41.5)	42.5	28.5 (40.5)		22 E		25.5 (37.5)	41.5	27.5 (39.5)	38	24 (36)

(mm) Proper Auto Switch Mounting Height (mm)

	Auto switch model Bore size		D-C7□/C80 D-H7□ D-H7□W D-H7NF D-H7BA	D-B7□/B80 D-G5□/K59 D-B73C D-G5□W D-B80C D-K59W D-G79/K79 D-B5□/B64 D-K79C D-B59W D-H7C D-G5BA D-G5NT D-G59F					
	(mm) \	Hs	Hs	Hs	Hs				
)	20	25	24.5	27	27.5				
)	25	27.5	27	29.5	30				
)	32	31	30.5	33	33.5				
)	40	35.5	35	37.5	38				
)	50	41	40.5	43	43.5				

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



^{* ():} Long stroke, double rod

Made to Order Common Specifications: -XC82: Bottom Mounting Type



57 Bottom Mounting Type

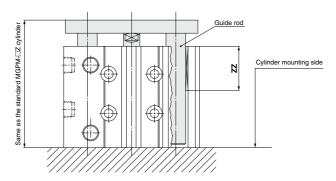
Symbol -XC82

Since the guide rod does not protrude from the bottom at the retraction of the rod, relief holes for guide rods are not required.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
MGP	Compact guide cylinder	MGPM	Double acting		Web Catalog

How to Order MGP M 32 50 Z -**XC82** Compact guide cylinder Bottom mounting type Bearing Type Suffix for auto switch M Slide bearing Auto switch Bore size (mm) 12 12 mm Cylinder stroke (mm) 16 16 mm Bore size (mm) Applicable stroke (mm) 20 20 mm 12 to 25 75, 100 25 25 mm 32 to 100 25, 50, 75, 100 32 32 mm 40 mm Port thread type 50 50 mm 63 mm 80 mm 100 100 mm



Note) The total length (ZZ) of the guide rod bushing is shorter than the standard type.

Made to Order Common Specifications: -XC83: Built-in Cylinder with Lock (MDNB)



58 Built-in Cylinder with Lock (MDNB)

This type has a built-in cylinder with lock, which accommodates intermediate stops, emergency stops and drop prevention, etc.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
MGG	Guide cylinder	MGG	Double acting		Web Catalog

How to Order

MGG Bearing type Mounting type Bore size Auto switch Stroke

Specifications

Opcomodi													
Applio	cable series					MC	iG						
Bore	size (mm)	50			63		8	0	100				
Bas	ic cylinder	MDNBB	Bore	size	-[Stroke	oke -D- Auto switch -X1						
Minimum ope	rating pressure		0.2 MPa (Horizontal with no load)										
Piston speed	Note)	50 to 1000	mm/s				50 to 70	00 mm/s					
	ent range (One side) ting bolts (2 pcs.)]					0 to -1	5 mm						
Non-rotating	Slide bearing		±0.0)4°				±0.	03°				
accuracy *	Ball bushing bearing		±0.0	3°				±0.02°					
Shock absorb	er model	RB2015 RB2725											
Specification	s other than above	Same as standard type											

Built-in cylinder with lock

- Note) When the piston is locked, the load mass is limited by the mounting orientation and the operating pressure.
 - For details about the lock specifications etc., refer to the cylinders with lock (Web Catalog)
- * Non-rotating rod accuracy must be below the values shown in the table at the retraction of the cylinder (initial value), and without loads or the conditions excluding the deflection of the quide rods

Applicable Auto Switches/Refer to pages 1289 to 1383 for the detailed specifications of auto switches.

		Electrical	퍒	Wiring		Load vo	ltage	Auto swite	ch part no.	Lead v	wire le	ength	(m)	Pre-wired									
Туре	Special function	entry	Indicator light	(output)		DC	AC	Tie-rod mounting	Band mounting	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	connector Applicab		ble load							
				3-wire (NPN)		5 1/ 40 1/		M9N	_	•	•	•	0	0	IC								
_		Grommet		3-wire (PNP)		5 V, 12 V	_	M9P	_	•	•	•	0	0	circuit								
switch				2-wire		12 V		M9B	_	•	•	•	0	0									
		Terminal		3-wire (NPN)		5 V, 12 V		_	G39	_	_	_	_	_	_								
육		conduit		2-wire		12 V		_	K39	_	_	_	_	_									
	Diagnostic indication (2-color)	1	Yes	3-wire (NPN) 24 V 3-wire (PNP)	5 V, 12 V		M9NW	_	•	•	•	0	0	IC	Relay,								
state						5 V, 12 V	_	M9PW	_	•	•	•	0	0	circuit	PLC							
	(2-00101)	Grommet		2-wire		12 V		M9BW	_	•	•	•	0	0	_								
Solid	Water resistant	Gionnie		3-wire (NPN)		5 V, 12 V		M9NA	_	0	0	•	0	0	IC								
ŭ	(2-color indicator)			3-wire (PNP)		5 V, 12 V		M9PA	_	0	0	•	0	0	circuit								
	(2 color indicator)			2-wire		12 V		M9BA	_	0	0	•	0	0	_								
switch			Crommet	Grommet	Crammat	0			. Ye		3-wire (NPN equivalent)	_	5 V	_	A96	-	•	-	•	-	_	IC circuit	_
		Gionnie					100 V	A93	_	•	•	•	•	_	_	Relay,							
육	<u> </u>		No	0			100 V or less	A90	_	•	_	•	_	_	IC circuit	PLĆ							
		Terminal		2-wire	24 V	12 V	_	_	A33	_	_	-	_	_		PLC							
Reed		conduit	Yes				100 1/ 200 1/		A34	_	_	_	_	_	-	Relay,							
Œ		Din terminal					100 V, 200 V	_	A44	_	_	_	_	_		PLC							

- * Lead wire length symbols: 0.5 m Nil (Example) M9NW 1 m M (Example) M9NWM
- * Solid state auto switch with O: Manufactured upon receipt of order.
- 3 m ----- L 5 m ---- Z (Example) M9NWZ Refer to page 1566 since there are applicable auto switches other than listed above
- * Refer to pages 1358 and 1359 for the details of auto switches with a pre-wired connector.

 * D-A9□/M9□/M9□W/M9□A/M9□AV auto switches are shipped together (not assembled).

(Example) M9NWL

(Auto switch mounting brackets for the models above are mounted when shipped.)

Auto Switch Mounting Bracket: Part No.

Auto switch model		Bore siz	ze (mm)	
Auto switch model	ø 50	ø 63	ø 80	ø100
D-A9□/A9□V D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV	BA7-040	BA7-040	BA7-063	BA7-063
D-A3□/A44 D-G39/K39	BMB1-050	BMB1-063	BMB1-080	BMB1-100
D-Z7□/Z80 D-Y59□/Y69□ D-Y7P/Y7PV D-Y7□W/Y7□WV D-Y7BA	BMB4-050	BMB4-050	BA4-063	BA4-063

[Mounting screw set made of stainless steel]

The following set of mounting screws made of stainless steel (including nuts) is available. Use it in accordance with the operating environment. (Please order the auto switch mounting bracket separately, since it is not included.)

BBA1: Stainless steel screw set for D-A5/A6/F5/J5 types

Note) Refer to page 1395 for the details of BBA1

When shipping cylinders with D-M9\(\to A\/M9\(\to AV/Y7BA\) auto switches, the stainless steel screws above are used to secure auto switch mounting brackets.



Made to Order Common Specifications: -XC83: Built-in Cylinder with Lock (MDNB)



58 Built-in Cylinder with Lock (MDNB)

Symbol -XC83

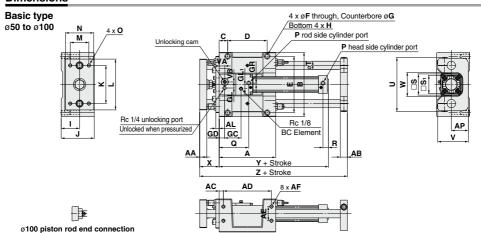
Besides the models listed on the previous page, the following auto switches are applicable. Refer to pages 1289 and 1383 for details.

Auto switch type	Part no.	Electrical entry (Fetching direction)	Features		
	D-A93V, A96V	Grommet (Perpendicular)	_		
Reed	D-A90V	Grommet (Ferpendicular)	Without indicator light		
neeu	D-Z73, Z76	Grommet (In-line)	_		
	D-Z80	Gronnier (in-line)	Without indicator light		
	D-M9NV, M9PV, M9BV				
	D-Y69A, Y69B, Y7PV		_		
	D-M9NWV, M9PWV, M9BWV	Grommet (Perpendicular)	Diagnostic indication		
Solid state	D-Y7NWV, Y7PWV, Y7BWV		(2-color)		
Soliu state	D-M9NAV, M9PAV, M9BAV		Water resistant (2-color indicator)		
	D-Y59A, Y59B, Y7P		_		
	D-Y7NW, Y7PW, Y7BW	Grommet (In-line)	Diagnostic indication (2-color)		
	D-Y7BA		Water resistant (2-color indicator)		

^{*} For solid state switches, auto switches with a pre-wired connector are also available. Refer to pages 1358 and 1359 for details.

Normally closed (NC = b contact) solid state auto switches (D-F9G/F9H/Y7G/Y7H types) are also available. Refer to pages 1308 and 1310 for details.
 Refer to the MNB series in the Web Catalog for the minimum auto switch mounting stroke, proper auto switch mounting position and operating range.

Dimensions



Standa	rd Stroke																						(mm)
Bore size (mm)	Stroke range (mm)	A	AA	ΑВ	AC	AD	ΑE	AF	AL	AP	В	С	D	E	F	G	GC	GD	GL	GL₁	GR	н	ı
50		200	25	25	15	170	50	M12 x 1.75 depth 24	12	60	228	30	140	200	13.5	20 depth 14.5	58.5	19	12.5	15	5	M16 x 2 depth 28	65
63	75, 100, 125 150, 200	230	25	27	15	200	55	M12 x 1.75 depth 24	12	70	262	30	170	234	13.5	20 depth 14.5	68	23	17.5	12	9	M16 x 2 depth 28	75
80	250, 200	280	30	30	17.5	245	70	M14 x 2 depth 28	16	80	304	35	210	274	15	23 depth 17	81	33	22	18	11.5	M18 x 2.5 depth 32	85
100		280	32	30	17.5	245	70	M14 x 2 depth 28	16	80	304	35	210	274	15	23 depth 17	96	37.5	25	20	17	M18 x 2.5 depth 32	85

																					Long S	troke
Bore size (mm)	J	κ	L	М	N	0	Р	Q	R	s	S ₁	Т	U	v	VA	۷В	w	х	Υ	z	Bore size (mm)	Stroke range (mm)
50	117	135	180	66	100	M12 x 1.75 depth 23	Rc 1/4	104.5	19.5	75	65	30	192	108	20	9	86	69	187	323	50	350 to 1000
63	138	160	214	76	115	M12 x 1.75 depth 23	Rc 3/8	119.5	20.5	90	75	35	224	128	23	8.5	104	69	201	358	63	350 to 1000
80	153	190	245	80	125	M14 x 2 depth 28	Rc 3/8	150	23	102	95	40	262	143	33	10.5	128	87	249	431	80	350 to 1000
100	153	190	245	80	125	M14 x 2 depth 30	Rc 1/2	170	23	116	114	40	262	143	37.5	10.5	128	87	269	431	100	350 to 1000

Made to Order Common Specifications: -XC83: Built-in Cylinder with Lock (MDNB)

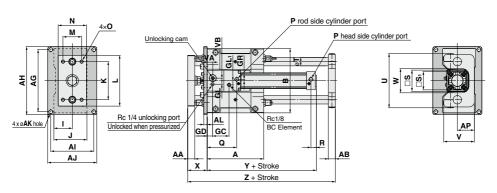


58 Built-in Cylinder with Lock (MDNB)

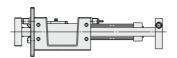
Symbol -XC83

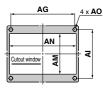
Dimensions

Front mounting flange type ø50 to ø100









Mounting dimensions

Standa	rd Stroke																									(mm)
Bore size (mm)	Stroke range (mm)	Α	AA	АВ	AG	АН	AI	AJ	AK	AL	АМ	AN	ΑО	AP	В	GC	GD	GL	GL₁	GR	ı	J	к	L	м	N
50		200	25	25	228	250	158	180	14	12	135	234	M12	60	228	58.5	19	12.5	15	5	65	117	135	180	66	100
63	75, 100, 125 150, 200	230	25	27	262	284	178	200	14	12	155	268	M12	70	262	68	23	17.5	12	9	75	138	160	214	76	115
80	250, 200	280	30	30	300	326	200	226	16	16	175	310	M14	80	304	81	33	22	18	11.5	85	153	190	245	80	125
100		280	32	30	300	326	200	226	16	16	175	310	M14	80	304	96	37.5	25	20	17	85	153	190	245	80	125

																Long S	troke
Bore size (mm)	0	Р	Q	R	s	Sı	т	U	v	VA	۷В	w	x	Υ	z	Bore size (mm)	Stroke range (mm)
50	M12 x 1.75 depth 23	Rc 1/4	104.5	19.5	75	65	30	192	108	20	9	86	69	187	323	50	350 to 1000
63	M12 x 1.75 depth 23	Rc 3/8	119.5	20.5	90	75	35	224	128	23	8.5	104	69	201	358	63	350 to 1000
80	M14 x 2 depth 28	Rc 3/8	150	23	102	95	40	262	143	33	10.5	128	87	249	431	80	350 to 1000
100	M14 x 2 depth 30	Rc 1/2	170	23	116	114	40	262	143	37.5	10.5	128	87	269	431	100	350 to 1000

Made to Order Common Specifications: -XC85: Grease for Food Processing Equipment



Part of the CM2-Z series (model highlighted in red) is to be discontinued as of the end of January 2025, an part of the CG1-Z series (model highlighted in red) is to be discontinued as of the end of February 2025. Select a model from the CM2-Z1 series or the CG1-Z1 series instead.

59 Grease for Food Processing Equipment

Symbol -XC85

Food grade grease (certified by NSF-H1) is used as lubricant.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
		CJ2-Z	Double acting, Single rod		
	Air cylinder	CJ2-Z	Single acting (Spring returnlextend)		
		CJ2W-Z	Double acting, Double rod		
	Non-rotating rod	CJ2K-Z	Double acting, Single rod		
	type	GJZK-Z	Single acting (Spring returnlextend)		
CJ2	With speed	CJ2Z-Z	Double acting, Single rod		
	controller	CJ2ZW-Z	Double acting, Double rod		
	Direct mount	CJ2BA-Z	Double acting, Single rod		
	type	CJZRA-Z	Single acting (Spring returnlextend)		
	Non-rotating rod,	CJ2RK-Z	Double acting, Single rod		
	Direct mount type	CJZNK-Z	Single acting (Spring returnlextend)		
		CM2-Z1	Double acting, Single rod		
	Air cylinder	CM2-Z	Double acting, Single rod		
	All Cyllidei	CM2W-Z	Double acting, Double rod		
		CM2-Z	Single acting (Spring returnlextend)		Web Catalog
	Non votation and	CM2K-Z	Double acting, Single rod		
CM2	Non-rotating rod type	CM2KW-Z	Double acting, Double rod		
	туре	CM2K-Z	Single acting (Spring returnlextend)		
	Direct mount type	CM2R-Z	Double acting, Single rod		
	Direct mount Non-rotating rod type	CM2RK-Z	Double acting, Single rod		
	Centralized piping type	CM2□P	Double acting, Single rod	Except with rod boot	
		CG1-Z1	Double acting, Single rod]
	Air cylinder	CG1-Z	Double acting, Single rod		
CG1	All cylinder	CG1W-Z	Double acting, Double rod]
		CG1-Z	Single acting (Spring returnlextend)]
	Direct mount type	CG1R-Z	Double acting, Single rod		
CA2	Air cylinder	CA2-Z	Double acting, Single rod		
CAZ	All Cyllider	CA2W-Z	Double acting, Double rod		

Series	Description	Model	Action	Note	Vol. no. (for std model
	Commont	CQS	Double acting, Single rod		
	Compact cylinder	cqs	Single acting, Single rod]
CQS	cyllildei	CQSW	Double acting, Double rod]
	Long stroke	CQS	Double acting, Single rod		
	Anti-lateral load	CQS□S	Double acting, Single rod]
	0	CQ2-Z	Double acting, Single rod]
	Compact cylinder	CQ2-Z	Single acting (Spring return/extend)		
	cyllildei	CQ2W-Z	Double acting, Double rod]
	Laura bana sina	CQ2-Z	Double acting, Single rod		1
	Large bore size	CQ2W-Z	Double acting, Double rod		
	Long stroke	CQ2-Z	Double acting, Single rod		1
CQ2	Non-rotating rod	CQ2K-Z	Double acting, Single rod		1
CUZ	type	CQ2KW-Z	Double acting, Double rod		Web Catalog
	14/-4	CQ2-R/V	Double acting, Single rod		1
	Water resistant	CQ2W-R/V	Double acting, Double rod		1
	Axial piping type	CQP2	Double acting, Single rod		
	(Centralized piping type)	CQP2	Single acting (Spring return/extend)		1
	Anti-lateral load	CQ2□S-Z	Double acting, Single rod		1
	With end lock	CBQ2	Double acting, Single rod		1
	Compact guide cylinder	MGP-Z	Double acting, Single rod		1
MGP	With air cushion	MGP-□AZ	Double acting, Single rod		1
WGP	With end lock	MGP	Double acting, Single rod		
	Heavy duty guide rod type	MGPS	Double acting, Single rod		1
CXSJ	Dual rad autiadas	CXSJ	Double acting		1
CXS	Dual rod cylinder	CXS	Double acting		1

How to Order

Standard model no. — XC85

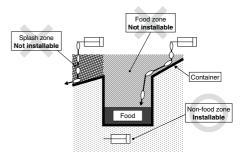
Grease for food processing equipment

Specifications

Seal material	Nitrile rubber
Grease	Grease for food
Auto switch	Mountable
Dimensions	Same as standard model
Specifications other than above	Same as standard model

Be aware that smoking cigarettes, etc. after your hands have come into contact with

<Installable>
Non-food zone......An environment where there is no contact with food.



Note 1) Avoid using this product in the food zone. (Refer to the figure above.) Note 2) When the product is used in an area of liquid splash, or a water resistant function is required for the product, please consult SMC.

Note 3) Operate without lubrication from a pneumatic system lubricator.

Note 4) Use the following grease pack for the maintenance work. GR-H-010 (Grease: 10 g)

Note 5) Please contact SMC for details on the maintenance intervals for this cylinder, which differ from those of the standard cylinder.

Made to Order Common Specifications: -XC86: With Rod End Bracket



60 With Rod End Bracket

Symbol -XC86

With rod end bracket type to simplify the order process.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
CS1	Standard type	CS1	Double acting, Single rod		
CSI	Low friction type	CS1Q	Double acting, Single rod	ø125 to ø160 only	Web Catalog
CS2	Standard type	CS2	Double acting, Single rod		Web Catalog
U32	Smooth cylinder	CS2Y	Double acting, Single rod	ø125 to ø160 only	

How to Order

Standard model no. —XC86 A

Note 1) Rod end brackets are shipped together.

Note 2) A pin and two split pins are attached for double knuckle joint.

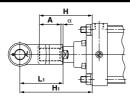
Note 3) XC86A to C: Standard type, XC86D to F: Standard type except for rod end thread length (A and H dimensions)

With rod end bracket

• Sui	IIX
Α	With rod end nut
В	With double knuckle joint
С	With single knuckle joint
D	With double knuckle joint and rod end nut
E	With single knuckle joint and rod end nut
F	With rod end nut (For knuckle joint)

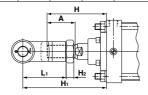
Dimensions (Dimensions other than below are the same as standard type.)

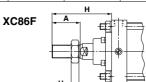
CS1, CS2 series XC86B, XC86C



Symbol						CS1 CS2							
Bore size	н	Α	α	L ₁	H₁	Applicable knuckle joint part no.							
(mm)						I type single knuckle	Y type double knuckle	I type single knuckle	Y type double knuckle				
125	110	50	3.5	100	156.5	I-12	Y-12	I-12A	Y-12A				
140	110	50	3.5	105	161.5	I-14	Y-14	I-14A	Y-14A				
160	120	56	3.5	110	170.5	I-16	Y-16	I-16A	Y-16A				
180, 200	135	63	3.5	125	193.5	I-18, I-20	Y-18, Y-20	I-18A, I-20A	Y-18A, Y-20A				
250	160	71	3.5	160	245.5	I-25	Y-25	I-25A	Y-25A				
300	175	80	3.5	175	266.5	I-30	Y-30	_	_				
320	175	80	3.5	175	266.5	_	_	I-32A	Y-32A				

CS1, CS2 series XC86D, XC86E





Symbol						C	S1	C	S2	CS1, CS2 common
Bore size	Н	Α	L ₁	H ₁	H ₂		Applicable knuc	kle joint part no.		Applicable
(mm)						I type single knuckle	Y type double knuckle	I type single knuckle	Y type double knuckle	rod end nut
125	125	65	100	181	18	I-12	Y-12	I-12A	Y-12A	NT-12
140	125	65	105	186	18	I-14	Y-14	I-14A	Y-14A	NT-12
160	140	76	110	198	21	I-16	Y-16	I-16A	Y-16A	NT-16
180	155	83	125	223	23	I-18	Y-18	I-18A	Y-18A	NT-18
200	160	88	125	227	27	I-20	Y-20	I-20A	Y-20A	NT-20
250	195	106	160	287	34	I-25	Y-25	I-25A	Y-25A	NT-25
300	210	115	175	312	38	I-30	Y-30	_	_	NT-30
320	210	115	175	312	38	_	_	I-32A	Y-32A	NT-30

-XC86: With Rod End Bracket

-XC87: Cylinder with One-way Lock/Heavy Duty Specifications

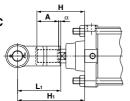


60 With Rod End Bracket

Symbol -XC86

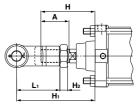
Dimensions (Dimensions other than below are the same as standard type.)





Symbol Bore size	н	Α		Lı		Applicable knuc	kle joint part no.
(mm)	п	А	α	L1	H₁	I type single knuckle	Y type double knuckle
125	110	50	3.5	100	156.5	I-12A	Y-12A
140	110	50	3.5	105	161.5	I-14A	Y-14A
160	120	56	3.5	110	170.5	I-16A	Y-16A

CS2 series XC86D, XC86E



Symbol Bore size		Α	Lı	Hı			kle joint part no.	
(mm)		A	L1	П1	П 2	I type single knuckle	Y type double knuckle	rod end nut
125	125	65	100	181	18	I-12A	Y-12A	NT-12
140	125	65	105	186	18	I-14A	Y-14A	NT-12
160	140	76	110	198	21	I-16A	Y-16A	NT-16

61 Cylinder with One-way Lock/Heavy Duty Specifications

Symbol -XC87

Piston rods are heat treated. Even when an external force exceeding the specification range acts temporarily on the piston rod in the locked state, it is resistant to damage and an unlocking failure is unlikely to occur.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
CLQ	Compact cylinder with lock	CLQ	Double acting, Single rod	Applicable to ø40 to ø100.	
RLQ	Compact cylinder with air cushion and lock	RLQ	Double acting, Single rod	Applicable to ø40 to ø63.	
MLGP	Compact guide cylinder with lock	MLGP	Double acting	Applicable to ø40 to ø100.	Web Catalog
CLK2	Clamp cylinder with lock	CLK2	Double acting, Single rod	Applicable to ø40 to ø63.	
MLU	Plate cylinder with lock	MLU	Double acting, Single rod	Applicable to ø40 and ø50.	

How to Order

Standard model no. -XC87

Heavy duty specifications

Specifications: Same as standard type Dimensions: Same as the standard type

-XC88: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)

-XC89: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

-XC91: Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: Š45C)



Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)
 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

-XC88

Reduces spatter adhesion and improves durability by the use of the coil scraper, Lube-retainer and grease for welding.

64 Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S45C)

-XC91

With coil scraper and grease for welding

Applicable Series

Series	Description	Model	Action	XC88	XC89	XC91	Note	Vol. no. (for std model)
МВ	Air cylinder	MB-Z	Double acting, Single rod	•	•	•	ø32-ø100 only	
CA2	Air cylinder	CA2-Z	Double acting, Single rod	•	•	•		
	Compact cylinder	CQ2-Z	Double acting, Single rod	•	•	•		
CQ2	Long stroke	CQ2-Z	Double acting, Single rod	•	•	_		
	Anti-lateral load	CQ2□S-Z	Double acting, Single rod	•	•	_		
	Compact guide cylinder	MGPM-Z	Double acting	•	-*	•		Web Catalog
MGP		MGPL-Z	Double acting	_	_	•	ø32-ø100 only	web Catalog
		MGPA-Z	Double acting	_	_	•]	
MK2T	Rotary clamp cylinder	MK2T	Double acting	_	•	•	ø32-ø63 only	
		CKG1-Z1	Double acting, Single rod	•	•	•		
CKG1	Clamp cylinder	CKG1-Z	Double acting, Single rod	•	•	•		
		CKGA	Double acting, Single rod	•	•	•	ø80 and ø100 only	

Common Specifications: MB, CA2, CQ2, MK2T, CKG1

Part no.		Piston rod material (Hard chrome plating)		Lube-retainer	Grease for welding	
	S45C Stainless steel 304		scraper			
-XC88	_	•	•	•	•	
-XC89	•	_	•	•	•	
-XC91	•	_	•	_	•	

Note) Use the -XC91 in a place where the distance from the welding portion is far and the spatter scattering is minimized.

Specifications: MGP

Part no.	Piston rod/Guide rod material (Hard chrome plating) S45C Stainless steel 304		Coil scraper Rod side Head side		Lube-retainer		Grease for
					Rod side Head side		welding
-XC88	_	•	•	_	•	_	•
-XC91	•	_	•	_	•	_	•
-XC88W	_	•	•	•	•	•	•
-XC89W	•	_	•	•	•	•	•
-XC91W	•	_	•	•	•	_	•

^{*} There is no "-XC89" part number suffix as the specifications are the same as those of the "-XC91."



-XC88: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)

-XC89: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

-XC91: Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: \$45C)



MB-XC88/XC89/XC91

62 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)

-XC88

63 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C) -XC89

Reduces spatter adhesion and improves durability by the use of the coil scraper, Lube-retainer and grease for welding.

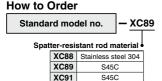
64 Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S45C)

-XC91

With coil scraper and grease for welding

Applicable Series

Series	Description	Model	Action	XC88	XC89	XC91	Vol. no. (for std model)
MB	Air cylinder	MB-Z	Double acting, Single rod	•	•	•	Web Catalog



Made to Order

	Part		d material me plated)	Coil scraper	Lube-	Grease for welding	
	no.	S45C	Stainless steel 304		retainer		
ĺ	-XC88	_	•	•	•	•	
ſ	-XC89	•	_	•	•	•	
	-XC91	•	_	•	_	•	

Note) Use the -XC91 in a place where the distance from the welding portion is far and the spatter scattering is minimized.

Specifications

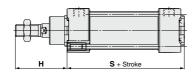
Bore size	ø32, ø40, ø50, ø63, ø80, ø100		
Port thread type	Rc		
Max. manufacturable stroke	See right side.		
Rod boot	None		
Cushion	Air cushion		
Dimensions	See below.		
Additional specifications	Same as standard type		

Max. manufacturable stroke

Bore size (mm)	Max. manufacturable stroke		
32	1000		
40	1000		
32 40 50 63 80	1000		
63	1000		
80	1000		
100	1000		

Manufacture of intermediate strokes is possible.(Spacers are not used.) Produced upon receipt of order.

Dimensions (Other dimensions are the same as the standard type.)



						(mm)
Bore size	XC8	8, 89	XC91		XC	35
(mm)	Н	S	Н	S	Н	S
32	50	88	47	88	47	88
40	61	88	58	88	58	88
50	67	98	67	98	67	98
63	67	98	67	98	67	98
80	82	118	81	118	81	118
100	82	118	81	118	81	118

^{*} At 0 stroke





-XC88: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)

-XC89: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod; S45C)

-XC91: Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: \$45C)



CA2-XC88/XC89/XC91

Symbol

62 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)

-XC88

Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

-XC89

Reduces spatter adhesion and improves durability by the use of the coil scraper, Lube-retainer and grease for welding.

64 Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S45C)

-XC91

With coil scraper and grease for welding

Applicable Series

Series	Description	Model	Action	XC88	XC89	XC91	Vol. no. (for std model)
CA2	Air cylinder	CA2-Z	Double acting, Single rod	•	•	•	Web Catalog

Made to Order

Part		d material me plated)	Coil	Lube-	Grease	
no.	S45C	Stainless steel 304		retainer	welding	
-XC88	_	•	•	•	•	
-XC89	•	_	•	•	•	
-XC91	• –		•	_	•	

Note) Use the -XC91 in a place where the distance from the welding portion is far and the spatter scattering is minimized.

How to Order

Standa	<u> - xc</u>	89						
Spat	Spatter-resistant rod materia							
	XC88	Stainless st	teel 304					
	XC89 S45C							
	XC91	S450)					

Specifications

Bore size	ø40, ø50, ø63, ø80, ø100
Tubing material	Aluminum tube
Port thread type	Rc
Max. manufacturable stroke	See right side.
Rod boot	None
Cushion	Air cushion
Dimensions	See below.
Additional specifications	Same as standard type

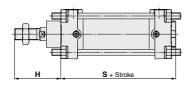
Max. manufacturable stroke

(mm)

Bore size	Max. manufacturable strokeNote 1)
40	1000
50, 63	1000
80, 100	1000

Note 1) For details about applicable maximum stroke, refer to the model selection table on the **Web Catalog**.

Dimensions (Other dimensions are the same as the standard type.)



						(mm)
Bore size	XC8	XC88, 89		XC91		35
(mm)	Н	S	Н	S	Н	S
40	56	95	51	95	51	95
50	60	101	58	101	58	101
63	60	112	58	112	58	112
80	73	133	71	133	71	133
100	74	143	72	143	72	143

^{*} At 0 stroke

SMC



- -XC88: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)
- -XC89: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)
- -XC91: Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: \$45C)



CQ2-XC88/XC89/XC91

Symbol

62 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)

-XC88

53 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

-XC89

Reduces spatter adhesion and improves durability by the use of the coil scraper, Lube-retainer and grease for welding.

64 Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S45C)

-XC91

With coil scraper and grease for welding

- CDQ2 series Standard
- CDQ2 series Long Stroke
- ■CDQ2□S series (Anti-lateral Load)

Applicable Series

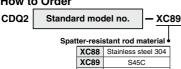
	Series	Description	Model	Action	Note	XC88	XC89	XC91
		Compact cylinder	CQ2-Z	Double acting, Single rod	With auto	•	•	•
	CQ2	Long stroke	CQ2-Z	Double acting, Single rod	switch magnet	•	•	_
	Anti-lateral load	CQ2□S-Z	Double acting, Single rod	only	•	•	_	

Made to Order

Part		d material me plated)	Coil	Lube-	Grease for welding	
no.	S45C	Stainless steel 304	scraper	retainer		
-XC88	_	•	•	•	•	
-XC89	•	_	•	•	•	
-XC91	•	_	•	_	•	

Note) Use the -XC91 in a place where the distance from the welding portion is far and the spatter scattering is minimized.

How to Order



XC88	Stainless steel 304
XC89	S45C
XC91	S45C

Standard

Specifications

Bore size	ø32, ø40, ø50, ø63, ø80, ø100
Mounting brackets	Excludes the compact foot bracket
Туре	Pneumatic
Mounting bolt for the through-hole type	Not included
Dimensions	See below.
Additional specifications	Same as standard type

Long stroke

Specifications

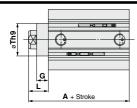
Mounting brackets	Excludes the compact foot bracket
Туре	Pneumatic
Cushion	Rubber bumper
Dimensions	See below.
Additional specifications	Same as standard type

Anti-lateral load

Specifications

Mounting brackets	Excludes the compact foot bracket				
Dimensions	See below.				
Additional specifications	Same as standard type				

Dimensions (Other dimensions are the same as the standard type.)



										(mm)	
			XC88	8, 89				XC91			
Bore size		Α									
(mm)	Standard	Long stroke	Anti-lateral load	G	L	Th9	A	G	L	Th9	
32	50	67.5	60	10	17	23 -0.052	45	5	12	23 - 0.052	
40	56.5	77	66.5	10	17	28 _ 0.052	51.5	5	12	28 _ 0.052	
50	58.5	78.5	68.5	10	18	35 _ 0.062	53.5	5	13	35 _ 0.062	
63	64	80	74	10	18	35 - 0.062	59	5	13	35 - 0.062	
80	73.5	91	83.5	10	20	43_0.062	68.5	5	15	43 _ 0.062	
100	85	102.5	95	10	22	59_0,074	80	5	17	59 _ 0.074	

-XC88: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod; Stainless steel 304)

-XC89: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

-XC91: Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: \$45C)



MGP-XC88(W)/XC89W/XC91(W)

62 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)

-XC88

Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

-XC89

Reduces spatter adhesion and improves durability by the use of the coil scraper, Lube-retainer and grease for welding.

64 Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S45C)

-XC91

With coil scraper and grease for welding

Applicable Series

Series	Description	Model	Action	XC88(W)	XC89	XC91(W)	Note	Vol. no. (for std model)
		MGPM-Z		•	-*	•		
MGP	Compact guide cylinder	MGPL-Z	Double acting	_	_	•	ø32 to ø100 only	Web Catalog
		MGPA-Z		_	_	•		

Made to Order

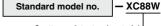
Part no. (Hard chrome plating) S45C Stainless steel 304 Rod side Rod side Head side Head side Head side Head side S4C S	made to Order								
S45C Stell 804 Head side Rod side Head side -XC88	Part no.	Guide ro	d material	Coil s	craper	Lube-r	Grease for		
-XC91		S45C		Rod side	Head side	Rod side	Head side	welding	
-XC88W — • • • •	-XC88	_	•	•	_	•	_	•	
	-XC91	•	_	•	_	•	_	•	
VOCCUM C	-XC88W	_	•	•	•	•	•	•	
-XC89W • - • • • •	-XC89W	•	_	•	•	•	•	•	
-XC91W	-XC91W	•	_	•	•	•	_	•	

^{*} There is no "-XC89" part number suffix as the specifications are the same as those of the "-XC91."

Specifications

Bore size		ø32, ø40, ø50, ø63, ø80, ø100
Max. operating	XC88, XC91	0.12 MPa
pressure	XC88W, XC89W, XC91W	0.14 MPa
Dimension	ns	See below.
Additiona	I specifications	Same as standard type

How to Order



Spatter-resistant rod material

Symbol	Scraper mounting position	Rod material	
XC88	Single side scraper	Stainless steel 304	
XC91	Sirigle side scraper	S45C	
XC88W		Stainless steel 304	
XC89W	Both sides scraper	S45C	
XC91W		S45C	

Single side scraper

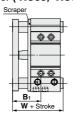
Both sides scraper





Dimensions (Other dimensions are the same as the standard type.)

Single side scraper (-XC88, -XC91)

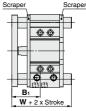


						(111111)	
Bore size	XC	XC88		291	XC35		
(mm)	B ₁	W Note 1)	B ₁	W Note 1)	B ₁	W Note 1)	
32	53	85	53	85	53	85	
40	54	85	54	85	54	85	
50	62	98.5	62	98.5	62	98.5	
63	62	98.5	62	98.5	62	98.5	
80	78	114.5	78	114.5	78	114.5	
100	71	136.5	71	136.5	71	136.5	

* At 0 stroke

Note 1) W dimensions are for 50 stroke or less.

Both sides scraper (-XC88W, -XC89W, -XC91W)



Bore size			XCS	91W	XC35W		
(mm)	B ₁	W	B ₁	W	B ₁	W	
32	53	82.5	53	82.5	53	82.5	
40	54	89	54	89	54	89	
50	62	95	62	95	62	95	
63	62	100	62	100	62	100	
80	78	120.5	78	120.5	78	120.5	
100	71	143	71	143	71	143	

* At 0 stroke



(mm)

-XC88: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)

-XC89: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

-XC91: Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: \$45C)



MK2T-XC89/XC91

Symbol -XC89

63 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

Reduces spatter adhesion and improves durability by the use of the coil scraper, Lube-retainer and grease for welding.

64 Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S45C)

-XC91

With coil scraper and grease for welding

Applicable Series

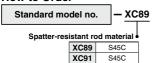
Series	Description	Model	Action	XC89	XC91	Vol. no. (for std model)
МК2Т	Rotary clamp cylinder	MK2T	Double acting	•	•	Web Catalog

Made to Order

Part no.	Piston rod material (Hard chrome plated) S45C	Coil scraper	Lube- retainer	Grease for welding	
-XC89	•	•	•	•	
-XC91	•	•	_	•	

Note) Use the -XC91 in a place where the distance from the welding portion is far and the spatter scattering is minimized.

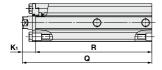
How to Order



Specifications

Bore size	ø32, ø40, ø50, ø63
Dimensions	See below.
Additional specifications	Same as standard type

Dimensions (Other dimensions are the same as the standard type.)



Clamp stroke: 10 mm

Bore size		XC89			XC91	
Dore Size	Q	R	K 1	Q	R	K 1
32	156	140	16	148	140	8
40	160.5	144	16.5	151.5	144	7.5
50	_	_	_	_	_	_
63	_	_	_	_	_	_

Clamp stroke: 20 mm

(mm)

(mm)

Olding Stre	/KC. 20 IIII	"				(111111)		
Bore size		XC89			XC91			
bore size	Q	R	K 1	Q	R	K 1		
32	176	160	16	168	160	8		
40	180.5	164	16.5	171.5	164	7.5		
50	202.5	179	23.5	191	179	12		
63	205	182	23	192	182	10		

Clamp stroke: 50 mm

(mm)

Clamp Stre	Ke. Ju iiii	"				(111111)	
Bore size		XC89		XC91			
Bole Size	Q	R	K 1	Q	R	K 1	
32	_	_	_	_	_	_	
40	_	_	_	_	_	_	
50	266	242.5	23.5	254.5	242.5	12	
63	269	246	23	256	246	10	





- -XC88: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)
- -XC89: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)
- -XC91: Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S45C)



CKG1-XC88/XC89/XC91

Symbol

62 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)

-XC88

Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

-XC89

Reduces spatter adhesion and improves durability by the use of the coil scraper, Lube-retainer and grease for welding.

64 Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S45C)

-XC91

With coil scraper and grease for welding

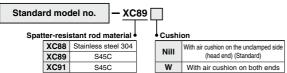
CKG1 series (Magnetic Field Resistant Auto Switch Rod Mounting Type

■ CKG1 series General Purpose Auto Switch Band Mounting/Rod Mounting

Applicable Series

	Series	Description	Model	Action	XC88	XC89	XC91	Vol. no. (for std model)
	CKG1	Clamp adjudar	CKG1-Z1	Double acting, Single rod	•	•	•	Web Catalog
		Clamp cylinder	CKG1-7	Double action. Single rod.	•	•	•	web catalog

How to Order



Note) The dimensions of the product with the air cushion on both ends are the same as those of the product with the air cushion on the unclamped side (head end).

Made to Order

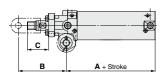
		Piston rod material (Hard chrome plated)		Coil	Lube-	Grease	
	no.	S45C	Stainless steel 304	scraper	retainer	welding	
Ī	-XC88	_	•	•	•	•	
	-XC89	•	_	•	•	•	
	-XC91	•	_	•	_	•	

Note) Use the -XC91 in a place where the distance from the welding portion is far and the spatter scattering is minimized.

Specifications/CKG1-Z, CKG1-Z1 common

Bore size	ø40, ø50, ø63				
End bracket	I, IA, Y, YA				
Option	Mounting brackets "B," "D," "L," and "K" are not available				
Dimensions	See below.				
Additional specifications	Same as standard type				

Dimensions/CKG1-Z, CKG1-Z1 common (Other dimensions are the same as the standard type.)



						(mm)	
Bore size		XC88, 89		XC91			
(mm)	Α	В	С	Α	В	С	
40	78	97	43	78	97	52	
50	78	97	43	78	97	52	
63	78	97	43	78	97	52	

* At 0 stroke

- -XC88: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)
- -XC89: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)
- -XC91: Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: \$45C)



CKGA-XC88/XC89/XC91

Symbol

62 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)

-XC88

53 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

-XC89

Reduces spatter adhesion and improves durability by the use of the coil scraper, Lube-retainer and grease for welding.

64 Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S45C)

-XC91

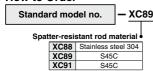
With coil scraper and grease for welding

■ CKGA series (Rod Mounting)

Applicable Series

Series	Description	Model	Action	XC88	XC89	XC91	Vol. no. (for std model)
CKG1	Clamp cylinder	CKGA	Double acting, Single rod	•	•	•	Web Catalog

How to Order



Specifications

Bore size	ø80, ø100
Dimensions	Same as standard type
Additional specifications	Same as standard type

Made to Order

Part		d material me plated)	Coil scraper	Lube-	Grease	
no.	S45C	Stainless steel 304		retainer	welding	
-XC88	_	•	•	•	•	
-XC89	•	_	•	•	•	
-XC91	•	_	•	_	•	

Note) Use the -XC91 in a place where the distance from the welding portion is far and the spatter scattering is minimized.

- -XC88: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)
- -XC89: Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)
- -XC91: Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S45C)



CKGA-XC88/XC89/XC91

Symbol

62 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)

-XC88

Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)

-XC89

Reduces spatter adhesion and improves durability by the use of the coil scraper, Lube-retainer and grease for welding.

64 Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S45C)

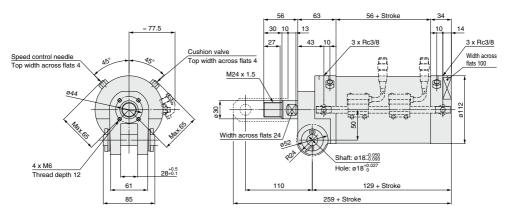
-XC91

With coil scraper and grease for welding

$^{\text{Bore Size}}_{\emptyset}$ 80 to \emptyset 100

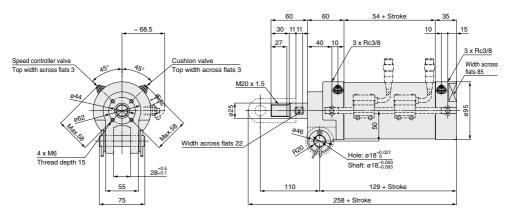
CKGA100-XC88/XC89

With auto switch (D-P4DWS ...).



CKGA80-XC88/XC89

With auto switch (D-P4DWS ...).



The specifications of the end bracket (double knuckle joint with pins) are the same as those of the standard model.

Comparison of the Dimensions of Each Series

The -XC88/XC89/XC91 and standard product have the same dimensions.



Made to Order Common Specifications: -XC92: Dust Resistant Actuator



65 Dust Resistant Actuator

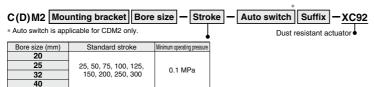
Symbol -XC92

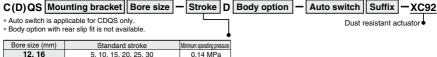
Applicable for environments with flying micro-powder (20 to 30 µm) such as ceramic powder, toner powder, paper powder, and metallic powder (except weld spatter). 4 times stronger than the standard model

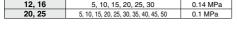
Applicable series

Series	Description/Type	/Type Model Action		Remark (s)	Vol. No. (for std model)				
CM2	Air Cylinder CM2 Double acting, Single ro		Double acting, Single rod	Compatible with cylinders with rubber bumper					
cqs	Compact Cylinder CQS Dou		Double acting, Single rod		Web Catalog				
CQ2	CQ2 Compact Cylinder		Double acting, Single rod	Applicable to ø32 to ø100.	Web Catalog				
MGP	Compact Guide Cylinder	MGP	Double acting, Single rod						

How to Order







C(D)Q2 | Mounting bracket | Bore size Stroke D Body option Auto switch Suffix * Auto switch is applicable for CDQ2 only. Dust resistant actuator * Body option with rear slip fit is not available.

Bore size (mm)	Standard stroke	Minimum operating pressure
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	0.1 MPa
50 to 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	0.1 MPa

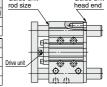


`
Standard stroke
10, 20, 30, 40, 50, 75, 100
20, 30, 40, 50, 75, 100, 125, 150, 175, 200
25, 50, 75, 100, 125, 150, 175, 200

Specifications other than minimum operating pressure are the same as standard model.

● Suπix					
Symbol	Type	Drive unit	Guide unit		
Syllibol	туре	Drive unit	Rod side	Head end	
Nil	With lube-retainers on one side	0	0	_	
W	With lube-retainers on both sides	0	0	0	
	Bore size	Minimum	operating	pressure	
XC92	ø12, ø16	0.2 MPa			
AC92	ø20 to ø100	0	15 MP	а	

Cymbol	Турс	Direc unit	Rod side	Head end			\	
Nil	With lube-retainers on one side	0	0	_			_	
W	With lube-retainers on both sides	0	0	0	-	Н	\dashv	
	Bore size	Minimum	Minimum operating pressure				4	
XC92	ø12, ø16	0.2 MPa			-		20	
AUSZ	ø20 to ø100	0	.15 MP	Drive unit /	n	E		
XC92W	ø12, ø16		0.25 MPa			Ц		_
XC92W	ø20 to ø100	0	.2 MPa				\dashv	_



Guide unit

Guide unit

Made to Order Common Specifications: -XC92: Dust Resistant Actuator



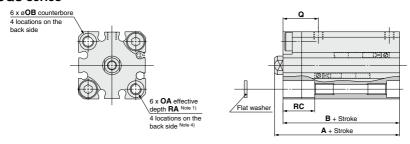
65 Dust Resistant Actuator

Symbol -XC92

(mm)

Dimensions (Other dimensions are the same as the standard type.)

CM2 series: The same as the standard type CQS series



Note 1) For the standard type ø12 and ø16 with 5 strokes, ø20 with 15 strokes or less, and ø25 with 5 or 10 strokes, and for models with an auto switch and built-in magnet of ø20 with 5 strokes, the through-hole is threaded over the entire length.

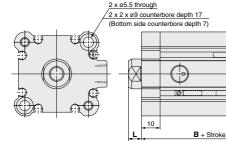
Note 2) Be sure to use the attached flat washer for mounting cylinder with through-holes.

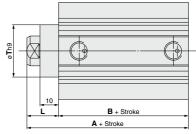
Note 3) For models with a rubber bumper, the stroke tolerance does not include bumper deflection.

Note 4) 2 locations on the back side for the standard-type ø20 with 15 strokes or less and ø25 with 10 strokes, and for models with an auto switch and built-in magnet of ø20 with 5 strokes.

	(IIIII)											
Bore size	Α		E	В			ОВ	RA	RC			
(mm)	Without auto switch	With auto switch	Without auto switch	With auto switch	Q	OA	ОВ	nA	nC			
12	30.5	35.5	27	32	17.5	M4 x 0.7	6.5	7	14			
16	30.5	35.5	27	32	17.5	M4 x 0.7	6.5	7	14			
20	34	44	29.5	39.5	19	M6 x 1.0	9	10	17			
25	37.5	47.5	32.5	42.5	21	M6 x 1.0	9	10	17			

CQ2 series





ø32

						(mm)
Bore size		4	E	3		т
(mm)	Without auto switch	With auto switch	Without auto switch	With auto switch	_	•
32	40 (50)	50	33 (43)	43	7	_
40	46.5 (56.5)	56.5	29.5 (39.5)	39.5	17	28
50	48.5 (58.5)	58.5	30.5 (40.5)	40.5	18	35
63	54 (64)	64	36 (46)	46	18	35
80	63.5 (73.5)	73.5	43.5 (53.5)	53.5	20	43
100	75 (85)	85	53 (63)	63	22	59

A + Stroke

ø40 to ø100

Note 1) For cylinders with rubber bumper, stroke tolerance does not include the amount of bumper change.

Note 2) Dimensions inside () are for 75, 100st.



Made to Order Common Specifications: -XC92: Dust Resistant Actuator

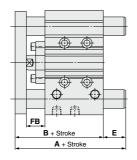


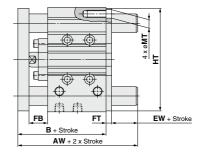
65 Dust Resistant Actuator

Symbol -XC92

Dimensions (Other dimensions are the same as the standard type.)

MGP series





With Lube-retainers on one side (mm) Bore size Over 50 st and 50 st Over 50 st and FB (mm) or less 200 st or less* or less 200 st or less* 12 70.5 15 0 18.5 74.5 0 16 56 56 18.5 15 20 63 94.5 63 0 31.5 16 25 63.5 95 63.5 0 31.5 16 32 112 69.5 27.5 20 40 97 112 76 21 20 50 106.5 128 82 24.5 22 63 106.5 128 87 19.5 41 22 106.5 80 125 152 18.5 28 100 147 172 126

* The standard		

With Lub	With Lube-retainers on both sides (mm						
Bore size (mm)	AW	В	EW	FB	FT	МТ	нт
12	63	52	6	15	5	5	57
16	67	56	6	15	5	6	64
20	74	63	6	16	5	6	80
25	74.5	63.5	6	16	5	7	92
32	82.5	69.5	7	20	6	8.5	110
40	89	76	7	20	6	8.5	118
50	95	82	7	22	6	11	146
63	100	87	7	22	6	11	160
80	120.5	106.5	8	28	6	14	200
100	143	126	8	35	9	16	238

-XC93□: With Greater Water Resistance + Stable Lubrication Function



66 With Greater Water Resistance + Stable Lubrication Function

Symbol -XC93

·5 times stronger against water (liquids) than the standard model

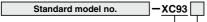
-Equipped with the greater water resistant scraper (Fluororubber). The Lube-retainer creates grease coating around the piston rod, which improves lubrication.

·Stainless steel can be selected for the piston rod and rod end nut.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
RHC	High power cylinder	RHC	Double acting, Single rod	Applicable bore size: ø32, ø40 Rc port only	Web Catalog

How to Order

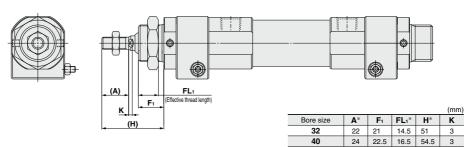


With greater water resistance + stable lubrication function

Piston rod, Rod end nut material

Nil	Standard (Carbon steel)
S	Stainless steel

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



^{*:} Same as the standard model.

Made to Order Common Specifications -XC102: Lock Release Specification



67 Lock Release Specification

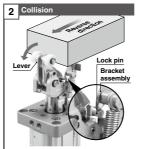
Symbol -XC102

·Prevents lever damage when a transferred workpiece moves backward

(Prevents damage by releasing the locked lever when a pallet suddenly moves backward and collides with the lever)



The lever is in the locked state when the lock pin is hooked on the bracket assembly.



When a workpiece moves backward and collides with the lever, the lock pin unhooks from the bracket assembly as the lever is pushed backward.



When the lock pin is unhooked from the bracket assembly, the lever becomes unlocked, which allows the workpiece to pass through.



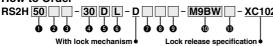
Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
RS2H	Heavy duty stopper cylinder	RS2H	Double acting		Web Catalog

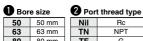
Specifications

Lever	With lock mechanism		
Shock absorber	Shock absorber with scraper (Option)		
Specifications other than above	Same as the standard type		

How to Order



■The main product specifications and dimensions are the same as those of the standard model. For further details on the shape and dimensions, refer to the CAD data.



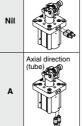


Option*1 Nil Without option

With cancel cap

- With lever detection switch*2 *1 Ontions can be combined Indicate the option symbols in the order of "C" then "S."
- *2 For details on the lever detection switch, refer to the standard model.





Cylinder stroke 40 mm (ø80)

30 mm (ø50, ø63) T Single acting/spring extend

6	Action	6
D	Double acting	L
В	Double acting spring type	M

Roller material Resin Carbon steel

8 Positional relationship of the lever and port

	С то от				
Nil	Transfer Port direction	Q	Port Transfer direction		
Р	Port Transfer direction	R	Transfer direction		

Shock absorber

Nil	Standard		
Υ	Shock absorber with scraper		

 Number of auto switches (Number of auto

switches mounted)				
Nil	2			
S	1			

Auto switch

Nil	Without auto switch
	(Built-in magnet)

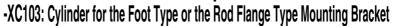
- The applicable auto switches are the same as those for the standard model
- Auto switches are shipped together with the product but do not come assembled.

Replacement Parts/Shock Absorber

Dozo siza (mm)	Orde	er no.
Bore size (mm)	Standard	With scraper
50	RS2H-R50	RS2H-R50-X2666
63	RS2H-R63	RS2H-R63-X2666
80	RS2H-R80	RS2H-R80-X2666

The shock absorber can be replaced individually. Mounting of the built-in shock absorber with a scraper is interchangeable with the standard shock absorber (RS2H-RD).







68 Cylinder for the Foot Type or the Rod Flange Type Mounting Bracket

Symbol -XC103

For cylinders with a foot type or a rod flange type mounting bracket (The rod end length is 5 mm longer than that of the standard model.)

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
JCQ	Compact cylinder	JCQ	Double acting, Single rod		Web Catalog

How to Order

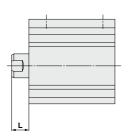
JC(D)QA Standard model no. - XC103

• Cylinder for the foot type or the rod flange type mounting bracket

Specifications

Mounting type	Both ends tapped
Dimensions	See below.
Specifications other than above	Same as standard type

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



	(mm)
Bore size	L
32	10
40	11
50	13
63	13
80	14
100	15

Dimensions other than those above are the same as those of the standard model.

Made to Order Common Specifications: -XC104: Built-in Cylinder with Lock (MWB)



Built-in cylinder with lock

69 Built-in Cylinder with Lock (MWB)

This type has a built-in cylinder with lock, which accommodates intermediate stops, emergency stops and drop prevention, etc.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
MGG	Guide cylinder	MGG	Double acting		2-2 From P. 538

How to Order

MGG	Bearing type	Mounting type	Bore size	Port thread type	_	Stroke	_	Auto switch	-XC104	

Specifications

Applic	able series		MC	GG								
Bore	size (mm)	50	63	80	100							
Basi	c cylinder	MDWBB Bore s	ize Port thread	type - Stroke N	V - Auto switch							
Minimum ope	rating pressure Note)	0.2 MPa (Horizontal with no load)										
Piston speed		50 to 1000 mm/s 50 to 700 mm/s										
	ent range (One side) ting bolts (2 pcs.)]	0 to –15 mm										
Non-rotating	Slide bearing	±0.	04°	±0.03°								
accuracy *2	Ball bushing bearing	±0.	03°	±0.02°								
Shock absorb	er model	RB2015 RB2725										

^{*1} Specifications other than shown above are the same as the standard type.

Note) When the piston is locked, the load mass is limited by the mounting orientation and the operating pressure. For details about the lock specifications, etc., refer to the cylinders with lock/MWB series.



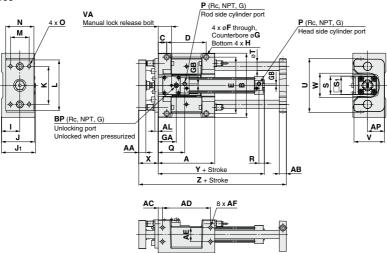
^{*2} Non-rotating rod accuracy must be below the values shown in the table at the retraction of the cylinder (initial value), and without loads or the conditions excluding the deflection of the guide rods.

Made to Order Common Specifications: -XC104: Built-in Cylinder with Lock (MWB)



Dimensions

Basic type ø50 to ø100



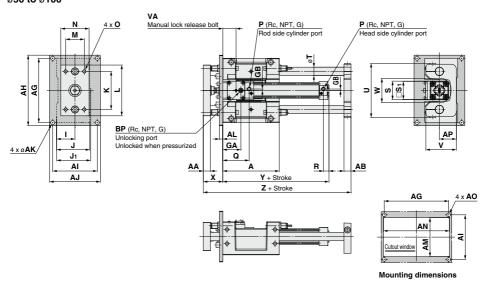
																									(mm)
Bore size (mm)	Α	AA	ΑВ	A	С	AD	AE		AF	AL	AP	В	С	D	E	F		G	(GA	GB		Н		I
50	200	25	25	15	;	170	50	M1	2 x 1.75 depth 24	12	60	228	30	140	200	13.5	20 d	epth 1	4.5	64	5	M16 >	(2 de	pth 28	65
63	230	25	27	15	;	200	55	M1	2 x 1.75 depth 24	12	70	262	30	170	234	13.5	20 d	epth 1	4.5	73	9	M16 >	(2 de	pth 28	75
80	280	30	30	17	.5	245	70	M1	4 x 2.0 depth 28	16	80	304	35	210	274	15	23 (depth	17	92	11.5	M18 x	2.5 d	epth 32	85
100	280	32	30	17	'.5	245	70	M1	4 x 2.0 depth 28	16	80	304	35	210	274	15	23 (depth	17	109	17	M18 x	2.5 d	epth 32	85
					_																			_	
Bore size (mm)	J	J1		κ	L	. 1	м	N	0		P	ВР		Q	R	s	S ₁	т	U	v	VA	w	х	Y	z
50	117	120.	5	135	18	0 6	66	100	M12 x 1.75 depth	23	1/4	1/8		93.5	19.5	66	65	30	192	108	47	86	69	184	323
63	138	134.	5	160	21	4	76	115	M12 x 1.75 depth	23	3/8	1/4		106.5	20.5	78	75	35	224	128	53	104	69	196	358
80	153	156.	5	190	24	5 8	30	125	M14 x 2 depth 2	28	3/8	1/4		132	23	98	95	40	262	143	65	128	87	241	431
100	153	165	5	100	2/1	5 5	20	125	M14 v 2 donth	30	1/2	1/4		150	23	116	11/	40	262	1/13	74	128	87	261	131

Made to Order Common Specifications: -XC104: Built-in Cylinder with Lock (MWB)



Dimensions

Front mounting flange type ø50 to ø100



																			(mm)
Bore size (mm)	Α	AA	АВ	AG	АН	AI	AJ	AK	AL	AM	AN	AO	AP	В	GA	GB	1	J	J1
50	200	25	25	228	250	158	180	14	12	135	234	M12	60	228	64	5	65	117	120.5
63	230	25	27	262	284	178	200	14	12	155	268	M12	70	262	73	9	75	138	134.5
80	280	30	30	300	326	200	226	16	16	175	310	M14	80	304	92	11.5	85	153	156.5
100	280	32	30	300	326	200	226	16	16	175	310	M14	80	304	109	17	85	153	165.5

Bore size (mm)	К	L	М	N	o	Р	ВР	Q	R	s	S ₁	Т	U	v	VA	w	х	Υ	z
50	135	180	66	100	M12 x 1.75 depth 23	1/4	1/8	93.5	19.5	66	65	30	192	108	47	86	69	184	323
63	160	214	76	115	M12 x 1.75 depth 23	3/8	1/4	106.5	20.5	78	75	35	224	128	53	104	69	196	358
80	190	245	80	125	M14 x 2 depth 28	3/8	1/4	132	23	98	95	40	262	143	65	128	87	241	431
100	190	245	80	125	M14 x 2 depth 30	1/2	1/4	150	23	116	114	40	262	143	74	128	87	261	431