Made to Order Common Specifications



	Oversized red evlinder	D 1445
2 -XB6	Heat resistant cylinder (-10 to 150°C)	D 1445
3 -XB7	Cold resistant cylinder (-40 to 70°C)	P 1448
4 -XB9	Low speed cylinder (10 to 50 mm/s)	P 1449
5 -XB10	Intermediate stroke (Using exclusive body)	P 1450
6 -XB10A	Intermediate stroke (Spacer-installed type)	P 1455
7 -XB11	Long stroke type	P.1456
8 -XB12	External stainless steel cylinder	P.1460
9 -XB13	Low speed cylinder (5 to 50 mm/s)	P.1461
10 -XB14	Cylinder with heat resistant auto switch	P.1462
11 -XB19	High speed type	P.1463
12 -XB20	Stroke adjustment unit with adjustment bolt	P.1464
13 -XB22	Shock absorber soft type RJ series type	P.1468
14 -XC2(A)	Rod end length extended 10 mm	P.1472
15 -XC3	Special port location	P.1473
16 -XC4	With heavy duty scraper	P.1477
17 -XC5	Heat resistant cylinder (-10 to 110°C)	P.1484
18 -XC6	Made of stainless steel	P.1485
19 -XC7	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel	P.1491
20 -XC8	Adjustable stroke cylinder/Adjustable extension type	P.1492
21 -XC9	Adjustable stroke cylinder/Adjustable retraction type	P.1498
22 -XC10	Dual stroke cylinder/Double rod type	P.1503
23 -XC11	Dual stroke cylinder/Single rod type-	P.1508
24 -XC12	Tandem cylinder	P.1516
25 -XC13	Auto switch rail mounting type	P.1518
26 -XC17	Pin cylinder with rod quenched	P.1523
27 -XC19	Intermediate stroke (Spacer type)	P.1524
28 -XC20	Head cover axial port	P.1525
29 -XC22	Fluororubber seals	P.1526
30 -XC24	With magnetic shielding plate	P.1528
31 -XC25	No fixed throttle of connection port	P.1528
32 -XC26	with split pins for double clevis pin/double knuckle joint pin and flat washers	P.1529
	Double clevis wiath/Double knuckle wiath 12.5 mm, 16.5 mm, 19.5 mm; with double clevis, double knuckle joint…	P.1531
34 -XC27	Double clevis and double knuckle joint pins made of stainless steel	P.1532
	Double knuckle joint with enring him	P.1000
30 -XC29	Double knuckie joint with spring pin	P.1534
37 -AC30	Non rotating plate with workpiece mounting screw (Ne extended part on the red and).	D 1527
39 -XC34	With coil scraper	D 1529
40 -XC36	With boss in rod side	P 1544
41 -XC37	Larger throttle diameter of connection port	D 15//
42 -XC38	Vacuum (Bod through-hole)	P 1545
43 -XC42	Built-in shock absorber in head cover side	P 1546
44 -XC51	With hose nipple	P 1547
45 -XC52	Mounting nut with set screw	P.1547
46 -XC56	With knock pin holes	P.1548
47 -XC57	Rodless cylinder with floating joint	P.1552
48 -XC65	Made of Stainless Steel (Combination of XC7 and XC68)	P.1554
49 -XC67	Dust seal band NBR lining specifications	P.1555
50 -XC68	Made of stainless steel (with hard chrome plated piston rod)	P.1555
51 -XC69	MGP series with shock absorber	P.1556
52 -XC71	Helical insert thread specifications	P.1558
53 -XC72	Without built-in auto switch magnet	P.1558
54 -XC73	Built-in cylinder with lock (CDNG)	P.1559
55 -XC74	With front plate for MGG cylinder	P.1562
56 -XC78	Auto switch mounting special dimensions at stroke end	P.1563
57 -XC82	Bottom mounting type-	P.1564



Made to Order Common Specifications

58 -XC83	Built-in cylinder with lock (MDNB)	P.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) I	P.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.1585-1



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





1 Oversized Rod Cylinder

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.

How to Order



Oversized rod cylinder

Applicable Series

w

Series	Description	Model	Action	Note	Vol. no. (for std model)
MB	Air cylinder	MB	Double acting, Single rod		
MB1	Air cylinder	MB1	Double acting, Single rod		
CA2	Air cylinder	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	B1	øD	н	H1	к	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)	A	AL	B1	øD	н	H1	к	ка	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



В	lore size (mm)	A	AL	D	Е	EA	F	FA	н	к	ка	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

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

CS2 series

Single rod type ø180 to ø250



Width across flats KA

Double rod type ø180 to ø250

ø**320**

ø320



	D	F	К	KA
ø 180	45	37	20	41
ø 200	50	41	20	46
ø 250	60	52	25	56
ø 320	70	60	30	65





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.

Symbol

-XB6

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

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 model)	
CJP2	Pin cylinder	CJP2	Double acting, Single rod	Except clevis, trunnion type, with auto switch, ø4. Packing set (8)		
C.12	Air cylinder	CJ2-Z	Double acting, Single rod	Except with air cushion and auto switch, rod end bracket T, U		
002	7 in Cymrider	CJ2W-Z	Double acting, Double rod	Except with air cushion and auto switch, rod end bracket T, U		
	Air oulindor	CM2-Z	Double acting, Single rod	Except with rod boot and with auto switch		
	All cylinder	CM2W-Z	Double acting, Double rod	Except with rod boot and with auto switch		
	Non rotating rad type	CM2K-Z	Double acting, Single rod	Except with rod boot and with auto switch		
CM2	Non-rotating rod type	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		
		CG1-Z1	Double acting, Single rod	Except with auto switch. Without a bumper for cylinders with rubber bumper		
	Air cylinder	CG1-Z	Double acting, Single rod	Except with auto switch. Without a bumper for cylinders with rubber bumper		
CG1		CG1W-Z	Double acting, Double rod	Except with auto switch. Without a bumper for cylinders with rubber bumper		
	Discotorectore	CG1R-Z1	Double acting, Single 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		
		MB-Z	Double acting, Single rod	Except without air cushion and with auto switch		
MB	Air cylinder	MBW-Z	Double acting, Double rod	Except without air cushion and with auto switch		
	A	MB1-Z	Double acting. Single rod	Except without air cushion and with auto switch		
MB1	Air cylinder	MB1W-Z	Double acting. Double rod	Except without air cushion and with auto switch		
		CA2-Z	Double acting, Single rod	Except with auto switch		
CA2	A2 Air cylinder	CA2W-Z	Double acting, Double rod	Except with auto switch		
	End lock cylinder	lock cylinder CBA2 Double acting. Single rod Except with auto switch				
		CS1⊟N	Double acting. Single rod			
CS1	Air cylinder	Inder CS1W□N Double acting, Double rod Except with auto switch. Applicable bore size (ø125 to ø200)				
000	A factor of the set of the	CS2	Double acting, Single rod	Except with auto switch Except ø180 to ø320	Web Catalog	
052	Air cylinder	CS2W	Double acting, Double rod	Except with auto switch Except ø180 to ø320		
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		
	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		
		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		
		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		
		CO2K-Z	Double acting. Single rod	Except with rubber bumper and auto switch		
	Non-rotating rod type	CO2KW-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.)		
01/0		CY3B-Z	n	Without a bumper		
CY3	Magnetically coupled rodless cylinder	CY3B	Basic type	Without a bumper		
МК	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). No rubber bumper is equipped.		
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	Dural and and in days	CXSJ	Compact type	Except with auto switch		
CXS	Duai rod cylinder	CXS	Basic type	Except with auto switch		

How to Order

Standard mod	lel no.	-XB6			
	Heat resistant cylind				
Specifications					
Ambient temperature range	-10 to 150°C (0 t	o 150°C for CS			

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
operintendente enter man abere and external annenerene	Carrie de Charidard (Jpc

▲ 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) The maintenance intervals for this cylinder 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. However, for the type with an auto switch and the heat-resistant cylinder with a heat-resistant auto switch, refer to the "XB14 Made to Order Common Specifications."
- Note 4) Piston speed is ranged from 50 to 500 mm/s. But, for MGQIIB0, 100 and MGPIB0, 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) 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 6) The ambient temperature range of the CY3B and CY3B-Z series is 50 to 150°C.
- Note 7) Refer to the construction of the standard type for the details of the packing set for CJP2⊡6,10 and 16.



© SMC

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

Made to Order

Symbol

-XB6

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

CY3B series

How to Order

CY3B

Standard model no.

XB6

Heat resistant cylinder

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*

* 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 MPa⁸

* 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



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

SMC

Temperature Range for Operating Cylinder and Piston Speed

- 1. 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.
- 2. 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.
- 3. 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.)



MGPM Standard model no.

Heat resistant cylinder

Dimensions



	(mm)
Bore size (mm)	DA
12	(6)
16	(8)
20	(10)
25	(10)
32	(14)
40	(14)
50	20
63	20
80	25
100	30
The dimensions in () are t	ha cama aa daada

XB6

ird type.

Made to Order Common Specifications: -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 (6)		
C 12	Air cylinder	CJ2-Z	Double acting, Single rod	Except with air cushion and auto switch, rod end bracket, pivot bracket		
002	All Cylinder	CJ2W-Z	Double acting, Double rod	Except with air cushion and auto switch, rod end bracket, pivot bracket	Web Ostalan	
	A in audio dan	CM2-Z	Double acting, Single rod	Except with rod boot, with air cushion, with auto switch, rod end bracket, pivot bracket	web Catalog	
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		
		CG1-Z1	Double acting, Single rod	Except with air cushion, auto switch. Cylinders with a rubber bumper have no bumper.		
	Air cylinder	CG1-Z	Double acting, Single rod	Except with air cushion, auto switch. Cylinders with a rubber bumper have no bumper.		
CG1		CG1W-Z	Double acting, Double rod	Except with air cushion, auto switch. Cylinders with a rubber bumper have no bumper.	Web Catalog ⁽⁵⁾	
	Direct mount type	CG1R-Z1	Double acting, Single rod	Except with air cushion, auto switch. Cylinders with a rubber bumper have no bumper.		
		CG1R-Z	Double acting, Single rod	Except with air cushion, auto switch. Cylinders with a rubber bumper have no bumper.		
	Free mount cylinder	CU	Double acting, Single rod	Except with auto switch		
C 11	Non-rotating rod type	CUK	Double acting, Single rod	Except with auto switch		
	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		
202	Compost a diador	CQS	Double acting, Single rod	Except with auto switch, with rubber bumper, with bracket	Web Catalog	
Cus	Compact cylinder	CQSW	Double acting, Double rod	Except with auto switch, with rubber bumper, with bracket		
	Compact avlindor	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

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) The maintenance intervals for this cylinder differ from those of the standard cylinder.
- Note 4) Mounting auto switch is impossible.
- Note 5) No cushion type is adopted. Piston speed is ranged from 50 to 500 mm/s.
- Note 6) Refer to the construction of the standard type for the details of the packing set for CJP2□6,10 and 16.

A 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.

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. Made to Order

Symbol

-XB9

Note) Operate without lubrication from

a pneumatic system lubricator.

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	
CM2	Direct mount type	CM2R-Z	Double acting, Single rod	Except with air cushion	
	End lock cylinder	CBM2	Double acting, Single rod	Except with rod boot, with air cushion	
	Air cylinder	CG1-Z1	Double acting, Single rod	Except with rod boot, with air cushion	
CG1	All Cylinder	CG1-Z	Double acting, Single rod	Except with rod boot, with air cushion	
	Direct mount type	CG1R-Z	Double acting, Single rod	Except with air cushion	
	Free mount cylinder	CU	Double acting, Single rod		
CII	Non-rotating rod type	CUK	Double acting, Single rod		
	Long stroke standard type	CU	Double acting, Single rod		
	Long stroke, Non-rotating rod type		Double acting, Single rod		Web Catalog
202	Compact cylinder	CQS	Double acting, Single rod	Except long stroke	web Calalog
ouo		CQSW	Double acting, Double rod		
	Compact cylinder	CQ2-Z	Double acting, Single rod	Except long stroke and large bore type	
CQ2	Compact cymraei	CQ2W-Z	Double acting, Double rod		
	Axial piping type (Centralized piping type)	CQP2	Double acting, Single rod		
MGQ	Compact guide cylinder	MGQ	Double acting		
CXS	Dual rod cylinder	CXS Basic type			
		CY3B-Z	Double acting		
01	Magnetically coupled	CY3B	Double acting		
	rodless cylinder	CY1S-Z	Double acting		
		CY1L	Double acting		

How to Order



Specifications

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

Made to Order

5 Intermediate Stroke (Using exclusive body)

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)
		000	Double acting, Single rod	Long stroke is available, too.	
COS	Compact cylinder	cus	Single acting (Spring return)		
040		CQSW	Double acting, Double rod		
	Anti-lateral load	CQ2⊡S	Double acting, Single rod		
		CO2 7	Double acting, Single rod		
	Compact cylinder	002-2	Single acting (Spring return)		
		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		
C02	Lorgo boro oizo	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 registent	CQ2-R/V	Double acting, Single rod	Applicable to ø40 to ø100	
	Water 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		
CV1	Magnetically coupled	CY1H	Linear guide type		
CII	rodless cylinder	CY1F	Low profile guide type		
REA	Sine rodless cylinder	REAH	Lipear quide type		
REB Sine rodiess cylinder		REBH	Lineal guide type		

How to Order

Standard model no.

-XB10 Intermediate stroke

(mm)

(mm)

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



	<u> </u>				
bore size		4	E	3	stroke
(((((((((((((((((((((((((((((((((((((((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)	_	C to 00
16	22 (34)	—	18.5 (30.5)	—	6 to 29
20	24 (36)	—	19.5 (31.5)	_	C to 10
25	27.5 (37.5)	—	22.5 (32.5)	_	6 10 49
32	30 (40)	40 (40)	23 (33)	33 (33)	6 to 00
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)	1140.00
80	53.5 (63.5)	63.5 (63.5)	43.5 (53.5)	53.5 (53.5)	1110 99
100	65 (75)	75 (75)	53 (63)	63 (63)	

Single acting, Spring return

Bore size	Single rod type (Si	Applicable		
(mm)	A B		range (mm)	
12	20.5 (31.5)	17 (28)	E to D	
16	22 (34)	18.5 (30.5)	6109	
20	24 (36)	19.5 (31.5)	6 to 9	
25	27.5 (37.5)	22.5 (32.5)		
32	30 (40)	23 (33)	C to O	
40	36.5 (46.5)	29.5 (39.5)	6 tõ 9	
50	38.5 (48.5)	30.5 (40.5)	11 to 19	

Specifications: Same as standard type

Double acting, Double rod ⊕ ⊕ B + Stroke A + 2 (Stroke)

(mm						
Dava sina		Double	rod type		Applicable	
Bore size	4	1	E	stroke		
(((((((((((((((((((((((((((((((((((((((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 10 29	
20	35 (47)	-	26 (38)	_	C to 10	
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)	01033	
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 +0.00	
80	71 (81)	81 (81)	51 (61)	61 (61)	1110 99	
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.



Symbol

-XB10

5 Intermediate Stroke (Using exclusive body)

Dimensions: CQ2 Series

Double acting, Single rod/Long stroke

Double acting, Single rod/Large bore

€ € B + Stroke A + Stroke



* Dimensions of "with auto switch" and those of

"without auto switch" are the same.

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



Head Side Locking (mm)							
Bore size	Α		E	в			
(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		65.5		6 to 99		
40	82		75				
50	83.5		75.5]		
63	8	5	77				
Bore size	4	Α		3	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 00		
100	132.5	147.5	120.5	125.5	0 10 99		



			(mm)
Bore size	Single r	Applicable stroke	
(mm)	Α	В	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.

Double acting, Double rod/Large bore



		(1111)
Double	rod type	Applicable stroke
Α	В	range(mm)
115	83	
115	83	
125	91	11 to 299

-00	110	100		
	s other than	listed above	e are the	same
Bintonoion	o ounor unam	notou upor	5 a.o a.o	040
as standar	d type			

102

100

Note) Applicable stroke available in 1 mm increments.

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

Bore size

(mm)

125

140

160

180

200

D

136

1/3



Rod Side Locking													
Bore size		4	E	В									
(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	58									
40	71	.5	64	610 99									
50	73	8.5	65										
63	7	9	7	1									
-													
Bore size	4	4	E	3	Applicable stroke								
(mm)	49 stroke or less 51 to 99 st		49 stroke or less	51 to 99 stroke	range(mm)								
80	113.5	136	103.5	116	6 to 00								
100	125	147.5	113	125.5	010 99								



SMC



Symbol -XB10

5 Intermediate Stroke (Using exclusive body)

Dimensions: CQS Series



			(mm
Dana alaa	Single r	od type	
(mm)	Α	в	Applicable stroke
12	20.5 (25.5)	17 (22)	0.4- 00
16	20.5 (25.5)	17 (22)	6 to 29
20	24 (34)	19.5 (29.5)	6 to 10
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 10 29
20	35 (45)	26 (36)	6 to 40
25	39 (49)	29 (39)	01049

			,
	Single rod type	e (Long stroke)	
Bore size (mm)	Α	в	Applicable stroke
12	45.5	32	01 4- 00
16	45.5	32	31 to 99
20	55.5	41	51 to 199
25	59	44	51 to 299

(mm)

(mm)

	Single rod type (Si	ngle acting/Return)	
Bore size (mm)	Α	В	Applicable stroke
12	20.5 (25.5)	17 (22)	0.45.0
16	20.5 (25.5)	17 (22)	6 10 9
20	24 (34)	19.5 (29.5)	0.45.0
25	27.5 (37.5)	22.5 (32.5)	6 10 9

Double acting, Double rod



			(mm)
Dava sina	Single rod type (Anti-lateral load)	
(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 40
25	32.5 (42.5)	27.5 (37.5)	01049

* (): 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.



5 Intermediate Stroke (Using exclusive body)



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		w	Α		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	Stroke range			WA					WB		
(mm)	(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 s
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

Ī	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 s
l	32	26 to 399	24	48	124	200	300	33	45	83	121	171
l	40		24	48	124	200	300	34	46	84	122	172
	50		24	48	124	200	300	36	48	86	124	174
Ī	63		28	52	128	200	300	38	50	88	124	174
	80		28	52	128	200	300	42	54	92	128	178
Ī	100		48	72	148	220	320	35	47	85	121	171

MGPM-Z/A, E Dimensions

50

63

80

100

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				

150.5

150.5

180.5

16.5

11.5

8

10.5

37.5

32.5

35.5

35

78.5

73.5

74.5

84

131.5 126.5 151.5 190.5 * Dimensions except mentioned above are the same as standard type

109.5

88.5 109.5

88.5

104.5

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

. , .	. ,										
Bore size		-	4				E				
(mm)	11 to 39	st 41 to	99 st 1	01 to 249 st	11 to 39	st 41 to	99 st 10	01 to 249 st			
12	43	5	5	84.5	1	1	3	42.5			
16	49	6	5	94.5	3	1	9	48.5			
Bore size			Ā				=				
(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 s	t 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			Ā		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 s	t 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		4	4								
(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 s	t 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			

Stroke Range

12, 16

20, 25

Bore size (mm)

32, 40, 50, 63, 80, 100



5 Intermediate Stroke (Using exclusive body)



Stroke range (mm)

11 to 99

21 to 199

26 to 199

Dimensions: MGQ Series



MGQM (Slide bearing) A, E Dimensions

Bore size		4		E				
(mm)	11 to	99 st	11 to	99 st				
12	3	19	0					
16	4	3	(D				
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		۹.	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	1	2	25				
63	8	1	2	20				
80	g	3	18.5					
			21					

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

RE^A_B series



Intermediate stroke

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	٠	0	0	0	•		\nearrow		\nearrow	\checkmark	\checkmark	\nearrow		\nearrow	\checkmark	\lor			\nearrow	\checkmark	\checkmark		\checkmark	\checkmark	\checkmark
RE ⁶ H15	•	0	•	0	0	0	•	0	0	0	•	0	0	0	•	\triangleright	\triangleright	\checkmark			\nearrow	\triangleright	\bigtriangledown	\checkmark	\triangleright	\checkmark	\checkmark
REAH20	\square	\nearrow	•	0	0	0	•	0	0	0	•	0	0	0	•	0	0	0	•	\nearrow	\nearrow	\square	\square	\square	\square	\square	\bigtriangledown
RE ^A BH25	\checkmark	\nearrow	٠	—	0	—	•	—	0	—	٠	—	0	—	٠	—	0	—	•	0	0	0	•	\checkmark	\square	\checkmark	\bigtriangledown
RE ^A HT25	\checkmark	\nearrow	•	_	0	-	•	_	0	_	•	_	0	_	•	_	0	-	•	0	0	0	•	0	0	0	•
RE ^A BHT32	\square	\square	•	—	0	—	۲	—	0	—	٠	—	0	—	٠	—	0	-	•	0	0	0	•	0	0	0	۲

Standard stroke

O: Strokes set for -XB10

-: No setting

MGQL (Ball bushing bearing) A, E Dimensions

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

Bore size		4	I	E
(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		A		
Bore size (mm)	26 to 74 st	A 76 to 199 st	26 to 74 st	76 to 199 st
Bore size (mm) 32	26 to 74 st 53	A 76 to 199 st 90	26 to 74 st 5.5	76 to 199 st 42.5
Bore size (mm) 32 40	26 to 74 st 53 54	A 76 to 199 st 90 90	26 to 74 st 5.5 0	76 to 199 st 42.5 36
Bore size (mm) 32 40 50	26 to 74 st 53 54 60	A 76 to 199 st 90 90 102	26 to 74 st 5.5 0 4	76 to 199 st 42.5 36 46
Bore size (mm) 32 40 50 63	26 to 74 st 53 54 60 61	A 76 to 199 st 90 90 102 102	26 to 74 st 5.5 0 4 0	76 to 199 st 42.5 36 46 41
Bore size (mm) 32 40 50 63 80	26 to 74 st 53 54 60 61 84	A 76 to 199 st 90 90 102 102 143	26 to 74 st 5.5 0 4 0 9.5	76 to 199 st 42.5 36 46 41 68.5

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

Made to Order Common Specifications: -XB10A: Intermediate Stroke (Spacer-installed type)





6 Intermediate Stroke (Spacer-installed type)

A spacer is installed on the exclusive body (\bullet indication). The overall length is shorter than that of the spacer-installed type 1. The \bigcirc indicates the selectable stroke range. (Strokes with the \bullet indication are not selectable.) The — indicates strokes supported by the spacer-installed type 1.

Dere size [mm]	Charles renge									Stro	oke								
Bore size [mm]	Stroke range	\leftrightarrow	55	ţ	60	ţ	65	ţ	70	ţ	75	ţ	80	+ +	85	ţ	90	↔	95
32 to 100	51 to 94	0	٠	0	٠	0	٠	0	٠	—	٠	0	٠	0	۲	\bigcirc	٠	0	٠

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 B

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.)

																		(mm)
	Double acting,	Symbol					4							E	3			
	Single rod	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
Æ		32	95	100	105	110	120	125	130	135	88	93	98	103	113	118	123	128
-6	1.66-	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
p		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
	B + Stroke	100	130	135	140	145	155	160	165	170	118	123	128	133	143	148	153	158
	A + Stroke																	

Made to Order

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	Туре	Note	Vol. no. (for std model)
CX2	Slide unit	CX2	Slide bearing type		
CVW	Olide unit	CXWM	Slide bearing type		
CAW	Silde unit	CXWL	Ball bushing bearing type		
CXSJ		CXSJ	Standard type	Except ø6, Axial type]
OVC	Dual rod cylinder	CXS Note)	Standard type]
0.15		CXSW	Double rod type		1
		CY3B-Z	Basic type		Web Catalan
CV	Magnetically coupled	CY3B	Basic type		web Catalog
	rodless cylinder	CY1H	Linear guide type		1
		CY1F	Low profile guide type		
ML1	Hy-rodless cylinder	ML1C	Cam follower guide type		
REA	Sine rodless cylinder	REA	Basic type		1
BEO	Stopper cylinder/	RSQ-Z	Double acting	Round bar type only	
nau	Fixed mounting height	RSQ	Double acting	ø12, Round bar type only]

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)				
CV2B (-7)	25, 32	100 to 800	2001 to 3000 (ø25 to ø40)				
0136 (-2)	40, 50, 63	100 to 1000	2001 to 5000 (ø50, ø63)				
	10	100 to 300	301 to 500				
CV1H	15	100 to 500	501 to 750				
CI III	20	100 to 600	601 to 1000				
	25	100 to 800	801 to 1200				
CV1HT	25	100 to 1000	1001 to 1200				
Стіпі	32		1001 to 1500				
CX2	15, 25	25 to 200	225, 250, 275, 300				
схwм	10,00,05,00	05 to 000	225, 250, 275, 300 (CXWM16 to 25) 225, 250 (CXWM32)				
CXWL	10, 20, 25, 32	25 10 200	225, 250, 275 (CXWL16 to 25) 225 (CXWL32)				

Model	Bore size	Standard stroke	Long stroke
Woder	(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
CYEW	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

7 Long Stroke Type

Dimensions

CX2 series: ø15, ø25



CXWM series: Ø16, Ø25



ø**20**, ø**32**



CXWL series: ø16, ø25



									(mm)
Model	F	L	K	Ρ	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	L	K	Р	Q	S	SS	Z	ZZ
CX2N25-225	96	241	20.5	90	525	227	282	509	553
CX2N25-250	108.5	266	20.5	90	575	252	307	559	603
CX2N25-275	121	291	20.5	90	625	277	332	609	653
CX2N25-300	133.5	316	20.5	90	675	302	357	659	703

									(mm)
Model	F	L	К	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	Р	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

				-	-				(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	К	Р	Q	S	SS	Z	ZZ
CXWM32-225	38	240	28	220	543	227	296	523	563
CXWM32-250	38	265	28	245	593	252	321	573	613

	_		_	_				-	(mm)
Model	F	L	ĸ	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	ĸ	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







Symbol

-XB11

7 Long Stroke Type

Dimensions

CXWL series: ø20, ø32



$CXSJ^{M}_{L}$ series: Ø10



									(mm)
Model	F	L	к	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	к	Р	Q	s	SS	z	zz
CXWL32-225	41	277	30	255	584	227	337	564	604

$\textbf{CXSJ}_{L}^{M} \textbf{ series: } \texttt{\emptyset15}, \texttt{\emptyset20}, \texttt{\emptyset25}, \texttt{\emptyset32}$



N	lodel			C)	(SJ [№]	10			(cxs	J [™] 15				cxs	J [™] 20)				cxs	J [™] 25	;				cxs	J [™] 32	2	
S	troke	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	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
ğ	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
ž	Ζ	88	98	108	118	128	133	158		65		75		8	0		10	00		8	0		10	00		9	0		1	10
0)	Κ	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_{L}^{M} series: Ø10, Ø15





CXS^M_L series: Ø20, Ø25, Ø32





N	lodel			odel CXSt10						CXS	S№15				CXS	°″20					CXS	°″25			CXS [™] 32					
S	troke	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
ō	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
郒	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
s	Ζ	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.







Symbol

-XB11



Symbol 7 Long Stroke Type -XB11 How to Order For ø12 RS(D)Q Mounting bracket 12 - Stroke D - Auto switch Suffix -XB11 • Refer to the below for specifications. Long stroke type For ø16 to ø50 RS(D)Q Mounting bracket Bore size Stroke DZ -Auto switch Suffix -XB11 Refer to the below for specifications. Long stroke type

Specifications

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



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

RSDQB12



Symbol

8 External Stainless Steel Cylinder

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)
		0140	Double acting, Single rod	
	Air cylinder	CIVI2	Single acting (Spring return/extend)	
CM2		CM2W	Double acting, Double rod	Web Catalog
	Non votating and type	OMOK	Double acting, Single rod	
	Non-rotating rod type	CIVI2K	Single acting (Spring return/extend)	

How to Order



External stainless steel cylinder

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 st	andard type

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

Mounting Bracket Part No.

Description		Bore siz	e (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	CM-L040BSUS	
Flange	CM-F020BSUS	CM-F03	2BSUS	CM-F040BSUS
Mounting nut	SN-020BSUS	SN-032	2BSUS	SN-040BSUS
Rod end nut	NT-02SUS	NT-0:	BSUS	NT-04SUS
Single knuckle joint	I-020BSUS	I-032I	BSUS	I-040BSUS
Double knuckle (1) joint	Y-020BSUS	Y-032	BSUS	Y-040BSUS
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)

Made to Order

Symbol

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

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

-XB13

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 model)
CJ2	Air cylinder	CJ2	Double acting, Single rod	ø6 only	
	Air ovlindor	CG1-Z1	Double acting, Single rod	Except with rod boot, with air cushion]
CG1	All Cylinder	CG1-Z	Double acting, Single rod	Except with rod boot and with air cushion]
	Direct mount type	CG1R-Z	Double acting, Single rod	Except with air cushion]
	Free mount cylinder	CU	Double acting, Single rod]
cu	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]
000	Compost a dindor	CQS	Double acting, Single rod	Except long stroke]
Cus	Compact cylinder	CQSW	Double acting, Double rod]
	O	CQ2-Z	Double acting, Single rod	Except long stroke and large bore type]
CQ2	Compact cylinder	CQ2W-Z	Double acting, Double rod		1
	Axial piping type (Centralized piping type)	CQP2	Double acting, Single rod		1
CX2	Slide unit	CX2	Slide bearing type		1
0.00	Olista unit	CXWM	Slide bearing type		Web Catalog
CXW	Slide unit	CXWL	Ball bushing bearing type		1
МХН	Compact slide	MXH-Z	Double acting, Single rod		1
CXSJ	Dural and and in day	CXSJ	Standard type		1
CXS	Duai rod cylinder	CXS	Standard type		1
	Compact guide cylinder	MGP-Z	Double acting		1
MGP	With end lock	MGPL	Double acting		1
	Heavy duty guide rod type	MGPS	Double acting		1
MGG	Guide cylinder	MGGM	Double acting	Shock absorber cannot be mounted.	1
MGC	Guide cylinder	MGCM	Double acting	With rubber bumper. Port size Rc1/8 is applicable to ø20, 25.	1
		CY3B-Z	Basic type		1
01	Magnetically coupled	CY3B	Basic type		1
CY	rodless cylinder	CY1S-Z	Slide bearing type		1
		CY1L	Ball bushing bearing type		1
СХТ	Platform cylinder	СХТ	Double acting	Except long stroke. Shock absorber cannot be mounted.	1

How to Order



Low speed cylinder

-XB13

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)

Warning Operating 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.

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



10 Cylinder with Heat-resistant Auto Switch



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

Applicable Series

Description	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

How to Order

5 m ······ Z (Example) M9NJZ



Specifications

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

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

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



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

* 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.

1462



11 High Speed Type

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	MPa		0.05 MPa	1					
Maximum operating pressure		0.7 MPa									
Proof pressure			1.05	MPa							
Fluid			Air (No	n-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 :	< 0.8		Rc	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 (\mathbf{m}) should not exceed the values indicated in the graph below.



CXS□6, 10, 15, 20





Allowable kinetic energy (XB19)



Dimensions





Symbol

-XB19

25

0 to -11.5

-11 5 to -23

-23 to -34.5

н

RB1412

BB2015

L

RB1007

RB1412

40

0 to -16

-16 to -32

-32 to -48

н

RB2015

BB2725

L

RB1412

RB2015



Symbol

-XB20

12 Stroke Adjustment Unit with Adjustment Bolt

Stroke adjustment unit with an adjustment bolt.

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
MVO	Mechanically jointed	MY2H	Linear guide (Single axis)	Web Catalan
IVI 1 Z	rodless cylinder	MY2HT	Linear guide (Double axes)	web catalog

How to Order

Unit symbol

model

range by

spacer (mm)

Shock absorber

Stroke adjustment

intermediate fixing

MY2H MY2HT

Bore size (mm)

Standard model no. -XB20

16

0 to -5.6

-5.6 to -11.2

-11.2 to -16.8

н

RB1007

RB1412

L

RB0806

RB1007

Stroke Adjustment Unit Specifications





Port,

Port

* 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 Model

MY2H

MY2H1

Without spacer

With short spacer

With long spacer



@SMC

* Nuts are installed onto the cylinder body.

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

12 Stroke Adjustment Unit with Adjustment Bolt



Made to Order

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	Е	EA	EC	ED	EY	FA	FB	h	S	SD	т	тт	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



A 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

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

(Absorber stroke) T

12 Stroke Adjustment Unit with Adjustment Bolt

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

MY2HT L unit





s



Made to Order

Symbol

-XB20

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

SMC



A 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
MY2HT16 L/H Unit	1	28	28
MY2HT25 L/H Unit	1	37	37
MY2HT40 L/H Unit	1	58	58

MY2H(-XB20)

XB20 (Stroke Adjustment Unit with Adjustment Bolt)

∧Caution

<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.

12 Stroke Adjustment Unit with Adjustment Bolt

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.





MY2HT(-XB20)

Tightening Torgue for Stroke Adjustment Unit Holding Bolt (N·m)

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



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



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

Made to Order

Symbol

-XB20



Symbol

13 Shock Absorber Soft Type RJ Series Type

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	
MV	Mechanically jointed	MY1⊡W	With protective cover	ø16 to ø40	
141 1	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 sounded	CY1L	Ball bushing bearing type	ø6 to ø25	
CY	rodless cylinder	CY1H	Single-axis linear guide type	ø10 to ø25	
	Todiess 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

-XB22

Shock absorber soft type RJ series type

How to Order a Stroke Adjustment Unit for MY Itself

Stroke adjustment unit model

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 MOD service or funds are as 4.474	

* 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.

	Made Orde	to r
•		

13 Shock Absorber Soft Type RJ Series Type

Symbol

Cylinders

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

Mechanically Jointed Rodless Cylinder

Model	Turno	Stroke				Bore size				
Woder	Type	adjusting unit	ø10	ø16	ø 20	ø 25	ø 32	ø 40	ø 50	
	-YB22	L			RJ0806H	RJ1007H	RJ14	412H		
MV1B	-7022	Н	RJ0805		RJ1007H	RJ1412H	—	—		
WITTD	Chandard	L			RB0806	RB1007	RB1	412		
	Standard	Н	RB0805		RB1007	RB1412	RB2	2015		
	VBOO	L		RJ08	306H	RJ1007H	RJ14	412H		
MY1M	-4022	Н			RJ1007H	RJ1412H	—	—		
MY1C	Standard	L		RBC	806	RB1007	RB1	412		
	Stanuaru	Н			RB1007	RB1412	RB2	2015		
	-YB22	L		RJ08	306H	RJ1007H	RJ14	412H		
MV1L	-7022	Н	RJ0805		RJ1007H	RJ1412H	—	—		
WIT III	Standard	L		RBC	806	RB1007	RB1	412		
	Stanuaru	Н	RB0805		RB1007	RB1412	RB2	RB2015		
-XB22		L		RJ08	306H	RJ1007H	RJ14	412H		
	Standard	L		RBC	806	RB1007	RB1	412		
	-1822	L		RJ0806H		RJ1007H		RJ1412H		
MY2C	-7022	Н		RJ1007H Note)		RJ1412H				
MY2H	Standard	L		RB0806		RB1007		RB1412		
	Stanuaru	Н		RB1007 Note)		RB1412		RB2015		
	-XB22	L		RJ1007H		RJ1412H				
MY2HT	-7022	Н		RJ1412H		_				
	Standard	L		RB1007		RB1412		RB2015		
	Stanuaru	Н	/	RB1412		RB2015		RB2725		
	-YB22	L		RJ08	806H	RJ10	07H	RJ14	12H	
MY3B	-7022	Н		RJ10	07H	RJ14	12H		—	
mille	Standard	L		RB0	806	RB1	007	RB1	412	
	otunuuru	Н		RB1	007	RB1	412	RB2	015	
	-XB22	L		RJ0806H		RJ1007H		RJ1412H		
MY3M		Н		RJ1007H		RJ1412H		—		
	Standard	L		RB0806		RB1007		RB1412		
	Clandara	Н		RB1007		RB1412	\checkmark	RB2015	\vee	

Note) MY2C16 is not available with H unit.

Magnetically Coupled Rodless Cylinder

Model	Turno	Bore size									
woder	Type	Ø 6	ø10	ø15	ø 20	ø 25					
CV11	-XB22	RJ0805	RJ08	306H	RJ1007H	RJ1412H					
CTIL	Standard		RB0805	RB1006	RB1411						
CV1H	-XB22		RJ08	306H	RJ1007H	RJ1412H					
CTIH	Standard		RB0805	RB0806	RB1006	RB1411					
CY1HT	-XB22					RJ1412H					
	Standard		\geq			RB1411					

Guide Cylinder

Model	Turno		Bore size										
woder	Type	ø12	ø16	ø 20	ø 25	ø32	ø 40	ø 50	ø63	ø 80	ø100		
MCD 7	-XB22	RJ08	306H	RJ1007H		RJ1412H		RJ2015H		RJ2725H			
MGP-2	-XC69	-	-	—		-	-	RB2	015	RB2	725		
MCC	-XB22			RJ1007H	RJ1412H		_		_				
MGG	Standard			RB1007	RB1	412		RB2015		RB2	725		

Platform Cylinder

Model	Turno	Bore size							
	Type	ø12	ø16	ø 20	ø 25				
CVT	-XB22	RJ08	306H	RJ1007H	RJ1412H				
CXI	Standard	RBC	806	RB1007 RB1411					

Slide Unit/Double Rod Type

Model	Time	Bore size					
woder	Type	ø10	ø15	ø 25			
OVON	-XB22	RJ08	306H	RJ1007H			
CA2N	Standard	RBC	805	RB1006			



Symbol

13 Shock Absorber Soft Type RJ Series Type

-XB22 * Values in the maximum impact mass graph are at room temperature (20 to 25°C).

Maximum Impact Weight Graph (Shock Absorber Performance Line Graph)

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)



RJ0805 Absorbed Energy



RJ1412H Absorbed Energy Horizontal or

upward impact

impact

0.5

Downward

Collision speed v (m/s)

1.5



RJ2015H Absorbed Energy



RJ1007H 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.

(kg 18

Mass of impacting object m

16

14

12

10

8

6

4

2

00

13 Shock Absorber Soft Type RJ Series Type

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





Made t Order

Symbol

-XB22

											(11111)
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	.5 9	82	30	10	41	25	8	37	RJ1007H	M14 x 1.5
32	135.5	.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	.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
63 80 100	155 160 212.5 232	10 10 10 10 10 10 17 17	139 153 190 228	60 60 75 75	16 16 22 25	71 84 114 140	38 50 50 65	9 9 16 16	57 57 77 74	RJ2015H RJ2015H RJ2725H RJ2725H	

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	-25	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

-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	CQ2-Z	Single acting (Spring return/extend)	Foot type, Rod side flange		
CQ2		CQ2W-Z	Double acting, Double rod	Foot type only	Web Catalon	
	Non-rotating rod type	Non rotating red type		Double acting, Single rod	Foot type, Rod side flange only	web Catalog
		CQ2KW-Z	Double acting, Double rod	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 Catalan	
	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

Specifications: Same as standard type

-XC2A For mounting double rod flange 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)



Rod end female thread

type

Applicable series

rod type

C



Bore size

(mm)

12

16

20

25

32

40

50

63

80

100

L + Stroke Rod end female thread





Rod end female thread



L

13.5

13.5

14.5

15

17

17

18

18

20

22

Standard Non-rotating Female thread Male thread

Dimensions

L1

25.5

28.5

32.5

38.5

38.5

43.5

43.5

53.5

53.5

24

Rod end male thread XC2: Standard, Anti-lateral load, Non-rotating rod (mm)

XC2A: Standard, Non-rotating rod

-XC2 Foot type, Rod side flange only

(mm) Applicable series Dimensions Bore size Standard Non-rotating Female thread Male thread (mm) type rod type L L2 L1 L3 12 13.5 3.5 24 14 16 13.5 3.5 25.5 15.5 20 14.5 4.5 28.5 18.5 25 15 32.5 22.5 32 17 7 38.5 28.5 40 38.5 28.5 50 18 8 43.5 33.5 63 C 18 8 43.5 33.5 80 20 10 43.5 100 22 12 53.5 43.5

XC2: CQ2 Single acting

Endoha	Female thread				Male thread			
and shape	L				L1			
Action	Spring return		Spring extend		Spring return	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



(mm)

Made to Order

Symbol

-XC2(A)

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

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

Series	Description	Model	Action	Note	Vol. no. (for std model)
	Standard type	CJ2-Z	Double acting, Single rod	Except w/ rail mounting type auto switches, w/ air cushion	
CJ2	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]
		CM2-7	Double acting, Single rod		
	Standard type	CIVIZ-Z	Single acting (Spring return/extend)]
		CM2W-Z	Double acting, Double rod		
	Air-hydro type	CM2H-Z	Double acting, Single rod		
		CM2K-7	Double acting, Single rod		
CM2	Non-rotating rod type	OWIZI -Z	Single acting (Spring return/extend)		
CIVIZ		CM2KW-Z	Double acting, Double rod		
	Direct mount type	CM2R-Z	Double acting, Single rod	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	Except with air cushion	
	Standard type	MB	Double acting, Single rod		
MB	Standard type	MBW	Double acting, Double rod		
WID	Non-rotating rod type	MBK	Double acting, Single rod		
	Non-rotating rod type	MBKW	Double acting, Double rod		
	Standard type	MB1	Double acting, Single rod		
MB1		MB1W	Double acting, Double rod		Web Catalog
	Non-rotating rod type	MB1K	Double acting, Single rod		web catalog
		CA2T-Z	Double acting, Single rod	It can only be selected for "-XC3BC," "-XC3CD," and "-XC3DA" products with a trunnion bracket.**	
	Standard type	CA2WT-Z	Double acting, Double rod	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	Excludes the "-XC3BC," "-XC3CD," and "-XC3DA"**	
	End lock cylinder	CBA2	Double acting, Single rod		
CS1	Standard type	CS1	Double acting, Single rod		
	Low friction type	CS1□Q	Double acting, Single rod	Applicable to ø125 to ø160	
CS2	Standard type	CS2	Double acting, Single rod		
002	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	4
			Double acting		
		RSQ-Z	Double acting with spring installed		
RSQ	Stopper cylinder		Single acting		
			Double acting	ø12 only	
		RSQ*	Double acting with spring installed	ø12 only	
			Single acting	ø12 only	
			Double acting		4
RSG	Stopper cylinder	HSG	Louble acting with spring installed		4
			Single acting		4
CL1	Locked up cylinder	CL1	Double acting, Single rod		4
CLS	Cylinder with lock	CLS	Double acting, Single rod		4
CNA2	Cylinder with lock	CNA2	Double acting, Single rod	Unlocking cams are on the same side as cushion valves.	4
MXH	Compact slide	MXH-Z	Double acting		

The RSQ, MB, MB1, and CA2 are the same shape as the current product.

direction.

Position relation between clevis and port

CG1

** 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.



shown in the diagram, the ports are rendered A, B, C, and D, in the clockwise direction

2. Cylinder with cushion of CJ2 (CJ2-A) is not available for -XC3 3. The standard product is used for

Symbol

-XC3

CG1-XC3AA/BB/CC/DD.



lade



SMC



lade 1

lade



How to Order



Change of port location

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.





@SMC

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

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)
	Ala a dia dan	CM2-Z	Double acting, Single rod		
CM2	Air cylinder	CM2W-Z	Double acting, Double rod		
CIVIZ	Centralized piping type	CM2□□P	Double acting, Single rod		
	End lock cylinder C		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	
Cui	Air cylinder	CG1-Z	Double acting, Single rod	Applicable to ø32 to ø63	
MB	Air ovlinder	MB-Z	Double acting, Single rod	Except ø125	
	Air cylinder	MBW-Z	Double acting, Double rod	Except ø125	
MB1	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125	
		MB1W-Z	Double acting, Double rod	Except ø125	
	Air ovlinder	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 ovlinder	CS1	Double acting, Single rod		
All Cylinder		CS1W	Double acting, Double rod		
CS2	Air cylinder	CS2	Double acting, Single rod	Applicable to ø125 to ø250	
		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.	
C02		CQ2W-Z	Double acting, Double rod	Applicable to ø40 to ø100	
	Axial piping type (Centralized piping type)	CQP2	Double acting, Single rod	Applicable to ø32 to ø100	
	Long stroke	CQ2-Z	Double acting, Single rod		
RQ	Compact cylinder with air cushion	RQ	Double acting, Single rod		
		CVM5	Double acting, Single rod		
cv	Valve mounted air cylinder	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	
МК	Rotary clamp cylinder	MK-Z	Double acting	Applicable to ø16 to ø63 (Rod flange type only applicable to ø32 to ø63)	

* CA2DH (Air-hydro type) comes with a heavy duty scraper as standard.

How to Order



Specifications: Same as standard type

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 ø125 to ø160, the entire rod cover assembly will need to be replaced. For bore sizes ø180 to ø250, 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



Made to Order

Construction (Dimensions are the same as standard.)



16 With Heavy Duty Scraper



(mm)

(mm)

Made to Order

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



Poro cizo	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	
25 32 40	24 24 26	99 101 130	24 24 26	110 112 140	

CG1-Z1 series CG1 series



CG1 Series

our ocnes	Sarocics								()		
Dere size	St	roke range	Ea	F. FA				н		ZZ	
Dore size	CG1-Z1	CG1-Z			гв	IVI	12	Male thread	Female thread	Male thread	Female thread
32			17	8	3	5	38	48	28	121 (129)	101 (109)
40	Un to 1000	Up to 300	21	8	3	3.5	47	58	29	138 (147)	109 (118)
50	00 10 1000	(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
ø 180	42
ø 200	46
ø 250	57



16 With Heavy Duty Scraper

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









ø40 to ø100



Rod end male thread





Symbol

-XC4

[mm]

(mm)

Bore size	1	Α			3			L	.1	т
[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





L1

				[mm]
Bore size	4	4		14
[mm]	Up to 50 mm stroke	75, 100 mm stroke	L .	
40	46.5 (56.5)	56.5	17	38.5
50	48.5 (58.5)	58.5	18	43.5
63	54 (64)	64	18	43.5
80	63.5 (73.5)	73.5	20	53.5
100	75 (85)	85	22	53.5

(): Dimensions with auto switch magnet

RQ series





Bore size (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		

* Only standard strokes are applicable.



16 With Heavy Duty Scraper



Bore size	E2	FA	FB	M	12	н	ZZ	
32	17	8	3	5	38	48	204	Lor
40	21	8	3	3.5	47	58	229	

ZZ ng strokes 212 238

Made to Order

Symbol

-XC4

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.



	(11111)
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.





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

Small flange			
<u></u>		-m	_
• 1		-	
	 ••		_
•		_	-
		-Ψ	_



16 With Heavy Duty Scraper



How to Order/MGP

MGPM	Bore size	Port thread ty	pe -	Stroke Z-XC4		
MGPL MGPA		With heavy duty scraper				
				Sullix		
			Nil	With single side scraper		
			w	With both sides scraper		

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	With single side	0.12 MPa			
operating pressure	operating pressure With both sides		MPa		
Specifications othe	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:

Bore size	Б	DA	FD	F	с					
(mm)	Р	DA	гр	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

Jimei	nsions	5: AW,	EW,	FD, IVI	1, 05	(mm)
Bore size	A 14/	EW/	ED	мт	DS	*
(mm)	AW		FU		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
Bypas	s port si	ze for g	uide rod	with bo	ttom mo	unting

(mm)

MGPM (Slide bearing) A, E, HT Dimensions

Bore size		Α			E		υт
(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
80	114.5	141.5	190.5	8	35	84	202
100	136.5	161.5	200.5	10.5	35.5	74.5	240

(mm)

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

									<u> </u>
Bore size		-	۹.		E				шт
(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		Α				E			
(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	
32	89.5	106.5	126.5	148.5	20	37	57	79	110
40	89.5	106.5	126.5	148.5	13.5	30.5	50.5	72.5	118
50	101.5	122.5	142.5	169.5	19.5	40.5	60.5	87.5	146
63	101.5	122.5	142.5	169.5	14.5	35.5	55.5	82.5	160

Bore size	Α				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	ні
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

How to Order/MK



Specifications

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

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

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



Bore	Ded	Clamp stroke								
size (mm)	state	10 mm		20 mm		30 mm				
		Ø	R	Q	R	Q	R			
40	Retracted	78	45.5	98		118	05 F			
10	Extended	95.5	45.5	125.5	55.5	155.5	05.5			

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

ø20, ø25



Bore	Ded	Clamp stroke									
size (mm)	state	10 mm		20 mm		30 mm					
		Q	R	Q	R	Q	R				
20	Retracted	99	70	119	00	139					
20	Extended	118.5	12	148.5	02	178.5	92				
25	Retracted	111.5	70	131.5	00	151.5	00				
	Extended	131	/3	161	03	191	33				

ø32 to ø63



Bore	Ded				Clamp	stroke				
size	HOU	10 mm		20	20 mm		30 mm		50 mm	
(mm)	state	Q	R	Q	R	Q	R	Q	R	
20	Retracted	118.5	01 E	138.5	01 5	158.5	101 5	198.5	101 5	
32	Extended	143.5	01.5	173.5	91.5	203.5	101.5	263.5	121.0	
40	Retracted	119	75	139	05	159	95	199	115	
40	Extended	144	/5	174	65	204		264		
50	Retracted	137	96 E	157	06 5	177	106 5	217	400.5	
50	Extended	166	60.5	196	90.5	226	100.5	286	120.5	
60 F	Retracted	140	00	160	100	180	110	220	130	
03	Extended	169	90	199	100	229		289		



Symbol

-XC4

Made to Order Common Specifications: -XC5: Heat Resistant Cylinder (-10 to 110°C)

Symbol

Made to Order

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

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)
	Ain au dia atau	CM2-Z	Double acting, Single rod		
CM2	Air cylinder	CM2W-Z	Double acting, Double rod		
	Direct mount type	CM2R-Z	Double acting, Single rod		
мв	Air avlindor	MB-Z	Double acting, Single rod	Except with rubber bumper, with auto switch	
	Air cylinder	MBW-Z	Double acting, Double rod	Except with rubber bumper, with auto switch	
MD1	Aix audia dar		Double acting, Single rod	Except with rubber bumper, with auto switch	
	Air cylinder	MB1W-Z	Double acting, Double rod	Except with rubber bumper, with auto switch	Web Catalog
CA2	Air ovlinder	CA2-Z	Double acting, Single rod		
CAZ	Air cylinder	CA2W-Z	Double acting, Double rod		
CS1*	Air ovlinder	CS1	Double acting, Single rod		
031	Air cylinder	CS1W	Double acting, Double rod		
CE 2	Air ovlinder	CS2	Double acting, Single rod	Applicable to ø125 to ø160]
032		CS2W	Double acting, Double rod	Applicable to ø125 to ø160]

How to Order



-XC5

Heat resistant cylinder igstarrow

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.

Symbol -XC6

18 Made of Stainless Steel

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 mode
			CM2-Z1	Double acting, Single rod	
		Airedinder	CM0 7	Double acting, Single rod	
		Air cylinder	011/2-2	Single acting (Spring return/extend)	
			CM2W-Z	Double acting, Double rod	
			CMOK 7	Double acting, Single rod	
		Non-rotating rod type	GIVIZR-Z	Single acting (Spring return/extend)	
	0.00		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	
			004 74	Double acting, Single rod	
		A la sulla stan	CGI-ZI	Single acting (Spring return/extend)	Web Catalog
		Air cylinder	0617	Double acting, Single rod	
	001		001-2	Single acting (Spring return/extend)	
	CGI	Double rod type	CG1W-Z	Double acting, Double rod	
		Disc at an event to me	CG1R-Z1	Double acting, Single rod	
		Direct mount type	CG1R-Z	Double acting, Single rod	
		Smooth cylinder (5)	CG1Y-Z	Double acting, Single rod	
	MD (2)	Airadiadar	MB-Z (4)	Double acting, Single rod	
		Air cylinder	MBW-Z (4)	Double acting, Double rod	
I	MB1 ⁽²⁾	Air cylinder	MB1-Z (4)	Double acting, Single rod	
		End lock cylinder	CBA2 (1)	Double acting, Single rod	
	CA2 ⁽²⁾	Air budro turo o	CA2⊟H	Double acting, Single rod	
		Air-riydro type	CA2W□H	Double acting, Double rod	
		Air adiadar	CS1	Double acting, Single rod	
	CS1 (2)	Air cylinder	CS1W	Double acting, Double rod	
		Air-hvdro type	CS1⊟H	Double acting. Single rod	

How to Order CM2, CG1, MB, MB1, CA2, CS1, CQS, CQ2, MU, CV

Standard model no.

Made of stainless steel

-XC6

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

Series	Description	Model	Action	Vol. no. (for std model)
		COS	Double acting, Single rod	
	Compact cylinder	ouo	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	
		CO2-7	Double acting, Single rod	
	Compact cylinder		Single acting (Spring return/extend)	
		CQ2W-Z	Double acting, Double rod	
	Axial piping	COP2-7	Double acting, Single rod	
CQ2	(Centralized piping)		Single acting (Spring return/extend)	
	Long stroke	CQ2-Z	Double acting, Single rod	
	Anti-lateral load	CQ2□S-Z	Double acting, Single rod	Web Catalog
	Water recistant	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	
••	raite meanoù an eynnder	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.

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

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



Specifications

Material			Stainless steel
XC6A		XC6A	Piston rod, Rod end nut
	parts XC6B		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.)

ade 1

Order

Symbol

-XC6

 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.

De

432	1	Other accessory
	+	
		I [D ^u
BI	ubber b	oumper

No.	1	2	3	4	5
escription	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.

Min. order			Bore size [mm]				
wounting 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-L032BSUS		CM-L040BSUS	1 foot bracket*2	
Flange	1	CM-F020BSUS	CM-F032BSUS		CM-F040BSUS	1 flange*2	
Rod end nut	1	NT-02SUS	NT-03SUS		NT-04SUS	1 rod end nut	
Mounting nut	1	SN-020BSUS	SN-032BSUS		SN-040BSUS	1 mounting nut	
Single knuckle joint	1	I-020BSUS	I-032BSUS		I-040BSUS	1 single knuckle joint	
Double knuckle joint	1	Y-020BSUS	Y-032BSUS		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.





Symbol

-XC6

18 Made of Stainless Steel

$CQ2 \square_{V}^{R}$ Series

Applicable Series

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

How to Order



Specifications

Parts changed to stainless steel	XC6	Retaining ring, Piston rod, Rod end nut
	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

Rod end nut (Male thread only)

18 Made of Stainless Steel

MGP series

Specified Parts Changed to Stainless Steel

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			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

iade t

Order

Symbol

-XC6

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

CXSJM series Retaining ring How to Order Hexagon socket CXSJM Standard model no. XC6 head set screw Made of stainless steel Piston rod Specifications Piston rod, retaining ring, hexagon socket head bolt, Parts changed to stainless steel hexagon socket head set screw, dumper bolt, hexagon nut Hexagon socket head bolt Specifications other than above Same as standard and external dimensions

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

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



C Stainless steel rod end moving parts

specin	ed Parts Changed to Star	mess 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, Bal bushing (MGGLD), 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 bolt
XC6B		Front plate, Guide rod, End bracket, Flat washer, Spring washer, Parallel pin (for front plate), Guide bolt
XC6C		Guide rod
Specifi	cations 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--XC6A



		(11111)
Bore size (mm)	AA	AL
20	12	9
25	16	9
32	16	9
40	19	12
50	25	12

MGG B20 to 50--XC6B MGG B20 to 50--XC6C







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



Symbol -XC6



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

MGC B20 to 50--XC6A





25

32

40

50

16 9

16 9

19 12

25 12

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	E				_
	H	0	0		
AA,					
				(mm)	

Small flange

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

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



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

Made to Order Common Specifications: -XC7: Tie-rod, Cushion Valve, Tie-rod Nut, etc. Made of Stainless Steel

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 red time	MBK-Z	Double acting, Single rod		
	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		MB1W-Z	Double acting, Double rod	Except ø125	
	Non-rotating rod type	MB1K-Z	Double acting, Single rod		Web Catalog
	Standard type	CA2-Z	Double acting, Single rod		
		CA2W-Z	Double acting, Double rod		
	Non-rotating rod type	CA2K	Double acting, Single rod		
CA2		CA2KW	Double acting, Double rod		
	End lock cylinder	CBA2	Double acting, Single rod		
		CA2H	Double acting, Single rod		
	Air-riydro cylinder	CA2HW	Double acting, Double rod		
	Smooth cylinder	CA2Y-Z	Double acting, Single rod		

How to Order

Standard model no.

-<u>xc</u>7

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

Symbol

-XC7

20 Adjustable Stroke Cylinder/Adjustable Extension Type



Made to Order

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.	1
CM2	End lock cylinder	CBM2	Double acting	Except clevis type Head side locking type only, Except with air cushion	1
	Air-hydro type	CM2H-Z	Double acting	Except clevis type	1
	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]
004	Non-rotating rod type	CG1K-Z	Double acting	Except head side flange, clevis types and with air cushion]
CGI	Direct mount type	CG1R-Z	Double acting	Except with air cushion]
	Direct mount, Non-rotating rod type	CG1KR-Z	Double acting	Except with air cushion]
MD	Air cylinder	MB-Z	Double acting	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	
	Non-rotating rod type	MBK-Z	Double acting	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	
MR1	Air cylinder	MB1-Z	Double acting	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	
	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	-
	Air-hydro type	CS1H	Double acting	Except head side flange and clevis types	4
cu	Free mount cylinder	CU	Double acting		-
	Long stroke	CU	Double acting		
cqs	Compact cylinder CQS Dor		Double acting	Except with rubber bumper and with mounting bracket	
	Non-rotating rod	CQSK	Double acting	Except with rubber bumper and with mounting bracket	
000	Compact cylinder	CQ2-Z	Double acting	Except with rubber bumper and with mounting bracket	-
Cuz	Non-rotating rod type	CQ2K-Z	Double acting	Except with rubber bumper and with mounting bracket	-
MTC	Air-nydro type	CQ2H-Z	Double acting	Except with mounting bracket	
WI 5	Precision cylinder	MIS	Double acting		-
MCD			Double acting		-
MGP	Compact guide cylinder	MCDA Z	Double acting		-
MGG	Guide cylinder	MGG	Double acting		•
MGC	Guide cylinder	MGC	Double acting		
mao		INICO	Double acting		
How 1	to Order				
CJ2	Mounting type		Bore	size – Stroke Z – XC8	
			10-		
CM2	Mounting type Bore size	e – Sti	roke Cushic	n Rod end type symbol Z – XC8 Stroke adjustment symbol	
CG1	Mounting type Type	Bore s	ize - Strok	Rod end type symbol Stroke adjustment symbol Z - XC8	
CBM2 CBA2	Mounting type Bor	e size	Stroke	Stroke adjustment symbol -H Manual release type - XC8	
MB MB1	* Except head side flange and	ore size	– Str	oke Suffix Stroke adjustment symbol Z - XC8	
CA2	Mounting type E	ore size	– Str	oke Suffix Stroke adjustment symbol Z – XC8	

-	* Except head side	flange	and clevis type	s							
CA2K	Mounting typ	e	Bore size	-	Stroke	•	Suffix	Stroke adju	stment symbo	i]- (xċ8
	* Except head side	flange	and clevis type	S	•						
CS1	Mounting type T	lubing	material Typ	e Bo	re size -	Strok	e Suff	ix Stroke a	ljustment symbo	<u>[] – j</u>	XĊ8
	* Except head side	flange	and clevis type	S							
CU	Bore size	-	Stroke	D Str	roke adjust	ment s	ymbol			<u> </u>	<u>XĊ8</u>
CQSB	Bore size	-	Stroke	D(M)						<u> </u>	хċя
CQ2B(H)	Bore size	-	Stroke	D(M)	(Z) ——						xċ8
MTS	Bore size	-	Stroke	(R)							x¢8
MGP	Bearing type	e	Bore siz	e ·	- Stroke	St	roke adj	ustment	symbol	z – :	<u>xċs</u>
MGG	Bearing type Mo	ounting	type Bore	size	Port thread ty	pe —	Stroke	Stroke ad	justment symbo] -]	XĊ8
MGC	Bearing type Mounti	ng type	Bore size	Port th	read type -	Stroke	Stroke adjustme	nt symbol 🗕 Eq	uipped/Not equipped back pla	ie —	<u>x¢8</u>
					Adju	ustable s	stroke cy	inder/Adju	istable exten	d typ	e 🖌



20 Adjustable Stroke Cylinder/Adjustable Extension Type

Symbol

Specifications

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

Series	Stroke adjustment symbol	Stroke adjustment range (mm)					
MCP	A	0 to 10					
MGP	В	0 to 25					
мте		0 to 10 (ø8)					
INT5	_	0 to 25 (ø12 to ø40)					
Specifications other than above	ove Same as standard type						

Precautions

A Warning

- 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.







Made to Order

20 Adjustable Stroke Cylinder/Adjustable Extension Type

Symbol

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



SMC

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 Series (mm)											
Bore size (mm)	B ₂	H ₂	MA	MH	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

20 Adjustable Stroke Cylinder/Adjustable Extension 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

Made to Order

Symbol

-XC8

								(mm)
Bore size (mm)	H ₂	MG	MH	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

CS1 series



(mm) ZZ Bore size (mm) øb ød h а С е f øi M30 x 1.5 M30 x 1.5 M30 x 1.5 M42 x 1.5 37.5 132.5 378.5 M42 x 1.5 37.5 132.5 378.5* M56 x 2 M56 x 2

* With auto switch ø180: 382.5, ø200: 387.5



CBM2 Series (mm										
Bore size (mm)	B ₃	H3	MA	MI	MK	MM ₂	MT	MH	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 x 1 25	21.5	60	24	198

CBA2 series (Only with head side locking)



CBA2 Series											
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		



20 Adjustable Stroke Cylinder/Adjustable Extension Type



							(mm)
Bore size	MG	МН	МІ	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

Symbol

-XC8



_								Ac	ljustme	nt A: 0 to 10	Ad	djustme	ent B: 0 to 20	Adjustment C: 0 to 30			
size	МА	MB	øMC	ММ	U	v	w	мн	ML	Z MH M		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.

20 Adjustable Stroke Cylinder/Adjustable Extension Type

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

CQ2, CQ2H series ø12 to ø25





														(mm)
Bore	4	4	E	3		мы	мт	мл	м	мм	мк	м	~6	Stroke adjust-
size	50 mm stroke or less	75, 100 mm stroke	50 mm stroke or less	75, 100 mm stroke		INIT		IWIA	IVII	IVIIVI	WIR		øG	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	E to 20
16	58.5 (68.5)	-	26 (36)	—	3.5	29	5	10	□28 (ø20)	M5 x 0.8	5.5	20	14	5 10 30
20	67.5 (79.5)	—	26 (38)	—	4.5	37	8	12	□36 (ø25)	M6 x 1	7	24	20	E to E0
25	71 (81)	-	29 (39)	—	5	37	8	12	□40 (ø30)	M6 x 1	7	24	20	5 10 50
20	70 5 (00 5)	00 F	20 E (40 E)	40 F	-	44	6	17	~00	M0 v 1 05	0	00 5	05	5 to 50
32	70.5 (00.5)	6.00	30.5 (40.5)	40.5	'	41	0		030	IVIO X 1.25	9	20.5	25	75,100
40	00 (00)	00	40 (50)	50	-	44	6	10	~10	M10 x 1 05	10	07	05	5 to 50
40	00 (90)	90	40 (50)	50	'	41	0	19	040	WITU X 1.25	10	21	25	75,100
50	100 E (110 E)	110.5	40 E (E0 E)	50 F		50		04	~57	MIAVIE	10	0.1	05	10 to 50
50	100.5 (110.5)	110.5	40.5 (50.5)	50.5	°	52	°	24	057	W114 X 1.5	13	31	35	75,100
60	100 (110)	110	40 (50)	50		50	10	04	~00	MIAVIE	10	0.1	05	10 to 50
63	102 (112)	112	42 (52)	52	°	52		24	000	W114 X 1.5	13	31	35	75,100
00	105 (105)	105	E1 (01)	61	10	64	10	20	~00	M00 v 1 F	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 5 (140 5)	140.5	60 E (70 E)	70 F	10		14	20	~110	M00 x 1 5	10	40	45	10 to 50
100	130.5 (148.5)	148.5	00.5 (70.5)	70.5	12	00	14	32	0110	WI∠U 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.

Made to Order

Symbol

-XC8

Made to Order

(mm)

M18 x 1.5

11 27

20 Adjustable Stroke Cylinder/Adjustable Extension Type



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

CQS series



											(mm)
Bore size	Α	В	L	MH	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	E to 20
16	56.5 (61.5)	22 (27)	3.5	31	5	10	M5 x 0.8	5.5	20	14	51030
20	67.5 (77.5)	26 (36)	4.5	37	8	12	M6 x 1	7	24	20	E to 50
25	71 (81)	29 (39)	5	37	8	12	M6 x 1	7	24	20	5 10 50

G GA

15.5 42.5

19.5 42.5 8.5 17 5 13 M8 x 1.25

GB GC GD GE GF

7 13 5 10 M6 x 1.0

11.5 27

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

в

80.5 49.5 6 13.5 42.5 6 11 4 8 M5 x 0.8

114.5 51.5 12 21.5 42.5 9 19 6 17 M10 x 1.25

106.5 50.5 10

16 27.5 45 10.5 24 8 22 M14 x 1.5

LC DA

Note 2) Applicable stroke available in 5 mm increments.

Basic Type

Bore size Α

(mm)

12 145

16 149.5 83 50.5 8

20 175

25 187

32

MTS series



ø12 to ø40



222.5 142.5 56 40 240 155 59 32.5 45 20

with End Lo	СК	(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		

20 Adjustable Stroke Cylinder/Adjustable Extension Type



Made to Order

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

MGG series ø20 to ø50



ø63



MGC series ø20 to ø50



MGP series



MGG Series											
Bore size (mm)	R	Y	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	Adjustr	nent 0 ta	25 mm	Adjustment 0 to 50 mm			
(mm)	ΜН	ML	ZZ	ΜН	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

MGC Series (mm)												
Bore size (mm)	R	Y	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 Adjustment 0 to 25 mm Adjustment 0 to 50 mm

(mm)	ΜН	ML	ZZ	ΜН	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.

Common Dimensions: MGPM-Z, MGPL-Z, MGPA-Z (n	mm
--	----

Bore size (mm)	DA	МА	мв	мс	MD	øMG	мн	мк	ML	ΜР	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



21 Adjustable Stroke Cylinder/Adjustable Retraction Type

Symbol

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

Applicable Series

Air cylinder C.12-Z Double ading, Single nd Except double-side bossed, double clevis type, double foot and head side flange and with air cushion CJ26 Direct mount type C.12R-Z Double ading, Single nd Non-rotating rodDirect mount type C.12R-Z Double ading, Single nd Non-rotating rodDirect mount type C.12R-Z Double ading, Single nd Non-rotating rodDirect mount type C.12R-Z Double ading, Single nd Non-rotating rodDirect mount type CM2R-Z Double ading, Single nd Except double-side boss-cut and clevis types Non-rotating rodDirect mount type CM2R-Z Double ading, Single nd Except toess-cut and clevis types Direct mount type CM2R-Z Double ading, Single nd Except toess-cut and clevis types Non-rotating rodDirect mount type CG1R-Z Double ading, Single nd Except toess vit and clevis types Non-rotating rodDirect mount type CG1R-Z Double ading, Single nd Except toesd vit ali ange and clevis types Non-rotating rod MB-Z Double ading, Single nd Except toesd vit and side flange and clevis types Non-rotating rod MB-Z Double ading, Single nd Except toesd vit ali acushi	Series	Description	Model	Action	Note	Vol. no. (for std model)
Non-rotating rod CJ2R-Z Joulde ading, Single rod Except double-losies bossed, double clevis type, double foot and head side flange Direct mount type CJ2R-Z Double ading, Single rod Except double-side bossed, double clevis type, double foot and head side flange Non-rotating rod/linet mount pe CJ2R-Z Double ading, Single rod Except boss-cut and clevis types Non-rotating rod CM2-Z Double ading, Single rod Except boss-cut and clevis types Non-rotating rod/nortaling rod/mount pie CM2R-Z Double ading, Single rod Except the head cover with boss Non-rotating rod/nortaling rod/mount pie CM2R-Z Double ading, Single rod Except the head cover with boss Smooth cylinder CM2-Z Double ading, Single rod Except the head cover with boss Non-rotating rod CG12 Double ading, Single rod Except the head cover with bars Mon-rotating rod CG14-Z Double ading, Single rod Except the head cover with bars Non-rotating rod CG17-Z Double ading, Single rod Except the head side flange and clevis types MB Air cylinder MB-Z Double ading, Single rod Except the ad side flange and clevis types		Air cylinder	CJ2-Z	Double acting, Single rod	Except double-side bossed, double clevis type, double foot, head side flange and with air cushion	
CJ2 Non-rotating rodDirect mount type CJ2R-Z CJ2R-Z CJ2 Outle ading, Single rod Except double-side bossed, double clevis type, double foot and head side flange mon-rotating rod CM2-Z Double ading, Single rod Except boss-cut and clevis types CM2 CM2 Non-rotating rodDirect mount type CM2-Z CM2-Z CM2-Z Double ading, Single rod Except the head cover with boss CM2 CM2 Non-rotating rodDirect mount type CM2-Z CM2-Z Double ading, Single rod Except the head cover with boss Air cylinder CM2-Z CM2-Z Double ading, Single rod Except head side flange, and clevis types, add, and a 100 CG1 Double ading, Single rod Except head side flange, and clevis types, add, and a 100 Non-rotating rodDirect mount type CG11-Z CG11-Z Double ading, Single rod Except head side flange, and clevis types, add, and a 100 Non-rotating rodDirect mount type CG11-R-Z Double ading, Single rod Except vith air cushion Except with air cushion Non-rotating rodDirect mount type CG11-R-Z Double ading, Single rod Except 125, with rubber bumper, with auto swith, head side flange and clevis types MB1 Air cylinder MB1-Z Double ading, Single rod Except 125, with rubber bumper, with auto swith, head side flange and clevis types, Air cylinder CA2-Z Double ading, Single rod Except head side flange and clevis types, Air cylinder CA2-Z Double ading, Single rod Except head side flange and clevis ty	CJ2	Non-rotating rod	CJ2K-Z	Double acting, Single rod	Except double-side bossed, double clevis type, double foot and head side flange	
Non-rotating rodDirect mount type CJ2PK-Z Double ading, Single rod Except double-side bossed, double clevis type, double foot and head side flange Arr cylinder CM2-Z Double ading, Single rod Except double-side boss-cut and clevis types Non-rotating rod CM2K-Z Double ading, Single rod Except the head cover with boss Non-rotating rodDirect mount type CM2R-Z Double ading, Single rod Except the head cover with boss Non-rotating rodDirect mount type CM2R-Z Double ading, Single rod Except the head cover with boss Smooth cylinder CG1K-Z Double ading, Single rod Except head side flange, and clevis types, a80, and a100 Non-rotating rodDirect mount type CG1K-Z Double ading, Single rod Except with air cushion Non-rotating rodD CG1K-Z Double ading, Single rod Except vith air cushion Non-rotating rod MB-Z Double ading, Single rod Except vith air cushion MB1 Air cylinder MB-Z Double ading, Single rod Except tass with rubber bumper, with auto switch, head side flange and clevis types MB1 Air cylinder MB-Z Double ading, Single rod Except tass with, head side flange an	CJ2	Direct mount type	CJ2R-Z	Double acting, Single rod		
Smooth cylinder CL2Y-Z Oudle ading, Single nd CM2 Except double-side based, double clevis types, double fort and head side flange investment of the strength of the strength obss-cut and clevis types Air cylinder CM2 Oudle ading, Single nd CM2R-Z Except double-side score that clevis types Non-rotating rod CM2R-Z Oudle ading, Single nd CM2R-Z Except the head cover with boss Air cylinder CM2R-Z Oudle ading, Single nd CM2R-Z Except the head cover with boss Air cylinder CM2R-Z Oudle ading, Single nd Except head side flange, clevis types, ø80, and ø100 Non-rotating rod CG1R-Z Oudle ading, Single nd Except head side flange and clevis types, ø80, and ø100 Non-rotating rod CG1R-Z Oudle ading, Single nd Except vilk air cushion Except vilk air cushion MB Air cylinder MB-Z Dudle ading, Single nd Except 125, with rubber bumper, with auto swith, head side flange and clevis types Air cylinder MB-Z Dudle ading, Single nd Except 125, with rubber bumper, with auto swith, head side flange and clevis types Air cylinder MB-Z Dudle ading, Single nd Except 125, with rubber bumper, with auto swith, head side flange and clevis types Air cylinder CA2-Z Dudle ading, Single nd Except head side fl		Non-rotating rod/Direct mount type	CJ2RK-Z	Double acting, Single rod		
Air cylinder CM2-Z Double ading, Single rd Except boss-cut and clevis types Non-rotating rod CM2-Z Double ading, Single rd Except boss-cut and clevis types Non-rotating rod/Direct mount type CM2R-Z Double ading, Single rd Except the head cover with boss Smooth cylinder CG1-Z Double ading, Single rd Except the head cover with boss Air cylinder CG1-Z Double ading, Single rd Except the single and clevis types, ad0, and o100 Air cylinder CG1-Z Double ading, Single rd Except head side flange, and clevis types, ad0, and o100 Non-rotating rod CG1-R-Z Double ading, Single rd Except head side flange, and clevis types, and with air cushion Non-rotating rod CG1-R-Z Double ading, Single rd Except with air cushion Non-rotating rod MB-Z Double ading, Single rd Except head side flange and clevis types MB1 Air cylinder MB1-Z Double ading, Single rd Except head side flange and clevis types Air cylinder CS2 Double ading, Single rd Except head side flange and clevis types, 125 to o160 CS3 Air cylinder CS2		Smooth cylinder	CJ2Y-Z	Double acting, Single rod	Except double-side bossed, double clevis type, double foot and head side flange	
Non-rotating rod CM2K-Z Double ading. Single rod Except these add cover with boss Nn-rotating rod/Direct mount type CM2R-Z Double ading. Single rod Except the head cover with boss Smooth cylinder CM2R-Z Double ading. Single rod Except the head cover with boss Nn-rotating rod/Direct mount type CM2R-Z Double ading. Single rod Except the head cover with boss CG1 Non-rotating rod CG1K-Z Double ading. Single rod Except head side flange and clevis types, a80, and ø100 Non-rotating rod CG1K-Z Double ading. Single rod Except with air cushion Direct mount type CG1R-Z Double ading. Single rod Except with air cushion MB Air cylinder MB-Z Double ading. Single rod Except vith air cushion MB Air cylinder MB-Z Double ading. Single rod Except thead side flange and clevis types CA2 Air cylinder MB-Z Double ading. Single rod Except thead side flange and clevis types CA3 Air cylinder CA2K Double ading. Single rod Except thead side flange and clevis types CA4 Air cylind		Air cylinder	CM2-Z	Double acting, Single rod	Except boss-cut and clevis types	
CM2 Direct mount type CM2R-Z Double ading, Single nd Except the head cover with boss Non-rotating rodDiret mount bye CM2R-Z Double ading, Single nd Except the head cover with boss Smooth cylinder CM2Y-Z Double ading, Single nd Except head side flange, and clevis types, 800, and ø100 Non-rotating rodDiret mount bye CG1R-Z Double ading, Single nd Except head side flange, clevis types and with air cushion Direct mount type CG1R-Z Double ading, Single nd Except vilk air cushion Non-rotating rodDiret mount bye CG1R-Z Double ading, Single nd Except vilk hair cushion MB Air cylinder MB-Z Double ading, Single nd Except vilk hair cushion Non-rotating rod MB1-Z Double ading, Single nd Except vilk hair cushion Non-rotating rod MB1-Z Double ading, Single nd Except vilk nubber bumper, with auto switch, head side flange and clevis types MB1 Non-rotating rod CA2-Z Double ading, Single nd Except vilk vilk single and clevis types MC6 Air cylinder CA2-Z Double ading, Single nd Except vilk air cushion		Non-rotating rod	CM2K-Z	Double acting, Single rod	Except boss-cut and clevis types	
Non-rotating rodDirect mountype CM2RK-Z Double ading, Single rod Except the head cover with boss Smooth cylinder CG1-Z Double ading, Single rod Except boss-cut and clevis types, e80, and e100 Air cylinder CG1-Z Double ading, Single rod Except head side flange, and clevis types, and with air cushion Treet mount type CG1R-Z Double ading, Single rod Except with air cushion Non-rotating rodDirect mount type CG1R-Z Double ading, Single rod Except with air cushion Non-rotating rod MB-Z Double ading, Single rod Except with air cushion MB Air cylinder MB-Z Double ading, Single rod Except table shith aubo switch, head side flange and clevis types MB1 Air cylinder MB1-Z Double ading, Single rod Except table shith aubo switch, head side flange and clevis types CA2 Non-rotating rod MB1-Z Double ading, Single rod Except table side flange and clevis types CA1 Non-rotating rod MB1-Z Double ading, Single rod Except taed side flange and clevis types CA2 Non-rotating rod CA2 Double ading, Single rod Except thead side fl	CM2	Direct mount type	CM2R-Z	Double acting, Single rod	Except the head cover with boss	
Smooth cylinder CM2Y-Z Double ading, Single nd Except bass-cut and clevis types. Air cylinder CG1 CG14-Z Double ading, Single nd Except head side flange, clevis types, a080, and o100 Non-rotating rod CG1R-Z Double ading, Single nd Except head side flange, clevis types, a080, and o100 Direct mount type CG1R-Z Double ading, Single nd Except with air cushion MB Air cylinder MB-Z Double ading, Single nd Except with air cushion MB Air cylinder MB-Z Double ading, Single nd Except with air cushion Non-rotating rod MBK-Z Double ading, Single nd Except 125, with rubber humper, with auto swith, head side flange and clevis types Air cylinder MB1-Z Double ading, Single nd Except 125, with rubber humper, with auto swith, head side flange and clevis types Air cylinder CA2-Z Double ading, Single nd Except 148 side flange and clevis types Air cylinder CB2 Double ading, Single nd Except 148 side flange and clevis types, 125 to 1610 CS1 Air cylinder CS2 Double ading, Single nd Except thead side flange and clevis types, 125 to 1610		Non-rotating rod/Direct mount type	CM2RK-Z	Double acting, Single rod	Except the head cover with boss	
Air cylinder CG1-Z Double ading, Single rd Except head side flange, and clevis types, a080, and o100 Non-rotating rod CG1-Z Double ading, Single rd Except head side flange, clevis types, a080, and o100 Direct mount type CG1R-Z Double ading, Single rd Except with air cushion Non-rotating rodDirect mount type CG1R-Z Double ading, Single rd Except with air cushion MB Air cylinder MB-Z Double ading, Single rd Except 125, with rubber bumper, with auto switch, head side flange and clevis types MB1 Air cylinder MBH-Z Double ading, Single rd Except 125, with rubber bumper, with auto switch, head side flange and clevis types Air cylinder CA2-Z Double ading, Single rd Except 125, with rubber bumper, with auto switch, head side flange and clevis types Air cylinder CA2-Z Double ading, Single rd Except 125, with rubber bumper, with auto switch, head side flange and clevis types Air cylinder CA2-Z Double ading, Single rd Except 125, with rubber bumper, with auto switch, head side flange and clevis types CG1 Air cylinder CS1 Double ading, Single rd Except 125, with rubber bumper, and clevis types CG2		Smooth cylinder	CM2Y-Z	Double acting, Single rod	Except boss-cut and clevis types	
CG1 Non-rotating rod CG1K-Z Double ading, Single rod Except head side flange, clevis types and with air cushion Direct mount type CG1R-Z Double ading, Single rod Except with air cushion MB Air cylinder MB-Z Double ading, Single rod Except with air cushion MB Air cylinder MB-Z Double ading, Single rod Except 25, with rubber bumper, with auto switch, head side flange and clevis types MB1 Air cylinder MB1-Z Double ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types CA2 Non-rotating rod MB1-Z Double ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types CA2 Non-rotating rod CA2-X Double ading, Single rod Except head side flange and clevis types CS1 Air cylinder CA2-X Double ading, Single rod Except head side flange and clevis types CS1 Air cylinder CS2 Double ading, Single rod Except head side flange and clevis types, o125 to o160 CS2 Air cylinder CS2 Double ading, Single rod Except with rubber bumper and with mounting bracket <th></th> <td>Air cylinder</td> <td>CG1-Z</td> <td>Double acting, Single rod</td> <td>Except head side flange and clevis types, ø80, and ø100</td> <td></td>		Air cylinder	CG1-Z	Double acting, Single rod	Except head side flange and clevis types, ø80, and ø100	
Other Direct mount type CG1R-Z Double ading, Single rod Except with air cushion Non-rotating rod/Direct mont type CG1R-Z Double ading, Single rod Except with air cushion MB Air cylinder MB-Z Double ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types MB Air cylinder MB1-Z Double ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types MB Air cylinder MB1-Z Double ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types CA2 Non-rotating rod MB1K-Z Double ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types CA2 Non-rotating rod CA2-Z Double ading, Single rod Except 125, with rubber bumper, and clevis types CA2 Double ading, Single rod Except 125, with rubber bumper, and clevis types Colored clevis types CA2 Double ading, Single rod Except 125, with rubber bumper, and clevis types Colored clevis types CA2 Double ading, Single rod Except 125, with rubber bumper and with mounting bracket <	CG1	Non-rotating rod	CG1K-Z	Double acting, Single rod	Except head side flange, clevis types and with air cushion	
Non-rotating rodDirect mountype CG1 KR-Z Double ading. Except with air cushion MB Air cylinder MB-Z Double ading. Single rod Except v125, with rubber bumper, with auto switch, head side flange and clevis types MB1 Air cylinder MB1-Z Double ading. Single rod Except v125, with rubber bumper, with auto switch, head side flange and clevis types MB1 Air cylinder MB1-Z Double ading. Single rod Except v125, with rubber bumper, with auto switch, head side flange and clevis types Air cylinder CA2-Z Double ading. Single rod Except v125, with rubber bumper, with auto switch, head side flange and clevis types CA2 Malo ck cylinder CA2-Z Double ading. Single rod Except head side flange and clevis types CS1 Air cylinder CS1 Double ading. Single rod Except head side flange and clevis types CS1 Air cylinder CS2 Double ading. Single rod Except head side flange and clevis types 125 to o 160 CS2 Air cylinder CS2 Double ading. Single rod Except with rubber bumper and with mounting bracket CO3 Compact cylinder CO3 Double ading. Single rod Exc	Car	Direct mount type	CG1R-Z	Double acting, Single rod	Except with air cushion	
MB Air cylinder MB-Z Double ading, Single rod Non-rotating rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types Web Catalog MB1 Air cylinder MB1-Z Double ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types Web Catalog CA2 Air cylinder MB1-Z. Double ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types Web Catalog CA2 Air cylinder CA2Z. Double ading, Single rod Except head side flange and clevis types Web Catalog CS1 Air cylinder CB4Z. Double ading, Single rod Except head side flange and clevis types Totalog and clevis types CS1 Air cylinder CB4Z. Double ading, Single rod Except head side flange and clevis types, ot 125 to ot 160 CS2 Air cylinder CS2 Double ading, Single rod Except head side flange and clevis types, ot 125 to ot 160 CS3 Air cylinder CQ2 Double ading, Single rod Except head side flange and clevis types, ot 125 to ot 160 CG3 Compact cylinder CQ3 Double ading, Single rod Except with rubber bumper and with mounting bracket Compact cylinder CQ2-Z <td< th=""><th></th><td>Non-rotating rod/Direct mount type</td><td>CG1KR-Z</td><td>Double acting</td><td>Except with air cushion</td><td></td></td<>		Non-rotating rod/Direct mount type	CG1KR-Z	Double acting	Except with air cushion	
Non-rotating rod MBK-Z Double ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types Web Catalog MB1 Air cylinder MB1-Z Double ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types Web Catalog Air cylinder MB1K-Z Double ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types Web Catalog CA2 Air cylinder CA2-Z Double ading, Single rod Except 1ead side flange and clevis types Except 1ead side flange and clevis types CS1 Air cylinder CS2 Double ading, Single rod Except 1ead side flange and clevis types, ot25 to ot160 CS2 Air cylinder CS2 Double ading, Single rod Except thead side flange and clevis types, ot25 to ot160 CS3 Air cylinder CS2 Double ading, Single rod Except thead side flange and clevis types, ot25 to ot160 CS3 Air cylinder CS2 Double ading, Single rod Except with rubber bumper and with mounting bracket CO3 Compact cylinder CO3 Double ading, Single rod Except with rubber bumper and with mounting bracket <tr< th=""><th>MB</th><td>Air cylinder</td><td>MB-Z</td><td>Double acting, Single rod</td><td>Except ø125, with rubber bumper, with auto switch, head side flange and clevis types</td><td></td></tr<>	MB	Air cylinder	MB-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 ading, Single rod Except 125, with rubber bumper, with auto switch, head side flange and clevis types Web Catalog CA2 Air cylinder CA2-Z Double ading, Single rod Except head side flange and clevis types Web Catalog CA3 Air cylinder CA2-Z Double ading, Single rod Except head side flange and clevis types Except head side flange and		Non-rotating rod	MBK-Z	Double acting, Single rod	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	
Non-rotating rod MB1K-Z Double ading, Single rod Except head side flange and clevis types CA2 Air cylinder CA2-Z Double ading, Single rod Except head side flange and clevis types CA2 Torvinder CA2-Z Double ading, Single rod Except head side flange and clevis types CA2 Torvinder CB4Z Double ading, Single rod Except head side flange and clevis types CS1 Air cylinder CS2 Double ading, Single rod Except head side flange and clevis types, of 125 to o 160 CS2 Air cylinder CS2 Double ading, Single rod Except head side flange and clevis types, of 125 to o 160 CS3 Air cylinder CS2 Double ading, Single rod Except head side flange and clevis types, of 125 to o 160 Compact cylinder CO3 Double ading, Single rod Except head side flange and clevis types, of 125 to o 160 Compact cylinder CO3 Double ading, Single rod Except with rubber bumper and with mounting bracket CO2 Compact cylinder CO2-Z Double ading, Single rod Except with rubber bumper and with mounting bracket MGP Compact guide cylinder MC2-Z	MB1	Air cylinder		Double acting, Single rod	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	Web Catalog
Air cylinder CA2-Z Double ading, Single rod Except head side flange and clevis types Non-rotating rod CA2-Z Double ading, Single rod Except head side flange and clevis types End lock cylinder CBA2 Double ading, Single rod Except head side flange and clevis types CS1 Air cylinder CS1 Double ading, Single rod Except head side flange and clevis types, ot25 to ot60 CS2 Air cylinder CS2 Double ading, Single rod Except head side flange and clevis types, ot25 to ot60 CS3 Air cylinder CS2 Double ading, Single rod Except head side flange and clevis types, ot25 to ot60 CM3 Compact cylinder CS2 Double ading, Single rod Except head side flange and clevis types, ot25 to ot60 CM3 Compact cylinder COS Double ading, Single rod Except with rubber bumper and with mounting bracket CO2 Compact cylinder CO2- Double ading, Single rod Except with rubber bumper and with mounting bracket MGP Compact guide cylinder CO2+ Double ading, Single rod Except with rubber bumper and with mounting bracket MGP Compact guide cylinder		Non-rotating rod	MB1K-Z	Double acting, Single rod	Except head side flange and clevis types	
CA2 Non-rotating rod CA2K Double ading, Single rod Except head side flange and clevis types CS1 Air cylinder CS1 Double ading, Single rod Except head side flange and clevis types, of 125 to of 160 CS2 Air cylinder CS1 Double ading, Single rod Except head side flange and clevis types, of 125 to of 160 CS3 Air cylinder CS2 Double ading, Single rod Except head side flange and clevis types, of 125 to of 160 CG8 Finode rod (CS2 Double ading, Single rod Except head side flange and clevis types, of 125 to of 160 CG08 Compact cylinder CQS2 Double ading, Single rod Except with rubber bumper and with mounting bracket C04 Compact cylinder CQS2 Double ading, Single rod Except with rubber bumper and with mounting bracket C04 Compact cylinder CQ2-Z Double ading, Single rod Except with rubber bumper and with mounting bracket MGP Compact cylinder CQ2-Z Double ading, Single rod Except with rubber bumper and with mounting bracket MGP Compact guide cylinder MGPL-Z Double ading MGPL-Z Double ading		Air cylinder	CA2-Z	Double acting, Single rod	Except head side flange and clevis types	
End lock cylinder CBA2 Double ading, Single rod Except head side flange and clevis types. CS1 Air cylinder CS1 Double ading, Single rod Except head side flange and clevis types, o125 to o160 CS2 Air cylinder CS2 Double ading, Single rod Except head side flange and clevis types, o125 to o160 CM2 Smooth cylinder CS2 Double ading, Single rod Except head side flange and clevis types, o125 to o160 CM3 Compact cylinder CS2 Double ading, Single rod Except with rubber bumper and with mounting bracket CM2 Compact cylinder CQ2. Double ading, Single rod Except with rubber bumper and with mounting bracket CM2 Compact cylinder CQ2.Z Double ading, Single rod Except with rubber bumper and with mounting bracket MGP Compact guide cylinder CQ2.Z Double ading, Single rod Except with rubber bumper and with mounting bracket MGP Compact guide cylinder MGPA-Z Double ading MGPA-Z MGC Guide cylinder MGC Double ading MGCA	CA2	Non-rotating rod	CA2K	Double acting, Single rod	Except head side flange and clevis types	
CS1 Air cylinder CS1 Double ading, Single rod Except head side flange and clevis types, e125 to e160 CS2 Air cylinder CS2 Double ading, Single rod Except head side flange and clevis types, e125 to e160 Compact cylinder CS2 Double ading, Single rod Except head side flange and clevis types, e125 to e160 COB Compact cylinder COS Double ading, Single rod Except with rubber bumper and with mounting bracket CO2 Compact cylinder COS2 Double ading, Single rod Except with rubber bumper and with mounting bracket CO2 Compact cylinder CO2-2 Double ading, Single rod Except with rubber bumper and with mounting bracket MGP Compact cylinder CO2+2 Double ading, Single rod Except with rubber bumper and with mounting bracket MGP Compact guide cylinder MGPM-2 Double ading, Single rod Except with rubber bumper and with mounting bracket MGG Guide cylinder MGPA-2 Double ading MGPA-2 Double ading MGC Guide cylinder MGC Double ading MGPA-2 Double ading		End lock cylinder	CBA2	Double acting, Single rod	Except head side flange and clevis types	
Air cylinder CS2 Double ading. Single rod Except head side flange and clevis types, e125 to e160 Smooth cylinder CS2 Double ading. Single rod Except head side flange and clevis types, e125 to e160 Cos Compact cylinder CQS Double ading. Single rod Except with rubber bumper and with mounting bracket Cos Compact cylinder CQSZ Double ading. Single rod Except with rubber bumper and with mounting bracket Cos Compact cylinder CO2Z Double ading. Single rod Except with rubber bumper and with mounting bracket MGP Compact cylinder CO2Z-Z Double ading. Single rod Except with rubber bumper and with mounting bracket MGP Compact cylinder CO2Z-Z Double ading. Single rod Except with rubber bumper and with mounting bracket MGP Compact guide cylinder MGPL-Z Double ading MGPL-Z MGG Guide cylinder MGP-Z Double ading MGPL-Z MGC Guide cylinder MGC Double ading MGPL-Z	CS1	Air cylinder	CS1	Double acting, Single rod	Except head side flange and clevis types, ø125 to ø160	
Smooth cylinder CS2Y Double ading, Single rof Except head side flange and clevis types, e125 to e160 Compact cylinder CQS Double ading, Single rof Except with rubber bumper and with mounting bracket Concentrating rod type CQ2-Z Double ading, Single rof Except with rubber bumper and with mounting bracket Concentrating rod CQ2-Z Double ading, Single rof Except with rubber bumper and with mounting bracket MGP Compact cylinder CQ2-Z Double ading, Single rof Except with rubber bumper and with mounting bracket MGP Compact guide cylinder MGPL-Z Double ading MGPL-Z Double ading MGG Guide cylinder MGC Double ading MGE Double ading	CS2	Air cylinder	CS2	Double acting, Single rod	Except head side flange and clevis types, ø125 to ø160	
Compact cylinder COS Double admg. Single rod Except with rubber bumper and with mounting bracket Co2 Compact cylinder CQ2-Z Double admg. Single rod Except with rubber bumper and with mounting bracket Co2 Compact cylinder CQ2-Z Double admg. Single rod Except with rubber bumper and with mounting bracket MGP CO2K-Z Double admg. Single rod Except with rubber bumper and with mounting bracket MGP Compact cylinder CQ2K-Z Double admg. Single rod Except with rubber bumper and with mounting bracket MGP Compact guide cylinder MGPH-Z Double admg. MGPH-Z MGPA-Z Double admg MGPA-Z Double admg MGPH-Z MGG Guide cylinder MGG Double admg MGPH-Z MGG Guide cylinder MGG Double admg MGH		Smooth cylinder	CS2Y	Double acting, Single rod	Except head side flange and clevis types, ø125 to ø160	
Mon-rotating rod type CQSK Duble ading. Single rod Except with rubber bumper and with mounting bracket Co22 Compact cylinder CO2-2 Double ading. Single rod Except with rubber bumper and with mounting bracket MGP Compact cylinder CO2-2 Double ading. Single rod Except with rubber bumper and with mounting bracket MGP Compact guide cylinder MCPL-2 Double ading MGG Guide cylinder MGG Double ading MGC Guide cylinder MGG Double ading	202	Compact cylinder	CQS	Double acting, Single rod	Except with rubber bumper and with mounting bracket	
CO22 Compact cylinder CO2-Z Double ading, Single nd Except with rubber bumper and with mounting bracket MGP Co2K-Z Double ading, Single nd Except with rubber bumper and with mounting bracket MGP Compact guide cylinder MGPL-Z Double ading MGG Guide cylinder MGPA-Z Double ading MGC Guide cylinder MGC Double ading	Cus	Non-rotating rod type	CQSK	Double acting, Single rod	Except with rubber bumper and with mounting bracket	
MGP Control contro control control control control con	CO2	Compact cylinder	CQ2-Z	Double acting, Single rod	Except with rubber bumper and with mounting bracket	
MGP MorPM-Z Double acting MGP Guide cylinder MGPL-Z Double acting MGG Guide cylinder MGPA-Z Double acting MGC Guide cylinder MGC Double acting	042	Non-rotating rod	CQ2K-Z	Double acting, Single rod	Except with rubber bumper and with mounting bracket	
MGP Compact guide cylinder MGPL-Z Double ading MGG Guide cylinder MGG Double ading MGC Guide cylinder MGC Double ading			MGPM-Z	Double acting		
MGPA-Z Double acting MGG Guide cylinder MGG Double acting MGC Guide cylinder MGC Double acting	MGP	Compact guide cylinder	MGPL-Z	Double acting		
MGG Guide cylinder MGG Double acting MGC Guide cylinder MGC Double acting			MGPA-Z	Double acting		
MGC Guide cylinder MGC Double acting	MGG	Guide cylinder	MGG	Double acting		
	MGC	Guide cylinder	MGC	Double acting		

How to Order

CJ2	Mounting type Bore size Stroke Z - XC9
CM2	Mounting type Bore size - Stroke Cushion Rod end type symbol Z- XC9 Stroke adjustment symbol
	* Except boss-cut and clevis types
CM2R	Mounting type Bore size - Stroke Rod end type symbol Z- XC9 Stroke adjustment symbol
CG1	Mounting type Type Bore size - Stroke Rod end type symbol Stroke adjustment symbol Z - XC9
MD	* Except clevis type
MB1	Mounting type Bore size - Stroke Suffix Stroke adjustment symbol Z - XC9
	* Except head side flange and clevis types
CA2	Mounting type Type Bore size - Stroke Suffix Stroke adjustment symbol Z - XC9
	* Except head side flange and clevis types
CA2K	Mounting type Type Bore size - Stroke Suffix Stroke adjustment symbol - XC9
	Except head side flange and clevis types
CBA2	Mounting type Type Bore size - Stroke Stroke adjustment symbol R Manual release type - XC9
	* Except head side flange and clevis types
CS1	Mounting type Tubing material Type Bore size – Stroke Suffix Stroke adjustment symbol – <u>XC9</u>
	* Except head side flange and clevis types
CS2	Mounting type Bore size Port suffix - Stroke Suffix Stroke adjustment symbol - XC9
	* Except head side flange and clevis types
CS2Y	Mounting type Bore size Port suffix - Stroke Suffix Stroke adjustment symbol - XC9
	Except head side flange and clevis types
CQ2B	Bore size – Stroke D (M) (Z) – XC9
CQSB	Bore size – Stroke D (M) – XC9
MGP	Bearing type Bore size - Stroke Stroke adjustment symbol Z - XC9
MGG	Bearing type Mounting type Bore size Port thread type - Stroke Stroke adjustment symbol - XC9
MGC	Bearing type Mounting type Bore size Port thread type - Stroke Stroke adjustment symbol - Equipellat equipel tax jate - 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.)





Symbol

-XC9

21 Adjustable Stroke Cylinder/Adjustable Retraction Type

Specifications

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

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

Precautions

∧Caution

- When air is supplied to the cylinder, if the stroke adjustment bolt is loosened in excess of the allowable stroke adjustment amount, be aware that the stroke adjustment bolt 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.
 If it is adjusted in the pressurized state, the seal of the adjustment section could become deformed, leading to air leakage.

CS1 series

Symbol





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



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



			(mm)
Bore size (mm)	BM	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

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

21 Adjustable Stroke Cylinder/Adjustable Retraction Type



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



CM2R					(mm)
Bore size (mm)	BM	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	DM	s	Rubber	bumper	Air cushion		
(mm)	DIVI		MH	ZZ	MH	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 Common (mm)										
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	3A2 (With	lock o	n rod	side only)	(mm)
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

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

55 19

19

M24 x 1.5

M24 x 1.5

242

255

80

100

15 10

15

10 57

21 Adjustable Stroke Cylinder/Adjustable Retraction Type Dimensions (Dimensions other than below are the same as standard type.)





d ΖZ 271 63 63 271 59 285

Made to Order

Symbol

-XC9

(mm)

CQS series





Setting nut

BL

						(mm)
Bore size (mm)	Α	в	L	BL	вм	Manufacturable stroke
12	50.5 (54.5)	22 (27)	3.5	25 (29)	M5 x 0.8	5 to 20
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 4- 50
25	63.5 (73.5)	29 (39)	5	29.5	M8 x 1.25	5 10 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



A + Stroke

B + Stroke

ø20, ø25, ø32



								(mm)
Bore size	F0 mm straka ar lasa	75 100 mm otroko	E0 mm stroke er lese	50 mm stroke or less 75 100 mm stroke			ВМ	Manufacturable
(1111)	JU IIIIII SUUKE UI IESS	75, 100 mm Stroke	SO THEFT SHOWE OF 1655	75, TOU HILL SLIDKE				SILUNE
12	52 (59.2)	—	25.2 (32.4)	—	3.5	23.3	M5 x 0.8	E to 20
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	E to EO
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	
	Denetee th	dimonolono :	منافله مريام مارزار	. la			-	

Note 2) Applicable stroke available in 5 mm increments.

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

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.



21 Adjustable Stroke Cylinder/Adjustable Retraction Type



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

BI

мн

MGP series

MGG series

ø20 to ø50

ø63



© ₽

Front mounting flange

COMMOND	1111011310113. 1	narw,	WGFL,	MOLA	(mm)
Bore size (mm)	BM	MA	MB	MC	MH
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

mon Dimonoiono, MCDM, MCDL, MCDA

MGG Series (mm)											
Bore size	-	v	DM	Adjustment 0 to 25 mm		Adjustment 0 to 50 mm					
(mm)	к	T	BM	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.



Y + Stroke

ZZ + Stroke

MGC series ø20 to ø50



Front mounting flange

MGC Se	MGC Series (mm)										
Bore size	Б	v	BM	Adjustment	0 to 25 mm	Adjustment 0 to 50 mm					
(mm)	n	T	ым	MH	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.

Made to Order

22 Dual Stroke Cylinder/Double Rod Type



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

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
0.10	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		
car	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	
	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 A	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	
001	Air-hydro cylinder	CS1H	Double acting, Single rod	Except clevis and trunnion types	
CC2	Air cylinder	CS2	Double acting, Single rod	Except clevis and trunnion types	
0.52	Smooth cylinder	CS2Y	Double acting, Single rod	Except clevis and trunnion types	
cos	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

CJ2	Mounting type	Bore size	- :	Stroke A	+ Str	oke B	z —	<u>XC10</u>
CM2	Mounting type	Bore size -	Stroke A	Suffix +	Stroke B	Suffix	z —	<u>xc10</u>
CG1	Mounting type Ty	ype Bore siz	ze – S	troke A	Rod boot su	+		I
	Stroke B Rod en	the same for both strokes	ooot suffix	z ——				<u>XC10</u>
MB MB1	Mounting type	Bore size -	Stroke A	Suffix +	Stroke B	Suffix	z –	xc10
MBB	Mounting type Bore s	ize - Stroke A	Suffix -	Lock position	Manual rele	ase type +		I
	Stroke B Suffix	Lock position	ymbol of manual	release				<u>XC10</u>
CA2	Mounting type Type	Bore size -	Stroke A	Suffix +	Stroke B	Suffix	z —	<u>xc10</u>
CA2K	Mounting type Type	Bore size -	Stroke A	Suffix	Stroke B	Suffix	-	<u>xc10</u>
CBA2	Mounting type Type	Bore size – Stro	ke A Suffix	Lock positi	on Manual re	lease type +		I
	Stroke B Suffix	- Lock position S	ymbol of manual	release				<u>XC10</u>
CS1	Mounting type Tubing ma	terial Type Bore s	size — St	roke A Suf	fix + Strol	ce B Suff	x —	
CS2	Mounting type Bor	e size Port su	ffix – St	roke A Suf	ix + Strol	ce B Suff	ix —	<u>xc10</u>
CQ2B	Bore size	- Strok	e S1 +	Stro	ke S₂	D(C)(M)(Z) —	<u>xc10</u>
CQSB	Bore size	- Stro	ke S1	+ S	troke S ₂	D(C)(N	1) —	<u>xc10</u>

1503

Made to Order

Symbol -XC10

22 Dual Stroke Cylinder/Double Rod Type

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)
C61	125, 140	1000 (A + B stroke)
631	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)	
CQS	12, 16	60 (Maximum 30 on one side)	
CQ2	20, 25	100 (Maximum 50 on one side)	
CO3	32, 40	200 (Maximum 100 on one side)	
Cuz	50 to 100	200 (Maximum 100 on one side)	
Specifications other than above	Same as standard type		

CA2 series

Symbol

Function



Made to Order

22 Dual Stroke Cylinder/Double Rod Type



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

CJ2 series





CM2 series

					(11111)
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





									(11111			
Dere eize				Air cushion								
Dore size	GC	GD		SA SA	п БА	30	30	56	WO	WC	WD	22
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

					(1111)
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

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.

Stroke B B port Stroke A B port S + Stroke (A + B) ZZ + Stroke (A + B)

CS1 series

				(mm)	
	Without a	uto switch	With auto switch		
Bore size (mm)	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



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



	-	(mm)
Bore size (mm)	S	zz
125	196	416
140	196	416
160	212	452

ø180 to ø250









(mm)
zz

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

Stroke S1

÷

B + Stroke S1

Part no. denotation A

22 Dual Stroke Cylinder/Double Rod Type



2 x O thread effective depth R

Dimensions (Other dimensions are the same as standard.)

CQ2 series

ø12 to ø25 With auto switch magnet



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

Stroke S2

B + Stroke S2

ė

Part no. denotation B

e *

A + Stroke (S1 + S2)



* 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.

Bore size	Α			E	3		0	Б
[mm]	50 $^{\rm st}$ or less for both $\pmb{S1}$ and $\pmb{S2}$	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	n
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)	A	В	L	Stroke Both of S 1, S 2
12	41 (51)	17 (22)	3.5	E to 20
16	41 (51)	17 (22)	3.5	5 10 30
20	48 (68)	19.5 (29.5)	4.5	E to EO
25	55 (75)	22.5 (32.5)	5	5 10 50

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



ml

Made to Order

23 Dual Stroke Cylinder/Single Rod Type



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		
CM2	Non-rotating rod	CM2K-Z	Double acting, Single rod	Except with air cushion	
	Direct mount	CM2R-Z	Double acting, Single rod		
	Non-rotating rod, Direct mount type	CM2RK-Z	Double acting, Single rod		
001	Air cylinder	CG1-Z	Double acting, Single rod	Except ø80-100	
Car	Non-rotating rod	CG1K-Z	Double acting, Single rod	Except with air cushion	
MB	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 	
C 4 2	Air cylinder	CA2-Z	Double acting, Single rod	* Except trunnion type	
CAZ	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	
202	Compact cylinder	CQS	Double acting, Single rod	Except with bracket	
045	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

CJ2	Mounting type Bore size - Stroke A + Stroke B-A Z - XC11
CM2	Mounting type Bore size - Stroke A + Stroke B-A Suffix Z - XC11
CG1	Mounting type Type Bore size - Stroke A + Stroke B-A Suffix Z - XC11
MB MB1	Mounting type Bore size - Stroke A Suffix + Stroke B-A Suffix Z - XC11
CA2	• Except trunnion type Mounting type Type Bore size - Stroke A Suffix + Stroke B-A Suffix Z - XC11
CA2K	* Except trunnion type Mounting type Bore size - Stroke A Suffix + Stroke B-A Suffix - XC11
	* Except trunnion type
CS1	Mounting type Iubing material Bore size Stroke A Sumix Stroke B-A Sumix ACTI • Except trunnion type
CS2	Mounting type Bore size Port suffix - Stroke A Suffix + Stroke B-A Suffix - XC11 • Except trunnion type •
CQSB	Bore size Stroke S1 Stroke S2-S1 D(C)(M) - XC11
CQ2B	Bore size - Stroke S1 + Stroke S2-S1 D(C)(M)(Z) - XC11
CNA2	Mounting type Type Bore size - Stroke A Suffix + Stroke B-A Suffix - D - XC11
	Dual stroke cylinder/Single rod

SMC

Made to Order

Symbol

-XC11

23 Dual Stroke Cylinder/Single Rod Type

Specifications: The following models are the same as the standard type except for the specifications listed below.

(Refer to the dimensions page for the manufacturable strokes for each series.)

CJ2

Bore size (mm)		10	16			
Piston speed		The piston speed for the stroke B retraction side is 50 to 500 mm/s.				
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				

CM₂

Bore size (mm)	20	25	32	40		
Piston speed	The piston speed for the stroke B retraction side is 50 to 500 mm/s.					
Allowable kinetic energy	0.12 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 type					
Specifications other than above Same as standard 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 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		Sa	me as st	andard ty	/pe		

Functional description of dual stroke cylinder





2) 1st stage Stroke A operation When the air pressure is supplied from the A port, the rod operates the stroke A.

(0 stroke position)

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



∆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.





- 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



Made to Order

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-H7□, D-H7C, D-H7□W, D-H7NF, D-H7BA

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

CM2 series





			(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



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

, ui, u										(1111)
Bore	66			77	Air cushion Long stroke					
size	GC	GD	п	SA	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

Construction/Dimensions



					(mm)
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

Made to Order

Symbol

-XC11



					(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



			(mm)
Bore size	GE	S	ZZ
40	29	237	299
50	33	258	327
63	33	280	352
80	41	334	422
100	41	372	461



23 Dual Stroke Cylinder/Single Rod Type

Construction/Dimensions

CS1 series









100 m		
O T	H	DQ
Po	Щ	
		Y
EO		
<u>B</u>	Ш	

		(mm)
Bore size (mm)	s	zz
180	231	401
200	241	411
250	283	484.5
320	351	577.5

				(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	_	_



Bore size (mm)	S	zz
125	197	334
140	197	334
160	213	363.5

(mm)

	A	
Ì		
SK.		



SMC



Symbol

-XC11



Symbol

-XC11

22 Dual Stroke Cylinder/Double Rod Type

CQS series



					(11111)
Bore size (mm)	A	Bı	B2	L	Stroke Both of S 1, S 2
12	42.5 (52.5)	17 (22)	22 (27)	3.5	E to 20
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 50
25	56.5 (76.5)	22.5 (32.5)	29 (39)	5	5 10 50

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

CQ2 series

							(mm)
Bore size (mm)	A	Bı	B2	L	R	Y	Stroke Both S1 and S 2
12	45.7 (63.9)	17 (28)	25.2 (32.4)	3.5	8.3 (8.1)	M2 v 0 5	E to 20
16	48 (70)	18.5 (30.5)	26 (36)	3.5	9 (7)	WI3 X 0.5	5 10 50
20	50 (74)	19.5 (31.5)	26 (38)	4.5	11.5 (7.5)	M5 x 0.8	5 to 50
25	56.5 (76.5)	22.5 (32.5)	29 (39)	5	10.5		
32	60.5 (80.5)	23 (33)	30.5 (40.5)	7	8.5		
40	76.5 (96.5)	29.5 (39.5)	40 (50)	7	7.5		
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 to 50
80	104.5 (124.5)	43.5 (53.5)	51 (61)	10	19	M10 x 1 5	101050
100	125.5 (145.5)	53 (63)	60.5 (70.5)	12	15	WIIU X 1.5	

* (): Dimensions with auto switch magnet

* Applicable stroke available in 5 mm increments

Precautions

E

≜Caution

- 1. 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.





Symbol

-XC11

- XC11

23 Dual Stroke Cylinder/Single Rod Type

MGG series

How to Order

MGG Bearing type Mounting type Bore size - Stroke A + Stroke B-A - Auto switch

Dual stroke cylinder/Single rod type

Specifications

Bore size	20	25	32	40	50	63		
Basic cylinder	ø20 to ø50: CDG1ZN Bore size - Stroke A + Stroke B-A Z - Auto switch - X428 ø63: 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							

por

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



MGG Se	MGG Series (mm)							
Bore size (mm)	GC	SA	SB	sz	zz	Bracket mounting stroke Stroke A +	Lo stroke	ng 9 ^{Note)}
					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 -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	CDG12	CDG1ZA Bore size - Stroke A + Stroke B-A Z - Auto switch - XC11						
Dimensions		Refer to the table below.						
Piston speed		The piston speed for t	he stroke B retraction s	ide 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 ø20 to ø50





MGC Series (mm)								
Bore size	GC	GD	SA	SB	₩θı	₩∂₂	Long stroke ^{Note)}	
(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		
(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)

24 Tandem Cylinder

Symbol

(mm)

SA SB ZZ

48 62 164

48 62 168

50 64 172

67.5 88.5 222

CG1 series

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)
CMO	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	
001	Air cylinder	CG1-Z	Double acting, Single rod	Except with air cushion	
Car	Non-rotating rod type	CG1K-Z	Double acting, Single rod	Except with air cushion	Web Catalog
MB	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		

How to Order

Standard model no.

Tandem cylinder

- XC12

Symbol



When air pressure is supplied to ports (B) and (D), the output force is doubled in the retract stroke.

When air pressure is supplied to ports (A) and (C), the output force is doubled in the out stroke.

Specifications: Same as standard type

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

CM2 series



24 Tandem Cylinder

Symbol -XC12

Nade 1 Ordei

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

CG1 series



CG1	CG1 (mm)								
Dere eize	~~	00		C.A.	CD	MO	77	Long str	oke Note)
Dore size	GC	GD	п	SA	30	WU	~~~	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

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

CG1K							(mm)
Bore size	GC	GD	н	SA	SB	Wθ	zz
20	21	9	35	48	87	30°	172
25	21	9	40	48	87	30°	177
32	23	9	40	50	91	30°	183
40	24	8	50	57	99	20°	208
50	28	12	58	64	117	20°	241
63	28	12	58	64	117	20°	241

* For long strokes (301 mm or more), refer to the dimensions page, as the SA dimension and the ZZ dimension are different from those listed in the table above.



				(mm)
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





					(11111)
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

Made to Order

Symbol

-XC13

25 Auto Switch Rail Mounting Type

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)
		CM0 7	Double acting, Single rod		
	Air cylinder	CIVI2-Z	Single acting (Spring return/extend)		1
		CM2W-Z	Double acting, Double rod		1
		CMOK 7	Double acting, Single rod		1
0140	Non-rotating rod type	GM2K-Z	Single acting (Spring return/extend)		1
CIVIZ		CM2KW	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		1
	Smooth cylinder	CM2Y-Z	Double acting, Single rod		
	End lock cylinder	CBM2	Double acting, Single rod	For XC13A and XC13C only	Web Catalog
	Air a diadar	CG1-Z1	Double acting, Single rod	Except the trunnion type	
	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 look autinder	CBG1-Z1	Double acting, Single rod	For XC13A only	
	End lock cylinder	CBG1	Double acting, Single rod	For XC13A only	
MGG	Guide cylinder	MGG	Double acting		
MGC	Guide cylinder	MGC	Double acting		

How to Order



Dell mounting	Solid state	D-F7□, D-F7□V, D-F7BA, D-F79F, D-F79W, D-F7□WV, D-J79, D-J79C, D-J79W
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

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.



Made to Order

(mm)

25 Auto Switch Rail Mounting Type



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

CDM2 series



Proper Auto Switch Mounting Position

														· · · ·
Auto switch model Bore size	D-F70/F79F D-J79/J79C D-F70W/J7 D-F7BA/F7E D-A72/A70 D-A73C/A80	F/F7□V 9W/F7□WV BAV H/A80H DC	D-F7NT		D-A9 D-A9 D-A9 D-A79W		D-A7□ D-A80		D-F7=/F79F D-J79/F7NT D-F7=W/J79W D-F7BA D-A9=/A9=V A7=H/A80H	D-F7□V D-F7□WV D-F7BAV	D-J79C	D-A7□ D-A80	D-A73C D-A80C	D-A79W
(mm)	A	В	Α	В	Α	В	Α	В	Hs	Hs	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	29.5	25
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	32.5	28
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	35	31.5
40	15	13	19	18	12	10	14.5	12.5	34	36.5	39.5	33	40	35.5

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…)

Operating range

(mm) Auto Switch Mounting Height

				(mm)			
	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 environment.

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.

Auto Switch Mounting Bracket: Part No.

Auto switch model	Bore size (mm)	Note 1) When adding D-A9□(V), order a set of auto switch mounting brackets BQ-1 and BQ2-012 for					
Auto switch model	ø20 to ø40	the CDQ2 series (#12 to #25) separately. When adding the auto switches other than D-A9D(V) mentioned on the left and D-E7B					
D-A9□/A9□V	BQ2-012	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.					

Symbol

-XC13

[mm]

[mm]

25 Auto Switch Rail Mounting Type

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

CDG1-Z1 series



Proper Auto Switch Mounting Position (Detection at stroke end) Applicable Cylinder Series: CDG1-Z1-XC13 Rubber bumper

										[]
Auto switch model Bore	D-M9_/D-M9_V D-M9_W/D-M9_WV D-M9_A/D-M9_AV		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	
size	Α	В	Α	В	Α	В	Α	В	Α	В
20	29.5	27.5	27	25	32	30	26.5	24.5	24	22
25	29	28	26.5	25.5	31.5	30.5	26	25	23.5	22.5
32	29.5	29.5	27	27	32	32	26.5	26.5	24	24
40	33	33	30.5	30.5	35.5	35.5	30	30	27.5	27.5
50	39.5	38.5	37	36	42	41	36.5	35.5	34	33
63	39.5	38.5	37	36	42	41	36.5	35.5	34	33
80	51	45	48.5	42.5	53.5	47.5	48	42	45.5	39.5
100	49	47	46.5	44.5	51.5	49.5	46	44	43.5	41.5

Note) 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: CDG1-Z1-XC13 Air cushion

										[]
Auto switch model Bore	D-M9=//D-M9=V D-M9=W/D-M9=WV D-M9=A/D-M9=AV		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	
size	Α	В	A	В	Α	В	A	В	A	В
20	30.5	26.5	28	24	33	29	27.5	23.5	25	21
25	29	28	26.5	25.5	31.5	30.5	26	25	23.5	22.5
32	31	28	28.5	25.5	33.5	30.5	28	25	25.5	22.5
40	35	31	32.5	28.5	37.5	33.5	32	28	29.5	25.5
50	40	38	37.5	35.5	42.5	40.5	37	35	34.5	32.5
63	40	38	37.5	35.5	42.5	40.5	37	35	34.5	32.5
80	51.5	44.5	49	42	54	47	48.5	41.5	46	39
100	50	46	47.5	43.5	52.5	48.5	47	43	44.5	40.5

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

25 Auto Switch Rail Mounting Type



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

Prop	er Auto S	Switch Mou	unting Pos	ition/Applic	able Cylind	er Series:	CDBG1-Z1	-XC13 Rub	ber bumpe	r	[mm]
Bore size	Auto switch model Lock	D-M9□/D- D-M9□W/ D-M9□A/I	M9⊡V D-M9⊡WV D-M9⊡AV	D-F7:::/F79F/F7:: D-J79/J79C D-F7::W/J79W/F7::W	V D-F7BA/F7ABV D-A72/A7□H/A80H V D-A73C/A80C	D-I	-7NT	D-/ D-/	A7□ A80	D-A	179W
	position	Α	В	Α	В	Α	В	A	В	Α	В
	Rod side	40.5	27.5	38	25	43	30	37.5	24.5	35	22
20	Head side	29.5	39.5	27	37	32	42	26.5	36.5	24	34
	Both sides	40.5	39.5	38	37	43	42	37.5	36.5	35	34
	Rod side	40	28	37.5	25.5	42.5	30.5	37	25	34.5	22.5
25	Head side	29	40	26.5	37.5	31.5	42.5	26	37	23.5	34.5
	Both sides	40	40	37.5	37.5	42.5	42.5	37	37	34.5	34.5
	Rod side	39.5	29.5	37	27	42	32	36.5	26.5	34	34
32	Head side	29.5	39.5	27	37	32	42	26.5	36.5	24	34
	Both sides	39.5	39.5	37	37	42	42	36.5	36.5	34	34
	Rod side	42	33	39.5	30.5	44.5	35.5	39	30	36.5	27.5
40	Head side	33	47	30.5	44.5	35.5	49.5	30	44	27.5	41.5
	Both sides	42	47	39.5	44.5	44.5	49.5	39	44	36.5	41.5
	Rod side	51.5	38.5	49	36	54	41	48.5	35.5	46	33
50	Head side	39.5	55.5	37	53	42	58	36.5	52.5	34	50
	Both sides	51.5	55.5	49	53	54	58	48.5	52.5	46	50
	Rod side	51.5	38.5	49	36	54	41	48.5	35.5	46	33
63	Head side	39.5	55.5	37	53	42	58	36.5	52.5	34	50
	Both sides	51.5	55.5	49	53	54	58	48.5	52.5	46	50
	Rod side	67	45	64.5	42.5	69.5	47.5	64	42	61.5	39.5
80	Head side	51	67	48.5	64.5	53.5	69.5	48	64	45.5	61.5
	Both sides	67	67	64.5	64.5	69.5	69.5	64	64	61.5	61.5
	Rod side	63	49	60.5	46.5	65.5	51.5	60	46	57.5	43.5
100	Head side	47	71	44.5	68.5	49.5	73.5	44	68	41.5	65.5
	Both sides	63	71	60.5	68.5	65.5	73.5	60	68	57.5	65.5

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

Note 2) For the dimensions other than the proper auto switch mounting position and mounting height, refer to standard type for CBG1 series.

25 Auto Switch Rail Mounting Type



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

Prop	er Auto S	Switch Mou	unting Pos	ition/Applic	able Cylind	ler Series:	CDBG1-Z1	-XC13 Air	cushion		[mm]
Bore size	Auto switch model Lock	D-M9□/D- D-M9□W/ D-M9□A/I	M9□V D-M9□WV D-M9□AV	D-F7[]/F79F/F7[]\ D-J79/J79C D-F7[]W/J79W/F7[]W	/ D-F7BA/F7ABV D-A72/A7⊡H/A80H V D-A73C/A80C	D-I	F7NT	D-/ D-/	A7□ A80	D-A79W	
	position	Α	В	Α	В	Α	В	A	В	Α	В
	Rod side	41.5	26.5	39	24	44	29	38.5	23.5	36	21
20	Head side	30.5	38.5	28	36	33	41	27.5	35.5	25	33
	Both sides	41.5	38.5	39	36	44	41	38.5	35.5	36	33
	Rod side	40	28	37.5	25.5	42.5	30.5	37	25	34.5	22.5
25	Head side	29	40	26.5	37.5	31.5	42.5	26	37	23.5	34.5
	Both sides	40	40	37.5	37.5	42.5	42.5	37	37	34.5	34.5
	Rod side	41	28	38.5	25.5	43.5	30.5	38	25	35.5	22.5
32	Head side	31	38	28.5	35.5	33.5	40.5	28	35	25.5	32.5
	Both sides	41	38	38.5	35.5	43.5	40.5	38	35	35.5	32.5
	Rod side	44	31	41.5	28.5	46.5	33.5	41	28	38.5	25.5
40	Head side	35	45	32.5	42.5	37.5	47.5	32	42	29.5	39.5
	Both sides	44	45	41.5	42.5	46.5	47.5	41	42	38.5	39.5
	Rod side	52	38	49.5	35.5	54.5	40.5	49	35	46.5	32.5
50	Head side	40	55	37.5	52.5	42.5	57.5	37	52	34.5	49.5
	Both sides	52	55	49.5	52.5	54.5	57.5	49	52	46.5	49.5
	Rod side	52	38	49.5	35.5	54.5	40.5	49	35	46.5	32.5
63	Head side	40	55	37.5	52.5	42.5	57.5	37	52	34.5	49.5
	Both sides	52	55	49.5	52.5	54.5	57.5	49	52	46.5	49.5
	Rod side	67.5	44.5	65	42	70	47	64.5	41.5	62	39
80	Head side	51.5	66.5	49	64	54	69	48.5	63.5	46	61
	Both sides	67.5	66.5	65	64	70	69	64.5	63.5	62	61
	Rod side	66	46	63.5	43.5	68.5	48.5	63	43	60.5	40.5
100	Head side	50	68	47.5	65.5	52.5	70.5	47	65	44.5	62.5
	Both sides	66	68	63.5	65.5	68.5	70.5	63	65	60.5	62.5

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

Note 2) For the dimensions other than the proper auto switch mounting position and mounting height, refer to standard type for CBG1 series. [mm]

Auto Switch Mounting Height

						[]
Auto switch model Bore	D-M9=/M9=V D-M9=WV/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
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

Made to Order

(mm)

(mm)

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

Auto switch model	D-M9_/D-M9_V D-M9_W/D-M9_WV D-M9_A/D-M9_AV		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	A	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

		-								()
Auto switch model	switch D-M9□/D-M9□V model D-M9□W/D-M9□WV D-M9□A/D-M9□AV		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	A	В	Α	В	A	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)

Lock position	H	1	F	3	V	v	
	(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 CBG series.

Auto Switch Mounting Height (mm)									
Auto switch model	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			

1520



Made to Order

(mm)

ΗU

30.7 33.2

36.5

41

46.2

53.2

62.2

72.7

25 Auto Switch Rail Mounting Type





MGG/MGC Applicable Auto Switches

Rail mounting type	Solid state switch	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⊡W, D-J79, D-J79C, D-J79W
Reed switch		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.

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



MGG Series									
Bore size (mm)	R	Y	HS	нт					
20	14	99	28.5	14					
25	14	99	31	14					
32	14	101	34.5	14					
40	15	109	39	14					
50	16	124	49.5	17					
63	16	139	56.5	17					
80	23	165	75.5	23					
100	23	165	86	26					

View D-D'



MGC series ø20 to ø50





Width across flats HT

HS

HU





View D-D







View D-D'

MGC Series (mr								
Bore size (mm)	R	Y	HS	нт	ΗU			
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



Proper 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/	9⊡V /M9⊡WV M9⊡AV	D-F70/F79F D-J79/J79C D-F70W/J7 D-F7BA/F7F D-A72/A70 D-A73C/A80	F/F7□V 9W/F7□WV BAV H/A80H DC	D-F	7NT	D-A D-A	.7⊡ .80	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-A7□ D-A80	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 owitch	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 quitab model	Bore size (mm)									
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		

Made to Order

Symbol

-XC13

* 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 quitab model	Bore size (mm)	No
Auto switch model	ø20 to ø100	
D-M9□/M9□V D-M9□W/M9□WV	BQ2-012	No
D-A9□A/A9□AV	BQ2-012S	

te 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.

When ordering the auto switches other than D-M9DD mentioned on the left and D-F7BA(V). order auto switch mounting brackets BQ-1 separately.

te 2) When adding D-M9 A(V), order a stainless steel screw set BBA2 together with BQ2-012S separately When adding the auto switch D-F7BA(V), order a stainless steel screw set BBA2 separately.



Symbol

-XC17

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

26 Pin Cylinder with Rod Quenched

Applicable Series

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

Made to Order

(mm)

(mm)



27 Intermediate Stroke (Spacer type)

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	
011	Non-rotating rod type	CUK	Double acting, Single rod	5 mm spacer only	
0	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	
МХН	Compact slide	MXH-Z	Double acting	5 mm spacer only	
CXS	Dual rod cylinder	CXS⊻	Double acting	5 mm spacer only	
CXSJ	Dual rod cylinder compact type	CXSJ [™]	Double acting	5 mm spacer only	

How to Order

CU

Standard model no.

_-<u>XC19</u>

(mm)

Intermediate stroke (Spacer type)

Applicable Stroke

ø 6, ø10, ø16	35, 45, 55
ø20, ø25, ø32	35, 45, 55, 65, 75, 85, 95

 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.

CJP2

Applicable Stroke

10 10 1 mm increments in 20 et er lage	ø 6	1 mm increments in 24 st or less
Ø10, Ø16 I min increments in 39 st or less	ø 10, ø 16	1 mm increments in 39 st or less

 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

Description	Dealing with the stroke in 1 mm increments by changing a collar of the standard 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 for less than this stroke.		
Part no.	Suffix "-XC19" to the end of standard part number.		
Applicable strake	ø16	15 to 249	
(mm)	ø20 to ø63	15 to 399	
	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.

CXS Applicable Stroke

1		6	(11111
	ø 6	15, 25, 35, 45	
	ø 10	55, 65	
	ø 15		
	ø 20	55 65 85 95	
	ø 25] 33, 65, 65, 85	
	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 for the required stroke.

MXH Applicable Stroke	(mm)			
ø6, ø10, ø16, ø20	35, 45, 55			
Dealing with it by installing a E mm width appear with the standard				

 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.

 Strokes other than the applicable strokes are only available as a special order.

CXSJ Applicable Stroke

	- ()
ø 6	15, 25, 35, 45
ø 10	15, 25, 35, 45, 70
ø15	
ø 20	15 25 35 45 70 95
ø 25	10, 20, 00, 40, 70, 00
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 for the required stroke.

. Strokes other than the applicable strokes are only available as a special order.



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

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		Double acting, Single rod	Except with air cushion		
		CIVI2-Z	Single acting (Spring return/extend)			
	Non-rotating rad type		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	Double acting, Single rod	Except with air cushion		
	Smooth cylinder	CM2Y-Z	Double acting, Single rod		Web Catalog	
		CG1-Z1	Double acting, Single rod	Except clevis type (D). Except with air cushion	web catalog	
CG1	Air cylinder	Air cylinder	ir cylinder	Double acting, Single rod	Except clevis type (D). Except with air cushion	
		001-2	Single acting (Spring return/extend)	Except clevis type (D)		
	Non-rotating rod type	CG1K-Z	Double acting, Single rod	Except clevis type (D). Except with air cushion		
	Direct mount type	CG1R-Z	Double acting, Single rod	Except with air cushion		
	Non-rotating rod, Direct mount type	g rod, Direct mount type CG1KR-Z Double acting, Single rod Except with air cushion		Except with air cushion		
	Smooth cylinder	CG1Y-Z	Double acting, Single rod	Except clevis type (D)		

How to Order

Standard model no.



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

lade

Symbol

-XC20

CG1 series CG1-Z1 series



Bore size (mm)	Port size
20, 25, 32, 40	Rc ¹ /8
50, 63	Rc 1/4
80*	Rc ³ /8
100*	Rc 1/2
* CG1-Z1 only	

⊘SMC

Made to Order Common Specifications: -XC22: Fluororubber Seals

29 Fluororubber Seals

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)	
		CJPB-Z	Single acting (Panel mounting)	Except ø4		
CJP		CJPS-Z	Single acting (Embedded)	Except ø4		
	Pin cylinder	CJP2	Double acting, Single rod	Except ø4. Packing set (6)		
	-	CJPB	Single acting (Panel mounting)	Except ø4	1	
		CJPS	Single acting (Embedded)	Except ø4		
		a =	Double acting, Single rod	Except with air cushion		
	Air cylinder	CJ2-Z	Single acting (Spring return/extend)	•	1	
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			
	Airadindar	CM2-Z	Double acting, Single rod		-	
	Air cylinder	CM2W-Z	Double acting, Double rod			
	Non-rotating rad type	CM2K-Z	Double acting, Single rod			
CM2	Non-rotating rou 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-Z1	Double acting, Single rod	Without a bumper for cylinders with a rubber bumper		
001	All Cylinder	CG1-Z	Double acting, Single rod	Without a bumper for cylinders with a rubber bumper	Web Catalog (4)	
Cui	Double rod type	CG1W-Z	Double acting, Double rod	Without a bumper for cylinders with a rubber bumper	Web Catalog	
	Direct mount type	CG1R-Z	Double acting, Single rod	Without a bumper for cylinders with a rubber bumper		
мр	Air cylinder	MB-Z	Double acting, Single rod	Except ø125, Air cushion only		
		MBW-Z	Double acting, Double rod	Except ø125, Air cushion only		
MR1	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125, Air cushion only		
		MB1W-Z	Double acting, Double rod	Except ø125, Air cushion only		
	Air cylinder	CA2-Z	Double acting, Single rod	Air cushion only		
CA2		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	Air cylinder	CS2	Double acting, Single rod	Applicable to ø125 to ø160		
		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.		
	Free mount cylinder	CU	Double acting, Single rod		_	
			Single acting (Spring return/extend)		_	
CU	Non-rotating rod type	сик	Double acting, Single rod		-	
		011	Single acong (Spring return externo)		-	
	Long stroke Non rotating		Double acting, Single rod		-	
	Compositione, Non-rotating	MCDM 7	Double acting, Single rou Double acting	Clide beaving only (5)	_	
MGP	Compact guide cylinder	MGPW-Z	Double acting	Side bearing only (5)	-	
MGO	Compact quide outinder	MGOM	Double acting	Slide beering only (5)		
MGG	Guide cylinder	MGG	Double acting	Without rubber humper (3)		
MGC	Guide cylinder	MGC	Double acting	Without tubber bumper	-	
CEP1	Hinh precision stroke reading cylinder	CEP1	Double acting Single rod		1	
MXH	Compact slide	MXH-7	Double acting		1	
CXS	Dual rod cylinder	CXS	Double acting		Web Catalog	
CXSJ	Dual rod cylinder compact type	CXSJ	Double acting		- Heb Gatalog	
CX2	Slide unit	CX2	Double acting			
CXW	Slide unit	CXW	Double acting		1	
MK	Botary clamp cylinder	MK	Double acting	The humper is a standard product	-	

How to Order

Standard model no.

0.

Fluororubber seals

XC22

@SMC

specifications	
Seal material	Fluororubber
Ambient temperature range	With auto switch :-10 to 60°C (0°C to 60°C for CS1, CS2 series) Note 1) Without auto switch :-10 to 70°C (0°C to 70°C for CS1, CS2 series) (No freezing)
Specifications other than above and external dimensions	Same as standard type for each series



Note 1) Depending on the type of chemical and the operating temperature, the use of this product may not be possible.

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.

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.

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



Symbol

-XC22

Made to Order Common Specifications: -XC22: Fluororubber Seals



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 MGC Standard model no. -XC22 Fluororubber seals

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

ade 1

Ordel

Made to Order Common Specifications: -XC24: With Magnetic Shielding Plate -XC25: No Fixed Throttle of Connection Port

Made to Order

30 With Magnetic Shielding Plate

Symbol -XC24

Shields against the magnetic leaked from external slider.

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)	
СҮЗ	Magnetically coupled rodless cylinder	CY3B-Z	Double acting		
		CY3B	Double acting	Web Catalog	
REA	Sine rodless cylinder	REA	Double acting		

How to Order СҮЗВ XC24 Standard model no. REA

With magnetic shielding plate

Specifications: Same as standard type

Dimensions

Magnetic shielding plate (t=1 mm)





Dimensions	Bore size (mm)								
Dimensions	ø 6	ø 10	ø15	ø 20	ø 25	ø 32	ø 40	ø 50	ø 63
□B	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.

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

Symbol 31 No Fixed Throttle of Connection Port -XC25

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

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
		0107	Double acting, Single rod	
	Air cylinder	CM2-Z	Single acting (Spring returnlextend)	
		CM2W-Z	Double acting, Double rod	
CM2		CM2K-Z	Double acting, Single rod	
	Non-rotating rod type	CM2KW-Z	Double acting, Double rod	Web Catalog
			Single acting (Spring returnlextend)	
	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/ 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).

Made to Order Common Specifications: -XC26: With Split Pins for Double Clevis Pin and Double Knuckle Joint Pin and Flat Washers



Symbol

-XC26

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

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	
		MB1W	Double acting, Double rod	ø125 only]
061	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		
	Smooth cylinder	CS2Y	Double acting, Single rod	ø125 to ø160 only	

How to Order



With clevis pin, split pin and flat washer

· Parts assembly

$\begin{array}{c} \text{MB} \\ \text{CS1} - \text{D} 12 - \text{XC26} \\ \text{CS2} - \text{T} - \text{T} \end{array}$							
Double clevis •	 With clevis pin, split pin and flat washer 						
•	Bo	re size	Applicable model				
	12	125 mm	MB, MB1, CS1, CS2				
	14	140 mm	CS1, CS2				
	16	160 mm	CS1, CS2				
	18	180 mm	CS1, CS2				
	20	200 mm	CS1, CS2				
	25	250 mm	CS1, CS2				
	30	300 mm	CS1				
	32	320 mm	CS2				
CS1 Y - 12, 14, 16, 18, 20, 25, 30 - XC26 MB Y - 12A, 14A, 16A, 18A, 20A, 25A, 32A - $XC26$ CS2 J Double knuckle joint							
With knuckle joint pin, split pin and flat washer							
Clevis pin/Knud	Clevis pin/Knuckle joint pin						

With clevis pin, knuckle joint pin, 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
ø 125	90
ø 140	104
ø 160	113
ø 180	136
ø 200	136
ø 250	169
ø 300 , ø 320	207
ø 300 , ø 320	207

Double knuckle joint

Split pin Pin Flat washer

*	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.



Made to Order Common Specifications: -XC26: With Split Pins for Double Clevis Pin and Double Knuckle Joint Pin and Flat Washers

Made to Order

Symbol

XC26

XC26

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

Applicable Series

	Series	Model	Action	Note	Vol. no. (for std model)
	Ctondord	CQS	Double acting, Single rod		
	Standard		Single acting (Spring return/extend)		
CQS	Long stroke	CQS	Double acting, Single rod		
	Non-rotating rod	CQSK	Double acting, Single rod		
	Anti-lateral load	CQS⊟S	Double acting, Single rod		
	O	000	Double acting, Single rod		Web Catalog
	Compact cylinder	002	Single acting (Spring return/extend)		
CQ2	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		

With double knuckle joint pin.

With clevis pin/knuckle pin,

split pins and flat washers

split pins and flat washers

How to Order





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



				(mm)
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
32	CQ-D032-XC26	V C04 VC06		50 F
40	CQ-D040-XC26	1-004-7020	11-004-X020	52.5

				(11111)
Bore size (mm)	Double clevis	Double knuckle joint	Clevis pin Knuckle joint pin	L
50	CQ-D050-XC26	V-G05-XC26	IX-G05-XC26	66
63	CQ-D063-XC26	1-005-7020	11-003-2020	00
80	CQ-D080-XC26	Y-G08-XC26	IY-G08-XC26	78
100	CQ-D100-XC26	Y-G10-XC26	IY-G10-XC26	86



Made to Order Common Specifications:

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







* Body mounting bolts, 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		16.5	50 F
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	Y-G05-XC26B		19.5	
	CQ-D050-XC26C	Y-G05-XC26C		12.5	
	CQ-D063-XC26A	Y-G05-XC26A	TY-G05-XC26	16.5	66
63	CQ-D063-XC26B	Y-G05-XC26B		19.5	
	CQ-D063-XC26C	Y-G05-XC26C	1	12.5	



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



* Split pins and flat washers are included.

Made to Order Common Specifications: -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

-XC27

Symbol

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
	Standard tupa	CM2-7	Double acting, Single rod (1)	
	Standard type	CIVIZ-Z	Single acting (Spring return/extend) (1)	
CM2	Non-rotating rad type	CM2K-7	Double acting, Single rod (1)	
CIVIZ	Non-rotating rod type	OWER-2	Single acting (Spring return/extend) ⁽¹⁾	
	End lock cylinder	CBM2	Double acting, Single rod	
	Smooth cylinder	CM2Y-Z	Double acting, Single rod	
		CG1-Z1	Double acting, Single rod (1)	
CG1	Air cylinder	0017	Double acting, Single rod (1)	
Car		CG1-2	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 rod type	MBKW-Z	Double acting, Double rod	
	With end lock	MBB	Double acting, Single rod	
	Smooth cylinder	MBY-Z	Double acting, Single rod (1)	
MD1	Standard type	MB1-Z	Double acting, Single rod (1)	
IVID I	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)
001	Standard type	CS1	Double acting, Single rod	
CSI	Low friction	CS1Q	Double acting, Single rod	
CE 2	Standard type	CS2	Double acting, Single rod	
032	Smooth cylinder	CS2Y	Double acting, Single rod	
	Standard type	202	Double acting, Single rod	
	Standard type	003	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	
	Ctondard type	000 7	Double acting, Single rod ⁽¹⁾	
	Standard type	602-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

СМ2Д	Standard model no.	-xc	27
CG1	Standard model no.	-xc	27
CA2	Standard model no.	-xc	27
CS1	Standard model no.	-xc	27
CS2D	Standard model no.	-xc	27
cas	Standard model no.	-xc	27
	Standard model no.	-xc	27
I	Double clevis type Double clevi made of stainless	s pin steel	•
¥ -[G012, Z015A, G02, G03, G04, G05, G08, G10	-xc	27
Ý -[020B, 032B, 040B	-xc	27
⊻́ -[04D, 05D, 08D, 10D	- <u>xc</u>	27
<u>v</u> –[12, 14, 16, 18, 20, 25, 30	-xc	27
Ϋ́ −[12A, 14A, 16A, 18A, 20A, 25A, 32A	-xc	27
	ble knuckle joint Double knuckle join made of stainless	nt pin , steel	•

opeemeanor	specifications				
Mounting type	Only double clevis type (D), Double knuckle joint only				
Pin and retaining ring material	Stainless steel 304				
Specifications other than above	Same as standard type				

CG -	D020, D025, D032, D040, D050, D063, D080, D100	-xc	;27
	Clevis pin made of stainless	steel	
Clev	is assembly (Clevis, Mounting bolt, Pin, Retain	ning ri	ng)
<u>IY</u> -	12, 14, 16, 18, 20, 25, 30	- <u>xc</u>	27
<u>i</u> y -	G012 (J015)*, G02, G03, G04, G05, G08, G10	-xc	27
<u>c</u> <u></u> -	M03, M05, M08	-xc	27
<u>c</u> d -	G02, G25, G03, G04, G05, G06	- <u>xc</u>	27
<u>CDP</u> -	1, 2, 3	-xc	27
<u>CDP</u> -	2A, 3A, 4A, 5A, 6A, 7A	-xc	27
	Clauria min		

Clevis pin Knuckle pin

Clevis pin
 Knuckle pin

* 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.





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)
	Ain andia da a	CA2-Z	Double acting, Single rod	
	Air cylinder	CA2W-Z	Double acting, Double rod	
	Non rotating rad tuna	CA2K	Double acting, Single rod	
C 42	Non-rotating rod type	CA2KW	Double acting, Double rod	Web Catalog
CA2	With end lock	CBA2	Double acting, Single rod	Web Catalog
	A in burden and in day.	CA2H	Double acting, Single rod]
	Air-nydro cylinder		Double acting, Double rod]
	Smooth cylinder	CA2Y-Z	Double acting, Single rod	



		-	
2 F		Standard model no.	-XC28
Т		Compact flange made of	SS400
ļ	Moun	ting type	
	F	Rod side flange	
	G	Head side flange	

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.

Description

Cylinder with end lock

Smooth cylinder

End lock cylinder

Air-hydro cylinder Smooth cylinder

Valve mounted air cylinder

Air cylinder

Air cylinder

Air cylinder

Model

MB-7st

MBY-Z

MB1-Z*

CA2-Z

CBA2

CA2H

CV3

(mm)

CA2Y-Z

MBB

Action

Double acting, Single rod (1

Double acting, Single rod

Double acting, Single rod

Double acting, Single rod (1)

Double acting, Single rod (1)

Double acting, Single rod

Double acting, Single rod

Double acting, Single rod

Double acting, Single rod

36 Double Knuckle Joint with Spring Pin



Vol. no. (for std model)

Web Catalog

To prevent loosening of the double knuckle joint

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
		CM0 7	Double acting, Single rod (1)	
	Air cylinder	CIVIZ-Z	Single acting (Spring returnlextend) (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 ⁽¹⁾	
CG1	Air cylinder	CG1-Z	Double acting, Single rod (1)	
			Sincle activo (Spring return) (1) (2)	

* Except ø125

Series

MB

MB1

CA2

cv

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



Bore size (mm)	н	Lı	NDH10	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	Lı	РХ	PY	ZZ	RR1	øND	H10	d9	NX	NZ	Spring pin
40	51	55	11	84	192	13	12	+0.070	-0.050 -0.093	16 ^{+0.3} _{+0.1}	38	ø4 x 24L
50	58	60	12	91	207	15	12	+0.070	-0.050 -0.093	16 ^{+0.3} +0.1	38	ø4 x 25L
63	58	60	12	91	218	15	12	+0.070	-0.050 -0.093	16 ^{+0.3} +0.1	38	ø4 x 25L
80	71	71	16	105	257	19	18	+0.070	-0.050 -0.093	28 ^{+0.3} +0.1	55	ø4 x 36L
100	72	83	16	118	282	21	20	+0.084	-0.065	30 +0.3	61	ø4 x 40L

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



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

37 Rod Side Trunnion

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 tupo	MB-Z*1	Double acting, Single rod		
	Stanuaru 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		
	Ctondord type	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		
	Ctondard type	CS1	Double acting, Single rod		1
CS1	Standard type	CS1W	Double acting, Double rod		
	Low friction	CS1Q	Double acting, Single rod	ø125 to ø160 only	
	Ctondord type	CS2	Double acting, Single rod	ø125 to ø160 only	
CS2	Standard type	CS2W	Double acting, Double rod	ø125 to ø160 only	
	Smooth cylinder	CS2Y	Double acting, Single rod	ø125 to ø160 only]

How to Order MB T Standard model no. -XC30 MB1 CA2 CS1 CS2 Trunnion bracket

Specifications: Same as standard type

(mm)

*1 Except ø125

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

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

CA2 series





											. ,
Symbol Bore size	n	GA	н	s	TDe8	тт	тх	ТҮ	ΤZ	z	zz
40	23	11	66	80	15 -0.032 -0.059	22	85	62	117	55	151
50	26	13	71	86	15 -0.032 -0.059	22	95	74	127	60	163
63	27	13	79	94	18 ^{-0.032} -0.059	28	110	90	148	65	179
80	32	16	94.5	111	25 -0.040	34	140	110	192	77.5	212.5
100	35	16	100	121	25 -0.040	40	162	130	214	80	229

MB series





ZZ + Stroke

								(11111)
Bore size	н	øTDe8	TT	ТХ	TY	TZ	Z	ZZ
32	47	12 ^{-0.032} -0.059	17	50	49	74	38.5	135
40	60	16-0.032 -0.059	22	63	58	95	49	148
50	66	16-0.032 -0.059	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.





Symbol

-XC30

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

37 Rod Side Trunnion



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

20-0.0

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

CS1 series

CS2 series





												(/
Bore size (mm) Symbol	GA	GB	GC	NA	s	øTDe8	TT	TY	ΤZ	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 -0.089	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
180 200 250 300	45 45 54.5 59.5	25.5 25.5 30 30	50 50 60 70	36 36 46 46	108 108 138 143	$\begin{array}{r} -0.050\\ 45 & -0.050\\ -0.089\\ 45 & -0.089\\ 56 & -0.060\\ 56 & -0.106\\ 67 & -0.106\\ \end{array}$	59 59 69 79	228 257 325 390	326 355 447 534	138 138 163 178	108.5 108.5 128.5 138.5	272 272 331 357

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





_													(mm)
	Bore size (mm)	GA	GB	GC	NA	S	TDe8	TT	TY	ΤZ	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







Made to Order Common Specifications: -XC34: 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





E

H

Z + stroke

F. E.

Single acting, Spring return



Single acting, Spring extend

								(mm
Bore size (mm)	в	с	FK	FY	кі	NA	NB	Y
6	13	22	11	20.5	M3 x 0.5	6	14	10.5
10	15	24	12	22	M3 x 0.5	7	15	11.5
16	20	32	13	28	M4 x 0.7	6	18	15.5
20	26	40	16	33	M4 x 0.7	8	20	19.5
25	32	50	20	43.5	M5 x 0.8	10	28	24.5
32	40	62	24	51.5	M5 x 0.8	12	32	30.5

																(mm)
Action			Double	e acting		Single	acting ((Spring	return)	Single acting (Spring extend)						
	-		2	z			7	z			Z					
Bore size	F	п	Without	With	Wit	hout sw	itch	W	/ith swite	ch	Without switch With switch					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

Made to Order

Symbol

-XC35

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.

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 V						
	A in surflim days	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)]				
001		CG1-Z1	Double acting, Single rod]				
Car	Air cylinder	CG1-Z	Double acting, Single rod]				
MD		MB-Z	Double acting, Single rod	Except ø125]				
	Air cylinder	MBW-Z	Double acting, Double rod	Except ø125]				
MD1	Air culindor	MB1-Z	Double acting, Single rod	Except ø125]				
	All Cylinder	MBW-Z	Double acting, Double rod	Except ø125]				
	Air aulindar	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 culindor	CS1	Double acting, Single rod]				
0.51	All Cylinder	CS1W	Double acting, Double rod]				
C 52	Air culindor	CS2	Double acting, Single rod	Applicable to ø125 to ø250]				
0.52	All Cylinder	CS2W	Double acting, Double rod	Applicable to ø125 to ø160]				
		CQ2-Z	Double acting, Single rod	Applicable to ø32 to ø100	Web Catalog				
C02	Compact cylinder	CQ2W-Z	Double acting, Double rod	Applicable to ø32 to ø100]				
0.02		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		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					

How to Order



* For MGP series, refer to page 1542.

Specifications: Same as standard type

39 With Coil Scraper

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

CG1-Z1 series CG1-Z series



									(11111)	
Bore	Str	oke range	-	ŀ	-	1.		ZZ		
size	CG1-Z1	CG1-Z	FA	Male thread	Female thread	12	IVI	Male thread	Female thread	
20		p to 200 (up to 1500)	6	39	27	26	4	110 (118)	98 (106)	
25			6	44	28	31	5	115 (123)	99 (107)	
32	Up to	11- 1- 000	6	44	28	38	5	117 (125)	101 (109)	
40	1500	Up to 300	7	54	29	47	3.5	134 (143)	109 (118)	
50	1	(up to 1500)	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).

(mm)

ZZ

135

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

Bore size 32 47 н ZZ + Stroke MB1 series н ZZ + Stroke CS1 series Ð н

ZZ + Stroke

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

н

40	58	146
50	67	165
63	67	165
80	81	199
100	81	199

Bore size	Without auto switch			With auto switch		
DOLE 2126	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 Ø125 to Ø160 have the same dimensions as the standard type.



(mm)



Symbol

-XC35

39 With Coil Scraper

Symbol -XC35

Orde

(mm)

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

CQ2 series



						(1111)
		Α		L	-	
Bore size	Standard type, A	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 -0.052
50	43.5 (53.5)	53.5	73.5	13	18	35 ⁺⁰ -0.062
63	49 (59)	59	75	13	18	35 ⁺⁰ _{-0.062}
80	58.5 (68.5)	68.5	86	15	20	43+0
100	70 (80)	80	97.5	17	22	59 ⁺⁰ _{-0.074}

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

39 With Coil Scraper

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

CQ2W series



RQ series



CBA2 series



CNG series



CNA2 series



SMC

			(mm)
Bore	A		
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

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

			(mm)
Bore size (mm)	Α	В	Th9
32	49	37	23 _0.052
40	56	44	28 _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}

(mm)

		f
Bore size (mm)	i) 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.

Bore size (mm)	FA	М	12	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
					190
			Long	stroke	205
2					
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

Made 1 Order

Symbol

-XC35

39 With Coil Scraper

Symbol -XC35

Made to Order

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	Stroke range	Α			T1 60
(mm)	(mm)	Without auto switch	With auto switch	_	11119
40	10 to 50	75.5	0F F	40	20 0
40	75,100 85.5 85.5	65.5	12	20_0.052	
50	10 to 50	78.5	00 E	12	25 0
50	75,100 88.5	00.5	13	30_0.062	
	10 to 50	87	07 15	12	35.0
03	75,100	97	97	13	55_0.062
80	10 to 50	101.5	111 5	15	42.0
80	75,100	111.5	111.5	15	43_0.062
400	10 to 50	120	120	17	50 ⁰
100	75,100	130	130		09_0.074

Creations

39 With Coil Scraper



lade t

Orde



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	With single end	0.12 MPa					
pressure	With both ends	0.14 MPa					
Specifications other than above		Same as standard type					

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



© MT ሰ ሰ Piston rod external diameter) FD EW + Stroke ⁸DA AW + 2 x Stroke

For cylinder with both sides scraper

MGPM (Slide bearing) A, E, HT Dimensions							
Dana alar		Α					
Bore size (mm)	50 st	Over 50 st	Over	50 st	Over 50 st	Over	НТ
(1111)	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

MGPL, MGPA (Ball bushing bearing) A, E, HT Dimensions							(mm)		
-	A				E				
Bore size	30 st	Over 30 st	Over 100 st	Over	30 st	Over 30 st	Over 100 st	Over	HT
(mm)	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
	A			E					
Bore size	50 st	Over 50 st	Over 100 st	Over	50 st	Over 50 st	Over 100 st	Over	HT
(mm)	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
			-						

		Α			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

Common Dimensions: MGPM, MGPL, MGPA

MGPM, MGPL, MGPA (mm)							
Bore size	Bore size			FC			
(mm)	P	DA	гв	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. EW. FD. MT (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				
Made to Order Common Specifications: -XC35: With Coil Scraper



39 With Coil Scraper



How to Order



Specifications: Same as the standard type of each series Note 1) Except 020 and 025

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



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

MGC□B series

ø32 to ø50



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

Made to Order Common Specifications: -XC36: With Boss in Rod Side Made to Order -XC37: Larger Throttle Dia. of Connection Port

40 With Boss in Rod Side



Cylinder with boss in rod side

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)	
		000	Double acting, Single rod	1	
CQS	Compact cylinder	003	Single acting (Spring return/extend)		
		CQSW	Double acting, Double rod		
		000 7	Double acting, Single rod		
	Compact cylinder	CQ2-Z	Single acting (Spring return/extend)		
		CQ2W-Z	Double acting, Double rod	Web Catalog	
c02	Long stroke Note 4)	CQ2	Double acting, Single rod		
CQZ	Non votating red Note 4)	CQ2K Doub	Double acting, Single rod		
	Non-rotating rou	CQ2KW	Double acting, Double rod		
	Axial piping type		Double acting, Single rod		
	(Centralized piping type)		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



Specifications: Same as standard type

Dimensions



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

				(mm)
Series	CQ2		CC	S
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_022	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	_	_





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

Applicable Series

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

Note 1) Except ø80, 100



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 Se	ries (mm)
Bore size (mm)	Throttle dia. (ø)
20	5
25	5
32	6
40	7
50	9
63	9

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



Made to Order Common Specifications: -XC38: Vacuum (Rod through-hole)

Made to Order





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

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
CM2	Air cylinder/Standard type	CM2W-Z	Double acting, Double rod		Web Catalog
MTS	Precision cylinder	MTS	Double acting, Single rod	Available only for ø8 female thread	Web Catalog

How to Order



Specifications: Same as standard type

Stroke (P)-XC38

Vacuum

(Rod through-hole)

Axial piping 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

Dimensions

MTS8 series



▲ Caution

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

Specifications

MTS8-

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

1

Made to Order Common Specifications: -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	Air cylinder	CG1-Z	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.)



					(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.

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.



Made to Order Common Specifications: -XC51: With Hose Nipple -XC52: Mounting Nut with Set Screw







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

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
		0.00 7	Double acting, Single rod	
	Air cylinder	CJ2-Z	Single acting (Spring return/extend)	
		CJ2W-Z	Double acting, Double rod	
	Non-rotating		Double acting, Single rod	
	rod type	CJ2K-Z	Single acting (Spring returnlextend)	
CJ2	With speed	CJ2Z-Z	Double acting, Single rod	Web Catalog
	controller	CJ2ZW-Z	Double acting, Double rod	
	Direct mount type		Double acting, Single rod	
	Direct mount type	UJ2HA-Z	Single acting, (Spring return lextend)	
	Non-rotating rod,		Double acting, Single rod	
	Direct mount type	UJZrik-Z	Single acting, (Spring return lextend)	

How to Order



Specifications: Same as standard type

Applicable Hose Nipple Type

Symbol	Applicable bore size (mm)	Function	Hose nipple part no.	
H4	ø4/2.5	With a fixed	CJ-5H-4	
H6	ø6/4	orifice (ø0.8)	CJ-5H-6	
MH4	ø4/2.5	Without fixed	M-5H-4	
MH6	ø6/4	orifice	M-5H-6	

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.



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	Action	Action	Vol. no. (for std model)
		0140 7	Double acting, Single rod	
	Air cylinder	CM2-Z	Single acting (Spring returnlextend)	
		CM2W-Z	Double acting, Double rod	
	No	CHOK 7	Double acting, Single rod	
CM2	rod type	GIVIZK-Z	Single acting (Spring returnlextend)	Web Catalog
CWIZ		CM2KW-Z	Double acting, Double rod	web Catalog
	Centralized piping type	CM200P-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



Specifications: Same as standard type

Dimensions

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





46 With Knock Pin Holes

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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 ^M _L B	Double acting	For basic type only	
MGC	Guide cylinder	MGCLMB	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		
МҮ	rodless cylinder	MY1H	Linear guide		
		MY2H	Linear guide type (Single axis)		
		MY2HT	Linear guide type (Double axis)		

How to Order



With knock pin holes

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

Bottom view of cylinder







(mm)

MGPW Series

						()
Bore size (mm)	НА	нв	N	RA	ХА	ХВ
20	25±0.02	25±0.02	3H7 +0.010 depth 6	28±0.02	17	76±0.03
25	28±0.02	28±0.02	4H7 +0.012 depth 6	34±0.02	18	92±0.03
32	34±0.02	34±0.02	4H7 0 40012 depth 6	42±0.02	19	112±0.03
40	38±0.02	38±0.02	4H7 +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



46 With Knock Pin Holes



-XC56

Made to Order

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

MGG series









MGG Series (m									
Bore size (mm)	AQ	AR	AS	AT					
20	92	45	5 ^{H7 +0.012} depth 6	36					
25	113	50	6H7 +0.012 depth 8	45					
32	118	60	6H7 +0.012 depth 8	48					
40	150	70	8H7 +0.015 depth 11	56					
50	170	85	$10^{_{H7}^{+0.015}}depth13$	68					
63	200	100	$10^{_{H7}^{+0.015}}_{0}$ depth 13	74					
80	234	115	$12^{_{H7}^{+0.018}}_{_{0}}depth15$	92					
100	274	140	12H7 0 tepth 15	106					

MGC series
ø20 to ø50





MGQ series







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	6H7 0 depth 8	60	20			
40	140	47.5	8H7 0015 depth 11	70	22			
50	170	65	8H7 0015 depth 11	85	30			

MGQ Series (m									
Bore size (mm)	на	нв	NA	NB	RA	ХА	хв		
12	0	19	3H7+0.010 depth 4	3H7 +0.010 depth 4	21	14.5	50		
16	7	22	$3^{_{H7}+0.010}_{0}$ depth 4	$3^{_{H7}}{}^{_{+0.010}}_{_{0}}$ depth 4	22	16.5	54		
20	9	26	4H7+0.012 depth 5	4H7 +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	$6^{_{H7^{+0.012}}} through$	6H7 +0.012 depth 8	46	18.5	100		
40	14	54	$6^{_{H7}}^{_{+0.012}} through$	6H7 +0.012 depth 8	50	22	110		
50	20	62	$8^{_{H7}+0.015} through$	8H7 +0.015 depth 11	56	22	124		
63	30	74	8 ^{H7 +0.015} through	8H7 +0.015 depth 11	66	24	132		
80	36	94	10 ^{H7+0.015} through	10H7+0.015 depth 13	84	28.5	166		
100	40	116	10 ^{H7+0.015} through	1047 +0.015 depth 13	110	32.5	200		

46 With Knock Pin Holes

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

MY1C series



 XA
 OXGH7 depth XG
 32

 Mounting surface of a workpiece for the slide table
 40



							(11111)
Bore size (mm)	ХА	ХВ	XD	XE	XG	ХН	ХJ
16	40	40	80	40	4	5	9
20	50	40	100	50	4	5	9
25	51	50	110	55	5	6	10
32	66	60	140	70	6	7	11
40	81	80	180	80	6	7	11
50	100	90	230	85	8	9	13
63	115	110	280	90	10	10	15

MY1H-Z series ø25, ø32, ø40

MY1H series

ø10, ø16, ø20





					(mm)
Bore size (mm)	ХА	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	9

SMC



Symbol

-XC56

46 With Knock Pin Holes





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

MY2HT16, 25

Made to Order Common Specifications: -XC57: Rodless Cylinder with Floating Joint



Symbol

-XC57

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

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	CY3B	Double acting	
	rouloos oyimaon	CY3R	Double acting	Web Catalog
REA	Cine redless edinder	REA	Double acting	web catalog
	Sine rodiess cylinder	REAR	Double acting	
REB	Sine rodless cylinder	REBR	Double acting	

How to Order



Rodless cylinder with floating joint

Specifications: Same as standard type

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.

Made to Order Common Specifications: -XC57: Rodless Cylinder with Floating Joint

47 Rodless Cylinder with Floating Joint

Symbol -XC57

lade

Construction/Dimensions (Other dimensions are the same as standard.)







Bore size (mm)	Α	□B	С	F *(1)	HA	HB	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	MЗ	4.5	25	6	36
20	18	36	6.5	5.5	17	23.5	66	30	M4 x 0.7	M3	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 consideration.

Note 2) When the bolts are secured from above, be aware that if the cylinder is operated when dimension R (on e6 and e10, 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.

Made to Order Common Specifications: -XC57: Rodless Cylinder with Floating Joint



Symbol

-XC57

47 Rodless Cylinder with Floating Joint

Construction/Dimensions

CY3R series **REAR, REBR series**

For ø6, ø10, ø15



																					(mm)
Bore size (mm)	Α	BA	BB	CC	FC	FE ⁽¹⁾	FF ⁽¹⁾	FG	FH	HB ⁽¹⁾	HL	L	LA	LF	MD	R ⁽²⁾	S	SS	WF	XA	ΧВ
6	9.5	3.4	6.5	3.3	—	5	7	5.5	10.5	26	23	34	15	7.5	M3	—	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	M3	_	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	M3	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 off-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.

Made to Order Common Specifications: -XC65: Made of Stainless Steel (Combination of XC7 and XC68)



48 Made of Stainless Steel (Combination of XC7 and XC68)



Suitable for the cases it is likely to generate rust by being immersed in the water and corrosion.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
		MB-Z	Double acting, Single rod	Except ø125	
MB	Air cylinder	MBW-Z	Double acting, Double rod	Except ø125	
	Smooth cylinder	MBY-Z	Double acting, Single rod		
MD1	Air oylindor	MB1-Z	Double acting, Single rod	Except ø125	
	Air cylinder	MB1W-Z	Double acting, Double rod	Except ø125	
	A in a slin slaw	CA2-Z	Double acting, Single rod		Web Catalog
	Air cylinder	CA2W-Z	Double acting, Double rod		
CA2	Air hudro gulindor	CA2H	Double acting, Single rod]
	All-Hydro cylinder	CA2HW	Double acting, Double rod		
	Smooth cylinder	CA2Y-Z	Double acting, Single rod		
CV	Valve mounted cylinder	CV3	Double acting, Single rod		

How to Order

Standard model no. - XC65

Made of stainless steel (Combination of XC7 and XC68)

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				

Made to Order Common Specifications: -XC67: Dust Seal Band NBR Lining Specifications -XC68: Made of Stainless Steel (With Hard Chrome Plated Piston Rod)



-XC68



50 Made of Stainless Steel (With Hard Chrome Plated Piston Rod)

Suitable for the cases it is likely to generate rust by being immersed in the water and corrosion.

Applicable Series

Series	Description	Model	Action	Vol. no. (for std model)
		MB-Z	Double acting, Single rod	
MB	Standard type	MBW-Z	Double acting, Double rod	
	Smooth cylinder	MBY-Z	Double acting, Single rod	
MD1	Standard tune	MB1-Z	Double acting, Single rod	
INIDI	Standard type	MB1W-Z	Double acting, Double rod	
		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	
	Standard tune	CS2	Double acting, Single rod	
CS2	Stanuaru 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.

Maxin	ium strok	e	(mm)				
S	Series	Double acting, Single rod	Double acting single rod with rod boot				
ME	8, MB1	1600	1000				
	CA2	1000	1000				
(m							
Series	Bore size	Double acting, Single rod	Double acting single rod with rod boot				
	125 to 160	1600	1600				
061	180	1569	1569				
001	200	998	998				
0.32	250	813	813				
	300, 320	495	495				

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			
63	300 mm	2500 mm	up to the maximum			
80	300 mm		length.			
100	300 mm					



Maximum atualia

 Rod is shipped together with the product.

Made to Order Common Specifications: -XC69: MGP Series with Shock Absorber

51 MGP Series with Shock Absorber

Applicable Series



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 to30
Piston 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 extended side (Shock absorber)

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.

Symbol

-XC69

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: -XC69: MGP Series with Shock Absorber

51 MGP Series with Shock Absorber



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





											(mm)
Bore size	re size A E N		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

Made to Order Common Specifications: -XC71: Helical Insert Thread Specifications -XC72: Without Built-in Auto Switch Magnet

									Symbol					
52 He	2 Helical Insert Thread Specifications													
The guide	e body mounting threa	ads are helical i	nsert threads.											
Applic	cable Series													
Series	Description	Model	Action				Note		Vol. no. (for std model)					
MGG	Guide cylinder		Web Catalog											
How to MGG	o Order Bearing type B	Bore size	Port thread	type –	Stroke]-[Auto switch]- <u>XC71</u> •Helical	insert thread					
Specifi	cations							specifi	cations					
Ap	plicable series	Γ	/IGG□B											
Bore siz	e (mm)	20, 2	25, 32, 40, 50											
Mountin	g type	I	Basic type											
Specificat	tions other than above	Same a	as standard type											

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

ø20 to ø50





	(mm)				
н	AF				
M6 x 1 depth 12	M5 x 0.8 depth 7.5				
M8 x 1.25 depth 16	M6 x 1 depth 9				
M8 x 1.25 depth 16	M6 x 1 depth 9				
M10 x 1.5 depth 20	M8 x 1.25 depth 12				
M12 x 1.75 depth 24	M10 x 1.5 depth 15				
	H M6 x 1 depth 12 M8 x 1.25 depth 16 M8 x 1.25 depth 16 M10 x 1.5 depth 20 M12 x 1.75 depth 24				

Made to Order

	Symb
53 Without Built-in Auto Switch Magnet	-XC

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



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: Made t -XC73: Built-in Cylinder with Lock (CDNG) Order Symbol

54 Built-in Cylinder with Lock (CDNG)

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

Cylinder Specifications

Ap	plicable series		мо	G		No							
В	ore size (mm)	20	20 25 32 40										
E	Basic cylinder	CDNGBN B	ore size - Stroke	e – D – Auto swit	ch - C Note 1)	1							
Minimum	operating pressure		0.2 MPa (Horizoi	ntal with no load)		No							
Piston sp	eed	50 to 1000 mm/s Note 2)											
Stroke adju [Built-in ad	stment range (One side) justment bolts (2 pcs.)]) 0 to –15 mm											
Non-rotating	Slide bearing	±0.06°	±0.	05°	±0.04°	*							
accuracy *2	Ball bushing bearing	ng ±0.04° ±0.04° ±0.04°											
Shock ab	sorber model	RB1412		RB2015									
Specifications other than above Same as standard type													

Built-in cylinder with lock

-XC73

- 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.) (Nii) 2) When the piston is locked, the load mass is limited by the mounting orientation and the operating conditional the lock orientation and the operating pressure. For details about the lock specifications, specifications, etc., refer to cylinders with lock (Web Catalog). the

on-rotating rod accuracy must be below e values shown in the table at the traction of the cylinder (initial value), and ithout loads or the conditions excluding e deflection of the guide rods.

Dimensions



Standard Stroke

																								()
Bore size (mm)	Stroke range (mm)	A	AA	АВ	AC	AD	AE	AF	AL	AP	в	с	D	Е	F	G	GC	GК	GL	GQ	GR	н	Т	J
20	75, 100, 125, 150, 200	120	12	16	10	100	35	M6 x 1 depth 12	9	35	135	20	80	118	6.6	11 depth 8	18	5.5	6	8	4	M10 x 1.5 depth 18	40	73
25	75, 100, 125	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	50	93
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	50	93
40	250, 300	170	19	21	10	150	45	M10 x 1.5 depth 20	12	50	194	25	120	170	11	17 depth 12	26	7	11	12	7	M14 x 2 depth 25	55	103
																	1	ono	1 Sti	roke				

																Long o	lioke					
Bore size (mm)	к	L	м	N	0	PG	PL	Q	R	s	т	υ	v	w	x	ХА	Y	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)



Dimensions

Front mounting flange type/MGG□F ø20 to ø40





(mm)



Standard Stroke

Bore size (mm)	Stroke range (mm)	Α	AA	АВ	AG	АН	AI	AJ	AK	AL	АМ	AN	AO	AP	в	GC	GΚ	GL	GQ	GR	I	J	к	L	м	N
20	75, 100, 125, 150, 200	120	12	16	134	150	102	118	9	9	85	140	M8	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
																1	ona	Str	oke							-

۵

															Long C	di OKC		
Bore size (mm)	0	PG	PL	Q	R	s	т	U	v	w	x	ХА	Y	z	Bore size (mm)	Stroke range (mm)	R	Y
20	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	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	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	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: Made to Order -XC73: Built-in Cylinder with Lock (CDNG)

Symbol 54 Built-in Cylinder with Lock (CDNG) -XC73 This type has a built-in cylinder with lock, which accommodates intermediate stops, emergency stops and drop prevention, etc. How to Order Equipped/Not uipped rear pl MGC Bearing type Mounting type Bore size Stroke Auto switch C Note 1) Built-in cylinder with lock

Cylinder Specifications





XC73

L) 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

Basic type/MGC B ø20 to ø40





View A-A

Long Stroke

Standard Stroke

Bore size (mm)	Stroke range (mm)	A	AA	AB*	AC	AD	AE	AF	AP*	в	с	D	E	F	G	GC	GK	GL	GQ	GR	н	Т	J	к
20	75, 100, 125, 150, 200	94	11	13	16.5	70	35	M6 x 1 depth 12	32	135	26.5	50	118	6.8	11 depth 8	27	5.5	6	8	4	M8 x 1.25 depth 14	35	60	80
25	75, 100, 125	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	70	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	70	95
40	250, 300	142	17	19	22	110	45	M10 x 1.5 depth 20	42	194	37	80	170	10.5	17 depth 12	38	7	11	12	7	M12 x 1.75 depth 21	45	82.5	115

																					LOUG	JOHORE	
Bore size (mm)	L	м	N	0	Р	PG	PL	Q	R	s	т	U *	v*	w*	wн	Wθ	х	ХА	Y	z	Bore size (mm)	Stroke range (mm)	R
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
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
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
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

Note) Without rear plate: Dimensions with an asterisk (*) mark is not needed.



(mm)

Made to Order Common Specifications: -XC73: Built-in Cylinder with Lock (CDNG) -XC74: With Front Plate for MGG Cylinder

54 Built-in Cylinder with Lock (CDNG)

Dimensions



25	75, 100, 12	5 104	14	16	160	176	110	125	9	9	88	165	M8	37	160	34	6.5	9	10	7	40	70	95	125	60	32
32	150, 200, 25	50 104	14	16	160	176	110	125	9	9	88	165	M8	37	160	34	6.5	9	10	7	40	70	95	125	60	32
40	300	142	17	19	190	210	115	135	11	12	96	200	M10	42	194	38	7	11	12	7	45	82.5	115	150	75	38
																		L	ong	Str	oke)				
Bore size (mm)	0	Ρ	PG	PL	Q	R	s	т	U*	v *	w*	wн	Wθ	x	ХА	Y	z	B	ore siz (mm)	e S	troke (m	rang m)	e F	3	z	

70 33 200 44 4 210 227

35.5 40 M8 x 1.25 Rc 1/8 40 93 116 12 47 25 162 73 Note) Without rear plate: Dimensions with an asterisk (*) mark is not needed

82 106 12 38 20 132 63 60 28.5 25° 37 3 169 202

55 With Front Plate for MGG Cylinder

M8 x 1.25 M5 x 0.8 35.5 82 106 12

This type uses a front plate equivalent to the MGG series.

Rc 1/8

How to Order

M8 x 1.25

25

32



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
* Specifications other than abo	ove are the same as standard type.

25

32

40

350 to 500

350 to 600

350 to 800

14 207

14 210

15 236

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

31 20 132 63 60 25 30° 37 3 169 199

ø 20	to	ø 50	



					(mm)
Bore size (mm)	L	м	N	ο	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



Made to Order

Symbol

-XC73



Made to Order Common Specifications: -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.

> Auto switch mounting special dimensions at stroke end

-XC78

Specifications

opeenieanenie	
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-B5/B6 D-G5/K5



D-C7/C8 D-H7





D-B7/B8 D-G7/K7

Hs



ar Auto Cuvitab Maunti

per Auto Switch Mounting Position

Proper	r Au	to S	wit	cn	ΜΟι	inti	ng I	Pos	Itio	n						(mm)		Proper	Auto S	Switch	Mounti	ng Height (mm)
Auto switch model Bore size	D-M9 D-M9 D-M9	□(V) □W(V) □A(V)	D-A9)⊡(V)	D-B D-B D-B D-G D-K	7/B8 73C 80C 7/K7 79C	D-C D-C D-C D-C	70 80 73C 80C	D-E D-E	35⊡ 364	D-B	59W	D-H7 D-H7 D-H7 D-H7 D-H7	7□ 7C 7NF 7⊡W 7BA	D-G59 D-K59 D-G5 D-K59 D-G5N D-G5E	IF/G5 IW W IT BA		Auto switch model Bore size	D-M9=(V) D-M9=W(V) D-M9=A(V) D-A9=(V)	D-C7□/C80 D-H7□ D-H7□W D-H7NF D-H7NF D-H7BA	D-C73C D-C80C	D-87□/880 D-65□/K59 D-873C D-65□W D-880C D-K59W D-679/K79 D-85□/864 D-K79C D-859W D-H7C D-658A D-65NT D-659F
(mm) \	Α	В	Α	в	Α	В	Α	В	Α	В	Α	в	Α	В	Α	В		(mm) \	Hs	Hs	Hs	Hs
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)		20	25	24.5	27	27.5
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)		25	27.5	27	29.5	30
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)		32	31	30.5	33	33.5
40	39	27 (36)	35	23 (32)	36.5	24.5 (33.5)	35.5	23.5 (32.5)	29.5	19 (26.5)	32	20.5 (29.5)	34.5	22.5 (31.5)	31	19 (28)		40	35.5	35	37.5	38
50	46	32 (36)	42	28 (40)	43.5	29.5 (41.5)	42.5	28.5 (40.5)	36.5	22.5 (34.5)	39.5	25.5 (37.5)	41.5	27.5 (39.5)	38	24 (36)		50	41	40.5	43	43.5

* (): Long stroke, double rod

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



Made to Order Common Specifications: -XC82: Bottom Mounting Type

Made to Order

Symbol

-XC82

57 Bottom Mounting Type

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



Note) The total length (ZZ) of the guide rod bushing is shorter than the standard type.

Made to Order Common Specifications: Made to Order -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

Applic	able series		M	GG							
Bore	size (mm)	50	63	80)		100				
Bas	ic cylinder	MDNBB Bore	size – Stroke	[Auto sv	vitch	-X1189	1			
Minimum ope	rating pressure		0.2 MPa (Horizo	ntal with no	load)			1			
Piston speed	Note)	50 to 1000 mm/s		50 to 700) mm/s						
Stroke adjustm [Built-in adjus	ent range (One side) ting bolts (2 pcs.)]	0 to –15 mm									
Non-rotating	Slide bearing	±0.	04°		±0.	03°					
accuracy *	Ball bushing bearing	±0.03° ±0.02°									
Shock absorb	ber model	RB2015 RB2725									
Specification	s other than above	Same as standard type									

Built-in cylinder with lock

XC83

Symbol

-XC83

te) 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 auide rods.

Applicable Auto Switches/Refer to pages 1289 to 1383 for the detailed specifications of auto switches.

		Electrical	light	Minima		Load vo	oltage	Auto swite	ch part no.	Lead v	wire le	ength	(m)			
Туре	Special function	entry	Indicator	(output)		DC	AC	Tie-rod mounting	Band mounting	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	connector	Applica	ble load
				3-wire (NPN)		5 V 40 V		M9N	-	•	•	٠	0	0	IC	
£		Grommet		3-wire (PNP)		5 V, 12 V	_	M9P	_	•	•	•	0	0	circuit	
Ę				2-wire]	12 V		M9B	-	•	•	•	0	0		
SV		Terminal	1	3-wire (NPN)]	5 V, 12 V		-	G39	-	-	-	-	-	-	
욕		conduit		2-wire		12 V		_	K39	_	-	-	-	-		
a	Discretis indication		Yes	3-wire (NPN)	24 V	5 V 10 V		M9NW	-	•	•	•	0	0	IC	Relay,
ate	Diagnostic indication			3-wire (PNP)	5 V, 12 V	_	M9PW	-	•	•	•	0	0	circuit	PLC	
lst	(2-color)	Grommet		2-wire		12 V		M9BW	_	•	•	•	0	0	-	
i≅	Water resistant	Citorinier		3-wire (NPN)		5 V 10 V		M9NA	-	0	0	•	0	0	IC	
ŭ	(2-color indicator)			3-wire (PNP)]	5 V, 12 V		M9PA	_	0	0	٠	0	0	circuit	
				2-wire		12 V		M9BA	_	0	0	•	0	0	-	
vitch		Grommot	Yes	3-wire (NPN equivalent)	-	5 V	_	A96	-	•	-	•	-	-	IC circuit	Ι
s		Gronnier					100 V	A93	_	•	•	•	•	-	-	Relay,
웈	ę		No				100 V or less	A90	-	•	-	•	-	-	IC circuit	PLĆ
qa	qac	Terminal		2-wire	24 V	12 V	_	_	A33	_	-	-	-	-		PLC
ee		conduit	Yes				100 1/ 000 1/	_	A34	_	-	-	-	-	-	Relay,
æ		Din terminal					100 V, 200 V	_	A44	_	-	—	—	-		PLĆ
* Lea	d wire length symbols	s: 0.5 m	Nil	(Example) M9N	w	* Solid	state auto switch	n with O: M	lanufacture	d upon r	eceipt	of ord	er.			

* Lead wire length symbols: 0.5 m Nil (Example) M9NW 1 m ----- M

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).

(Auto switch mounting brackets for the models above are mounted when shipped.)

Auto Switch Mounting Bracket: Part No.

Auto quitab model	Bore size (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 280 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□A/M9□AV/Y7BA auto switches, the stainless steel screws above are used to secure auto switch mounting brackets.



⁽Example) M9NWM (Example) M9NWL

Made to Order Common Specifications: -XC83: Built-in Cylinder with Lock (MDNB)

Made to Order

(mm)

Symbol 58 Built-in Cylinder with Lock (MDNB) -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) D-A90V Without indicator light Reed D-Z73, Z76 Grommet (In-line) I D-Z80 Without indicator light D-M9NV, M9PV, M9BV I D-Y69A, Y69B, Y7PV I Grommet (Perpendicular) D-M9NWV, M9PWV, M9BWV Diagnostic indication I D-Y7NWV, Y7PWV, Y7BWV (2-color) Solid state D-M9NAV, M9PAV, M9BAV I Water resistant (2-color indicator) L D-Y59A, Y59B, Y7P I D-Y7NW, Y7PW, Y7BW Grommet (In-line) Diagnostic indication (2-color) I D-Y7BA Water resistant (2-color indicator) 1 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



Standard Stroke

otuniaa																							()
Bore size (mm)	Stroke range (mm)	Α	AA	АВ	AC	AD	AE	AF	AL	AP	в	с	D	Е	F	G	GC	GD	GL	GL₁	GR	н	I
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	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, 300	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
																				na	Str	hko	

Bore size (mm)	J	к	L	м	N	0	Ρ	Q	R	s	S1	т	U	v	VA	٧В	w	х	Y	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

@SMC

Made to Order Common Specifications: -XC83: Built-in Cylinder with Lock (MDNB)

58 Built-in Cylinder with Lock (MDNB)

Dimensions

Front mounting flange type ø50 to ø100



Mounting dimensions

Symbol

-XC83

Bore size (mm)	Stroke range (mm)	Α	AA	АВ	AG	АН	AI	AJ	AK	AL	АМ	AN	AO	AP	в	GC	GD	GL	GL₁	GR	I	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	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, 300	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
																	1.	ona	Ctr	oko						

																Long o	lione
Bore size (mm)	ο	Р	Q	R	s	S1	т	U	v	VA	٧В	w	х	Y	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

(mm)

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, 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.

59 Grease for Food Processing Equipment

Food grade grease (certified by NSF-H1) is used as lubricant.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
		C 10 7	Double acting, Single rod		
	Air cylinder	032-2	Single acting (Spring returnlextend)]
		CJ2W-Z	Double acting, Double rod		
	Non-rotating rod		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		Double acting, Single rod]
	type	UJZNA-Z	Single acting (Spring returnlextend)		
	Non-rotating rod,		Double acting, Single rod		
	Direct mount type	GJZHK-Z	Single acting (Spring returnlextend)]
		CM2-Z1	Double acting, Single rod		
	Air oulindor	CM2-Z	Double acting, Single rod] [
	All Cylinder	CM2W-Z	Double acting, Double rod]
		CM2-Z	Single acting (Spring returnlextend)		Web Catalog
	Non retating red	CM2K-Z	Double acting, Single rod] [
CM2	type	CM2KW-Z	Double acting, Double rod]
	type	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		1
	Air autindar	CG1-Z	Double acting, Single rod		1
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 oulindor	CA2-Z	Double acting, Single rod		
CAZ	An cynnder	CA2W-Z	Double acting, Double rod		

Series	Description	Model	Action	Note	Vol. no. (for std model)
	Composi	CQS	Double acting, Single rod		
	Compact	CQS	Single acting, Single rod		
CQS	cylinder	CQSW	Double acting, Double rod		
	Long stroke	CQS	Double acting, Single rod		
	Anti-lateral load	CQS□S	Double acting, Single rod		
	Composi	CQ2-Z	Double acting, Single rod		
	compact	CQ2-Z	Single acting (Spring returnlextend)		
	cylinder	CQ2W-Z	Double acting, Double rod		
	Laura haus sins	CQ2-Z	Double acting, Single rod		
	Large bore size	CQ2W-Z	Double acting, Double rod		
	Long stroke	CQ2-Z	Double acting, Single rod		
000	Non-rotating rod	CQ2K-Z	Double acting, Single rod		
Cuz	type	CQ2KW-Z	Double acting, Double rod		Web Catalog
	Water registert	CQ2-R/V	Double acting, Single rod		
	water resistant	CQ2W-R/V	Double acting, Double rod		
	Axial piping type	CQP2	Double acting, Single rod		
	(Centralized piping type)	CQP2	Single acting (Spring returnlextend)		
	Anti-lateral load	CQ2□S-Z	Double acting, Single rod		
	With end lock	CBQ2	Double acting, Single rod		
	Compact guide cylinder	MGP-Z	Double acting, Single rod		
MCD	With air cushion	MGP-□AZ	Double acting, Single rod		
MGP	With end lock	MGP	Double acting, Single rod		
	Heavy duty guide rod type	MGPS	Double acting, Single rod		
CXSJ	Dual rad avlindar	CXSJ	Double acting		
CXS	Dual rod cylinder	CXS	Double acting		

Symbol

-XC85

How to Order



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

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.

<Not installable>

Food zone	An environment where food which will be sold as merchandize,
	directly touches the cylinder's components.
Splash zone	An environment where food which will not be sold as
	merchandize, directly touches the cylinder's components.
<installable></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) Operate without lubrication from a pneumatic system lubricator. Note 3) Use the following grease pack for the maintenance work. GRH-1010 (Grease: 10 g)





60 With Rod End Bracket

With rod end bracket type to simplify the order process.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
061	Standard type	CS1	Double acting, Single rod		
031	Low friction type	CS1Q	Double acting, Single rod	ø125 to ø160 only	Web Catalog
000	Standard type	CS2	Double acting, Single rod		web catalog
652	Smooth cylinder	CS2Y	Double acting, Single rod	ø125 to ø160 only	

How to Order



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



Symbol						C	S1	CS2		
	н	A	α	Lı	H1		Applicable knuc	kle 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	CS	52	CS1, CS2 common
	н	A	Lı	H1	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

XC86F



Symbol

-XC86

Made to Order Common Specifications: -XC86: With Rod End Bracket -XC87: Cylinder with One-way Lock/Heavy Duty Specifications

60 With Rod End Bracket



Y-14A

Y-16A

NT-12

NT-16

Symbol

-XC87

I-14A

I-16A

Made to Order

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



110 170.5

CS2 serie XC86D, X	s (C8)	6E		L1	A			2
Symbol Bore size (mm)	н	A	L1	H1	H ₂	Applicable knuck	kle joint part no. Y type double knuckle	Applicable rod end nut
125	125	65	100	181	18	I-12A	Y-12A	NT-12

18

21

61 Cylinder with One-way Lock/Heavy Duty Specifications

I-16A

Y-16A

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.

140

160

65 105 186

110 198

125

140 76

Applicable Series

120 56 3.5

160

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

Made to Order Common Specifications: -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)

Mad	le to der
_	_

	Symbol
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	Note	Vol. no. (for std model)
MB	Air cylinder	MB-Z	Double acting, Single rod	•	•	•	ø32-ø100 only	
CA2	Air cylinder	CA2-Z	Double acting, Single rod	•	•	•		1
	Compact cylinder	CQ2-Z	Double acting, Single rod	•	•	•		1
CQ2	Long stroke	CQ2-Z	Double acting, Single rod	•	•	-		1
	Anti-lateral load	CQ2⊡S-Z	Double acting, Single rod	•	•	-		1
	Compact guide cylinder	MGPM-Z	Double acting	•	-*	•	ø32-ø100 only	Web Catalog
MGP		MGPL-Z	Double acting	-	-	•		
		MGPA-Z	Double acting	-	-	•]	
MK2T	Rotary clamp cylinder	MK2T	Double acting	-	•	•	ø32-ø63 only	1
CKG1		CKG1-Z1	Double acting, Single rod	•	•	•		1
	Clamp cylinder	CKG1-Z	Double acting, Single rod	•	•	•		1
		CKGA	Double acting, Single rod	•	•	•	ø80 and ø100 only]

Common Specifications: MB, CA2, CQ2, MK2T, CKG1

Part no.	Piston roo (Hard chro	d material me plating)	Coil	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/Gui (Hard chro	Guide rod material hrome plating) Coil scraper		Lube-r	Grease for		
	S45C	Stainless steel 304	Rod side	Head side	Rod side	Head side	weiding
-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: S45C)

MB-XC88/XC89/XC91

	Symbol
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	•	٠	٠	Web Catalog

How to Order



Made to Order

Part	Piston ro (Hard chro	d material me plated)	Coil	Lube-	Grease for welding	
no.	S45C	Stainless steel 304	scraper	retainer		
-XC88	-	•	٠	•	•	
-XC89	•	—	٠	•	•	
-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
50	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	XC88, 89		XC91		XC35	
(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: Š45C)

CA2-XC88/XC89/XC91

64 Spatter Resistant Coil Scraper, Grease for Welding (Piston rod: S/5C)	-YCQ1
Reduces spatter adhesion and improves durability by the use of the coil scraper, Lube-retainer and grease for welding.	
63 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: S45C)	-XC89
62 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)	-XC88
	Symbol

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	•	٠	•	Web Catalog

How to Order



Made to Order

Part	Piston rod material (Hard chrome plated)		Coil	Lube-	Grease	
no.	S45C	Stainless steel 304	scraper	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

Max, manufacturable stroke

Max. manufacturable strol	ke (mm)
Bore size	Max. manufacturable stroke ^{Note 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.

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

Dimensions (Other dimensions are the same as the standard type.)



						(mm)
Bore size	XC88, 89		XC91		XC35	
(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: Š45C)

Made to Order

.

CQ2-XC88/XC89/XC91

	Symbol
62 Spatter Resistant Coil Scraper, Lube-retainer, Grease for Welding (Piston rod: Stainless steel 304)	-XC88
63 Spatter Posiciant Coil Scraper Lube retainer Grease for Welding (Piston rod: \$450)	-XC80
Spatter Resistant Con Scraper, Euberetainer, Grease for Weiding (Fiston rod. 345C)	-7009
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	•	•	—

How to Order



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			

Made to Order

Part	Piston ro (Hard chro	d material me plated)	Coil	Lube-	Grease for welding	
no.	S45C	Stainless steel 304	scraper	retainer		
-XC88	-	•	•	•	•	
-XC89	•	_	•	•	•	
-XC91	•	—	٠	-	•	

Note) Use the -XC91 in a place where the distance from the welding portion is far and the spatter scattering is minimized.

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 bracke			
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 _ 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 0.074	80	5	17	59_0 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: Š45C)



MGP-XC88(W)/XC89W/XC91(W)

	Cynnoor
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

Symbol

With coil scraper and grease for welding

Applicable Series

Series	Description	Model	Action	XC88(W)	XC89	XC91(W)	Note	Vol. no. (for std model)
MGP Compact guide cylinder	MGPM-Z		•	-*	•			
	Compact guide cylinder	MGPL-Z	Double acting	_	-	•	ø32 to ø100 only	Web Catalog
		MGPA-Z	1	—	-	•		

Made to Order

Part no.	Piston rod/ Guide rod material (Hard chrome plating)		Coil s	craper	Lube-r	Grease for	
	S45C	Stainless steel 304	Rod side	Head side	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."

Specifications

Bore size		ø32, ø40, ø50, ø63, ø80, ø100		
Max. operating	XC88, XC91	0.12 MPa		
pressure	XC88W, XC89W, XC91W	0.14 MPa		
Dimensions		See below.		
Additional specifications		Same as standard type		

How to Order

Standard model no.

— XC88W

	Spatter-resistant rod material							
Symbol	Scraper mounting position	Rod material						
XC88	Single side coronor	Stainless steel 304						
XC91	Single 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)



()							
Bore size	XC	XC88		091	XC35		
(mm)	B 1	W Note 1)	B 1	W Note 1)	B1	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	XC88W XC89W		XC	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

@SMC

(mm)

(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

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)

With coil scraper and grease for welding

Applicable Series

Series	Description	Model	Action	XC89	XC91	Vol. no. (for std model)
МК2Т	Rotary clamp cylinder	МК2Т	Double acting	•	•	Web Catalog

How to Order



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.

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 (mm) XC89 XC91 Bore size Q R K1 Q R K1 30 156 140 16 148 140 8 40 160.5 144 16.5 151.5 144 7.5 50 _ 63

Clamp stroke: 20 mm

Clamp stroke: 20 mm (mm)								
		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) XC89 XC91 Bore size Q R K1 Q R K1 32 40 50 266 242.5 23.5 254.5 242.5 12 63 269 246 23 256 246 10



Symbol

-XC89

-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: Š45C)



Grease

for

welding

•

•

.

Symbol

CKG1-XC88/XC89/XC91

	Symbol
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

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)
	Clamp ovlindor	CKG1-Z1	Double acting, Single rod	٠	٠	٠	Web Catalog
CKGI	Clamp Cylinder	CKG1-Z	Double acting, Single rod	٠	•	•	web catalog

How to Order



the air cushion on both ends are the same as those of the product with the air cushion on the unclamped side (head end)

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

-XC89 -XC91 .

Part

no

-XC88

Made to Order

S45C steel 304

.

Piston rod material

(Hard chrome plated)

Stainless scrape retainer

> • • .

Note) Use the -XC91 in a place where the distance from the welding portion is far and the spatter scattering is minimized.

Coil

• .

.

Lube-

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
Made to Order Common Specifications:

-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
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

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	٠	•	•	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	Piston roo (Hard chro	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.

Made to Order Common Specifications:

-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)



CKGA-XC88/XC89/XC91

	Symbol
52 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

ø**80 to** ø**100**

CKGA100-XC88/XC89 -XC91

With auto switch (D-P4DWSD).



CKGA80-XC88/XC89 -XC91

With auto switch (D-P4DWSD).



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.

65 Dust Resistant Actuator

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

Symbol

-XC92

Applicable series

Series	Description/Type	Model	Action	Remark (s)	Vol. No. (for std model)
CM2	Air Cylinder	CM2	Double acting, Single rod	Compatible with cylinders with rubber bumper	
CQS	Compact Cylinder	CQS	Double acting, Single rod		Web Catalog
CQ2	CQ2 Compact Cylinder CQ2-Z		Double acting, Single rod	Applicable to ø32 to ø100.	web catalog
MGP	Compact Guide Cylinder	MGP	Double acting, Single rod		

How to Order



Made to Order Common Specifications: -XC92: Dust Resistant Actuator

65 Dust Resistant Actuator

Symbol -XC92

Made to Order

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.

									(mm)
Bore size	A		В		0	0.0		D۸	PC.
(mm)	Without auto switch	With auto switch	Without auto switch	With auto switch	Q	UA	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

2 x ø5.5 through





ø40 to ø100

(mm)

т

28

35

35 43

59

- 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.

Bore size	4	4	E	В			
(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		
50	48.5 (58.5)	58.5	30.5 (40.5)	40.5	18		
63	54 (64)	64	36 (46)	46	18		
80	63.5 (73.5)	73.5	43.5 (53.5)	53.5	20		
100	75 (85)	85	53 (63)	63	22		

Made to Order Common Specifications: -XC92: Dust Resistant Actuator

(mm)

65 Dust Resistant Actuator



Made to Order

Dimensions (Other dimensions are the same as the standard type.)

MGP series





With Lube-retainers on one side

Dana sina	1	4		E		
Bore size	50 st	Over 50 st and	в	50 st	Over 50 st and	FB
(11111)	or less	200 st or less*		or less	200 st or less*	
12	52	70.5	52	0	18.5	15
16	56	74.5	56	0	18.5	15
20	63	94.5	63	0	31.5	16
25	63.5	95	63.5	0	31.5	16
32	97	112	69.5	27.5	42.5	20
40	97	112	76	21	36	20
50	106.5	128	82	24.5	46	22
63	106.5	128	87	19.5	41	22
80	125	152	106.5	18.5	45.5	28
100	147	172	126	21	46	35

* The standard stroke for ø12 and ø16 is 100 st.

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			

Made to Order Common Specifications: -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



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

·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)





collides with the lever, the lock pin unhooks from the bracket assembly as the lever is



When the lock pin is unhooked from the

bracket assembly, the lever becomes unlocked, which allows the workpiece to

pass through.



Symbol

XC102

The lever is in the locked state when the lock pin is hooked on the bracket assembly.

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model
RS2H	Heavy duty stopper cylinder	RS2H	Double acting		Web Catalog

pushed backward

Specifications

Lever	With lock mechanism
Shock absorber	Shock absorber with scraper (Option)
Specifications other than above	Same as the standard type

The main product specifications and dimensions are the same as those of the standard model.



r	with scraper	*	The	app	licable	auto	switc	hes
			are	the	same	as	those	for
Nun	ber of auto switches		the	stan	dard m	odel.		
(Nui	mber of auto	*	Auto) sv	vitches	are	ship	bed

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

David align (see)	Order 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).

Nil

D Number of a

switches mounted)

1



Made to Order Common Specifications: -XC103: Cylinder for the Foot Type or the Rod Flange Type Mounting Bracket



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.)

XC103

Applicable Series

Se	eries	Description	Model	Action	Note	Vol. no. (for std model)
J	ICQ	Compact cylinder	JCQ	Double acting, Single rod		Web Catalog

How to Order

JC(D)QA

Standard model no.

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)

Symbol

-XC104

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

<u> </u>					
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

opeemeane	/13												
Applic	able series	MGG											
Bore	size (mm)	50	63	80	100								
Basi	c cylinder	MDWBB Bore s	size Port thread	type – Stroke N	I – 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											
Stroke adjustm [Built-in adjus	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	per model	RB2015	RB2725										

*1 Specifications other than shown above are the same as the standard type

*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.

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.

Made to Order Common Specifications: -XC104: Built-in Cylinder with Lock (MWB)

Dimensions

Basic type ø50 to ø100



																								(mm)
Bore size (mm)	A	AA	АВ	AC	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>	c 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>	c 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 0	depth	17	92	11.5	M18 x	2.5 d	epth 32	85
100	280	32	30	17.5	245	70	M1	M14 x 2.0 depth 28		80	304	35	210	274	15	23 0	23 depth 17		109	17	M18 x 2.5 depth 32		85	
Bore size (mm)	J	Jı		ĸ	L I	м	N	о		Ρ	BP		Q	R	s	S1	т	υ	v	VA	w	x	Y	z
50	117	120.	5 1	35 1	80 E	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 1	60 2	14 7	76 '	115	M12 x 1.75 depth	23	3/8	1/4	1	106.5	20.5	78	75	35	224	128	53	104	69	196	358
80	153	156.	5 1	90 2	45 E	30 -	125	M14 x 2 depth	28	3/8	1/4	1	132	23	98	95	40	262	143	65	128	87	241	431
100	153	165.	5 1	90 2	45 E	30 -	125	M14 x 2 depth	30	1/2	1/4	1	150	23	116	114	40	262	143	74	128	87	261	431

Made to Order Common Specifications: -XC104: Built-in Cylinder with Lock (MWB)

Dimensions

Front mounting flange type ø50 to ø100



Bore size (mm)	A	AA	. /	АВ	AG	АН	AI	AJ	АК	AL	АМ	AN	AC	A	P	в	GA	GB	; I	Τ	J	J1
50	200	25		25	228	250	50 158		14	12	135	234	M1	2 6	D .	228	64	5	65	5	117	120.5
63	230	25		27	262	284	178	200	14	12	155	268	M1:	2 7	0	262	73	9	75	5	138	134.5
80	280	30	:	30	300	326	200	226	16	16	175	310	M1-	4 8	0	304	92	11.5	5 85	5	153	156.5
100	280	32	:	30	300	326	200	226	16	16	175	310	M1-	4 8	D I	304	109	17	85	5	153	165.5
												<u> </u>										
Bore size (mm)	к	L	м	N		0		Ρ	E	BP	Q	R	s	S1	т	U	v	VA	w	x	Y	z
50	135	180	66	100	M12	x 1.75 d	lepth 23	1/4	1	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 d	lepth 23	3/8	1	1/4	106.5	20.5	78	75	35	224	128	53	104	69	196	358
80	190	245	80	125	M1-	4 x 2 depth 28		3/8	1	1/4	132	23	98	95	40	262	143	65	128	87	241	431
100	190	245	80	125	M1-	4 x 2 de	pth 30	1/2	1	1/4	150	23	116	114	40	262	143	74	128	87	261	431

Mounting dimensions

(mm)