

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



21 Adjustable Stroke Cylinder/Adjustable Retraction Type

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

Applicable Series

Series	Description	Model	Action	Note	Vol. no. (for std model)
CJ2	Air cylinder	CJ2-Z	Double acting, Single rod	Except double clevis type and with air cushion	②-1 From P. 46
	Non-rotating rod	CJ2K-Z	Double acting, Single rod		
	Direct mount type	CJ2R-Z	Double acting, Single rod	Except double clevis type	
	Non-rotating rod/Direct mount type	CJ2RK-Z	Double acting, Single rod		
	Smooth cylinder	CJ2Y-Z	Double acting, Single rod		
CM2	Air cylinder	CM2-Z	Double acting, Single rod	Except boss-cut and clevis types	②-1 From P. 172
	Non-rotating rod	CM2K-Z	Double acting, Single rod		
	Direct mount type	CM2R-Z	Double acting, Single rod	Except the head cover with boss	
	Non-rotating rod/Direct mount type	CM2RK-Z	Double acting, Single rod	Except the head cover with boss	
	Smooth cylinder	CM2Y-Z	Double acting, Single rod	Except boss-cut and clevis types	
CG1	Air cylinder	CG1-Z	Double acting, Single rod	Except head side flange and clevis types, ø80, and ø100	②-1 From P. 292
	Non-rotating rod	CG1K-Z	Double acting, Single rod	Except head side flange, clevis types and with air cushion	
	Direct mount type	CG1R-Z	Double acting, Single rod	Except with air cushion	
	Non-rotating rod/Direct mount type	CG1KR-Z	Double acting	Except with air cushion	
MB	Air cylinder	MB-Z	Double acting, Single rod	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	②-1 From P. 392
	Non-rotating rod	MBK-Z	Double acting, Single rod	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	
MB1	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125, with rubber bumper, with auto switch, head side flange and clevis types	②-1 From P. 440
	Non-rotating rod	MB1K-Z	Double acting, Single rod		
CA2	Air cylinder	CA2-Z	Double acting, Single rod	Except head side flange and clevis types	②-1 From P. 470
	Non-rotating rod	CA2K	Double acting, Single rod	Except head side flange and clevis types	
	End lock cylinder	CBA2	Double acting, Single rod	Except head side flange and clevis types	
CS1	Air cylinder	CS1	Double acting, Single rod	Except head side flange and clevis types, ø125 to ø160	②-1 From P. 530
	Air cylinder	CS2	Double acting, Single rod	Except head side flange and clevis types	
CS2	Smooth cylinder	CS2Y	Double acting, Single rod	Except head side flange and clevis types	②-1 From P. 568
	Smooth cylinder	CS2Y	Double acting, Single rod	Except head side flange and clevis types	
CQS	Compact cylinder	CQS	Double acting, Single rod	Except with rubber bumper and with mounting bracket	②-1 From P. 693
CQ2	Compact cylinder	CQ2-Z	Double acting, Single rod	Except with rubber bumper and with mounting bracket	②-1 From P. 773
	Non-rotating rod	CQ2K-Z	Double acting, Single rod		
MGP	Compact guide cylinder	MGPM-Z	Double acting		②-2 From P. 432
		MGPL-Z	Double acting		
		MGPA-Z	Double acting		
MGG	Guide cylinder	MGG	Double acting		②-2 From P. 538
MGC	Guide cylinder	MGC	Double acting		②-2 From P. 578

How to Order

CJ2	Mounting type	Bore size	Stroke	Z - XC9
	* Except clevis type			
CM2	Mounting type	Bore size	Stroke	Cushion
	* Except boss-cut and clevis types			
CM2R	Mounting type	Bore size	Stroke	Rod end type symbol
	* Except boss-cut and clevis types			
CG1	Mounting type	Type	Bore size	Stroke
	* Except clevis type			
MB	Mounting type	Bore size	Stroke	Suffix
MB1	Mounting type	Bore size	Stroke	Suffix
	* Except head side flange and clevis types			
CA2	Mounting type	Type	Bore size	Stroke
	* Except head side flange and clevis types			
CA2K	Mounting type	Type	Bore size	Stroke
	* Except head side flange and clevis types			
CBA2	Mounting type	Type	Bore size	Stroke
	* Except head side flange and clevis types			
CS1	Mounting type	Tubing material	Type	Bore size
	* Except head side flange and clevis types			
CS2	Mounting type	Bore size	Port suffix	Stroke
	* Except head side flange and clevis types			
CS2Y	Mounting type	Bore size	Port suffix	Stroke
	* Except head side flange and clevis types			
CQ2B	Bore size	Stroke	D (M)	Z
CQSB	Bore size	Stroke	D (M)	Z
MGP	Bearing type	Bore size	Stroke	Stroke adjustment symbol
MGG	Bearing type	Mounting type	Bore size	Port thread type
MGC	Bearing type	Mounting type	Bore size	Port thread type

Adjustable stroke cylinder/Adjustable retract type ●

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

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

Symbol
-XC9

Specifications

Series	Stroke adjustment symbol	Stroke adjustment range (mm)
CJ2	—	0 to 15
CM2 CG1 MB MB1 CA2 CS1 CS2	A	0 to 25
	B	0 to 50

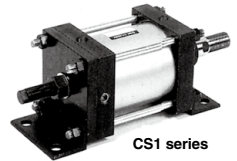
Series	Stroke adjustment symbol	Stroke adjustment range (mm)
CQ2 CQS	—	0 to 10
MGP	A	0 to 10
	B	0 to 25
MGG MGC	A	0 to 25
	B	0 to 50

Note) Specifications other than above are the same as standard type.

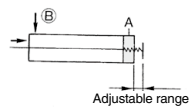
Precautions

⚠ 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.

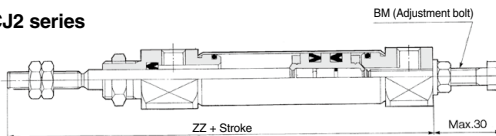


Symbol



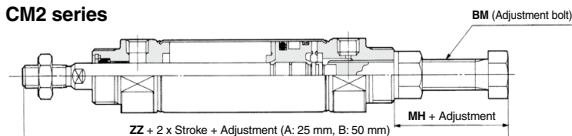
Dimensions (Dimensions other than below are the same as standard type.)

CJ2 series



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

CM2 series



Bore size (mm)	(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

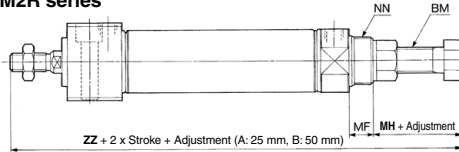
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Dimensions (Dimensions other than below are the same as standard type.)

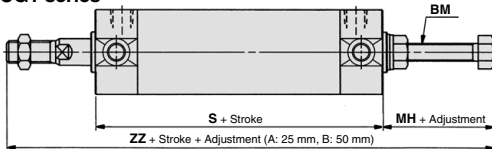
CM2R series



CM2R

(mm)					
Bore size (mm)	BM	MF	MH	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

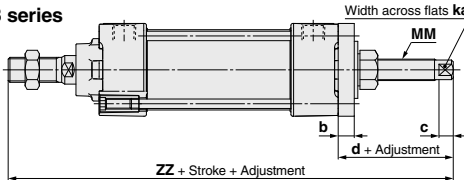
CG1 series



CG1

(mm)						
Bore size (mm)	BM	S	Rubber bumper		Air cushion	
			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

MB series



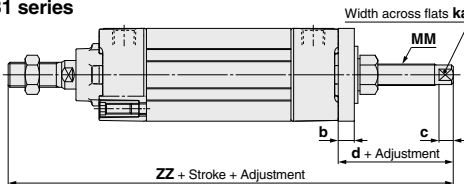
* In the case of axial foot type, the cushion is shipped after mounting. On other types, it is placed in the same package (not assembled).

* Dimensions other than above are the same as the CG1 series, long stroke type.

MB, MB1 Common

(mm)						
Bore size (mm)	b	c	d	ka	MM	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

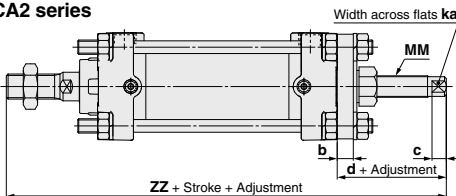
MB1 series



CA2

(mm)						
Bore size (mm)	b	c	d	ka	MM	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

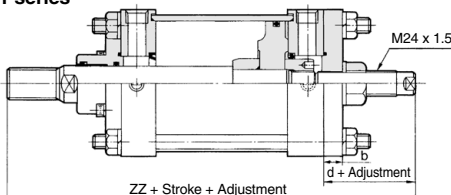
CA2 series



CA2K, CBA2 (With lock on rod side only)

(mm)						
Bore size (mm)	b	c	d	ka	MM	ZZ
40	9	8	44	11	M16 x 1.5	179
50	11	8	42	11	M16 x 1.5	190
63	11	8	48	14	M20 x 1.5	204
80	15	10	55	19	M24 x 1.5	242
100	15	10	57	19	M24 x 1.5	255

CS1 series



CS1

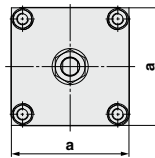
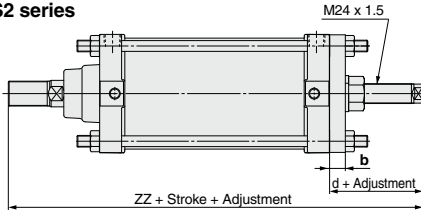
(mm)			
Bore size (mm)	b	d	ZZ
125	19	66	274
140	19	66	274
160	22	62	288

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

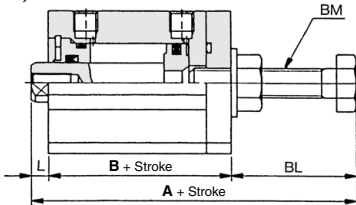
CS2 series



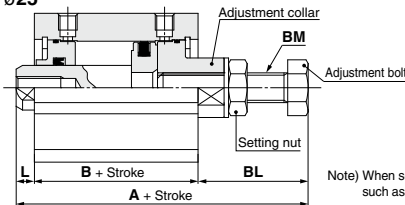
Bore size (mm)	a	b	d	ZZ
125	142	19	63	271
140	155	19	63	271
160	174	19	59	285

QCS series

ø12, ø16



ø20, ø25



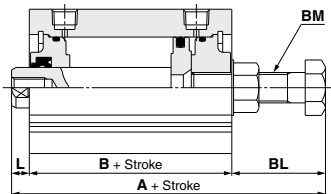
Bore size (mm)	A	B	L	BL	BM	Manufacturable stroke
12	50.5 (54.5)	22 (27)	3.5	25 (29)	M5 x 0.8	5 to 30
16	51 (56)	22 (27)	3.5	25.5	M6 x 1	
20	61 (71)	26 (36)	4.5	30.5	M8 x 1.25	5 to 50
25	63.5 (73.5)	29 (39)	5	29.5	M8 x 1.25	

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

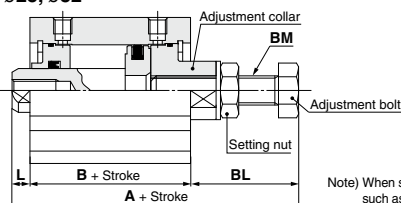
Note 2) Applicable stroke available in 5 mm increments.

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



ø20, ø25, ø32



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

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

Note 2) Applicable stroke available in 5 mm increments.

Note) 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.

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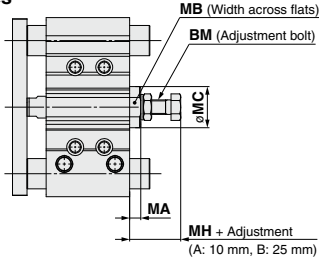
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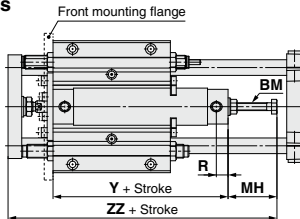
MGP series



Common Dimensions: MGPM, MGPL, MGPA (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

MGG series ø20 to ø50

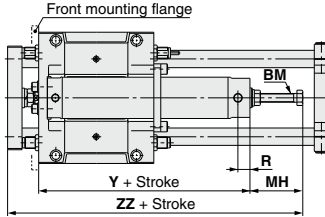


MGG Series (mm)

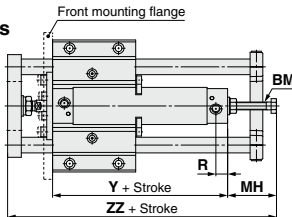
Bore size (mm)	R	Y	BM	Adjustment 0 to 25 mm		Adjustment 0 to 50 mm	
				MH	ZZ	MH	ZZ
20	12	77	M6 x 1	48	164	73	189
25	12	77	M6 x 1	48	171	73	196
32	12	79	M8 x 1.25	50	175	75	200
40	13	87	M12 x 1.75	65	208	90	233
50	14	102	M12 x 1.75	58	227	83	252
63	14	117	M16 x 2	65	236	90	261

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

ø63



MGC series ø20 to ø50



MGC Series (mm)

Bore size (mm)	R	Y	BM	Adjustment 0 to 25 mm		Adjustment 0 to 50 mm	
				MH	ZZ	MH	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.