

# Made to Order Common Specifications: -XC10: Dual Stroke Cylinder/Double Rod Type



## 22 Dual Stroke Cylinder/Double Rod Type

Symbol  
**-XC10**

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

### 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	②-1 From P. 46
	Non-rotating rod type	CJ2K-Z	Double acting, Single rod		
CM2	Air cylinder	CM2-Z	Double acting, Single rod	Except with air cushion	②-1 From P. 172
	Non-rotating rod type	CM2K-Z	Double acting, Single rod	Except with air cushion	
CG1	Smooth cylinder	CM2Y-Z	Double acting, Single rod		②-1 From P. 292
	Air cylinder	CG1-Z	Double acting, Single rod		
MB	Non-rotating rod type	CG1K-Z	Double acting, Single rod	Except with air cushion	②-1 From P. 392
	Air cylinder	MB-Z	Double acting, Single rod	* Except ø125, clevis and trunnion types	
	Non-rotating rod type	MBK-Z	Double acting, Single rod	* Except clevis and trunnion types	
MB1	With end lock type	MBB	Double acting, Single rod	* Except clevis and trunnion types	②-1 From P. 440
	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	
CA2	Air cylinder	CA2-Z	Double acting, Single rod	* Except clevis and trunnion types	②-1 From P. 470
	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	②-1 From P. 530
	Air-hydro cylinder	CS1H	Double acting, Single rod	* Except clevis and trunnion types	
CS2	Air cylinder	CS2	Double acting, Single rod	* Except clevis and trunnion types	②-1 From P. 568
	Smooth cylinder	CS2Y	Double acting, Single rod	* Except clevis and trunnion types	
CQS	Compact cylinder	CQS	Double acting, Single rod	Except with bracket	②-1 From P. 693
CQ2	Compact cylinder	CQ2-Z	Double acting, Single rod	Except with bracket	Web Catalog
	Air-hydro cylinder	CQ2H-Z	Double acting, Single rod	Except with bracket	

### How to Order

CJ2	Mounting type	Bore size	-	Stroke A	+	Stroke B	Z	-	XC10		
CM2	Mounting type	Bore size	-	Stroke A	Suffix	+	Stroke B	Suffix	Z - XC10		
CG1	Mounting type	Type	Bore size	-	Stroke A	Suffix	+	Stroke B	Suffix	Z - XC10	
MB	Mounting type	Bore size	-	Stroke A	Suffix	+	Stroke B	Suffix	Z - XC10		
MB1	* Except clevis and trunnion types										
MBB	Mounting type	Bore size	-	Stroke A	Suffix	-	Lock position	Manual release type	+		
	Stroke B	Suffix	-	Lock position	Symbol of manual release	XC10					
	* Except clevis and trunnion types										
CA2	Mounting type	Type	Bore size	-	Stroke A	Suffix	+	Stroke B	Suffix	Z - XC10	
	* Except clevis and trunnion types										
CA2K	Mounting type	Type	Bore size	-	Stroke A	Suffix	+	Stroke B	Suffix	- XC10	
	* Except clevis and trunnion types										
CBA2	Mounting type	Type	Bore size	-	Stroke A	Suffix	-	Lock position	Manual release type	+	
	Stroke B	Suffix	-	Lock position	Symbol of manual release	XC10					
	* Except clevis and trunnion types										
CS1	Mounting type	Tubing material	Type	Bore size	-	Stroke A	Suffix	+	Stroke B	Suffix	- XC10
	* Except clevis and trunnion types										
CS2	Mounting type	Bore size	Port suffix	-	Stroke A	Suffix	+	Stroke B	Suffix	- XC10	
	* Except clevis and trunnion types										
CQ2B	Bore size	-	Stroke S <sub>1</sub>	+	Stroke S <sub>2</sub>	D (C)(M)(Z)	XC10				
CQSB	Bore size	-	Stroke S <sub>1</sub>	+	Stroke S <sub>2</sub>	D (C)(M)	XC10				

Dual stroke cylinder



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## 22 Dual Stroke Cylinder/Double Rod Type

### Specifications

Series	Bore size (mm)	Maximum manufacturable stroke (mm)
<b>CJ2</b>	10, 16	300 (Maximum 150 on one side)
<b>CM2</b>	20 to 40	1000 (A + B stroke)
<b>CG1</b>	20	1500 (A + B stroke)
	25	1500 (A + B stroke)
	32	1500 (A + B stroke)
	40	1500 (A + B stroke)
<b>MB MB1</b>	50, 63	1500 (A + B stroke)
	32 to 100	1000 (A + B stroke)

\* Specifications other than above are the same as standard type.

Series	Bore size (mm)	Maximum manufacturable stroke (mm)
<b>CA2</b>	40 to 100	1000 (A + B stroke)
<b>CS1</b>	125, 140	1000 (A + B stroke)
	160 to 300	1200 (A + B stroke)
<b>CS2</b>	125, 140	1000 (A + B stroke)
	160	1200 (A + B stroke)
<b>CQS CQ2</b>	12, 16	60 (Maximum 30 on one side)
	20, 25	100 (Maximum 50 on one side)
<b>CQ2</b>	32, 40	200 (Maximum 100 on one side)
	50 to 100	200 (Maximum 100 on one side)

### Symbol

#### Function



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



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



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



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



CJ2 series



CS1 series



CG1 series

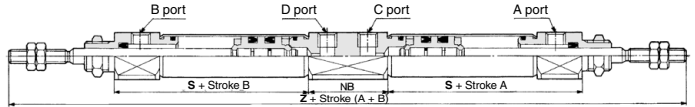


CA2 series

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

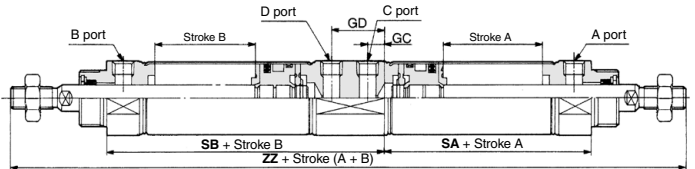
**CJ2 series**

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

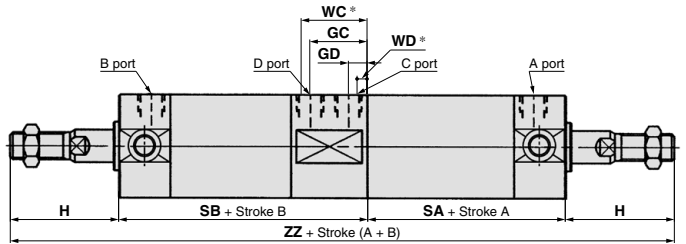
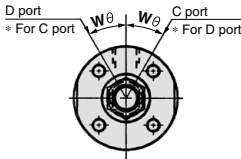


**CM2 series**

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



**CG1 series**

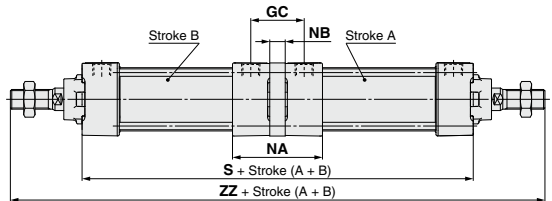


Bore size	GC	GD	H	SA	SB	Wθ	Air cushion		
							WC	WD	ZZ
20	20.5 (21)	8.5 (9)	35	56.5 (56)	85.5 (86)	30°	(25)	(5)	212
25	21 (21.5)	9 (8.5)	40	56	86	30°	(25)	(5)	222
32	23	9	40	58	90	30°	(27)	(5)	228
40	23.5 (25)	7.5 (9)	50	66.5 (65)	97.5 (99)	20°	(29)	(5)	264
50	29	13	58	75	117	20°	(32)	(9)	308
63	28	12	58	76	116 (116)	20°	(32)	(8)	308

\* ( ): With air cushion

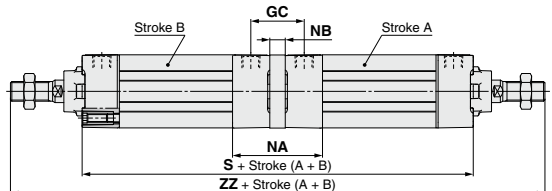
**MB series**

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



**MB1 series**

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



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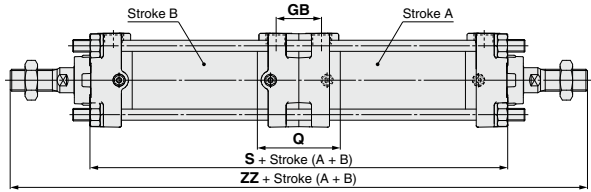
## 22 Dual Stroke Cylinder/Double Rod Type

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

### CA2 series

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

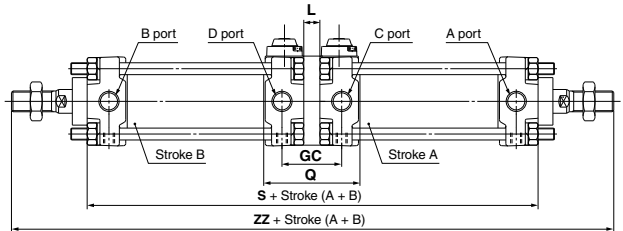
(mm)



### CBA2 series

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

(mm)

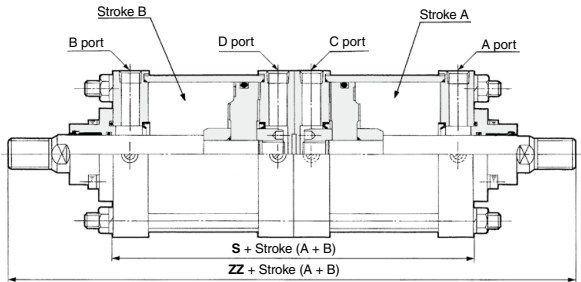


\* The above diagram shows head side lock type and manual releasing non-locking type. Dimensions of rod side locking type, both-side lock type and manual releasing lock type are the same as dimensions in the above table.

### CS1 series

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

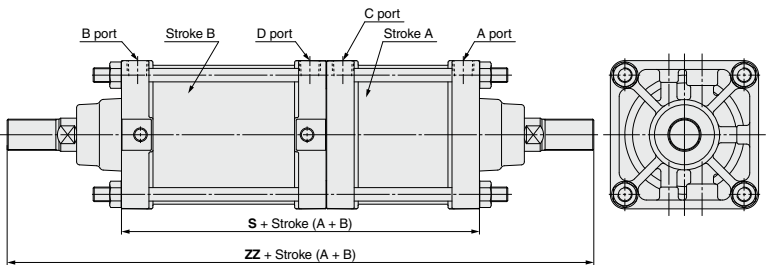
(mm)



### CS2 series

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

(mm)

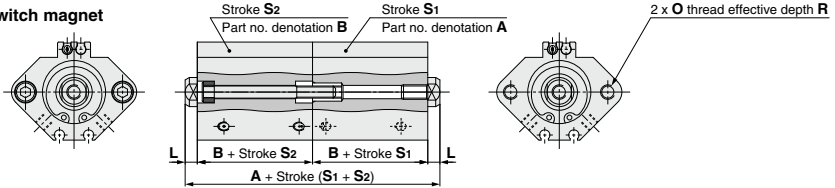


\* For rod side flange type "F", the flange bracket will be attached to the stroke A side.

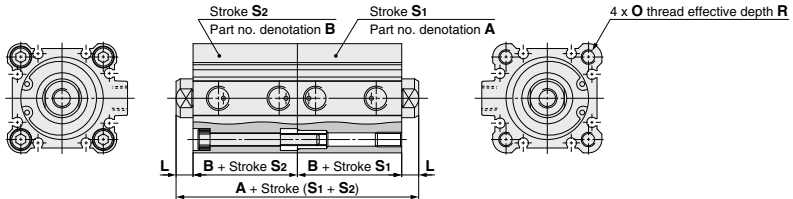
**Dimensions (Other dimensions are the same as standard.)**

ø12 to ø25

With auto switch magnet



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



\* Secure the body with the threaded portion at the tip of the piston rod on both sides or with the cylinder tube on the stroke S<sub>1</sub> side tapped.

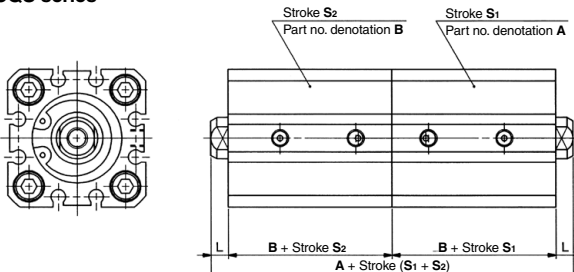
\* Please contact SMC for the through-hole type and models with a mounting bracket.

Bore size [mm]	A			B		L	O	R
	50 <sup>#</sup> or less for both S <sub>1</sub> and S <sub>2</sub>	Combination of 50 <sup>#</sup> or less, 75, 100 <sup>#</sup>	75, 100 <sup>#</sup> for both S <sub>1</sub> and S <sub>2</sub>	50 <sup>#</sup> or less	75, 100 <sup>#</sup>			
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**



Bore size (mm)	A	B	L	Stroke Both of S <sub>1</sub> , S <sub>2</sub>
12	41 (51)	17 (22)	3.5	5 to 30
16	41 (51)	17 (22)	3.5	
20	48 (68)	19.5 (29.5)	4.5	5 to 50
25	55 (75)	22.5 (32.5)	5	

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

Note 2) Applicable stroke available in 5 mm increments.