

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	Excludes the type with an air cushion, a rod end bracket, or a pivot bracket as well as "E," "D," "M," and "G"	Web Catalog
	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"	
CM2	Air cylinder	CM2-Z	Double acting, Single rod	Excludes the type with an air cushion, a rod end bracket, or a pivot bracket	
	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	
CG1	Smooth cylinder	CM2Y-Z	Double acting, Single rod	Excludes the type with a rod end bracket or a pivot bracket	
	Air cylinder	CG1-Z	Double acting, Single rod		
MB	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	
	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	
	Air cylinder	MB1-Z	Double acting, Single rod	Except ø125, clevis and trunnion types	
CA2	Non-rotating rod type	MB1K-Z	Double acting, Single rod	Except clevis and trunnion types	
	Air cylinder	CA2-Z	Double acting, Single rod	Except clevis and trunnion types	
	Non-rotating rod type	CA2K	Double acting, Single rod	Except clevis and trunnion types	
CS1	End lock cylinder	CBA2	Double acting, Single rod	Except clevis and trunnion types	
	Air cylinder	CS1	Double acting, Single rod	Except clevis and trunnion types	
CS2	Air-hydro cylinder	CS1H	Double acting, Single rod	Except clevis and trunnion types	
	Air cylinder	CS2	Double acting, Single rod	Except clevis and trunnion types	
CQS	Smooth cylinder	CS2Y	Double acting, Single rod	Except clevis and trunnion types	
	Compact cylinder	CQS	Double acting, Single rod	Except with bracket	
CQ2	Non-rotating rod type	CQSK	Double acting, Single rod	Except with bracket	
	Compact cylinder	CQ2-Z	Double acting, Single rod	Except with bracket	
CQ2B	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	+	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	Rod boot suffix	+	Stroke B	Rod end thread*1	Rod boot suffix	Z —	XC10					
*1 The rod end thread shape is the same for both strokes A and B.																	
MB	Mounting type	Bore size	—	Stroke A	Suffix	+	Stroke B	Suffix	Z —	XC10							
MBB	Mounting type	Bore size	—	Stroke A	Suffix	—	Lock position	Manual release type	+	Stroke B	Suffix	—	Lock position	Symbol of manual release	Z —	XC10	
CA2	Mounting type	Type	Bore size	—	Stroke A	Suffix	+	Stroke B	Suffix	Z —	XC10						
CA2K	Mounting type	Type	Bore size	—	Stroke A	Suffix	+	Stroke B	Suffix	Z —	XC10						
CBA2	Mounting type	Type	Bore size	—	Stroke A	Suffix	—	Lock position	Manual release type	+	Stroke B	Suffix	—	Lock position	Symbol of manual release	Z —	XC10
CS1	Mounting type	Tubing material	Type	Bore size	—	Stroke A	Suffix	+	Stroke B	Suffix	Z —	XC10					
CS2	Mounting type	Bore size	Port suffix	—	Stroke A	Suffix	+	Stroke B	Suffix	Z —	XC10						
CQ2B	Bore size	—	Stroke S ₁	+	Stroke S ₂	D (C)(M)(Z) —	XC10										
CQSB	Bore size	—	Stroke S ₁	+	Stroke S ₂	D (C)(M) —	XC10										

Dual stroke cylinder*

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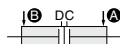
Specifications

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)
CG1	20	1500 (A + B stroke)
	25	1500 (A + B stroke)
	32	1500 (A + B stroke)
	40	1500 (A + B stroke)
50, 63	1500 (A + B stroke)	
MB MB1	32 to 100	1000 (A + B stroke)
CA2	40 to 100	1000 (A + B stroke)
CS1	125, 140	1000 (A + B stroke)
	160 to 300	1200 (A + B stroke)

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

Symbol

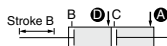
Function



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



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



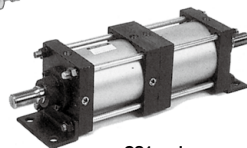
When air pressure is supplied to ports **A** and **D**, B out strokes.



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

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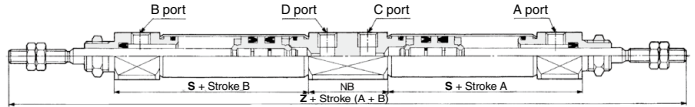
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Dimensions (Dimensions other than below are the same as standard type.)

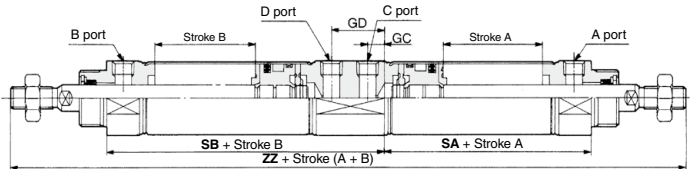
CJ2 series

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

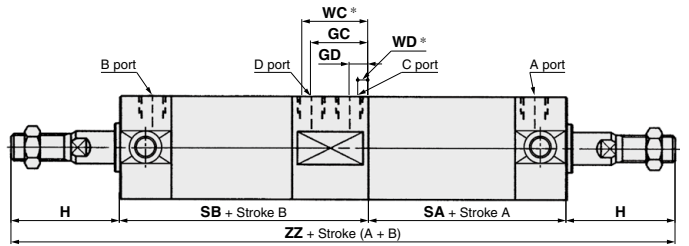
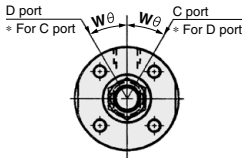


CM2 series

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

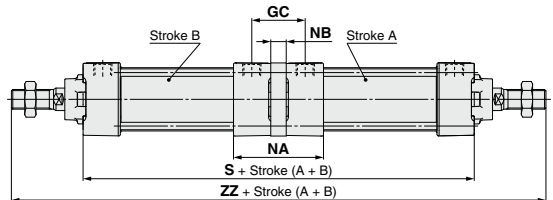


Bore size	GC	GD	H	SA	SB	Wθ	Air cushion		
							WC	WD	ZZ
20	20.5 (21)	8.5 (9)	35	56.5 (56)	85.5 (86)	30°	(25)	(5)	212
25	21 (21.5)	9 (8.5)	40	56	86	30°	(25)	(5)	222
32	23	9	40	58	90	30°	(27)	(5)	228
40	23.5 (25)	7.5 (9)	50	66.5 (65)	97.5 (99)	20°	(29)	(5)	264
50	29	13	58	75	117	20°	(33)	(9)	308
63	28	12	58	76	116 (116)	20°	(32)	(8)	308

* (): With air cushion

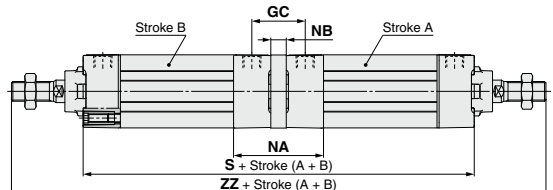
MB series

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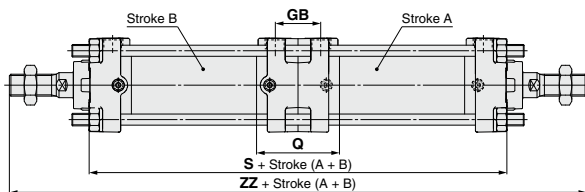
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Dimensions (Dimensions other than below are the same as standard type.)

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

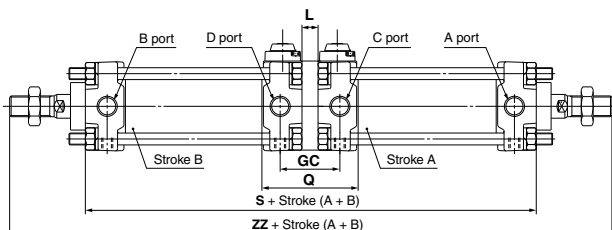
(mm)



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)

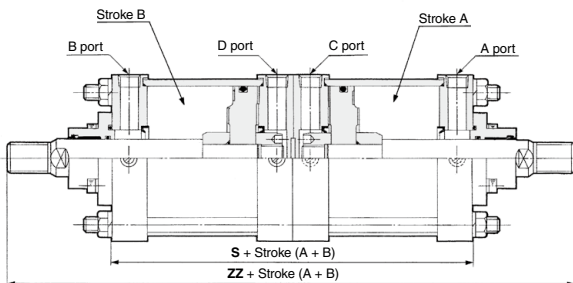


* The above diagram shows head side lock type and manual releasing non-locking type. Dimensions of rod side locking type, both-side lock type and manual releasing lock type are the same as dimensions in the above table.

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	—	—

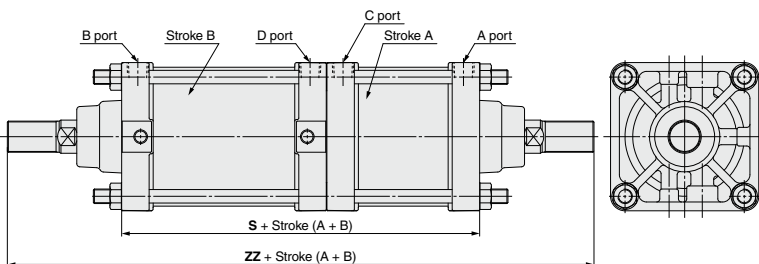
(mm)



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.

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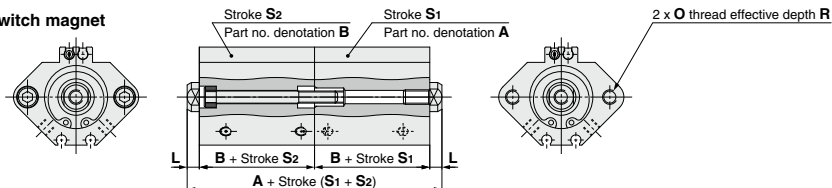
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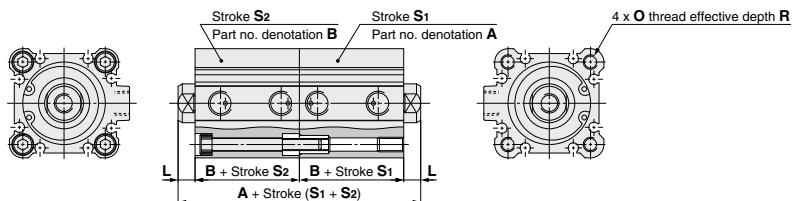
Dimensions (Other dimensions are the same as standard.)

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 S₁ side tapped.

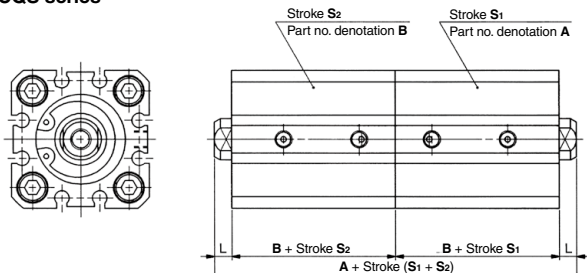
* Please contact SMC for the through-hole type and models with a mounting bracket.

Bore size [mm]	A		B		L	O	R
	50 st or less for both S ₁ and S ₂	Combination of 50 st or less, 75, 100 st	75, 100 st for both S ₁ and S ₂	50 st or less			
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 ₁ , S ₂
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.