

Series CA2 Made to Order Specifications

Contact P/A for detailed dimensions, specifications, and lead times.

1



1 Oversized rod -XB5

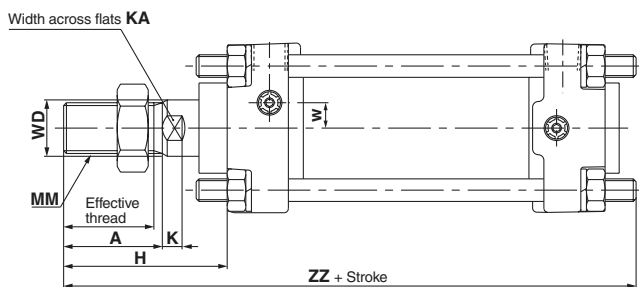
The strength of the cylinder is increased by increasing the diameter of the piston rod. This cylinder is used when the stroke is long, and there is a danger of the piston rod bending or buckling, etc. (Contact P/A in case a lateral load will be applied.)

CA2 Standard part No. **-XB5**
● Heavy duty rod

Specifications

Operating direction	Double acting single rod
Bore size (mm)	40, 50, 63, 80, 100
Auto switch	Mountable

Dimensions



Bore size (mm)	Effective thread length	Width across flats	A	D	H	K	MM	W	ZZ
40	32	18	35	20	58	7	M18 x 1.5	9	153
50	37	22	40	25	71	11	M22 x 1.5	9	172
63	37	22	40	25	71	11	M22 x 1.5	9	183
80	37	26	40	30	72	11	M26 x 1.5	0	205
100	47	31	50	36	85	15	M30 x 1.5	0	228

2 Heat resistant (150°C) -XB6

The cylinder seals are changed to a heat resistance (to 150°C) material, for use under severe conditions which exceed the standard specifications of -10°C to +70°C.

CA2 Standard part No. **-XB6**
CA2W ● Heat resistant (150°C)

Specifications

Action	Double acting single rod/double rod
Ambient temperature range	-10 to 150°C
Auto switch	Not mountable
Cushion	Air cushion
Seal material	Fluoro rubber
Grease	Heat resistance grease

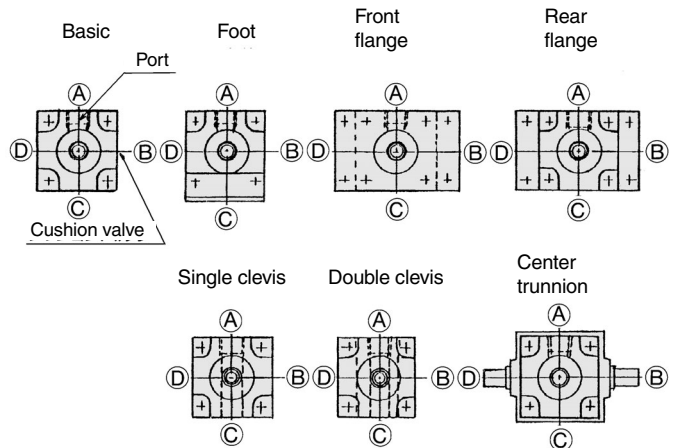
Specifications and dimensions other than the above are the same as the standard type.

3 Special port positions -XC3

The positions of ports and cushion valves on the rod cover and head cover are changed from those of the standard type.

CA2 Standard part No. **-XC3** **A** **C**
● Special port positions ● Cushion valve location viewed from rod side
● Port location viewed from rod side

Relation of port locations and cushion valve locations



- The symbol A indicating the port or cushion valve position is assigned to the top position viewed from the rod side, with B, C, and D to the other positions in order when rotating clockwise.
- The optional combination of the port and cushion valve is available only when the same positional change is applied to the rod cover and head cover.
- The symbol -XC3 **A** **B** indicates the standard specification so an optional specification with A and B do not exist.
- Part numbers other than the symbols for the port and cushion valve positions are the same as those of the standard type.

4 With heavy duty scraper -XC4

Using a heavy duty scraper as a wiper ring, this series is ideal for use in severe environments where cylinders are exposed to dust, dirt and sand. Applicable to casting machines, construction equipment and industrial vehicles, etc.

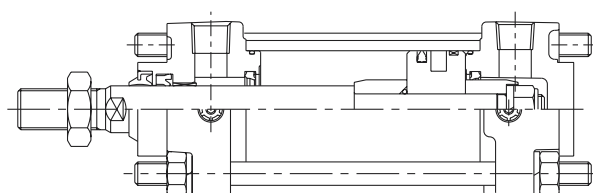
CA2 Standard part No. **-XC4**
CA2W ● With heavy duty scraper

Specifications

Action	Double acting single rod/double rod
Cushion	Air cushion
Wiper ring	SCB scraper

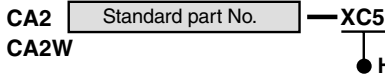
Specifications and dimensions other than the above are the same as the standard type.

Construction



5 Heat resistant (110°C)
-XC5

The cylinder seals are changed to a heat resistant (to 110°C) material, for use under severe temperature conditions which exceed the standard specifications of -10°C to +70°C.



Specifications

Action	Double acting single rod/double rod
Ambient temperature range	-10 to 110°C
Auto switch	Not mountable
Cushion	Air cushion
Seal material	Fluoro rubber

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

6 Piston rod and rod end nut made of stainless steel
-XC6

Applicable in cases where there is concern about rust or corrosion, etc., such as when the piston rod end gets wet when extended.



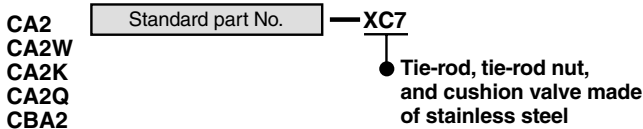
Specifications

Action	Double acting single rod/double rod
Cushion	Air cushion

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

7 Tie-rod, tie-rod nut, and cushion valve made of stainless steel
-XC7

Certain parts are changed from standard materials to stainless steel, when used in locations where there is a danger of rust or corrosion, etc



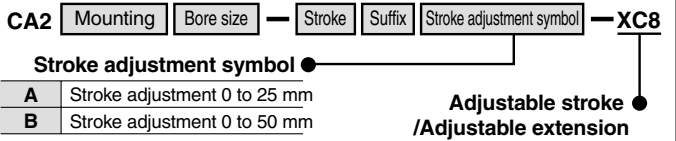
Specifications

Action	Double acting single rod/double rod
Cushion	Air cushion

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

8 Adjustable stroke/Extension adjustment
-XC8

The extending stroke of the cylinder can be adjusted from a full stroke to (0 to 25) mm, or (0 to 50) mm. A stroke adjustment mechanism is provided on the head side to adjust the extension stroke.

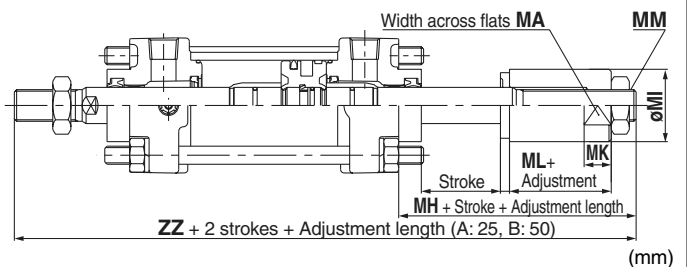


Specifications

Action	Double acting single rod
Mounting bracket	B, L, F, T (G, C, D not applicable)
Stroke Adjustment method	Stopper adjustment
Stroke adjustment range	A: 0 to 25 mm B: 0 to 50 mm

Other specifications are the same as those of the standard type.

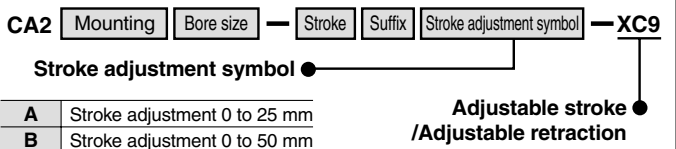
Dimensions



Bore size (mm)	MA	MK	MI	MH	ML	MM	ZZ
40	27	12	32	45	20	14	180
50	32	15	38	49	21	18	197
63	32	15	38	49	21	18	205
80	36	20	45	66	32	22	253
100	46	20	55	69	32	26	267

9 Adjustable stroke/Retraction adjustment
-XC9

The retracting stroke of the cylinder can be adjusted to (0 to 25) mm or (0 to 50) mm by an adjustment bolt which performs adjustable setting on the return stroke.

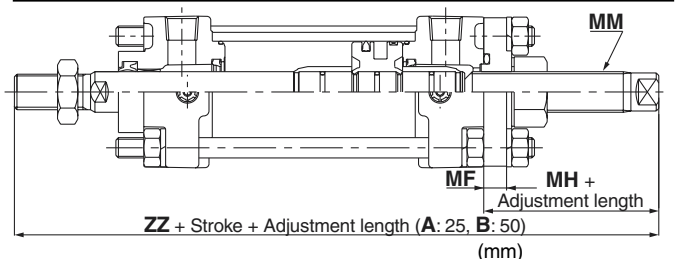


Specifications

Action	Double acting single rod
Mounting bracket	B, L, F, T (G, C, D not applicable)
Stroke adjustment method	Adjustment bolt
Stroke adjustment range	A: 0 to 25 mm B: 0 to 50 mm

Other specifications are the same as those of the standard type.

Dimensions



Bore size (mm)	MH	MF	MM	ZZ
40	44	9	M16 x 1.5	179
50	42	11	M16 x 1.5	190
63	48	11	M20 x 1.5	204
80	55	15	M24 x 1.5	242
100	57	15	M24 x 1.5	255

Standard type CA2
Standard type CA2W
Standard/Non-rotating rod CA2K
Standard/Non-rotating rod CA2KW
Low friction CA2IQ
End lock CBA2
Air-hydro CA2IH
Air-hydro CA2WH
Auto switch
Made to order
Precautions

Series CA2 Made to Order Specifications

2



Contact P/A for detailed dimensions, specifications, and lead times.

10 -XC10 Dual stroke/Double rod

Two cylinders are combined in a back-to-back configuration, allowing the two reciprocating cylinder strokes to be controlled in three steps.

CA2 [Mounting] [Bore size] - [Stroke A] [Suffix] + [Stroke B] [Suffix] -XC10

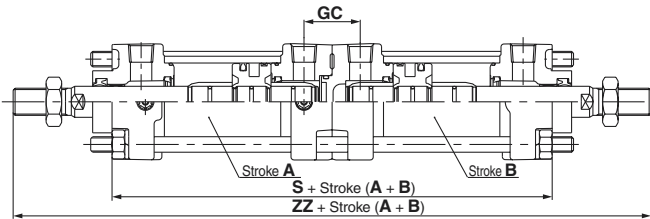
Dual stroke/Double rod ●

Specifications

Action	Double acting single rod
Cushion	Air cushion
Mounting bracket	B, L, F, G (C, D, T not applicable)
Maximum available stroke (A+B)	to 1000

Other specifications are the same as those of the standard type.

Dimensions



Bore size (mm)	GC	S	ZZ
40	29	167	269
50	33	179	295
63	33	195	311
80	41	231	373
100	41	251	395

11 -XC11 Dual stroke/Single rod

Two cylinders are combined in an in-line configuration, allowing the two reciprocating cylinder strokes to be controlled in two steps, or making it possible to double the cylinder output.

CA2 [Mounting] [Bore size] - [Stroke A] [Suffix] + [Stroke B-A] [Suffix] -XC11

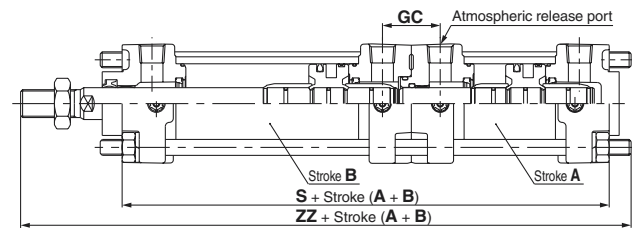
Dual stroke/Single rod ●

Specifications

Action	Double acting single rod
Cushion	Air cushion
Mounting bracket	B, L, F, G, C, D (T not applicable)

Other specifications are the same as those of the standard type.

Dimensions



Bore size (mm)	GC	S	ZZ
40	29	168	230
50	33	180	249
63	33	196	268
80	41	232	320
100	41	252	341

12 -XC12 Tandem type

Two cylinders are connected in-line, allowing cylinder output to be doubled.

CA2 [Standard part No.] -XC12

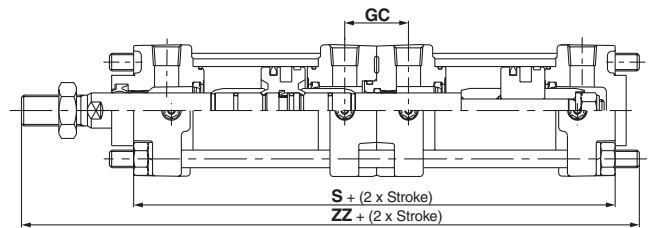
● Tandem type

Specifications

Action	Double acting single rod
Minimum operating pressure	0.1 MPa
Cushion	Air cushion
Mounting bracket	B, L, F, G, C, D (T not applicable)

Other specifications are the same as those of the standard type.

Dimensions



Bore size (mm)	GC	S	ZZ
40	29	169	231
50	33	181	250
63	33	197	269
80	41	233	321
100	41	253	342

13 -XC22 Fluoro rubber seal

Seals are changed to a fluoro rubber material which has outstanding resistance to chemicals.

CA2 [Standard part No.] -XC22

CA2W

● Fluoro rubber seal

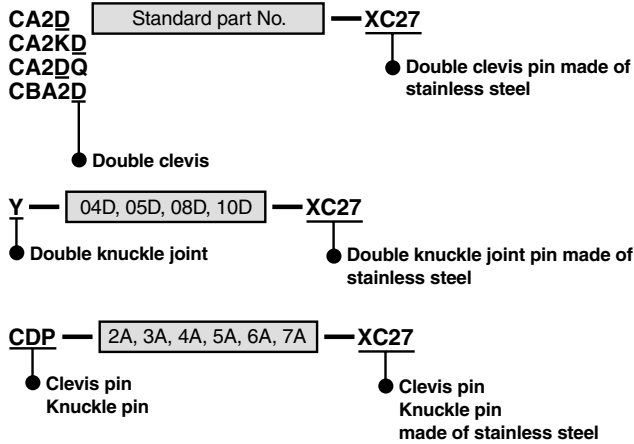
Specifications

Action	Double acting single rod/double rod
Seals	Fluoro rubber

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

14-XC27 Double clevis pin and double knuckle pin made of stainless steel

To prevent the rotating part of a double clevis, which is a bracket, or double knuckle joint, which is an accessory, from rusting, the pin and the snap ring (cotter pin) are made of stainless steel.



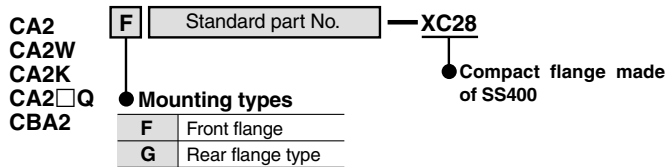
Specifications

Mounting types	Double clevis (D) only
Pin material	Stainless steel (SUS304)

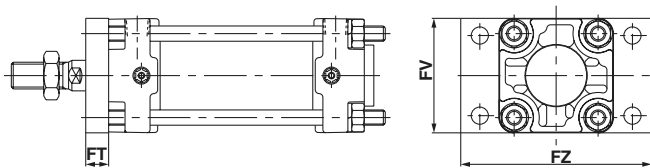
Other specifications are the same as those of the standard type.
Cotter pins, clevis pins and knuckle joint pins are packed with the mounting bracket.

15-XC28 Compact flange made of SS400

Width of the front and rear flange bracket for air cylinder Series CA2 has the same dimensions as the cylinder rod cover to save the mounting space. (Flange shape and FV-dimensions are only differences from the standard type.)



Dimensions

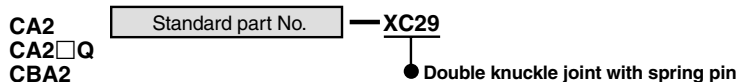


Bore size (mm)	FT	FV	FZ
40	12	60	100
50	12	70	110
63	15	85	130
80	18	102	160
100	18	116	180

* Other dimensions are the same as those of the standard front flange and rear flange. (The drawing illustrates a front flange example.)

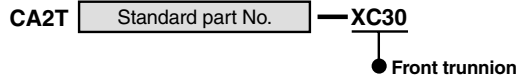
16-XC29 Double knuckle joint with spring pin

To prevent loosening of the double knuckle joint



17-XC30 Front trunnion

When a standard double acting single rod cylinder supported by a front trunnion bracket has a long stroke, the trunnion bracket is mounted on the front of the cylinder's rod cover to reduce the distance from the fulcrum to the rod end.

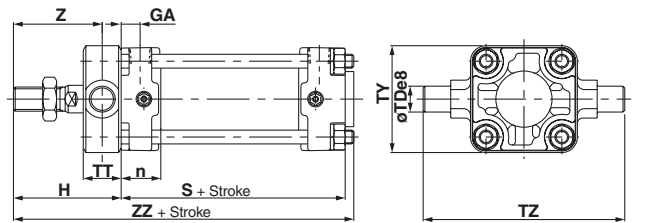


Specifications

Action	Double acting single rod/double rod
Mounting bracket	T-bracket only

Other specifications are the same as those of the standard type.

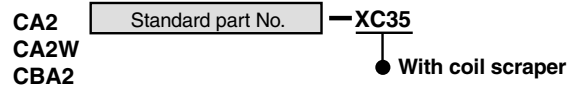
Dimensions



Bore size (mm)	n	ØTDe8	GA	TT	TY	TZ	H	Z	ZZ	S
40	23	15 ^{-0.032} _{-0.059}	11	22	62	117	66	55	151	80
50	26	15 ^{-0.032} _{-0.059}	13	22	74	127	71	60	163	86
63	27	18 ^{-0.032} _{-0.059}	13	28	90	148	79	65	179	94
80	32	25 ^{-0.040} _{-0.073}	16	34	110	192	94.5	77.5	212.5	111
100	35	25 ^{-0.040} _{-0.073}	16	40	130	214	100	80	229	121

18-XC35 With coil scraper

Seals are protected by removing frost, welding spatter or cutting chips, etc. that adhere to the piston rod.

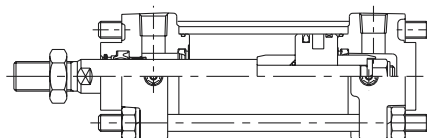


Specifications

Action	Double acting single rod/double rod
Cushion	Air cushion
Wiper ring	Coil scraper (metal)

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

Construction



Standard type CA2
Standard type CA2W
Standard/Non-rotating rod CA2K
Standard/Non-rotating rod CA2KW
Low friction CA2□Q
End lock CBA2
Air-hydro CA2□H
Air-hydro CA2W□H
Auto switch
Made to order
Precautions

Series CA2 Made to Order Specifications

Contact P/A for detailed dimensions, specifications, and lead times.

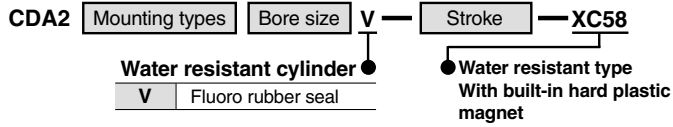
3



Water resistant/Built-in hard plastic magnet

19-XC58

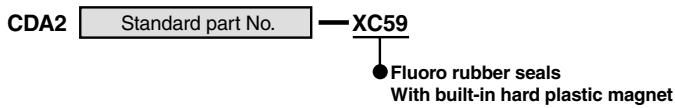
The magnet for auto switch on a water resistant cylinder is made of hard plastic in order to prevent swelling.



Fluoro rubber seals and built-in hard plastic magnet

20-XC59

The magnet for auto switch on a fluoro rubber seal cylinder is made of hard plastic in order to prevent swelling.



⚠ Caution

- ① Confirm with P/A, as the type of chemical and the operating temperature may not allow the use of this product.
- ② Although the cylinder is available with auto switch, confirm its compatibility with the operating environment with P/A before it is put to use. This is because it uses the same auto switch related parts (auto switch body and mounting bracket) as the standard type.