

Compact Cylinder: Standard Double Acting, Single Rod

Series CQ2

ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

How to Order

Without auto switch
ø12 to ø25

Without auto switch
ø32 to ø100

With auto switch

CQ2 **B** **20** **-30** **D** **—**

CQ2 **B** **32** **-30** **D** **Z** **—**

CDQ2 **B** **32** **-30** **D** **Z** **M9BW** **—**

Mounting

B	Through-hole (Standard)	F	Rod flange
A	Both ends tapped	G	Head flange
L	Foot	D	Double clevis

* Mounting brackets are shipped together, (but not assembled).
* Cylinder mounting bolts are not included. Order them separately referring to "Mounting Bolt for C(D)Q2B" on pages 5 and 10.

Type

Nil	Pneumatic
H	Air-hydro (Note 1)

Note 1) Bore sizes available for air-hydro type are ø20 to ø100.

Bore size

12	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Port thread type

Nil	M thread	ø12 to ø25
	Rc	
TN	NPT	ø32 to ø100
TF	G	
F	Built-in one-touch fittings (Note 2)	

Note 2) Bore sizes available with one-touch fittings are ø32 to ø63. Besides, it is not possible to use for air-hydro type.
Note 3) "TF" is not available for air-hydro type.
* For cylinders without auto switch, M threads are compatible only for ø32-5 mm stroke.

Action

D	Double acting
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Cylinder stroke (mm)

Refer to the next page and page 3 for standard strokes and intermediate strokes.

Auto switch

Nil Without auto switch

* Refer to the below table for applicable auto switches.

Auto switch mounting groove

Z	ø12 to ø25	2 surfaces
	ø32 to ø100	4 surfaces

Note 5) The made-to-order, heat resistant auto switch -XB14 is not applicable.

Number of auto switches

Nil	2 pcs.
S	1 pc.
n	"n" pcs.

Made to Order

Refer to the next page for details.

Body option

Nil	Standard (Rod end female thread)
F	With boss on head end
C	With rubber bumper (Note 4)
M	Rod end male thread

* Combination of body options ("CM", "FC", "FM", "FCM") is available.
Note 4) Air-hydro type with rubber bumper is not available.

Built-in Magnet Cylinder Model

If a built-in magnet cylinder without an auto switch is required, there is no need to enter the symbol for the auto switch.
(Example) CDQ2L32-25DZ

Refer to pages 1263 to 1371 in Best Pneumatics No. 2 for further information on auto switches.
Refer to the individual catalog (ES20-201) for the D-P3DW type.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)					Pre-wired connector	Applicable load			
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)					
Solid state auto switch	——	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV	M9N	●	●	●	○	—	○	IC circuit	Relay, PLC	
	3-wire (PNP)			M9PV				M9P	●	●	●	○	—	○				
	2-wire			M9BV				M9B	●	●	●	○	—	○				
	Diagnostic indication (2-color indication)			3-wire (NPN)				5 V, 12 V	M9NVV	M9NW	●	●	●	○	—	○		IC circuit
	Water resistant (2-color indication)			3-wire (PNP)				5 V, 12 V	M9PVV	M9PW	●	●	●	○	—	○		
				2-wire				12 V	M9BVV	M9BW	●	●	●	○	—	○		
				3-wire (NPN)				5 V, 12 V	M9NAV**	M9NA**	○	○	●	○	—	○		IC circuit
				3-wire (PNP)				12 V	M9PAV**	M9PA**	○	○	●	○	—	○		
	2-wire			12 V				M9BAV**	M9BA**	○	○	●	○	—	○	—		
	Magnetic field resistant (2-color indication)			2-wire (Non-polar)				—	—	P3DW	●	—	●	●	—	○		—
Reed auto switch	——	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	—	●	—	—	—	IC circuit	—	
				2-wire	24 V	12 V	100 V	A93V	A93	●	—	●	—	—	—	—	—	Relay, PLC
						5 V,12 V	100 V or less	A90V	A90	●	—	●	—	—	—	—	IC circuit	

* Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.
If water resistance is needed, we recommend water resistant cylinders be used. (Page 156)

* Lead wire length symbols: 0.5 m Nil (Example) M9NV
1 m M (Example) M9NVW
3 m L (Example) M9NWL
5 m Z (Example) M9NWZ

* There are other applicable auto switches other than the listed above. For details, refer to page 175.

* For details about auto switches with pre-wired connector, refer to pages 1328 and 1329 in Best Pneumatics No. 2.