

# Compact Cylinder: Standard Double Acting, Single Rod

## CQ2 Series

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

### How to Order

Without auto switch  
ø12 to ø25

CQ2 B 20 - 30 D

Without auto switch  
ø32 to ø100

CQ2 B 32 - 30 D Z

With auto switch

CDQ2 B 32 - 30 D M Z - L W - M9BW

#### Mounting

<b>B</b>	Through-hole (Standard)	<b>F</b>	Rod flange
<b>A</b>	Both ends tapped	<b>G</b>	Head flange
<b>L</b>	Foot	<b>D</b>	Double clevis
<b>LC</b>	Compact foot		

\* Mounting brackets are shipped together (but not assembled).  
\* Cylinder mounting bolts are not included. Order them separately referring to "Mounting Bolt for CQ2" on pages 778 and 783.

#### Type

<b>Nii</b>	Pneumatic
<b>H</b>	Air-hydro (Note 1)

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

With auto switch  
(Built-in magnet)

#### 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

<b>Nii</b>	M thread	ø12 to ø25
	Rc	
<b>TN</b>	NPT	ø32 to ø100
<b>TF</b>	G	
<b>F</b>	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.

#### Mounting bolt

<b>Nii</b>	None
<b>L</b>	Shipped together

\* Mounting bolt is shipped together only when the mounting bracket is "B".

\* For details about the mounting bolt sizes, refer to pages 778 and 783.  
\* Mounting bolt is shipped together.  
\* Order mounting bolts separately for made to order specifications.

#### Auto switch mounting groove

<b>Z</b>	ø12 to ø25	2 surfaces
	ø32 to ø100	4 surfaces

#### Body option

<b>Nii</b>	Standard (Rod end female thread)
<b>F</b>	With boss on head end
<b>C</b>	With rubber bumper (Note 4)
<b>M</b>	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.

#### Number of auto switches

<b>Nii</b>	2 pcs.
<b>S</b>	1 pc.
<b>n</b>	"n" pcs.

#### Auto switch

<b>Nii</b>	Without auto switch
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\* Refer to the below table for applicable auto switches.

#### Made to Order

Refer to the next page for details.

#### Rod end bracket (Refer to pages 796 and 797.)

<b>Nii</b>	None
<b>D</b>	Simple joint A type + Joint
<b>E</b>	Simple joint B type + Joint
<b>V</b>	Single knuckle joint
<b>W</b>	Double knuckle joint

\* The single knuckle joint and double knuckle joint cannot be mounted for the rod end female thread.

\* A knuckle joint pin is not provided with the single knuckle joint.

\* The simple joint A and B types cannot be mounted for the rod end male thread.

\* Rod end bracket is shipped together.

\* Bore sizes available with the simple joint (D, E) are ø32 to ø100.

### 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

### Cylinder stroke (mm)

Refer to page 774 and 775 for standard strokes and intermediate strokes.

### Action

<b>D</b>	Double acting
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### Applicable Auto Switches (Refer to pages 1575 to 1701 for further information on auto switches.)

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	1	3	5	None		
									(Nii)	(M)	(L)	(Z)			
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	—	<b>M9NV</b>	<b>M9N</b>	●	●	○	○	○	IC circuit	
				3-wire (PNP)			<b>M9PV</b>	<b>M9P</b>	●	●	○	○			
				2-wire			<b>M9BV</b>	<b>M9B</b>	●	●	○	○	—		
				3-wire (NPN)			<b>M9NVW</b>	<b>M9NW</b>	●	●	○	○			
	Diagnostic indication (2-color indicator)	Grommet	Yes	3-wire (PNP)	24 V	—	<b>M9PVW</b>	<b>M9PW</b>	●	●	○	○	○	IC circuit	
				2-wire			<b>M9BVW</b>	<b>M9BW</b>	●	●	○	○			
				3-wire (NPN)			<b>M9NAV<sup>*1</sup></b>	<b>M9NA<sup>*1</sup></b>	○	○	○	○	IC circuit		
				3-wire (PNP)			<b>M9PAV<sup>*1</sup></b>	<b>M9PA<sup>*1</sup></b>	○	○	○	○			
Water resistant (2-color indicator)	Grommet	Yes	2-wire	24 V	—	<b>M9BAV<sup>*1</sup></b>	<b>M9BA<sup>*1</sup></b>	○	○	○	○	○	—		
			2-wire (Non-polar)			—	<b>P3DWA</b>	●	●	○	○				
			3-wire (NPN equivalent)			—	<b>A96V</b>	<b>A96</b>	●	●	○	○		IC circuit	
			2-wire			—	<b>A93V<sup>*2</sup></b>	<b>A93</b>	●	●	○	○			
Read auto switch	—	Grommet	Yes	2-wire	24 V	—	<b>A90V</b>	<b>A90</b>	●	●	○	○	○	IC circuit	
				No	2-wire	24 V	5 V, 12 V	100 V	100 V or less	<b>A93V<sup>*2</sup></b>	<b>A93</b>	●	●		○

\*1 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 949)

\*2 1 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... Nii (Example) M9NV  
1 m ..... M (Example) M9NVW  
3 m ..... L (Example) M9NVW  
5 m ..... Z (Example) M9NVW

\* Solid state auto switches marked with "○" are produced upon receipt of order.  
\* The D-P3DWA type is available from ø25 to ø100 only.

\* There are other applicable auto switches other than the listed above. For details, refer to page 970.

\* For details about auto switches with pre-wired connector, refer to pages 1648 and 1649.