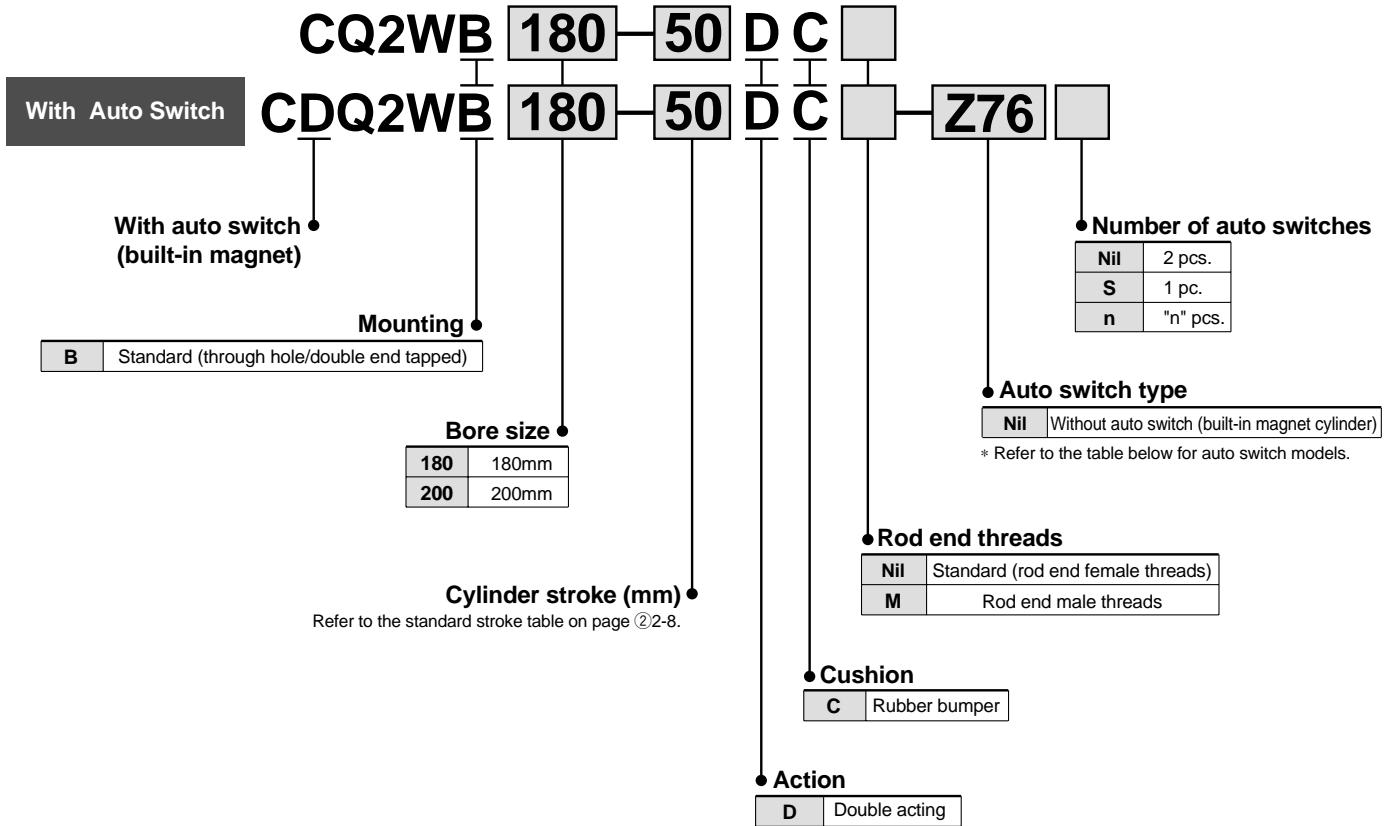


Compact Cylinder/Double Acting: Double Rod

Series CQ2W

ø180, ø200

How to Order



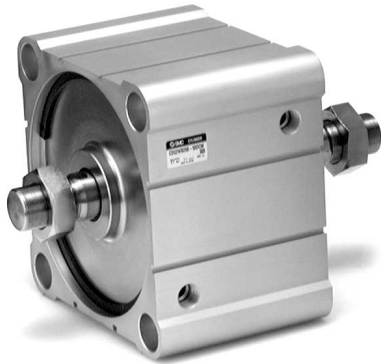
Applicable auto switches

| Type | Special function | Electrical entry | Indicator light | Wiring (output) | Load voltage | | Auto switch models | | Lead wire length (mm)* | | | Applicable loads | | Detailed specifications | |
|--------------------|--|------------------|-----------------|-----------------|--------------|---------|----------------------------|--------------|------------------------|-------|------------|------------------|------------|-------------------------|------|
| | | | | | DC | AC | Electrical entry direction | 0.5 (Nil) | 3 (L) | 5 (Z) | | | | | |
| Reed switch | - | Grommet | Yes | 3 wire | — | 5V | — | — | Z76 | ● | ● | — | IC circuit | Relay, PLC | P.9 |
| | | | | 2 wire | 24V | 12V | 100V | — | Z73 | ● | ● | ● | — | | |
| | | | No | 5V, 12V | 100V or less | — | Z80 | ● | ● | — | IC circuit | | | | |
| Solid state switch | Diagnostic indication (2 color indicator) Water resistant (2 color indicator) | Grommet | Yes | 3 wire (NPN) | 24V | 5V, 12V | — | Y69A | Y59A | ● | ● | ○ | IC circuit | Relay, PLC | P.10 |
| | | | | 3 wire (PNP) | | | | Y7PV | Y7P | ● | ● | ○ | IC circuit | | |
| | | | | 2 wire | | | | Y69B | Y59B | ● | ● | ○ | — | | |
| | | | | 3 wire (NPN) | | | | Y7NWV | Y7NW | ● | ● | ○ | IC circuit | | |
| | | | | 3 wire (PNP) | | | | Y7PWV | Y7PW | ● | ● | ○ | — | | |
| | | | | 2 wire | | | | Y7BWV | Y7BW | ● | ● | ○ | — | | |
| | | | | 12V | | | | — | Y7BA | — | ● | ○ | — | | |

* Lead wire length symbols: 0.5m ... Nil (Example) Y69B
 3m L Y69BL
 5m Z Y69BZ

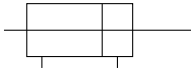
** Auto switches marked with a "○" symbol are produced upon receipt of order.

Series CQ2



Symbol

Double acting: Double rod



Specifications

| | |
|-------------------------------|---|
| Fluid | Air |
| Proof pressure | 1.05MPa |
| Maximum operating pressure | 0.7MPa |
| Minimum operating pressure | 0.05MPa |
| Ambient and fluid temperature | Without auto switch: -10°C to 70°C (with no freezing) |
| | With auto switch: -10°C to 60°C (with no freezing) |
| Lubrication | Non-lube type |
| Cushion | Rubber bumper |
| Rod end threads | Female thread |
| Thread tolerance | JIS class 2 |
| Stroke length tolerance | +1.4 0 |
| Mounting brackets | Basic type |
| Mounting | Through hole/Double end tapped |

Standard Strokes

| Bore size (mm) | Standard strokes (mm) |
|-----------------|---|
| 180, 200 | 10, 20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300 |

Minimum Strokes for Auto Switch Mounting

| | | D-Z7, Z8 | D-Y5, Y6, Y7 | D-Y7□W, D-Y7BAL |
|-----------------|-------------------------------------|----------|--------------|-----------------|
| 180, 200 | 2 pcs. (different sides, same side) | 10 | 5 | 15 |
| | 1 pc. | 5 | 5 | 10 |

Theoretical Output/Double Acting

Unit: N

| Bore Size (mm) | Operating pressure (MPa) | | | | | |
|----------------|--------------------------|------|-------|-------|-------|-------|
| | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 |
| 180 | 4838 | 7257 | 9676 | 12095 | 14514 | 16933 |
| 200 | 6032 | 9048 | 12064 | 15080 | 18096 | 21112 |

Do not apply loads greater than 50% of the theoretical output.

Weight Table

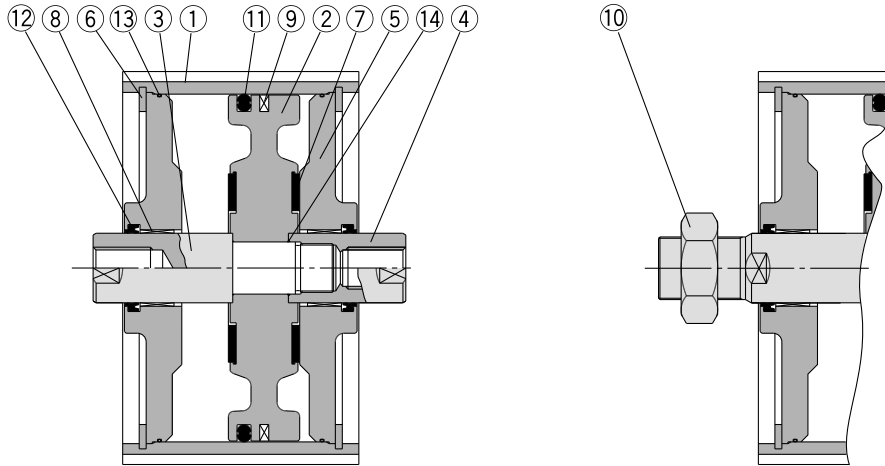
Unit: kg

| | Standard strokes (mm) | | | | | | | | | | | | | With magnet | Rod end male threads |
|------------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------------|----------------------|
| | 10 | 20 | 30 | 40 | 50 | 75 | 100 | 125 | 150 | 175 | 200 | 250 | 300 | Additional weight | Additional weight |
| 180 | 12.18 | 12.70 | 13.23 | 13.75 | 14.28 | 15.59 | 16.90 | 18.21 | 19.52 | 20.83 | 22.14 | 24.76 | 27.39 | 0.08 | 1.48 |
| 200 | 15.63 | 16.22 | 16.80 | 17.39 | 17.97 | 19.44 | 20.91 | 22.37 | 22.84 | 25.30 | 26.77 | 29.70 | 32.63 | 0.09 | 1.48 |

Example) CDQ2WB200-100DCM

| | | |
|-------------------|----------------------|-----------------|
| Basic weight | CQ2WB200-100DC | 20.91kg |
| Additional weight | Built-in magnet | 0.09kg |
| | Rod end male threads | 1.48kg |
| | | <u> </u> |
| | | Total 22.48kg |

Construction



Rod end male threads

Parts list

| No. | Description | Material | Note |
|-----|----------------------|------------------------|--------------------|
| 1 | Cylinder tube | Aluminum alloy | Hard anodized |
| 2 | Piston | Aluminum alloy casting | Chromated |
| 3 | Piston rod A | Carbon steel | Hard chrome plated |
| 4 | Piston rod B | Carbon steel | Hard chrome plated |
| 5 | Rod cover | Cast iron | Nickel plated |
| 6 | Snap ring | Carbon tool steel | Phosphate coated |
| 7 | Bumper | Polyurethane | |
| 8 | Bushing | Lead-bronze casting | |
| 9 | Magnet | - | CDQ2B only |
| 10 | Rod end nut | Rolled steel | Nickel plated |

Parts list

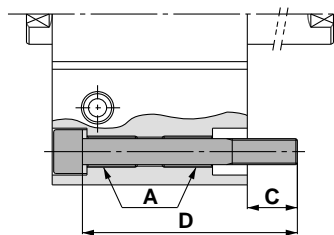
| No. | Description | Material | Note |
|-----|----------------------|----------|------|
| 11 | Piston seal | NBR | |
| 12 | Rod seal | NBR | |
| 13 | Tube gasket | NBR | |
| 14 | Piston gasket | NBR | |

Replacement parts: Seal kits

| Bore size (mm) | Seal kit No. | Contents |
|----------------|--------------|---|
| 180 | CQ2WB180-PS | A set of Nos.11, 12 and 13 from the table above |
| 200 | CQ2WB200-PS | |

Mounting

Mounting/Through hole type mounting bolts are available.
 How to order: Add "Bolt" in front of the bolts to be used.
 (Example) Bolt M18 x 125 ℓ



Note1) When mounting with through hole type mounting bolts, be sure to use the flat washers which are included.

Note 2) When mounting a cylinder with a stroke over 100mm, use the section A mounting threads.

| Model | C | D | Mounting bolt |
|---------------------|----|-----|---------------|
| C (D) Q2WB180- 10DC | 36 | 125 | M18 x 125 ℓ |
| C (D) Q2WB180- 20DC | | 135 | M18 x 135 ℓ |
| C (D) Q2WB180- 30DC | | 145 | M18 x 145 ℓ |
| C (D) Q2WB180- 40DC | | 155 | M18 x 155 ℓ |
| C (D) Q2WB180- 50DC | | 165 | M18 x 165 ℓ |
| C (D) Q2WB180- 75DC | | 190 | M18 x 190 ℓ |
| C (D) Q2WB180-100DC | | 215 | M18 x 215 ℓ |

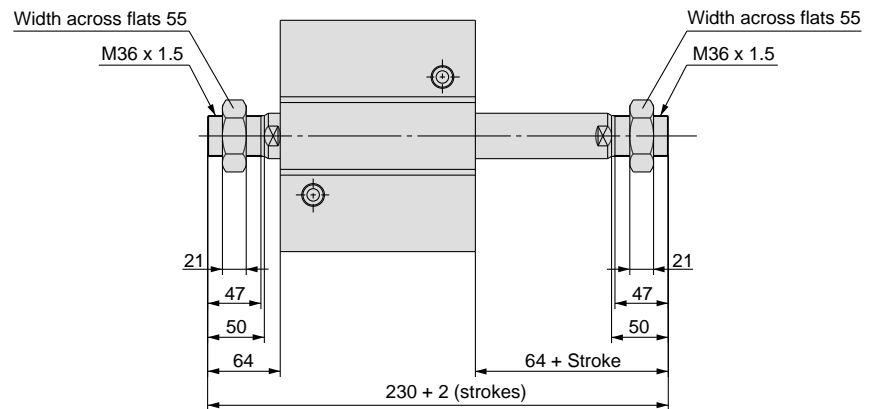
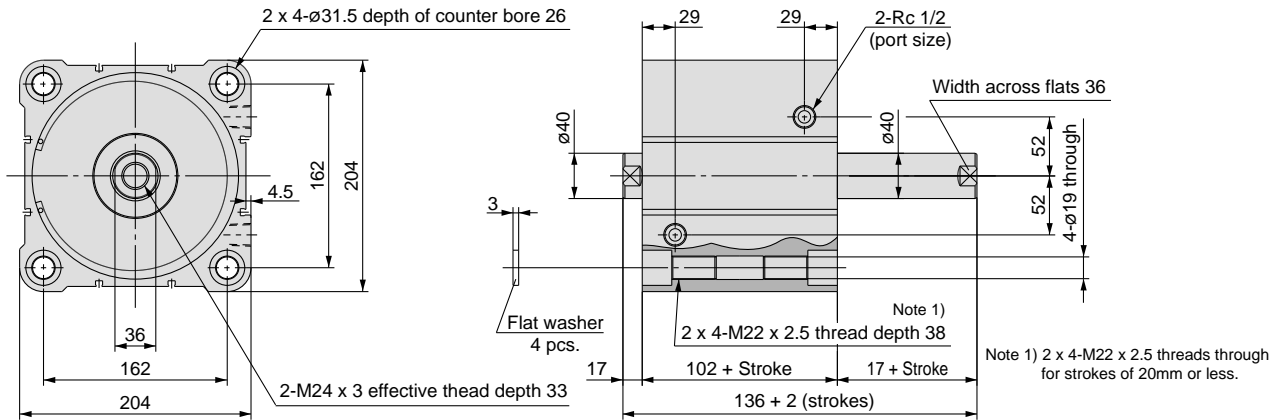
| Model | C | D | Mounting bolt |
|---------------------|----|-----|---------------|
| C (D) Q2WB200- 10DC | 39 | 135 | M18 x 135 ℓ |
| C (D) Q2WB200- 20DC | | 145 | M18 x 145 ℓ |
| C (D) Q2WB200- 30DC | | 155 | M18 x 155 ℓ |
| C (D) Q2WB200- 40DC | | 165 | M18 x 165 ℓ |
| C (D) Q2WB200- 50DC | | 175 | M18 x 175 ℓ |
| C (D) Q2WB200- 75DC | | 200 | M18 x 200 ℓ |
| C (D) Q2WB200-100DC | | 225 | M18 x 225 ℓ |

Series CQ2

Dimensions

Dimensions are the same with and without auto switches.

Ø180



Ø200

