

Compact Hydraulic Cylinder Double Acting/Single Rod

3.5 MPa

Series **CH** **QB**

ø20, ø32, ø40, ø50, ø63, ø80, ø100

How to Order

CHQB 50 - 30 D

With Auto Switch **CHDQB 50 - 30 D** **M9BW**

• **With auto switch (built-in magnet)**

• **Mounting: Basic style**

• **Bore size**

| | |
|-----|--------|
| 20 | 20 mm |
| 32 | 32 mm |
| 40 | 40 mm |
| 50 | 50 mm |
| 63 | 63 mm |
| 80 | 80 mm |
| 100 | 100 mm |

• **Cylinder stroke (mm)**
Refer to the standard stroke table on page 165.

• **Action: Double acting**

• **Auto switch type**

| | |
|-----|---------------------|
| Nil | Without auto switch |
|-----|---------------------|

* Select applicable auto switch models from the table below.

• **Number of auto switches**

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

• **Rod end thread type**

| | |
|-----|---------------|
| Nil | Female thread |
| M | Male thread |

* Rod end nut is provided standard for male thread type.

• **Made to order specifications**
For details, refer to page 165.

Built-in Magnet Cylinder Model

If a built-in magnet cylinder without auto switch is required, there is no need to enter the symbol for the auto switch.
(Example) CHDQB50-100D

Applicable Auto Switches: Refer to pages 347 to 406 for further details on each auto switch.

| 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 switch | _____ | Grommet | Yes | 3-wire (NPN) | 5 V, 12 V | — | M9NV | M9N | ● | ● | ● | ○ | — | ○ | IC circuit | Relay PLC | |
| | | 3-wire (PNP) | | M9PV | | | M9P | ● | ● | ● | ○ | — | ○ | | | | |
| | Connector | 2-wire | | 12 V | M9BV | | M9B | ● | ● | ● | ○ | — | ○ | — | | | |
| | | J79C | | — | ● | | — | ● | ● | ● | — | | | | | | |
| | Diagnostic indication (2-color display) | Grommet | | 3-wire (NPN) | 5 V, 12 V | | M9NWV | M9NW | ● | ● | ● | ○ | — | ○ | IC circuit | | |
| | | | | 3-wire (PNP) | | | M9PWV | M9PW | ● | ● | ● | ○ | — | ○ | | | |
| | 2-wire | | | 12 V | M9BWV | | M9BW | ● | ● | ● | ○ | — | ○ | — | | | |
| | 3-wire (NPN) | | | 5 V, 12 V | M9NAV | | M9NA | ○ | ○ | ● | ○ | — | ○ | | IC circuit | | |
| | 3-wire (PNP) | | | | M9PAV | | M9PA | ○ | ○ | ● | ○ | — | ○ | | | | |
| | 2-wire | | | 12 V | M9BAV | | M9BA | ○ | ○ | ● | ○ | — | ○ | — | | | |
| 4-wire | 5 V, 12 V | — | F79F | ● | — | ● | ○ | — | ○ | IC circuit | | | | | | | |
| Reed switch | _____ | Grommet | Yes | 3-wire (NPN equiv.) | — | 5 V | — | A96V | A96 | ● | — | ● | — | — | — | IC circuit | Relay PLC |
| | | | | | | — | 200 V | A72 | A72H | ● | — | ● | — | — | — | | |
| | | | | | | 12 V | 100 V | A93V | A93 | ● | — | ● | — | — | — | | |
| | | | | | | 5 V, 12 V | 100 V or less | A90V | A90 | ● | — | ● | — | — | — | | |
| | | Connector | | | | 12 V | — | A73C | — | ● | — | ● | ● | ● | — | — | |
| | | | | | | 5 V, 12 V | 24 V or less | A80C | — | ● | — | ● | ● | — | — | | |
| | | | | | | — | — | A79W | — | ● | — | ● | — | — | — | | |
| | | | | | | — | — | — | — | — | — | — | — | — | — | | |

* Lead wire length symbols: 0.5 m Nil (Example) M9NW
1 m M (Example) M9NWM
3 m L (Example) M9NWL
5 m Z (Example) M9NWZ
None N (Example) J79CN

* Solid state auto switches marked "○" are produced upon receipt of order.

* Since there are applicable auto switches other than listed, refer to page 178 for details.

* For details about auto switches with pre-wired connector, refer to pages 389 and 390.

* For mounting D-A9□(V), M9□(V), M9□W(V), M9□A(V)L with ø32 to ø50 to a surface other than the port surface, order an auto switch mounting bracket separately. Refer to page 179 for details.

Compact Hydraulic Cylinder Double Acting/Single Rod: 3.5 MPa **Series CH□QB**

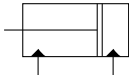
Specifications



Made to order specifications
(For details, refer to page 170)

| Symbol | Specifications |
|--------|---|
| -XB10 | Intermediate stroke (Using exclusive body) |

JIS symbol



Hydraulic Fluid Compatibility

| Hydraulic fluid | Compatibility |
|----------------------------------|----------------|
| Standard mineral hydraulic fluid | Compatible |
| W/O hydraulic fluid | Compatible |
| O/W hydraulic fluid | Compatible |
| Water/Glycol hydraulic fluid | Not compatible |
| Phosphate hydraulic fluid | Not compatible |

| Bore size (mm) | 20 | 32 | 40 | 50 | 63 | 80 | 100 |
|--------------------------------------|--------------------------------------|----|----|----|----|----|-----|
| Action | Double acting/Single rod | | | | | | |
| Fluid | Hydraulic fluid | | | | | | |
| Nominal pressure | 3.5 MPa | | | | | | |
| Proof pressure | 5.0 MPa | | | | | | |
| Maximum allowable pressure | 3.5 MPa | | | | | | |
| Minimum operating pressure | 0.3 MPa | | | | | | |
| Ambient and fluid temperature | Without auto switch: -10° to 80°C | | | | | | |
| | With auto switch: -10° to 60°C | | | | | | |
| Piston speed | 8 to 100 mm/s | | | | | | |
| Cushion | None | | | | | | |
| Rod end thread | Standard: Female thread, Male thread | | | | | | |
| Stroke length tolerance | $+1.0$ 0 mm | | | | | | |
| Mounting style | Basic style | | | | | | |
| Mounting | Through hole | | | | | | |

Note) Refer to page 134 for definitions of terms related to pressure.

Standard Strokes

| Bore size (mm) | Standard strokes (mm) |
|----------------|--|
| 20 | 5, 10, 15, 20, 25, 30, 35, 40, 45, 50 |
| 32 | 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100 |
| 40 | 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100 |
| 50 | 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100 |
| 63 | 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100 |
| 80 | 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100 |
| 100 | 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100 |

Note) Consult with SMC regarding the manufacture of strokes other than the above.

CHQ

CHK□

CHN

CHM

CHS□

CH2□

CHA

Related
Equipment

D-□