

Compact Cylinder: Plate Type Double Acting, Single Rod

Series *CQU*

Size: 20, 25, 32, 40

How to Order

CQU B 20 - 30 - M9BW

Mounting

B	Through-hole/Both ends tapped common (Standard)
L	Vertical foot
M	Lateral foot
D	Double clevis

* Support brackets are shipped together, (but not assembled).
* Cylinder mounting bolt is not included.
Order it separately from "Mounting Bolt for CQU" on page 3.

Number of auto switches

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

Auto switch

Nil	Without auto switch (Built-in magnet)
------------	---------------------------------------

* For applicable auto switch models, refer to the table below.

Size

20	Piston area equivalent to 20 mm
25	Piston area equivalent to 25 mm
32	Piston area equivalent to 32 mm
40	Piston area equivalent to 40 mm

Rod end thread

Nil	Rod end female thread
M	Rod end male thread

Cylinder stroke (mm)

Size	Stroke
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

Applicable Auto Switches/Refer to pages 13 through to 16 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 (Nil)	1 (M)	3 (L)		5 (Z)			
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV**	M9N**	●	●	●	○	○	IC circuit	Relay, PLC	
				3-wire (PNP)		12 V		M9PV**	M9P**	●	●	●	○	○			
				2-wire				M9BV**	M9B**	●	●	●	○	○			
	Diagnostic indication (2-color indication)			3-wire (NPN)	5 V, 12 V	M9NWV		M9NW	●	●	●	○	○	IC circuit			
				3-wire (PNP)		M9PWV		M9PW	●	●	●	○	○				
	Water resistant (2-color indication)			2-wire	12 V	M9BWV		M9BW	●	●	●	○	○	—			
				3-wire (NPN)		M9NAV***		M9NA***	○	○	●	○	○		IC circuit		
				3-wire (PNP)	5 V, 12 V	M9PAV***		M9PA***	○	○	●	○	○	—			
				2-wire		12 V		M9BAV***	M9BA***	○	○	●	○		○		
				Reed switch	—	Grommet		Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●		—
No	2-wire	24 V	12 V				100 V		A93V	A93	●	—	●	—	—	—	Relay, PLC
							100 V or less		A90V	A90	●	—	●	—	—	—	

* Lead wire length symbols: 0.5 m Nil (Example) M9NV
1 m M (Example) M9NV**
3 m L (Example) M9NWV
5 m Z (Example) M9NWZ

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

* For details about the auto switch with pre-wired connector, refer to Best Pneumatics.

* Auto switches are shipped together, (but not assembled).

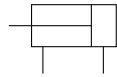
** The D-M9□M and M9□VM type (lead wire length: 1 m) will be available with products delivered from August 2008 onwards.

*** The water resistant improved D-M9□A and M9□AV type can be mounted, but cylinders are not designed to be water resistant improved construction.

Note) The D-M9□V, M9□WV, M9□AV, and A9□V type cannot be mounted on the port surface depending on the cylinder's stroke and the fitting size for piping. Please confirm SMC separately.



JIS Symbol



Specifications

Equivalent bore size (mm)	20	25	32	40
Action	Double acting, Single rod			
Fluid	Air			
Proof pressure	1.0 MPa			
Maximum operating pressure	0.7 MPa			
Minimum operating pressure	0.08 MPa	0.05 MPa		
Ambient and fluid temperature	Without auto switch: −10 to 70°C (No freezing)			
	With auto switch: −10 to 60°C (No freezing)			
Cushion	Rubber bumper			
Rod end thread	Female thread, Male thread			
Stroke length tolerance	+1.4 0			
Mounting	Through-hole/Both ends tapped common			
Piston speed	50 to 500 mm/s			

* The stroke length tolerance does not include the changed amount of the rubber bumper due to compression.

Theoretical Output

Size	Rod size (mm)	Operating direction	Piston area (mm ²)	Operating pressure (MPa)		
				0.3	0.5	0.7
20	10	IN	236	71	118	165
		OUT	314	94	157	220
25	10	IN	412	124	206	288
		OUT	491	147	246	344
32	14	IN	650	195	325	455
		OUT	804	241	402	563
40	14	IN	1103	331	552	772
		OUT	1256	377	628	879

Standard Stroke

Size	Standard stroke
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

* Other intermediate strokes can be manufactured upon receipt of order. Please contact SMC.

Support Bracket Part No.

Size	Vertical foot ^{Note 1)}		Lateral foot		Double clevis
	Rod end	Head end	Rod end	Head end	
20	CQU-LR20	CQU-LH20	CQU-MR20	CQU-MH20	CQU-D20
25	CQU-L25		CQU-M25		CQU-D25
32	CQU-L32		CQU-M32		CQU-D32
40	CQU-L40		CQU-M40		CQU-D40

Note 1) When ordering a foot bracket of size 20, check which end, rod end or head end, it will be on.

For other sizes, the part number is common to both ends.

Note 2) Parts belonging to each bracket are as follows.

Vertical foot, Lateral foot: Body mounting bolt

Double clevis: Clevis pin, C-type retaining ring for shaft, Body mounting bolt