

Compact Cylinder with Solenoid Valve/ Guide Rod Type

Series **CVQM**

ø32, ø40, ø50, ø63



How to Order

CVQM 32-30-M9BW - 5 M

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm

Cylinder stroke (mm)
Refer to the next page for "Standard Stroke" and "Intermediate Stroke".

Auto switch

Nil	Without auto switch (Built-in magnet)
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* For applicable auto switch models, refer to the below table.

Number of auto switches

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

Rated voltage

5	24 VDC
6	12 VDC

Port thread type

Nil	M5 x 0.8	ø32 ø40
	Rc	
F	G	ø50
N	NPT	ø63

Piping

Nil	Standard
P	Axial

Standard piping
Axial piping

Manual override



Nil	Non-locking push type
B	Locking slotted type

Surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar)
U	With light/surge voltage suppressor (Non-polar)

Electrical entry

M	MO
M-type plug connector with lead wire (300 mm)	M-type plug connector without connector

* For lead wire lengths other than 300 mm, refer to the plug connector lead wire. (Page 5)

Applicable Auto Switches/Refer to pages 11 to 13 for detailed auto switch specifications.

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	Electrical entry		0.5 (Nil)	1 (M)	3 (L)	5 (Z)			
								Perpendicular	In-line							
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			5 V, 12V		M9BV		M9B	●	●	●	○	○	—		
	3-wire (NPN)					M9NVW		M9NW	●	●	●	○	○			
	3-wire (PNP)					M9PWV		M9PW	●	●	●	○	○			
	2-wire					M9BVV		M9BW	●	●	●	○	○			
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	●	—	●	—	—	—	IC circuit
			5 V, 12 V			100 V or less	A90V	A90	●	—	●	—	—			

* Lead wire length symbols: 0.5 m Nil
1 m M
3 m L
5 m Z

(Example) M9NW
M9NWM
M9NWL
M9NWZ

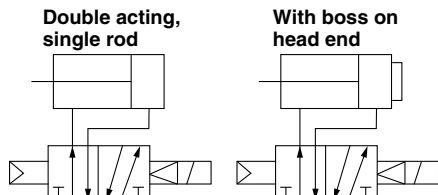
* Solid state auto switches marked with "○" are produced upon receipt of order.
* For details about auto switches with pre-wired connector, refer to pages 1784 and 1785 of Best Pneumatics No. 3.
* Auto switches are shipped together, (but not assembled).



⚠ Caution

1. Do not separate the cylinder from the valve.
2. Do not disassemble or modify the guide rod.
3. This product should not be used as a stopper.

JIS Symbol



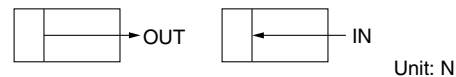
Standard Stroke

Bore size	Standard stroke (mm)
32 *1	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 *2	10, 15, 20, 25, 30, 35 40, 45, 50, 75, 100
63	10, 15, 20, 25, 30, 35 40, 45, 50, 75, 100

*1 The outline dimensions for 5 mm stroke will be the same as those for 10 mm stroke.

*2 The outline dimensions for 10 mm stroke will be the same as those for 15 mm stroke.

Theoretical Output



Bore size (mm)	Operating direction	Operating pressure (MPa)		
		0.3	0.5	0.7
32	IN	181	302	422
	OUT	241	402	563
40	IN	317	528	739
	OUT	377	628	880
50	IN	495	825	1150
	OUT	589	982	1370
63	IN	840	1400	1960
	OUT	936	1560	2184

Cylinder Specifications

Bore size (mm)	32	40	50	63
Action	Double acting, Single rod			
Fluid	Air (Non-lube)			
Proof pressure	1.0 MPa			
Maximum operating pressure	0.7 MPa			
Minimum operating pressure	0.15 MPa			
Ambient and fluid temperature	−10 to 50°C (No freezing)			
Stroke tolerance	0 to +1.0 mm*			
Mounting	Through-hole/Both ends tapped			
Piston speed	50 to 500 mm/s		50 to 300 mm/s	
Cushion	Rubber bumper			

* Stroke length tolerance dose not include the amount of bumper change.

Valve Specifications

Type of actuation	2-position single
Manual override	Non-locking push type/Locking slotted type
Pilot exhaust	Main/Pilot valve common exhaust type
Mounting orientation	Unrestricted (based on cylinder mounting orientation)
Enclosure	Dustproof

Solenoid Specifications

Electrical entry	M-type plug connector
Coil rated voltage	DC 24, 12 (V)
Allowable voltage range ^{Note)}	±10% of the rated voltage
Power consumption	DC 0.35 (With light: 0.4) W
Surge voltage suppressor	Diode (Non-polar: Varistor)
Indicator light	LED

Note) The S and Z types of surge voltage suppressor have an internal circuit allowing voltage drop, so use within the following allowable voltage range.

S, Z type 24 VDC: -7% to +10%
12 VDC: -4% to +10%

Intermediate Stroke

Part no.	Refer to "How to Order" for standard model numbers. (Previous page)	
Description	Spacers are installed in a cylinder with standard stroke.	
	Bore size	Description
	32	Available in 1 mm stroke increments
Stroke range (mm)	40, 50, 63	Available in 5 mm stroke increments
	Bore size	Stroke range
	32	1 to 99
Example	40, 50, 63	5 to 95
	Part no.: CVQM32-95-□ A spacer 5 mm in width is installed in standard cylinder CVQM32-100-□. B dimension: 133 mm	

Weight

Bore size (mm)	Stroke (mm)												Unit (g)
	5	10	15	20	25	30	35	40	45	50	75	100	
32	349	344	368	393	417	441	465	489	514	538	660	782	
40	435	464	492	520	548	577	605	633	661	690	828	966	
50	—	834	865	908	952	995	1039	1081	1125	1168	1386	1603	
63	—	1088	1139	1190	1241	1292	1343	1394	1445	1496	1751	2006	