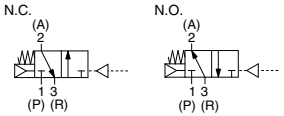
3 Port Air Operated Valve
Series VGA342



Symbol

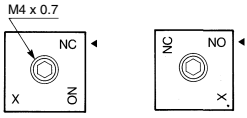


⚠ Precautions

Be sure to read this before handling. Refer to front matter 53 for Safety Instructions and pages 3 to 8 for 3/4/5 Port Solenoid Valve Precautions.

⚠Caution

1. Change of fluid passage



N.C. N.O.

Please note that the pressure in the valve should be exhausted when changing the fluid passage.
Loosen the hexagon socket head cap screw M4 x 0.7. Rotate the NC/NO switching plate and align the desired passage symbol NO/NC with the ◀ mark on the adapter plate. However, the X symbol is not applicable. For piping, refer to the table below.
Screw tightening torque M4: 1.4 N·m

Piping

Fluid passage \ Port	P	A	R
N.C.	Inlet side	Outlet side	EXH side (2 port: Plug)
N.O.	EXH side (2 port: Plug)	Outlet side	Inlet side

Take sufficient precations and confirm safety when changing the flow path and restarting after the changes.

2. Other

M5 size hole at the left side of the adapter plate is a breathing port for spool valve. Do not plug or tighten it.

How to Order

VGA342− [04] [ ] [A]

Port size

04	1/2
06	3/4
10	1

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Passage

A	Normally closed (N.C.)
B	Normally open (N.O.)

Specifications

Operating type	Air operated type
Type of actuation	N.C./N.O. (Changeable)
Return mechanism	Air + Spring
Fluid	Air
Operating pressure range	0.2 to 0.9 MPa
Pilot pressure	Same as operating pressure
Ambient temperature and operating fluid temperature	−10 to 50°C (No freezing. Refer to page 5.)
Lubrication	Not required (Use turbine oil Class 1 ISO VG32, if lubricated.)
Impact/Vibration resistance Note)	150/50 m/s²

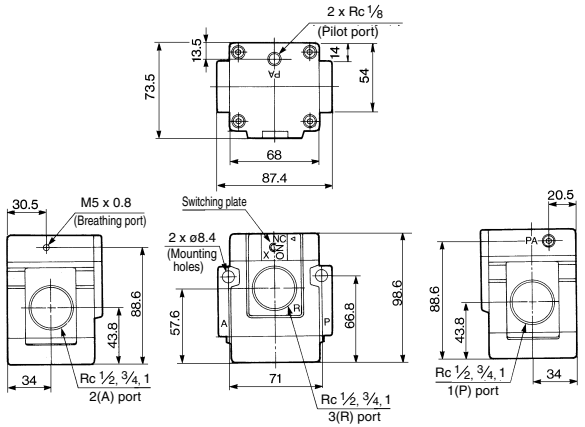
Note) Impact resistance: No malfunction from test using drop impact tester, to axis and right angle directions of main valve, each one time when pilot signal ON and OFF. (Value in the initial stage)
Vibration resistance: No malfunction occurs on the test with one sweep from 45 to 1000 Hz, to axis and right angle directions of main valve each time when pilot signal ON and OFF. (Value in the initial stage)

Flow Characteristics

Port size	Flow characteristics											
	1→2(P→A)			2→3(A→R)			2→1(A→P)			3→2(R→A)		
	C[dm³/(s·bar)]	b	Cv	C[dm³/(s·bar)]	b	Cv	C[dm³/(s·bar)]	b	Cv	C[dm³/(s·bar)]	b	Cv
1/2	26	0.38	7.0	27	0.37	7.4	27	0.36	7.3	25	0.37	6.8
3/4	38	0.30	9.8	38	0.32	9.8	40	0.22	9.8	40	0.20	9.6

Port size	Effective area (mm²)	
	1→2(P→A)	2→3(A→R)
1	210	235

Dimensions



Made to Order Specifications

Please contact SMC for detailed specifications, dimensions and delivery.

Made to Order

1 External Pilot, Air Operated Valve

How to Order

VGA342 R – 04 □

Solenoid valve specifications

R	External pilot

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

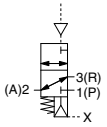
Port size

04	1/2
06	3/4
10	1

Specifications

Valve type	External pilot, air operated valve	
Type of actuation	Universal porting type	
Fluid	Air	
Operating pressure range	Main pressure	–101.2 kPa to 0.9 MPa
	Pilot pressure	Equivalent to main pressure (Min. 0.2 MPa or more)
	External pilot	Equivalent to pilot pressure
Ambient and fluid temperature	–10 to 50°C (No freezing. Refer to page 5.)	
Weight	1.2 kg	

Symbol



Dimensions

