



Direct Air Operated 3 Port Valve For Air, Gas, Vacuum, Water and Oil

Series VXA31/32



■ Able to control a wide variety of fluids. Wide variations of combination.

Application can be matched by simply choosing body material (Brass or Stainless steel) and seal material (NBR, FKM or EPDM).

■ C.O. type easy to use; operatable as either N.C. or N.O.

■ Easy to disassemble and reassemble in a short time.

■ High viscosity fluids (500 cSt).

VC□

VDW

VQ

VX2

VX□

VX3

VXA

VN□

LVC

LVA

LVH

LVD

LVQ

LQ

LVN

TI/
TIL

PA

PAX

PB

Variations

Valve ●

Common (C.O.)

● **Pilot port** (Free take off direction)

Port size ——— Rc 1/8
Pilot pressure ——— 0.25 to 0.7 MPa

Material ●

Body — Brass, Stainless steel
Seal — NBR, FKM, EPDM

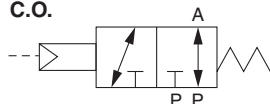
Model

Model	Port size Rc	Orifice size (mmø)
VXA3114	1/8, 1/4	1.5
VXA3124	1/8, 1/4	2.2
VXA3134	1/8, 1/4	3
VXA3224	1/4, 3/8	2.2
VXA3234	1/4, 3/8	3
VXA3244	1/4, 3/8	4

Common (C.O.)

JIS Symbol

C.O.



Fluid

Standard specifications	Option ^{Note)}
Water (Standard, up to 40°C)	Vacuum (up to 1.3×10^{-1} Pa) (V, M)
Air (Standard, Dry)	Non-leak (10^{-6} Pa·m ³ /s or less) (V, M)
Turbine oil	
Vacuum (up to 1.3×10^2 Pa)	
Carbon dioxide (CO ₂), Nitrogen gas (N ₂)	



Note) Refer to page 17-3-14 "Applicable Fluids Check List" for details of special fluids outside of the standard options and specifications.

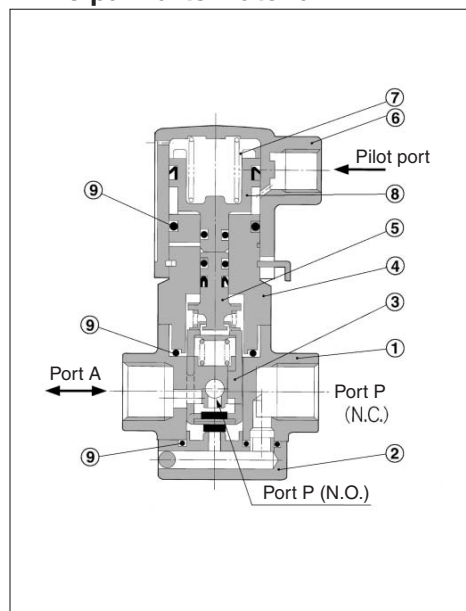
Model/Valve Specifications

Port size	Orifice size (mmø)	Model	Max. operating pressure differential (MPa)	Flow characteristics					Max. system pressure (MPa)	Proof pressure (MPa)	Weight (g)		
				Water, Oil		Air							
				Av x 10 ⁻⁶ (m²)	Cv converted	C [dm³/(s·bar)]	b	Cv					
1/8 (6A)	1.5	VXA3114	1.0	1.9	0.08	0.29	0.32	0.08	1.0	1.5	280		
	2.2	VXA3124	0.5	3.8	0.16	0.60	0.25	0.15					
	3	VXA3134	0.3	8.0	0.24	0.82	0.20	0.20					
1/4 (8A)	1.5	VXA3114	1.0	1.9	0.08	0.29	0.32	0.08			1.0	1.5	410 280
	2.2	VXA3124	0.5	3.8	0.16	0.60	0.25	0.15					
		VXA3224	1.0	4.6	0.19	0.64	0.40	0.17					
	3	VXA3134	0.3	8.0	0.24	0.82	0.20	0.20					
		VXA3234	0.6	9.0	0.33	1.1	0.25	0.27					
	4	VXA3244	0.3	12	0.50	1.6	0.20	0.38					
3/8 (10A)	2.2	VXA3224	1.0	4.6	0.19	0.64	0.40	0.17			410		
	3	VXA3234	0.6	9.0	0.33	1.1	0.25	0.27					
	4	VXA3244	0.3	12	0.50	1.6	0.20	0.38					



Note) Refer to "Glossary" on page 17-3-15 for details of max. operating pressure differential and max. system pressure.

Construction/Principal Parts Material



No.	Description	Material	
		Standard	Option
①	Body assembly	Brass	Stainless steel
②	Retainer assembly	Brass	Stainless steel
③	Valve assembly	NBR, Polyacetal	FKM/EPDM, Stainless steel
④	Adapter	Brass	Stainless steel
⑤	Travel assembly	Stainless steel, NBR, Polyacetal	FKM/EPDM, Stainless steel
⑥	Pilot cover	Aluminum	—
⑦	Piston spring	Stainless steel	—
⑧	Piston assembly	Polyacetal, NBR	—
⑨	O-ring	NBR	FKM/EPDM

Operating Fluid and Ambient Temperature

Temperature conditions	Operating fluid temperature (°C)				Ambient temperature (°C)
	Water (Standard)	Air (Standard)	Oil (Standard)	Vacuum ⁽³⁾ (V, M)	
Maximum	40	60	40	40	40
Minimum	1	-5 ⁽¹⁾	-5 ⁽²⁾	-5	-5



Note 1) Dew point: -5°C or less Note 2) 500 cSt or less
Note 3) "V", "M" in parentheses are option symbols.

Tightness of Valve (Leak rate)

Seal material	Fluid	Air	Liquid	Non-leak, Vacuum ⁽²⁾
NBR, FKM, EPDM		1 cm ³ /min or less	0.1 cm ³ /min or less ⁽¹⁾	10 ⁻⁶ Pa·m ³ /s or less



Note 1) Differs depending on the operating conditions such as pressure, etc.
Note 2) Value on option "V", "M" (Non-leak, Vacuum).

Pilot Pressure

Model	Pressure (MPa)
VXA31□4	0.25 to 0.7
VXA32□4	

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The VX* series will be revised shortly.

How to Order

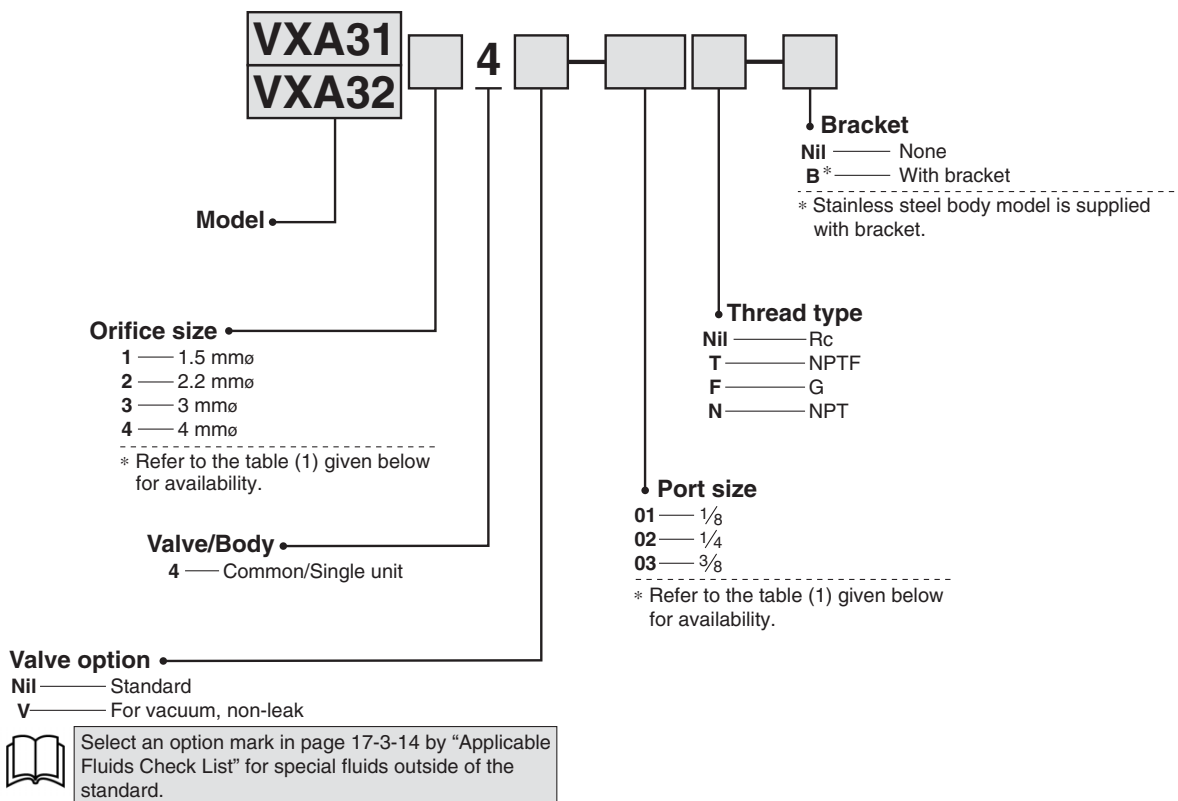


Table (1) Port/Orifice Size

Valve (Port size)		Orifice size (No.)			
VXA31	VXA32	1 (1.5 mmø)	2 (2.2 mmø)	3 (3 mmø)	4 (4 mmø)
01 (1/8)	—	●	●	●	—
02 (1/4)	—	●	●	●	—
—	02 (1/4)	—	●	●	●
—	03 (3/8)	—	●	●	●

Ordering example

(Example) Series VXA31, Orifice size 1.5 mmø, Rc 1/8
(Part no.) **VXA3114-01**

VC□

VDW

VQ

VX2

VX□

VX3

VXA

VN□

LVC

LVA

LVH

LVD

LVQ

LQ

LVN

TI/
TIL

PA

PAX

PB