

# Direct Air Operated 2 Port Valve

# VXA21/22 Series

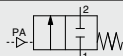
For Air, Water, Oil



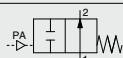
## Single Unit

### Valve

Normally closed (N.C.)



Normally open (N.O.)



### Material

Body — Brass (C37), Stainless steel  
Seal — NBR, FKM, EPDM

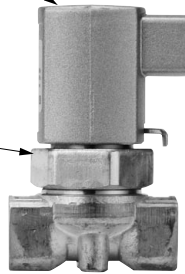
When the valve is closed, flow is blocked from port 1 to port 2. However, if the pressure in port 2 is higher than port 1, the valve will not be able to block the fluid.

### Pilot port (Free take off direction)

Port size — Rc $\frac{1}{8}$   
Pilot pressure — 0.25 to 0.7 MPa

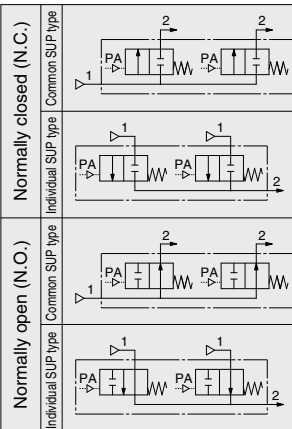
### Model

Model	Port size Rc	Orifice dia. (mmø)
VXA212 $\frac{2}{8}$	1/8, 1/4	3
VXA213 $\frac{3}{8}$	1/8, 1/4	4.5
VXA223 $\frac{3}{8}$	1/4, 3/8	4.5
VXA224 $\frac{4}{8}$	1/4, 3/8	6
VXA225 $\frac{5}{8}$	1/4, 3/8	8
VXA226 $\frac{6}{8}$	1/4, 3/8, 1/2	10



## Manifold

### Valve



### Material

Base — AL  
Body — Zn  
Seal — NBR, FKM, EPDM

### Manifold

Manifold system — B mount  
Manifold station — 2 to 10 station

When the valve is closed, flow is blocked from port 1 to port 2. However, if the pressure in port 2 is higher than port 1, the valve will not be able to block the fluid.

### Model

Manifold base	Individual port Rc	Common port Rc
VVXA211-station	1/8	3/8
VVXA212-station	1/4	
VVXA221-station	1/8	
VVXA222-station	1/4	

## VXA21/22 Series

# Common Specifications

### Standard Specifications

Valve specifications	Type		Single Unit	Manifold
	Valve construction		Pilot operated poppet	
	Withstand pressure	MPa	1.5	
	Body material		Brass (C37), Stainless steel	Zn
	Seal material		NBR, FKM, EPDM	NBR, FKM, EPDM

### Contents

For Air /Single Unit .....	P.410
For Air /Manifold .....	P.412
For Water /Single Unit .....	P.414
For Oil /Single Unit .....	P.416
For Oil /Manifold .....	P.418
Construction: Single Unit .....	P.420
Construction: Manifold .....	P.421
Dimensions: Single Unit .....	P.422
Dimensions: Manifold .....	P.423

# Direct Air Operated 2 Port Valve

## VXA21/22 Series

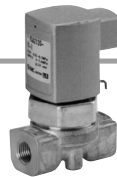
# Applicable Fluid Check List

**All Options (Single Unit)** Refer to page 410 for specifications and models.

VXA2    $\frac{0}{2}$   -   - 1 -

Option symbol

Fluid and application	Option symbol	Seal material	Body material	Holder material (drive part)
Air	Nil	NBR	Brass (C37)	PPS
	G		Stainless steel	
Medium vacuum (0.1 Pa-abs), Non-leak <small>Note 1</small>	V <small>Note 2</small>	FKM	Brass (C37)	
	M <small>Note 2</small>		Stainless steel	
Water	Nil	NBR	Brass (C37)	
	G		Stainless steel	
Oil <small>Note 3</small>	A	FKM	Brass (C37)	
	H		Stainless steel	
Other combination	B	EPDM	Brass (C37)	
	J		Stainless steel	



**All Options (Manifold)** Refer to page 412 for specifications and models.

VXA2    $\frac{1}{3}$   - 00 - 1

Option symbol

Fluid and application	Option symbol	Seal material	Body material	Base material	Holder material (drive part)
Air	Nil	NBR	Zn	Al	PPS
Medium vacuum, Non-leak <small>Note 1</small>	V <small>Note 2</small>	FKM	Al		
Oil <small>Note 3</small>	A	FKM	Zn		
Other combination	B	EPDM			



Note 1) The leakage amount ( $10^{-4}$  Pa·m<sup>3</sup>/s) of "V" options are values when differential pressure is 0.1 MPa.

Note 2) Use grease for vacuums on sliding parts. Use silicon grease elsewhere.

Note 3) The dynamic viscosity of the fluid must not exceed 50 mm<sup>2</sup>/s or less.

\* If using for other fluids, please consult with SMC.

\* Oil-free specification: Oil-free specification cannot be manufactured since the sliding parts in contact with fluid have a seal construction.

VX2

VXK

VXD

VXZ

VXS

VXB

VXE

VXP

VXR

VXH

VXF

VX3

VXA

# VXA21/22 Series

## For Air /Single Unit

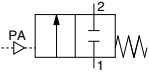
(Non-leak, Medium vacuum)

### Model/Valve Specifications

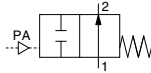
N.C.

N.O.

Symbol



Symbol



When the valve is closed, flow is blocked from port 1 to port 2. However, if the pressure in port 2 is higher than port 1, the valve will not be able to block the fluid.

### Model/Valve

Port size	Orifice diameter (mm)	Model	Max. operating pressure differential (MPa) <sup>Note 2)</sup>	Pilot pressure (MPa)	Flow rate characteristics <sup>Note 1)</sup>			Max. system pressure (MPa) <sup>Note 2)</sup>	Proof pressure (MPa)	Weight (g)
					Air					
					C[dm <sup>3</sup> /(s·bar)]	b	Cv			
1/8 (6A)	3	VXA212 $\frac{1}{2}$	1.0	0.25 to 0.7	1.3	0.50	0.38	1.0	1.5	170
	4.5	VXA213 $\frac{1}{2}$	0.5		2.3	0.45	0.70			
1/4 (8A)	3	VXA212 $\frac{1}{2}$	1.0		1.3	0.50	0.38			
	4.5	VXA213 $\frac{1}{2}$	0.5		2.5	0.45	0.75			
	6	VXA224 $\frac{1}{2}$	0.6		3.3	0.50	1.1			
	8	VXA225 $\frac{1}{2}$	0.2		6.4	0.40	1.8			
	10	VXA226 $\frac{1}{2}$	0.1		8.8	0.40	2.3			
	4.5	VXA223 $\frac{1}{2}$	1.0		2.5	0.45	0.75			
3/8 (10A)	6	VXA224 $\frac{1}{2}$	0.6		3.3	0.50	1.1	1.0	1.5	250
	8	VXA225 $\frac{1}{2}$	0.2		6.4	0.40	1.8			
	10	VXA226 $\frac{1}{2}$	0.1		11.0	0.38	2.8			
1/2 (15A)	10	VXA226 $\frac{1}{2}$	0.1		11.0	0.38	2.8	0.4	1.5	340

Note 1) The flow rate characteristics of this product have variations.

When the highly precise flow control is required according to the system to be used, select an orifice diameter 1.3 times larger than that shown above and install a restrictor on the downstream side of the solenoid valve to make the adjustment.

Note 2) Refer to "Glossary of Terms" on page 309 for details on the max. operating pressure differential and the max. system pressure.

### Fluid and Ambient Temperature

Fluid temperature (°C)		Ambient temperature (°C)
Valve option symbol		
Nil, Others	V, M	-5 to 40
-5 <sup>Note)</sup> to 60	-5 <sup>Note)</sup> to 40	

Note) Dew point temperature: -5°C or less

### Valve Leakage Rate

#### Internal Leakage

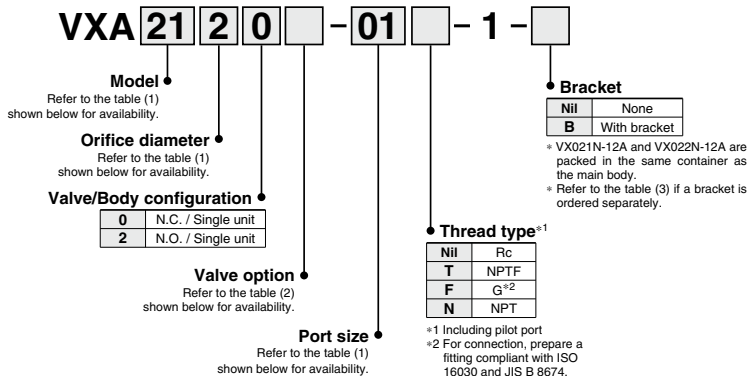
Seal material	Leakage rate	
	Air	Non-leak <sup>Note)</sup> Medium vacuum
NBR, EPDM, FKM	1 cm <sup>3</sup> /min or less	10 <sup>-6</sup> Pa·m <sup>3</sup> /sec or less

#### External Leakage

Seal material	Leakage rate	
	Air	Non-leak <sup>Note)</sup> Medium vacuum
NBR, EPDM, FKM	1 cm <sup>3</sup> /min or less	10 <sup>-6</sup> Pa·m <sup>3</sup> /sec or less

Note) Value for option "V", "M" (Non-leak, Medium vacuum)

**How to Order (Single Unit)**



**Table (1) Model/Orifice Diameter/Port Size**

Solenoid valve (Port size)		Orifice symbol (Diameter)					
Model	VXA21	VXA22	2 (3 mmø)	3 (4.5 mmø)	4 (6 mmø)	5 (8 mmø)	6 (10 mmø)
Port no. (Port size)	01 (1/8)	—	●	●	—	—	—
	02 (1/4)	—	●	●	—	—	—
	—	02 (1/4)	—	●	●	●	●
	—	03 (3/8)	—	●	●	●	●
	—	04 (1/2)	—	—	—	—	●

**Table (2) Valve Option**

Option symbol	Seal material	Body material	Holder material	Note
Nil	NBR	Brass (C37)	PPS	—
G		Stainless steel		
V (Note)	FKM	Brass (C37)		
M (Note)		Stainless steel		

Note) Use grease for vacuums on sliding parts. Use silicon grease elsewhere.

**Table (3) Bracket Part No.**

Model	Part no.
VXA21 <sup>20</sup> <sub>32</sub>	VX021N-12A
VXA22 <sup>32</sup> <sub>62</sub>	VX022N-12A
VXA22 <sup>50</sup> <sub>62</sub>	VX023N-12A-L

- VX2
- VXK
- VXD
- VXZ
- VXS
- VXB
- VXE
- VXP
- VXR
- VXH
- VXF
- VX3
- VXA

# VVXA21/22 Series

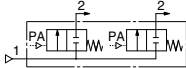
## For Air /Manifold

(Non-leak, Medium vacuum)

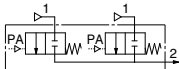
### Model for Manifold/Valve Specifications

N.C.

Symbol



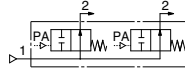
Common SUP type



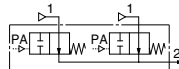
Individual SUP type

N.O.

Symbol



Common SUP type



Individual SUP type



When the valve is closed, flow is blocked from port 1 to port 2. However, if the pressure in port 2 is higher than port 1, the valve will not be able to block the fluid.

### Model for Manifold/Valve Specifications

Orifice diameter (mm)	Model	Max. operating pressure differential (MPa) <sup>Note 2)</sup>	Pilot pressure (MPa)	Flow rate characteristics <sup>Note 1)</sup>			Max. system pressure (MPa) <sup>Note 2)</sup>	Proof pressure (MPa)	Weight (g)	
				Air						
				C <sub>d</sub> (dm <sup>3</sup> /(s·bar))	b	C <sub>v</sub>				
3	VXA212 $\frac{1}{2}$ -00	1.0	0.25 to 0.7	1.3	0.50	0.38	1.0	1.5	120	
	VXA213 $\frac{1}{4}$ -00	0.5		2.3	0.45	0.70				
4.5	VXA223 $\frac{1}{4}$ -00	1.0		3.3	0.50	1.1				160
6	VXA224 $\frac{1}{2}$ -00	0.6								

Note 1) The flow rate characteristics of this product have variations.

When the highly precise flow control is required according to the system to be used, select an orifice diameter 1.3 times larger than that shown above and install a restrictor on the downstream side of the solenoid valve to make the adjustment.

Note 2) Refer to "Glossary of Terms" on page 309 for details on the max. operating pressure differential and the max. system pressure.

### Fluid and Ambient Temperature

Fluid temperature (°C)		Ambient temperature (°C)
Solenoid valve option symbol		
NII, A, B	V	
-5 <sup>Note)</sup> to 60	-5 <sup>Note)</sup> to 40	-5 to 40

Note) Dew point temperature: -5°C or less

### Valve Leakage Rate

#### Internal Leakage

Seal material	Leakage rate	
	Air	Non-leak <sup>Note)</sup> Medium vacuum
NBR, EPDM, FKM	1 cm <sup>3</sup> /min or less	10 <sup>-6</sup> Pa·m <sup>3</sup> /sec or less

#### External Leakage

Seal material	Leakage rate	
	Air	Non-leak <sup>Note)</sup> Medium vacuum
NBR, EPDM, FKM	1 cm <sup>3</sup> /min or less	10 <sup>-6</sup> Pa·m <sup>3</sup> /sec or less

Note) Value for option "V" (Non-leak, Medium vacuum)

### How to Order (Valve for Manifold)

VXA **21** **2** **1**  - **00** - **1**

- Model**  
Refer to the table (1) shown below for availability.
- Orifice diameter**  
Refer to the table (1) shown below for availability.
- Valve option**  
Refer to the table (2) shown below for availability.
- Valve/Body configuration**

1	N.C. (For manifold)
3	N.O. (For manifold)

### How to Order Manifold Bases

VVXA21  
VVXA22

**1**  - **07** - **1**

- Port size (Individual port)**
- Number of manifolds**
- Base**
- Manifold base**

1	Rc 1/8
2	Rc 1/4

\* All IN ports are Rc 3/8.

02	2 stations
:	:
10	10 stations

Nil	Common SUP type
V	Individual SUP type

Table (1) Model/Orifice Diameter

Solenoid valve	Orifice symbol (Diameter)		
	2 (3 mmφ)	3 (4.5 mmφ)	4 (6 mmφ)
VXA21	●	●	—
VXA22	—	●	●

Table (2) Valve Option

Option symbol	Body material	Base material	Seal material	Holder material	Note
Nil	Zn	AL	NBR	PPS	—
A			FKM		
B			EPDM		
V <sup>(Note)</sup>	Al		FKM		Non-leak (10 <sup>-6</sup> Pam <sup>3</sup> /sec), Medium vacuum (0.1 Pa.abs)

Note) Use grease for vacuums on sliding parts. Use silicon grease elsewhere.

### Blanking plate part no.

For VXA21: VX011-001   
 For VXA22: VX011-006

### Seal material

N	NBR
F	FKM
E	EPDM

### How to Order Manifold

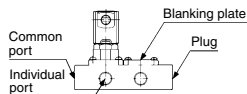
#### Write both the base part number and the solenoid valve to be mounted or blanking plate part number.

(Example) 7 stations of VXA21 common pressure, individual port Rc 1/8.

(Base) VVXA211-07-1 ..... 1 pc.  
 (Valve) \* VXA2121-00-1 ..... 6 pcs.  
 (Blanking plate) \* VX011-001N ..... 1 pc.

\*" is the symbol for mounting. When shipping mounted on a base, add an "\*" in front of the valve and blanking plate model.

#### Arrangement of solenoid valves



The standard arrangement of manifolds should be placed on an individual port on this side, each solenoid valve from the left side and a blanking plate in the right side. The right side of the common port provides plug.

- VX2
- VXK
- VXD
- VXZ
- VXS
- VXB
- VXE
- VXP
- VXR
- VXH
- VXF
- VX3
- VXA

# VXA21/22 Series

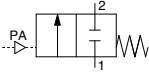
## For Water /Single Unit

### Model/Valve Specifications

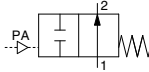
N.C.

N.O.

Symbol



Symbol



When the valve is closed, flow is blocked from port 1 to port 2. However, if the pressure in port 2 is higher than port 1, the valve will not be able to block the fluid.

### Model/Valve Specifications

Port size	Orifice diameter (mm)	Model	Pilot pressure (MPa)	Max. operating pressure differential (MPa) <sup>Note 2)</sup>	Flow rate characteristics <sup>Note 1)</sup>		Max. system pressure (MPa) <sup>Note 2)</sup>	Proof pressure (MPa)	Weight (g)			
					Water							
					Kv	Cv converted						
1/8 (6A)	3	VXA212 $\frac{1}{2}$	0.25 to 0.7	1.0	0.28	0.33	1.0	1.5	170			
	4.5	VXA213 $\frac{1}{2}$		0.5	0.54	0.61						
1/4 (8A)	3	VXA212 $\frac{1}{2}$		1.0	0.28	0.33				0.4	1.5	250
	4.5	VXA213 $\frac{1}{2}$		0.5	0.54	0.61						
	6	VXA224 $\frac{1}{2}$		0.6	0.93	1.1						
	8	VXA225 $\frac{1}{2}$		0.2	1.46	1.7						
	10	VXA226 $\frac{1}{2}$		0.1	1.64	1.9						
	4.5	VXA223 $\frac{1}{2}$		1.0	0.54	0.61						
3/8 (10A)	6	VXA224 $\frac{1}{2}$		0.6	0.93	1.1	1.0	1.5	250			
	8	VXA225 $\frac{1}{2}$		0.2	1.46	1.7						
	10	VXA226 $\frac{1}{2}$		0.1	2.07	2.4						
	10	VXA226 $\frac{1}{2}$		0.1	2.07	2.4						
1/2 (15A)	10	VXA226 $\frac{1}{2}$			0.1	2.07	2.4	0.4	1.5	420		

Note 1) The flow rate characteristics of this product have variations.

When the highly precise flow control is required according to the system to be used, select an orifice diameter 1.3 times larger than that shown above and install a restrictor on the downstream side of the solenoid valve to make the adjustment.

Note 2) Refer to "Glossary of Terms" on page 309 for details on the max. operating pressure differential and the max. system pressure.

### Fluid and Ambient Temperature

Fluid temperature (°C)	Ambient temperature (°C)
Valve option symbol	
<b>Nii, G, B, J</b>	-5 to 40
1 to 40	

Note) With no freezing

### Valve Leakage Rate

#### Internal Leakage

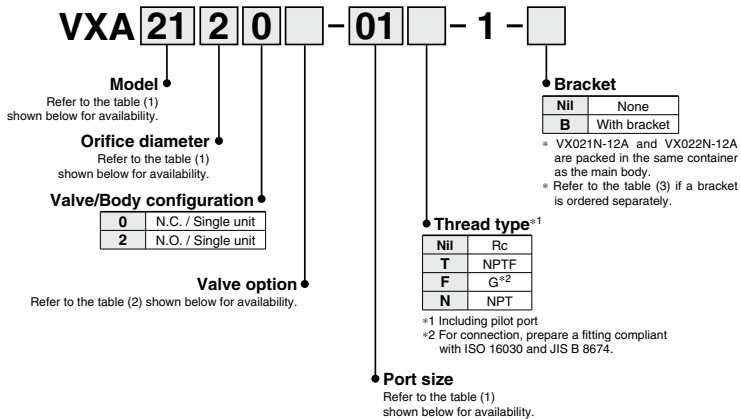
Seal material	Leakage rate (Water)
NBR, EPDM	0.1 cm <sup>3</sup> /min or less

#### External Leakage

Seal material	Leakage rate (Water)
NBR, EPDM	0.1 cm <sup>3</sup> /min or less



### How to Order (Single Unit)



**Table (1) Model/Orifice Diameter/Port Size**

Model	Valve (Port size)		Orifice symbol (Diameter)				
	VX21	VX22	2 (3 mmø)	3 (4.5 mmø)	4 (6 mmø)	5 (8 mmø)	6 (10 mmø)
Port no. (Port size)	01 (1/8)	—	●	●	—	—	—
	02 (1/4)	—	●	●	—	—	—
	—	02 (1/4)	—	●	●	●	●
	—	03 (3/8)	—	●	●	●	●
	—	04 (1/2)	—	—	—	—	●

**Table (2) Valve Option**

Option symbol	Seal material	Body material	Holder material	Note
Nil	NBR	Brass (C37)	PPS	—
G		Stainless steel		
B		Brass (C37)		
J	EPDM	Stainless steel		

**Table (3) Bracket Part No.**

Model	Part no.
VX21 <sup>20</sup> <sub>32</sub>	VX021N-12A
VX22 <sup>30</sup> <sub>42</sub>	VX022N-12A
VX22 <sup>50</sup> <sub>62</sub>	VX023N-12A-L

- VX2
- VXK
- VXD
- VXZ
- VXS
- VXB
- VXE
- VXP
- VXR
- VXH
- VXF
- VX3
- VXA

# VXA21/22 Series

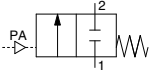
## For Oil /Single Unit

### Model/Valve Specifications

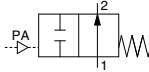
N.C.

N.O.

Symbol



Symbol



When the valve is closed, flow is blocked from port 1 to port 2. However, if the pressure in port 2 is higher than port 1, the valve will not be able to block the fluid.



**⚠ When the fluid is oil.**  
The dynamic viscosity of the fluid must not exceed 500 mm<sup>2</sup>/s.

### Model/Valve Specifications

Port size	Orifice diameter (mm)	Model	Max. operating pressure differential (MPa) <sup>Note 2)</sup>	Pilot pressure (MPa)	Flow rate characteristics <sup>Note 1)</sup>		Max. system pressure (MPa) <sup>Note 2)</sup>	Proof pressure (MPa)	Weight (g)
					Oil	Cv converted			
1/6 (6A)	3	VXA212 $\frac{1}{2}$	1.0	0.25 to 0.7	7.9	0.33	1.0	1.5	170
	4.5	VXA213 $\frac{1}{2}$	0.5		15	0.61			
	3	VXA212 $\frac{1}{2}$	1.0		7.9	0.33			
1/4 (8A)	4.5	VXA213 $\frac{1}{2}$	0.5		15	0.61			
	6	VXA224 $\frac{1}{2}$	0.6		26	1.1			
	8	VXA225 $\frac{1}{2}$	0.2		41	1.7			
	10	VXA226 $\frac{1}{2}$	1.0		46	1.9			
3/8 (10A)	4.5	VXA223 $\frac{1}{2}$	1.0		15	0.61	1.0	1.5	250
	6	VXA224 $\frac{1}{2}$	0.6		26	1.1			
	8	VXA225 $\frac{1}{2}$	0.2		41	1.7	0.4	1.5	340
	10	VXA226 $\frac{1}{2}$	0.1		58	2.4			
1/2 (15A)	10	VXA226 $\frac{1}{2}$	0.1		58	2.4	0.4	1.5	420

Note 1) The flow rate characteristics of this product have variations.

When the highly precise flow control is required according to the system to be used, select an orifice diameter 1.3 times larger than that shown above and install a restrictor on the downstream side of the solenoid valve to make the adjustment.

Note 2) Refer to "Glossary of Terms" on page 309 for details on the max. operating pressure differential and the max. system pressure.

### Fluid and Ambient Temperature

Fluid temperature (°C)	Ambient temperature (°C)
Valve option symbol	
A, H	
-5 <sup>Note)</sup> to 40	-5 to 40

Note) Dynamic viscosity: 500 mm<sup>2</sup>/s or less

### Valve Leakage Rate

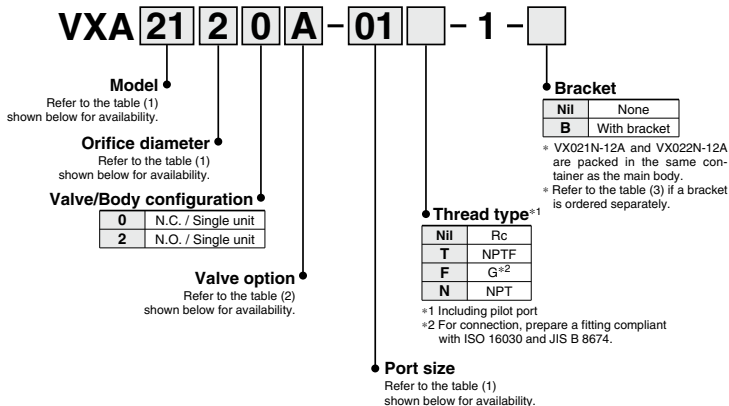
#### Internal Leakage

Seal material	Leakage rate (Oil)
FKM	0.1 cm <sup>3</sup> /min or less

#### External Leakage

Seal material	Leakage rate (Oil)
FKM	0.1 cm <sup>3</sup> /min or less

### How to Order (Single Unit)



0	N.C. / Single unit
2	N.O. / Single unit

Nil	None
B	With bracket

\* VX021N-12A and VX022N-12A are packed in the same container as the main body.  
 \* Refer to the table (3) if a bracket is ordered separately.

Nil	Rc
T	NPTF
F	G <sup>*2</sup>
N	NPT

\*1 Including pilot port  
 \*2 For connection, prepare a fitting compliant with ISO 16030 and JIS B 8674.

**Table (1) Model/Orifice Diameter/Port Size**

Model	Solenoid valve (Port size)		Orifice symbol (Diameter)				
	VX21	VX22	2 (3 mmø)	3 (4.5 mmø)	4 (6 mmø)	5 (8 mmø)	6 (10 mmø)
Port no. (Port size)	01 (1/8)	—	●	●	—	—	—
	02 (1/4)	—	●	●	—	—	—
	—	02 (1/4)	—	●	●	●	●
	—	03 (3/8)	—	●	●	●	●
	—	04 (1/2)	—	—	—	—	●

**Table (2) Valve Option**

Option symbol	Seal material	Body material	Holder material
A	FKM	Brass (C37)	PPS
H		Stainless steel	

**Table (3) Bracket Part No.**

Model	Part no.
VX21 <sup>20</sup> <sub>32</sub>	VX021N-12A
VX22 <sup>30</sup> <sub>42</sub>	VX022N-12A
VX22 <sup>30</sup> <sub>62</sub>	VX023N-12A-L

- VX2
- VXK
- VXD
- VXZ
- VXS
- VXB
- VXE
- VXP
- VXR
- VXH
- VXF
- VX3
- VXA

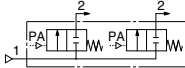
# VVXA21/22 Series

## For Oil /Manifold

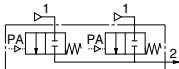
### Valve for Manifold/Valve Specifications

N.C.

Symbol



Common SUP type



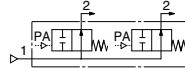
Individual SUP type

**⚠ When the fluid is oil.**

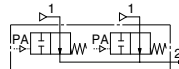
The dynamic viscosity of the fluid must not exceed 500 mm<sup>2</sup>/s.

N.O.

Symbol



Common SUP type



Individual SUP type



When the valve is closed, flow is blocked from port 1 to port 2. However, if the pressure in port 2 is higher than port 1, the valve will not be able to block the fluid.

### Valve for Manifold/Valve Specifications

Orifice diameter (mm)	Model	Max. operating pressure differential (MPa) <sup>Note 2)</sup>	Pilot pressure (MPa)	Flow rate characteristics <sup>Note 1)</sup>		Max. system pressure (MPa) <sup>Note 2)</sup>	Proof pressure (MPa)	Weight (g) <sup>Note)</sup>
				Air				
				Av x 10 <sup>-6</sup> m <sup>2</sup>	Cv converted			
3	VXA2123-00	1.0	0.25 to 0.7	7.9	0.33	1.0	1.5	120
	VXA2133-00	0.5						
4.5	VXA2233-00	1.0		15	0.61			
	VXA2243-00	0.6		26	1.1			

Note 1) The flow rate characteristics of this product have variations.

When the highly precise flow control is required according to the system to be used, select an orifice diameter 1.3 times larger than that shown above and install a restrictor on the downstream side of the solenoid valve to make the adjustment.

Note 2) Refer to "Glossary of Terms" on page 309 for details on the max. operating pressure differential and the max. system pressure.

### Fluid and Ambient Temperature

Fluid temperature (°C)	Ambient temperature (°C)
Valve option symbol	
<b>A</b>	
-5 <sup>Note)</sup> to 40	-5 to 40

Note) Dynamic viscosity: 500 mm<sup>2</sup>/s or less

### Valve Leakage Rate

#### Internal Leakage

Seal material	Leakage rate
FKM	0.1 cm <sup>3</sup> /min or less

#### External Leakage

Seal material	Leakage rate
FKM	0.1 cm <sup>3</sup> /min or less

### How to Order (Valve for Manifold)

**VXA 21 2 1 A - 00 - 1**

- Model**  
Refer to the table (1) shown below for availability.
- Orifice diameter**  
Refer to the table (1) shown below for availability.
- Valve option**  
Refer to the table (2) shown below for availability.
- Valve/Body configuration**

1	N.C. (For manifold)
3	N.O. (For manifold)

### How to Order Manifold Bases

**VVXA21**  
**VVXA22** 1 [ ] - 07 - 1

- Port size (Individual port)**

1	Rc 1/8
2	Rc 1/4

\* All IN ports are Rc 3/8.
- Number of manifolds**

02	2 stations
:	:
10	10 stations
- Base**

Nil	Common SUP type
V	individual SUP type

**Table (1) Model/Orifice Diameter**

Solenoid valve	Orifice symbol (Diameter)		
	2 (3 mmø)	3 (4.5 mmø)	4 (6 mmø)
VXA21	●	●	—
VXA22	—	●	●

**Table (2) Valve Option**

Option symbol	Body, Base material	Seal material	Holder material	Note
A	Aluminum	FKM	PPS	—

Manifold base

Blanking plate part no.

For VXA21: VX011-001 F  
 For VXA22: VX011-006 F

- Seal material**

F	FKM
---	-----

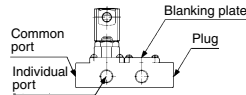
### How to Order Manifold

Write both the base part number and the solenoid valve to be mounted or blanking plate part number.  
 (Example) 7 stations of VXA21 common pressure, individual port Rc 1/8.

(Base) VVXA211-07-1.....1 pc.  
 (Valve) = VXA2121-00-1.....6 pcs.  
 (Blanking plate) = VX011-001F.....1 pc.

"\*" is the symbol for mounting. When shipping mounted on a base, add an "\*" in front of the valve and blanking plate model.

Arrangement of solenoid valves



The standard arrangement of manifolds should be placed on an individual port on this side, each solenoid valve from the left side and a blank plate on the right side. The right side of the common port provides plug.

- VX2
- VXK
- VXD
- VXZ
- VXS
- VXB
- VXE
- VXP
- VXR
- VXH
- VXF
- VX3
- VXA

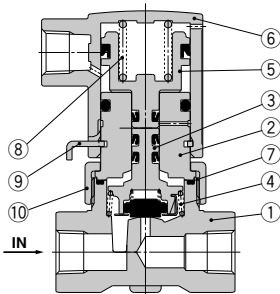
# VXA21/22 Series

For Air, Water, Oil

## Construction: Single Unit

Normally closed (N.C.)

Body material: Brass (C37), Stainless steel



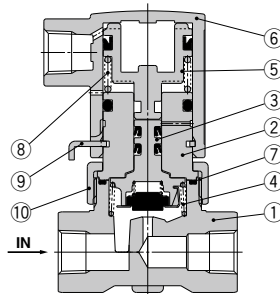
### Component Parts

No.	Description	Material	
		Body material Brass (C37) specification	Body material stainless steel specification
1	<b>Body</b>	Brass (C37)	Stainless steel
2	<b>Adapter</b>	C36	Stainless steel
3	<b>Holder assembly</b>	(NBR, FKM, EPDM), Stainless steel, PPS	
4	<b>Return spring</b>	Stainless steel	
5	<b>Piston assembly</b>	(NBR), Polyacetal	
6	<b>Pilot cover</b>	ADC12	
7	<b>O-ring</b>	(NBR, FKM, EPDM)	
8	<b>Piston spring</b>	Stainless steel	
9	<b>Retainer</b>	Stainless steel	
10	<b>Nut</b>	Brass (C37)	Brass (C37), Ni plated

The materials in parentheses are the seal materials.

Normally open (N.O.)

Body material: Brass (C37), Stainless steel



### Component Parts

No.	Description	Material	
		Body material Brass (C37) specification	Body material stainless steel specification
1	<b>Body</b>	Brass (C37)	Stainless steel
2	<b>Adapter</b>	C36	Stainless steel
3	<b>Holder assembly</b>	(NBR, FKM, EPDM), Stainless steel, PPS	
4	<b>Return spring</b>	Stainless steel	
5	<b>Piston assembly</b>	(NBR), Polyacetal	
6	<b>Pilot cover</b>	ADC12	
7	<b>O-ring</b>	(NBR, FKM, EPDM)	
8	<b>Piston spring</b>	Stainless steel	
9	<b>Retainer</b>	Stainless steel	
10	<b>Nut</b>	Brass (C37)	Brass (C37), Ni plated

The materials in parentheses are the seal materials.

### Construction: Manifold

**Normally closed (N.C.)**

**Body material: Zn**

**Base material: AL**

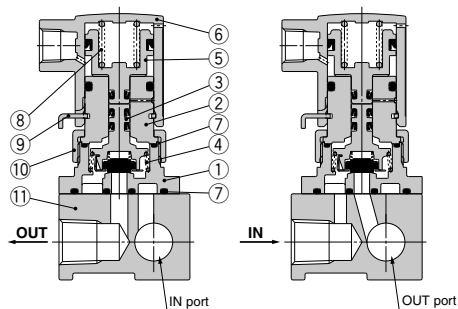
**Normally open (N.O.)**

**Body material: Zn**

**Base material: AL**

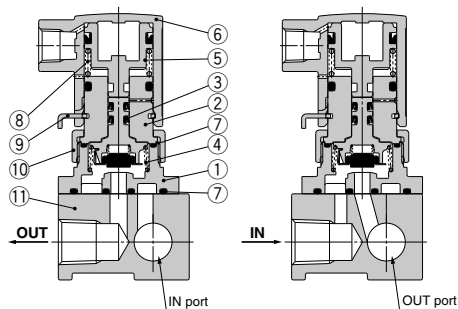
Common SUP type

Individual SUP type



Common SUP type

Individual SUP type



#### Component Parts

No.	Description	Material
1	Body	Zn (AL)
2	Adapter	C36
3	Holder assembly	(NBR, FKM, EPDM), Stainless steel, PPS
4	Return spring	Stainless steel
5	Piston assembly	NBR, Polyacetal
6	Pilot cover	ADC12
7	O-ring	(NBR, FKM, EPDM)
8	Piston spring	Stainless steel
9	Retainer	Stainless steel
10	Nut	Brass (C37)
11	Base	Aluminum

The materials in parentheses are the seal materials.

#### Component Parts

No.	Description	Material
1	Body	Zn (AL)
2	Adapter	C36
3	Holder assembly	(NBR, FKM, EPDM), Stainless steel, PPS
4	Return spring	Stainless steel
5	Piston assembly	NBR, Polyacetal
6	Pilot cover	ADC12
7	O-ring	(NBR, FKM, EPDM)
8	Piston spring	Stainless steel
9	Retainer	Stainless steel
10	Nut	Brass (C37)
11	Base	Aluminum

The materials in parentheses are the seal materials.

- VX2
- VXK
- VXD
- VXZ
- VXS
- VXB
- VXE
- VXP
- VXR
- VXH
- VXF
- VX3
- VXA

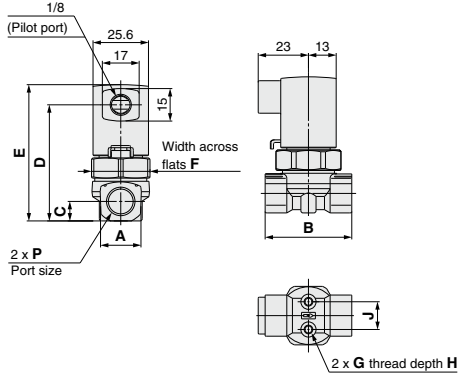
# VXA21/22 Series

For Air, Vacuum, Water, Oil

## Dimensions: Single Unit/Body Material: Brass (C37), Stainless Steel

Normally closed (N.C.): VXA21□0/VXA22□0

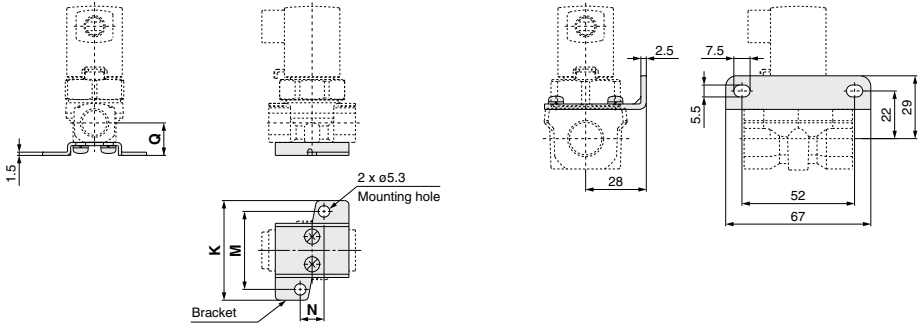
Normally open (N.O.): VXA21□2/VXA22□2



Model		Orifice diameter	Port size P	A	B	C	D	E	F	G	H	J
N.C.	N.O.											
VXA21□0	VXA21□2	ø3, ø4.5	1/8, 1/4	19	40	9	54	63	27	M4	6	12.8
VXA22(3,4)0	VXA22(3,4)2	ø4.5, ø6	1/4, 3/8	22	45	10.5	60	69	32	M5	8	19
VXA22(5,6)0	VXA22(5,6)2	ø8, ø10	1/4, 3/8, 1/2	29	50	14	66	76	32	M5	8	23

### Specifications with bracket Orifice ø3, ø4.5, ø6

### Orifice ø8, ø10

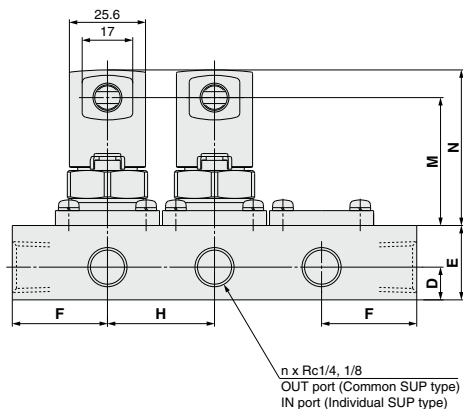
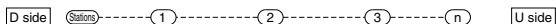
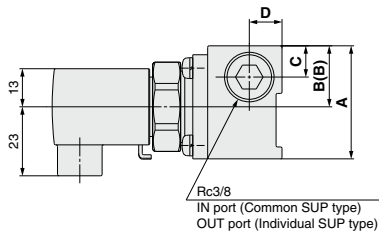
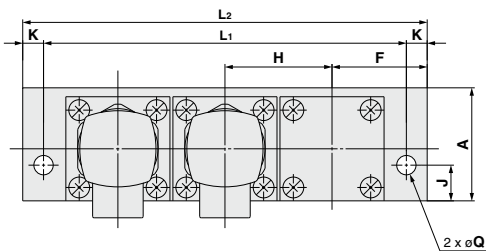


Model		Orifice diameter	Port size P	Bracket mounting			
N.C.	N.O.			K	M	N	Q
VXA21□0	VXA21□2	ø3, ø4.5	1/8, 1/4	46	36	11	15
VXA22(3,4)0	VXA22(3,4)2	ø4.5, ø6	1/4, 3/8	56	46	13	17.5



**Dimensions: Manifold/Body Material: Zn**

Normally closed (N.C.): VVXA21/VVXA22  
 Normally open (N.O.):



- VX2
- VXK
- VXD
- VXZ
- VXS
- VXB
- VXE
- VXP
- VXR
- VXH
- VXF
- VX3
- VXA

(mm)

Model	Dimension	n (Stations)									
		2	3	4	5	6	7	8	9	10	
VVXA21	L <sub>1</sub>	86	122	158	194	230	266	302	338	374	
	L <sub>2</sub>	100	136	172	208	244	280	316	352	388	
VVXA22	L <sub>1</sub>	108	154	200	246	292	338	384	430	476	
	L <sub>2</sub>	126	172	218	264	310	356	402	448	494	

(mm)

Model	A	B	(B) Individual SUP type	C	D	E	F	H	J	K	M	N	Q
VVXA21	38	20.5	17.5	10.5	11	25	32	36	12	7	43	52	6.5
VVXA22	49	26.5	22.5	13	13	30	40	46	15	9	48	57	8.5