

# 5 Port Air Operated Valve

# Series VFRA3000

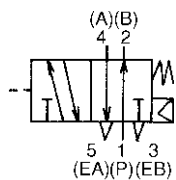


## Model

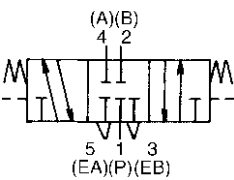
Valve model	Configuration	Port size Rc(PT)	Effective area (mm <sup>2</sup> ) (Cv)	Pilot port size Rc(PT)	Weight (kg)
VFRA3111-02	2 position single	1/4	37.8 (2.1)	1/8	0.61
VFRA3111-03	single	3/8	41.4 (2.3)		
VFRA3211-02	2 position double	1/4	37.8 (2.1)	1/8	0.71
VFRA3211-03	double	3/8	41.4 (2.3)		
VFRA3311-02	3 position closed center	1/4	34.2 (1.9)	1/8	0.72
VFRA3311-03	closed center	3/8	36 (2.0)		
VFRA3411-02	3 position exhaust center	1/4	P→A, B: 34.2 (1.9) A, B→EA, EB: 45 (2.5) [A, B→EA, EB: 27 (1.5)]	1/8	0.72
VFRA3411-03		3/8	P→A, B: 36 (2.0) A, B→EA, EB: 50.4 (2.8) [A, B→EA, EB: 28.8 (1.6)]		
VFRA3511-02	3 position pressure center	1/4	39.6 (2.2) [P→A, B: 16.2 (0.9)]	1/8	0.72
VFRA3511-03		3/8	41.4 (2.3) [P→A, B: 16.2 (0.9)]		

### JIS symbol

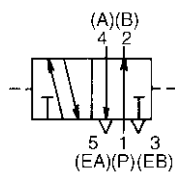
#### 2 position single



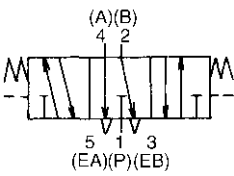
#### 3 position closed center



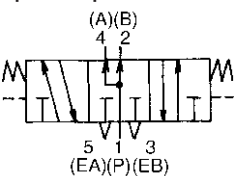
#### 2 position double



#### 3 position exhaust center



#### 3 position pressure center



⊙ ( ) : in case of normal position.

## Specifications

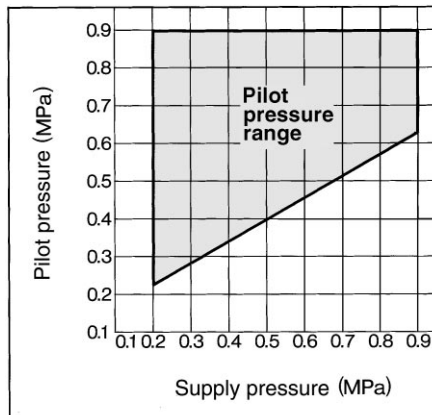
Fluid		Air
Operating pressure range (MPa)	2 position single	0.2 to 0.9
	2 position double	0.1 to 0.9
	3 position	0.2 to 0.9
Pilot pressure range (MPa)	2 position single	(0.6 X P+0.1) to 0.9 P: Operating pressure
	2 position double	0.1 to 0.9
	3 position	0.2 to 0.9
Ambient and fluid temperature (°C)		Max 60°C
Lubrication <sup>(1)</sup>		Not required
Mounting orientation		Free
Impact/Vibration resistance (m/s <sup>2</sup> ) <sup>(2)</sup>		300/50

Note 1) Use turbin oil class 1 (ISO VG32) if lubricating.

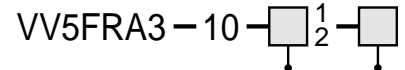
Note 2) Impact resistance: No malfunction from test using drop impact tester, to axis and right angle directions of main valve, each one time when pilot signal is ON and OFF. (Initial valve)

Vibration resistance: No malfunction from test with 8.3 to 2000Hz 1 sweep, to axis and right angle directions of main valve, each one time when pilot signal is ON and OFF. (Initial valve)

## Pilot Pressure Range (Single pilot)



## How to Order Manifold



Stations Piping port size

Indicate the same part number as VFR3000 manifold.

EX) VV5FR3-10-□1-□, VV5FR3-10-□2-□

\*Valves and blank plate assembly should be indicated with manifold base part number as the following example.

EX) VV5FRA3-10-061-03 ..... 1 pc.  
VFRA3111 ..... 5 pcs.  
VVFS3000-10A ..... 1 pc.

## Caution

Refer to p.0-33 to 0-36 for Safety Instruction and common precautions.



# 5 Port Air Operated Valve

# Series VFRA4000



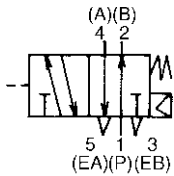
## Model

Valve model	Configuration	Port size Rc(PT)	Effective area (mm <sup>2</sup> ) (Cv)	Pilot port size Rc(PT)	Weight (kg)
VFRA4111-03	2 position single	3/8	65 (3.6)	1/8	1.1
VFRA4111-04	single	1/2	67 (3.7)		
VFRA4211-03	2 position double	3/8	65 (3.6)	1/8	1.2
VFRA4211-04	double	1/2	67 (3.7)		
VFRA4311-03	3 position closed center	3/8	57.6 (3.2)	1/8	1.2
VFRA4311-04	closed center	1/2	57.6 (3.2)		
VFRA4411-03	3 position exhaust center	3/8	P→A, B: 51 (2.8) A, B→EA, EB: 57.6 (3.2) [A, B→EA, EB: 45 (2.5)]	1/8	1.2
VFRA4411-04		1/2	P→A, B: 51 (2.8) A, B→EA, EB: 57.6 (3.2) [A, B→EA, EB: 45 (2.5)]		
VFRA4511-03	3 position pressure center	3/8	65 (3.6) [P→A, B: 30.6 (1.7)]	1/8	1.2
VFRA4511-04		1/2	67 (3.7) [P→A, B: 30.6 (1.7)]		

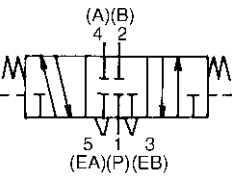
( ): in case of normal position.

## JIS symbol

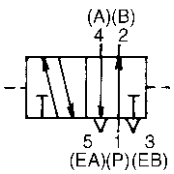
### 2 position single



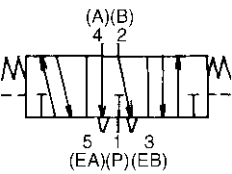
### 3 position closed center



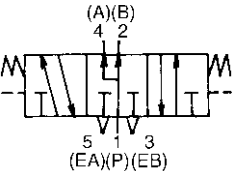
### 2 position double



### 3 position exhaust center



### 3 position pressure center



## ⚠ Caution

Refer to p.0-33 to 0-36 for Safety Instruction and common precautions.

## Specifications

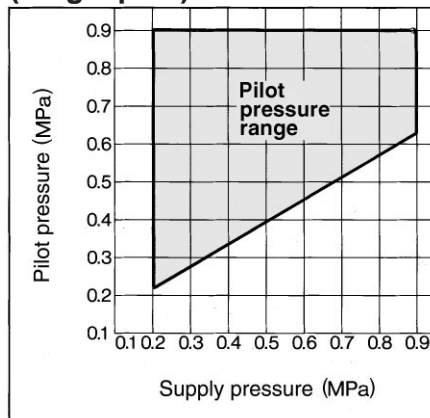
Fluid		Air
Operating pressure range (MPa)	2 position single	0.2 to 0.9
	2 position double	0.1 to 0.9
	3 position	0.2 to 0.9
Pilot pressure range (MPa)	2 position single	(0.6 X P+0.1) to 0.9 P: Operating pressure
	2 position double	0.1 to 0.9
	3 position	0.2 to 0.9
Ambient and fluid temperature (°C)		Max. 60°C
Lubrication <sup>(1)</sup>		Not required <sup>(1)</sup>
Mounting orientation		Free
Impact/Vibration resistance (m/s <sup>2</sup> ) <sup>(2)</sup>		300/50

Note 1) Use turbine oil class 1 (ISO VG32) if lubricating.

Note 2) 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 is ON and OFF. (Initial valve)

Vibration resistance: No malfunction from test with 8.3 to 2000Hz 1 sweep, to axis and right angle directions of main valve, each one time when pilot signal is ON and OFF. (Initial valve)

## Pilot Pressure Range (Single pilot)



## How to Order/Manifold base

VV5FRA4-10--

Stations Piping port size

Indicate the same part number as VFR3000 manifold.

EX) VV5FRA4-10-□1-□  
VV5FRA4-10-□2-□

EX) VV5FRA4-10-061-03 ..... 1 pc.  
VFRA4111 ..... 5 pcs.  
VVFS4000-10A ..... 1 pc.

