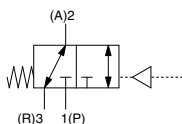


# 3 Port Air Operated Valve

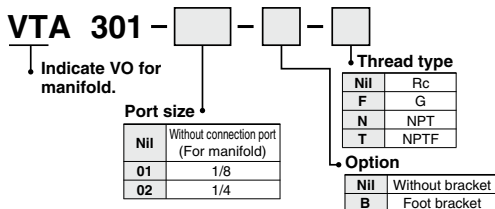
# VTA301 Series



Symbol



## How to Order



## Specifications

Fluid	Air
Operating pressure range (MPa)	0 to 1.0
Pilot pressure range (MPa)	0.2 to 1.0
Ambient and fluid temperature (°C)	-10 to 50 (No freezing)
Lubrication	Not required (Use turbine oil Class 1 ISO VG32, if lubricated.)
Impact/Vibration resistance (m/s <sup>2</sup> ) <sup>Note)</sup>	150/50
Enclosure	Dustproof

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 from test with 45 to 2000 Hz one sweep, to axis and right angle direction of main valve, each one time when pilot signal ON and OFF. (Value in the initial stage)

## Option

Description	Part no.
Bracket (With screw)	DXT060-27A

## Flow Rate Characteristics/Weight

Valve model	Port size	Flow rate characteristics												Weight (kg)
		1→2(P→A)			2→3(A→R)			3→2(R→A)			2→1(A→P)			
		C <sub>v</sub> [dm <sup>3</sup> /(s·bar)]	b	C <sub>v</sub>	C <sub>v</sub> [dm <sup>3</sup> /(s·bar)]	b	C <sub>v</sub>	C <sub>v</sub> [dm <sup>3</sup> /(s·bar)]	b	C <sub>v</sub>	C <sub>v</sub> [dm <sup>3</sup> /(s·bar)]	b	C <sub>v</sub>	
VTA301-01-□-□	1/8	0.63	0.30	0.16	0.59	0.30	0.15	0.59	0.32	0.15	0.65	0.30	0.16	0.11
VTA301-02-□-□	1/4	0.66	0.28	0.16	0.60	0.29	0.15	0.61	0.32	0.15	0.66	0.30	0.16	(With bracket: 0.13)
VOA301	Without connection port	0.34	0.26	0.084	0.32	0.17	0.076	0.35	0.22	0.084	0.35	0.13	0.079	0.12

Note 1) The pilot port size is 1/8.

Note 2) Flow rate characteristics of VOA301 is the value when the valve is mounted on a manifold.



## Precautions

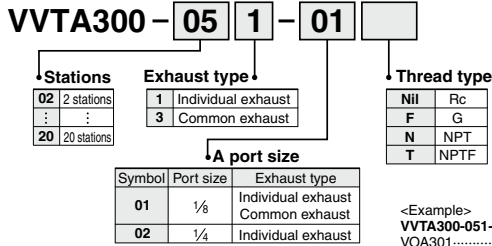
Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 3 to 9 for 3/4/5 Port Solenoid Valve Precautions.

### For manifold

#### Caution

1. Each valve is fixed on the manifold with two M4 mounting screws. Please tighten the screws properly when valves are reassembled.  
Screw tightening torque: 1.4 N·m
2. M4 or equivalent bolts should be tightened evenly to mount the valve onto the manifold base.
3. In the case of common exhaust type, pressurization or vacuum suction through R port is not possible.
4. In the case of 6 stations or more, supply pressure from both sides of P port.  
In the case of common exhaust type, exhaust air from both sides of R port as well.

### How to Order Manifold



\* To order valves and blanking plate assembly mounted onto the manifold, list valves and blanking plate assembly with manifold base part number.

• Manifold bases same as those for VVT300 series manifold valves are available. Please consult with SMC for the manifold specifications and precautions.

### Manifold Model

Model	Applicable manifold model	Accessory (Part no.)
VOA301	Common/Individual exhaust	Function plate (DXT060-32-4A)

### 6 Valve Functions Available by Changing of Piping Port

	3 port N.C.	3 port N.O.	2 port N.C.	2 port N.O.	Selector	Divider
Pilot OFF						
Pilot ON						

SYA

SYJA

VZA

VFA

VFRA

VPA4

SYJA

VZA

VTA

VGA

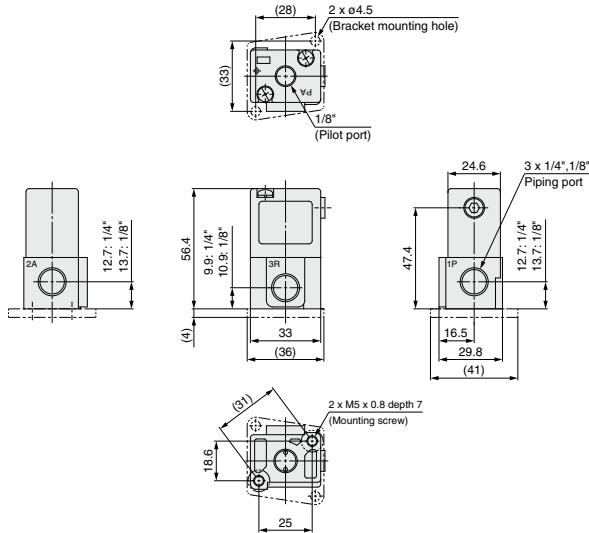
VPA

VPA3

# VTA301 Series

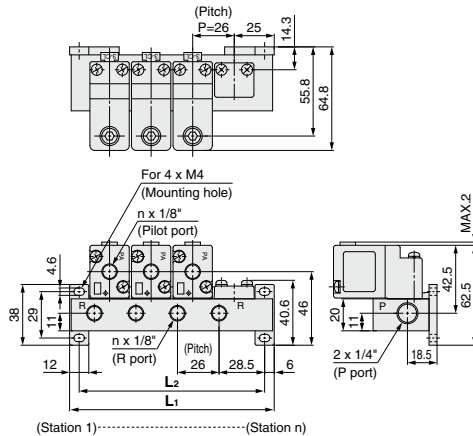
## Dimensions/Base Mounted

VTA301-□□□

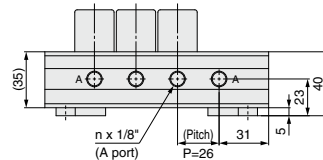
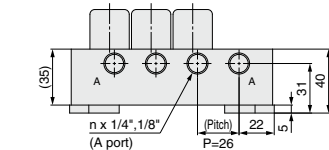
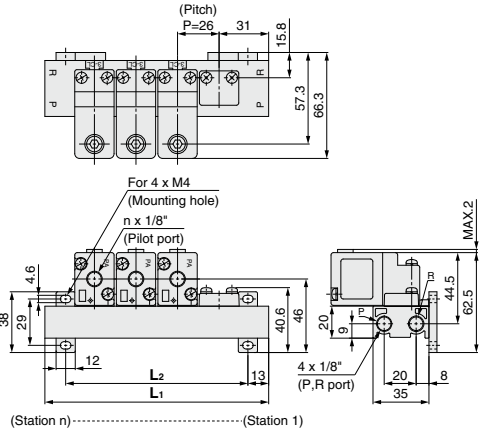


## Dimensions/Manifold

VVTA300-□□1



VVTA300-□□3



### Individual Exhaust

n: Station

Symbol	n	2	3	4	5	6	7	8	9	10
L <sub>1</sub>		76	102	128	154	180	206	232	258	284
L <sub>2</sub>		64	90	116	142	168	194	220	246	272

Calculation formula: L<sub>1</sub> = 26n + 24, L<sub>2</sub> = 26n + 12

1550

### Common Exhaust

n: Station

Symbol	n	2	3	4	5	6	7	8	9	10
L <sub>1</sub>		88	114	140	166	192	218	244	270	296
L <sub>2</sub>		62	88	114	140	166	192	218	244	270

Calculation formula: L<sub>1</sub> = 26n + 36, L<sub>2</sub> = 26n + 10