

Valves for Sampling, Analytical, and Test System



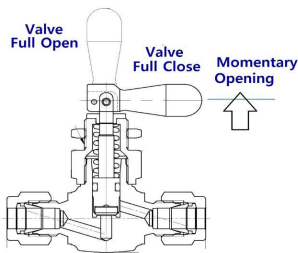
Design

- Quick open and close.
- In-line and Angle pattern.
- No stem-tip goes over-tightened by design.
- Panel mounting standard.

Operation

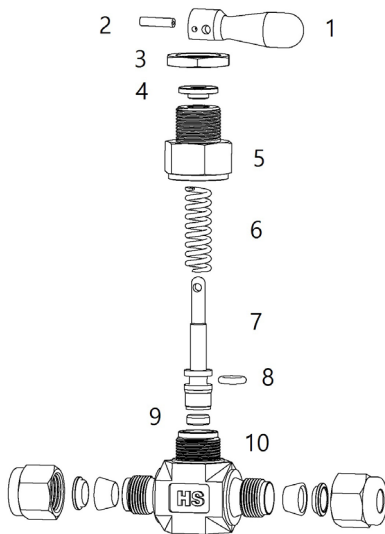
- 90° handle actuation.
- Lift the handle to open, release the handle to close.
- Sliding O-ring seal below stem protects the spring from contamination by system fluids.
- O-ring stem seal design requires no packing adjustment.
- Non-rotating PTFE stem tip at closure allows valve for repetitive shut-off service.

Visually Identifiable Valve Position



Application

- Sampling, Analytical, and Test System.
- Valve momentary opening is allowed by design. To take the least sample volume, raise up handle momentarily while the valve is in close position.
- Spring forces the valve to close, providing leak-tight sealing under vacuum & position pressure.



Materials of Construction

Components	Valve Body Material		
	SS316	Brass	
	Grade/ASTM Standard		
1	Handle	Aluminum black anodized	
2	Toggle Pin	SS304	
3	Panel Nut	SS316/ A276	Brass C36000/B16 C3771/JIS H3250
4	Washer	Polypropylene	
5	Packing nut	SS316/ A276	Brass C36000/B16 C3771/JIS H3250
6	Spring	Teflon-Coated Stainless/SS302	
7	Stem	SS316/A276	
8	Stem O-ring	Standard FKM, Optional Buna-C, FFKM	
9	Stem Tip	PTFE/D1710	
10	Body	F316/A182	C37700/B283 C3771/JIS H3250
	Lubricant	Silicon-based	

Wetted component listed in **BOLD** letter

Pressure –Temperature Ratings

Valve Series	Pressure Rating @ 100°F (37°C) psig (bar)	Temperature Rating °F (°C)
VT03A	300 (20.6)	-20 to 200 (-28 to 93)
VT03B		
VT03C	200 (13.7)	

Optional O-ring

Application	O-ring	Temperature Range °F (°C)	Designator
Low temperature	Silicon FVMQ	-76 to 338 (-60 to 170)	FQ8
High temperature	FFKM	-22 to 600 (-30 to 315)	KZ

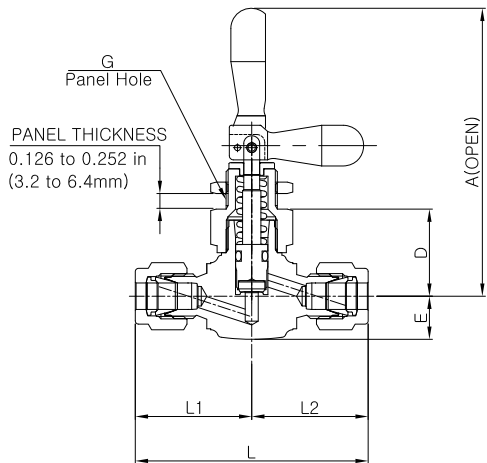
Factory test

Every valve is factory tested at 200psig (13 bar) with nitrogen at the seat and seal for no detectable leakage with a liquid leak detector.

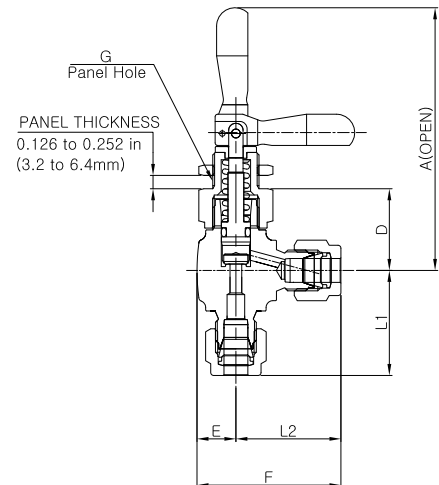
Safe Valve Selection

The selection of a valve for any application or system must be considered to ensure safe performance. Valve rating, valve function, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. HSME Corporation accepts no liability for any improper selection, compatibility, installation, operation or maintenance.

In-Line Pattern



Angle Pattern



Valve Series	Orifice, in. (mm)	Cv	G in. (mm)
VT03A	0.08 (2.0)	0.11	0.53 (13.5)
VT03B	0.125 (3.2)	0.2	
VT03C	0.25 (6.4)	0.7	0.66 (16.8)

Ordering Information and Dimensions

Complete Ordering Number	End Connection		Dimensions mm (in.)							
	Inlet	Outlet	L	L1	L2	D	E	F	A	
VT03A-	M2N-SS	1/8 in. Male NPT	38.1 (1.5)	19.05 (0.75)		23.4 (0.92)	10.6 (0.42)	27.0 (1.06)	72.9 (2.87)	
	A2T-SS	1/8 in. OD	49.8 (1.96)	24.9 (0.98)		23.4 (0.92)	10.6 (0.42)	32.8 (1.29)	72.9 (2.87)	
	A3M-SS	3 mm OD	49.8 (1.96)	24.9 (0.98)		23.4 (0.92)	10.6 (0.42)	32.8 (1.29)	72.9 (2.87)	
	MA2N2T-SS	1/8 in. Male NPT	1/8 in. OD	43.9 (1.73)	19.05 (0.75)	24.9 (0.98)	23.4 (0.92)	10.6 (0.42)	32.8 (1.29)	72.9 (2.87)
VT03B-	F2N-SS	1/8 in. Female NPT	41.4 (1.63)	20.6 (0.81)		21.8 (0.86)	9.5 (0.38)	30.2 (1.19)	71.4 (2.81)	
	M2N-SS	1/8 in. Male NPT	43.7 (1.72)	21.8 (0.86)		21.8 (0.86)	9.5 (0.38)	31.2 (1.23)	71.4 (2.81)	
	M4N-SS	1/4 in. Male NPT	49.8 (1.96)	24.9 (0.98)		21.8 (0.86)	9.5 (0.38)	34.5 (1.36)	71.4 (2.81)	
	A4T-SS	1/4 in. OD	57.4 (2.26)	28.7 (1.13)		21.8 (0.86)	9.5 (0.38)	38.1 (1.5)	71.4 (2.81)	
	A6M-SS	6 mm OD	57.4 (2.26)	28.7 (1.13)		21.8 (0.86)	9.5 (0.38)	38.1 (1.5)	71.4 (2.81)	
	A8M-SS	8 mm OD	56.4 (2.22)	28.2 (1.11)		21.8 (0.86)	9.5 (0.38)	37.6 (1.48)	71.4 (2.81)	
	MF2N-SS	1/8 in. Male NPT	1/8 in. Female NPT	41.4 (1.63)	20.6 (0.81)		21.8 (0.86)	9.5 (0.38)	30.2 (1.19)	71.4 (2.81)
	MA4N4T-SS	1/4 in. Male NPT	1/4 in. OD	53.6 (2.11)	24.9 (0.98)	28.7 (1.13)	21.8 (0.86)	9.5 (0.38)	38.1 (1.5)	71.4 (2.81)
VT03C-	F4N-SS	1/4 in. Female NPT	53.8 (2.12)	26.9 (1.06)		26.9 (1.06)	12.7 (0.5)	39.6 (1.56)	90.4 (3.56)	
	M6N-SS	3/8 in. Male NPT	57.2 (2.25)	28.4 (1.12)		26.9 (1.06)	12.7 (0.5)	41.1 (1.62)	90.4 (3.56)	
	A6T-SS	3/8 in. OD	65.5 (2.58)	32.8 (1.29)		26.9 (1.06)	12.7 (0.5)	45.5 (1.79)	90.4 (3.56)	
	A8T-SS	1/2 in. OD	71.1 (2.8)	35.6 (1.4)		26.9 (1.06)	12.7 (0.5)	48.3 (1.9)	90.4 (3.56)	
	A10M-SS	10 mm OD	69.1 (2.72)	34.5 (1.36)		26.9 (1.06)	12.7 (0.5)	47.2 (1.86)	90.4 (3.56)	
	A12M-SS	12 mm OD	74.2 (2.92)	37.1 (1.46)		26.9 (1.06)	12.7 (0.5)	49.8 (1.96)	90.4 (3.56)	

All dimensions shown are for reference only and subject to change. Dimensions with HSME nuts are in finger-tight position.

How to Order

To order stainless steel valve, select a valve complete ordering number.

To order Brass valve, replace "SS" in the ordering number with "B".

To order valve with an optional O-ring, insert the O-ring designator in the ordering number.

To order valve with an optional color coded handle, insert the designator in the ordering number.

Example: VT03A-M2N-SS

Example: VT03A-M2N-B

Example: VT03A-M2N-KZ-SS

Example: VT03A-M2N-KZ-RD-SS

Option				
Color-Coded Handle	Red Handle Designator: RD		Silver Handle Designator: SL	
Standard: Black				