



Design

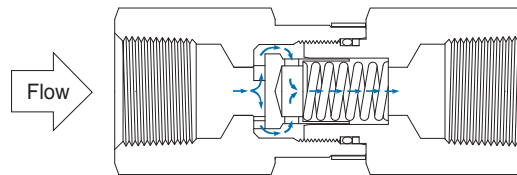
VX6 Series valve protects against rapid escape of system fluid by tripping the poppet to metal sealing position when flow through the valve rapidly increases to a set flow volume.

The valve design with a spring-loaded poppet allows for the valve to be installed vertically, horizontally or in any orientation.

Poppet to body metal sealing design.

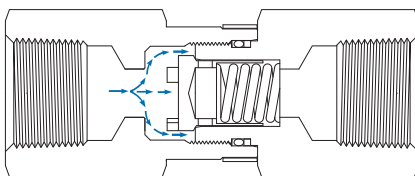
Operation

Valve in Open Position

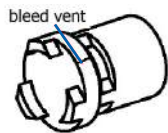


In normal operation, the spring-loaded poppet retains the valve in the open position.

Valve in Tripped Position

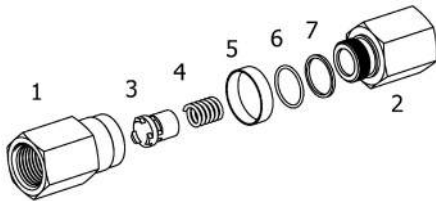


When an excess flow occurs downstream, the poppet rapidly moves to the tripped position to stop the uncontrolled release of system fluid.



When the system upstream and downstream pressures equalize through the bleed vent constructed on poppet, the spring automatically resets the valve to open position.

While the valve is in tripped position, the least volume of flow goes through the bleed vent that is less than 1% of the flow rate in the trip range.



Materials of Construction

Components	Material Grade/ ASTM Standards
1 Inlet Body	SS316/A276, A479
2 Outlet Body	
3 Poppet	SS302/A313
4 Spring	
5 Indication Ring	Polyetherimide
6 O-ring	FKM, see Table 1. Optional O-ring materials
7 Backup Ring	PTFE/D1710, Optional PEEK
O-ring lubricant	Silicon-based

Wetted parts are listed in **BOLD** letters.

Factory Test and Cleaning

- Every valve is factory tested for proper operation in the valve open and tripped position.
- Every valve is cleaned and packaged in accordance with HSME's cleaning standard CS-01. Special cleaning CS-11 in compliance with ASTM G93 Level C is for option.

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.

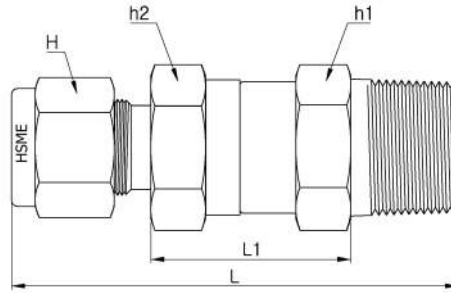
Pressure – Temperature Ratings

Ratings are based on FKM O-rings.

ASME Class	2500
Material	SS316
Material Group	2.2
Temperature, °F (°C)	Working Pressure, psig (bar)
- 10 to 100 (-23 to 37)	6000 (413)
200 (93)	5160 (355)
250 (121)	4910 (338)
300 (148)	4660 (321)
400 (204)	4280 (294)

Table 1. Optional O-ring Materials

Designator	O-ring Material	Temperature Rating, °F (°C)
BN	NBR	-40 to 250 (-40 to 121)
EP	EPDM	-50 to 300 (-45 to 148)
CR	Neoprene	- 40 to 250 (-40 to 121)



Complete Ordering Number		Inlet End Connection		Dimensions, mm (in.)				
		Inlet	Outlet	L	L1	H	h1	h2
VX6A-	A4T-SS	1/4 in. OD M Tube Fitting		61.7 (2.43)	26.4 (1.04)	9/16	11/16	
	A6M-SS	6mm OD M Tube Fitting				14 mm		
	F2N-SS	1/8 in. Female NPT		47.5 (1.87)	-	-		
	F4N-SS	1/4 in. Female NPT		53.8 (2.12)	-	-		
	M2N-SS	1/8 in. Male NPT		45.5 (1.79)	26.4 (1.04)	-		
	M4N-SS	1/4 in. Male NPT		55.1 (2.17)		-		
	MA4N4T-SS	1/4 in. Male NPT	1/4 in. OD M Tube Fitting	58.4 (2.3)	9/16			
	MF4N-SS	1/4 in. Male NPT	1/4 in. Female NPT	54.1 (2.13)	-	-		
VX6B-	A6T-SS	3/8 in. OD M Tube Fitting		69.9 (2.75)	31.2 (1.23)	11/16	1 in.	
	A8M-SS	8mm OD M Tube Fitting				16 mm		
	F6N-SS	3/8 in. Female NPT		64.8 (2.55)	-	-		
	M6N-SS	3/8 in. Male NPT		59.9 (2.36)	31.2 (1.23)	-		
	MA6N6T-SS	3/8 in. Male NPT	3/8 in. OD M Tube Fitting	65.0 (2.56)	11/16			
	MF6N6T-SS	3/8 in. Male NPT	3/8 in. Female NPT	62.5 (2.46)	-	-		
VX6C-	A8T-SS	1/2 in. OD M Tube Fitting		75.4 (2.97)	31.2 (1.23)	7/8	1 in.	
	A12M-SS	12mm OD M Tube Fitting				22 mm		
	F8N-SS	1/2 in. Female NPT		77.0 (3.03)	-	-		
	M8N-SS	1/2 in. Male NPT		69.3 (2.73)	31.2 (1.23)	-		
	MA8N8T-SS	1/2 in. Male NPT	1/2 in. OD M Tube Fitting	72.4 (2.85)	7/8			
	MF-8N8T-SS	1/2 in. Male NPT	1/2 in. Female NPT	73.4 (2.89)	-	-		
						1 in.	1 1/16	

Dimensions shown are for reference only and subject to change. Dimensions with M Tube Fittings are in finger-tight position.

How to order

To order, select an applicable valve ordering number.

To order valve with "NBR" O-ring material (refer to Table 1 on page 1), insert "BN" into the ordering number.

To order valve with an optional backup ring material "PEEK", insert "PK" into the ordering number.

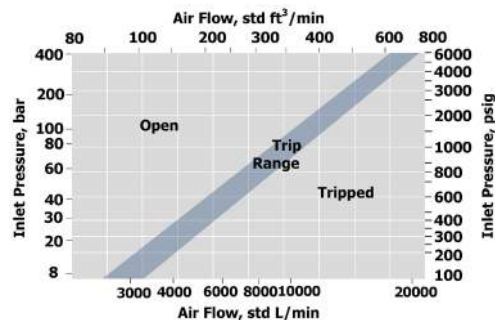
VX6A-A4T-SS
 VX6A-A4T-BN-SS
 VX6A-A4T-BN-PK-SS

Flow Data for Valve Trip @ 70°F (20°C)

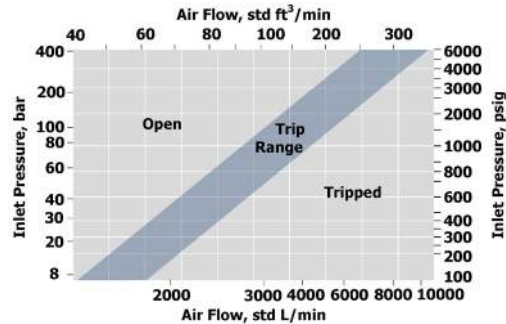
Water – VX6A, VX6B, and VX6C Series

Valve Series	Cv	Water Flow Range for Valve Trip U.S.gal/min. (L/min.)
VX6A	0.5	3.9 to 5.8 (14.7 to 21.9)
VX6B	1.1	8.2 to 10.0 (31.0 to 37.8)
VX6C		11.2 to 14.9 (42.3 to 56.3)

Air – VX6B Series



Air – VX6A Series



Air – VX6C Series

