



# INDUSTRIAL EXCESS FLOW VALVES

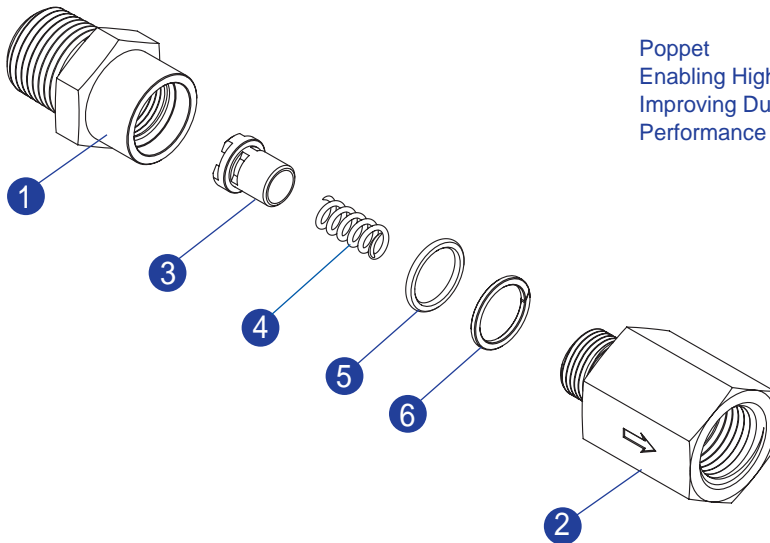
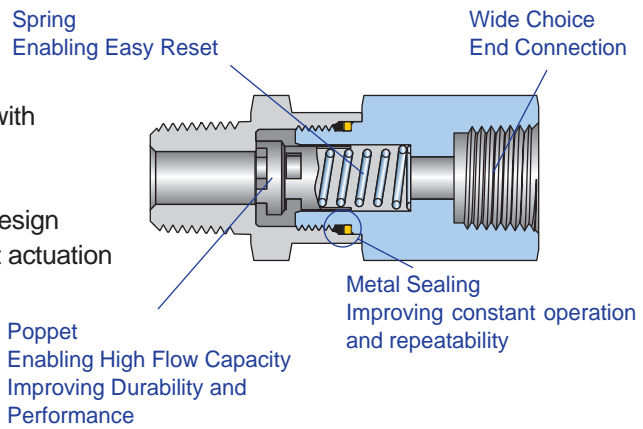
**VE Series**

[www.unilok.com](http://www.unilok.com)



## Features

- Pressure rating up to 6000psig (413bar) @38°C (100°F)
- Temperature rating from -23°C(-10°F) to 204°C (400°F) with standard Viton o-ring
- Automatic reset by the bleed vent
- Simple spring and seal maintenance with 2 piece body design
- Limitless mounting orientation from spring loaded poppet actuation

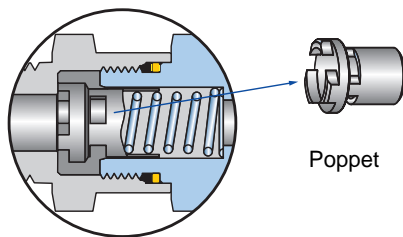


## Materials of Construction

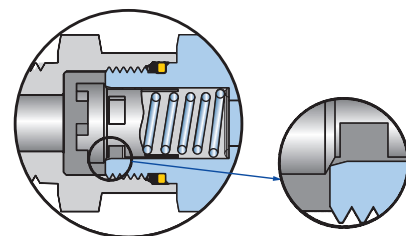
No.	Description	Materials	
Body Material		316SS	Alloy 400
1	Inlet Body	316SS	Alloy 400
2	Outlet Body	316SS	Alloy 400
3	Poppet	316SS	Alloy 400
4	Spring	302SS	Alloy 400
5	O-Ring	Viton	
6	Back-up Ring	PTFE	

## Operation

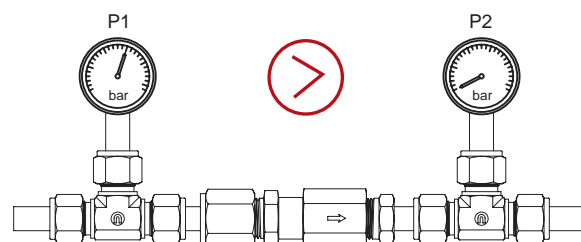
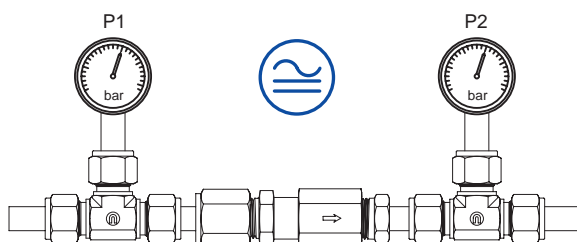
- The spring maintains the poppet in a normally opening position as long as the system pressure is balanced.
- If the system is unbalanced or the downstream pressure drops, the poppet will remain in closed position until the system pressure becomes equal.
- The bleed in the poppet will allow the pressure to slowly and automatically equalize if the downstream line is closed or repaired.
- When the pressure will be equal across the valve, the spring will reset the poppet to the open position.



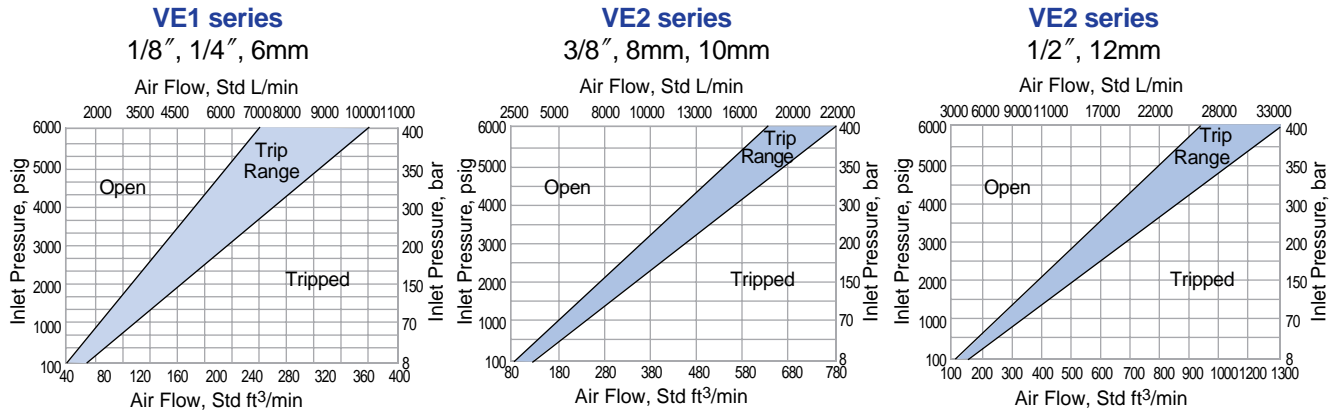
Open Position



Closed Position



## Air Flow Data at 70°F(21°C)



## Water Flow Data at 70°F(21°C)

Series	Connection Size	Cv	Trip Range	
			US gal/min	L/min
VE1	1/8", 1/4", 6mm	0.5	3.9~5.8	14.7~21.9
VE2	3/8", 8mm, 10mm	1.1	8.2~10.0	31.0~37.9
	1/2", 12mm	1.1	11.2~14.9	42.4~56.4

## Cleaning

Uni-Lok valves are free from machine oils, loose particles and grease throughout the close cleaning process. The special cleaning for high purity application is available upon request.

## Application

Prevent uncontrolled release of system fluid

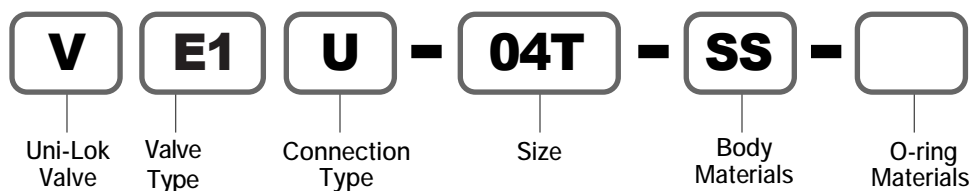
## Testing

Every VE series valve is 100% factory tested for proper functionality.

## How To Order

Uni-Lok VE series relief valves are ordered by part number as shown as below.

**Example :** The following part number, **VE1U-04T-SS** is designated for VE series relief valve with both 1/4", Uni-Lok tube fittings, 316SS.



Connection Type	
U	Uni-Lok Tube Fitting
F	Female NPT or ISO7/1(PT)
M	Male NPT or ISO7/1(PT)

Body Materials	
SS	316SS
MO	Alloy 400

Other alloys are available upon request.

Connection Type				
Fractional(Inch) Tube O.D. Designation				
Tube O.D.	inch	1/4	3/8	1/2
	mm	6.35	9.52	12.70
Designator		04T	06T	08T

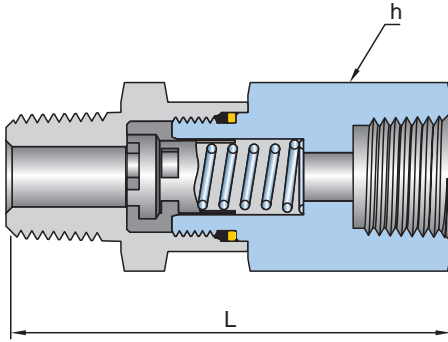
Metric Tube O.D. Designation					
Tube O.D.	mm	6	8	10	12
Designator		M06T	M08T	M10T	M12T

Pipe Size Designation (NPT or ISO7/1-PT)			
Pipe Size	1/4	3/8	1/2
Designator	04N/R	06N/R	08N/R

O-ring Materials	
None	Viton
E	Ethylene Propylene
N	Buna N
P	Neoprene
K	Kalrez

Seal kits are available for retrofit or maintenance. Contact Uni-Lok local distributors.

# VE series



## Temperature - Pressure Rating

Temperature Rating		Working Pressure	
F°	C°	psig	bar
100	37	6000	413
200	93	5160	355
250	121	4910	338
300	148	4660	321
400	204	4280	295

316SS body and Viton O-ring

VE2 series valves

with 3/8" Female NPT - 5000psig(344bar)

with 1/2" Female NPT - 4600psig(316bar)

## Ordering Information & Dimensions

Part Number	End Connection		Dimensions (mm)	
	Inlet	Outlet	L	h
VE1	U-04T- 1/4" Uni-Lok		61.7	17.4
	U-M06T- 6mm Uni-Lok		61.7	
	F-02N- 1/8" Female NPT		47.5	
	F-04N- 1/4" Female NPT		53.8	
	M-02N- 1/8" Male NPT		45.5	
	M-04N- 1/4" Male NPT		55.1	
	MU-04N04T-	1/4" Male NPT   1/4" Uni-Lok	58.4	
	MF-04N-	1/4" Male NPT   1/4" Female NPT	54.1	
VE2	U-06T- 3/8" Uni-Lok		69.9	25.4
	U-08T- 1/2" Uni-Lok		75.4	
	U-M08T- 8mm Uni-Lok		68.6	
	U-M10T- 10mm Uni-Lok		71.7	
	U-M12T- 12mm Uni-Lok		75.2	
	F-06N- 3/8" Female NPT		64.8	
	F-08N-	1/2" Female NPT	77.0	27.0
	M-06N-	3/8" Male NPT	59.9	
	M-08N-	1/2" Male NPT	69.3	
	MU-06N06T-	3/8" Male NPT   3/8" Uni-Lok	65.0	
	MU-08N08T-	1/2" Male NPT   1/2" Uni-Lok	72.4	
	MF-06N-	3/8" Male NPT   3/8" Female NPT	62.5	
MF-08N-	1/2" Male NPT   1/2" Female NPT	73.4	25.4	

Outlet body dimension (h) of VE2MF-08N-SS is 27mm.

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VE series valves. Add "R" as a suffix instead of "N"

## O-ring Seal Temperature Rating

O-ring Materials	Temperature Rating	
	°C	°F
Viton	-28 ~ 204	-18 ~ 400
Ethylene Propylene	-45 ~ 135	-49 ~ 275
Buna N	-20 ~ 105	-4 ~ 221
Neoprene	-40 ~ 121	-40 ~ 250
Kalrez	-20 ~ 315	-22 ~ 599

## Important Notification

Proper installation, materials compatibility, operation and maintenance of these valves are the responsibility of the user. The total system design must be taken into consideration to ensure optimal performance and safety.

Dimensions are for reference only and are subject to change without prior notice.



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