



**HIGH PRESSURE  
INTEGRAL BONNET BAR STOCK  
NEEDLE VALVES**

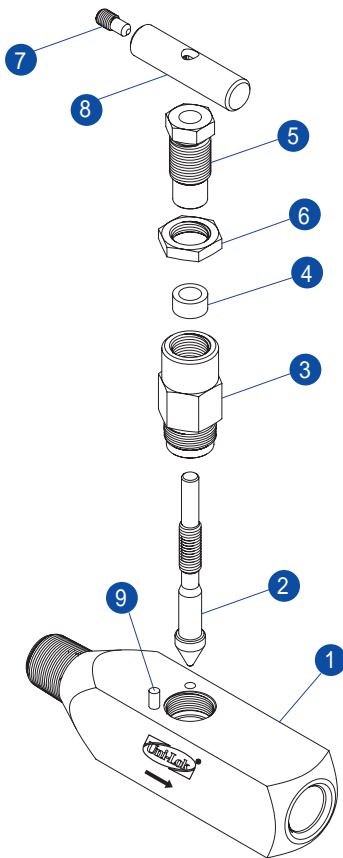
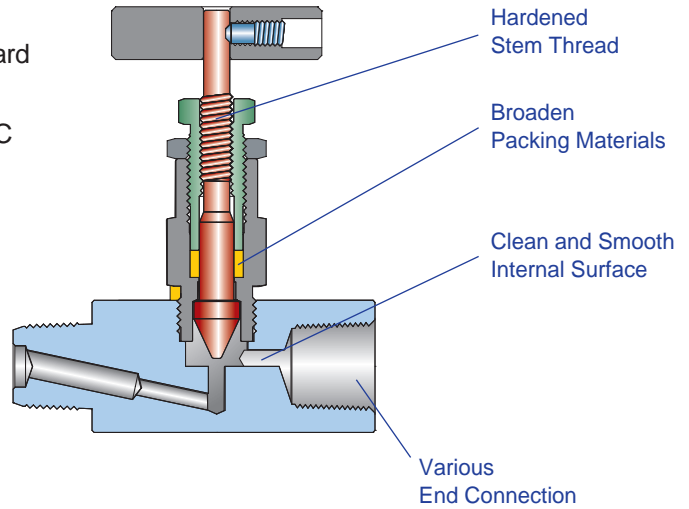
**VN6 Series**

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



## Features

- Pressure rating up to 6000psig (413bar) @38°C(100°F)
- Temperature rating from -53°C(-65°F) to 232°C(450°F) with standard PTFE packing, up to 315°C(600°F) with PEEK packing
- Low temperature application is available with TFM packing, -200°C (-328°F) to 260°C (500°F)
- Compact body design
- Hardened stem threads and forged body for long cycle life
- Integral bonnet design to eliminate unintentional stem back-out
- Stop pin to prevent accidental bonnet disengagement



## Materials of Construction

No.	Description	Materials	
		Body Material	
1	Body	316SS	Alloy 400
2	Stem	316SS	Alloy R-405/B164
3	Body Bonnet	316SS	Alloy R-405/B164
4	Packing	PTFE	
5	Spindle Bushing	316SS	Alloy R-405/B164
6	Jam Nut	316SS	Alloy R-405/B164
7	Set Screw	304SS	
8	Bar Handle	304SS	
9	Stop Pin	304SS	

## Pressure - Temperature Rating

Body Material	Stem	PTFE packing			
		Temperature Rating		Pressure Rating	
		°C	°F	psig	bar
316SS	Vee (metal to metal)	-54~232	-65~450	6000	413
	Soft-seat (Kel-F)	-54~93	-65~200		
Alloy 400	Vee (metal to metal)	-54~232	-65~450	5000	345
	Soft-seat (Kel-F)	-54~93	-65~200		

Packing Material	Body Material	PTFE packing			
		Temperature Rating		Pressure Rating	
		°C	°F	psig	bar
PTFE	316SS	-54~232	-65~450	4130	285
	Alloy 400	-54~232	-65~450	3970	274
PEEK	316SS	-54~315	-65~600	3760	260
	Alloy 400	-54~260	-65~500	3960	273

For the service with aromatic heat transfer fluids or concentrated sulfuric and nitric acids, PEEK is not recommended.

## Application

Severe service application, steam service in power plant, hot condensates

## Sour Environment Services

Uni-Lok valves are comply with NACE MR-0175/ISO 115156 for sour oilfield application or NACE MR-0103 for petroleum refining operations.

To order, add -N to the end of part number.

## Cleaning

Uni-Lok valves are free from machine oils, loose particles and grease throughout the close cleaning process.

## How To Order

Uni-Lok VN6 series needle valves are ordered by part number as shown as below.

## Testing

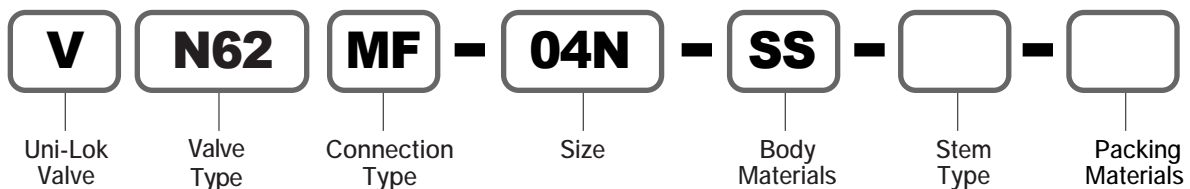
Every valve is 100% factory tested with air and nitrogen at 1000psig(69bar) for leakage at the seat and packing. Each test is performed to a maximum allowable leak rate of 0.1scc/min.

## 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.

The packing adjustment may be required during the valve's service life.

**Example :** The following part number, **VN62MF-04N-SS** is designated for VN6 series needle valve with 1/4" male NPT to 1/4" female NPT, 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

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

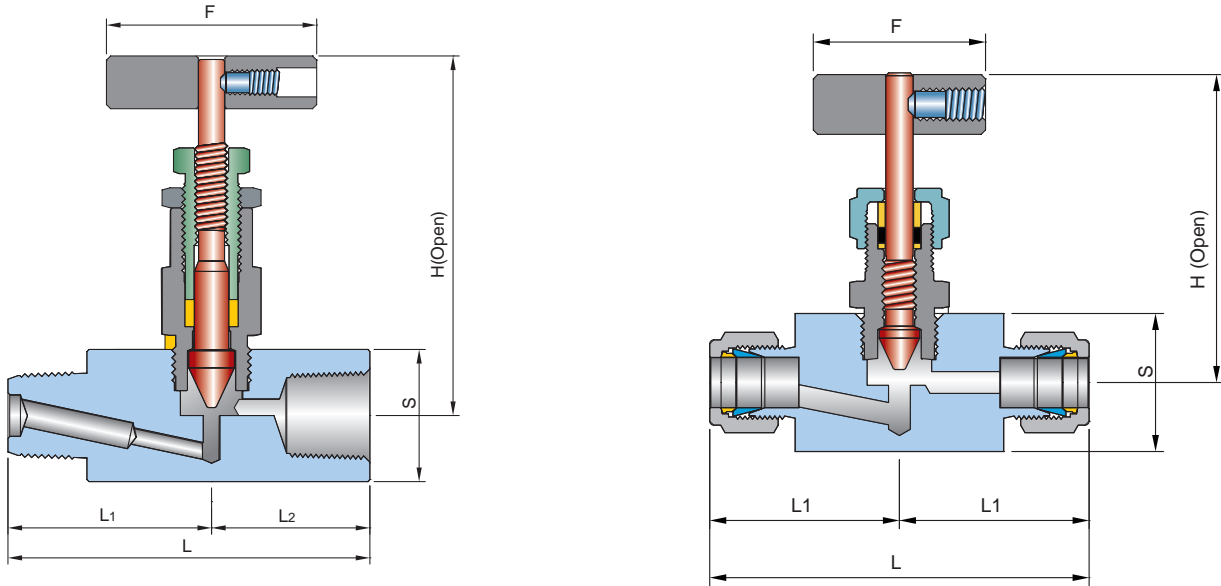
Metric Tube O.D. Designation					
Tube O.D.	mm	6	8	10	12
	Designator	M06T	M08T	M10T	M12T

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

Stem Type	
None	Vee Stem
S	Soft Seat Stem

Packing Materials	
None	PTFE
PK	PEEK
TM	TFM

# VN6 series



## Ordering Information & Dimensions

Part Number	End Connection		Orifice	CV	Dimensions (mm)					
	Inlet	Outlet			L	L1	S	F	H	
VN61	U-04T-	1/4" Uni-Lok		4.0	0.35	76.2	38.1	25.0	31.7	56.7
	U-06T-	3/8" Uni-Lok								
	U-08T-	1/2" Uni-Lok								
	U-M06T-	6mm Uni-Lok								
	U-M08T-	8mm Uni-Lok								
	U-M10T-	10mm Uni-Lok								
	U-M12T-	12mm Uni-Lok								
VN62	F-04N-	1/4" Female NPT		4.0	0.35	76.2	38.1	25.0	50.6	86.5
	F-06N-	3/8" Female NPT								
	F-08N-	1/2" Female NPT								
	MF-04N-	1/4" Male NPT	1/4" Female NPT							
	MF-06N-	3/8" Male NPT	3/8" Female NPT							
	MF-08N-	1/2" Male NPT	1/2" Female NPT							

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VN6 series valves. Add "R" as a suffix instead of "N".

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



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