



UNION BONNET VALVES

VU6 Series

www.unilok.com



Features

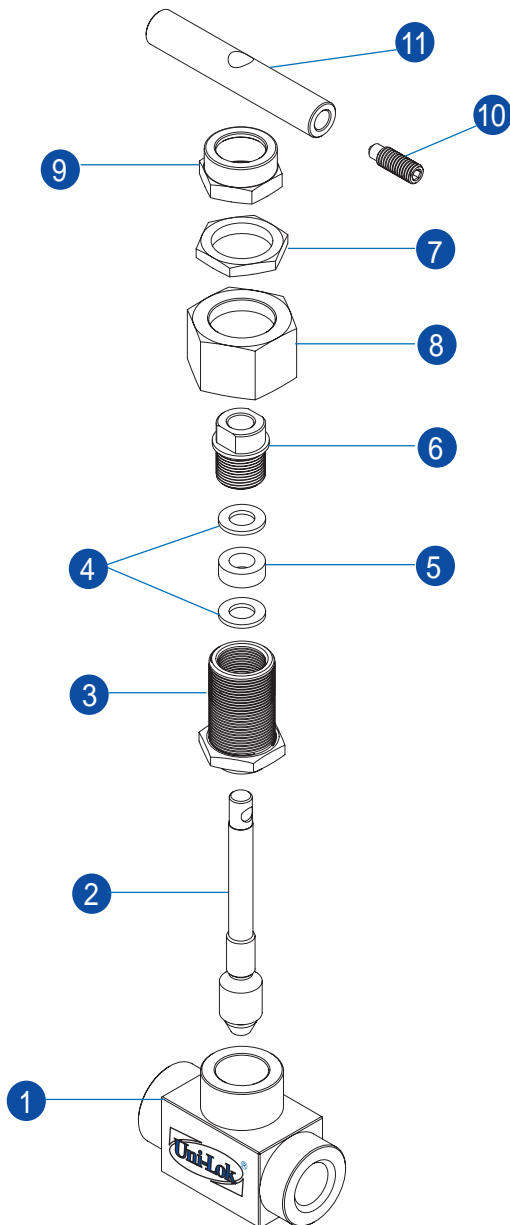
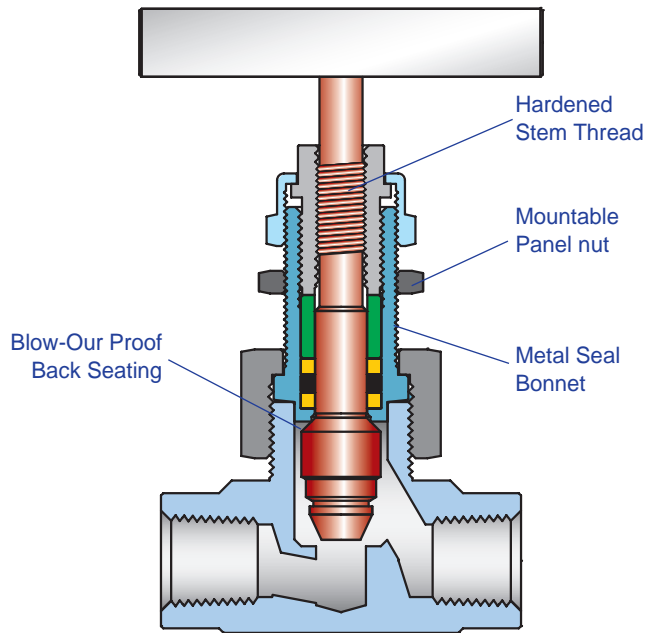
Pressure rating up to 6000psig (413bar) @38°C (100°F)

Temperature rating from -53°C(-65°F) to 232°C (450°F) with standard PTFE packing, up to 648°C (1200°F) with Grafoil packing

Roll threaded and hardened stem for long cycle life

Union bonnet design to ensure high integrity seal under severe environments

Panel mounting without packing disruption



Materials of Construction

No.	Description	Materials	
	Body Material	316SS	Alloy 400
1	Body	316SS	Alloy 400
2	Stem	316SS	Alloy R-405/B164
3	Union Nut	316SS	Alloy R-405/B164
4	Packing Support	Glass-filled PTFE	
5	Packing	PTFE	
6	Gland	316SS	Alloy R-405/B164
7	Panel Nut	316SS	Alloy R-405/B164
8	Bonnet	316SS	Alloy R-405/B164
9	Packing Bolt	316SS	Alloy R-405/B164
10	Set Screw	304SS	
11	Handle	304SS	

Application

Severe service application, high pressure sampling and shut-down systems, test stands

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 VU6 series union bonnet valves are ordered by part number as shown as below.

Testing

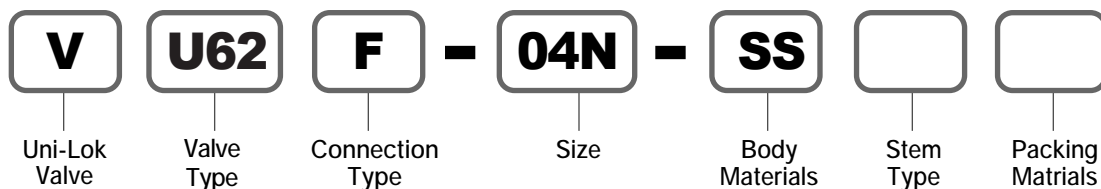
Every valve is 100% factory tested with air and nitrogen at 1000psig(69bar) for leakage at the seat and packing. Each test is performed to a maximum allowable leak rate of 0.1scc/min.

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, **VU62F-04N-SS** is designated for VU6 series union bonnet valve with 1/4" male NPT to 1/4" female NPT, 316SS.



Valve Type	
U6	Straight Pattern
U6A	Angle Pattern

Connection Type	
U	Uni-Lok Tube Fitting
F	Female NPT or ISO7/1(PT)
M	Male NPT or ISO7/1(PT)
WS-*T	Socket Weld -Tube
WS-*P	Socket Weld - Pipe

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	1/8	1/4	3/8	1/2	3/4	1
	mm	3.17	6.35	9.52	12.70	19.05	25.40
Designator		02T	04T	06T	08T	12T	16T

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	1/8	1/4	3/8	1/2	3/4	1
Designator	02N/R	04N/R	06N/R	08N/R	12N/R	16N/R

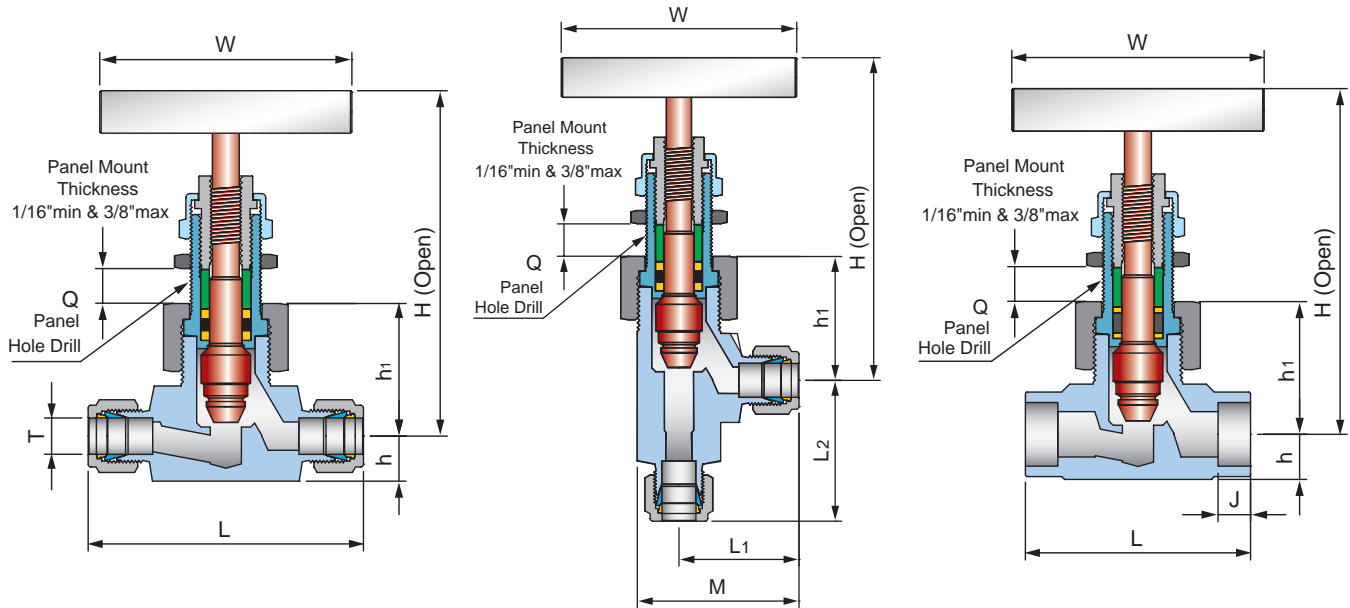
Weld Size Designation				
Tube Size	1/4	3/8	1/2	3/4
Designator	04T	06T	08T	12T
Pipe Size	1/4	3/8	1/2	
Designator	04P	06P	08P	

Stem Type	
None	Veel Stem
R	Regulating
S	Soft-seat
B	Ball

Packing Materials	
None	PTFE
PK	PEEK
GF	Grafoil

VU6 series

(Straight or Angle Pattern,
Both Uni-Lok Tube Fittings or
Both Tube or Pipe Socket Welds)



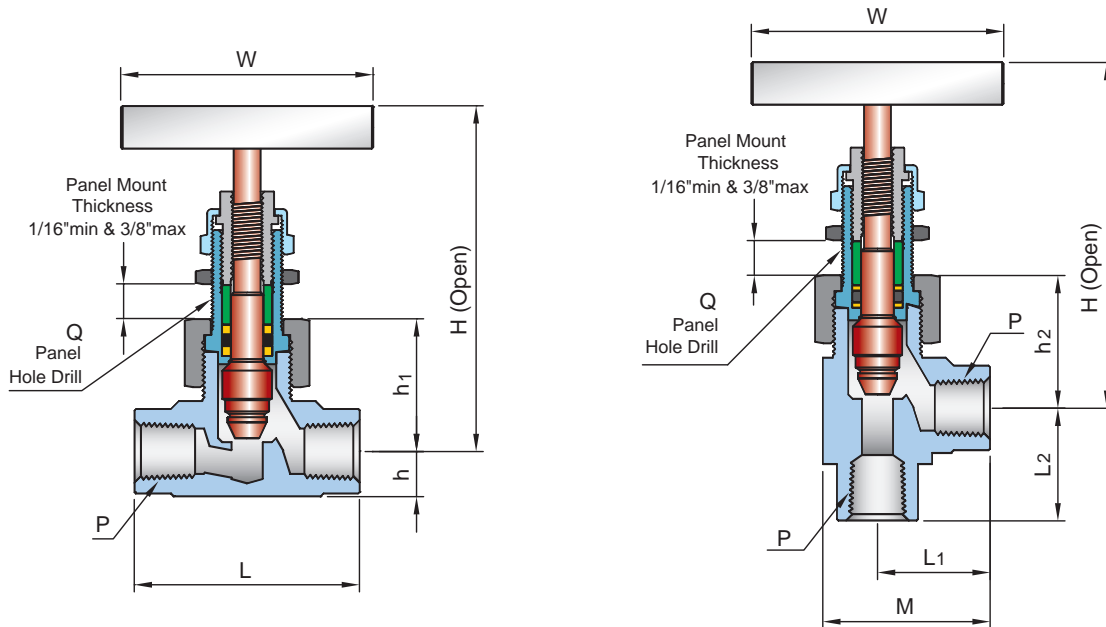
Ordering Information & Dimensions

Part Number	End Connection		Orifice	CV	Dimensions (mm)										
	Inlet	Outlet			L	L ₁	L ₂	M	h	h ₁	h ₂	H(open)	W	Q	J
VU61	U-04T-	1/4" Uni-Lok	4.0	0.35	61.9	29.4	37.3	38.9	9.6	27.8	27.8	77.8	45.0	15.1	-
	U-M06T-	6mm Uni-Lok													-
	U-M08T-	8mm Uni-Lok													-
	WS-04T	1/4" Tube SW													7.2
VU62	U-06T-	3/8" Uni-Lok	6.4	0.86	73.0	32.5	42.9	45.3	12.7	34.1	31.0	93.7	64.0	19.9	-
	U-08T-	1/2" Uni-Lok													-
	U-M10T-	10mm Uni-Lok													-
	U-M12T-	12mm Uni-Lok													-
	WS-06T	3/8" Tube SW													8.0
	WS-08T	1/2" Tube SW													9.6
	WS-04P	1/4" Pipe SW													9.6
VU63	U-08T-	1/2" Uni-Lok	11.0	2.20	98.0	43.7	53.2	61.1	15.9	46.0	47.6	121.5	89.0	26.2	-
	U-12T-	3/4" Uni-Lok													-
	U-16T-	1" Uni-Lok													-
	U-M12T-	12mm Uni-Lok													-
	WS-08T	1/2" Tube SW													9.6
	WS-12T	3/4" Tube SW													11.1
	WS-08P	1/2" Pipe SW													9.6

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

VU6 series

(Straight or Angle Pattern
Both Female or Male Threads
or Male/Female Thread)



Ordering Information & Dimensions

Part Number	End Connection		Orifice	CV	Dimensions (mm)									
	Inlet	Outlet			L	L ₁	L ₂	M	h	h ₁	h ₂	H(open)	W	Q
VU61	F-02N-	1/8" Female NPT	4.0	0.35	50.8	23.0	25.4	32.6	9.6	27.8	32.6	77.8	45.0	15.1
	F-04N-	1/4" Female NPT			52.4	26.2	23.0	32.6						
	M-04N-	1/4" Male NPT			50.8	25.4	25.4	35.0						
	MF-04N-	1/4" Male NPT 1/4" Female NPT			52.4	23.0	25.4	32.6						
VU62	F-04N-	1/4" Female NPT	6.4	0.86	57.2	25.4	28.6	38.1	12.7	34.1	37.3	93.7	64.0	19.9
	F-06N-	3/8" Female NPT			57.2	25.4	28.6	38.1	12.7	34.1	37.3	93.7	64.0	19.9
VU63	F-08N-	1/2" Female NPT	11.0	2.20	79.4	33.3	39.7	50.8	15.9	46.0	50.8	121.5	89.0	26.2
	F-12N-	3/4" Male NPT			82.6	-	-	-	19.9	48.4	-			
	F-16N-	1" Male NPT			92.1	-	-	-	25.4	54.0	-			
	MF-08N-	1/2" Male NPT 1/2" Female NPT			79.4	33.3	39.7	50.8	15.9	46.0	50.8			
	MF-12N-	3/4" Male NPT 3/4" Female NPT			82.6	-	-	-	19.9	48.4	-			
	MF-16N-	1" Male NPT 1" Female NPT			92.1	-	-	-	25.4	54.0	-			

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VU6 series valves.
Add "R" as a suffix instead of "N".

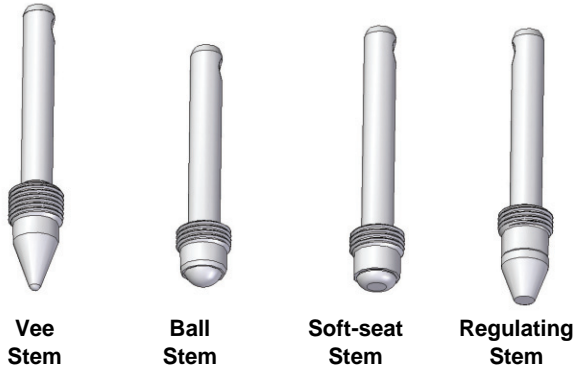
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Stem Types

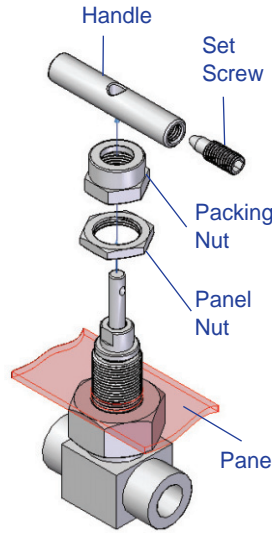
Metal to metal vee stem is standard for pressure tightness even at elevated temperature. Regulating stem, ball stem and soft-seat stem with KEL-F are available as optional.

The excessive force when closing valve may damage both seat and stem tip, particularly soft-seat stem.

Vee, ball and soft-seat are non-rotating stems.



Panel Mounting Procedure



Loose handle set screw using appropriate allen key.

Disassemble packing nut and panel nut.

Insert the valve into the panel hole.

Tighten panel nut and packing nut onto the valve bonnet.

Reassemble handle.

Tighten panel nut when fully closing of the valve.

Pressure -Temperature Rating

Body Material	Stem	PTFE packing			
		Temperature Rating		Pressure Rating	
		°C	°F	psig	bar
316SS	Vee, Ball, Regulating	-54~232	-65~450	6000	413
	Soft-seat (Kel-F)	-54~93	-65~200		
Alloy400	Vee, Ball, Regulating	-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
Grafoil	316SS	-54~648	-65~1200	1715	119
	Alloy 400	-54~260	-65~500	3960	273

Alloy 400/Monle is not applicable over 260°C (500°F)

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

Uni-Lok Line up

Instrumentation

Fittings



- Tube Fittings
- PTFE Fittings
- Hose & Push-On Connectors
- Precision Pipe Fittings
- Fusible Connectors
- Dielectric Fittings

Valves



- VB1 series
 - VB2 series
 - VB3 series
 - VB6B series
 - VB6F series
 - VB6T series
 - VP series
 - VN5 series
 - VN6 series
 - VU6 series
 - VMT series
 - VM series
 - VG series
 - VL series
 - VD series
 - VC series
 - VR series
 - VE series
 - VF series
 - VPR series
 - VBR series
- Precision & Clean Ball Valves
Swing-Out Ball Valves
Instrumentation Ball Valves
High Pressure Bar Stock Ball Valves
High Pressure Forged Ball Valves
Trunnion Ball Valves
Plug Valves
- Integral Bonnet Forged Needle Valves
High Pressure Bar Stock Needle Valves
Union Bonnet Valves
Metering Valves
- Instrumentation Manifolds Valves
Gauge & Gauge Root Valves
Bleed Valves
- Double Block and Bleed Valves
- General & High Pressure Relief Valves
Low & High Pressure Relief Valves
Industrial Excess Flow Valves
- T & In-Line Filters
Pressure Reducing Valves
Back Pressure Regulators

Others

- Seamless & Welded Tubing
- Condensate Pots

UHP(Ultra High Purity)

Fittings



- Weld & Metal Face Seal Fittings
- Pipe & Tube Fittings
- Flanges
- Cylinder Connectors

Valves



- VCD series
- VCB series
- VCC series
- Diaphragm Valves
- Bellows Valves
- Welded Check Valves

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