



HIGH PRESSURE FORGED MULTI PURPOSE **BALL VALVES**

VB6F Series

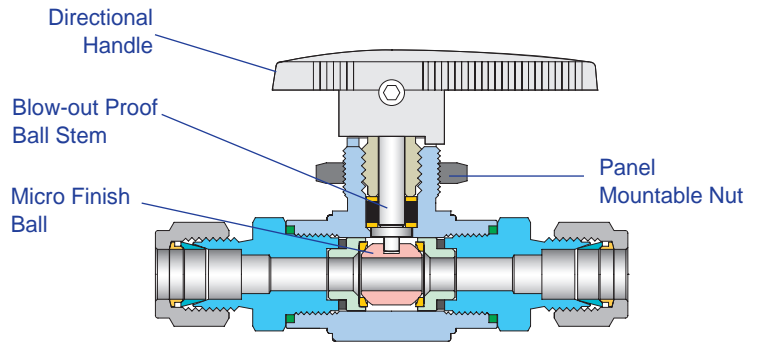
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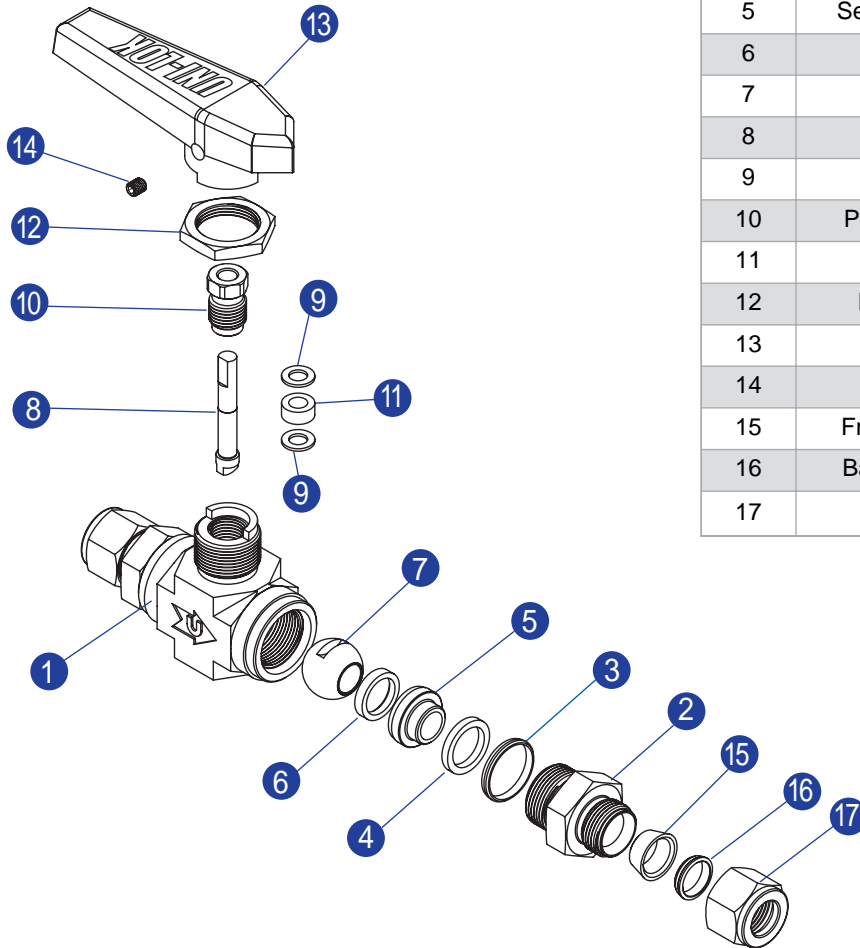
Features

- Pressure rating up to 6000psig (413bar) @21°C (70°F) with standard PCTFE seats
- Temperature rating from -54°C (-65°F) to 177 °C (350°F) with standard PCTFE seats
- Compact forged body design
- Micro finished 316SS ball to provide a positive seal
- Blow-out proof design with internally loaded ball stem
- Low operating torques and positive handle stops
- Panel mounting for easy installation
- 2 way shut off valves and 3 way switching valves are available



Materials of Construction

No.	Description	Materials
1	Body	316SS
2	Connector	316SS
3	Connector O-ring	PTFE
4	Retainer Seal	PTFE
5	Seat Retainer	316SS
6	Ball Seat	PCTFE
7	Ball	316SS
8	Stem	316SS
9	Washer	304SS
10	Packing Bolt	304SS
11	Packing	PTFE
12	Panel Nut	316SS
13	Handle	Nylon
14	Bolt	304SS
15	Front Ferrule	316SS
16	Back Ferrule	316SS
17	Nut	316SS



Application

VB6F series valves are requiring in a wide range onshore and offshore applications to offer a safe and reliable performance.

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.

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.

Hydrostatic shell test to be performed at 1.5 time of the working pressure with optional.

Cleaning

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

Important Notification

Uni-Lok ball valves are designed to be operated in a fully open or fully closed position.

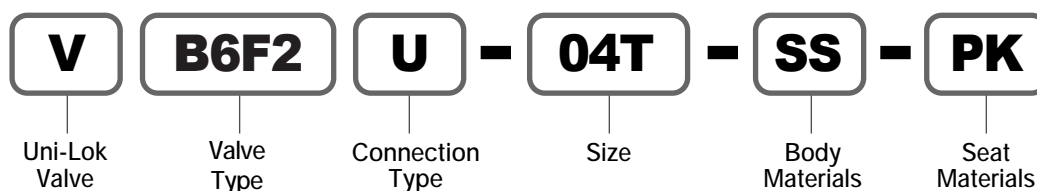
The packing adjustment may be required during the valve's service life.

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.

How To Order

Uni-Lok VB6F series ball valves are ordered by part number as shown as below.

Example : The following part number, **VB6F2U-04T-SS-PK** is designated for VB6F series ball valve with both 1/4" Uni-Lok tube fitting, 316SS, PEEK seat.



Other alloys are available upon request

Valve Type	
B6F	2 Way Type
B6FX	3 Way Type

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

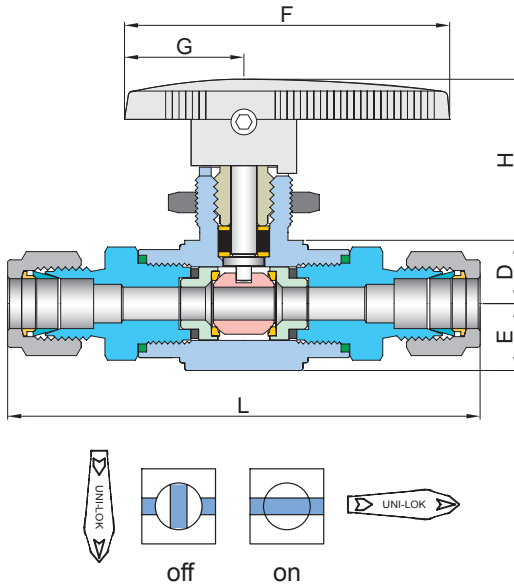
Connection Type						
Fractional(Inch) Tube O.D. Designation						
Tube O.D.	inch	1/8	1/4	3/8	1/2	3/4
	mm	3.17	6.35	9.53	12.70	19.05
Designator		02T	04T	06T	08T	12T

Metric Tube O.D. Designation						
Tube O.D.	mm	3	6	8	10	12
Designator		M03T	M06T	M08T	M10T	M12T

Pipe Size Designation (NPT or ISO7/1-PT)				
Pipe Size	1/8	1/4	3/8	1/2
Designator	02N/R	04N/R	06N/R	08N/R

Seat Materials	
None	PCTFE
PK	PEEK

VB6F series (2 Way, Shut-Off Both Uni-Lok Tube Fittings or Both Female or Male Threads)



Ordering Information & Dimensions

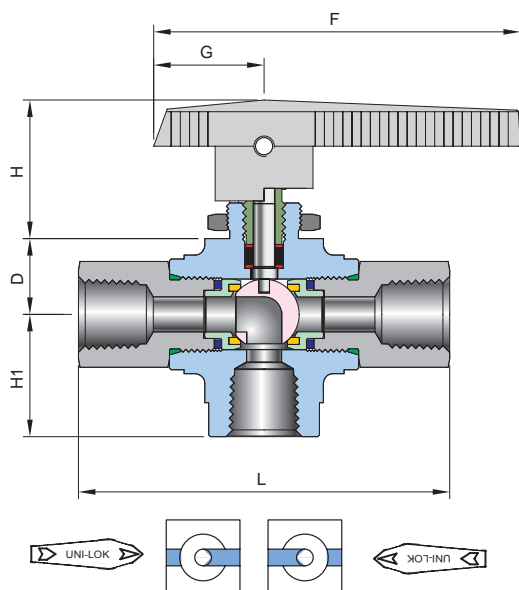
Part Number		End Connection		Orifice	CV	Dimensions (mm)					
		Inlet	Outlet			L	E	D	H	F	G
VB6F1	U-04T-	1/4" Uni-Lok		4.2	0.93	75.2	9.5	8.4	23.2	46.0	17.4
	F-02N-	1/8" Female NPT				54.4					
	M-04N-	1/4" Male NPT				68.6					
VB6F2	U-04T-	1/4" Uni-Lok		6.4	2.34	88.7	13.0	12.3	31.8	63.2	23.2
	U-06T-	3/8" Uni-Lok				91.4					
	U-M06T-	6mm Uni-Lok				88.7					
	U-M08T-	8mm Uni-Lok				91.0					
	U-M10T-	10mm Uni-Lok				93.0					
	F-04N-	1/4" Female NPT				77.0					
	M-04N-	1/4" Male NPT				82.2					
	M-06N-	3/8" Male NPT				82.2					
VB6F3	U-08T-	1/2" Uni-Lok		10.3	6.42	118.8	18.5	17.0	46.1	108.0	32.5
	U-12T-	3/4" Uni-Lok				118.4					
	U-M12T-	12mm Uni-Lok		9.5	5.57	118.8					
	F-06N-	3/8" Female NPT		10.3	6.42	98.9					
	F-08N-	1/2" Female NPT				109.2					
	M-08N-	1/2" Male NPT				112.8					

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VB6F series valves.
Add "R" as a suffix instead of "N".

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

VB6FX series

(3 Way, Switching Uni-Lok Tube Fittings or Female or Male Threads)



Ordering Information & Dimensions

Part Number		End Connection		Orifice	CV	Dimensions (mm)					
		Inlet	Outlet			L	H ₁	D	H	F	G
VB6FX1	U-04T-	1/4" Uni-Lok		4.2	0.93	75.2	37.2	8.4	23.2	46.0	17.4
	F-02N-	1/8" Female NPT				54.4	29.9				
	M-04N-	1/4" Male NPT				68.6	29.9				
VB6FX2	U-04T-	1/4" Uni-Lok		4.8	1.04	88.7	40.3	12.3	31.8	63.2	23.2
	U-06T-	3/8" Uni-Lok		6.4	2.34	91.4	40.3				
	U-M06T-	6mm Uni-Lok				88.7	40.4				
	U-M08T-	8mm Uni-Lok				91.0	40.5				
	U-M10T-	10mm Uni-Lok				93.0	40.6				
	F-04N-	1/4" Female NPT				77.0	33.0				
	M-04N-	1/4" Male NPT				82.2	33.0				
	M-06N-	3/8" Male NPT				82.2	33.0				
VB6FX3	U-08T-	1/2" Uni-Lok				10.3	6.42	118.8	57.1	17.0	46.1
	U-12T-	3/4" Uni-Lok		118.4	57.1						
	U-M12T-	12mm Uni-Lok		9.5	5.57	118.8	57.1				
	F-06N-	3/8" Female NPT		10.3	6.42	98.9	47.0				
	F-08N-	1/2" Female NPT				109.2	47.0				
	M-08N-	1/2" Male NPT				112.8	47.0				

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VB6FX series valves.
Add "R" as a suffix instead of "N".

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

Pressure - Temperature Ratings

Valve Group	Sealing Materials			Pressure Rating	Temperature Rating
	Seat	Stem Packing	End Seal		
2 Way					
VB6F1	PCTFE	PTFE	Viton	6000psig(413bar)	-22°F ~355°F (-30°C~180°C)
VB6F2	PEEK			6000psig(413bar)	-65°F ~446°F (-54°C~230°C)
VB6F3					
3 Way					
VB6FX1	PCTFE	PTFE	Viton	4000psig(275bar)	-22°F ~355°F (-30°C~180°C)
	PEEK			6000psig(413bar)	-65°F ~446°F (-54°C~230°C)
VB6FX2	PCTFE	PTFE	Viton	3000psig(206bar)	-9°F ~320°F (-23°C~160°C)
VB6FX3	PEEK			4000psig(275bar)	-54°F ~410°F (-35°C~210°C)

Flow Rates

Pressure Drop(Δp) to Atmosphere in psig		Cv													
		0.06	0.18	0.21	0.26	0.63	0.7	0.87	0.93	1.04	2.34	3.46	3.62	5.57	6.42
Air @70°F(21°C) SCFM	10	5.9	17.7	20.7	25.6	62.0	68.9	85.6	91.5	102.4	230.3	340.6	356.3	548.2	631.9
	50	13.2	39.6	46.2	57.2	138.7	154.1	191.5	204.7	228.9	515.0	761.5	796.7	1225.9	1413.0
	100	18.7	56.0	65.4	80.9	196.1	217.9	270.8	289.5	323.7	728.3	1077.0	1126.8	1733.7	1998.3
Water @60°F(16°C) US GPM	10	0.2	0.6	0.7	0.8	2.0	2.2	2.8	2.9	3.3	7.4	10.9	11.5	17.6	20.3
	50	0.4	1.3	1.5	1.8	4.5	4.9	6.2	6.6	7.4	16.5	24.5	25.6	39.4	45.4
	100	0.6	1.8	2.1	2.6	6.3	7.0	8.7	9.3	10.4	23.4	34.6	36.2	55.7	64.2

Flow rate calculated with 1000psig(69bar) inlet pressure.

To determine m³/hr, multiply SCFM by 1.69 and US GPM by 0.227.

SCFM : Standard Cubic Feet per Minute. US GPM : Gallons Per Minute

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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