



**HIGH PRESSURE FORGED  
MULTI PURPOSE  
BALL VALVES**

**VB6F Series**

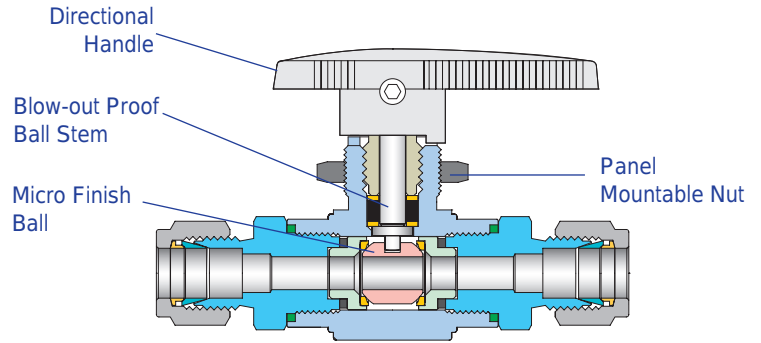
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**Kor-Lok**® Kor-Lok USA

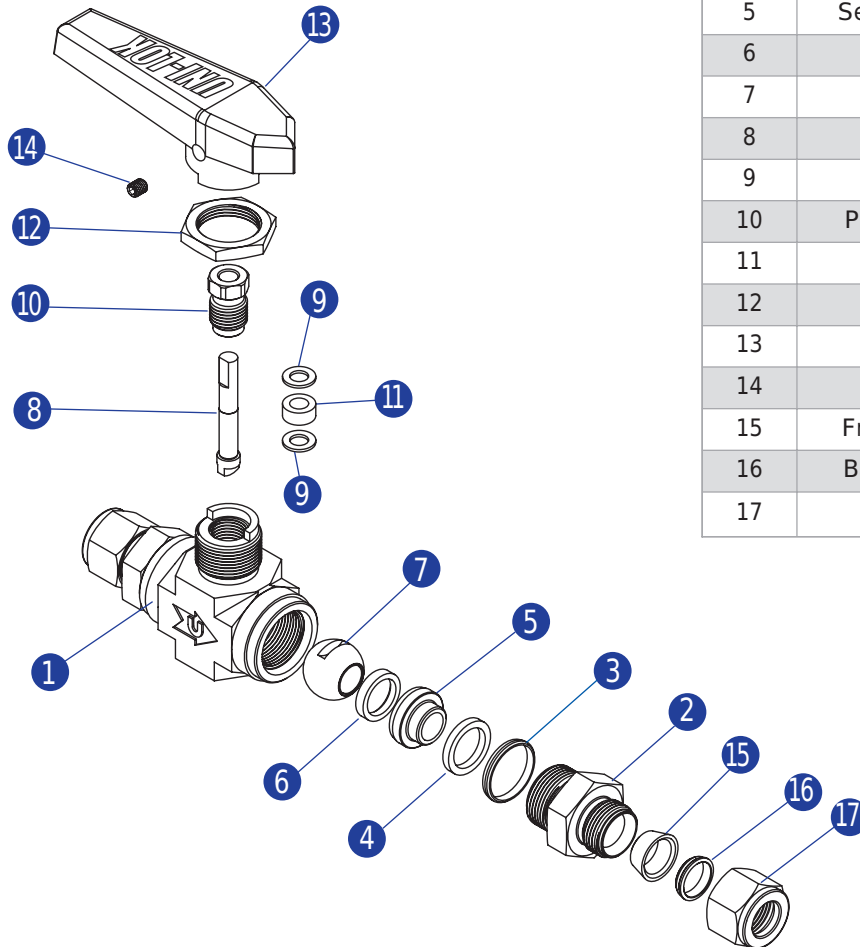
## Features

- 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

Kor-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.

## How To Order

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

## Cleaning

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

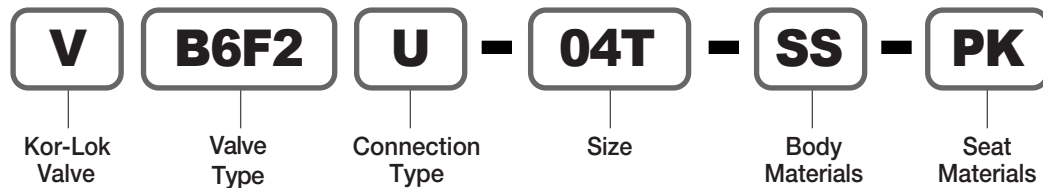
## Important Notification

Kor-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.

**Example :** The following part number, **VB6F2U-04T-SS-PK** is designated for VB6F series ball valve with both 1/4" Kor-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	Kor-Lok Tube Fitting
F	Female NPT or ISO7/1(PT)
M	Male NPT or ISO7/1(PT)

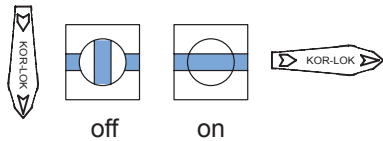
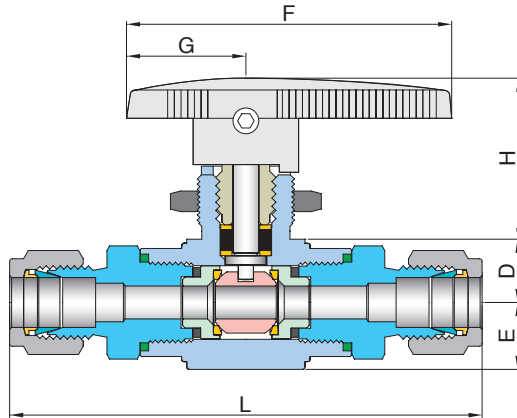
Connection Type						
Fractional(Inch) Tube O.D. Designation						
Tube O.D.	inch	1/8	1/4	3/8	1/2	3/4
	mm	3.17	6.35	9.53	12.70	19.05
Designator		02T	04T	06T	08T	12T

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 Kor-Lok Tube Fittings or Both Female or Male Threads)



### Ordering Information & Dimensions

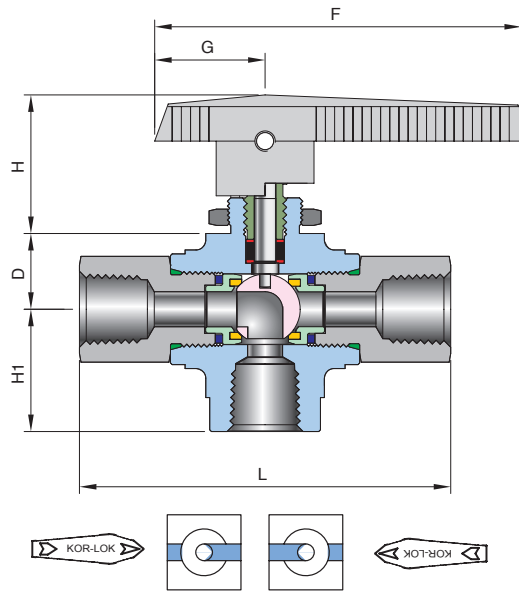
Part Number	End Connection		Orifice	CV	Dimensions (mm)					
	Inlet	Outlet			L	E	D	H	F	G
VB6F1	U-04T-	1/4" Kor-Lok	4.2	0.93	75.2	9.5	8.4	23.2	46.0	17.4
	F-02N-	1/8" Female NPT			54.4					
	M-04N-	1/4" Male NPT			68.6					
VB6F2	U-04T-	1/4" Kor-Lok	6.4	2.34	88.7	13.0	12.3	31.8	63.2	23.2
	U-06T-	3/8" Kor-Lok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



### Ordering Information & Dimensions

Part Number	End Connection		Orifice	CV	Dimensions (mm)					
	Inlet	Outlet			L	H <sub>1</sub>	D	H	F	G
VB6FX1	U-04T-	1/4" Kor-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" Kor-Lok	6.4	2.34	88.7	40.3	12.3	31.8	63.2	23.2
	U-06T-	3/8" Kor-Lok			91.4	40.3				
	U-M06T-	6mm Kor-Lok			88.7	40.4				
	U-M08T-	8mm Kor-Lok			91.0	40.5				
	U-M10T-	10mm Kor-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" Kor-Lok	10.3	6.42	118.8	57.1	17.0	46.1	108.0	32.5
	U-12T-	3/4" Kor-Lok			118.4	57.1				
	U-M12T-	12mm Kor-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		
<b>2 Way</b>					
VB6F1 VB6F2 VB6F3	PCTFE PEEK	PTFE	Viton	6000psig(413bar)	-22°F~355°F (-30°C~180°C)
				6000psig(413bar)	-65°F~446°F (-54°C~230°C)
<b>3 Way</b>					
VB6FX1	PCTFE PEEK	PTFE	Viton	4000psig(275bar)	-22°F~355°F (-30°C~180°C)
				6000psig(413bar)	-65°F~446°F (-54°C~230°C)
VB6FX2 VB6FX3	PCTFE PEEK	PTFE	Viton	3000psig(206bar)	-9°F~320°F (-23°C~160°C)
				4000psig(275bar)	-54°F~410°F (-35°C~210°C)

### Flow Rates

Pressure Drop( $\Delta p$ ) 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 m<sup>3</sup>/hr, multiply SCFM by 1.69 and US GPM by 0.227.  
 SCFM : Standard Cubic Feet per Minute. US GPM : Gallons Per Minute

# Kor-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

**A QUALITY PRODUCT AT  
A GREAT PRICE**



**Kor-Lok**® Kor-Lok USA, LLC

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