



HIGH PRESSURE BAR STOCK BALL VALVES

VB6B Series

www.unilok.com



UNILOK 

Features

Pressure rating up to

6000psig (413bar) @21°C(70°F) with standard PTFE seats

10000psig (689bar) @21°C(70°F) with optional PEEK seats for CNG application

Temperature rating from -30°C(-22°F) to 180°C (355°F) with standard PCTFE seats

Robust body for high pressure application

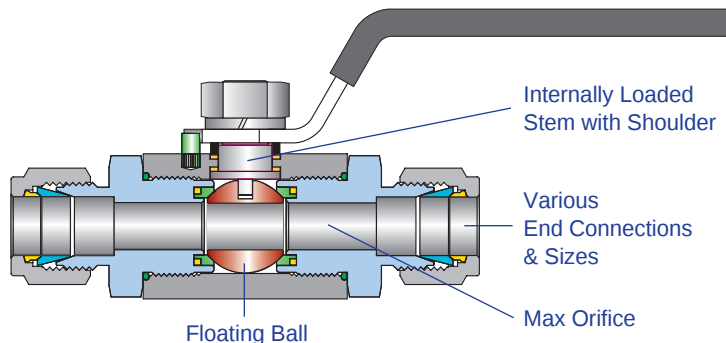
Floating ball design ensures leak proof shut-off at high pressure

Blow-out proof design with internally loaded ball stem with shoulder

Lever handle with PVC coat allows easy and quick operation with low torque and 1/4 turn to open and close

Max orifice minimizes the pressure drop Panel mounting is available as optional

2 way shut off valves and 3 way switching valves are available



Materials of Construction

No.	Description	Materials
1	Body	316SS
2	Pin	304SS
3	Connector	316SS
4	O-Ring	Viton
5	Ring Seat	PTFE
6	Ball Seat	PCTFE
7	Ball	316SS
8	Stem	316SS
9	Packing	PTFE
10	Bushing	316SS
11	Handle	304SS+PVC
12	Spring Washer	304SS
13	Nut	304SS
14	Front Ferrule	316SS
15	Back Ferrule	316SS
16	Nut	316SS

VB6BC Series Valves for CNG Application

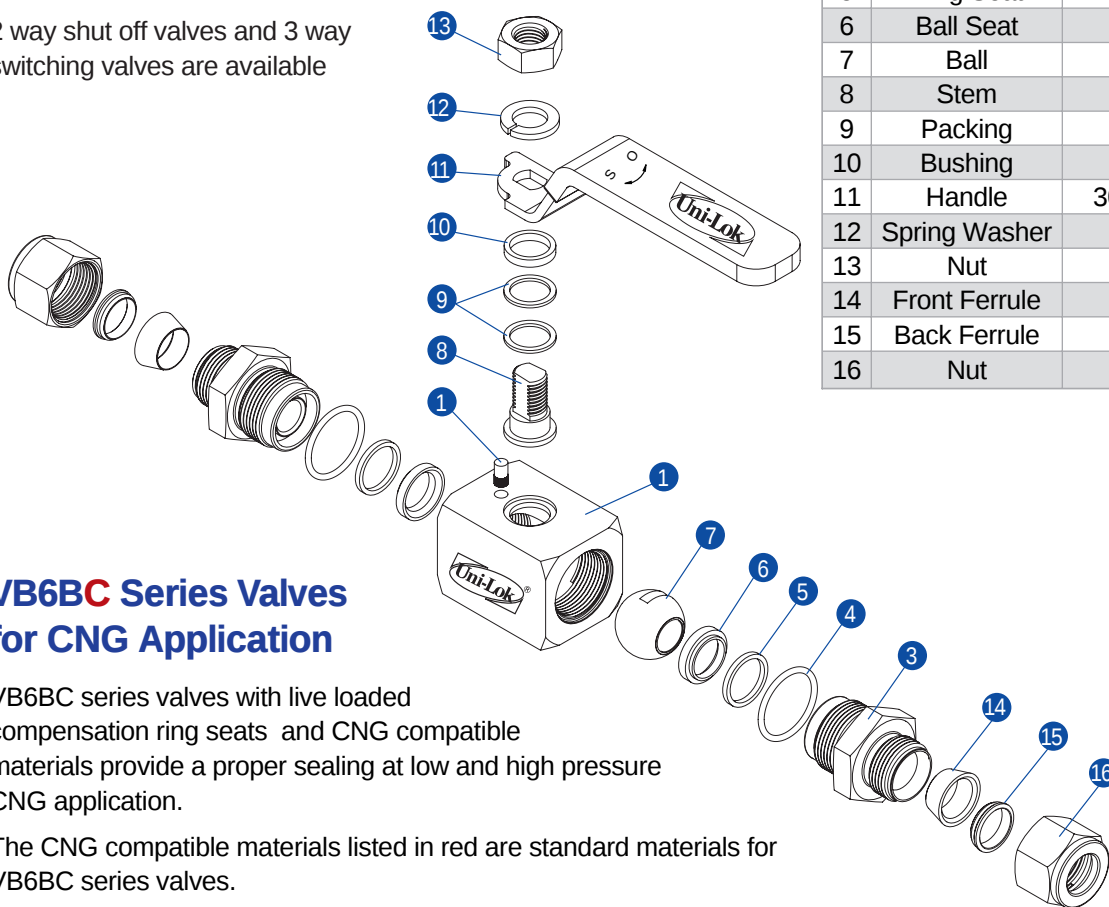
VB6BC series valves with live loaded compensation ring seats and CNG compatible materials provide a proper sealing at low and high pressure CNG application.

The CNG compatible materials listed in red are standard materials for VB6BC series valves.

⑥ PEEK : Ball Seats ⑤ PCTFE : Ring Seats ④ H-NBR : O-rings

To order, add **C** next to valve series number.

Example : VB6BC2U-12T-SS.



Application

Internally live loaded ball stem to ensure sealing at low and high pressure CNG application .

PEEK and PCTFE seats are compatible with CNG

VB6B series valves are requiring in a wide range onshore and offshore applications to offer a safe and reliable perform.

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 is available as optional.

How To Order

Uni-Lok VB6B series ball valves are ordered by part number as shown as below.

Cleaning

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

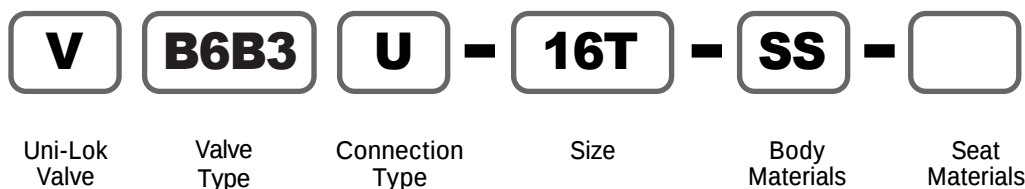
Important Notification

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.

Example : The following part number, **VB6B3U-16T-SS** is designated for VB6B series ball valve with both 1" Un-Lok tube fitting, 316SS, PCTFE seat.



Other alloys are
available upon request

Valve Type	
B6B	2 Way Type
B6B C	2 Way Type, CNG Applicaon
B6BX	3 Way Type

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

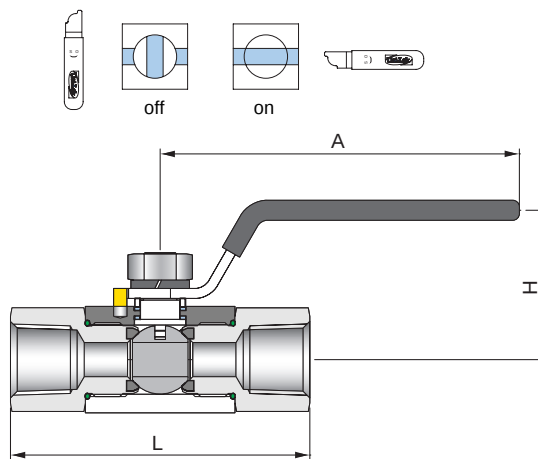
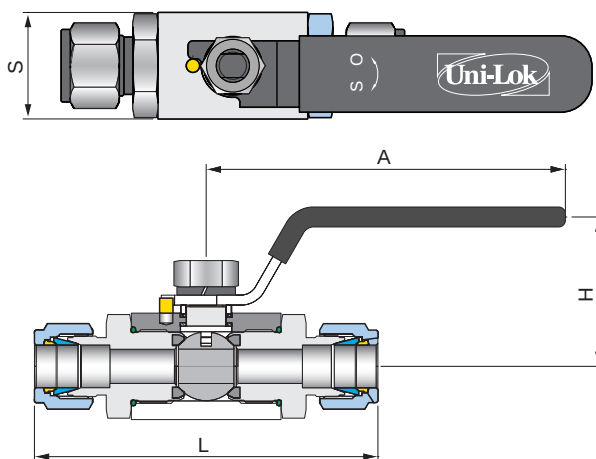
Connection Type						
Fractional(Inch) Tube O.D. Designation						
Tube	inch	1/4	3/8	1/2	3/4	1
O.D.	mm	6.35	9.53	12.70	19.05	25.40
Designator		04T	06T	08T	12T	16T

Pipe Size Designation (NPT or ISO7/1-PT)					
Pipe Size	1/4	3/8	1/2	3/4	1
Designator	04N/R	06N/R	08N/R	12N/R	16N/R

Seat Materials	
None	PCTFE
PK	PEEK

VB6B series

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



Ordering Information & Dimensions

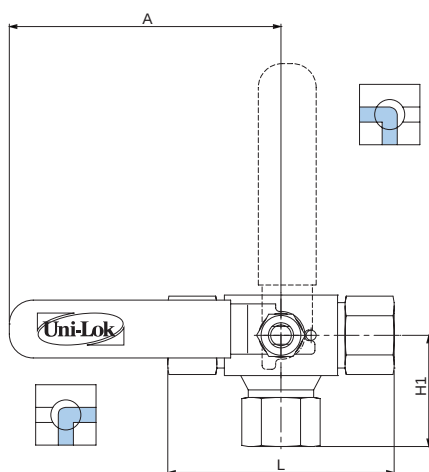
Part Number		End Connection		Orifice	CV	Dimensions (mm)			
		Inlet	Outlet			L	S	H	A
VB6B1	U-04T-	1/4" Uni-Lok		4.8	1.2	92.0	32.0	45.0	108.0
	U-06T-	3/8" Uni-Lok		7.1	3.7	95.0			
	U-08T-	1/2" Uni-Lok		10.0	7.5	103.0			
	F-04N-	1/4" Female NPT				70.0			
	F-06N-	3/8" Female NPT				75.0			
	F-08N-	1/2" Female NPT				90.0			
	M-04N-	1/4" Male NPT		7.1	3.7	85.0			
	M-06N-	3/8" Male NPT		9.7	7.2	85.0			
	M-08N-	1/2" Male NPT		10.0	7.5	85.0			
VB6B2	U-12T-	3/4" Uni-Lok		12.7	10.0	110.6	40.0	55.0	148.0
	F-08N-	1/2" Female NPT				90.0			
	F-12N-	3/4" Female NPT				98.0			
	M-12N-	3/4" Male NPT				105.0			
VB6B3	U-12T-	3/4" Uni-Lok		19.0	30.0	118.6	50.0	60.0	148.0
	U-16T-	1" Uni-Lok				127.5			
	F-12N-	3/4" Female NPT		15.8	19.0	95.0			
	F-16N-	1" Female NPT		19.0	30.0	106.0			
	M-12N-	3/4" Male NPT		15.8	19.0	115.0			
	M-16N-	1" Male NPT		19.0	30.0	125.0			

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VB6B series valves.
Add "R" as a suffix instead of "N".

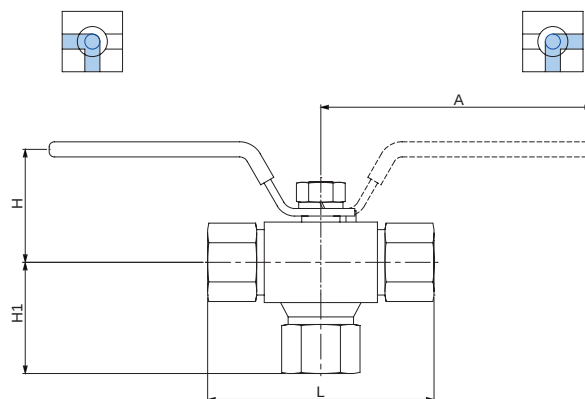
Dimensions are for reference only and are subject to change without prior notice.

VB6BX series

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

**Side Port Inlet**

1/4 Turn Actuation

**Bottom Port Inlet**

1/2 Turn Actuation

Ordering Information & Dimensions

Part Number		End Connection		Orifice	d Min.	Dimensions (mm)				
		Inlet	Outlet			L	S	H	H1	A
VB6BXB1	U-04T-	1/4" Uni-Lok		10.0	4.8	92.0	32.0	44.9	53.5	108.0
	U-06T-	3/8" Uni-Lok			7.1	95.0			55.0	
	U-08T-	1/2" Uni-Lok			10.0	106.0			57.5	
	F-04N-	1/4" Female NPT				72.0			36.7	
	F-06N-	3/8" Female NPT				75.0			40.2	
	F-08N-	1/2" Female NPT				89.0			44.2	
VB6BXB2	U-12T-	3/4" Uni-Lok		12.7	12.7	115.0	40.0	55.0	65.5	148.0
	F-08N-	1/2" Female NPT				93.0			49.7	
	F-12N-	3/4" Female NPT				102.0			55.2	
VB6BXB3	U-12T-	3/4" Uni-Lok		19.0	15.8	125.0	50.0	60.0	70.0	148.0
	U-16T-	1" Uni-Lok			20.0	134.0			76.6	
	F-12N-	3/4" Female NPT				119.0			56.7	
	F-16N-	1" Female NPT				129.0			60.8	

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

Bottom and Side Port Entry Valve Ordering Information

To order side port entry valve, replace **B** with **S**

Examples : VB6**B**XB1U-04T-SS, VB6**S**X1U-04T-SS

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					
VB6B1	PCTFE	PTFE	PTFE	6000psig(413bar)	-22°F~266°F (-30°C~130°C)
	PEEK			10000psig(413bar)	-40°F~446°F (-40°C~230°C)
VB6B2	PCTFE	PTFE	PTFE	5000psig(344bar)	-22°F~320°F (-30°C~160°C)
VB6B3	PEEK			10000psig(413bar)	-40°F~410°F (-40°C~210°C)
3 Way					
VB6BX1	PCTFE	PTFE	Viton	4000psig(275bar)	-22°F~266°F (-30°C~130°C)
	PEEK			6000psig(413bar)	-40°F~446°F (-40°C~230°C)
VB6BX2	PCTFE	PTFE	Viton	3000psig(206bar)	-22°F~320°F (-30°C~160°C)
VB6BX3	PEEK			4000psig(275bar)	-40°F~410°F (-40°C~210°C)

Valve Actuation Torque

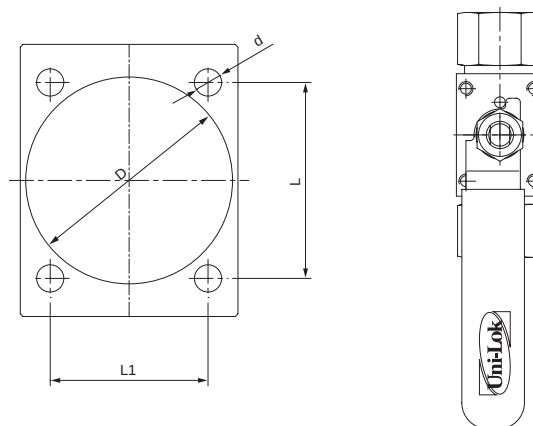
Valve Group	Pressure (psig)		
	0	5000	6000
2 Way			
	Torque (Nm)		
VB6B1	3.92	-	6.37
VB6B2	7.35	10.30	-
VB6B3	12.26	19.61	-
	0	3000	4000
3 Way			
	Torque (Nm)		
VB6BX1	3.92	-	4.90
VB6BX2	7.35	7.85	-

Panel Mounting

Screw hole panel mounting is available with four screw holes on the top of VB6B series valves, M4 x 6mm depth.

To order, add **-M** to end of part number.

Disassemble the handle before panel mounting.



Valve Group	Dimensions			mm
	L	L1	d	D
VB6B1	34	25	4	30
VB6B2	36	29	5	38
VB6B3	40	35	6	38

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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