



# HIGH PRESSURE BAR STOCK BALL VALVES

**VB6B Series**

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



Kor-Lok USA

## 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

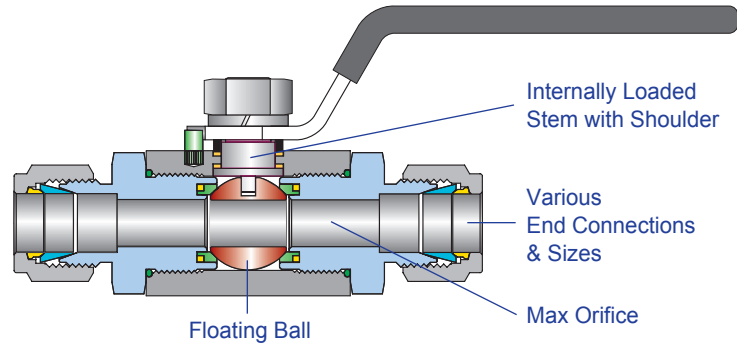
Floating ball design ensures leak proof shut-off at high pressure

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

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 is available as optional.

## 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.

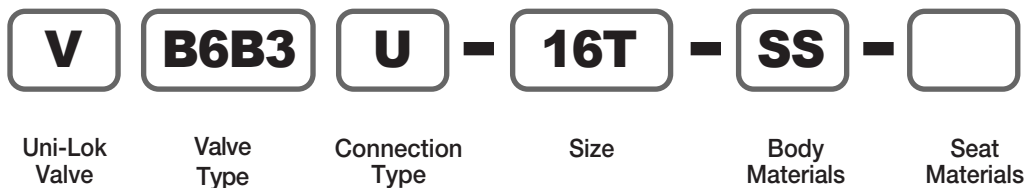
The packing adjustment may be required during the valve's service life.

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.

## How To Order

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

**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

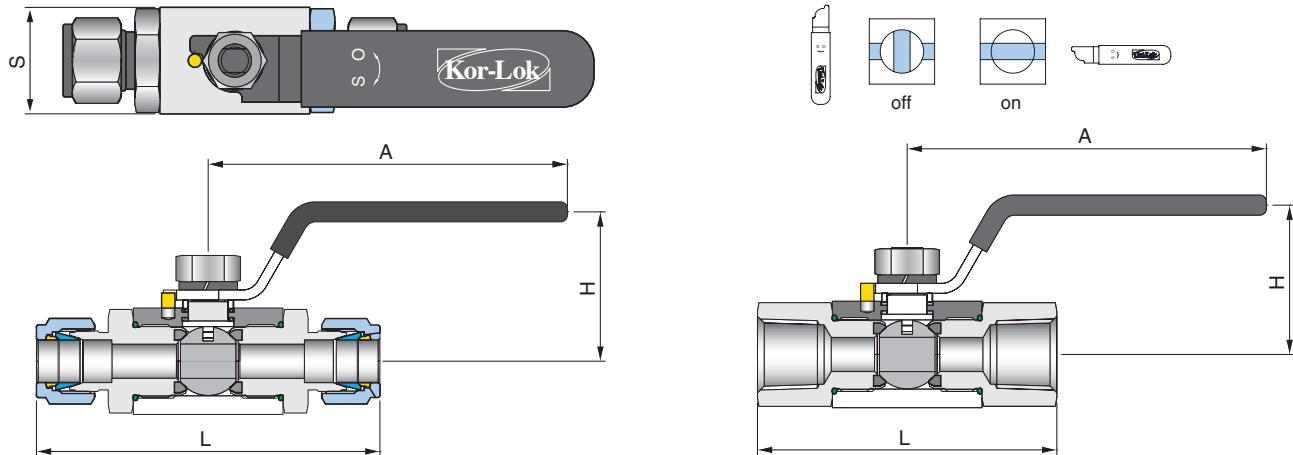
| Valve Type      |                                  |
|-----------------|----------------------------------|
| B6B             | 2 Way Type                       |
| B6BC            | 2 Way Type, <b>CNG Applicaon</b> |
| B6BX            | 3 Way Type                       |
| Connection Type |                                  |
| 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 O.D.                                | inch | 1/4   | 3/8   | 1/2   | 3/4   | 1     |
|  | 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 Kor-Lok Tube Fittings or  
Both Female or Male Threads)



### Ordering Information & Dimensions

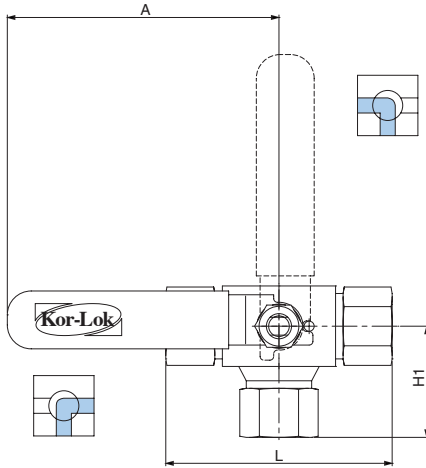
| Part Number |        | End Connection  |        | Orifice | CV   | Dimensions (mm) |      |      |       |
|-------------|--------|-----------------|--------|---------|------|-----------------|------|------|-------|
|             |        | Inlet           | Outlet |         |      | L               | S    | H    | A     |
| VB6B1       | U-04T- | 1/4" Kor-Lok    |        | 4.8     | 1.2  | 92.0            | 32.0 | 45.0 | 108.0 |
|             | U-06T- | 3/8" Kor-Lok    |        | 7.1     | 3.7  | 95.0            |      |      |       |
|             | U-08T- | 1/2" Kor-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" Kori-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" Kor-Lok    |        | 19.0    | 30.0 | 118.6           | 50.0 | 60.0 | 148.0 |
|             | U-16T- | 1" Kor-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".

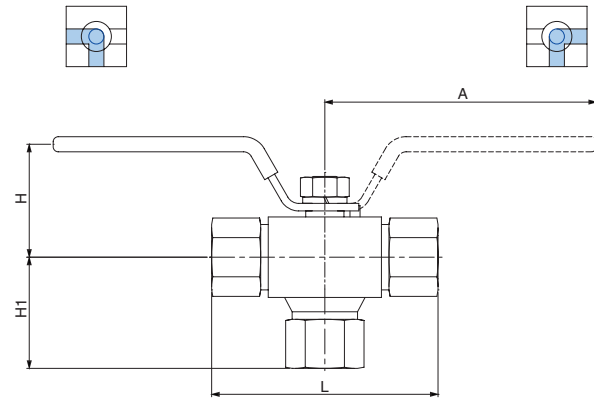
Dimensions are for reference only and are subject to change without prior notice.

# VB6BX series

## (3 Way, Switching Kor-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<br>Min. | Dimensions (mm) |      |      |      |       |
|------------------|--------|-----------------|--------|---------|-----------|-----------------|------|------|------|-------|
|                  |        | Inlet           | Outlet |         |           | L               | S    | H    | H1   | A     |
| VB6BX <b>B</b> 1 | U-04T- | 1/4" Kor-Lok    |        | 10.0    | 4.8       | 92.0            | 32.0 | 44.9 | 53.5 | 108.0 |
|                  | U-06T- | 3/8" Kor-Lok    |        |         | 7.1       | 95.0            |      |      | 55.0 |       |
|                  | U-08T- | 1/2" Kor-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 |       |
| VB6BX <b>B</b> 2 | U-12T- | 3/4" Kor-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 |       |
| VB6BX <b>B</b> 3 | U-12T- | 3/4" Kor-Lok    |        | 19.0    | 15.8      | 125.0           | 50.0 | 60.0 | 70.0 | 148.0 |
|                  | U-16T- | 1" Kor-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, VB6BX**S**1U-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

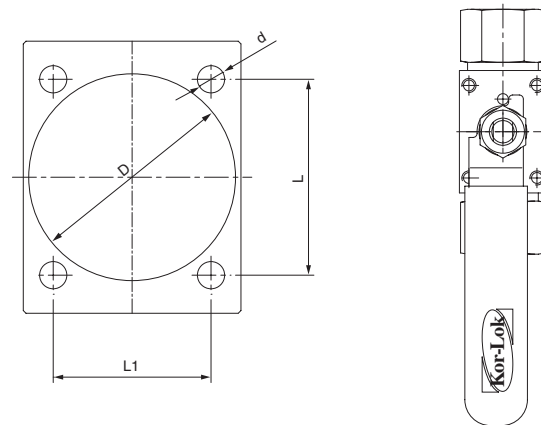
| Valve Group  | Pressure (psig) |       |      |
|--------------|-----------------|-------|------|
|              | 0               | 5000  | 6000 |
| <b>2 Way</b> |                 |       |      |
| Torque (Nm)  |                 |       |      |
| VB6B1        | 3.92            | -     | 6.37 |
| VB6B2        | 7.35            | 10.30 | -    |
| VB6B3        | 12.26           | 19.61 | -    |
|              | 0               | 3000  | 4000 |
| <b>3 Way</b> |                 |       |      |
| 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 |

# 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



- 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



- VN5 series
- VN6 series
- VU6 series
- VMT series

- Integral Bonnet Forged Needle Valves
- High Pressure Bar Stock Needle Valves
- Union Bonnet Valves
- Metering Valves

- VM series
- VG series
- VL series

- Instrumentation Manifolds Valves
- Gauge & Gauge Root Valves
- Bleed Valves

- VD series

- Double Block and Bleed Valves

- VC series
- VR series
- VE series

- General & High Pressure Relief Valves
- Low & High Pressure Relief Valves
- Industrial Excess Flow Valves

- VF series
- VPR series
- VBR series

- 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



**CONNECTS THE WORLD SINCE 1984  
WITH THE SAME ATTITUDE  
OF THE TIME OF BEGINNING**



**Kor-Lok® Kor-Lok USA, LLC**

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