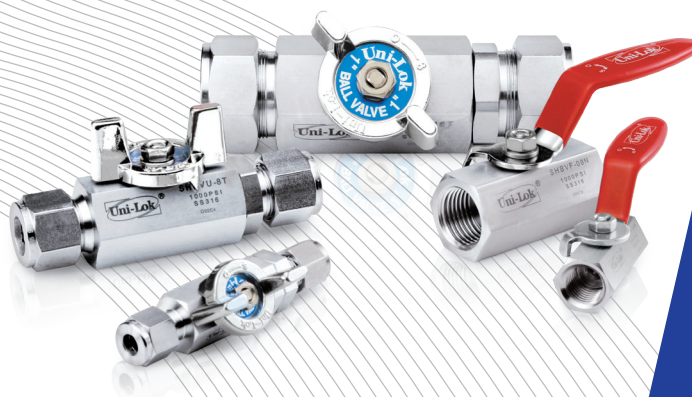




# PRECISION & CLEAN HEX BALL VALVES

**VB1 Series**

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



**UNILOK** 

### Features

Pressure rating up to 1000psig (69bar) with PTFE seats and 2000psig(137bar) with TFM only for VB1F series ball valves with lever handle

Easy to operate owing to low torque quarter turn actuation

All valve body's made from 316SS bar stock to secure the high integrity

Compact designed one piece hexagonal body

Micro finished 316SS balls not to occur the leakage

Blow-out proof design with internally loaded stem

Various selection of handles

Wide choice of end connections : Uni-Lok tube fittings, Female NPT or ISO7/1(PT) threads, Weld Systems

### Application

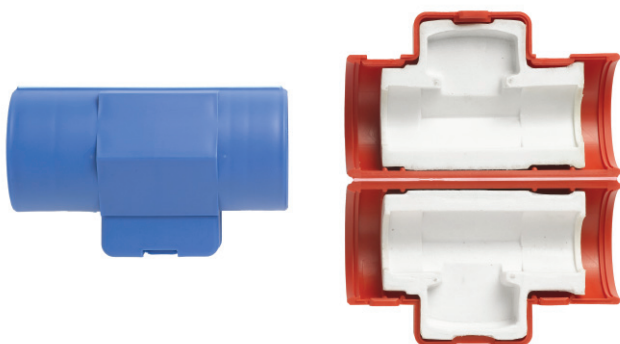
Steam, water, air lines in onshore and offshore application

Utility lines in semiconductor and display panel industries.

### Protection Cover

Maintain the temperature of fluids, keep handle position and distinguish in-out lines visually, to keep the temperature of flow and to distinguish the line.

VB1 series ball valve with both 3/4" Uni-Lok end connection and plastic bar handle. 1/2" is available only with the different size of inner cover.



### Type of Handle



Lever Handle  
(standard)



Butterfly Handle

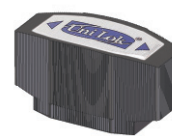
Bar handles offer visual distinguishment of in-out lines at high purity applications.



Red



Blue



Black  
(up to ~1/2")

### 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.

### Cleaning

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

The special cleaning for high purity application is available upon request.

### Important Notification

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

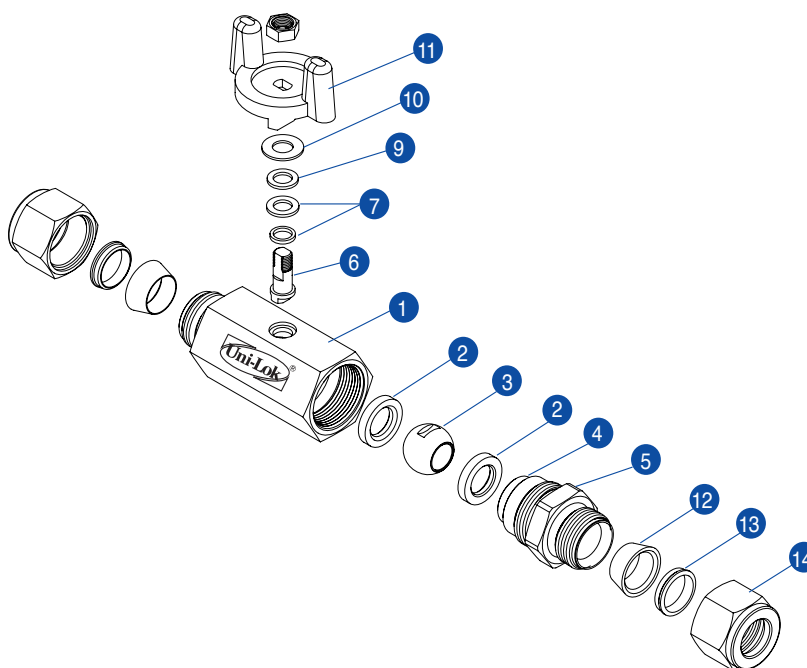
The packing adjustment may be required during the valve's service life.

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.

## Materials of Construction

No.	Description	Materials
1	Body	316SS
2	Ball Seat	PTFE(Glass 30%)
3	Ball	316SS
4	O-Ring	Viton
5	Connector	316SS
6	Stem	316SS
7	Inner Packing	PTFE
8	Outer Packing	PTFE
9	Gland	316SS
10	Washer	316SS
11	Handle	Aluminium
12	Front Ferrule	316SS
13	Back Ferrule	316SS
14	Nut	316SS

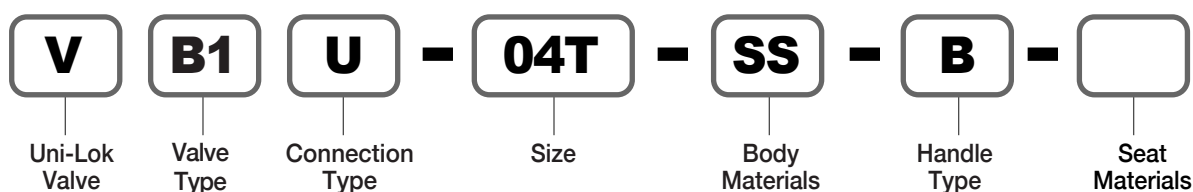
Handle Materials :  
 Lever - 304SS+PVC Coat  
 Bar - Nylon



## How To Order

Uni-Lok VB1 series ball valves are ordered by part number as shown as below.

**Example :** The following part number, **VB1U-04T-SS-B** is designated for VB1 series ball valve with both 1/4" Un-Lok tube fitting, 316SS, PTFE seat, butterfly handle.



Uni-Lok Designator	
U	Uni-Lok Tube Fitting
F	Female NPT or ISO7/1-PT
WB-*T	Butt Weld-Tube
WB-*P	Butt Weld-Pipe

Pipe Size O.D. Designation	
Pipe	Normal
O.D.	mm
Designator	15A 20A 25A

Connection Type	
Fractional(Inch) Tube O.D. Designation	
Tube	inch
O.D.	mm
Designator	04T 06T 08T 12T 16T

Metric Tube O.D. Designation	
Tube	mm
O.D.	
Designator	M06T M08T M10T M12T M25T

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

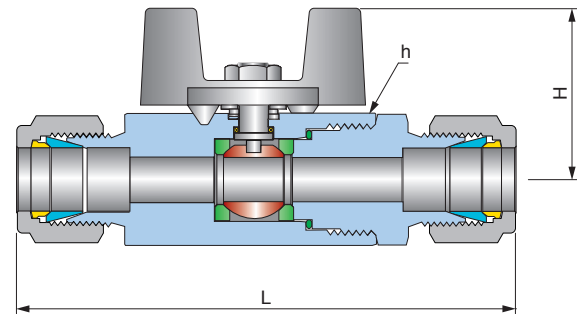
Handle Type	
None	Lever Handle
B	Butterfly Handle
PR	Nylon
PS	Bar
PB	Handle

Seat Materials	
None	PTFE
TF	TFM
PK	PEEK

## VB1U series

(Both Uni-Lok Tube Fittings)

- Max Operating Pressure  
1000psig (69bar) at 38°C(100°F) with PTFE seat  
1000psig(69bar) at 170°C(338°F) with PEEK seat
- Connection Type  
Both Uni-Lok tube fittings
- Handle Type  
Lever, Butterfly and Bar



### Ordering Information & Dimensions

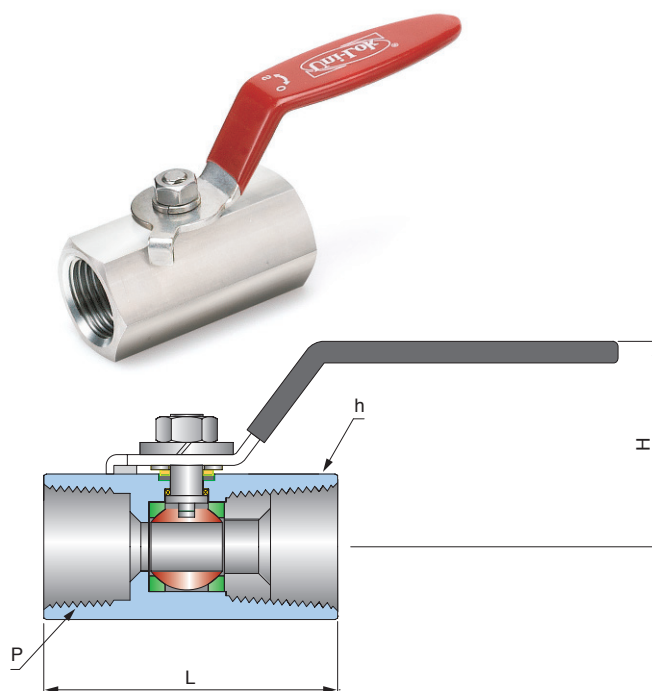
Part No.		End Connections		Orifice	Dimensions (mm)		
		Inlet	Outlet		h(Hex)	L	H
VB11	U-04T-	1/4" Uni-Lok		5.0	17.46	79.0	26.5
	U-M06T-	6mm Uni-Lok				82.0	
	U-M08T-	8mm Uni-Lok					
VB12	U-06T-	3/8" Uni-Lok		7.5	22.22	89.5	32.5
	U-M10T-	10mm Uni-Lok					
VB13	U-08T-	1/2" Uni-Lok		9.0	26.98	101.6	35.0
	U-M12T-	12mm Uni-Lok					
VB14	U-12T-	3/4" Uni-Lok		12.5	31.75	107.5	37.5
VB15	U-16T-	1" Uni-Lok		16.0	38.10	132.6	44.5
	U-M25T-	25mm Uni-Lok					

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

## VB1F series

### (Both Female Threads)

- Max Operating Pressure  
1000psig (69bar) at 38°C(100°F) with PTFE seat  
2000psig(69bar) at 38°C(100°F) with TFM seat
- Connection Type  
Both NPT or ISO7/1(PT) female threads
- Handle Type  
Lever, Butterfly and Bar



### Ordering Information & Dimensions

Part No.		End Connections		Orifice	Dimensions (mm)		
		Inlet	Outlet		h(Hex)	L	H
VB11	F-04N-	1/4" Female NPT		5.0	17.46	40.0	29.0
VB12	F-06N-	3/8" Female NPT		7.5	22.22	45.0	35.7
VB13	F-08N-	1/2" Female NPT		9.0	26.98	54.5	38.1
VB14	F-12N-	3/4" Female NPT		12.5	31.75	61.0	44.5
VB15	F-16N-	1" Female NPT		16.0	38.10	75.0	48.0

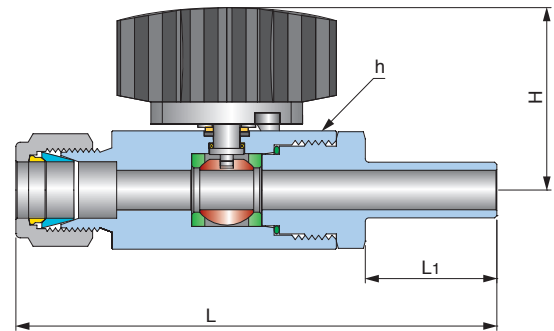
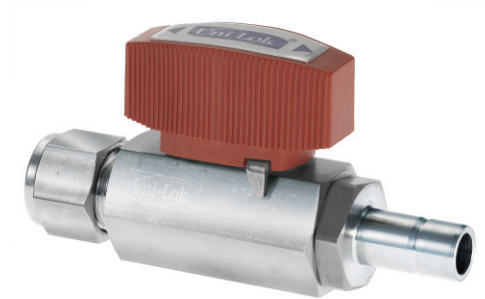
Female ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VB1F series valves.  
Add "R" as a suffix instead of "N".

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

## VB1W series

### (Pipe or Tube Butt Weld and Uni-Lok Tube Fitting)

- Max Operating Pressure  
1000psig (69bar) at 38°C(100°F) with PTFE seat
- Connection Type  
Pipe Butt or Tube Butt Weld and Uni-Lok Tube Fitting
- Handle Type  
Lever, Butterfly and Bar



### Ordering Information & Dimensions

Part No.		End Connections		Orifice	Dimensions (mm)			
		Inlet	Outlet		h(Hex)	L	L1	H
VB13	WSU-08T08T	1/2" Tube	1/2" Uni-Lok	9.0	26.98	109.7	30.0	41.6
	WSU-15AP08T	15A Pipe	1/2" Uni-Lok			114.7	35.0	
VB14	WSU-12T12T	3/4" Tube	3/4" Uni-Lok	12.5	31.75	129.2	43.0	44.2
	WSU-20AP12T	20A Pipe	3/4" Uni-Lok			121.2	35.0	
VB15	WSU-16T16T	1" Tube	1" Uni-Lok	16.0	38.10	137.3	31.0	53.8
	WSU-25AP16T	25A Pipe	1" Uni-Lok			146.3	40.0	

Length of L1 can be adjusted upon the customer's request.

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# VB1 Protection Cover

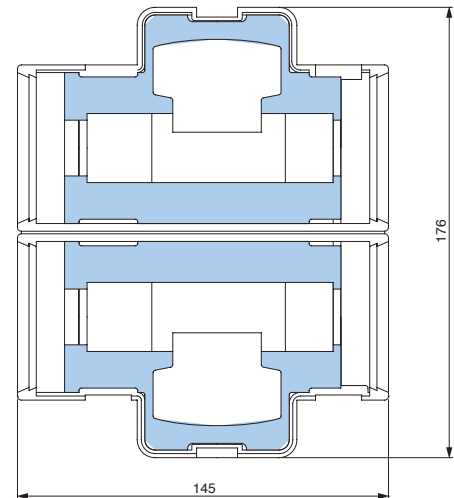
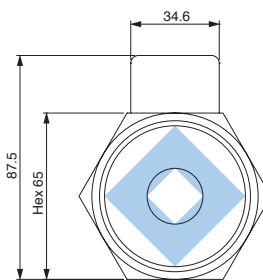
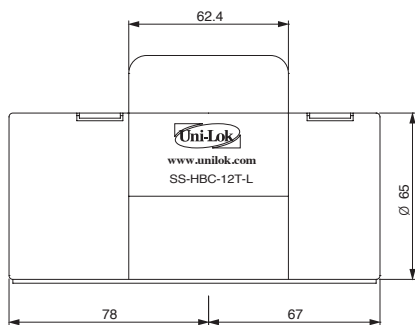
Maintain the temperature of fluids, keep handle position and distinguish in-out visually.

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Ordering Number

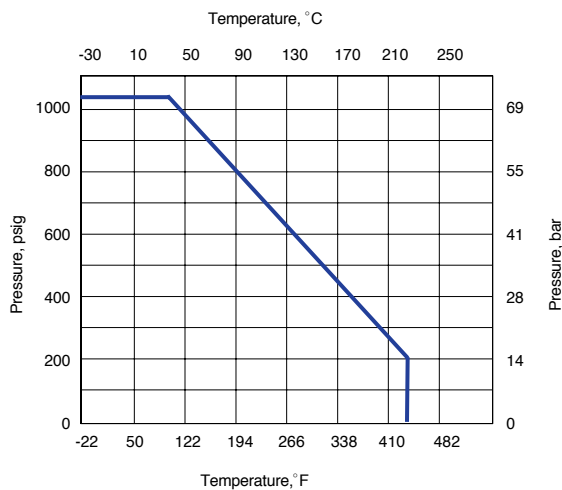
VB1-PC-R : Red

VB1-PC-S : Blue

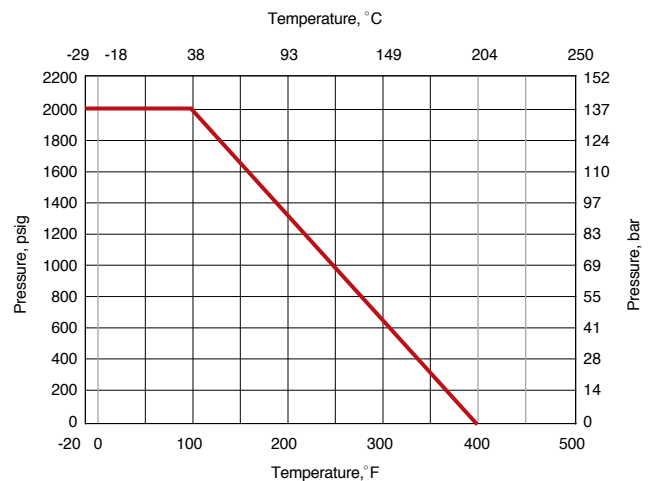


## Pressure - Temperature Ratings

### PTFE Seat



### TFM Seat



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



#### 본사 및 제1공장

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