

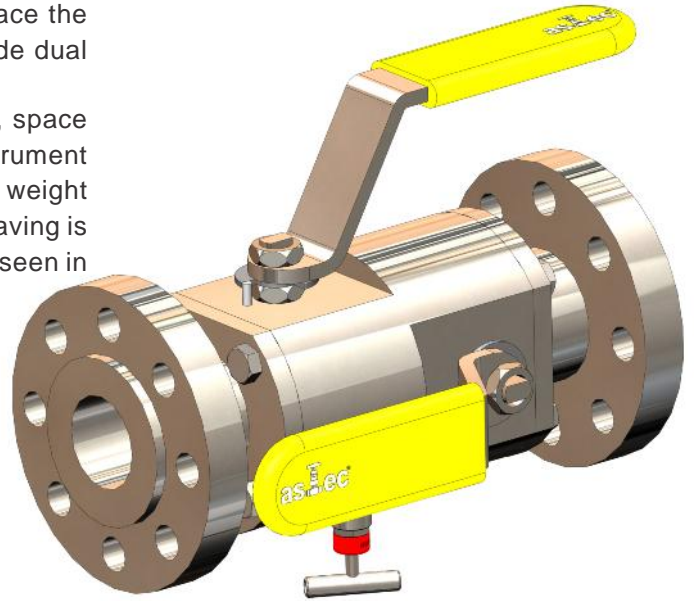
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Why use a Double Block and Bleed valve?

Double Block and Bleed valves have evolved to replace the process of bolting together individual valves to provide dual isolation.

This new assembly provides great savings in weight, space and installation times especially in instrument or instrument cage isolation. These savings can be as much as 60% in weight and studies have shown that a 70% installation time saving is also possible. However the greatest savings are to be seen in the reduction of leak paths to atmosphere, therefore reducing the risk of the potential hazards this entails. Dual isolation is a necessary requirement when maintenance is taking place down stream of the first isolation valve. Cavity venting is provided by either a ball or globe OS&Y vent valve so that trapped pressure between the two isolation valves is safely vented.

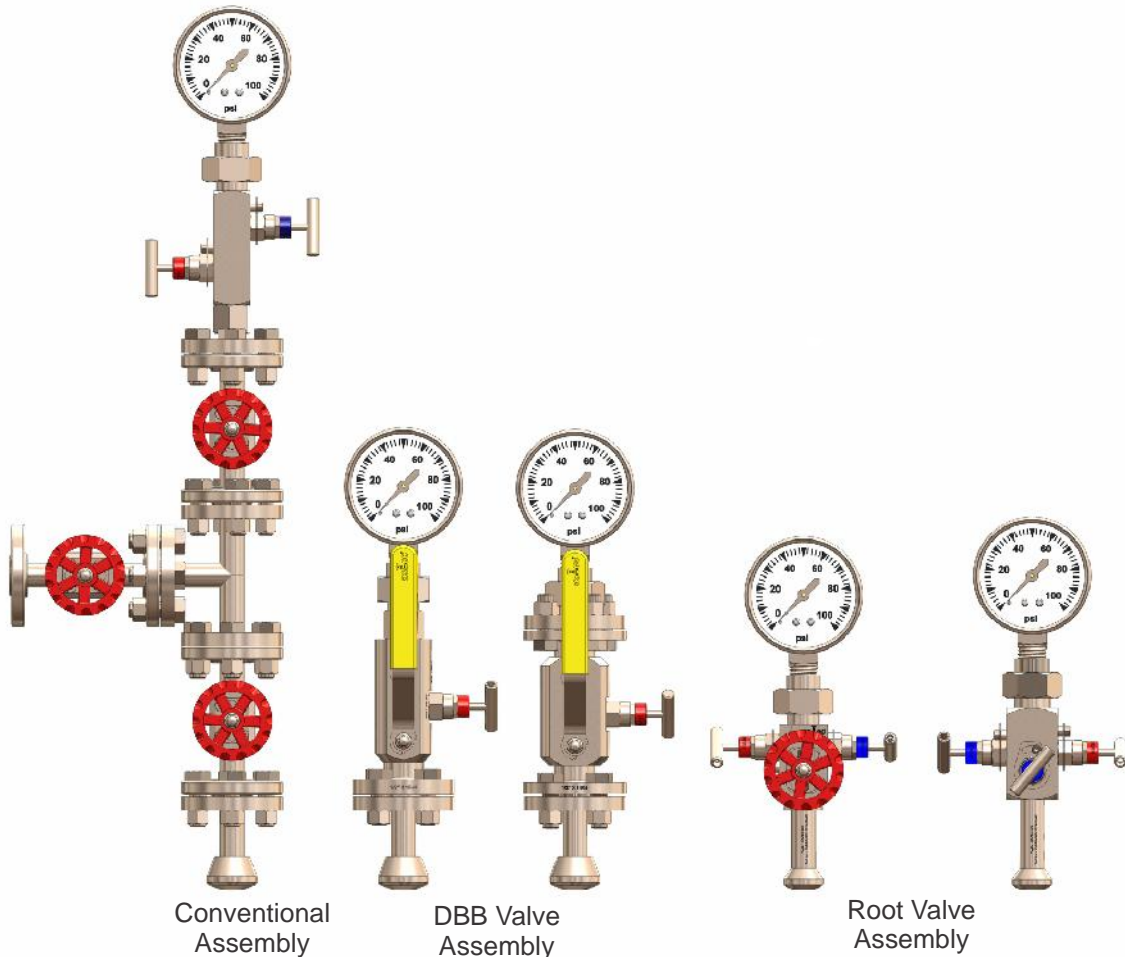
These valves have also evolved to encompass the function of chemical injection (using a suitable quill) and sample points. In-built check valves are often integrated in these valves.



Double Block and Bleed valve

- Manufactured in accordance with all recognised standards including EEMUA 182 latest revision, API6D, API607, BS6755PT2, API up to 10000 and 15000 PSI
- Trunnion mounted, floating ball, and variants of gate, globe check and ball
- Special designs including injection quills, sample probes, double block and single block, in-built check valves and seat wipers
- Tested to TUV low emission standards, including cyclical testing at -46 deg C to +200 deg C
- Supplied to all major oil companies including over 2000 trunnion mounted valves to PDO Oman.

APPLICATION & INSTALLATION



Purpose

Astec Double block & bleed valve is designed to replace conventional multiple-valve installations currently in use for interface with pressure measuring systems. By combining customer specified valves into a single DBB, the number of leak path is considerably reduced and the mass of the system is lowered reducing the stresses from loading and vibration. The result of which substantially improves installation and operational safety factors. Reduction in leakage path connections together with a one-piece solution also provides positive installation cost savings & time.

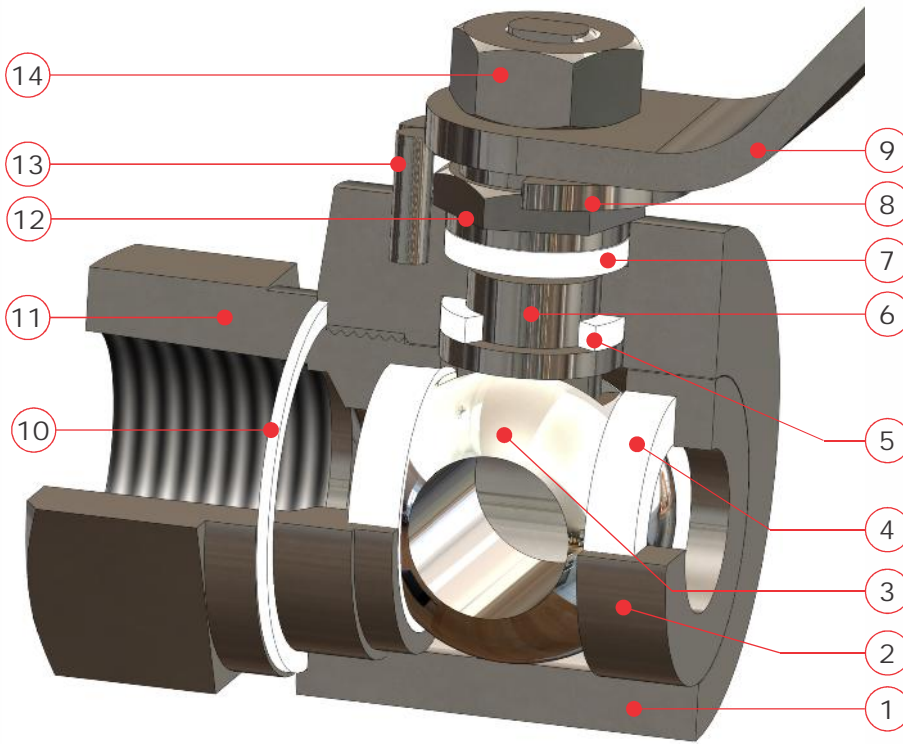
Design Construction

- ✓ Wall Thickness - ASME B 16.34
- ✓ Flange Dimensions - ASME B 16.5
- ✓ Flange Face Raised face & Ring type joint
- ✓ Threads - ASME B 1.20.1
- ✓ Fire tested - API 607 (ISO 10497)
- ✓ Fugitive Emission - ISO 15842 (MESG 77/312)
- ✓ Antiblowout Valve Stems
- ✓ Nonrotating Needle
- ✓ Optional locking / Anti temper arrangement for Needle valve

Feature

- ✓ Direct Flange Mounting
- ✓ Reduced Height & Weight
- ✓ Reduced No. of Joints & Potential Leak Path
- ✓ Single Piece, Compact Design
- ✓ Reduced Effect of System Vibration Stresses
- ✓ In Built Swivel Connector
- ✓ Reduced Installation Cost & Time
- ✓ Flange Connection size 1/2" to 3" NB
- ✓ Optional Material on Request
- ✓ Bore size 3/8" to 2"

Block & Bleed Valves

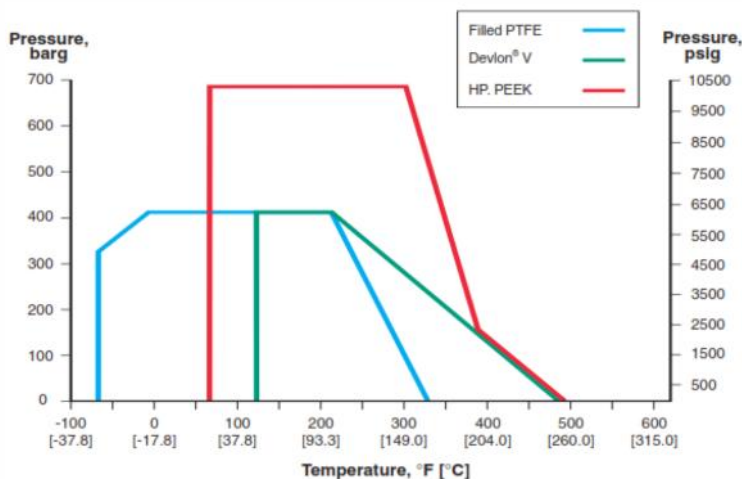


Sr. No.	PART DESCRIPTION
1	BODY
2	SEAT RETAINER
3	BALL
4	BALL SEAT
5	LOWER STEAM PACKING
6	STEM
7	UPPER STEAM PACKING
8	STOPPER
9	HANDLE
10	BODY SEAL
11	OUTLET CONNECTOR
12	PACKING GLAND
13	STOPPER PIN
14	STEM NUT

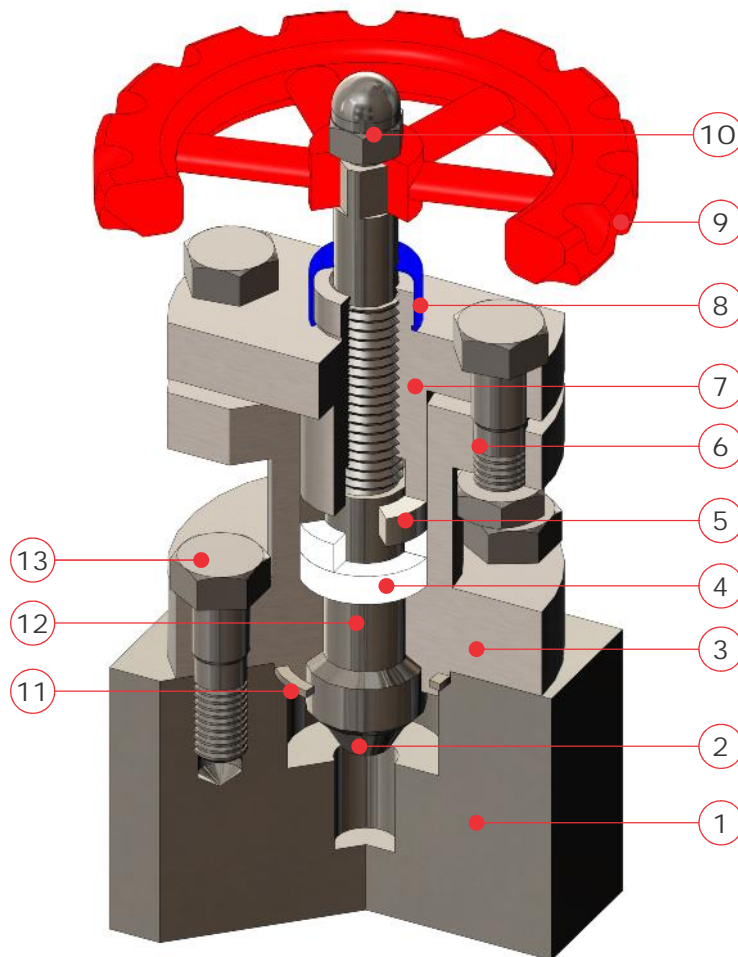
Features

- **Blow proof** One piece stem spindle.
- **Fully supported ball seats** minimize seat extrusion and allow high working pressures.
- **Super finish ball** for low operating torque and long life.
- **End adaptor** threads are fully isolated from process by primary and secondary static seals.
- **Spindle locknut** is vibration resistance to avoid working loose.
- **10mm bore** fully roddable.
- **Anti-static design as standard.**
- **Pressure rating** up to 10,000 psig [680 barg].
- **Temperature rating** -71°F to 482°F [-57°C to +230°C].
- ✓ Two piece body design - minimize leakage paths.
- ✓ Designed to comply with requirements of ANSI/ASME B16.34.
- ✓ Bi-directional.
- ✓ Ball seats choice of seat materials : PTFE(virgin or filled)PVDF , NYLON or PEEK.
- ✓ Floating ball principal with dynamic response seats featuring inherent self relief.
- ✓ Integral compression ends available eliminating taper threads and thread sealants.
- ✓ Firesafe designed to meet BS 6755 Part2 / API 607,(optional).

Pressure and Temperature Ratings



Outside Screw & Yoke (OS&Y) Needle Valve

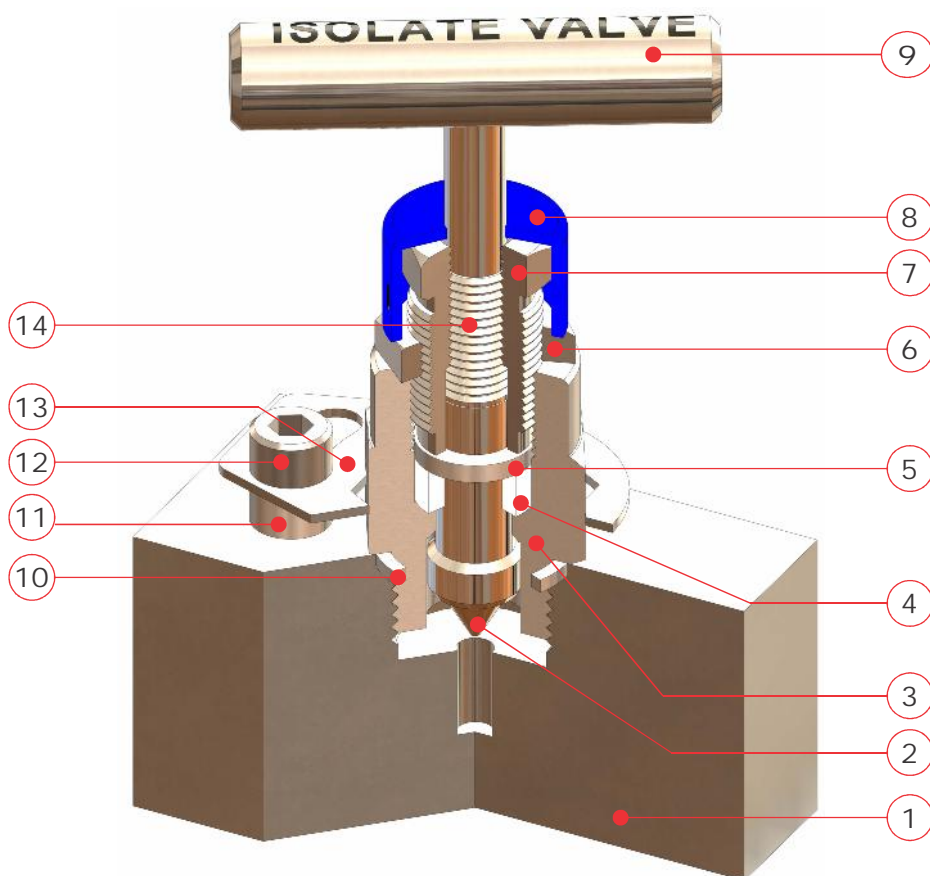


Sr. No.	PART DESCRIPTION
1	BODY
2	SPINDLE TIP
3	BONNET
4	GLAND PACKING
5	GLAND WASHER
6	GLAND NUT & BOLT
7	GLAND
8	DUST CAP
9	HAND WHEEL
10	DOME NUT
11	BODY SEAL
12	SPINDLE
13	BONNET BOLT

Features

- **Non rotating Tip** for repetitive bubble-tight shutoff.
- **Bolted bonnet** for strength and reliability.
- **Stem packing** with Graphite or PTFE rings for bubble-tight seal.
- **Adjustable gland flange/follower** allows easy access to the packing gland, which can be replaced while the valve is under pressure. This design provides consistent packing adjustment for an effective stem seal.
- **Weather-resistant plastic cap** prevents stem lubricant contamination.
- **Handle assembly** utilizes locking bolt and will not vibrate or work loose.
- **Flange gasket ring** ensures a bubble-tight seal between body and bonnet.
- **Rolled stem threads** prevent galling. Stem threads are completely isolated from the process.
- **Back seat design** provides secondary stem sealing and prevents stem blowout.
- **Pressure rating** up to 6000 psig [414 barg].
- **Temperature rating** -71°F to 1022°F [-57°C to +550°C].
- ✓ Externally adjustable gland.
- ✓ PTFE or Graphite packing for bubble tight sealing.
- ✓ Stem tip construction : Non rotating, Self-centering, Anti-galling tip positive bubble-tight and field interchangeable tip.
- ✓ All components stainless steel.
- ✓ Flange gasket seal ensures a bubble-tight between body and yoke.
- ✓ Back seat design provides secondary stem sealing and prevents stem blow out.
- ✓ Rolled stem operating threads.
- ✓ Independent stem thread bush with maximum female thread interface.
- ✓ Colour coded close contact dust cup and function label for easy identification.

Needle Valve Type Globe Valve

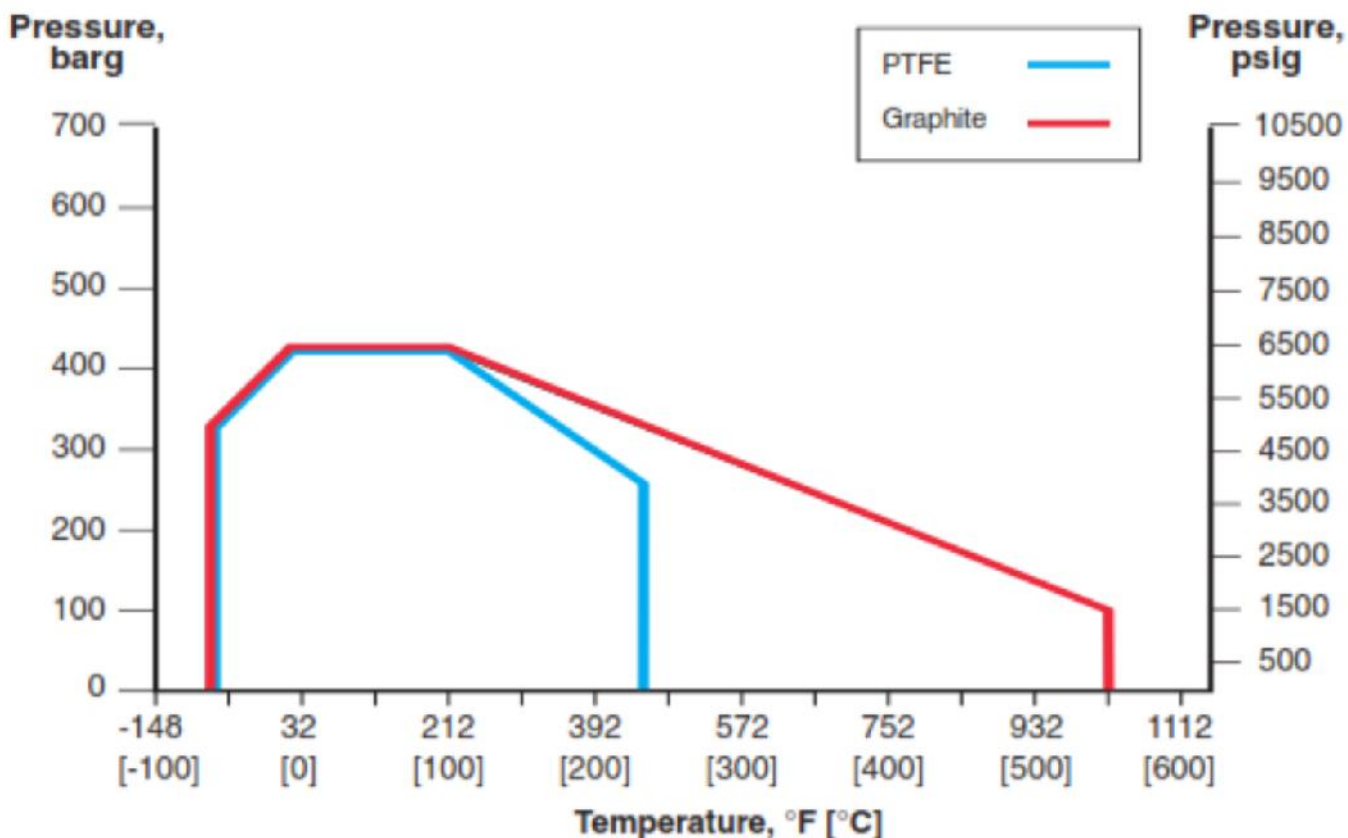


Sr. No.	PART DESCRIPTION
1	BODY
2	SPINDLE TIP
3	BONNET
4	PACKING
5	PACKING WASHER
6	LOCK NUT
7	BONNET PUSHER
8	DUST CAP
9	HANDLE
10	BODY SEAL
11	SPACER
12	ALLEN BOLT
13	LOCKING PLATE
14	SPINDLE

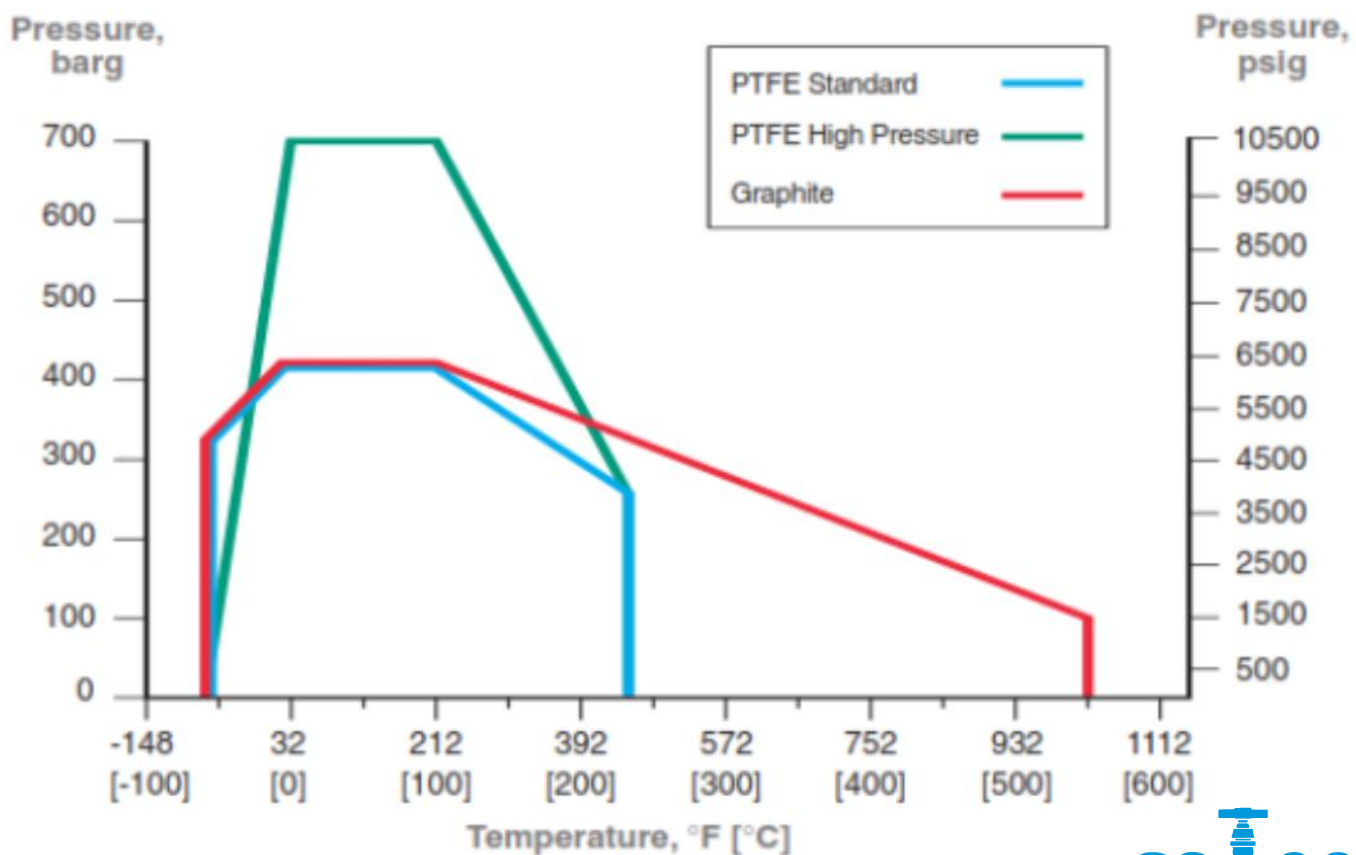
Features

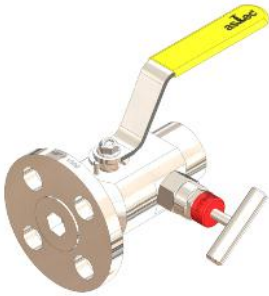
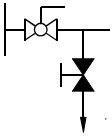
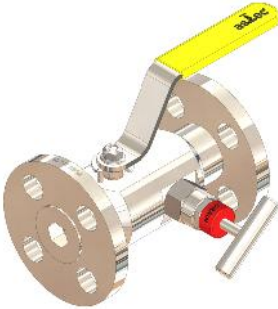
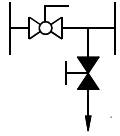
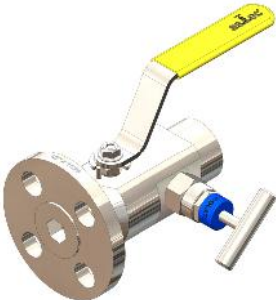
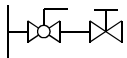
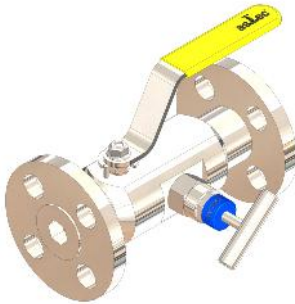
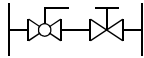

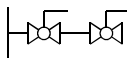

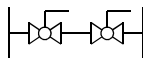

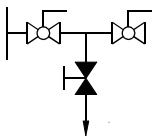
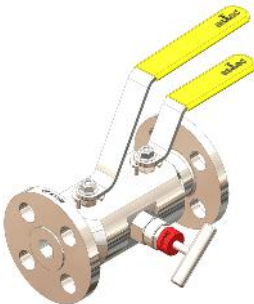
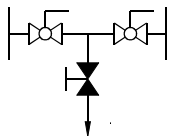
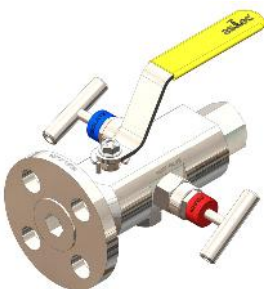
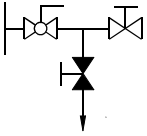
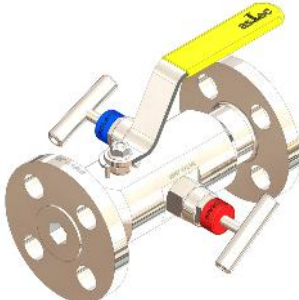
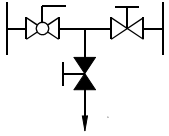
- **Non rotating Tip** for repetitive bubble-tight shutoff.
- **Rolled stem threads** for low operating torque and long cycle life. Stem threads are locked above the spindle packing and are completely isolated from the process.
- **Stem packing** with Graphite or PTFE rings for bubble-tight seal.
- **Body -to-Bonnet metal pressure seal** below threads prevents process from corroding bonnet retention threads and ensure the bonnet threads are in loaded compression for additional strength.
- **Weather-resistant plastic cap** prevents stem lubricant contamination.
- **Handle assembly** utilizes locking bolt and will not vibrate or work loose.
- **Flange gasket ring** ensures a bubble-tight seal between body and bonnet.
- **Back seat design** provides secondary stem sealing and prevents stem blowout.
- **Adjustable gland follower** allows easy access to adjust the packing gland.
- **4 to 5mm bore.**
- **Pressure rating** up to 10,000 psig [680 barg].
- **Temperature rating** -71°F to 1022°F [-57°C to +550°C].
- ✓ Rolled stem threads prevent galling. Stem threads are completely isolated from the Process.
- ✓ Stem tip construction : Non rotating, Self-centering, Anti-galling tip positive bubble-tight and field interchangeable tip.
- ✓ Gland packing in PTFE or Graphite for bubble tight sealing.
- ✓ Colour coded close contact dust cup and function label for easy identification.
- ✓ Bonnet pusher with easy access.
- ✓ Lock nut for vibration protection.
- ✓ Orifice size 4 to 5mm.
- ✓ Temperature rating -70.6° F to 1022° F (-57° C to 550° C).
- ✓ Anti-Temper bonnets are available with a removable T-bar key to prevent unauthorized operation of vent valves.

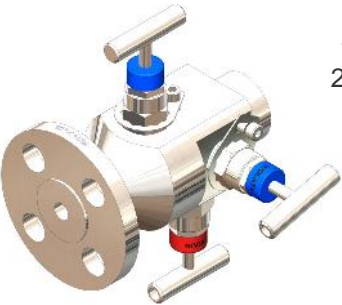
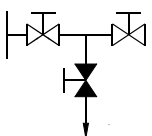
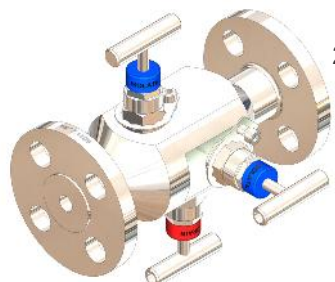
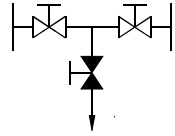
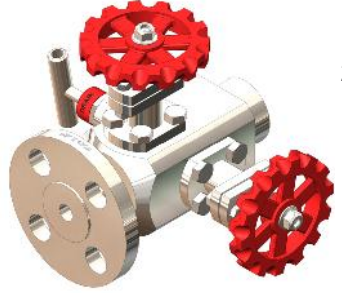
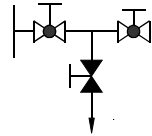
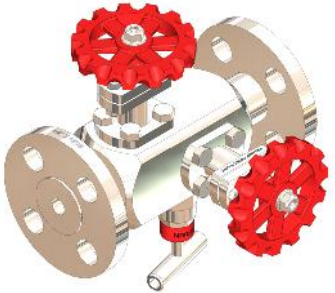
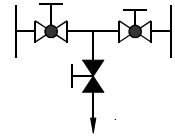
Outside Screw & Yoke (OS&Y) Needle Valve



Needle Valve Type Globe Valve



<p>Single Block and Bleed Valve Model No. :- SBB-FBNT Flange x Thread 1st Isolate :- Ball Drain :- Needle</p>  	<p>Single Block and Bleed Valve Model No. :- SBB-FBNF Flange x Flange 1st Isolate :- Ball Drain :- Needle</p>  
<p>Double Block Valve Model No. :- DB-FBNT Flange x Thread 1st Isolate :- Ball 2nd Isolate :- Needle</p>  	<p>Double Block Valve Model No. :- DB-FBNF Flange x Flange 1st Isolate :- Ball 2nd Isolate :- Needle</p>  
<p>Double Block Valve Model No. :- DB-FBBT Flange x Thread 1st Isolate :- Ball 2nd Isolate :- Ball</p>  	<p>Double Block Valve Model No. :- DB-FBBF Flange x Flange 1st Isolate :- Ball 2nd Isolate :- Ball</p>  
<p>Double Block and Bleed Valve Model No. :- DBB-FBNBT Flange x Thread 1st Isolate :- Ball 2nd Isolate :- Ball Drain :- Needle</p>  	<p>Double Block and Bleed Valve Model No. :- DBB-FBNBF Flange x Flange 1st Isolate :- Ball 2nd Isolate :- Ball Drain :- Needle</p>  
<p>Double Block and Bleed Valve Model No. :- DBB-FBNTT Flange x Thread 1st Isolate :- Ball 2nd Isolate :- Needle Drain :- Needle</p>  	<p>Double Block and Bleed Valve Model No. :- DBB-FBNNTF Flange x Flange 1st Isolate :- Ball 2nd Isolate :- Needle Drain :- Needle</p>  

<p>Needle Type Double Block and Bleed Valve Model No. :- DBB-FNNNT Flange x Thread 1st Isolate :- Needle 2nd Isolate :- Needle Drain :- Needle</p>  	<p>Needle Type Double Block and Bleed Valve Model No. :- DBB-FNNNF Flange x Flange 1st Isolate :- Needle 2nd Isolate :- Needle Drain :- Needle</p>  
<p>OS&Y Type Double Block and Bleed Valve Model No. :- DBB-FPPNT Flange x Thread 1st Isolate :- OS&Y 2nd Isolate :- OS&Y Drain :- Needle</p>  	<p>OS&Y Type Double Block and Bleed Valve Model No. :- DBB-FPPNF Flange x Flange 1st Isolate :- OS&Y 2nd Isolate :- OS&Y Drain :- Needle</p>  

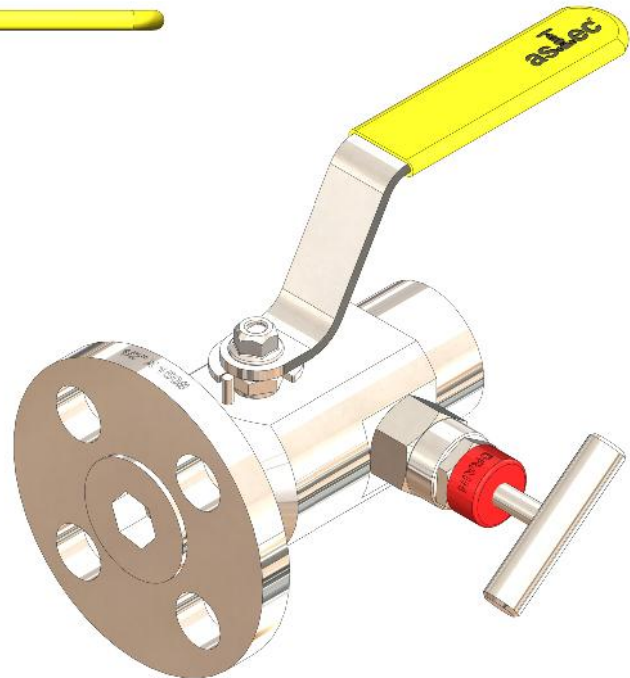
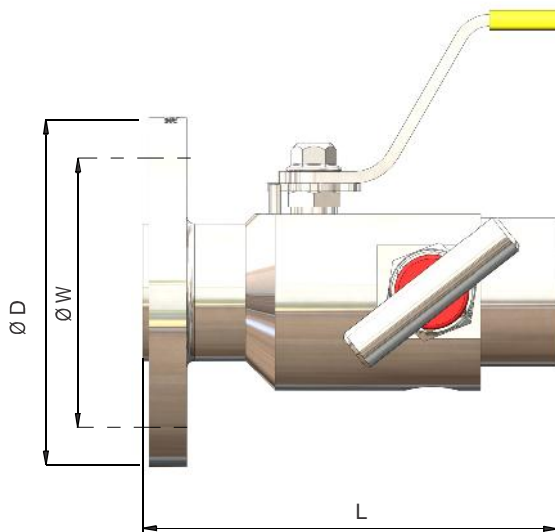
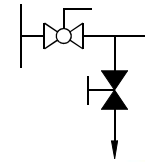
Single Block and Bleed Valve

Model No:- SBB-FBNT

Flange x Thread

1st Isolate :- Ball

Drain :- Needle



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle Ø W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	106
	300	95	66.7	4	15.9	1/2	109
	600	95	66.7	4	15.9	1/2	116
	900/1500	120	82.6	4	22.2	3/4	124
	2500	135	88.9	4	22.2	3/4	132
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	108
	300	115	82.6	4	19.1	5/8	111
	600	115	82.6	4	19.1	5/8	117
	900/1500	130.0	88.9	4	22.2	3/4	127
	2500	140	95	4	22.2	3/4	133
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	109
	300	125.0	88.9	4	19.1	5/8	113
	600	125.0	88.9	4	19.1	5/8	119
	900/1500	150.0	101.6	4	25.4	7/8	130
	2500	160	107.4	4	25.4	7/8	136
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	113
	300	155	114.3	4	22.2	3/4	116
	600	155	114.3	4	22.2	3/4	124
	900/1500	180	123.8	4	28.6	1	133
	2500	205	146	4	31.8	1 1/8	146
2 (DN 50)	150	150	120.7	4	19.1	5/8	114
	300	165	127	8	19.1	5/8	117
	600	165	127	8	19.1	5/8	127
	900/1500	215	165.1	8	25.4	7/8	140
	2500	235.0	171.4	8	28.6	1	152

Note :- 1) End Connection of different size can be provided on request.

2) Dimension in millimeter are for reference only and are subject to change



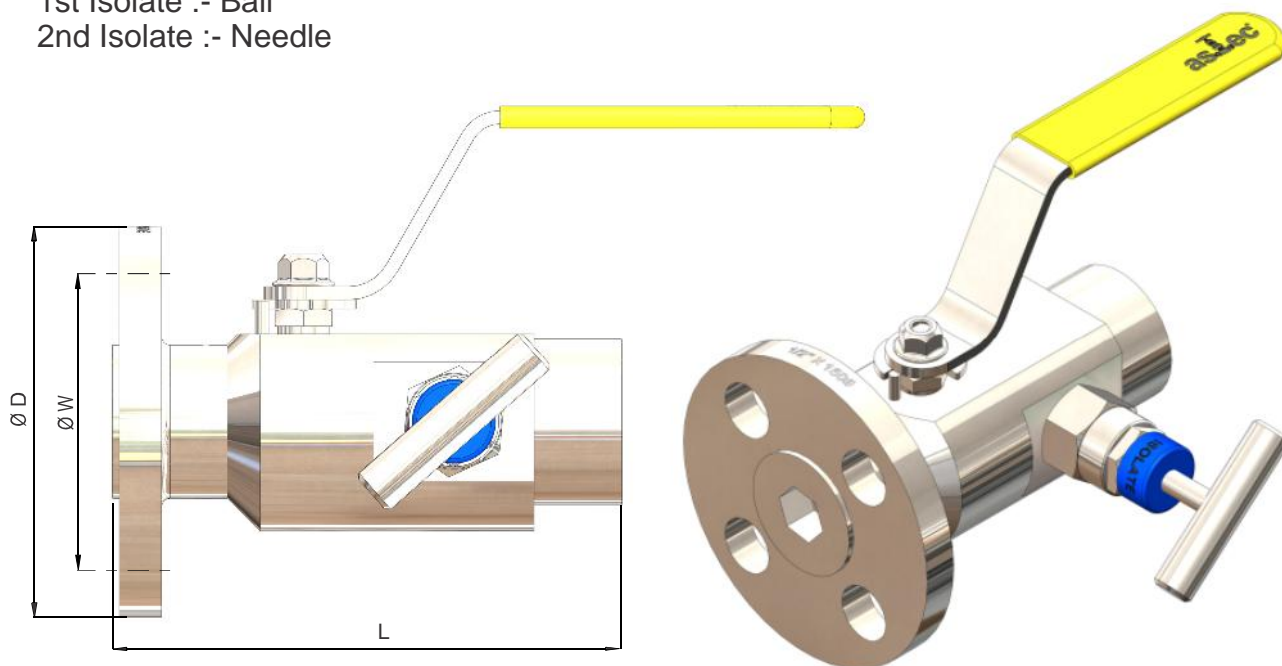
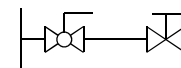
Double Block Valve

Model No:- DB-FBNT

Flange x Thread

1st Isolate :- Ball

2nd Isolate :- Needle



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle Ø W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	116
	300	95	66.7	4	15.9	1/2	119
	600	95	66.7	4	15.9	1/2	126
	900/1500	120	82.6	4	22.2	3/4	134
	2500	135	88.9	4	22.2	3/4	142
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	118
	300	115	82.6	4	19.1	5/8	121
	600	115	82.6	4	19.1	5/8	127
	900/1500	130.0	88.9	4	22.2	3/4	137
	2500	140	95	4	22.2	3/4	143
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	119
	300	125.0	88.9	4	19.1	5/8	123
	600	125.0	88.9	4	19.1	5/8	129
	900/1500	150.0	101.6	4	25.4	7/8	140
	2500	160	107.4	4	25.4	7/8	146
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	123
	300	155	114.3	4	22.2	3/4	126
	600	155	114.3	4	22.2	3/4	134
	900/1500	180	123.8	4	28.6	1	143
	2500	205	146	4	31.8	1 1/8	156
2 (DN 50)	150	150	120.7	4	19.1	5/8	124
	300	165	127	8	19.1	5/8	127
	600	165	127	8	19.1	5/8	137
	900/1500	215	165.1	8	25.4	7/8	150
	2500	235.0	171.4	8	28.6	1	162

Note :- 1) End Connection of different size can be provided on request.

2) Dimension in millimeter are for reference only and are subject to change



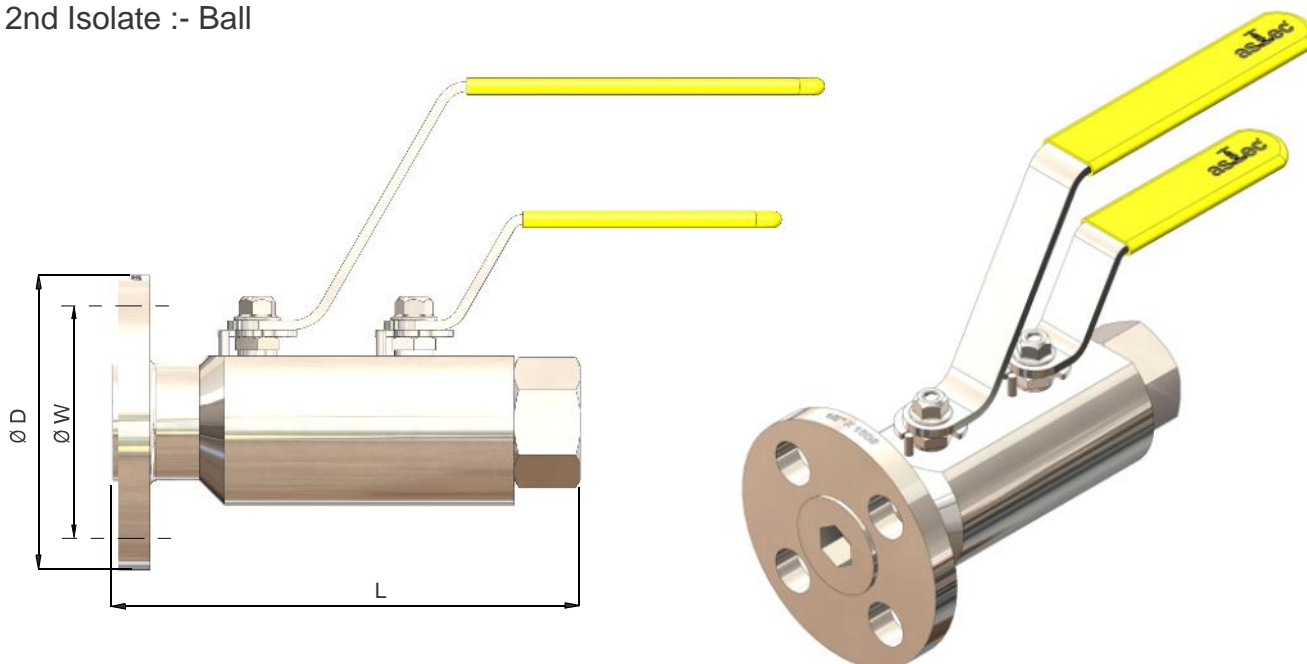
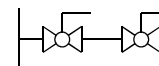
Double Block Valve

Model No:- DB-FBBT

Flange x Thread

1st Isolate :- Ball

2nd Isolate :- Ball



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle Ø W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	141
	300	95	66.7	4	15.9	1/2	144
	600	95	66.7	4	15.9	1/2	151
	900/1500	120	82.6	4	22.2	3/4	159
	2500	135	88.9	4	22.2	3/4	167
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	143
	300	115	82.6	4	19.1	5/8	146
	600	115	82.6	4	19.1	5/8	152
	900/1500	130.0	88.9	4	22.2	3/4	162
	2500	140	95	4	22.2	3/4	168
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	144
	300	125.0	88.9	4	19.1	5/8	148
	600	125.0	88.9	4	19.1	5/8	154
	900/1500	150.0	101.6	4	25.4	7/8	165
	2500	160	107.4	4	25.4	7/8	171
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	148
	300	155	114.3	4	22.2	3/4	151
	600	155	114.3	4	22.2	3/4	159
	900/1500	180	123.8	4	28.6	1	168
	2500	205	146	4	31.8	1 1/8	181
2 (DN 50)	150	150	120.7	4	19.1	5/8	149
	300	165	127	8	19.1	5/8	152
	600	165	127	8	19.1	5/8	168
	900/1500	215	165.1	8	25.4	7/8	175
	2500	235.0	171.4	8	28.6	1	187

Note :- 1) End Connection of different size can be provided on request.

2) Dimension in millimeter are for reference only and are subject to change

Double Block & Bleed Valve

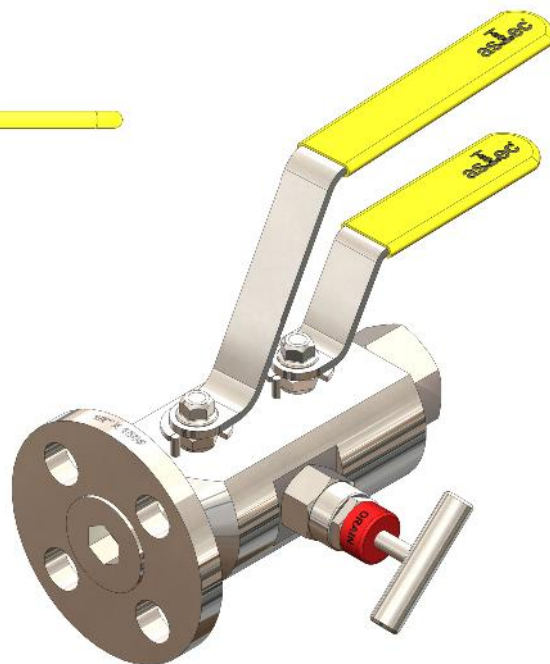
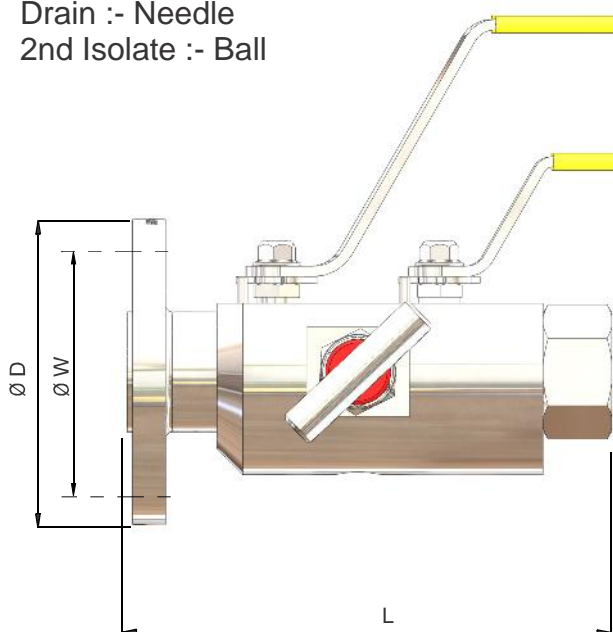
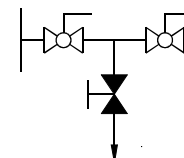
Model No:- DBB-FBNBT

Flange x Thread

1st Isolate :- Ball

Drain :- Needle

2nd Isolate :- Ball



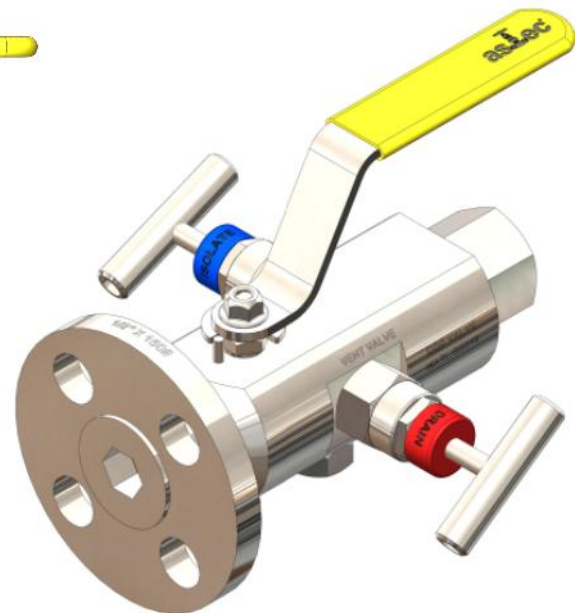
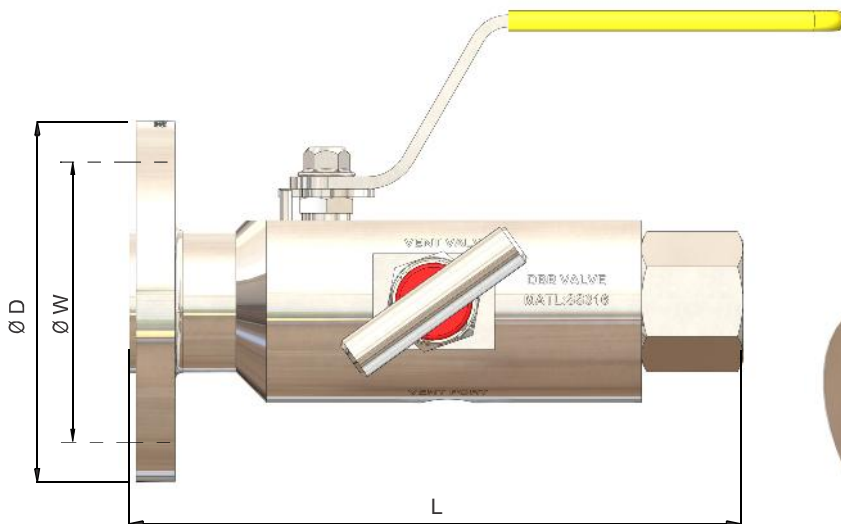
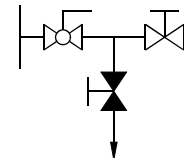
Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	154
	300	95	66.7	4	15.9	1/2	157
	600	95	66.7	4	15.9	1/2	163
	900/1500	120	82.6	4	22.2	3/4	171
	2500	135	88.9	4	22.2	3/4	179
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	155
	300	115	82.6	4	19.1	5/8	158
	600	115	82.6	4	19.1	5/8	165
	900/1500	130.0	88.9	4	22.2	3/4	174
	2500	140	95	4	22.2	3/4	181
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	157
	300	125.0	88.9	4	19.1	5/8	160
	600	125.0	88.9	4	19.1	5/8	167
	900/1500	150.0	101.6	4	25.4	7/8	178
	2500	160	107.4	4	25.4	7/8	184
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	160
	300	155	114.3	4	22.2	3/4	163
	600	155	114.3	4	22.2	3/4	171
	900/1500	180	123.8	4	28.6	1	181
	2500	205	146	4	31.8	1 1/8	194
2 (DN 50)	150	150	120.7	4	19.1	5/8	162
	300	165	127	8	19.1	5/8	165
	600	165	127	8	19.1	5/8	174
	900/1500	215	165.1	8	25.4	7/8	187
	2500	235.0	171.4	8	28.6	1	200

Note :- 1) End Connection of different size can be provided on request.
 2) Dimension in millimeter are for reference only and are subject to change

Double Block & Bleed Valve

Model No:- DBB-FBNNT

Flange x Thread
 1st Isolate :- Ball
 Drain :- Needle
 2nd Isolate :- Needle



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle Ø W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	151
	300	95	66.7	4	15.9	1/2	154
	600	95	66.7	4	15.9	1/2	161
	900/1500	120	82.6	4	22.2	3/4	169
	2500	135	88.9	4	22.2	3/4	177
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	153
	300	115	82.6	4	19.1	5/8	156
	600	115	82.6	4	19.1	5/8	162
	900/1500	130.0	88.9	4	22.2	3/4	172
	2500	140	95	4	22.2	3/4	178
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	154
	300	125.0	88.9	4	19.1	5/8	158
	600	125.0	88.9	4	19.1	5/8	164
	900/1500	150.0	101.6	4	25.4	7/8	175
	2500	160	107.4	4	25.4	7/8	181
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	158
	300	155	114.3	4	22.2	3/4	161
	600	155	114.3	4	22.2	3/4	169
	900/1500	180	123.8	4	28.6	1	178
	2500	205	146	4	31.8	1 1/8	191
2 (DN 50)	150	150	120.7	4	19.1	5/8	159
	300	165	127	8	19.1	5/8	162
	600	165	127	8	19.1	5/8	172
	900/1500	215	165.1	8	25.4	7/8	185
	2500	235.0	171.4	8	28.6	1	197

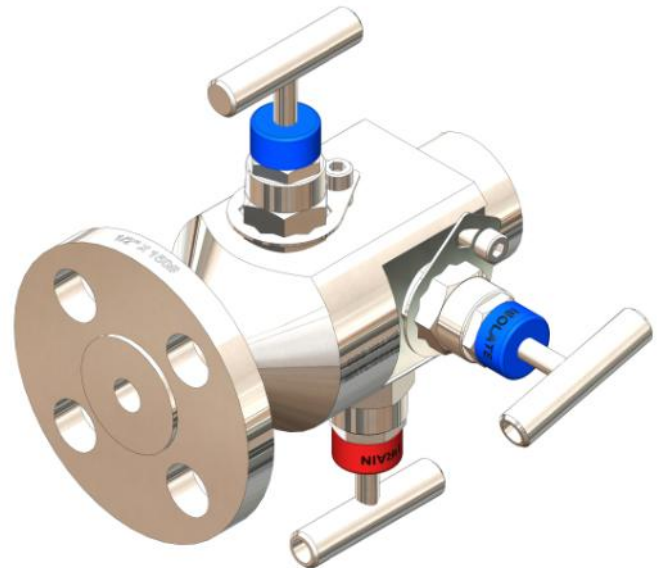
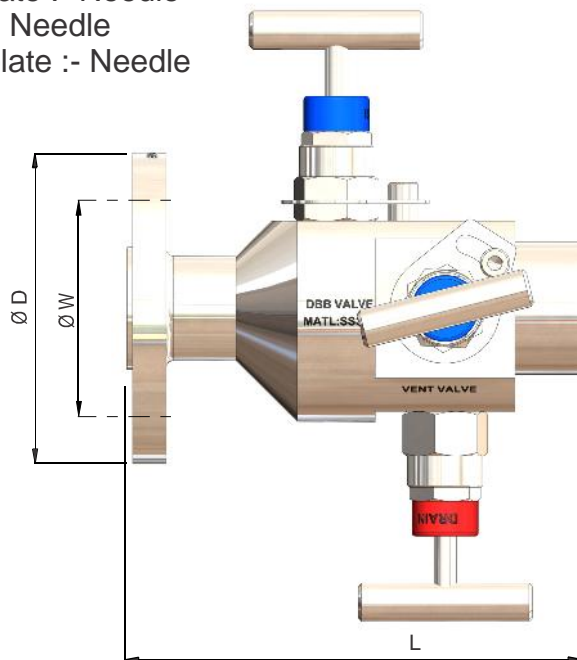
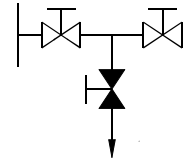
Note :- 1) End Connection of different size can be provided on request.
 2) Dimension in millimeter are for reference only and are subject to change



Double Block & Bleed Valve

Model No:- DBB-FNNNT

Flange x Thread
 1st Isolate :- Needle
 Drain :- Needle
 2nd Isolate :- Needle



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle Ø W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	131
	300	95	66.7	4	15.9	1/2	134
	600	95	66.7	4	15.9	1/2	141
	900/1500	120	82.6	4	22.2	3/4	149
	2500	135	88.9	4	22.2	3/4	157
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	133
	300	115	82.6	4	19.1	5/8	136
	600	115	82.6	4	19.1	5/8	142
	900/1500	130.0	88.9	4	22.2	3/4	152
	2500	140	95	4	22.2	3/4	158
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	134
	300	125.0	88.9	4	19.1	5/8	138
	600	125.0	88.9	4	19.1	5/8	144
	900/1500	150.0	101.6	4	25.4	7/8	155
	2500	160	107.4	4	25.4	7/8	161
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	138
	300	155	114.3	4	22.2	3/4	141
	600	155	114.3	4	22.2	3/4	149
	900/1500	180	123.8	4	28.6	1	158
	2500	205	146	4	31.8	1 1/8	171
2 (DN 50)	150	150	120.7	4	19.1	5/8	139
	300	165	127	8	19.1	5/8	142
	600	165	127	8	19.1	5/8	152
	900/1500	215	165.1	8	25.4	7/8	165
	2500	235.0	171.4	8	28.6	1	177

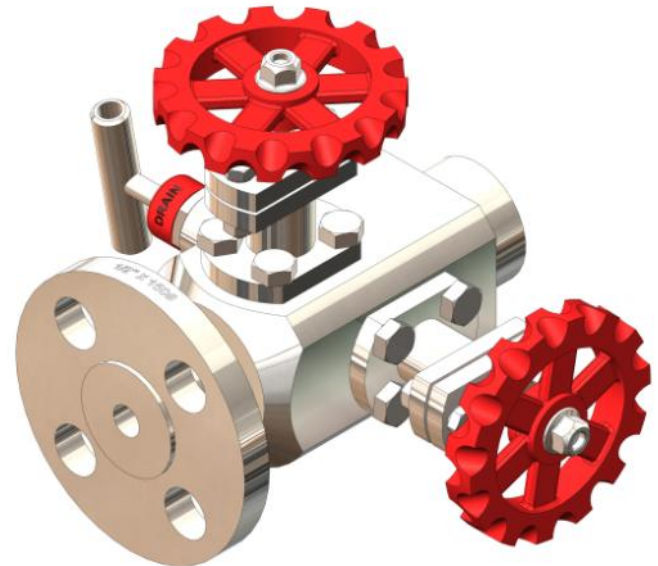
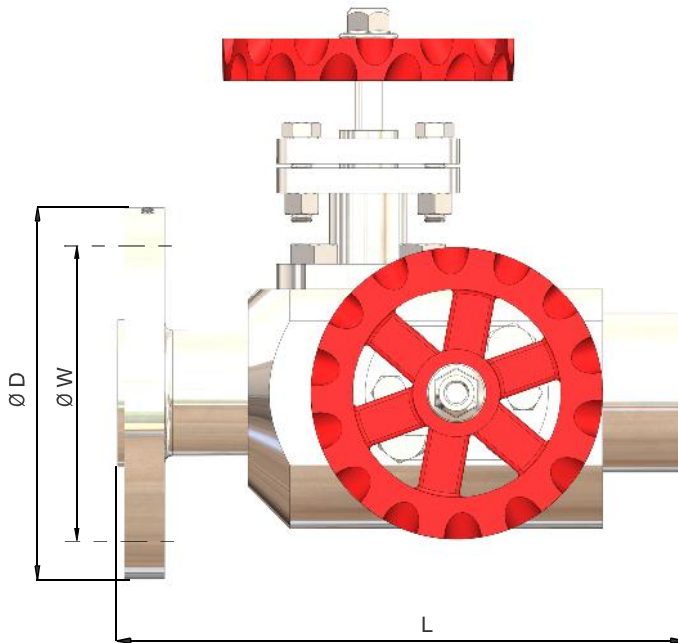
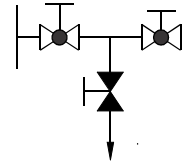
Note :- 1) End Connection of different size can be provided on request.
 2) Dimension in millimeter are for reference only and are subject to change



Double Block & Bleed Valve

Model No:- DBB-FPPNT

Flange x Thread
 1st Isolate :- OS&Y
 Drain :- Needle
 2nd Isolate :- OS&Y



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle Ø W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	151
	300	95	66.7	4	15.9	1/2	154
	600	95	66.7	4	15.9	1/2	161
	900/1500	120	82.6	4	22.2	3/4	169
	2500	135	88.9	4	22.2	3/4	177
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	153
	300	115	82.6	4	19.1	5/8	156
	600	115	82.6	4	19.1	5/8	162
	900/1500	130.0	88.9	4	22.2	3/4	172
	2500	140	95	4	22.2	3/4	178
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	154
	300	125.0	88.9	4	19.1	5/8	158
	600	125.0	88.9	4	19.1	5/8	164
	900/1500	150.0	101.6	4	25.4	7/8	175
	2500	160	107.4	4	25.4	7/8	181
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	158
	300	155	114.3	4	22.2	3/4	161
	600	155	114.3	4	22.2	3/4	169
	900/1500	180	123.8	4	28.6	1	178
	2500	205	146	4	31.8	1 1/8	191
2 (DN 50)	150	150	120.7	4	19.1	5/8	159
	300	165	127	8	19.1	5/8	162
	600	165	127	8	19.1	5/8	172
	900/1500	215	165.1	8	25.4	7/8	185
	2500	235.0	171.4	8	28.6	1	197

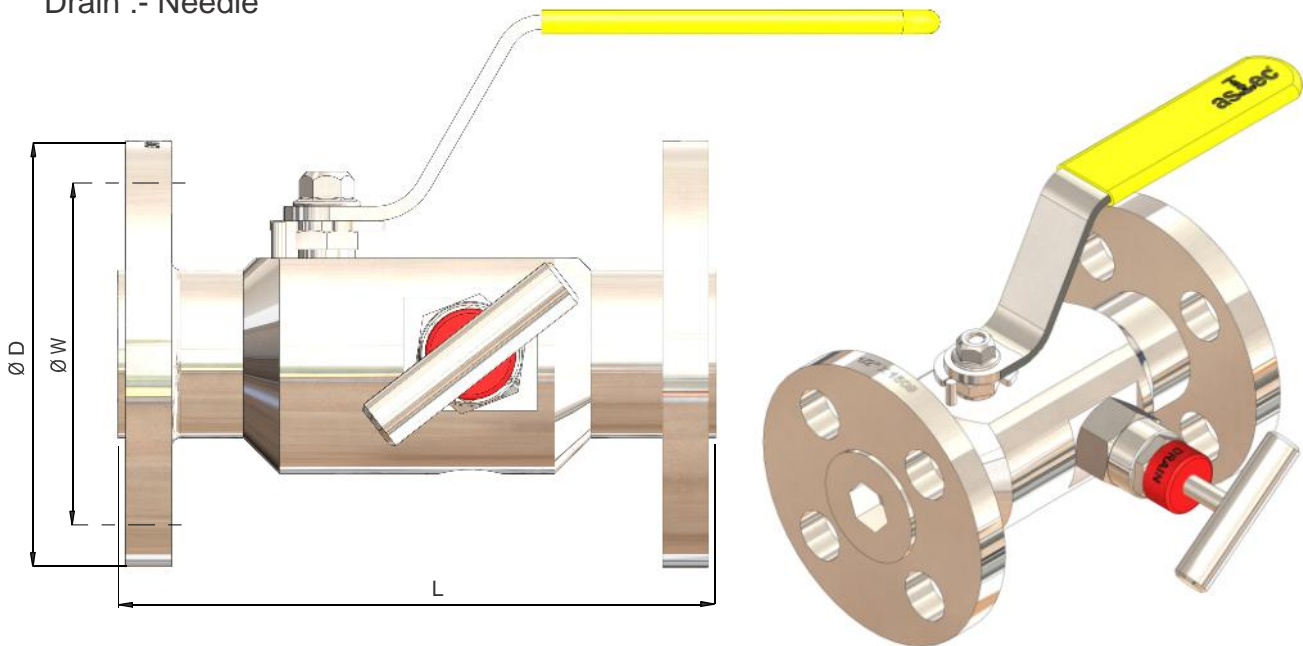
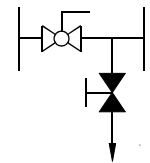
Note :- 1) End Connection of different size can be provided on request.
 2) Dimension in millimeter are for reference only and are subject to change



Single Block and Bleed Valve

Model No:- SBB-FBNF

Flange x Flange
 1st Isolate :- Ball
 Drain :- Needle



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle Ø W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	117
	300	95	66.7	4	15.9	1/2	124
	600	95	66.7	4	15.9	1/2	136
	900/1500	120	82.6	4	22.2	3/4	152
	2500	135	88.9	4	22.2	3/4	168
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	121
	300	115	82.6	4	19.1	5/8	127
	600	115	82.6	4	19.1	5/8	140
	900/1500	130.0	88.9	4	22.2	3/4	159
	2500	140	95	4	22.2	3/4	171
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	124
	300	125.0	88.9	4	19.1	5/8	130
	600	125.0	88.9	4	19.1	5/8	143
	900/1500	150.0	101.6	4	25.4	7/8	165
	2500	160	107.4	4	25.4	7/8	178
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	130
	300	155	114.3	4	22.2	3/4	136
	600	155	114.3	4	22.2	3/4	152
	900/1500	180	123.8	4	28.6	1	171
	2500	205	146	4	31.8	1 1/8	197
2 (DN 50)	150	150	120.7	4	19.1	5/8	133
	300	165	127	8	19.1	5/8	140
	600	165	127	8	19.1	5/8	159
	900/1500	215	165.1	8	25.4	7/8	184
	2500	235.0	171.4	8	28.6	1	210

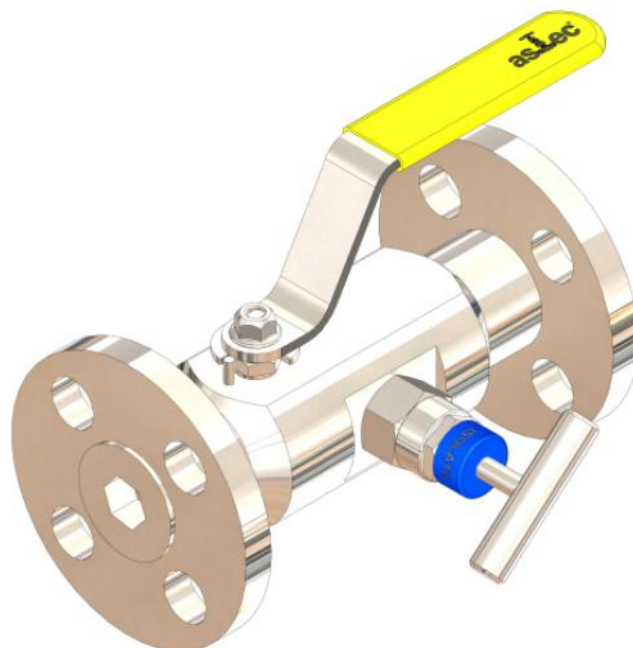
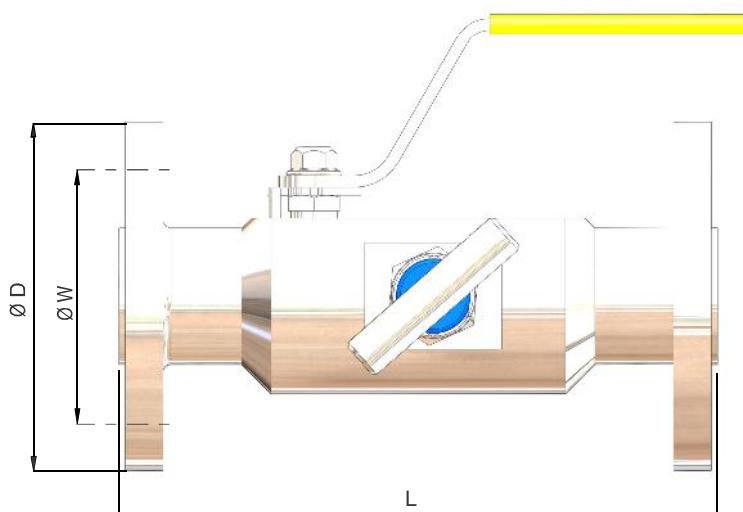
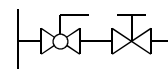
Note :- 1) End Connection of different size can be provided on request.
 2) Dimension in millimeter are for reference only and are subject to change



Double Block Valve

Model No:- DB-FBNF

Flange x Flange
 1st Isolate :- Ball
 2nd Isolate :- Needle



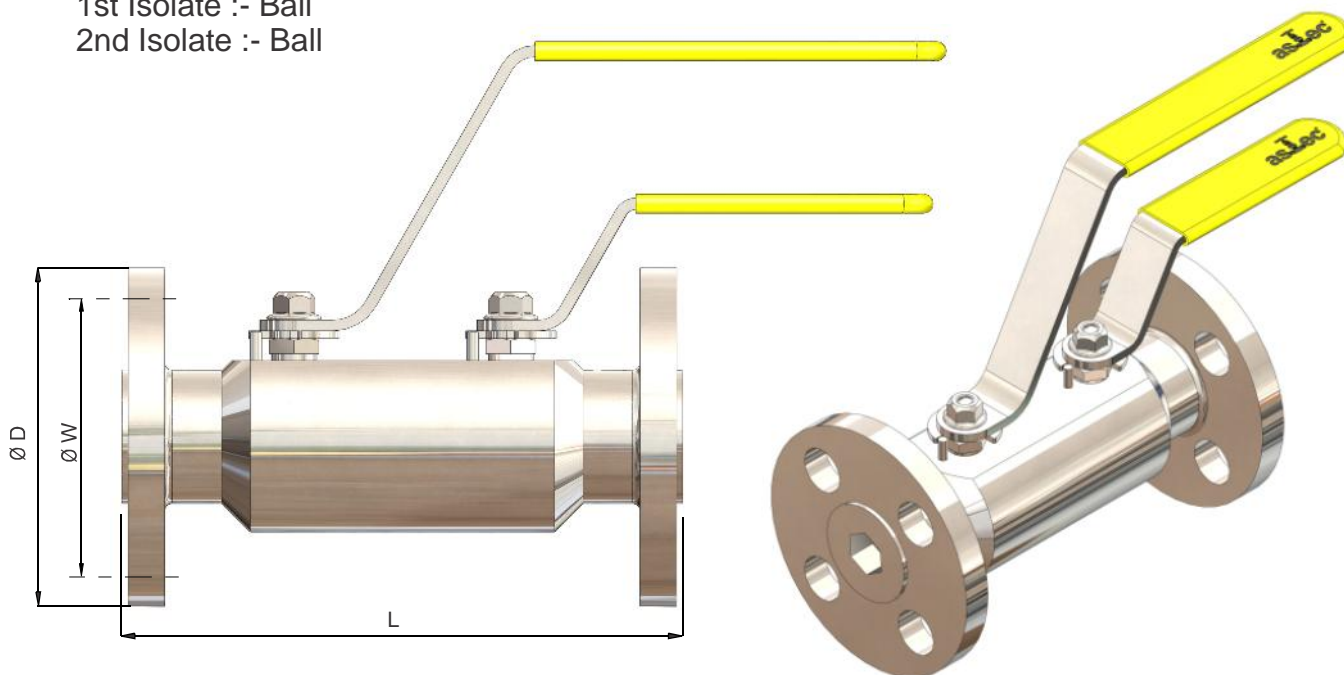
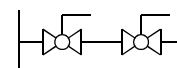
Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle Ø W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	127
	300	95	66.7	4	15.9	1/2	134
	600	95	66.7	4	15.9	1/2	146
	900/1500	120	82.6	4	22.2	3/4	162
	2500	135	88.9	4	22.2	3/4	178
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	131
	300	115	82.6	4	19.1	5/8	137
	600	115	82.6	4	19.1	5/8	150
	900/1500	130.0	88.9	4	22.2	3/4	169
	2500	140	95	4	22.2	3/4	181
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	134
	300	125.0	88.9	4	19.1	5/8	140
	600	125.0	88.9	4	19.1	5/8	153
	900/1500	150.0	101.6	4	25.4	7/8	175
	2500	160	107.4	4	25.4	7/8	188
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	140
	300	155	114.3	4	22.2	3/4	146
	600	155	114.3	4	22.2	3/4	162
	900/1500	180	123.8	4	28.6	1	181
	2500	205	146	4	31.8	1 1/8	207
2 (DN 50)	150	150	120.7	4	19.1	5/8	143
	300	165	127	8	19.1	5/8	150
	600	165	127	8	19.1	5/8	169
	900/1500	215	165.1	8	25.4	7/8	194
	2500	235.0	171.4	8	28.6	1	220

Note :- 1) End Connection of different size can be provided on request.
 2) Dimension in millimeter are for reference only and are subject to change



Double Block Valve Model No:- DB-FBBT

Flange x Flange
1st Isolate :- Ball
2nd Isolate :- Ball



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	152
	300	95	66.7	4	15.9	1/2	159
	600	95	66.7	4	15.9	1/2	171
	900/1500	120	82.6	4	22.2	3/4	187
	2500	135	88.9	4	22.2	3/4	203
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	156
	300	115	82.6	4	19.1	5/8	162
	600	115	82.6	4	19.1	5/8	175
	900/1500	130.0	88.9	4	22.2	3/4	194
	2500	140	95	4	22.2	3/4	206
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	159
	300	125.0	88.9	4	19.1	5/8	165
	600	125.0	88.9	4	19.1	5/8	178
	900/1500	150.0	101.6	4	25.4	7/8	200
	2500	160	107.4	4	25.4	7/8	213
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	165
	300	155	114.3	4	22.2	3/4	171
	600	155	114.3	4	22.2	3/4	187
	900/1500	180	123.8	4	28.6	1	206
	2500	205	146	4	31.8	1 1/8	232
2 (DN 50)	150	150	120.7	4	19.1	5/8	168
	300	165	127	8	19.1	5/8	175
	600	165	127	8	19.1	5/8	194
	900/1500	215	165.1	8	25.4	7/8	219
	2500	235.0	171.4	8	28.6	1	245

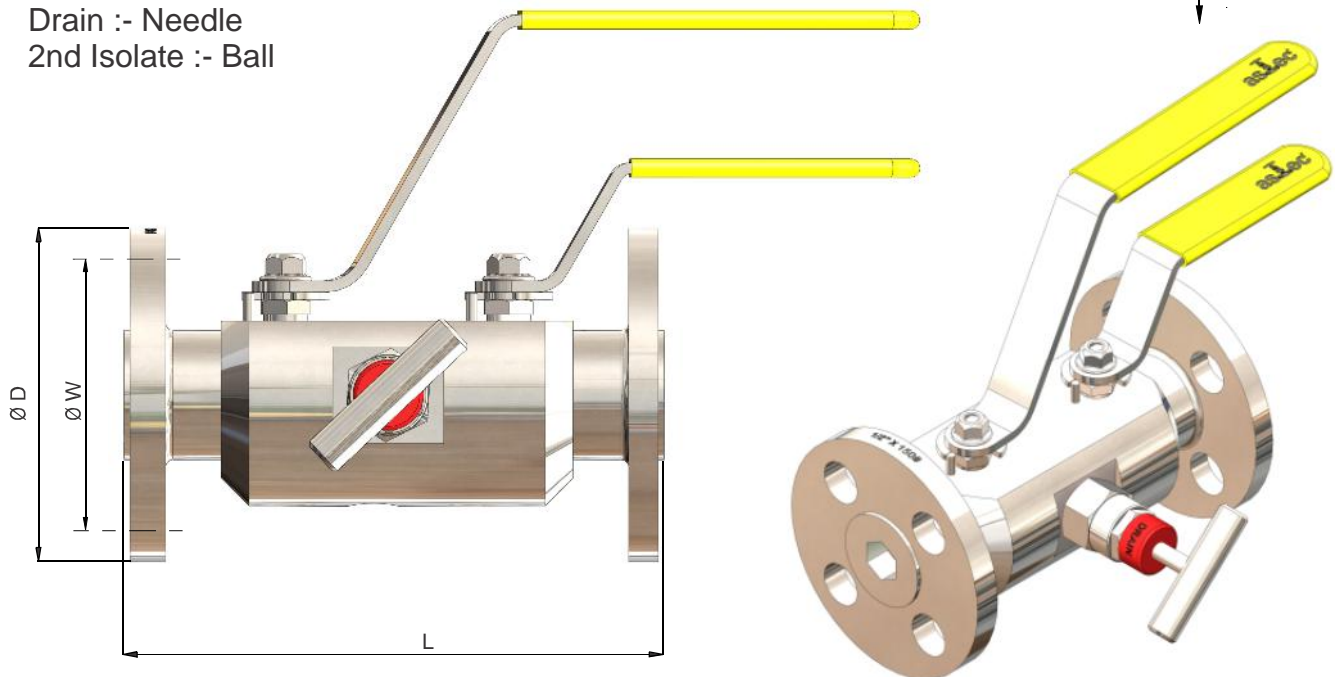
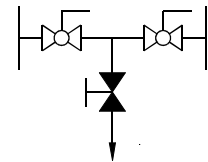
Note :- 1) End Connection of different size can be provided on request.
2) Dimension in millimeter are for reference only and are subject to change



Double Block & Bleed Valve

Model No:- DBB-FBNBF

Flange x Flange
 1st Isolate :- Ball
 Drain :- Needle
 2nd Isolate :- Ball



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	165
	300	95	66.7	4	15.9	1/2	171
	600	95	66.7	4	15.9	1/2	184
	900/1500	120	82.6	4	22.2	3/4	200
	2500	135	88.9	4	22.2	3/4	216
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	168
	300	115	82.6	4	19.1	5/8	174
	600	115	82.6	4	19.1	5/8	187
	900/1500	130.0	88.9	4	22.2	3/4	206
	2500	140	95	4	22.2	3/4	219
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	171
	300	125.0	88.9	4	19.1	5/8	178
	600	125.0	88.9	4	19.1	5/8	190
	900/1500	150.0	101.6	4	25.4	7/8	213
	2500	160	107.4	4	25.4	7/8	225
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	178
	300	155	114.3	4	22.2	3/4	184
	600	155	114.3	4	22.2	3/4	200
	900/1500	180	123.8	4	28.6	1	219
	2500	205	146	4	31.8	1 1/8	244
2 (DN 50)	150	150	120.7	4	19.1	5/8	181
	300	165	127	8	19.1	5/8	187
	600	165	127	8	19.1	5/8	206
	900/1500	215	165.1	8	25.4	7/8	232
	2500	235.0	171.4	8	28.6	1	257

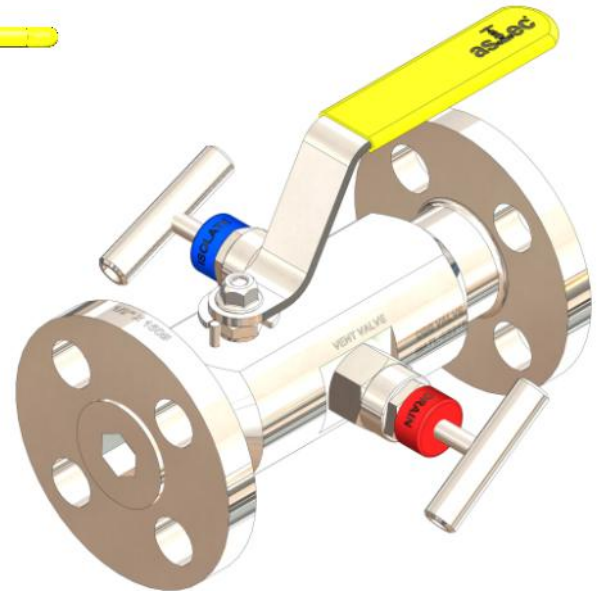
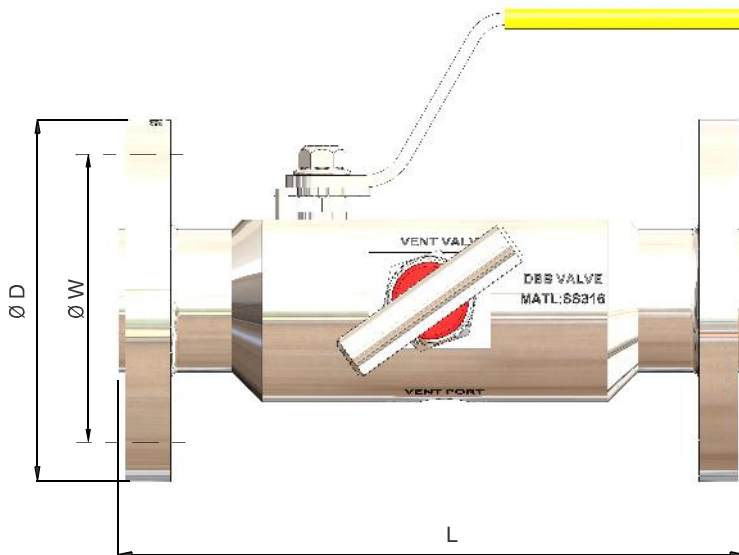
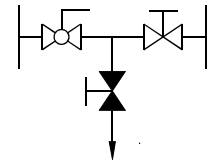
Note :- 1) End Connection of different size can be provided on request.
 2) Dimension in millimeter are for reference only and are subject to change



Double Block & Bleed Valve

Model No:- DBB-FBNNF

Flange x Flange
 1st Isolate :- Ball
 Drain :- Needle
 2nd Isolate :- Needle



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	162
	300	95	66.7	4	15.9	1/2	169
	600	95	66.7	4	15.9	1/2	181
	900/1500	120	82.6	4	22.2	3/4	197
	2500	135	88.9	4	22.2	3/4	213
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	166
	300	115	82.6	4	19.1	5/8	172
	600	115	82.6	4	19.1	5/8	185
	900/1500	130.0	88.9	4	22.2	3/4	204
	2500	140	95	4	22.2	3/4	216
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	169
	300	125.0	88.9	4	19.1	5/8	175
	600	125.0	88.9	4	19.1	5/8	188
	900/1500	150.0	101.6	4	25.4	7/8	210
	2500	160	107.4	4	25.4	7/8	223
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	175
	300	155	114.3	4	22.2	3/4	181
	600	155	114.3	4	22.2	3/4	197
	900/1500	180	123.8	4	28.6	1	216
	2500	205	146	4	31.8	1 1/8	242
2 (DN 50)	150	150	120.7	4	19.1	5/8	178
	300	165	127	8	19.1	5/8	185
	600	165	127	8	19.1	5/8	204
	900/1500	215	165.1	8	25.4	7/8	229
	2500	235.0	171.4	8	28.6	1	255

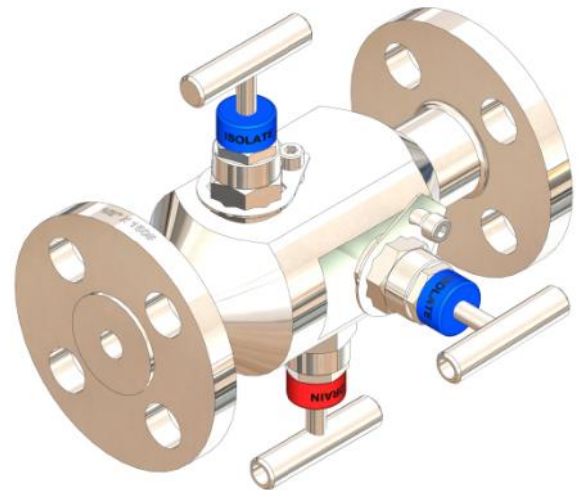
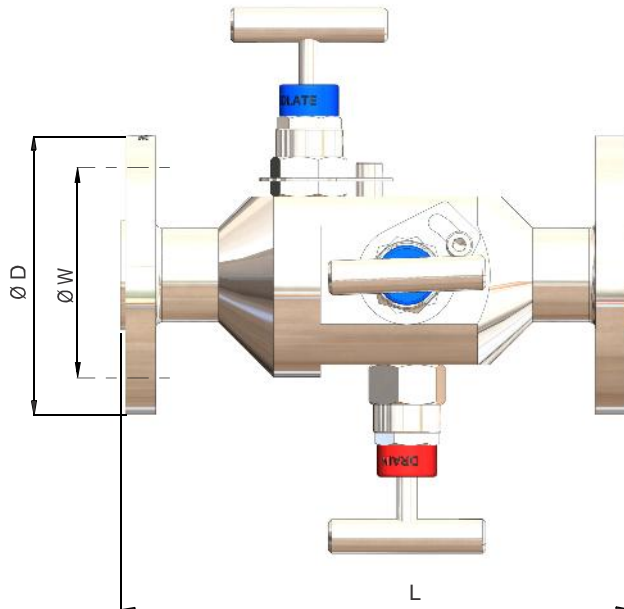
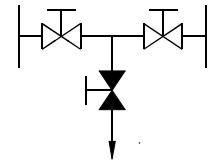
Note :- 1) End Connection of different size can be provided on request.
 2) Dimension in millimeter are for reference only and are subject to change



Double Block & Bleed Valve

Model No:- DBB-FNNNF

Flange x Thread
 1st Isolate :- Needle
 Drain :- Needle
 2nd Isolate :- Needle



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle Ø W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	142
	300	95	66.7	4	15.9	1/2	149
	600	95	66.7	4	15.9	1/2	161
	900/1500	120	82.6	4	22.2	3/4	177
	2500	135	88.9	4	22.2	3/4	193
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	146
	300	115	82.6	4	19.1	5/8	152
	600	115	82.6	4	19.1	5/8	165
	900/1500	130.0	88.9	4	22.2	3/4	184
	2500	140	95	4	22.2	3/4	196
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	149
	300	125.0	88.9	4	19.1	5/8	155
	600	125.0	88.9	4	19.1	5/8	168
	900/1500	150.0	101.6	4	25.4	7/8	190
	2500	160	107.4	4	25.4	7/8	203
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	155
	300	155	114.3	4	22.2	3/4	161
	600	155	114.3	4	22.2	3/4	177
	900/1500	180	123.8	4	28.6	1	196
	2500	205	146	4	31.8	1 1/8	222
2 (DN 50)	150	150	120.7	4	19.1	5/8	158
	300	165	127	8	19.1	5/8	165
	600	165	127	8	19.1	5/8	184
	900/1500	215	165.1	8	25.4	7/8	209
	2500	235.0	171.4	8	28.6	1	235

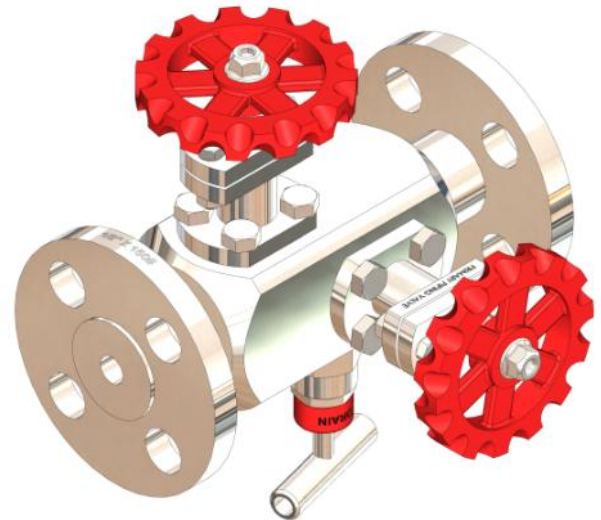
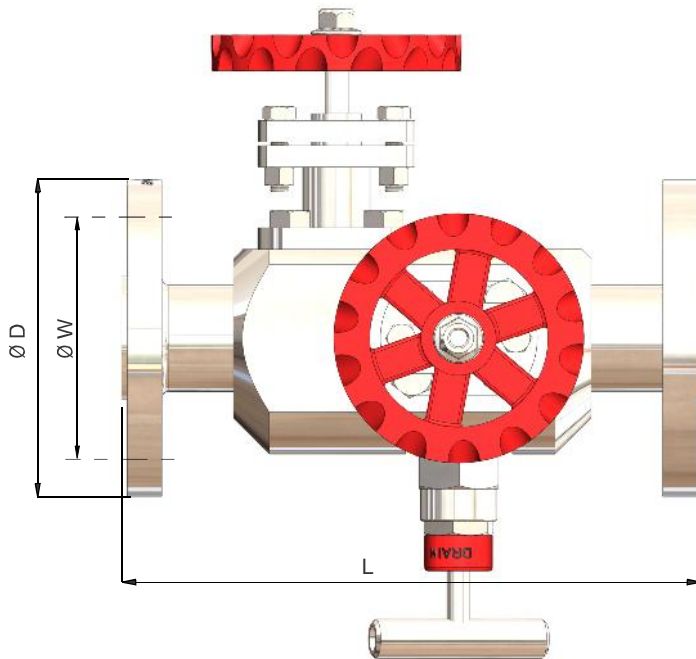
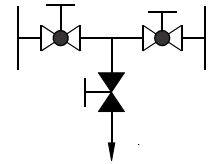
Note :- 1) End Connection of different size can be provided on request.
 2) Dimension in millimeter are for reference only and are subject to change



Double Block & Bleed Valve

Model No:- DBB-FPPNF

Flange x Thread
 1st Isolate :- OS&Y
 Drain :- Needle
 2nd Isolate :- OS&Y



Flange Size (Inch)	Flange Class	Out Side Diameter of Flange Ø D (mm)	Diameter of Bolt Circle W	No. of Bolts	Diameter of Bolt Holes (mm)	Diameter of Bolts (Inch)	TOTAL LENGTH (L)
1/2 (DN 15)	150	90	60.3	4	15.9	1/2	162
	300	95	66.7	4	15.9	1/2	169
	600	95	66.7	4	15.9	1/2	181
	900/1500	120	82.6	4	22.2	3/4	197
	2500	135	88.9	4	22.2	3/4	213
3/4 (DN 20)	150	100	69.9	4	15.9	1/2	166
	300	115	82.6	4	19.1	5/8	172
	600	115	82.6	4	19.1	5/8	185
	900/1500	130.0	88.9	4	22.2	3/4	204
	2500	140	95	4	22.2	3/4	216
1 (DN 25)	150	110.0	79.4	4	15.9	1/2	169
	300	125.0	88.9	4	19.1	5/8	175
	600	125.0	88.9	4	19.1	5/8	188
	900/1500	150.0	101.6	4	25.4	7/8	210
	2500	160	107.4	4	25.4	7/8	223
1 1/2 (DN 40)	150	125.0	98.4	4	15.9	1/2	175
	300	155	114.3	4	22.2	3/4	181
	600	155	114.3	4	22.2	3/4	197
	900/1500	180	123.8	4	28.6	1	216
	2500	205	146	4	31.8	1 1/8	242
2 (DN 50)	150	150	120.7	4	19.1	5/8	178
	300	165	127	8	19.1	5/8	185
	600	165	127	8	19.1	5/8	204
	900/1500	215	165.1	8	25.4	7/8	229
	2500	235.0	171.4	8	28.6	1	255

Note :- 1) End Connection of different size can be provided on request.
 2) Dimension in millimeter are for reference only and are subject to change