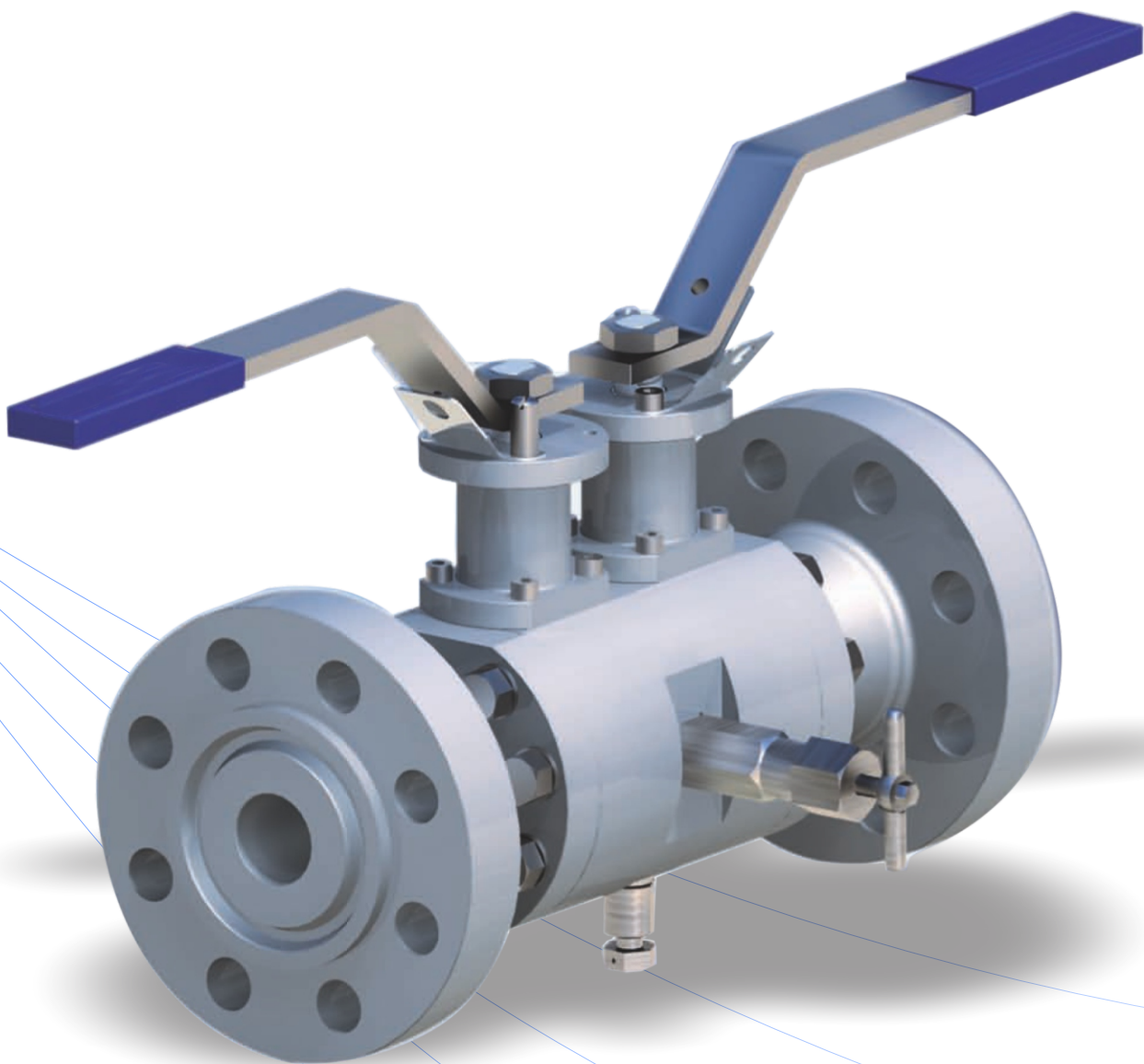


DOUBLE BLOCK AND BLEED VALVE
Soft & Metal Seated

SERIES : DBB - C
DBB - F



Product Range

End Connection	Port	Rating Class	Sizes																
			INCH	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"
			M	15	20	25	40	50	65	80	100	150	200	250	300	350	400	450	500
Flanged	Full/Red	150	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Full/Red	300	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Full/Red	600	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Full/Red	900	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Full/Red	1500	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Full/Red	2500	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Features

- **Live Loaded Gland Packing**

Graphite Packing are provided as standard taking care of Fire Safe Design Condition. Belleville Springs Washers are used to achieve live loading which protects Gland loosening under vibrations & shock conditions.

- **Antistatic Device**

To ensure Electrical Continuity between the Stem and Ball and Body all Valves are provided with Antistatic device as an integral part of Floating Ball Valves.

- **Blow Out Proof Stem**

Stem is Designed to include a collar to provide protection against Blow Outs.

- **Double ‘D’ Stem to Lever Connection**

Stems are Designed to have Double ‘D’ Connection at the top for Lever Fixing. This feature eliminates possibility of Lever Assembly in the wrong direction as the Lever indicates the Valve Position once installed on the line.

- **Equalized Cavity Pressure**

The Pressure equalization hole at the top of the Ball combined with Seat Design are Engineered to maintain the Pressure balance in the line & in the Body Cavity irrespective of Valve Position

- **Locking Device**

Locking devices are provided on all Valves with both Lever Operator and Gear Operator.

Features

- ❑ ANSI B16.5 flanged inlet connections 1/2" to 20" sizes.
- ❑ Class 150 rated to class 2500 rated.
- ❑ 1/2"-14 to 1"-11.5 NPT (female) standard outlet (depending on bore size).
- ❑ 1/2" NPT (female) standard vent.
- ❑ Standard materials of connection: Stainless steel ASTM A182 F316/F316L, WCB & CF8M, Carbon steel ASTM A350 LF2/A105, Duplex ASTM A182 F51.
- ❑ Optional materials on request. Stainless steel ASTM A182 F316/F316L.
- ❑ Carbon steel ASTM A350 LF2/A105. Duplex ASTM A182 F51.
- ❑ Raised face and ring type joint flange face styles.
- ❑ One-piece forged construction flange as standard. Fire safe designed (and tested) to meet BS 6755 Part 2/API 607.
- ❑ 304 stainless steel handles and trim as standard to reduce the risk of corrosion when required .
- ❑ Designed to meet the pressure and temperature requirements of ASME/ANSI B16.34/B16.5.
- ❑ Pressure boundary designs calculated to ASME VIII Div 1 and verified by testing.
- ❑ Heat code traceable material to EN 10204.3.1.
- ❑ Bubble tight shut off.
- ❑ locking and anti tamper devices for all valve types available option.
- ❑ Positive lever stop. User preferred handles. Permanent affixed reference label.

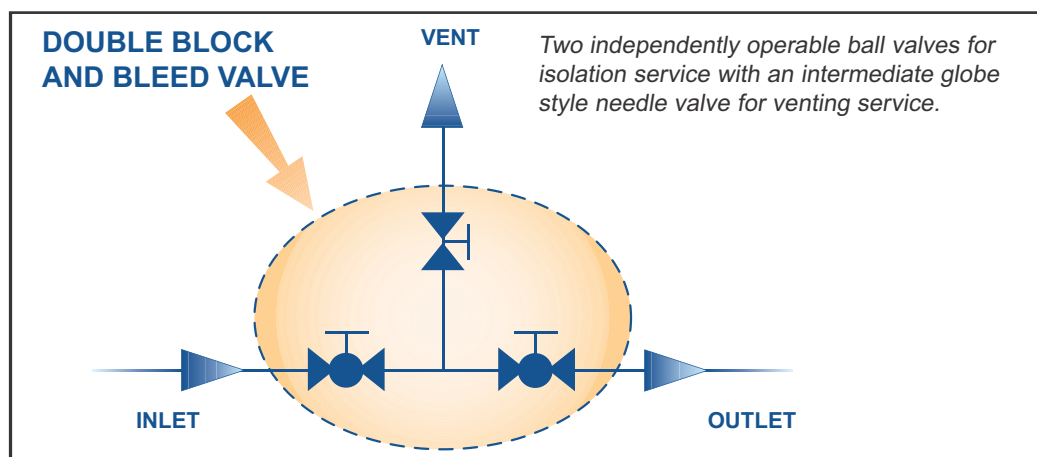


DOUBLE BLOCK AND BLEED CONCEPT

The increased activity in the offshore sector of the energy industry has led to additional factors that have to be taken into consideration when designing piping systems. Space in these modern locations is always at a premium and the design of piping systems and their associated components must therefore be more compact. There are structural constraints that are also very important, such as keeping the structure as light as possible, and there are obvious benefits from making components smaller and lighter. Construction site job is also very expensive and any reduction in installation manpower is also beneficial. The above situation has led to the modification of the patterns of valve components to incorporate savings in space, weight, and labor costs where possible, while still retaining the original function of the valve.

The greatest savings are to be seen in the reduction of leak to atmosphere because the potential leak points are minimized compared to the conventional design.

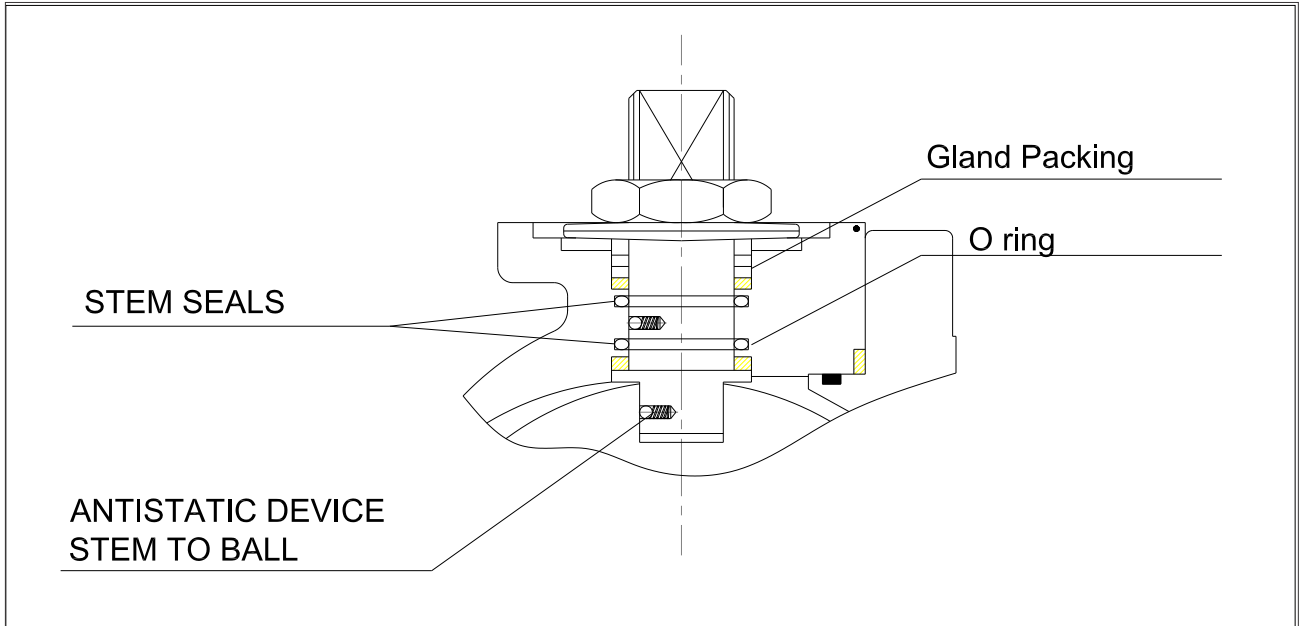
Process isolation philosophy has become more complex as safety issues have to be addressed and the requirement for double block and bleed isolation has become more commonly used. Double Block and Bleed isolation requires two in-line isolation valves and a bleed valve, used to drain or vent trapped fluid between the two closure elements.



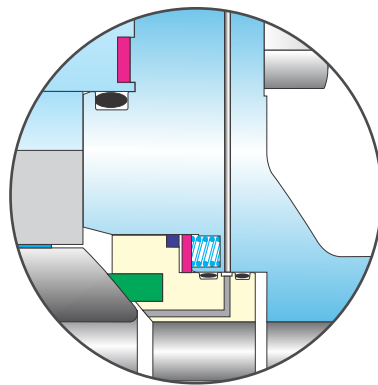
DOUBLE BLOCK AND BLEED MAIN FUNCTIONS

<p>INSTRUMENT DOUBLE BLOCK AND BLEED FOR CHEMICAL INJECTION & SAMPLING</p>	<p>Double Block and Bleed valves for chemical injection & sampling require an additional straight tubing this application in order to prevent reverse flow and process fluid contaminating the chemical source. For sampling the reverse is applied.</p>
<p>INSTRUMENT DOUBLE BLOCK AND BLEED FOR PRESSURE CONNECTIONS</p>	<p>Double Block and Bleed valves for pressure connections are generally used to isolate instrumentation such as pressure indicators and lever gauges.</p>
<p>IN-LINE DOUBLE BLOCK AND BLEED FOR PROCESS ISOLATION</p>	<p>Double Block and Bleed valves for process isolation are located in the primary process stream.</p>

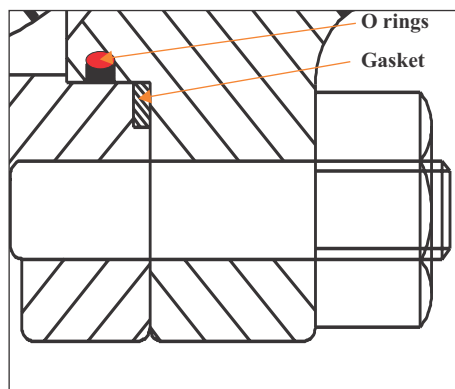
Stem Seal : We provide multiple stem sealing for high degree of sealing



Fire Safe : Fire safe design as per API 607, API 6FA



Body Sealing : We provide O ring & Gasket between body and side connection for effective sealing.



Design & Testing Standards

Design Standard:.

- ❑ ASME B16.34
- ❑ API 6D
- ❑ BS -5351
- ❑ ISO 17292
- ❑ ISO 5211 (Mounting Pad)

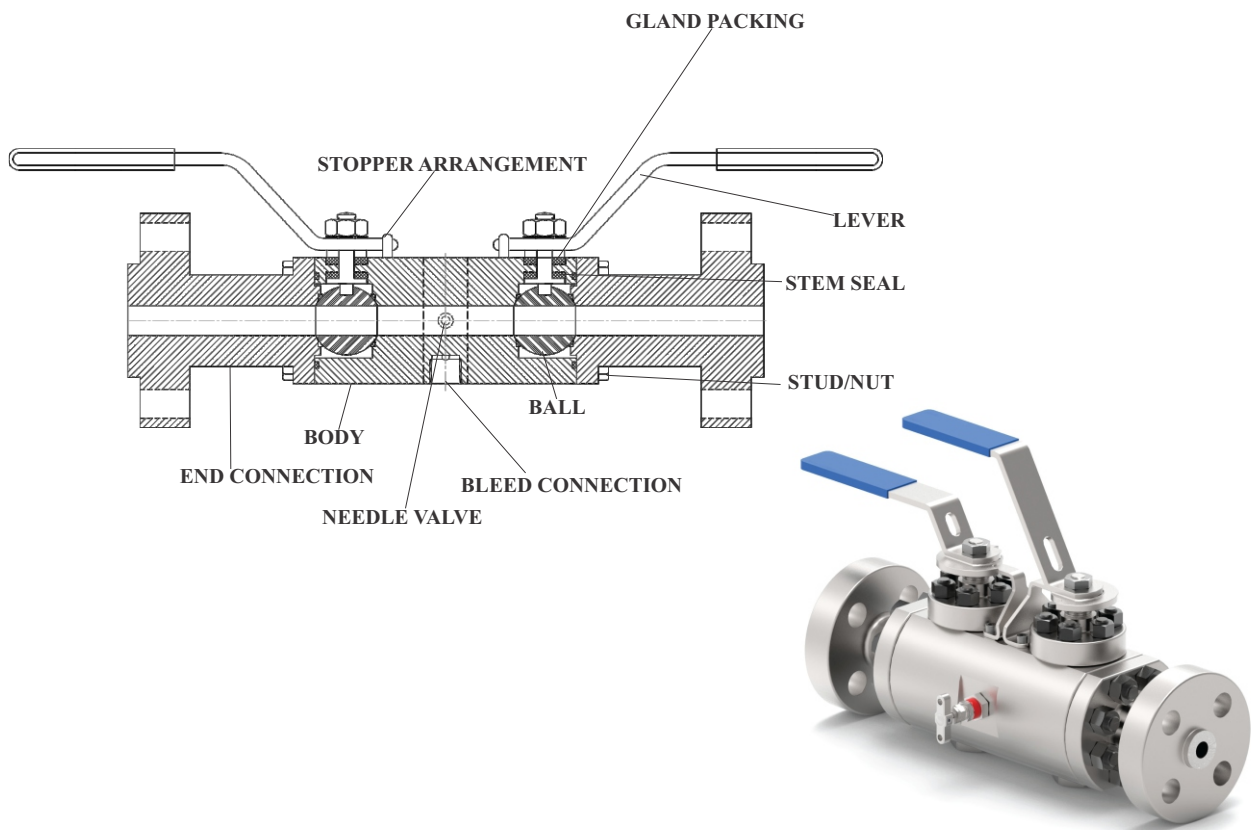
End Connection Standards:.

- ❑ Face to Face : Manufactured & Standard
- ❑ Flange Dimensions : ASME B16.5, EN 1092 , JIS B 2220 ,
- ❑ Butt weld End Dimensions : ASME B16.25,
- ❑ Socketweld End Dimensions : ASME B16.11
- ❑ Screwed End Dimensions : ASME B 16.11

Testing Standards

- ❑ Pressure Testing : API 598, API 6D, ASME/FCI 70.2, EN 12266-1, ISO 5208
- ❑ Fire Testing : API 607 / API 6FA
- ❑ Nace Requirements : MR 01-75
- ❑ Fugitive Emission Testing : ISO 15848-2

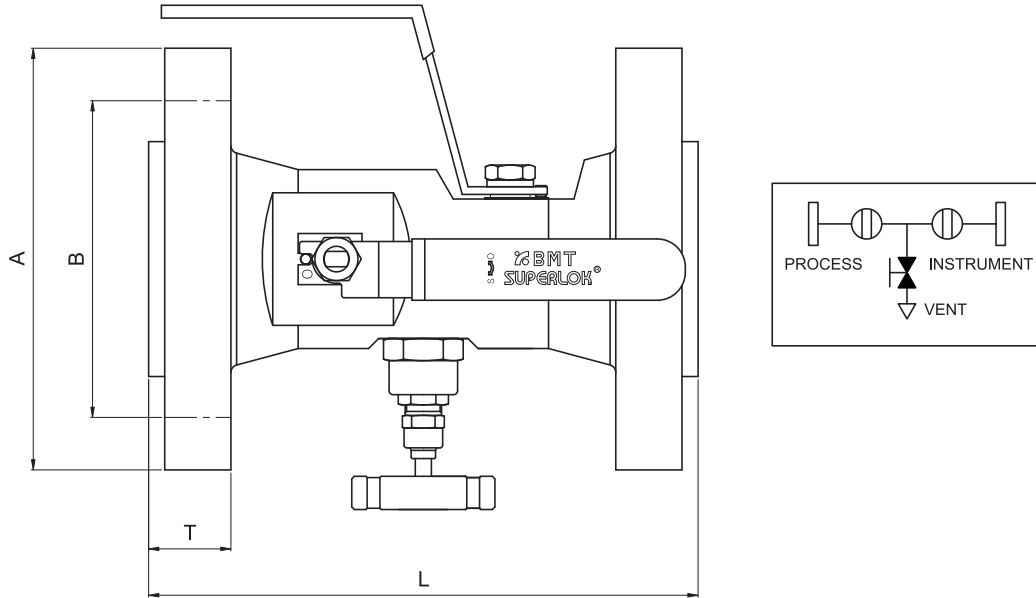
Valve Construction



Material Options

Part Name	Casting	Forgings
VALVE BODY	A 216 WCB, A 351 CF8	A 105, A 350 LF2 , A 350 LF3, A 182 F6a
SIDE CONNECTION	A 351 CF8M, A 351 CF3	A 182 F 304, A 182 F 316, A 182 F 316LN
BALL	A 351 CF3M, A 352 LCB	A 182 F 321, A 182 F 44(6% MO)
	A 217 CA 15, A 148 C95000	A 150 C 63000 (Al. Bronze),
	(AL. BRONZE)	A 182 F 51 (Duplex S.S.)
	(DUPLEX)	INCONEL 625 (UNS N 06625)
	SUPER DUPLEX	INCONEL 825 (UNS N 8825)
	ALLOY 20	MONEL K 400 (UNS N 04400)
	HAST C 276	MONEL K 500 (UNS N 05500)
STEM	A 105, A 350 LF2 , A 350 LF3, A 182 F6a	
	A 182 F 304, A 182 F 316, A 182 F 316LN	
	A 182 F 321, A 182 F 44(6% MO)	
	A 150 C 63000 (Al. Bronze),	
	A 182 F 51 (Duplex S.S.)	
	INCONEL 625 (UNS N 06625)	
	INCONEL 825 (UNS N 8825)	
	MONEL K 400 (UNS N 04400)	
	MONEL K 500 (UNS N 05500)	
SOFT SEAT	PTFE , RPTFE, NYLON 12-G, DEVLON , PEEK	
SEALS	NITRIL, EPDM, VITON B, VITON GLT	
GASKET	PTFE, RPTFE, GRAPHITE	
STUDS/BOLTS	A 193 GR. B7	A 194 GR. 2H
& NUTS	A 193 GR. B7M	A 194 GR. 2HM
	A 320 L7	A 194 GR. 7 or GR.4
	A 320 L7M	A 194 GR 7M
	A 320 L43	A 194 GR. 7M
	A 193 GR. B8	A 194 GR. 8
	A 193 GR. B8M	A 194 GR. 8M

FULL BORE

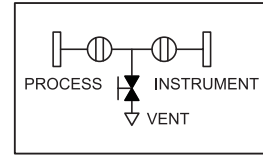
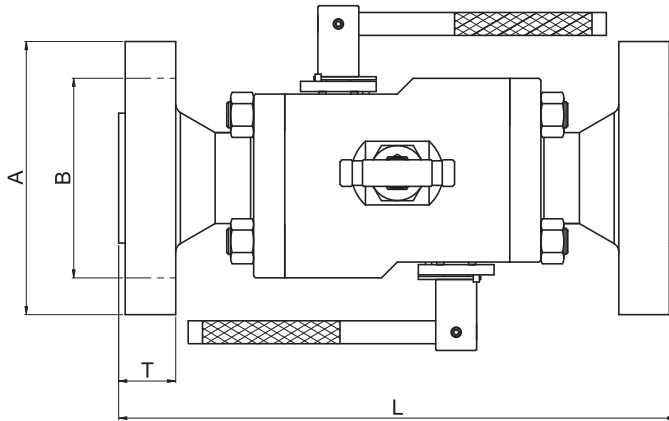


Dimensions

SIZE (INCH)	RATING (IB)	DIMENSION (mm)			
		DB-S1 L(RF)	A	B	T
		L	A	B	T
1/2" (DN15)	150#		88.9	60.5	9.5
	300#		95.3	66.5	14.3
	600#		95.3	66.5	20.6
	900#		120.7	82.6	28.7
	1500#		120.7	82.6	28.7
	2500#		133.4	88.9	36.6
3/4" (DN20)	150#		98.6	69.9	10.2
	300#		117.3	82.6	15.8
	600#		117.3	82.6	22.1
	900#		130	88.9	31.8
	1500#		130	88.9	31.8
	2500#		139.7	95.3	38.2
1" (DN25)	150#		108	79.2	11.3
	300#		124	88.9	17.3
	600#		124	88.9	23.9
	900#		149.4	101.6	34.8
	1500#		149.4	101.6	34.8
	2500#		158.8	108	41.5
1-1/2" (DN40)	150#		127	98.6	14.3
	300#		155.4	114.3	20.7
	600#		155.4	114.3	28.7
	900#		177.8	124	38.1
	1500#		177.8	124	38.1
	2500#		203.2	146.1	50.9
2" (DN50)	150#		152.4	120.7	15.8
	300#		165.1	127	22.2
	600#		165.1	127	31.8
	900#		215.9	165.1	44.5
	1500#		215.9	165.1	44.5
	2500#		235.0	171.5	57.2

*Dimensions are for reference only and are subject to change

REDUCE BORE



Dimensions

SIZE (INCH)	RATING (IB)	DIMENSION (mm)			
		DB-S1 L(RF)	A	B	T
		L	A	B	T
2-1/2" (DN65)	150#		177.8	139.7	17.3
	300#		190.5	149.4	25.5
	600#		190.5	149.4	34.8
	900#		244.3	190.5	47.5
	1500#		244.3	190.5	47.5
	2500#		266.7	196.9	63.6
3" (DN80)	150#		190.5	152.4	19.1
	300#		209.6	168.1	28.5
	600#		209.6	168.1	38.1
	900#		241.3	190.5	44.5
	1500#		266.7	203.2	54.1
	2500#		304.8	228.6	72.9
4" (DN100)	150#		228.6	190.5	24
	300#		254	200.2	31.8
	600#		273	215.9	44.5
	900#		292.1	235	50.8
	1500#		311.2	241.3	60.2
	2500#		355.6	273.1	82.6
5" (DN125)	150#		254	215.9	24
	300#		279.4	235	34.9
	600#		330.2	266.7	50.8
6" (DN150)	150#		279.4	241.3	25.5
	300#		317.5	269.7	36.7
	600#		355.6	292.1	54.1
	900#		381	317.5	62
	1500#		393.7	317.5	88.9
	2500#		482.6	368.3	114.4

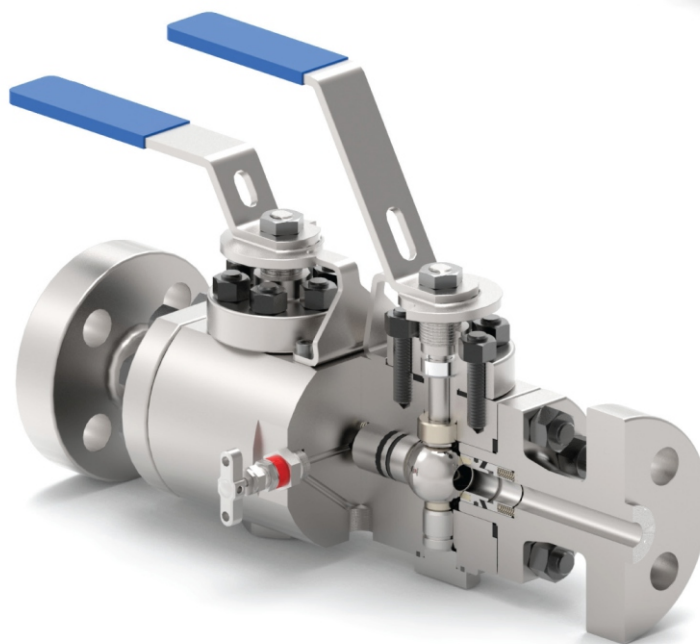
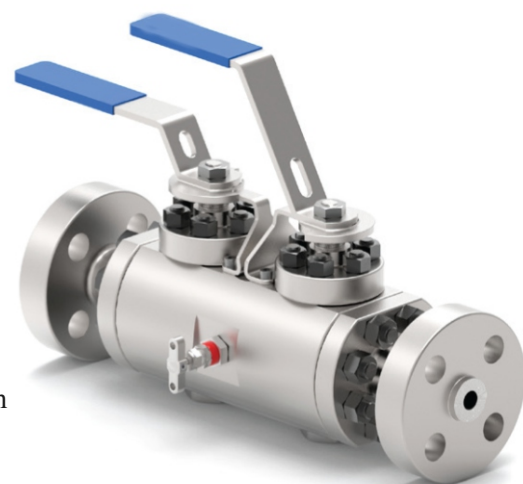
*Dimensions are for reference only and are subject to change

Trunnion Mount Ball Double Block and Bleed (DBB) Technical Information

Dembla TP series trunnion mounted valve with a low operating torque is available with either soft or metal seat options for bubble-tight sealing, spanning a wide range of pressures and temperatures.

The valve has double block and bleed function and consists of two separate isolating balls and one vent in a single unit. This three-piece construction offers space and weight saving benefits over the traditional method of using three separate valves in process piping applications.

These valves are supplied to the API 6D standards (excluding 15 mm bore).



Markets / Applications:

- Petrochemical
- Low temperature and LNG (tankers, terminals, platforms, plants, air separation)
- Chemical
- Oil and Gas

Design Standards:

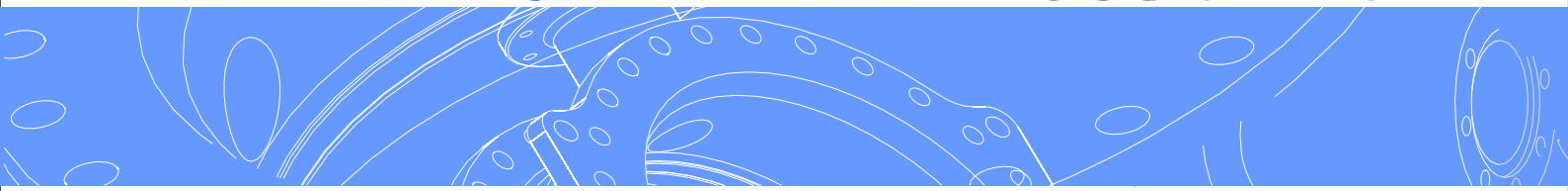
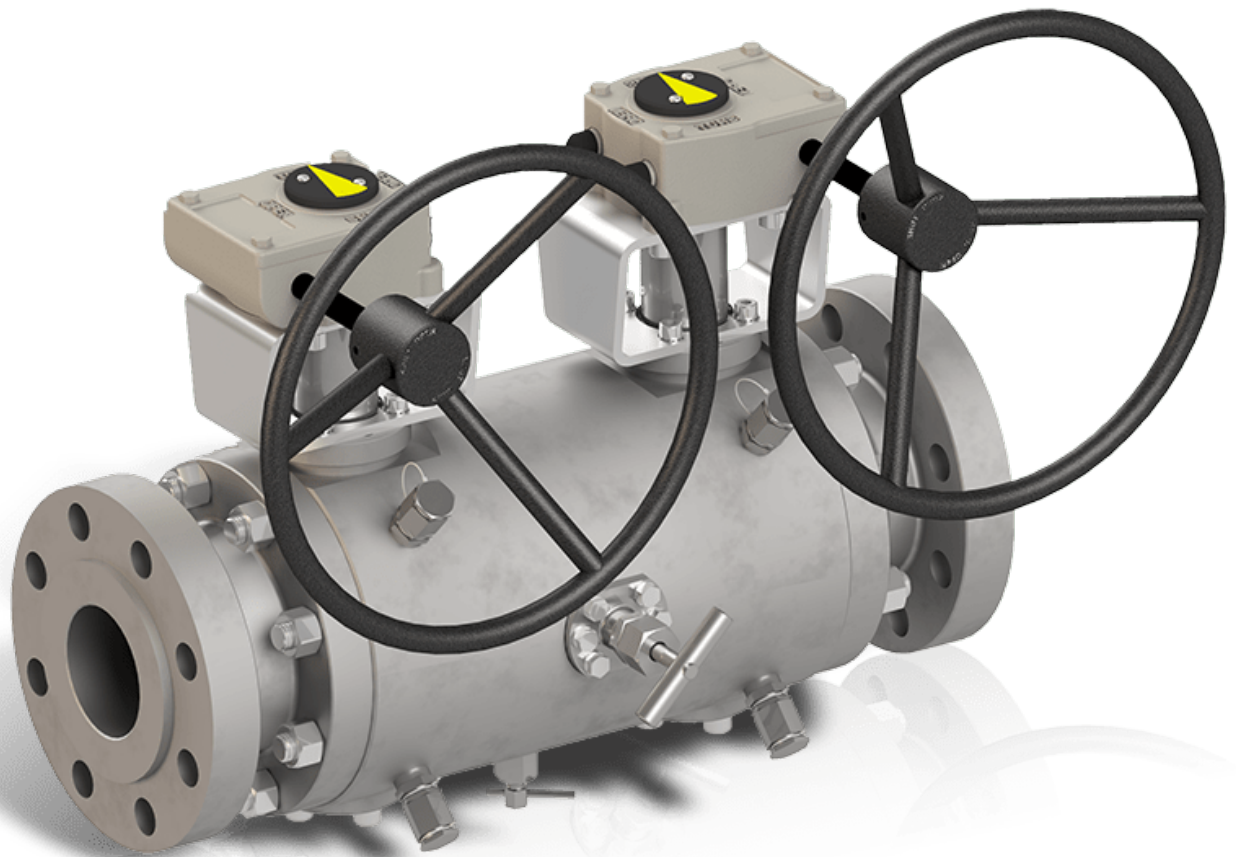
- Design: ASME B16.34, EEMUA 182
- Design pressure: ASME B16.34
- Body wall thickness: ASME B16.34, ASME VIII Div. I
- Fire safe: API 6FA and API 607

Technical Specifications:

Bore sizes	As per API 6D.
Seat materials	TFM, PEEK, Metal
Body materials	316 Stainless Steel ASTM A182-F316/ UNS S31600 Duplex ASTM A182-F51 / UNS S31803 Super Duplex ASTM A182-F53/F55 Low Temp Carbon Steel ASTM A350 LF2 Alloy 625 UNS N06625 Alloy 825 UNS N08825
Valve configurations	Flange x screw Flange x flange
Max. Working Temperature	360° C
Min. Working Temperature	-196° C
Max. Working Pressure	6,250 PSI (431 bar)

VALVE SEAT & GASKET MATERIAL SELECTION GUIDE

SEAL MATERIAL	MATERIAL CHARACTERISTIC	BFE SYMBOL	AVAILABLE MATERIAL FOR SEAT	AVAILABLE MATERIAL FOR GASKET
			BFE SEAL CODE DIGIT 1	BFE SEAL CODE DIGIT 2/3
VIRGIN PTFE	Polytetrafluoroethylene is a Fluorocarbon-based polymer. This seating material has excellent chemical resistance and low coefficient of friction. PTFE is non-contaminating and accepted by FDA for use in food services. Not recommended for liquid alkalis and fluorine.	M	YES	YES
RPTFE 25% CARBO-GRAPHITE	PTFE's mechanical properties are enhanced by adding percentage of filler material to provide improved strength, stability and wear resistance.	R	YES	YES
RPTFE 60% BRONZE	This material exhibits a unique combination of heat resistance and low friction together with outstanding chemical and good electrical properties. No moisture absorption, high arc resistance, and is self lubricating with a low coefficient of friction.	B	YES	NO
DEVLON-V	Devlon-V (special Nylon produced by Devol Engineering Ltd) offers very good performances regarding the maximum allowable pressure and excellent elasticity.	D	YES	NO
KEL-F	PCTFE (Polychlorotrifluoroethylene) is a fluorocarbon based polymer. It offers a unique combination of physical and mechanical properties non-flammability, chemical resistance, and near zero moisture absorption. It is suitable for cryogenic applications.	K	YES	NO
PEEK	Polyetheretherketone high temperature semi rigid elastomer. Best suited for high pressure and temperature service. Also offers very good corrosion resistance.	P	YES	NO
UHMWP	Ultra-High Molecular Weight Polyethylene. Ideal for use in low level radiation service. This seat also meets the requirements of the tobacco industry where TFE is prohibited and it offers an excellent resistance to abrasive media.	U	YES	YES
VITON A	Standard material for O-RING	V	YES	YES
VITON GLT	Viton GLT is a fluoroelastomer designed to retain the high heat and the chemical resistance of general use grades of Viton fluoroelastomer, while improving the low temperature flexibility of the material. Glass transition temperatures of materials are indicative of low temperature performance in typical elastomer applications	L	YES	YES
HNBR	Hydrogenated nitrile rubber (HNBR) has excellent mechanical, thermo-oxidative and chemical resistant properties and an excellent operating temperature range.	H	YES	NO
GRAPHITE	Hard carbon with excellent heat resistance. Not suitable as seat material when presence of oxidized service is expected.	G	YES	YES
TUNGSTEN CARBIDE	For liquid or gas services with high presence of solids or in any case where extreme hardness and resistance is required. Tungsten carbide itself is practically inert and extremely strong. Any attack is usually on the binder. Not suitable when small presence of caustic soda is expected	W	YES	N.A.
CHROME CARBIDE COAT	For liquid or gas services with small presence of solids. Not suitable when small presence of caustic soda is expected.	C	YES	N.A.
OTHER	For other materials please ask to BFE.	-	-	-



Dembla

Sales Office:

M/S. Dembla Valves Ltd.
 C-30, Jai Matadi Compound, Kalher
 Village, Thane-Bhiwandi-Agra Raod -
 421302,
 Maharashtra, India.
 Tel - +91-9292234790 - 97
 E-mail - expo@dembla.com
[More info - www.dembla.com](http://www.dembla.com)

Works:

M/S. Dembla Valves Ltd.
 A/8, Arahm Logistic, Valshind Village,
 Mumbai -Nashik Highway
 (NH3), Bhiwandi
 Thane - 421302. Maharashtra (India)

