



MED[®]

INTEGRAL BLOCD & BLEED VALVES



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High Technology Valve & Fitting Series

INTEGRAL BLOCK & BLEED VALVES



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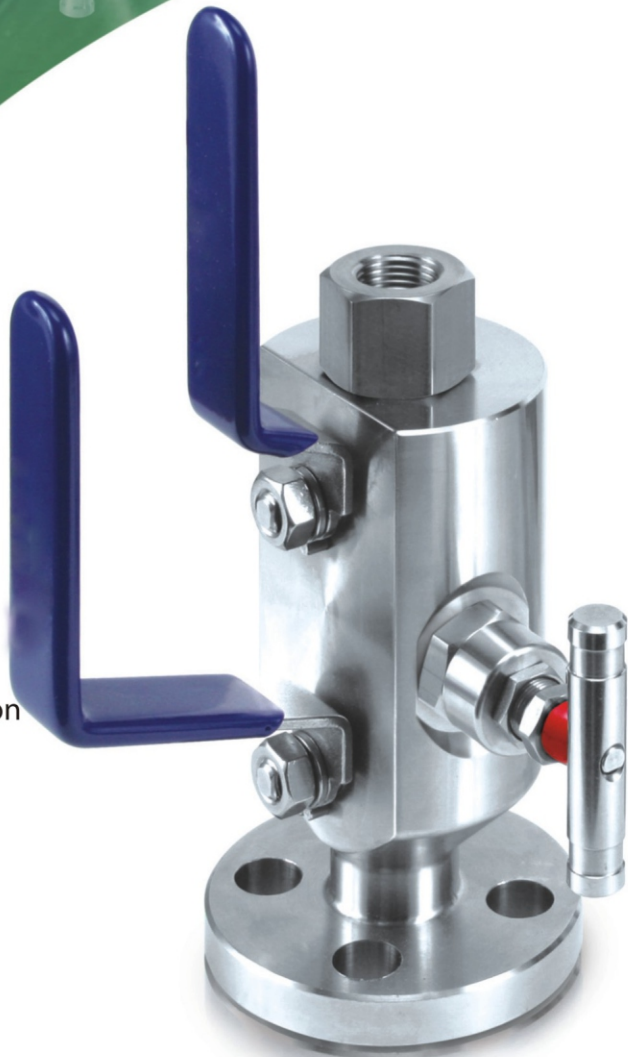
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INTRODUCTION

MED Integral Block & Bleed Valves have been specifically designed to provide a compact installation for gauge or transmitter instruments.

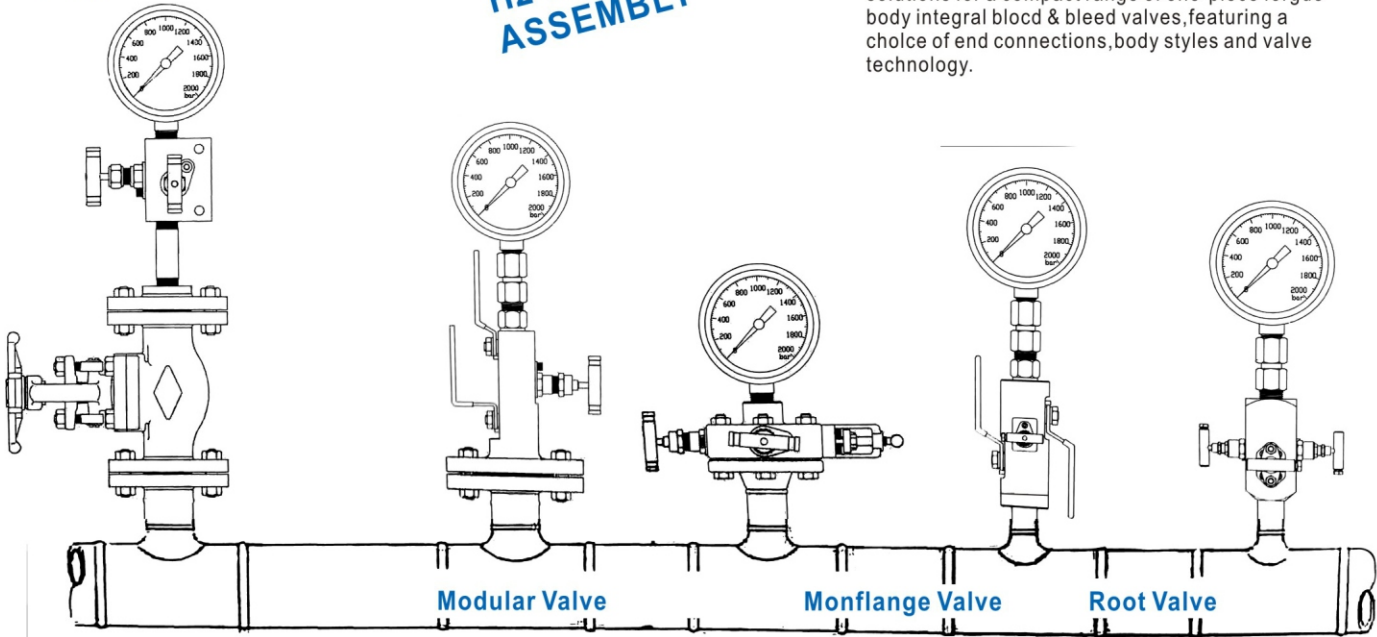
Used as an alternative to multivalve systems the advantages of reduced weight and minimum leakpaths provide for a higher integrity system. And the reduced height of the installation reduces the risk of damage through vibration as well.



CONVENTIONAL ASSEMBLY

Hz-Lok Integral Block & Bleed Valve ASSEMBLY

MED instrumentation Products has the ultimate solutions for a compact range of one-piece forged body integral block & bleed valves, featuring a choice of end connections, body styles and valve technology.



- Modular Valve**
Ball and Globe style Needle Valves
Flange and Threaded Connections
Integrally Forged Body
- Monflange Valve**
Globe Style Needle Valves
Flanged and Threaded Connections
Slimline Integrally Forged Body
- Root Valve**
Ball and Globe Style Needle Valves
Weld or Threaded Connections
Direct Connection to the Vessel
Integrally Forged Body

APPLICATION

- Double block and bleed instrument isolation
- Gauge isolation
- Instrument drain
- Chemical injection connection
- Sample connections
- Chemical seal instrument isolation
- Piping/instrument interface
- Direct mounting of instruments
- Remote mounting of instruments

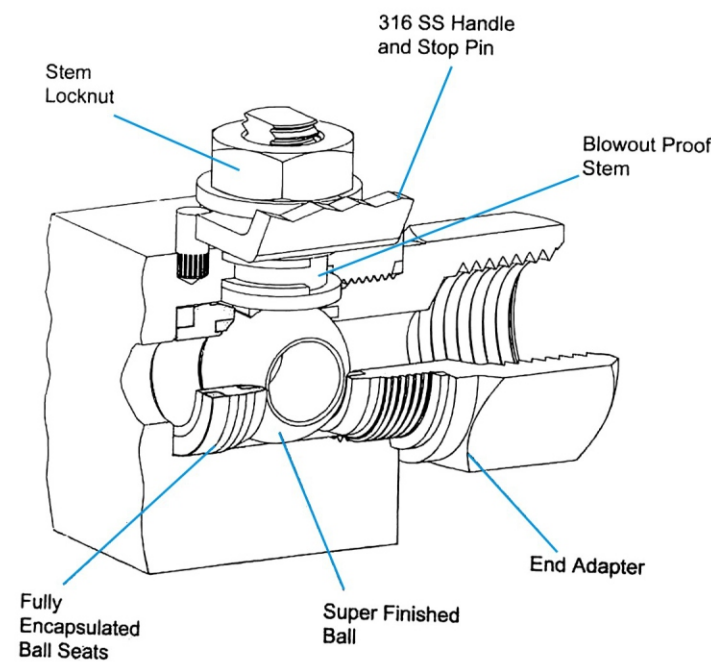
ADVANTAGES

- More compact design
- Reduced weight
- Reduced height
- Reduced leakage points
- Reduced effect of system vibration
- Supporting brackets are not required
- Reduced bending moment acting on the vessel branch fitting weld
- Reduced installation cost
- Reduced gaskets and bolting

MARKETS

- Offshore oil and gas production
- Onshore terminals
- Chemical, petro-chemical, refining
- Control panel manufacturers
- Process/power industry contractors
- Compressor manufacturers
- LNG Carriers

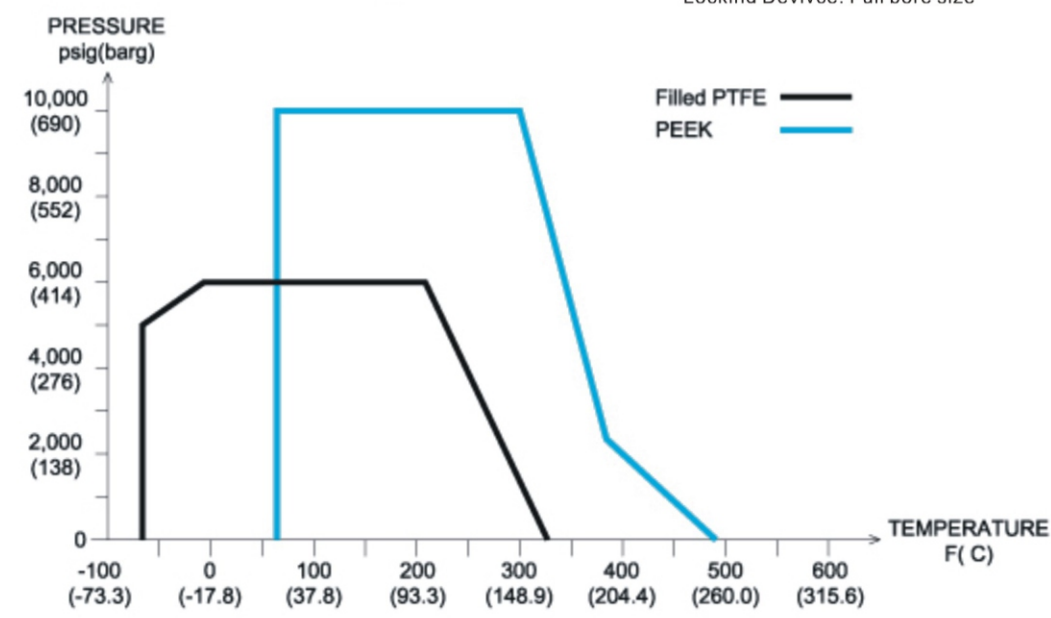
BALL VALVE



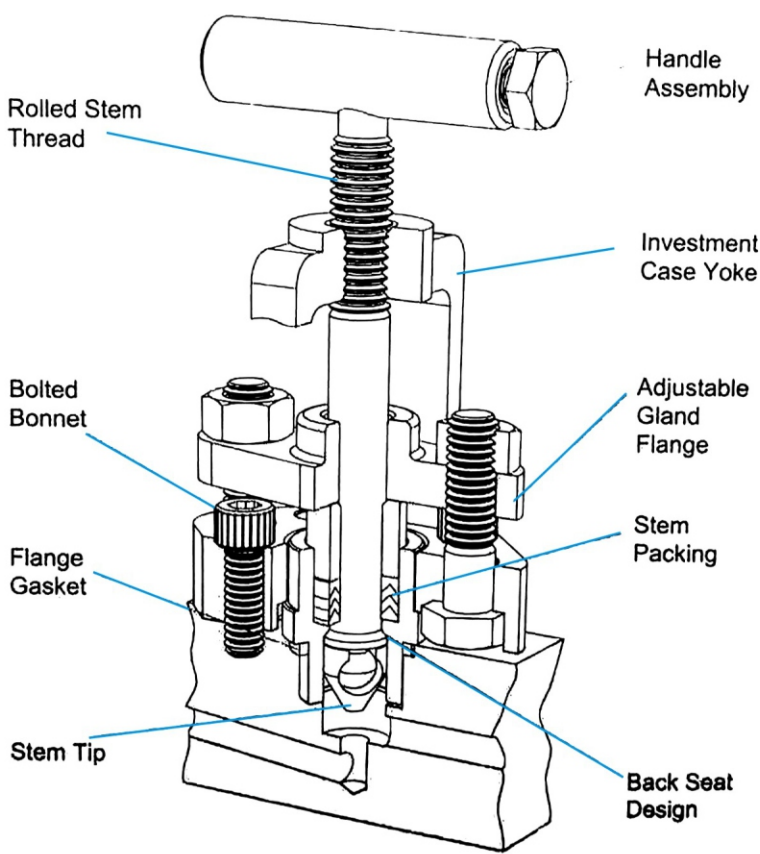
Features

- Stainless steel handle and positive machined stop.
- Full grip PVC handle sleeve.
- Blowout proof one-piece stem spindle.
- Low operating torque.
- Fully encapsulated ball seats minimize seat seal extrusion and allow high working pressures.
- Super finished ball for low operating torque and long life.
- End adapter threads are fully isolated from process by primary and secondary static seals.
- Stem locknut is vibration resistant to avoid working loose.
- Color coded and function identified handles.
- Firesafe to API 607.BS 6755 part2.
- Bore size available 0.4"(10mm).
- Bore size available 0.55"(14mm).
- Ball seats choice of seat materials: PVDF, PTFE(virgin or filled), PCTFE or PEEK.
- Anti-static design as standard.
- Pressure rating up to 10,000psig (690barg).
- Temperature rating-70.6°F to +482°F (-57°C to +250°C)
- Optional:NACE compliance,Handle Locking Device. Full bore size

Pressure and Temperature Ratings



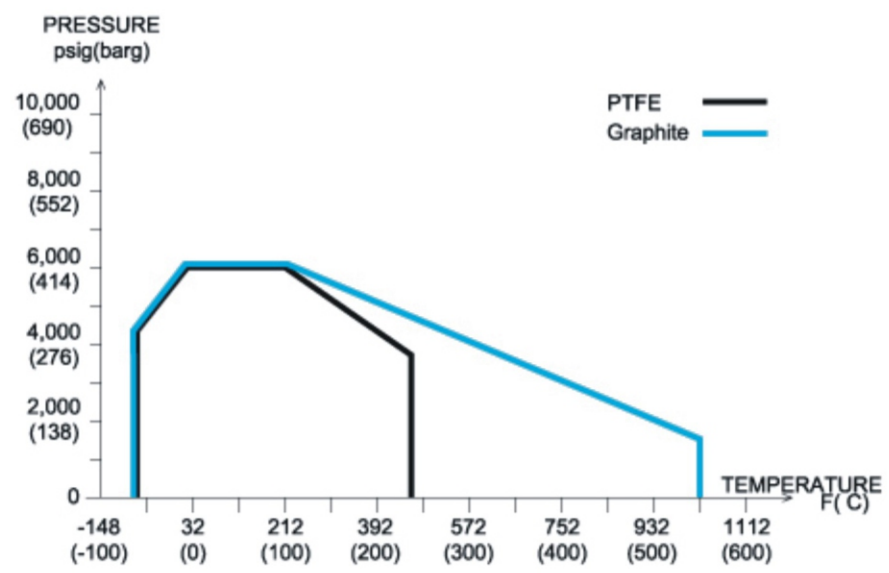
OS&Y NEEDLE TYPE



Features

- Rolled stem threads prevent galling. stem threads are completely isolated from the process.
- Stem packing with Graphite or PTFE rings for bubble-tight seal.
- Bolted bonnet for strength and reliability.
- Stem tip construction : non-rotating self-centering, Anti-galling tip positive bubble-tight and field interchangeable tip.
- Flange gasket seal ensures a bubble-tight between body and bonnet.
- Backseat design provides secondary stem sealing and prevents stem blowout.
- Adjustable gland flange allows easy access to the packing gland and packing adjustment for an effective stem seal.
- Investment cast yoke is precision casted for strength and perfect stem alignment.
- Robust bar handle is standard.
- Color coded and function label for easy identification.
- Firesafe to API 607.BS 6755 part2.
- Orifice size 0.2"(5mm).
- Pressure rating up to 6,000psig (414barg).
- Temperature rating-70.6°F to +1022°F (-57°C to +550°C)

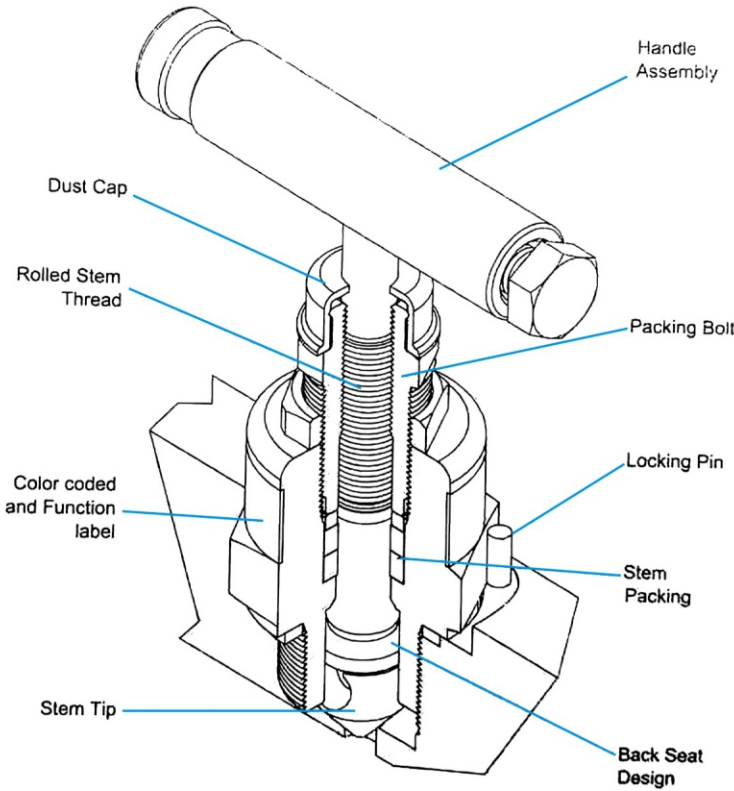
Pressure and Temperature Ratings



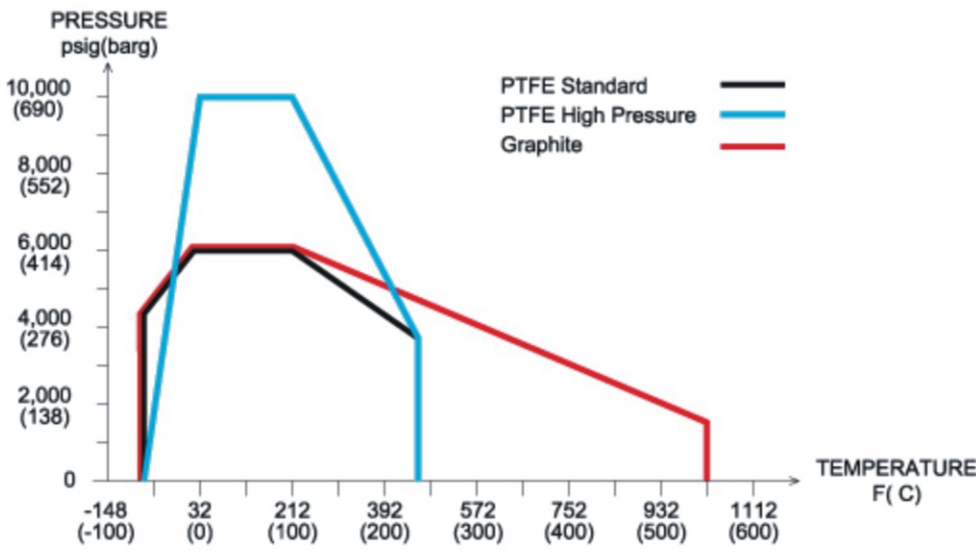
NEEDLE TYPE GLOBE VALVE

Features

- Rolled stem threads prevent galling, stem threads are completely isolated from the process.
- Stem packing with Graphite or PTFE rings for bubble-tight seal.
- Stem tip construction : non-rotating self-centering, Anti-galling tip positive bubble-tight and field interchangeable tip.
- Backseat design provides secondary stem sealing and prevents stem blowout.
- Packing bolt allows easy access to adjust the packing gland.
- Robust bar handle is standard.
- Color coded and function label for easy identification.
- Firesafe to API 607.BS 6755 part2.
- Orifice size 0.2"(5mm).
- Pressure rating up to 6,000psig (414barg).
- Temperature rating-70.6 F to +1022 F (-57 C to + 550 C)
- Anti-Temper bonnet are available with a removable T-bar key to prevent unauthorized operation of vent valves.



Pressure and Temperature Ratings



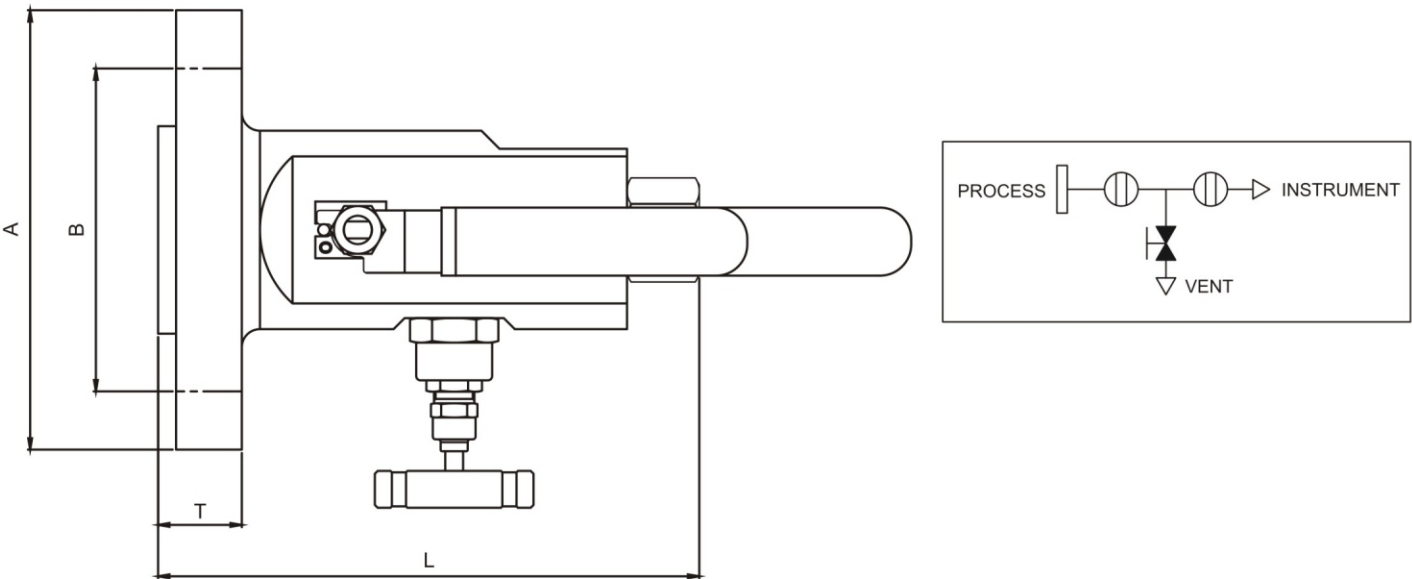
TYPE	DESCRIPTION	MATERIAL				
MODULAR	Body/ End Connector	A182 F51	A182 F316	A350 LF2	A105	UNS NO4400
MONOFLANGE		A182 F51	A182 F316	A350 LF2	A105	UNS NO4400
ROOT VALVE		UNS-S31803	A479 TYPE316	A350 LF2	A105	UNS NO4400
Ball Valve	Ball	UNS-S31803	4479 TYPE316			UNS NO4400
	Stem	UNS-S31803	4479 TYPE316			UNS NO4400
	Retainer	UNS-S31803	4479 TYPE316			UNS NO4400
	Socket	UNS-S31803	4479 TP316		A105	UNS NO4400
	Ball Seat	PVDF, PTFE(virhin or filled), PCTFE or PEEK				
OS&Y Needle Type Globe Valve	Stem Tip	UNS-S31803	A564 TP630			UNS NO4400
	Stem	UNS-S31803	4479 TYPE316			UNS NO4400
	Bonnet	UNS-S31803	4479 TYPE316			UNS NO4400
Needle Type Globe Valve	Yoke		A351 CF8M			
	Stem Tip	UNS-S31803	A584 TP830			UNS NO4400
	Stem	UNS-S31803	4479 TYPE316			UNS NO4400
	Bonnet	UNS-S31803	4479 TYPE316			UNS NO4400

NOTE.
Stainless steel is standand body material but such a Monel, Duplex, Super Duplex, Hasteloy, Inconel and other special material are available upon request.

Block & Bleed valve

Features

- ANSI B16.5 flanged inlet connections 1/2" to 3" sizes Class 150 rated to class 2500 rated.
- 1/2" -1" F.NPT Thread outlet to ANSI/ASME B1.20.1 (depending on bore size).
- 1/2" F.NPT Thread vent connection to ANSI/ASME B1.20.1
- Standard materials of Stainless steel
ASTM A182 F316/F316L, Carbon steel ASTM A350 LF2/A105, Duplex ASTM A182 F51.
- Optional materials include Super Duplex, Monel, Hastelloy, Inconel.
- Raised face and ring type joint flange styles.
- One-piece forged construction flange as standard.
- Fire safe designed (and tested) to meet BS 6755 Part 2/API 607.
- DBB & SBB Products meet the relevant code requirement of ASME VIII, ASMEB 16.34, B16.5, B31.3 and API 6D.
- 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.



Dimensions

(10mm BORE)

SIZE	RATING (1b)	DIMENSION (mm)			
		L (RF)	A	B	T
1/2 (DN15)	150	160	89	60.3	14
	300	160	95	66.7	15
	600	165	95	66.7	21.5
	900/1500	185	120	82.6	29.5
	2500	185	135	88.9	37.5
3/4 (DN20)	150	160	100	69.9	14
	300	165	115	82.6	16.5
	600	170	115	82.6	23
	900/1500	185	130	88.9	32.5
	2500	185	140	95.2	39
1 (DN25)	150	160	110	79.4	14
	300	165	125	88.9	18
	600	175	125	88.9	24.5
	900/1500	190	150	101.6	36
	2500	190	160	108	42
1-1/2 (DN40)	150	165	125	98.4	15
	300	180	155	114.3	21.5
	600	185	155	114.3	29.5
	900/1500	200	180	123.8	39
	2500	210	205	146	51.5
2 (DN50)	150	165	150	120.7	16.5
	300	170	165	127	23
	600	180	165	127	32.5
	900/1500	200	215	165.1	45.5
	2500	210	235	171.4	58

*Dimensions are for reference only and are subject to change.

Dimensions

(14mm BORE)

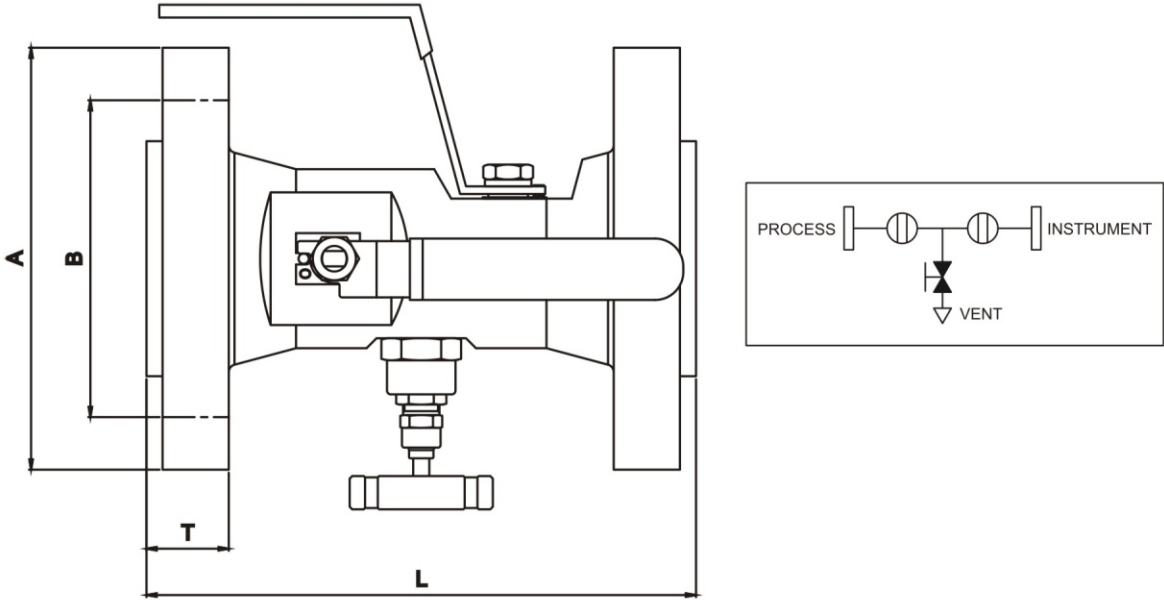
SIZE	RATING (1b)	DIMENSION (mm)			
		L (RF)	A	B	T
3/4 (DN20)	150	170	100	69.9	14
	300	175	115	82.6	16.5
	600	180	115	82.6	23
	900/1500	200	130	88.9	32.5
	2500	200	140	95.2	39
1 (DN25)	150	170	110	79.4	14
	300	175	125	88.9	18
	600	185	125	88.9	24.5
	900/1500	200	150	101.6	36
	2500	200	160	108	42
1-1/2 (DN40)	150	175	125	98.4	15
	300	190	155	114.3	21.5
	600	195	155	114.3	29.5
	900/1500	210	180	123.8	39
	2500	210	205	146	51.5
2 (DN50)	150	175	150	120.7	16.5
	300	180	165	127	23
	600	190	165	127	32.5
	900/1500	210	215	165.1	45.5
	2500	220	235	171.4	58

*Dimensions are for reference only and are subject to change.

(20mm BORE)

SIZE	RATING (1b)	DIMENSION (mm)			
		L (RF)	A	B	T
1 (DN25)	150	180	110	79.4	14
	300	185	125	88.9	18
	600	195	125	88.9	24.5
	900/1500	215	150	101.6	36
	2500	225	160	108	42
1-1/2 (DN40)	150	185	125	98.4	15
	300	200	155	114.3	21.5
	600	205	155	114.3	29.5
	900/1500	220	180	123.8	39
	2500	230	205	146	51.5
2 (DN50)	150	185	150	120.7	16.5
	300	190	165	127	23
	600	200	165	127	32.5
	900/1500	220	215	165.1	45.5
	2500	240	235	171.4	58

*Dimensions are for reference only and are subject to change.



Dimensions

(10mm BORE)

SIZE	RATING (1b)	DIMENSION (mm)			
		L (RF)	A	B	T
1/2 (DN15)	150	160	89	60.3	14
	300	160	95	66.7	15
	600	170	95	66.7	21.5
	900/1500	210	120	82.6	29.5
	2500	225	135	88.9	37.5
3/4 (DN20)	150	160	100	69.9	14
	300	170	115	82.6	16.5
	600	180	115	82.6	23
	900/1500	210	130	88.9	32.5
	2500	225	140	95.2	39
1 (DN25)	150	160	110	79.4	14
	300	170	125	88.9	18
	600	190	125	88.9	24.5
	900/1500	220	150	101.6	36
	2500	230	160	108	42
1-1/2 (DN40)	150	170	125	98.4	15
	300	200	155	114.3	21.5
	600	210	155	114.3	29.5
	900/1500	235	180	123.8	39
	2500	250	205	146	51.5
2 (DN50)	150	170	150	120.7	16.5
	300	180	165	127	23
	600	200	165	127	32.5
	900/1500	250	215	165.1	45.5
	2500	265	235	171.4	58

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Dimensions

(14mm BORE)

SIZE	RATING (1b)	DIMENSION (mm)			
		L (RF)	A	B	T
3/4 (DN20)	150	170	100	69.9	14
	300	180	115	82.6	16.5
	600	190	115	82.6	23
	900/1500	230	130	88.9	32.5
	2500	230	140	95.2	39
1 (DN25)	150	170	110	79.4	14
	300	180	125	88.9	18
	600	200	125	88.9	24.5
	900/1500	230	150	101.6	36
	2500	230	160	108	42
1-1/2 (DN40)	150	180	125	98.4	15
	300	210	155	114.3	21.5
	600	220	155	114.3	29.5
	900/1500	250	180	123.8	39
	2500	250	205	146	51.5
2 (DN50)	150	180	150	120.7	16.5
	300	190	165	127	23
	600	210	165	127	32.5
	900/1500	250	215	165.1	45.5
	2500	270	235	171.4	58

*Dimensions are for reference only and are subject to change.

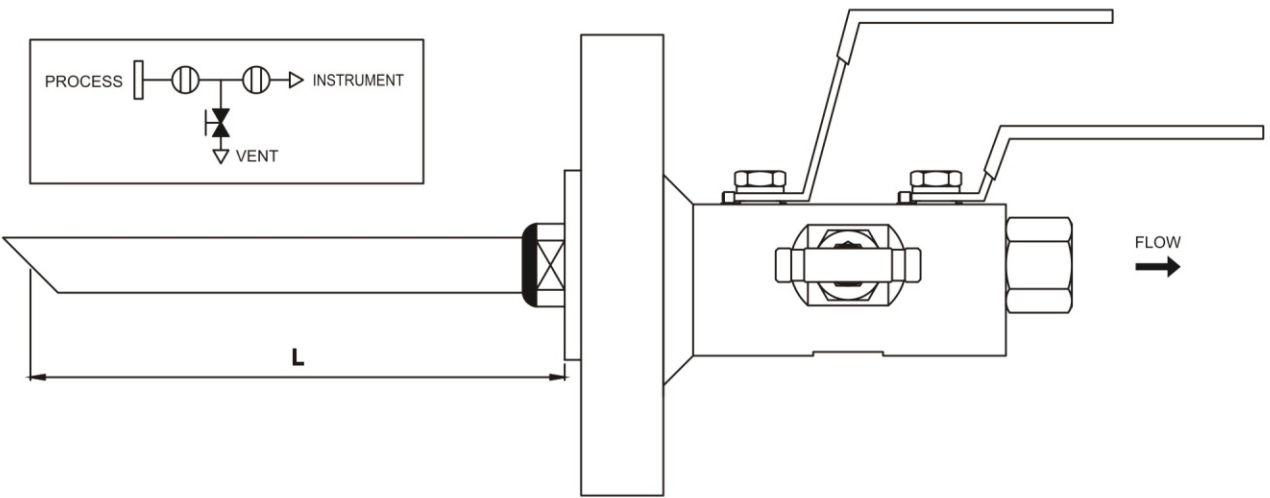
(20mm BORE)

SIZE	RATING (1b)	DIMENSION (mm)			
		L (RF)	A	B	T
1 (DN25)	150	180	110	79.4	14
	300	190	125	88.9	18
	600	210	125	88.9	24.5
	900/1500	250	150	101.6	36
	2500	270	160	108	42
1-1/2 (DN40)	150	190	125	98.4	15
	300	220	155	114.3	21.5
	600	230	155	114.3	29.5
	900/1500	260	180	123.8	39
	2500	280	205	146	51.5
2 (DN50)	150	190	150	120.7	16.5
	300	200	165	127	23
	600	220	165	127	32.5
	900/1500	260	215	165.1	45.5
	2500	300	235	171.4	58

*Dimensions are for reference only and are subject to change.

SAMPLING VALVE

This manifold range is designed to replace conventional multiple-valve installations where sampling of the process stream is required. This design has been developed to remove a sample directly from the process stream at full system pressure.

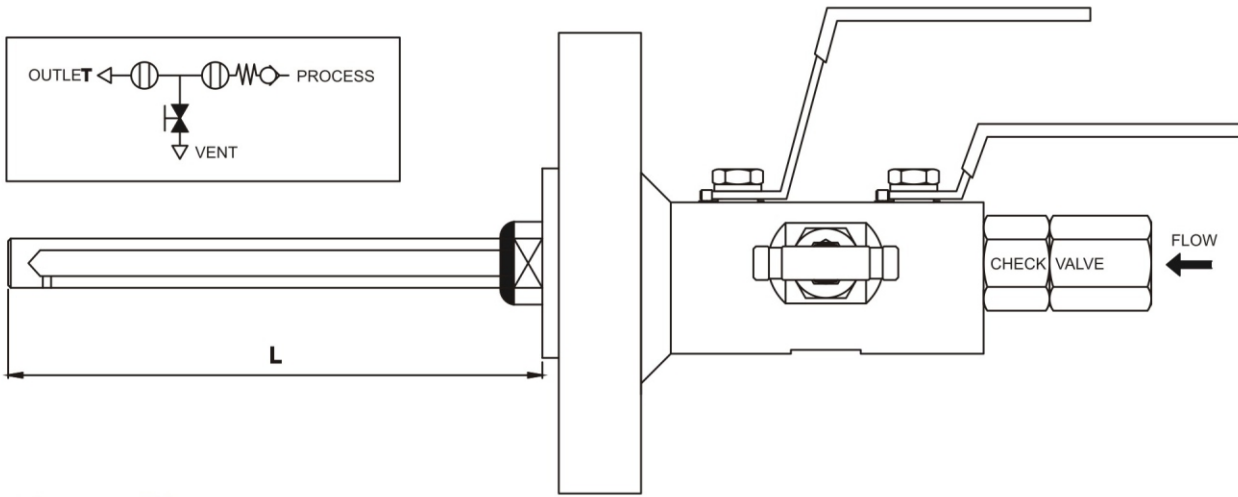


Sampling probe

The probe length must be specified from the raised face to the end of the probe in mm , to the nearest mm. Probes are supplied to suit the insertion length required by the pipeline and thus must be specified by the customer

CHEMICAL INJECTION VALVE

This manifold range is designed to replace conventional multiple-valve installations where injection into the process stream is required. This design has been developed to inject directly into the process stream at full system pressure.



Injection quill

The probe length must be specified from the raised face to the end of the probe in mm . Probes length shall be decided in consideration of injection insert length in the pipeline and customer's request.

Non return check valve

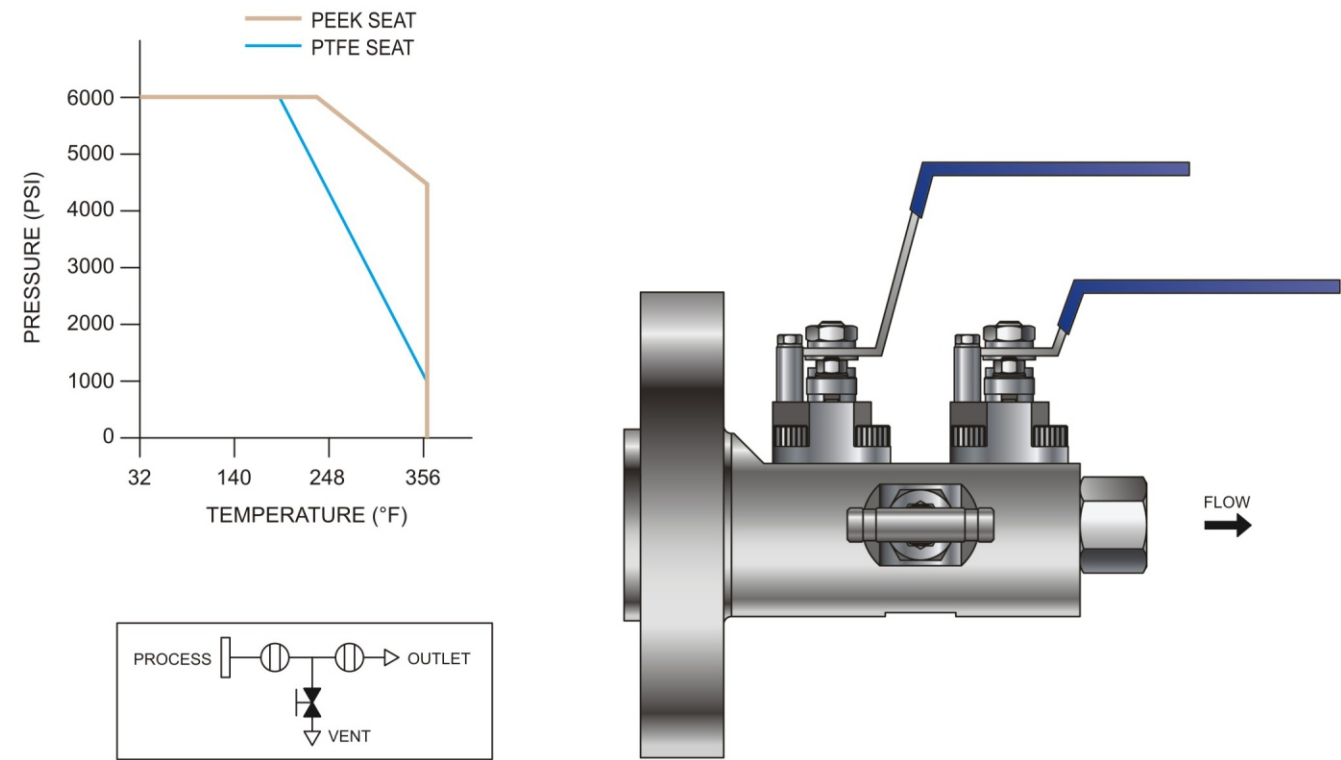
This poppet type spring return valve has a viton soft seal

FUGITIVE EMISSION

ISO 15848 parts 1&2 (defining a classification system and qualification procedures, and production acceptance test of industrial valves, respectively) specify new ultra low standards for emissions. This standard is becoming the requirement for oil and gas and petrochemical organizations worldwide. The standard was originally created for process valves and control valves but is now being applied to Instrument valves which include primary isolation valves, especially on environmentally sensitive projects. Meeting these low levels is a challenge, which BMT Instrument has solved with the new ball and needle valve designs used in these DBB valves and mono flanges. These designs meet the highest class 'A' level over the temperature range -29°C to +180°C, alongside the standard instrumentation manifold pressure ranges. Production testing and certification is available upon request. Please specify sample quantity required for production testing with your order.

Valve Specification

- Tightness class A >1 x 10⁻⁶ mg.s-1.m-1.
- Maximum cold working pressure rating 6,000 psig.
- Temperature rating -50°C to 180°C (-58°F to 356°F)
- ISO15848-1 prototype tested using global helium vacuum method.



The ISO 15848 standard effectively sets a requirement for zero emissions for processes involving volatile air pollutants and hazardous fluids. This design has been developed to minimise fugitive emissions.

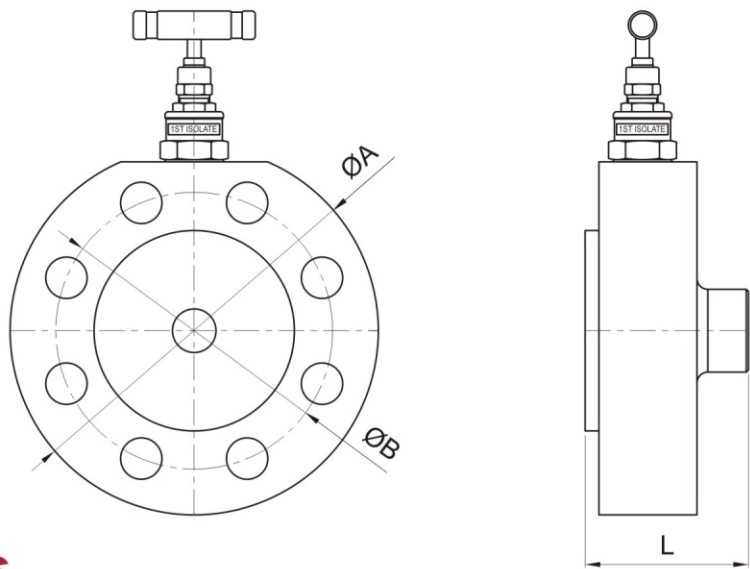
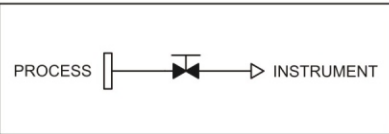
Monoflange valve

Features

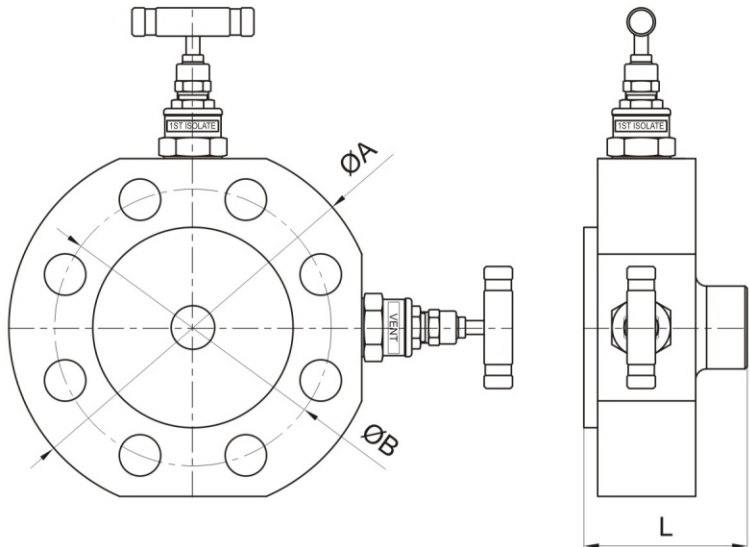
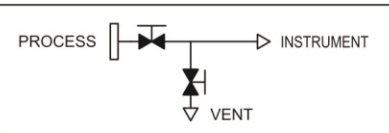
- ANSI B16.5 flanged inlet connections 1/2" to 2" sizes Class 150 rated to class 2500 rated.
- 1/2"-14 NPT(female) standard outlet.
- 1/4"-18 NPT(female) standard vent.
- Standard materials of Stainless steel ASTM A182 F316/F316L, Carbon steel ASTM A350 LF2/A105, Duplex ASTM A182 F51.
- Optional materials include Super Duplex, Monel, Hastelloy, Inconel.
- Combined needle and OS & Y valves available.
- Raised face and ring type joint flange styles.
- One-piece forged construction flange as standard.
- Fire safe designed to meet BS 6755 Part 2 / API 607. (As option)
- 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 valve seats 17-4 PH tips standard.
- Colour coded functional valves.
- Locking and anti tamper devices for all valve types available. (as option)
- Permanent marked body with full order and specification details.



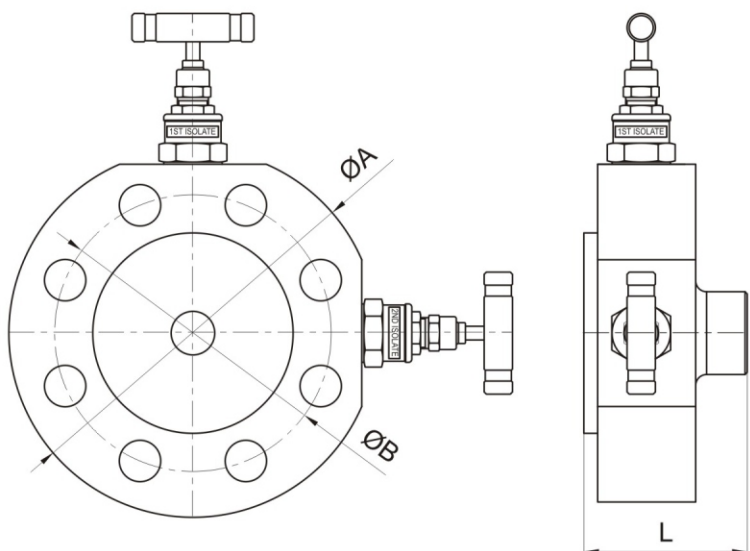
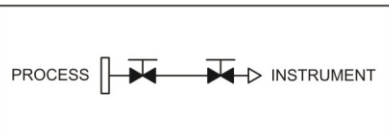
HZ1V1 Series



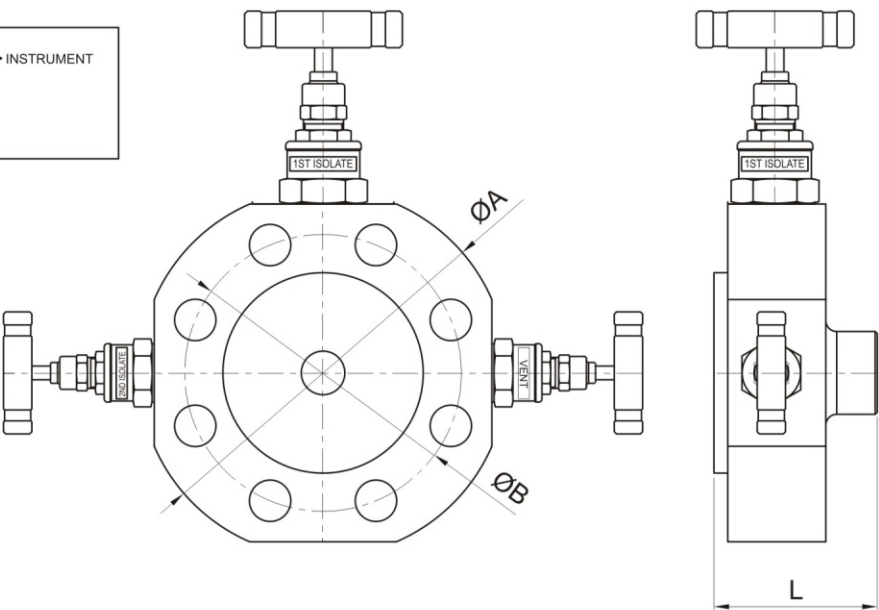
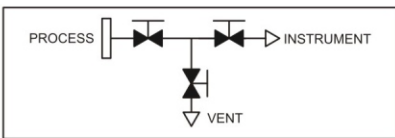
HZ1V2 Series



HZ1V3 Series



HZ1V4 SERIES

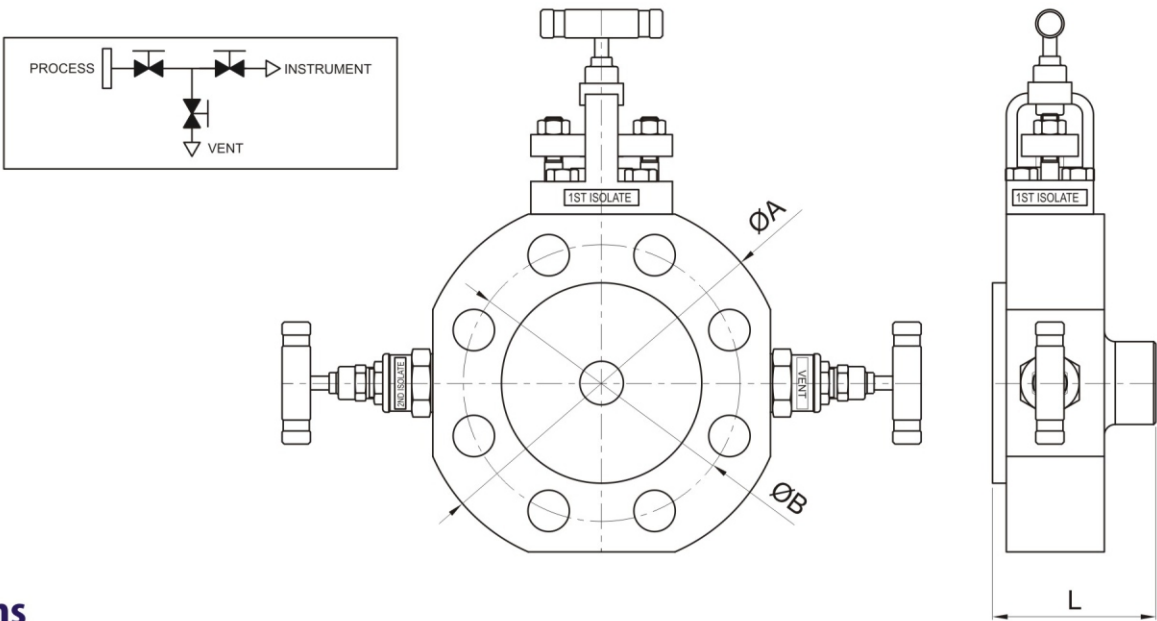


Dimensions

SIZE	RATING (1b)	DIMENSION (mm)			
		L (RF)	A	B	T
1/2 (DN15)	150	42	89	60.3	14
	300	42	95	66.7	15
	600	48	95	66.7	21.5
	900/1500	48	120	82.6	29.5
	2500	50	135	88.9	37.5
3/4 (DN20)	150	42	100	69.9	14
	300	42	115	82.6	16.5
	600	48	115	82.6	23
	900/1500	50	130	88.9	32.5
	2500	50	140	95.2	39
1 (DN25)	150	42	110	79.4	14
	300	42	125	88.9	18
	600	48	125	88.9	24.5
	900/1500	55	150	101.6	36
	2500	55	160	108	42
1-1/2 (DN40)	150	45	125	98.4	15
	300	48	155	114.3	21.5
	600	55	155	114.3	29.5
	900/1500	55	180	123.8	39
	2500	60	205	146	51.5
2 (DN50)	150	48	150	120.7	16.5
	300	55	165	127	23
	600	60	165	127	32.5
	900/1500	60	215	165.1	45.5
	2500	65	235	171.4	58

*Dimensions are for reference only and are subject to change.

HZ1V5 SERIES



Dimensions

SIZE	RATING (1b)	DIMENSION (mm)			
		L (RF)	A	B	T
1/2 (DN15)	150	48	89	60.3	14
	300	48	95	66.7	15
	600	55	95	66.7	21.5
	900/1500	55	120	82.6	29.5
	2500	60	135	88.9	37.5
3/4 (DN20)	150	48	100	69.9	14
	300	48	115	82.6	16.5
	600	55	115	82.6	23
	900/1500	55	130	88.9	32.5
	2500	60	140	95.2	39
1 (DN25)	150	52	110	79.4	14
	300	52	125	88.9	18
	600	55	125	88.9	24.5
	900/1500	55	150	101.6	36
	2500	60	160	108	42
1-1/2 (DN40)	150	52	125	98.4	15
	300	52	155	114.3	21.5
	600	60	155	114.3	29.5
	900/1500	60	180	123.8	39
	2500	65	205	146	51.5
2 (DN50)	150	52	150	120.7	16.5
	300	60	165	127	23
	600	65	165	127	32.5
	900/1500	65	215	165.1	45.5
	2500	70	235	171.4	58

*Dimensions are for reference only and are subject to change.

Root Valves are integrally forged, one-piece double block and bleed assemblies for primary isolation of pressure take-offs, where the valve is directly mounted to the vessel or process pipe. Instruments may be directly mounted to the valve outlet or alternatively remotely with gauge lines/impulse pipe work.

Applications

- Isolation
- Block and Bleed
- Double Block and Bleed
- Pressure Measurement
- Flow Measurement

Standard Features

Weld inlet connections 1/2" to 2" sizes
Class150 rated to Class2500 rated.
1/2" NPT threaded female outlet to ANSI/ASME B1.20.1.
1/2" NPT threaded female vent connection to ANSI/ASME B1.20.1.
Material thickness to ANSI B 16.34.
Firesafe to API 607, Bs6755 Part2

Standard Pressure Testing

to Bs6755 Part1.

Standard Material Traceability

to EN 10204 3.1.B(Body only).

Ball Isolation Valve Seat Material

A choice of PVDF, PTFE(virgin or filled), PCTFE and PEEK are available.

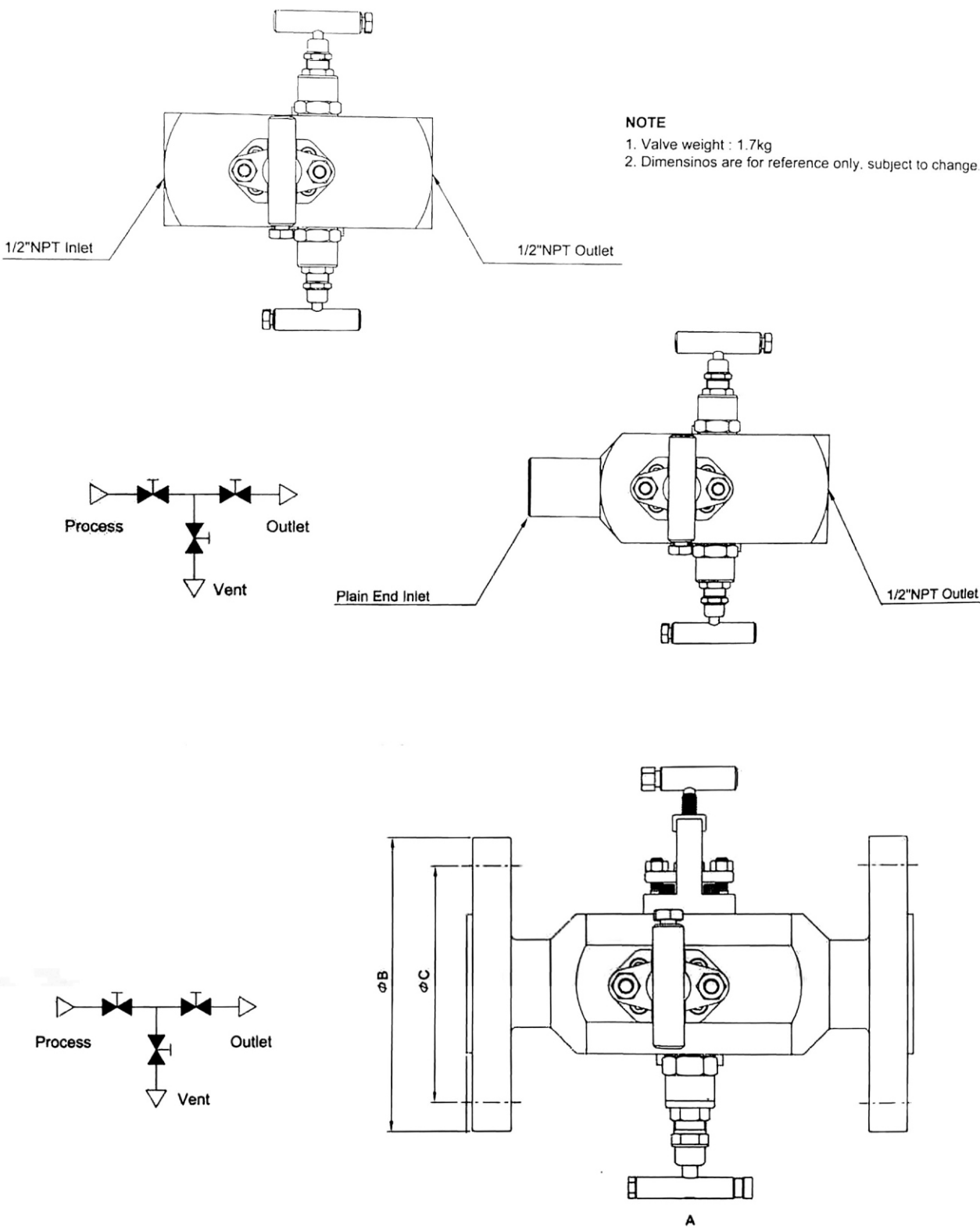
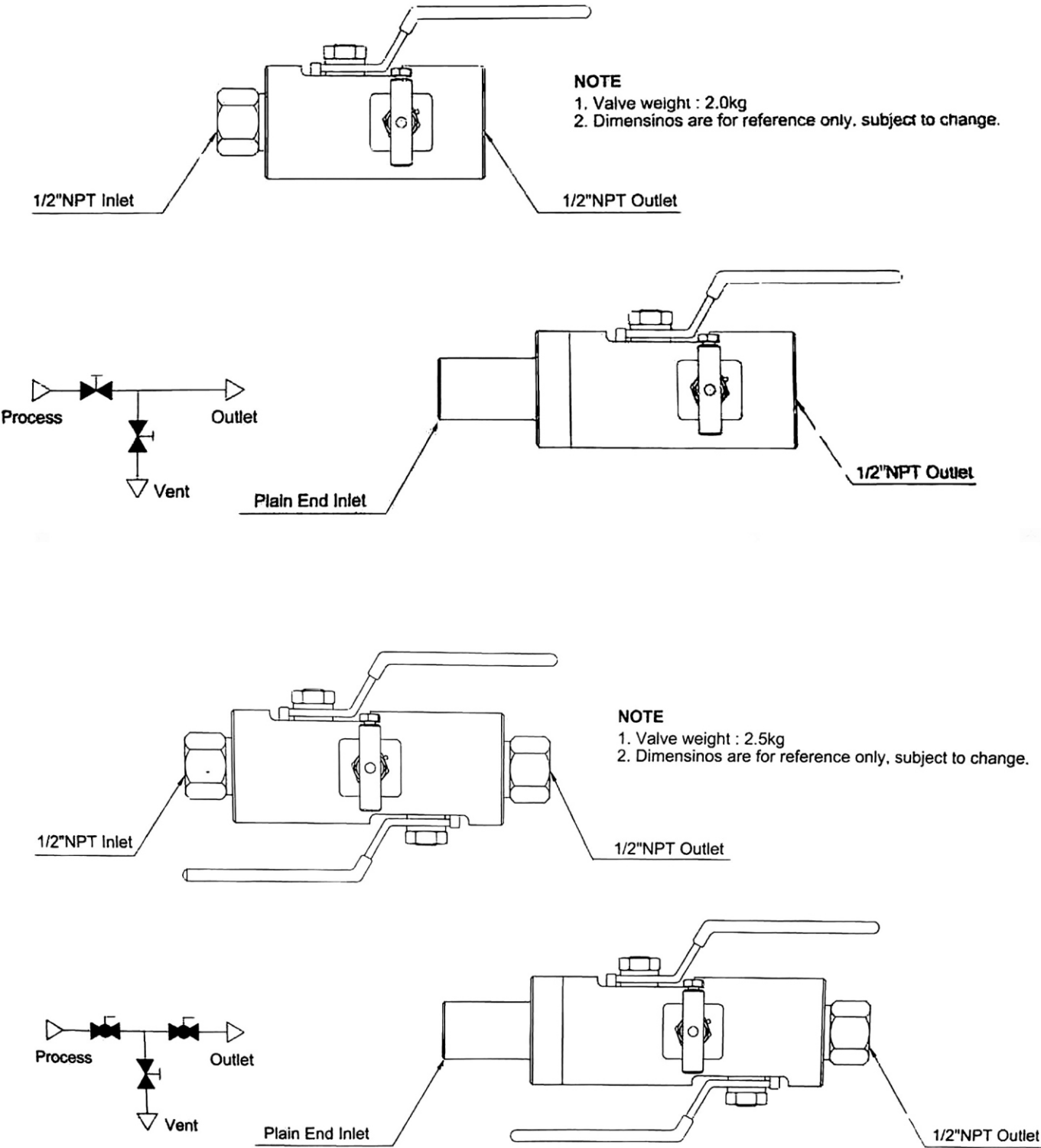
OS&Y Needle Type and Needle Type Globe Valve Packing Materials

Standard valves are offered with Graphite.PTFE is also available as an option.

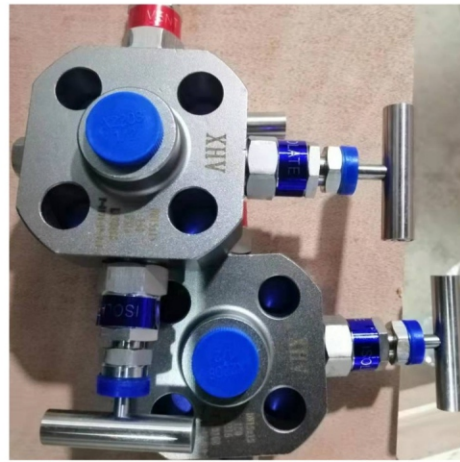
Options

Options requirement are the same as the Modular and monoflange range.





车间一览 Workshops



现场应用 Field application