

INTEGRAL BLOCK & BLEED VALVE

MONO FLANGE VALVE



- Sizes: 1/2" to 3"
- Pressure Ratings: 150# To 2500#
- Carbon steel LF2, F51, Duplex, Super Duplex, Monel 400, Hastelloy C276, Inconel 625 Titanium, Incolloy 825,

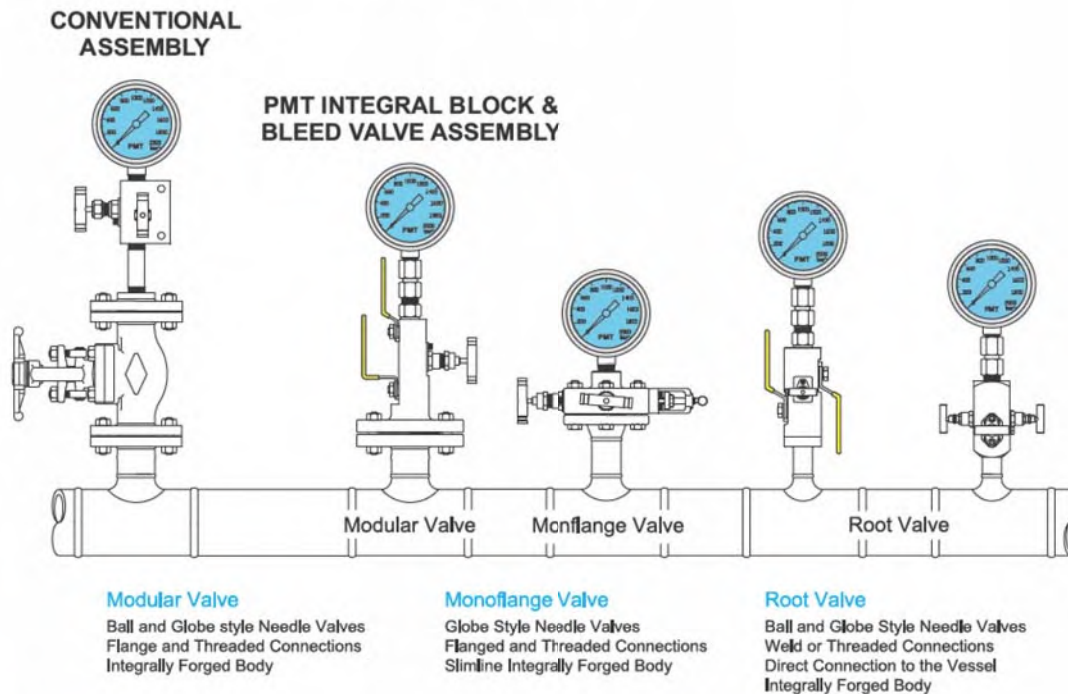
APPLICATION & INSTALLATION

Conventional Installation

- A welded flange, connected to a primary ANSI class isolating valve. The primary valve will be connected to a secondary instrument valve. A pressure gauge or transmitter will then be installed downstream of the instrument valve.

Block & Bleed Valve

- A one-piece integral forging incorporating up 3 ball valve or mixture of ball and needle design.
- Improved safety : leak paths reduced by up to 60%
- Reduced costs : installation and component costs reduced by up to 70%
- Reduced weight : by up to 80%
- Reduced susceptibility to problems caused by vibration.



Features

- 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.
- Raised face and ring type joint flange styles.
- Optional materials include Super Duplex, Monel, Hastelloy, Inconel.

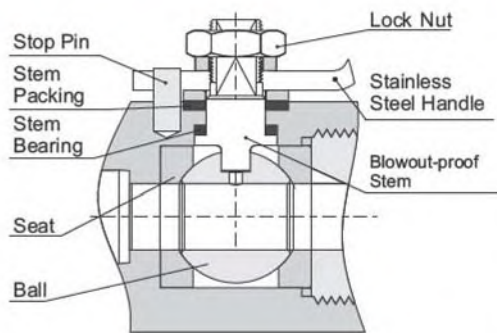
Advantages

- More compact design
- Reduced weight
- Reduced height
- Reduced leakage points
- Reduced effect of system vibration
- Supporting brackets are not required

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

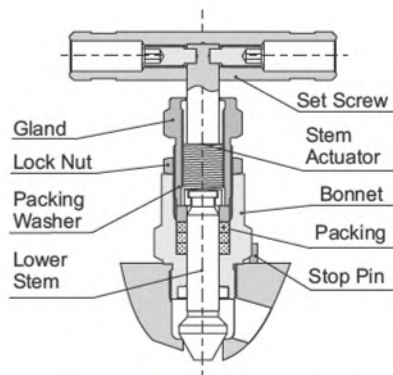
Ball Valve Model



Features

- One piece or two piece body design -minimize leakage paths.
- Ball seat choice of seat materials : PTFE , PEEK
- Fully encapsulated ball seat.
- Superior finished ball for low operating torque.
- Floating ball design providing seat wear compensation.
- Anti static design as standard.
- Blowout proof stem design.
- Optional : handle locking available
- 316 Stainless steel as standard materials.
- Pressure rating up to 10,000 psig (690bar).
- Temperature rating -71°F to 482°F (-57°C to 250°C).

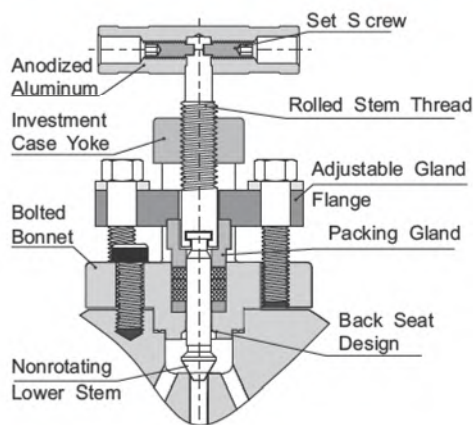
Needle Type Valve Model



Features

- Rolled stem operating threads for low torque operation.
- Gland packing in PTFE or Graphite for bubble tight sealing.
- Close contact dust cap for operating thread protection.
- Back seat design provides secondary stem sealing.
- Stem threads are completely isolated from the process.
- Packing bolt with easy access.
- Lock nut for vibration protection.
- 316 Stainless steel as standard materials.
- Pressure rating up to 10,000 psig (690bar).
- Temperature rating -65°F to 1000°F (-54°C to 538°C).

OS&Y Needle Type Valve Model



Features

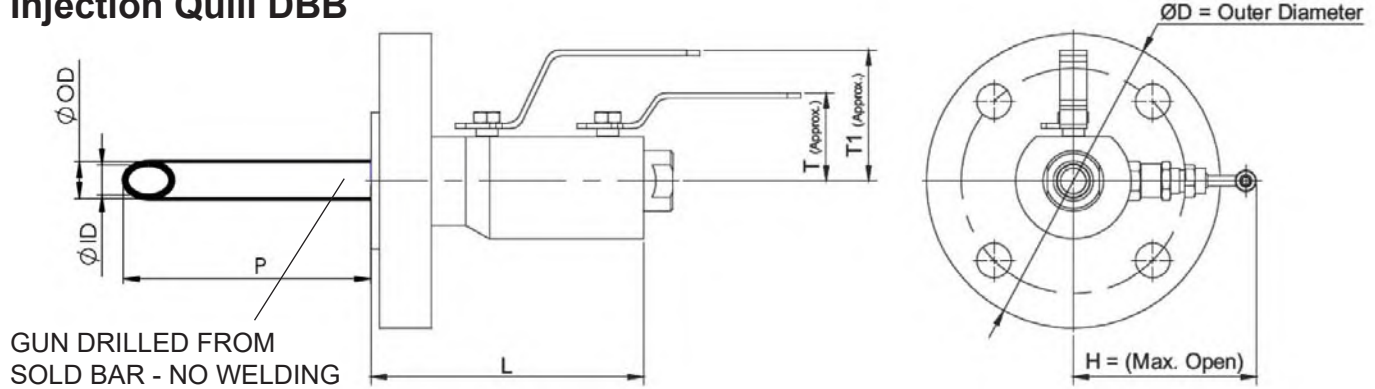
- Externally adjustable gland.
- PTFE or Graphite packing for bubble tight sealing.
- Bonnet seal ensure a bubble tight between body and bonnet.
- Stem threads are completely isolated from the process.
- Yoke of investment casting is precision casted for strength.
- Bolted bonnet for strength.
- 316 Stainless steel as standard materials.
- Pressure rating up to 6,000 psig (413bar).
- Temperature rating -65°F to 1000°F (-54°C to 538°C).

Custom Configurations

TVI process interface valves and process monoflanges can be configured to suit a variety of special applications. In addition to double block and bleed assemblies, single block and block and bleed combinations are available. Block and bleed globe valve module options are also available for all configurations.

TVI MONO FLANGE - FLANGED DBB

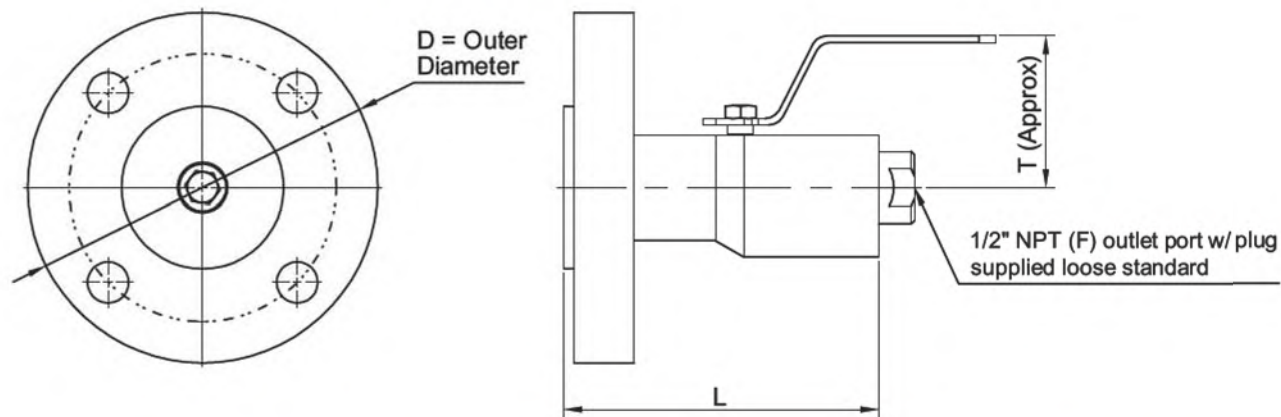
Injection Quill DBB



ANSI/ Flange Size	B16.34 Press Class	Raised Face Design - 10mm Ball					RTJ Design - 10mm Ball					PROBE DIMS		
		D	H	T	T1	L	D	H	T	T1	L	P	OD	ID
1/2"	150	3.5	4.0	2.8	4.3	7.0	NA	NA	NA	NA	7.3	USER SPECIFIED	USER SPECIFIED	USER SPECIFIED
1/2"	300	3.75	4.0	2.8	4.3	7.1	3.75	4.0	2.8	4.3	7.2			
1/2"	600	3.75	4.0	2.8	4.3	7.3	3.75	4.0	2.8	4.3	7.3			
1/2"	900/1500	4.75	4.0	2.8	4.3	7.7	4.75	4.0	2.8	4.3	7.3			
1/2"	2500	5.25	4.0	2.8	4.3	8.0	5.25	4.0	2.8	4.3	8.0			
3/4"	150	3.88	4.0	2.8	4.3	7.0	NA	NA	NA	NA	NA			
3/4"	300	4.62	4.0	2.8	4.3	7.1	4.62	4.0	2.8	4.3	7.3			
3/4"	600	4.62	4.0	2.8	4.3	7.4	4.62	4.0	2.8	4.3	7.4			
3/4"	900/1500	5.12	4.0	2.8	4.3	7.8	5.12	4.0	2.8	4.3	7.8			
3/4"	2500	5.50	4.0	2.8	4.3	8.0	5.50	4.0	2.8	4.3	8.0			
1.0"	150	4.25	4.0	2.8	4.3	7.1	4.25	4.0	2.8	4.3	7.3			
1.0"	300	4.88	4.0	2.8	4.3	7.2	4.88	4.0	2.8	4.3	7.4			
1.0"	600	4.88	4.0	2.8	4.3	7.5	4.88	4.0	2.8	4.3	7.5			
1.0"	900/1500	5.88	4.0	2.8	4.3	7.9	5.88	4.0	2.8	4.3	7.9			
1.0"	2500	6.25	4.0	2.8	4.3	8.2	6.25	4.0	2.8	4.3	8.2			
1.5"	150	5.00	4.0	2.8	4.3	7.2	5.00	4.0	2.8	4.3	7.4			
1.5"	300	6.12	4.0	2.8	4.3	7.3	6.12	4.0	2.8	4.3	7.5			
1.5"	600	6.12	4.0	2.8	4.3	7.7	6.12	4.0	2.8	4.3	7.7			
1.5"	900/1500	7.00	4.0	2.8	4.3	8.0	7.00	4.0	2.8	4.3	8.0			
1.5"	2500	8.00	4.0	2.8	4.3	8.5	8.00	4.0	2.8	4.3	8.6			
2.0"	150	6.00	4.0	2.8	4.3	7.3	6.00	4.0	2.8	4.3	7.5			
2.0"	300	6.50	4.0	2.8	4.3	7.4	6.50	4.0	2.8	4.3	7.6			
2.0"	600	6.50	4.0	2.8	4.3	7.8	6.50	4.0	2.8	4.3	7.8			
2.0"	900/1500	8.50	4.0	2.8	4.3	8.3	8.50	4.0	2.8	4.3	8.3			
2.0"	2500	9.25	4.0	2.8	4.3	8.8	9.25	4.0	2.8	4.3	8.8			

TVI MONO FLANGE - FLANGED DBB

10mm Ball Valve - Single Flange



10mm Std Single Block

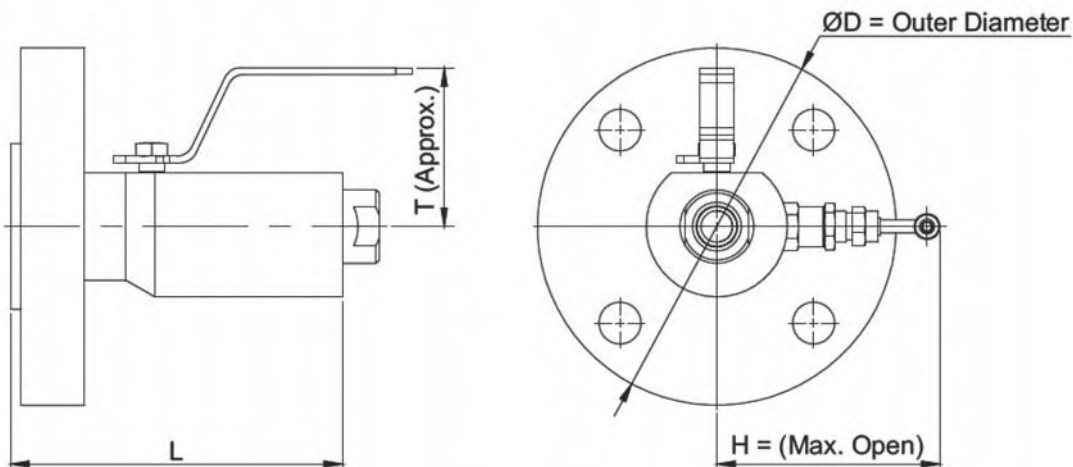
Unit : Inch

Flange Size	B16.34 Pressure Class	RF Single Flange (10mm)			RTJ Single Flange (10mm)		
		D	T	L	D	T	L
1/2"	150	3.50	2.5	4.1	N/A	N/A	N/A
1/2"	300	3.75	2.5	4.1	3.75	2.5	4.1
1/2"	600	3.75	2.5	4.3	3.75	2.5	4.3
1/2"	900/1500	4.75	2.5	4.7	4.75	2.5	4.7
1/2"	2500	5.25	2.5	5.1	5.25	2.5	5.1
3/4"	150	3.88	2.5	4.1	N/A	N/A	N/A
3/4"	300	4.62	2.5	4.1	4.62	2.5	4.1
3/4"	600	4.62	2.5	4.5	4.62	2.5	4.5
3/4"	900/1500	5.12	2.5	4.9	5.12	2.5	4.9
3/4"	2500	5.50	2.5	5.1	5.50	2.5	5.1
1"	150	4.25	2.5	4.1	4.25	2.5	4.1
1"	300	4.88	2.5	4.1	4.88	2.5	4.1
1"	600	4.88	2.5	4.5	4.88	2.5	4.5
1"	900/1500	5.88	2.5	4.9	5.88	2.5	4.9
1"	2500	6.25	2.5	5.1	6.25	2.5	5.1
1-1/2"	150	5.00	2.5	4.3	5.00	2.5	4.3
1-1/2"	300	6.12	2.5	4.3	6.12	2.5	4.3
1-1/2"	600	6.12	2.5	4.7	6.12	2.5	4.7
1-1/2"	900/1500	7.00	2.5	5.1	7.00	2.5	5.1
1-1/2"	2500	8.00	2.5	5.9	8.00	2.5	5.9
2"	150	6.00	2.5	4.3	6.00	2.5	4.3
2"	300	6.50	2.5	4.5	6.50	2.5	4.5
2"	600	6.50	2.5	4.9	6.50	2.5	4.9
2"	900/1500	8.50	2.5	5.3	8.50	2.5	5.3
2"	2500	9.25	2.5	5.9	9.25	2.5	5.9

TVI MONO FLANGE - FLANGED DBB

BLOCK & BLEED VALVES

10mm Ball Valve and Needle Bleed - Single Flange



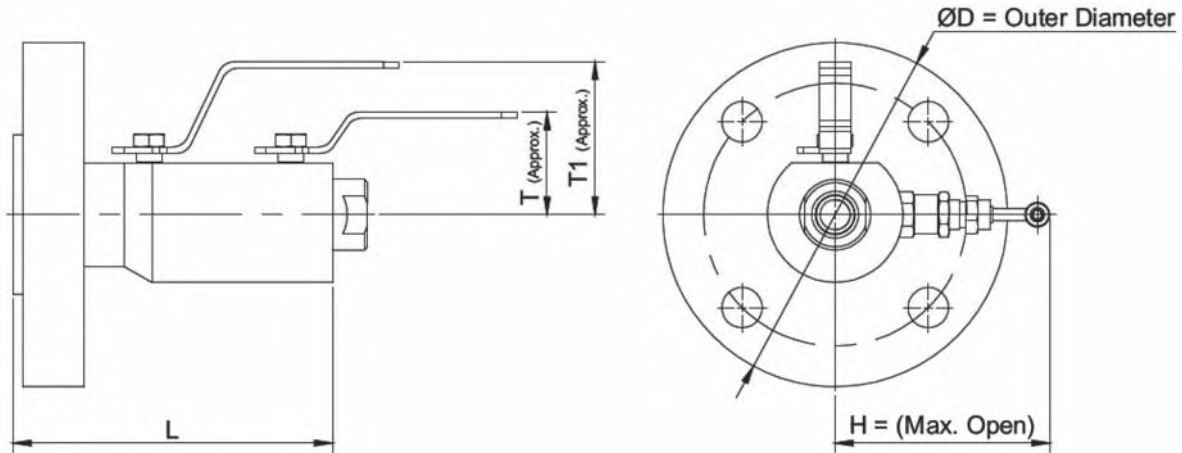
10mm Std Block & Bleed

Unit : Inch

Flange Size	B16.34 Pressure Class	RF Single Flange (10mm)				RTJ Single Flange (10mm)			
		D	H*	T	L	D	H*	T	L
1/2"	150	3.50	4.0	2.8	7.0	N/A	N/A	N/A	N/A
1/2"	300	3.75	4.0	2.8	7.1	3.75	4.0	2.8	7.2
1/2"	600	3.75	4.0	2.8	7.3	3.75	4.0	2.8	7.3
1/2"	900/1500	4.75	4.0	2.8	7.7	4.75	4.0	2.8	7.7
1/2"	2500	5.25	4.0	2.8	8.0	5.25	4.0	2.8	8.0
3/4"	150	3.88	4.0	2.8	7.0	N/A	N/A	N/A	N/A
3/4"	300	4.62	4.0	2.8	7.1	4.62	4.0	2.8	7.3
3/4"	600	4.62	4.0	2.8	7.4	4.62	4.0	2.8	7.4
3/4"	900/1500	5.12	4.0	2.8	7.8	5.12	4.0	2.8	7.8
3/4"	2500	5.50	4.0	2.8	8.0	5.50	4.0	2.8	8.0
1"	150	4.25	4.0	2.8	7.1	4.25	4.0	2.8	7.3
1"	300	4.88	4.0	2.8	7.2	4.88	4.0	2.8	7.4
1"	600	4.88	4.0	2.8	7.5	4.88	4.0	2.8	7.5
1"	900/1500	5.88	4.0	2.8	7.9	5.88	4.0	2.8	7.9
1"	2500	6.25	4.0	2.8	8.2	6.25	4.0	2.8	8.2
1-1/2"	150	5.00	4.0	2.8	7.2	5.00	4.0	2.8	7.4
1-1/2"	300	6.12	4.0	2.8	7.3	6.12	4.0	2.8	7.5
1-1/2"	600	6.12	4.0	2.8	7.7	6.12	4.0	2.8	7.7
1-1/2"	900/1500	7.00	4.0	2.8	8.0	7.00	4.0	2.8	8.0
1-1/2"	2500	8.00	4.0	2.8	8.5	8.00	4.0	2.8	8.6
2"	150	6.00	4.0	2.8	7.3	6.00	4.0	2.8	7.5
2"	300	6.50	4.0	2.8	7.4	6.50	4.0	2.8	7.6
2"	600	6.50	4.0	2.8	7.8	6.50	4.0	2.8	7.8
2"	900/1500	8.50	4.0	2.8	8.3	8.50	4.0	2.8	8.3
2"	2500	9.25	4.0	2.8	8.8	9.25	4.0	2.8	8.8

BLOCK & BLEED VALVES

10mm Double Ball Valve & Needle Bleed - Single Flange



10mm Std Double Block & Bleed

Unit : Inch

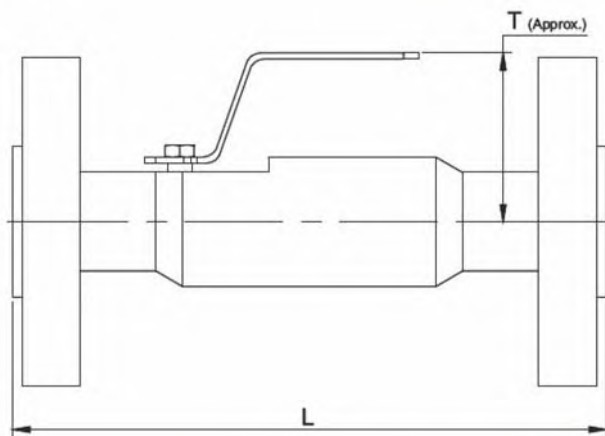
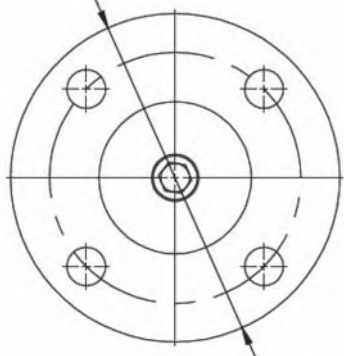
ANSI/ Flange Size	B16.34 Pressure Class	RF Single Flange (10mm)					RTJ Single Flange (10mm)				
		D	H*	T	T1	L	D	H*	T	T1	L
1/2"	150	3.50	4.0	2.8	4.3	7.0	N/A	N/A	N/A	N/A	N/A
1/2"	300	3.75	4.0	2.8	4.3	7.1	3.75	4.0	2.8	4.3	7.2
1/2"	600	3.75	4.0	2.8	4.3	7.3	3.75	4.0	2.8	4.3	7.3
1/2"	900/1500	4.75	4.0	2.8	4.3	7.7	4.75	4.0	2.8	4.3	7.7
1/2"	2500	5.25	4.0	2.8	4.3	8.0	5.25	4.0	2.8	4.3	8.0
3/4"	150	3.88	4.0	2.8	4.3	7.0	N/A	N/A	N/A	N/A	N/A
3/4"	300	4.62	4.0	2.8	4.3	7.1	4.62	4.0	2.8	4.3	7.3
3/4"	600	4.62	4.0	2.8	4.3	7.4	4.62	4.0	2.8	4.3	7.4
3/4"	900/1500	5.12	4.0	2.8	4.3	7.8	5.12	4.0	2.8	4.3	7.8
3/4"	2500	5.50	4.0	2.8	4.3	8.0	5.50	4.0	2.8	4.3	8.0
1"	150	4.25	4.0	2.8	4.3	7.1	4.25	4.0	2.8	4.3	7.3
1"	300	4.88	4.0	2.8	4.3	7.2	4.88	4.0	2.8	4.3	7.4
1"	600	4.88	4.0	2.8	4.3	7.5	4.88	4.0	2.8	4.3	7.5
1"	900/1500	5.88	4.0	2.8	4.3	7.9	5.88	4.0	2.8	4.3	7.9
1"	2500	6.25	4.0	2.8	4.3	8.2	6.25	4.0	2.8	4.3	8.2
1-1/2"	150	5.00	4.0	2.8	4.3	7.2	5.00	4.0	2.8	4.3	7.4
1-1/2"	300	6.12	4.0	2.8	4.3	7.3	6.12	4.0	2.8	4.3	7.5
1-1/2"	600	6.12	4.0	2.8	4.3	7.7	6.12	4.0	2.8	4.3	7.7
1-1/2"	900/1500	7.00	4.0	2.8	4.3	8.0	7.00	4.0	2.8	4.3	8.0
1-1/2"	2500	8.00	4.0	2.8	4.3	8.5	8.00	4.0	2.8	4.3	8.6
2"	150	6.00	4.0	2.8	4.3	7.3	6.00	4.0	2.8	4.3	7.5
2"	300	6.50	4.0	2.8	4.3	7.4	6.50	4.0	2.8	4.3	7.6
2"	600	6.50	4.0	2.8	4.3	7.8	6.50	4.0	2.8	4.3	7.8
2"	900/1500	8.50	4.0	2.8	4.3	8.3	8.50	4.0	2.8	4.3	8.3
2"	2500	9.25	4.0	2.8	4.3	8.8	9.25	4.0	2.8	4.3	8.8

TVI MONO FLANGE - FLANGED DBB

BLOCK & BLEED VALVES

10mm Ball Valve - Double Flange

ØD = Outer Diameter



10mm Std Single Block

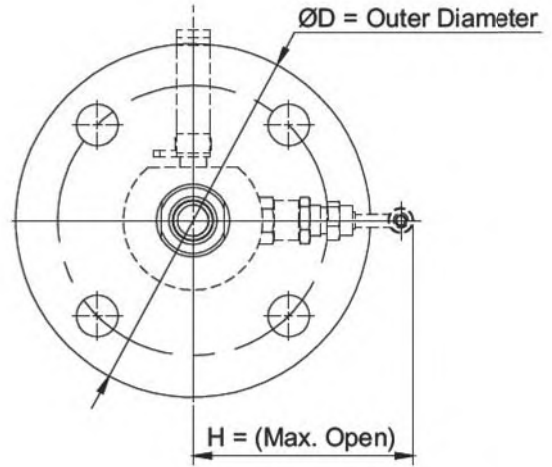
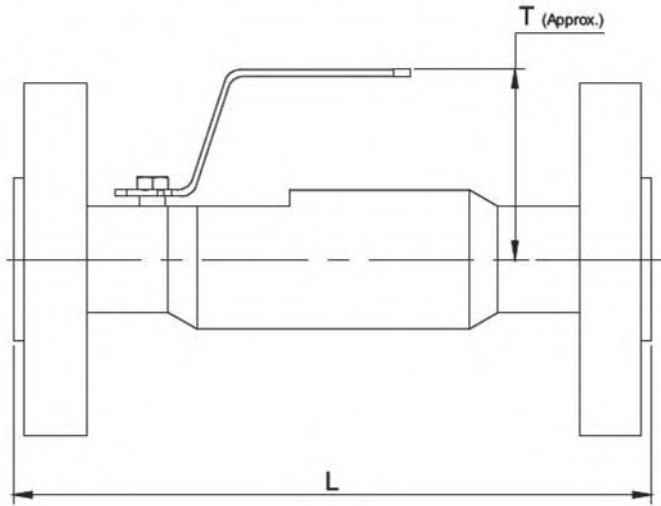
Unit : Inch

Flange Size	B16.34 Pressure Class	RF Double Flange (10mm)			RTJ Double Flange (10mm)		
		D	T	L	D	T	L
1/2"	150	3.50	4.3	8.5	NA	NA	NA
1/2"	300	3.75	4.3	8.7	3.75	4.3	9.1
1/2"	600	3.75	4.3	9.2	3.75	4.3	9.2
1/2"	900/1500	4.75	4.3	9.9	4.75	4.3	9.9
1/2"	2500	5.25	4.3	10.5	5.25	4.3	10.5
3/4"	150	3.88	4.3	8.6	NA	NA	NA
3/4"	300	4.62	4.3	8.9	4.62	4.3	9.2
3/4"	600	4.62	4.3	9.4	4.62	4.3	9.4
3/4"	900/1500	5.12	4.3	10.1	5.12	4.3	10.1
3/4"	2500	5.50	4.3	10.6	5.50	4.3	10.6
1"	150	4.25	4.3	8.7	4.25	4.3	9.1
1"	300	4.88	4.3	9.0	4.88	4.3	9.4
1"	600	4.88	4.3	9.5	4.88	4.3	9.5
1"	900/1500	5.88	4.3	10.4	5.88	4.3	10.4
1"	2500	6.25	4.3	10.9	6.25	4.3	10.9
1-1/2"	150	5.00	4.3	9.0	5.00	4.3	9.4
1-1/2"	300	6.12	4.3	9.2	6.12	4.3	9.6
1-1/2"	600	6.12	4.3	9.9	6.12	4.3	9.9
1-1/2"	900/1500	7.00	4.3	10.6	7.00	4.3	10.6
1-1/2"	2500	8.00	4.3	11.6	8.00	4.3	11.7
2"	150	6.00	4.3	9.1	6.00	4.3	9.5
2"	300	6.50	4.3	9.4	6.50	4.3	9.9
2"	600	6.50	4.3	10.1	6.50	4.3	10.2
2"	900/1500	8.50	4.3	11.1	8.50	4.3	11.2
2"	2500	9.25	4.3	12.1	9.25	4.3	12.2

TVI MONO FLANGE - FLANGED DBB

BLOCK & BLEED VALVES

10mm Ball Valve - Double Flange



10mm Std Block & Bleed

Unit : Inch

Flange Size	B16.34 Pressure Class	RF Double Flange (10mm)				RTJ Double Flange (10mm)			
		D	H*	T	L	D	H*	T	L
1/2"	150	3.50	4.0	4.3	8.5	N/A	N/A	N/A	NA
1/2"	300	3.75	4.0	4.3	8.7	3.75	4.0	4.3	9.1
1/2"	600	3.75	4.0	4.3	9.2	3.75	4.0	4.3	9.2
1/2"	900/1500	4.75	4.0	4.3	9.9	4.75	4.0	4.3	9.9
1/2"	2500	5.25	4.0	4.3	10.5	5.25	4.0	4.3	10.5
3/4"	150	3.88	4.0	4.3	8.6	N/A	N/A	N/A	NA
3/4"	300	4.62	4.0	4.3	8.9	4.62	4.0	4.3	9.2
3/4"	600	4.62	4.0	4.3	9.4	4.62	4.0	4.3	9.4
3/4"	900/1500	5.12	4.0	4.3	10.1	5.12	4.0	4.3	10.1
3/4"	2500	5.50	4.0	4.3	10.6	5.50	4.0	4.3	10.6
1"	150	4.25	4.0	4.3	8.7	4.25	4.0	4.3	9.1
1"	300	4.88	4.0	4.3	9.0	4.88	4.0	4.3	9.4
1"	600	4.88	4.0	4.3	9.5	4.88	4.0	4.3	9.5
1"	900/1500	5.88	4.0	4.3	10.4	5.88	4.0	4.3	10.4
1"	2500	6.25	4.0	4.3	10.9	6.25	4.0	4.3	10.9
1-1/2"	150	5.00	4.0	4.3	9.0	5.00	4.0	4.3	9.4
1-1/2"	300	6.12	4.0	4.3	9.2	6.12	4.0	4.3	9.6
1-1/2"	600	6.12	4.0	4.3	9.9	6.12	4.0	4.3	9.9
1-1/2"	900/1500	7.00	4.0	4.3	10.6	7.00	4.0	4.3	10.6
1-1/2"	2500	8.00	4.0	4.3	11.6	8.00	4.0	4.3	11.7
2"	150	6.00	4.0	4.3	9.1	6.00	4.0	4.3	9.5
2"	300	6.50	4.0	4.3	9.4	6.50	4.0	4.3	9.9
2"	600	6.50	4.0	4.3	10.1	6.50	4.0	4.3	10.2
2"	900/1500	8.50	4.0	4.3	11.1	8.50	4.0	4.3	11.2
2"	2500	9.25	4.0	4.3	12.1	9.25	4.0	4.3	12.2

Monoflange valve

PMT Monoflange

- Improved safety : leak paths reduced by up to 60%, less susceptibility to vibration
- Reduced costs : installation and component costs saving up to 80%
- Reduced weight : up to 85%

Features

- Combined needle and OS & Y valves available.
- Raised face and ring type joint flange styles.
- One-piece forged construction flange as standard.
- Locking and anti tamper devices for all valve types available. (as option)
- Standard materials of Stainless steel ASTM A182 F316/F316L, Carbon steel ASTM
- Optional materials include Super Duplex, Monel, Hastelloy, Inconel.

Applications

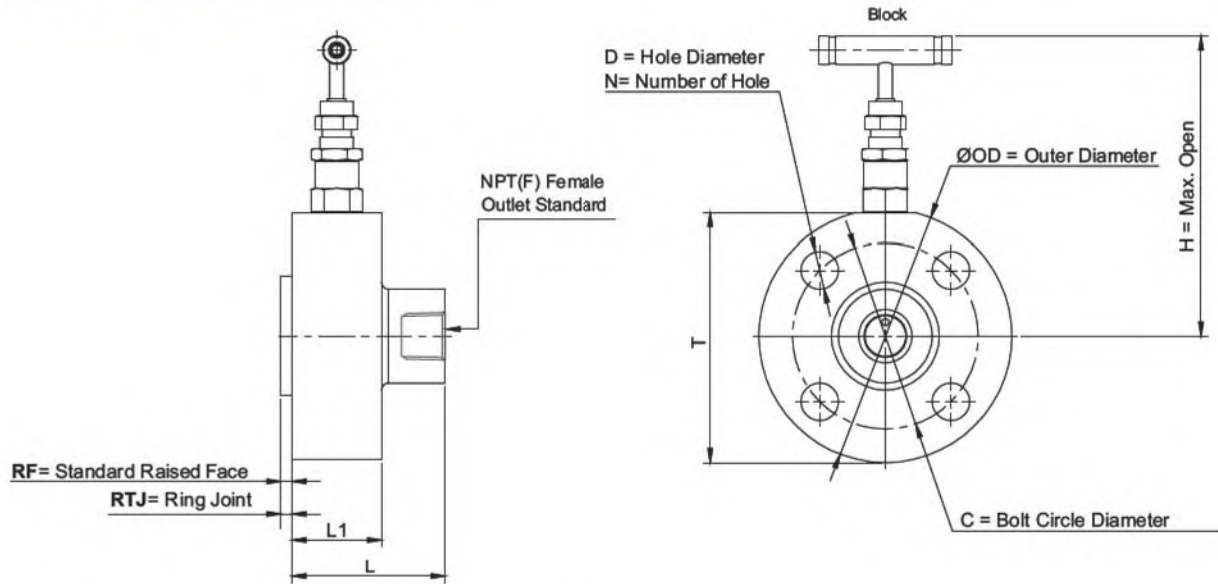
- Isolation
- Block and Bleed
- Double Block and Bleed
- Pressure Measurement
- Chemical Injection
- Level Measurement
- Sampling
- Flow Measurement



TVI MONO FLANGE - FLANGED DBB

MONOFLANGE VALVE

Single Block Needle Type

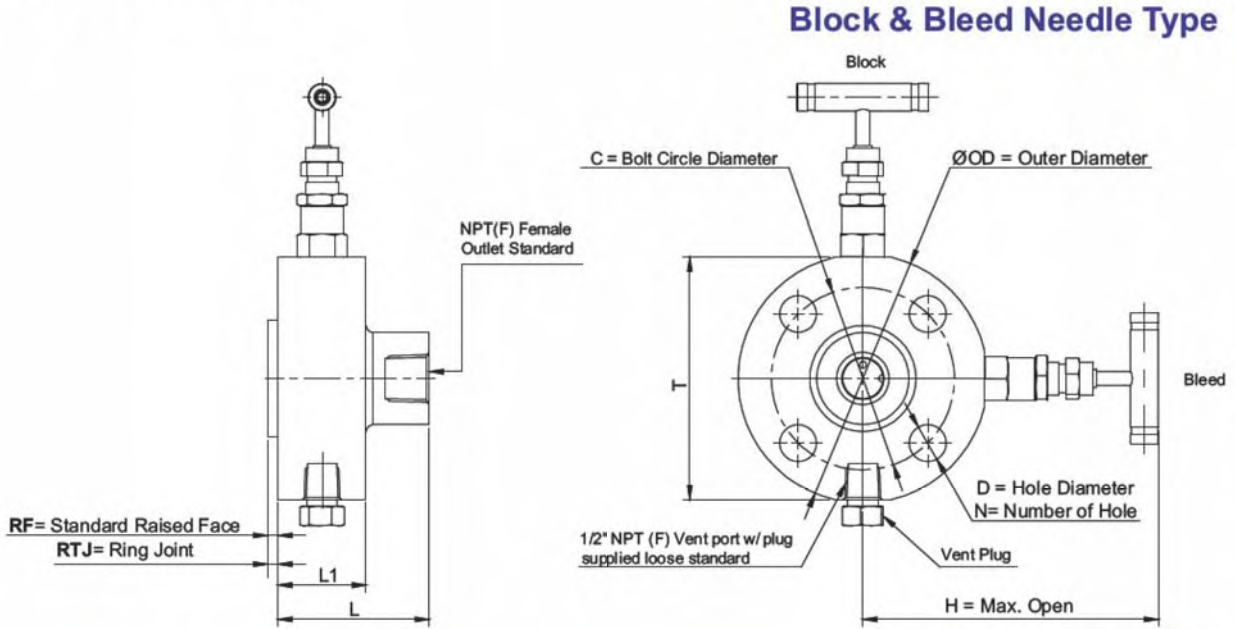


Standard Screwed Bonnet Dimensions (inches)

Size	Class	RF	RTJ	OD	L	L1	C	N	D	H	T
1/2"	150	0.06	N/A	3.50	2.44	1.50	2.38	4	5/8	4.50	3.40
	300	0.06	0.219	3.75	2.63	1.50	2.62	4	5/8	4.63	3.65
	600	0.25	0.219	3.75	2.63	1.50	2.62	4	5/8	4.63	3.65
	900/1500	0.25	0.250	4.75	2.63	1.50	3.25	4	7/8	5.13	4.65
	2500	0.25	0.250	5.25	2.63	1.50	3.50	4	7/8	5.38	5.15
3/4"	150	0.06	N/A	3.88	2.63	1.50	2.75	4	5/8	4.75	3.78
	300	0.06	0.250	4.62	2.63	1.50	3.25	4	3/4	5.06	4.52
	600	0.25	0.250	4.62	2.63	1.50	3.25	4	3/4	5.06	4.52
	900/1500	0.25	0.250	5.12	2.63	1.50	3.50	4	7/8	5.31	5.02
	2500	0.25	0.250	5.50	2.63	1.50	3.75	4	7/8	5.50	5.40
1"	150	0.06	0.250	4.25	2.63	1.50	3.12	4	5/8	4.88	4.15
	300	0.06	0.250	4.88	2.63	1.50	3.50	4	3/4	5.19	4.78
	600	0.25	0.250	4.88	2.63	1.50	3.50	4	3/4	5.19	4.78
	900/1500	0.25	0.250	5.88	2.63	1.50	3.50	4	1	5.88	5.78
	2500	0.25	0.250	6.25	2.63	1.50	4.25	4	1	5.88	6.15
1-1/2"	150	0.06	0.250	5.00	2.63	1.50	3.88	4	5/8	5.25	4.90
	300	0.06	0.250	6.12	2.63	1.50	4.50	4	7/8	5.88	6.02
	600	0.25	0.250	6.12	2.63	1.50	4.50	4	7/8	5.88	6.02
	900/1500	0.25	0.250	7.00	2.63	1.50	4.88	4	1-1/8	6.25	6.90
	2500	0.25	0.312	8.00	2.63	1.75	5.75	4	1-1/4	6.75	7.90
2"	150	0.06	0.250	6.00	2.63	1.50	4.75	4	3/4	5.75	5.90
	300	0.06	0.312	6.50	2.63	1.50	5.00	8	3/4	6.00	6.40
	600	0.25	0.312	6.50	2.63	1.50	5.00	8	3/4	6.00	6.40
	900/1500	0.25	0.312	8.50	2.63	1.50	6.50	8	1	7.00	8.40
	2500	0.25	0.312	9.25	3.13	2.00	6.75	8	1-1/8	7.38	9.15

TVI MONO FLANGE - FLANGED DBB

MONOFLANGE VALVE

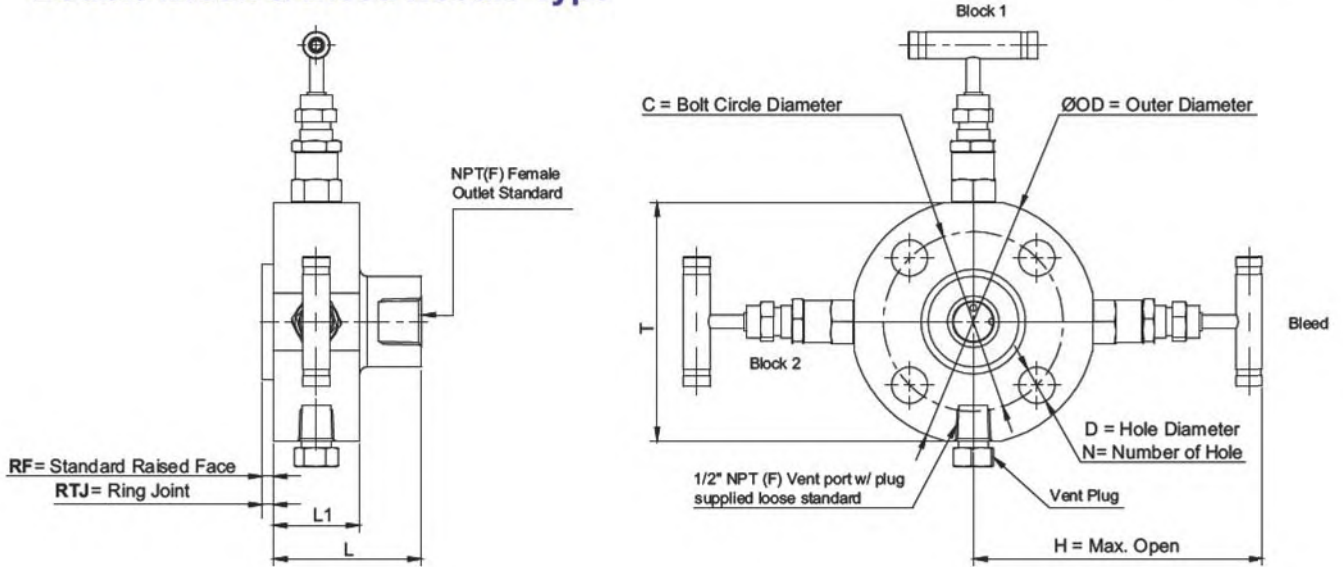


Standard Screwed Bonnet Dimensions (inches)											
Size	Class	RF	RTJ	OD	L	L1	C	N	D	T	H
1/2"	150	0.06	N/A	3.50	2.44	1.50	2.38	4	5/8	3.40	4.50
	300	0.06	0.219	3.75	2.63	1.50	2.62	4	5/8	3.65	4.63
	600	0.25	0.219	3.75	2.63	1.50	2.62	4	5/8	3.65	4.63
	900/1500	0.25	0.250	4.75	2.63	1.50	3.25	4	7/8	4.65	5.13
	2500	0.25	0.250	5.25	2.63	1.50	3.50	4	7/8	5.15	5.38
3/4"	150	0.06	N/A	3.88	2.63	1.50	2.75	4	5/8	3.78	4.75
	300	0.06	0.250	4.62	2.63	1.50	3.25	4	3/4	4.52	5.06
	600	0.25	0.250	4.62	2.63	1.50	3.25	4	3/4	4.52	5.06
	900/1500	0.25	0.250	5.12	2.63	1.50	3.50	4	7/8	5.02	5.31
	2500	0.25	0.250	5.50	2.63	1.50	3.75	4	7/8	5.40	5.50
1"	150	0.06	0.250	4.25	2.63	1.50	3.12	4	5/8	4.15	4.88
	300	0.06	0.250	4.88	2.63	1.50	3.50	4	3/4	4.78	5.19
	600	0.25	0.250	4.88	2.63	1.50	3.50	4	3/4	4.78	5.19
	900/1500	0.25	0.250	5.88	2.63	1.50	4.00	4	1	5.78	5.88
	2500	0.25	0.250	6.25	2.63	1.50	4.25	4	1	6.15	5.88
1-1/2"	150	0.06	0.250	5.00	2.63	1.50	3.88	4	5/8	4.90	5.25
	300	0.06	0.250	6.12	2.63	1.50	4.50	4	7/8	6.02	5.88
	600	0.25	0.250	6.12	2.63	1.50	4.50	4	7/8	6.02	5.88
	900/1500	0.25	0.250	7.00	2.63	1.50	4.88	4	1-1/8	6.90	6.25
	2500	0.25	0.312	8.00	2.63	1.50	5.75	4	1-1/4	7.90	6.75
2"	150	0.06	0.250	6.00	2.63	1.50	4.75	4	3/4	5.90	5.75
	300	0.06	0.312	6.50	2.63	1.50	5.00	8	3/4	6.40	6.00
	600	0.25	0.312	6.50	2.63	1.50	5.00	8	3/4	6.40	6.00
	900/1500	0.25	0.312	8.50	2.63	1.50	6.50	8	1	8.40	7.00
	2500	0.25	0.312	9.25	3.13	2.00	6.75	8	1-1/8	9.15	7.38

TVI MONO FLANGE - FLANGED DBB

Double Block & Bleed Needle Type

MONOFLANGE VALVE

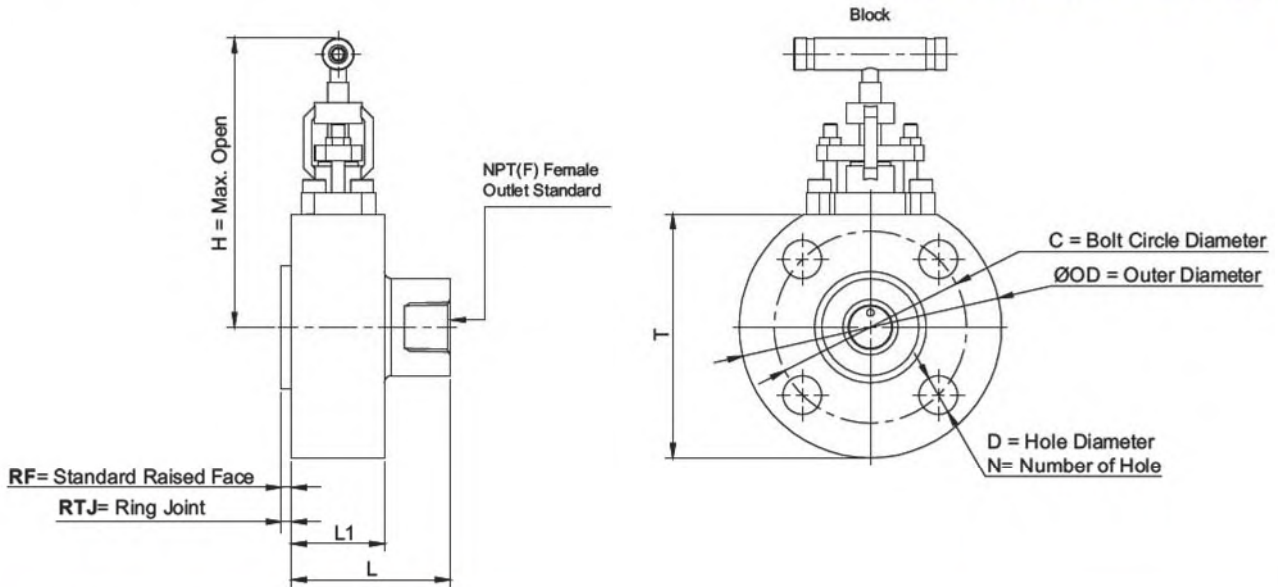


Standard Screwed Bonnet Dimensions (inches)											
Size	Class	RF	RTJ	OD	L	L1	C	N	D	H	T
1/2"	150	0.06	N/A	3.50	2.44	1.50	2.38	4	5/8	4.50	3.40
	300	0.06	0.219	3.75	2.63	1.50	2.62	4	5/8	4.63	3.65
	600	0.25	0.219	3.75	2.63	1.50	2.62	4	5/8	4.63	3.65
	900/1500	0.25	0.250	4.75	2.63	1.50	3.25	4	7/8	5.13	4.65
	2500	0.25	0.250	5.25	2.63	1.50	3.50	4	7/8	5.38	5.15
3/4"	150	0.06	N/A	3.88	2.63	1.50	2.75	4	5/8	4.75	3.78
	300	0.06	0.250	4.62	2.63	1.50	3.25	4	3/4	5.06	4.52
	600	0.25	0.250	4.62	2.63	1.50	3.25	4	3/4	5.06	4.52
	900/1500	0.25	0.250	5.12	2.63	1.50	3.50	4	7/8	5.31	5.02
	2500	0.25	0.250	5.50	2.63	1.50	3.75	4	7/8	5.50	5.40
1"	150	0.06	0.250	4.25	2.63	1.50	3.12	4	5/8	4.88	4.15
	300	0.06	0.250	4.88	2.63	1.50	3.50	4	3/4	5.19	4.78
	600	0.25	0.250	4.88	2.63	1.50	3.50	4	3/4	5.19	4.78
	900/1500	0.25	0.250	5.88	2.63	1.50	4.00	4	1	5.88	5.78
	2500	0.25	0.250	6.25	2.63	1.50	4.25	4	1	5.88	6.15
1-1/2"	150	0.06	0.250	5.00	2.63	1.50	3.88	4	5/8	5.25	4.90
	300	0.06	0.250	6.12	2.63	1.50	4.50	4	7/8	5.88	6.02
	600	0.25	0.250	6.12	2.63	1.50	4.50	4	7/8	5.88	6.02
	900/1500	0.25	0.250	7.00	2.63	1.50	4.88	4	1-1/8	6.25	6.90
	2500	0.25	0.312	8.00	2.63	1.50	5.75	4	1-1/4	6.75	7.90
2"	150	0.06	0.250	6.00	2.63	1.50	4.75	4	3/4	5.75	5.90
	300	0.06	0.312	6.50	2.63	1.50	5.00	8	3/4	6.00	6.40
	600	0.25	0.312	6.50	2.63	1.50	5.00	8	3/4	6.00	6.40
	900/1500	0.25	0.312	8.50	2.63	1.50	6.50	8	1	7.00	8.40
	2500	0.25	0.312	9.25	3.13	2.00	6.75	8	1-1/8	7.38	9.15

TVI MONO FLANGE - FLANGED DBB

MONOFLANGE VALVE

Single Block OS & Y Type



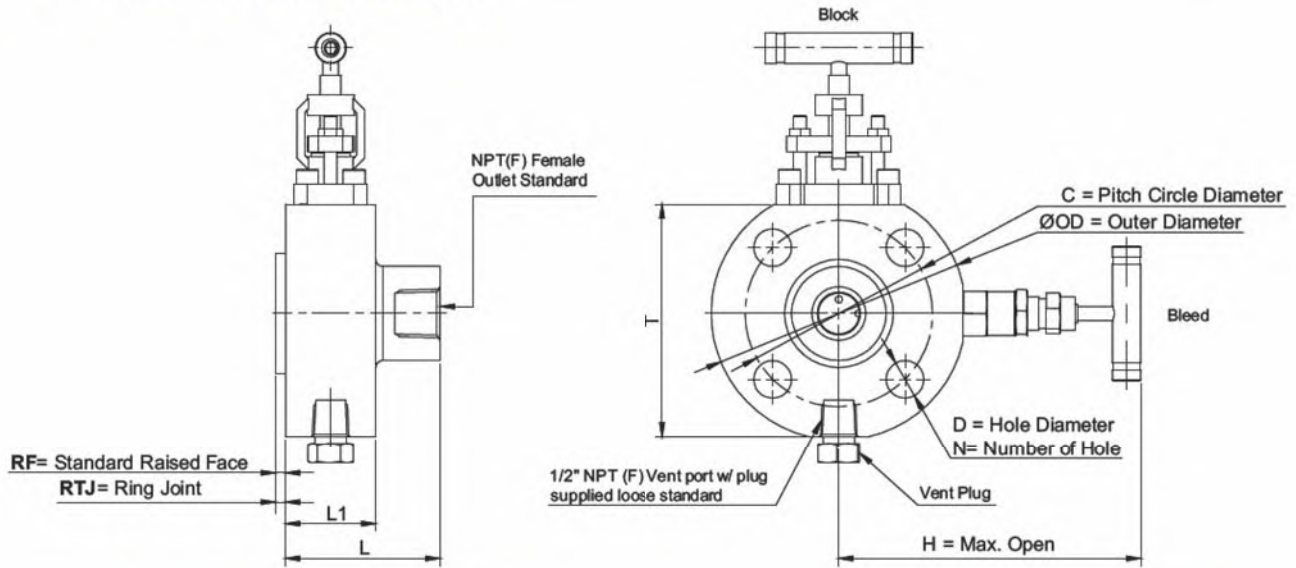
OS&Y Bonnet Dimensions (inches)

Size	Class	RF	RTJ	OD	L	L1	C	N	D	T	H
1/2"	150	0.06	N/A	3.50	2.44	1.50	2.38	4	5/8	3.40	5.50
	300	0.06	0.219	3.75	2.63	1.50	2.62	4	5/8	3.65	5.63
	600	0.25	0.219	3.75	2.63	1.50	2.62	4	5/8	3.65	5.63
	900/1500	0.25	0.250	4.75	2.63	1.50	3.25	4	7/8	4.65	6.13
	2500	0.25	0.250	5.25	2.63	1.50	3.50	4	7/8	5.15	6.38
3/4"	150	0.06	N/A	3.88	2.63	1.50	2.75	4	5/8	3.78	5.75
	300	0.06	0.250	4.62	2.63	1.50	3.25	4	3/4	4.52	6.06
	600	0.25	0.250	4.62	2.63	1.50	3.25	4	3/4	4.52	6.06
	900/1500	0.25	0.250	5.12	2.63	1.50	3.50	4	7/8	5.02	6.31
	2500	0.25	0.250	5.50	2.63	1.50	3.75	4	7/8	5.40	6.50
1"	150	0.06	0.250	4.25	2.63	1.50	3.12	4	5/8	4.15	5.88
	300	0.06	0.250	4.88	2.63	1.50	3.50	4	3/4	4.78	6.19
	600	0.25	0.250	4.88	2.63	1.50	3.50	4	3/4	4.78	6.19
	900/1500	0.25	0.250	5.88	2.63	1.50	4.00	4	1	5.78	6.88
	2500	0.25	0.250	6.25	2.63	1.50	4.25	4	1	6.15	6.88
1-1/2"	150	0.06	0.250	5.00	2.63	1.50	3.88	4	5/8	4.90	6.25
	300	0.06	0.250	6.12	2.63	1.50	4.50	4	7/8	6.02	6.88
	600	0.25	0.250	6.12	2.63	1.50	4.50	4	7/8	6.02	6.88
	900/1500	0.25	0.250	7.00	2.63	1.50	4.88	4	1-1/8	6.90	7.25
	2500	0.25	0.312	8.00	2.69	1.50	5.75	4	1-1/4	7.90	7.25
2"	150	0.06	0.250	6.00	2.63	1.50	4.75	4	3/4	5.90	6.75
	300	0.06	0.312	6.50	2.63	1.50	5.00	8	3/4	6.40	7.00
	600	0.25	0.312	6.50	2.63	1.50	5.00	8	3/4	6.40	7.00
	900/1500	0.25	0.312	8.50	2.63	1.50	6.50	8	1	8.40	8.00
	2500	0.25	0.312	9.25	3.13	2.00	6.75	8	1-1/8	9.15	8.38

TVI MONO FLANGE - FLANGED DBB

Block & Bleed OS & Y Type

MONOFLANGE VALVE

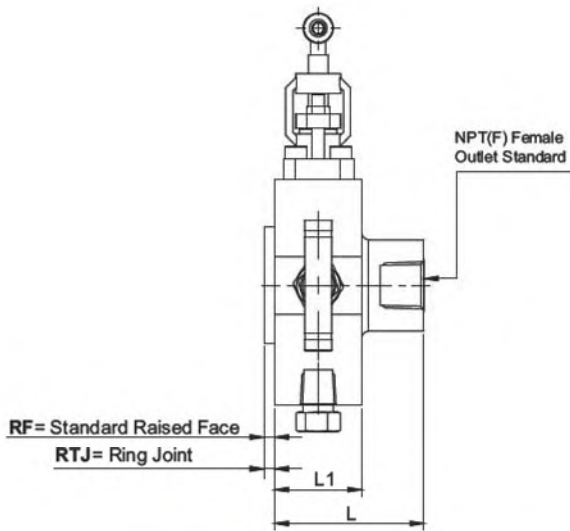


OS&Y Bonnet Dimensions (inches)

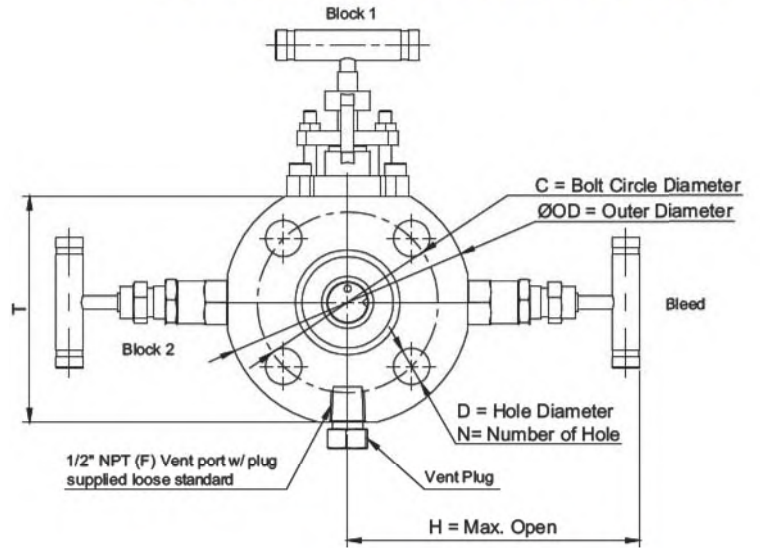
Size	Class	RF	RTJ	OD	L	L1	C	N	D	T	H
1/2"	150	0.06	N/A	3.50	2.44	1.50	2.38	4	5/8	3.40	5.50
	300	0.06	0.219	3.75	2.63	1.50	2.62	4	5/8	3.65	5.63
	600	0.25	0.219	3.75	2.63	1.50	2.62	4	5/8	3.65	5.63
	900/1500	0.25	0.250	4.75	2.63	1.50	3.25	4	7/8	4.65	6.13
	2500	0.25	0.250	5.25	2.63	1.50	3.50	4	7/8	5.15	6.38
3/4"	150	0.06	N/A	3.88	2.63	1.50	2.75	4	5/8	3.78	5.75
	300	0.06	0.250	4.62	2.63	1.50	3.25	4	3/4	4.52	6.06
	600	0.25	0.250	4.62	2.63	1.50	3.25	4	3/4	4.52	6.06
	900/1500	0.25	0.250	5.12	2.63	1.50	3.50	4	7/8	5.02	6.31
	2500	0.25	0.250	5.50	2.63	1.50	3.75	4	7/8	5.40	6.50
1"	150	0.06	0.250	4.25	2.63	1.50	3.12	4	5/8	4.15	5.88
	300	0.06	0.250	4.88	2.63	1.50	3.50	4	3/4	4.78	6.19
	600	0.25	0.250	4.88	2.63	1.50	3.50	4	3/4	4.78	6.19
	900/1500	0.25	0.250	5.88	2.63	1.50	4.00	4	1	5.78	6.88
	2500	0.25	0.250	6.25	2.63	1.50	4.25	4	1	6.15	6.88
1-1/2"	150	0.06	0.250	5.00	2.63	1.50	3.88	4	5/8	4.90	6.25
	300	0.06	0.250	6.12	2.63	1.50	4.50	4	7/8	6.02	6.88
	600	0.25	0.250	6.12	2.63	1.50	4.50	4	7/8	6.02	6.88
	900/1500	0.25	0.250	7.00	2.63	1.50	4.88	4	1-1/8	6.90	7.25
	2500	0.25	0.312	8.00	2.63	1.50	5.75	4	1-1/4	7.90	7.25
2"	150	0.06	0.250	6.00	2.63	1.50	4.75	4	3/4	5.90	6.75
	300	0.06	0.312	6.50	2.63	1.50	5.00	8	3/4	6.40	7.00
	600	0.25	0.312	6.50	2.63	1.50	5.00	8	3/4	6.40	7.00
	900/1500	0.25	0.312	8.50	2.63	1.50	6.50	8	1	8.40	8.00
	2500	0.25	0.312	9.25	3.13	2.00	6.75	8	1-1/8	9.15	8.38

TVI MONO FLANGE - FLANGED DBB

MONOFLANGE VALVE



Double Block & Bleed OS & Y Type



OS&Y Bonnet Dimensions (inches)

	Class	RF	RTJ	OD	L	L1	C	N	D	T	H
1/2"	150	0.06	N/A	3.50	2.44	1.50	2.38	4	5/8	3.40	5.50
	300	0.06	0.219	3.75	2.63	1.50	2.62	4	5/8	3.65	5.63
	600	0.25	0.219	3.75	2.63	1.50	2.62	4	5/8	3.65	5.63
	900/1500	0.25	0.250	4.75	2.63	1.50	3.25	4	7/8	4.65	6.13
	2500	0.25	0.250	5.25	2.63	1.50	3.50	4	7/8	5.15	6.38
3/4"	150	0.06	N/A	3.88	2.63	1.50	2.75	4	5/8	3.78	5.75
	300	0.06	0.250	4.62	2.63	1.50	3.25	4	3/4	4.52	6.06
	600	0.25	0.250	4.62	2.63	1.50	3.25	4	3/4	4.52	6.06
	900/1500	0.25	0.250	5.12	2.63	1.50	3.50	4	7/8	5.02	6.31
	2500	0.25	0.250	5.50	2.63	1.50	3.75	4	7/8	5.40	6.50
1"	150	0.06	0.250	4.25	2.63	1.50	3.12	4	5/8	4.15	5.88
	300	0.06	0.250	4.88	2.63	1.50	3.50	4	3/4	4.78	6.19
	600	0.25	0.250	4.88	2.63	1.50	3.50	4	3/4	4.78	6.19
	900/1500	0.25	0.250	5.88	2.63	1.50	4.00	4	1	5.78	6.88
	2500	0.25	0.250	6.25	2.63	1.50	4.25	4	1	6.15	6.88
1-1/2"	150	0.06	0.250	5.00	2.63	1.50	3.88	4	5/8	4.90	6.25
	300	0.06	0.250	6.12	2.63	1.50	4.50	4	7/8	6.02	6.88
	600	0.25	0.250	6.12	2.63	1.50	4.50	4	7/8	6.02	6.88
	900/1500	0.25	0.250	7.00	2.63	1.50	4.88	4	1-1/8	6.90	7.25
	2500	0.25	0.312	8.00	2.63	1.50	5.75	4	1-1/4	7.90	7.25
2"	150	0.06	0.250	6.00	2.63	1.50	4.75	4	3/4	5.90	6.75
	300	0.06	0.312	6.50	2.63	1.50	5.00	8	3/4	6.40	7.00
	600	0.25	0.312	6.50	2.63	1.50	5.00	8	3/4	6.40	7.00
	900/1500	0.25	0.312	8.50	2.63	1.50	6.50	8	1	8.40	8.00
	2500	0.25	0.312	9.25	3.13	2.00	6.75	8	1-1/8	9.15	8.38