

MONOFLANGE VALVE

3/16" Bore Monoflange Valve

Phoenix offers a 3/16" bore monoflange for use at pressure sensing points on process vessels and pipelines. The valve is mounted directly to the vessel or process pipe, and measurement instruments can be mounted directly to the valve outlet or mounted remotely using sensing lines. The monoflange valve is available in flange ratings from CLASS 150 to CLASS 2500 in both a raised face design (RF) and a ring type joint design (RTJ), with outside screw and yoke bonnets (OS&Y) or standard packed bonnets. The following configurations are offered: single block, block and bleed, double block and bleed, and single block and bleed with a calibration port. Phoenix's 8-bolt pattern monoflange features an innovative handle arrangement which provides additional space between handles for easier operation.



Standard Features

Hydrotested at 150% of rated pressure (shell test). Nitrogen gas tested to 2000 psi.



Benefits

Complies with ASME B31.1 & B31.3 shell testing procedures as standard. Ensures structural integrity of valve.

Seat tightness (zero leakage) verified to 110% of rated pressure. Nitrogen gas tested to 2000 psi.



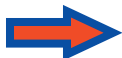
Complies with ASME B31.1 & B31.3 seat testing procedures as standard. Ensures zero leakage at seats for proper calibration.

Packing below stem threads



Prevents corrosion of critical stem threads

Metal body-to-bonnet seals are in compression, not tension



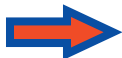
Mitigates risk of stress cracking

Stem threads are rolled, not cut



Higher quality stem for longer service life

8 RMS stem finish



Extended packing life

V-Style Teflon™ packing



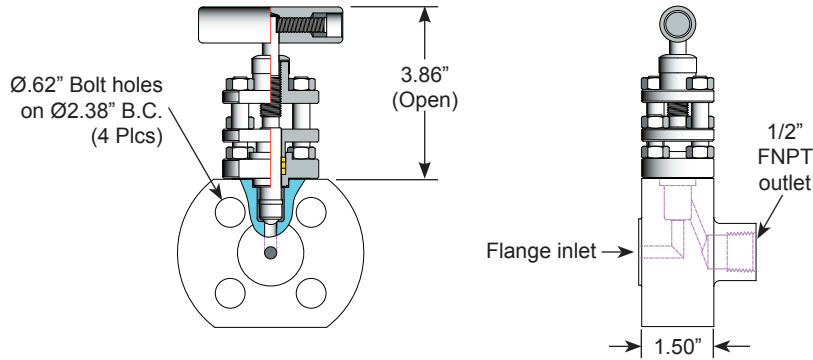
30-40% less operational torque and less frequent packing adjustments than traditional Teflon™ packed valves

Pressure component materials sourced from the US, Canada or Europe



Reliable material traceability. MTR's provided with every order for pressure containing components.

Needle Style Monoflange



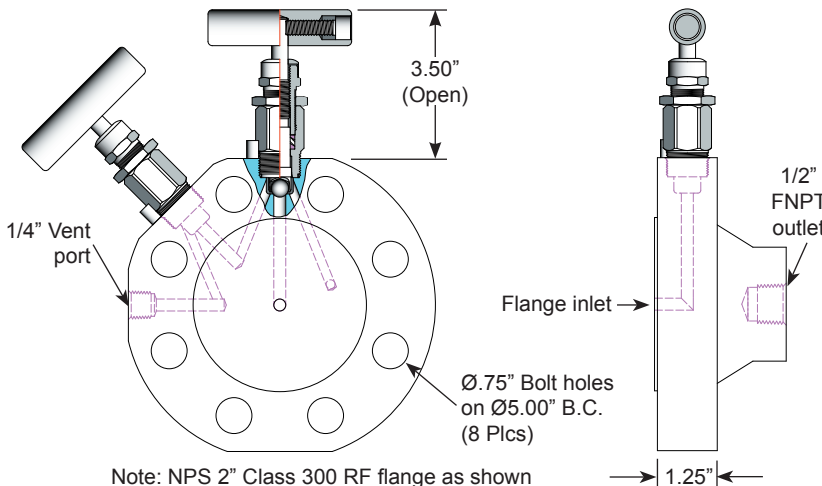
Note: NPS 1/2" Class 150 RF flange as shown; The thickness of flange for OS&Y style bonnet must be 1.50".

Specifications:

Type: **P3FN** Monoflange, Globe Pattern
 Rating: Up to 6000 psi @ 100°F (41370 kPa @ 38°C)
 Stem: Needle or Ball Tip Stem
 Packing: Teflon™ or Grafoil™
 Seat: Integral
 Handle: Removable
 Bore Size: 3/16"
 Inlet Connections: 1/2" to 2" RF/RTJ Flange, Rating from class 150 to class 2500
 Outlet Connections: 1/2" FNPT, Flange or 2(4)-Bolt Flange
 Bonnet Lock: Bolted Down
 Body Stock: Forged ANSI Flanges
 Weight: Based on Flange Size and Rating
 Special Service: O₂ or CL cleaning available*

*Other specifications or services may be available.

Block and Bleed Monoflange



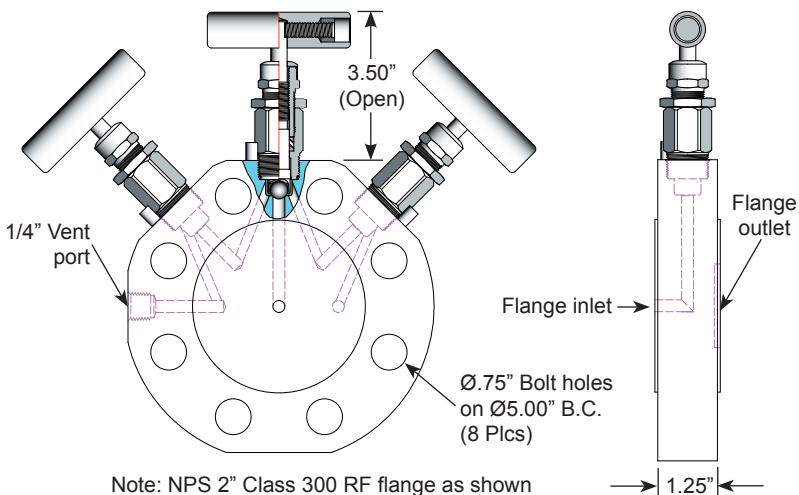
Note: NPS 2" Class 300 RF flange as shown

Specifications:

Type: **P3FBB** Monoflange, Globe Pattern
 Rating: Up to 6000 psi @ 100°F (41370 kPa @ 38°C)
 Stem: Needle or Ball Tip Stem
 Packing: Teflon™ or Grafoil™
 Seat: Integral
 Handle: Removable
 Bore Size: 3/16"
 Inlet Connections: 1/2" to 2" RF/RTJ Flange, Rating from class 150 to class 2500
 Outlet Connections: 1/2" FNPT, Flange or 2(4)-Bolt Flange
 Bonnet Lock: Pin or Plate
 Body Stock: Forged ANSI Flanges
 Weight: Based on Flange Size and Rating
 Special Service: O₂ or CL cleaning available*

*Other specifications or services may be available.

Double Block and Bleed Monoflange



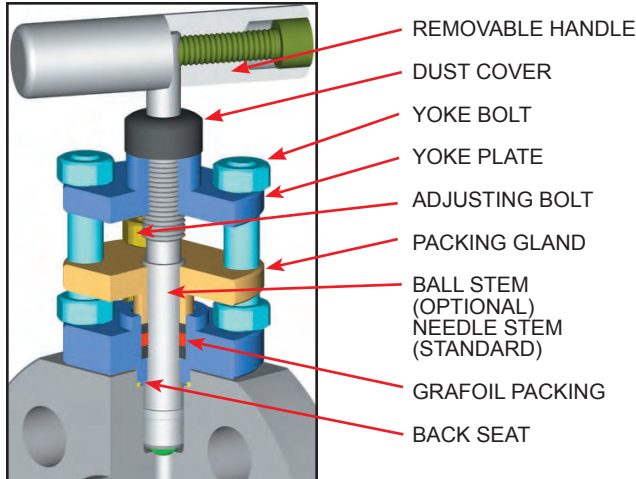
Note: NPS 2" Class 300 RF flange as shown

Specifications:

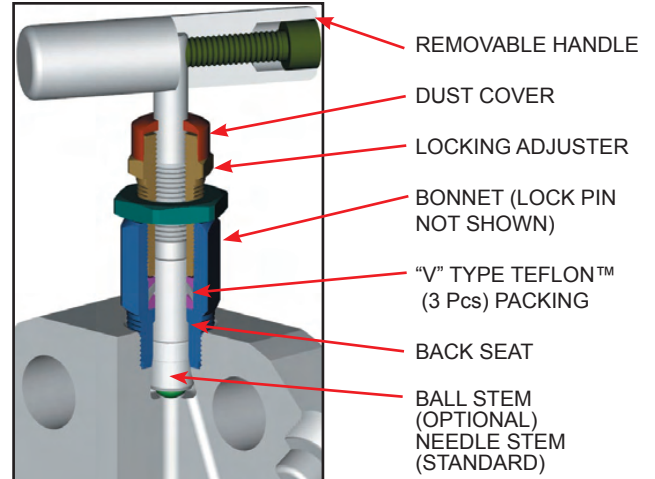
Type: **P3FDBB** Monoflange, Globe Pattern
 Rating: Up to 6000 psi @ 100°F (41370 kPa @ 38°C)
 Stem: Needle or Ball Tip Stem
 Packing: Teflon™ or Grafoil™
 Seat: Integral
 Handle: Removable
 Bore Size: 3/16"
 Inlet Connections: 1/2" to 2" RF/RTJ Flange, Rating from class 150 to class 2500
 Outlet Connections: 1/2" FNPT, Flange or 2(4)-Bolt Flange
 Bonnet Lock: Pin or Plate
 Body Stock: Forged ANSI Flanges
 Weight: Based on Flange Size and Rating
 Special Service: O₂ or CL cleaning available*

*Other specifications or services may be available.

OS&Y Bonnet Assembly



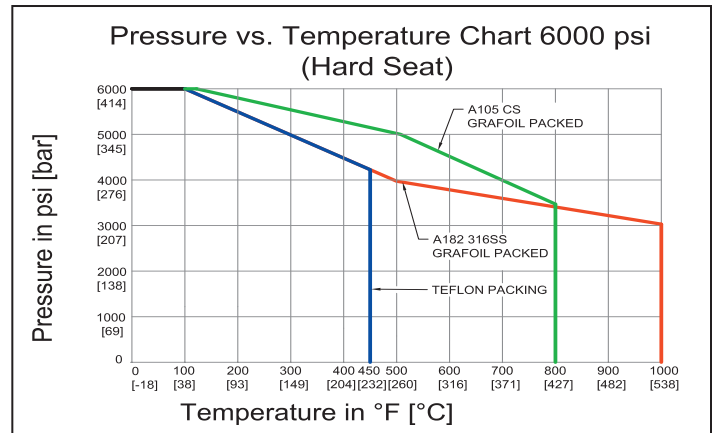
Threaded Bonnet Assembly



Materials of Construction

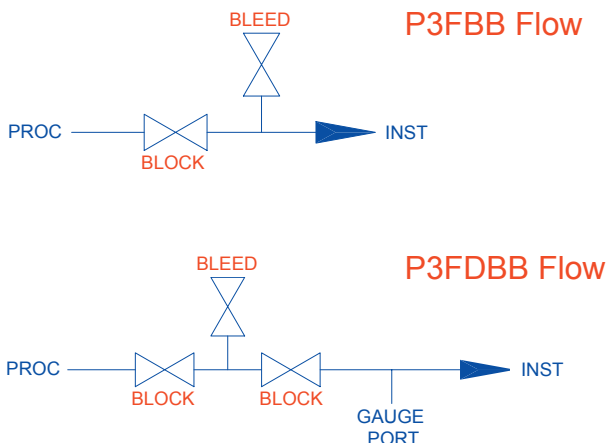
Code	SS	SC	CS
Body	ASTM A182 316SS	ASTM A105 CS	ASTM A108 CS
Bonnet	ASTM A182 316SS	ASTM A182 316SS	ASTM A108 CS
Stem	ASTM A182 316SS	ASTM A182 316SS	ASTM A582 303SS
Adjuster	ASTM A582 303SS	ASTM A582 303SS	ASTM A108 CS
Ball	SEE OPTION CODES ON PAGE 4		
Packing	TEFLON™ AND GRAFOIL™		

NOTE: Low torque Grafoil™ available (G4 Packing Code)

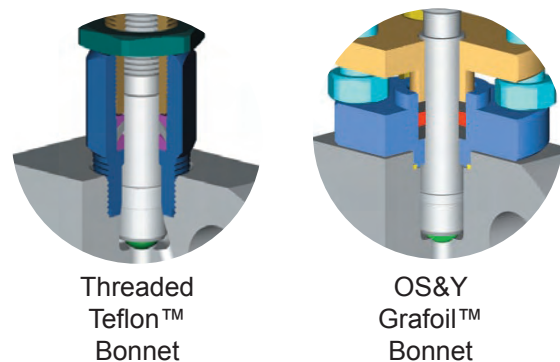


Note: Body material specifications based on ASME B16.34 - 2009. Packing material ratings based on manufacturer's specifications. Approximations only. Phoenix does not represent these values as finite. They are provided only as representative values.

Flow Diagrams



Stem and Seat Configurations



Phoenix	Orifice Size	Type	OS&Y Bonnet	Inlet Size	Inlet Rating	Outlet Size	Outlet Type	Material	Packing	Seat	Stem Tip	Options
P	3=3/16"	FN6H= Needle Style	1Y= 1 OS&Y Bonnet	50R=1/2" NPS Flange	150F= 150 Class	8=1/2" (FNPT Only)	F=FNPT	SS=ASTM A182 316/316L	T=Teflon™ (PTFE)	Integral (leave blank)	Needle Tip Standard (leave blank)	GP= Extra Gauge Post
		FBB6H= Block & Bleed	2Y=2 OS&Y Bonnet	75R=3/4" NPS Flange	300F= 300 Class	Flange (Same as Inlet, Leave Blank)	Flange (Same as Inlet, Leave Blank)	SC=ASTM A105 CS*	G=Grafoil™		B=316SS Ball Tip	LB= Bonnet Lock
		FDBB6H= Double Block & Bleed	3Y=3 OS&Y Bonnet	100R=1" NPS Flange	400F= 400 Class		4BF=4-Bolt Flange	CS=ASTM A108 CS*	G4= Low Torque Grafoil™		BC=Ceramic Ball Tip	CC= Chlorine Clean
		FBBC= Block & Bleed with Calibration Port		150R= 1 1/2" NPS Flange	600F= 600 Class		2BF=2-Bolt Flange	C5=ASTM A350 LF2			BM=Monel™ Ball Tip	OC=Oxygen Clean
				200R=2" NPS Flange	900F= 900 Class			N4=Monel™ 400				TG= SS Tag
				R=Raised Face	1500F= 1500 Class			N6=Inconel™ 625				SGI=Sour Gas ISO NACE Latest Rev.
				RJ=Ring Joint	2500F= 2500 Class			N8=Inconel™ 825				
								N2=Hastelloy™ C276				
EXAMPLE: P3FDBB6H1Y100R300F8FSSTBC-GP = Phoenix, 3/16" Orifice Monoflange, Double Block and Bleed, 1 OS&Y Bonnet (2 Threaded Bonnet for the rest valves), 1" NPS Class 300 Flange Inlet, 1/2" FNPT Outlet, A182 316/316L Flange Material, Teflon™ Packing, Integral Seat, Ceramic Ball Tip Stem, Extra Gauge Port												
P	3	FDBB6H	1Y	100R	300F	8	F	SS	T		BC	GP
*For code applications, A108 CS is unacceptable, A105 CS must be selected for CS valves. Note: including 2 pipe plugs for gauge ports.												

Use with Confidence, Phoenix Precision Products Meet the Following Specifications:

- ✓ ASME B31.1 Power Piping
- ✓ ASME B31.3 Process Piping
- ✓ ASME B16.34 Valves - Flanged, Thread, and Welding End
- ✓ API 598 Valve Inspection and Testing
- ✓ MSS SP-25 Standard Marking Systems for Valves, Fittings and Flange Unions
- ✓ MSS SP-99 Instrument Valves
- ✓ MSS SP-105 Instrument Valves for Code Applications
- ✓ NACE MR0175/ISO15156 for all 316SS valves and A105cs body/316SS bonnet (SC-Material Code) when in service with less than 50 PPM of chlorides

Seal and Seat Material Temperature Rating

Code	Description	MIN. TEMP	MAX. TEMP
T	Teflon™	-65°F (-54°C)	450°F (232°C)
G	Grafoil™ (SS Body)	-70°F (-56°C)	1000°F (537°C)
	Grafoil™ (CS Body)	-70°F (-56°C)	800°F (427°C)

Note: Grafoil™ is suitable for services in excess of 1000°F in a non-oxidizing environment.

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