

**DOUBLE BLOCK AND BLEED VALVES**

**1/8” Bore Double Block and Bleed Valve**

The P2DBB double block and bleed valves are designed for use with various instrumentation equipment and can be installed to control, isolate, measure, calibrate, equalize, drain or vent the pressure of gases and liquids. Phoenix’s globe pattern DBB valves are of bar stock construction and are available in various materials, sizes, sealing styles, end connections and stem types. The main features of these DBB valves are dual valve bonnets, robust stems, bubble tight seals, and pinned bonnets. The P2DBB also features primary and secondary valve blocks and a bleed valve designed with a 1/4” FNPT vent/calibration port.

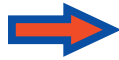


**Standard Features**

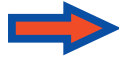
Hydrotested at 150% of rated pressure (shell test). Nitrogen gas tested to 2000 psi.



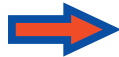
Seat tightness (zero leakage) verified to 110% of rated pressure. Nitrogen gas tested to 2000 psi.



Packing below stem threads



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



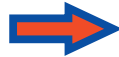
Stem threads are rolled, not cut



8 RMS stem finish



V-Style Teflon™ packing



Pressure component materials sourced from the US, Canada or Europe



**Benefits**

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

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

Prevents corrosion of critical stem threads

Mitigates risk of stress cracking

Higher quality stem for longer service life

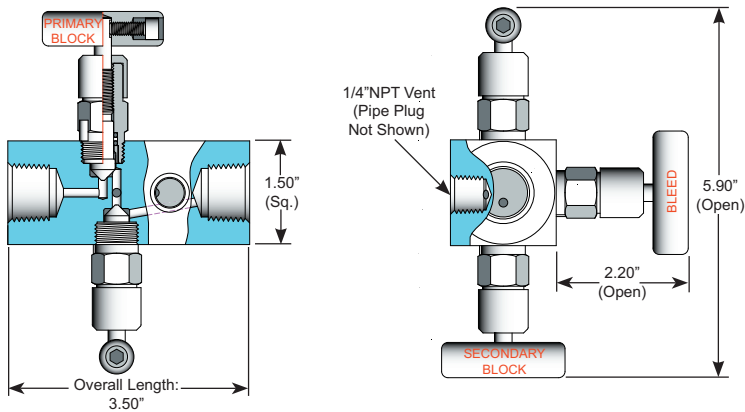
Extended packing life

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

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

# P2DBB™ Double Block and Bleed Valve Technical Specifications

## FNPT x FNPT Configuration with O-ring Bonnets

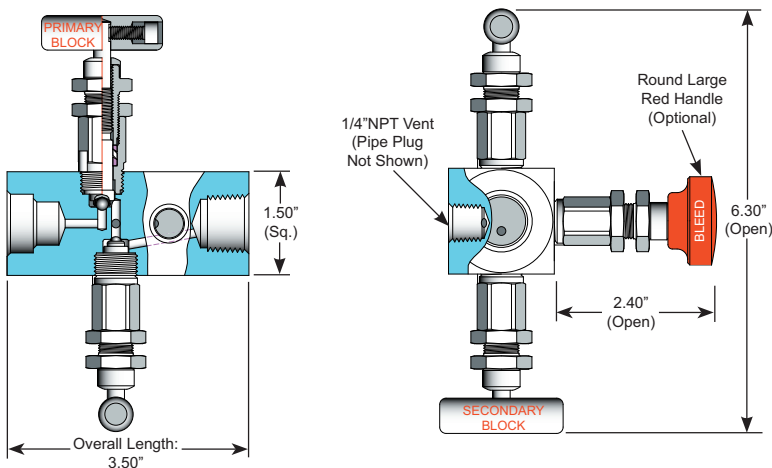


### Specifications:

Type: **P2DBB** Valve, Globe Pattern  
 Rating: Up to 6000 psi @ 100°F  
 (41370 kPa @ 38°C)  
 Stem: Needle tip or Ball tip  
 Packing: Viton™ O-ring, Teflon™ or Grafoil™  
 Seat: Integral  
 Handle: Removable  
 Bore Size: 1/8"  
 Inlet Connections: 1/2" NPT to 3/4" NPT, SW or FT  
 (1" for Male NPT, SW Only)  
 Outlet Connections: Same as inlet  
 Vent Port: 1/4" FNPT (includes 1/4" Pipe Plug)  
 Bonnet Lock: Pin or Plate  
 Body Stock: 1.5" sq  
 Weight: 2.5 ~ 2.6 lbs  
 Special Service: O<sub>2</sub> or CL cleaning available\*

\*Other specifications or services may be available

## FSW x FNPT Configuration with Teflon™ Bonnets

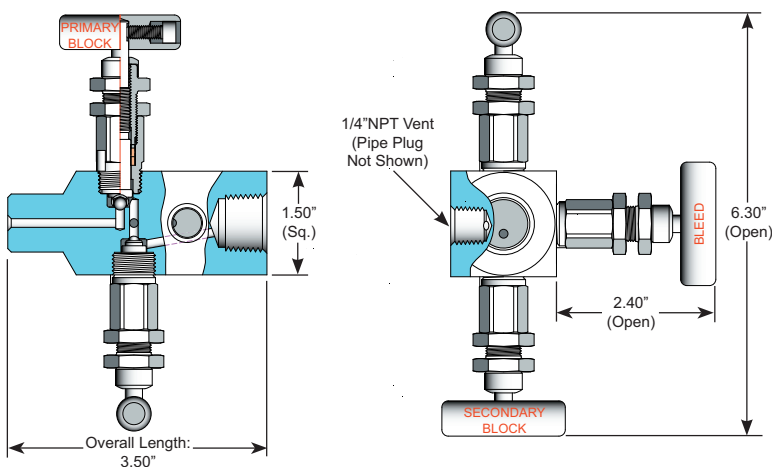


### Specifications:

Type: **P2DBB** Valve, Globe Pattern  
 Rating: Up to 6000 psi @ 100°F  
 (41370 kPa @ 38°C)  
 Stem: Needle tip or Ball tip  
 Packing: Viton™ O-ring, Teflon™ or Grafoil™  
 Seat: Integral  
 Handle: Removable  
 Bore Size: 1/8"  
 Inlet Connections: 1/2" NPT to 3/4" NPT, SW or FT  
 (1" for Male NPT, SW Only)  
 Outlet Connections: Same as inlet  
 Vent Port: 1/4" FNPT (includes 1/4" Pipe Plug)  
 Bonnet Lock: Pin or Plate  
 Body Stock: 1.5" sq  
 Weight: 2.6 ~ 2.7 lbs  
 Special Service: O<sub>2</sub> or CL cleaning available\*

\*Other specifications or services may be available

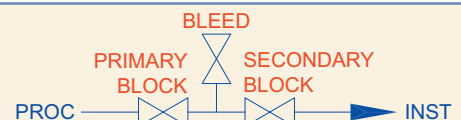
## MSW x FNPT Configuration with Grafoil™ Bonnets



### Specifications:

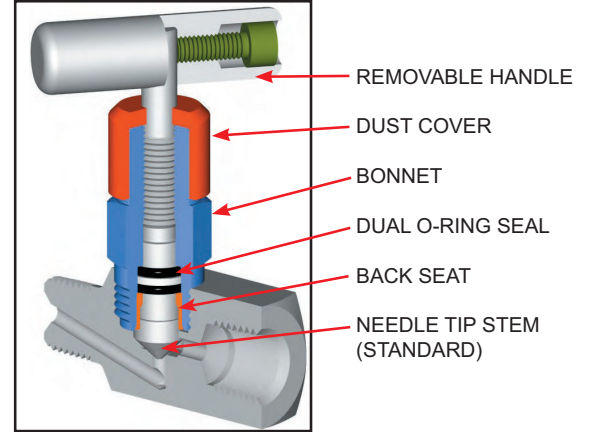
Type: **P2DBB** Valve, Globe Pattern  
 Rating: Up to 6000 psi @ 100°F  
 (41370 kPa @ 38°C)  
 Stem: Needle tip or Ball tip  
 Packing: Viton™ O-ring, Teflon™ or Grafoil™  
 Seat: Integral  
 Handle: Removable  
 Bore Size: 1/8"  
 Inlet Connections: 1/2" NPT to 3/4" NPT, SW or FT  
 (1" for Male NPT, SW Only)  
 Outlet Connections: Same as inlet  
 Vent Port: 1/4" FNPT (includes 1/4" Pipe Plug)  
 Bonnet Lock: Pin or Plate  
 Body Stock: 1.5" sq  
 Weight: 2.5 ~ 2.6 lbs  
 Special Service: O<sub>2</sub> or CL cleaning available\*

\*Other specifications or services may be available



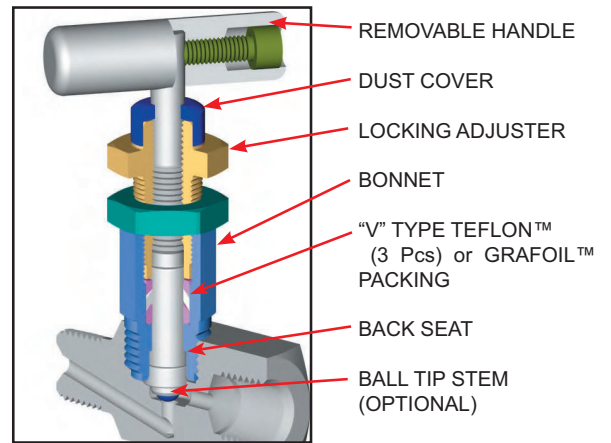
### O-Ring Bonnet Assembly

Standard Materials					
Valve	Body	Bonnet	Stem	Ball	Packing
CS	ASTM A108CS	ASTM A108CS	ASTM A582 303SS	SEE OPTION CODES ON PAGE 4	Dual Viton™ O-ring with Teflon™ backup ring
SC	ASTM A105CS	ASTM A182 316SS	ASTM A182 316SS		
316SS	ASTM A182 316SS	ASTM A182 316SS	ASTM A182 316SS		



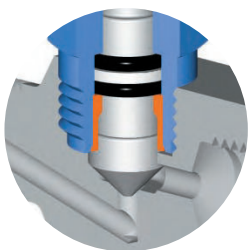
### Teflon™ or Grafoil™ Bonnet Assembly

Standard Materials					
Valve	Body	Bonnet	Stem	Ball	Packing
CS	ASTM A108CS	ASTM A108CS	ASTM A582 303SS	SEE OPTION CODES ON PAGE 4	Teflon™ and Grafoil™
SC	ASTM A105CS	ASTM A182 316SS	ASTM A182 316SS		
316SS	ASTM A182 316SS	ASTM A182 316SS	ASTM A182 316SS		

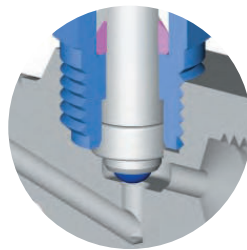


NOTE: Optional low torque Grafoil™ available (G4 Packing Code)

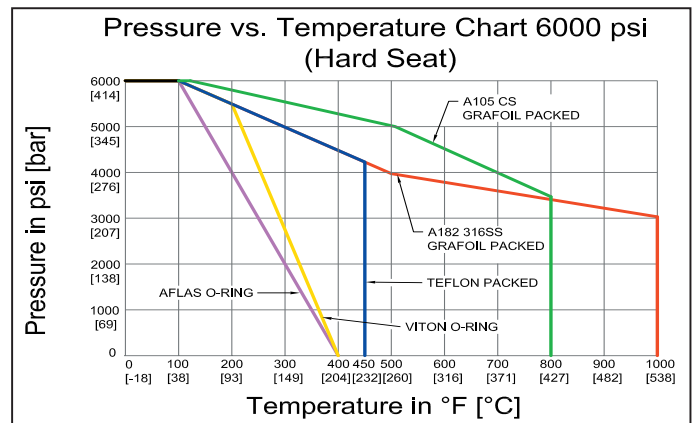
### Stem and Seat Configurations



Mini Needle Tip  
(Standard)



Mini Ball Tip  
(Optional)



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.

# P2DBB™ Double Block and Bleed Valve Model Numbering System

Phoenix	Orifice Size	Type	Inlet Size	Inlet Type	Outlet Size	Outlet Type	Material	Packing	Seat	Stem Tip	Option Codes	Description
P	2=1/8"	DBB6M	8=1/2"	F=FNPT	8=1/2"	F=FNPT	SS=ASTM A182 316/316L	A=Aflas™	Integral (leave blank)	Needle Tip Standard (leave blank)	LB	Bonnet Lock
			12=3/4"	M=MNPT	12=3/4"	M=MNPT	SC=ASTM A105 CS**	V=Viton™ (FKM)		B=316SS Ball Tip	CC	Chlorine Clean
			16=1" (Male Only)	MS*=Male Socket weld	16=1" (Male Only)	MS*=Male Socket weld	CS=ASTM A108 CS**	T=Teflon™ (PTFE)		BC=Ceramic Ball Tip	OC	Oxygen Clean
				FS*=Female Socket weld		FS*=Female Socket weld	C5=ASTM A350 LF2	G=Grafoil™		BM=Monel™ Ball Tip	TG	SS Tag
				FT=Female Tube Fitting		FT=Female Tube Fitting	N4=Monel™ 400	G4=Low Torque Grafoil™			SGI	Sour Gas ISO NACE Latest Rev.
							N6=Inconel™ 625				RLR	Round Large Red Aluminum Handle for Bleed (Vent)
							N8=Inconel™ 825				RC	Round Handle C.S.
							N2=Hastelloy™ C276				RS	Round Handle S.S.
EXAMPLE: P2DBB6M8M8FSSV = Phoenix, 1/8" Orifice, Double Block & Bleed Valve, 1/2" MNPT Inlet, 1/2" FNPT Outlet, 316 SS Body, Viton™ O-ring Packing, Integral Seat, Needle Tip Stem												
<b>P</b>	<b>2</b>	<b>DBB6M</b>	<b>8</b>	<b>M</b>	<b>8</b>	<b>F</b>	<b>SS</b>	<b>V</b>				
*For socket weld (SW) connections, specify MS or FS **For code applications, A108 CS is unacceptable, A105 CS must be selected for CS valves.												

## 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

## For further information please contact:

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## Seal and Seat Material Temperature Rating

Code	Description	MIN. TEMP	MAX. TEMP
A	Aflas™	15°F (-10°C)	400°F (204°C)
V	Viton™	-20°F (-29°C)	400°F (204°C)
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.

## Distributor / Representative:

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