



**P2DBB™**

# Double Block & Bleed Valve

1/8" Bore Double Block and Bleed Valve



Parker Phoenix Precision Brand

## Table of Contents

Overview, Features and Benefits ..... 3

Technical Specifications ..... 4

Bonnet Characteristics ..... 5

Stem and Seat Characteristics ..... 6

Model Numbering System ..... 7



## P2DBB™: 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.

Parker 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.

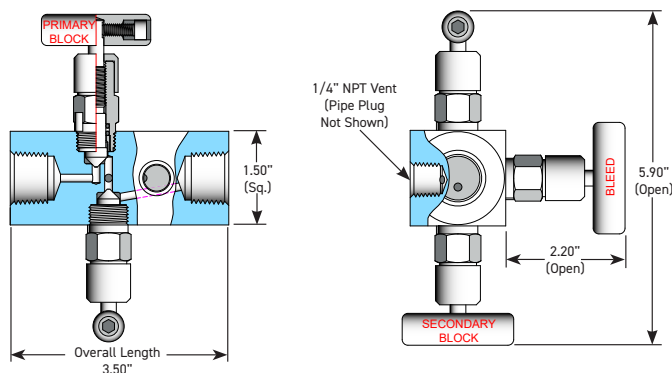
The main features of these DBB valves are dual valve bonnets, robust stems, bubble tight seals, and pinned bonnets. The P2DBB also features primary and secondary valve blocks and a bleed valve designed with a 1/4" FNPT vent/calibration port.



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

## P2DBB™: Technical Specifications

### FNPT x FNPT Configuration with O-ring Bonnets

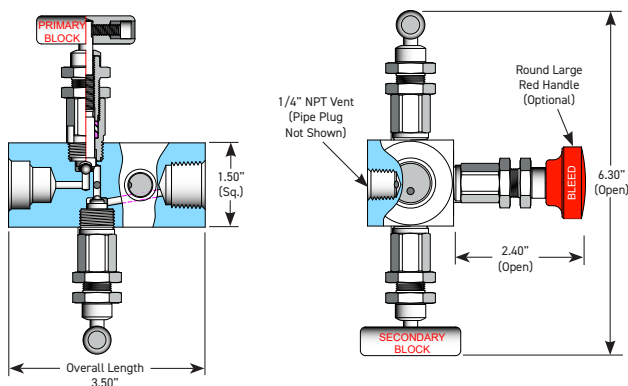


#### Specifications:

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: O2 or CL cleaning available\*

\*Other specifications or services may be available.

### FSW x FNPT Soft Seat with Teflon™ Bonnets

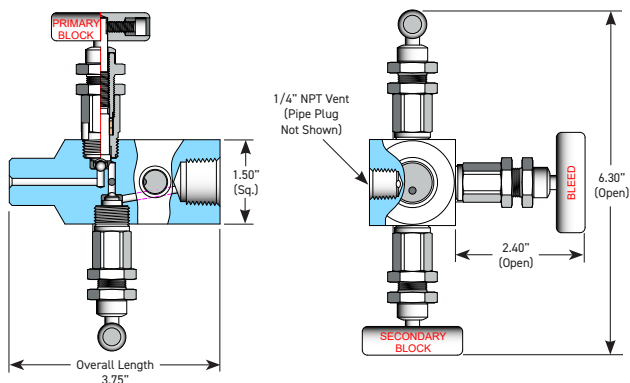


#### Specifications:

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: O2 or CL cleaning available\*

\*Other specifications or services may be available.

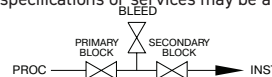
### MSW x FNPT Configuration with Grafoil™ Bonnets



#### 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: O2 or CL cleaning available\*

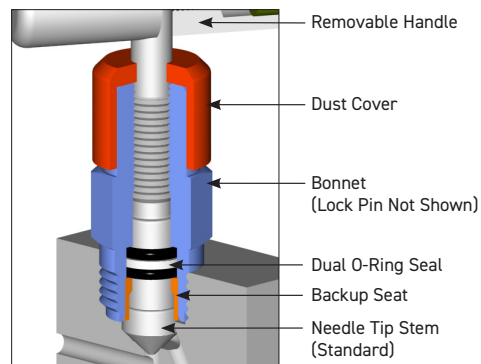
\*Other specifications or services may be available.



## P2DBB™: Bonnet Characteristics

### O-Ring Bonnet Assembly

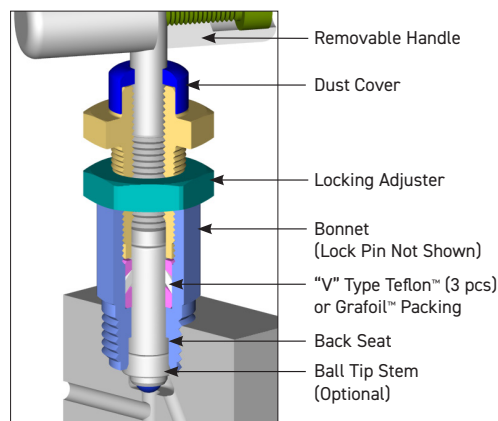
Standard Materials					
Valve	Body	Bonnet	Stem	Ball	Packing
CS	ASTM A108CS	ASTM A108CS	ASTM A582 303SS	SEE OPTION CODES ON PAGE 6	Dual Viton™ O-ring with Teflon™ backup ring
SC	ASTM A105CS	ASTM A182 316SS	ASTM A182 316SS		
316SS	ASTM A182 316SS	ASTM A182 316SS	ASTM A182 316SS		



### Teflon™ or Grafoil™ Bonnet Assembly

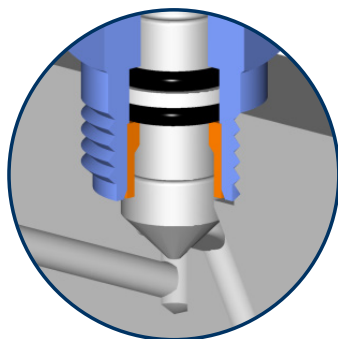
Standard Materials					
Valve	Body	Bonnet	Stem	Ball	Packing
CS	ASTM A108CS	ASTM A108CS	ASTM A582 303SS	SEE OPTION CODES ON PAGE 6	Teflon™ and Grafoil™
SC	ASTM A105CS	ASTM A182 316SS	ASTM A182 316SS		
316SS	ASTM A182 316SS	ASTM A182 316SS	ASTM A182 316SS		

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

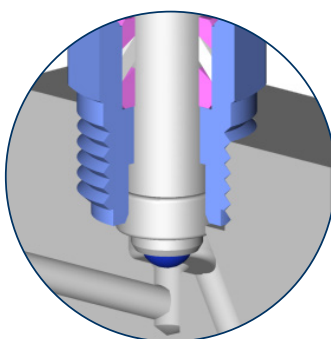


## P2DBB™ : Stem Tips and Seat Characteristics

### Stem Tips

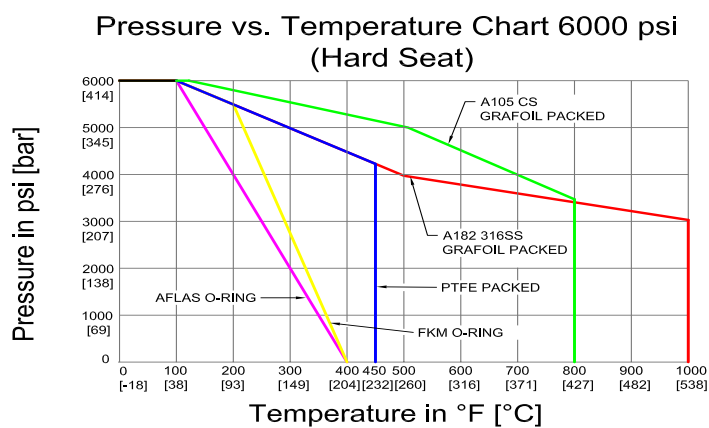


Mini Needle Tip  
(Standard)



Mini Ball Tip  
(Optional)

### Pressure vs. Temperature (Hard Seat)



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™: 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 CS
							N2 Hastelloy™ C276				RS	Round Handle SS
EXAMPLE: <b>P2DBB6M8M8FSSV</b> = Phoenix, 1/8" Orifice, Double Block and Bleed Valve, 1/2" MNPT Inlet, 1/2" FNPT Outlet, 316 SS Body, Viton™ O-ring Packing, Integral Seat, Needle Tip Stem												
P	2	DBB6M	8	M	8	F	SS	V				

\*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, Parker 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 for all 316SS valves and A105CS body/316SS bonnet (SC Material Code)

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) (CS Body)	-70°F (-56°C) -70°F (-56°C)	1000°F (537°C) 800°F (427°C)
<b>Note:</b> Grafoil™ is suitable for services in excess of 1000°F in a non-oxidizing environment.			

Parker Hannifin Corporation  
**Instrumentation Products Division**  
1005 A Cleaner Way  
Huntsville, AL 35805 USA  
phone 256 881 2040  
fax 256 881 5072  
[www.parker.com/ipd](http://www.parker.com/ipd)

Parker Phoenix P2DBB™ 1/8" Bore Double Block and Bleed Valve  
**PPL-CAT-P2DBB-001 May 2024**

© 2024 Parker Hannifin Corporation



[parker.com/ipd](http://parker.com/ipd)