PHOENIX™ PRECISION

P6GDBB-NR™ SEVERE SERVICE DOUBLE BLOCK AND BLEED VALVE

DOUBLE BLOCK AND BLEED VALVE - SEVERE SERVICE

3/8” Bore Double Block and Bleed Valve

The double block and bleed valve (DBB) is designed for high temperature and severe service applications. This globe pattern provides maximum shut-off using a ceramic ball tip stem on the process valve and a needle tip stem on the bleed valve. Phoenix offers this valve in a variety of construction materials, end connections and configurations, including configurations with multiple cross ports. The DBB provides an excellent transition between process piping and instrumentation. The P6GDBB functions in applications that monoflange valves and DBB ball valves cannot due to plugging and/or high temperatures.

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.
High temperature/pressure qualification tests of design	Complies with the requirements of EEMUA Pub. 182
Extended body and high temperature bonnets	Allows for welded installation and localize PWHT without disassembling valve
Metal body-to-bonnet seals are in compression, not tension. Bonnet design has additional top bonnet seal.	Mitigates risk of stress cracking
Integral block and bleed	Minimizes number of leak points in valve
Non-rotating stem design with 8 RMS finish	Extended packing life
Non-rotating stem design with ceramic ball tip	Provides best sealing ability on stem and valve seat and longer service life in abrasive processes
Grafoil™ packing (Teflon™ free)	Fire safe design to API 6FA
Top bonnet seal Grafoil™	Protects against corrosion attacks of bonnet threads from chlorides and other contaminants
Pressure component materials sourced from the US, Canada or Europe	Reliable material traceability. MTR’s provided with every order for pressure containing components.

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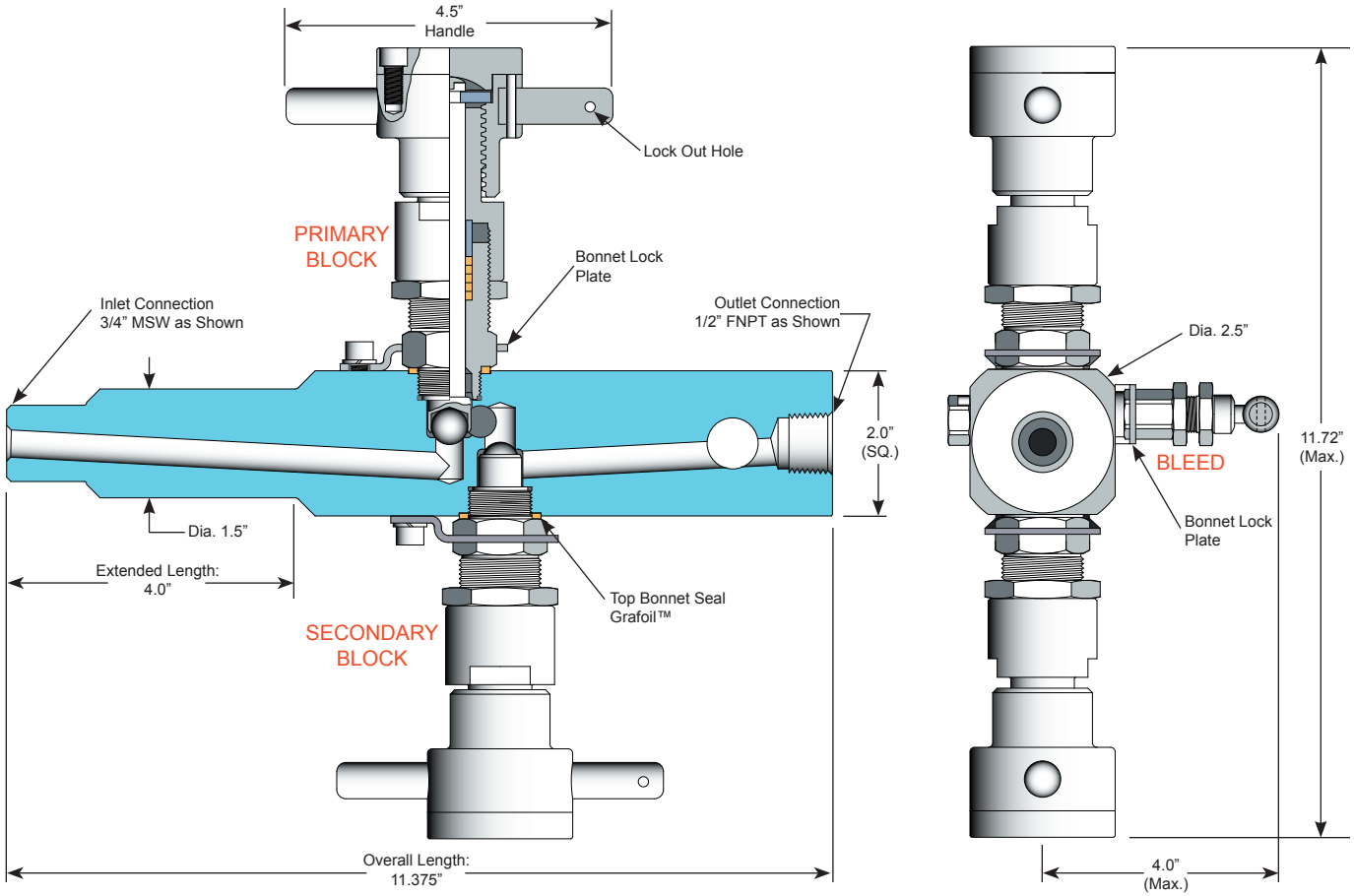
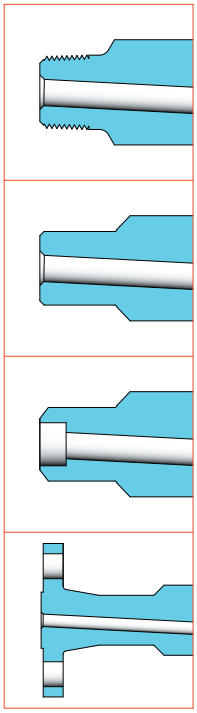
P6GDBB-NR™ SEVERE SERVICE VALVE
Technical Specifications



NOTE: DBB valves supplied with four 1/2" MNPT pipe plugs liquid nitrided, two gusset bolts with lock washers and one stainless steel tag with wire, not shown above.

FIG. 1
INLET CONNECTION TYPE



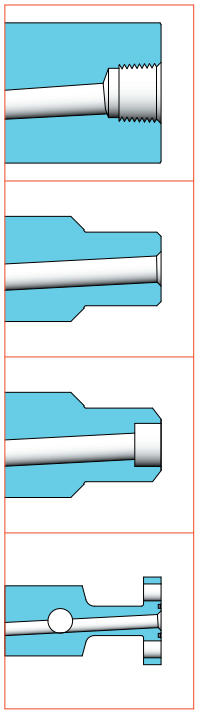
-M
MALE NPT
INLET
1/2" ~ 1"

-MS
MALE SOCKET
WELD INLET
1/2" ~ 2"

-BW
BUTT WELD
INLET
1/2" ~ 2"

-F
FLANGE INLET
3/4" - 2"
CLASS 150
- CLASS 600

FIG. 2
OUTLET CONNECTION TYPE



-F
FEMALE NPT
OUTLET
1/2" ~ 1"

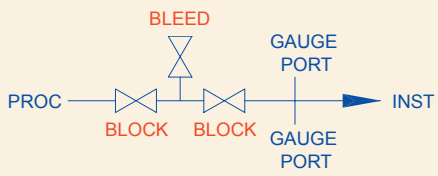
-MS
MALE SOCKET
WELD OUTLET
1/2" ~ 2"

-BW
BUTT WELD
INLET
1/2" ~ 2"

-IF
INTEGRAL
FLANGE
2-BOLTS

Specifications:

Type: **P6GDBB**, DBB Gauge Valve
Globe Pattern
Rating: Up to 6000 psi @ 100ºF
(41370 kPa @ 38°C)
Stem: Non-rotating Ceramic Ball Tip Stems for both Blocks and Needle Tip for Bleed
Packing: Grafoil™
Seat: Integral
Handle: Non-removable
Bore Size: 3/8" for Primary, 1/8" for Bleed
Inlet Connections: See Fig. 1
Outlet Connections: See Fig. 2
Vent Port: 1/2" FNPT (includes 1/2" Pipe Plug)
Bonnet Lock: Standard
Body Stock: 2.5" Round Bar
Weight: 14.5 lbs



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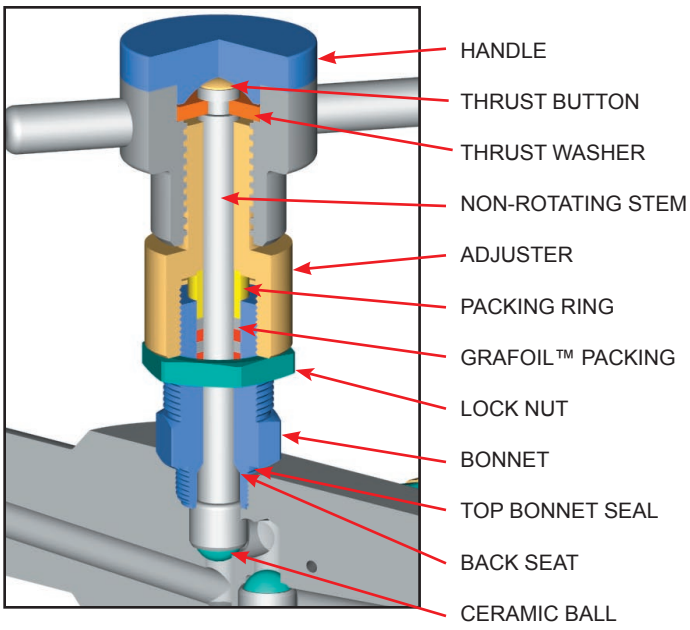
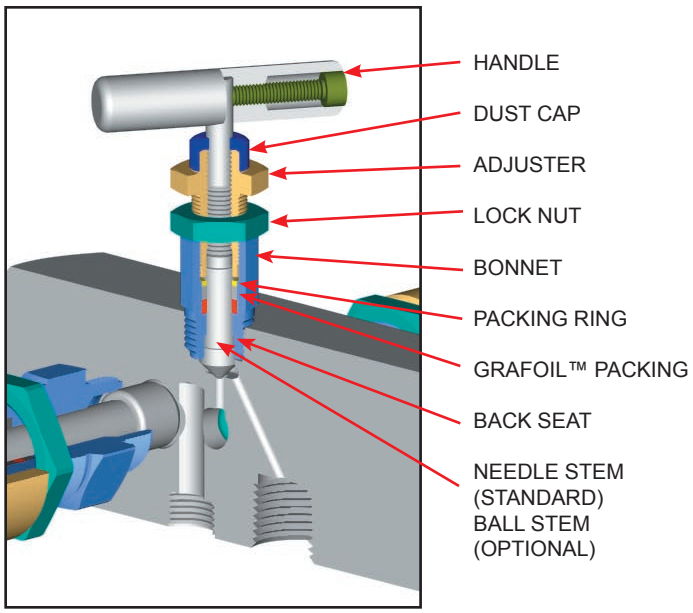
P6GDBB-NR™ SEVERE SERVICE VALVE
Bonnet, Stem and Seat Characteristics

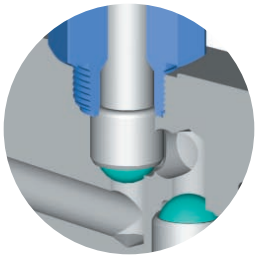
Block Bonnet Assembly



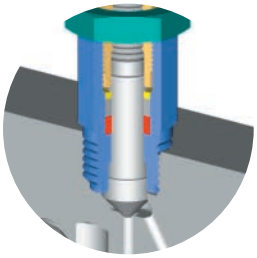
Bleed Bonnet Assembly



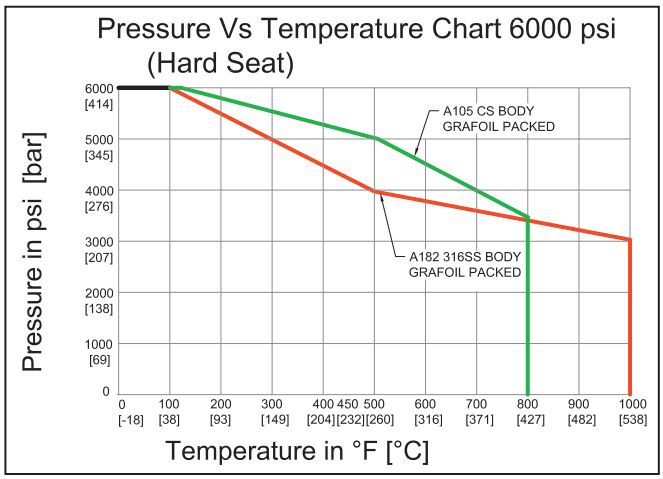
Stem and Seat Configurations



Non-rotating stem with ceramic ball tip



Needle tip stem standard



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.

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 for all 316SS valves and A105CS body/316SS bonnet (SC Material Code)

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P6GDBB-NR™ SEVERE SERVICE VALVE
Model Numbering System

PHOENIX	ORIFICE SIZE	TYPE	INLET SIZE	INLET TYPE	SCHEDULE (for butt-weld inlet)	OUTLET SIZE	OUTLET TYPE	BODY MATERIAL	TRIM MATERIAL	PACKING	STEM TIP	STEM TYPE	OPTIONAL STEM MATERIAL
P	6=6/16" =3/8"	GDBB6H	8=1/2"	M=Male NPT	40S= SCH 40S	8=1/2"	F=Female NPT	SS=ASTM A182 F316/316L	same as body	G= Grafoil™	BC= Ceramic Ball	NR=Non -Rotating	
			12=3/4"	MS=Male socket weld	80S= SCH 80S	12=3/4"	MS=Male socket weld	S317=ASTM A182 F317/317L	same as body		B= 316SS Ball		
			16=1"	BW=Male Butt-weld	160S= SCH 160S	16=1"	BW=Male Butt-weld	S310=ASTM A182 F310H	same as body				
			*75=3/4"	R150F=150# Raised Face Flange	XXH= SCH XXH		IF=Integral 2 Bolt Flange	S321=ASTM A182 F321SS	same as body				
			*100=1"	R300F=300# Raised Face Flange				S347=ASTM A182 F347SS	same as body				
			*150=1.5"	R600F=600# Raised Face Flange				C5=ASTM A350 LF2	316SS				
			*200=2"					SC=ASTM A105	316SS				S410 =410SS
								C4=ASME SA105	316SS				
								S22=DUPLEX 2205	same as body				
								F5=A182 F5	Stem - 316SS Bonnet -same as body				
								F9=A182 F9					
								F11=A182 F11					
								F22=A182 F22					
								N6=Inconel™ 625	same as body				
								N8=Inconel™ 825	same as body				
								N20=Alloy 20	same as body				
e.g.: P6GDBB6H12MS8FSSGBC-NR = 3/8" Bore, 3/4" Male Socket Weld Inlet, 1/2" FNPT Outlet, 316SS Body, Grafoil™ Packing, Ceramic Ball Tip, Non-Rotating Stem													
P	**6**	**GDBB6H**	**12**	**MS**		**8**	**F**	**SS**		**G**	**BC**	**NR**	
e.g.: P6GDBB6H12BWXXHIFF11GBC-NR = 3/8" Bore, 3/4" BW(XXH) Inlet, Integral 2 Bolt Flange Outlet, F11 Body, Grafoil™ Packing, Ceramic Ball Tip, Non-Rotating stem													
P	**6**	**GDBB6H**	**12**	**BW**	**XXH**		**IF**	**F11**		**G**	**BC**	**NR**	
e.g.: P6GDBB6H100R300F8FSCGBC-NR = 3/8" Bore, 1" 300# RF Flange Inlet, 1/2" FNPT Outlet, A105CS Body, Grafoil™ Packing, Ceramic Ball Tip, Non-Rotating Stem													
P	**6**	**GDBB6H**	**100**	**R300F**		**8**	**F**	**SC**		**G**	**BC**	**NR**	
* Only for raised face flange inlet.													

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