P3N6H™ AND P3NA6H™ NEEDLE VALVE

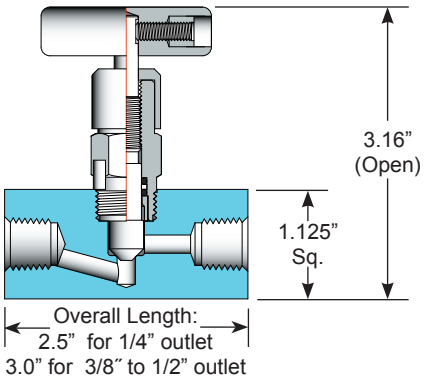
NEEDLE VALVE

3/16” Bore Needle Valve

The P3N6H and P3NA6H needle valves are constructed from bar stock and feature a robust stem. Parker’s valve design assures a bubble tight seal in a variety of conditions with options for materials and configurations to meet most customer requirements. Bonnets are pinned for security. The globe-pattern provides maximum shut-off, with a variety of stem tips. Parker’s mini bonnets feature packing below the threads to prevent process contamination. All Parker valves are built and tested in accordance with MSS-SP105.

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 PTFE packing	30-40% less operational torque and less frequent packing adjustments than traditional PTFE 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.

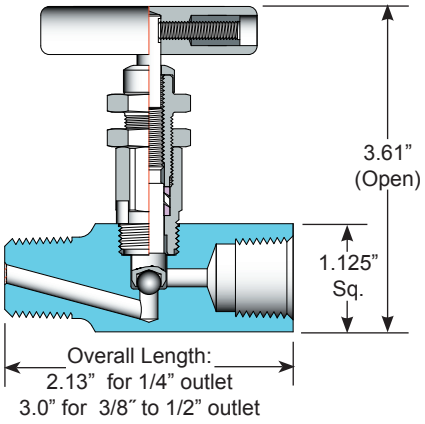
O-Ring Bonnet Assembly



Specifications:
Type: **P3N6H** Valve, Globe Pattern
Rating: Up to 6000 psi @ 100ºF (41370 kPa @ 38°C)
Stem: Needle tip, Ball tip
Packing: FKM or Aflas™ O-ring
Seat: Integral
Handle: Removable
Bore Size: 3/16"
Inlet Connections: 1/4" to 1/2" NPT, SW or FT (3/4" for male NPT, SW Only)
Outlet Connections: 1/4" to 1/2"NPT, SW or FT
Bonnet Lock: Pin or Plate
Body Stock: 1.125" sq
Weight: 0.6 - 0.9 lbs
Special Service: O_2 or Cl cleaning available*

*Other specifications or services may be available.

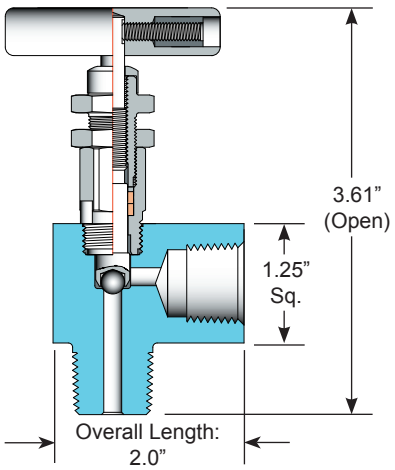
Packed Bonnet Assembly



Specifications:
Type: **P3N6H** Valve, Globe Pattern
Rating: Up to 6000 psi @ 100ºF (41370 kPa @ 38°C)
Stem: Needle tip, Ball tip
Packing: PTFE or Grafoil™
Seat: Integral
Handle: Removable
Bore Size: 3/16"
Inlet Connections: 1/4" to 1/2"NPT, SW or FT (3/4" for male NPT, SW Only)
Outlet Connections: 1/4" to 1/2"NPT, SW or FT
Bonnet Lock: Pin or Plate
Body Stock: 1.125" sq
Weight: 0.7 - 1.0 lbs
Special Service: O_2 or Cl cleaning available*

*Other specifications or services may be available.

Angle Body Assembly



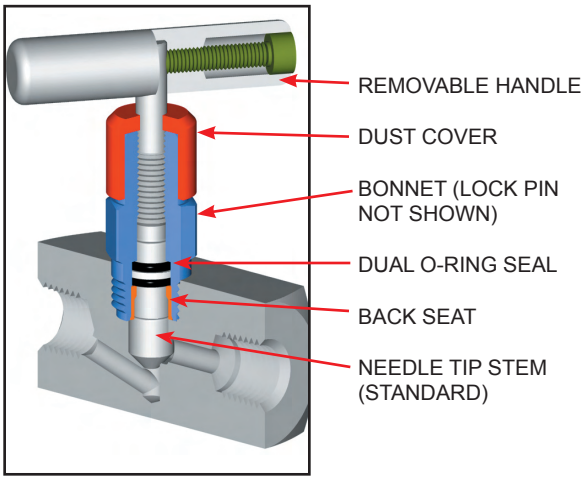
Specifications:
Type: **P3NA6H** Valve, Globe Pattern
Rating: Up to 6000 psi @ 100ºF (41370 kPa @ 38°C)
Stem: Needle tip, Ball tip
Packing: FKM, PTFE or Grafoil™
Seat: Integral
Handle: Removable
Bore Size: 3/16"
Inlet Connections: 1/4" to 1/2"NPT, SW or FT (3/4" for male NPT, SW Only)
Outlet Connections: 1/4" to 1/2"NPT, SW or FT
Bonnet Lock: Pin or Plate
Body Stock: 2.0" x 1.25" Flat Bar
Weight: 0.7 - 1.0 lbs
Special Service: O_2 or Cl cleaning available*

*Other specifications or services may be available.

P3N6H™ AND P3NA6H™ Needle Valve
Bonnet, Stem and Seat Characteristics

O-Ring Bonnet Assembly

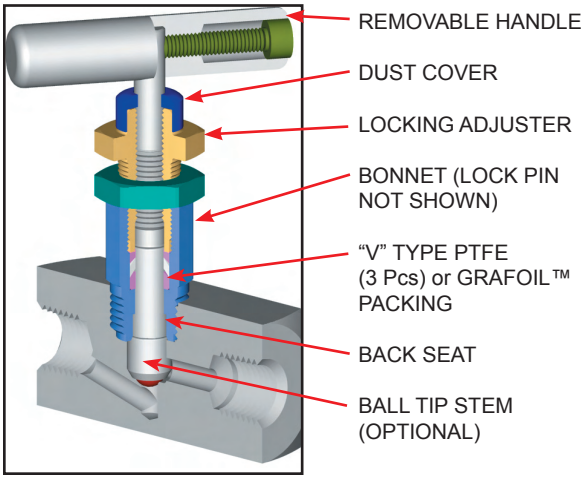
Standard Materials					
Valve	Body	Bonnet	Stem	Ball	Packing
CS	ASTM A108CS	ASTM A108CS	ASTM A582 303SS	SEE OPTION CODES ON PAGE 4	Dual FKM O-ring with PTFE backup ring
SC	ASTM A105CS	ASTM A182 316SS	ASTM A182 316SS		
316SS	ASTM A182 316SS	ASTM A182 316SS	ASTM A182 316SS		



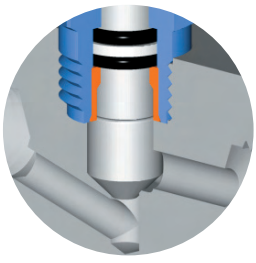
Packed Bonnet Assembly

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

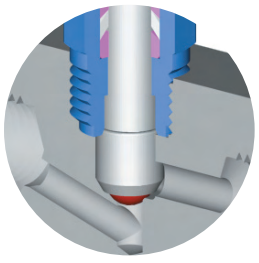
NOTE: Optional low torque Grafoil™ available (G4 Packing Code)



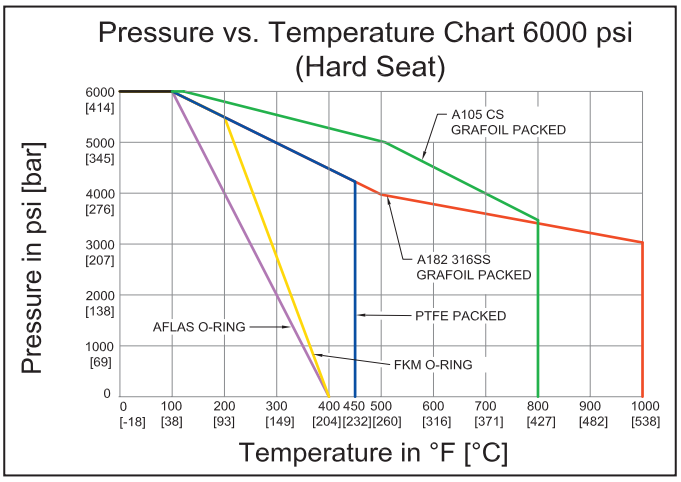
Stem and Seat Configurations



Needle Tip (Standard)



Ball Tip (Optional)



Note: Body material specifications based on ASME B16.34 - 2013. Packing material ratings based on manufacturer's specifications. Approximations only. Parker does not represent these values as finite. They are provided only as representative values.

P3N6H™ AND P3NA6H™ Needle Valve
Model Numbering System

Parker	Orifice Size	Type	Inlet Size	Inlet Type	Outlet Size	Outlet Type	Material	Packing	Seat	Stem Tip
P	3=3/16”	N6H	4=1/4”	F=FNPT	4=1/4”	F=FNPT	SS=ASTM A182 316/316L	A=Aflas™	Integral (leave blank)	Needle Tip Standard (leave blank)
		NL6H***	6=3/8”	M=MNPT	6=3/8”	M=MNPT	SC=ASTM A105 CS**	V=FKM		B=316SS Ball Tip
		NXL6H***	8=1/2”	MS*=Male Socket weld	8=1/2”	MS*=Male Socket weld	CS=ASTM A108 CS**	T=PTFE		BC=Ceramic Ball Tip
		NA6H= Angle Body	12=3/4” (Male only)	FS*=Female Socket weld		FS*=Female Socket weld	C5=ASTM A350 LF2	G=Grafoil™		BM=Monel™ Ball Tip
				FT=Female Tube Fitting		FT=Female Tube Fitting	N4=Monel™ 400	G4=Low Torque Grafoil™		
							N6=Inconel™ 625			
							N8=Inconel™ 825			
							N2=Hastelloy™ C276			
EXAMPLE: P3N6H4M4FCSV = Parker, 3/16” Orifice, N6H, 1/4” MNPT Inlet, 1/4” FNPT Outlet, A108 CS Body, FKM O-ring, Integral Seat, Needle Tip Stem										
P	**3**	**N6H**	**4**	**M**	**4**	**F**	**CS**	**V**		

*For socket weld (SW) connections, specify MS or FS (For hard seat models only)
**For code applications, A108 CS is unacceptable, A105 CS must be selected for CS valves.
***__NL6H__ for extended length valve body, __NXL6H__ for extra extended length valve body, consult Parker Precision for details.

Option Codes	Description
LB	Bonnet Lock
CC	Chlorine Clean
OC	Oxygen Clean
TG	SS Tag
SGI	Sour Gas ISO NACE Latest Rev.
RA (R)(B)	Round Handle Aluminum (Red)(Blue)
RC	Round Handle C.S.
RS	Round Handle S.S.
PM	Panel Mount
N4	Monel™ 400 Stem
N5	Monel™ 500 Stem
N6	Inconel™ 625 Stem
N8	Inconel™ 825 Stem
N2	Hastelloy™ C276 Stem

Use with Confidence, Parker 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	FKM	-20°F (-29°C)	400°F (204°C)
T	PTFE	-65°F (-54°C)	450°F (232°C)
G	Grafoil™		
	(SS Body)	-70°F (-56°C)	1000°F (537°C)
	(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.			

For further information please contact:

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Certified System™ SAI GLOBAL ISO 9001 Quality

Distributor / Representative: