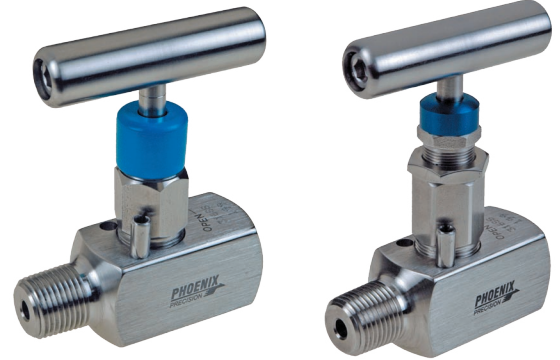


10,000 PSI NEEDLE VALVE

3/16" Bore 10,000 psi Needle Valve

Phoenix's certified 10,000 psi needle valve is proof tested to 20,000 psi and burst tested to 53,000 psi without yield, as per ASME Section VIII, MSS SP-99 and MSS SP-105. These valves feature packing below the threads, back seating capability, blowout proof stems and large 'T' handles for comfort and easy operation.



Special Features

Proof tested to 20,000 psi, burst tested to 53,000 psi without yeild

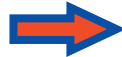


Benefits

Certified 10,000 psi valve rating, CRN No. 0C06740.2

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



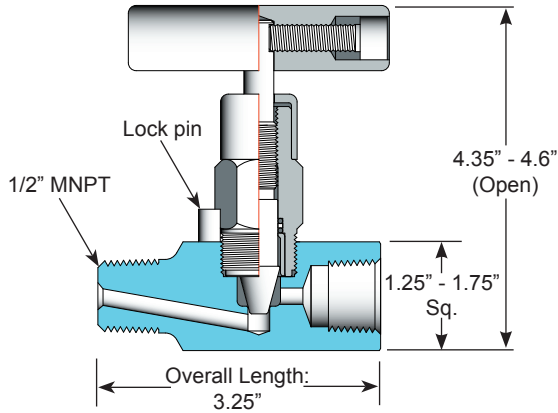
30-40% less operational torque and less frequent packing adjustments than traditional Teflon™ packed valves

Pressure component materials sourced from the US, Canada or Europe



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

O-Ring Bonnet Assembly

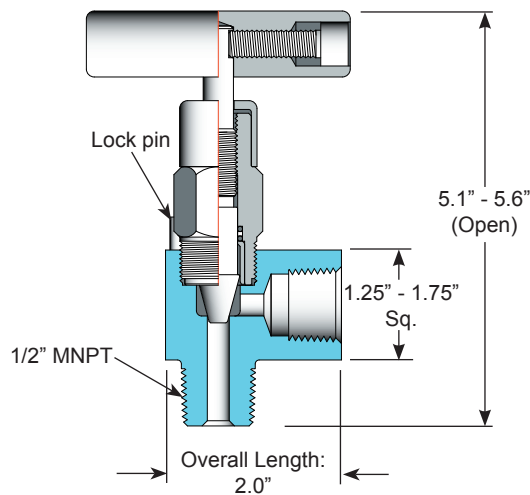


Specifications:

Type: **P3N10H** Valve, Globe Pattern
 Rating: Up to 10,000 psi @ 100°F (68950 kPa @ 38°C)
 Stem: Needle tip (Standard), Ball tip (Optional)
 Packing: Viton™, Aflas™ O-ring or Teflon™
 Seat: Integral
 Handle: Removable
 Bore Size: 3/16"
 Inlet Connections: 1/4" to 3/4"NPT, 1" for male only
 Outlet Connections: 1/4" to 3/4"NPT
 Bonnet Lock: Pin or Plate
 Body Stock: 1.25" - 1.75" sq
 Weight: 1.1 - 3.3 lbs
 Special Service: O₂ or CL cleaning available*

*Other specifications or services may be available.

Angle Body Assembly

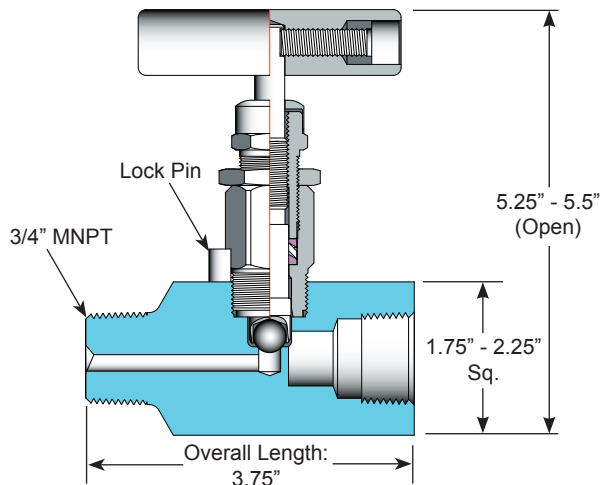


Specifications:

Type: **P3NA10H** Valve, Globe Pattern
 Rating: Up to 10,000 psi @ 100°F (68950 kPa @ 38°C)
 Stem: Needle tip (Standard), Ball tip (Optional)
 Packing: Viton™, Aflas™ O-ring or Teflon™
 Seat: Integral
 Handle: Removable
 Bore Size: 3/16"
 Inlet Connections: 1/4" to 3/4"NPT
 Outlet Connections: 1/4" to 3/4"NPT
 Bonnet Lock: Pin or Plate
 Body Stock: 2.0" - 2.5" Flat bar
 Weight: 1.1 - 2.1 lbs
 Special Service: O₂ or CL cleaning available*

*Other specifications or services may be available.

Packed Bonnet Assembly



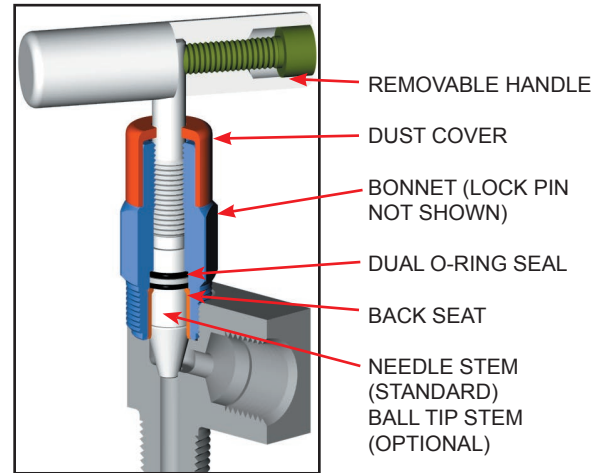
Specifications:

Type: **P3N10H** Valve, Globe Pattern
 Rating: Up to 10,000 psi @ 100°F (68950 kPa @ 38°C)
 Stem: Needle tip (Standard), Ball tip (Optional)
 Packing: Viton™, Aflas™ O-ring or Teflon™
 Seat: Integral
 Handle: Removable
 Bore Size: 3/16"
 Inlet Connections: 1/4" to 1" NPT
 Outlet Connections: 1/4" to 1" NPT
 Bonnet Lock: Pin or Plate
 Body Stock: 1.75" - 2.25" sq
 Weight: 1.1 - 3.9 lbs
 Special Service: O₂ or CL cleaning available*

*Other specifications or services may be available.

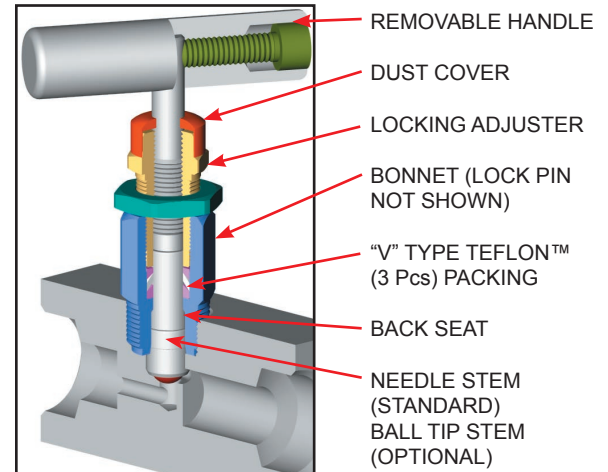
O-Ring Bonnet Assembly

| 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 | | |

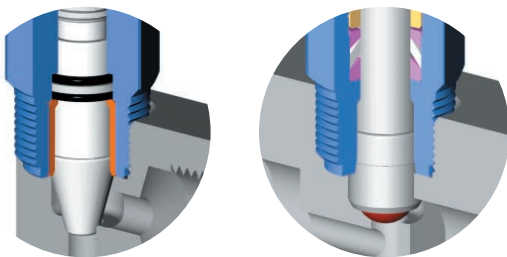


Packed Bonnet Assembly

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

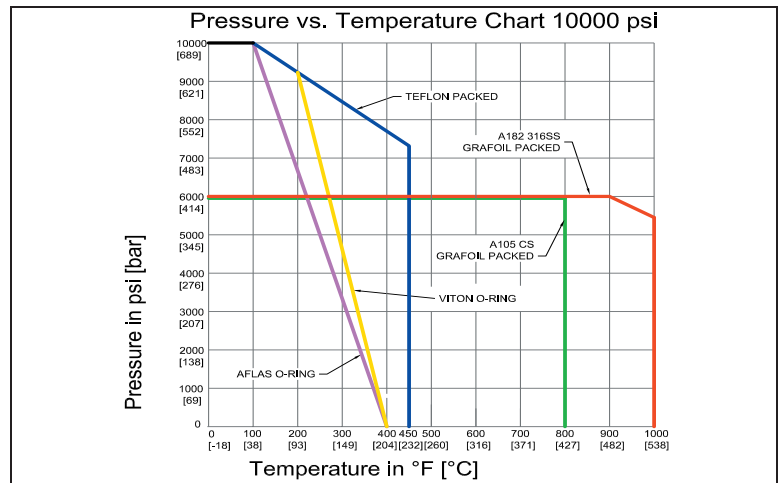


Stem and Seat Configurations



Needle Tip (Standard)

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.

| Phoenix | Orifice Size | Type | Inlet Size | Inlet Type | Outlet Size | Outlet Type | Material | Packing | Seat | Stem Tip | Option Codes | Description |
|---|--------------|-------------------------|------------|------------|-------------|-------------|-----------------------------|---------------------|---------------------------|---|--------------|----------------------------------|
| P | 3=3/16" | N10H | 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) | LB | Bonnet Lock |
| | | NL10H** | 6=3/8" | M=MNPT | 6=3/8" | M=MNPT | SC=ASTM A105 CS* | V=Viton™ (FKM) | | B=316SS Ball Tip | CC | Chlorine Clean |
| | | NXL10H** | 8=1/2" | | 8=1/2" | | CS=ASTM A108 CS* | T=Teflon™ (PTFE) | | BC=Ceramic Ball Tip | OC | Oxygen Clean |
| | | NA10H= Angle Body | 12=3/4" | | 12=3/4" | | C5=ASTM A350 LF2 | | | BM=Monel™ Ball Tip | TG | SS Tag |
| | | N10HD= Heavy Duty | 16=1" | | 16=1" | | N4=Monel™ 400 | | | | SGI | Sour Gas ISO NACE Latest Rev. |
| | | | | | | | N6=Inconel™ 625 | | | | N4 | Monel™ 400 Stem |
| | | | | | | | N8=Inconel™ 825 | | | | N5 | Monel™ 500 Stem |
| | | | | | | | N2=Hastelloy™ C276 | | | | N6 | Inconel™ 625 Stem |
| | | | | | | | | | | | N8 | Inconel™ 825 Stem |
| | | | | | | | | | | | N2 | Hastelloy™ C276 Stem |
| EXAMPLE: P3N10H8M8FCSV = Phoenix, 3/16" Orifice, N10H, 1/2" MNPT Inlet, 1/2" FNPT Outlet, A108 CS Body, FKM Packing, Integral Seat, Needle Tip Stem | | | | | | | | | | | | |
| P | 3 | N10H | 8 | M | 8 | F | CS | V | | | | |
| *For code applications, A108 CS is unacceptable, A105 CS must be selected for CS valves. **NL10H for extended length valve body, NXL10H for extra extended length valve body, consult Phoenix Precision for details. | | | | | | | | | | | | |
| Note: This model is available in Grafoil™ packing at a 6000 psi rating. | | | | | | | | | | | | |

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)

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) |

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