



# P2N6M™ / P2NA6M™

## Globe Style Mini Needle Valve

1/8" Bore Globe Style Mini Needle Valve



Parker Phoenix Precision Brand

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## P2N6M™ / P2NA6M™ : 1/8" Bore Globe Style Mini Needle Valve

The mini valve is built using bar stock construction and a robust stem. Parker Phoenix's stem and seat design assures a bubble tight seal.

Bonnets are pinned for security. The globe pattern provides maximum shut-off, with a variety of stem tips, materials and configurations to meet most customer requirements. Parker Phoenix mini bonnets feature packing below the threads to prevent process contamination.

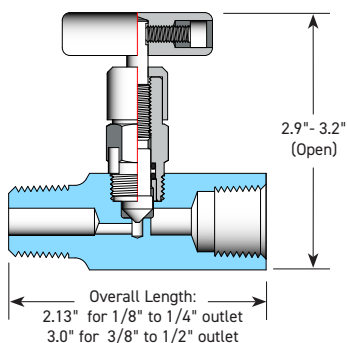
All Parker Phoenix valves are built and tested in accordance with MSS-SP105



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 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.

## P2N6M™ / P2NA6M™: Technical Specifications

### O-ring Bonnet Assembly

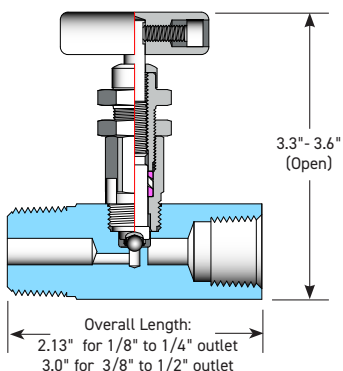


#### Specifications:

Type: P2N6M, Mini-Valve, Globe Pattern  
 Rating: Up to 6000 psi @ 100°F (41370 kPa @ 38°C)  
 Stem: Needle tip, Ball tip or Flat tip  
 Packing: Viton™ or Aflas™ O-ring  
 Seat: Integral, Peek™, Delrin™ or Kel-F™  
 Handle: Removable  
 Bore Size: 1/8"  
 Inlet Connections: 1/8" to 3/4" NPT, SW or FT  
 Outlet Connections: 1/8" to 1/2" NPT, SW or FT  
 Bonnet Lock: Pin or Plate  
 Body Stock: .875" sq to 1.125" sq  
 Weight: 0.6 - 1.3 lbs  
 Special Service: O2 or CL cleaning available\*

\*Other specifications or services may be available.

### Packed Bonnet Assembly

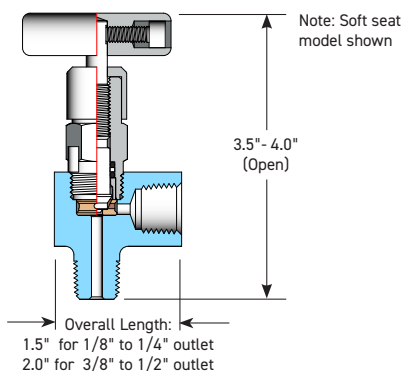


#### Specifications:

Type: P2N6M, Mini-Valve, Globe Pattern  
 Rating: Up to 6000 psi @ 100°F (41370 kPa @ 38°C)  
 Stem: Needle tip, Ball tip or Flat tip  
 Packing: Teflon™ or Grafoil™  
 Seat: Integral, Peek™, Delrin™ or Kel-F™  
 Handle: Removable  
 Bore Size: 1/8"  
 Inlet Connections: 1/8" to 3/4" NPT, SW or FT  
 Outlet Connections: 1/8" to 1/2" NPT, SW or FT  
 Bonnet Lock: Pin or Plate  
 Body Stock: .875" sq to 1.125" sq  
 Weight: 0.7 - 1.4 lbs  
 Special Service: O2 or CL cleaning available\*

\*Other specifications or services may be available.

### Angle Body Assembly



#### Specifications:

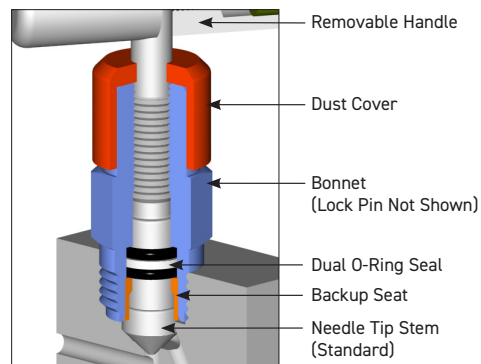
Type: P2NA6M, Mini-Valve, Globe Pattern  
 Rating: Up to 6000 psi @ 100°F (41370 kPa @ 38°C)  
 Stem: Needle tip, Ball tip or Flat tip  
 Packing: Viton™, Teflon™ or Grafoil™  
 Seat: Integral, Peek™, Delrin™ or Kel-F™  
 Handle: Removable  
 Bore Size: 1/8"  
 Inlet Connections: 1/8" to 3/4" NPT, SW or FT  
 Outlet Connections: 1/8" to 1/2" NPT, SW or FT  
 Bonnet Lock: Pin or Plate  
 Body Stock: 1.5" x .875" or 2.0" x 1.25" Flat Bar  
 Weight: 0.7 - 1.4 lbs  
 Special Service: O2 or CL cleaning available\*

\*Other specifications or services may be available.

## P2N6M™ / P2NA6M™: Bonnet Characteristics

### O-Ring Bonnet Assembly

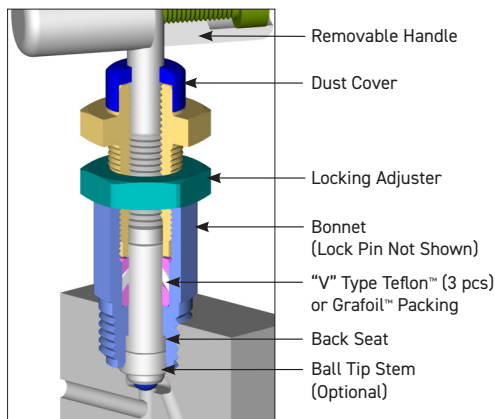
Standard Materials					
Valve	Body	Bonnet	Stem	Ball	Packing
CS	ASTM A108CS	ASTM A108CS	ASTM A582 303SS	SEE OPTION CODES ON PAGE 6	Dual Viton™ O-ring with Teflon™ backup ring
SC	ASTM A105CS	ASTM A182 316SS	ASTM A182 316SS		
316SS	ASTM A182 316SS	ASTM A182 316SS	ASTM A182 316SS		



### Packed Bonnet Assembly

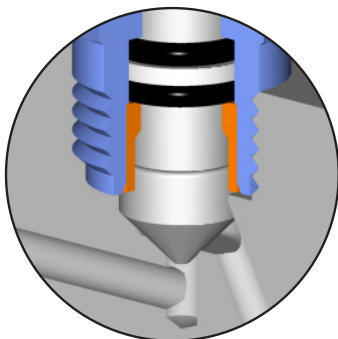
Standard Materials					
Valve	Body	Bonnet	Stem	Ball	Packing
CS	ASTM A108CS	ASTM A108CS	ASTM A582 303SS	SEE OPTION CODES ON PAGE 6	Teflon™ and Grafoil™
SC	ASTM A105CS	ASTM A182 316SS	ASTM A182 316SS		
316SS	ASTM A182 316SS	ASTM A182 316SS	ASTM A182 316SS		

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

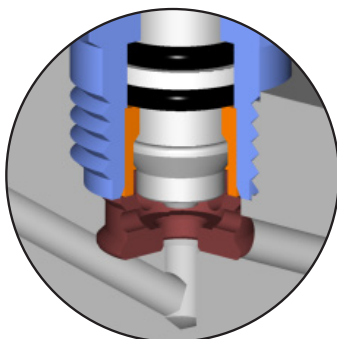


## P2N6M™ / P2NA6M™: Stem and Seat Characteristics

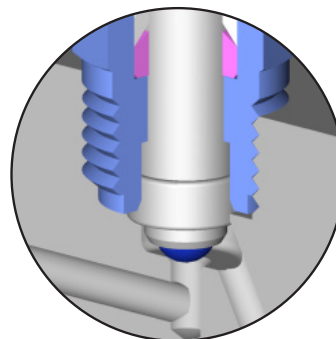
### Stem Tips



Mini Needle Tip  
(Standard)



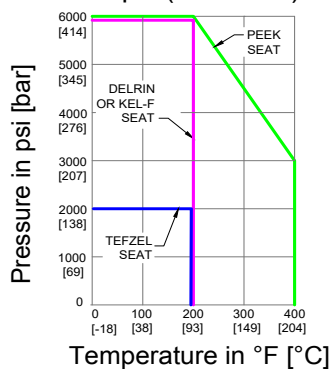
Mini Soft Seat Unique Flat  
Tip Design  
Rated Up to 6000 psi  
(Optional)



Mini Ball Tip  
(Optional)

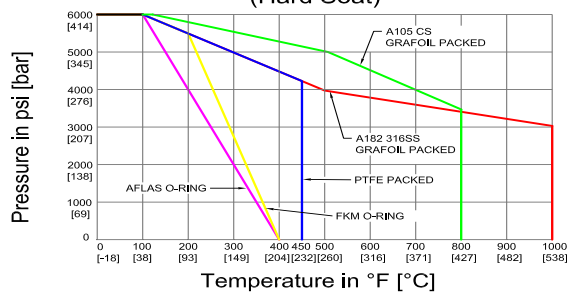
### Pressure vs. Temperature (Soft and Hard Seat)

Pressure vs. Temperature Chart  
6000 psi (Soft Seat)



**Note:** Packing material ratings based on manufacturer's specifications. Approximations only. Parker Phoenix does not represent these values as finite. They are provided only as representative values.

Pressure vs. Temperature Chart 6000 psi  
(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.

## P2N6M™ / P2NA6M™ : 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"	N6M	2 1/8"	F FNPT	2 1/8"	F FNPT	SS ASTM A182 316/316L	A Aflas™	Integral (leave blank)	Needle Tip Standard (leave blank)	LB	Bonnet Lock
		NA6M (Angle Body)	4 1/4"	M MNPT	4 1/4"	M MNPT	SC ASTM A105 CS**	V Viton™ (FKM)	D Delrin™	B 316SS Ball Tip	CC	Chlorine Clean
			6 3/8"	MS* Male Socket weld	6 3/8"	MS* Male Socket weld	CS ASTM A108 CS**	T Teflon™ (PTFE)	P Peek™	BC Ceramic Ball Tip	OC	Oxygen Clean
			8 1/2"	FS* Female Socket weld	8 1/2"	FS* Female Socket weld	C5 ASTM A350 LF2	G Grafoil™	K KEL-F™	BM Monel™ Ball Tip	TG	SS Tag
			12 3/4"	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				RA (R)(B)	Round Handle Aluminum (Red)(Blue)
							N8 Inconel™ 825				RC	Round Handle CS
							N2 Hastelloy™ C276				RS	Round Handle SS
EXAMPLE: <b>P2N6M4M4FCSVD</b> = 1/8" Orifice, 1/4" MNPT Inlet, 1/4" FNPT Outlet, A108 CS Body, FKM Packing, Delrin™ Seat, Needle Tip Stem												
P	2	N6M	4	M	4	F	CS	V	D		PM	Panel Mount
*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)
D	Delrin™	-40°F (-40°C)	200°F (93°C)
P	Peek™	-40°F (-40°C)	400°F (204°C)
K	Kel-F™	-100°F (-73°C)	200°F (93°C)
<b>Note:</b> Grafoil™ is suitable for services in excess of 1000°F in a non-oxidizing environment.			

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Parker Phoenix P2N6M™/ P2NA6M™ - 1/8" Bore Globe Style Mini Needle Valve  
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