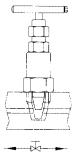
# NEEDLE VALVES

# Pressure Accessories

REOTEMP needle valves are high-quality, instrument grade valves that are designed for reliable operation and extended service life in a variety of environments. Standard features such as non-rotating tips, packing below stem threads, mirror finish packing surfaces and bonnet locking pins provide for smooth, safe, and trouble-free service.



#### **SOFT SEAT**



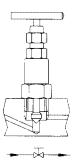
Soft, replaceable Delrin seat. Ideal for fluids containing solid particles or viscous fluids Max. temp: 212°F.

- · Straight thru path
- Roddable for easy cleanout
- · Delrin seat
- · High throughput
- Bidirectional

	PART NUMBERS		
NPT, max pressure @ 100C	CARBON STEEL	316 S.S.	
1/2" MXF, 6000#	G5C166MF	G5SS166MF	
1/2" MXF, 6000#, NACE		G5SS166MF-NC	
1/2" FXF, 6000#	G5C166FF	G5SS166FF	
1/4" MXF, 6000#	G5C144MF	G5SS144MF	
1/4" FXF, 6000#	G5C144FF	G5SS144FF	

Optional seat materials: KEL-F, PEEK, PTFE

### HARD SEAT



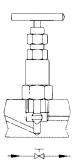
Metal seat and tip for high-pressure isolation of instrument lines. Suitable for liquid or gas service. Max. temp: 460°F.

- · Angled flow path for finer metering
- Metal-to-Metal bubble tight seal

	PART NUMBERS			
NPT, max pressure @ 100C	CARBON STEEL	316 S.S.		
1/2" MXF, 6000#	N2C166MF	N2SS166MF		
1/2" MXF, 10,000#	N2C266MF	N2SS266MF		
1/2" MXF, 10,000#, NACE		N2SS266MF-NC		
1/2" FXF, 6000#	N2C166FF	N2SS166FF		
1/2" FXF, 10,000#	N2C266FF	N2SS266FF		
1/4" MXF, 6000#	N2C144MF	N2SS144MF		
1/4" FXF, 6000#	N2C144FF	N2SS144FF		

Note: for "Block & Bleed" design with integral bleed, substitute B8 for N2.

#### **SOFT TIP**



Soft Delrin tip on metal stem. Ideal for gas service. Max. temp: 212°F.

- Angled flow path for finer metering
- · Delrin tip / metal seat
- Bubble-tight seal

	PART NUMBERS		
NPT, max pressure @ 100C	CARBON STEEL	316 S.S.	
1/2" MXF, 6000#	F3C166MF	F3SS166MF	
1/2" FXF, 6000#	F3C166FF	F3SS166FF	
1/4" MXF, 6000#	F3C144MF	F3SS144MF	
1/4" FXF, 6000#	F3C144FF	F3SS144FF	

Optional items available:

Angle pattern valves, high temperature assemblies (to 1,000°F), high pressure tip

assemblies, oxygen cleaning, NACE certification, compression fitting ends,

multi-outlet valves, valve manifolds.

Optional valve materials: Brass, Monel, Hastelloy C, 304 S.S., 316 S.S.

Also Available: Mini Needle Valves; Manifolds.

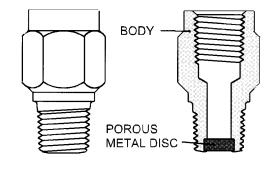


# SNUBBERS

REOTEMP Snubbers are a simple cost-effective solution to harmful pressure surges and pulsation. When a REOTEMP Snubber is installed it absorbs pulsation and surges - protecting your instrumentation and stabilizing the pointer for easier readings. Available in an adjustable self-cleaning piston design or economical porous disc type.



#### **POROUS DISC TYPE**



- · Economical choice for non-clogging applications
- Different porosities available for various viscosities

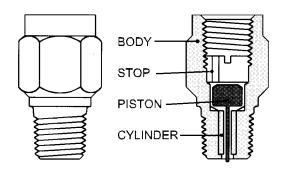
Material	Max. PSI	NPT	Porosity	Part #
Brass	5,000		Liquid Gas	PXS-722BE PXS-722BG
Bruoo	3,000	1/2	Liquid Gas	PXS-723BE PXS-723BG
303SS	15.000	1/4	Liquid Gas	PXS-722SE PXS-722SG
00000	15,000	1/2	Liquid Gas	PXS-723SE PXS-723SG

Other Porosities available:

"D"= for thick oils

"HX" = for Hi-pressure gas

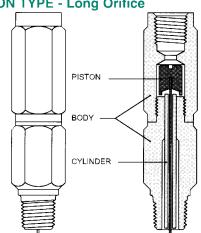
#### **PISTON TYPE - Short Orifice**



- Moving Piston Design for self-cleaning action
- · Solid Body for High pressure resistance
- Three pistons included for adjustable snubbing

Material	Max. PSI	NPT	Length (in.)	Part #
Brass Monel	5,000	1/4	1.5	PXS-022B PXS-022M
303SS 316SS	15,000	1/4	1.5	PXS-022S PXS-022SS
Brass Monel	5,000	1/2	2.0	PXS-023B PXS-023M
303SS 316SS	15,000	1/2	2.0	PXS-023S PXS-023SS





- Moving Piston Design for self-cleaning action
- · Long orifice for smoother snubbing
- •Three pistons included for adjustable snubbing
- •Center Joint (1/4" and brass models) for easier adjustment

Material	Max. PSI	NPT	Length (in.)	Part #
Brass	3,000			PXS-010B
303SS 316SS	5,000	1/4	3.46	PXS-010S PXS-010SS
Brass	5,000			PXS-060B
303SS 316SS	10,000	1/2	3.61	PXS-060S PXS-060SS

# Pressure Gauge Accessories

# **Siphons**

Pigtail siphons are used in steam service to protect the instrument from direct exposure to high temperature steam.



## Common Siphon Part #'s

NPT	Material	Sched.	180 deg.	90 deg.	360 deg
1/4"		40	PXS21SS	PXS22SS	PXS24SS
1/4"	Steel	80	PXS21SX	PXS22SX	PXS24SX
1/2"		80	PXS51SX	PXS52SX	PXS54SX
1/4"		40	PXS214S	PXS224S	PXS244S
1/4"	304SS	80	PXS214X	PXS224X	PXS244X
1/2"		80	PXS514X	PXS524X	PXS544X
1/2"	316SS	40	PXS516S	PXS526S	PXS546S

## **How to Specify Siphons:**

PXS — Pressure Accessory Siphon	— <u>2</u> (NPT)	— <u>1</u> – (Style)	— <u>4</u> (Material)	(Pipe Schedule)
	<b>2</b> = 1/4"	1=180°	A=Carbon Steel (or alloy Stl Welded)	S= Sch 40 X= Sch 80
	5=1/2"	<b>2</b> = 90°	S= Carbon Steel Seamless 4= 304SS	1= Sch 160 (1/2" only) D= xx heavy
		3=270°	6= 316SS 1= Chrome Moly P11 2= Chrome Moly P22	(1/2" only)
		4=360°		

# **Gauge Cocks**

1/4" NPT Brass, Max 100 p.s.i.



Female - Male Union #PXG-3101



Female - Female #PXG-1380



= normally in stock

Female - Female #PXG-1440

## **Restrictor Screws**

A restrictor screw (or throttle screw) is threaded into the process opening of the pressure gauge and helps to dampen rapid pressure fluctuations. This reduces pointer flutter, and can prolong the life of the gauge. Many REO*TEMP* industrial gauges are shipped with restrictor screw installed.

Specify part # PXR.

### **ELECTRICAL (ALARM) CONTACTS**

- Two easily adjustable setpoints
- Can be used to open or close on rise
- 0.7A max current (higher loads can be run through relay)
- Available on 4" dial (P/N PXEM21-40) or 4 1/2" dial (P/N PXEM21-45)



### MAX POINTER INDICATORS

- Indicates max pressure reached
- Easily reset
- Liquid fillable (Works best dry, though)
- Available for: 2 1/2" dial (MP-PR25)

4" dial (MP-PR40) 4 1/2" dial (MP-PT45)



## **CUSTOM DIALS**

**REO**TEMP can provide custom dials with:

- Special Ranges or designs
- Custom logos
- Colored zones

Consult factory for assistance with dial designs



## **OPTIONAL WINDOWS**

- Polycarbonate
- Laminated Safety Glass
- Polysulfone (for autoclaving)

# Pressure Services

Pressure Instrument Repair Services- Reotemp will be glad to quote on your repair and servicing needs for pressure gauges, transmitters, switches, and diaphragm seal systems.

Calibration and Certification – Services include testing, calibration, and certification of pressure gauges, transmitters, switches, and diaphragm seal systems. All certification is NIST traceable.

Certificate Description	Part#
Conformance/ calibration to NIST General calibration sticker	CNISTPG CALSTKPG
3 Logged Points - sticker & Cert.	CCALPG-3
5 Logged Points - sticker & Cert.	CCALPG-5
Switch setpoint cert	CCALSW

Oxygen Cleaning - removes oil from gauge intended for oxygen service.

Diaphragm Seal Application Assistance - REO*TEMP* will assist you in designing and specifying the most effective diaphragm seal system for your pressure or vacuum application. Contact factory for details.