



Astragauge

High Pressure Gauges

High Pressure Equipment has added the full line of ASTRAGAUGE high pressure gauges, ROTASEAL high pressure swivels and high pressure Gauge Snubbers to their product family. ASTRAGAUGE has established a reputation for producing highly accurate and reliable bourdon-tube style gauges for pressures up to 150,000 psi.

ASTRAGAUGE features:

- Wall or Flush Mounting
- Bottom or Back Connected
- 6" Diameter Black-on-White Dial
- All "Wetted" Parts 316 SS
- Accuracy - 1/2 of 1% Ascending Pressure or 3/4 of 1% for 150,000 psi
- 14 Ranges from 7,500 PSI to 150,000 PSI
- Polycarbonate Front Window
- 316 SS Multiturn (10 turns) Bourdon Element (Ni-Span "C" for 150,000 PSI)
- Turret Type Heavy Duty Sealed Aluminum Case
- Oxygen, Gas and Water Service
- PSI: Kg/Cm²; Megapascals; Bars



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ASTRAGAUGE

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ACCURACY

The standard accuracy is 1/2 of 1% pressure or 3/4 of 1% for 150,000 psi. All gauges are calibrated against NIST traceable dead weight testers accurate to 1/10 of 1% or against a certified master gauge. Gauges are checked at a minimum of five (5) points.

ELEMENT

Of specially cold drawn and cold formed 316 SS. This multiturn (10 turns) helical Bourdon tube gives longer life and provides better accuracy. It is used in all ranges to 100,000 PSI. Ni-Span "C" is used for 150,000 PSI. Element has mechanically sealed end to permit cleaning when required (as for oxygen service). No soldered or welded joints. Available in 14 ranges as shown in table.

PRESSURE TEST

All gauges are "over-pressurized" to 130% of the rated pressure (except for 150,000 which is proof tested at 180,000 PSI) and cycled to full pressure prior to calibrating.

MOVEMENT

For best accuracy and smoothness of operation, a special bronze movement is used. Zero adjustment is achieved by means of a micro pointer gear arrangement. The range can be field adjusted from the outside of the case, provided a suitable calibration standard is available.

DIAL

PSI/MPA dual dial is standard scale. Special orders are available. (i.e. KgCm², Bar, MPA)

SOCKET ADAPTER AND SPECIAL OPENINGS

We can offer (on special order) sockets for (7,500 - 30,000) 1/2" NPT or 1/2" NPS (straight) but caution that at the higher pressures it will be difficult to achieve leak free joints.

SAFETY

The case is the turret type and of heat treated high tensile aluminum having a heavy section between the viewer and the Bourdon element, thus providing safety in case of element failure. The standard dial face is an easily removable polycarbonate plastic, sealed with a Tetra-Seal gasket. A light, plastic, frangible diaphragm back sealed to the case by an "O" ring, provides safety in case of element failure, proven by tests to be the safest possible design.

OPTIONS

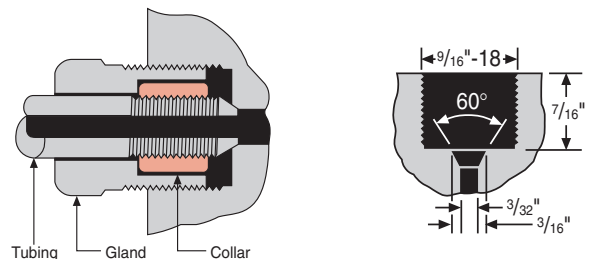
Maximum pressure indicator, pointer stop, special order dial.



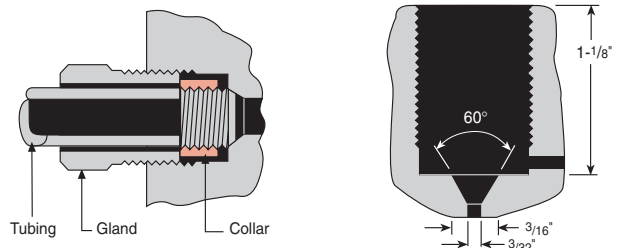
PRESSURE CONNECTIONS

Standard is 1/4" high pressure (1/4" HP, F250C, H F-4) available in bottom or back connected in all ranges up to 100,000 PSI. For the higher pressure ranges (e.g. 50,000 to 150,000 PSI) we can offer our 2V connection suitable for 5/16" OD x 1/16" ID or 3/8" OD x 1/16" ID tubing.

1/4" HIGH PRESSURE

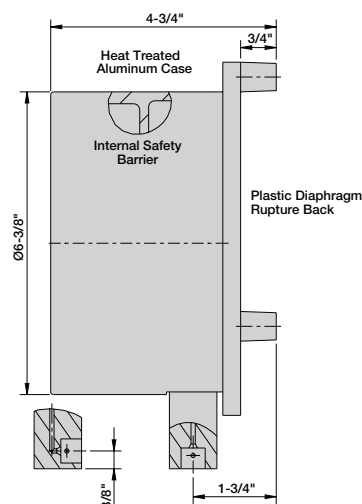
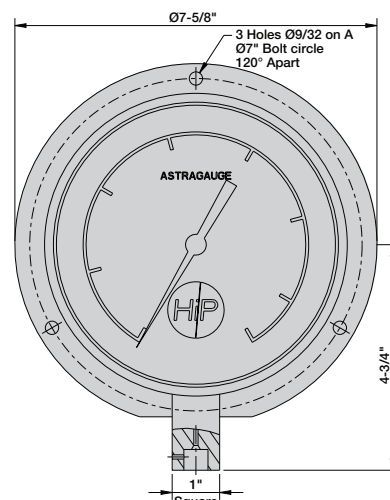


3/8" HIGH PRESSURE



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Range PSIG	Connection	Wall Mounted 1/4"HP	Flush Mounted 1/4"HP	Division PSIG
7,500	Bottom	W-7-1	F-7-1	50
	Back	WB-7-1	FB-7-1	
10,000	Bottom	W-10-1	F-10-1	100
	Back	WB-10-1	FB-10-1	
15,000	Bottom	W-15-1	F-15-1	100
	Back	WB-15-1	FB-15-1	
20,000	Bottom	W-20-1	F-20-1	200
	Back	WB-20-1	FB-20-1	
30,000	Bottom	W-30-1	F-30-1	250
	Back	WB-30-1	FB-30-1	
40,000	Bottom	W-40-1	F-40-1	500
	Back	WB-40-1	FB-40-1	
50,000	Bottom	W-50-1	F-50-1	500
	Back	WB-50-1	FB-50-1	
60,000	Bottom	W-60-1	F-60-1	500
	Back	WB-60-1	FB-60-1	
75,000	Bottom	W-75-1	F-75-1	500
	Back	WB-75-1	FB-75-1	
80,000	Bottom	W-80-1	F-80-1	1,000
	Back	WB-80-1	FB-80-1	
100,000	Bottom	W-100-1	F-100-1	1,000
3/8" or 5/16" HP				
75,000	Bottom	W-75-2	F-75-2	500
100,000	Bottom	W-100-2	F-100-2	1,000
150,000	Bottom	W-150-2V	F-150-2V	1,000



Gauge Snubber

The gauge snubber is a device used to “smooth” out the pressure fluctuations created by reciprocating pumps commonly used to develop the high pressures required for waterjet cutting. This “smoothing” action provides more accurate pressure indication and extends the life and calibration of the pressure gauge.

- Standard Connections: 1/4" HP (3/8" and 9/16" HP available)
- Working Pressure: 60,000 PSI
- Design: 75,000 PSI
- Size: 1-1/8" Hex x 4-1/4" lg.
- Weight: 2 lbs.
- Materials/Construction: High Tensile 316 SS and 17-4 PHSS

The unit consists of a small pressure vessel (approximately 3 cc. in volume) in conjunction with a 12" length of small bore (.010" ID) capillary. The pressure



enters the small vessel volume and gauge through the capillary and is trapped momentarily thus “smoothing” out the pressure pulse. A stainless steel filter (20 micron) is included at the entrance of the capillary to prevent dirt or foreign objects from clogging the small bore of the capillary.

The gauge snubber concept has proven to be superior to using a valve having an extremely small orifice, or a close fitting pin in a cylinder, due to clogging or instability. While the bore of .010" ID may appear to be quite small, it is actually very large when compared to the orifices required for “snubbing” using other means.

ROTASEAL

The ROTASEAL was developed for use in the waterjet cutting industry where a rotating member is required to conduct the high pressure water safely and without leaks. The ROTASEAL will handle any fluid compatible with the materials of construction used.

- Compact
- Lightweight
- Corrosion Resistant
- Simple Design
- 1/4" and 3/8" HP Connections (NPT Pipe on special order)
- Easy Installation
- Quick Disassembly
- Long Life

The ROTASEAL is offered in two configurations - right angle or straight through. ROTASEALS are available for pressures to 60,000 PSI and flow rates to 15 GPM (at lower pressures). The standard 1/4" HP (SW- 1-A-60) ROTASEAL is rated at 60,000 PSI and 1 GPM.

Materials of construction are 17-4 PH SS and 316 SS for all metallic parts in contact with the fluid. The dynamic seals are of specially formulated UHMW/PTFE with elastomeric self energizing "O" rings. The seals are long lasting, inexpensive, and easy to replace. Standard connections are 1/4" and 3/8" HP. Pipe connections are available in some configurations and pressure ranges - consult factory.

The ROTASEAL is compact and light in weight. Mounting holes are furnished and brackets can be provided to suit user requirements. "Weep" holes to detect leaks and assure safety are provided at all connections and seals. The ROTASEAL can be disassembled in a matter of minutes. The only special tool required is a spanner wrench to remove the bearings. All ROTASEALS are tested before shipment to assure performance before being put into service.



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