



PANAM
ENGINEERING
BEYOND
LIMITS

Gauge Savers

Maximum Working Pressure
upto 8720 psi (600 bar)



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Introduction

PANAM[®] has emerged as renowned name in Global market for 'Instrumentation Fittings & Valves'. Since its inception in 1998 to present day, **PANAM**[®] has added new product every year and has broadened its product portfolio and its clientele base by supplying to potential customers worldwide. Key core values like Timely Delivery, Quality Consistency, Product Improvisation and after sales service has been instrumental in the phase wise evolution of company. Continuous improvement is the key to success, Customer feedback are taken with positive attitude and product are constantly groomed to a new quality and performance level to cope up with the competition. Our products are known for providing high-quality, high-reliability, low-cost options for the oil and gas industry. Over the year, the company has evolved from a product based company to a complete system solution provider. Over the coming years the entity of the company will attain state of the art operational efficiency for maintaining a competitive edge, with the advent increase in the utilization of its products in oil, gas and power sector.

PANAM[®] is having state of the art manufacturing facility span over an area of 65,000 sqft with a fleet of CNC machines, VMC machines, Semi-Automatic Lathe machines, High pressure test bench with SCADA control, Configuration centre for transmitters and dedicated R&D Team.

PANAM[®] offers Gauge Savers with different end connections such as compression end connection, NPT tapered, ISO tapered (BSPT), ISO parallel (BSPP), metric.

PANAM[®] products meet the requirements of ASME and MSS standards. All materials are supplied in accordance with ASTM specifications and verified by independent laboratories. Gauge Savers are subjected to all factory tests, comply with NACE MR0175 and NACE MR0103, the manufacturing process can be traced back to the heat number. Maximum working pressure of Gauge Savers is up to 8720 psi (600 bar). Gauge Savers can be supplied also for oxygen application after a special cleaning.

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General Information

PANAM[®] Gauge Savers are designed to protect pressure gauges and other instrumentation from excess pressure.

Gauge savers are designed for the use in corrosive and hazardous environments up to 8702 psi (600 bar). The manufacturing process includes high precision machining. The valves have high wear resistance, maximum efficiency in operation, high quality, and afford ability for use in control systems in liquid and gaseous media.

The quality of Gauge Savers meets the high requirements for instrumentation valves. Gauge Savers are made of high-quality Stainless Steel, Monel and Hastelloy Alloys. NACE MR0175 and NACE MR0103 (sour gas service) compliant Gauge Savers are available upon request. Each valve is fully factory tested in accordance with MSS-SP-99.

Technical Characteristics

- F 316 stainless steel as standard body material.
- Maximum working pressure 8702 psi (600 bar).
- Piston Seals: FKM as standard seats and NBR in diaphragm.
- Working temperature range -23° C to 120° C (-10° F to 248° F).
- Connections: 1/2 ", M20 x 1.5.
- Connection type: Male / Female.
- Thread types: Tapered NPT, ISO Parallel (BSPP), Metric.

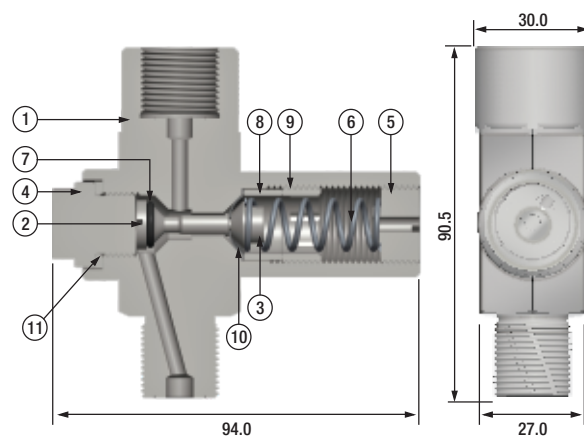
Benefits

- One-piece body design for high strength and safety.
- ASTM A182 F316 stainless steel construction for high corrosion resistance.
- Various pressure ranges with the possibility of adjustment.
- Heat code traceability.

Testing

Each **PANAM**[®] Gauge Saver is hydrostatically tested in accordance with MSS-SP-99. This procedure includes hydrostatic testing of the valve body and leak test. The hydrostatic test is performed with clean water or other fluids of similar or lower viscosity at 1.5 times the maximum working pressure, and the seat leak test is performed at 1.1 times the maximum working pressure. Each valve also undergoes a 6.9 MPa (1000 psi) nitrogen seal and stem seal test. On request, additional tests are carried out, such as vibration test, temperature test, helium leak test.

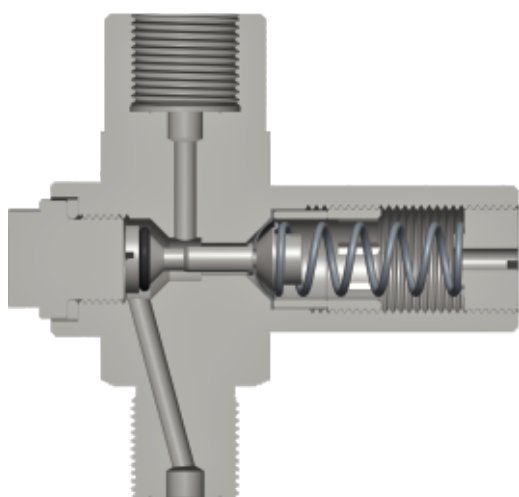
Design and Materials



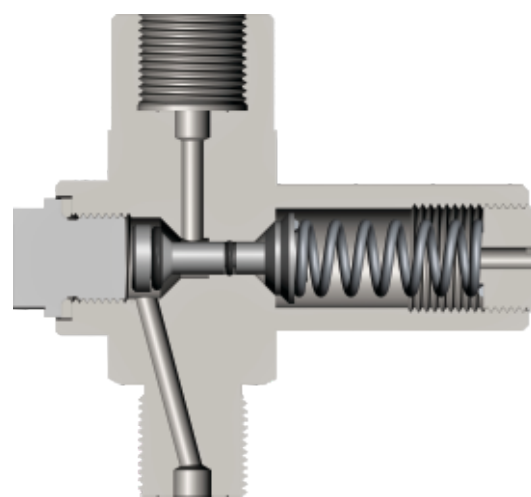
No.	Part	Qty.	Material
1	Body	1	F316 ASTM A182
2	Poppet Valve	1	SS 316 - ASTM A479
3	Poppet Nut	1	SS 316 - ASTM A479
4	Plug	1	SS 316 - ASTM A479
5	Adjusting Nut	1	SS 316 - ASTM A479
6	Spring	1	SS 302 ASTM A276
7	O-Ring	1	FKM
8	Sleeve	1	SS 316 - ASTM A479
9	Sleeve Nut	1	SS 316 - ASTM A479
10	Diaphragm	1	NBR
11	Sealing Washer	1	SS 316 - ASTM A479

Gauge Saver Types

Design For Low Pressure



Design For High Pressure



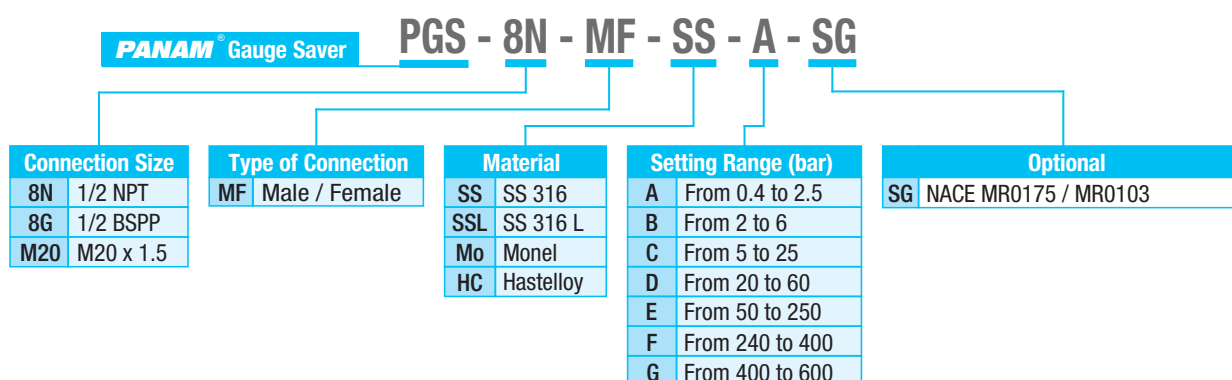
Characteristics of Sealing Material

FKM

FKM is a special type of synthetic rubber based on fluoro elastomer. It has extremely high chemical resistance to various oils, gasoline, propane, butane and other chemically active substances.

- Resistant to high temperatures, ozone, many chemical elements, and to any weather conditions.
- Compatible with mineral oils, greases containing sulfur, HFD working fluids (almost all ester phosphates, chlorinated hydrocarbons), crude oil and sour gas.
- Withstands temperatures up to + 204° C (up to + 400° F) for a long time, for a short time up to 232° C. Does not burn.

Ordering Information



Safety

For safe operation of **PANAM[®]** Gauge Savers shall be adequately selected. When choosing materials operating conditions, compatibility of materials, purpose and product specifications shall be considered. Installation and maintenance of products shall be carried out by qualified personnel.

Wrong selection, poor installation or incorrect operation and maintenance may result in accident, cause personal injury and result in material damage.

PANAM ENGINEERS LLC provides a guarantee for all manufactured and supplied products, however, is not responsible for the wrong selection, installation, operation, and technical maintenance of delivered products.

Other Products



2-3-5 VALVE MANIFOLDS



BELLOW SEAL VALVES



GAUGE ROOT VALVES



NEEDLE VALVES



HP NEEDLE VALVES



BALL VALVES



HP BALL VALVES



DOUBLE BLOCK & BLEED VALVES



MONO FLANGE VALVES



CHECK VALVES



RELIEF VALVES



FILTERS



TUBE FITTINGS



PIPE FITTINGS



HP PIPE FITTINGS



SWIVEL FITTINGS



JIC FITTINGS



WELD FITTINGS



HIGH PRESSURE FITTINGS



GAUGE SAVERS



PRESSURE GAUGES



TEMPERATURE GAUGES



PRESSURE TRANSMITTERS



TEMPERATURE TRANSMITTERS



PRESSURE REGULATORS



CONDENSATE POTS



AIR HEADERS



GRAB SAMPLING SYSTEM



PRE-FABRICATED HOOK UPS



FLANGE ADAPTERS



SWIVEL GAUGE ADAPTERS



THERMOWELLS



BLEED PLUGS



DIE-ELECTRIC FITTINGS



TUBING



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