



MARSH
INSTRUMENTS



THE STANDARD OF ACCURACY
SINCE 1865

MarshGauges.com



Our History

Since 1865, Marsh Instruments, a division of the Marsh Bellofram Group of Companies, has been the standard of accuracy. Our products are used in countless applications where accuracy, dependability, and adaptability to application environments are essential. Whether standard or custom designed, Marsh Instruments manufactures rugged, high-quality precision pressure gauges, thermometers, and accessories for customers around the world.

Marsh Instruments prides itself on its long-standing history and expertise. With over 150 years of experience in design and manufacture of pressure gauges, our gauges have proven to stand the test of time. Our experts provide solutions to any application and establish strong working relationships to develop custom solutions to meet your project need.

In this catalog, you will find basic information about our product offering. To submit a request or learn more, contact us at (304)-387-1200 or visit us at www.marshgauges.com.

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APPLICATIONS

Since 1865, Marsh Instruments has manufactured instruments that keep critical industry running. Shown are some of our key markets.



Hydraulics

Marsh Instruments manufactures durable, cost effective general service and liquid filled gauges for air lines, compressors, and regulators.



Oil & Gas

Marsh Instruments manufactures rugged, heavy-duty instruments to withstand the rigors of the oilfield and offshore applications.



HVAC/Refrigeration

Whether industrial, commercial, or residential, Marsh Instruments offers an industry leading selection of reliable instruments for the HVAC, plumbing, and refrigeration industries.



Chemical/Petrochemical

Marsh Instruments SAFECASE gauges and diaphragm seals are available in a wide variety of configurations to meet the needs of chemical plants and refineries.



Water/Wastewater

Marsh Instruments diaphragm seals have been a standard in water treatment and wastewater facilities for over 155 years.



Power Generation

Marsh Instruments manufactures a wide variety of instruments for gas, coal fired, hydroelectric or nuclear power generation facilities.



Custom/OEM

Marsh Instruments manufactures a wide variety of custom gauges for OEM customers, from logo dials to completely custom units for a wide variety of applications.



Medical

For years, Marsh Instruments low-pressure diaphragm gauges have been one of the most widely used pressure instruments in ventilator, respirator, and other medical applications.

GENERAL SERVICE GAUGES

Marsh Instruments General Service Gauges offer high repeatability pressure measurement capabilities across a variety of OEM, commercial and industrial applications, including pumps, machinery and related systems, steam boilers or other pressurized vessels, compressors, chemical processing, oil, gas and petrochemical systems, oil and gas pipeline monitoring, power plant equipment, and pulp and paper mills.



GG Series

Steel Case / Brass Internals / Lower Mount

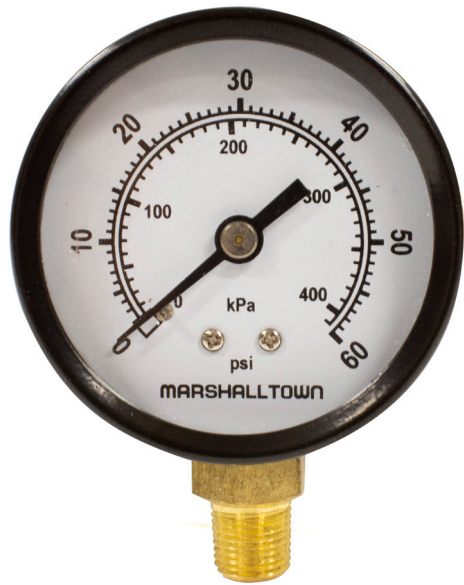


GG Series

Steel Case / Brass Internals / Center Back Mount



General Service Gauges

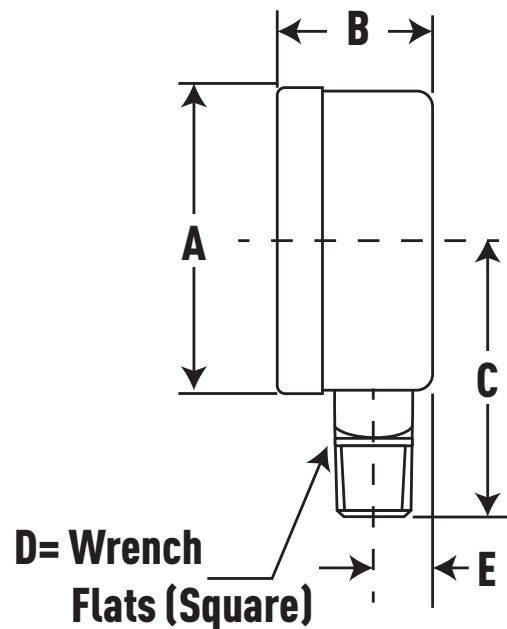


The General Service Steel Case Gauge from Marsh Instruments is a family of cost-effective, general purpose instruments designed for reliable pressure measurements. Suitable for use with water, oil, air, gas or other noncorrosive media from vacuum/compound through 5,000 psi.

Features:

- Superb quality, economical price
- Pressure ranges to 5,000 psi

Product Dimensions

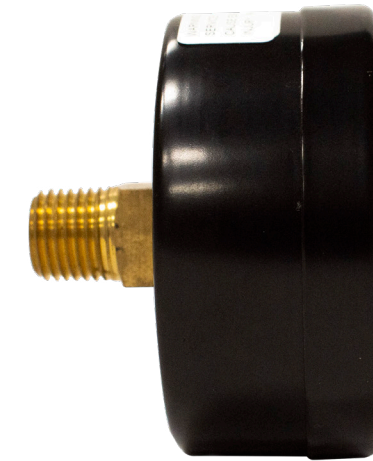


Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	1 1/2", 2", 2 1/2", 3 1/2", 4 1/2" Diameter
Case	Steel, Black Painted
Bezel	Steel, Black Painted, Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/8" & 1/4" NPT - Lower Mount
Pressure Ranges	VAC/Compound to 5,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Flat Plastic (Glass Optional)
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	1" 0.2 lb. 2" 0.3 lb. 2 1/2" 0.4 lb. 3 1/2" 0.5 lb. 4 1/2" 0.75 lb.

Dial Size	Product Numbers	A	B	C	D	E
1.5	GG15XXL8	1.606	0.89	1.488	0.433	0.296
	GG20XXL4	2.047	1.122	1.787	0.534	0.376
2	GG20XXL8	2.047	1.122	1.787	0.551	0.394
	GG25XXL4	2.496	1.134	1.961	0.543	0.39
2.5	GG35XXL4	3.488	1.22	2.717	0.543	0.413
	GG45XXL4	4.941	1.142	3.409	0.551	0.394

General Service Gauges

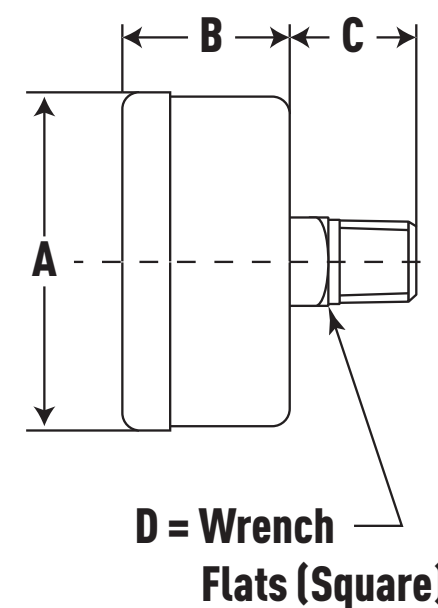


The General Service Steel Case Gauge from Marsh Instruments is a family of cost-effective, general purpose instruments designed for reliable pressure measurements. Suitable for use with water, oil, air, gas or other noncorrosive media from vacuum/compound through 5,000 psi.

Features:

- Superb quality, economical price
- Pressure ranges to 5,000 psi

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	1 1/2", 2", 2 1/2", 3 1/2" Diameter
Case	Steel, Black Painted
Bezel	Steel, Black Painted, Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/8" & 1/4" NPT - Center Back Mount
Pressure Ranges	VAC/Compound to 5,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Flat Plastic (Glass Optional)
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	1" 0.2 lb. 2" 0.3 lb. 2 1/2" 0.4 lb. 3 1/2" 0.5 lb. 4 1/2" 0.75 lb.

Dial Size	Product Numbers	A	B	C	D
1.5	GG15XXXXC8	1.57	0.92	1.61	0.433
	GG20XXXXC8	2.047	1.122	0.64	0.534
2	GG20XXXXC4	2.047	1.022	0.74	0.534
	GG25XXXXC8	2.496	1.134	0.66	0.543
2.5	GG25XXXXC4	2.496	1.122	0.771	0.543
	GG35XXXXC4	3.488	1.22	0.86	0.543

GG Series

Steel Case / Brass Internals / U-Clamp Panel Mount



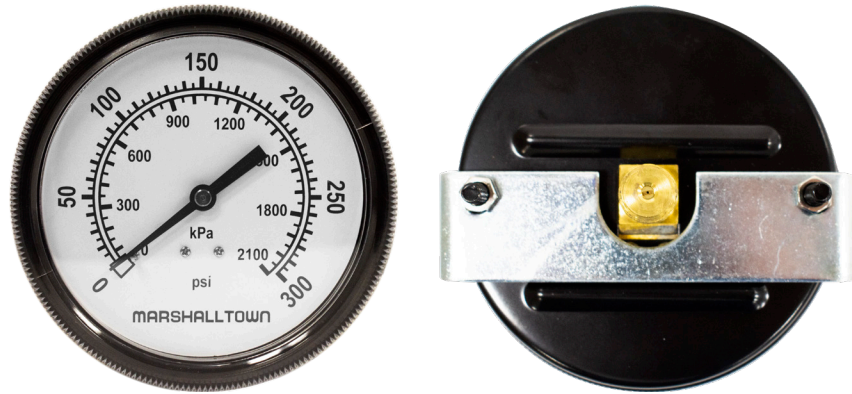
J Series

Steel Case / Brass Internals / Lower Mount



General Service Gauges

General Service Gauges

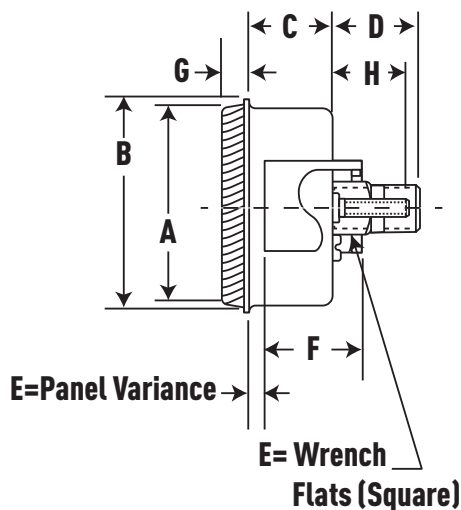


The General Service Steel Case Gauge from Marsh Instruments is a family of cost-effective, general purpose instruments designed for reliable pressure measurements. Suitable for use with water, oil, air, gas or other noncorrosive media from vacuum/compound through 5,000 psi.

Features:

- Superb quality, economical price
- Pressure ranges to 5,000 psi

Product Dimensions



Dial Size	Product Numbers	A	B	C	D	E	F	G	H	I
1.5	GG15XXXXU8	1.606	1.86	0.89	0.61	0.433	0-0.25	1.05	0.16	0.52
	GG20XXXXU8	1.97	2.24	1.01	0.64	0.534	0-0.26	1.15	0.16	0.52
2	GG15XXXXU4	1.97	2.24	1.01	0.74	0.534	0-0.26	1.15	0.16	0.52
	GG25XXXXU8	2.55	2.55	0.97	0.74	0.543	0-0.24	1.18	0.23	0.52
2.5	GG25XXXXU4	2.55	2.55	0.97	0.74	0.543	0-0.24	1.18	0.23	0.52
	GG35XXXXU4	3.75	3.96	0.99	0.71	0.543	0-0.37	1.2	2	0.73

Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	1 1/2", 2", 2 1/2", 3 1/2" Diameter
Case	Steel, Black Painted
Bezel	Steel, Black Painted, Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/8 & 1/4 NPT - U-Clamp Panel Mount (Front Flange Optional)
Pressure Ranges	VAC/Compound to 5,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Twist-On Acrylic
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	1 0.2 lb. 2" 0.3 lb. 2 1/2" 0.4 lb. 3 1/2" 0.5 lb. 4 1/2" 0.75 lb.

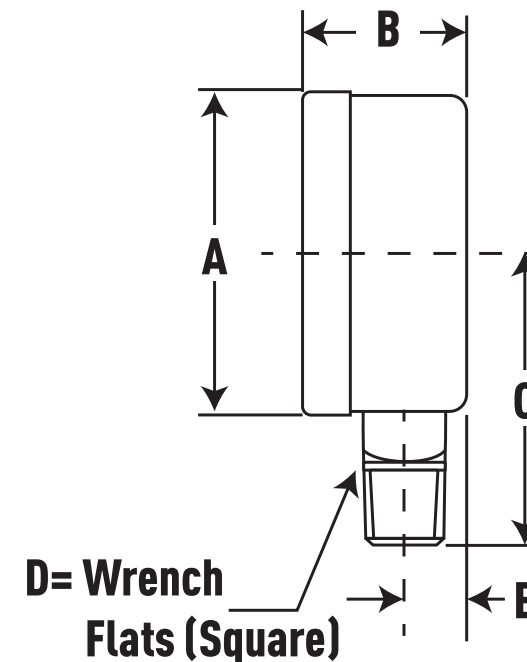


The General Service Steel Case Gauge from Marsh Instruments is a family of cost-effective, general purpose instruments designed for reliable pressure measurements. Suitable for use with water, oil, air, gas or other noncorrosive media from vacuum/compound through 5,000 psi.

Features:

- Superb quality, economical price
- Pressure ranges to 5,000 psi

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	1 1/2", 2", 2 1/2", 3 1/2", 4 1/2" Diameter
Case	Steel, Black Painted
Bezel	Twist Lock Lens
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/8 & 1/4 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 5,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	1.5"-3.5" Twist-On Acrylic 4.5" Flat Plastic
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	1 0.2 lb. 2" 0.3 lb. 2 1/2" 0.4 lb. 3 1/2" 0.5 lb. 4 1/2" 0.75 lb.

Dial Size	Product Numbers	A	B	C	D	E
1.5	J04XX	1.67	0.90	1.50	7/16	0.26
	J11XX	2.20	1.22	1.82	9/16	0.40
2	J14XX	2.20	1.22	1.82	9/16	0.40
	J40XX	2.73	1.22	2.10	9/16	0.40
2.5	J46XX	2.73	1.22	2.10	9/16	0.40
	J80XX	3.71	1.22	2.77	9/16	0.40
4.5	J90XX	4.53	1.22	3.16	9/16	0.40

J Series

Steel Case / Brass Internals / Center Back Mount

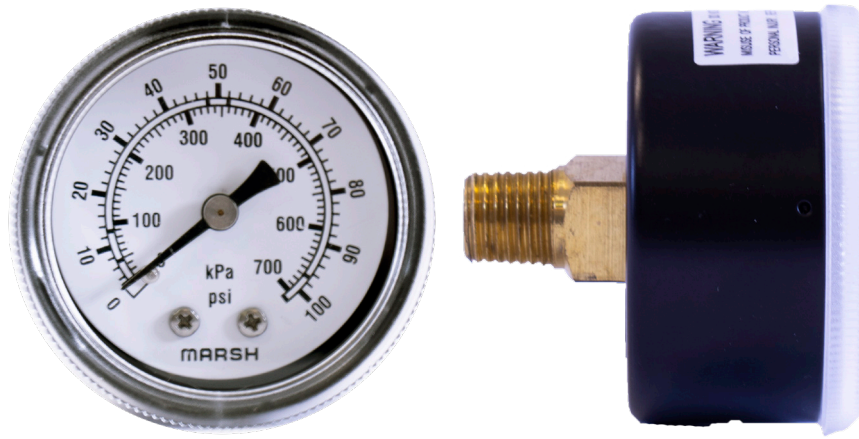


J Series

Steel Case / Brass Internals / U Clamp Panel Mount



General Service Gauges



Product Specifications

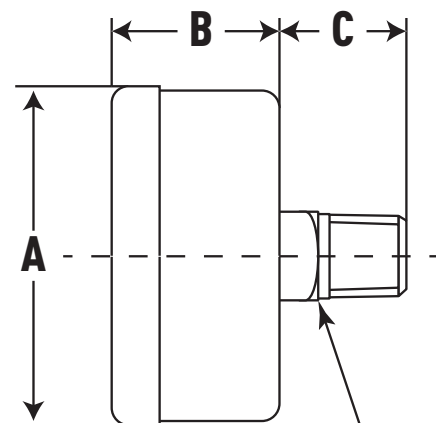
Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	1 1/2", 2", 2 1/2", 3 1/2" Diameter
Case	Steel, Black Painted
Bezel	Twist Lock Lens
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/8" & 1/4" NPT - Center Back Mount
Pressure Ranges	VAC/Compound to 5,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	1.5" -3.5" Twist-On Acrylic 4.5" Flat Plastic
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	1 0.2 lb. 2" 0.3 lb. 2 1/2" 0.4 lb. 3 1/2" 0.5 lb. 4 1/2" 0.75 lb.

The General Service Steel Case Gauge from Marsh Instruments is a family of cost-effective, general purpose instruments designed for reliable pressure measurements. Suitable for use with water, oil, air, gas or other noncorrosive media from vacuum/compound through 5,000 psi.

Features:

- Superb quality, economical price
- Pressure ranges to 5,000 psi

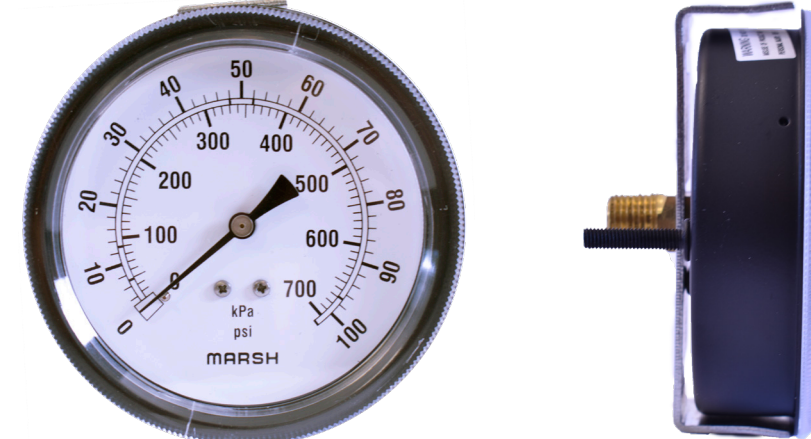
Product Dimensions



D = Wrench Flats (Square)

Dial Size	Product Numbers	A	B	C	D
1.5	J06XX	1.67	0.90	0.72	7/16
2	J18XX	2.20	1.22	0.82	7/16
	J20XX	2.20	1.22	0.82	7/16
2.5	J50XX	2.73	1.23	0.82	7/16
	J54XX	2.73	1.23	0.82	7/16
3.5	J86XX	3.71	1.15	.80	7/16

General Service Gauges



Product Specifications

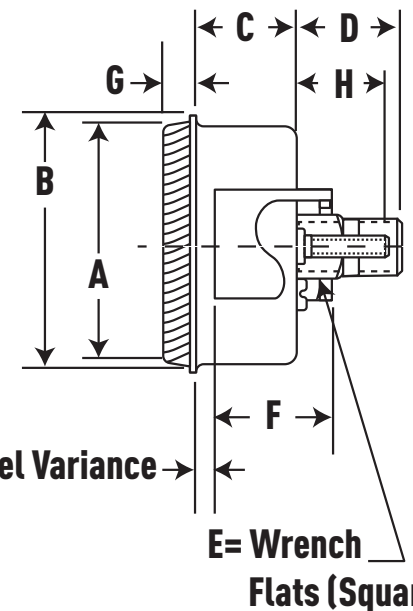
Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	1 1/2", 2", 2.5", 3.5" Diameter
Case	Steel, Black Painted
Bezel	Steel, Black Painted, Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/8" & 1/4" NPT - U-Clamp Panel Mount (Front Flange Optional)
Pressure Ranges	15 to 5,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Twist-On Acrylic
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	1 0.2 lb. 2" 0.3 lb. 2 1/2" 0.4 lb. 3 1/2" 0.5 lb. 4 1/2" 0.75 lb.

The General Service Steel Case Gauge from Marsh Instruments is a family of cost-effective, general purpose instruments designed for reliable pressure measurements. Suitable for use with water, oil, air, gas or other noncorrosive media from vacuum/compound through 5,000 psi.

Features:

- Superb quality, economical price
- Pressure ranges to 5,000 psi

Product Dimensions



E=Panel Variance

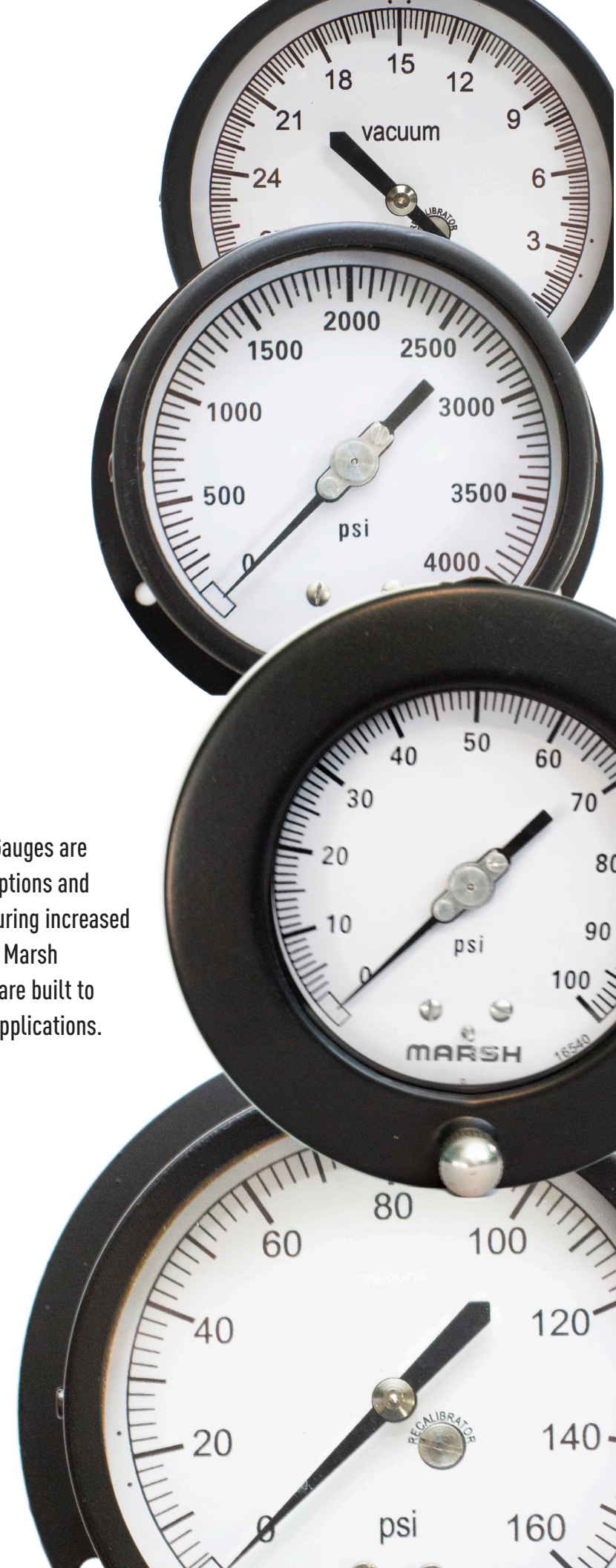
E= Wrench Flats (Square)

Dial Size	Product Numbers	A	B	C	D	E	F	G	H	I
1.5	J05XX	1.60	1.75	0.71	0.72	7/16	0.06-0.37	0.81	0.19	0.63
2	J24XX	2.06	2.25	0.94	0.88	7/16	0-0.43	1.22	0.20	0.92
	J26XX	2.06	2.25	0.94	0.88	7/16	0-0.43	1.22	0.20	0.92
2.5	J60XX	2.58	2.81	0.94	0.88	7/16	0-0.43	1.22	0.20	0.92
	J62XX	2.58	2.81	0.94	0.88	7/16	0-0.43	1.22	0.20	0.92
3.5	J88XX	3.65	3.98	0.91	0.87	7/16	0-0.49	1.10	0.24	0.92



QUALITY SERIES GAUGES

Marsh Instruments Quality Series Gauges are available in a variety of mounting options and large, easy-to-read dial sizes. Featuring increased accuracy and heavy-duty internals, Marsh Instruments Quality Series gauges are built to withstand the toughest industrial applications.



H02/42/48 Series

Heavy Duty - Increased Accuracy / 3.5" & 4.5" Lower Mount



H12 Series

Heavy Duty - Increased Accuracy / 3.5" Backflange



Quality Series Gauges

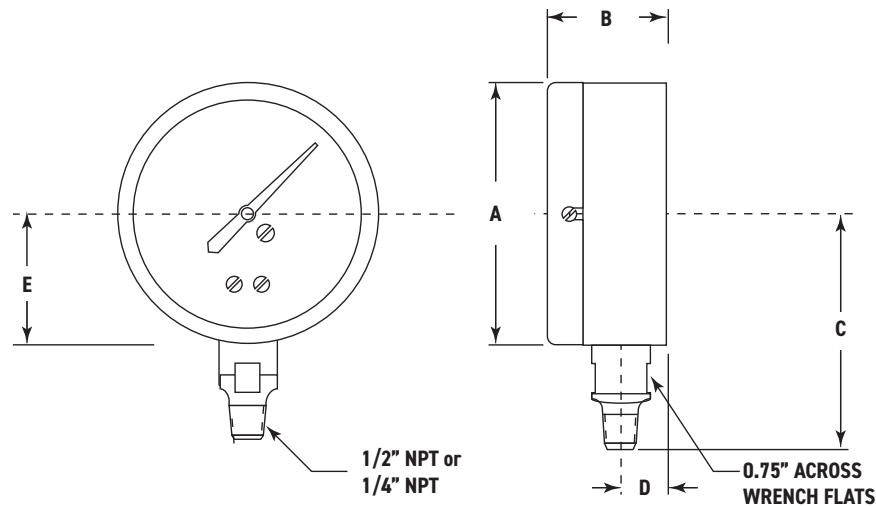


Marsh Instruments Quality Gauges feature the exclusive recalibrator and the accuracy is within ± 1 " in the middle half of span. These gauges provide continuous service at an economical price.

Features:

- Recalibrator Standard on 3 1/2"
- Adjustable pointer standard on 4 1/2"
- Ranges to 20,000 psi

Product Dimensions



Dial Size	A	B	C	D	E
3.5"	3.72"	1.69"	3.34"	0.67"	2.00"
4.5"	4.78"	1.73"	4.06"	0.55"	2.39"

Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 2/1/2\%$ (ASME Grade B)
Dial Size(s)	3 1/2" Diameter (89 mm) 4 1/2" Diameter (115 mm)
Case	Steel, Black Painted
Bezel	Steel, Black Painted, Removable
Tube & Socket	0-1,000 psi: Copper Alloy 1,500-20,000 psi: Stainless Steel
Movement	Stainless Steel
Connection	1/4 & 1/2 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Instrument Glass
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	3 1/2" 2.0 lb 4 1/2" 2.0 lb

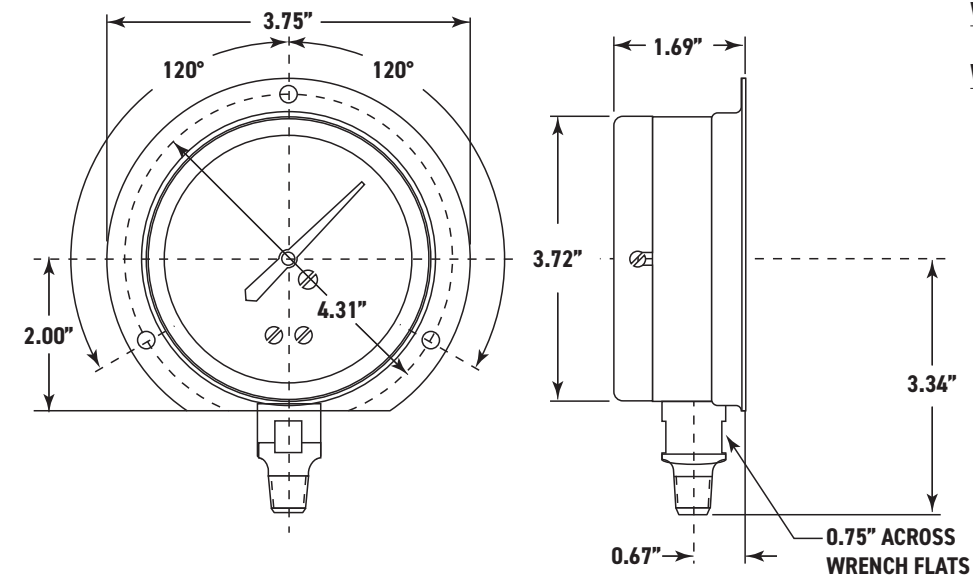


Marsh Instruments Quality Gauges feature the exclusive recalibrator and the accuracy is within ± 1 " in the middle half of span. These gauges provide continuous service at an economical price.

Features:

- Recalibrator Standard on 3 1/2"
- Ranges to 20,000 psi

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 2/1/2\%$ (ASME Grade A)
Dial Size(s)	3 1/2" Diameter (89 mm)
Case	Steel, Black Painted
Bezel	Steel, Black Painted, Removable
Tube & Socket	0-1,000 psi: Copper Alloy 1,500-20,000 psi: Stainless Steel
Movement	Stainless Steel
Connection	1/4 or 1/2 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Instrument Glass
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	2.0 lb.

Quality Series Gauges

H20/60 Series

Heavy Duty - Increased Accuracy / 3.5 and 4.5" Hinged Ring Panel Mount



H18 Series

Stainless Steel Case Brass Internals / 3.5" Back Flange Lower Back Mount



Quality Series Gauges

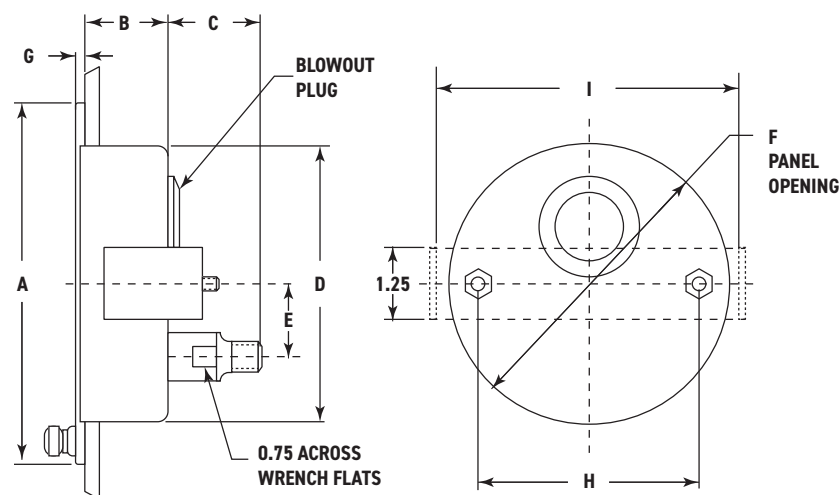


Marsh Instruments Quality Gauges feature the exclusive recalibrator and the accuracy is within ± 1 " in the middle half of span. These gauges provide continuous service at an economical price.

Features:

- Recalibrator Standard on 3 1/2"
- Adjustable pointer standard on 4 1/2"
- Ranges to 20,000 psi

Product Dimensions



Size	A	B	C	D	E	F	G	H	I
3.5"	3.72	1.69	1.55	3.34	0.67	4.31	1.16	2.00	3.75
4.5"	6.31	1.39	2.15	4.81	1.27	4.88	0.11	3.88	5.31

Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 2/1/2\%$ (ASME Grade A)
Dial Size(s)	3 1/2" Diameter (89 mm) 4 1/2" Diameter (100 mm) 6" Diameter (150 mm)
Case	Steel, Black Painted
Bezel	Steel, Black Painted, Removable
Tube & Socket	0-1,000 psi: Copper Alloy 1,500-20,000 psi: Stainless Steel
Movement	Stainless Steel
Connection	1/4 & 1/2 NPT - Hinged Ring Panel Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Instrument Glass
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160° F
Vent Plug	N/A
Weight	3 1/2" 2.0 lb 4 1/2" 2.0 lb

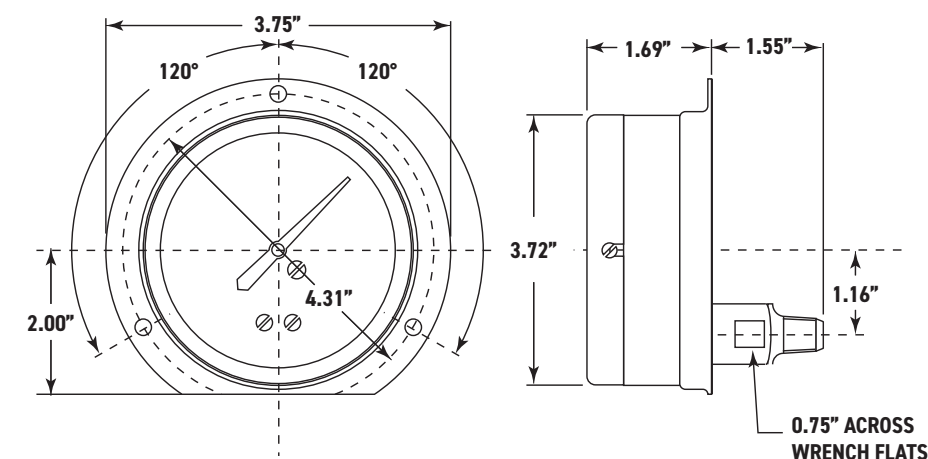


Marsh Instruments Quality Gauges feature the exclusive recalibrator and the accuracy is within ± 1 " in the middle half of span. These gauges provide continuous service at an economical price.

Features:

- Recalibrator Standard on 3 1/2"
- Ranges to 20,000 psi

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 2/1/2\%$ (ASME Grade A)
Dial Size(s)	3 1/2" Diameter (63 mm)
Case	Steel, Black Painted
Bezel	Steel, Black Painted, Removable
Tube & Socket	0-1,000 psi: Copper Alloy 1,500-20,000 psi: Stainless Steel
Movement	Stainless Steel
Connection	1/4 or 1/2 NPT - Back Flange-Lower Back Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Instrument Glass
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160° F
Vent Plug	N/A
Weight	2.0 lb

Quality Series Gauges



LOW PRESSURE GAUGES

Low Pressure Gauges from Marsh Instruments incorporate a diaphragm element allowing for accurate low-pressure readings in support of a variety of applications, with ASME Grade A 2/1/2% accuracy for ranges above 30" of water. Available ranges include vacuum and pressure in inches of water, ounces per square inch, kilopascals, and millimeters of mercury.



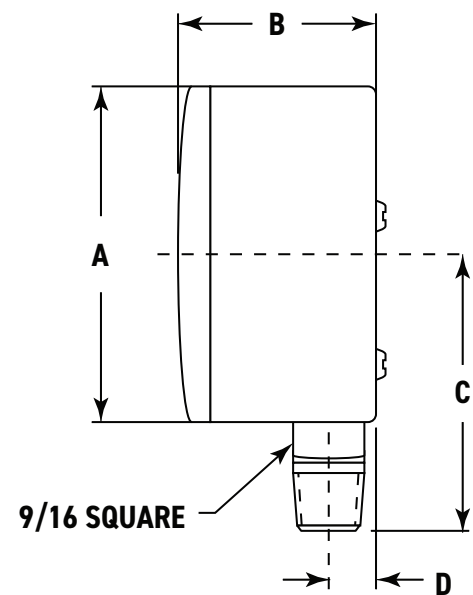
G Series - Low Pressure

Steel Case / Brass Internals / Lower Mount



Low Pressure Gauges from Marsh Instruments incorporate a diaphragm element allowing for accurate low-pressure readings in support of a variety of applications, with ASME Grade A 2/1/2% accuracy for ranges above 30" of water. Available ranges include vacuum and pressure in inches of water, ounces per square inch, kilopascals, and millimeters of mercury.

Product Dimensions



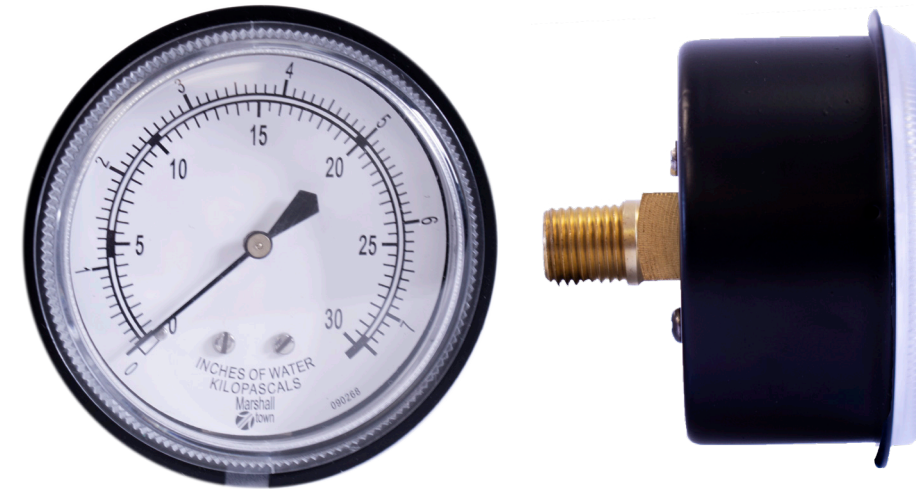
Lower Mount	Dial Size	A	B	C	D
	2 1/2"	2.63	1.50	2.19	0.38
	3 1/2"	3.69	1.59	2.72	0.38
	4 1/2"	4.78	1.47	3.38	0.81

Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	For Ranges 30" H ₂ O and Above: ±2/1/2% (ASME Grade A) For Ranges Below 30" H ₂ O: ±3/1/3%
Dial Sizes	2 1/2" Diameter (40 mm) 3 1/2" Diameter (50 mm) 4 1/2" Diameter (115 mm)
Case	Steel, Black Painted
Bezel	N/A
Tube & Socket	Phosphor Bronze Diaphragm
Movement	Brass Sector and Pinion
Connection	1/8 & 1/4 NPT - Lower Mount
Pressure Ranges	Low Pressure Vacuum + Pressure 10" H ₂ O through 10 psi
Standard Scale	Dual Scale with kPa Triple Scale: oz/in ² , in H ₂ O, & kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	2 1/2" Acrylic Twist-In Clearlok 3 1/2" Acrylic Twist-In Clearlok 4 1/2" Flat Acrylic with Steel Friction Ring
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	2 1/2" 0.5 lb. 3 1/2" 0.7 lb. 4 1/2" 1.0 lb.

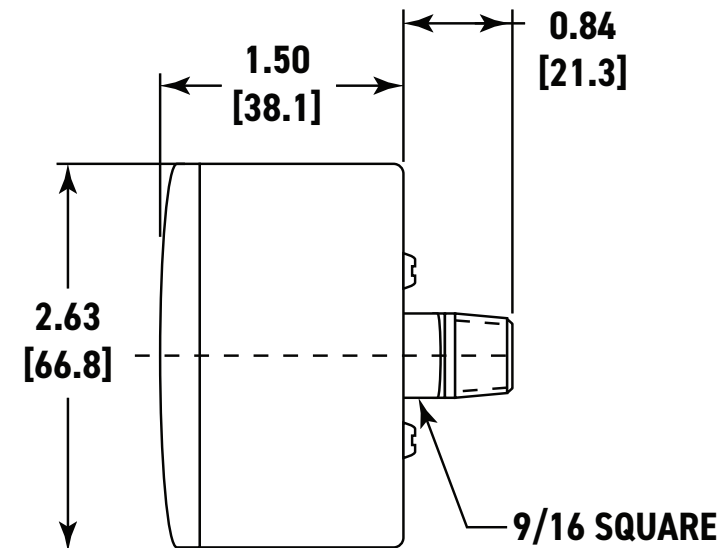
G Series - Low Pressure

Steel Case / Brass Internals / Center Back Mount



Low Pressure Gauges from Marsh Instruments incorporate a diaphragm element allowing for accurate low-pressure readings in support of a variety of applications, with ASME Grade A 2/1/2% accuracy for ranges above 30" of water. Available ranges include vacuum and pressure in inches of water, ounces per square inch and millimeters of mercury.

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	For Ranges 30" H ₂ O and Above: ±2/1/2% (ASME Grade A) For Ranges Below 30" H ₂ O: ±3/1/3%
Dial Size(s)	2 1/2" Diameter (40 mm)
Case	Steel, Black Painted
Bezel	N/A
Tube & Socket	Phosphor Bronze Diaphragm
Movement	Brass Sector and Pinion
Connection	1/8 & 1/4 NPT - Center Back Mount
Pressure Ranges	Low Pressure Vacuum + Pressure 10" H ₂ O through 10 psi
Standard Scale	Dual Scale with kPa Triple Scale: oz/in ² , in H ₂ O, & kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	2 1/2" Acrylic Twist-In Clearlok 3 1/2" Acrylic Twist-In Clearlok 4 1/2" Flat Acrylic with Steel Friction Ring
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	2 1/2" 0.5 lb.

Low Pressure Gauges

Low Pressure Gauges

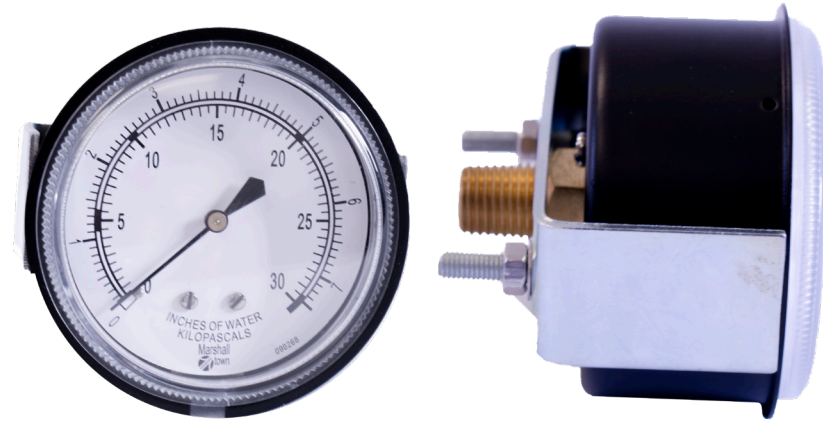
G Series - Low Pressure

Steel Case / Brass Internals / U-Clamp Panel Mount



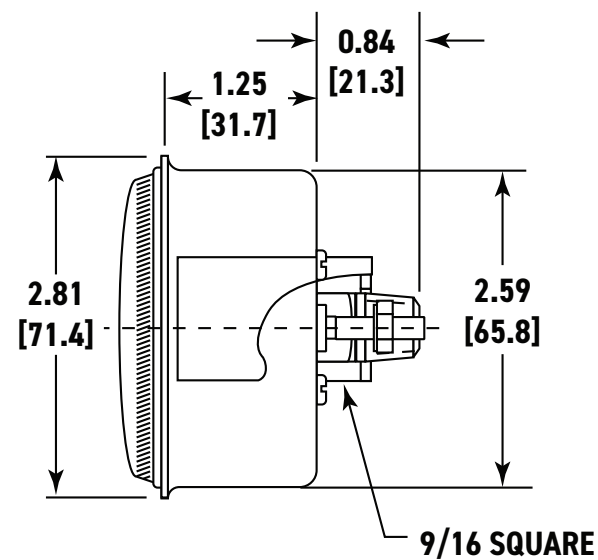
G Series - Low Pressure

Steel Case / Brass Internals / Front Flange Panel Mount



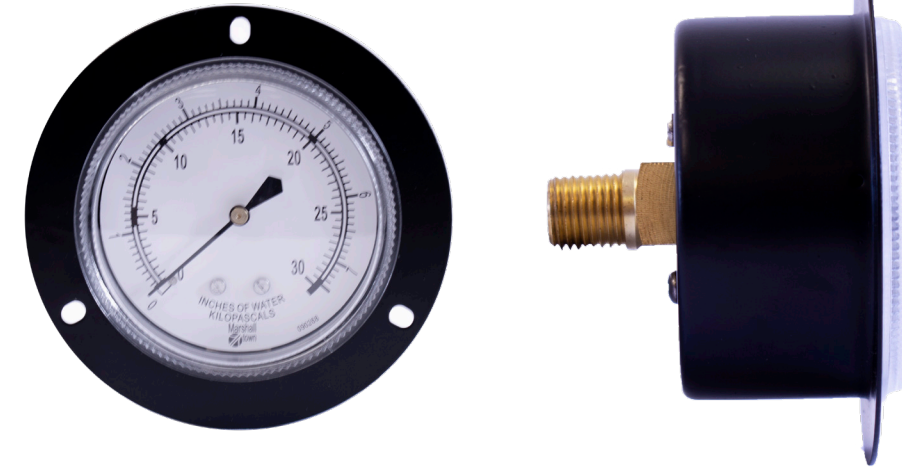
Low Pressure Gauges from Marsh Instruments incorporate a diaphragm element allowing for accurate low-pressure readings in support of a variety of applications, with ASME Grade A 2/1/2% accuracy for ranges above 30" of water. Available ranges include vacuum and pressure in inches of water, ounces per square inch, kilopascals, and millimeters of mercury.

Product Dimensions



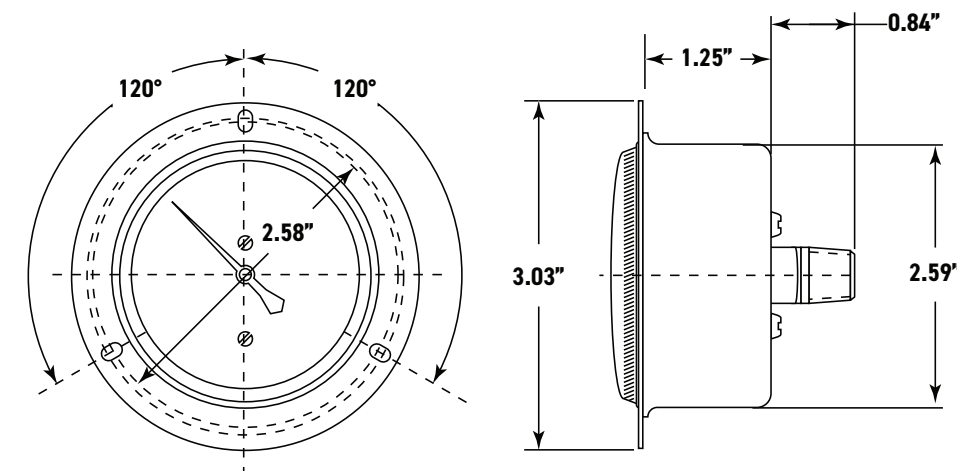
Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	For Ranges 30" H ₂ O and Above: ±2/1/2% (ASME Grade A) For Ranges Below 30" H ₂ O: ±3/1/3%
Dial Size(s)	2 1/2" Diameter (40 mm)
Case	Steel, Black Painted
Bezel	N/A
Tube & Socket	Phosphor Bronze Diaphragm
Movement	Brass Sector and Pinion
Connection	1/8 & 1/4 NPT - U-Clamp Panel Mount
Pressure Ranges	Low Pressure Vacuum + Pressure 10" H ₂ O through 10 psi
Standard Scale	Dual Scale with kPa Triple Scale: oz/in ² , in H ₂ O, & kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Acrylic Twist-In Cleartok
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	2 1/2" 0.5 lb.



Low Pressure Gauges from Marsh Instruments incorporate a diaphragm element allowing for accurate low-pressure readings in support of a variety of applications, with ASME Grade A 2/1/2% accuracy for ranges above 30" of water. Available ranges include vacuum and pressure in inches of water, ounces per square inch, kilopascals, and millimeters of mercury.

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	For Ranges 30" H ₂ O and Above: ±2/1/2% (ASME Grade A) For Ranges Below 30" H ₂ O: ±3/1/3%
Dial Size(s)	2 1/2" Diameter (40 mm)
Case	Steel, Black Painted
Bezel	N/A
Tube & Socket	Phosphor Bronze Diaphragm
Movement	Brass Sector and Pinion
Connection	1/8 & 1/4 NPT - Front Flange Panel Mount
Pressure Ranges	Low Pressure Vacuum + Pressure 10" H ₂ O through 10 psi
Standard Scale	Dual Scale with kPa Triple Scale: oz/in ² , in H ₂ O, & kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Acrylic Twist-In Cleartok
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	2 1/2" 0.5 lb.

Low Pressure Gauges

Low Pressure Gauges

G44 Series - Low Pressure

Stainless Steel Case / Brass Internals



G44 Series - Low Pressure

Stainless Steel Case / Stainless Steel Internals

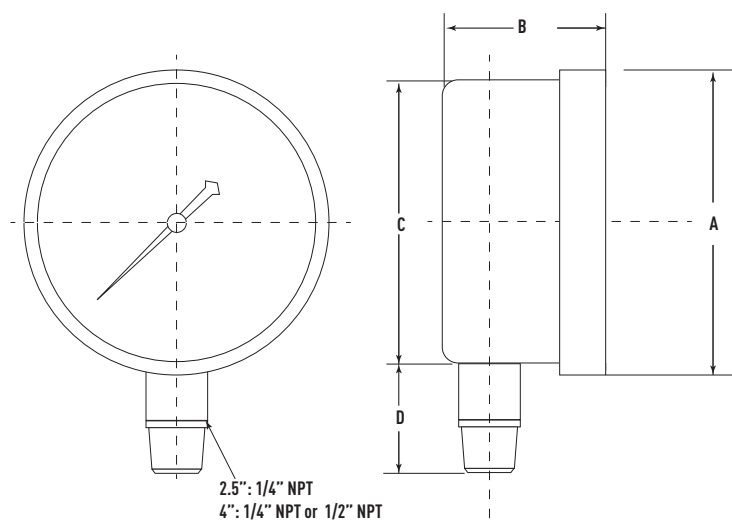


Low Pressure Gauges from Marsh Instruments incorporate a diaphragm element allowing for accurate low-pressure readings in support of a variety of applications, with ASME Grade A 2/1/2% accuracy for ranges above 30" of water. Available ranges include vacuum and pressure in inches of water, ounces per square inch, kilopascals, and millimeters of mercury.

Features:

- Weatherproof-Hermetically Sealed Case

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	For Ranges 30" H ₂ O and Above: ±2/1/2% (ASME Grade A) For Ranges Below 30" H ₂ O: ±3/1/3%
Dial Size(s)	2.5" Diameter (63 mm) 4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	2.5" 1/4" NPT - Lower Mount 4" 1/4" or 1/2" NPT - Lower Mount
Pressure Ranges	Low Pressure Vacuum + Pressure 10" H ₂ O through 10 psi
Standard Scale	Dual Scale with kPa Triple Scale: oz/in ² , in H ₂ O, & kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Glass
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	2.5" 0.5 lb. 4" 1.0 lb

Dial Size	A	B	C	D
2.5"	2.81"	1.85"	2.56"	0.98"
4"	4.21"	1.93"	3.86"	1.24"

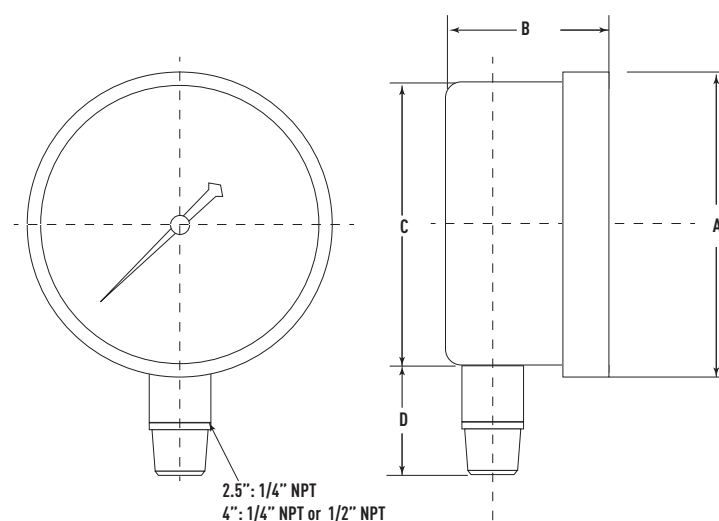


Low Pressure Gauges from Marsh Instruments incorporate a diaphragm element allowing for accurate low-pressure readings in support of a variety of applications, with ASME Grade A 2/1/2% accuracy for ranges above 30" of water. Available ranges include vacuum and pressure in inches of water, ounces per square inch, kilopascals, and millimeters of mercury.

Features:

- Stainless Steel Case & Internals
- Weatherproof-Hermetically Sealed Case

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	For Ranges 30" H ₂ O and Above: ±2/1/2% (ASME Grade A) For Ranges Below 30" H ₂ O: ±3/1/3%
Dial Size(s)	2.5" Diameter (63 mm) 4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Removable
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	2.5" 1/4" NPT - Lower Mount 4" 1/4" or 1/2" NPT - Lower Mount
Pressure Ranges	Low Pressure Vacuum + Pressure 10" H ₂ O through 10 psi
Standard Scale	Dual Scale with kPa Triple Scale: oz/in ² , in H ₂ O, & kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Glass
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	2.5" 0.5 lb. 4" 1.0 lb

Dial Size	A	B	C	D
2.5"	2.81"	1.85"	2.56"	0.98"
4"	4.21"	1.93"	3.86"	1.24"

Low Pressure Gauges

Low Pressure Gauges



SEVERE SERVICE GAUGES

Marsh Instruments Severe Service Liquid Filled Gauges are designed to provide reliable pressure measurements in harsh and demanding environments, particularly where pulsation and vibration are a concern. Marsh Severe Service Gauges are filled with liquid to offer a dampening effect, reduce pointer flutter and lubricate the internals.



M Series - Liquid Filled

Stainless Steel Case / Brass Internals / 1.5" & 2" Center Back Mount



J76 Series - Liquid Filled

Stainless Steel Case / Brass Internals / 2.5" Lower Mount

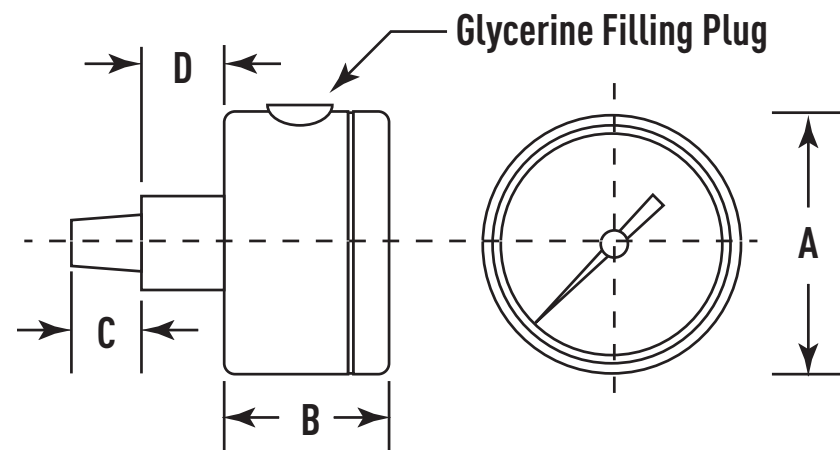


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is present. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Small diameter for use in Positioner and Low Clearance Applications

Product Dimensions



Dial Size	A	B	C	E
1.5"	1.57"	1.06"	0.45"	0.51"
2.0"	1.97"	1.18"	0.45"	0.39"

Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	1.5" Diameter (40 mm) 2" Diameter (50 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	Copper Alloy with Nickel Plated Brass Socket
Movement	Brass
Connection	1/8 & 1/4 NPT - Center Back Mount
Pressure Ranges	VAC/Compound to 3,000 psi
Standard Scale	Triple Scale psi/BAR/kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Acrylic
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	0.5 lb.

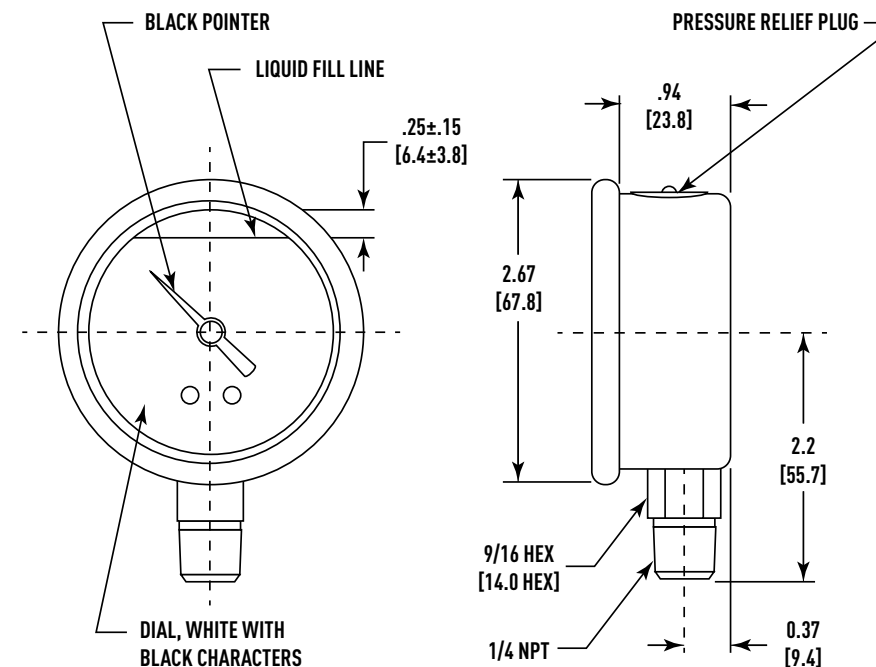


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Liquid Filled for Dampening Effect
- Weatherproof/Hermetically Sealed
- Heavy Duty 1 Piece Socket Design

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	2.5" Diameter (63 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/4 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	Filled 1.0 lb. Dry 0.7 lb.

J64 Series

Stainless Steel Case / Brass Internals / 2.5" Center Back Mount



J72 Series

Stainless Steel Case / Brass Internals / 2.5" U-Clamp Mount

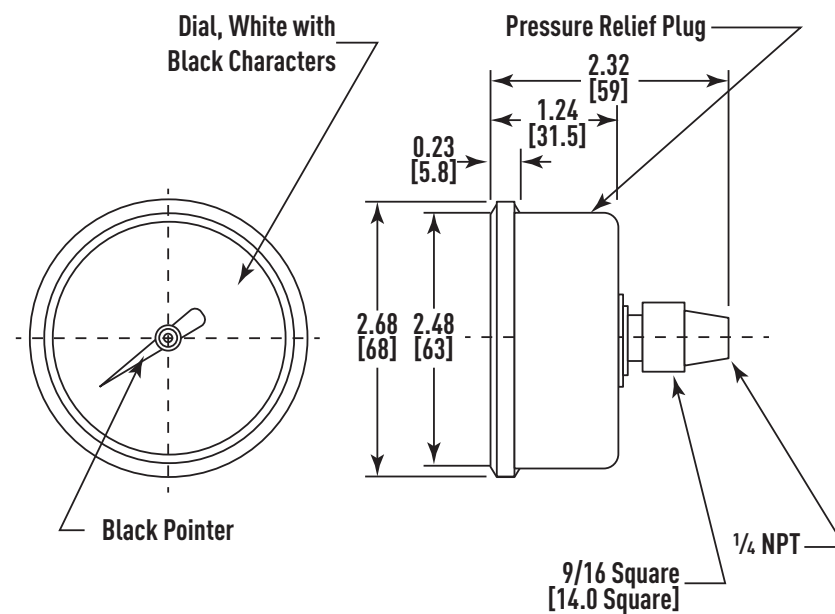


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

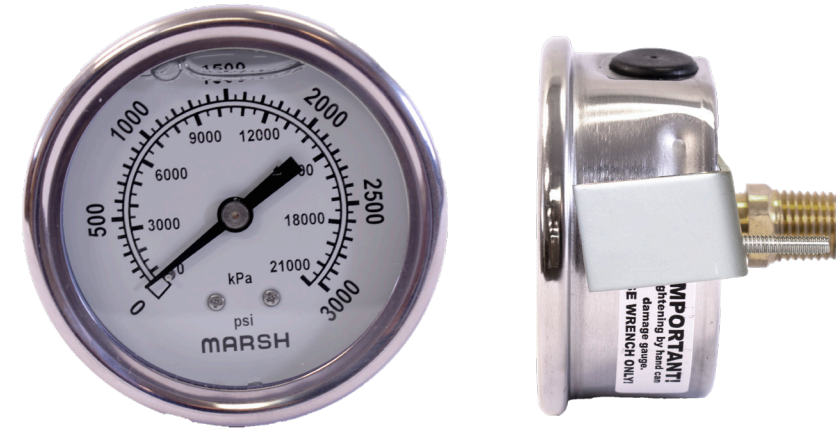
- Liquid Filled for Dampening Effect
- Weatherproof/Hermetically Sealed
- Heavy Duty 1 Piece Socket Design

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±2.5% of Range Across Full Scale ±3/2/3% (ASME Grade B)
Dial Size(s)	2.5" Diameter (63 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/4 NPT - Center Back Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi/kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	0.5 lb.

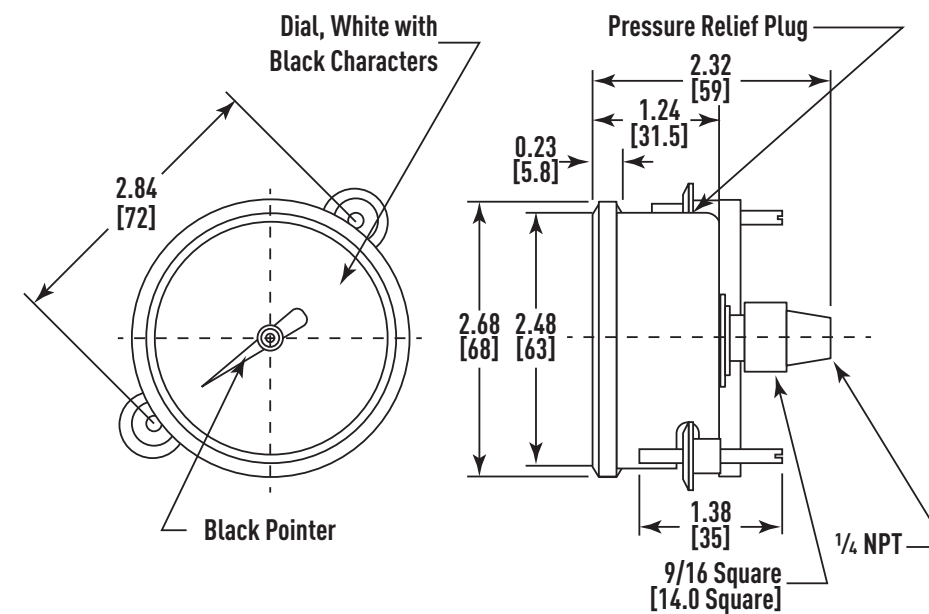


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Liquid Filled for Dampening Effect
- Weatherproof/Hermetically Sealed
- Heavy Duty 1 Piece Socket Design

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	2.5" Diameter (63 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/4 NPT - U-Clamp Panel Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	Filled 1.0 lb. Dry 0.7 lb.

Severe Service Gauges

Severe Service Gauges

J64R Series

Stainless Steel Case / Brass Internals / 2.5" Front Flange



X Series

Stainless Steel Case / Brass Internals / 4" Lower Mount

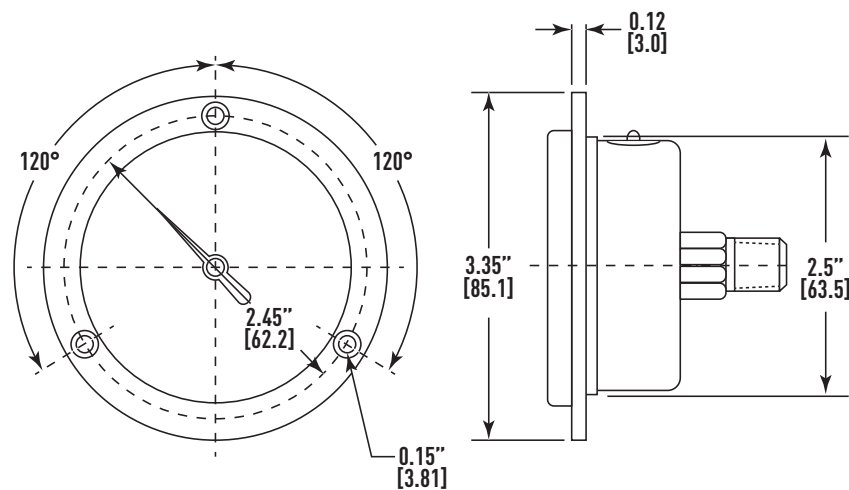


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Liquid Filled for Dampening Effect
- Weatherproof/Hermetically Sealed
- Heavy Duty Socket Design

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	2.5" Diameter (63 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	316 Stainless Steel
Movement	Brass
Connection	1/4 NPT - Front Flange Panel Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi/kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	0.5 lb.

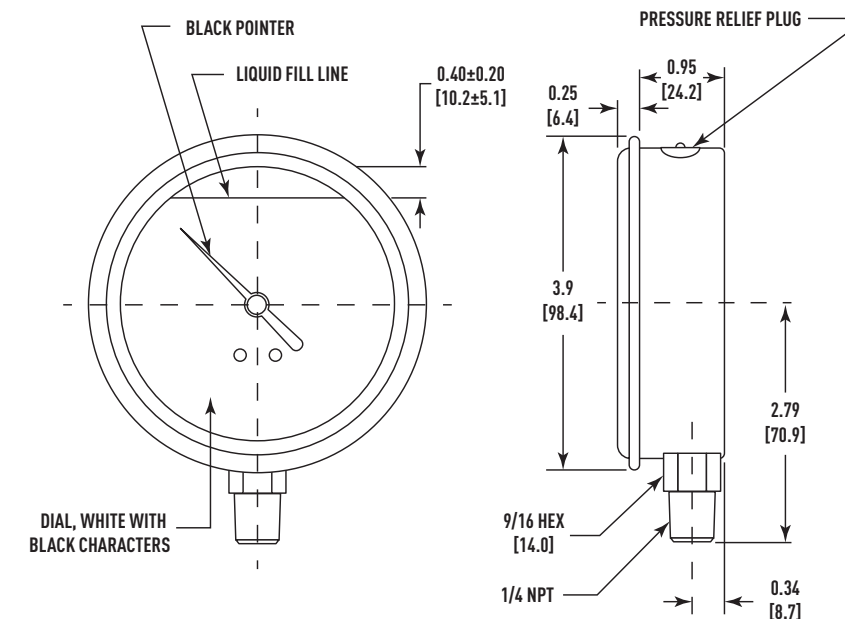


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Liquid Filled for Dampening Effect
- Weatherproof/Hermetically Sealed
- ±2/1/2% Accuracy

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±2/1/2% (ASME Grade A)
Dial Size(s)	4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/4 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	Filled 1.0 lb. Dry 0.7 lb.

Severe Service Gauges

Severe Service Gauges

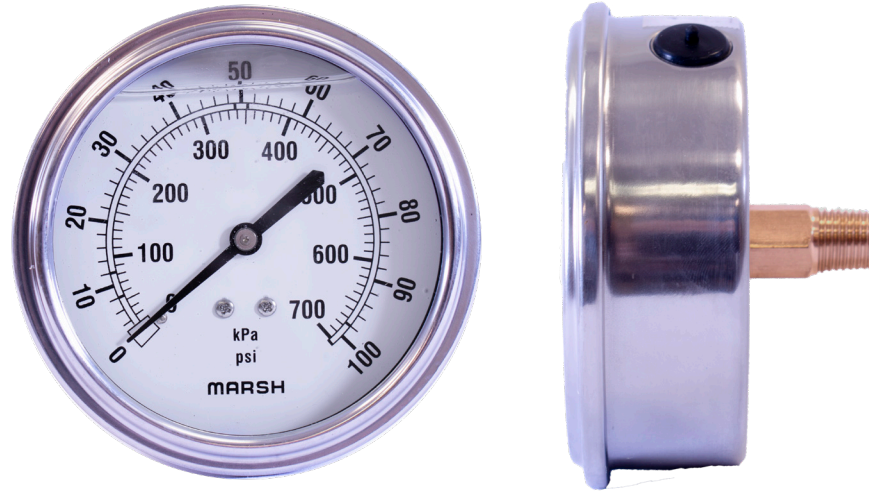
X Series

Stainless Steel Case / Brass Internals / 4" Center Back Mount



X Series

Stainless Steel Case / Brass Internals / 4" U-Clamp Mount

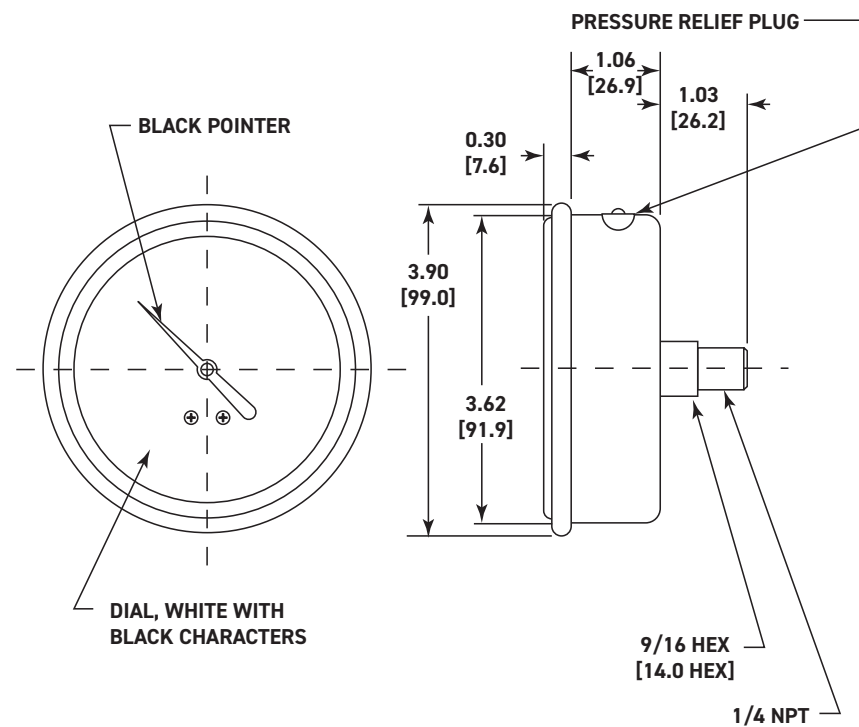


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Liquid Filled for Dampening Effect
- Weatherproof/Hermetically Sealed
- $\pm 2/1/2\%$ Accuracy

Product Dimensions



Product Specifications

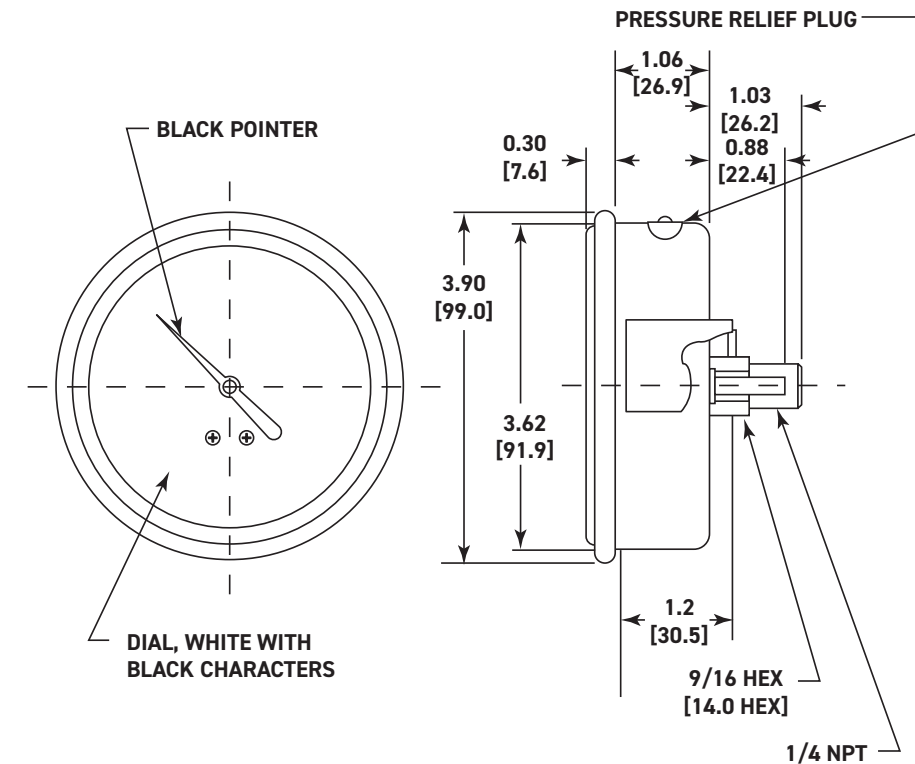
Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 2/1/2\%$ (ASME Grade A)
Dial Size(s)	4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/4 NPT - Center Back Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Acrylic
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	0.5 lb.

Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Liquid Filled for Dampening Effect
- Weatherproof/Hermetically Sealed
- $\pm 2/1/2\%$ Accuracy

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 2/1/2\%$ (ASME Grade A)
Dial Size(s)	4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/4 NPT - U-Clamp Panel Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	Filled 1.0 lb. Dry 0.7 lb.

Severe Service Gauges

Severe Service Gauges

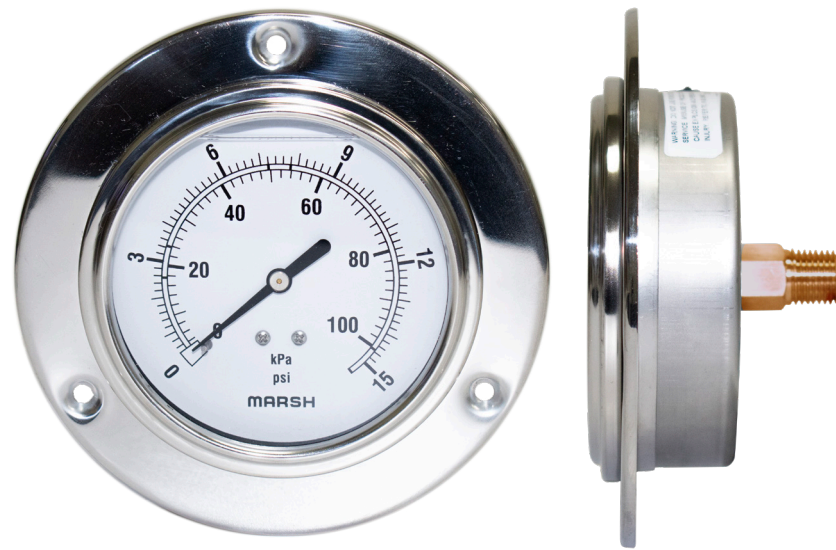
X Series

Stainless Steel Case / Brass Internals / 4" Front Flange



W90/94 Series - Forged Brass

Forged Brass Case / Brass Internals / 2.5" & 4" Lower Mount

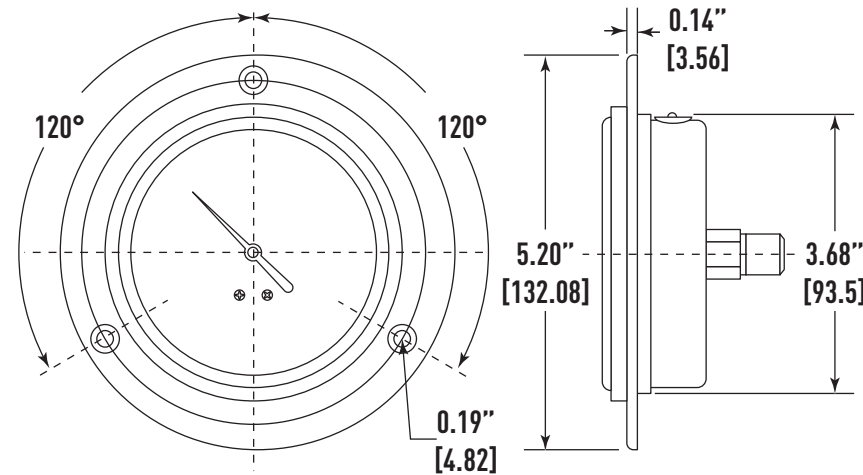


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Liquid Filled for Dampening Effect
- Weatherproof/Hermetically Sealed
- $\pm 2/1/2\%$ Accuracy

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 2/1/2\%$ (ASME Grade A)
Dial Size(s)	4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/4" NPT - Front Flange Panel Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug

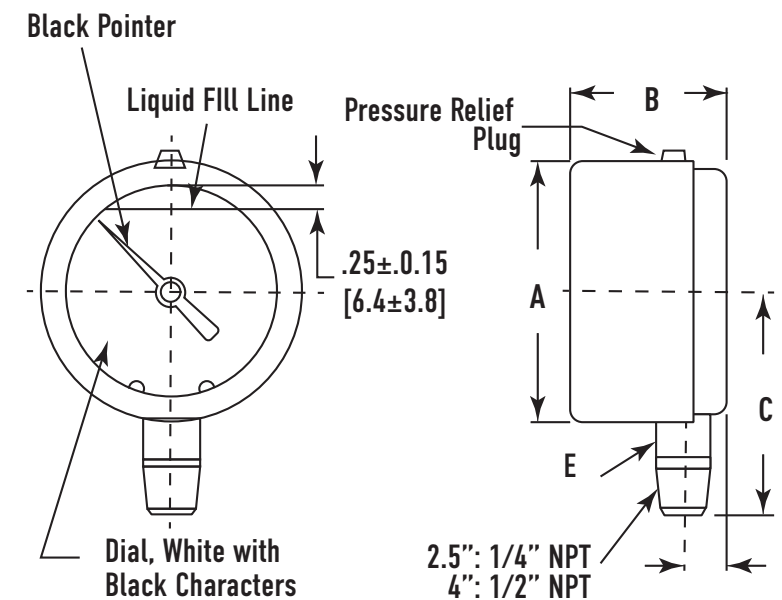


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Durable, One Piece Forged Brass Case & Socket
- Liquid Filled For Dampening Effect

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	2.5": $\pm 2/1/2\%$ (ASME Grade A) 4": 1% (ASME Grade 1A)
Dial Size(s)	2.5 Diameter (63 mm) 4" Diameter (100 mm)
Case	1 Piece Forged Brass Case & Socket
Bezel	2.5" Plated ABS 4" Plated Steel
Tube & Socket	Copper Alloy
Movement	Brass
Connection	2.5" 1/4" NPT - Lower Mount 4" 1/2" NPT - Lower Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	Filled 1.0 lb. Dry 0.7 lb.

Dial Size	A	B	C	D	E
2.5"	2.58"	1.53"	2.34"	0.45"	9/16 HEX
4"	3.94"	2.00"	3.38"	0.53"	7/8 HEX

H203/205 Series

Stainless Steel Case / Brass Internals / 4" Lower Mount

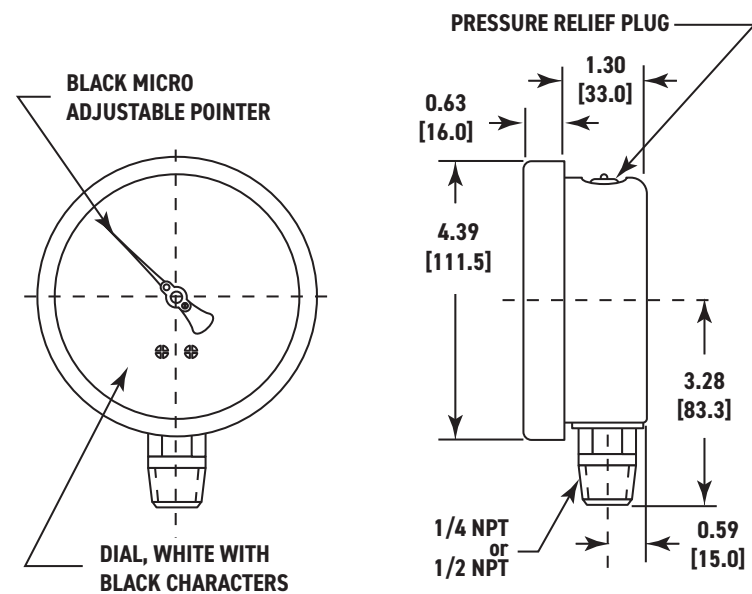


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Available Liquid Filled
- 1% Full Scale Accuracy
- Removable Bezel/Adjustable Pointer

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	1% of Full Scale (ASME Grade A)
Dial Size(s)	4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Removable
Tube & Socket	Copper Alloy
Movement	Stainless Steel
Connection	1/4" & 1/2" NPT - Lower Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Single Scale psi Dual Scale psi/kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted, Micro-Adjustable
Window	Safety Glass
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug

M Series

Stainless Steel Case / Stainless Steel Internals / 1.5" & 2" Center Back Mount

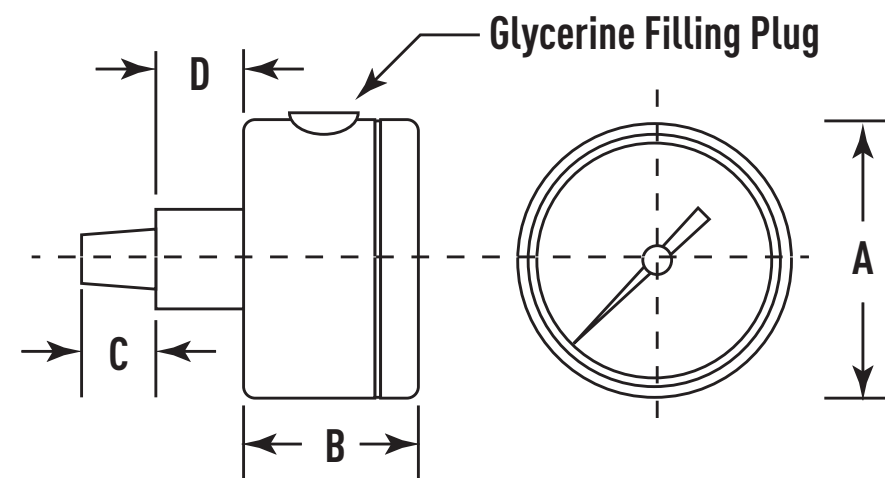


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Small diameter for use in Positioner and Low Clearance Applications

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	1.5" Diameter (40 mm) 2.0" Diameter (50 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/8" or 1/4" NPT - Center Back Mount
Pressure Ranges	VAC/Compound to 3,000 psi
Standard Scale	Triple Scale psi/BAR/kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Acrylic
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	Filled 1.0 lb. Dry 0.7 lb.

Dial Size	A	B	C	E
1.5"	1.57"	1.06"	0.45"	0.51"
2.0"	1.97"	1.18"	0.45"	0.39"

Severe Service Gauges

Severe Service Gauges

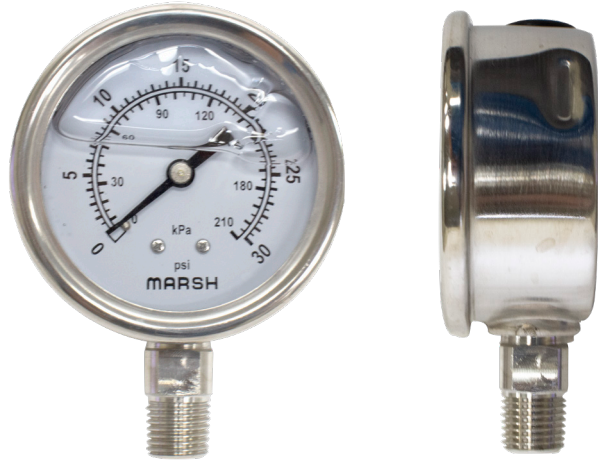
J78 Series

Stainless Steel Case / Stainless Steel Internals / 2.5" Lower Mount



J66 Series

Stainless Steel Case / Stainless Steel Internals / 2.5" Center Back Mount

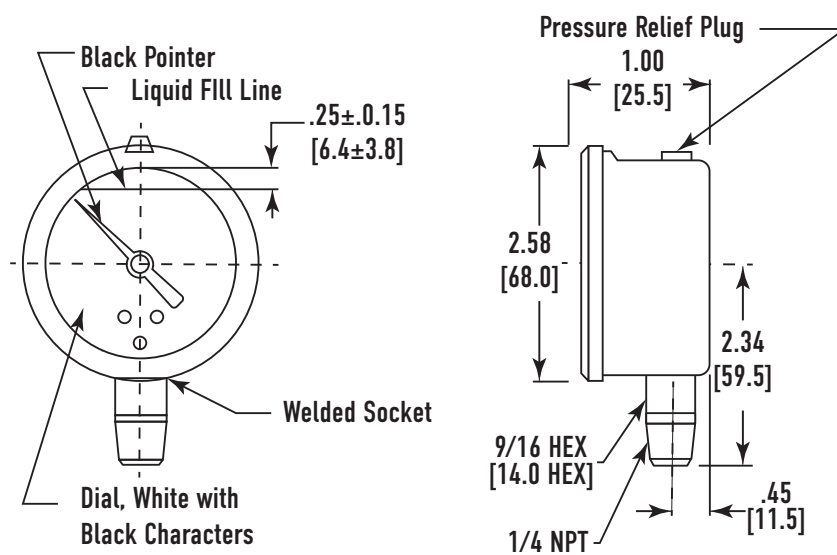


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- 316 Stainless Steel Internals
- Heavy Duty 1 Piece Socket Design
- Liquid Filled for Dampening Effect

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	2.5" Diameter (63 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 15,000 psi
Standard Scale	Dual Scale psi/kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	0.5 lb.

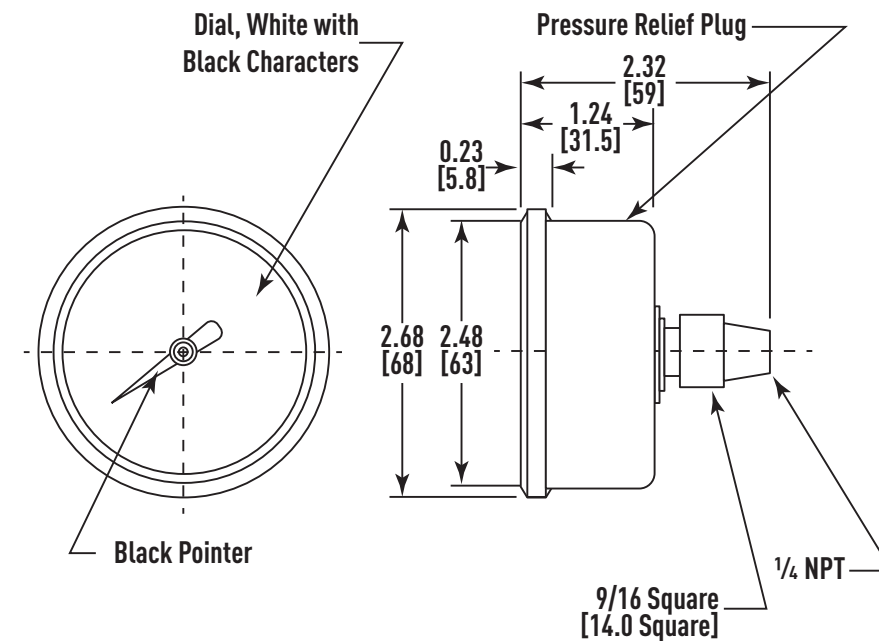


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- 316 Stainless Steel Internals
- Heavy Duty 1 Piece Socket Design
- Liquid Filled for Dampening Effect

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	2.5" Diameter (63 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 NPT - Center Back Mount
Pressure Ranges	VAC/Compound to 15,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	Filled 1.0 lb. Dry 0.7 lb.

Severe Service Gauges

Severe Service Gauges

J74 Series

Stainless Steel Case / Stainless Steel Internals / 2.5" U-Clamp Panel Mount



J66R Series

Stainless Steel Case / Stainless Steel Internals / 2.5" Front Flange

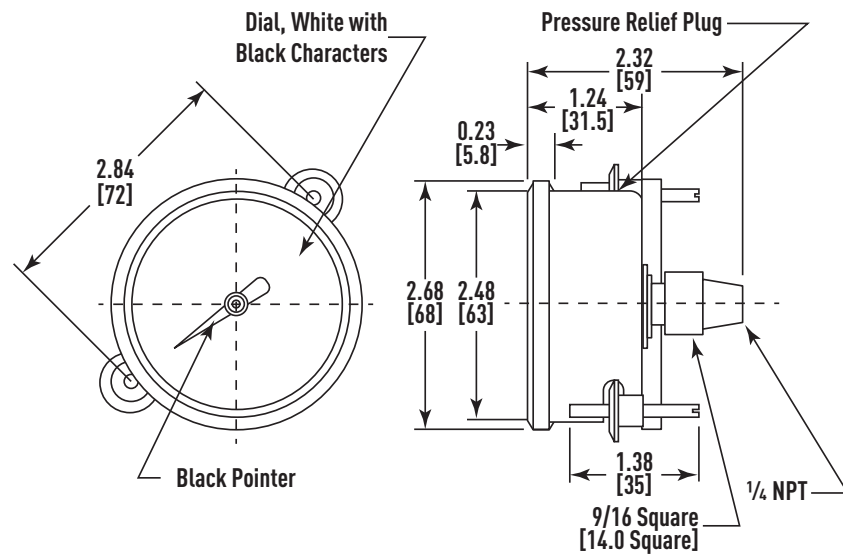


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- 316 Stainless Steel Internals
- Heavy Duty 1 Piece Socket Design
- Liquid Filled for Dampening Effect

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	2.5" Diameter (63 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 NPT - U-Clamp Panel Mount
Pressure Ranges	VAC/Compound to 15,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	0.5 lb.

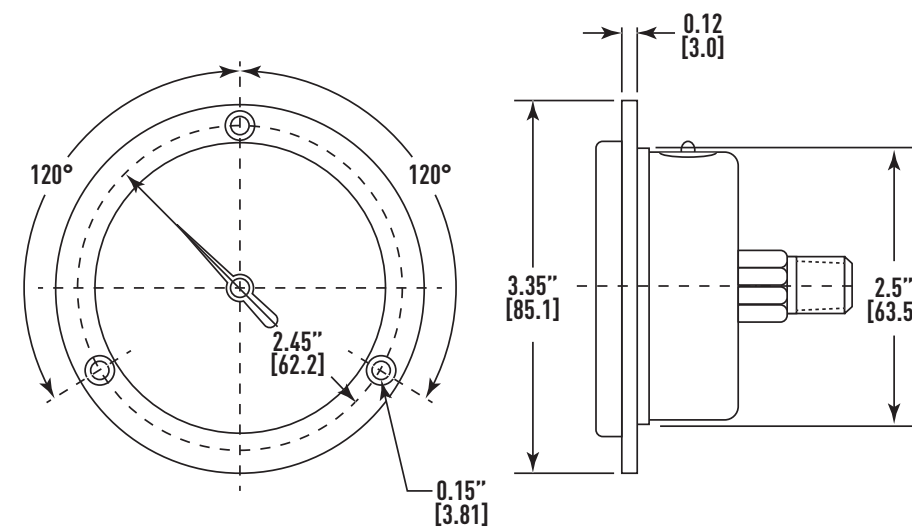


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- 316 Stainless Steel Internals
- Heavy Duty 1 Piece Socket Design
- Liquid Filled for Dampening Effect

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	2.5" Diameter (63 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 NPT - Front Flange Panel Mount
Pressure Ranges	VAC/Compound to 15,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	Filled: 1.0 lb. Dry: 0.7 lb.

Severe Service Gauges

Severe Service Gauges

X Series

Stainless Steel Case / Stainless Steel Internals / 4" Lower Mount

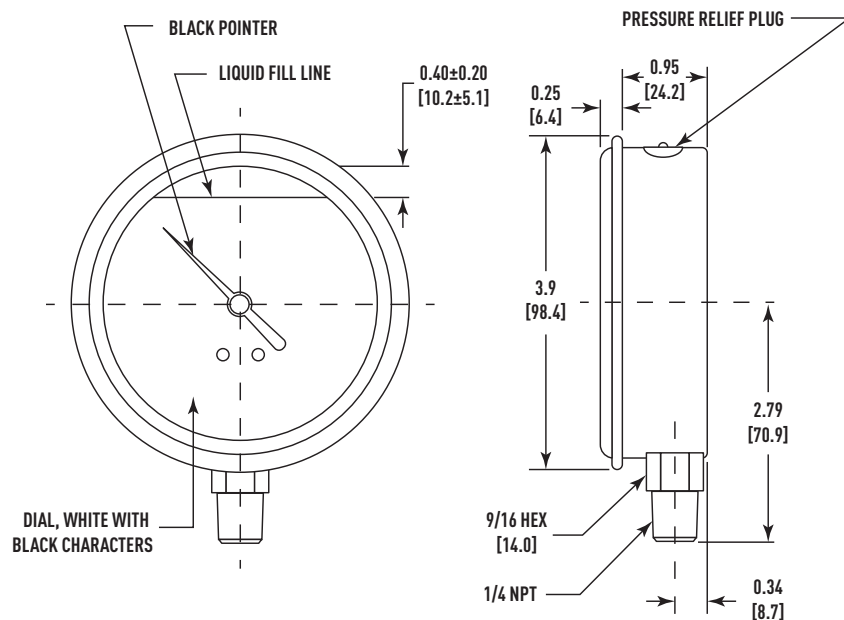


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- 316 Stainless Steel Internals
- Liquid Filled for Dampening Effect
- Weatherproof/Hermetically Sealed
- $\pm 2/1/2\%$ (ASME Grade A)

Product Dimensions

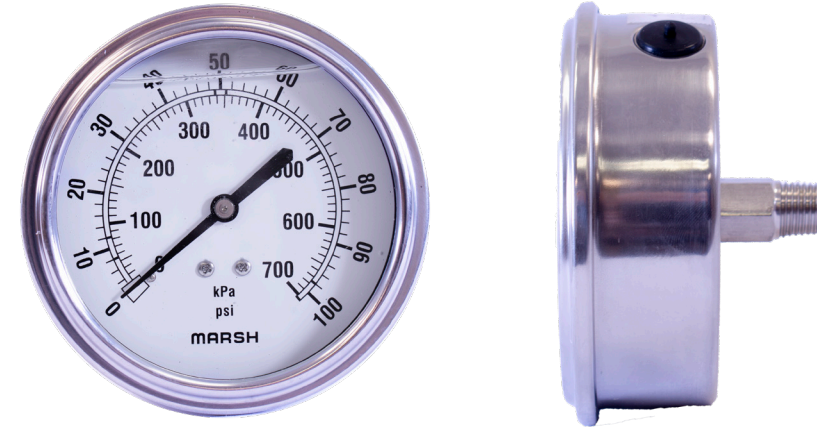


Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 2/1/2\%$ (ASME Grade A)
Dial Size(s)	4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi/kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	0.5 lb.

X Series

Stainless Steel Case / Stainless Steel Internals / 4" Center Back Mount

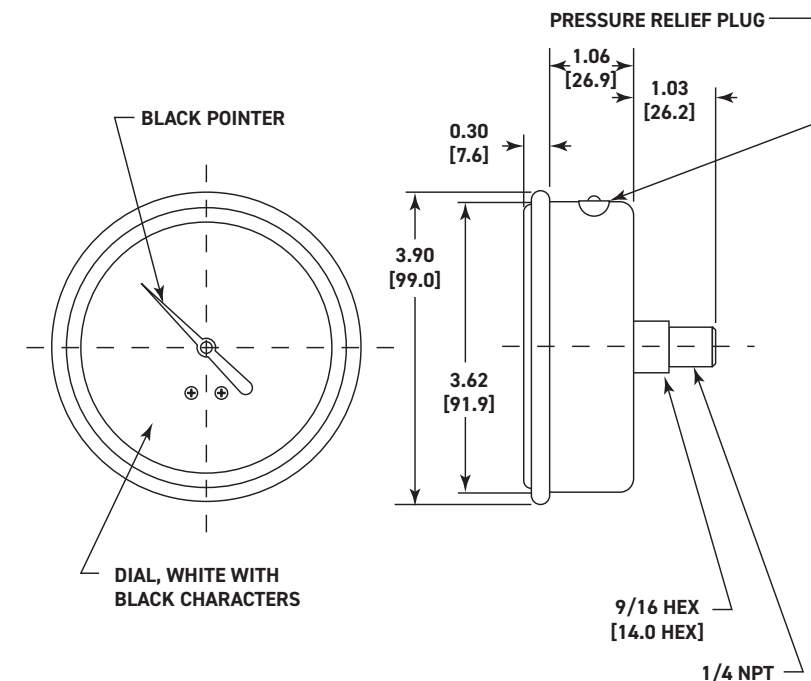


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- 316 Stainless Steel Internals
- Liquid Filled For Dampening Effect
- Weatherproof/Hermetically Sealed
- $\pm 2/1/2\%$ (ASME Grade A)

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 2/1/2\%$ (ASME Grade A)
Dial Size(s)	4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 NPT - Center Back Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	Filled 1.0 lb. Dry 0.7 lb.

Severe Service Gauges

Severe Service Gauges

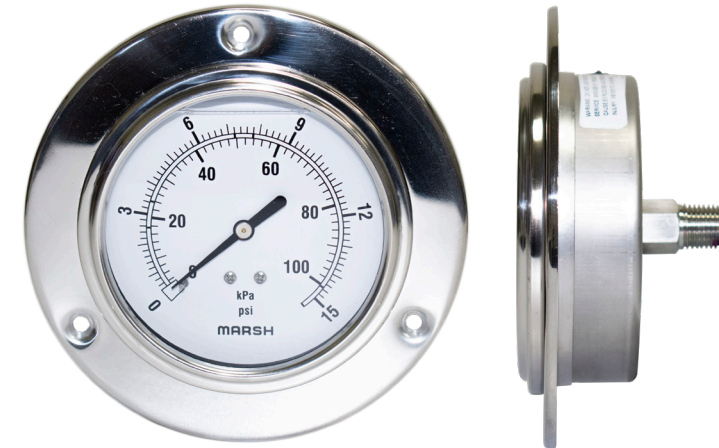
X Series

Stainless Steel Case / Stainless Steel Internals / 4" U-Clamp Panel Mount



X Series

Stainless Steel Case / Stainless Steel Internals / 4" Front Flange

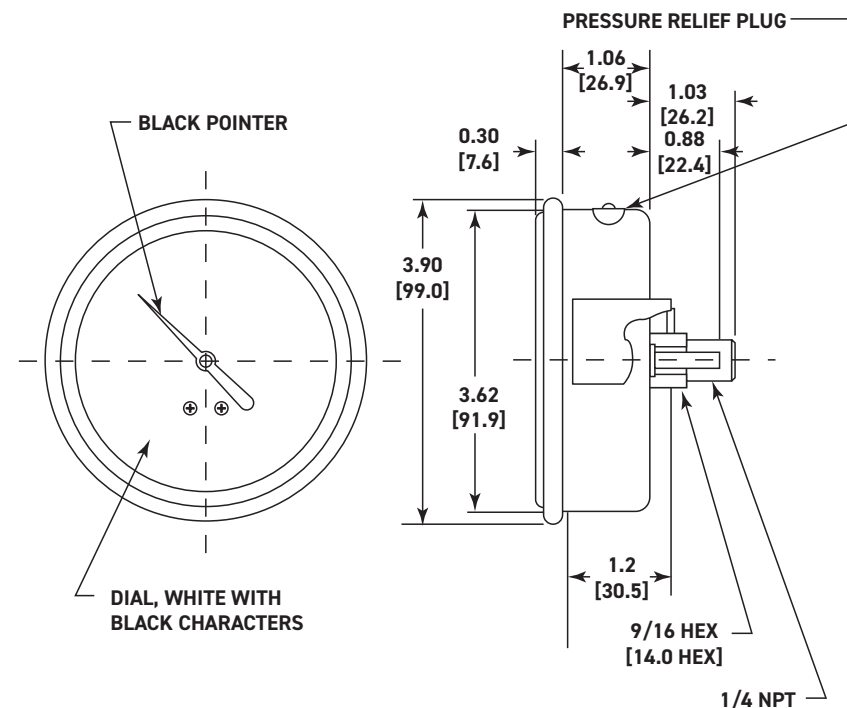


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- 316 Stainless Steel Internals
- Liquid Filled For Dampening Effect
- Weatherproof/Hermetically Sealed
- $\pm 2/1/2\%$ (ASME Grade A)

Product Dimensions



Product Specifications

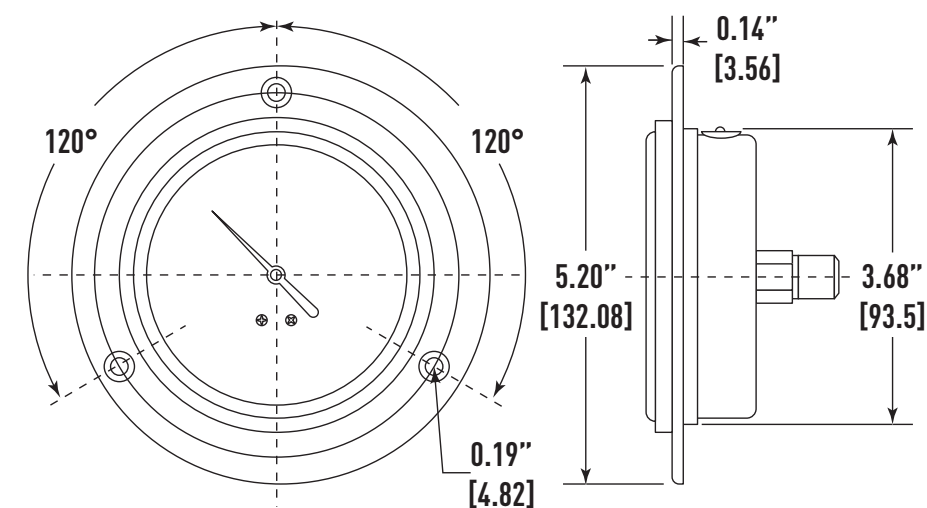
Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 2/1/2\%$ (ASME Grade A)
Dial Size(s)	4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 NPT - U-Clamp Panel Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi/kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	0.5 lb.

Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- 316 Stainless Steel Internals
- Liquid Filled
- Weatherproof/Hermetically Sealed

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 3/2/3\%$ (ASME Grade B)
Dial Size(s)	4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Fixed
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 NPT - Front Flange Panel Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	Filled 1.0 lb. Dry 0.7 lb.

Severe Service Gauges

Severe Service Gauges

H207/209 Series

Stainless Steel Case / Stainless Steel Internals / 4" Lower Mount



HW309 Series

Stainless Steel Case / Stainless Steel Internals / 6" Lower Mount

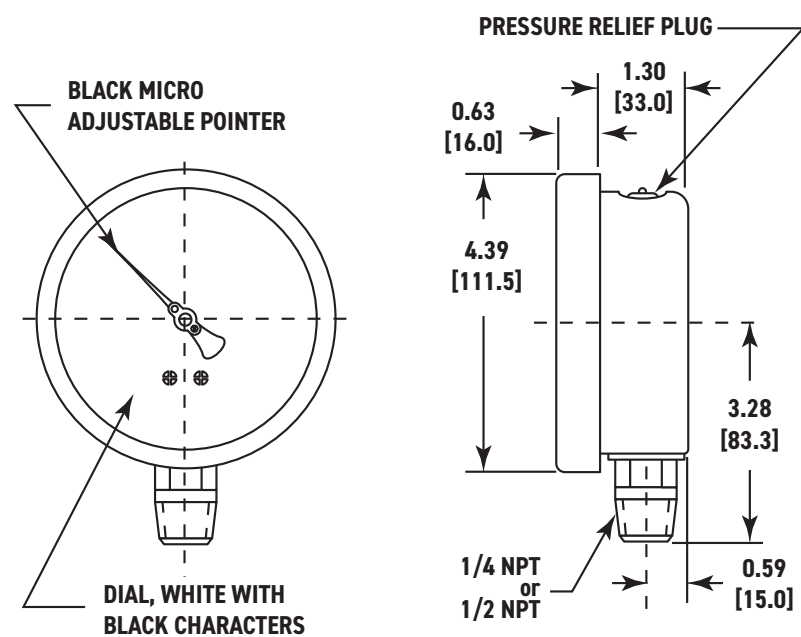


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- 316 Stainless Steel Internals
- Durable Welded Case-to-Socket Connection
- Liquid Filled Options Available
- 1% Accuracy

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	1% of Full Scale (ASME Grade A)
Dial Size(s)	4" Diameter (100 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Removable
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 or 1/2 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Single Scale psi Dual Scale psi/kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted, Micro-Adjustable
Window	Safety Glass
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	0.5 lb.

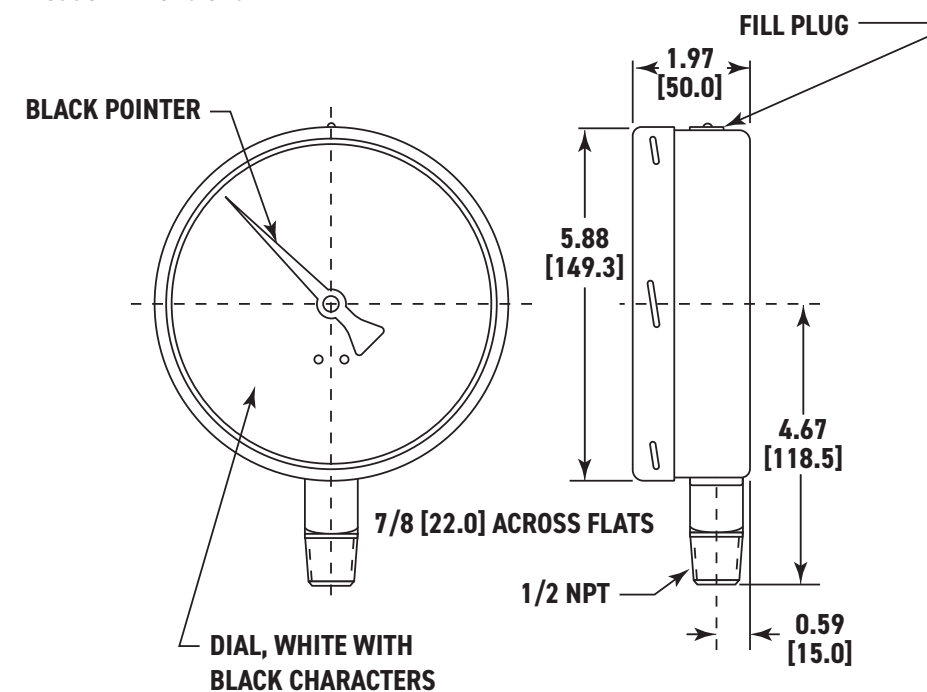


Marsh Instruments Severe Service Liquid Filled Gauges are designed to perform in rugged and harsh environmental conditions, especially where pulsation or vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and lubricating the internals.

Features:

- Large, Easy to Read Dial
- Durable, Welded Case-to-Socket Connection
- 1% Full Scale Accuracy

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	1% of Full Scale (ASME Grade A)
Dial Size(s)	6" Diameter (160 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel - Removable
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/2 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted, Micro-Adjustable
Window	Safety Glass
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Filler/Pressure Relief Plug
Weight	Filled 1.0 lb. Dry 0.7 lb.

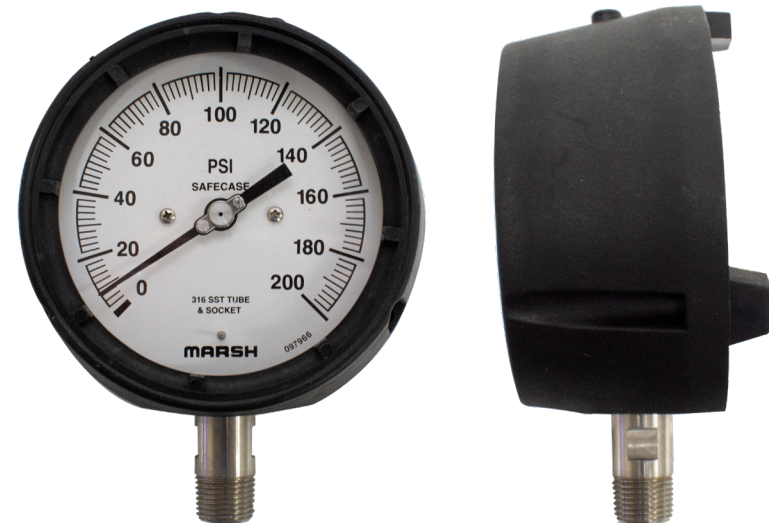
SAFECASE PROCESS GAUGES

With over 155 years of proven experience, an extensive list of designs and options make the Marsh Instruments line of Process Gauges the intelligent and practical choice in process instrumentation. All case styles feature SAFECASE solid front construction.



P51/56 Series - Process Gauge

Polypropylene Case / Stainless Steel Internals / 4.5" Lower Mount

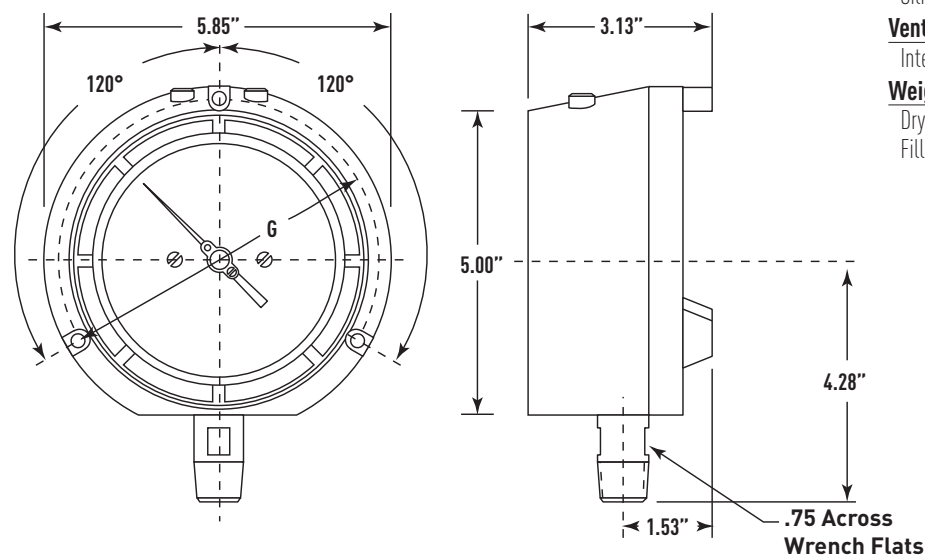


With over 155 years of proven experience, an extensive list of designs and options make the Marsh Instruments line of Process Gauges the intelligent and practical choice in process instrumentation. All case styles feature SAFECASE solid front construction.

Features:

- Solid Front SAFECASE
- 0.5% Full Scale Accuracy
- Pressure Ranges Vacuum to 20,000 psi
- Dry or Liquid Filled
- Micrometer Pointer

Product Dimensions

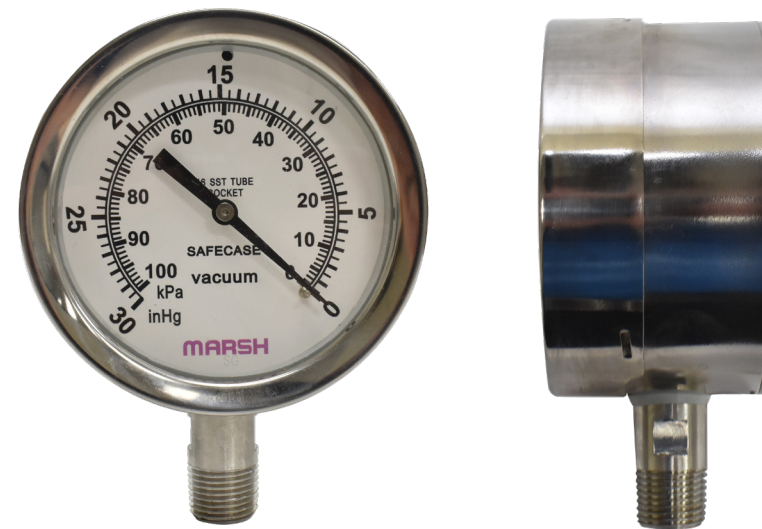


Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	0.5% of Full Scale (ASME Grade A)
Dial Size(s)	4 1/2" Diameter
Case	SAFECASE Polypropylene
Bezel	Polypropylene - Removable
Tube & Socket	Copper Alloy or 316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 & 1/2 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted, Micro-Adjustable
Window	Safety Glass
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Internal Compensating Diaphragm
Weight	Dry 3.0 lb. Filled 4.0 lb.

W96 Series - Solid Front

Stainless Steel Case / Stainless Steel Internals / 4" Lower Mount

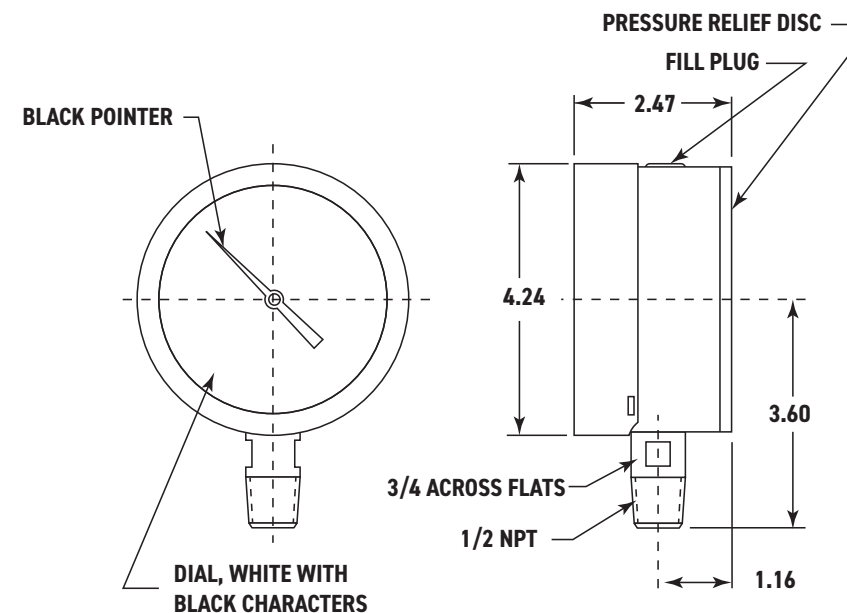


With over 155 years of proven experience, an extensive list of designs and options make the Marsh Instruments line of Process Gauges the intelligent and practical choice in process instrumentation. All case styles feature SAFECASE solid front construction.

Features:

- Solid Front SAFECASE
- ±1% Full Scale Accuracy
- Pressure Ranges Vacuum to 20,000 psi
- Dry or Liquid Filled
- Micrometer Pointer

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±1% of Full Scale (ASME Grade 1A)
Dial Size(s)	4" Diameter
Case	SAFECASE Stainless Steel
Bezel	Stainless Steel - Removable
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 & 1/2 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted, Micro-Adjustable
Window	Safety Glass
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Internal Compensating Diaphragm
Weight	Dry 2.4 lb. Filled 3 lb.

P14 Series - Process Gauge

Aluminum Case / Stainless Steel Internals / 4.5" Lower Mount

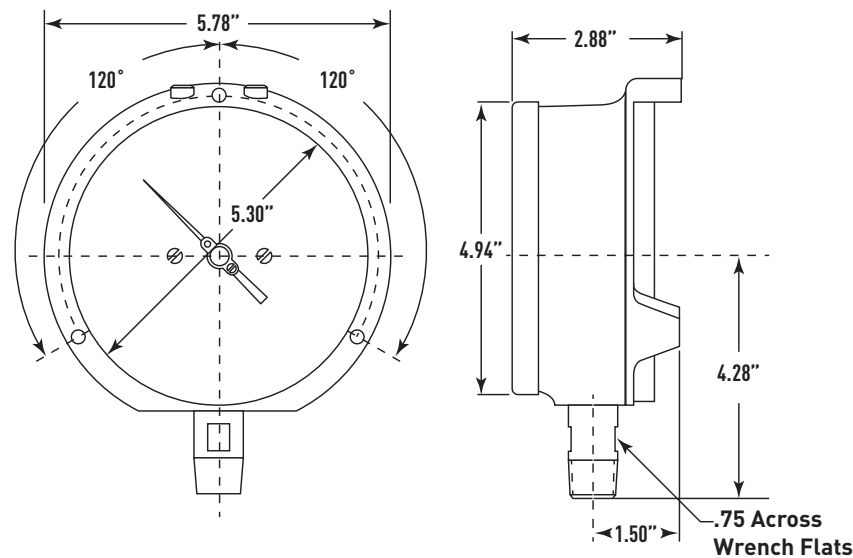


With over 155 years of proven experience, an extensive list of designs and options make the Marsh Instruments line of Process Gauges the intelligent and practical choice in process instrumentation. All case styles feature SAFECASE solid front construction.

Features:

- Solid Front SAFECASE
- 0.5% Full Scale Accuracy
- Pressure Ranges Vacuum to 20,000 psi
- Dry or Liquid Filled
- Micrometer Pointer

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±0.5% of Full Scale (ASME Grade A)
Dial Size(s)	4 1/2" Diameter (100 mm)
Case	SAFECASE Aluminum
Bezel	Aluminum - Removable
Tube & Socket	Copper Alloy or 316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 & 1/2 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted, Micro-Adjustable
Window	Safety Glass
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Internal Compensating Diaphragm
Weight	Dry 5.0 lb. Filled 6.0 lb.

P24 Series - Process Gauge

Aluminum Case / Stainless Steel Internals / 6" Backflange Lower Mount

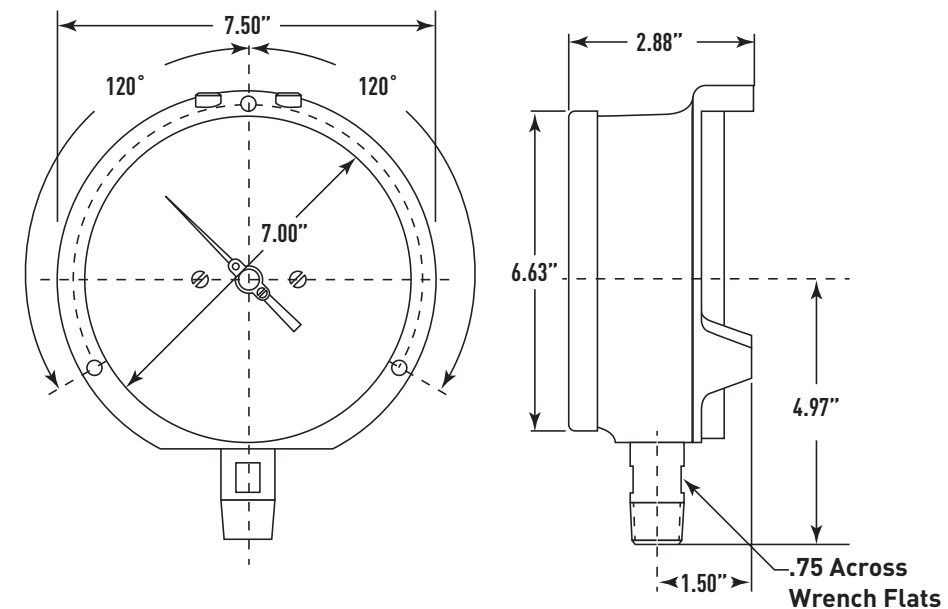


With over 155 years of proven experience, an extensive list of designs and options make the Marsh Instruments line of Process Gauges the intelligent and practical choice in process instrumentation. All case styles feature SAFECASE solid front construction.

Features:

- Solid Front SAFECASE
- 0.5% Full Scale Accuracy
- Pressure Ranges Vacuum to 20,000 psi
- Dry or Liquid Filled
- Micrometer Pointer

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±0.5% of Full Scale (ASME Grade A)
Dial Size(s)	6" Diameter (150 mm)
Case	SAFECASE Aluminum
Bezel	Aluminum - Removable
Tube & Socket	Copper Alloy or 316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 & 1/2 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted, Micro-Adjustable
Window	Safety Glass
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Internal or Compensating Diaphragm
Weight	Dry 5.0 lb. Filled 6.0 lb.

P15 Series - Process Gauge

Aluminum Case / Stainless Steel Internals / 4.5" Lower Back Mount with Back Flange



P18 Series - Process Gauge

Aluminum Case / Stainless Steel Internals / 4.5" Hinged Ring Panel Mount



With over 155 years of proven experience, an extensive list of designs and options make the Marsh Instruments line of Process Gauges the intelligent and practical choice in process instrumentation. All case styles feature SAFECASE solid front construction.

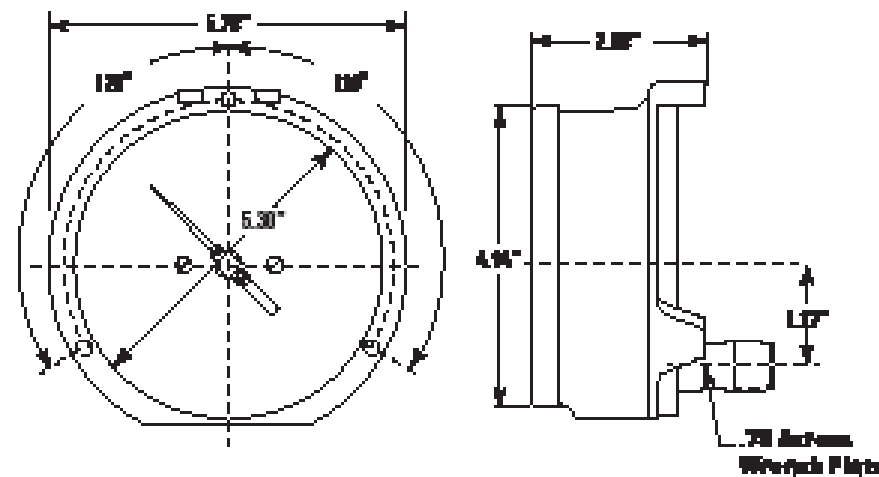
Features:

- Solid Front SAFECASE
- 0.5% Full Scale Accuracy
- Pressure Ranges Vacuum to 20,000 psi
- Dry or Liquid Filled
- Micrometer Pointer

Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±0.5% of Full Scale (ASME Grade A)
Dial Size(s)	4 1/2" Diameter (100 mm)
Case	SAFECASE Aluminum
Bezel	Aluminum - Removable
Tube & Socket	Copper Alloy or 316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 & 1/2 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted, Micro-Adjustable
Window	Safety Glass
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Internal Compensating Diaphragm
Weight	Dry 5.0 lb. Filled 6.0 lb.

Product Dimensions



With over 155 years of proven experience, an extensive list of designs and options make the Marsh Instruments line of Process Gauges the intelligent and practical choice in process instrumentation. All case styles feature SAFECASE solid front construction.

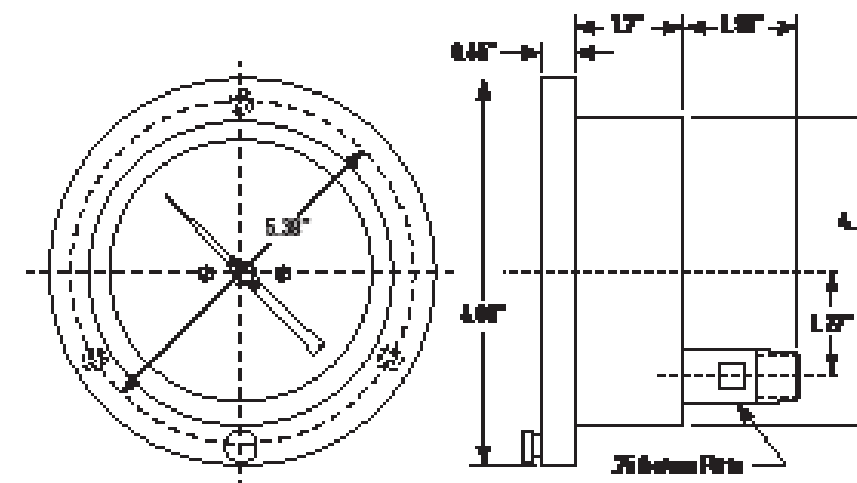
Features:

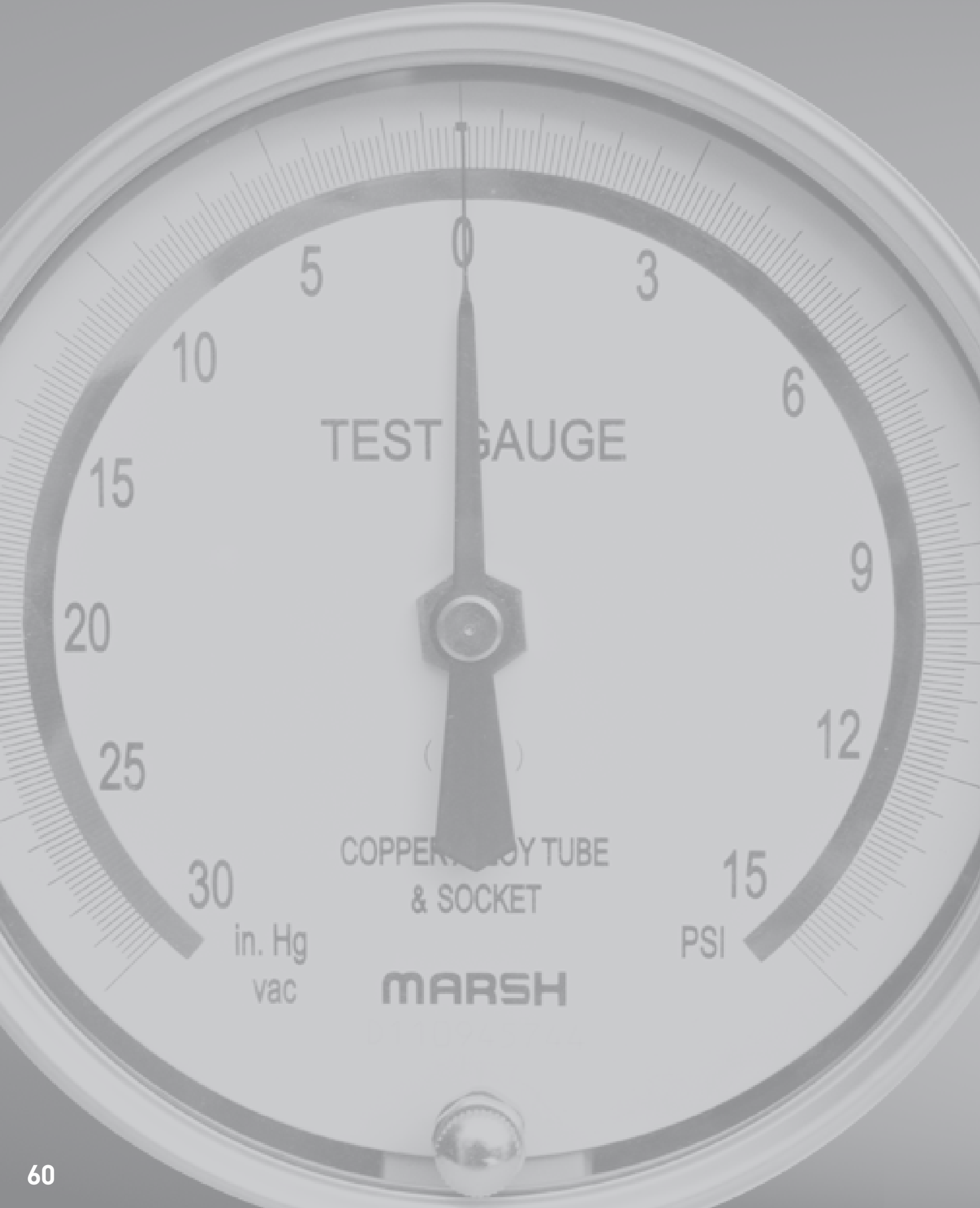
- Solid Front SAFECASE
- 0.5% Full Scale Accuracy
- Pressure Ranges Vacuum to 20,000 psi
- Dry or Liquid Filled
- Micrometer Pointer

Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±0.5% of Full Scale (ASME Grade A)
Dial Size(s)	4 1/2" Diameter (100 mm)
Case	SAFECASE Aluminum
Bezel	Aluminum - Removable
Tube & Socket	Copper Alloy or 316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 NPT - Hinged Ring Panel Mount
Pressure Ranges	VAC/Compound to 20,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted, Micro-Adjustable
Window	Safety Glass
Standard Case Fill	Dry Glycerine Silicone
Ambient Temperature	Dry: -40° to 180°F Glycerine: 30° to 160°F Silicone: -40° to 180°F
Vent Plug	Internal Compensating Diaphragm
Weight	Dry 5.0 lb. Filled 6.0 lb.

Product Dimensions





PRECISION SERVICE GAUGES

Marsh Instruments Test Gauges are precision test instruments designed for use where high accuracy is demanded. Available in a variety of dial sizes and configurations, Marsh Instruments Test Gauges are the instrument of choice for laboratory and industrial applications requiring precise measurement.



D31 Series Test Gauge

Stainless Steel Case / Stainless Steel Internals / 6" Lower Mount

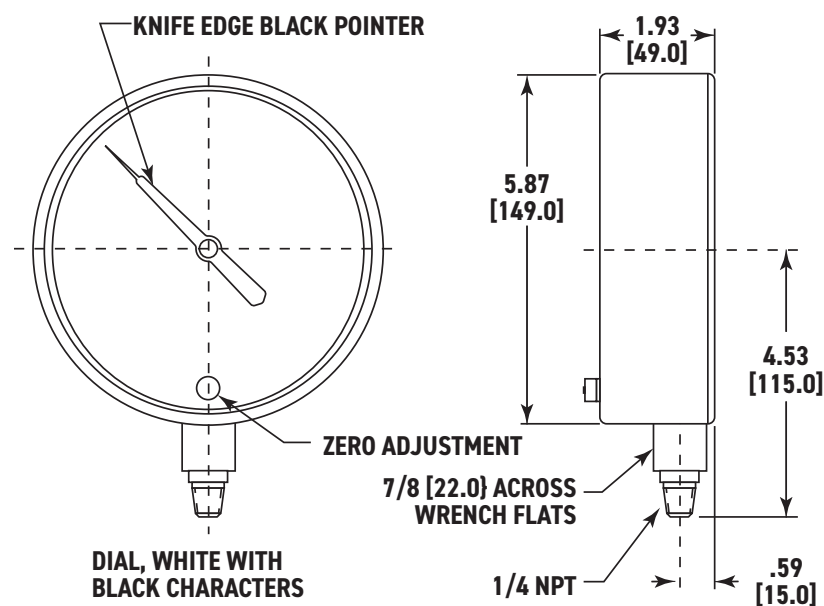


Marsh Instruments Master Test Gauges are used in laboratory and industrial environments where precise accuracy is demanded. For pressure readings to 10,000 psi, Marsh Instruments Master Test Gauges offer dependable, consistent accuracy within 0.25% of span. The pressure relieving blowout plug provides increased safety for the user.

Features:

- Knife-Edge Pointer
- External Zero Adjustment
- Ranges to 10,000 psi

Product Dimensions

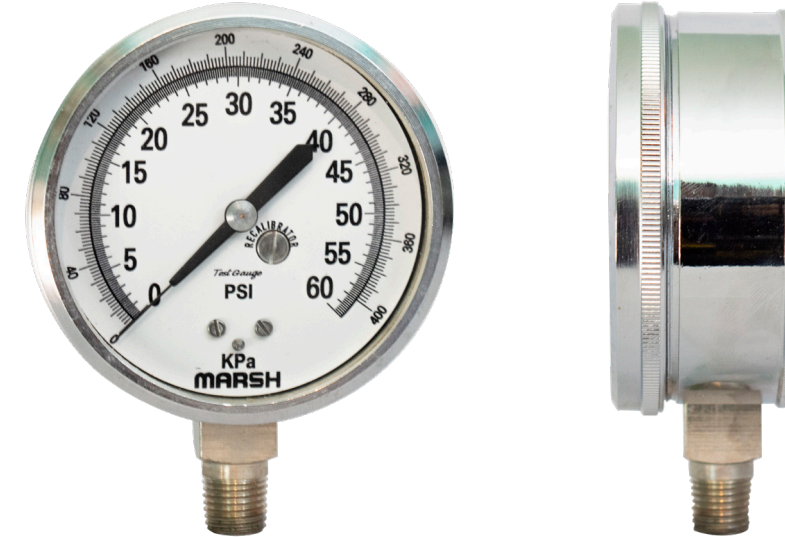


Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±0.25% (ASME Grade A)
Dial Size(s)	6" Diameter (150 mm)
Case	304 Stainless Steel
Bezel	304 Stainless Steel
Tube & Socket	Copper Alloy through 600 psi 316 Stainless Steel 1,000 psi and Above
Movement	Stainless Steel
Connection	1/4 NPT - Lower Mount through 600 psi 1/2 NPT - Lower Mount 1,000 psi and Above
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White with Mirror Dial to Avoid Parallax
Pointer	Aluminum, Black Painted, Knife-Edge
Window	Instrument Glass
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 180°F
Vent Plug	Blowout Plug
Weight	5.0 Lb.

D15 Series Test Gauge

Nickel Plated Brass Case / Brass Internals / 3" Lower mount

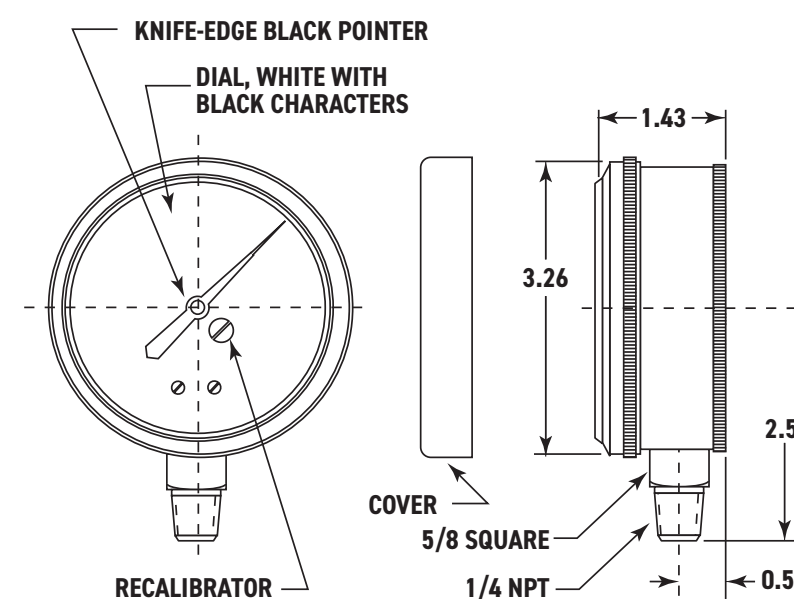


Marsh Instruments Inspector's Test Gauges are specifically designed for use by steam boiler, air brake, and pressure system inspectors. The rugged 3" Inspector's test gauge features a nickel-plated case and an accuracy of 0.5% span. The bushed Master Test Gauge movement with recalibrator is standard.

Features:

- 0.5% Full Scale Accuracy (ASME Grade A)
- Vacuum to 1,000 psi Range
- Recalibrator on Dial Face

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±0.5% Accuracy (ASME Grade 2A)
Dial Size(s)	3" Diameter
Case	Brass, Nickel Plated
Bezel	Brass, Nickel Plated, Removable
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/4 NPT - Lower Mount
Pressure Ranges	VAC to 1,000 psi
Standard Scale	Dual Scale psi/kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted, Knife-Edge
Window	Beveled Glass
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	2.0 lb.

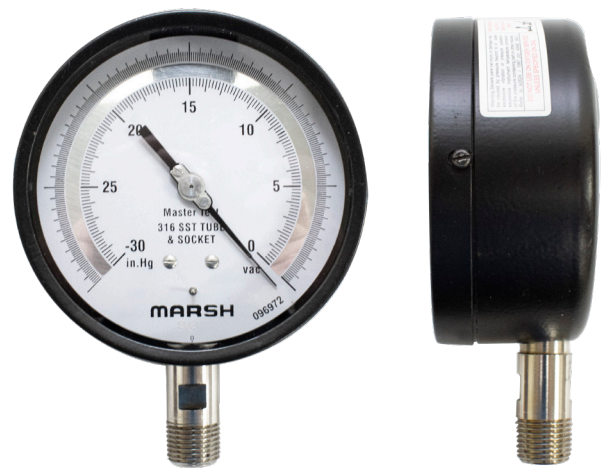
D52/56 Series Test Gauge

Steel Case / Stainless Steel Internals / 4.5" Lower Mount



D61/64 Series Test Gauge

Steel Case / Stainless Steel Internals / 4.5" Hinged Ring Front Flange

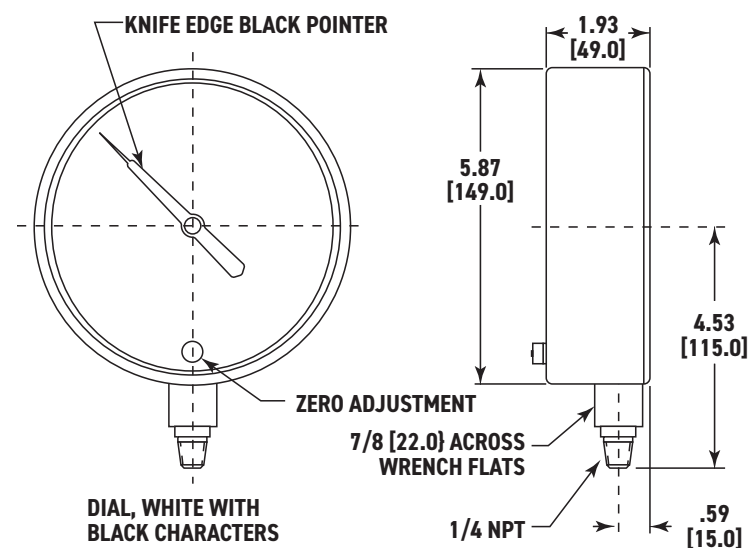


The Marsh Instruments Test Gauge is designed with a black painted steel housing and 316 stainless steel tube and socket to meet the demanding service needs of various test gauge applications. Accuracy is 0.5% of full span. A highly polished integral mirror is positioned between the two graduation arcs on the dial face. The knife-edge pointer is reflective so that, when the pointer and its reflection are in alignment, parallax is virtually eliminated and a true dial reading is assured.

Features:

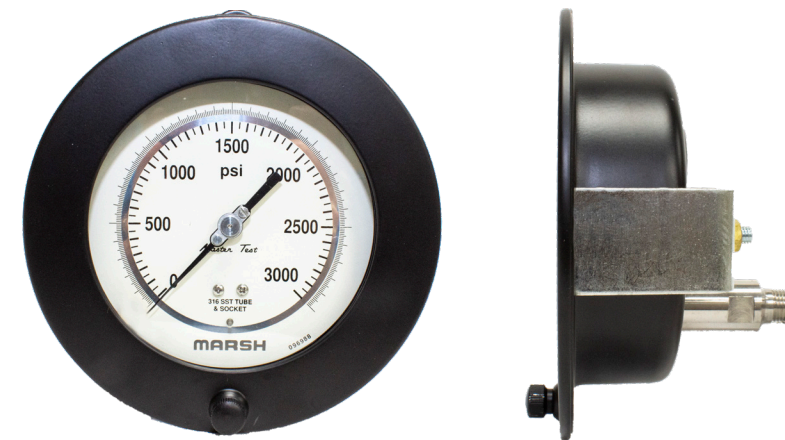
- 0.5% Full Scale Accuracy
- Adjustable micrometer knife-edge pointer with mirror dial
- Stainless Steel Movement
- Ranges to 10,000 psi

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±0.5% Accuracy (ASME Grade 2A)
Dial Size(s)	4 1/2" Diameter
Case	Steel, Black Painted
Bezel	Steel, Black Painted
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 & 1/2 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White with Mirror Dial to Avoid Parallax
Pointer	Aluminum, Black Painted, Micro-Adjustable, Knife Edge
Window	Instrument Glass
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	Blowout Plug
Weight	3.0 lb.

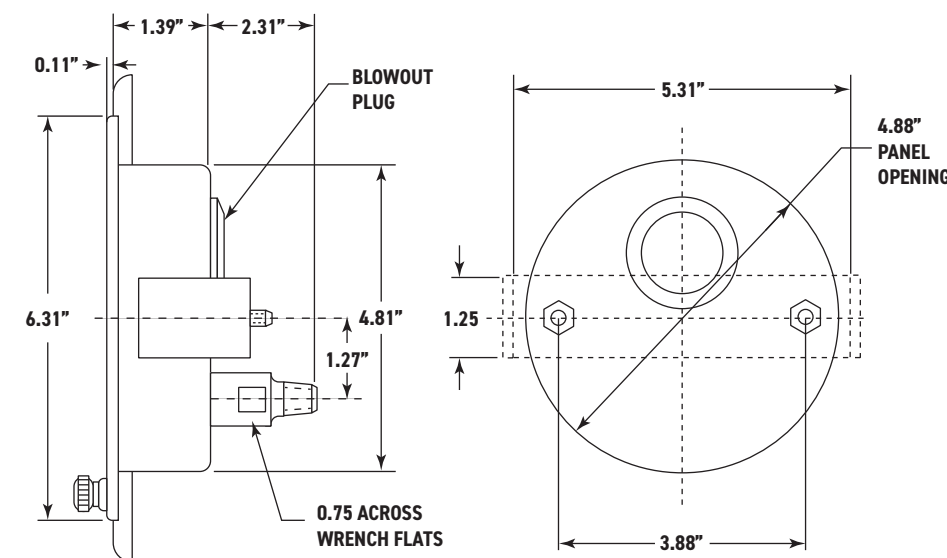


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Features:

- Adjustable micrometer knife-edge pointer with mirror dial
- Stainless Steel Movement
- Ranges to 10,000 psi

Product Dimensions



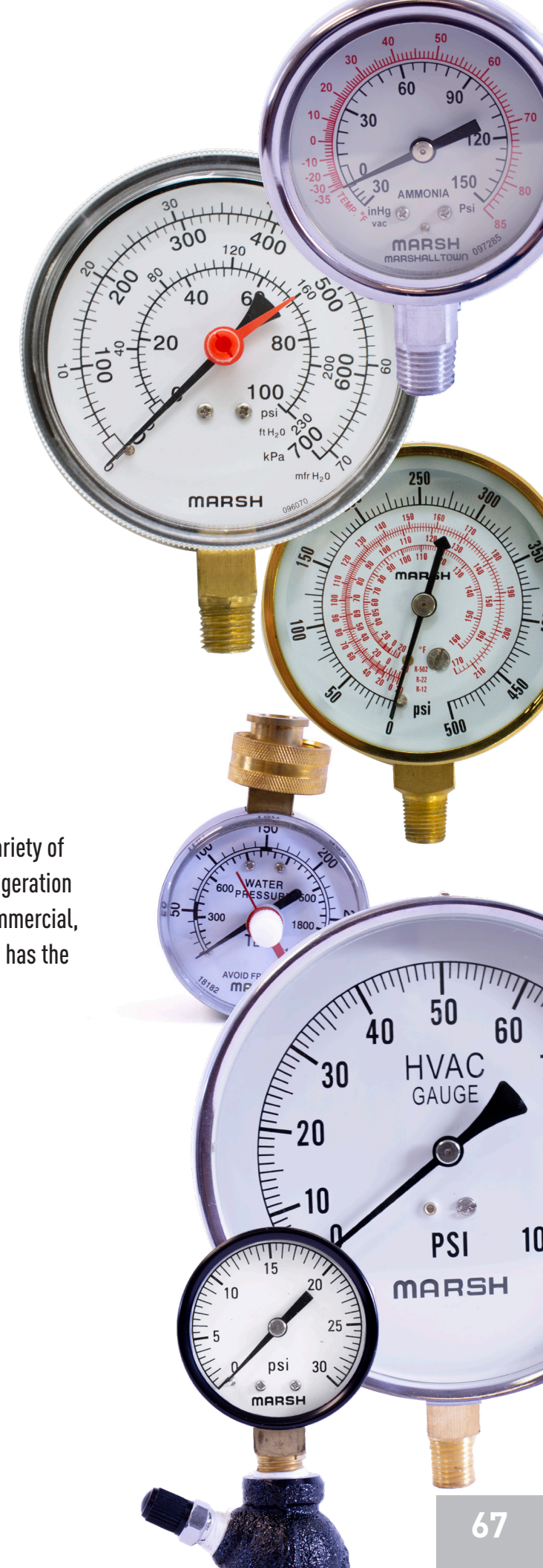
Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±0.5% Accuracy (ASME Grade 2A)
Dial Size(s)	4 1/2" Diameter
Case	Steel, Black Painted
Bezel	304 Stainless Steel
Tube & Socket	316 Stainless Steel
Movement	Stainless Steel
Connection	1/4 & 1/2 NPT - Lower Back Hinged Ring Front Flange
Pressure Ranges	VAC/Compound to 10,000 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White with Mirror Dial to Avoid Parallax
Pointer	Aluminum, Black Painted, Micro-Adjustable, Knife Edge
Window	Instrument Glass
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	Blowout Plug
Weight	3.0 lb.



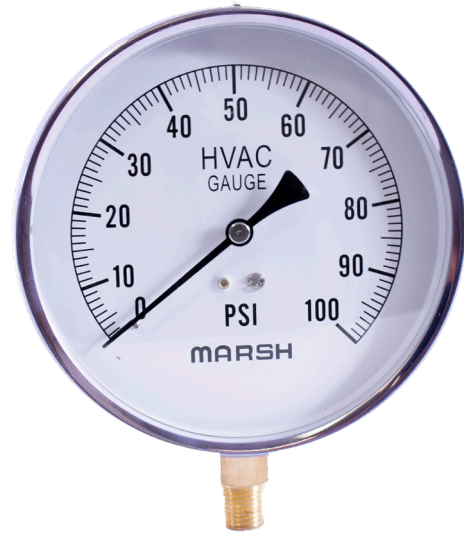
HVAC/R GAUGES

Marsh Instruments has offered the widest variety of gauges and thermometers for HVAC and refrigeration applications for over 155 years. Whether commercial, industrial, or residential, Marsh Instruments has the instruments to meet your HVAC/R needs.



W04 Series - Contractor Gauge

Stainless Steel Case / Brass Internals / 4.5" Lower Mount

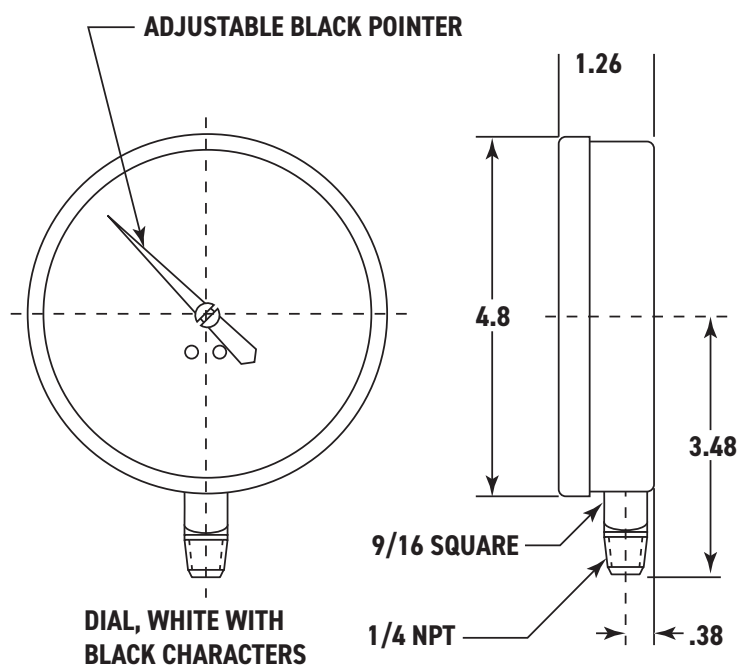


Marsh Instruments Contractor's HVAC Service Gauge features long-life movement to meet the needs of contractors in air conditioning, heating, plumbing, and refrigeration. This rugged and reliable gauge is economically priced and offers many features normally found on more expensive gauges such as adjustable pointer, and polished stainless steel case.

Features:

- 2/1/2% Accuracy
- Polished Stainless Steel Case
- Adjustable Pointer

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±2/1/2% (ASME Grade A)
Dial Size(s)	4 1/2" Diameter
Case	Polished Stainless Steel
Bezel	Polished Stainless Steel - Removable
Tube & Socket	Copper Alloy
Movement	Copper Alloy
Connection	1/4 NPT - Lower Mount
Pressure Ranges	VAC/Compound to 1,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Acrylic
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A

G33 Series

Steel Case / Brass Internals / Bell or Hex Mounted

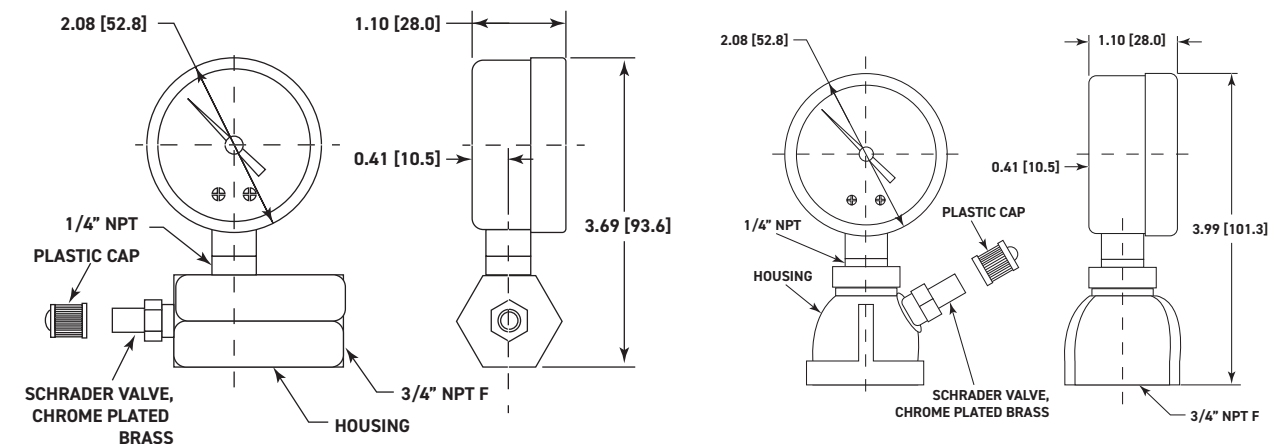


Used to pressure test all new gas installations for leaks and passing inspection codes. After installing the Marsh Instruments Gas Test Gauge, the system is pressurized with air. Any leakage will be indicated by a pressure drop in the gauge.

Features:

- Hex or Bell Type Mounting
- 15 to 100 psi Pressure ranges
- Steel Case and Brass Internals

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	2" Diameter
Case	Steel, Black Painted
Bezel	Steel, Black Painted, Fixed
Tube & Socket	Copper Alloy
Movement	Brass
Connection	3/4 FPT - Bell or Hex Mount
Pressure Ranges	15 to 200 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Acrylic
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A

Gas Pressure Test Kit

Steel Case / Brass Internals / Lower Mount



Water Test/Hose Gauge

Steel Case / Brass Internals / Lower Mount



HVAC/R Gauges

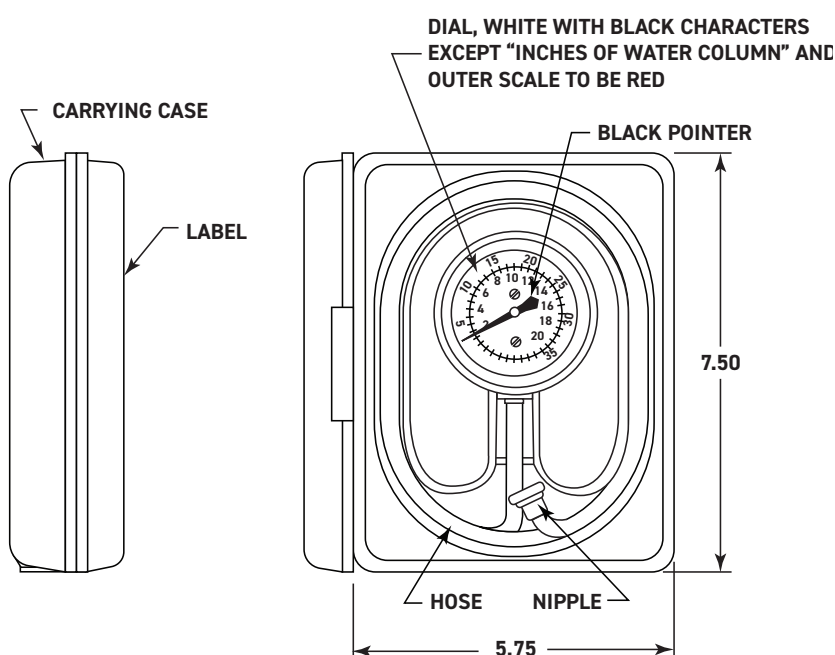


The Marsh Instruments Gas Pressure Test kit is designed to test the system pressure of your natural gas or LP system. It can be used to check for leaks as well as accurately set manifold pressure. The kit includes an easy-to-read Marsh Instruments low pressure diaphragm gauge, 30" long hose and fitting all contained in a durable case to help protect the instrument and allow for easy transport.

Features:

- Gray Polyethylene Case with 3 Feet of Rubber Tubing
- 2 1/2" Dial Gauge

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	For Ranges 30" H ₂ O and above: ±2/1/2% (ASME Grade A) For Ranges Below 30" H ₂ O: ±3/1/3%
Dial Size(s)	2 1/2" Diameter
Case	Steel, Black Painted
Bezel	Twist Lock Lens
Tube & Socket	Copper Alloy
Movement	Brass
Connection	Hose Barb with Tubing
Pressure Ranges	Low Pressure- oz/in ² , in H ₂ O
Standard Scale	oz/in ² , in H ₂ O
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Acrylic
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	1 lb

HVAC/R Gauges

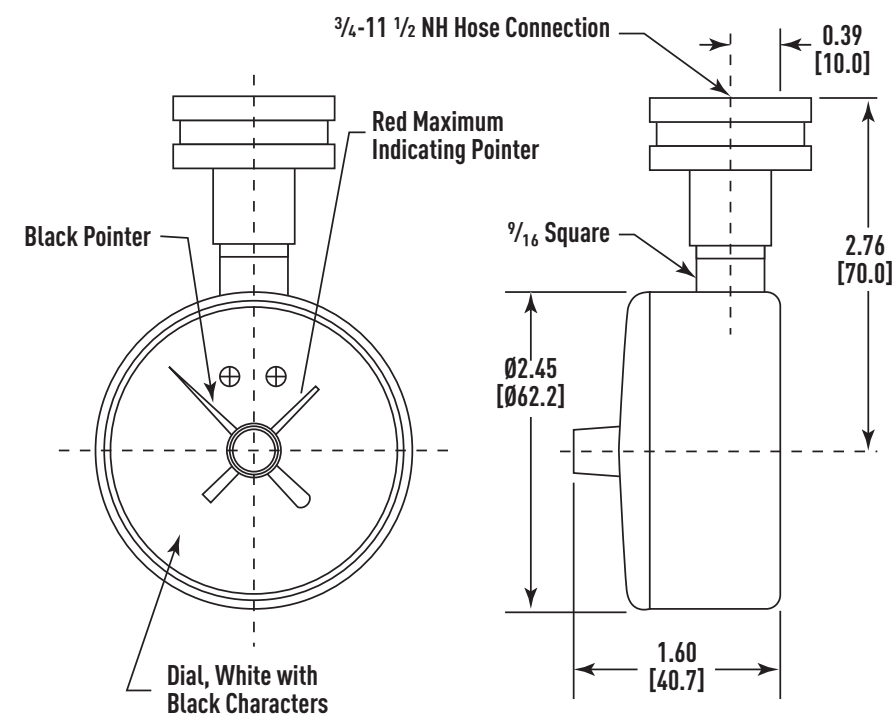


Marsh Instruments Water Test Gauge is designed to connect directly to a standard 3/4" water faucet or hose. The max pointer included on the Water Test Gauge allows you to monitor a peak operating or surge pressure point.

Features:

- Connects Directly to Standard Water Faucet or Hose
- Optional Max Pointer
- Dual Scale Dial

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (±2% of Range Across Middle Half of Scale)
Dial Size(s)	2 1/2" Diameter
Case	Steel, Black Painted
Bezel	N/A
Tube & Socket	Copper Alloy
Movement	Brass
Connection	3/4" - 11 1/2 NH Female Hosebib
Pressure Ranges	0 to 300 psi
Standard Scale	Dual Scale psi and kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Acrylic With or Without Red Maximum Indicating Pointer
Standard Case Fill	N/A
Ambient Temperature	N/A
Vent Plug	N/A
Weight	0.5 lb.

Heating System Altitude Gauge

Steel or Aluminum Case / Brass or Stainless Steel Internals / Lower Mount

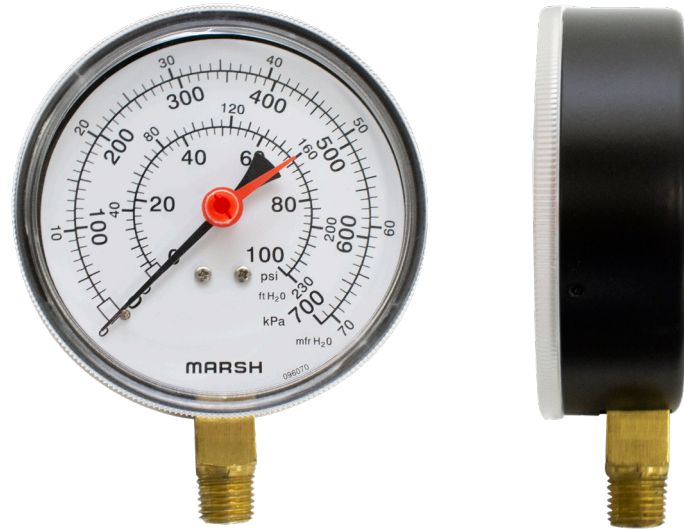


W01 Series - Ammonia Gauge

Stainless Steel Case / Stainless Steel Internals / Lower Mount



HVAC/R Gauges

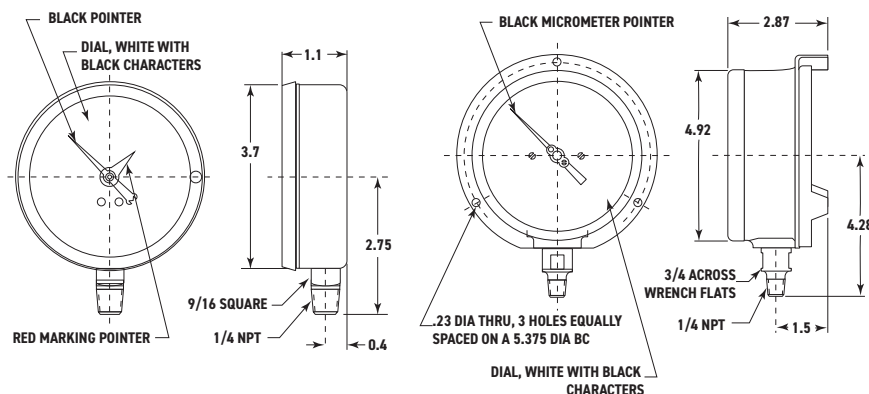


Marsh Instruments Heating System Gauges are available in 3 1/2" and 4 1/2" dial sizes. An adjustable red altitude pointer is standard on feet of water gauges. This feature allows the user to indicate the head of water to be maintained in the system. Marsh Instruments Heating System Gauges provide accurate psi and feet of water measurements in elevated tanks, reservoirs, standpipes, and similar applications where reliability and dependability are crucial in heating system equipment.

Features:

- Adjustable Set hand
- Ranges to 300 psi and 690 Feet of Water
- 3 1/2" and 4 1/2" Dials

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	3 1/2" ASME Grade B $\pm 3/2/3\%$ 4 1/2" ASME Grade A $\pm 2/1/2\%$
Dial Size(s)	3 1/2", 4 1/2" Diameter
Case	3 1/2" Steel, Black Painted 4 1/2" Aluminum Back Flange Case, Black Painted
Bezel	3 1/2" Twist Lock Lens 4 1/2" Aluminum
Tube & Socket	Copper Alloy
Movement	3 1/2" Brass 4 1/2" Stainless Steel
Connection	1/4 NPT - Lower Mount
Pressure Ranges	15-300 psi/ 30 to 690 Ft/H ₂ O
Standard Scale	psi/Ft H ₂ O
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted with Red Set Hand
Window	3 1/2" Acrylic Clearlok 4 1/2" Instrument Glass
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160° F
Vent Plug	N/A
Weight	3 1/2" 2.0 lb. 4 1/2" 2.0 lb.

HVAC/R Gauges

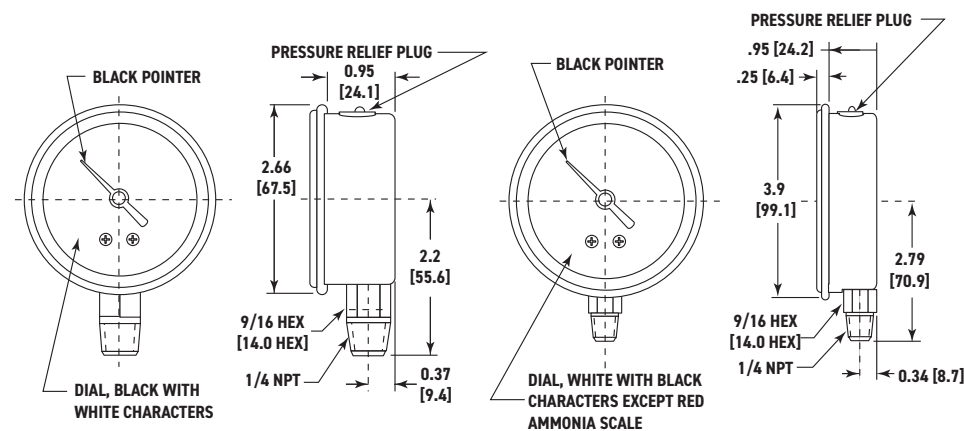


For use on ammonia refrigeration systems, Marsh Instruments Ammonia Refrigeration Gauges feature dual scale psi/ammonia temperature dials. Available dry or liquid filled for added durability.

Features:

- Ammonia Refrigeration Dial
- Liquid Fillable Case for Added Durability

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	$\pm 3/2/3\%$ ($\pm 2\%$ of Range Across Middle Half of Scale)
Dial Size(s)	2 1/2", 3 1/2" Diameter
Case	304 Stainless Steel
Bezel	304 Stainless Steel
Tube & Socket	Stainless Steel
Movement	Stainless Steel
Connection	1/4 NPT - Lower Mount
Pressure Ranges	Compound 30" Hg VAC to 150 psi or 30" Hg VAC to 300 psi
Standard Scale	Single Scale psi with Corresponding Ammonia Temperature Scales
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Polycarbonate
Standard Case Fill	Glycerine Silicone
Ambient Temperature	Glycerine: 30° to 160° F Silicone: -40° to 160° F
Vent Plug	N/A
Weight	2 1/2" 0.5 lb. 3 1/2" 1.0 lb.

Manifold Gauges

Steel or Plastic Case / Brass Internals / Lower Mount

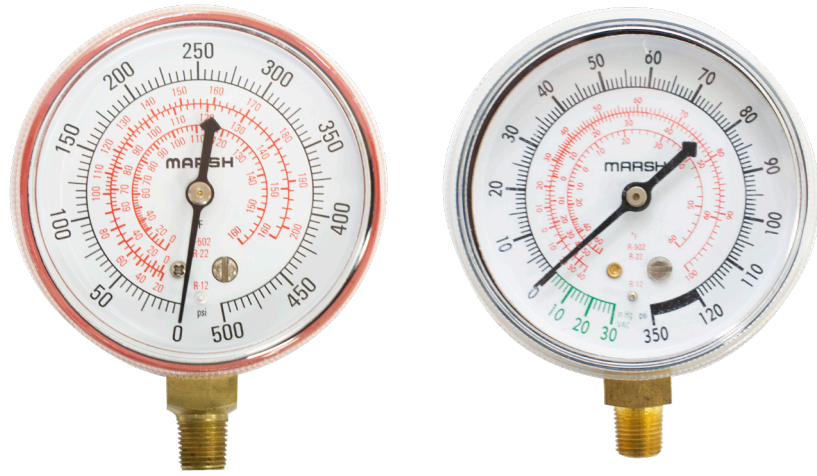


Serviceman's Test Gauge

Polished Brass Case / Brass Internals / Lower Mount



HVAC/R Gauges

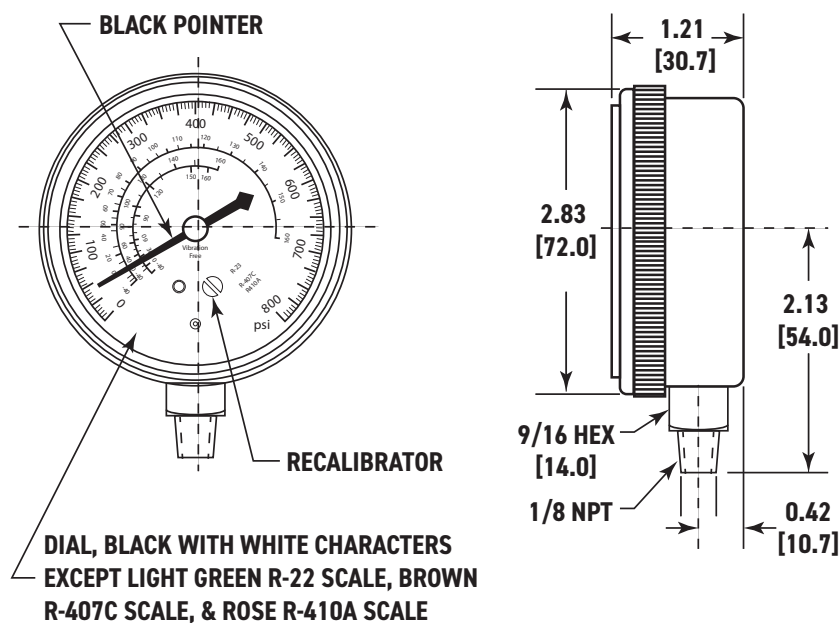


Marsh Refrigeration Manifold Gauges are designed for the pressure measurement of refrigeration systems. All dials are furnished with corresponding temperature scales for the various refrigerants. Dials feature R-12, R-22, and R-502. Standard connections are 1/8 NPT lower mount with your choice of red or blue case.

Features:

- Recalibrator and Restrictor Standard
- Color Coded Cases, "Reds" and "Blues"
- Overpressure Protections to 350 psi

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (±2% of Range Across Middle Half of Scale)
Dial Size(s)	2 1/2" Diameter
Case	Steel or Plastic; Red or Blue
Bezel	Twist-Off Lens
Tube & Socket	Copper Alloy
Movement	Brass with Recalibrator
Connection	1/8 NPT with Restrictor Standard
Pressure Ranges	0-500 psi, 30" Hg VAC to 120 psi Retarded to 350 psi
Standard Scale	psi with Corresponding Temperature Scales
Dial Color	Black Markings on White with Red or Blue Temperature Scales
Pointer	Aluminum, Black Painted
Window	Impact Resistant Plastic
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	0.5 lb.

HVAC/R Gauges

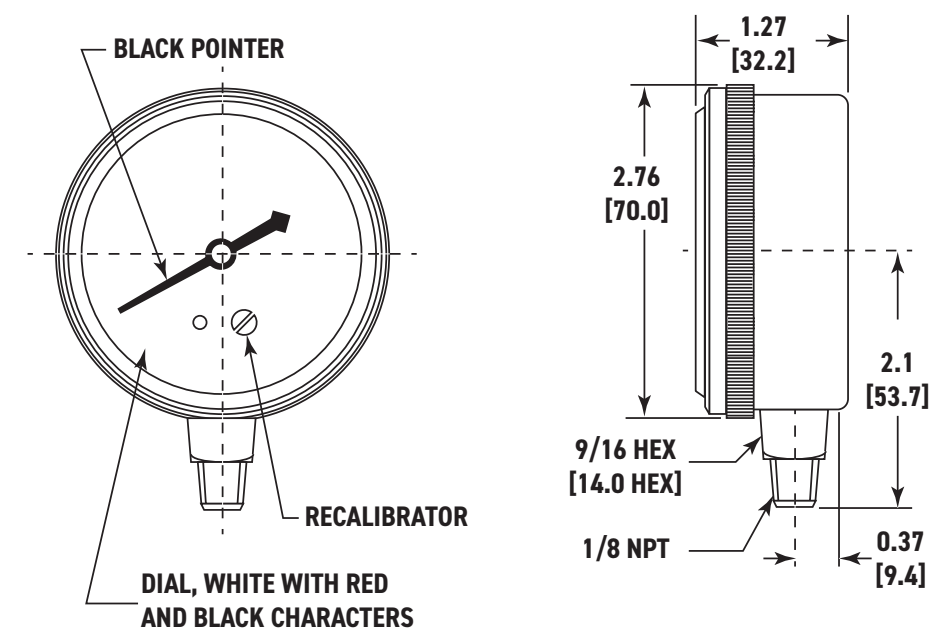


Marsh Instruments Deluxe Serviceman's Test Gauge is designed to assure the modern serviceman the best possible gauge for testing refrigeration equipment. Corresponding, easy-to-read temperature scales are printed in red on the inner arcs of the dial face.

Features:

- Recalibrator and Restrictor Standard
- Heavy Duty Brass Case
- Clam Shell Packaging (Optional)

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	2 1/2" Diameter (63 mm)
Case	Polished Brass
Bezel	Polished Brass - Removable
Tube & Socket	Copper Alloy
Movement	Brass with Recalibrator
Connection	1/8 NPT with Restrictor Standard
Pressure Ranges	0-500 psi, 30" Hg VAC to 120 psi Retarded to 350 psi
Standard Scale	psi with Corresponding Temperature Scales
Dial Color	Black Markings on White with Red or Blue Temperature Scales
Pointer	Aluminum, Black Painted
Window	Beveled Glass
Standard Case Fill	N/A
Ambient Temperature	N/A
Vent Plug	N/A
Weight	0.5 lb.

SPECIAL APPLICATION & CUSTOM GAUGES

Marsh Instruments manufactures a wide variety of gauges for special applications. These industry specific products are designed and engineered with the application in mind. Whether standard or custom, Marsh Instruments constructs gauges to suit any application.



Paper Machine Gauge

Stainless Steel Case / Brass Internals / 3.5" Hinged Ring Front Flange



Vacuum Cleaner Test Gauge

Steel Case / Rubber Plug / 2.5" Lower Mount



Special Application Gauges

Special Application Gauges

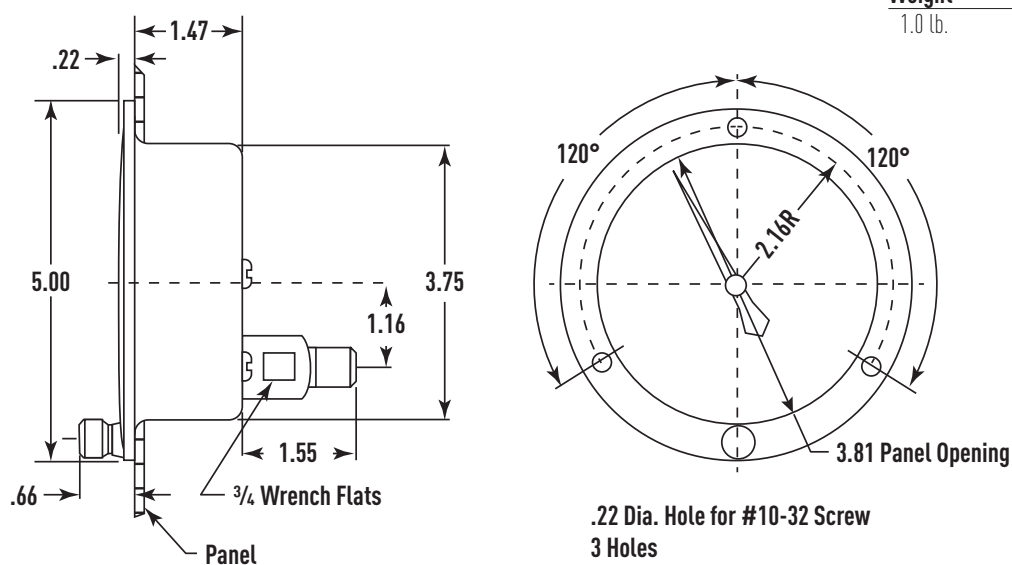


Marsh Instruments Paper Machine Gauges are available in nine ranges and fit existing panel cutouts. The heavy-duty stainless steel case features a front flanged/hinged ring design which allows easy access for pointer adjustment. A restrictor is standard.

Features:

- 3.5" Diameter to Fit Existing Panels
- Hinged Ring Stainless Steel Case
- Protective Weather Tight Seal

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±2 1/2% (ASME Grade A)
Dial Size(s)	3 1/2" Diameter (76 mm)
Case	Stainless Steel
Bezel	Stainless Steel Hinged Ring
Tube & Socket	Copper Alloy
Movement	Stainless Steel
Connection	1/4 NPT - Lower Back Mount Hinged Ring Front Flanged Panel Mount
Pressure Ranges	30 to 1,000 psi
Standard Scale	Single Scale psi
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Glass
Standard Case Fill	N/A
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	1.0 lb.

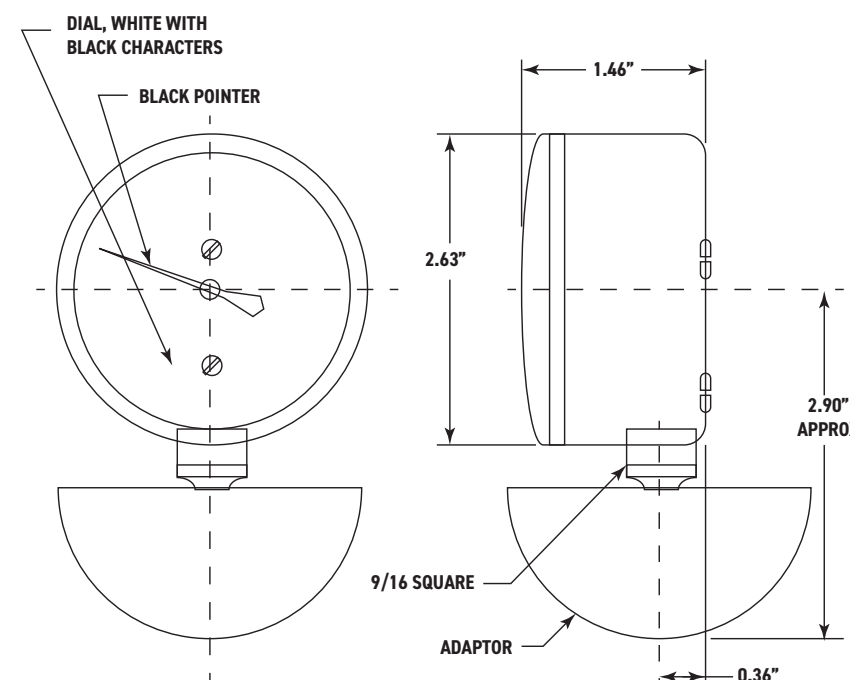


The Marsh Instruments Vacuum Cleaner Test Gauge is designed to test the amount of vacuum generated by a vacuum cleaner to ensure proper operation and to check for leaks or other problems. The Vacuum Cleaner test gauge features a reliable Marsh Instruments Low Pressure Diaphragm Gauge available in several ranges, as well as a rubber plug/fitting designed to fit various different vacuum cleaner hoses and connections.

Features:

- 2 1/2" Dial Size Gauge
- Dual Scale: In. of H2O & kPa Vacuum
- Complete with rubber plug to fit vacuum cleaner intake opening

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±2 1/2% (ASME Grade A)
Dial Size(s)	2 1/2" Diameter
Case	Steel
Bezel	Twist Lock Lens
Tube & Socket	Phosphor Bronze Diaphragm
Movement	Copper Alloy
Connection	Lower Mount with Rubber Plug for Vacuum Cleaner
Pressure Ranges	60" - 200" H ₂ O Vacuum
Standard Scale	Dual Scale In. of H ₂ O/kPa
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted
Window	Acrylic
Standard Case Fill	Dry, Non-Fillable
Ambient Temperature	-40° to 160°F
Vent Plug	N/A
Weight	N/A

Custom OEM Gauges



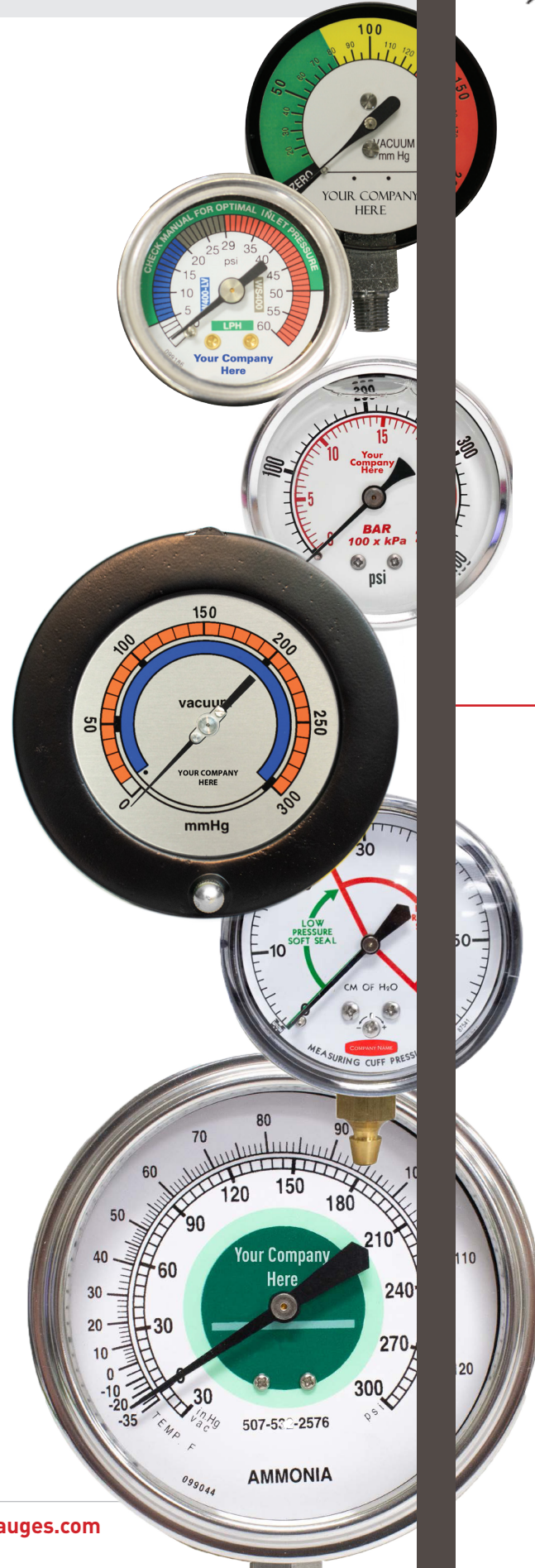
Special Application Gauges



Our sales and application engineers are trained to help you design and select the right instrument for your application. We collaborate with your team and assist in the design and creation of the ideal instrument for your needs.

Custom Solutions include:

- Logo Dials
- Pressure Ranges/Scales
- Color Zone Dials
- Case Color/Material
- Connection Size/Location
- Internals
- Increased Accuracy
- Clean for Oxygen Service
- Lens Material
- Anti-Vibration/Dampened Movement
- Max/Min Pointers
- High Temperature Design
- Rubber Cover
- Inquire for others



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DIAPHRAGM SEALS

Diaphragm seals are isolation devices which separate pressure gauges and other instruments from the process media while allowing the instrument to measure the process pressure. The service life of the instrument is greatly extended, because it is protected from corrosion, clogging, freezing, or pulsation.



13000 Series

Mini Diaphragm Seals / 3.5" Dials and Below



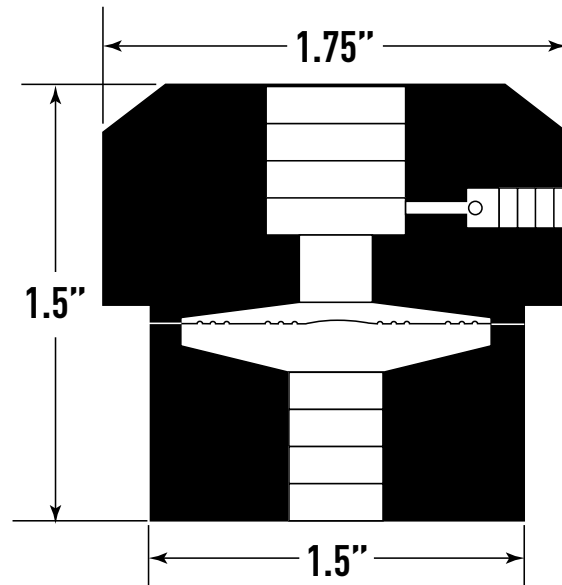
13040 Series

Mini Diaphragm Seals / 4.5" Dials and Below



The Model 13000 Mini Welded Seal is designed for up to 3 1/2" bourdon tube gauges with a minimum range of 0-60 psi. The maximum operating pressure is 2,500 psi at 100°F. Available in all 316 Stainless Steel or Hastelloy C process housing and diaphragm.

Product Dimensions



Product Specifications

Upper Housing Material

316 Stainless Steel

Lower Housing Material

316 Stainless Steel

Hastelloy C

Diaphragm Material

316 Stainless Steel

Hastelloy C

Instrument Connection

1/4", 1/2" NPT

Process Connection

1/4", 1/2" NPT

Flush Connection

None

1/4" NPT

Pressure Rating

60-2,500 PSI

System Fill

Dry

Glycerine

Silicone

Others Optional

Options Available

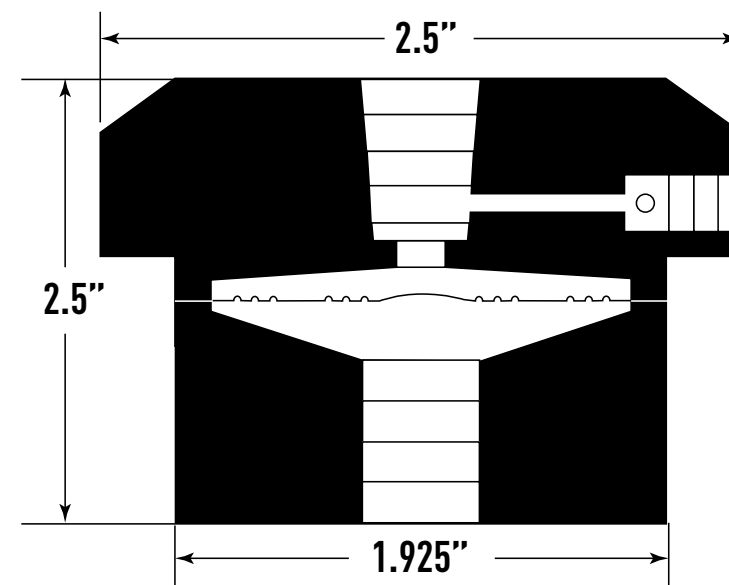
Custom Connection Sizes

Custom Materials



The Model 13040 All Welded Seal is designed for up to 4 1/2" bourdon tube gauges with pressure ranges from vacuum to 1000 psi. Available in all 316 Stainless Steel or Hastelloy C process housing and diaphragm, with threaded connections. Optional flushing connections also available.

Product Dimensions



Product Specifications

Upper Housing Material

316 Stainless Steel

Lower Housing Material

316 Stainless Steel

Hastelloy C

Diaphragm Material

316 Stainless Steel

Hastelloy C

Instrument Connection

1/4" NPT, 1/2" NPT

Process Connection

1/4" NPT, 1/2" NPT, 3/4" NPT, 1" NPT

Flush Connection

None

1/4" NPT

Pressure Rating

60-2,500 PSI

System Fill

Glycerine

Silicone

Syltherm

Others Optional

Options Available

Custom Connection Sizes

Custom Materials

Low Pressure

High Pressure

Diaphragm Seals

Diaphragm Seals

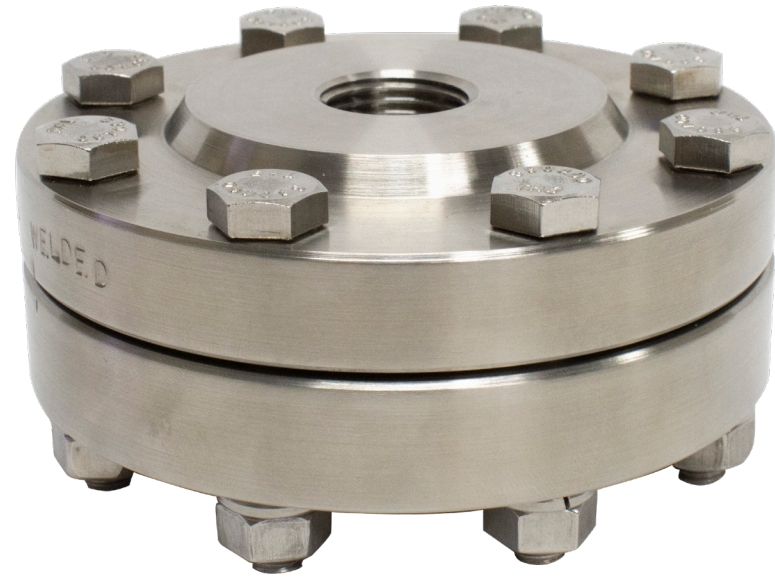
14040 Series

Full Size Diaphragm Seals



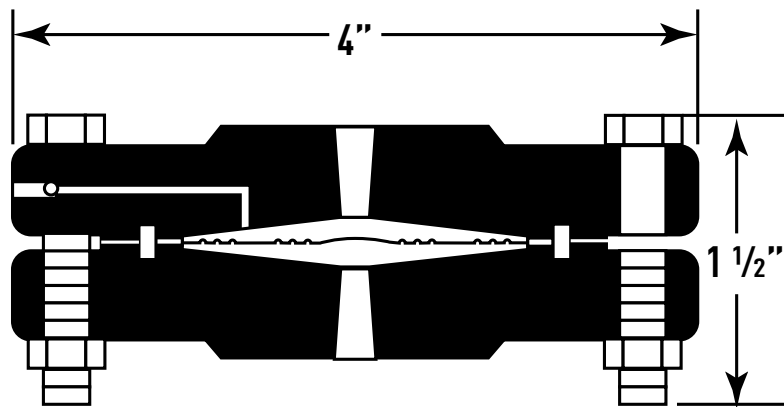
140FL Series

Full Size Diaphragm Seals



The Model 14040 Welded Diaphragm Seal is a welded diaphragm-to-upper design allowing the upper housing to be removed with the instrument in place without losing fill. Available in threaded connections for pressures from vacuum to 2,500 psi. Fill/bleed port screw in the upper is standard and an optional flush connection is available.

Product Dimensions



Product Specifications

Upper Housing Material

Carbon Steel
316 Stainless Steel

Lower Housing Material

Carbon Steel
316 Stainless Steel
Hastelloy C
Tantalum
Others Optional

Diaphragm Material

316 Stainless Steel
Hastelloy C
Tantalum
Others Optional

Instrument Connection

1/4" NPT, 1/2" NPT

Process Connection

1/4" NPT, 1/2" NPT, 3/4" NPT, 1" NPT

Flush Connection

Standard - None
1/4" NPT

Pressure Rating

Vacuum-2,500 psi

Bolts and Nuts

Carbon Steel
Stainless Steel

System Fill

Glycerine
Silicone
Syltherm
Others Optional

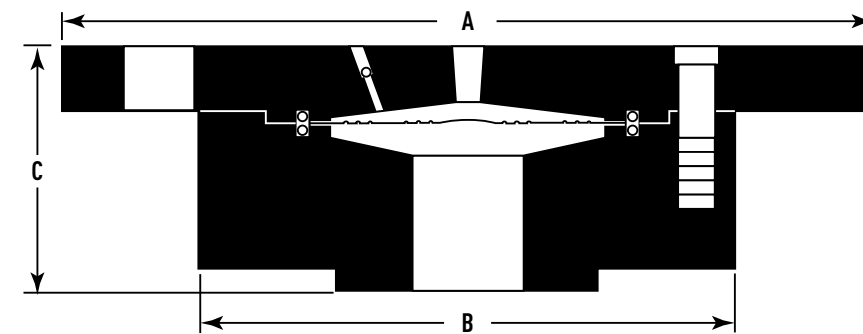
Options

Low Pressure- In. of H₂O
High Pressure- Up to 10,000 psi
Custom Connection Sizes
Custom Materials



The Model 140FL Welded Diaphragm Seal is a welded diaphragm-to-upper design allowing the upper housing to be removed with the instrument in place without losing fill. Available in threaded connections for pressures from vacuum to 2,500 psi. Fill/bleed port screw in the upper is standard and a flush ring option is available.

Product Dimensions



Drawings for 1/2", 3/4", and 1" sizes can be found on MarshGauges.com

Product Specifications

Upper Housing Material

Carbon Steel
316 Stainless Steel

Lower Housing Material

Carbon Steel
316 Stainless Steel
Hastelloy C
Others Optional

Diaphragm Material

316 Stainless Steel
Hastelloy C
Tantalum
Others Optional

Instrument Connection

1/4" NPT, 1/2" NPT

Process Connection

Flanged, 1/2" through 3", 150# through 600#

Flush Connection

Flush Ring Optional

Pressure Rating

Vacuum - 2,500 psi (According to Flange Size)

Bolts and Nuts

Steel
Stainless Steel

System Fill

Glycerine
Silicone
Syltherm
Others Optional

Options

Custom Connection Sizes
Custom Materials

Process Connection		A	B	C
1 1/2"	150#	5"	5"	1.135"
2"		6"	4"	1.375"
3"		7.5"	5"	1.685"
4"		9"	6 3/16"	1.685"
1 1/2"	300#	6 1/8"	3 1/2"	1.500"
2"		6 1/2"	4"	1.575"
3"		8 1/4"	5"	1.960"
4"		10"	6 3/16"	1.960"
2"	600#	6 1/2"	4"	1.685"
3"		8 1/4"	5"	1.750"

12000 Series

Rubber/Polymer Seals



B8498 Series

Rubber/Polymer Seals



The Model 12000 Serviceable Mini Diaphragm Seal is designed for gauges and instruments with operating pressures of 2500 psi with stainless and 500 psi with PVC models. Ideally suited for small applications and corrosive installations. The optional "Easy Clean Out" feature allows the removal of the process side housing without losing the instrument side fill fluid. Fill/bleed screwport in the instrument side housing, and stainless steel build screws are standard.

Product Specifications

Upper Housing Material

316 Stainless Steel
PVC

Lower Housing Material

316 Stainless Steel
PVC

Diaphragm Material

Nitrile
Fluorocarbon
Neoprene

Instrument Connection

1/4" NPT, 1/2" NPT

Process Connection

1/4" NPT, 1/2" NPT

Easy Clean Out

Optional

System Fill

Glycerine
Silicone
Syltherm
Others Upon Request



The Model B8498 Gauge Protector is designed for extremely high volume displacement. Ideally suited for gauges and instruments with operating pressures up to 200 psi and vacuum applications. Available in 1/4" threaded connections and chrome plated zinc construction. A 3/8" flush plug is standard in the process side housing.

Product Specifications

Upper Housing Material

Chrome Plated Zinc

Lower Housing Material

Chrome Plated Zinc

Diaphragm Material

Nitrile
Fluorocarbon
Neoprene

Instrument Connection

1/4" NPT

Process Connection

1/4" NPT

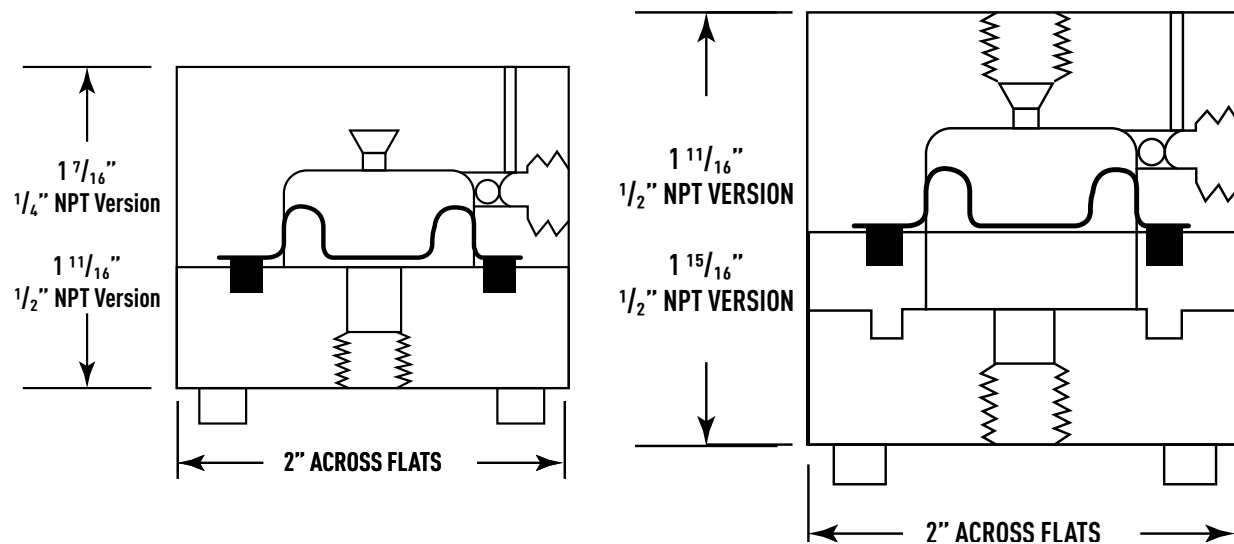
Flush Connection

3/8" - Standard

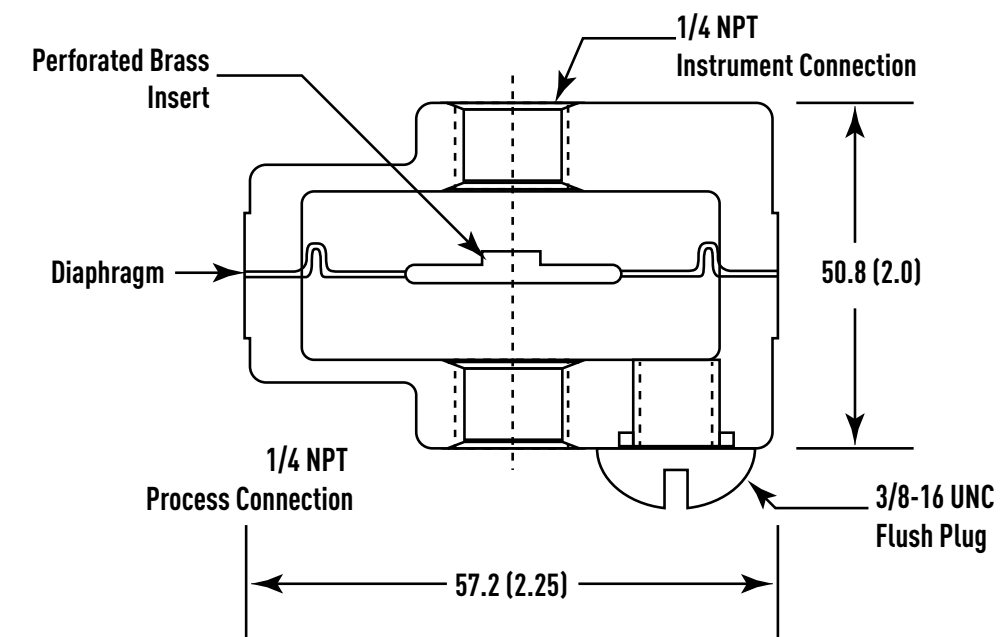
System Fill

Glycerine
Silicone
Syltherm
Others Upon Request

Product Dimensions



Product Dimensions



Diaphragm Seals

Diaphragm Seals

Diaphragm Seals are designed to isolate instruments from process conditions such as clogging, high temperature, corrosive media, etc. Marsh Instruments offers an endless variety of custom seals in addition to our standard threaded and flanged diaphragm seals. Configurations include, but are not limited to sanitary/clamp-in, saddle weld/weld-in, flush mount, high pressure, and more.

In addition to custom connection and configurations, all Marsh Instruments Diaphragm Seals are available in a wide variety of custom materials and coatings to ensure chemical compatibility with corrosive media.



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THERMOMETERS

Marsh Instruments Thermometers are available in a wide variety of configurations for any application. Marsh Instruments bimetal thermometers feature, heavy-duty stainless steel construction for industrial and commercial applications. Marsh Instruments industrial thermometers, tridicators and hot water thermometers are a reliable, economical choice for HVAC, plumbing and industrial applications.



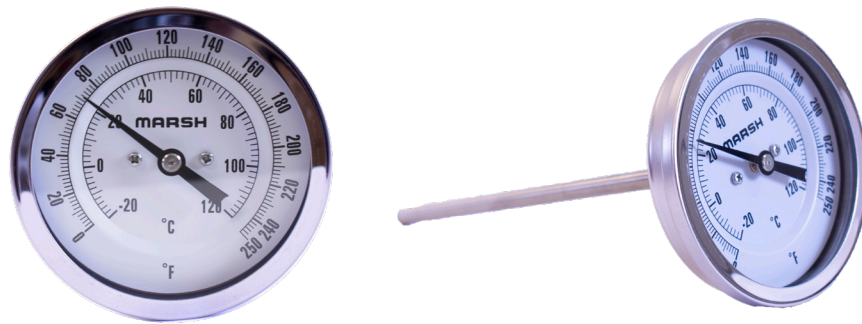
L11/31 Series - Bimetal Thermometer

Stainless Steel Case & Stem / Fixed Back Mount



L33/53 Series - Bimetal Thermometer

Stainless Steel Case & Stem / Adjustable Angle

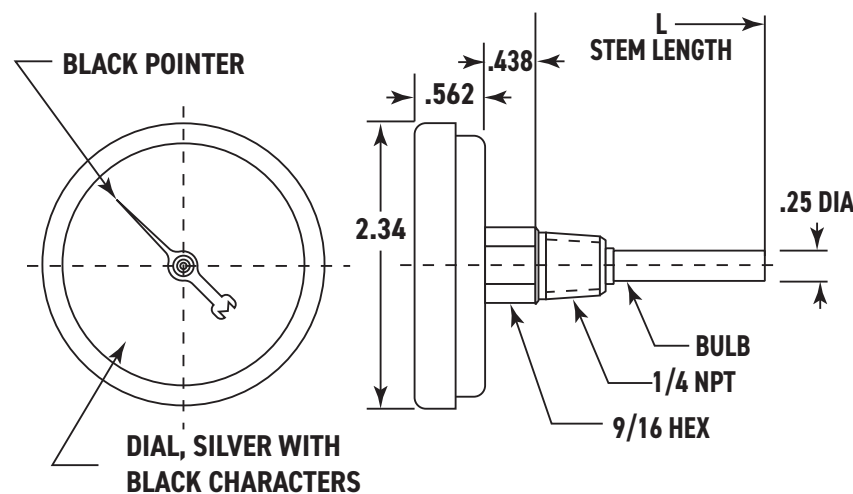


Marsh Instruments Bimetal Thermometers are heavy-duty instruments for temperature indication in dual scale ranges from -50° to 1,000°F (-40° to 525°C). Series "L" Bimetal Thermometers include an easy-to-read dual scale, fast response, and accurate temperature indication. The hermetically sealed case is resistant to shock, vibration, dust, and moisture. The bimetal sensing element provides an accuracy to within 1% of scale. An external adjustment screw on the back of the case provides convenient reset and field calibration. Built-in over-range protection is a standard feature.

Features:

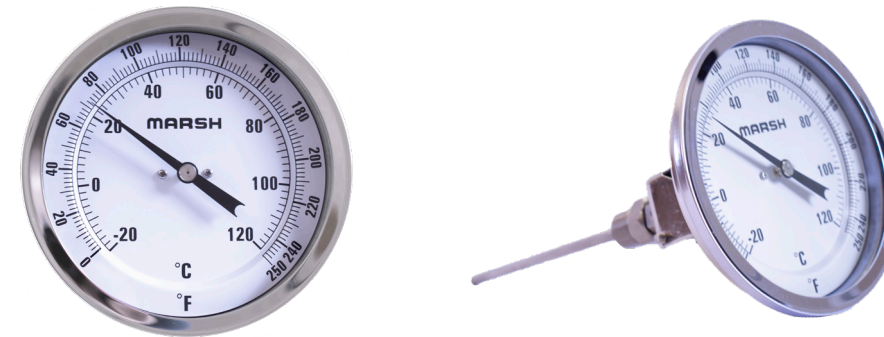
- 1% Accuracy
- Stainless Steel Stem and Case Material
- Welded Stem-to-Socket Connection

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±1% of Span Throughout Entire Range recommended 2" Immersion in Liquids, 4" in Gases
Dial Size(s)	2", 3", 5" Diameter
Case	304 Stainless Steel
Bezel	304 Stainless Steel
Stem	2 1/2", 4", 6", 9", 12", 15", 18", 24" Stainless Steel, 1/4" Diameter
Movement	Bimetal Element - Dampened
Connection	1/4" NPT - Center Back Connection (2" Case Only) 1/2" NPT - Center Back Connection (3" & 5")
Temperature Ranges	-50° to 1,000°F
Standard Scale	Dual Scale in Celsius and Fahrenheit
Dial Color	Black Markings on White
Pointer	Steel, Black Painted
Window	Glass, Hermetically Sealed Acrylic (Optional)
Standard Case Fill	Dry, Non-Fillable
Weight	N/A

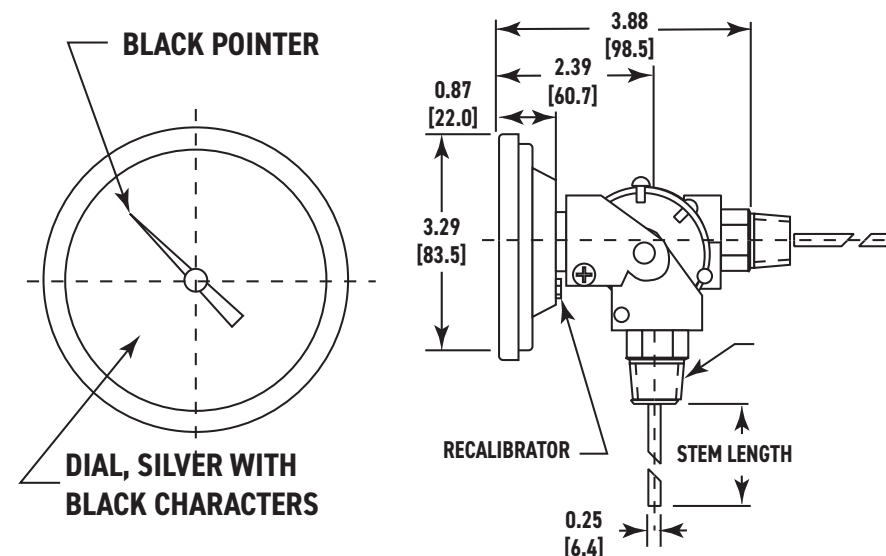


Marsh Instruments Bimetal Thermometers are heavy-duty instruments for temperature indication in dual scale ranges from -50° to 1,000°F (-40° to 525°C). Series "L" Bimetal Thermometers include an easy-to-read dual scale, fast response, and accurate temperature indication. The hermetically sealed case is resistant to shock, vibration, dust, and moisture. The bimetal sensing element provides an accuracy to within 1% of scale. An external adjustment screw on the back of the case provides convenient reset and field calibration. Built-in over-range protection is a standard feature.

Features:

- Adjustable Angle Dial
- 1% Accuracy
- Stainless Steel Stem and Case Material
- Welded Stem of Socket Connection

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±1% of Span Throughout Entire Range recommended 2" Immersion in Liquids, 4" in Gases
Dial Size(s)	3", 5" Diameter
Case	304 Stainless Steel
Bezel	304 Stainless Steel
Stem	2 1/2", 4", 6", 9", 12", 15", 18", 24" Stainless Steel, 1/4" Diameter
Movement	Bimetal Element - Dampened
Connection	1/2" NPT - Adjustable Connection (3" & 5")
Temperature Ranges	-50° to 1,000°F
Standard Scale	Dual Scale in Celsius and Fahrenheit
Dial Color	Black Markings on White
Pointer	Steel, Black Painted
Window	Glass, Hermetically Sealed Acrylic (Optional)
Standard Case Fill	Dry, Non-Fillable
Weight	N/A

Y12 Series - Industrial Thermometer

9" Scale / Any Angle Mount

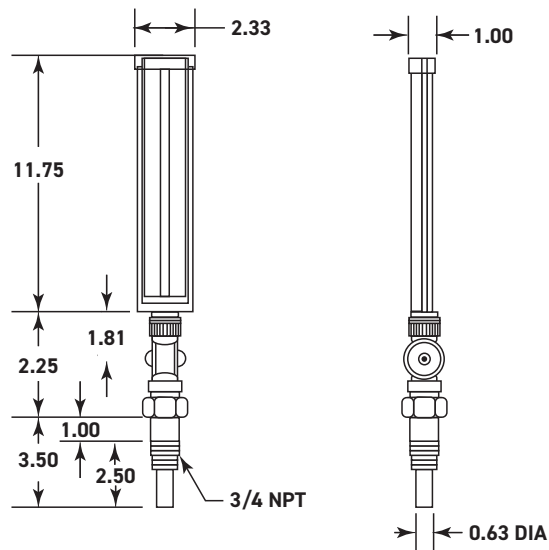


Marsh Instruments Y12 Industrial Thermometers large scale 9" scale permits easy reading at longer distances. The glass-reinforced nylon case is lightweight yet rugged enough for demanding installations. The adjustable stem can be locked into any position. These thermometers are commonly used on hot or chilled water lines in commercial/industrial buildings.

Features:

- Standard Well & Lagged Well Options
- Adjustable Angle
- Easy-to-Read Dual Scale

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±1% of Scale Range
Dial Size(s)	9" Length (228 mm)
Case	Molded Black Nylon, Glass Fiber Reinforced
Connection & Stem	Adjustable Aluminum 3 1/2" or 6" Stem with 360° Rotation 1/4" - 18 Swivel Nut, For Use with Separable Socket
Movement	N/A
Temperature Ranges	-40° to 300°F
Standard Scale	Dual Scale in Celsius and Fahrenheit
Dial Color	White Coated Aluminum
Tube	Blue Liquid Fill
Window	Glass

Y14 Series - Submarine Thermometer

6" Scale / Lower or Back Mount

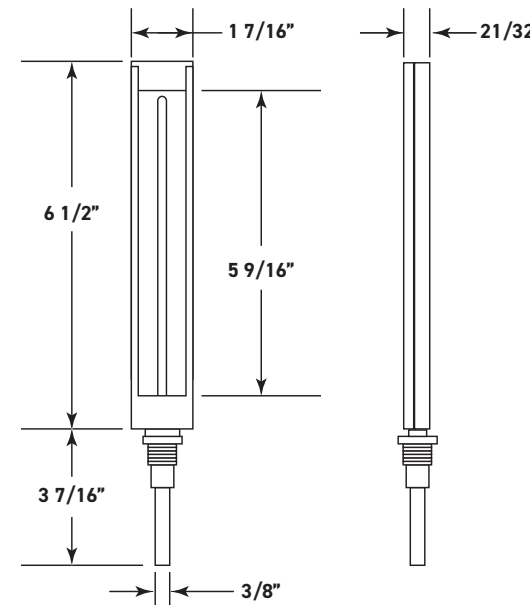


Marsh Instruments Y14 Series thermometer is manufactured to a standard accuracy of 1% span. Each Y14 Series thermometer comes with a case with blue reading spirit filled tube with magnifying lens for easy readability, and white aluminum scale with bold black graduations and figures.

Features:

- 5" Scale Size
- V-Shaped Aluminum Scale with Black Markings
- Blue Reading Organic Filled Tube
- Gray ABS Case
- 2" Nominal Stem Length for 3 1/4" Socket

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±1% of Scale Range
Dial Size(s)	5" Length
Case	Gray ABS Plastic
Connection & Stem	Brass 3/4" - 28" Swivel Nut, For Use with Separable Socket (Thermowell)
Movement	N/A
Temperature Ranges	-40° to 300°F
Standard Scale	Dual Scale in Celsius and Fahrenheit
Dial Color	White Coated Aluminum
Tube	Blue Liquid Fill
Window	Glass

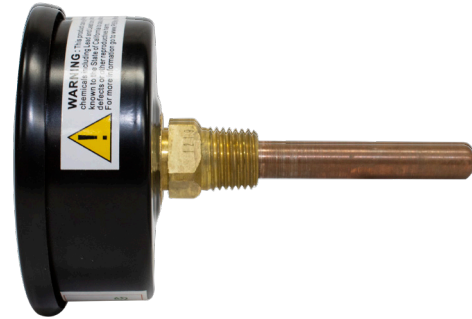
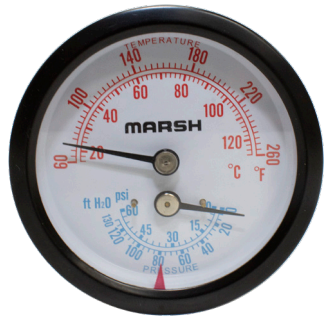
Tridicators

Steel Case / Brass Internals / 2.5" & 3.5" Round Face



Tridicators

Steel Case / Brass Internals / 3.5" Square Face



Product Specifications

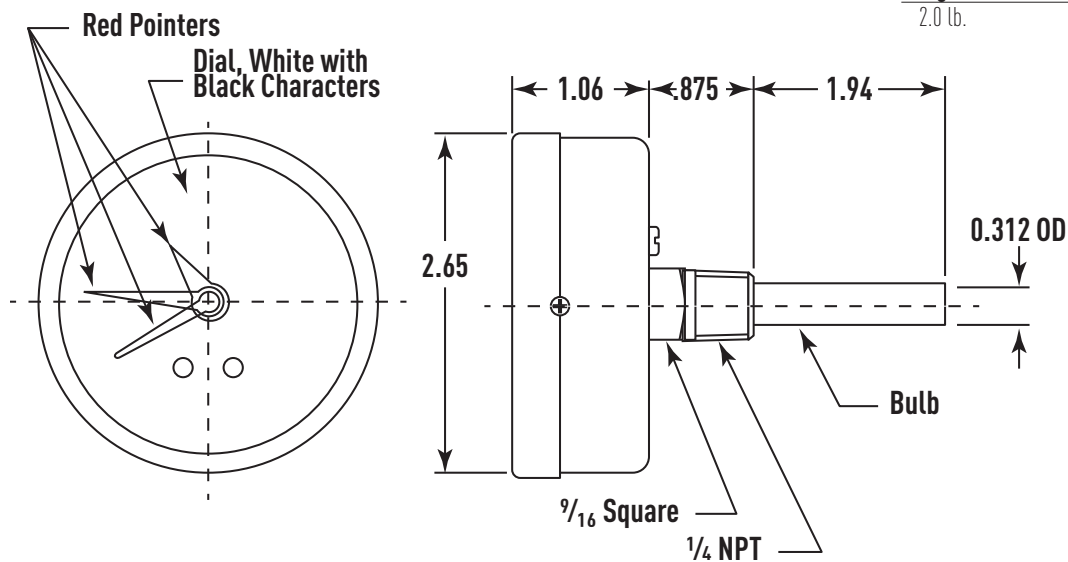
Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	3 1/2" Diameter (89 mm)
Case	Steel, Black Painted
Bezel	Steel, Black Painted
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/4 NPT - Center Back Mount
Pressure Ranges	60 to 300 psi (130-680 Ft H ₂ O)
Temperature Ranges	60° to 260°F (20° to 120°C)
Standard Scale	Dual Scale Celsius and Fahrenheit
Dial Color	Black Markings on White
Pointer	Aluminum, Red Painted with Black Painted Set Pointer
Window	Acrylic
Vent Plug	N/A
Weight	2.0 lb.

Marsh Instruments Tridicators are durable, cost-effective combination pressure and temperature instruments for use in a wide variety of commercial and industrial boiler and hot water applications.

Features:

- Rotatable Set Pointer
- 2 1/2" & 3 1/2" Sizes Optional

Product Dimensions

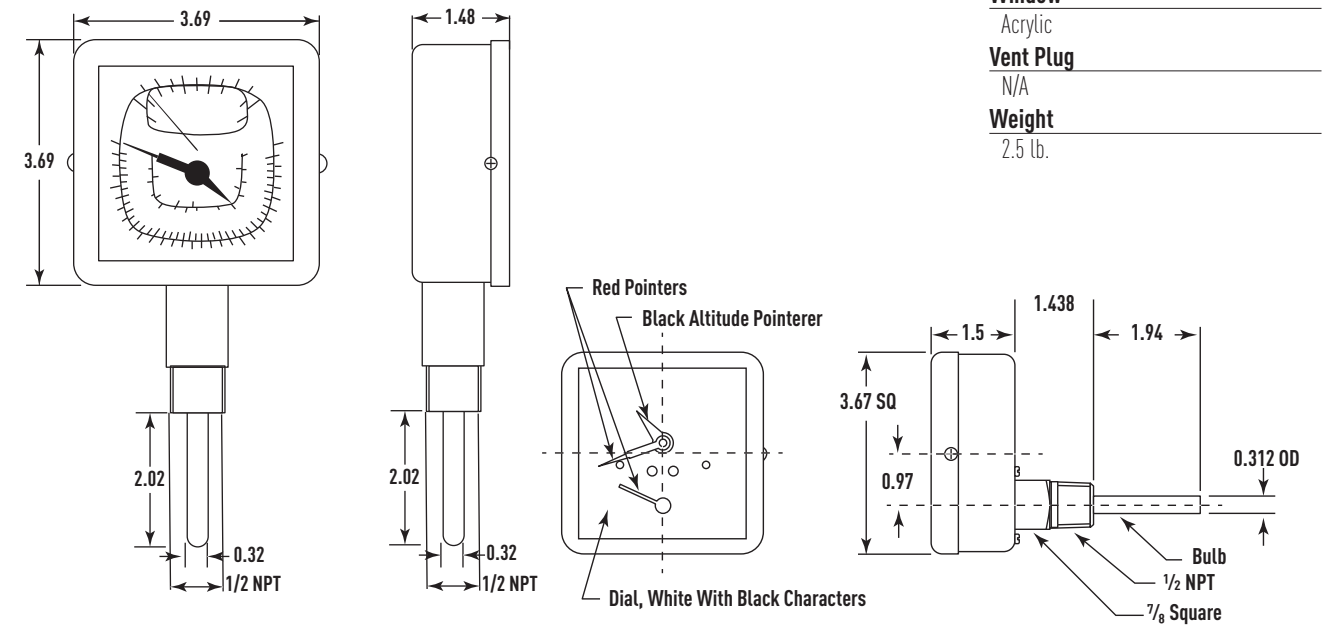


Marsh Instruments Tridicators are durable, cost-effective combination pressure and temperature instruments for use in a wide variety of commercial and industrial boiler and hot water applications.

Features:

- Back and Bottom Mounting Options
- Rotatable Set Pointer

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±3/2/3% (ASME Grade B)
Dial Size(s)	3 1/2" Square (89 mm)
Case	Steel, Black Painted
Bezel	Steel, Black Painted
Tube & Socket	Copper Alloy
Movement	Brass
Connection	1/2 NPT - Lower Mount 1/2 NPT - Lower Back Mount
Pressure Ranges	60 to 300 psi (130-680 Ft H ₂ O)
Temperature Ranges	60° to 260°F (20° to 120°C)
Standard Scale	Dual Scale Celsius and Fahrenheit
Dial Color	Black Markings on White
Pointer	Aluminum, Red Painted with Black Painted Set Pointer
Window	Acrylic
Vent Plug	N/A
Weight	2.5 lb.

Thermometers

Thermometers

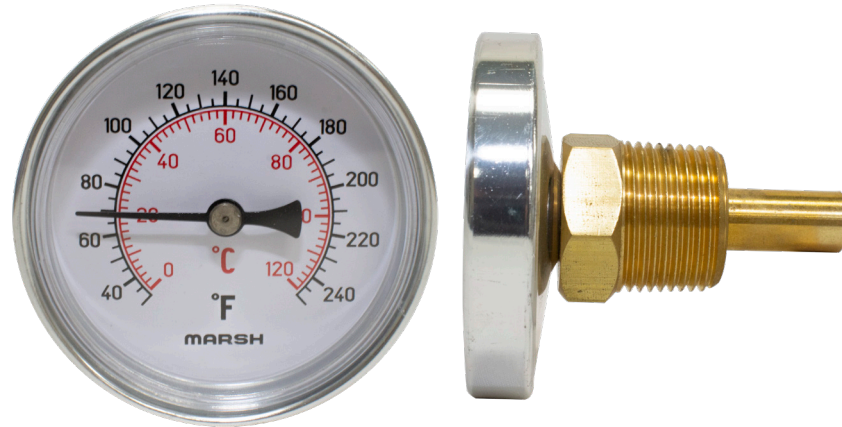
Hot Water Thermometer

Aluminum Case & Stem / Center Back Mount



Pocket Test Thermometer

Analog

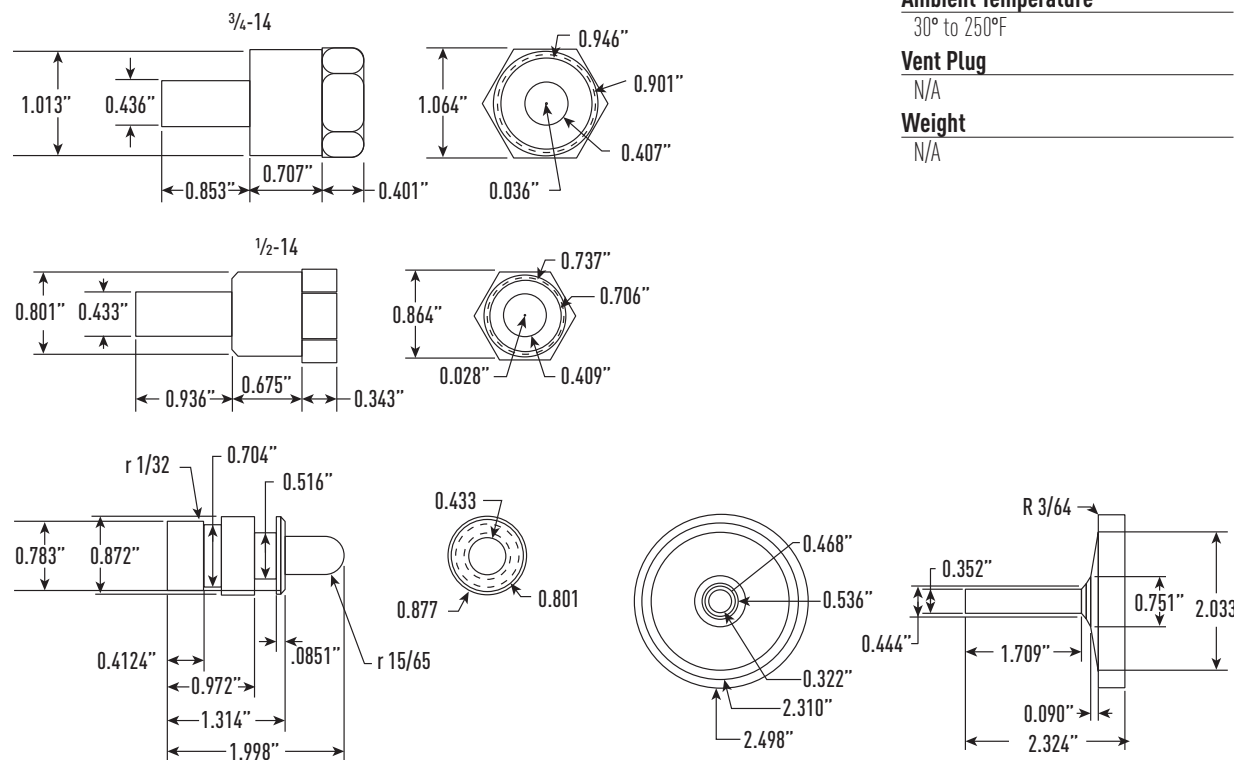


Marsh Instruments Hot Water Thermometers are designed for accurate temperature readings in hot water lines, boilers, and hydronic systems. Includes separable socket/well.

Features:

- 1% of Span Throughout Entire Range
- Aluminum Stem and Case Material
- Bi-Metallic Element

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±1% of Span Throughout Entire Range
Dial Size(s)	2 1/2" Diameter (63 mm)
Case	Aluminum
Bezel	Steel, Black Painted, Fixed
Tube & Socket	N/A
Movement	Bi-Metallic Element
Connection	1/2 & 3/4 NPT - Lower Mount
Temperature Ranges	30-250°F (0-120°C)
Standard Scale	Dual Scale Celsius and Fahrenheit
Dial Color	Black and Red Markings on White
Pointer	Aluminum, Black Painted
Window	Acrylic
Standard Case Fill	N/A
Ambient Temperature	30° to 250°F
Vent Plug	N/A
Weight	N/A

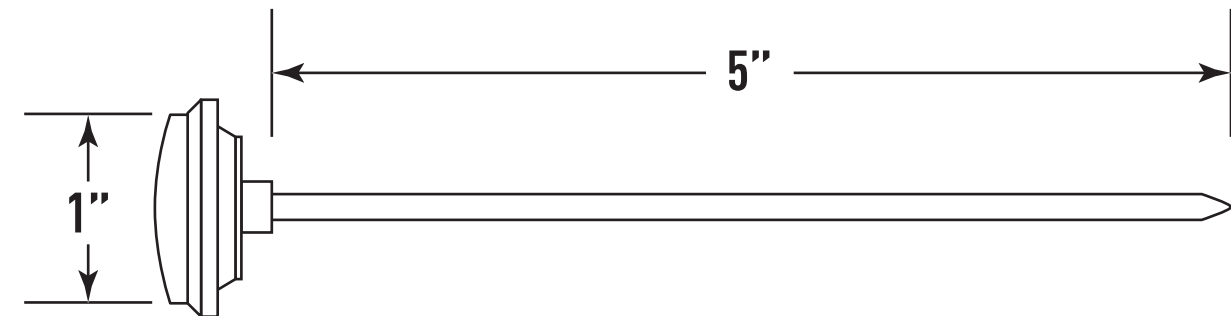


Marsh Instruments Pocket Thermometers have a 1" dial, 304 stainless steel hermetically sealed case, 304 stainless steel 0.4mm diameter 5" long stem, and a plastic lens. The accuracy of 1.5% of scale range. Each unit comes with a protective case with stainless steel clip that allows it to be safely carried in your pocket.

Features:

- 304 Stainless Steel Hermetically Sealed Case
- Protective Case with Stainless Steel Clip

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±1.5% of Span Throughout Entire Range
Dial Size(s)	1" Face (25 mm)
Case	304 Stainless Steel
Bezel	N/A
Stem	5" Stainless Steel
Movement	Bimetal Element
Connection	N/A
Temperature Ranges	-40° to 160°F 0° to 220°F -50° to 550°F
Standard Scale	Single Scale in Fahrenheit
Dial Color	Black Markings on White
Pointer	Aluminum, Black Painted

Pocket Test Thermometer

Digital

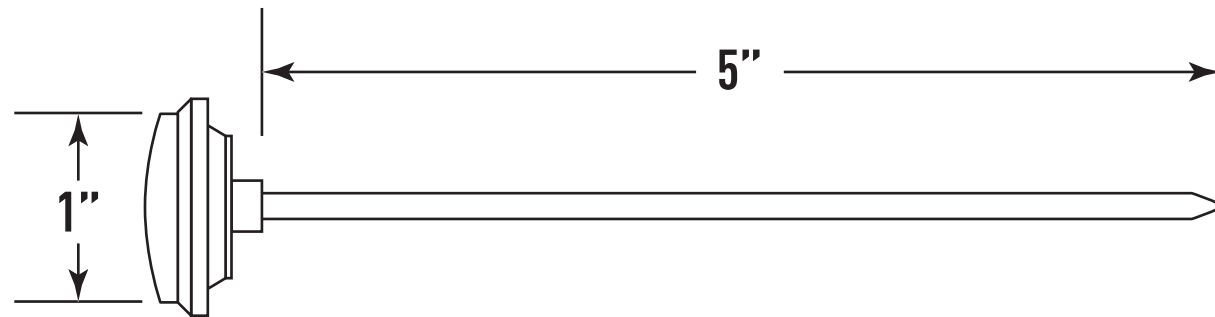


Marsh Instruments Digital Pocket Thermometers have a 3.5 digit LCD display, ABS case, and a 304 stainless steel 5" long stem. The accuracy is 2F with an update time of 10 seconds. Each unit has an on-off switch for longer battery life and comes with the protective carrying case.

Features:

- 3.5 Digit LCD Display
- ABS Plastic Case
- Protective Case with Stainless Steel Clip

Product Dimensions



Product Specifications

Design	Meets/Exceeds ASME B40.100
Accuracy	±2° F
Dial Size(s)	1" Face (25mm)
Case	ABS Plastic
Bezel	N/A
Stem	5" Stainless Steel
Movement	N/A
Connection	N/A
Temperature Ranges	-58° to 302°F -50° to 150°C
Standard Scale	Celsius and Fahrenheit Options
Dial Color	Digital

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THERMOWELLS

Thermowells are protective sheaths used to allow for the safe installation and removal of temperature instruments. Thermowells also protect the instrument against process pressures and are offered in wide variety of materials to resist corrosion. Marsh Instruments manufactures thermowells in threaded, flanged, clamped and weld-in configurations in multiple sizes to fit any application.



Bi-Metal Thermowells

Non-Lagging Options



Bi-Metal Thermowells

Lagging



Thermowells are protective sheaths used to allow for the safe installation and removal of temperature instruments. Thermowells also protect the instrument against process pressures and are offered in wide variety of materials to resist corrosion.

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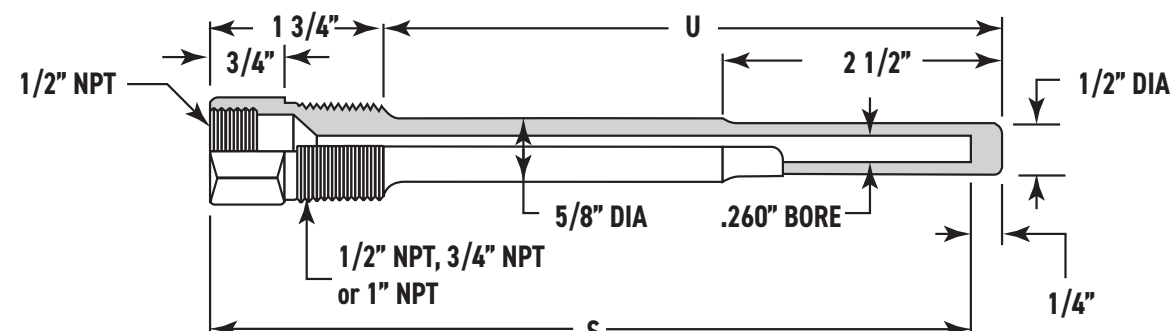
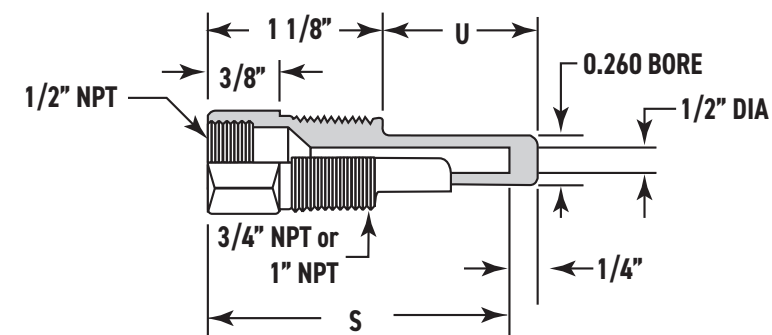
Product Specifications

Material	Brass 316 Stainless Steel 306 Stainless Steel
Instrument Connection	1/2" Standard
Process Connection	1/2", 3/4", 1" NPT
Standard Bore	0.260 Standard Others Optional
Shank	Stepped - Standard Straight - Optional Tapered - Optional
Options	Material Certificate Custom Lengths Custom Connection Sizes Custom Materials

Product Specifications

Material	Brass 304 Stainless Steel 316 Stainless Steel Others Optional
Instrument Connection	1/2" Standard
Process Connection	1/2", 3/4", 1" NPT
Standard Bore	0.260 Standard Others Optional
Shank	Stepped - Standard Straight - Optional Tapered - Optional
Options	Material Certificate Custom Custom Lengths Custom Connection Sizes Custom Materials

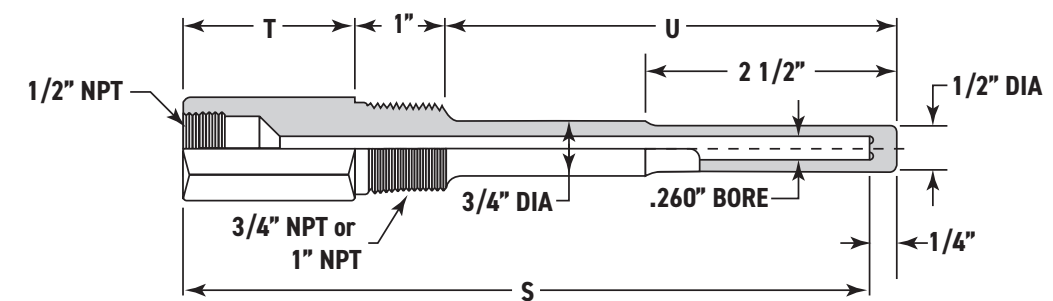
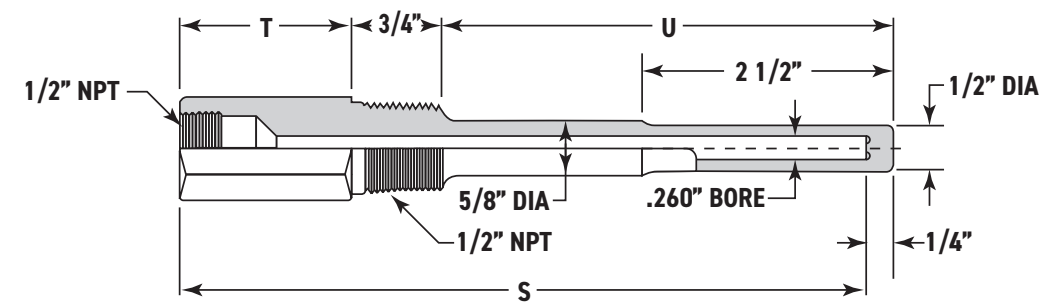
Standard Product Dimensions - More Available on MarshGauges.com



"S" Stem	"U" Insertion
2 1/2"	1 5/8"
4"	2 1/2"
6"	4 1/2"
9"	7 1/2"
12"	10 1/2"
18"	16 1/2"
24"	22 1/2"

"S" Stem	"U" Insertion	"T" Lag
6"	2 1/2"	2 3/4"
9"	4 1/2"	3 3/4" or 4"
12"	7 1/2"	3 3/4" or 4"
18"	13 1/2"	3 3/4" or 4"
24"	19 1/2"	3 3/4" or 4"

Product Dimensions



Thermowells

Thermowells

Custom Thermowells



In addition to our standard Thermowells, Marsh Instruments offers custom Thermowells. Configurations include, but are not limited to flanged, weld-in, sanitary/clamp-in, and more. Marsh Instruments Thermowells can be offered in custom sizes, lengths, bore diameters, and shank configurations as well as a variety of materials to ensure chemical compatibility with corrosive media. Marsh Instruments Thermowells can also be provided with test certificates including material certification, wake frequency test, hydrostatic tests, and more.

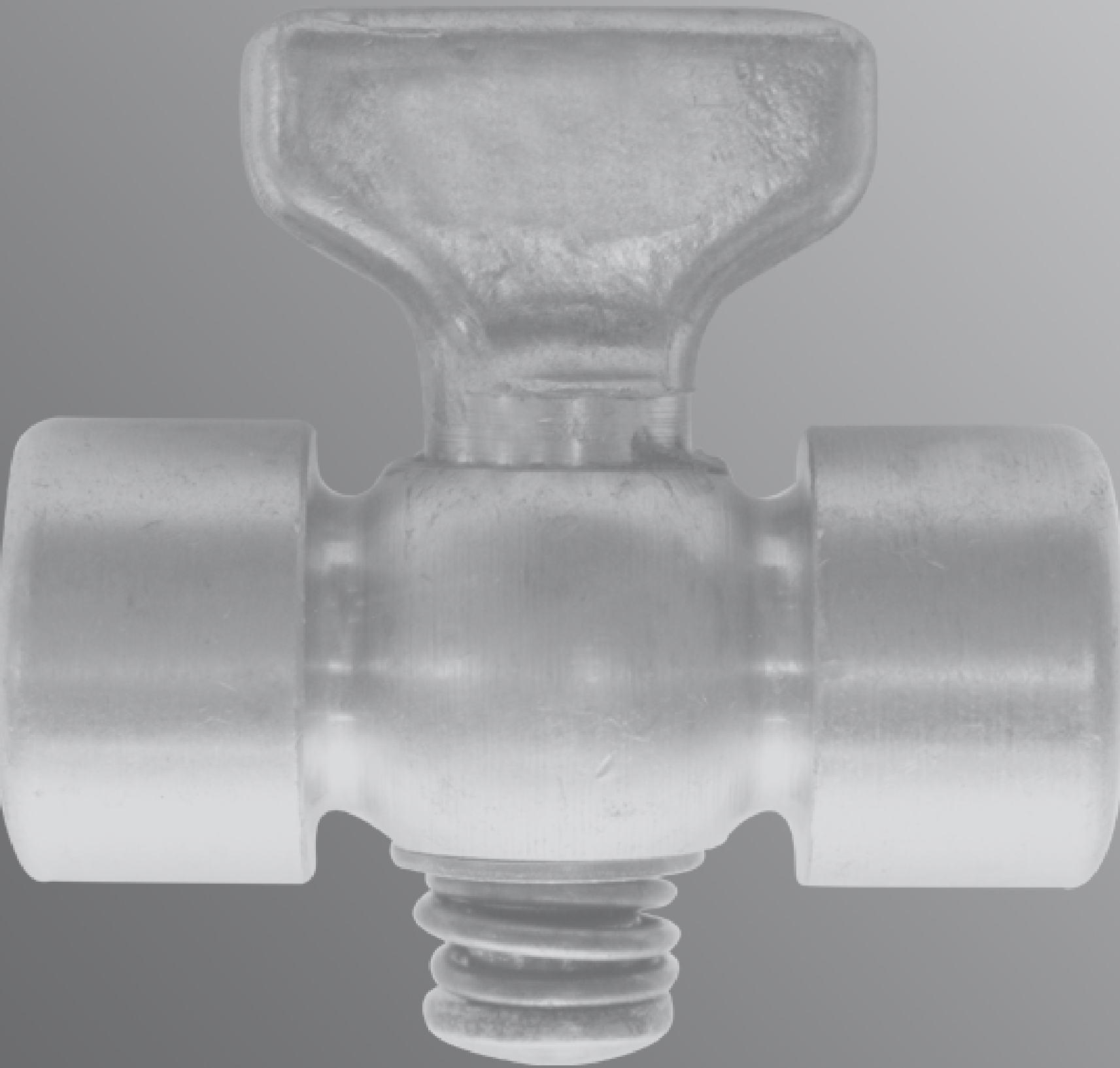


MARSHGAUGES.COM

Need more information or interested in ordering?
Visit MarshGauges.com or call us at (304) 387-1200
to speak to a representative today.

ACCESSORIES

Marsh Instruments offers a wide variety of accessories to enhance the performance of our instruments and protect against the effects of harsh operating conditions.



Snubbers



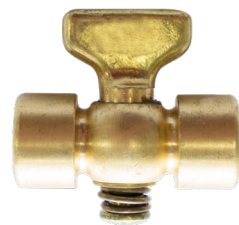
Snubbers are designed to dampen pulsation and protect gauges from its effects. Marsh Instruments offers a line of filter snubbers in brass and stainless steel for air/gas, liquids, and oils.

Siphons



Siphons, often referred to as pigtails or pigtail siphons are required when installing gauges in steam service. The siphon acts as a condensate loop, effectively removing steam from the process before it reaches the gauge. Marsh Instruments offers siphons in a variety of sizes and materials.

Gauge Cocks/Ball Valves



Gauge cocks and ball valves are shut off valves designed to allow intermittent reading of gauges to conserve instrument life. They can also be used to shut off process media to allow for removal and recalibration of gauges. Marsh Instruments offers gauge cocks and ball valves in a variety of materials and configurations.

Needle Valves



Marsh Instruments offers BelGAS brand Needle Valves for applications requiring multi-turn valves. Needle valves can be used for positive shutoff or regulation of flow to an instrument. BelGAS Needle Valves are available in stainless steel and carbon steel with 6,000 or 10,000 PSI pressure ratings.

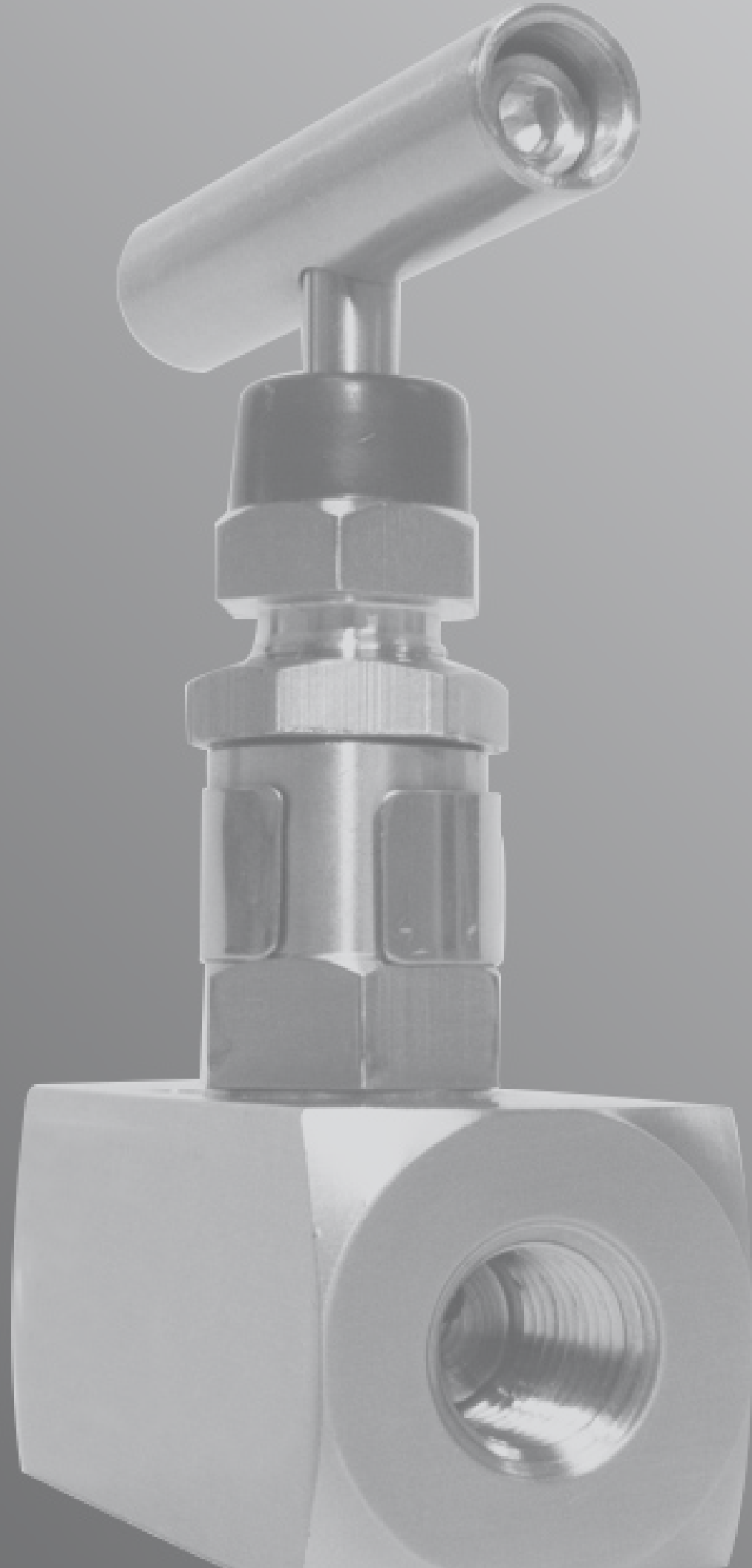
Cooling Towers



High process temperatures can damage gauges, Marsh Instruments manufactures cooling towers to effectively reduce process temperatures before reaching the instrument.

MARSHGAUGES.COM

Need more information or interested in ordering? Visit MarshGauges.com or call us at (304) 387-1200 to speak to a representative today.



BELGAS NEEDLE VALVES

BelGAS Needle Valves are suited for instrumentation, process plant use, oil and gas production and general applications where isolation and positive shutoff is a requirement.



BelGAS Needle Valves - M Series

Miniature / Hard or Soft Seat / 6,000 psi

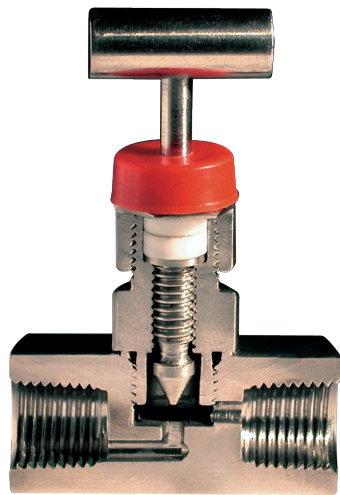


BelGAS Needle Valves - VH Series

Full Size / Hard Seat / 10,000 psi



BelGAS Needle Valves

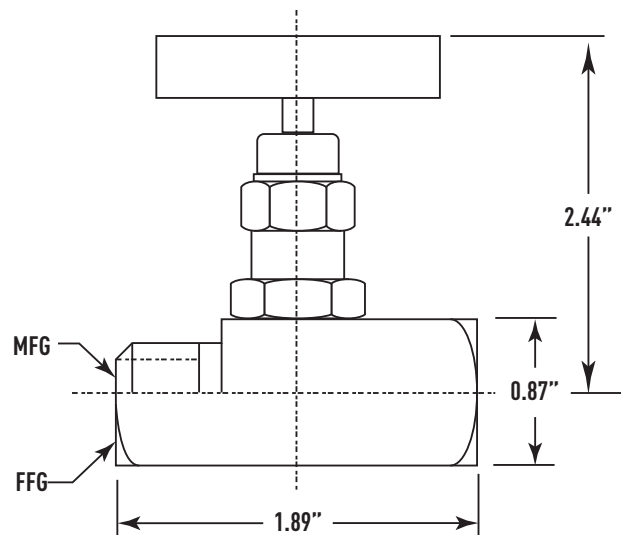


Miniature size for applications where space is limited. Ideal for test stand and general equipment.

Features:

- "T" Bar Handle or Thumb Wheel
- Roll-Formed Stem Threads
- Precision-Machined Stem
- Teflon Packing
- Bonnet Locking Pin Prevents Accidental Removal
- Metal-to-Metal and Soft Seat
- Pressure Rating, 6,000 psi (42,000 kPa)

Product Dimensions



Product Specifications

Body & Bonnet Material

316 Stainless Steel
Carbon Steel, Plated

Connection Size

1/4" NPT

Configuration

Male X Female
Female X Female

Stem Material

316 Stainless Steel

Pressure/Temperature Rating

6,000 psi at 200°F

Packing

Molded Teflon (PTFE)

Seat

Metal-to-Metal
Delrin Soft Seat

Handle

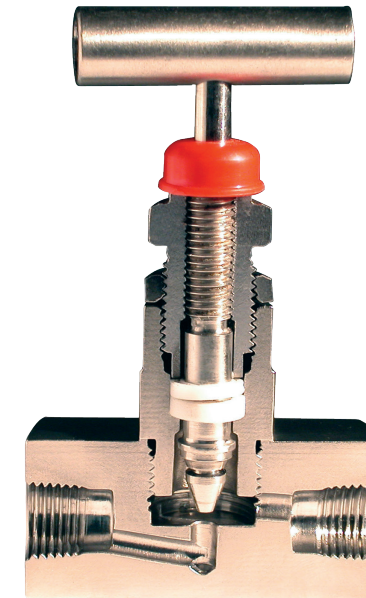
316 Stainless Steel "T" Bar
Carbon Steel "T" Bar
Aluminum Anodized Thumb Wheel

Connection

National Pipe Thread (ANSI B2.1)

Finish

Stainless Steel: Passivated
Carbon Steel: Zinc Dichromate Finish

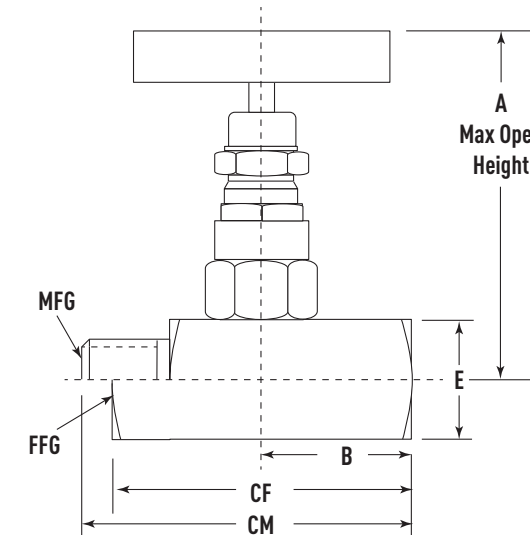


Pressure ratings to 10,000 psi (70,000 kPa).

Features:

- "T" Bar Handle
- Teflon Packing
- Roll-Formed Stem Threads
- Precision-Machined Stem
- Bonnet Locking Pin Prevents Accidental Removal
- Below Stem Thread Packing Gland
- Hardened and Ground Self Centering, Non-Rotating Tip
- Metal-to-Metal Seat
- Pressure Rating, 10,000 psi (70,000 kPa)

Product Dimensions



Product Specifications

Body & Bonnet Material

316 Stainless Steel
Carbon Steel, Plated

Connection Size

1/4" NPT

1/2" NPT

3/4" NPT

1" NPT

Configuration

Male X Female
Female X Female

Stem Material

316 Stainless Steel

Pressure/Temperature Rating

10,000 psi at 200°F

Packing

Two Piece Molded Teflon (PTFE)

Seat

Metal-to-Metal Hard Seat

Handle

316 Stainless Steel "T" Bar
Carbon Steel "T" Bar

Connection

National Pipe Thread (ANSI B2.1)

Finish

Stainless Steel: Passivated
Carbon Steel: Clear Zinc Dichromate

BelGAS Needle Valves

Dimension	Nominal Size (Inches & mm)			
	1/4	1/2	3/4	1
A	3.39 (86.0)	3.62 (92.0)	3.66 (93.0)	4.41 (112.0)
B	1.18 (30.0)	1.26 (32.0)	1.26 (32.0)	1.69 (43.0)
CF	2.36 (60.0)	2.68 (68.0)	2.68 (68.0)	3.15 (80.0)
CM	2.99 (76.0)	3.50 (89.0)	3.50 (89.0)	4.13 (105.0)
E	1.12 (28.5)	1.50 (38.0)	1.57 (40.0)	1.77 (45.0)
Orifice	0.17 (4.2)	0.28 (7.0)	0.35 (9.0)	0.47 (12.0)

BelGAS Needle Valve - VS Series

Full Size / Soft Seat / 6,000 psi

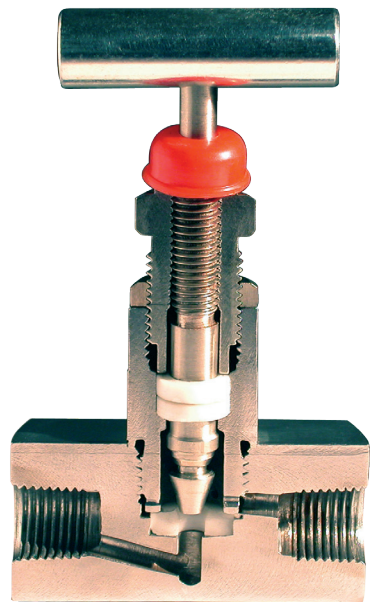


BelGAS Needle Valve - BH Series

Multiport / Block and Bleed / Gauge Valve



BelGAS Needle Valves

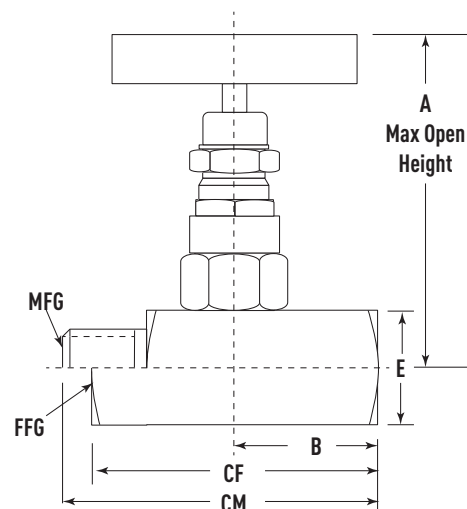


For applications where bubble-tight shutoff of liquids or gases are required. Pressure rating to 6,000 psi (42,000 kPa). These valves are designed with a replaceable Delrin soft seat.

Features:

- "T" Bar Handle
- Teflon Packing
- Roll-Formed Stem Threads
- Precision-Machined Stem
- Bonnet Locking Pin Prevents Accidental Removal
- Below Stem Thread Packing Gland
- Hardened and Ground Self-Centering Non-Rotating Tip
- Soft Seat
- Bubble-Tight Shutoff of Liquids or Gases to 6,000 psi (42,000 kPa)

Product Dimensions



Dimension	Nominal Size (Inches & mm)			
	1/4	1/2	3/4	1
A	3.39 (86.0)	3.62 (92.0)	3.66 (93.0)	4.41 (112.0)
B	1.18 (30.0)	1.26 (32.0)	1.26 (32.0)	1.26 (32.0)
CF	2.36 (60.0)	2.68 (68.0)	2.68 (68.0)	3.15 (80.0)
CM	2.99 (76.0)	3.50 (89.0)	3.50 (89.0)	
E	1.12 (28.5)	1.26 (32.0)	1.57 (40.0)	1.77 (45.0)
Orifice	0.17 (4.2)	0.28 (7.0)	0.35 (9.0)	0.47 (12.0)

Product Specifications

Body & Bonnet Material

316 Stainless Steel
Carbon Steel, Plated

Connection Size

1/4" NPT
1/2" NPT
3/4" NPT
1" NPT

Configuration

Male X Female
Female X Female

Stem Material

316 Stainless Steel

Pressure/Temperature Rating

6,000 psi at 200°F

Packing

Two Piece Molded Teflon (PTFE)

Seat

Delrin Soft-Seat

Handle

316 Stainless Steel "T" Bar
Carbon Steel "T" Bar

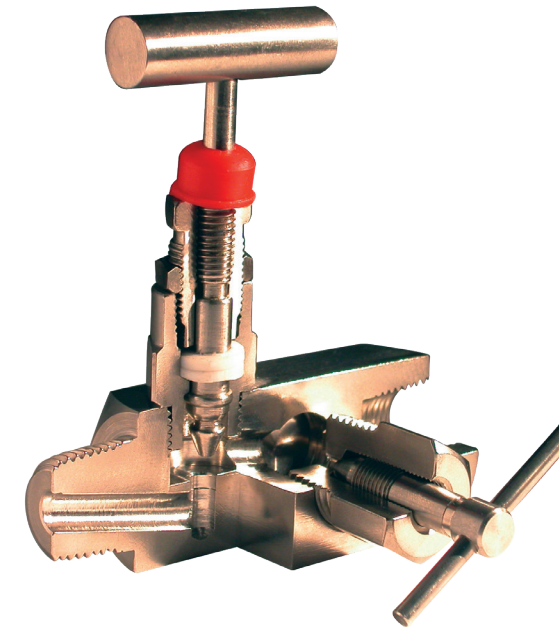
Connection

National Pipe Thread (ANSI B2.1)

Finish

Stainless Steel: Passivated
Carbon Steel: Clear Zinc Dichromate

BelGAS Needle Valves

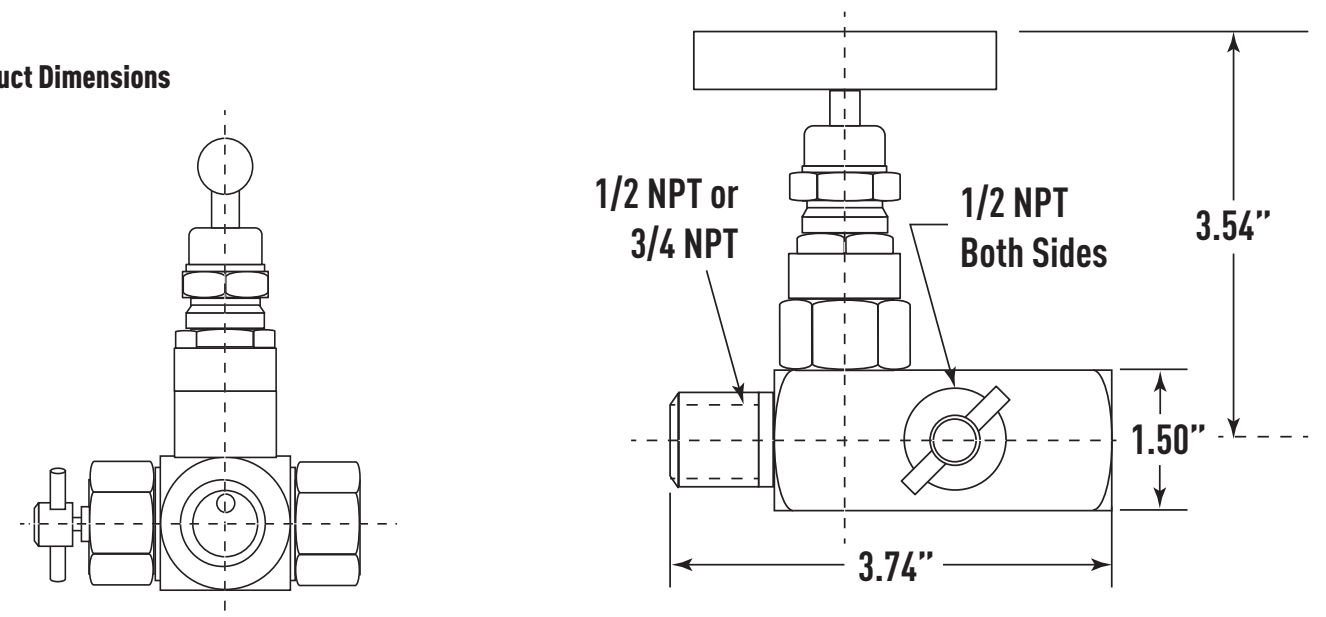


Ideally used to isolate gauge legs and gauge reading. Allows sampling to take place without loss of material and provide extra pressure ports with isolation capabilities.

Features:

- "T" Bar Handle
- Teflon Packing
- Roll-Formed Threads
- Precision Machined Stem
- Below Stem Thread Packing Gland
- Hardened and Ground 316 Stainless Steel, Self-Centering, Non-Rotating Tip
- Carbon Steel or 316 Stainless Steel Port Plug
- Pressure Rating, 10,000 psi (70,000 kPa)

Product Dimensions



Product Specifications

Body and Bonnet Material

316 Stainless Steel
Carbon Steel, Plated

Connection Size

1/2" NPT
3/4" NPT

Configuration

1 Male X 3 Female

Stem Material

316 Stainless Steel

Pressure/Temperature Rating

10,000 psi at 200°F

Packing

Two Piece Molded Teflon (PTFE)

Seat

Metal-to-Metal

Handle

316 Stainless Steel
Carbon Steel

Connection

National Pipe Thread (ANSI B2.1)

Finish

Stainless Steel: Passivated
Carbon Steel: Zinc Dichromate Finish

REFERENCES

In this section you will find the Selection and Use of a Pressure Gauge Guide, Pressure Gauge Operating Principle and How a Diaphragm Gauge Works Literature, and Terms and Conditions. For more information, visit www.marshgauges.com

Things to Consider When Buying a Gauge

Pressure Range

A range of 2 times the operating pressure is recommended for safety and extended gauge life. The operating pressure should be limited to the middle 75% of range.

Temperature Range

Ambient temperatures can effect the operation of a pressure gauge. Please consult specification pages for ambient temperature ratings. Accessories can be installed to limit temperatures or isolate a gauge from high or low temperature.

Conditions

Liquid Filled Gauges offer a dampening effect and reduce friction and wear. When used with a restrictor these gauges absorb vibration and dampen pressure shock and spikes or other contaminants from entering the gauge case and lubricates the internals.

Case Venting

Case pressure due to changes in ambient temperature or changes in barometric pressure can effect gauge readings. For liquid filled or fillable gauges, the fill plug at the top can be vented or "burped", then reinstalled to relieve case pressure. Marsh Instruments SAFE-CASE Process Gauges feature an internal diaphragm that automatically regulates case pressure to atmosphere.

Pressure Fluid Composition

Since the sensing element of a pressure gauge may be exposed directly to the measured medium, consider the characteristics of this process media. It may be corrosive, it may solidify at various temperatures, or it may contain solids that will leave deposits inside the sensing element. Diaphragm Chemical Seals should be considered for process media that is high temperature, viscous, or not compatible with gauge wetted parts. A chemical compatibility chart is available on MarshGauges.com for more information.

Pressure Fluid Temperature

Steam and other hot media may raise the temperature of the gauge components above safe working limits of the sealed joints and affect gauge accuracy. In these cases it is recommended that a syphon, cooling tower, or chemical seal be used in conjunction with the pressure gauge. Diaphragm Seals and remote capillary can also be considered to isolate instruments from very low or high ambient temperature.

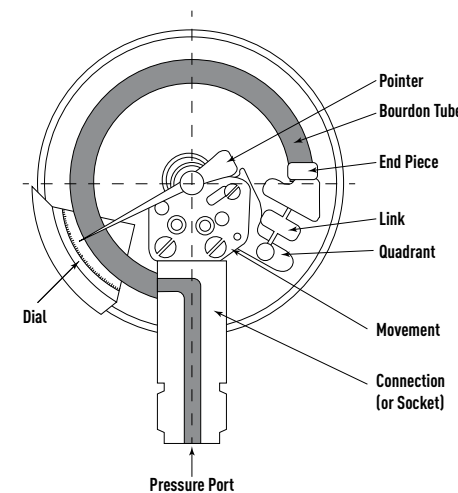
Ambient Conditions

Moisture and weather effects must also be considered. Liquid filled gauges prevent condensation build up. For outdoor use, stainless steel, brass, or plastic cased gauges are recommended.

Visit MarshGauges.com for the following references:

- Part Matrix
- Chemical Compatibility
- Accuracy Table
- Pressure Units
- Cross Reference Chart
- Part Number Prefix/Suffix Guide
- Abbreviations and Terms Used
- Terms and Conditions
- Product Classes and Options
- Product Claims, Warnings, and Notices

Pressure Gauge Operating Principle

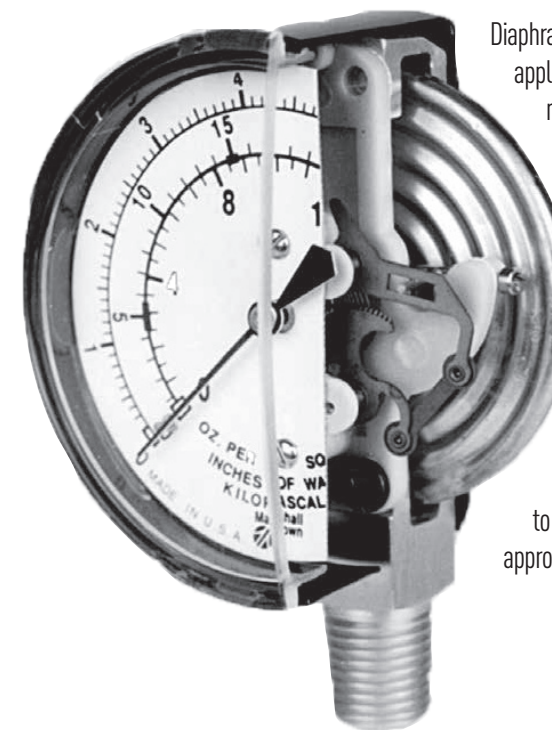


Bourdon tube pressure gauges are widely used in all branches of industry. The construction is simple yet rugged, and operation does not require any additional power source. The Bourdon tube element is directly exposed to the medium being measured and is normally made of copper alloy (brass) or stainless steel as the application demands.

The Bourdon tube measuring element is made of a thin walled tube that is either bent into a semicircle (C-Shape tube) or spirally wound (coiled safety tube). When pressure is applied to the measuring system through the pressure port, the pressure causes the Bourdon tube to straighten itself, thus causing the end piece to move upward (or downward for vacuum measurements). The movement of the end piece is transmitted via the link to the movement. The movement converts the linear motion of the Bourdon tube end piece to a rotational movement which in turn

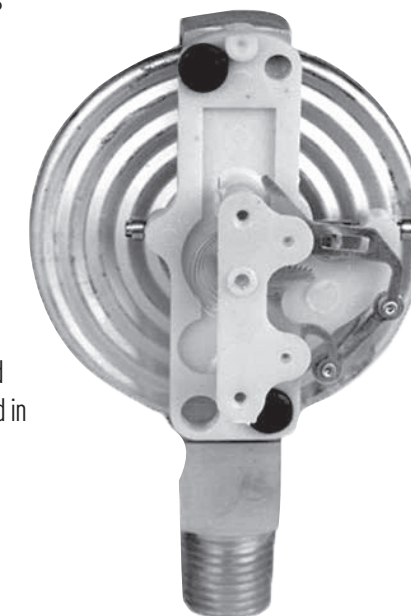
causes the pointer to indicate the measured pressure. Bourdon tube pressure gauges are designed for the measurement of pressure and vacuum and are generally suitable for all clean and non-clogging liquid and gaseous media. Various types of Bourdon tubes are used. C-shape Bourdon tubes are typically used for ranges to 1,000 psi. Higher ranges use coiled Bourdon tubes for safety. Bourdon tube pressure gauges are available to measure full vacuums, compound and pressure ranges from 0-10 psi to 0-20,000 psi with an accuracy from $\pm 0.25\%$ to $\pm 3/2/3\%$ of span (ASME Grade 3A to Grade B).

How the Diaphragm Gauge Works



Diaphragm gauges are sensitive instruments used in low pressure applications not exceeding 10 psi. The diaphragm capsule is an elastic metal sensing element comprised of two thin wall diaphragms whose sides are soldered together to make the capsule.

Whenever air or gas enters the intake port (gauge connection), it travels into the diaphragm capsule. As vacuum or pressure is applied to the diaphragm capsule, the walls of the capsule expand and contract in response to the change in pressure. This change is then transferred to a rotating rod and arm that rest on the outside of the capsule. The rotating rod is connected to a geared movement through a linkage system. Connected to a shaft, this system then drives the pointer over a dial marked in appropriate pressure or vacuum units.



Terms & Conditions

Marsh Bellofram Terms & Conditions

I. GENERAL

A. Customer purchase orders are binding only after written acceptance by Marsh Bellofram. Verbal orders shall not be accepted as binding until confirmed in writing by Marsh Bellofram.

B. Prices are effective from date of publication and are subject to change without notice

C. Marsh Bellofram reserves the right, without prior notice to:

1. Change and/or revoke any price.
2. Change and /or revoke any provisions contained herein.
3. Discontinue shipments to any customers.
4. Resolve any inconsistencies, conflicts or ambiguities.

D. Special production runs or product orders are subject to Marsh Bellofram requirements such as, but not limited to, minimum quantities and extended delivery times. On special production run products Marsh Bellofram reserves the right to over ship or under ship the purchase order quantity by up to 5% and invoice accordingly. Special orders are subject to cancellation charges.

E. Minimum billing: \$60 net per order.

II. Payment Terms

A. For customer with established credit terms: Net 30 days from shipment date.

B. If credit is not established, payment plus estimated (By Marsh Bellofram) freight charges shall accompany order or arrangements shall be made for collect on delivery (C.O.D.)

C. Marsh Bellofram reserves the right to revoke any credit extended to a customer if the customer fails to pay for any shipments when due. If in Marsh Bellofram's opinion there is a material adverse chance in customer's financial condition, Marsh Bellofram shall have the right to suspend further shipments until receipt of adequate assurance of customer's ability to pay therefor.

D. All shipments are F.O.B. Plant of Manufacture.

E. The shipment is deemed accepted in good condition by the common carrier and title and all risk of loss or damage is transferred to customer upon that acceptance by the carrier. The customer is responsible for inspection the merchandise upon receipt. The customer shall insist that visible damage be noted on its copy of the freight bill. If the product has been lost or damaged in transit, the customer must file the claim with the carrier, as Marsh Bellofram bears no responsibility for any such loss or damage.

F. All freight, handling and insurance charges shall be invoiced to the customer or shipped freight collect.

G. All shipments are made by carriers of Marsh Bellofram's choice. Any special arrangements requested by customer shall be at customer's additional expense.

H. Any quantity shortages, incorrect items, or billing errors shall be reported in writing to Marsh Bellofram within 15 days of delivery. Sales order and invoice numbers are to be furnished on all claims.

I. Marsh Bellofram reserves the right to make delivery in installments. All such installments shall be separately invoiced and paid for when due, without regard to subsequent deliveries. Delay in delivery of any installment shall not relieve customer of his obligation to accept remaining deliveries.

J. Marsh Bellofram shall not be liable for failure to deliver or delay in delivery occasioned by causes beyond Marsh Bellofram's control, including without limitation, lockouts, fires, embargoes, war or other breakouts of hostilities, act of inability to obtain shipping space, machinery breakdowns, delays of suppliers, and domestic or foreign governmental acts or regulations. In the event of any delay in delivery due to such causes, unless otherwise agreed, time of delivery shall be deemed extended for a period of sixty (60) days. Customer shall extend the letter of credit if payment is to be made by letter of credit. If delivery is not made within such extended sixty (60) day period, contract shall be deemed canceled without liability to either party.

III. Canceled Orders

ORDER CANCELLATIONS CAN ONLY BE ACCEPTED BY WRITTEN REQUEST via FAX or MAIL. All order cancellations result in a cancellation fee of at least 25% of the appropriate invoice of the finished item. Additional cancellation fees are:

1. Catalog Stock Items
 - If canceled less than 1 week before ship date, 25% cancellation fee.
2. Catalog Non-Stock Items
 - If canceled less than 30 days before ship date, full price.
3. Customer Specials
 - If canceled at any time, full price.

IV. Limited Warranty

A. All Marsh Bellofram products are warranted against defects in workmanship materials under normal use for 1 year after date of purchase from Marsh Bellofram unless otherwise stated. (Proof of purchase is required). Any product which is determined by Marsh Bellofram to be defective in material or workmanship and returned to Marsh Bellofram, shipping costs prepaid, shall be, as the sole remedy, repaired or replaced at Marsh Bellofram's option.

B. This warranty is expressly in lieu of all other warranties expressed or implied, including the warranties of merchantability and fitness for use and all other obligations or liabilities on the part of Marsh Bellofram, and Marsh Bellofram neither assumes nor authorizes any other person to assume for it, and other liability in connection with the sale hereunder. Marsh Bellofram disclaims any liability for product defects that are due to product misuse, improper product selection or misapplication.

C. Marsh Bellofram shall not be liable for customer's costs, lost profits, good will or other special or consequential damages Marsh Bellofram's liability in all events is limited and shall not exceed, the value of merchandise involved.

D. Remedies - Any controversy or claim arising out of or relating to the contract, or the breach thereof, shall be settled by arbitration in Hancock County, State of West Virginia in accordance with the commercial arbitration Rule of the American Arbitration Association, and judgement on the award render by the arbitrator(s) may be entered in a court having jurisdiction thereof.

V. Modification of Terms

This contract constitutes the entire agreement between the parties, all private representations and understanding having been merged herein. It may not be modified or terminated except in writing signed by a duly authorized representative of Marsh Bellofram. This contract shall be governed by and construed according to the laws of the State of West Virginia.

Terms & Conditions (Cont.)



I. Return goods authorization (RGA)

A. Merchandise returned to Marsh Bellofram for any reason must have a Marsh Bellofram Returned Goods Authorization (RGA) number. Warranty returns also require proof of purchase (invoice number, date, and an RGA number).

B. An RGA is valid for 45 days from issuance and merchandise must arrive at Marsh Bellofram within that validity period.

C. All material must be shipped freight prepaid.

D. The RGA number must be clearly visible on the outside of the package. A packing list must be included which clearly shows the RGA number, quantity, product description and reason for return.

E. No returns will be accepted without an authorized RGA (Return Goods Authorization)

II. Marsh Bellofram cannot be held responsible for any merchandise returned without an RGA Number.

A. An RGA number is issued in good faith based upon customer's representation of the merchandise quantity, condition, age and reason for return. All returned material is subject to inspection by Marsh Bellofram. If the material is found to be other than that originally represented, the shipment will be returned at the customer's expense.

B. An RGA may be requested by mail, fax or by telephoning Marsh Bellofram at 304-387-1200.

1. Warranty Returns (see Warranty Policy): Limited in-warranty merchandise must have an RGA number and be returned freight prepaid. The merchandise will be repaired or replaced under Marsh Bellofram's warranty terms, it will be returned freight prepaid to the customer.

2. Incorrect Shipments: For short shipments or incorrectly supplied merchandise, discrepancies must be reported within 15 days of receipt. For short shipments, a debit memo should be issued to Marsh Bellofram. Marsh Bellofram will then issue a credit memo, ship the missing merchandise freight prepaid and issue an invoice. For incorrectly supplied merchandise, all returns require an RGA number and must be returned freight prepaid. A debit memo should be issued to Marsh Bellofram for the freight. If a replacement is required, Marsh Bellofram will ship freight prepaid and invoice for the new product plus freight.

3. General Terms for Returns (Exchange or Credit): Material requested to be returned will be considered if the following conditions are met:

a. Merchandise is unused, current standard catalog stock of latest design, with both product and packaging in saleable condition.

b. Merchandise shall have been purchased directly from Marsh Bellofram in the last 12 months.

c. Merchandise shall not have been purchased on a "product promotion" or other special pricing.

4. Marsh Bellofram reserves the right to reject any return request. If accepted, the return will be under the terms specified herein.

The following products are not returnable:

a. Annual Merchandise Exchange Policy for Marsh Bellofram Distributors: Marsh Bellofram will normally accept one stock exchange in a 12 month period, for the purpose of increasing the flexibility of distributor's stock. This annual exchange is limited to distributors who are in good standing and whose accounts are current. The merchandise is subject to the product restrictions listed previously and limited to no more than 2% of the net invoiced sales from Marsh Bellofram to the distributor location during the previous 12 months. The value of the exchange will be determined by the current list price and current maximum published discount.

An offsetting order equal to the return is required.

1. The distributor shall issue a written request for an RGA number for the annual exchange showing quantity, product catalog number and description.

2. The exchange is subject to Marsh Bellofram approval and may be subject to an on-site inspection by Marsh Bellofram personnel. Please allow minimum 2 weeks for approval. Non-stock product or custom product is not returnable.

3. Upon approval of the exchange, Marsh Bellofram will inform the distributor of the net amount of the exchange for the scheduled date for return. The RGA number will be issued only upon receipt of a purchase order for an equal (net) value, calculated on current list price, current maximum published discount.

4. Upon receipt of RGA number, the distributor shall then package the authorized material and return freight prepaid to Marsh Bellofram, Newell, WV. The distributors bears liability for lost shipments or shipping damage.

5. All merchandise is subject to inspection upon receipt. Merchandise which is found to be damaged, modified, or in any other way ineligible for exchange, will be returned at the customer's expense and the value will be deducted from the exchange. A credit memo will then be issued for the net value of the exchange.

6. The replacement order will be shipped and invoiced against the new purchase order with freight at distributor's expense.

b. Merchandise Returns for Credit: Merchandise returned for credit requires an RGA number, and is subject to a 25% restocking charge and must be returned freight prepaid. The amount of the credit will be determined as follows:

1. Items returned within 90 days of purchase and with proof of purchase (copy of invoice) will be at invoiced price less applicable charges.

2. All other will be calculated at current list price and current maximum published discount less 25% restocking fee.

3. In addition to the standard restocking fee, gauges with accessories will be subject to a removal charge equal to the difference between the "installed" and "sold separately" prices.

4. Solid fill thermometry products are non-returnable.

c. Credit Memos:

1. Where required, Marsh Bellofram will issue a credit memo for the returned or exchanged merchandise less any applicable restocking or removal charges.

2. The credit memo will be issued only after receipt and inspection of merchandise.

3. Deduction from payments shall not be made until the Marsh Bellofram issued credit memo has been received.

PRODUCT CLASSES AND OPTIONS

A. Stock items: Shipped in 7 days or less, with no minimum quantity. (Large quantities may require extended lead times.)

B. Non-stock items: Consult factory for quantities and lead times.

C. Custom options on stock items: Dials, rings, windows, restrictors, and cosmetic changes - 4 weeks.

E. Customer special class: Special connections and materials consult factory for quantities and lead times.



MARSHGAUGES.COM

Need more information or interested in ordering?
 Visit MarshGauges.com or call us at (304) 387-1200
 to speak to a representative today.



Our sales and application engineers are trained to help you design and select the right instrument for your application. We collaborate with your team and assist in the design and creation of the ideal instrument for your needs.

Custom Solutions include:

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- Pressure Ranges/Scales
- Color Zone Dials
- Case Color/Material
- Connection Size/Location
- Internals
- Increased Accuracy
- Clean for Oxygen Service
- Lens Material
- Anti-Vibration/Dampened Movement
- Max/Min Pointers
- High Temperature Design
- Rubber Cover
- Inquire for others

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