

pro^{ense}® Steel Case / Brass Wetted Pressure Gauges

Lower Mount



Center Back Mount



Features

- Economical, all-purpose pressure gauge
- Friction bezel rings
- Dual scale (psig/kPa)
- Brass wetted parts for use with air, oil, water and non-corrosive liquids
- ±3-2-3% accuracy - ASME/ANSI Grade B
- 5 year warranty

Applications

- Plumbing, heating, air conditioning, pneumatic, hydraulic, water tanks, air compressors, OEM, general purpose

ProSense 1.5" Steel Case / Brass Wetted Pressure Gauges

| Part Number | Description | Pcs/Pkg | Wt(lb) | Price |
|----------------------|---|---------|--------|--------|
| G15-BDV-8LB | Gauge, 1.5 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, brass-1/8 NPT, lower mount | 1 | 0.20 | \$7.50 |
| G15-BD30-8LB | Gauge, 1.5 in., steel case, dry, 0-30 psig/0-200 kPa, brass-1/8 NPT, lower mount | 1 | 0.20 | \$7.50 |
| G15-BD60-8LB | Gauge, 1.5 in., steel case, dry, 0-60 psig/0-400 kPa, brass-1/8 NPT, lower mount | 1 | 0.20 | \$7.50 |
| G15-BD100-8LB | Gauge, 1.5 in., steel case, dry, 0-100 psig/0-700 kPa, brass-1/8 NPT, lower mount | 1 | 0.20 | \$7.50 |
| G15-BD160-8LB | Gauge, 1.5 in., steel case, dry, 0-160 psig/0-1,100 kPa, brass-1/8 NPT, lower mount | 1 | 0.20 | \$7.50 |
| G15-BD200-8LB | Gauge, 1.5 in., steel case, dry, 0-200 psig/0-1,400 kPa, brass-1/8 NPT, lower mount | 1 | 0.20 | \$7.50 |
| G15-BDV-8CB | Gauge, 1.5 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, brass-1/8 NPT, center back mount | 1 | 0.20 | \$7.50 |
| G15-BD30-8CB | Gauge, 1.5 in., steel case, dry, 0-30 psig/0-200 kPa, brass-1/8 NPT, center back mount | 1 | 0.20 | \$7.50 |
| G15-BD60-8CB | Gauge, 1.5 in., steel case, dry, 0-60 psig/0-400 kPa, brass-1/8 NPT, center back mount | 1 | 0.20 | \$7.50 |
| G15-BD100-8CB | Gauge, 1.5 in., steel case, dry, 0-100 psig/0-700 kPa, brass-1/8 NPT, center back mount | 1 | 0.20 | \$7.50 |
| G15-BD160-8CB | Gauge, 1.5 in., steel case, dry, 0-160 psig/0-1,100 kPa, brass-1/8 NPT, center back mount | 1 | 0.20 | \$7.50 |
| G15-BD200-8CB | Gauge, 1.5 in., steel case, dry, 0-200 psig/0-1,400 kPa, brass-1/8 NPT, center back mount | 1 | 0.20 | \$7.50 |

ProSense 2" Steel Case / Brass Wetted Pressure Gauges

| Part Number | Description | Pcs/Pkg | Wt(lb) | Price |
|----------------------|---|---------|--------|--------|
| G20-BDV-4LB | Gauge, 2.0 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, brass-1/4 NPT, lower mount | 1 | 0.20 | \$7.75 |
| G20-BD30-4LB | Gauge, 2.0 in., steel case, dry, 0-30 psig/0-200 kPa, brass-1/4 NPT, lower mount | 1 | 0.20 | \$7.75 |
| G20-BD60-4LB | Gauge, 2.0 in., steel case, dry, 0-60 psig/0-400 kPa, brass-1/4 NPT, lower mount | 1 | 0.20 | \$7.75 |
| G20-BD100-4LB | Gauge, 2.0 in., steel case, dry, 0-100 psig/0-700 kPa, brass-1/4 NPT, lower mount | 1 | 0.20 | \$7.75 |
| G20-BD160-4LB | Gauge, 2.0 in., steel case, dry, 0-160 psig/0-1,100 kPa, brass-1/4 NPT, lower mount | 1 | 0.20 | \$7.75 |
| G20-BD200-4LB | Gauge, 2.0 in., steel case, dry, 0-200 psig/0-1,400 kPa, brass-1/4 NPT, lower mount | 1 | 0.20 | \$7.75 |
| G20-BDV-4CB | Gauge, 2.0 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, brass-1/4 NPT, center back mount | 1 | 0.20 | \$7.75 |
| G20-BD30-4CB | Gauge, 2.0 in., steel case, dry, 0-30 psig/0-200 kPa, brass-1/4 NPT, center back mount | 1 | 0.20 | \$7.75 |
| G20-BD60-4CB | Gauge, 2.0 in., steel case, dry, 0-60 psig/0-400 kPa, brass-1/4 NPT, center back mount | 1 | 0.20 | \$7.75 |
| G20-BD100-4CB | Gauge, 2.0 in., steel case, dry, 0-100 psig/0-700 kPa, brass-1/4 NPT, center back mount | 1 | 0.20 | \$7.75 |
| G20-BD160-4CB | Gauge, 2.0 in., steel case, dry, 0-160 psig/0-1,100 kPa, brass-1/4 NPT, center back mount | 1 | 0.20 | \$7.75 |
| G20-BD200-4CB | Gauge, 2.0 in., steel case, dry, 0-200 psig/0-1,400 kPa, brass-1/4 NPT, center back mount | 1 | 0.20 | \$7.75 |

ProSense 2.5" Steel Case / Brass Wetted Pressure Gauges

| Part Number | Description | Pcs/Pkg | Wt(lb) | Price |
|-----------------------|---|---------|--------|--------|
| G25-BDV-4LB | Gauge, 2.5 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa, vacuum, brass-1/4 NPT, lower mount | 1 | 0.30 | \$8.00 |
| G25-BD30-4LB | Gauge, 2.5 in., steel case, dry, 0-30 psig/0-200 kPa, brass-1/4 NPT, lower mount | 1 | 0.30 | \$8.00 |
| G25-BD60-4LB | Gauge, 2.5 in., steel case, dry, 0-60 psig/0-400 kPa, brass-1/4 NPT, lower mount | 1 | 0.30 | \$8.00 |
| G25-BD100-4LB | Gauge, 2.5 in., steel case, dry, 0-100 psig/0-700 kPa, brass-1/4 NPT, lower mount | 1 | 0.30 | \$8.00 |
| G25-BD160-4LB | Gauge, 2.5 in., steel case, dry, 0-160 psig/0-1,100 kPa, brass-1/4 NPT, lower mount | 1 | 0.30 | \$8.00 |
| G25-BD200-4LB | Gauge, 2.5 in., steel case, dry, 0-200 psig/0-1,400 kPa, brass-1/4 NPT, lower mount | 1 | 0.30 | \$8.00 |
| G25-BD300-4LB | Gauge, 2.5 in., steel case, dry, 0-300 psig/0-2,000 kPa, brass-1/4 NPT, lower mount | 1 | 0.30 | \$8.00 |
| G25-BD600-4LB | Gauge, 2.5 in., steel case, dry, 0-600 psig/0-4,200 kPa, brass-1/4 NPT, lower mount | 1 | 0.30 | \$8.00 |
| G25-BD1000-4LB | Gauge, 2.5 in., steel case, dry, 0-1000 psig/0-7,000 kPa, brass-1/4 NPT, lower mount | 1 | 0.30 | \$8.00 |
| G25-BDV-4CB | Gauge, 2.5 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, brass-1/4 NPT, center back mount | 1 | 0.30 | \$8.00 |
| G25-BD30-4CB | Gauge, 2.5 in., steel case, dry, 0-30 psig/0-200 kPa, brass-1/4 NPT, center back mount | 1 | 0.30 | \$8.00 |
| G25-BD60-4CB | Gauge, 2.5 in., steel case, dry, 0-60 psig/0-400 kPa, brass-1/4 NPT, center back mount | 1 | 0.30 | \$8.00 |
| G25-BD100-4CB | Gauge, 2.5 in., steel case, dry, 0-100 psig/0-700 kPa, brass-1/4 NPT, center back mount | 1 | 0.30 | \$8.00 |
| G25-BD160-4CB | Gauge, 2.5 in., steel case, dry, 0-160 psig/0-1,100 kPa, brass-1/4 NPT, center back mount | 1 | 0.30 | \$8.00 |
| G25-BD200-4CB | Gauge, 2.5 in., steel case, dry, 0-200 psig/0-1,400 kPa, brass-1/4 NPT, center back mount | 1 | 0.30 | \$8.00 |

pro^{sense}® Steel Case / Brass Wetted Pressure Gauges

| ProSense Steel Case / Brass Wetted Gauges Specifications | | | |
|--|------------------------------------|--------------|--------------|
| Dial Size | 1.5" [40 mm] | 2.0" [50 mm] | 2.5" [63 mm] |
| Case | Steel, Painted Black | | |
| Lens | Polycarbonate | | |
| Ring | Steel, Painted Black | | |
| Socket | Brass* | | |
| Connection | 1/8" NPT | 1/4" NPT | 1/4" NPT |
| Fill Liquid | None | | |
| Bourdon Tube | Phosphor Bronze | | |
| Movement | Brass* | | |
| Wetted Parts | Brass, Phosphor Bronze | | |
| Pointer | Aluminum, Painted Black | | |
| Welding | Silver Alloy | | |
| Over Pressure Limit | 125% of full scale | | |
| Working Pressure | Maximum 75% of full scale value | | |
| Ambient/Process Temperature | -40 °F to 150 °F (-40 °C to 65 °C) | | |
| Accuracy | ±3-2-3% ANSI/ASME Grade B | | |
| Enclosure Rating | IP52 | | |

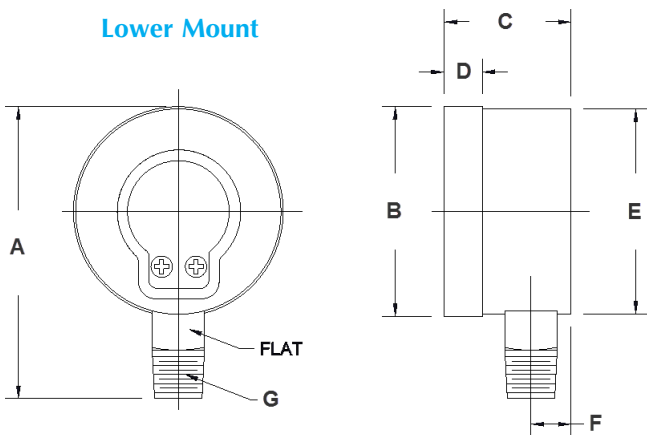
* Leaded Brass not suitable for use in drinking water or other food & beverage applications.



WARNING: CHECK THE CHEMICAL COMPATIBILITY OF THE GAUGE'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED. USE A SUITABLE THREAD SEALANT SUCH AS TEFLON® TAPE. ALWAYS TIGHTEN WITH AN OPEN END OR ADJUSTABLE WRENCH ON THE WRENCH FLATS. NEVER USE ANY PART OF THE PRESSURE GAUGE TO TIGHTEN OTHER THAN THE WRENCH FLATS THAT ARE ON THE GAUGE SOCKET. FAILURE TO DO SO WILL SEVERELY DAMAGE THE PRESSURE GAUGE.

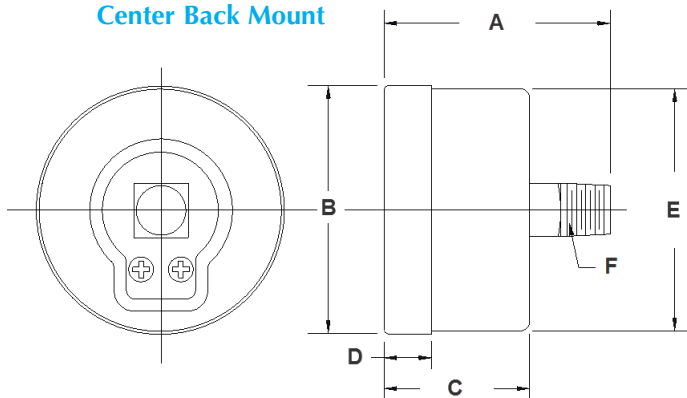
Dimensions

Lower Mount



| Dimensions - Lower Mount Gauges | | | |
|---------------------------------|------------------|------------------|------------------|
| Dial | 1.5" [40 mm] | 2.0" [50 mm] | 2.5" [63 mm] |
| A | 2.300" [58.4 mm] | 2.992" [76.0 mm] | 3.189" [81.0 mm] |
| B | 1.653" [42.0 mm] | 2.190" [55.6 mm] | 2.488" [63.2 mm] |
| C | 1.000" [25.4 mm] | 1.161" [29.5 mm] | 1.102" [28.0 mm] |
| D | 0.300" [7.6 mm] | 0.378" [9.6 mm] | 0.394" [10.0 mm] |
| E | 1.617" [41.0 mm] | 2.126" [54.0 mm] | 2.441" [62.0 mm] |
| F | 0.315" [8.0 mm] | 0.394" [10.0 mm] | 0.433" [11.0 mm] |
| G | 1/8" NPT | 1/4" NPT | 1/4" NPT |

Center Back Mount



| Dimensions - Center Back Mount Gauges | | | |
|---------------------------------------|------------------|------------------|------------------|
| Dial | 1.5" [40 mm] | 2.0" [50 mm] | 2.5" [63 mm] |
| A | 1.515" [38.5 mm] | 1.850" [47.0 mm] | 1.850" [47.0 mm] |
| B | 1.660" [42.1 mm] | 2.070" [52.5 mm] | 2.500" [63.4 mm] |
| C | 0.975" [24.6 mm] | 1.079" [27.4 mm] | 1.079" [27.4 mm] |
| D | 0.320" [8.1 mm] | 0.394" [10 mm] | 0.394" [10.0 mm] |
| E | 1.620" [41.1 mm] | 2.008" [51.0 mm] | 2.421" [61.5 mm] |
| F | 1/8" NPT | 1/4" NPT | 1/4" NPT |

See our website www.AutomationDirect.com for complete Engineering drawings.

ProSense® Pressure Gauges



Bourdon Tube Pressure Gauges

ProSense mechanical dial pressure gauges are available in a variety of configurations for use in most pneumatic, hydraulic, HVAC, plumbing, industrial and commercial applications. These high quality gauges use Bourdon tube sensing elements and do not require any external power sources to operate other than the media being sensed. Cases are available in durable steel or stainless steel and in either dry or liquid filled to dampen vibration and pulsations. Brass wetted parts are suitable for air, oil, or water applications while stainless steel wetted parts are available for corrosive applications. Dual marked dial faces (psig/kPa or inHg/kPa) are available in pressure ranges from vacuum up to 6000 psig.

The Bourdon tube pressure gauge applies the principle that a flattened tube will change to a more circular cross-section when pressurized. These tubes are then bent into a C-shape with one end crimped close and the other connected to the process. When the pressure inside the tube becomes greater than the ambient pressure the tube tries to straighten; this elongation is converted to a rotational motion with the use of a pinion gear attached to the pointer.



The bourdon tubes are calibrated at the factory for a specific range known as gauge pressure*. This pressure is relative to ambient atmospheric pressure.

Pressure Gauge Terms:

- **Atmospheric Pressure:** The weight of a column of air measuring one square inch from sea level to the top of the atmosphere. Sea level pressure = 29.92 inHg / 101.325 kPa / 14.696 psig / 1.0132 bar
- **Absolute Pressure:** Zero (0) in reference to a perfect vacuum
“Absolute Pressure” = gauge pressure (+) atmospheric pressure.
- **Gauge Pressure:** Zero (0) in reference to “Atmospheric Pressure”.
“Gauge Pressure” = absolute pressure (-) atmospheric pressure.
- **Differential Pressure:** Is the difference in pressure between two measuring points.

Gauge Accuracy and Grade

| Gauge accuracy and grade categorized by ASME (ANSI) Standard B40.1 | |
|--|------------|
| Gauge Accuracy | ANSI Grade |
| ±5% Full Scale | D |
| ±3% lower ¼ Scale; ±2% middle ½ scale; ±3% upper ¼ scale | B |
| ±2% lower ¼ Scale; ±1% middle ½ scale; ±2% upper ¼ scale | A |
| ±1% Full Scale | 1A |
| ±0.5% Full Scale | 2A |
| ±0.25% Full Scale | 3A |

Gauge Selection Considerations

Environment and Application

As the Bourdon tube is in direct contact with the medium being measured, the characteristics of the medium must be considered. If the medium is corrosive, stainless steel internals and casing should be chosen over brass. Brass is more suitable for general applications. The effects of moisture and weather conditions may also be harmful to the gauge and should be considered when selecting a gauge. Liquid filled gauges help prevent moisture build-up. Medium that will leave a deposit, clog or solidify in the Bourdon tube should be avoided.

For applications that produce harmful pulsation, vibration or pressure spikes, a liquid filled gauge will minimize the effects of vibration and provide a more accurate pressure reading.

Gauge Size

ProSense gauges are available with dial sizes of 1.5, 2 or 2.5 inches.

Connection

ProSense gauges offer lower and center back connections. The standard threads are 1/8” and 1/4” NPT.

Accuracy

The degree of accuracy required should be determined to ensure that the proper gauge is used. ProSense gauges offer accuracies of +/- 1.5% or +/- 3-2-3% (ANSI/ASME Grade B). Generally, the more critical the application, the higher the accuracy required.

Gauge Mounting

ProSense pressure gauges can be mounted in a variety of ways. For direct stem mount, we offer lower and center back connections. Bear in mind that if a piece of equipment produces heavy vibration making pressure reading difficult due to needle fluctuations, consider a liquid-filled gauge or remote mounting.

Pressure Range

It is important to select a pressure range that is approximately twice the normal operating pressure of the media. The maximum operating pressure should not exceed 75% of the full scale range. If a gauge is not selected considering these criteria, it may result in fatigue of the Bourdon tube.

Temperature Range

The normal temperature ranges for dry gauges are between -40°C to 65°C (-40°F to 150°F). The normal temperature ranges for glycerin-filled gauges are -20°C to 65°C (-4°F to 150°F). It is important to know the normal operating temperature of the environment for proper gauge use.

Click on the thumbnail or go to <https://www.automationdirect.com/VID-PR-0002> for a short video on ProSense Dial Pressure Gauges

