



High Precision Differential Pressure Gauges

Series 300 6" Dial



For routine test and production uses, this capsule-type gauge offers an acceptable balance among size, readability, accuracy, and price. Available in 18 standard ranges (including vacuum and compound ranges), the Series 300 is convenient to use. High differential pressure is applied to the capsule; low pressure to the case. Maximum static (case) pressure is 15 psig. A built-in overpressure relief valve protects the case.

STANDARD FEATURES

- Size:** 6" dial
- Scale length:** 16"
- Range:** To 100 psi
- Accuracy:** 0.33% of full scale
- Sensitivity:** 0.2% of full scale
- Pressure element volume:** 2.5 cc for the range 0-10" water; 2.0 cc for all other ranges.
- Case volume:** 1890 cc, with overpressure relief valve on the case
- Maximum case pressure:** 15 psig
- Maximum case leak rate:** Will not exceed 6.34×10^{-5} std cc/sec or 0.0018 psi/hr
- Case connection:** 1/8" female NPT pressure and static connections. Both have built-in stainless steel filters and are located in the bottom of the case.

STANDARD RANGES AND ORDERING NUMBERS

Series 300 6" Dial Differential Pressure Gauge

Range and Calibration	Ordering Number	Graduation
0-10" water	62C-4C-0010	0.05"
0-20" water	62C-4C-0020	0.1"
0-40" water	62C-4C-0040	0.2"
0-60" water	62C-4C-0060	0.5"
0-100" water	62C-4C-0100	0.5"
0-200" water	62C-4C-0200	1.0"
0-300" water	62C-4C-0300	2.0"
0-400" water	62C-4C-0400	2.0"

Range and Calibration	Ordering Number	Graduation
0-15 psi	62C-4A-0015	0.1 psi
0-30 psi	62C-4A-0030	0.2 psi
0-60 psi	62C-4A-0060	0.5 psi
0-100 psi	62C-4A-0100	0.5 psi

Vacuum and Compound Ranges

Range	Ordering Number*	Graduation
-10" water to 0	62C-7C-0010	0.05"
-20" water to 0	62C-7C-0020	0.1"
-400" water to 0	62C-7C-0400	2.0"
-5 to 0 to 5" water	62C-6C-0010	0.05"
-10 to -10" water	62C-6C-0020	0.1"
-20 to 0 to 20" water	62C-6C-0040	0.2"

* Can be calibrated as shown, or in any other standard pressure unit at no extra cost.

STANDARD FEATURES (cont.)

Case construction: Cast aluminum with tempered-glass dial cover. Flush mounted by three screws through the bezel.

Materials exposed to measured gas:

Pressure elements: beryllium copper, brass, soft solder in ranges to 100" water; silver and soft solder in ranges above 100" water.

Case: aluminum, beryllium copper, brass, stainless steel, nylon, Hypalon, Monel, soft solder, synthetic sapphire, TFE, white paint, drawing ink, Duco lacquer. Ranges above 100" water have silver solder also.

Options: Calibration in most metric units is available at no extra cost. Other units of calibration and two sets of graduations on the same dial are available at extra cost.

Weight and shipping weight:

4 lb. and 6 lb.

Ordering information:

When ordering, please specify ordering number, range, and mounting angle (Extra cost if mounting angle is other than vertical). Options as listed above.

Note: This gauge should not be used for corrosive gases or for liquids of any kind.

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Convenience in the Low Pressure Ranges

Available in the low-pressure ranges (lowest is 0-10 in. water). The Series 300 is a reliable mechanical indicator, which reads out differential pressure directly. It is less expensive, more convenient, and easier to use than most electronic transducers and lab-type liquid columns.

Excellent Readability

With a 16-inch scale, the Series 300 offers excellent readability. (In the lowest range, 0 to 10" water, the minimum graduation represents 0.05-in. water.) Graduations have ample white space between them. This and a knife-edge pointer read out to be better than 0.1% of full scale. Numbers on the dial are horizontally placed and a mirror ring eliminates parallax errors.

Calibration is Traceable to National Institute of Standards and Technology

A computer-assisted plotter marks calibration points and the graduations between them on each dial. This produces a scale, which precisely matches the characteristics of its own pressure capsule and mechanism. Calibration is against precision mercury manometers or sonar manometers, which are certified traceable to NIST. Wallace & Tiernan's calibration system conforms to MIL-STD-45662.

Performs Better than the Rated Accuracy of 0.33 % of Full Scale

A readable scale, individually matched dials and mechanisms, excellent repeatability, and a precision mechanism add up to an accuracy of 0.33% and a sensitivity of 0.2% of full scale. These figures are the minimum performance, which can be expected. After rigorous testing, any Series 300 Gauge, which fails to better the rated accuracy, is rejected.

Rugged Design

The heavy aluminum case has tempered-glass dial cover. Overpressuring the instrument up to 25% above its full scale range will not damage the mechanism nor affect accuracy. A built-in relief valve has a dumping capacity, which protects the case from applied pressure up to 10 times the maximum case pressure. (Optional relief valve U-18073, with higher dumping capacity, protects against applied pressure up to 40 times the maximum case pressure.)

This valve is an emergency-protective device only. Systems must be designed to operate at pressures no higher than 25% above full-scale range.

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