

Differential Pressure Gauge Series 300 6" Dial

WIKA Datasheet 300D, 6"

Applications

- Suitable for test, laboratory and production applications

Special Features

- This capsule-type gauge offers an acceptable balance among size, readability, accuracy
- Available in 18 standard ranges (including vacuum and compound ranges)
- High differential pressure is applied to the capsule; low pressure to the case
- Maximum static (case) pressure is 15 psig
- Built-in overpressure relief valve protects the case



Differential Pressure Gauge Model 300D 6"

Standard Features

Size

6" dial

Scale length

16"

Range

To 100 psi

Accuracy

0.30% 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.

Case construction

Aluminum with tempered-glass window.
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, 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 lbs. and 6 lbs.

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.

Series 300 6" Differential Pressure Gauge

Convenience in the Low Pressure Ranges

Available in the low-pressure ranges (lowest is 0-10" 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" scale, the Series 300 offers excellent readability. (In the lowest range, 0 to 10" water, the minimum graduation represents 0.05" 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 (NIST)

A computer-assisted plotter marks calibration points and the graduations between them on each dial. This produces a scale, that precisely matches the characteristics of its own pressure capsule and mechanism. Instruments supplied are certified traceable to NIST.

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% full scale and a sensitivity of 0.2% 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 window. Overpressuring the instrument up to 10% above its full scale range will not damage the mechanism nor affect accuracy. A built-in relief valve has a dumping capacity that 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 10% above full-scale range.

Connection for Different Pressure Readouts

Gauge Pressure: pressure is applied to capsule (P), case (S) is open to atmosphere.

Differential Pressure: high pressure to capsule (P); low pressure to case (S).

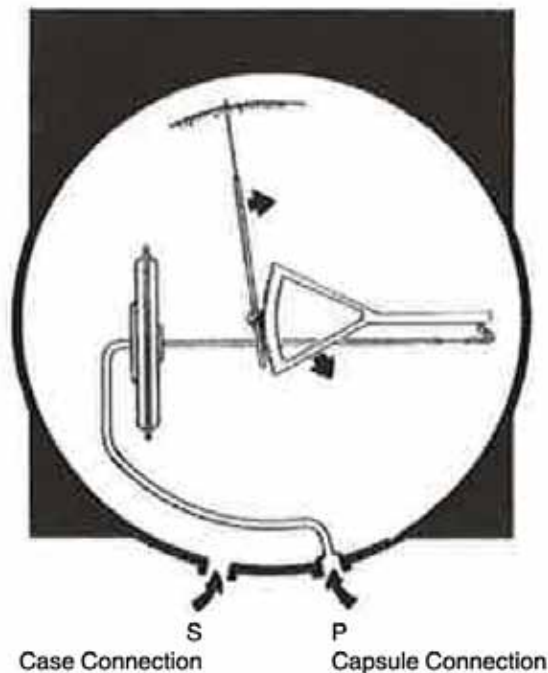
Absolute Pressure: pressure to capsule (P), case (S) held at full vacuum with a pump.

Vacuum: (clockwise pointer): capsule (P) open to atmosphere, vacuum to case (S).

Vacuum and Compound Gauges Vacuum

(counter-clockwise pointer movement): case (S) open to atmosphere, vacuum to capsule (P)

Compound: The pointer can move two ways from center zero. One way is towards the capsule connection, the other way is towards the case. When the pressure to the capsule is higher than the pressure to the case, the pointer will give a positive reading; whereas when the pressure to the capsule is lower than the pressure to the case, the pointer will give a negative reading.



Standard Ranges and Ordering Numbers

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.

