

Differential Pressure Gauge Series 1000 6" Dial

Applications

WIKA Datasheet 1000 6D

- Suitable for test, laboratory, and production applications

Special Features

- These gauges have capsule pressure elements
- High differential pressure is applied to the capsule; low pressure to the case
- Available in 22 standard ranges

Standard Features

Size

6" dial

Scale length

Approx. 30" through 2 pointer revolutions

Range

-30" Hg to 150 psi

Accuracy

0.1% of full scale

Repeatability

0.03% of full scale

Sensitivity

0.01% of full scale

Hysteresis

0.1% of full scale for all ranges except 150 psi or equivalent, which is 0.2% of full scale

Maximum temperature effect

0.1% of full scale per 10°C/50°F change from 23°C/73.4°F

Pressure element volume

6.9 cc with pointer at zero; 8.6 cc at full scale. For the range 0-125" water only: 6.3 cc with pointer at zero; 8.0 cc at full scale

Case volume

1775 cc, with overpressure relief valve built into the back of the case

Maximum case pressure

35 psig

Maximum case leak rate

Will not exceed 6.34×10^{-5} std cc/sec 0.0018 psi/hr.

Case connections

1/8" female NPT

Stainless steel filters are mounted in the orifice of both units and are located in the bottom of the case.



Gauge Pressure Indicator Series 1000 - 6" Dial

Case construction

Cast aluminum with tempered-glass window.

The bezel has no screw holes; case has special clips for easy flush mounting.

Materials exposed to measured gas

Capsule system: Ni-Span C[®], soft solder, brass, 303 stainless steel, and silver solder. 303 stainless steel tubing, adapter, and silver solder at pressure connection are optional instead of brass and soft solder.

Case: Ni-span C[®], brass, beryllium copper, magnesium, aluminum, ABS, nylon, Elgiloy, soft solder, Buna N, Hypalon, 303 stainless steel, silver solder, synthetic sapphire, white paint, epoxy cement, nickel silver, nickel plating, drawing ink, lacquer.

Weight and shipping weight

Approx. 8 lbs.

Ordering information

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

Options

Calibration in most metric units available at no extra cost. Non-linear calibration units at extra cost.

Also available is a compact (12¾" H, 12" W, 8¹/₁₆" D), suitcase-type carrying case with the gauge in a mounted panel. The cover is easily removed and pressure connections can be made without removing the gauge from the case.

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

Series 1000 6" Differential Pressure Gauge

High Accuracy and Compact Size

Accuracy is 0.1% of full scale; dial diameter is only 6". This combination of high accuracy and compact size makes for smaller and more efficient test stands, such as consoles for ground support equipment.

Excellent Readability

The pointer covers full scale in two revolutions permitting a scale 30" long. This is more than twice as long as same size single revolution gauges. It permits up to 900 scale graduations with a minimum of 1/32" of white space between them. This and a knife-edge pointer allow readings to better than 0.03% of full scale.

Performs Better than the Rated Accuracy

Excellent readability, custom dial calibration, and individual matching and adjustment of each mechanism to its dial add up to an accuracy of 0.1% full scale. These figures are the minimum, which can be expected. After rigorous testing, any WIKA gauge which fails to better the rated accuracy is rejected.

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 which precisely matches the characteristics of its own mechanism and pressure element. Instruments supplied are certified traceable to NIST.

Rugged Design

The case is heavy cast aluminum with a tempered-glass dial cover. A heavy aluminum dial plate, with only a 1/16" opening for the pointer, isolates the capsule. Over-pressuring 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, which protects the case from applied pressure up to 60 times the maximum 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.

Series 1000 6" Differential Pressure Gauge

Standard Ranges and Ordering Numbers

Range and Calibration	Ordering Number	Graduation
0-4.5 psi	62B-4A-0005	0.01 psi
0-10 psi	62B-4A-0010	0.02 psi
0-15.5 psi	62B-4A-0015	0.02 psi
0-20 psi	62B-4A-0020	0.05 psi
0-30 psi	62B-4A-0030	0.05 psi
0-45 psi	62B-4A-0045	0.1 psi
0-60 psi	62B-4A-0060	0.1 psi
0-100 psi	62B-4A-0100	0.2 psi
0-150 psi	62B-4A-0150	0.2 psi

Vacuum and Compound Ranges

Range and Calibration	Ordering Number	Graduation
-30" Hg to 0	62B-7B-0030*	0.05"
-15" to 0 to 15" * Hg	62B-6B-0030	0.05"
-30" to 0 to 30" Hg	62B-6B-0060*	0.1"
-30" to 0 to 90" Hg	62B-6B-0120*	0.2"
-30" to 0 to 270" Hg	62B-6B-0300*	0.5"

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

Connection for Different Pressure Readouts

Gauge Pressure:

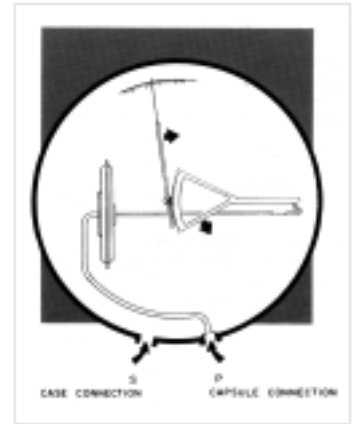
pressure is applied to capsule (P), case (S) is open to atmosphere.

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.

Range and Calibration	Ordering Number	Graduation
0-125" water	62B-4C-0125	0.2"
0-280" water	62B-4C-0280	0.5"
0-800 mm Hg	62B-4D-0800	1.0 mm
0-31.5" Hg	62B-4B-0031	0.05"
0-60" Hg	62B-4B-0060	0.1"
0-120" Hg	62B-4B-0120	0.2"
0-200" Hg	62B-4B-0200	0.5"
0-300" Hg	62B-4B-0300	0.5"

