

Absolute Pressure Gauge Series 1000 6" Dial

WIKA Datasheet 1000 6A

Applications

- Suitable for test, laboratory, and production applications

Special features

- Series 1000 gauge pressure elements are capsules up to and including the 50 psia range; 100 psia and above use Bourdon tubes
- In the 50 psia range, pressure is applied to the case and is referenced against the evacuated capsule
- In the 100 psia and above use Bourdon tubes, pressure is applied to a Bourdon tube, which is referenced against an evacuated Bourdon tube
- Available in 14 standard ranges
- Series 1000 Absolute Pressure gauges are compact for efficient panels and consoles, yet readability is excellent

Standard Features

Size

6" dial

Scale length

30" through two pointer revolutions

Ranges

To 500 psia

Accuracy

0.1% of full scale

Repeatability

0.03% of full scale

Sensitivity

0.01% of full scale

Hysteresis

Below 100 psia: 0.15 % of full scale;
100 psia and above: 0.1% of full scale

Maximum temperature effect

Below 100 psia, 0.019% of full scale per 10°C/18°F change from 23°C/73.4°F; 100 psia and above, 0.1% of full scale per 10°C/18°F change from 23°C/73.4°F

Case pressure and volume

For gauges with ranges of 50 psia or below, maximum case pressure is 35 psig

Case volume is 1775 cc with overpressure relief valve built into the back of the case

For gauges with ranges of 100 psia and above, volume of pressure Bourdon system is 10 cc with case vented to atmosphere

Case connections

Below 100 psia, 1/8" female NPT, 100 psia and above, 1/4" female NPT. Both have a built-in stainless steel filter and are located in the bottom of the case.



Absolute Pressure Gauge Model 1000 6"

Case construction

Anodized aluminum with tempered-glass window, the case has special clips which make flush mounting easy, the bezel has no screw holes

Materials exposed to measured gas

Below 100 psia: Ni-Span C[®], brass, phosphor bronze, beryllium-copper, magnesium, aluminum, nylon, 303 stainless steel, Elgiloy, soft solder, silver solder, Hypalon, synthetic sapphire, paper, epoxy cement, TFE, nickel silver, nickel plating, drawing ink, lacquer

100 psia and above: stainless steel, Ni-Span C[®], Easy-flow #45 brazing alloy, silver solder, nylon

Weight and shipping weight

Approx. 8 lbs.

Options

- Calibration in most metric units available at no extra cost.
- Non-linear calibration units are available at extra cost.
- Also available is a compact (12 3/4" H, 12" W, 8 1/16" D) suit-case type carrying case with the gauge in a shock-mounted panel. The cover is easily removed and pressure connections can be made without removing the gauge from the case.

Ordering Information

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

Note: Gases must be non-corrosive, no liquid service.

Series 1000 6" Absolute Pressure Gauge

Direct Readout, No Barometric Adjustments

Because applied pressure is referenced against an evacuated element, WIKA gauges read out true absolute pressure directly. No corrections or adjustments required.

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.

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 1,000 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% of 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 tempered glass window.

Ranges below 50 psia are supplied with a built in pressure relief valve.

Ranges above 50 psia are supplied with a blowout plug.

Overpressuring these gauges up to 10% above full scale will not damage the mechanism nor affect accuracy.

*These valves are emergency-protective devices only. Systems must be designed to operate at pressures no higher than 10% above full-scale range.

Series 1000 6" Absolute Pressure Gauge

Standard Ranges and Ordering Numbers

Range and Calibration	Ordering Number	Graduation
0-15.5 psia	61B-1A-0015	0.02 psia
0-25 psia	61B-1A-0025	0.05 psia
0-35 psia	61B-1A-0035	0.05 psia
0-50 psia	61B-1A-0050	0.1 psia
0-100 psia	61B-1A-0100	0.2 psia
0-150 psia	61B-1A-0150	0.2 psia
0-200 psia	61B-1A-0200	0.5 psia
0-300 psia	61B-1A-0300	0.5 psia
0-500 psia	61B-1A-0500	1.0 psia

Range and Calibration	Ordering Number	Graduation
0-800 mm Hg	61B-1D-0800	1.0mm
0-31.5" Hg	61B-1D-0031	0.05"
0-50" Hg	61B-1B-0050	0.1"
0-70" Hg	61B-1B-0070	0.1"
0-100" Hg	61B-1B-0100	0.2"

