



# High Precision Gauge Pressure Indicators

## Series 300 2 3/4" Dial



For test, laboratory, and production uses, this gauge gives accuracy in a compact size. It is sensitive, yet rugged and low in cost. Available in 18 standard ranges (including vacuum and compound ranges), the Series 300 is convenient to use. Pressure is applied to the capsule through a single connection in the case. Readings are referenced to atmospheric pressure in the case.

### STANDARD FEATURES

**Ranges:** To 100 psig  
**Accuracy:** 0.33% of full scale  
**Sensitivity:** 0.2% of full scale  
**Scale length:** 7" through one pointer revolution  
**Dial diameter:** 2 3/4"

**Pressure element volume:** 2.5 cc for the range 0-10" water; 2.0 cc for all other ranges.

**Case connection:** 1/8" female NPT with built-in stainless steel filter. Connection located on back of case.

**Case pressure:** Cases are open to atmosphere.

**Case construction:** Cast, anodized aluminum with a high-strength, scratch-resistant plastic dial cover. Flush mounted by four screws through the bezel.

### STANDARD RANGES AND ORDERING NUMBERS

#### Series 300-2 3/4" Gauge Pressure Indicators

Range and Calibration	Ordering Number	Graduation
0-10" water	62D-2C-0010	0.1"
0-20" water	62D-2C-0020	0.2"
0-40" water	62D-2C-0040	0.5"
0-60" water	62D-2C-0060	1.0"
0-100" water	62D-2C-0100	1.0"
0-200" water	62D-2C-0200	2.0"
0-300" water	62D-2C-0300	5.0"
0-400" water	62D-2C-0400	5.0"

Range and Calibration	Ordering Number	Graduation
0-15 psi	62D-2A-0015	0.2 psi
0-30 psi	62D-2A-0030	0.5 psi
0-60 psi	62D-2A-0060	1.0 psi
0-100 psi	62D-2A-0100	1.0 psi

#### Vacuum and Compound Ranges

Range	Ordering Number	Graduation
-10" water to 0	62D-3C-0010*	0.1"
-20" water to 0	62D-3C-0020*	0.2"
-400" water to 0	62D-3C-0400*	5.0"
-5 to 0 to 5" water	62D-5C-0010*	0.1"
-10 to 0 to 10" water	62D-5C-0020*	0.2"
-20 to 0 to 20" water	62D-5C-0040*	0.5"

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

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## STANDARD FEATURES (cont.)

### Zero

**adjustment:** A zero adjustment is accessible through the case front.

### Material exposed to measured

**gas:** Beryllium copper, brass, soft solder in ranges to 100" water; silver and soft solder in ranges above 100" water.

**Options:** Metric calibration (SI) units available at no extra cost. Other calibration units available at extra cost.

### Weight and shipping

**weight:** 1¼ lb. And 3 lb.

### Order

**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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## **Series 300 2<sup>3</sup>/<sub>4</sub>" High Precision Gauge Pressure Indicator**

### **Convenience in the Low Pressure Ranges**

Available in the low-pressure ranges (10" to 400" water), the Series 300 is a reliable mechanical indicator, which reads out gauge pressure directly. It is low in cost, practically maintenance free and convenient to use. Yet it gives results comparable to complicated electrical transducers and lab-type liquid columns.

### **Compact for Space Saving**

The Series 300 has a dial only 2 <sup>3</sup>/<sub>4</sub>" in diameter and a scale 7" long. Thus the gauge is compact, yet offers adequate readability. It saves dollars in panel construction, makes for more compact consoles and easier handling in the laboratory.

### **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 matches precisely the characteristics of its own pressure capsule and mechanism. Calibration is against precision mercury or water manometers or precision dead-weight testers. These 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% 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.

### **Sensitive, Rugged, and Overpressure Protected**

A small, sensitive capsule responds to minute pressure changes. Low-inertia parts throughout and a linkage containing flexures and jewel bearings mean high sensitivity. Yet the mechanism is rugged and resists damage by on-the-job handling. The case is heavy cast aluminum with a high-strength plastic dial cover. A blowout plug in the back of the case is designed to relieve at the slightest pressure build-up. Overpressuring the instrument up to 25% above its full-scale range will not damage the mechanism nor affect accuracy.

## **DESIGN and CONSTRUCTION**

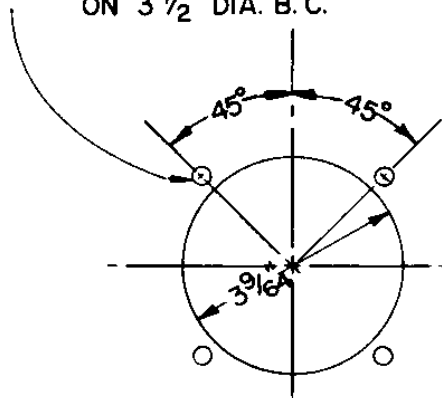
W & T Gauges for gauge pressure contain capsules or Bourdon tubes. These are small-volume beryllium copper or Ni-Span C pressure elements, which give excellent speed of response. They are heat-treated to enhance repeatability and to minimize hysteresis and the effects of temperature change.

Pressure-element movement is amplified and transmitted to the pointer via a mechanical linkage. The linkage contains low inertia parts as well as flexures and jewel bearings for low friction. It is not lubricated. An anti-backlash device maintains uniform tension between the parts. There is no lost motion. The pointer and mechanism are carefully balanced to minimize pointer position error.

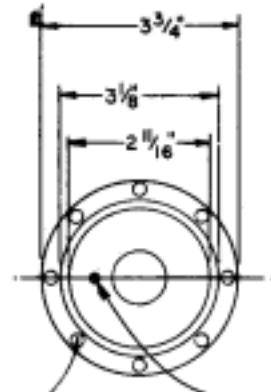
W & T Gauge Pressure Indicators have a calibration adjustment accessible through the front of the case, except Series 1500, which is accessible through both front and rear. Although sensitive, the mechanisms are not fragile. They resist damage due to on-the-job handling.

Series 300 2 3/4" Pressure Gauge Indicators

DRILL 4 HOLES #17 (.173")  
ON 3 1/2" DIA. B.C.

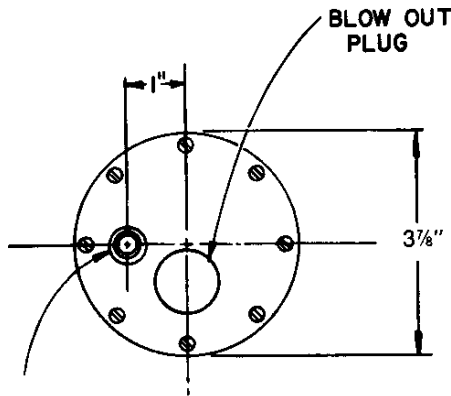


PANEL OPENING

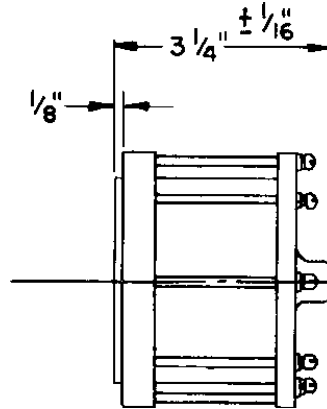


FRONT ACCESS SCREW FOR  
POINTER ADJUSTMENT

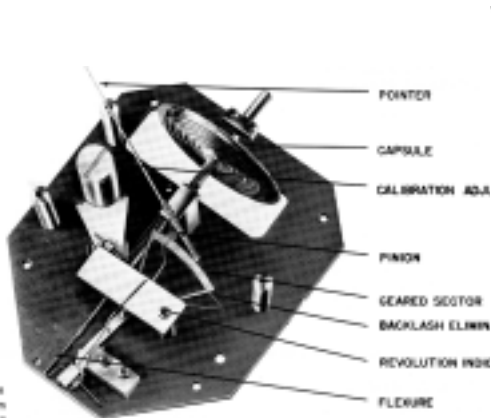
(8) #8-32 TAP 1/4" DEEP



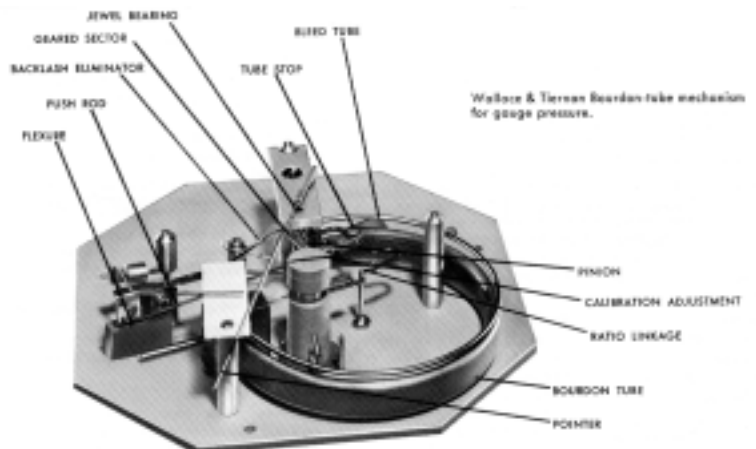
1/8" FEMALE N.P.T. HIGH  
PRESSURE CONNECTION



DESIGN and CONSTRUCTION



Wallace & Tiernan  
couple mechanism  
for gauge pressure.





# High Precision Test Gauges

## Type 332.54 4" Dial

- STAINLESS STEEL WETTED PARTS

- MIRRORED DIAL / ADJUSTABLE POINTER

- ±0.25% OF SPAN ACCURACY



WIKA Type 332.54 inspector's test gauges are convenient for field calibrations. They have an accuracy of ±0.25% which meets ASME B40.1 Grade 3A. The mirrored band on the dial and the knife-edge pointer make it easy to take accurate readings from the gauge. Type 332.54 test gauges are supplied standard with a nylon, zippered carrying pouch.

### STANDARD FEATURES

**Size:** 4" (100 mm)

**Case:** 304 SS

**Bayonet Ring:** Polished SS

**Wetted Parts:** 316 SS

**Window:** Safety glass

**Dial:** White aluminum with mirrored band

**Pointer:** Black, aluminum, knife-edge, adjustable

**O-ring:** EPDM

**Accuracy:** ± 0.25% of span  
*ASME B40.1 Grade 3A*

### STANDARD RANGES AND PART NUMBERS

Type	332.54
Size	4"
Connection	LM
Conn. Size	1/4" NPT
Press. Scale	PSI
30 "Hg	4220013
30"-0-15 psi	
30"-0-30 psi	
30"-0-60 psi	
30"-0-100 psi	
30"-0-160 psi	
30"-0-200 psi	
15 psi	4220021
30 psi	4220030
60 psi	4220048
100 psi	4220056
160 psi	4220064
200 psi	4220072
300 psi	4220081
400 psi	4220099
600 psi	4220102
800 psi	
1,000 psi	4220111

### Options Available from Inventory

Stainless steel rear flange (RF)

Stainless steel restrictor

Acrylic Window

### ABBREVIATIONS

LM - Lower Mount

\* Items shown with part numbers are available from stock (subject to prior sale).

\* Items shown without part numbers are available on special order. Minimum order quantities may apply.