

# Product Catalog

## Pressure and Temperature Measurement



- Mechanical Pressure
- Diaphragm Seals
- Mechanical Temperature
- Accessories

**WIKAI**®

Part of your business



# Product Catalog 900

## Pressure and Temperature Measurement

## Product Catalog 900


### Mechanical Pressure Diaphragm Seals Mechanical Temperature Accessories


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For complete detailed information, including electronic pressure, electronic temperature and ultra high purity products, please visit [www.wika.com](http://www.wika.com).



# Selecting a Pressure Gauge

When selecting a pressure gauge, it is important to consider the following factors to ensure safety and accuracy:

1. Pressure fluid composition
2. Pressure fluid temperature
3. Ambient conditions
4. Pressure range
5. Conditions affecting wear of the system
6. Method of mounting
7. Required accuracy

## 1. Pressure fluid composition

Since the sensing element of a pressure gauge may be exposed directly to the measured medium, consider the characteristics of this medium. It may be corrosive, it may solidify at various temperatures, or it may contain solids that will leave deposits inside the sensing element. For pressure fluids that will not solidify under normal conditions or leave deposits, a Bourdon tube gauge is acceptable. Otherwise a Sealgauge® or diaphragm seal should be used. A chemical compatibility chart follows this section to aid in the selection of the proper sensing element material.

## 2. Pressure fluid temperature

Steam and other hot media may raise the temperature of the gauge components above safe working limits of the sealed joints. In these cases it is recommended that a siphon, cooling tower or diaphragm seal be used in conjunction with the pressure gauge.

## 3. Ambient conditions

The normal ambient temperature range for WIKA pressure gauges is -40°F to +140°F (-40°C to +60°C) for dry or silicone-filled gauges and -4°F to +140°F (-20°C to +60°C) for glycerine-filled gauges. The error caused by temperature changes is +0.3% or -0.3% per 18°F rise or fall, respectively. The reference temperature is 70°F (20°C). The correction is for the temperature of the gauge, and not the temperature of the measured medium. Remote gauge mounting using a diaphragm seal and capillary line is one alternative for applications involving extreme ambient temperature.

Moisture and weather effects must also be considered. Liquid-filled gauges prevent condensation build up. For outdoor use, stainless steel, brass, or plastic cased gauges are recommended.

## 4. Pressure range

A gauge range of twice the working pressure is generally selected. The working pressure in all cases should be limited to 75% of the gauge range. Where alternating pressure and pulsation are encountered, working pressure should be limited to 2/3 of the gauge range.

## 5. Conditions affecting wear of the system

In applications involving severe pressure fluctuation or pulsation, the use of restrictors and/or snubbers is recommended. In addition, liquid-filled gauges increase the service life of gauges in these conditions. WIKA liquid-filled gauges are generally filled with glycerine. Silicone for larger temperature extremes and Halocarbon® for use with oxidizing agents such as chlorine, oxygen, and hydrogen peroxide are also available.

## 6. Method of mounting

Radial (LM) and back (CBM or LBM) connections are available for most WIKA gauges. WIKA stocks gauges with standard NPT threaded connections. Other types such as metric threads, straight threads, hose barbs, and special fittings are available as a special order.

Pressure gauges should be mounted in the upright position. For applications where the gauge is mounted side ways, horizontally, or upside down, contact WIKA Customer Service for gauge type compatibility.

## 7. Required accuracy

WIKA stocks gauges with accuracies from  $\pm 3/2/3\%$  to  $\pm 0.1\%$  of span (ASME Grade B to Grade 4A).

To ensure safe and accurate gauge selection, you must take all of the above factors into consideration. When in doubt, please do not hesitate to contact your local stocking distributor or WIKA Customer Service for assistance!



# Chemical Compatibility Chart

|                     |   |                     |   |                        |   |
|---------------------|---|---------------------|---|------------------------|---|
| Acetic Acid         | B | Ethyl Acetate       | A | Oxygen                 | A |
| Acetic Anhydride    | D | Ethyl Cellulose     | B | Paraffin               | A |
| Acetone             | B | Ethylene            | A | Phosphoric Acid        | B |
| Acetylene           | B | Ethylene Dibromide  | B | Photographic Solutions | B |
| Alcohol             | A | Ethylene Dichloride | D | Pickling Solutions     | B |
| Alums               | B | Ethylene Glycol     | A | Picric Acid            | B |
| Aluminum Sulfate    | B | Ferric Nitrate      | B | Picric Acid (dry)      | B |
| Ammonia             | B | Ferric Sulfate      | B | Potassium Chloride     | D |
| Ammonium Carbonate  | B | Formaldehyde        | B | Potassium Cyanide      | B |
| Ammonium Hydroxide  | D | Freon               | A | Potassium Permanganate | B |
| Ammonium Phosphate  | D | Gallic Acid         | B | Prestone               | A |
| Beer                | A | Gas (for lighting)  | A | Salicylic Acid         | A |
| Benzine             | A | Gasoline            | A | Sea Water              | C |
| Benzol              | A | Gasoline (refined)  | B | Silver Nitrate         | B |
| Benzyl Alcohol      | B | Glucose             | C | Sodium Carbonate       | D |
| Bleach Liquors      | B | Glycerine           | A | Sodium Cyanide         | D |
| Bordeaux Mixture    | A | Hydrocyanic Acid    | B | Sodium Hydroxide       | D |
| Butane              | B | Hydrogen            | B | Sodium Nitrate         | B |
| Butanol             | A | Hydrogen Peroxide   | B | Sodium Peroxide        | B |
| Butyric Acid        | B | Kerosene            | A | Sodium Phosphate       | B |
| Calcium Bisulfite   | B | Lacquers            | A | Sodium Sulfate         | B |
| Calcium Chloride    | C | Lactic Acid         | B | Sodium Sulfide         | D |
| Calcium Hydroxide   | B | Lysol               | B | Sodium Sulfite         | B |
| Carbon Dioxide(dry) | B | Magnesium Hydroxide | C | Sulfur Dioxide         | D |
| Carbon Bisulfide    | B | Magnesium Sulfate   | B | Sulfur Dioxide (dry)   | B |
| Casein              | B | Mercury             | B | Sulfuric (75%)         | B |
| Chloroform          | B | Methyl Chloride     | D | Sulfurous Acid         | B |
| Chromic Acid        | B | Methyl Salicylate   | D | Tanning Liquors        | D |
| Citric Acid         | B | Naphtha             | A | Toluene                | A |
| Coal Gas            | A | Nickel Acetate      | B | Vegetable Oils         | B |
| Copper Sulfate      | B | Nitric Acid (pure)  | B | Vinegar                | B |
| Cottonseed Oil      | B | Nitrous Acid        | D | Water                  | A |
| Creosote (crude)    | B | Nitrous Oxide       | D | Whiskey                | B |
| Dextrine            | A | Oil (lubricating)   | A | Wines                  | B |
| Ethers              | D | Oil (refined)       | A | Zinc Sulfate           | B |

**NOTE: For steam service, a siphon is required.**

Find the process fluid in the table above and match the letter code (A,B,C, or D) with the wetted part material listed below:

**A = Brass (Copper Alloy)      B = 316 Stainless Steel      C = Monel®      D = Consult Factory**

This table is provided as a reference only and is accurate to the best of WIKA's knowledge. WIKA assumes no responsibility for, or obligation from, the information here.

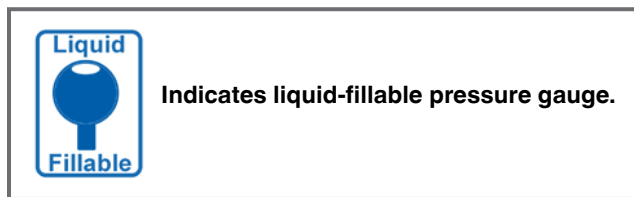
# Advantages of Liquid-Filled Gauges

## Liquid-filled gauges

Liquid-filled pressure gauges provide a number of advantages:

- \* the liquid absorbs vibration and pressure spikes
- \* the dampening action of the liquid enables the operator to take readings during conditions of rapid dynamic loading and vibration
- \* the liquid lubricates all moving elements, dramatically reducing wear in the movement
- \* because most liquid-filled gauges are filled with non-aqueous liquid and hermetically sealed, they perform in corrosive environments and are immune to moisture penetration and icing, and shock effects are lessened


Liquid-filled gauges enhance the reliability and integrity of the measuring system for long periods under extreme operating conditions.



## Liquid Fill Fluid

Ambient Temperature Ratings (Table A)

**Allowable Operating Range** - Temperature range in which the operation of the gauge is not adversely affected by the filling liquid. At temperatures above the maximum rating, the fluid may break down. At temperatures below the minimum rating, the fluid may solidify (freeze).

 **NOTE:** Some parts of the pressure gauge may not be able to withstand temperatures above 140°F. Consult with the factory for technical assistance for these applications.

## Choose the Right Liquid

The type of liquid used to fill the gauge varies with the application. Although pure glycerine provides the best performance in most applications, each has its own requirements. Guidelines to help ensure that a fluid is properly matched to an application are:

- \* if icing is a problem, use gauges filled with silicone oil or other comparable liquids. They have low viscosities even at -60°C
- \* if the system has electric accessories, such as contacts, use insulating oils, and
- \* if extreme temperature fluctuations are expected, use silicone oils

The higher the liquid viscosity, the greater its dampening capacity. The reason for this is that dampening changes in proportion to the temperature-dependent viscosity of the filling liquid. The suitable degree of dampening depends on the operating requirements the gauge must meet, such as pointer response time, pressure extremes, vibration, and changes in pressure. WIKA can recommend specific liquids to suit problem applications.

| Fill Fluid   | Allowable Operating Range    |
|--|------------------------------|
| <b>Glycerine</b><br>Dow 99.7% USP, Synthetic<br>1118 Centistokes at 68°F | -4°F to 140°F -20°C to 60°C  |
| <b>Silicone</b><br>Dow Corning 200 Fluid<br>1000 Centistokes at 77°F     | -40°F to 140°F -40°C to 60°C |
| <b>Halocarbon®</b><br>Halocarbon® Products<br>6.3 Centistokes at 100°F   | -40°F to 140°F -40°C to 60°C |

Table A - Allowable Ambient Temperature Ratings

## Liquid-Filled Gauge Case Venting

For pressure gauges with full scale ranges of 300 psi and below (including vacuum and compound ranges of 30" Hg-0-200 psi and below), case venting (after the gauge is installed) is necessary to preserve the accuracy. Temperature fluctuations during shipment and in the process application cause the liquid filling to expand and contract which in turn increases or decreases case pressure. As a result, accuracy can be decreased and the pointer may not return to zero properly until the gauge is vented to the atmosphere.

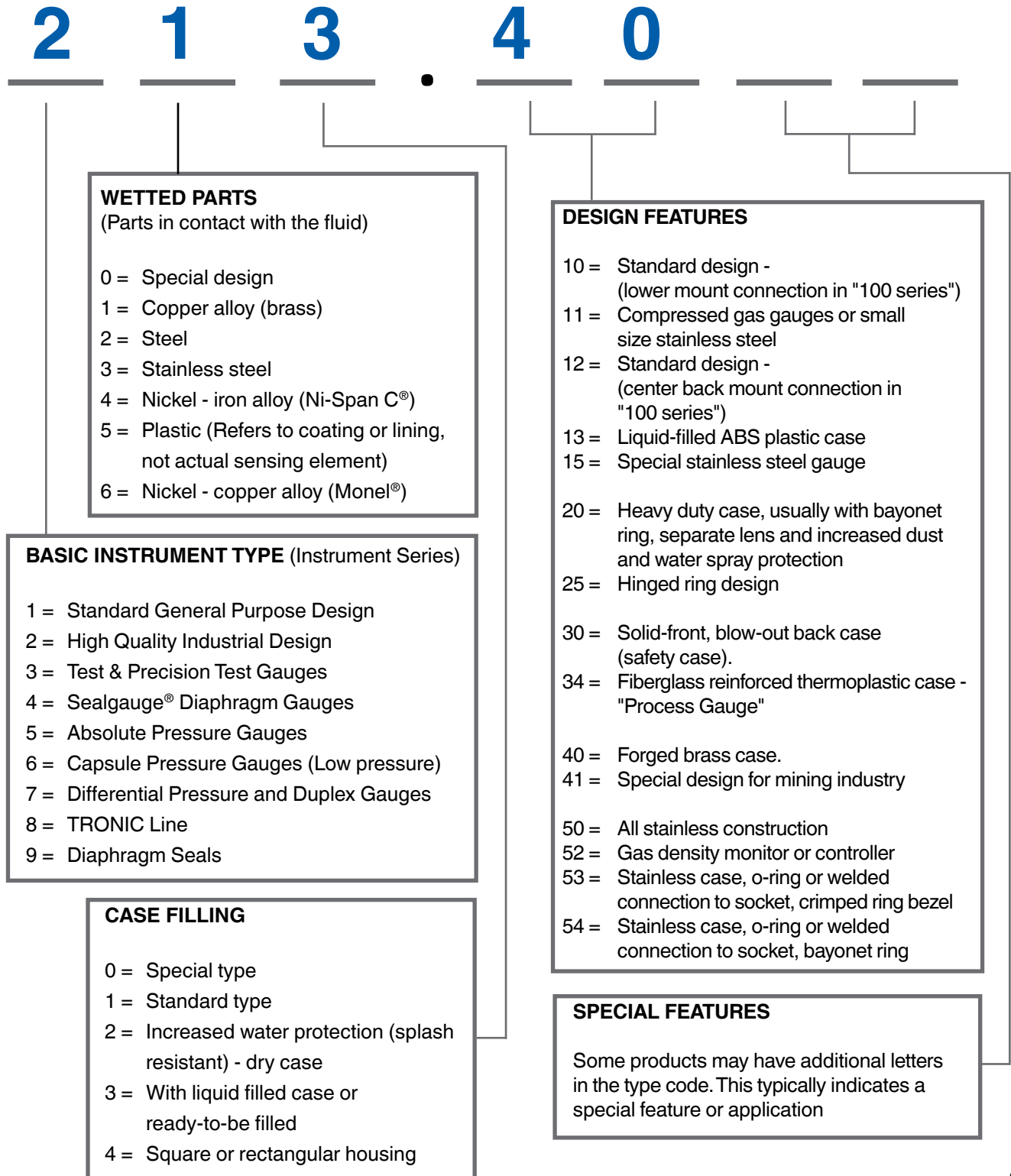
To vent a WIKA gauge, move the valve to the open position which will release any pressure or vacuum built up in the case. If the gauge is installed in an upright position, the lever can be left in the open position. The lever allows the use of a gauge in a non-upright orientation.



Vent Plug

# WIKA Type Numbers

The following is a guide to the WIKA model numbering system.





# Ordering Guidelines for Pressure Gauges

## 1) “Quick Order” 7- or 8-Digit Part Numbers:

**Example: 9834850**

Use the part number for the instrument you wish to order.

If you need additional options, or don't see a part number referenced for the exact product you need, you may use “DESCRIPTIVE TEXT” as indicated below (see #2). **A 7-or 8-digit part number will be provided with your Order Confirmation.** The part number provided may then be used for re-ordering purposes.

## 2) Descriptive Text Part Number System:

**Example:**

| Standard Product Description Section |             |                  |                            | Additional Options & Accessories |                                    |
|--------------------------------------|-------------|------------------|----------------------------|----------------------------------|------------------------------------|
| <b>232.34</b>                        | <b>4.5</b>  | <b>100 psi</b>   | <b>1/2"</b>                | <b>LM</b>                        | <b>SG, PM</b>                      |
| (Type#)                              | (Dial Size) | (Pressure Range) | (Process Conn. & Location) |                                  | (Additional Options / Accessories) |

***The above example would indicate a 4½" process gauge, dry, 100 psi dial scale, ½" NPT connection, lower mount connection with the following selected options: safety glass (SG) and panel mount (PM), as indicated.***

- Descriptive text can be used anytime you do not find an exact item with a listed part number. You may add as many codes at the end of the descriptive text as is required to configure the product.
- CODES and installed prices are found on a selection chart for each Model Type. Additional options may be located on the Accessory pages section in the back of the Catalog 900.
- Please reference the WIKA Type Number (pg. 5) for additional Model/Type information. WIKA Model Types may already determine many configurations for wetted parts and case fill.
- Options and Accessories should always appear at the end of the Descriptive Text, separated by commas. If you are not sure what to use for abbreviated code, then simply SPELL IT OUT.

**NOTE: If you provide a part number and descriptive text, we will use the part number only.**

If you are unclear, do not see the option(s) needed, or require ordering assistance, please contact a WIKA Customer Care or Technical Quote Team Representative.

## Type 111.10

WIKA Type 111.10 standard pressure gauges are designed for long and reliable service under rugged conditions. Some typical applications are for pumps, hydraulic and pneumatic systems, compressors, as a contractor's gauge, and for many other applications where the measured media does not corrode brass.



### Standard Features

|                      |                          |                    |                      |
|----------------------|--------------------------|--------------------|----------------------|
| <b>Size:</b>         | 1½", 2", 2½" & 4"        | <b>Accuracy:</b>   | ± 3/2/3% of span     |
| <b>Case:</b>         | Black ABS                |                    | ASME B40.100 Grade B |
| <b>Wetted Parts:</b> | Copper alloy             | <b>Connection:</b> | Lower mount          |
| <b>Window:</b>       | Clear plastic            |                    |                      |
| <b>Dial:</b>         | White ABS; (4") aluminum |                    |                      |
| <b>Pointer:</b>      | Black ABS; (4") aluminum |                    |                      |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 111.10.

| Type   | 111.10                  |                         |                         |                         |                         |                         |                         |                         |
|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Size   | 1½"                     |                         | 2"                      |                         | 2½"                     |                         | 4"                      |                         |
| Connection                                   | LM                      |                         | LM                      |                         | LM                      |                         | LM                      |                         |
| Conn. Size                                   | 1/8" NPT                | 1/8" NPT                | 1/4" NPT                |                         | 1/4" NPT                |                         | 1/4" NPT                |                         |
| Press. Scale                                 | PSI                     | PSI                     | PSI                     | PSI/KPA                 | PSI                     | PSI/KPA                 | PSI                     | PSI/KPA                 |
| 30" Hg                                       | <a href="#">9747214</a> | <a href="#">8990039</a> | <a href="#">4252901</a> | <a href="#">8990250</a> | <a href="#">4253027</a> | <a href="#">8990471</a> | <a href="#">4255900</a> | <a href="#">9767991</a> |
| 30"-0-15 psi                                 |                         |                         |                         |                         | <a href="#">4253035</a> | <a href="#">8990489</a> | <a href="#">4255918</a> | 9768009                 |
| 30"-0-30 psi                                 |                         |                         |                         |                         | <a href="#">4253043</a> | <a href="#">8990497</a> | <a href="#">4255926</a> | 9768017                 |
| 30"-0-60 psi                                 |                         |                         |                         |                         | <a href="#">4253051</a> | 8990501                 | <a href="#">4255934</a> | 9768025                 |
| 30"-0-100 psi                                |                         |                         |                         |                         | <a href="#">4253060</a> | 8990519                 | 4255942                 | 9768033                 |
| 30"-0-160 psi                                |                         |                         |                         |                         | 4253078                 | 8990527                 | <a href="#">4255951</a> | 9768041                 |
| 30"-0-200 psi                                |                         |                         |                         |                         | 4253086                 | 8990535                 | 4255969                 | 9768050                 |
| 15 psi                                       | <a href="#">9747222</a> | 8990102                 | <a href="#">4252919</a> | <a href="#">8990323</a> | <a href="#">4253108</a> | <a href="#">8990552</a> | 4255977                 | 9768068                 |
| 30 psi                                       | <a href="#">9747230</a> | <a href="#">8990110</a> | <a href="#">4252927</a> | <a href="#">8990331</a> | <a href="#">4253116</a> | <a href="#">8990560</a> | <a href="#">4255985</a> | 9768076                 |
| 60 psi                                       | <a href="#">9747249</a> | 8990128                 | <a href="#">4252935</a> | <a href="#">8990349</a> | <a href="#">4253124</a> | <a href="#">8990578</a> | <a href="#">4255993</a> | <a href="#">9768084</a> |
| 100 psi                                      | <a href="#">9747257</a> | 8990136                 | <a href="#">4252943</a> | <a href="#">8990357</a> | <a href="#">4253132</a> | <a href="#">8990586</a> | <a href="#">4256000</a> | <a href="#">9768092</a> |
| 160 psi                                      | <a href="#">9747265</a> | <a href="#">8990145</a> | <a href="#">4252951</a> | <a href="#">8990365</a> | <a href="#">4253141</a> | <a href="#">8990595</a> | <a href="#">4256018</a> | <a href="#">9768106</a> |
| 200 psi                                      | <a href="#">9747273</a> | 8990153                 | <a href="#">4252960</a> | <a href="#">8990374</a> | <a href="#">4253159</a> | <a href="#">8990608</a> | <a href="#">4256026</a> | <a href="#">9768114</a> |
| 300 psi                                      |                         | 8990161                 | 4252978                 | <a href="#">8990382</a> | <a href="#">4253167</a> | <a href="#">8990616</a> | <a href="#">4256034</a> | <a href="#">9768122</a> |
| 400 psi                                      |                         |                         | 4252986                 |                         | <a href="#">4253175</a> | <a href="#">8990625</a> | 4256042                 | 9768130                 |
| 600 psi                                      |                         |                         | 4252994                 |                         | <a href="#">4253183</a> | <a href="#">8990633</a> | <a href="#">4256051</a> | 9768149                 |
| 800 psi                                      |                         |                         |                         |                         | 4253191                 | 8990641                 | 4256060                 |                         |
| 1,000 psi                                    |                         |                         | 4253001                 |                         | <a href="#">4253205</a> | <a href="#">8990659</a> | 4256078                 | <a href="#">9768416</a> |
| 1,500 psi                                    |                         |                         |                         |                         | 4253213                 | <a href="#">8990667</a> | 4256086                 |                         |
| 2,000 psi                                    |                         |                         |                         |                         | 4253221                 | <a href="#">8990675</a> | 4256094                 |                         |
| 3,000 psi                                    |                         |                         | <a href="#">4253019</a> |                         | 4253230                 | <a href="#">8990684</a> | 4256107                 |                         |
| 5,000 psi                                    |                         |                         |                         |                         | 4253248                 | <a href="#">8990692</a> | 4256115                 |                         |
| Accessory order codes (installed at factory) |                         |                         |                         |                         |                         |                         |                         |                         |
| Restrictor                                   | + R                     |                         |                         |                         |                         |                         |                         |                         |

Stock items shown in blue print.

### Available Options

- Glass window
- Drag pointer
- Cleaned for oxygen service
- Black steel case and ring
- Stainless steel case and ring
- Special connections

### Applications

- Fire sprinkler systems
- Suitable for all media that will not obstruct the pressure system or attack copper alloy parts

### Abbreviations

LM - Lower mount

## Type 111.10SP

WIKA Type 111.10SP 4" gauges are specifically designed for fire sprinkler service. This gauge features a black polycarbonate case, polycarbonate window, and brass wetted parts. They are UL and FM approved for fire sprinkler service and have a standard accuracy of  $\pm 3/2/3\%$  of span.



### Standard Features

|                      |                       |                    |                       |
|----------------------|-----------------------|--------------------|-----------------------|
| <b>Size:</b>         | 4"                    | <b>Accuracy:</b>   | $\pm 3/2/3\%$ of span |
| <b>Case:</b>         | Black polycarbonate   |                    | ASME B40.100 Grade B  |
| <b>Wetted Parts:</b> | Copper alloy          | <b>Connection:</b> | Lower mount           |
| <b>Window:</b>       | Snap-in polycarbonate |                    |                       |
| <b>Dial:</b>         | White aluminum        |                    |                       |
| <b>Pointer:</b>      | Black aluminum        |                    |                       |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **111.10SP**.

| Type   | 111.10SP       |
|--|----------------|
| <b>Size</b>                                  | <b>4"</b>      |
| <b>Connection</b>                            | <b>LM</b>      |
| <b>Conn. Size</b>                            | 1/4" NPT       |
| <b>Press. Scale</b>                          | PSI            |
| 300 psi "WATER"                              | <b>4233761</b> |
| 80 psi rated to 250 psi "AIR"                | <b>4233779</b> |
| Accessory order codes (installed at factory) |                |
| Restrictor                                   | + R            |

Stock items shown in blue print.

### Available Options

- Black steel case

UL-393 Listed



Factory Mutual Approved



### Abbreviations

LM - Lower mount

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **111.10SP**.

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).



# Type 111.11

WIKA Type 111.11 gauges are designed for use with compressed gases, such as those used in the welding industry. The low copper content of the Bourdon tube for pressure ranges 800 psi and below makes it safe for use with acetylene. All Type 111.11 gauges are cleaned to ASME B40.100 Level IV. "USE NO OIL" is printed in red on the face of each dial, making them safe for use with oxygen.



MECHANICAL PRESSURE

## Standard Features

|                      |                                      |   |  |
|----------------------|--------------------------------------|---|--|
| <b>Size:</b>         | 1½", 2" & 2½"                        | <b>Pointer:</b>                                       | Black aluminum                           |
| <b>Case:</b>         | Polished brass or gold-painted steel | <b>Accuracy:</b>                                      | ± 3/2/3% of span<br>ASME B40.100 Grade B |
| <b>Wetted Parts:</b> | Copper alloy                         | <b>Connection:</b>                                    | Lower mount                              |
| <b>Window:</b>       | Twist-lock polycarbonate             |   |  |
| <b>Dial:</b>         | White aluminum                       | <b>Ranges 100 psi and up supplied with restrictor</b> |  |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 111.11.

| Type   | 111.11             |          |         |                |         |
|--|--------------------|----------|---------|----------------|---------|
| Size   | 1½"                | 2"       | 2½"     | 2"             | 2½"     |
| Case   | Gold-painted steel |          |         | Polished brass |         |
| Conn. Size                                   | 1/8" NPT           | 1/4" NPT |         | 1/4" NPT       |         |
| Press. Scale                                 | PSI                | PSI      | PSI     | PSI            | PSI     |
| 15 psi                                       |                    |          |         |                |         |
| 30 psi                                       |                    |          |         | 8611009        | 8610851 |
| 30 psi Red Band                              | 8079633            | 8985025  | 8985030 | 8611017        | 8610860 |
| 60 psi                                       |                    |          |         | 8611025        | 8610878 |
| 100 psi                                      | 8079650            | 8985026  | 8985031 | 8611033        | 8610886 |
| 200 psi                                      |                    | 8985027  | 8985032 | 8611041        | 8610894 |
| 400 psi                                      | 9735232            | 8985028  | 8985033 | 8611050        | 8610908 |
| 600 psi                                      |                    |          |         | 8611076        | 8610924 |
| 1000 psi                                     |                    |          |         | 8611084        | 8610932 |
| 1,500 psi                                    |                    |          |         |                |         |
| 2,000 psi                                    |                    |          |         | 8611106        | 8610959 |
| 3,000 psi                                    |                    |          |         | 8611122        | 8610967 |
| 4,000 psi                                    | 8079617            | 8985029  | 8985034 | 8611114        | 8610975 |
| 6,000 psi                                    | N/A                |          |         |                |         |
| Accessory order codes (installed at factory) |                    |          |         |                |         |
| Restrictor                                   |                    |          | + R     |                |         |

Stock items shown in blue print.

## Available Options

- Restrictor
- Cleaned for oxygen service with bag and cap
- CBM connection (1½" and 2" only)
- Black steel case
- Chrome plated steel case
- Black plastic case (1½" and 2" only)

## Applications

- Compressed gas regulators
- Beverage dispensing machines
- Suitable for all media that will not obstruct the pressure system or attack copper alloy parts

## Abbreviations

- LM - Lower mount
- CBM - Center back mount

## Type 111.12

WIKA Type 111.12 gauges feature a black plastic case, snap-in plastic window, and a center back mount (CBM) rear connection. With an industry recognized ASME 3/2/3% of span accuracy, WIKA Type 111.12 gauges are the industry standard in the commercial gauge line. Available in a variety of sizes, mounting styles and optional configurations, Type 111.12 gauges are suitable for many tough applications including regulators, medical, pneumatic controllers, compressors, valve positioners, and pumps.



### Standard Features

|                      |                          |                    |                      |
|----------------------|--------------------------|--------------------|----------------------|
| <b>Size:</b>         | 1½", 2", 2½" & 4"        | <b>Accuracy:</b>   | ± 3/2/3% of span     |
| <b>Case:</b>         | Black ABS                |                    | ASME B40.100 Grade B |
| <b>Wetted Parts:</b> | Copper alloy             | <b>Connection:</b> | Center back mount    |
| <b>Window:</b>       | Clear plastic            |                    |                      |
| <b>Dial:</b>         | White ABS; (4") aluminum |                    |                      |
| <b>Pointer:</b>      | Black ABS; (4") aluminum |                    |                      |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 111.12.

| Type   | 111.12   |                        |          |          |         |
|--|----------|------------------------|----------|----------|---------|
| Size   | 1½"      |                        | 2"       |          |         |
| Connection                                   | CBM      |                        |          |          |         |
| Conn. Size                                   | 1/8" NPT |                        | 1/8" NPT | 1/4" NPT |         |
| Press. Scale <sup>1</sup>                    | PSI      | PSI/KG/CM <sup>2</sup> | PSI      | PSI      | PSI/KPA |
| 30" Hg                                       | 9690128  | 9692635                | 9690357  | 4253256  | 9690586 |
| 30"-0-15 psi                                 |          |                        |          |          |         |
| 30"-0-30 psi                                 |          |                        |          |          |         |
| 30"-0-60 psi                                 |          |                        |          |          |         |
| 30"-0-100 psi                                |          |                        |          |          |         |
| 30"-0-160 psi                                |          |                        |          |          |         |
| 30"-0-200 psi                                |          |                        |          |          |         |
| 30"-0-300 psi                                |          |                        |          |          |         |
| 30"-0-400 psi                                |          |                        |          |          |         |
| 15 psi                                       | 9690209  | 9692644                | 9690438  | 4253264  | 9690667 |
| 30 psi                                       | 9690217  | 9691923                | 9690446  | 4253272  | 9690675 |
| 60 psi                                       | 9690225  | 9692652                | 9690455  | 4253281  | 9690684 |
| 100 psi                                      | 9690234  | 9692660                | 9690463  | 4253290  | 9690692 |
| 160 psi                                      | 9690242  | 9692678                | 9690471  | 4253302  | 9690705 |
| 200 psi                                      | 9690250  | 9692686                | 9690489  | 4253311  | 9690714 |
| 300 psi                                      |          |                        | 9690497  | 4253329  | 9690722 |
| 400 psi                                      |          |                        |          | 4253337  |         |
| 600 psi                                      |          |                        |          | 4253345  |         |
| 800 psi                                      |          |                        |          |          |         |
| 1,000 psi                                    |          |                        |          | 4253353  |         |
| 1,500 psi                                    |          |                        |          |          |         |
| 2,000 psi                                    |          |                        |          |          |         |
| 3,000 psi                                    |          |                        |          | 4253361  |         |
| 5,000 psi                                    |          |                        |          |          |         |
| Accessory order codes (installed at factory) |          |                        |          |          |         |
| Front flange, black steel                    | --       |                        |          | FF B     |         |
| Front flange, chr steel                      | --       |                        |          | FF C     |         |
| Restrictor, brass                            |          |                        | R        |          |         |

### Available Options

- Glass window
- Drag pointer
- Cleaned for oxygen service
- Black steel case and ring
- Stainless steel case and ring
- Special connections

### Applications

- Hydraulic and pneumatic systems
- Pumps, compressors, water systems, regulators
- Suitable for all media that will not obstruct the pressure system or attack copper alloy parts

### Abbreviations

CBM - Center back mount

Stock items shown in blue print.



Mechanical Pressure > Commercial Gauges > 111.12

# Type 111.12

**MECHANICAL PRESSURE**

| Type                       | 111.12         |                |                        |
|----------------------------|----------------|----------------|------------------------|
| Size                       | 2½"            |                | 4"                     |
| Connection                 | CBM            |                | CBM                    |
| Conn. Size                 | 1/4" NPT       |                | 1/4" NPT               |
| Press. Scale <sup>1</sup>  | PSI            | PSI/KPA        | PSI/KG/CM <sup>2</sup> |
| 30" Hg                     | 4253371        | 9691035        |                        |
| 30"-0-15 psi               | <b>4253389</b> | 9691044        |                        |
| 30"-0-30 psi               | <b>4253397</b> | 9691052        |                        |
| 30"-0-60 psi               | 4253400        | 9691060        |                        |
| 30"-0-100 psi              | 4253418        | 9691078        |                        |
| 30"-0-160 psi              | 4253426        | 9691086        |                        |
| 30"-0-200 psi              | 4253434        | 9691095        |                        |
| 30"-0-300 psi              |                |                |                        |
| 30"-0-400 psi              |                |                |                        |
| 15 psi                     | 4253451        | <b>9691116</b> | 9693577                |
| 30 psi                     | <b>4253460</b> | <b>9691125</b> | 9693585                |
| 60 psi                     | <b>4253478</b> | <b>9691133</b> | 9693594                |
| 100 psi                    | <b>4253486</b> | <b>9691141</b> | 9693607                |
| 160 psi                    | <b>4253494</b> | <b>9691159</b> | 9693615                |
| 200 psi                    | <b>4253507</b> | <b>9691167</b> | 9693624                |
| 300 psi                    | <b>4253515</b> | <b>9691175</b> | 9693632                |
| 400 psi                    | 4253523        | 9691184        | 9693640                |
| 600 psi                    | 4253531        | 9691192        | 9693658                |
| 800 psi                    | 4253541        | 9691205        |                        |
| 1,000 psi                  | 4253559        | 9691214        |                        |
| 1,500 psi                  | 4253567        | 9691222        |                        |
| 2,000 psi                  | 4253575        | 9691230        |                        |
| 3,000 psi                  | 4253583        | 9691248        |                        |
| 5,000 psi                  | 4253591        | 9691256        |                        |
| Accessories (installed)    |                |                |                        |
| Front flange, black steel  |                | FF B           |                        |
| Front flange, chrome steel |                | FF C           |                        |
| Restrictor, brass          |                | R              |                        |

**Abbreviations**  
 CBM - Center back mount

Stock items shown in **blue print**.

<sup>1</sup> "PSI/KG/CM<sup>2</sup>" denotes dual scale; PSI outside in black, KG/CM<sup>2</sup> inside in red.  
 Vacuum scale: 30"Hg outside in black; 760 mm Hg inside in red.



Mechanical Pressure > Commercial Pressure > 111.16PM

## Type 111.16PM

WIKA Type 111.16PM gauges are designed for U-clamp panel mounting. They feature a black ABS case and low friction Swiss movement to insure a long, reliable service life. The 111.16PM design fits into U.S. size panel cut-outs.



### Standard Features

|                      |               |                    |  |
|----------------------|---------------|--------------------|--|
| <b>Size:</b>         | 1½" & 2"      | <b>Pointer:</b>    | Black ABS                                |
| <b>Case:</b>         | Black ABS     | <b>Accuracy:</b>   | ± 3/2/3% of span<br>ASME B40.100 Grade B |
| <b>Wetted Parts:</b> | Copper alloy  | <b>Connection:</b> | Center back mount,<br>with U-clamp       |
| <b>Window:</b>       | Clear plastic |                    |  |
| <b>Dial:</b>         | White ABS     |                    |  |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **111.16PM**.

| Type   | 111.16PM       |                |                |
|--|----------------|----------------|----------------|
| Size   | 1½"            | 2"             |                |
| Connection                                   | CBM/UC         | CBM/UC         |                |
| Conn. Size                                   | 1/8" NPT       | 1/4" NPT       | 1/4" NPT       |
| Press. Scale                                 | PSI            | PSI            | PSI/KPA        |
| 30" Hg                                       | <b>4231279</b> | <b>4231341</b> | <b>4231422</b> |
| 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                                       | 4231287        | 4231350        | 4231431        |
| 30 psi                                       | <b>4231295</b> | 4231368        | 4231449        |
| 60 psi                                       | <b>4231309</b> | 4231376        | 4231457        |
| 100 psi                                      | <b>4231317</b> | 4231384        | <b>4231465</b> |
| 160 psi                                      | <b>4231325</b> | <b>4231392</b> | 4231473        |
| 200 psi                                      | <b>4231333</b> | 4231406        | 4231481        |
| 300 psi                                      |                | 4231414        | <b>4231490</b> |
| 400 psi                                      |                |                |                |
| 600 psi                                      |                |                |                |
| 800 psi                                      |                |                |                |
| 1,000 psi                                    |                |                |                |
| 1,500 psi                                    |                |                |                |
| 2,000 psi                                    |                |                |                |
| 3,000 psi                                    |                |                |                |
| 5,000 psi                                    |                |                |                |
| Accessory order codes (installed at factory) |                |                |                |
| Restrictor                                   |                | + R            |                |

### Available Options

- Restrictor
- Cleaned for oxygen service
- Special connections

### Applications

- Pneumatics
- HVAC
- Suitable for all media that will not obstruct the pressure system or attack copper alloy parts

### Abbreviations

CBM - Center back mount  
UC - U-clamp

Stock items shown in **blue** print.

# Type 111.25CT

WIKA Type 111.25CT 4½" gauges are specifically designed for the HVAC market as a contractor's Gauge. This gauge features a stainless steel case, brass wetted parts, and an adjustable pointer. Contractor's gauges are designed for static applications and may not be well-suited to high vibration and pulsation applications.



MECHANICAL PRESSURE

## Standard Features

|                      |                       |                    |                            |
|----------------------|-----------------------|--------------------|----------------------------|
| <b>Size:</b>         | 4½"                   | <b>Pointer:</b>    | Black aluminum, adjustable |
| <b>Case:</b>         | SS, matte-finish      | <b>Accuracy:</b>   | ± 1% of span               |
| <b>Wetted Parts:</b> | Copper alloy          |                    | ASME B40.100 Grade 1A      |
| <b>Window:</b>       | Snap-in polycarbonate | <b>Connection:</b> | Lower mount                |
| <b>Dial:</b>         | White aluminum        |                    |                            |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 111.25CT.

| Type   | 111.25CT |         |
|--|----------|---------|
| <b>Size</b>                                  | 4½"      |         |
| <b>Connection</b>                            | LM       |         |
| <b>Conn. Size</b>                            | 1/4" NPT |         |
| <b>Press. Scale</b>                          | PSI      | PSI/KPA |
| 30" Hg                                       |          |         |
| 30"-0-15 psi                                 | 4277687  | 4277849 |
| 30"-0-30 psi                                 | 4277695  | 4277857 |
| 30"-0-60 psi                                 | 4277709  | 4277865 |
| 30"-0-100 psi                                | 4277717  | 4277873 |
| 30"-0-160 psi                                | 4277725  | 4277881 |
| 30"-0-200 psi                                | 4277733  | 4277890 |
| 30"-0-300 psi                                | 4277741  | 4277903 |
| 30"-0-400 psi                                |          |         |
| 15 psi                                       | 4277750  | 4277911 |
| 30 psi                                       | 4277768  | 4277920 |
| 60 psi                                       | 4277776  | 4277938 |
| 100 psi                                      | 4277784  | 4277946 |
| 160 psi                                      | 4277792  | 4277954 |
| 200 psi                                      | 4277806  | 4277962 |
| 300 psi                                      | 4277814  | 4277971 |
| 400 psi                                      | 4277822  | 4277989 |
| 600 psi                                      | 4277831  | 4277997 |
| Accessory order codes (installed at factory) |          |         |
| Rear flange, SS                              | + RF     |         |
| Restrictor                                   | + R      |         |

## Available Options

- Cleaned for oxygen service
- Special connections
- Restrictor
- SS case with rear flange
- Black steel case

### Abbreviations

LM - Lower mount  
 SS - Stainless steel

Stock items shown in blue print.

## Type 113.13

The WIKA Type 113.13 gauge is the ideal choice for OEM and general industrial applications requiring an economical, liquid-filled pressure gauge. The glycerine liquid fill dampens the Bourdon tube and reduces wear of the movement, extending gauge life. Typical applications of the Type 113.13 include air compressors, hydraulic presses, pumps, marine engines, as well as other types of industrial hydraulic and pneumatic equipment.



### Standard Features

|                      |               |                     |  |
|----------------------|---------------|---------------------|--|
| <b>Size:</b>         | 1½" & 2½"     | <b>Accuracy:</b>    | ± 3/2/3% of span                             |
| <b>Case:</b>         | Black ABS     |                     | ASME B40.100 Grade B                         |
| <b>Wetted Parts:</b> | Copper alloy  | <b>Connection:</b>  | Lower or center back mount<br>(1½" CBM only) |
| <b>Window:</b>       | Clear plastic | <b>Liquid Fill:</b> | Glycerine                                    |
| <b>Dial:</b>         | White ABS     |                     |  |
| <b>Pointer:</b>      | Black ABS     |                     |  |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **113.13**.

| Type   | 113.13   |          |         |
|--|----------|----------|---------|
| Size   | 1½"      | 2½"      |         |
| Connection                                   | CBM      | LM       | CBM     |
| Conn. Size                                   | 1/8" NPT | 1/4" NPT |         |
| Press. Scale                                 | PSI      | PSI      | PSI     |
| 30" Hg                                       |          | 9677909  | 9693289 |
| 30"-0-15 psi                                 |          |          |         |
| 30"-0-30 psi                                 |          | 9677925  |         |
| 30"-0-60 psi                                 |          | 9677933  |         |
| 30"-0-100 psi                                |          | 9677941  |         |
| 30"-0-160 psi                                |          | 9677950  |         |
| 30"-0-200 psi                                |          | 9677968  |         |
| 15 psi                                       |          | 9677976  | 9693351 |
| 30 psi                                       | 9738240  | 9677984  | 9693360 |
| 60 psi                                       | 9738258  | 9677992  | 9693378 |
| 100 psi                                      | 9738266  | 9678000  | 9693386 |
| 160 psi                                      | 9738274  | 9678018  | 9693394 |
| 200 psi                                      |          | 9693726  | 9693408 |
| 300 psi                                      |          | 9693734  | 9693416 |
| 400 psi                                      |          | 9693742  | 9693424 |
| 600 psi                                      |          | 9693750  | 9693432 |
| 800 psi                                      |          |          |         |
| 1,000 psi                                    |          | 9693777  | 9693459 |
| 1,500 psi                                    |          | 9693785  | 9693467 |
| 2,000 psi                                    |          | 9693793  | 9693475 |
| 3,000 psi                                    |          | 9693807  | 9693483 |
| 5,000 psi                                    |          | 9693815  | 9693491 |
| Accessory order codes (installed at factory) |          |          |         |
| Front flange, ABS                            | --       | --       | + FF    |
| UC, steel                                    | --       | --       | + UC    |
| Restrictor                                   |          | + R      |         |

### Available Options

- Restrictor
- Other connections
- 2" case size (LM & CBM)

### Abbreviations

LM - Lower mount  
 CBM - Center back mount  
 UC - U-clamp

Stock items shown in blue print.

Mechanical Pressure > Commercial Gauges > 113.53

# Type 113.53

WIKA Type 113.53 features a 1½" size liquid-filled gauge with a stainless steel case. The glycerine case fill dampens and lubricates the gauge internals, extending the life of the gauge. The 113.53 gauge is ideal for applications with high dynamic pressure pulsations and vibrations.



MECHANICAL PRESSURE

## Standard Features

|                      |                  |                  |                          |
|----------------------|------------------|------------------|--------------------------|
| <b>Size:</b>         | 1½"              | <b>Pointer:</b>  | Black aluminum           |
| <b>Case:</b>         | SS, matte-finish | <b>Accuracy:</b> | ± 3/2/3% of span         |
| <b>Wetted Parts:</b> | Copper alloy     |                  | per ASME B40.100 Grade B |
| <b>Window:</b>       | Clear plastic    |                  |                          |
| <b>Dial:</b>         | White aluminum   |                  |                          |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 113.53.

| Type                            | 113.53     |          |          |
|---------------------------------|------------|----------|----------|
| <b>Size</b>                     | <b>1½"</b> |          |          |
| <b>Connection</b>               | LM         | CBM      | CBM/UC   |
| <b>Conn. Size</b>               | 1/8" NPT   |          |          |
| <b>Press. Scale<sup>1</sup></b> | PSI        | PSI      | PSI      |
| 30" Hg                          | 50702424   | 50701525 | 50700821 |
| 30"-0-15 psi                    | 50702432   | 50701533 | 50700847 |
| 30"-0-30 psi                    | 50702441   | 50701541 | 50700855 |
| 30"-0-60 psi                    | 50702459   | 50701550 | 50700863 |
| 30"-0-100 psi                   | 50702467   | 50701568 | 50700871 |
| 30"-0-160 psi                   | 50702475   | 50701576 | 50700880 |
| 30"-0-200 psi                   | 50702483   | 50701584 | 50700898 |
| 30"-0-300 psi                   |            |          |          |
| 30"-0-400 psi                   |            |          |          |
| 15 psi                          | 50702491   | 50701592 | 50700901 |
| 30 psi                          | 50702505   | 50701606 | 50700910 |
| 60 psi                          | 50702513   | 50701614 | 50700928 |
| 100 psi                         | 50702521   | 50701622 | 50700936 |
| 160 psi                         | 50702530   | 50701631 | 50700944 |
| 200 psi                         | 50702548   | 50701649 | 50700952 |
| 300 psi                         | 50702556   | 50701657 | 50700961 |
| 400 psi                         | 50702564   | 50701665 | 50700979 |
| 600 psi                         | 50702572   | 50701673 | 50700987 |
| 800 psi                         |            |          |          |
| 1,000 psi                       | 50702581   | 50701681 | 50700995 |
| 1,500 psi                       | 50702599   | 50701690 | 50701002 |
| 2,000 psi                       | 50702602   | 50701703 | 50701011 |
| 3,000 psi                       | 50702611   | 50701711 | 50701029 |
| 5,000 psi                       | 50702629   | 50701720 | 50701061 |

## Available Options

- Other pressure connections
- U-clamp bracket for panel mounting (CBM only)
- Restrictor
- Alternate case fills

**Note:** For options not shown - consult your WIKA distributor or the factory.

### Abbreviations

LM - Lower mount  
 CBM - Center back mount  
 SS - Stainless steel

Stock items shown in blue print.

## Type 131.11

Type 131.11 gauges feature 316 stainless steel wetted parts, a 304 stainless steel case, and a snap-in, acrylic window. When installation space is limited and stainless steel wetted parts are needed, WIKA Type 131.11 is the best choice. The stainless steel construction also makes these gauges ideal for harsh environments.



### Standard Features

|                      |                       |                    |                            |
|----------------------|-----------------------|--------------------|----------------------------|
| <b>Size:</b>         | 1½" & 2"              | <b>Pointer:</b>    | Black aluminum             |
| <b>Case:</b>         | 304 SS, matte-finish  | <b>Accuracy:</b>   | ± 2.5% of span             |
| <b>Wetted Parts:</b> | 316L stainless steel  | <b>Connection:</b> | Lower or center back mount |
| <b>Window:</b>       | Snap-in polycarbonate |                    |                            |
| <b>Dial:</b>         | White aluminum        |                    |                            |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **131.11**.

| Type   | 131.11         |                |                |                |                |                |
|--|----------------|----------------|----------------|----------------|----------------|----------------|
| Size   | 1½"            |                | 2"             |                |                |                |
| Connection                                   | LM             | CBM            | LM             | CBM            | LM             | CBM            |
| Conn. Size                                   | 1/8" NPT       |                | 1/8" NPT       |                | 1/4" NPT       |                |
| Press. Scale <sup>1</sup>                    | PSI            | PSI            | PSI            | PSI            | PSI            | PSI            |
| 30" Hg                                       |                |                |                |                |                |                |
| 30"-0-15 psi                                 |                |                |                |                | 8993241        | 8993259        |
| 30"-0-30 psi                                 |                |                |                |                |                |                |
| 30"-0-60 psi                                 |                |                |                |                | 8993267        | 8993275        |
| 30"-0-100 psi                                |                |                |                |                | 8993284        | 8993292        |
| 30"-0-160 psi                                |                |                |                |                | 8993305        | 8993314        |
| 30"-0-200 psi                                |                |                |                |                |                |                |
| 15 psi                                       |                |                |                |                |                |                |
| 30 psi                                       | 9117946        | <b>9118128</b> | 9118063        | <b>9117970</b> | 9118039        | 9117903        |
| 60 psi                                       | <b>9117938</b> | <b>9118101</b> | 9118071        | 9117989        | <b>9118020</b> | <b>9117890</b> |
| 100 psi                                      | 9117920        | <b>9118098</b> | <b>9118055</b> | 9117962        | <b>9118012</b> | 9117881        |
| 160 psi                                      | 9117911        | <b>9118080</b> | 9118047        | 9117954        | 9117997        | <b>9117865</b> |
| 200 psi                                      |                |                |                |                |                |                |
| 300 psi                                      |                |                |                |                |                |                |
| 400 psi                                      |                |                |                |                |                |                |
| 600 psi                                      |                |                |                |                |                |                |
| 800 psi                                      |                |                |                |                |                | 8993330        |
| 1,000 psi                                    |                |                |                |                |                |                |
| 1,500 psi                                    |                |                |                |                |                |                |
| 2,000 psi                                    |                |                |                |                |                |                |
| 3,000 psi                                    |                |                |                |                | 8993348        | 8993356        |
| 5,000 psi                                    |                |                |                |                |                |                |
| 10,000 psi                                   |                |                |                |                |                |                |
| Accessory order codes (installed at factory) |                |                |                |                |                |                |
| Restrictor                                   |                |                |                | + R            |                |                |

### Available Options

- Restrictor
- 2½" case size
- U-clamp bracket
- Front or rear flange
- Instrument glass window
- Cleaned for oxygen service
- Other connections

### Applications

- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Ideal when a smaller size instrument is needed
- CDA (Clean Dry Air) applications

### Abbreviations

LM - Lower mount  
 CBM - Center back mount  
 SS - Stainless steel

Stock items shown in blue print.



Mechanical Pressure > Industrial Gauges > 13X.53

## Type 13X.53

Type 13X.53 stainless steel gauges provide resistance to corrosive media and environments. They feature 316 stainless steel wetted parts, series 300 stainless steel case and movement, and a welded case-to-socket connection. Type 132.53 gauges are field liquid fillable or available filled from the factory. This gauge is designed for static applications and may not be well-suited to high vibration and pulsation applications.



MECHANICAL PRESSURE

### Standard Features

|                      |                |                    |                      |
|----------------------|----------------|--------------------|----------------------|
| <b>Size:</b>         | 4"             | <b>Accuracy:</b>   | ± 3/2/3% of span     |
| <b>Case:</b>         | 304 SS         |                    | ASME B40.100 Grade B |
| <b>Wetted Parts:</b> | 316L SS        | <b>Connection:</b> | Lower mount          |
| <b>Window:</b>       | Polycarbonate  |                    |                      |
| <b>Dial:</b>         | White aluminum |                    |                      |
| <b>Pointer:</b>      | Black aluminum |                    |                      |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **13X.53**.

| Type   | 132.53      |                |
|--|-------------|----------------|
| <b>Size</b>                                  | <b>4"</b>   |                |
| <b>Connection</b>                            | LM          |                |
| <b>Conn. Size</b>                            | 1/4" NPT    | 1/2" NPT       |
| <b>Press. Scale</b>                          | PSI         | PSI            |
| 30 psi                                       | 4285329     | 4285477        |
| 60 psi                                       | 4285337     | 4285485        |
| 100 psi                                      | 4285345     | <b>4285493</b> |
| 160 psi                                      | 4285353     | 4285507        |
| 200 psi                                      | 4285361     | 4285515        |
| 300 psi                                      | 4285370     | 4285523        |
| 400 psi                                      | 4285388     | 4285531        |
| 600 psi                                      | 4285396     | <b>4285540</b> |
| 800 psi                                      |             |                |
| 1,000 psi                                    | 4285400     | 4285558        |
| 1,500 psi                                    | 4285418     | <b>4285566</b> |
| 2,000 psi                                    | 4285426     | <b>4285574</b> |
| 3,000 psi                                    | 4285434     | 4285582        |
| 5,000 psi                                    | 4285442     | 4285591        |
| 10,000 psi                                   | 4285451     | 4285604        |
| 15,000 psi                                   | 4285469     | 4285612        |
| Accessory order codes (installed at factory) |             |                |
| Rear flange, SS                              | + RF        |                |
| Restrictor                                   | + R         |                |
| Glycerine fill                               | Type 133.53 |                |

### Available Options

- Cleaned for oxygen service
- Other connections
- Restrictor
- Special connections
- Case fillings

### Applications

- With liquid filled case for applications with high dynamic pressure pulsations or vibration
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in **blue** print.

Mechanical Pressure > Industrial Gauges > 211.11

## Type 211.11

Type 2X1.11 10" pressure gauges are ideal for boiler room service or other applications where its large dial size makes it easier to read from a distance. These gauges feature a black-painted steel case and a  $\pm 1.0\%$  accuracy.



### Standard Features

|                      |                       |                    |                            |
|----------------------|-----------------------|--------------------|----------------------------|
| <b>Size:</b>         | 10"                   | <b>Pointer:</b>    | Black aluminum, adjustable |
| <b>Case:</b>         | Black-painted steel   | <b>Accuracy:</b>   | $\pm 1\%$ of span          |
| <b>Ring:</b>         | Black-painted steel   |                    | ASME B40.100 Grade 1A      |
| <b>Wetted Parts:</b> | Copper alloy          | <b>Connection:</b> | Lower mount                |
| <b>Window:</b>       | Flat instrument glass |                    |                            |
| <b>Dial:</b>         | White aluminum        |                    |                            |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **2X1.11**.

| Type                  | 211.11     |
|-----------------------|------------|
| <b>Size</b>           | <b>10"</b> |
| <b>Connection</b>     | LM         |
| <b>Conn. Size</b>     | 1/2" NPT   |
| <b>Press. Scale</b>   | PSI/BAR    |
| 30" Hg                |            |
| 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                |            |
| 30 psi                | 4273193    |
| 60 psi                |            |
| 100 psi               | 4273214    |
| 160 psi               |            |
| 200 psi               | 4273231    |
| 300 psi               | 4273240    |
| 400 psi               | 4273258    |
| 600 psi               | 4273266    |
| 800 psi               | 4273274    |
| 1,000 psi             | 4273282    |
| 1,500 psi             |            |
| 2,000 psi             | 4273303    |
| 3,000 psi             | 50081799   |
| 5,000 psi             | 4273321    |
| 10,000 psi            |            |
| 15,000 psi            |            |
| Accessory order codes |            |
| Rear flange           | + RF       |
| Restrictor            | + R        |

### Available Options

- Lower back mount connection
- 316SS wetted parts (Type 231.11)
- Cleaned for oxygen service
- Special connections

### Applications

- For plants and equipment where measured values must be read from a distance
- Suitable for gaseous or liquid media that will not obstruct the pressure system

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in blue print.

Mechanical Pressure > Industrial Gauges > 212.20

## Type 212.20

Designed for severe industrial service, WIKA Type 212.20 gauges provide proven service life of an industrial gauge. The large dial size makes it ideal for applications requiring reading from a distance.



### Standard Features

|                      |                       |                    |                       |
|----------------------|-----------------------|--------------------|-----------------------|
| <b>Size:</b>         | 6"                    | <b>Pointer:</b>    | Black aluminum        |
| <b>Case:</b>         | 304 SS                | <b>Accuracy:</b>   | ± 1% of span          |
| <b>Ring:</b>         | 304 SS, bayonet-type  |                    | ASME B40.100 Grade 1A |
| <b>Wetted Parts:</b> | Copper alloy          | <b>Connection:</b> | Lower mount           |
| <b>Window:</b>       | Flat instrument glass |                    |                       |
| <b>Dial:</b>         | White aluminum        |                    |                       |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **212.20**.

| Type                              | 212.20    |
|-----------------------------------|-----------|
| <b>Size</b>                       | <b>6"</b> |
| <b>Connection</b>                 | LM        |
| <b>Conn. Size</b>                 | 1/2" NPT  |
| <b>Press. Scale</b>               | PSI       |
| 30" Hg                            | 4287836   |
| 30"-0-15 psi                      |           |
| 30"-0-30 psi                      | 4287844   |
| 30"-0-60 psi                      |           |
| 30"-0-100 psi                     |           |
| 30"-0-160 psi                     |           |
| 30"-0-200 psi                     |           |
| 15 psi                            | 4287852   |
| 30 psi                            | 4287861   |
| 60 psi                            | 4287879   |
| 100 psi                           | 4287887   |
| 160 psi                           | 4287895   |
| 200 psi                           | 4287909   |
| 300 psi                           | 4287917   |
| 400 psi                           | 4287925   |
| 600 psi                           | 4287933   |
| 800 psi                           |           |
| 1,000 psi                         | 4287941   |
| 1,500 psi                         | 4287950   |
| 2,000 psi                         | 4287968   |
| 3,000 psi                         | 4287976   |
| 5,000 psi                         | 4287984   |
| 10,000 psi                        | 4287992   |
| 15,000 psi                        | 4288000   |
| Accessory order codes (installed) |           |
| Rear flange                       | + RF      |
| Restrictor                        | + R       |

### Available Options

- Lower back mount connection
- Safety glass window
- Adjustable pointer
- Drag pointer (maximum reading indicator)
- Cleaned for oxygen service
- Magnetic or Inductive contact switches
- Special connections

### Applications

- Sturdy industrial pressure gauges designed in compliance with operational safety requirements of EN 837-1 and ASME B40.100
- Reliable pressure gauge for machine and plant construction industry
- Suitable for gaseous or liquid media that will not obstruct the pressure system or corrode copper alloy wetted parts

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in **blue** print.

Mechanical Pressure > Industrial Gauges > 213.40

## Type 213.40

This Type 213.40 gauges feature an integral Bourdon tube which is soldered or brazed directly into the one-piece case/socket.

### Applications

- Intended for adverse service conditions where pulsation or vibration exists
- Suitable for gaseous or liquid media that will not obstruct the pressure
- Hydraulics and compressors

### Standard Features

|                      |   |                     |  |
|----------------------|---|---------------------|--|
| <b>Size:</b>         | 2½" & 4"  | <b>Pointer:</b>     | Black aluminum                           |
| <b>Case:</b>         | Forged brass, gold-painted                        | <b>Accuracy:</b>    | (2½") ± 2/12% of span                    |
| <b>Ring:</b>         | (2½") Gold-plated ABS<br>(4") Chrome-plated brass |                     | ASME B40.100 Grade A<br>(4) ± 1% of span |
| <b>Wetted Parts:</b> | Copper alloy                                      |                     | ASME B40.100 Grade 1A                    |
| <b>Window:</b>       | Acrylic   | <b>Connection:</b>  | Lower or back mount                      |
| <b>Dial:</b>         | White aluminum                                    | <b>Liquid fill:</b> | Glycerine                                |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 213.40.

| Type   | 213.40   |         |         |         |         |         |
|--|----------|---------|---------|---------|---------|---------|
| Size   | 2½"      |         |         |         |         |         |
| Connection                                   | LM       |         |         | CBM     |         |         |
| Conn. Size                                   | 1/4" NPT |         |         |         |         |         |
| Press. Scale                                 | PSI      | PSI/KPA | PSI/BAR | PSI     | PSI/KPA | PSI/BAR |
| 30" Hg                                       | 9318003  | 9456198 | 9734109 | 9318070 | 9455930 | 9764312 |
| 30"-0-15 psi                                 | 9318011  | 9613862 |         | 9318089 | 9325662 |         |
| 30"-0-30 psi                                 | 9318020  | 9456163 |         | 9318097 | 9325689 |         |
| 30"-0-60 psi                                 | 9318038  | 9456201 |         | 9318100 | 9325816 |         |
| 30"-0-100 psi                                | 9318046  | 9679928 |         | 9318119 | 9149872 |         |
| 30"-0-160 psi                                | 9318054  | 9679936 |         | 9318127 | 9325972 |         |
| 30"-0-200 psi                                | 9318062  | 9442863 |         | 9318135 | 9326251 |         |
| 15 psi                                       | 9310673  | 9456155 | 9734117 | 9318143 | 9455949 | 9734215 |
| 30 psi                                       | 9310681  | 9456171 | 9734125 | 9318151 | 9455957 | 9734223 |
| 60 psi                                       | 9310690  | 9456210 | 9734134 | 9318160 | 9455965 | 9734231 |
| 100 psi                                      | 9310703  | 9456228 | 9734142 | 9318178 | 9456120 | 9746072 |
| 160 psi                                      | 9310711  | 9456180 | 8986216 | 9318186 | 9455981 | 9734257 |
| 200 psi                                      | 9310720  | 9456236 |         | 9318194 | 9442979 |         |
| 300 psi                                      | 9310738  | 9442871 | 9798870 | 9318208 | 9442987 | 9734265 |
| 400 psi                                      | 9310746  | 9611452 |         | 9318216 | 9455990 |         |
| 600 psi                                      | 9310754  | 9456244 | 8985815 | 9318224 | 9456007 | 8985774 |
| 800 psi                                      | 9310762  | 9690115 |         | 9318232 | 9128832 |         |
| 1,000 psi                                    | 9310770  | 9456252 | 9798404 | 9318240 | 9456015 | 9746048 |
| 1,500 psi                                    | 9310789  | 9456260 | 9734193 | 9318259 | 9207511 | 8985829 |
| 2,000 psi                                    | 9310797  | 9455906 |         | 9318267 | 9456023 |         |
| 3,000 psi                                    | 9310800  | 9455914 | 8985566 | 9318275 | 9435220 | 8985831 |
| 5,000 psi                                    | 9310819  | 9456279 |         | 9318283 | 9442995 |         |
| 7,500 psi                                    | 9325107  | 9455922 |         | 9318291 | 9128840 |         |
| 10,000 psi                                   | 9790454  |         |         |         |         |         |
| 15,000 psi                                   |          |         |         |         |         |         |
| Accessory order codes (installed at factory) |          |         |         |         |         |         |
| FF, brass pol                                | + FF P   |         | + FF P  |         |         |         |
| FF, chrome                                   | + FF C   |         | + FF C  |         |         |         |
| FF, SS                                       | + FF SS  |         | + FF SS |         |         |         |
| UC, SS                                       | -        |         | + UC S  |         |         |         |
| RF, brass pol                                |          |         | + RF P  |         |         |         |
| Restrictor                                   |          |         | + R     |         |         |         |



### Available Options

- Dampened movement
- Safety glass window
- Pressure compensating window
- Drag pointer (max. reading indicator)
- Special connections

| Type   | 213.40     |          |          |
|--|------------|----------|----------|
| Size   | 4"         |          |          |
| Connection                                   | LM         |          | LBM      |
| Conn. Size                                   | 1/4" NPT   | 1/2" NPT | 1/4" NPT |
| Press. Scale                                 | PSI        | PSI      | PSI      |
| 30" Hg                                       | 9314555    |          | 9314296  |
| 30"-0-15 psi                                 | 9314563    |          | 9314300  |
| 30"-0-30 psi                                 | 9314571    |          | 9314318  |
| 30"-0-60 psi                                 | 9314580    |          | 9314326  |
| 30"-0-100 psi                                | 9314598    |          | 9314334  |
| 30"-0-160 psi                                | 9314601    |          | 9314342  |
| 30"-0-200 psi                                | 9314610    |          | 9314350  |
| 15 psi                                       | 9314644    | 9314121  | 9314385  |
| 30 psi                                       | 9314652    | 9314130  | 9314393  |
| 60 psi                                       | 9314660    | 9314148  | 9314407  |
| 100 psi                                      | 9314679    | 9314156  | 9314415  |
| 160 psi                                      | 9314687    | 9314164  | 9314423  |
| 200 psi                                      | 9314695    | 9314172  | 9314431  |
| 300 psi                                      | 9314709    | 9314180  | 9314440  |
| 400 psi                                      | 9314717    | 9314199  | 9314458  |
| 600 psi                                      | 9314725    | 9314202  | 9314466  |
| 800 psi                                      | 9314733    | 9314210  | 9314474  |
| 1,000 psi                                    | 9314741    | 9314229  | 9314482  |
| 1,500 psi                                    | 9314750    | 9314237  | 9314490  |
| 2,000 psi                                    | 9314768    | 9314245  | 9314504  |
| 3,000 psi                                    | 9314776    | 9314253  | 9314512  |
| 5,000 psi                                    | 9314784    | 9314261  | 9314520  |
| 7,500 psi                                    |            |          |          |
| 10,000 psi                                   | 9314792    | 9314270  | 9314539  |
| 15,000 psi                                   |            |          |          |
| Accessory order codes (installed at factory) |            |          |          |
| FF, chrome                                   | + FF C     |          | + FF C   |
| UC, chrome                                   | -          |          | + UC C   |
| RF, chrome                                   | + RF C     |          | + RF C   |
| 4½" panel kit                                | + PM ADAPT |          |          |
| Restrictor                                   | + R        |          |          |

Stock items shown in blue print.

#### Abbreviations

CBM - Center back mount, FF - Front flange, LM - Lower mount, RF - Rear flange, UC - U-clamp, SS - Stainless steel

Mechanical Pressure > Industrial Gauges > 21X.40PM

## Type 21X.40PM

WIKA Type 21X.40PM gauges are designed to fit existing paper machine panels. Each gauge is hermetically sealed to prevent moisture from entering during washdown. The hermetic seal makes this gauge liquid fillable for high vibration or pulsation applications. The generously oversized polished stainless steel front flange allows for easy retrofit installation.



Type 212.40PM - Dry case  
Type 213.40PM - Liquid filled case

### Standard Features

|                      |                            |                    |                      |
|----------------------|----------------------------|--------------------|----------------------|
| <b>Size:</b>         | 3½"                        | <b>Pointer:</b>    | Black aluminum       |
| <b>Case:</b>         | Forged brass, gold-painted | <b>Accuracy:</b>   | ± 2/1/2% of span     |
| <b>Ring:</b>         | Polished SS front flange   |                    | ASME B40.100 Grade A |
| <b>Wetted Parts:</b> | Copper alloy               | <b>Connection:</b> | Back mount           |
| <b>Window:</b>       | Acrylic                    |                    |                      |
| <b>Dial:</b>         | White aluminum             |                    |                      |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **21X.40PM**.

| Type   | 212.40PM      |
|--|---------------|
| <b>Size</b>                                  | <b>3½"</b>    |
| <b>Connection</b>                            | LBM           |
| <b>Conn. Size</b>                            | 1/4" NPT      |
| <b>Press. Scale</b>                          | PSI           |
| 30" Hg                                       | 9838932       |
| 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                                       |               |
| 30 psi                                       | 8998804       |
| 60 psi                                       | 8998812       |
| 100 psi                                      | 8998820       |
| 160 psi                                      | 8998940       |
| 200 psi                                      | 8998838       |
| 300 psi                                      | 8998846       |
| 400 psi                                      | 8998855       |
| 600 psi                                      | 8998863       |
| 800 psi                                      |               |
| 1,000 psi                                    | 8998871       |
| 1,500 psi                                    |               |
| 2,000 psi                                    |               |
| 3,000 psi                                    |               |
| 5,000 psi                                    |               |
| Accessory order codes (installed at factory) |               |
| Glycerine fill                               | Type 213.40PM |
| Restrictor                                   | + R           |

### Available Options

- Cleaned for oxygen service
- Special connections

### Applications

- With liquid filled case for applications with high dynamic pressure pulsations or vibration
- Paper machines and hydraulic presses
- Suitable for gaseous or liquid media that will not obstruct the pressure system

### Abbreviations

LBM - Lower back mount  
SS - Stainless steel

Stock items shown in **blue** print.



## Type 21X.53

WIKA Type 21X.53 gauges feature a stainless steel case for protection in harsh environments. The O-ring seal around the connection makes this gauge field liquid fillable. When filled, the 213.53 is excellent for high vibration and pulsation applications.



Type 212.53 - Dry  
Type 213.53 - Liquid filled

### Standard Features

|                      |                |                    |  |
|----------------------|----------------|--------------------|--|
| <b>Size:</b>         | 2", 2½", 4"    | <b>Pointer:</b>    | Black aluminum   |
| <b>Case:</b>         | 304 SS         | <b>Accuracy:</b>   | (2" & 2½") ± 2/1/2% of span<br>ASME B40.100 Grade A    |
| <b>Wetted Parts:</b> | Copper alloy   |                    | (4") ± 1.0% of span (4" size)<br>ASME B40.100 Grade 1A |
| <b>Window:</b>       | Polycarbonate  | <b>Connection:</b> | Lower or back mount                                    |
| <b>Dial:</b>         | White aluminum |                    |  |
| <b>Ring:</b>         | SS polished    |                    |  |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **21X.53**.

| Type   | 213.53 (Liquid Filled) |                |                        |                |                |                        |
|--|------------------------|----------------|------------------------|----------------|----------------|------------------------|
| Size   | 2½"                    |                |                        |                |                |                        |
| Connection                                   | LM                     |                |                        | CBM            |                |                        |
| Conn. Size                                   | 1/4" NPT               |                |                        | 1/4" NPT       |                |                        |
| Press. Scale                                 | PSI                    | PSI/BAR        | PSI/KG/CM <sup>2</sup> | PSI            | PSI/BAR        | PSI/KG/CM <sup>2</sup> |
| 30" Hg                                       | <b>9767002</b>         | 9691957        | 9693683                | <b>9767185</b> | 9692139        | 9693861                |
| 30"-0-15 psi                                 |                        |                |                        |                |                |                        |
| 30"-0-30 psi                                 | <b>9767010</b>         | 9691965        | 9693691                |                |                |                        |
| 30"-0-60 psi                                 | <b>9767029</b>         | 9691974        | 9693705                |                |                |                        |
| 30"-0-100 psi                                |                        |                |                        |                |                |                        |
| 30"-0-160 psi                                |                        |                |                        |                |                |                        |
| 30"-0-200 psi                                |                        |                |                        |                |                |                        |
| 15 psi                                       | <b>9767037</b>         | 9691982        | 9693713                |                |                | 9697220                |
| 30 psi                                       | <b>9767045</b>         | 9691990        | 9693721                | <b>9767193</b> | 9692147        | 9693879                |
| 60 psi                                       | <b>9767053</b>         | 9692007        | 9693739                | <b>9767202</b> | 9692155        | 9693887                |
| 100 psi                                      | <b>9767061</b>         | <b>9692015</b> | 9693747                | <b>9767215</b> | <b>9692164</b> | 9693895                |
| 160 psi                                      | <b>9767070</b>         | <b>9692024</b> | 9693755                | <b>9767223</b> | 9692172        | 9693909                |
| 200 psi                                      | <b>9767088</b>         | 9692032        | 9693764                | <b>9767231</b> | 9692180        | 9693917                |
| 300 psi                                      | <b>9767096</b>         | <b>9692040</b> | 9693772                | <b>9767240</b> | 9692198        | 9693925                |
| 400 psi                                      | <b>9767100</b>         | 9692058        | 9693780                |                |                |                        |
| 600 psi                                      | <b>9767118</b>         | <b>9692066</b> | 9693798                | <b>9768947</b> | 9692202        | 9693934                |
| 800 psi                                      |                        |                |                        |                |                |                        |
| 1,000 psi                                    | <b>9767126</b>         | <b>9692075</b> | 9693802                | <b>9767258</b> | 9692210        | 9693942                |
| 1,500 psi                                    | <b>9767134</b>         | <b>9692083</b> | 9693810                | 9768165        | 9692228        | 9693950                |
| 2,000 psi                                    | <b>9767142</b>         | <b>9692091</b> | 9693828                | 9768939        | 9692236        | 9693968                |
| 3,000 psi                                    | <b>9767150</b>         | <b>9692105</b> | 9693836                | <b>9767266</b> | 9692245        | 9693976                |
| 5,000 psi                                    | <b>9767169</b>         | <b>9692113</b> | 9693845                | <b>9767274</b> | 9692253        | 9693985                |
| 6,000 psi                                    |                        | <b>9748207</b> |                        | 9795728        |                |                        |
| 10,000 psi                                   | <b>9767177</b>         | 9692121        | 9693853                | 9767282        | 9692261        | 9693993                |
| Accessory order codes (installed at factory) |                        |                |                        |                |                |                        |
| Front flange, SS                             | --                     |                |                        | + FF S         |                |                        |
| Rear flange, SS                              | + RF S                 |                |                        | + RF S         |                |                        |
| U-clamp, steel                               | --                     |                |                        | + UC Z         |                |                        |
| U-clamp, SS                                  | --                     |                |                        | + UC S         |                |                        |
| Restrictor                                   | + R                    |                |                        |                |                |                        |

Stock items shown in blue print.

### Available Options

- Drag pointer (max. reading indicator)
- Cleaned for oxygen service
- Special connection

### Applications

- Intended for adverse service conditions where pulsating or vibration exists (with liquid filling)
- Hydraulics and compressors
- Suitable for gaseous or liquid media that will not obstruct the pressure system

### Abbreviations

LM - Lower mount  
CBM - Center back mount  
SS - Stainless steel



# INDUSTRIAL GAUGES

Mechanical Pressure > Industrial Gauges > 21X.53

## Type 21X.53

MECHANICAL PRESSURE

| Type                              | 213.53<br>(Liquid Filled) |
|-----------------------------------|---------------------------|
| <b>Size</b>                       | 2½"                       |
| <b>Connection</b>                 | LM                        |
| <b>Conn. Size</b>                 | 7/16"-20 SAE              |
| <b>Press. Scale</b>               | PSI/BAR                   |
| 30" Hg                            |                           |
| 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                            |                           |
| 30 psi                            |                           |
| 60 psi                            |                           |
| 100 psi                           | 9795664                   |
| 160 psi                           | 9795672                   |
| 200 psi                           | 9795680                   |
| 300 psi                           |                           |
| 400 psi                           |                           |
| 600 psi                           |                           |
| 800 psi                           |                           |
| 1,000 psi                         |                           |
| 1,500 psi                         |                           |
| 2,000 psi                         | 9795698                   |
| 3,000 psi                         | 9795702                   |
| 5,000 psi                         | 9795710                   |
| 6,000 psi                         |                           |
| 10,000 psi                        |                           |
| Accessory order codes (installed) |                           |
| Rear flange, SS                   | + RF S                    |
| Restrictor                        | + R                       |

### Abbreviations

LM - Lower mount  
 LBM - Lower back mount  
 SS - Stainless steel

| Type   | 213.53 (Liquid Filled) |                        |                |                |                        |          |
|--|------------------------|------------------------|----------------|----------------|------------------------|----------|
| Size   | 4"                     |                        |                |                |                        |          |
| Connection                                   | LM                     |                        | LM             |                | LBM                    |          |
| Conn. Size                                   | 1/4" NPT               |                        | 1/2" NPT       |                | 1/4" NPT               | 1/2" NPT |
| Press. Scale                                 | PSI                    | PSI/KG/CM <sup>2</sup> | PSI            | PSI/BAR        | PSI/KG/CM <sup>2</sup> | PSI/BAR  |
| 30" Hg                                       | <b>9699028</b>         | 9694000                |                | 9734427        | 9694239                | 9734533  |
| 30"-0-15 psi                                 | 9699036                | 9694018                |                |                |                        |          |
| 30"-0-30 psi                                 | <b>9699045</b>         | 9694026                |                |                |                        |          |
| 30"-0-60 psi                                 | 9699053                | 9694035                |                |                |                        |          |
| 30"-0-100 psi                                | 9699061                | 9694043                |                |                |                        |          |
| 30"-0-160 psi                                | 9699079                | 9694051                |                |                |                        |          |
| 30"-0-200 psi                                | 9699087                | 9694069                |                |                |                        |          |
| 15 psi                                       | <b>9699095</b>         | 9694077                |                | 9734320        |                        | 9734435  |
| 30 psi                                       | <b>9699109</b>         | 9694085                |                | 9734338        | 9694247                | 9734444  |
| 60 psi                                       | <b>9699117</b>         | 9694094                |                | 9734346        | 9694255                | 9734452  |
| 100 psi                                      | <b>9699125</b>         | 9694107                |                | <b>9734355</b> | 9694264                | 9734460  |
| 160 psi                                      | <b>9699257</b>         | 9694115                |                | <b>9734363</b> | 9694272                | 9734478  |
| 200 psi                                      | <b>9699134</b>         | 9694124                |                |                | 9694280                |          |
| 300 psi                                      | <b>9699142</b>         | 9694132                |                | <b>9734371</b> | 9694298                | 9734486  |
| 400 psi                                      | 9699150                | 9694140                |                |                | 9697743                |          |
| 600 psi                                      | <b>9699168</b>         | 9694158                |                | <b>9734389</b> | 9694302                | 9734495  |
| 800 psi                                      | 9699176                |                        |                |                |                        |          |
| 1,000 psi                                    | <b>9699185</b>         | 9694166                | <b>4228732</b> | <b>9734397</b> | 9694310                | 9734508  |
| 1,500 psi                                    | 9699193                | 9694175                | <b>9766885</b> | 9734401        | 9694328                | 9734516  |
| 2,000 psi                                    | <b>9699206</b>         | 9694183                | <b>9766876</b> | 4201591        | 9694336                |          |
| 3,000 psi                                    | <b>9699215</b>         | 9694191                | <b>9766893</b> | 9734419        | 9694345                | 9734525  |
| 5,000 psi                                    | <b>9699223</b>         | 9694205                | <b>9766906</b> | 4201604        | 9694353                |          |
| 6,000 psi                                    |                        |                        |                |                |                        |          |
| 10,000 psi                                   | 9699231                | 9694213                | <b>9766915</b> |                | 9694361                |          |
| 15,000 psi                                   | 9699249                | 9694221                |                |                |                        |          |
| Accessory order codes (installed at factory) |                        |                        |                |                |                        |          |
| Front flange, SS                             |                        | --                     |                |                |                        | + FF S   |
| Rear flange, SS                              |                        | + RF S                 |                |                |                        | + RF S   |
| U-clamp, steel                               |                        | --                     |                |                |                        | + UC Z   |
| U-clamp, SS                                  |                        | --                     |                |                |                        | + UC S   |
| Restrictor                                   |                        |                        |                | + R            |                        |          |

Stock items shown in blue print.

## Type 21X.53

| Type   | 212.53 (Dry) |          |          |         |            |          |         |            |
|--|--------------|----------|----------|---------|------------|----------|---------|------------|
| Size   | 2"           |          | 2½"      |         |            | 2½"      |         |            |
| Connection                                   | LM           | CBM      | LM       |         |            | CBM      |         |            |
| Conn. Size                                   | 1/4" NPT     | 1/4" NPT | 1/4" NPT |         |            | 1/4" NPT |         |            |
| Press. Scale                                 | PSI/BAR      | PSI/BAR  | PSI      | PSI/BAR | PSI/KG/CM² | PSI      | PSI/BAR | PSI/KG/CM² |
| 30" Hg                                       | 4311833      | 4312074  | 4269978  | 4270231 | 4270496    | 4270755  | 4271017 | 4271271    |
| 30"-0-15 psi                                 | 4311841      |          | 4269986  |         |            | 4270763  |         |            |
| 30"-0-30 psi                                 |              |          | 4269994  | 4270258 | 4270517    | 4270771  | 4271033 | 4271298    |
| 30"-0-60 psi                                 | 4311868      |          | 4270002  | 4270266 | 4270525    | 4270780  | 4271041 | 4271301    |
| 30"-0-100 psi                                |              |          | 4270011  |         |            | 4270798  |         |            |
| 30"-0-160 psi                                |              |          | 4270029  |         |            | 4270801  |         |            |
| 30"-0-200 psi                                |              |          | 4270037  |         |            | 4270810  |         |            |
| 15 psi                                       | 4311906      | 4315014  | 4270045  | 4270304 | 4270569    | 4270828  | 4271084 | 4271343    |
| 30 psi                                       | 4311914      | 4315022  | 4270053  | 4270312 | 4270577    | 4270836  | 4271092 | 4271351    |
| 60 psi                                       | 4311922      | 4315031  | 4270061  | 4270321 | 4270585    | 4270844  | 4271106 | 4271361    |
| 100 psi                                      | 4311931      | 4315049  | 4270070  | 4270339 | 4270593    | 4270852  | 4271114 | 4271379    |
| 160 psi                                      | 4311949      | 4315057  | 4270088  | 4270347 | 4270606    | 4270861  | 4271122 | 4271387    |
| 200 psi                                      | 4311957      | 4315065  | 4270096  | 4270355 | 4270614    | 4270879  | 4271131 | 4271395    |
| 300 psi                                      | 4311965      | 4315073  | 4270100  | 4270363 | 4270622    | 4270887  | 4271149 | 4271408    |
| 400 psi                                      | 4311973      |          | 4270118  | 4270371 | 4270631    | 4270895  | 4271157 | 4271416    |
| 600 psi                                      | 4311981      | 4315090  | 4270126  | 4270381 | 4270640    | 4270909  | 4271165 | 4271424    |
| 800 psi                                      |              |          |          |         |            |          |         |            |
| 1,000 psi                                    | 4312007      | 4315111  | 4270142  |         | 4270666    | 4270925  | 4271181 | 4271441    |
| 1,500 psi                                    | 4312015      | 4315120  | 4270151  |         | 4270674    | 4270933  | 4271191 | 4271450    |
| 2,000 psi                                    | 4312023      | 4315138  | 4270169  |         | 4270682    | 4270941  | 4271203 | 4271468    |
| 3,000 psi                                    | 4312031      | 4315146  | 4270177  |         | 4270691    | 4270950  | 4271211 | 4271476    |
| 5,000 psi                                    | 4312040      | 4315154  | 4270185  |         | 4270703    | 4270968  | 4271220 | 4271484    |
| 6,000 psi                                    |              |          |          |         |            |          | 4271238 |            |
| 7,500 psi                                    | 4312058      | 4315162  |          |         |            |          | 4271246 |            |
| 10,000 psi                                   | 4312066      | 4315171  | 4270215  | 4270470 | 4270739    | 4270992  | 4271254 | 4271513    |
| 15,000 psi                                   |              |          |          |         |            |          |         |            |
| Accessory order codes (installed at factory) |              |          |          |         |            |          |         |            |
| Front flange, SS                             | --           | + FF     |          | --      |            |          | + FF    |            |
| Rear flange, SS                              | + RF         | + RF     |          | + RF    |            |          | + RF    |            |
| U-clamp, steel                               | --           | + UC Z   |          | --      |            |          | + UC Z  |            |
| U-clamp, SS                                  | --           | + UC S   |          | --      |            |          | + UC S  |            |
| Restrictor                                   | + R          | + R      |          | + R     |            |          | + R     |            |

Stock items shown in blue print.

### Abbreviations

- LM - Lower mount
- CBM - Center back mount
- SS - Stainless steel

Mechanical Pressure > Industrial Gauges > 21X.53

# Type 21X.53

MECHANICAL PRESSURE

| Type   | 212.53 (Dry) |                        |          |         |
|--|--------------|------------------------|----------|---------|
| Size   | 4"           |                        |          |         |
| Connection                                   | LM           |                        | LBM      |         |
| Conn. Size                                   | 1/4" NPT     |                        | 1/2" NPT |         |
| Press. Scale                                 | PSI          | PSI/KG/CM <sup>2</sup> | PSI      | PSI/BAR |
| 30" Hg                                       | 4271531      | 4271786                |          | 4272286 |
| 30"-0-15 psi                                 | 4271549      | 4271794                |          |         |
| 30"-0-30 psi                                 | 4271557      | 4271808                |          |         |
| 30"-0-60 psi                                 | 4271565      | 4271816                |          |         |
| 30"-0-100 psi                                | 4271573      | 4271824                |          |         |
| 30"-0-160 psi                                | 4271581      | 4271832                |          |         |
| 30"-0-200 psi                                | 4271590      | 4271841                |          |         |
| 15 psi                                       | 4271602      | 4271859                |          | 4272359 |
| 30 psi                                       | 4271611      | 4271867                |          | 4272367 |
| 60 psi                                       | 4271620      | 4271875                |          | 4272375 |
| 100 psi                                      | 4271638      | 4271883                |          | 4272383 |
| 160 psi                                      | 4271646      | 4271891                |          | 4272391 |
| 200 psi                                      | 4271654      | 4271905                |          |         |
| 300 psi                                      | 4271662      | 4271913                |          | 4272412 |
| 400 psi                                      | 4271671      | 4271921                |          |         |
| 600 psi                                      | 4271689      | 4271930                |          | 4272430 |
| 800 psi                                      |              |                        |          |         |
| 1,000 psi                                    | 4271701      | 4271956                | 4272200  | 4272456 |
| 1,500 psi                                    | 4271719      | 4271964                | 4272218  | 4272464 |
| 2,000 psi                                    | 4271727      | 4271972                | 4272226  | 4272472 |
| 3,000 psi                                    | 4271735      | 4271981                | 4272234  | 4272481 |
| 5,000 psi                                    | 4271743      | 4271999                | 4272242  | 4272499 |
| 10,000 psi                                   | 4271760      | 4272013                | 4272260  |         |
| 15,000 psi                                   | 4271778      | 4272021                |          |         |
| Accessory order codes (installed at factory) |              |                        |          |         |
| Front flange, SS                             | --           |                        |          | + FF    |
| Rear flange, SS                              | + RF         |                        |          | + RF    |
| U-clamp, steel                               | --           |                        |          | + UC Z  |
| U-clamp, SS                                  | --           |                        |          | + UC S  |
| Restrictor                                   | + R          |                        |          | + R     |

Stock items shown in blue print.

**Abbreviations**

- LM - Lower mount
- LBM - Lower back mount
- SS - Stainless steel

## Type 23X.53

The rugged construction of WIKA Type 23X.53 stainless steel gauges provides resistance to the most corrosive media and environments. These gauges feature 316 stainless steel wetted parts and 304 stainless steel case and crimped ring, and can be liquid filled in the field.

### Standard Features

|                      |                |                    |  |
|----------------------|----------------|--------------------|--|
| <b>Size:</b>         | 2", 2½", 4"    | <b>Accuracy:</b>   | (2" & 2½") ± 2/1/2% of span<br>ASME B40.100 Grade A    |
| <b>Case:</b>         | 304 SS         |                    |  |
| <b>Wetted Parts:</b> | 316L SS        |                    | (4") ± 1.0% of span (4" size)<br>ASME B40.100 Grade 1A |
| <b>Window:</b>       | Polycarbonate  | <b>Connection:</b> | Lower or back mount                                    |
| <b>Dial:</b>         | White aluminum |                    |  |
| <b>Ring:</b>         | SS polished    |                    |  |
| <b>Pointer:</b>      | Black aluminum |                    |  |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 23X.53.



Type 232.53 - Dry case  
Type 233.53 - Liquid filled case

| Type   | 232.53 (Dry) |          |                |                |         |         |
|--|--------------|----------|----------------|----------------|---------|---------|
| Size   | 2"           |          | 2½"            |                |         |         |
| Connection                                   | LM           | CBM      | LM             | CBM            |         |         |
| Conn. Size                                   | 1/4" NPT     |          | 1/4" NPT       |                |         |         |
| Press. Scale                                 | PSI          | PSI      | PSI            | PSI            | PSI/BAR | PSI/KPA |
| 30" Hg                                       | 50533614     | 50533797 | <b>9768777</b> | 9768394        |         |         |
| 30"-0-15 psi                                 | 50533622     | 50533801 |                |                |         |         |
| 30"-0-30 psi                                 | 50533631     | 50533819 | <b>9768769</b> | 9768386        |         |         |
| 30"-0-60 psi                                 | 50533649     | 50533827 | 9768750        | 9768378        |         |         |
| 30"-0-100 psi                                | 50533657     | 50533835 |                |                |         |         |
| 30"-0-160 psi                                | 50533665     | 50533843 | 9768742        | 9768360        |         |         |
| 30"-0-200 psi                                | 50533673     | 50533851 |                |                |         |         |
| 15 psi                                       | 50533690     | 50533860 | <b>9768734</b> | 9768351        |         |         |
| 30 psi                                       | 4222680      | 50533878 | <b>9768726</b> | 9768343        |         |         |
| 60 psi                                       | 4282907      | 4214318  | <b>9768718</b> | <b>9768335</b> | 8992848 | 8993089 |
| 100 psi                                      | 4222698      | 4282915  | <b>9768700</b> | <b>9768327</b> | 8992856 | 8993097 |
| 160 psi                                      | 50466721     | 50466747 | <b>9768696</b> | <b>9768319</b> | 8992865 | 8993101 |
| 200 psi                                      | 4282923      | 50533886 | <b>9768688</b> | 9768300        | 8992873 | 8993119 |
| 300 psi                                      | 50533711     | 50533894 | <b>9768670</b> | 9768297        | 8992881 | 8993127 |
| 400 psi                                      | 50533720     | 50533908 | 9768661        | 9768289        |         |         |
| 600 psi                                      | 4222702      | 50533916 | <b>9768653</b> | 9768270        | 9779685 | 9779693 |
| 800 psi                                      | 50533738     | 50533924 |                |                |         |         |
| 1,000 psi                                    | 4222710      | 50533932 | 9768645        | 9768262        | 8992899 | 8993135 |
| 1,500 psi                                    | 50533746     | 50533941 | 9768637        | 9768254        | 8992903 | 8993144 |
| 2,000 psi                                    | 50533754     | 50533959 | 9768629        | 9768246        | 8992911 | 8993152 |
| 3,000 psi                                    | 50466739     | 50466755 | <b>9768610</b> | 9768238        | 8992929 | 8993160 |
| 5,000 psi                                    | 50533762     | 50533967 | <b>9768602</b> | 9768220        | 8992937 | 8993178 |
| 6,000 psi                                    |              |          |                | 8993208        | 8992945 | 8993186 |
| 10,000 psi                                   | 50533771     | 50533975 | 9768599        | 9768211        | 8992954 | 8993195 |
| 15,000 psi                                   | 50533789     | 50533983 |                | 9779715        | 9776715 | 9779723 |
| Accessory order codes (installed at factory) |              |          |                |                |         |         |
| Front flange, SS                             | --           | + FF S   | --             |                | + FF S  |         |
| U-clamp, steel                               | --           | + UC Z   | --             |                | + UC Z  |         |
| U-clamp, SS                                  | --           | + UC S   | --             |                | + UC S  |         |
| Rear flange, SS                              |              |          |                | + RF S         |         |         |
| Restrictor                                   |              |          |                | + R            |         |         |
| Glycerine fill                               |              |          |                | Type 233.53    |         |         |

### Available Options

- Dampened movement
- Drag pointer (max. reading indicator)
- Cleaned for oxygen service
- Special connection

### Applications

- With liquid filled case for applications with high dynamic pressure pulsations or vibration
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and off shore, environmental technology, mechanical engineering and plant construction

### Abbreviations

LM - Lower mount  
CBM - Center back mount  
SS - Stainless steel

Stock items shown in blue print.





# INDUSTRIAL GAUGES

Mechanical Pressure > Industrial Gauges > 23X.53

## Type 23X.53

MECHANICAL PRESSURE

| Type   | 232.53 (Dry) |             |            |
|--|--------------|-------------|------------|
| Size   | 4"           |             |            |
| Connection                                   | LM           | LM          | LBM        |
| Conn. Size                                   | 1/4" NPT     | 1/2" NPT    | 1/2" NPT   |
| Press. Scale                                 | PSI          | PSI         | PSI        |
| 30" Hg                                       | 9767576      | 9768459     | 9737057    |
| 30"-0-15 psi                                 | 9737910      | 9768467     | 9737065    |
| 30"-0-30 psi                                 | 9767398      | 9768475     | 9737073    |
| 30"-0-60 psi                                 | 9767401      | 9768483     | 9737081    |
| 30"-0-100 psi                                | 9737898      | 9737880     | 9737090    |
| 30"-0-160 psi                                | 9767410      | 9768491     | 9737103    |
| 30"-0-200 psi                                | 9737901      | 9768505     | 9737111    |
| 15 psi                                       | 9767428      | 9768513     | 9737120    |
| 30 psi                                       | 9767436      | 9768521     | 9737138    |
| 60 psi                                       | 9767444      | 9768530     | 9737146    |
| 100 psi                                      | 9767452      | 9768548     | 9737154    |
| 160 psi                                      | 9767460      | 9768556     | 9737162    |
| 200 psi                                      | 9767479      | 9768564     | 9737170    |
| 300 psi                                      | 9767487      | 9768572     | 9737189    |
| 400 psi                                      | 9767495      | 9768580     | 9737197    |
| 600 psi                                      | 9767509      | 9768963     | 9737200    |
| 800 psi                                      |              |             | 9737219    |
| 1,000 psi                                    | 9767517      | 9768858     | 9737227    |
| 1,500 psi                                    |              | 9768866     | 9737235    |
| 2,000 psi                                    |              | 9768807     | 9737243    |
| 3,000 psi                                    |              | 9768874     | 9737251    |
| 5,000 psi                                    |              | 9768823     | 9737260    |
| 10,000 psi                                   |              | 9768831     | 9737278    |
| 15,000 psi                                   |              | 9768840     | 9737286    |
| Accessory order codes (installed at factory) |              |             |            |
| Front flange, SS                             | --           |             | + FF S     |
| U-clamp, steel                               | --           |             | + UC Z     |
| U-clamp, SS                                  | --           |             | + UC S     |
| 4½" panel kit                                | --           |             | + PM ADAPT |
| Rear flange, SS                              |              | + RF S      |            |
| Restrictor                                   |              | + R         |            |
| Glycerine fill                               |              | Type 233.53 |            |

| Type   | 233.53 (Glycerine Filled) |         |          |          |         |
|--|---------------------------|---------|----------|----------|---------|
| Size   | 2½"                       |         | 4"       |          |         |
| Connection                                   | LM                        | CBM     | LM       | LM       | LBM     |
| Conn. Size                                   | 1/4" NPT                  |         | 1/4" NPT | 1/2" NPT |         |
| Press. Scale                                 | PSI                       | PSI     | PSI      | PSI      | PSI     |
| 30" Hg                                       | 9833646                   | 9833310 | 9833124  | 9833328  | 9831504 |
| 30"-0-15 psi                                 |                           |         | 9831775  | 9833336  | 9831512 |
| 30"-0-30 psi                                 | 9833638                   | 9833302 | 9832993  | 9833345  | 9831520 |
| 30"-0-60 psi                                 | 9833620                   | 9833298 | 9833000  | 9833353  | 9831538 |
| 30"-0-100 psi                                |                           |         | 9831759  | 9831741  | 9831546 |
| 30"-0-160 psi                                | 9833612                   | 9833280 | 9833018  | 9833361  | 9831555 |
| 30"-0-200 psi                                |                           |         | 9831767  | 9833379  | 9831563 |
| 15 psi                                       | 9833604                   | 9833272 | 9833026  | 9833387  | 9831571 |
| 30 psi                                       | 9833590                   | 9833264 | 9833035  | 9833395  | 9831589 |
| 60 psi                                       | 9833582                   | 9833255 | 9833043  | 9833409  | 9831597 |
| 100 psi                                      | 9833574                   | 9833247 | 9833051  | 9833417  | 9831601 |
| 160 psi                                      | 9833565                   | 9833239 | 9833069  | 9833425  | 9831619 |
| 200 psi                                      | 9833557                   | 9833221 | 9833077  | 9833434  | 9831627 |
| 300 psi                                      | 9833549                   | 9833213 | 9833085  | 9833442  | 9831635 |
| 400 psi                                      | 9833531                   | 9833205 | 9833094  | 9833450  | 9831644 |
| 600 psi                                      | 9833523                   | 9833191 | 9833107  | 9833727  | 9831652 |
| 1,000 psi                                    | 9833515                   | 9833183 | 9833115  | 9833697  | 9831678 |
| 1,500 psi                                    | 9833506                   | 9833175 |          | 9833701  | 9831686 |
| 2,000 psi                                    | 9833493                   | 9833166 |          | 9833655  | 9831695 |
| 3,000 psi                                    | 9833485                   | 9833158 |          | 9833719  | 9831708 |
| 5,000 psi                                    | 9833476                   | 9833140 |          | 9833663  | 9831716 |
| 10,000 psi                                   | 9833468                   | 9833132 |          | 9833671  | 9831725 |
| 15,000 psi                                   |                           |         |          | 9833689  | 9831733 |
| Accessory order codes (installed at factory) |                           |         |          |          |         |
| See tables for Type 232.53                   |                           |         |          |          |         |

**Abbreviations**  
 LM - Lower mount  
 CBM - Center back mount  
 LBM - Lower back mount  
 SS - Stainless steel

Stock items shown in blue print.

## Type 21X.54

Available in ranges up to 10,000 psi, WIKA Type 21X.54 pressure gauges offer heavy-duty service in industrial applications and environments. They feature a stainless steel case and the industrial grade Swiss movement assures repeatable accuracy and long service life.



Type 212.54 - Dry case  
Type 213.54 - Liquid filled case

### Standard Features

|                      |                |                    |                             |
|----------------------|----------------|--------------------|-----------------------------|
| <b>Size:</b>         | 4"             | <b>Ring:</b>       | SS polished                 |
| <b>Case:</b>         | 304 SS         | <b>Pointer:</b>    | Black aluminum - adjustable |
| <b>Wetted Parts:</b> | Copper alloy   | <b>Accuracy:</b>   | ±1.0% of span (4" size)     |
| <b>Window:</b>       | Safety glass   |                    | ASME B40.100 Grade1A        |
| <b>Dial:</b>         | White aluminum | <b>Connection:</b> | Lower or back mount         |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **21X.54**.

| Type   | 212.54 (Dry)   |             |        |
|--|----------------|-------------|--------|
| Size   | 4"             |             |        |
| Connection                                   | LM             | LM          | LBM    |
| Conn. Size                                   | 1/4" NPT       | 1/2" NPT    |        |
| Press. Scale                                 | PSI            | PSI         | PSI    |
| 30" Hg                                       |                |             |        |
| 30"-0-15 psi                                 |                |             |        |
| 30"-0-30 psi                                 |                |             |        |
| 30"-0-60 psi                                 |                |             |        |
| 30"-0-100 psi                                |                |             |        |
| 30"-0-160 psi                                |                |             |        |
| 30"-0-200 psi                                |                |             |        |
| 10 psi                                       | 4212011        |             |        |
| 15 psi                                       | 4212029        |             |        |
| 30 psi                                       | 4212037        |             |        |
| 60 psi                                       | 4212045        |             |        |
| 100 psi                                      | <b>4212053</b> |             |        |
| 160 psi                                      | 4212061        |             |        |
| 200 psi                                      | <b>4212070</b> |             |        |
| 300 psi                                      | <b>4212088</b> |             |        |
| 400 psi                                      | 4212096        |             |        |
| 600 psi                                      | 4212100        |             |        |
| 800 psi                                      |                |             |        |
| 1000 psi                                     | 4212126        | 4212363     |        |
| 1,500 psi                                    | 4212134        | 4212371     |        |
| 2,000 psi                                    | 4212142        | 4212380     |        |
| 3,000 psi                                    | 4212151        | 4212398     |        |
| 5,000 psi                                    | 4212169        | 4212401     |        |
| 10,000 psi                                   | 4212177        | 4212410     |        |
| Accessory order codes (installed at factory) |                |             |        |
| Front flange, SS                             | --             |             | + FF S |
| Rear flange, SS                              |                | + RF S      |        |
| Restrictor                                   |                | + R         |        |
| Glycerine fill                               |                | Type 213.54 |        |

### Available Options

- Instrument glass or acrylic window
- Drag pointer (maximum reading indicator)
- Cleaned for oxygen service
- Special connections

### Applications

- Vibration and shock resistant (with liquid filling)
- Stainless steel case with removable bayonet ring
- Pressure ranges up to 15,000 psi

### Abbreviations

- LM - Lower mount
- CBM - Center back mount
- SS - Stainless steel

Stock items shown in blue print.

Mechanical Pressure > Industrial Gauges > 23X.54

## Type 23X.54

Type 23X.54 gauges feature 316 stainless steel wetted parts and 304 stainless steel case and bayonet ring, a laminated safety glass window, and can be liquid filled in the field. These gauges are ideal for process, chemical applications, oil exploration and production, power generation, and pollution control equipment.



Type 232.54 - Dry case  
Type 233.54 - Liquid filled case

### Standard Features

|                      |                            |                    |                               |
|----------------------|----------------------------|--------------------|-------------------------------|
| <b>Case:</b>         | 304 stainless steel        | <b>Accuracy:</b>   | (2½") ± 2/12% of span         |
| <b>Ring:</b>         | Polished stainless steel   |                    | ASME B40.100 Grade A          |
| <b>Wetted Parts:</b> | 316L stainless steel       |                    | (4") ± 1.0% of span (4" size) |
| <b>Window:</b>       | Safety glass               |                    | ASME B40.100 Grade1A          |
| <b>Dial:</b>         | White aluminum             | <b>Connection:</b> | Lower and back mount          |
| <b>Pointer:</b>      | Black aluminum, adjustable |                    |                               |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **23X.54**.

| Type   | 232.54 (Dry)   |         |            |             |         |            |
|--|----------------|---------|------------|-------------|---------|------------|
| Size   | 2½"            |         |            |             |         |            |
| Connection                                   | LM             |         |            | CBM         |         |            |
| Conn. Size                                   | 1/4" NPT       |         |            |             |         |            |
| Press. Scale                                 | PSI            | PSI/BAR | PSI/KG/CM² | PSI         | PSI/BAR | PSI/KG/CM² |
| 30" Hg                                       | 9744827        | 9735245 | 9694531    | 9745068     | 9735385 | 9694778    |
| 30"-0-15 psi                                 | 9744835        |         | 9694549    | 9745076     |         |            |
| 30"-0-30 psi                                 | 9744843        |         | 9694557    | 9745084     |         |            |
| 30"-0-60 psi                                 | 9744851        |         | 9694565    | 9745092     |         |            |
| 30"-0-100 psi                                | 9744860        |         | 9694574    | 9745106     |         |            |
| 30"-0-160 psi                                | 9744878        |         | 9694582    | 9745114     |         |            |
| 30"-0-200 psi                                | 9744886        |         | 9694590    | 9745122     |         |            |
| 15 psi                                       | 9744894        | 9735114 | 9694604    | 9745130     | 9735254 | 9694786    |
| 30 psi                                       | <b>9744908</b> | 9735122 | 9694612    | 9745149     | 9735262 | 9694795    |
| 60 psi                                       | <b>9744916</b> | 9735130 | 9694620    | 9745157     | 9735270 | 9694808    |
| 100 psi                                      | <b>9744924</b> | 9735148 | 9694638    | 9745165     | 9735288 | 9694816    |
| 160 psi                                      | <b>9744932</b> | 9735156 | 9694646    | 9745173     | 9735296 | 9694825    |
| 200 psi                                      | <b>9744940</b> |         | 9694655    | 9745181     |         | 9694833    |
| 300 psi                                      | <b>9744959</b> | 9735165 | 9694663    | 9745190     | 9735300 | 9694841    |
| 400 psi                                      | 9744967        |         | 9694671    | 9745203     |         | 9694859    |
| 600 psi                                      | <b>9744975</b> | 9735173 | 9694689    | 9745211     | 9735318 | 9694867    |
| 800 psi                                      | 9744983        |         | 9694697    | 9745220     |         |            |
| 1,000 psi                                    | 9744991        | 9735181 | 9694701    | 9745238     | 9735326 | 9694875    |
| 1,500 psi                                    | 9745009        | 9735199 | 9694719    | 9745246     | 9735335 | 9694884    |
| 2,000 psi                                    | 9745017        |         | 9694727    | 9745254     |         | 9694892    |
| 3,000 psi                                    | 9745025        | 9735203 | 9694735    | 9745262     | 9735343 | 9694905    |
| 5,000 psi                                    | 9745033        | 9735211 | 9694744    | 9745270     | 9735351 | 9694914    |
| 10,000 psi                                   | 9745041        | 9735229 | 9694752    | 9745289     | 9735369 | 9694922    |
| 15,000 psi                                   | 9745050        | 9735237 |            | 9694760     | 9745297 | 9735377    |
| Accessory order codes (installed at factory) |                |         |            |             |         |            |
| Front flange, SS                             |                | --      |            |             |         | + FF S     |
| U-Clamp, steel                               |                | --      |            |             |         | + UC Z     |
| U-Clamp, SS                                  |                | --      |            |             |         | + UC S     |
| Rear flange, SS                              |                |         |            | + RF S      |         |            |
| Restrictor                                   |                |         |            | + R         |         |            |
| Glycerine fill                               |                |         |            | Type 233.54 |         |            |

### Available Options

- Instrument glass or acrylic window
- Drag pointer (max. reading indicator)
- Cleaned for oxygen service
- Special connections

### Abbreviations

LM - Lower mount  
CBM - Center back mount  
SS - Stainless steel

Stock items shown in **blue print**.

## Type 23X.54

| Type   | 232.54 (Dry) |          |             |                        |            |         |
|--|--------------|----------|-------------|------------------------|------------|---------|
| Size   | 4"           |          |             |                        |            |         |
| Connection                                   | LM           | LM       |             |                        | LBM        |         |
| Conn. Size                                   | 1/4" NPT     | 1/2" NPT |             |                        | 1/2" NPT   |         |
| Press. Scale                                 | PSI          | PSI      | PSI/BAR     | PSI/KG/CM <sup>2</sup> | PSI        | PSI/BAR |
| 30" Hg                                       | 9745300      | 9745548  | 9734826     | 9694930                | 9745785    | 9734966 |
| 30"-0-15 psi                                 | 9745319      | 9745556  |             | 9694948                | 9745793    |         |
| 30"-0-30 psi                                 | 9745327      | 9745564  |             | 9694956                | 9745807    |         |
| 30"-0-60 psi                                 | 9745335      | 9745572  |             | 9694965                | 9745815    |         |
| 30"-0-100 psi                                | 9745343      | 9745580  |             | 9694973                | 9745823    |         |
| 30"-0-160 psi                                | 9745351      | 9745599  |             |                        | 9745831    |         |
| 30"-0-200 psi                                | 9745360      | 9745602  |             |                        | 9745840    |         |
| 15 psi                                       | 9745378      | 9745610  | 9734699     | 9694981                | 9745858    | 9734835 |
| 30 psi                                       | 9745386      | 9745629  | 9734703     | 9694999                | 9745866    | 9734843 |
| 60 psi                                       | 9745394      | 9745637  | 9734711     | 9695006                | 9745874    | 9734851 |
| 100 psi                                      | 9745408      | 9745645  | 9734729     | 9695015                | 9745882    | 9734869 |
| 160 psi                                      | 9745416      | 9745653  | 9734737     | 9695023                | 9745890    | 9734877 |
| 200 psi                                      | 9745424      | 9745661  |             | 9695031                | 9745904    |         |
| 300 psi                                      | 9745432      | 9745670  | 9734745     | 9695049                | 9745912    | 9734885 |
| 400 psi                                      | 9745440      | 9745688  |             | 9695057                | 9745920    |         |
| 600 psi                                      | 9745459      | 9745696  | 9734754     | 9695065                | 9745939    | 9734894 |
| 800 psi                                      | 9745467      | 9745700  |             | 9695074                | 9745947    |         |
| 1,000 psi                                    | 9745475      | 9745718  | 9734762     | 9695082                | 9745955    | 9734907 |
| 1,500 psi                                    | 9745483      | 9745726  | 9734770     | 9695090                | 9745963    | 9734915 |
| 2,000 psi                                    | 9745491      | 9745734  |             | 9695104                | 9745971    |         |
| 3,000 psi                                    | 9745505      | 9745742  | 9734788     | 9695112                | 9745980    | 9734924 |
| 5,000 psi                                    | 9745513      | 9745750  | 9734796     | 9695120                | 9745998    | 9734932 |
| 10,000 psi                                   | 9745521      | 9745769  | 9734800     | 9695138                | 9746005    | 9734940 |
| 15,000 psi                                   | 9745530      | 9745777  | 9734818     | 9695146                | 9746013    | 9734958 |
| Accessory order codes (installed at factory) |              |          |             |                        |            |         |
| Front flange, SS                             |              | --       |             |                        | + FF S     |         |
| 4½" panel kit                                |              | --       |             |                        | + PM ADAPT |         |
| U-clamp, steel                               |              | --       |             |                        | + UC Z     |         |
| U-clamp, SS                                  |              | --       |             |                        | + UC S     |         |
| Rear flange, SS                              |              |          | + RF S      |                        |            |         |
| Restrictor                                   |              |          | + R         |                        |            |         |
| Glycerine fill                               |              |          | Type 233.54 |                        |            |         |

Stock items shown in blue print.

### Abbreviations

- LM - Lower mount
- LBM - Lower back mount
- SS - Stainless steel



# INDUSTRIAL GAUGES

Mechanical Pressure > Industrial Gauges > 23X.54

## Type 23X.54

| Type          | 233.54 (Glycerine Filled) |                |          |                |         |
|---------------|---------------------------|----------------|----------|----------------|---------|
|               | 2½"                       |                | 4"       |                |         |
| Size          | LM                        | CBM            | LM       | LM             | LBM     |
| Conn. Size    | 1/4" NPT                  |                | 1/4" NPT | 1/2" NPT       |         |
| Press. Scale  | PSI                       | PSI            | PSI      | PSI            | PSI     |
| 30" Hg        | 9831784                   | 9832020        | 9832275  | 9832518        | 9832755 |
| 30"-0-15 psi  | 9831792                   | 9832046        | 9832284  | 9832526        | 9832764 |
| 30"-0-30 psi  | 9831805                   | 9832055        | 9832292  | 9832535        | 9832772 |
| 30"-0-60 psi  | 9831814                   | 9832063        | 9832305  | 9832543        | 9832780 |
| 30"-0-100 psi | 9831822                   | 9832071        | 9832314  | 9832551        | 9832798 |
| 30"-0-160 psi | 9831830                   | 9832089        | 9832322  | 9832569        | 9832802 |
| 30"-0-200 psi | 9831848                   | 9832097        | 9832330  | 9832577        | 9832810 |
| 15 psi        | 9831856                   | 9832101        | 9832348  | 9832585        | 9832828 |
| 30 psi        | <b>9831865</b>            | 9832119        | 9832356  | 9832594        | 9832836 |
| 60 psi        | <b>9831873</b>            | 9832127        | 9832365  | 9832607        | 9832845 |
| 100 psi       | <b>9831881</b>            | 9832135        | 9832373  | <b>9832615</b> | 9832853 |
| 160 psi       | <b>9831899</b>            | 9832144        | 9832381  | 9832624        | 9832861 |
| 200 psi       | <b>9831903</b>            | 9832152        | 9832399  | <b>9832632</b> | 9832879 |
| 300 psi       | <b>9831911</b>            | 9832160        | 9832403  | <b>9832640</b> | 9832887 |
| 400 psi       | 9831929                   | 9832178        | 9832411  | 9832658        | 9832895 |
| 600 psi       | <b>9831937</b>            | 9832186        | 9832429  | <b>9832666</b> | 9832909 |
| 800 psi       | 9831945                   | 9832195        | 9832437  | 9832675        | 9832917 |
| 1,000 psi     | <b>9831954</b>            | 9832208        | 9832445  | <b>9832683</b> | 9832925 |
| 1,500 psi     | <b>9831962</b>            | 9832216        | 9832454  | <b>9832691</b> | 9832934 |
| 2,000 psi     | <b>9831970</b>            | <b>9832225</b> | 9832462  | <b>9832705</b> | 9832942 |
| 3,000 psi     | <b>9831988</b>            | 9832233        | 9832470  | <b>9832713</b> | 9832950 |
| 5,000 psi     | 9831996                   | <b>9832241</b> | 9832488  | <b>9832721</b> | 9832968 |
| 10,000 psi    | 9832004                   | 9832259        | 9832496  | <b>9832739</b> | 9832976 |
| 15,000 psi    | 9832012                   | 9832267        | 9832500  | <b>9832747</b> | 9832985 |

Accessory order codes (installed at factory)  
See tables for Type 232.54

Stock items shown in **blue print**.

### Abbreviations

- LM - Lower mount
- LBM - Lower back mount
- CBM- Center back mount
- SS - Stainless steel

| Type         | 232.54 XMAS Tree Gauge |
|--------------|------------------------|
| Size         | 4"                     |
| Connection   | LM                     |
| Conn. Size   | 1/2" NPT               |
| Press. Scale | PSI                    |
| 1,000 psi    | <b>8992350</b>         |
| 1,500 psi    | <b>8992342</b>         |
| 2,000 psi    | <b>8992334</b>         |
| 3,000 psi    | <b>8992325</b>         |
| 5,000 psi    | <b>8992317</b>         |
| 10,000 psi   | <b>8992309</b>         |

| Type       | 232.54 Receiver |
|------------|-----------------|
| Size       | 2½"             |
| Connection | LM              |
| Conn. Size | 1/4" NPT        |
| 100%       | 9749470         |
| 10 sq. ft. | 9749462         |

MECHANICAL PRESSURE



## Type 233.55

The Type 233.55 LBM is specifically designed and manufactured to exact panel builder requirements. With exclusive features, it is ideal when used for panel mount gauges in the oil and gas, refinery, petrochemical, and food and beverage industries.



### Standard Features

|                      |                |                     |                      |
|----------------------|----------------|---------------------|----------------------|
| <b>Size:</b>         | 2½"            | <b>Pointer:</b>     | Black aluminum       |
| <b>Case:</b>         | 304 SS         | <b>Accuracy:</b>    | ±2/12% of span       |
| <b>Wetted Parts:</b> | 316L SS        |                     | ASME B40.100 Grade A |
| <b>Window:</b>       | Safety glass   | <b>Connection:</b>  | Lower back mount     |
| <b>Dial:</b>         | White aluminum | <b>Liquid fill:</b> | Glycerine            |
| <b>Ring:</b>         | SS polished    | <b>Restrictor:</b>  | Standard             |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **233.55**.

| Type                | 233.55   |         |         |                        |
|---------------------|----------|---------|---------|------------------------|
| <b>Size</b>         | 2½"      |         |         |                        |
| <b>Connection</b>   | LBM      |         |         |                        |
| <b>Conn. Size</b>   | 1/4" NPT |         |         |                        |
| <b>Press. Scale</b> | PSI      | PSI/BAR | PSI/KPA | PSI/KG/CM <sup>2</sup> |
| 30" Hg              | 4282811  | 4283078 | 4283337 | 4283591                |
| 30"-0-15 psi        | 4282829  | 4283086 | 4283345 | 4283604                |
| 30"-0-30 psi        | 4282837  | 4283094 | 4283354 | 4283613                |
| 30"-0-60 psi        | 4282845  | 4283107 | 4283362 | 4283621                |
| 30"-0-100 psi       | 4282854  | 4283115 | 4283370 | 4283639                |
| 30"-0-160 psi       | 4282862  | 4283124 | 4283388 | 4283647                |
| 30"-0-200 psi       | 4282870  | 4283133 | 4283396 | 4283655                |
| 15 psi              | 4282888  | 4283141 | 4283400 | 4283664                |
| 30 psi              | 4282896  | 4283159 | 4283418 | 4283672                |
| 60 psi              | 4282900  | 4283167 | 4283426 | 4283680                |
| 100 psi             | 4282918  | 4283175 | 4283434 | 4283698                |
| 160 psi             | 4282926  | 4283184 | 4283443 | 4283702                |
| 200 psi             | 4282934  | 4283192 | 4283451 | 4283710                |
| 300 psi             | 4282943  | 4283204 | 4283469 | 4283728                |
| 400 psi             | 4282951  | 4283214 | 4283477 | 4283736                |
| 600 psi             | 4282969  | 4283222 | 4283485 | 4283744                |
| 800 psi             | 4282977  | 4283230 | 4283494 | 4283753                |
| 1,000 psi           | 4282985  | 4283248 | 4283507 | 4283761                |
| 1,500 psi           | 4282994  | 4283256 | 4283515 | 4283779                |
| 2,000 psi           | 4283000  | 4283264 | 4283524 | 4283787                |
| 3,000 psi           | 4283018  | 4283273 | 4283532 | 4283795                |
| 5,000 psi           | 4283026  | 4283281 | 4283540 | 4283809                |
| 6,000 psi           | 4283034  | 4283299 | 4283558 | 4283817                |
| 10,000 psi          | 4283044  | 4283303 | 4283566 | 4283825                |
| 15,000 psi          | 4283052  | 4283311 | 4283574 | 4283834                |
| 20,000 psi          | 4283060  | 4283329 | 4283583 | 4283842                |

### Available Options

- Special connections

### Applications

- With liquid filled case for applications with high dynamic pressure pulsations or vibration
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and off shore, environmental technology, mechanical engineering and plant construction

### Abbreviations

LM - Lower mount  
 LBM - Lower back mount  
 SS - Stainless steel

Stock items shown in blue print.

Mechanical Pressure > Industrial Gauges > 23X.30

## Type 23X.30

WIKA Type 23X.30 stainless steel gauges have a solid-front/blow-out back safety case. This gauge is an ideal choice for process, chemical, petrochemical, oil exploration and production, power generation applications, and any other application which demands reliable pressure measurement instrumentation.



LM Only

Type 232.30 - Dry case  
Type 233.30 - Liquid filled case (LM only)

### Standard Features

|                      |                          |                    |                               |
|----------------------|--------------------------|--------------------|-------------------------------|
| <b>Size:</b>         | 2½" & 4"                 | <b>Pointer:</b>    | Black aluminum, adjustable    |
| <b>Case:</b>         | 304 stainless steel      | <b>Accuracy:</b>   | (2½") ± 2/1/2% of span        |
| <b>Ring:</b>         | Polished stainless steel |                    | ASME B40.100 Grade A          |
| <b>Wetted Parts:</b> | 316L stainless steel     |                    | (4") ± 1.0% of span (4" size) |
| <b>Window:</b>       | (2½") Polycarbonate      |                    | ASME B40.100 Grade 1A         |
|                      | (4") Safety glass        | <b>Connection:</b> | Lower and back mount          |
| <b>Dial:</b>         | White aluminum           |                    |                               |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **23X.30**.

| Type   | 232.30 (Dry) |         |          |         | 233.30 (Filled) |          |
|--|--------------|---------|----------|---------|-----------------|----------|
|  | 2½"          |         | 4"       |         | 2½"             | 4"       |
| Connection                                   | LM           | LBM     | LM       | LBM     | LM              | LM       |
| Conn. Size                                   | 1/4" NPT     |         | 1/2" NPT |         | 1/4" NPT        | 1/2" NPT |
| Press. Scale                                 | PSI          | PSI     | PSI      | PSI     | PSI             | PSI      |
| 30" Hg                                       | 9305645      | 9367071 | 9366750  | 8596271 | 9305637         |          |
| 30"-0-15 psi                                 | 9365044      | 9365079 |          |         | 9366580         |          |
| 30"-0-30 psi                                 | 9314822      | 9481486 | 9366776  | 9562559 | 9364994         |          |
| 30"-0-60 psi                                 | 9305378      | 9197141 |          |         | 9366598         |          |
| 30"-0-100 psi                                | 9542353      | 9319646 |          |         | 9367853         |          |
| 30"-0-160 psi                                | 9365052      | 9469168 |          |         | 9319638         |          |
| 30"-0-200 psi                                | 9367250      |         |          |         | 9637141         |          |
| 15 psi                                       | 9305653      | 9244808 | 9366830  | 9253289 | 9305394         | 9361081  |
| 30 psi                                       | 9240160      | 9244816 | 9366849  | 9253270 | 9251618         | 9361090  |
| 60 psi                                       | 9240179      | 9244832 | 9366857  | 8596298 | 9251626         | 9361103  |
| 100 psi                                      | 9240187      | 9244840 | 9366865  | 9253084 | 9251634         | 9361111  |
| 160 psi                                      | 9240195      | 9244859 | 9366873  | 8596301 | 9251642         | 9361120  |
| 200 psi                                      | 9240209      | 9244867 | 9366881  | 9253076 | 9251650         | 9361138  |
| 300 psi                                      | 9240217      | 9244875 | 9366890  | 9821082 | 9251669         | 9361146  |
| 400 psi                                      | 9240225      | 9244883 | 9366903  | 8542805 | 9251677         | 9361154  |
| 600 psi                                      | 9240233      | 9244905 | 9366911  | 9253050 | 9251685         | 9361162  |
| 800 psi                                      |              |         |          |         | 9251693         | 9361170  |
| 1,000 psi                                    | 9240411      | 9244913 | 9366938  | 8513554 | 9251707         | 9361189  |
| 1,500 psi                                    | 9240420      | 9244921 | 9366946  | 8541574 | 9251715         | 9361197  |
| 2,000 psi                                    | 9240438      | 9244930 | 9366954  |         | 9251723         | 9361200  |
| 3,000 psi                                    | 9240446      | 9244948 | 9366962  |         | 9251731         | 9361219  |
| 5,000 psi                                    | 9240454      | 9244956 | 9366970  |         | 9251740         | 9361227  |
| 10,000 psi                                   | 9305661      | 9244964 | 9366989  |         | 9305629         | 9361235  |
| 15,000 psi                                   | 9482644      | 9153810 | 9366997  |         | 9542345         | 9361243  |
| 20,000 psi                                   | N/A          | N/A     | 8596336  |         | N/A             | 9829601  |
| Accessory order codes (installed at factory) |              |         |          |         |                 |          |
| Front flange, SS                             | + FF S       |         | + FF S   |         | + FF S          | + FF S   |
| 4½" panel kit                                | --           |         | + PM     |         | --              | + PM     |
| Restrictor                                   | + R          |         | + R      |         | + R             | + R      |

Stock items shown in blue print.

### Available Options

- Dampened movement
- Drag pointer (max. reading indicator)
- Cleaned for oxygen service
- Magnetic or inductive contact switches
- Special connections

### Applications

- With liquid filled case for applications with high dynamic pressure pulsations or vibration
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and off shore, environmental technology, mechanical engineering and plant construction

### Abbreviations

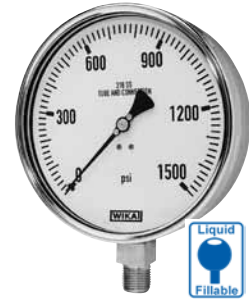
LM - Lower mount  
LBM - Lower back mount  
SS - Stainless steel

Mechanical Pressure > Industrial Gauges > 23X.50

## Type 23X.50

### Applications

- With liquid filled case for applications with high dynamic pressure pulsations or vibration
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction



Type 232.50 - Dry case  
Type 233.50 - Liquid filled case

### Standard Features

- Size:** 2½", 4", 4½" & 6"  
**Case:** 304 SS  
**Wetted Parts:** 316L SS  
**Window:** (2½") Polycarbonate  
 (4" & larger) Safety glass  
**Dial:** White aluminum  
**Ring:** SS polished
- Pointer:** Black aluminum, adjustable  
**Accuracy:** (2½") ±2/12% of span  
 ASME B40.100 Grade A  
 (4" & up) ±1% of span  
 ASME B40.100 Grade 1A  
**Connection:** Lower or back mount

### Available Options

- Dampened movement
- Safety glass window
- Drag pointer (max. reading indicator)
- Cleaned for oxygen service
- Magnetic or inductive contact switches
- Special connections

| Type   | 232.50 (Dry) |         |          |          |          |          |
|--|--------------|---------|----------|----------|----------|----------|
| Size   | 2½"          |         | 4"       |          | 4½"      |          |
| Connection                                   | LM           | CBM     | LM       | LBM      | LM       | LBM      |
| Conn. Size                                   | 1/4" NPT     |         | 1/2" NPT |          | 1/2" NPT |          |
| Press. Scale                                 | PSI          | PSI     | PSI      | PSI      | PSI      | PSI      |
| 30" Hg                                       | 9110992      |         |          |          | 50474511 | 50474588 |
| 30"-0-15 psi                                 |              |         |          |          | 50474529 | 50474596 |
| 30"-0-30 psi                                 |              |         |          |          | 50474537 | 50474600 |
| 30"-0-60 psi                                 |              |         |          |          | 50474545 | 50474618 |
| 30"-0-100 psi                                |              |         |          |          | 50474553 | 50474626 |
| 30"-0-160 psi                                |              |         |          |          | 50474561 | 50474634 |
| 30"-0-200 psi                                |              |         |          |          | 50474570 | 50474642 |
| 10 psi                                       |              |         |          |          |          |          |
| 15 psi                                       | 9111000      | 9110062 | 9319492  |          | 50474171 | 50474359 |
| 30 psi                                       | 9111018      | 9110070 | 9226860  |          | 50474197 | 50474367 |
| 60 psi                                       | 9111026      | 9110089 | 9154671  |          | 50474201 | 50474375 |
| 100 psi                                      | 9111034      | 9110097 | 9189459  | 50999452 | 50474219 | 50474383 |
| 160 psi                                      | 9111042      | 9110100 | 9189467  |          | 50474235 | 50474391 |
| 200 psi                                      | 9111050      | 9110119 | 9154701  |          | 50474243 | 50474405 |
| 300 psi                                      | 9111069      | 9110127 | 9154710  |          | 50474251 | 50474413 |
| 400 psi                                      | 9111077      | 9110143 | 9154728  |          | 50474260 | 50474421 |
| 600 psi                                      | 9111085      | 9110151 |          |          | 50474278 | 50474430 |
| 800 psi                                      |              |         |          |          | 50474286 | 50474448 |
| 1,000 psi                                    | 9111107      | 9110178 | 9154752  | 50997591 | 50474294 | 50474456 |
| 1,500 psi                                    | 9111115      | 9110186 |          |          | 50474308 | 50474464 |
| 2,000 psi                                    | 9111123      | 9110194 | 9212744  |          | 50474316 | 50474472 |
| 3,000 psi                                    | 9111131      | 9110208 | 9232087  |          | 50474324 | 50474481 |
| 5,000 psi                                    | 9111140      | 9110216 | 9145664  |          | 50474332 | 50474499 |
| 10,000 psi                                   | 9111158      | 9110224 | 9319506  |          | 50474341 | 50474502 |
| 15,000 psi                                   |              |         |          |          | 50474651 | 50474677 |
| 20,000 psi                                   |              |         |          |          | 50474669 | 50474685 |
| Accessory order codes (installed at factory) |              |         |          |          |          |          |
| Front flange, SS                             | --           | + FF S  | --       | + FF S   | --       | + FF S   |
| Rear flange, SS                              | + RF S       |         |          |          |          |          |
| Restrictor                                   | + R          |         |          |          |          |          |
| Glycerine fill                               | Type 233.50  |         |          |          |          |          |

| Type   | 232.50 (Dry)   |         |         |
|--|----------------|---------|---------|
| Size   | 6"             |         |         |
| Connection                                   | LM             | LM      | LBM     |
| Conn. Size                                   | 1/2" NPT       |         |         |
| Press. Scale                                 | PSI            | PSI/BAR | PSI     |
| 30" Hg                                       | 4213688        | 4213939 | 4214218 |
| 30"-0-15 psi                                 | 4213696        |         | 4214226 |
| 30"-0-30 psi                                 | 4213700        |         | 4214234 |
| 30"-0-60 psi                                 | 4213718        |         | 4214242 |
| 30"-0-100 psi                                | 4213726        |         | 4214251 |
| 30"-0-160 psi                                | 4213734        |         | 4214269 |
| 30"-0-200 psi                                | 4213742        |         | 4214277 |
| 10 psi                                       |                |         |         |
| 15 psi                                       | 4213751        | 4213947 | 4214285 |
| 30 psi                                       | 4213769        | 4213955 | 4214293 |
| 60 psi                                       | <b>4213777</b> | 4213963 | 4214307 |
| 100 psi                                      | <b>4213785</b> | 4213971 | 4214315 |
| 160 psi                                      | <b>4213793</b> | 4213981 | 4214323 |
| 200 psi                                      | <b>4213807</b> |         | 4214331 |
| 300 psi                                      | <b>4213815</b> | 4213999 | 4214340 |
| 400 psi                                      | 4213823        |         | 4214358 |
| 600 psi                                      | <b>4213831</b> | 4214005 | 4214366 |
| 800 psi                                      | 4213840        |         | 4214374 |
| 1,000 psi                                    | <b>4213858</b> | 4214013 | 4214382 |
| 1,500 psi                                    | 4213866        | 4214021 | 4214391 |
| 2,000 psi                                    | <b>4213874</b> |         | 4214404 |
| 3,000 psi                                    | 4213882        | 4214030 | 4214412 |
| 5,000 psi                                    | 4213891        | 4214048 | 4214421 |
| 10,000 psi                                   | 4213904        | 4214056 | 4214439 |
| 15,000 psi                                   | 4213912        | 4214064 | 4214447 |
| 20,000 psi                                   | 4213921        |         | 4214457 |
| Accessory order codes (installed at factory) |                |         |         |
| Front flange, SS                             | --             | --      | + FF S  |
| Rear flange, SS                              | + RF S         |         |         |
| Restrictor                                   | + R            |         |         |
| Glycerine fill                               | Type 233.50    |         |         |

**Abbreviations** LM - Lower mount,  
LBM - Lower back mount, SS - Stainless steel

Stock items shown in blue print.

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **23X.50**.

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

# Type 21X.34



Specifically designed for the chemical and petroleum processing industries, WIKA XSEL™ process gauges have the construction, materials, and engineering it takes to withstand rugged conditions. They are engineered to deliver years of accurate service, while withstanding vibration, corrosive media, corrosive environments and a wide range of temperature extremes. With the proven durability and performance of the XSEL™ process gauge series, it comes with an industry best warranty.



Type 212.34 - Dry case  
Type 213.34 - Liquid filled case

MECHANICAL PRESSURE

## Standard Features

|                      |                       |                    |                            |
|----------------------|-----------------------|--------------------|----------------------------|
| <b>Size:</b>         | 4½"                   | <b>Pointer:</b>    | Black aluminum, adjustable |
| <b>Case:</b>         | Black Pocan®          | <b>Accuracy:</b>   | ±0.5% of span              |
| <b>Ring:</b>         | Threaded black Pocan® | <b>Connection:</b> | ASME B40.100 Grade 2A      |
| <b>Wetted Parts:</b> | Copper alloy          | <b>Restrictor:</b> | Standard                   |
| <b>Window:</b>       | Acrylic               |                    |                            |
| <b>Dial:</b>         | White aluminum        |                    |                            |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 21X.34.

| Type   | 212.34            | 213.34         |
|--|-------------------|----------------|
| <b>Size</b>                                  | 4½"               |                |
| <b>Connection</b>                            | LM                |                |
| <b>Conn. Size</b>                            | 1/4" NPT          | 1/2" NPT       |
| <b>Press. Scale</b>                          | PSI               | PSI            |
| 30" Hg                                       | 9834036           | 9834257        |
| 30"-0-15 psi                                 | 9834044           | 9834265        |
| 30"-0-30 psi                                 | 9834052           | 9834273        |
| 30"-0-60 psi                                 | 9834060           | 9834281        |
| 30"-0-100 psi                                | 9834079           | 9834290        |
| 30"-0-160 psi                                | 9834087           | 9834303        |
| 30"-0-200 psi                                | 9834095           |                |
| 15 psi                                       | 9834117           | 9834338        |
| 30 psi                                       | 9834125           | 9834346        |
| 60 psi                                       | 9834133           | 9834354        |
| 100 psi                                      | <b>9834141</b>    | <b>9834362</b> |
| 160 psi                                      | 9834150           | <b>9834370</b> |
| 200 psi                                      | <b>9834168</b>    | 9834389        |
| 300 psi                                      | <b>9834176</b>    | <b>9834397</b> |
| 400 psi                                      | 9834184           | 9834400        |
| 600 psi                                      | 9834192           | 9834419        |
| 800 psi                                      | 9834982           | 9834990        |
| 1,000 psi                                    | 9834206           | 9834427        |
| Accessory order codes (installed at factory) |                   |                |
| 4½ panel kit                                 | + PM              |                |
| External zero adjust                         | + EXT ADJ         |                |
| Dampened movement                            | + DAMP            | --             |
| Glycerine fill                               | Type 213.34       |                |
| Silicone fill                                | Type 213.34 + SIL |                |

## Available Options

- Dampened movement
- Safety glass or instrument glass window
- Drag pointer (maximum reading indicator)
- Cleaned for oxygen service
- Magnetic or inductive contact switches
- Special connections

## Applications

- A liquid filled case and socket restrictor are available for applications with high dynamic pressure pulsations or vibration
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in blue print.



## Type 22X.34

XSEL™

Specifically designed for the chemical and petroleum processing industries, WIKA XSEL™ process gauges have the construction, materials, and engineering it takes to withstand rugged conditions. They are engineered to deliver years of accurate service, while withstanding vibration, corrosive media, corrosive environments and a wide range of temperature extremes. WIKA is so confident in the durability and performance of the XSEL™ process gauge series, that it comes with an industry leading warranty.

### Standard Features

|                      |                       |                    |                            |
|----------------------|-----------------------|--------------------|----------------------------|
| <b>Size:</b>         | 4½"                   | <b>Pointer:</b>    | Black aluminum, adjustable |
| <b>Case:</b>         | Black Pocan®          | <b>Accuracy:</b>   | ±0.5% of span              |
| <b>Ring:</b>         | Threaded black Pocan® |                    | ASME B40.100 Grade 2A      |
| <b>Wetted Parts:</b> | 1019 steel / 316L SS  | <b>Connection:</b> | Lower mount                |
| <b>Window:</b>       | Acrylic               | <b>Restrictor:</b> | Standard                   |
| <b>Dial:</b>         | White aluminum        |                    |                            |



Type 222.34 - Dry case  
Type 223.34 - Liquid filled case

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **22X.34**.

| Type                              | 222.34            |
|-----------------------------------|-------------------|
| <b>Size</b>                       | 4½"               |
| <b>Connection</b>                 | LM                |
| <b>Conn. Size</b>                 | 1/2" NPT          |
| <b>Press. Scale</b>               | PSI               |
| 30" Hg                            | 4332670           |
| 30"-0-15 psi                      | 4353639           |
| 30"-0-30 psi                      | 4353647           |
| 30"-0-60 psi                      | 4353656           |
| 30"-0-100 psi                     | 4353664           |
| 30"-0-160 psi                     | 4353672           |
| 30"-0-200 psi                     | 4353680           |
| 15 psi                            | 4353532           |
| 30 psi                            | 4332688           |
| 60 psi                            | 4332696           |
| 100 psi                           | 4332709           |
| 160 psi                           | 4332717           |
| 200 psi                           | 4332725           |
| 300 psi                           | 4353698           |
| 400 psi                           | 4332733           |
| 600 psi                           | 4332741           |
| 800 psi                           | 4353702           |
| 1,000 psi                         | 4332751           |
| 1,500 psi                         | 4353728           |
| 2,000 psi                         | 4353736           |
| 3,000 psi                         | 4353745           |
| 5,000 psi                         | 4353753           |
| Accessory order codes (installed) |                   |
| 4½ panel kit                      | + PM              |
| External zero adjust              | + EXT ADJ         |
| Dampened movement                 | + DAMP            |
| Glycerine fill                    | Type 213.34       |
| Silicone fill                     | Type 213.34 + SIL |

### Available Options

- Dampened movement
- Safety glass or instrument glass window
- Drag pointer (maximum reading indicator)
- Cleaned for oxygen service
- Magnetic or inductive contact switches
- Special connections

### Applications

- A liquid filled case and socket restrictor are available for applications with high dynamic pressure pulsations or vibration
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and off shore, environmental technology, mechanical engineering and plant construction

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in blue print.



Mechanical Pressure > Process Gauges > 23X.34

# Type 23X.34



Specifically designed for the chemical and petroleum processing industries, WIKA XSEL™ process gauges have the construction, materials, and engineering it takes to withstand rugged conditions. They are engineered to deliver years of accurate service, while withstanding vibration, corrosive media, corrosive environments and a wide range of temperature extremes. WIKA is so confident in the durability and performance of the XSEL™ process gauge series, that it comes with an industry leading warranty.

## Standard Features

|                      |                       |                    |                            |
|----------------------|-----------------------|--------------------|----------------------------|
| <b>Size:</b>         | 4½" & 6"              | <b>Pointer:</b>    | Black aluminum, adjustable |
| <b>Case:</b>         | Black Pocan®          | <b>Accuracy:</b>   | ±0.5% of span              |
| <b>Ring:</b>         | Threaded black Pocan® | <b>Connection:</b> | ASME B40.100 Grade 2A      |
| <b>Wetted Parts:</b> | 316L SS               | <b>Restrictor:</b> | Standard                   |
| <b>Window:</b>       | Acrylic               |                    |                            |
| <b>Dial:</b>         | White aluminum        |                    |                            |



Type 232.34 - Dry case  
Type 233.34 - Liquid filled case

MECHANICAL PRESSURE

| Type   | 232.34 (Dry)   |                   |                | 233.34 (Filled) |           |                |          |
|--|----------------|-------------------|----------------|-----------------|-----------|----------------|----------|
| Size   | 4½"            |                   |                | 4½"             |           |                |          |
| Connection                                   | LM             | LM                | LBM            | LM              | LM        |                |          |
| Conn. Size                                   | 1/4" NPT       | 1/2" NPT          | 1/2" NPT       | 1/4" NPT        | 1/2" NPT  |                |          |
| Press. Scale                                 | PSI            | PSI               | PSI/KPA        | PSI             | PSI       | PSI/KPA        |          |
| 30" Hg                                       | <b>9834478</b> | 9834729           | 9837604        | 4217004         | 9833735   | 9833914        | 9836769  |
| 30"-0-15 psi                                 | 9834486        | <b>9834737</b>    | 9837566        |                 | 9833744   | 9833922        | 9836777  |
| 30"-0-30 psi                                 | 9834494        | <b>9834745</b>    | 9837523        | 4220854         | 9833752   | <b>9833930</b> | 9836785  |
| 30"-0-60 psi                                 | 9834508        | <b>9834753</b>    | 9837485        |                 | 9833760   | 9833948        | 9836794  |
| 30"-0-100 psi                                | 9834516        | 9834761           | 9792818        |                 | 9833778   | 9833956        | 9836807  |
| 30"-0-160 psi                                | 9834524        | 9834770           |                |                 | 9833786   | 9833965        |          |
| 30"-0-200 psi                                | 9834532        | 9834788           | 9837361        |                 | 9833795   | 9833973        |          |
| 30"-0-300 psi                                | 4260163        | 4260180           |                |                 |           |                |          |
| 30"-0-400 psi                                | 4260171        | 4260198           |                |                 |           |                |          |
| 15 psi                                       | 9834559        | <b>9834800</b>    | 9776885        | 4242131         | 9833808   | 9833981        | 9836824  |
| 30 psi                                       | <b>9834567</b> | <b>9834818</b>    | 9837680        | 4247923         | 9833816   | <b>9833999</b> | 9836832  |
| 60 psi                                       | <b>9834575</b> | <b>9834826</b>    | 9776877        | 9797607         | 9833825   | <b>9834006</b> | 9836840  |
| 100 psi                                      | <b>9834583</b> | <b>9834834</b>    | <b>9837760</b> | 9797615         | 9833833   | <b>9834015</b> | 9836858  |
| 160 psi                                      | <b>9834591</b> | <b>9834842</b>    | <b>9776869</b> | 9797624         | 9833841   | <b>9834023</b> | 9836866  |
| 200 psi                                      | <b>9834605</b> | <b>9834850</b>    | <b>9837841</b> | 9797632         | 9833859   | <b>9834031</b> | 9836875  |
| 300 psi                                      | <b>9834613</b> | <b>9834869</b>    | <b>9837884</b> | 9797640         | 9833867   | <b>9834049</b> | 9836883  |
| 400 psi                                      | 9834621        | <b>9834877</b>    | <b>8985116</b> | 9797658         | 9833875   | <b>9834057</b> | 9836891  |
| 600 psi                                      | <b>9834630</b> | <b>9834885</b>    | <b>9837965</b> | 9797666         | 9833884   | <b>9834065</b> | 9836905  |
| 800 psi                                      | 9835008        | <b>9834974</b>    |                | 9797675         | 9833905   | 9834155        |          |
| 1,000 psi                                    | 9834648        | <b>9834893</b>    | 9778918        | 9797683         | 9833892   | <b>9834074</b> | 9836913  |
| 1,500 psi                                    | 9793318        | <b>9834907</b>    | 9838082        | 4247931         |           | <b>9834082</b> | 9836921  |
| 2,000 psi                                    | 9793661        | <b>9834915</b>    | 9838120        | 4247940         |           | <b>9834090</b> | 9836939  |
| 3,000 psi                                    | 9748911        | <b>9834923</b>    | 9838163        | 4247958         |           | <b>9834104</b> | 9836947  |
| 5,000 psi                                    | 9793521        | <b>9834931</b>    | 9838201        | 4247966         |           | 9834112        | 9836955  |
| 10,000 psi                                   | 9793679        | 9834940           | 9838244        |                 |           | 9834120        | \$184.25 |
| 15,000 psi                                   |                | 9834958           |                |                 |           | 9834138        |          |
| 20,000 psi                                   | N/A            | 9834966           |                |                 | N/A       | 9834146        |          |
| 30,000 psi                                   | N/A            | 4255691           |                |                 | N/A       |                |          |
| Accessory order codes (installed at factory) |                |                   |                |                 |           |                |          |
| 4½ panel kit                                 |                |                   |                |                 | + PM      |                |          |
| External zero adjust                         |                |                   |                |                 | + EXT ADJ |                |          |
| Dampened movement                            |                | + DAMP            |                |                 |           | --             |          |
| Glycerine fill                               |                | Type 233.34       |                |                 |           | --             |          |
| Silicone fill                                |                | Type 233.34 + SIL |                |                 |           | -              |          |

## Available Options

- Dampened movement
- Safety glass or instrument glass window
- Drag pointer (maximum reading indicator)
- Cleaned for oxygen service
- Magnetic or inductive contact switches
- Special connections

## Applications

- A liquid filled case and socket restrictor are available for applications with high dynamic pressure pulsations or vibration
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/ petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **23X.34**.

**Abbreviations**  
LM - Lower mount  
SS - Stainless steel

Stock items shown in blue print

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

# Type 23X.34

MECHANICAL PRESSURE

| Type   | 232.34 "Damp"     | 232.34 (Dry) |
|--|-------------------|--------------|
| <b>Size</b>                                  | <b>4½"</b>        | <b>6"</b>    |
| <b>Connection</b>                            | LM                | LM           |
| <b>Conn. Size</b>                            | 1/2" NPT          | 1/2" NPT     |
| <b>Press. Scale</b>                          | PSI               | PSI          |
| 30" Hg                                       | 4334478           | 4317492      |
| 30"-0-15 psi                                 |                   |              |
| 30"-0-30 psi                                 |                   |              |
| 30"-0-60 psi                                 |                   |              |
| 30"-0-100 psi                                |                   |              |
| 30"-0-160 psi                                |                   |              |
| 30"-0-200 psi                                |                   |              |
| 30"-0-300 psi                                |                   |              |
| 30"-0-400 psi                                |                   |              |
| 15 psi                                       | 4339623           |              |
| 30 psi                                       | 4334486           | 4317505      |
| 60 psi                                       | 4334494           | 4317513      |
| 100 psi                                      | 4333960           | 4317590      |
| 160 psi                                      | 4333978           | 4317521      |
| 200 psi                                      | 4334507           | 4317531      |
| 300 psi                                      | 4337329           | 4317549      |
| 400 psi                                      | 4333986           |              |
| 600 psi                                      | 4334515           | 4317557      |
| 800 psi                                      | 4334523           |              |
| 1,000 psi                                    | 4334531           | 4317565      |
| 1,500 psi                                    | 4334541           | 4343281      |
| 2,000 psi                                    | 4333994           |              |
| 3,000 psi                                    | 4334559           |              |
| 5,000 psi                                    | 4334567           |              |
| 10,000 psi                                   |                   |              |
| 15,000 psi                                   |                   |              |
| 20,000 psi                                   |                   |              |
| 30,000 psi                                   |                   |              |
| Accessory order codes (installed at factory) |                   |              |
| 4½ panel kit                                 | + PM              | --           |
| External zero adjust                         | + EXT ADJ         | --           |
| Glycerine fill                               | Type 233.34       |              |
| Silicone fill                                | Type 233.34 + SIL |              |

| Liquid Fill Conversion Kits<br>(Use for preparing a dry gauge for liquid filling) |       |         |
|---|-------|---------|
| For use with  | Conn. | P/N     |
| Glycerine/Silicone<br>Material: EPDM  | LM    | 1126768 |
|   | LBM   | 2044480 |
| Halocarbon<br>Material: Viton   | LM    | 1654268 |
|   | LBM   | 2044498 |

**Abbreviations**  
 LM - Lower mount  
 LBM - Lower back mount  
 SS - Stainless steel

Stock items shown in blue print

# Type 26X.34



Specifically designed for the chemical and petroleum processing industries, WIKA XSEL™ process gauges have the construction, materials, and engineering it takes to withstand rugged conditions. They are engineered to deliver years of accurate service, while withstanding vibration, corrosive media, corrosive environments and a wide range of temperature extremes. WIKA is so confident in the durability and performance of the XSEL™ process gauge series, that it comes with an industry leading warranty.

## Standard Features

|                      |                       |                    |                            |
|----------------------|-----------------------|--------------------|----------------------------|
| <b>Size:</b>         | 4½"                   | <b>Pointer:</b>    | Black aluminum, adjustable |
| <b>Case:</b>         | Black Pocan®          | <b>Accuracy:</b>   | ±0.5% of span              |
| <b>Ring:</b>         | Threaded black Pocan® |                    | ASME B40.100 Grade 2A      |
| <b>Wetted Parts:</b> | Monel M400 alloy      | <b>Connection:</b> | Lower mount                |
| <b>Window:</b>       | Acrylic               | <b>Restrictor:</b> | Standard                   |
| <b>Dial:</b>         | White aluminum        |                    |                            |

Type 262.34 - Dry case  
Type 263.34 - Liquid filled case

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 26X.34.

| Type                              | 262.34            |
|-----------------------------------|-------------------|
| <b>Size</b>                       | 4½"               |
| <b>Connection</b>                 | LM                |
| <b>Conn. Size</b>                 | 1/2" NPT          |
| <b>Press. Scale</b>               | PSI               |
| 30" Hg                            | 9835016           |
| 30"-0-15 psi                      | 9835024           |
| 30"-0-30 psi                      | 9835032           |
| 30"-0-60 psi                      | 9835040           |
| 30"-0-100 psi                     | 9835059           |
| 30"-0-160 psi                     | 9835067           |
| 30"-0-200 psi                     | 9835075           |
| 15 psi                            | 9835091           |
| 30 psi                            | 9835105           |
| 60 psi                            | 9835113           |
| 100 psi                           | 9835121           |
| 160 psi                           | 9835130           |
| 200 psi                           | <b>9835148</b>    |
| 300 psi                           | 9835156           |
| 400 psi                           | 9835164           |
| 600 psi                           | <b>9835172</b>    |
| 800 psi                           | 9835180           |
| 1,000 psi                         | 9835199           |
| 1,500 psi                         | 9835202           |
| 2,000 psi                         | 9835210           |
| 3,000 psi                         | 9835229           |
| 5,000 psi                         | 9835237           |
| 10,000 psi                        |                   |
| 15,000 psi                        |                   |
| Accessory order codes (installed) |                   |
| 4½ panel kit                      | + PM              |
| External zero adjust              | + EXT ADJ         |
| Dampened movement                 | + DAMP            |
| Glycerine fill                    | Type 263.34       |
| Silicone fill                     | Type 263.34 + SIL |

## Available Options

- Dampened Movement
- Safety glass or instrument glass window
- Drag pointer (max. reading indicator)
- Cleaned for oxygen service
- Magnetic or inductive contact switches
- Special connections

## Applications

- A liquid filled case and socket restrictor are available for applications with high dynamic pressure pulsations or vibration
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

## Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in blue print

## Type 232.34DD

WIKA Type 232.34DD Direct Drive Process Gauges feature a direct drive, movementless pressure system. With a shock absorbing Bourdon tube design, these gauges are an effective means for guarding against severe shock and vibration applications. The 232.34DD is manufactured in a standard yellow 4½" process gauge style case (additional colors available) and comes standard completely equipped with an external zero adjustment and a high 0.5% full scale accuracy.



### Standard Features

|                      |                         |                    |                                |
|----------------------|-------------------------|--------------------|--------------------------------|
| <b>Size:</b>         | 4½"                     | <b>Pointer:</b>    | Black aluminum, non-adjustable |
| <b>Case:</b>         | Yellow Pocan®           | <b>Accuracy:</b>   | ±0.5% of span                  |
| <b>Ring:</b>         | Threaded yellow Pocan®  | <b>ASME:</b>       | ASME B40.100 Grade 2A          |
| <b>Wetted Parts:</b> | X-750 Inconel / 316L SS | <b>Connection:</b> | Lower mount                    |
| <b>Window:</b>       | Acrylic                 | <b>Restrictor:</b> | Standard                       |
| <b>Dial:</b>         | White aluminum          |                    |                                |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **232.34DD**.

| Type                | 232.34DD |
|---------------------|----------|
| <b>Size</b>         | 4½"      |
| <b>Connection</b>   | LM       |
| <b>Conn. Size</b>   | ½" NPT   |
| <b>Press. Scale</b> | PSI      |
| -30"-0-30 psi       | 4206838  |
| -30"-0-60 psi       | 4332769  |
| -30"-0-150 psi      | 4332785  |
| -30"-0-300 psi      | 4342348  |
| 0-30 psi            | 4213117  |
| 0-60 psi            | 4206846  |
| 0-100 psi           | 4332822  |
| 0-160 psi           | 4332831  |
| 0-200 psi           | 4332840  |
| 0-300 psi           | 4332858  |
| 0-500 psi           | 4332874  |
| 0-1,000 psi         | 4332891  |
| 0-1,500 psi         | 4332903  |
| 0-2,000 psi         | 4346242  |
| 0-3,000 psi         | 4379604  |
| 0-5,000 psi         | 4332939  |
| 0-10,000 psi        | 50840363 |

### Available Options

- Cleaned for use in oxygen service
- Panel mount kit
- Special connection

### Applications

- Where high dynamic pressure pulsations or vibration exist
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

**Abbreviations**  
 LM - Lower mount  
 SS - Stainless steel

Stock items shown in blue print

# Type 212.25

WIKA's Type 212.25 4½" and 6" pressure gauges feature a solid-front aluminum case with a hinged ring for easy access to the adjustable pointer. These gauges are supplied with three threaded bolts in the back of the case which line up with existing standard panel hole patterns.



MECHANICAL PRESSURE

## Standard Features

|                      |                            |                    |                       |
|----------------------|----------------------------|--------------------|-----------------------|
| <b>Size:</b>         | 4½" & 6"                   | <b>Accuracy:</b>   | ±0.5% of span         |
| <b>Case:</b>         | Black-painted aluminum     |                    | ASME B40.100 Grade 2A |
| <b>Ring:</b>         | Black-painted aluminum     | <b>Connection:</b> | Lower back mount      |
| <b>Wetted Parts:</b> | Copper alloy               |                    |                       |
| <b>Window:</b>       | Flat instrument glass      |                    |                       |
| <b>Dial:</b>         | White aluminum             |                    |                       |
| <b>Pointer:</b>      | Black aluminum, adjustable |                    |                       |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 212.25.

| Type   | 212.25   |          |          |
|--|----------|----------|----------|
| Size   | 4½"      | 6"       |          |
| <b>Connection</b>                            | LBM      |          |          |
| <b>Conn. Size</b>                            | 1/4" NPT | 1/2" NPT | 1/2" NPT |
| <b>Press. Scale</b>                          | PSI      | PSI      | PSI      |
| 30" Hg                                       | 4234970  | 4235223  | 4235976  |
| 30"-0-15 psi                                 | 4234988  | 4235231  | 4235984  |
| 30"-0-30 psi                                 | 4234996  | 4235240  | 4235992  |
| 30"-0-60 psi                                 | 4235002  | 4235258  | 4236009  |
| 30"-0-100 psi                                | 4235011  | 4235266  | 4236017  |
| 30"-0-160 psi                                | 4235029  | 4235274  | 4236025  |
| 30"-0-200 psi                                | 4235037  | 4235282  | 4236033  |
| 15 psi                                       | 4235045  | 4235291  | 4236041  |
| 30 psi                                       | 4235053  | 4235304  | 4236050  |
| 60 psi                                       | 4235061  | 4235312  | 4236068  |
| 100 psi                                      | 4235070  | 4235321  | 4236076  |
| 160 psi                                      | 4235088  | 4235339  | 4236084  |
| 200 psi                                      | 4235096  | 4235347  | 4236092  |
| 300 psi                                      | 4235100  | 4235355  | 4236106  |
| 400 psi                                      | 4235118  | 4235363  | 4236114  |
| 600 psi                                      | 4235126  | 4235371  | 4236122  |
| 800 psi                                      | 4235134  | 4235381  | 4236131  |
| 1,000 psi                                    | 4235142  | 4235399  | 4236149  |
| Accessory order codes (installed at factory) |          |          |          |
| Restrictor                                   | + R      |          |          |

## Available Options

- Dampened movement
- Safety glass window
- Cleaned for oxygen service
- Special connections
- Instrument glass window

## Applications

- Pressure monitoring panels
- Suitable for gaseous or liquid media that will not obstruct the pressure system or attack copper alloy parts
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

## Abbreviations

LBM - Lower back mount  
SS - Stainless steel

Stock items shown in blue print



# Type 232.25

WIKA Type 232.25 gauges have a glass covered hinged ring front with securing screws as standard. The adjustable pointer is easily accessed under the hinged ring front. Designed for panel mounting, the Type 232.25 gauge features 316 SS wetted parts and a one-piece aluminum solid-front safety case design. Well-suited for installations in process panel and control applications, Type 232.25 gauges meet ASME Grade 2A accuracy standards.



## Standard Features

|                      |                        |                    |                            |
|----------------------|------------------------|--------------------|----------------------------|
| <b>Size:</b>         | 4½" & 6"               | <b>Pointer:</b>    | Black aluminum, adjustable |
| <b>Case:</b>         | Black-painted aluminum | <b>Accuracy:</b>   | ±0.5% of span              |
| <b>Ring:</b>         | Black-painted aluminum |                    | ASME B40.100 Grade 2A      |
| <b>Wetted Parts:</b> | 316L stainless steel   | <b>Connection:</b> | Lower back mount           |
| <b>Window:</b>       | Flat instrument glass  |                    |                            |
| <b>Dial:</b>         | White aluminum         |                    |                            |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 232.25.

| Type   | 232.25   |          |          |
|--|----------|----------|----------|
| Size   | 4½"      |          | 6"       |
| Connection                                   | LBM      |          |          |
| Conn. Size                                   | 1/4" NPT | 1/2" NPT | 1/2" NPT |
| Press. Scale                                 | PSI      | PSI      | PSI      |
| 30" Hg                                       | 4235470  | 4235721  | 4236220  |
| 30"-0-15 psi                                 | 4235488  | 4235739  | 4236238  |
| 30"-0-30 psi                                 | 4235496  | 4235747  | 4236246  |
| 30"-0-60 psi                                 | 4235509  | 4235755  | 4236254  |
| 30"-0-100 psi                                | 4235517  | 4235763  | 4236262  |
| 30"-0-160 psi                                | 4235525  | 4235771  | 4236271  |
| 30"-0-200 psi                                | 4235533  | 4235780  | 4236280  |
| 15 psi                                       | 4235541  | 4235798  | 4236298  |
| 30 psi                                       | 4235551  | 4235801  | 4236301  |
| 60 psi                                       | 4235569  | 4235810  | 4236319  |
| 100 psi                                      | 4235577  | 4235828  | 4236327  |
| 160 psi                                      | 4235585  | 4235836  | 4236335  |
| 200 psi                                      | 4235593  | 4235844  | 4236343  |
| 300 psi                                      | 4235606  | 4235852  | 4236351  |
| 400 psi                                      | 4235614  | 4235861  | 4236361  |
| 600 psi                                      | 4235622  | 4235879  | 4236379  |
| 800 psi                                      | 4235631  | 4235887  | 4236387  |
| 1,000 psi                                    | 4235640  | 4235895  | 4236395  |
| 1,500 psi                                    | 4235658  | 4235909  | 4236408  |
| 2,000 psi                                    | 4235666  | 4235917  | 4236416  |
| 3,000 psi                                    | 4235674  | 4235925  | 4236424  |
| 5,000 psi                                    | 4235682  | 4235933  | 4236432  |
| 10,000 psi                                   | 4235691  | 4235941  | 4236441  |
| 15,000 psi                                   | 4235703  | 4235950  | 4236450  |
| 20,000 psi                                   | 4235711  | 4235968  | 4236468  |
| Accessory order codes (installed at factory) |          |          |          |
| Restrictor                                   | + R      |          |          |

## Available Options

- Dampened movement
- Safety glass window
- Cleaned for oxygen service
- Special connections
- Instrument glass window

## Applications

- Pressure monitoring panels
- Suitable for corrosive gaseous or liquid media that will not clog the pressure system or attack 316L SS parts
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

## Abbreviations

LBM - Lower back mount  
 SS - Stainless steel

Stock items shown in blue print

# Type 4XX.12

WIKA Type 422.12 and 432.12 Sealgauges® offer superior protection from viscous and crystallizing media. Type 422.12 features carbon steel wetted parts, while Type 432.12 offers the corrosion protection of 316 stainless steel wetted parts. Each model is supplied with a standard black cast iron case and standard 1/2" NPT female connection.



MECHANICAL PRESSURE

## Standard Features

|                      |                                       |                    |                            |
|----------------------|---------------------------------------|--------------------|----------------------------|
| <b>Size:</b>         | 4" & 6"                               | <b>Window:</b>     | Flat instrument glass      |
| <b>Case:</b>         | Black-painted cast iron               | <b>Dial:</b>       | White aluminum             |
| <b>Ring:</b>         | Black-painted SS                      | <b>Pointer:</b>    | Black aluminum, adjustable |
| <b>Wetted Parts:</b> | (41x.12) carbon steel,<br>SS & Buna-N | <b>Accuracy:</b>   | ±1.5% of span              |
|                      | (43x.12) SS & Buna-N                  | <b>Connection:</b> | Lower mount                |

### Overpressure Safety:

- ranges ≤ 6 psi: 5 x full scale value
- ranges > 6 psi: 3 x full scale value, max 600 psi protection

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **4XX.12**.

| Type                  | 422.12          |     | 432.12  |     |
|-----------------------|-----------------|-----|---------|-----|
| Size                  | 4"              | 6"  | 4"      | 6"  |
| <b>Connection</b>     | LM              |     |         |     |
| <b>Conn. Size</b>     | 1/2" NPT Female |     |         |     |
| <b>Press. Scale</b>   | PSI             | PSI | PSI     | PSI |
| 30" Hg                |                 |     | 9736336 |     |
| 30"-0-15 psi          |                 |     |         |     |
| 30"-0-30 psi          |                 |     | 9740087 |     |
| 30"-0-60 psi          |                 |     | 9740095 |     |
| 30"-0-100 psi         |                 |     | 9744105 |     |
| 30"-0-160 psi         |                 |     |         |     |
| 30"-0-200 psi         |                 |     |         |     |
| 10 psi                | 9744113         |     |         |     |
| 15 psi                |                 |     | 8683581 |     |
| 30 psi                | 8558337         |     | 8558310 |     |
| 60 psi                | 8681791         |     | 8683590 |     |
| 100 psi               | 8558345         |     | 8657360 |     |
| 160 psi               |                 |     | 8683603 |     |
| 200 psi               | 8681813         |     | 9744121 |     |
| 300 psi               |                 |     | 8547092 |     |
| 400 psi               |                 |     | 9697565 |     |
| 600 psi               | 9744139         |     | 8681236 |     |
| 5" H <sub>2</sub> O   |                 |     |         |     |
| 10" H <sub>2</sub> O  |                 |     |         |     |
| 15" H <sub>2</sub> O  |                 |     |         |     |
| 30" H <sub>2</sub> O  |                 |     |         |     |
| 60" H <sub>2</sub> O  |                 |     |         |     |
| 100" H <sub>2</sub> O |                 |     |         |     |
| 200" H <sub>2</sub> O |                 |     |         |     |

## Available Options

- Open flange connections
- Liquid filled case design
- Special wetted materials
- Electrical alarm contacts

(Dry cases not field fillable)

## Applications

- With liquid filled case for applications with high dynamic pressure pulsations or vibration
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in blue print

Mechanical Pressure > Industrial Gauges > 43X.50

## Type 43X.50

WIKA Type 432.50 Sealgauges® feature all stainless steel construction and are built to withstand corrosive, highly viscous and crystallizing media. This Sealgauge® is ideal for applications in harsh environments such as pulp and paper processing, chemical, petrochemical, and in water and sewage treatment plants.



Type 432.50 - dry case  
Type 433.50 - filled case

### Standard Features

|                      |                             |                    |                            |
|----------------------|-----------------------------|--------------------|----------------------------|
| <b>Size:</b>         | 4" & 6"                     | <b>Dial:</b>       | White aluminum             |
| <b>Case:</b>         | 304 SS                      | <b>Pointer:</b>    | Black aluminum, adjustable |
| <b>Ring:</b>         | 304 SS                      | <b>Accuracy:</b>   | ±2.5% of span              |
| <b>Wetted Parts:</b> | 316L SS, Teflon®, Duratherm | <b>Connection:</b> | Lower mount                |
| <b>Window:</b>       | Safety glass                |                    |                            |

### Overpressure Safety:

5 x full scale value, max 600 psi protection

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **43X.50**.

| Type                  | 432.50 (Dry)    |     | 433.50 (Filled) |     |
|-----------------------|-----------------|-----|-----------------|-----|
| Size                  | 4"              | 6"  | 4"              | 6"  |
| <b>Connection</b>     | LM              |     |                 |     |
| <b>Conn. Size</b>     | 1/2" NPT Female |     |                 |     |
| <b>Press. Scale</b>   | PSI             | PSI | PSI             | PSI |
| 30" Hg                |                 |     |                 |     |
| 30"-0-15 psi          |                 |     |                 |     |
| 30"-0-30 psi          | 9744147         |     |                 |     |
| 30"-0-60 psi          | 9744155         |     |                 |     |
| 30"-0-100 psi         |                 |     |                 |     |
| 30"-0-160 psi         | 9744164         |     |                 |     |
| 30"-0-200 psi         |                 |     |                 |     |
| 10 psi                |                 |     | 8737134         |     |
| 15 psi                |                 |     |                 |     |
| 30 psi                | 8683360         |     | 9697603         |     |
| 60 psi                | 8683379         |     | 8605548         |     |
| 100 psi               | 8597952         |     | 8511950         |     |
| 160 psi               | 8683387         |     | 8737118         |     |
| 200 psi               | 9744172         |     | 8691320         |     |
| 300 psi               | 8683409         |     | 8737126         |     |
| 400 psi               | 9697581         |     | 8549176         |     |
| 600 psi               | 9697599         |     | 8503370         |     |
| 5" H <sub>2</sub> O   |                 |     |                 |     |
| 10" H <sub>2</sub> O  |                 |     |                 |     |
| 15" H <sub>2</sub> O  |                 |     |                 |     |
| 30" H <sub>2</sub> O  |                 |     |                 |     |
| 60" H <sub>2</sub> O  |                 |     |                 |     |
| 100" H <sub>2</sub> O |                 |     |                 |     |

Stock items shown in **blue** print

### Available Options

- Open flange connections
- Case filling
- Special wetted materials
- Electrical alarm contacts
- Transmitters

(Dry cases not field fillable.)

### Applications

- With liquid filled case for applications with high dynamic pressure pulsations or vibration
- Suitable in corrosive environments for gaseous, liquid or highly viscous media.
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Mechanical Pressure > Low Pressure Gauges > A2G-10

## Type A2G-10

This low pressure DP gauge is designed to measure dry, clean non-aggressive gases and air. This instrument is ideally suited to measure differential pressure in filtration systems, pressure monitoring for HVAC, air handlers and ventilation systems and for pressure monitoring of clean rooms, gas scrubbers and dust collection systems.



### Standard Features

|                      |                                |                    |   |
|----------------------|--------------------------------|--------------------|---|
| <b>Size:</b>         | 4½"                            | <b>Pointer:</b>    | Black aluminum                            |
| <b>Case:</b>         | High-impact polycarbonate      | <b>Accuracy:</b>   | ± 3% of span                              |
| <b>Wetted Parts:</b> | Silicone rubber, polycarbonate | <b>Connection:</b> | Lower or back mount                       |
| <b>Window:</b>       | Polycarbonate                  | <b>Mounting:</b>   | 3 self-tapping mounting screws (standard) |
| <b>Dial:</b>         | White aluminum                 |                    |   |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **A2G-10**.

| Type              | A2G-10             |             |
|-------------------|--------------------|-------------|
| <b>Size</b>       | 4½"                |             |
| <b>Conn. Size</b> | 2 x 1/8" Hose Barb |             |
| <b>Connection</b> | Lower              | Back        |
| <b>Mounting</b>   | Surface Mount      | Panel Mount |
| -0.1/+0.1 InWC    | 50677012           | 50676814    |
| -0.2/+0.2 InWC    | 50677039           | 50676822    |
| -0.5/+0.5 InWC    | 50677055           | 50676831    |
| 1/+1 InWC         | 50807132           | 50807099    |
| -2/+2 InWC        | 50807145           | 50807102    |
| -4/+4 InWC        | 50807153           | 50807111    |
| -6/+6 InWC        | 50807161           | 50807129    |
| 0/0.25 InWC       | 50677063           | 50676857    |
| 0/0.4 InWC        | 50677098           | 50676865    |
| 0/0.5 InWC        | 50677080           | 50676873    |
| 0/1 InWC          | 50556673           | 50676881    |
| 0/2 InWC          | 50556681           | 50676890    |
| 0/3 InWC          | 50556690           | 50676903    |
| 0/4 InWC          | 50556703           | 40246582    |
| 0/5 InWC          | 50686178           | 50676911    |
| 0/6 InWC          | 50556738           | 40214583    |
| 0/8 InWC          | 50556746           | 50676920    |
| 0/10 InWC         | 50556754           | 50676938    |
| 0/12 InWC         | 40214605           | 50676946    |
| 0/15 InWC         | 50556762           | 40246604    |
| 0/20 InWC         | 50556771           | 50676954    |
| 0/25 InWC         | 50556789           | 50676962    |
| 0/30 InWC         | 50677101           | 50676971    |
| 0/40 InWC         | 50677110           | 50676989    |
| 0/50 InWC         | 50677128           | 50676997    |

### Available Options

- Other pressure units (Pa, kPa, mmWC, cmWC, mbar) available in equivalent ranges
- Custom artwork with custom logo - background colors available upon request
- Adaptor for compression fitting

### Applications

- For dry, clean, non-aggressive gases, usually air
- Fan and blower monitoring
- Differential pressure monitoring in filters
- Overpressure monitoring in cleanrooms

Stock items shown in blue print

Mechanical Pressure > Low Pressure Gauges > A2G-15

## Type A2G-15

This low pressure DP gauge is designed to measure dry, clean non-aggressive gases and air. This instrument is ideally suited to measure differential pressure in filtration systems, pressure monitoring for HVAC, air handlers and ventilation systems and for pressure monitoring of clean rooms, gas scrubbers and dust collection systems.



air2guide<sup>P+E</sup>

### Standard Features

|                      |                                |                    |   |
|----------------------|--------------------------------|--------------------|---|
| <b>Size:</b>         | 4½"                            | <b>Pointer:</b>    | Black aluminum                            |
| <b>Case:</b>         | High-impact polycarbonate      | <b>Accuracy:</b>   | ± 3% of span                              |
| <b>Wetted Parts:</b> | Silicone rubber, polycarbonate | <b>Connection:</b> | Lower or back mount                       |
| <b>Window:</b>       | Polycarbonate                  | <b>Mounting:</b>   | 3 self-tapping mounting screws (standard) |
| <b>Dial:</b>         | White aluminum                 |                    |   |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **A2G-15**.

| Type                       | A2G-15                |                      |                       |                      |
|----------------------------|-----------------------|----------------------|-----------------------|----------------------|
| <b>Size</b>                | 4½"                   |                      |                       |                      |
| <b>Conn. Size</b>          | 2 x G1/8 Female       |                      |                       |                      |
| <b>Connection</b>          | Lower                 |                      | Back                  |                      |
| <b>Mounting</b>            | Surface Mount         |                      | Panel Mount           |                      |
| <b>Elec. Output Signal</b> | 4 ... 20 mA<br>2-wire | 0 ... 10 V<br>3-wire | 4 ... 20 mA<br>2-wire | 0 ... 10 V<br>3-wire |
| -0.1/+0.1 InWC             | 50693522              | 50693921             | 50692798              | 50693166             |
| -0.2/+0.2 InWC             | 50693531              | 50693930             | 50692801              | 50693191             |
| -0.5/+0.5 InWC             | 50693549              | 50693956             | 50692810              | 50693204             |
| 1/+1 InWC                  | 50807366              | 50807412             | 50807218              | 50807251             |
| -2/+2 InWC                 | 50807374              | 50807447             | 50807226              | 50807277             |
| -4/+4 InWC                 | 50807382              | 50807463             | 50807234              | 50807293             |
| -6/+6 InWC                 | 50807391              | 50807471             | 50807242              | 50807307             |
| 0/0.25 InWC                | 50693557              | 50693964             | 50692828              | 50693212             |
| 0/0.4 InWC                 | 50693565              | 50693972             | 50692836              | 50693221             |
| 0/0.5 InWC                 | 50693573              | 50693999             | 50692844              | 50693239             |
| 0/1 InWC                   | 50693581              | 50694006             | 50692852              | 50693247             |
| 0/2 InWC                   | 50693590              | 50694022             | 50692861              | 50693255             |
| 0/3 InWC                   | 50693603              | 50694031             | 50692879              | 50693271             |
| 0/4 InWC                   | 50693611              | 50694049             | 50692887              | 50693280             |
| 0/5 InWC                   | 50693620              | 50694057             | 50692895              | 50693298             |
| 0/6 InWC                   | 50693638              | 50694065             | 50692909              | 50693301             |
| 0/8 InWC                   | 50693646              | 50694090             | 50692917              | 50693310             |
| 0/10 InWC                  | 50693794              | 50694103             | 50692925              | 50693336             |
| 0/12 InWC                  | 50693808              | 50694120             | 50692933              | 50693344             |
| 0/15 InWC                  | 50693816              | 50694146             | 50692941              | 50693361             |
| 0/20 InWC                  | 50693841              | 50694154             | 50692950              | 50693379             |
| 0/25 InWC                  | 50693859              | 50694162             | 50692968              | 50693387             |
| 0/30 InWC                  | 50693867              | 50694171             | 50692976              | 50693395             |
| 0/40 InWC                  | 50693875              | 50694189             | 50692984              | 50693409             |
| 0/50 InWC                  | 50693883              | 50694197             | 50692992              | 50693417             |

### Available Options

- Other pressure units (Pa, kPa, mmWC, cmWC, mbar) available in equivalent ranges
- Custom artwork with custom logo - background colors available upon request
- Adaptor for compression fitting

### Applications

- For dry, clean, non-aggressive gases, usually air
- Fan and blower monitoring
- Differential pressure monitoring in filters
- Overpressure monitoring in cleanrooms

Stock items shown in blue print



Mechanical Pressure > Low Pressure Gauges > 611.10

## Type 611.10

WIKA Type 6X1.10 low pressure gauges are extremely sensitive and highly accurate. The capsule element pressure system is designed to measure pressure and vacuum of gaseous media from as low as 10" H<sub>2</sub>O to 275" H<sub>2</sub>O (10 psi). The finely polished nickel-silver pinion gear and shaft of the movement ensure repeatable accuracy.



### Standard Features

|                      |                     |                    |                            |
|----------------------|---------------------|--------------------|----------------------------|
| <b>Size:</b>         | 2½"                 | <b>Pointer:</b>    | Black aluminum             |
| <b>Case:</b>         | Black-painted steel | <b>Accuracy:</b>   | ±1.5% of span              |
| <b>Wetted Parts:</b> | Copper alloy        |                    | ASME B40.100 Grade B       |
| <b>Window:</b>       | Snap-in acrylic     | <b>Connection:</b> | Lower or center back mount |
| <b>Dial:</b>         | White aluminum      |                    |                            |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **611.10**.

| Type   |                     | 611.10   |         |
|--|---------------------|----------|---------|
| <b>Size</b>                                  |                     | 2½"      |         |
| <b>Connection</b>                            |                     | LM       | CBM     |
| <b>Conn. Size</b>                            |                     | 1/4" NPT |         |
| " H <sub>2</sub> O                           | mm H <sub>2</sub> O |          |         |
| 30 Vac                                       | 760                 | 9852344  | 9851852 |
| 60 Vac                                       | 1500                | 9748321  | 9748339 |
| 100 Vac                                      | 2500                | 9747473  | 9747465 |
| " H <sub>2</sub> O                           | mm H <sub>2</sub> O |          |         |
| 15   | 380                 | 9851682  | 9851860 |
| 30   | 760                 | 9851690  | 9855785 |
| 60   | 1500                | 9851704  | 9803432 |
| 100  | 2500                | 9851810  | 9851879 |
| 200  | 5000                | 9851828  | 9851887 |
| oz./sq. in.                                  | mm H <sub>2</sub> O |          |         |
| 10   | 440                 | 9851771  |         |
| 15   | 660                 | 9851780  |         |
| 20   | 880                 | 9851798  |         |
| 30   | 1320                | 9851747  | 9851917 |
| 35   | 1540                | 9851801  | 9857273 |
| 60   | 2640                | 9851755  | 9803548 |
| oz./sq. in.                                  | " H <sub>2</sub> O  |          |         |
| 20   | 34                  | 9851720  | 9857281 |
| 32   | 55                  | 9851739  | 9855793 |
| 3 psi  |                     | 9851925  | 9851836 |
| 5 psi  |                     | 9851933  | 9851844 |
| 10 psi                                       |                     | 4204212  | 4204221 |
| Accessory order codes (installed at factory) |                     |          |         |
| Front flange, chrome                         |                     | + FF C   |         |
| Front flange, black                          |                     | + FF B   |         |
| Restrictor                                   |                     | + R      |         |

### Available Options

- Rear flange (2½" only)
- Vacuum and overpressure safety
- Instrument or safety glass window
- Cleaned for oxygen service
- Adjustable red min/max pointer on window
- Other connections
- 2" case size
- U-clamp panel mount option
- Restrictor
- Stainless steel case

### Applications

- Fluid medium, gaseous or dry, which does not clog connection port or corrode copper alloy

Example: low pressure pneumatic systems

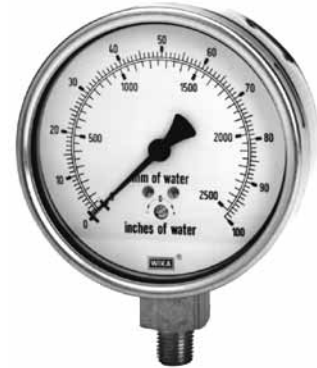
### Abbreviations

CBM - Center back mount  
LM - Lower mount  
SS - Stainless steel

Stock items shown in **blue print**

## Type 612.20

WIKA Type 612.20 low pressure gauges feature a copper alloy capsule element that is designed to measure pressure and vacuum of gaseous media from as low as 2.5" H<sub>2</sub>O to 275" H<sub>2</sub>O (10 psi). The 4" dial size allows easy reading from a distance. The finely polished nickel-silver pinion gear and shaft of the movement ensure repeatable accuracy.



### Standard Features

|                      |                     |                    |                      |
|----------------------|---------------------|--------------------|----------------------|
| <b>Size:</b>         | 4"                  | <b>Pointer:</b>    | Black aluminum       |
| <b>Case:</b>         | 304 stainless steel | <b>Accuracy:</b>   | ±2/1/2% of span      |
| <b>Wetted Parts:</b> | Copper alloy        |                    | ASME B40.100 Grade B |
| <b>Window:</b>       | Instrument glass    | <b>Connection:</b> | Lower mount          |
| <b>Dial:</b>         | White aluminum      |                    |                      |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **612.20**.

| Type   |                          | 612.20         |
|--|--------------------------|----------------|
| <b>Size</b>                                  |                          | <b>4"</b>      |
| <b>Connection</b>                            |                          | LM             |
| <b>Conn. Size</b>                            |                          | 1/4" NPT       |
| <b>" H<sub>2</sub>O</b>                      | <b>mm H<sub>2</sub>O</b> |                |
| 30 Vac                                       | 760                      | <b>9747724</b> |
| 60 Vac                                       | 1500                     |                |
| 100 Vac                                      | 2500                     |                |
| <b>" H<sub>2</sub>O</b>                      | <b>mm H<sub>2</sub>O</b> |                |
| 15   | 380                      | <b>9747732</b> |
| 30   | 760                      | <b>9747740</b> |
| 60   | 1500                     | <b>9747758</b> |
| 100  | 2500                     | <b>9747766</b> |
| 200  | 5000                     | <b>9747775</b> |
| <b>oz./sq. in.</b>                           | <b>mm H<sub>2</sub>O</b> |                |
| 10   | 440                      |                |
| 15   | 660                      |                |
| 20   | 880                      |                |
| 30   | 1320                     |                |
| 35   | 1540                     |                |
| 60   | 2640                     |                |
| <b>oz./sq. in.</b>                           | <b>" H<sub>2</sub>O</b>  |                |
| 20   | 34                       |                |
| 32   | 55                       |                |
| 3 psi  |                          | <b>9747783</b> |
| 5 psi  |                          | <b>9747791</b> |
| 10 psi                                       |                          | 4246684        |
| Accessory order codes (installed at factory) |                          |                |
| Front flange, SS                             |                          | + FF S         |
| Restrictor                                   |                          | + R            |

### Available Options

- Rear flange
- Vacuum and overpressure safety
- Acrylic or safety glass window
- Cleaned for oxygen service
- Adjustable red min/max pointer on window
- 2½" and 6" nominal case sizes
- Lower back mount connection
- Other connections
- Front flange
- U-clamp panel mount option
- Restrictor

### Applications

- Low pressure pneumatic systems
- Suitable for fluid medium, gaseous or dry that does not corrode copper alloy

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in **blue print**

Mechanical Pressure > Low Pressure Gauges > 6X2.34

## Type 6X2.34

WIKA Type 6X2.34 low pressure process gauges offer accurate readings in harsh ambient conditions. They are able to measure the pressure of gaseous media from as low as 10" H<sub>2</sub>O to 275" H<sub>2</sub>O (10 psi) or other equivalent units of pressure or vacuum. The finely polished nickel-silver pinion gear and shaft of the movement ensure repeatable accuracy.



### Standard Features

|                      |   |                    |                                     |
|----------------------|---|--------------------|-------------------------------------|
| <b>Size:</b>         | 4½"                                       | <b>Dial:</b>       | White aluminum                      |
| <b>Case:</b>         | Black thermoplastic                       | <b>Pointer:</b>    | Black aluminum, adjustable          |
| <b>Ring:</b>         | Threaded thermoplastic                    | <b>Accuracy:</b>   | ±2/12% of span                      |
| <b>Wetted Parts:</b> | 612.34 - copper alloy<br>632.34 - 316L SS | <b>Connection:</b> | ASME B40.100 Grade A<br>Lower mount |
| <b>Window:</b>       | Acrylic                                   |                    |                                     |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **6X2.34**.

| Type   |                        | 612.34         | 632.34         |
|--|------------------------|----------------|----------------|
| <b>Size</b>                                  |                        | 4½"            |                |
| <b>Connection</b>                            |                        | LM             |                |
| <b>Conn. Size</b>                            |                        | 1/4" NPT       |                |
| <b>Outer Scale</b>                           | <b>Inner Scale</b>     |                |                |
| 10 "H <sub>2</sub> O                         | 6 oz./in <sup>2</sup>  | 4217063        | <b>4217187</b> |
| 15 "H <sub>2</sub> O                         | 9 oz./in <sup>2</sup>  | <b>4217071</b> | <b>4217195</b> |
| 20 "H <sub>2</sub> O                         | 12 oz./in <sup>2</sup> | 4217080        | 4217209        |
| 30 "H <sub>2</sub> O                         | 18 oz./in <sup>2</sup> | <b>4217098</b> | <b>4217217</b> |
| 40 "H <sub>2</sub> O                         | 24 oz./in <sup>2</sup> | 4217101        | 4217225        |
| 60 "H <sub>2</sub> O                         | 35 oz./in <sup>2</sup> | <b>4217110</b> | <b>4217233</b> |
| 80 "H <sub>2</sub> O                         | 45 oz./in <sup>2</sup> | 4217128        | 4217241        |
| 100 "H <sub>2</sub> O                        | 57 oz./in <sup>2</sup> | <b>4217136</b> | <b>4217250</b> |
| 150 "H <sub>2</sub> O                        | 90 oz./in <sup>2</sup> | <b>4217144</b> | 4217268        |
| 5 psi  | 10 "Hg                 | <b>4217039</b> | <b>4217152</b> |
| 8 psi  | 16 "Hg                 | 4217047        | 4217161        |
| 10 psi                                       | 20 "Hg                 | 4217055        | 4217179        |
| Accessory order codes (installed at factory) |                        |                |                |
| 4½" panel kit                                |                        | + PM           |                |
| Restrictor                                   |                        | + R            |                |

Stock items shown in **blue print**

### Available Options

- Monel® wetted parts (Type 662.34)
- Vacuum or overpressure safety
- Flat glass and safety glass window
- Adjustable red min/max pointer on window
- Silicone case filling (633.34) (40" WC and up)
- Other connections
- Panel mount kit
- Restrictor

### Applications

- Where measurement of low pressures is needed
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

### Abbreviations

LM - Lower mount  
SS - Stainless steel

## Type 632.50

WIKA Type 632.50 low pressure gauges offer the corrosion resistance of 316 stainless steel wetted parts and is able to measure pressure and vacuum of gaseous media from as low as 1" H<sub>2</sub>O to 275" H<sub>2</sub>O (10 psi). The finely polished nickel-silver pinion gear and shaft of the movement ensure repeatable accuracy.



### Standard Features

|                      |                      |                    |                      |
|----------------------|----------------------|--------------------|----------------------|
| <b>Size:</b>         | 4"                   | <b>Pointer:</b>    | Black aluminum       |
| <b>Case:</b>         | 304 stainless steel  | <b>Accuracy:</b>   | ±2/1/2% of span      |
| <b>Wetted Parts:</b> | 316L stainless steel |                    | ASME B40.100 Grade B |
| <b>Window:</b>       | Safety glass         | <b>Connection:</b> | Lower mount          |
| <b>Dial:</b>         | White aluminum       |                    |                      |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **632.50**.

| Type                              | 632.50         |
|-----------------------------------|----------------|
| <b>Size</b>                       | <b>4"</b>      |
| <b>Connection</b>                 | LM             |
| <b>Conn. Size</b>                 | 1/2" NPT       |
| 5-0-5 "H <sub>2</sub> O           | 9804439        |
| 10-0-10 "H <sub>2</sub> O         | <b>9804447</b> |
| 15-0-15 "H <sub>2</sub> O         | <b>9804455</b> |
| 15 "H <sub>2</sub> O-0-5psi       | 9804412        |
| 15 "H <sub>2</sub> O              | <b>9804323</b> |
| 20 "H <sub>2</sub> O              | 9804471        |
| 30 "H <sub>2</sub> O              | <b>9804315</b> |
| 60 "H <sub>2</sub> O              | <b>9804498</b> |
| 100 "H <sub>2</sub> O             | 9859314        |
| 200 "H <sub>2</sub> O             | 9804501        |
| 5 psi                             | <b>9804307</b> |
| 10 psi                            | <b>9804420</b> |
| Accessory order codes (installed) |                |
| Front flange, SS                  | + FF S         |
| Restrictor                        | + R            |

Stock items shown in **blue print**

### Available Options

- Rear flange
- Vacuum and overpressure safety
- Inductive alarm contacts
- Cleaned for oxygen service
- Adjustable red min/max pointer on window
- Silicone case filling (40" WC and up)
- Other connections
- Lower back mount connection
- 2½" and 6" nominal case size
- Front flange

### Applications

- Robust design and weather protection, suitable for outdoor use
- Suitable for dry, gaseous media that will not attack 316 stainless steel parts
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

#### Abbreviations

LM - Lower mount  
 SS - Stainless steel  
 LBM - Lower back mount

## Type 700.04

This piston-style differential pressure gauge is designed for use with clean liquid or gaseous media where high differential pressure/static process pressures are required. Type 700.04 is suitable for measuring pressure drops across a variety of devices, including filters, strainers, separators, and heat exchangers.



### Standard Features

|                      |   |                    |  |
|----------------------|---|--------------------|--|
| <b>Size:</b>         | 2½" & 4½"   | <b>Window:</b>     | Acrylic                                  |
| <b>Case:</b>         | Black thermoplastic   | <b>Dial:</b>       | White aluminum                           |
| <b>Wetted Parts:</b> | Ceramic magnet,<br>316SS spring, Viton O-rings,<br>sensor housing (see table) | <b>Pointer:</b>    | Black aluminum                           |
|                      |   | <b>Accuracy:</b>   | ±2% of span<br>(ascending pressure only) |
|                      |   | <b>Connection:</b> | Back mount                               |

**6000 psig Max. Safe Working Pressure**

**Handwritten calibration report standard**

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **700.04**.

| Type   | 700.04                    |         |                      |          |
|--|---------------------------|---------|----------------------|----------|
| Size   | 2½"                       | 4"      | 2½"                  | 4"       |
| <b>Conn. Size</b>                            | 2 x 1/4" NPT Female, Back |         |                      |          |
| <b>Sensor Housing</b>                        | Black-anodized aluminum   |         | 316L stainless steel |          |
| 5 psid                                       | 4390954                   | 4390632 | 4390675              | 50334085 |
| 10 psid                                      | <b>4375242</b>            | 4371866 | 4368084              | 4372170  |
| 20 psid                                      | 5375250                   | 4368092 | 4371816              | 4372188  |
| 25 psid                                      | <b>4375268</b>            | 4371883 | 4371824              | 4272196  |
| 30 psid                                      | 4390616                   | 4390658 | 4390691              | 4390739  |
| 50 psid                                      | 4375276                   | 4371891 | 4371832              | 4272209  |
| 60 psid                                      | 50420267                  | 4390666 |                      | 50441647 |
| 75 psid                                      | 4375285                   | 4371905 | 4371840              | 43722147 |
| 100 psid                                     | 4372933                   | 4371913 | 4371858              | 4372162  |
| Accessory order codes (installed at factory) |                           |         |                      |          |
| Safety glass                                 | + SG                      |         |                      |          |
| Wall/pipe mount kit                          | + MKIT                    |         |                      |          |
| Drag pointer                                 | + DP                      |         |                      |          |
| Glycerine fill                               | Type 703.04               |         |                      |          |

Stock items shown in **blue print**

### Available Options

- ½" NPT female with adaptors (#203963)
- In-line connections (side/end connection)
- Bi-directional reading
- Reversed pressure ports: high (+) on left, low (-) on right (facing gauge)
- Buna -N or EPDM O-rings
- Reed switch with flying leads (SPST and SPDT)
- Wall/pipe - mounting brackets
- Safety glass window

### Applications

- For use in measurement applications requiring high differential/static process pressures
- Suitable for measuring pressure drops across filters, strainers, separators, etc.

### Abbreviations

SPDT - Single pole, double throw  
 SPST - Single pole, single throw  
 SS - Stainless steel



## Type 700.05

This diaphragm-style differential pressure gauge is suited for use in applications requiring low/medium differential and medium/high process pressure media. Type 700.05 is intended for measuring pressure drops across filters, strainers, separators, heat exchangers, and gas recovery systems.



### Standard Features

|                      |  |                    |                |
|----------------------|--|--------------------|----------------|
| <b>Size:</b>         | 2½" & 4½"  | <b>Dial:</b>       | White aluminum |
| <b>Case:</b>         | Black thermoplastic  | <b>Pointer:</b>    | Black aluminum |
| <b>Wetted Parts:</b> | Ceramic magnet,<br>316SS spring, Buna-N O-rings,<br>sensor housing (see table) | <b>Accuracy:</b>   | ±2% of span    |
| <b>Window:</b>       | Acrylic  | <b>Connection:</b> | Back mount     |

**3000 psig Max. Safe Working Pressure**

**Handwritten calibration report standard**

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **700.05**.

| Type   | 700.05                    |         |                      |         |
|--|---------------------------|---------|----------------------|---------|
| Size   | 2½"                       | 4"      | 2½"                  | 4"      |
| <b>Conn. Size</b>                            | 2 x 1/4" NPT Female, Back |         |                      |         |
| <b>Sensor Housing</b>                        | Black-anodized aluminum   |         | 316L stainless steel |         |
| 0/50 "H <sub>2</sub> O                       | 4375306                   | 4375446 | 4375586              | 4375722 |
| 0/75 "H <sub>2</sub> O                       | 4375315                   | 4375455 | 4375595              | 4375730 |
| 0/100 "H <sub>2</sub> O                      | 4375323                   | 4375463 | 4375608              | 4375748 |
| 0/200 "H <sub>2</sub> O                      | 4375331                   | 4375471 | 4375616              | 4375756 |
| 0/300 "H <sub>2</sub> O                      | 4375349                   | 4375489 | 4375625              | 4375765 |
| 0/400 "H <sub>2</sub> O                      | 4375357                   | 4375497 | 4375633              | 4375773 |
| 0/5 psid                                     | 4375366                   | 4375501 | 4375641              | 4375781 |
| 0/10 psid                                    | 4375374                   | 4375519 | 4375659              | 4375799 |
| 0/15 psid                                    | 4375382                   | 4375527 | 4375667              | 4375803 |
| 0/25 psid                                    | 4375390                   | 4375536 | 4375676              | 4375811 |
| 0/30 psid                                    | 4375404                   | 4375544 | 4375684              | 4375829 |
| 0/50 psid                                    | 4375412                   | 4375552 | 4375692              | 4375837 |
| 0/75 psid                                    | 4375420                   | 4375560 | 4375706              | 4375846 |
| 0/100 psid                                   | 4375438                   | 4375578 | 4375714              | 4375854 |
| Accessory order codes (installed at factory) |                           |         |                      |         |
| Safety glass                                 | + SG                      |         |                      |         |
| Wall/Pipe mount kit                          | + MKIT                    |         |                      |         |
| Drag pointer                                 | + DP                      |         |                      |         |
| Glycerine fill                               | Type 703.05               |         |                      |         |

Stock items shown in blue print

### Available Options

- ½" NPT female SS adaptors (#203963)
- ¼" NPT female top and bottom mount
- Safety glass window
- Case filling - glycerine or silicone
- Viton membrane and O-rings
- Wall/pipe - mounting brackets

### Applications

- For use in measurement applications requiring high differential/static process pressures
- Suitable for applications with particulate matter present in liquid/gas media or when separation of the media is required

### Abbreviations

SS - Stainless steel

Mechanical Pressure > Differential Pressure Gauges > 712.15

## Type 712.15

WIKA's Type 712.15 differential pressure "Cryo Gauge" is designed for liquid level measurement in particular for the cryogenic industry.

### Standard Features

**Size:** 6"  
**Case:** 304 stainless steel with polished SS front flange  
**Wetted Parts:** Copper alloy measuring cell with 316L compression springs and NBR separating diaphragm

**Window:** Polycarbonate  
**Dial:** White aluminum  
**Pointer:** Black aluminum  
**Accuracy:** ±2.5% of span  
**Connection:** Lower mount



### 750 psig Max. Working Pressure

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 712.15.

| Type                           | 712.15              |
|--------------------------------|---------------------|
| <b>Size</b>                    | <b>6"</b>           |
| <b>Connection</b>              | LM                  |
| <b>Conn. Size</b>              | 2 x 1/4" NPT Female |
| <b>Mounting</b>                | Panel Mount         |
| 0/50"WC                        | 50696246            |
| 0/100"WC                       | 50696262            |
| 0/150"WC                       | 50696271            |
| 0/200"WC                       | 50696289            |
| 0/250"WC                       | 50696297            |
| 0/300"WC                       | 50696301            |
| 0/350"WC                       | 50696319            |
| 0/400"WC                       | 50696327            |
| 0/450"WC                       | 50696335            |
| 0/500"WC                       | 50696343            |
| 0/600"WC                       | 50696351            |
| 0/700"WC                       | 50696360            |
| 0/800"WC                       | 50696378            |
| 0/900"WC                       | 50696386            |
| Accessory order codes          |                     |
| Safety glass window            | SG                  |
| Universal wall-/pipe mount kit | MKIT                |
| "H"- mounting bracket          | H-BRKT              |
| "C"- mounting bracket          | C-BRKT              |

### Available Options

- 3-way manifold w/integrated working pressure gauge
- Magnetic or inductive alarm contacts
- Single and dual Reed switches
- 4-20 mA transmitter output
- Variety of mounting devices
- 316 SS wetted parts (712.16)
- 4" nominal case size

### Applications

- Level measurement in closed tanks, particularly in cryotechnology
- Filter monitoring
- Monitoring and control of pumps
- For gaseous and liquid media that are not highly viscous and have no suspended solids

### Abbreviations

LM - Lower mount  
 SS - Stainless steel

Stock items shown in blue print

Mechanical Pressure > Differential Pressure Gauges > 712.25DP

## Type 712.25DP

Type 712.25DP 4½" and 6" gauges feature a tough black-painted aluminum case with brass wetted parts. They feature a dual Bourdon tube system and a special subtracting movement drives one pointer to display the differential pressure. The built-in rear flange matches up to existing mounting holes without any modifications. These gauges are suitable for all gaseous and liquid media that will not obstruct pressure systems or attack copper alloy parts.



### Standard Features

|                      |                             |                    |                      |
|----------------------|-----------------------------|--------------------|----------------------|
| <b>Size:</b>         | 4½" & 6"                    | <b>Dial:</b>       | White aluminum       |
| <b>Case:</b>         | Black epoxy-coated aluminum | <b>Pointer:</b>    | Black aluminum       |
| <b>Ring:</b>         | Black epoxy-coated aluminum | <b>Accuracy:</b>   | ±2/1/2% of span      |
| <b>Wetted Parts:</b> | Copper alloy                |                    | ASME B40.100 Grade A |
| <b>Window:</b>       | Instrument glass            | <b>Connection:</b> | Lower mount          |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **712.25DP**.

| Type   |                           | 712.25DP     |         |
|--|---------------------------|--------------|---------|
| <b>Size</b>                                  |                           | 4½"          | 6"      |
| <b>Connection</b>                            |                           | LM           |         |
| <b>Conn. Size</b>                            |                           | 2 x 1/4" NPT |         |
| <b>Diff. Range</b>                           | <b>Max. Static Press.</b> |              |         |
| 15 psid                                      | 15 psig                   |              |         |
| 30 psid                                      | 30 psig                   | 4241487      | 4241819 |
| 60 psid                                      | 60 psig                   | 4241495      | 4241827 |
| 100 psid                                     | 100 psig                  | 4241509      | 4241835 |
| 160 psid                                     | 160 psig                  | 4241715      | 4241843 |
| 200 psid                                     | 200 psig                  | 4241585      | 4241851 |
| 300 psid                                     | 300 psig                  |              |         |
| 400 psid                                     | 400 psig                  | 4241541      | 4241879 |
| 600 psid                                     | 600 psig                  |              |         |
| 800 psid                                     | 800 psig                  |              |         |
| 1000 psid                                    | 1000 psig                 | 4241568      | 4241895 |
| 15/0/15 psid                                 | 30 psig                   |              |         |
| 30/0/30 psid                                 | 60 psig                   |              |         |
| 50/0/50 psid                                 | 100 psig                  |              |         |
| 100/0/100 psid                               | 200 psig                  |              |         |
| 150/0/150 psid                               | 300 psig                  |              |         |
| 200/0/200 psid                               | 400 psig                  |              |         |
| 400/0/400 psid                               | 800 psig                  |              |         |
| 500/0/500 psid                               | 1000 psig                 |              |         |
| Accessory order codes (installed at factory) |                           |              |         |
| Restrictor                                   |                           | + R          |         |

### Available Options

- Restrictor

### Applications

- Measurement of pressure differential of two applied pressures
- Suitable for all gaseous and liquid media that will not obstruct the pressure system or attack copper alloy parts

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in blue print

Mechanical Pressure > Differential Pressure Gauges > 712.25DX

## Type 712.25DX

Type 712.25DX 4½" and 6" gauges feature a tough black-painted aluminum case with brass wetted parts. Type 712.25DX gauges feature two independent pressure systems and a special movement drives one red pointer and one black pointer to display two pressure readings on the dial. The built-in rear flange matches up to existing mounting holes without any modifications. The 712.25DX is suitable for all gaseous and liquid media that will not obstruct the pressure system or attack copper alloy parts.



### Standard Features

|                      |                             |                    |                      |
|----------------------|-----------------------------|--------------------|----------------------|
| <b>Size:</b>         | 4½" & 6"                    | <b>Dial:</b>       | White aluminum       |
| <b>Case:</b>         | Black epoxy-coated aluminum | <b>Pointer:</b>    | Black aluminum       |
| <b>Ring:</b>         | Black epoxy-coated aluminum | <b>Accuracy:</b>   | ±2/1/2% of span      |
| <b>Wetted Parts:</b> | Copper alloy                |                    | ASME B40.100 Grade A |
| <b>Window:</b>       | Instrument glass            | <b>Connection:</b> | Lower mount          |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 712.25DX.

| Type   |            | 712.25DX     |         |
|--|------------|--------------|---------|
| Size   |            | 4½"          | 6"      |
| Conn. Size                                   |            | 2 x 1/4" NPT |         |
| Diff. Range                                  | Max Static |              |         |
| 15 psi                                       | 19 psi     | 4241657      | 4241738 |
| 30 psi                                       | 39 psi     | 4241665      | 4241746 |
| 60 psi                                       | 78 psi     | 4241673      | 4241754 |
| 100 psi                                      | 130 psi    | 4241681      | 4241762 |
| 160 psi                                      | 208 psi    |              |         |
| 200 psi                                      | 260 psi    |              |         |
| 300 psi                                      | 390 psi    | 4241690      | 4241771 |
| 400 psi                                      | 520 psi    |              |         |
| 600 psi                                      | 780 psi    |              |         |
| 800 psi                                      | 1040 psi   |              |         |
| 1000 psi                                     | 1300 psi   | 4241720      | 4241801 |
| Accessory order codes (installed at factory) |            |              |         |
| Restrictor                                   |            | + R          |         |

### Available Options

- Restrictor

### Applications

- Measurement and indication of two applied pressures
- Suitable for all gaseous and liquid media that will not obstruct the pressure system or attack copper alloy parts

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in **blue print**.

## Type 732.25

### Applications

- Hydraulic and pneumatic systems
- Pumps, compressors, water systems, regulators
- Suitable for fluid medium which does not clog connection port or corrode copper alloy



### Standard Features

|                      |  |                    |                                      |
|----------------------|--|--------------------|--------------------------------------|
| <b>Size:</b>         | 4½" & 6"   | <b>Window:</b>     | Acrylic                              |
| <b>Case:</b>         | Black epoxy-coated aluminum                                    | <b>Dial:</b>       | White aluminum                       |
| <b>Ring:</b>         | Polished SS  | <b>Pointer:</b>    | Black aluminum                       |
| <b>Wetted Parts:</b> | 316L SS sensor housing,<br>Monel® membrane,<br>and PTFE O-ring | <b>Accuracy:</b>   | ±1% of span<br>ASME B40.100 Grade 1A |
|                      |  | <b>Connection:</b> | Back mount                           |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **732.25**.

| Type   | 732.25                    |         |
|--|---------------------------|---------|
| Size   | 4½"                       | 6"      |
| <b>Conn. Size</b>                            | 2 x 1/4" NPT Female, Back |         |
| 100 "H <sub>2</sub> Od                       |                           |         |
| 150 "H <sub>2</sub> Od                       |                           |         |
| 200 "H <sub>2</sub> Od                       |                           |         |
| 300 "H <sub>2</sub> Od                       |                           |         |
| 400 "H <sub>2</sub> Od                       |                           |         |
| 15 psid                                      | 4375862                   | 4275926 |
| 30 psid                                      | 4275870                   | 4375935 |
| 60 psid                                      | 4375888                   | 4375943 |
| 100 psid                                     | 4375896                   | 4375951 |
| 230 psid                                     | 4375900                   | 4375969 |
| 300 psid                                     | 4375918                   | 4375977 |
| 400 psid                                     |                           |         |
| 500 psid                                     |                           |         |
| 600 psid                                     |                           |         |
| Accessory order codes (installed at factory) |                           |         |
| Safety glass window                          | + SG                      |         |
| Glycerine fill                               | Type 733.25               |         |

### Available Options

- Case filling
- Top and bottom connection
- Wall/pipe mounting kit (only available in connection with top/bottom mount)
- ½" NPT female adaptors (#203963)
- 304 SS case material
- Dial for flow applications (square root)

### Applications

- For use in measurement applications requiring high differential/static process pressures
- For corrosive environments with either liquid or gaseous media

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in **blue print**.



## Type 732.26

This opposed membrane/liquid-filled sensor element differential pressure gauge is for applications requiring low differential/medium static process pressures. The 732.26 is typically used for a variety of industrial uses, including cryogenic gases and/or corrosive environments in liquid or gaseous media.



### Standard Features

|                      |  |                    |                                      |
|----------------------|--|--------------------|--------------------------------------|
| <b>Size:</b>         | 4½" & 6"   | <b>Window:</b>     | Acrylic                              |
| <b>Case:</b>         | Black epoxy-coated aluminum                                    | <b>Dial:</b>       | White aluminum                       |
| <b>Ring:</b>         | Polished SS  | <b>Pointer:</b>    | Black aluminum                       |
| <b>Wetted Parts:</b> | 316L SS sensor housing,<br>316 SS membrane,<br>and PTFE O-ring | <b>Accuracy:</b>   | ±1% of span<br>ASME B40.100 Grade 1A |
| <b>Dial:</b>         | White aluminum with<br>black lettering                         | <b>Connection:</b> | Top/bottom mount                     |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **732.26**.

**600 psig Max. Safe Working Pressure**

**Handwritten calibration report standard**

**Cleaned for oxygen service,  
with "USE NO OIL" on dial**

| Type   | 732.26                          |                |
|--|---------------------------------|----------------|
| Size   | 4½"                             | 6"             |
| <b>Conn. Size</b>                            | 2 x 1/4" NPT Female,<br>Top/Btm |                |
| 100 "H <sub>2</sub> O <sub>d</sub>           | 4375986                         | <b>4374246</b> |
| 150 "H <sub>2</sub> O <sub>d</sub>           | 4375994                         | 4376036        |
| 200 "H <sub>2</sub> O <sub>d</sub>           | 4376001                         | 4376044        |
| 300 "H <sub>2</sub> O <sub>d</sub>           | 4376019                         | 4376052        |
| 400 "H <sub>2</sub> O <sub>d</sub>           | 4376027                         | 4376060        |
| 15 psid                                      |                                 |                |
| 30 psid                                      |                                 |                |
| 60 psid                                      |                                 |                |
| 100 psid                                     |                                 |                |
| 230 psid                                     |                                 |                |
| 300 psid                                     |                                 |                |
| 400 psid                                     |                                 |                |
| 500 psid                                     |                                 |                |
| Accessory order codes (installed at factory) |                                 |                |
| Safety glass window                          | + SG                            |                |

### Available Options

- Case filling Halocarbon (only for O<sub>2</sub> service); other case fillings (glycerine or silicone oil) are available, but not for O<sub>2</sub> service (without \* use no oil\* on dial)
- Wall/pipe mounting kit
- C-bracket mounting kit (#2353275)
- H-bracket mounting kit (#2398784)
- Special dials for liquid level measurement
- ½" NPT female adaptors (#203963)
- 304 SS case material
- Safety glass window

### Applications

- For measurement in applications requiring low to medium differential and/or static process pressures
- For cryogenic gases or corrosive environments with either liquid or gaseous media

Stock items shown in **blue** print.

## Type 312.20

Extremely sensitive and highly accurate, WIKA Type 312.20 test gauges are excellent for instrument shops, gauge repair and calibration shops, testing laboratories and other applications demanding high precision and consistent results. Type 312.20 test gauges feature adjustable knife-edge pointers and mirror bands on the dial to assure precise readings and to eliminate parallax error.

### Standard Features

|                      |                                    |                    |   |
|----------------------|------------------------------------|--------------------|---|
| <b>Size:</b>         | 6"                                 | <b>Pointer:</b>    | Black aluminum, adjustable knife-edge           |
| <b>Case:</b>         | 304 stainless steel                | <b>Movement:</b>   | Brass with nickel-silver pinion gears and shaft |
| <b>Ring:</b>         | Polished SS                        | <b>Accuracy:</b>   | ±0.25% of span<br>ASME B40.100 Grade 3A         |
| <b>Wetted Parts:</b> | Copper alloy                       | <b>Connection:</b> | Lower mount                                     |
| <b>Window:</b>       | Safety glass                       |                    |   |
| <b>Dial:</b>         | White aluminum, with mirrored band |                    |   |



For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **312.20**.

| Type   | 312.20         |                |
|--|----------------|----------------|
| <b>Size</b>                                  | <b>6"</b>      |                |
| <b>Connection</b>                            | LM             |                |
| <b>Conn. Size</b>                            | 1/4" NPT       | 1/2" NPT       |
| <b>Press. Scale</b>                          | PSI            | PSI            |
| 30" Hg                                       | 9746859        | 9747163        |
| 30"-0-15 psi                                 |                |                |
| 30"-0-30 psi                                 |                |                |
| 30"-0-60 psi                                 |                |                |
| 30"-0-100 psi                                |                |                |
| 30"-0-160 psi                                |                |                |
| 30"-0-200 psi                                | 9651454        |                |
| 15 psi                                       | 9746867        | 9747171        |
| 30 psi                                       | <b>9746875</b> | 9747189        |
| 60 psi                                       | 9746884        | 9747197        |
| 100 psi                                      | <b>9746892</b> | 9747201        |
| 160 psi                                      | 9746905        | 9747219        |
| 200 psi                                      | <b>9746914</b> | 9747227        |
| 300 psi                                      | <b>9746922</b> | 9747235        |
| 400 psi                                      | 9746930        | 9747244        |
| 600 psi                                      | 9746948        | <b>9747252</b> |
| 800 psi                                      | 9746956        | 9747260        |
| 1,000 psi                                    | <b>9746965</b> | 9747278        |
| 1,500 psi                                    | 9746973        | 9747286        |
| 2,000 psi                                    | 9746981        | 9747295        |
| 3,000 psi                                    | <b>9746999</b> | 9747308        |
| 5,000 psi                                    | <b>9747006</b> | 9747316        |
| 10,000 psi                                   | 9747015        | 9747325        |
| Accessory order codes (installed at factory) |                |                |
| Front flange, SS                             | + FF           |                |
| Rear flange, SS                              | + RF           |                |
| Restrictor                                   | + R            |                |

### Available Options

- Cleaned for oxygen service
- Special connections

### Applications

- Calibration and testing laboratories
- Suitable for gaseous or liquid media that will not obstruct the pressure system or corrode copper alloy wetted parts

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in **blue print**.

## Type 332.30

Type 332.30 test gauges feature a solid front, blow-out back safety case design, adjustable knife-edge pointers, and mirror bands on the dial to assure precise readings and to eliminate parallax error. Extremely sensitive and highly accurate, WIKA Type 332.30 test gauges are excellent for instrument shops, gauge repair and calibration shops, testing laboratories and other applications demanding high precision and consistent results.



### Standard Features

|                      |                                    |                    |                                       |
|----------------------|------------------------------------|--------------------|---------------------------------------|
| <b>Size:</b>         | 6"                                 | <b>Pointer:</b>    | Black aluminum, adjustable knife-edge |
| <b>Case:</b>         | 304 SS, solid-front                | <b>Movement:</b>   | Stainless steel                       |
| <b>Ring:</b>         | Polished SS                        | <b>Accuracy:</b>   | ±0.25% of span                        |
| <b>Wetted Parts:</b> | 316L SS                            | <b>Connection:</b> | ASME B40.100 Grade 3A                 |
| <b>Window:</b>       | Safety glass                       |                    |                                       |
| <b>Dial:</b>         | White aluminum, with mirrored band |                    |                                       |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **332.30**.

| Type                              | 332.30    |
|-----------------------------------|-----------|
| <b>Size</b>                       | <b>6"</b> |
| <b>Connection</b>                 | LM        |
| <b>Conn. Size</b>                 | 1/2" NPT  |
| <b>Press. Scale</b>               | PSI       |
| 30" Hg                            | 50719092  |
| 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                            |           |
| 30 psi                            |           |
| 60 psi                            |           |
| 100 psi                           | 4207408   |
| 160 psi                           | 4277416   |
| 200 psi                           | 50407848  |
| 300 psi                           | 4248946   |
| 400 psi                           | 50046128  |
| 600 psi                           | 4286112   |
| 800 psi                           |           |
| 1,000 psi                         | 50179691  |
| 1,500 psi                         | 50046136  |
| 2,000 psi                         |           |
| 3,000 psi                         | 4282559   |
| 5,000 psi                         | 9744309   |
| 10,000 psi                        |           |
| Accessory order codes (installed) |           |
| Front flange, SS                  | + FF      |
| Restrictor                        | + R       |

### Available Options

- Rear flange, SS
- Acrylic window
- Cleaned for oxygen service
- Special connections

### Applications

- Calibration and testing laboratories
- Suitable for gaseous or liquid media that will not obstruct the pressure system or corrode stainless steel wetted parts

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in **blue** print.

## Type 332.54

WIKA Type 332.54 inspector's test gauges are convenient for field calibrations. They have an accuracy of  $\pm 0.25\%$  which meets ASME B40.100 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 padded, nylon carrying pouch.



### Standard Features

|                      |                                       |                    |   |
|----------------------|---------------------------------------|--------------------|---|
| <b>Size:</b>         | 4"                                    | <b>Pointer:</b>    | Black aluminum, adjustable knife-edge   |
| <b>Case:</b>         | 304 stainless steel                   | <b>Movement:</b>   | Stainless steel   |
| <b>Ring:</b>         | Polished SS                           | <b>Accuracy:</b>   | $\pm 0.25\%$ of span (ASME B40.1 Grade 3A)<br>0/30" Hg to 600 psi and 2000 psi to<br>20,000 psi $\pm 0.5\%$ of span (ASME B40.1<br>Grade 2A) 600>2000 psi |
| <b>Wetted Parts:</b> | 316L stainless steel                  | <b>Connection:</b> | Lower mount   |
| <b>Window:</b>       | Safety glass                          |                    |   |
| <b>Dial:</b>         | White aluminum,<br>with mirrored band |                    |   |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **332.54**.

| Type                              | 332.54         |
|-----------------------------------|----------------|
| <b>Size</b>                       | <b>4"</b>      |
| <b>Connection</b>                 | LM             |
| <b>Conn. Size</b>                 | 1/4" NPT       |
| <b>Press. Scale</b>               | PSI            |
| 30" Hg                            | <b>4220013</b> |
| 30"-0-15 psi                      | 4362336        |
| 30"-0-30 psi                      | 4255232        |
| 30"-0-60 psi                      | 4333781        |
| 30"-0-100 psi                     | 4237961        |
| 30"-0-160 psi                     | 4213176        |
| 30"-0-200 psi                     | 4200741        |
| 15 psi                            | <b>4220021</b> |
| 30 psi                            | 4220030        |
| 60 psi                            | <b>4220048</b> |
| 100 psi                           | <b>4220056</b> |
| 160 psi                           | <b>4220064</b> |
| 200 psi                           | <b>4220072</b> |
| 300 psi                           | <b>4220081</b> |
| 400 psi                           | 4220099        |
| 600 psi                           | <b>4220102</b> |
| 800 psi                           |                |
| 1,000 psi                         | <b>4220111</b> |
| 1,500 psi                         | 4246004        |
| 2,000 psi                         | 4249250        |
| 3,000 psi                         | 4237979        |
| 5,000 psi                         | 4243269        |
| 10,000 psi                        | 50044796       |
| Accessory order codes (installed) |                |
| Rear flange, SS                   | + RF           |
| Restrictor                        | + R            |

### Available Options

- Special connections
- Instrument glass window
- Cleaned for oxygen service

### Applications

- Inspector's test gauge
- Testing and calibration of other pressure measuring instruments
- Suitable for fluid medium which does not clog port or corrode 316 stainless steel

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in blue print.

Mechanical Pressure > High Precision Gauges > 332.34

## Type 332.34

The Type 332.34 is an industrial type gauge suitable for corrosive environments where the fluid medium does not clog connection or corrode 316 stainless steel material. Solid front, blow-out back case design meets safety requirements of ASME B40.100.



### Standard Features

|                      |                                    |                    |   |
|----------------------|------------------------------------|--------------------|---|
| <b>Size:</b>         | 4½"                                | <b>Pointer:</b>    | Black aluminum, adjustable knife-edge   |
| <b>Case:</b>         | Black Pocan®                       | <b>Movement:</b>   | Stainless steel   |
| <b>Ring:</b>         | Black Pocan®                       | <b>Accuracy:</b>   | ±0.25% of span (ASME B40.1 Grade 3A)<br>0/30" Hg to 600 psi and 2,000 psi to 20,000 psi<br>±0.5% of span (ASME B40.1 Grade 2A)<br>600>2,000 psi |
| <b>Wetted Parts:</b> | 316L SS                            | <b>Connection:</b> | Lower mount   |
| <b>Window:</b>       | Acrylic                            |                    |   |
| <b>Dial:</b>         | White aluminum, with mirrored band |                    |   |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **332.34**.

| Type                                     | 332.34     |
|--|------------|
| <b>Size</b>                              | <b>4½"</b> |
| <b>Connection</b>                        | LM         |
| <b>Conn. Size</b>                        | 1/2" NPT   |
| <b>Press. Scale</b>                      | PSI        |
| 30" Hg                                   | 4334711    |
| 30"-0-15 psi                             | 4334729    |
| 30"-0-30 psi                             |            |
| 30"-0-60 psi                             |            |
| 30"-0-100 psi                            |            |
| 30"-0-160 psi                            | 4334761    |
| 30"-0-200 psi                            |            |
| 15 psi                                   | 4334770    |
| 30 psi                                   | 4334788    |
| 60 psi                                   | 4334796    |
| 100 psi                                  | 4334800    |
| 160 psi                                  | 4334818    |
| 200 psi                                  | 4334826    |
| 300 psi                                  | 4334834    |
| 400 psi                                  | 4334842    |
| 600 psi                                  | 4334851    |
| 800 psi                                  | 4364398    |
| 1,000 psi                                | 50005456   |
| 1,500 psi                                | 50058649   |
| 2,000 psi                                | 4394506    |
| 3,000 psi                                | 4200627    |
| 5,000 psi                                | 50008880   |
| 10,000 psi                               | 4200792    |
| 15,000 psi                               |            |
| 20,000 psi                               |            |
| <b>Accessory order codes (installed)</b> |            |
| 4½" Panel kit                            | + PM       |
| Restrictor                               | + R        |

### Available Options

- Cleaned for oxygen service
- Instrument glass
- Safety glass
- Special connection

### Applications

- Industrial
- Suitable for corrosive environments where the fluid medium does not clog connection or corrode wetted part material.

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in blue print.



## Type 332.34DD

WIKA Type 332.34DD Direct Drive Test Gauge features a direct drive, movementless pressure system. With a shock absorbing Bourdon tube design, these gauges are an effective means for guarding against severe shock and vibration applications that require test gauge accuracy. The 332.34DD is manufactured in a standard red 4½" process gauge style case (additional colors available) and comes standard completely equipped with an external zero adjustment and a high 0.25% full scale accuracy.

### Standard Features

|                      |                             |                    |                                       |
|----------------------|-----------------------------|--------------------|---------------------------------------|
| <b>Size:</b>         | 4½"                         | <b>Pointer:</b>    | Black aluminum, adjustable knife edge |
| <b>Case:</b>         | Red Pocan®                  | <b>Accuracy:</b>   | ± 0.25% of span                       |
| <b>Ring:</b>         | Threaded red Pocan®         |                    | ASME B40.100 Grade 3A                 |
| <b>Wetted Parts:</b> | X-750 Inconel / 316L SS     | <b>Connection:</b> | Lower mount                           |
| <b>Window:</b>       | Acrylic                     | <b>Restrictor:</b> | Standard                              |
| <b>Dial:</b>         | White aluminum, mirror band |                    |                                       |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **332.34DD**.

| Type                | 332.34DD   |
|---------------------|------------|
| <b>Size</b>         | <b>4½"</b> |
| <b>Conn. Size</b>   | 1/2" NPT   |
| <b>Press. Scale</b> | PSI        |
| -30" to 30 psi      | 50838652   |
| -30" to 60 psi      | 50838725   |
| -30" to 150 psi     | 50838733   |
| -30" to 300 psi     | 50838784   |
| 30 psi              | 50838792   |
| 60 psi              | 50838806   |
| 100 psi             | 50838822   |
| 160 psi             | 50838831   |
| 200 psi             | 50838849   |
| 300 psi             | 50838857   |
| 500 psi             | 50838873   |
| 1,000 psi           | 50838881   |
| 1,500 psi           | 50838890   |
| 2,000 psi           | 50838903   |
| 3,000 psi           | 50838911   |
| 5,000 psi           | 50838920   |
| 10,000 psi          | 50838865   |

### Available Options

- Cleaned for use in oxygen service
- Panel mount kit
- Special connection

### Abbreviations

LM - Lower mount  
SS - Stainless steel

Stock items shown in **blue print**

## Type 332.25 / 312.25

WIKA Type 332.25 test gauges have a glass covered hinged ring front with securing screws as standard. The adjustable knife edge pointer is easily accessed under the hinged ring front. Designed for panel mounting, the Type 332.25 gauge features 316 stainless steel wetted parts and a one-piece aluminum solid-front safety case design. Well-suited for installations in process panel and control applications, Type 332.25 gauges meet ASME Grade 3A accuracy standards.



### Standard Features

|                      |                                       |                    |   |
|----------------------|---------------------------------------|--------------------|---|
| <b>Size:</b>         | 4½"                                   | <b>Pointer:</b>    | Black aluminum, adjustable knife-edge   |
| <b>Case:</b>         | Black-painted aluminum                | <b>Movement:</b>   | Stainless steel   |
| <b>Ring:</b>         | Black-painted aluminum                | <b>Accuracy:</b>   | ±0.25% of span (ASME B40.1 Grade 3A)<br>0/30" Hg to 600 psi and 2,000 psi to 20,000 psi<br>±0.5% of span (ASME B40.1 Grade 2A)<br>600>2,000 psi |
| <b>Wetted Parts:</b> | 316L stainless steel                  | <b>Connection:</b> | Lower back mount  |
| <b>Window:</b>       | Flat instrument glass                 |                    |   |
| <b>Dial:</b>         | White aluminum,<br>with mirrored band |                    |   |

| Type                              | 332.25   |          |
|-----------------------------------|----------|----------|
| <b>Size</b>                       | 4½"      |          |
| <b>Connection</b>                 | LBM      |          |
| <b>Conn. Size</b>                 | 1/4" NPT | 1/2" NPT |
| <b>Press. Scale</b>               | PSI      | PSI      |
| 30" Hg                            | 50675567 | 50675818 |
| 30"-0-15 psi                      | 50663003 | 50675826 |
| 30"-0-30 psi                      | 50675583 | 50675834 |
| 30"-0-60 psi                      | 50675591 | 50675842 |
| 30"-0-100 psi                     | 50675605 | 50675851 |
| 30"-0-160 psi                     | 50675613 | 50675869 |
| 30"-0-200 psi                     | 50675621 | 50675877 |
| 15 psi                            | 50675621 | 50675885 |
| 30 psi                            | 50675648 | 50675893 |
| 60 psi                            | 50675656 | 50675907 |
| 100 psi                           | 50675664 | 50675915 |
| 160 psi                           | 50663011 | 50675923 |
| 200 psi                           | 50663020 | 50675931 |
| 300 psi                           | 50675699 | 50675940 |
| 400 psi                           | 50663038 | 50675958 |
| 600 psi                           | 50663046 | 50675966 |
| 800 psi                           | 50675729 | 50675974 |
| 1,000 psi                         | 50675737 | 50675982 |
| 1,500 psi                         | 50675745 | 50675991 |
| 2,000 psi                         | 50675753 | 50676008 |
| 3,000 psi                         | 50675761 | 50676016 |
| 5,000 psi                         | 50675770 | 50676024 |
| 10,000 psi                        | 50675788 | 50676032 |
| 15,000 psi                        | 50675796 | 50676041 |
| 20,000 psi                        | 50675800 | 50676059 |
| Accessory order codes (installed) |          |          |
| Restrictor                        | + R      |          |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **332.25**.

### Available Options

- Cleaned for oxygen service
- Special connections

### Applications

- Instrument shops
- Precision panel installations
- Test benches
- Calibration laboratories

### Abbreviations

LBM - Lower back mount  
SS - Stainless steel

Stock items shown in blue print.

## Type 342.11

WIKA Type 342.11 precision test gauges are high quality, time-proven instruments designed for use as pressure transfer standards and in applications requiring exceptional precision and high reliability in the measurement of pressure. Both types of WIKA precision test gauges feature a Bourdon tube made of Ni-Span C<sup>®</sup> for all pressure ranges above 0-10 psi. Ni-Span C<sup>®</sup> has exceptional temperature stability and eliminates the need for an expensive thermal compensator.



### Standard Features

|                      |                            |                    |  |
|----------------------|----------------------------|--------------------|--|
| <b>Size:</b>         | 10"                        | <b>Dial:</b>       | White aluminum, with mirrored band     |
| <b>Case:</b>         | Grey-painted cast aluminum | <b>Pointer:</b>    | Black aluminum, knife-edge             |
| <b>Ring:</b>         | Grey-painted cast aluminum | <b>Movement:</b>   | Stainless steel                        |
| <b>Wetted Parts:</b> | Ni-Span C <sup>®</sup>     | <b>Accuracy:</b>   | ±0.1% of span<br>ASME B40.100 Grade 4A |
| <b>Window:</b>       | Acrylic, non-reflecting    | <b>Connection:</b> | Lower mount                            |

| Type                    | 342.11          |
|-------------------------|-----------------|
| <b>Size</b>             | <b>10"</b>      |
| <b>Connection</b>       | LM              |
| <b>Conn. Size</b>       | 1/4" NPT Female |
| <b>Press. Scale</b>     | PSI             |
| 30" Hg                  | 9328750         |
| 30"-0-15 psi            | 9328769         |
| 30"-0-30 psi            | 9328777         |
| 30"-0-60 psi            | 9328785         |
| 30"-0-100 psi           | 9328793         |
| 30"-0-150 psi           | 8988927         |
| 30"-0-200 psi           |                 |
| 30"-0-300 psi           |                 |
| 15 psi                  | 9328823         |
| 30 psi                  | 9328831         |
| 60 psi                  | 9328840         |
| 100 psi                 | 9328858         |
| 160 psi                 | 9328866         |
| 200 psi                 | 9328874         |
| 300 psi                 | 9328882         |
| 400 psi                 | 9328890         |
| 600 psi                 | 9328904         |
| 800 psi                 | 8988854         |
| 1,000 psi               | 9328920         |
| 1,500 psi               | 9328939         |
| 2,000 psi               | 9328947         |
| 3,000 psi               | 9328955         |
| 5,000 psi               |                 |
| 10,000 psi              |                 |
| 15,000 psi              | 9328998         |
| 20,000 psi              | 9329005         |
| 300" H <sub>2</sub> O   | 8590931         |
| 400" H <sub>2</sub> O   |                 |
| 600" H <sub>2</sub> O   |                 |
| 1,000" H <sub>2</sub> O |                 |

### Available Options

- Cleaned for oxygen service (up to 6,000 psi)
- Special connections including autoclave

### Applications

- Pressure gauge for testing, calibration and laboratory measurement
- Fluid medium does not clog port or corrode Ni-Span C<sup>®</sup> and stainless steel

**All Type 342.11 gauges are supplied with a NIST Certificate of Calibration.**

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **342.11**.

**Abbreviations**  
LM - Lower mount  
SS - Stainless steel

Stock items shown in **blue** print.

Mechanical Pressure > Calibration Equipment > 65-2000, 65-2000 II

## Type 65-2000, 65-2000 II

### Applications

- Portable pressure calibration
- Verification of pressure transmitters
- Differential pressure test

### Standard Features 65-2000

**Range:** -10..0..100 psi~ (-0.7...7 bar)  
**Units:** mbar, bar, kPa, mmHg, psi, in. H<sub>2</sub>O (20°), °Hg  
**Voltage measurement:** 0...± 32 V DC  
**Current measurement:** 0...± 32 mA DC  
**Transmitter supply:** ± 10%, galv. isolated  
 500 VDC max. current 30 mA

### Standard Features 65-2000 II

**Range:** -10..0..100 psi~ (-0.7...7 bar)  
**Units:** mbar, bar, kPa, mmHg, psi, in. H<sub>2</sub>O (20°), °Hg  
**Voltage measurement:** 0...± 32 V DC  
**Current measurement:** 0...± 32 mA DC  
**Transmitter supply:** ± 10%, galv. isolated  
 500 VDC max. current 30 mA  
**Pneumatic:** precision pressure regulator  
 (for external pressure supply); pressure hand pump  
 with volume controller for isolated supply



65-2000  
(Wally Box - Professional)



65-2000 II  
(Wally Box II - Professional Plus)

| Type                | 65-2000 | 65-2000 II |
|---------------------|---------|------------|
| -10 psi ... 100 psi | 65-2000 | 65-2000 II |

Stock items shown in **blue print**.

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets **65-2000** and **65-2000 II**.

Mechanical Pressure > Calibration Equipment > CPH-6600

# CPH-6600

## Applications

- Calibration of natural gas custody transfer sites
- Field calibration verification on transmitters
- Switch set point setting

## Standard Features

- Integrated electric pump (ranges 30 psi and 150 psi)
- Integrated hand pump (300 psi)
- Supplied certified to NIST 0.025% accuracy
- Simultaneous display of pressure, temperature, and mA output
- 24V loop power for device under test



For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **CPH-6600**.

| Type     | Range              | Part Number |
|----------|--------------------|-------------|
| CPH-6600 | -28" Hg to 30 psi  | 50846442    |
|          | -28" Hg to 150 psi | 50846451    |
|          | -28" Hg to 300 psi | 50846477    |

Stock items shown in **blue** print.



Mechanical Pressure > Calibration Equipment > CPG 1000

# Type CPG 1000


The CPG 1000 Digital Pressure Test Gauge takes the concept of an analog test gauge and brings it to a new level. The CPG 1000 combines the accuracy of digital technology with the simplicity of an analog test gauge and achieves performance, ease-of-use, and a feature set unmatched in the pressure measurement world.



MECHANICAL PRESSURE

## Standard Features

- Accuracy of (+/-) 0.05% full scale
- Stainless steel case meets NEMA 4, IP65
- Min/max recall
- 18 selectable engineering units,
- 1 user customized unit
- Adjustable tare

-  Class 1, Div. 2, Groups A, B, C, and T6
- Available with optional 24 V external power input
- Rubber boot standard

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **CPG-1000**.

| Type          | CPG 1000    |                  |                            |                                   |                               |
|---------------|-------------|------------------|----------------------------|-----------------------------------|-------------------------------|
| Size          | 4"          |                  |                            |                                   |                               |
| Conn. Size    | 1/4" NPT    |                  |                            |                                   |                               |
| Configuration | Lower Mount | Lower Back Mount | LM w/ Opt. 24 V Ext. Power | LBM Style w/ Opt. 24 V Ext. Power | Kit w/ Pump, Test Hose & Case |
| 30" W.C.      | 50577930    | 50578367         | 50578529                   | 50578669                          | N/A                           |
| -15-0-15 psi  | 50577964    | 50578405         | 50578553                   | 50579304                          | 50579428                      |
| -15-0-30 psi  | 50577972    | 50578421         | 50578561                   | 50579312                          | 50579436                      |
| 15 psi        | 50577948    | 50578383         | 50578537                   | 50579282                          | 50579401                      |
| 30 psi        | 50577956    | 50578391         | 50578545                   | 50579291                          | 50579410                      |
| 100 psi       | 50577981    | 50578448         | 50578570                   | 50579321                          | 50579444                      |
| 300 psi       | 50577999    | 50578456         | 50578596                   | 50579339                          | 50579452                      |
| 500 psi       | 50578003    | 50578464         | 50578600                   | 50579347                          | 50579461                      |
| 1,000 psi     | 50578014    | 50578472         | 50578618                   | 50579355                          | 50579479                      |
| 2,000 psi     | 50578022    | 50578481         | 50578626                   | 50579363                          | 50579487                      |
| 3,000 psi     | 50578341    | 50578499         | 50578634                   | 50579371                          | 50579509                      |
| 5,000 psi     | 50578359    | 50578502         | 50578642                   | 50579380                          | 50579517                      |
| 10,000 psi    | 50578375    | 50578511         | 50578651                   | 50579398                          | 50579495                      |

|          | LM       | LBM      | LM w/24V | LBM w/24V | Kit |
|----------|----------|----------|----------|-----------|-----|
| 15 psia  | 50579525 | 50579827 | 50579860 | 50579908  | N/A |
| 30 psia  | 50579533 | 50579835 | 50579878 | 50579916  | N/A |
| 100 psia | 50579541 | 50579843 | 50579886 | 50579924  | N/A |
| 300 psia | 50579819 | 50579851 | 50579894 | 50579935  | N/A |

|         |                            |
|---------|----------------------------|
| 5073861 | CPG-1000 Data Log Software |
|---------|----------------------------|

Stock items shown in **blue print**.

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

Mechanical Pressure > Calibration Equipment > WICP-L100, WICP-M500, WICP-H10K

# Type WICP-L100, WICP-M500, WICP-H10K

WIKA pneumatic and hydraulic test pumps are high performance hand operated pumps that allow the user to generate both pressure and vacuum for precise testing of pressure instrumentation including transmitters, pressure switches, and pressure gauges



**WICP-L100  
Pneumatic Pump Kit**



**WICP-M500  
Pneumatic Pump Kit  
(shown with CPG 1000)**



**WICP-H10K  
Pneumatic Pump Kit  
(shown with CPG 1000)**

| Type             | RANGE              | PART #   |
|------------------|--------------------|----------|
| <b>WICP-L100</b> | -28" Hg to 100 psi | 50578031 |
| <b>WICP-M500</b> | -29" Hg to 600 psi | 50578049 |
| <b>WICP-H10K</b> | 0 to 10,000 psi    | 50578057 |

| Accessories  | Part Number |
|--|-------------|
| <b>Pump Kits</b> <i>Kits include hard sided carrying case</i>  |             |
| WICP-L100 Kit - Low Pressure & Vacuum Pump (-28 in. Hg to 100 psi) with one test hose and one 1/8" FNPT port | 50578065    |
| WICP-M500 Kit - High Pressure & Vacuum Pump (-29 in Hg to 500 psi) with one test hose and one 1/4" FNPT port | 50578284    |
| WICP-H10K Kit - Hydraulic Pump (0 to 10,000 psi) with one test hose and one 1/4" FNPT port                   | 50578073    |
| <b>Fittings and Adapters for Pumps</b>   |             |
| Adapter 1/4 F BSP to 1/8 F NPT   | 50578081    |
| Adapter 1/4 F NPT to 1/4 M BSP   | 50578090    |
| Adapter 1/4 M NPT to 1/4 F BSP   | 50578103    |
| Adapter 1/4 M NPT to 1/4 M NPT (Union)   | 50578111    |
| Connector 1/4 M NPT to quick connect for high pressure hydraulic hose  | 50578120    |
| Tee, Street, SS, 1/4 F NPT x 1/4 F NPT x 1/4 M NPT   | 50578138    |
| Adapter 1/8 F NPT to 1/4 F NPT (Union)   | 50578146    |
| Adapter 1/8 M NPT to 1/4 M BSP   | 50578154    |
| Adapter 1/8 M NPT to 1/4 M NPT   | 50578162    |
| Connector 1/8 M NPT to 1/8 quick connect tubing (nylon)  | 50578171    |
| Hose, high pressure with quick connect fittings for WICP-H10K  | 6060100     |
| PAK100 Accessory Kit for WICP-L100 includes carrying case, test hose and fittings                            | 1010054     |
| PAK500 Accessory Kit for WICP-M500 includes carrying case, test hose and fittings                            | 1010055     |
| PAK10K Accessory Kit for WICP-H10K includes carrying case, test hose and fittings                            | 1010056     |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **WICP-X**.

Stock items shown in blue print.

# Diaphragm Seals

Diaphragm seals, also referred to as chemical seals, are used to isolate pressure gauges, switches, and transmitters from clogging and/or corrosive media. Standard diaphragm seal bodies and diaphragms are made of stainless steel; however, a variety of materials from carbon steel to Hastelloy® C-276 are available to meet the demands of most applications. WIKA diaphragm seals can operate in pressure applications from 10" H<sub>2</sub>O to 20,000 psi and media temperature between -130°F and 752°F.

## EXAMPLES OF TYPICAL DIAPHRAGM SEAL APPLICATIONS

- The media is **corrosive** and may damage a sensitive element such as a Bourdon tube gauge, pressure switch or transmitter diaphragm.
- The **temperature** of the media may be too high for a standard gauge, switch or transmitter to operate properly.
- The media is **highly viscous** or tends to **crystallize**, or **polymerize** and may clog the pressure port of a gauge, switch or transmitter.
- The media is **non-homogenous** or contains **suspended matter** such as wood pulp which may clog the pressure port of a gauge, switch or transmitter.
- **Remote reading** is required. A diaphragm seal with a capillary line will allow remote installation of a pressure instrument.
- The **sanitary cleanliness level** is critical. A flush mounted or INLINE SEAL™ sanitary type diaphragm seal avoids dead space and cavities.
- The media is **toxic or hazardous** and may pollute the environment. A suitably designed diaphragm seal will provide additional protection.
- The application requires **high overpressure protection**. A diaphragm seal with a contoured diaphragm bed can be configured to provide overpressure protection and protection to the instrument.

WIKA diaphragm seal systems are an excellent value and offer savings by:

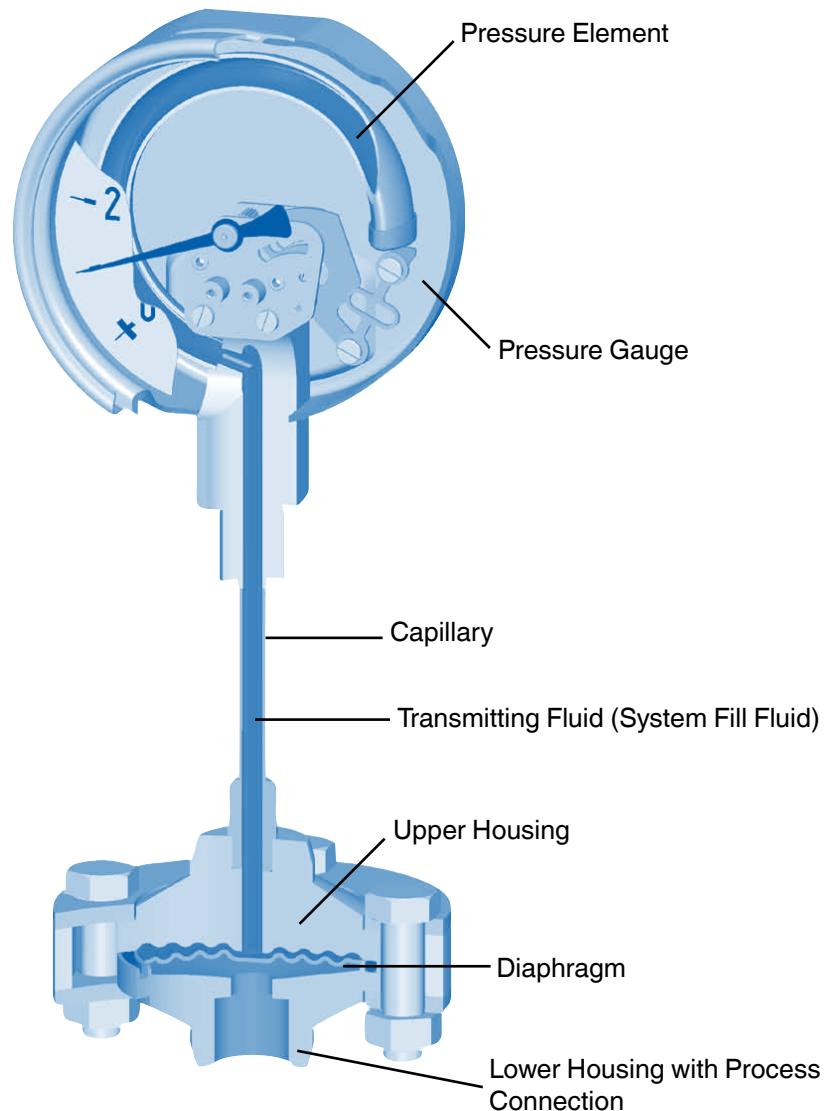
- Meeting fugitive emission requirements
  - Extending the service life of the pressure instrument
  - Reducing the cost of installation
  - Reducing or eliminating maintenance costs

## Operating Principle

The drawing below illustrates the operating principle of a diaphragm seal assembly. A pressure measurement instrument such as a conventional pressure gauge or electronic pressure transmitter is either mounted directly to the diaphragm seal or attached to the seal by means of a capillary or cooling element.

A diaphragm within the diaphragm seal separates the gauge/transmitter from the process medium. Any part of the diaphragm seal (i.e., diaphragm, lower housing, gaskets) which will be exposed to the process medium is selected from materials resistant to pressure, temperature and possible chemical attack by the process medium.

The diaphragm seal is also filled with a transmitting fluid or **system fill fluid**. Any pressure applied by the process medium to the seal diaphragm is hydraulically transmitted to the pressure element of the gauge/switch/transmitter thus generating a pressure reading.



# Selection Guidelines

When selecting a diaphragm seal assembly, the following details must be taken into consideration to ensure a safe and satisfactory operation. For specific technical assistance regarding temperature effects, volumetric compatibility, etc., contact the WIKA customer service department or send a completed diaphragm seal specification sheet to the factory for analysis.

- |                               |                                  |
|-------------------------------|----------------------------------|
| <b>1. Process composition</b> | <b>6. System fill fluid</b>      |
| <b>2. Temperature</b>         | <b>7. Mounting position</b>      |
| <b>3. Pressure range</b>      | <b>8. Response time</b>          |
| <b>4. Pressure instrument</b> | <b>9. Seal and gauge matches</b> |
| <b>5. Process connection</b>  |                                  |

## 1. Process composition

Since the diaphragm and lower housing of the diaphragm seal will be exposed to the process medium, it is critical to select materials for these components which will be compatible with this medium. Tables are available to assist in the selection of these materials (see Pressure Gauge Section); however, the customer is the ultimate source for specifying suitable materials. WIKA cannot guarantee suitability. For information, see numerous reference guides such as corrosion table reference books. If the pressure fluid is very thick, solidifies, or is full of solids, this should also be taken into consideration.

## 2. Temperature

Each diaphragm seal measurement system (diaphragm seal, pressure instrument, and cooling element or capillary, if applicable) is filled with an amount of fill fluid at an ambient temperature of about 70°F. This temperature is referred to as the system fill temperature. The fill fluid will expand or contract according to temperature changes. This in turn causes the pressure in the sensing element to rise or fall, thus adding zero shifting effects to the instrument output. To reduce this effect, the temperatures of the process and the environment should be specified when selecting a diaphragm seal system (see Diaphragm Seal Specification Sheet). Special advanced calibration techniques can be used to ensure the best possible accuracy. At temperatures above 300°F, a cooling element or capillary is suggested to protect the pressure instrument.

## 3. Pressure range

The displacement volume on the diaphragm seal required to "drive" each diaphragm seal measurement system (diaphragm seal, pressure instrument and capillary, if applicable) must be greater than the displacement volume needed to move the pressure sensing element. Normally, the lower the pressure range, the larger the diaphragm is required to "drive" the system. Conversely, for higher pressure ranges, smaller diaphragms are sufficient. Pressure transmitters also follow the general rule of the lower the pressure, the larger the diaphragm required.

## 4. Pressure instrument

As mentioned above (Item 3 - Pressure range), the diaphragm seal must supply sufficient displacement volume to enable the pressure instrument to reach full scale. As a general rule, smaller size gauges are better suited to low pressure applications since less displacement volume is required on the part of the diaphragm seal to drive the pressure instrument.

## 5. Process connection

The process connection is specified by the customer. Most process connections are threaded, flanged, or clamped; however, additional connections are available. Teflon® coating and lining is only available in flanged connections, since tapered NPT threads strip off the Teflon® during installation. However, solid Teflon® threaded connections are available with NPT threads.

## 6. System fill fluid

WIKA offers a wide range of system filling fluids allowing temperatures from -130°F to 752°F. Chemical compatibility of the system fill fluid with the process fluid must be carefully considered in the event of a leak. In food processing applications a nontoxic fluid should be selected. Special fill fluids are also available for oxidizing media such as oxygen and chlorine.



## Selection Guidelines (continued)

### 7. Mounting position

Mounting position is important for diaphragm seal systems which include a capillary. The level difference between the diaphragm seal and the pressure instrument causes a hydrostatic pressure to act on the sensing element:

- a. For gauges mounted above the level of the diaphragm seal, the pointer on the dial of the gauge will be lower than the zero point.
- b. For gauges mounted below the level of the diaphragm seal, the pointer on the dial of the gauge will be higher than the zero point.

The diaphragm seal system can be calibrated to compensate for the effect caused by the hydrostatic pressure, if the level difference is known in advance (see Diaphragm Seal Specification Sheet for assistance).

### 8. Response time

Response time, i.e., the time it takes the pressure instrument to indicate 90% of the value of a sudden pressure variation, is especially important for instrument/diaphragm seal assemblies which include a capillary. Response time increases significantly in systems with long capillaries. In applications requiring long capillaries, response times can be reduced by using larger diameter capillary tubing and reducing the viscosity of the system fill fluid. Be advised that increasing the inner diameter of the capillary increases the temperature influence of the measuring system. Consult factory if detailed information is needed.

### 9. Seal and gauge matches

For low ranges, gauge preference is 2XX.54 or 2XX.34 for access to perform calibration adjustments. Gauges with crimp rings might not be usable due to potential recalibration. The table below shows the common matches between gauge and diaphragm seal types **recommended by the factory**. Please contact the Diaphragm Seal Department for more information.

| Table 4 - Seal and Gauge Combinations |                    |                   |
|---------------------------------------|--------------------|-------------------|
| Gauge Size                            | Range <sup>1</sup> | Seal Model Number |
| 2½"                                   | ≥ 60 psi           | 990.22 1½"        |
|                                       | ≥ 30 psi           | 990.TA            |
|                                       | ≥ 15 psi           | 990.TB            |
|                                       | ≥ 15 psi           | 990.22 2"         |
|                                       | ≥ 15 psi           | 990.10            |
|                                       | ≥ 15 psi           | 990.12            |
| 4" or 4½"                             | ≥ 400 psi          | 990.22 1½"        |
|                                       | ≥ 160 psi          | 990.TA            |
|                                       | ≥ 15 psi           | 990.TB            |
|                                       | ≥ 100 psi          | 990.22 2"         |
|                                       | ≥ 15 psi           | 990.10            |
|                                       | ≥ 15 psi           | 990.12            |
| 6"                                    | N/A                | 990.22 1½"        |
|                                       | N/A                | 990.TA or 990.TB  |
|                                       | ≥ 600 psi          | 990.22 2"         |
|                                       | ≥ 160 psi          | 990.10            |
|                                       | ≥ 160 psi          | 990.12            |

<sup>1</sup> Includes compound ranges

≥ Indicates greater than or equal to

## Type M93X.25

Type M93X.25 sanitary gauge provides a 3/4" Tri-Clamp® process connection with a 2 1/2" stainless steel gauge. This assembly contains an electropolished process connection and meets the criteria set by "3A". The gauge is ideal for applications in the food and beverage, pharmaceutical and biotechnology industries.



### Standard Features

**Design:** This all-welded gauge assembly contains an external flush diaphragm on the 3/4" Tri-Clamp® process connection. Each gauge contains a traceable identification number.

**Pressure Rating, Maximum<sup>1</sup>:** 1,500 psi, limited by installation clamp rating

**Suitable Pressure Ranges:** -30" Hg to 30 psi  
up to -30" Hg to 1,500 psi

**Operating Temperature:** 0°F to 257°F (-18°C to 125°C)

**Ambient Temperature:** 0°F to 175°F (-18°C to 80°C)

### Gauge Features

**Dial Size:** 2 1/2"

**Process Connection:** 3/4" Tri-Clamp®

**Process Wetted Materials:** 316L stainless steel electropolished

**Case Material:** Polished stainless steel with vent plug

**Window:** Polycarbonate

**Dial:** Aluminum, white

**Pointer:** Black aluminum

**Accuracy:** ±2/1/2% ASME B40.1 Grade A

**System Fill Fluids:** Glycerine (non-vacuum and compound ranges)  
Mineral Oil (vacuum and compound ranges)

### Available Options

- Polysulfone window
- Auto claveable (dry case only)
- External zero adjust

Notes:

1. Pressure rating and range dependent on mating clamp

Note: Dry case and polysulfone window required for autoclaving

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **M93X.25**.

| M93X.25 Smart Code Configuration |                                       |
|----------------------------------|---------------------------------------|
| Field No.                        | Code                                  |
|                                  | Case Filling for Vibration Protection |
|                                  | 2 Without                             |
| 1                                | 3 Glycerine (standard)                |
|                                  | Unit                                  |
|                                  | P psi                                 |
| 2                                | S Special pressure range              |
|                                  | Pressure Range                        |
|                                  | V331 -30 inHg...30 psi                |
|                                  | V352 -30 inHg...60 psi                |
|                                  | V379 -30 inHg...100 psi               |
|                                  | V412 -30 inHg...160 psi               |
|                                  | V415 -30 inHg...200 psi               |
|                                  | G321 0 psi...30 psi                   |
|                                  | G341 0 psi...60 psi                   |
|                                  | G369 0 psi...100 psi                  |
|                                  | G411 0 psi...160 psi                  |
|                                  | G414 0 psi...200 psi                  |
|                                  | G421 0 psi...300 psi                  |
|                                  | G428 0 psi...400 psi                  |
| 3                                | G441 0 psi...600 psi                  |
|                                  | 2nd Scale / Special Scale             |
|                                  | K 2nd scale kg/cm2                    |
|                                  | B 2nd scale bar                       |
|                                  | L 2nd scale kPa                       |
| 4                                | Z Without                             |
|                                  | Window                                |
|                                  | E Polycarbonate                       |
| 5                                | 8 Polysulfone                         |
|                                  | Material of Wetted Parts              |
|                                  | B2 SS 316L (1.4435) electropolished   |
|                                  | A7 Hastelloy C276 (2.4819)            |
| 6                                | ?? Other - please specify             |
|                                  | Fill Fluid                            |
|                                  | F1 KN 7 glycerine                     |
|                                  | K3 KN 93 - food grade silicone        |
|                                  | K5 KN 59 - Neobee 20                  |
|                                  | J1 KN 92 - mineral oil                |
| 7                                | ?? Other - please specify             |
|                                  | Gasket (Process Seal)                 |
|                                  | H EPDM                                |
| 8                                | ? Other - please specify              |
|                                  | Quality Certificates                  |
|                                  | Z Without                             |
|                                  | 2 Certificate 2.2 EN 10204            |
| 9                                | 3 Certificate 3.1 EN 10204            |
|                                  | Additional Order Details              |
|                                  | A Autoclave design, case w/weep hole  |
|                                  | Z Without                             |
|                                  | O External "zero" adjust              |
| 10                               | T Additional text                     |

Order Code:    1                    2                    3                    4                    5                    6                    7                    8                    9                    10\*

                  M93  .25 -    -  -    -

\*Additional order details

Diaphragm Seals > Assembled Seals > M93X.3A

## Type M93X.3A

### Standard Features

**Design:** All-welded construction in full compliance with '3A' third party standards and meets the most rigorous biopharmaceutical specifications. This assembly has all the advantages of the 23X.50 series mechanical gauge (ASME B40.100 & EN 837-1), and WIKA combines it with a superior designed Tri-Clamp® diaphragm seal.

**Process Connection:** 1½" to 4" Tri-Clamp®

**Ranges:** Vacuum, compound and positive pressure up to 1,500 psi (limited by installation clamp rating)

**Operating Temp:** +25°F to 300°F

**Gauge Size:** 2½" or 4" - lower and back mount

**Case Fill:** Glycerine (optional)

**Dial:** White aluminum with black lettering

**Accuracy:** 2½": ±2/12% of span, 4": ±1.0% of span

**Case Material:** 304 stainless steel electro-polished case with vent plug and stainless steel electro-polished twist lock bayonet ring

**Window:** Polycarbonate or polysulfone

**Pointer:** Black aluminum, adjustable

**Serial Number:** Engraved in back of case

**System Fill:** Glycerine, KN 7 - non-vacuum application  
mineral oil, KN 92 - vacuum and compound range applications



### Gauge Features

All-welded design

±1% full scale, Grade 1A

≤ 20 Ra electro-polished

Engraved material identification and serial number

Manufacturer calibration report

FDA-approved system fill fluids

Meets 3A sanitary criteria

### Available Options

- Material certification
- Gasket, clamps
- Auto claveable
- Polysulfone window

Notes:

1. Pressure rating and range dependent on mating clamp
2. Pressure range dependent on mating clamp, gauge size, and process connection size

Note: Clamps, gaskets, and ferrules must be ordered separately.

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **M93X.3A**.

# Type M93X.3A

| M93X.3A Smart Code Configuration |  |                                  |                  |
|----------------------------------|--|----------------------------------|------------------|
| Field No.                        | Code   |                                  |                  |
| 1                                | <b>Case Filling for Vibration Protection</b> |                                  |                  |
|                                  | 2  | Without                          |                  |
|                                  | 3  | Glycerine (standard)             |                  |
| 2                                | <b>Nominal Size</b>                          |                                  |                  |
|                                  | C  | 2½"                              |                  |
|                                  | E  | 4"                               |                  |
| 3                                | <b>Unit</b>                                  |                                  |                  |
|                                  | P  | psi                              |                  |
|                                  | S  | Special pressure range           |                  |
| 4                                | <b>Pressure Range</b>                        |                                  |                  |
|                                  | V310   | -30 inHg...0                     |                  |
|                                  | V321   | -30 inHg...15 psi                |                  |
|                                  | V331   | -30 inHg...30 psi                |                  |
|                                  | V352   | -30 inHg...60 psi                |                  |
|                                  | V379   | -30 inHg...100 psi               |                  |
|                                  | V412   | -30 inHg...160 psi               |                  |
|                                  | V415   | -30 inHg...200 psi               |                  |
|                                  | G310   | 0 psi...15 psi                   |                  |
|                                  | G321   | 0 psi...30 psi                   |                  |
|                                  | G341   | 0 psi...60 psi                   |                  |
|                                  | G369   | 0 psi...100 psi                  |                  |
|                                  | G411   | 0 psi...160 psi                  |                  |
|                                  | G414   | 0 psi...200 psi                  |                  |
|                                  | G421   | 0 psi...300 psi                  |                  |
|                                  | G428   | 0 psi...400 psi                  |                  |
|                                  | G441   | 0 psi...600 psi                  |                  |
|                                  | G455   | 0 psi...800 psi                  |                  |
|                                  | 5  | <b>2nd Scale / Special Scale</b> |                  |
|                                  |  | K                                | 2nd scale kg/cm2 |
| B                                |  | 2nd scale bar                    |                  |
| L                                |  | 2nd scale kPa                    |                  |
| Z                                |  | Without                          |                  |
| 6                                | <b>Connector Position</b>                    |                                  |                  |
|                                  | U  | Lower mount                      |                  |
|                                  | 3  | Lower back mount (4" case)       |                  |
|                                  | B  | Center back mount (2½" case)     |                  |
| 7                                | <b>Window</b>                                |                                  |                  |
|                                  | E  | Polycarbonate                    |                  |
|                                  | 8  | Polysulfone                      |                  |
| 8                                | <b>Process Connection</b>                    |                                  |                  |
|                                  | A83  | 1½" Tri-Clamp®                   |                  |
|                                  | A84  | 2" Tri-Clamp®                    |                  |
|                                  | A91  | 2½" Tri-Clamp®                   |                  |
|                                  | A85  | 3" Tri-Clamp®                    |                  |
|                                  | A86  | 4" Tri-Clamp®                    |                  |
|                                  | ???  | Other - please specify           |                  |

| M93X.3A Smart Code Configuration |                                 |                                  |
|----------------------------------|---------------------------------|----------------------------------|
| Field No.                        | Code                            |                                  |
| 9                                | <b>Material of Wetted Parts</b> |                                  |
|                                  | B2                              | SS 316L (1.4435) electropolished |
|                                  | A7                              | Hastelloy C276 (2.4819)          |
| 10                               | ??                              | Other - please specify           |
|                                  | <b>Fill Fluid</b>               |                                  |
|                                  | F1                              | KN 7 glycerine <sup>1</sup>      |
|                                  | K3                              | KN 93 - food grade silicone      |
|                                  | K5                              | KN 59 - NEOBEE® 20               |
| 11                               | J1                              | KN 92 - mineral oil              |
|                                  | ??                              | Other - please specify           |
|                                  | <b>Gasket (Process Seal)</b>    |                                  |
| 12                               | Z                               | Without                          |
|                                  | <b>Quality Certificates</b>     |                                  |
|                                  | Z                               | Without                          |
| 13                               | 2                               | Certification 2.2 EN 10204       |
|                                  | 3                               | Certification 3.1 EN 10204       |
|                                  | <b>Additional Order Details</b> |                                  |
| 13                               | Z                               | Without                          |
|                                  | T                               | Additional order details         |

<sup>1</sup> Not available for vacuum or compound ranges

Order Code:

M93  .3A -  -     -   -      -

\*Additional order details

Diaphragm Seals > Assembled Seals > M932.2C

## Type M932.2C

Type M932.2C sanitary gauge assembly provides a ¾" Tri-Clamp® process connection welded to a 1½" or 2" stainless steel gauge. This assembly meets the criteria set by "3A" and is autoclavable. This gauge is ideal for applications in the food and beverage, pharmaceutical and biotechnology industries.



### Standard Features

- Pressure Rating, Maximum<sup>1</sup>:** 1,500 psi,  
limited by installation clamp rating
- Suitable Pressure Ranges<sup>2</sup>:** -30" Hg to 100 psi  
up to -30" Hg to 1,500 psi
- Operating Temperature:** 50°F to 257°F (10°C to 125°C)  
glycerine; 0°F to 257°F (-18°C to 125°C) mineral oil;  
0°F to 257°F (-18°C to 125°C) food grade silicone
- Ambient Temperature:** -40°F to 140°F (-40°C to 60°C)

### Gauge Features

- Gauge Size:** 1½" or 2"
- Process Connection:** ¾" Tri-Clamp®
- Process Wetted Materials:** 316L stainless steel
- Case Material:** Stainless steel
- Window:** 1.5" acrylic, 2.0" flat glass
- Dial:** Aluminum, white
- Pointer:** Black aluminum
- Accuracy:** ±3/2/3% of span
- System Fill Fluid:** Glycerine (non-vacuum ranges);  
mineral oil, food grade silicone oil and Neobee M20  
(positive pressure, vacuum and compound ranges)

Notes:

1. Pressure rating and range dependent on mating clamp

For full specifications and dimensional drawings,  
visit [www.wika.com](http://www.wika.com) to download datasheet **M93X.2C**.



## Type M932.2C

| M932.2C Smart Code Configuration |                                     |
|----------------------------------|-------------------------------------|
| Field No.                        | Code                                |
|                                  | <b>Nominal Size</b>                 |
| 1                                | A 1½"                               |
|                                  | B 2"                                |
|                                  | <b>Unit</b>                         |
| 2                                | P psi                               |
|                                  | S Special pressure range            |
|                                  | <b>Pressure Range</b>               |
| 3                                | V331 -30 inHg...30 psi              |
|                                  | V352 -30 inHg...60 psi              |
|                                  | V379 -30 inHg...100 psi             |
|                                  | V412 -30 inHg...160 psi             |
|                                  | V415 -30 inHg...200 psi             |
|                                  | G321 0 psi...30 psi                 |
|                                  | G341 0 psi...60 psi                 |
|                                  | G369 0 psi...100 psi                |
|                                  | G411 0 psi...160 psi                |
|                                  | G414 0 psi...200 psi                |
|                                  | G421 0 psi...300 psi                |
|                                  | G428 0 psi...400 psi                |
|                                  | G441 0 psi...600 psi                |
|                                  |                                     |
| 4                                | K 2nd scale kg/cm2                  |
|                                  | B 2nd scale bar                     |
|                                  | L 2nd scale kPa                     |
|                                  | Z Without                           |
|                                  | <b>Connector Position</b>           |
| 5                                | U Lower mount                       |
|                                  | B Center back mount                 |
|                                  | <b>Process Connection</b>           |
| 6                                | A81 3/4"                            |
|                                  | ?? Other - please specify           |
|                                  | <b>Material of Wetted Parts</b>     |
| 7                                | A2 SS 316L (1.4435)                 |
|                                  | B2 SS 316L (1.4435) electropolished |
|                                  | A7 Hastelloy C276 (2.4819)          |
|                                  | ?? Other - please specify           |
|                                  | <b>Nominal Size</b>                 |
| 8                                | F1 KN 7 glycerine                   |
|                                  | K3 KN 93 - food grade silicone      |
|                                  | K5 KN 59 - NEOBEE®                  |
|                                  | J1 KN 93 mineral oil                |
|                                  | ?? Other - please specify           |

| M932.2C Smart Code Configuration |                                 |
|----------------------------------|---------------------------------|
| Field No.                        | Code                            |
|                                  | <b>Quality Certificates</b>     |
| 9                                | Z Without                       |
|                                  | 2 Certificate 2.2 EN 10204      |
|                                  | 3 Certificate 3.1 EN 10204      |
|                                  | <b>Additional Order Details</b> |
| 10                               | Z Without                       |
|                                  | T Additional order details      |

Order Code:      1      2      3      4      5      6      7      8      9 10\*

**M932.2C** -  -    -  -    -

\*Additional order details \_\_\_\_\_

Diaphragm Seals > Assembled Seals > M93X.D1

## Type M93X.D1

Type M93X.D1 all-welded systems are a drop-in retrofit for existing gauges. This assembly eliminates all potential leak paths and has a tamper-resistant construction. The all-welded system is ideal for installations where tightly controlled fugitive emissions and safety are a concern. The M93X.D1 is well-suited for applications in the chemical, petrochemical and process industries.



### Standard Features

**Design:** This all-welded gauge assembly is constructed using WIKA gauge model number 23X.34 and diaphragm seal model number L990.34. The diaphragm is recessed within the all-welded seal body. The pressure gauge is back-welded to the seal upper housing to eliminate another potential leak path. The threaded seal fill port has been removed to ensure a tamper resistant design. Additional process wetted materials, process connections, system fill fluids and accessories are available to meet the rigorous demands of most applications.

**Pressure Rating, Maximum:** 1,500 psi and 5,000 psi

**Suitable Pressure Ranges:** -30" Hg to 0 psi up to 5,000 psi

**Operating Temperature:** 0 to 300°F (-18°C to 149°C)

**Ambient Temperature:** -40°F to 150°F (-40°C to 66°C)

### Gauge Features

**Dial Size:** 4½" process gauge

**Process Connection:** ¼" NPT & ½" NPT male or female

**Process Wetted Materials:** 316L stainless steel

**Case Material:** Fiberglass reinforced thermoplastic

**Window:** Acrylic

**Dial:** Aluminum, white

**Pointer:** Black aluminum

**Accuracy:** ±0.5% of span

**System Fill Fluid:** Silicone oil, DC200-10cst.

### Available Options

- Cooling element
- Severe pressure pulsation protection
- Other system fill fluids
- Additional process connections
- Window materials

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **M93X.D1**.

## Type M93X.D1

| M93X.D1 Smart Code Configuration |      |  |
|----------------------------------|------|--|
| Field No.                        | Code |  |
|                                  |      | <b>Case Filling for Vibration Protection</b> |
|                                  | 2    | Without                                      |
|                                  | 3    | Glycerine (standard)                         |
|                                  | P    | Silicone, 1000 cSt                           |
| 1                                | ?    | Other - please specify                       |
|                                  |      | <b>Nominal Gauge Size</b>                    |
| 2                                | U    | 4 1/2"                                       |
|                                  |      | <b>Unit</b>                                  |
|                                  | P    | psi  |
| 3                                | S    | Special pressure range                       |
|                                  |      | <b>Range</b>                                 |
|                                  | V310 | -30 inHg...0                                 |
|                                  | V321 | -30 inHg...15 psi                            |
|                                  | V331 | -30 inHg...30 psi                            |
|                                  | V352 | -30 inHg...60 psi                            |
|                                  | V379 | -30 inHg...100 psi                           |
|                                  | V412 | -30 inHg...160 psi                           |
|                                  | V415 | -30 inHg...200 psi                           |
|                                  | G310 | 0 psi...15 psi                               |
|                                  | G321 | 0 psi...30 psi                               |
|                                  | G341 | 0 psi...60 psi                               |
|                                  | G369 | 0 psi...100 psi                              |
|                                  | G411 | 0 psi...160 psi                              |
|                                  | G414 | 0 psi...200 psi                              |
|                                  | G421 | 0 psi...300 psi                              |
|                                  | G428 | 0 psi...400 psi                              |
|                                  | G441 | 0 psi...600 psi                              |
|                                  | G469 | 0 psi...1000 psi                             |
|                                  | G510 | 0 psi...1500 psi                             |
|                                  | G514 | 0 psi...2000 psi                             |
|                                  | G521 | 0 psi...3000 psi                             |
|                                  | G534 | 0 psi...5000 psi                             |
| 4                                | ???? | Other - please specify                       |
|                                  |      | <b>2nd Scale / Special Scale</b>             |
|                                  | K    | 2nd scale kg/cm <sup>2</sup>                 |
|                                  | B    | 2nd scale bar                                |
|                                  | L    | 2nd scale kPa                                |
| 5                                | Z    | Without                                      |
|                                  |      | <b>Connection Position</b> Dry      Filled   |
|                                  | U    | Lower mount                                  |
|                                  | 3    | Lower back mount                             |
| 6                                | ??   | Other - please specify                       |
|                                  |      | <b>Window</b>                                |
|                                  | A    | Acrylic                                      |
|                                  | G    | Flat instrument glass                        |
| 7                                | H    | Laminated safety glass                       |

| M93X.D1 Smart Code Configuration |      |                                 |
|----------------------------------|------|---------------------------------|
| Field No.                        | Code |                                 |
|                                  |      | <b>Process Connection</b>       |
|                                  | GNB  | 1/4" NPT-male                   |
|                                  | GND  | 1/2" NPT-male                   |
|                                  | GN2  | 1/4" NPT-female                 |
|                                  | GN4  | 1/2" NPT-female                 |
| 8                                | ???  | Other - please specify          |
|                                  |      | <b>Diaphragm Material</b>       |
|                                  | A2   | Stainless steel 316L (1.4435)   |
|                                  | A7   | Hastelloy C276 (2.4819)         |
|                                  | A8   | Monel 400 (2.4360)              |
|                                  | D1   | Duplex 2205 (1.4462)            |
| 9                                | ??   | Other - please specify          |
|                                  |      | <b>Lower Housing Material</b>   |
|                                  | A2   | Stainless steel 316L (1.4435)   |
|                                  | A7   | Hastelloy C276 (2.4819)         |
|                                  | A8   | Monel 400 (2.4360)              |
|                                  | D1   | Duplex 2205 (1.4462)            |
| 10                               | ??   | Other - please specify          |
|                                  |      | <b>Fill Fluid</b>               |
|                                  | B2   | KN 68 - DC 200 (10 cSt)         |
|                                  | A1   | KN 2 - silicone oil             |
|                                  | A2   | KN 32 - DC 704                  |
|                                  | E1   | KN 21 - halocarbon              |
| 11                               | ??   | Other - please specify          |
|                                  |      | <b>Flushing Connection</b>      |
|                                  | 1    | Without                         |
|                                  | 3    | 1 x 1/4" NPT                    |
|                                  | 5    | 2 x 1/4" NPT                    |
| 12                               | ??   | Other - please specify          |
|                                  |      | <b>Special Design Features</b>  |
|                                  | Z    | Without                         |
|                                  | A    | Clean for O2 service            |
| 13                               | ?    | Other - please specify          |
|                                  |      | <b>Quality Certificates</b>     |
|                                  | Z    | Without                         |
|                                  | 2    | Certificate 2.2 EN 10204        |
| 14                               | 3    | Certificate 3.1 EN 10204        |
|                                  |      | <b>Additional Order Details</b> |
|                                  | Z    | Without                         |
| 15                               | T    | Additional order details        |

DIAPHRAGM SEALS

Order Code:

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M93  .D1 -  -     -   -       -

\*Additional order details \_\_\_\_\_

Diaphragm Seals > Threaded Seals > L990.TA

## Type L990.TA

When an application is not well-suited for a gauge alone, due to clogging or corrosive material, the WIKA L990.TA is ideal. This mini-seal is economical and features a one-piece, tamper-resistant construction with an upper and lower housing, eliminating the need for a gasket. The L990.TA is used in a variety of industries.



### Standard Features

**Design:** The diaphragm is welded together with the lower and upper housing, generating a leak-free construction. The diaphragm is located between the upper and lower housing. A flushing port can be added to the lower housing to clean the diaphragm cavity.

**Pressure Rating, Maximum:** 2,500 psi

**Suitable Pressure Span, Minimum<sup>1</sup>:**

- Gauge (Range<sup>2</sup>):  
 2½", ≥ 30 psi  
 4" or 4½", ≥ 160 psi

**Pressure Transmitters (TRONIC):** ≥ 60 psi

**Operating Temperature<sup>3</sup>:** -40°F to 400°F (-40°C to 204°C)

Notes:

1. Typical values, dependant on pressure instrument and application
2. Includes compound ranges
3. Can vary based on selection of materials, assembly hardware and system fill fluid

### Available Options

- Other materials
- Additional process connections

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.TA**.

### L990.TA Smart Code Configuration

| Field No.                                | Code                        |                               |
|--|-----------------------------|-------------------------------|
| <b>Upper housing material</b>            |                             |                               |
| 1  | A2                          | Stainless steel 316L (1.4435) |
|  | ??                          | Other - please specify        |
| <b>Diaphragm Material</b>                |                             |                               |
| 2  | A2                          | Stainless steel 316L (1.4435) |
|  | A7                          | Hastelloy C276 (2.4819)       |
|  | A8                          | Monel 400 (2.4360)            |
|  | C2                          | Carpenter 20                  |
|  | ??                          | Other - please specify        |
| <b>Lower Housing Material</b>            |                             |                               |
| 3  | A2                          | Stainless steel 316L (1.4435) |
|  | A7                          | Hastelloy C276 (2.4819)       |
|  | A8                          | Monel 400 (2.4360)            |
|  | C2                          | Carpenter 20                  |
|  | ??                          | Other - please specify        |
| <b>Process Connection</b>                |                             |                               |
| 4  | GN2                         | 1/4" NPT-female               |
|  | GN4                         | 1/2" NPT-female               |
|  | GNB                         | 1/4" NPT-male                 |
|  | GND                         | 1/2" NPT-male                 |
|  | ???                         | Other - please specify        |
| <b>Connection to Pressure Instrument</b> |                             |                               |
| 5  | 4                           | 1/4" NPT-female               |
|  | 3                           | 1/2" NPT-female               |
|  | 5                           | Axial weld-in connection      |
|  | ?                           | Other - please specify        |
|  | <b>System Fillport</b>      |                               |
| 6  | C                           | Filler hole M6, set screw     |
|  | A                           | Without                       |
| <b>Flushing Connection</b>               |                             |                               |
| 7  | 1                           | Without                       |
|  | 2                           | 1 x 1/8" NPT                  |
|  | 3                           | 1 x 1/4" NPT                  |
|  | ?                           | Other - please specify        |
|  | <b>Quality Certificates</b> |                               |
| 8  | Z                           | Without                       |
|  | 2                           | Certificate 2.2 EN 10204      |
|  | 3                           | Certificate 3.1 EN 10204      |
| <b>Additional Order Details</b>          |                             |                               |
| 9  | Z                           | Without                       |
|  | T                           | Additional order details      |

Order Code:      1      2      3      4      5      6      7      8      9\*

**L990.TA** -         -

\*Additional order details \_\_\_\_\_

Diaphragm Seals > Threaded Seals > L990.TB

## Type L990.TB



The WIKA Type L990.TB large mini-seal is used for low pressure applications to protect the installed instrument from clogging due to viscous, contaminated or solidified process medium. This seal also allows for an exotic material interface with the process to protect the instrument from a corrosive application.

### Standard Features

**Design:** The diaphragm is welded together with the lower and upper housing, generating a leak-free construction. The diaphragm is located between the upper and lower housing. A flushing port can be added to the lower housing to clean the diaphragm cavity.

**Pressure Rating, Maximum:** 2,500 psi

**Suitable Pressure Span, Minimum<sup>1</sup>:**

Gauge (Range<sup>2</sup>):

2½", ≥ 15 psi

4" or 4½", ≥ 15 psi

**Pressure Transmitters (TRONIC)<sup>3</sup>:** ≥ 15 psi

**Operating Temperature:** -130°F to 752°F (-90°C to 400°C)

Notes:

1. Typical values, dependant on pressure instrument and application
2. Includes compound ranges
3. Absolute pressure - check with factory

### Available Options

- Other materials
- Additional process connections
- Cooling element

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.TB**.

| L990.TB Smart Code Configuration |  |                               |
|----------------------------------|--|-------------------------------|
| Field No.                        | Code                                     |                               |
| 1                                | <b>Upper Housing Material</b>            |                               |
|                                  | A2                                       | Stainless steel 316L (1.4435) |
|                                  | ??                                       | Other - please specify        |
| 2                                | <b>Diaphragm Material</b>                |                               |
|                                  | A2                                       | Stainless steel 316L (1.4435) |
|                                  | A7                                       | Hastelloy C276 (2.4819)       |
|                                  | A8                                       | Monel 400 (2.4360)            |
|                                  | C2                                       | Carpenter 20                  |
|                                  | ??                                       | Other - please specify        |
| 3                                | <b>Lower Housing Material</b>            |                               |
|                                  | A2                                       | Stainless steel 316L (1.4435) |
|                                  | A7                                       | Hastelloy C276 (2.4819)       |
|                                  | A8                                       | Monel 400 (2.4360)            |
|                                  | C2                                       | Carpenter 20                  |
|                                  | ??                                       | Other - please specify        |
| 4                                | <b>Process Connection</b>                |                               |
|                                  | GN2                                      | 1/4" NPT-female               |
|                                  | GN4                                      | 1/2" NPT-female               |
|                                  | GN5                                      | 3/4" NPT-female               |
|                                  | GN6                                      | 1" NPT-female                 |
|                                  | GNB                                      | 1/4" NPT-male                 |
|                                  | GND                                      | 1/2" NPT-male                 |
|                                  | GNE                                      | 3/4" NPT-male                 |
|                                  | GNF                                      | 1" NPT-male                   |
|                                  | ???                                      | Other - please specify        |
| 5                                | <b>Connection to Pressure Instrument</b> |                               |
|                                  | 4  | 1/4" NPT-female               |
|                                  | 3  | 1/2" NPT-female               |
|                                  | 5  | Axial weld-in connection      |
| ?                                | Other - please specify                   |                               |
| 6                                | <b>System Fillport</b>                   |                               |
|                                  | C  | Filler hole M6, set screw     |
|                                  | A  | Without                       |
| 7                                | <b>Flushing Connection</b>               |                               |
|                                  | 2  | 1 x 1/8" NPT                  |
|                                  | 3  | 1 x 1/4" NPT                  |
|                                  | 1  | Without                       |
| 8                                | <b>Quality Certificates</b>              |                               |
|                                  | Z  | Without                       |
|                                  | 2  | Certificate 2.2 EN 10204      |
|                                  | 3  | Certificate 3.1 EN 10204      |
| 9                                | <b>Additional Order Details</b>          |                               |
|                                  | Z  | Without                       |
|                                  | T  | Additional order details      |

DIAPHRAGM SEALS

Order Code:      1      2      3      4      5      6      7      8      9\*

**L990.TB** -           -

\*Additional order details \_\_\_\_\_



Diaphragm Seals > Threaded Seals > L990.10

## Type L990.10

WIKA's Type L990.10 standard threaded seal configuration is constructed of an upper and lower housing with a welded diaphragm. The design of this multi-purpose seal enables it to be used on a variety of applications.



### Standard Features

**Design:** The diaphragm is welded to the upper housing which allows the replacement of the lower housing without jeopardizing the integrity of the system fill fluid and installed instrument. The upper and lower housing are bolted together and sealed by use of an O-ring. Process wetted components can be manufactured with solid metallic and nonmetallic materials.

**Pressure Rating, Maximum<sup>1</sup>:** up to 3,675 psi

**Suitable Pressure Span, Minimum<sup>2</sup>:**

- Gauge (Range<sup>3</sup>):
- 2½", ≥ 15 psi
  - 4" or 4½", ≥ 15 psi

**Pressure Transmitters (TRONIC)<sup>4</sup>:** ≥ 15 psi

**Operating Temperature<sup>5</sup>:** -130°F to 752°F (-90°C to 400°C)

Notes:

1. Pressure rating based on solid metallic components
2. Typical values, dependant on pressure instrument and application
3. Includes compound ranges
4. Absolute pressure - check with factory
5. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

### Available Options

- Other materials
- Additional process connections
- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.10**.



Diaphragm Seals > Threaded Seals > L990.TC

## Type L990.TC

WIKA's Type L990.TC threaded seal is constructed of an upper and lower housing, two O-rings, and a diaphragm. Due to the clamped diaphragm design, if excessive wear occurs to the configuration, the diaphragm can be replaced as the pressure instrument remains intact.



### Standard Features

**Design:** The diaphragm is clamped between the upper and lower housing. This design allows for the installation of metallic and nonmetallic diaphragms. The upper and lower housing and diaphragm are bolted together and sealed by use of two O-rings. Process wetted components can be manufactured with solid metallic and nonmetallic materials.

**Pressure Rating, Maximum<sup>1</sup>:** up to 2,500 psi

**Suitable Pressure Span, Minimum<sup>2</sup>:**

Gauge (Range<sup>3</sup>):

2½", ≥ 15 psi

4 or 4½", ≥ 15 psi

**Pressure Transmitters (TRONIC)<sup>4</sup>:** ≥ 15 psi

**Operating Temperature<sup>5</sup>:** -130°F to 500°F (-90°C to 260°C)

Notes:

1. Pressure rating based on solid metallic components
2. Typical values, dependant on pressure instrument and application
3. Includes compound ranges
4. Absolute pressure - check with factory
5. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

### Available Options

- Other materials
- Additional process connections

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.TC**.

Diaphragm Seals > Threaded Seals > L990.TC

# Type L990.TC

| L990.TC Smart Code Configuration |      |   |                                  |
|----------------------------------|------|---|----------------------------------|
| Field No.                        | Code |   |                                  |
| 1                                |      | Upper Housing Material                    |                                  |
|                                  | GN2  | 1/4" NPT-female                           |                                  |
|                                  | GN4  | 1/2" NPT-female                           |                                  |
|                                  | GN5  | 3/4" NPT-female                           |                                  |
|                                  | GN6  | 1" NPT-female                             |                                  |
|                                  | GNB  | 1/4" NPT-male                             |                                  |
|                                  | GND  | 1/2" NPT-male                             |                                  |
|                                  | GNE  | 3/4" NPT-male                             |                                  |
|                                  | ???  | Other - please specify                    |                                  |
|                                  |      | Nominal Pressure Rating                   |                                  |
| 2                                | XP   | 1,500 psi MWP (std. 4 bolts)              |                                  |
|                                  | XR   | 2,500 psi MWP (special - 8 bolts)         |                                  |
|                                  | ??   | Other - please specify                    |                                  |
| 3                                |      | Upper Housing Material                    |                                  |
|                                  | AP   | Carbon steel 1018, nickel-plated          |                                  |
|                                  | A2   | Stainless steel 316L (1.4435)             |                                  |
|                                  | ??   | Other - please specify                    |                                  |
|                                  |      | Diaphragm Material                        |                                  |
| 4                                | A2   | Stainless steel 316L (1.4435)             |                                  |
|                                  | A5   | Hastelloy B2 (2.4617)                     |                                  |
|                                  | A7   | Hastelloy C276 (2.4819)                   |                                  |
|                                  | A8   | Monel 400 (2.4360)                        |                                  |
|                                  | A9   | Inconel 600 (2.4816)                      |                                  |
|                                  | AA   | Incoloy 825 (2.4858)                      |                                  |
|                                  | AB   | Tantalum                                  |                                  |
|                                  | AC   | Nickel 200 (2.4066)                       |                                  |
|                                  | AE   | Titanium grade 2 (3.7035)                 |                                  |
|                                  | C2   | Carpenter 20                              |                                  |
|                                  | AG   | SS 316L with PTFE-foil                    |                                  |
|                                  | BB   | SS 316L with PFA-coating                  |                                  |
|                                  | ??   | Other - please specify                    |                                  |
|                                  | 5    |   | Lower Housing Material           |
|                                  |      | AP  | Carbon steel 1018 nickel plating |
|                                  |      | A2  | Stainless steel 316L (1.4435)    |
| A5                               |      | Hastelloy B2 (2.4617)                     |                                  |
| A7                               |      | Hastelloy C276 (2.4819)                   |                                  |
| A8                               |      | Monel 400 (2.4360)                        |                                  |
| A9                               |      | Inconel 600 (2.4816)                      |                                  |
| AA                               |      | Incoloy 825 (2.4858)                      |                                  |
| C2                               |      | Carpenter 20                              |                                  |
| ??                               |      | Other - please specify                    |                                  |
| 6                                |      | Fastening Parts (Retainer Flange & Bolts) |                                  |
|                                  | A    | Galvanized steel                          |                                  |
|                                  | B    | Stainless steel                           |                                  |
|                                  | ?    | Other - please specify                    |                                  |

| L990.TC Smart Code Configuration |      |                                   |
|----------------------------------|------|-----------------------------------|
| Field No.                        | Code |                                   |
| 7                                |      | Gasket (Process Seal)             |
|                                  | G    | BUNA-N (NBR) max. 212 °F          |
|                                  | J    | Viton (FPM) max. 400 °F           |
|                                  | E    | Teflon (PTFE) max. 500 °F         |
|                                  | ?    | Other - please specify            |
| 8                                |      | Connection to Pressure Instrument |
|                                  | 3    | 1/2" NPT-female                   |
|                                  | 4    | 1/4" NPT-female                   |
|                                  | 5    | Axial weld-in connection          |
|                                  | ?    | Other - please specify            |
| 9                                |      | Flushing Connection               |
|                                  | 1    | Without                           |
|                                  | 2    | 1 x 1/8" NPT                      |
|                                  | 3    | 1 x 1/4" NPT                      |
|                                  | 4    | 2 x 1/8" NPT                      |
|                                  | 5    | 2 x 1/4" NPT                      |
| 10                               | ?    | Other - please specify            |
|                                  |      | System Fillport                   |
|                                  | A    | Without                           |
|                                  | C    | Filler hole M6, set screw         |
| 11                               |      | Quality Certificates              |
|                                  | Z    | Without                           |
|                                  | 1    | Quality certificates              |
| 12                               |      | Additional Order Details          |
|                                  | Z    | Without                           |
|                                  | T    | Additional order details          |

<sup>1</sup> Max 300 °F

Order Code:      1      2      3      4      5      6      7      8      9      10      11      12\*

**L990.TC** -           -

\*Additional order details \_\_\_\_\_

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

Diaphragm Seals > Threaded Seals > L990.40

## Type L990.40

WIKA's Type L990.40 large displacement volume threaded seal is constructed of an upper and lower housing with a welded diaphragm. This design allows for a variety of usable materials to be assembled to meet the requirements of specific applications. The large diameter diaphragm is excellent for use on low-pressure applications and with switches that contain a large displacement volume to activate.



### Standard Features

**Pressure Rating, Maximum<sup>1</sup>:** 1,500 psi

**Suitable Pressure Span, Minimum<sup>2</sup>:**

Gauge (Range<sup>3</sup>):

2½", ≥ 15 psi

4 or 4½", ≥ 15 psi

**Pressure Transmitters (TRONIC)<sup>4</sup>:** ≥ 100 in H<sub>2</sub>O

**Differential Transmitter (Span):** ≥ 10" H<sub>2</sub>O

**Operating Temperature<sup>5</sup>:** -130°F to 752°F (-90°C to 400°C)

#### Notes:

1. Pressure rating based on solid metallic components
2. Typical values, dependant on pressure instrument and application
3. Includes compound ranges
4. Absolute pressure - check with factory
5. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

### Available Options

- Other materials
- Additional process connections
- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.40**.



Diaphragm Seals > Threaded Seals > L990.40

# Type L990.40

| L990.40 Smart Code Configuration |                         |   |          |
|----------------------------------|-------------------------|---|----------|
| Field No.                        | Code                    |   |          |
| 1                                | Diaphragm Diameter      |   |          |
|                                  | G                       | 2.9" (72 mm)                            | Special  |
|                                  | H                       | 3.5" (89 mm)                            | Standard |
|                                  | K                       | 4.9" (124 mm)                           | Special  |
|                                  | ?                       | Other - please specify                  |          |
| 2                                | Process Connection      |   |          |
|                                  | GN2                     | 1/4" NPT-female                         |          |
|                                  | GN4                     | 1/2" NPT-female                         |          |
|                                  | GN5                     | 3/4" NPT-female                         |          |
|                                  | GN6                     | 1" NPT-female                           |          |
|                                  | GNB                     | 1/4" NPT-male                           |          |
|                                  | GND                     | 1/2" NPT-male                           |          |
|                                  | GNE                     | 3/4" NPT-male                           |          |
|                                  | GNF                     | 1" NPT-male                             |          |
|                                  | ???                     | Other - please specify                  |          |
| 3                                | Nominal Pressure Rating |   |          |
|                                  | XA                      | 200 psi MWP for 4.9" diaphragm          |          |
|                                  | XP                      | 1,500 psi MWP for 2.9" & 3.5" Diaphragm |          |
|                                  | ??                      | Other - please specify                  |          |
| 4                                | Upper Housing Material  |   |          |
|                                  | AP                      | Carbon Steel 1018 nickel-plated         |          |
|                                  | AR                      | Stainless steel 316L (1.4435)           |          |
|                                  | AE                      | Titanium grade 2 (3.7035)               |          |
|                                  | ??                      | Other - please specify                  |          |
|                                  | Diaphragm Material      |   |          |
|                                  | AR                      | Stainless steel 316L (1.4435)           |          |
|                                  | A5                      | Hastelloy B2 (2.4617)                   |          |
|                                  | A7                      | Hastelloy C276 (2.4819)                 |          |
|                                  | A8                      | Monel 400 (2.4360)                      |          |
|                                  | A9                      | Inconel 600 (2.4816)                    |          |
|                                  | AA                      | Incoloy 825 (2.4858)                    |          |
|                                  | AB                      | Tantalum                                |          |
|                                  | AC                      | Nickel 200 (2.4066)                     |          |
|                                  | AE                      | Titanium grade 2 (3.7035) <sup>1</sup>  |          |
|                                  | C2                      | Carpenter 20                            |          |
|                                  | 5                       | Lower Housing Material                  |          |
| AP                               |                         | Carbon steel 1018 nickel-plated         |          |
| AR                               |                         | Stainless steel 316L (1.4435)           |          |
| A7                               |                         | Hastelloy C276 (2.4819)                 |          |
| A8                               |                         | Monel 400 (2.4360)                      |          |
| A9                               |                         | Inconel 600 (2.4816)                    |          |
| AA                               |                         | Incoloy 825 (2.4858)                    |          |
| AE                               |                         | Titanium grade 2 (3.7035)               |          |
| C2                               |                         | Carpenter 20                            |          |
| ??                               |                         | Other - please specify                  |          |
| 6                                | Lower Housing Material  |   |          |
|                                  | ??                      | Other - please specify                  |          |

| L990.40 Smart Code Configuration |                                   |                           |
|----------------------------------|-----------------------------------|---------------------------|
| Field No.                        | Code                              |                           |
| 7                                | Fastening Parts                   |                           |
|                                  | A                                 | Bolts in galvanized steel |
|                                  | B                                 | Bolts in stainless steel  |
|                                  | C                                 | High tensile bolts        |
| ?                                | Other - please specify            |                           |
| 8                                | Gasket (Process Seal)             |                           |
|                                  | J                                 | Viton (FPM) max. 400 °F   |
|                                  | E                                 | Teflon (PTFE) max. 500 °F |
|                                  | ?                                 | Other - please specify    |
| 9                                | Connection to Pressure Instrument |                           |
|                                  | 3                                 | 1/2" NPT-female           |
|                                  | 4                                 | 1/4" NPT-female           |
|                                  | 5                                 | Axial weld-in connection  |
|                                  | ?                                 | Other - please specify    |
| 10                               | Flushing Connection               |                           |
|                                  | 1                                 | Without                   |
|                                  | 3                                 | 1 x 1/4" NPT              |
|                                  | 5                                 | 2 x 1/4" NPT              |
| ?                                | Other - please specify            |                           |
| 11                               | System Fillport                   |                           |
|                                  | A                                 | Without                   |
|                                  | C                                 | Filler hole M6 set screw  |
| 12                               | Quality Certificates              |                           |
|                                  | Z                                 | Without                   |
|                                  | 2                                 | Certificate 2.2 EN 10204  |
| 3                                | Certificate 3.1 EN 10204          |                           |
| 13                               | Additional Order Details          |                           |
|                                  | T                                 | Additional order details  |

<sup>1</sup> Titanium upper housing required

\*Additional order details \_\_\_\_\_

Order Code:    1        2        3        4        5        6        7        8        9        10    11        12 13\*

**L990.40** -              -

Diaphragm Seals > Threaded Seals > L990.34

## Type L990.34

The Type L990.34 high-pressure seal is installed on pressure gauges or pressure transmitters. This seal protects the installed instrument from clogging due to viscous, contaminated or solidified process media. This all-welded design is used in controlled fugitive emissions applications.



### Standard Features

**Design:** Diaphragm, lower and upper housing are welded together generating a leak-free construction. The diaphragm is located between the upper and lower housing. A flushing port can be added to the lower housing to clean the diaphragm cavity.

**Pressure Rating, Maximum<sup>2</sup>:**

1,500 psi, 5,000 psi, 9,000 psi

**Suitable Pressure Span, Minimum<sup>1</sup>:**

Gauge, Range (with 1.3" diaphragm):

2½", ≥ 30 psi

4½", ≥ 160 psi

Gauge, Range (with 2.1" diaphragm):

2½", ≥ 15 psi

4 & 4½", ≥ 15 psi

**Operating Temperature<sup>2</sup>:**

-130°F to 752°F (-90°C to 400°C)

**Notes:**

1. Typical values, dependant on pressure instrument and application
2. Can vary based on selection of materials, diaphragm diameter and system fill fluid

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.34**.

### L990.34 Smart Code Configuration

| Field No. | Code | Description                            |
|-----------|------|--|
| 1         |      | Diaphragm Diameter                     |
|           | N    | 2.1" (52 mm), max. 1,500 psi @ 100 °F  |
|           | O    | 2.1" (52 mm), max. 5,000 psi @ 100 °F  |
|           | M    | 1.3" (32 mm), max. 9,000 psi @ 100 °F  |
|           | ?    | Other - please specify                 |
| 2         |      | Process Connection                     |
|           | GN2  | 1/4" NPT-female                        |
|           | GN4  | 1/2" NPT-female                        |
|           | GNB  | 1/4" NPT-male                          |
|           | GND  | 1/2" NPT-male                          |
| 3         | ???  | Other - please specify                 |
|           |      | Material of Wetted Parts               |
|           | AR   | Stainless steel 316L (1.4435)          |
|           | A5   | Hastelloy B2 (2.4617)                  |
|           | A6   | Hastelloy C4 (2.4610)                  |
|           | A7   | Hastelloy C276 (2.4819)                |
|           | A8   | Monel 400 (2.4360)                     |
|           | A9   | Inconel 600 (2.4816)                   |
|           | AA   | Incoloy 825 (2.4858)                   |
|           | AE   | Titanium grade 2 (3.7035) <sup>1</sup> |
| 4         | ??   | Other - please specify                 |
|           |      | Connection to Pressure Instrument      |
|           | 3    | 1/2" NPT-female                        |
|           | 4    | 1/4" NPT-female                        |
|           | 5    | Axial weld-in connection               |
| 5         | ?    | Other - please specify                 |
|           |      | System Fillport                        |
|           | A    | Without                                |
| 6         | C    | Filler hole M6 set screw               |
|           |      | Quality Certificates                   |
| 7         | Z    | Without                                |
|           | 1    | Quality certificates                   |
|           |      | Additional Order Details               |
| 7         | Z    | Without                                |
|           | ?    | Other - please specify                 |

<sup>1</sup> Upper Titanium required, threaded to gauge

Order Code:      1      2      3      4      5      6      7\*

**L990.34** -      -

\*Additional order details \_\_\_\_\_

Diaphragm Seals > Threaded Seals > L990.36

## Type L990.36

WIKA Type L990.36 high-pressure button seal is used on pressure gauges or pressure transmitters. The flush diaphragm protects the installed instrument from clogging due to viscous and solidified process media. This flush design eliminates material hardening within an internal cavity, which may occur in a standard threaded seal.



### Standard Features

**Design:** The diaphragm is located flush on the end of the male threaded process connection. The seal body is constructed of similar material as the diaphragm. This all-welded design eliminates all potential seal leak paths.

**Pressure Rating, Maximum<sup>2</sup>:** 9,000 psi

**Suitable Pressure Span, Minimum<sup>1</sup>:**

Gauge Mechanical, Range:

1" NPT-male process connection:

2½", ≥ 160 psi

4 & 4½", ≥ 1,000 psi

2" NPT- male process connection:

2½", ≥ 15 psi

4 & 4½", ≥ 30 psi

Gauge & Absolute Switch or Transmitter, Span:

¾" NPT-male process connection ≥ 160 psi

1" NPT-male process connection ≥ 160 psi

2" NPT-male process connection ≥ 15 psi

Differential Switch or Transmitter, Span: N/A

**Operating Temperature<sup>2</sup>:** -130°F to 752°F (-90°C to 400°C)

Notes:

1. Typical values, dependant on pressure instrument and application
2. Can vary based on selection of materials, diaphragm diameter and system fill fluid

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.36**.

### L990.36 Smart Code Configuration

| Field No. | Code |  |
|-----------|------|--|
|           |      | Diaphragm Diameter                     |
|           | GNE  | 3/4 NPT-male                           |
|           | GNF  | 1.0 NPT-male                           |
|           | GNG  | 1 1/2 NPT-male                         |
|           | GNH  | 2.0 NPT-male                           |
|           | GGE  | G 3/4 male                             |
|           | GGF  | G 1.0 male                             |
|           | GGG  | G 1.5 male                             |
| 1         | ???  | Other - please specify                 |
|           |      | Material of Wetted Parts               |
|           | AR   | Stainless steel 316L (1.4435)          |
|           | A7   | Hastelloy C276 (2.4819)                |
|           | A8   | Monel 400 (2.4360)                     |
|           | A9   | Inconel 600 (2.4816)                   |
|           | AA   | Incoloy 825 (2.4858)                   |
|           | AE   | Titanium grade 2 (3.7035) <sup>1</sup> |
| 2         | ??   | Other - please specify                 |
|           |      | Connection to Pressure Instrument      |
|           | 4    | 1/4" NPT-female                        |
|           | 5    | Axial weld-in connection               |
| 3         | ?    | Other - please specify                 |
|           |      | System Fillport                        |
|           | A    | Without                                |
| 4         | C    | Filler hole M6 set screw               |
|           |      | Quality Certificates                   |
|           | Z    | Without                                |
|           | 2    | Certificate 2.2 EN 10204               |
| 5         | 3    | Certificate 3.1 EN 10204               |
|           |      | Additional Order Details               |
|           | Z    | Without                                |
| 6         | ?    | Other - please specify                 |

<sup>1</sup>Upper Titanium required, threaded to gauge

Order Code:                    1            2            3            4            5            6\*

**L990.36** -     -

\*Additional order details \_\_\_\_\_

Diaphragm Seals > Flanged Seals > L990.12

## Type L990.12

Type L990.12, WIKA's standard flanged seal configuration, has an upper and lower housing with a welded diaphragm. This construction allows for a variety of usable materials and process connection sizes to be assembled to meet the requirements of specific applications.



### Standard Features

**Design:** The diaphragm is welded to the upper housing which allows the replacement of the lower housing without jeopardizing the integrity of the system fill fluid and installed instrument. The upper and lower housing are bolted together and sealed by use of an O-ring. Process wetted components can be manufactured with solid metallic, metallic lined and nonmetallic lined materials. Additional sealing faces and flange standards are available.

**Pressure Rating, Maximum<sup>1</sup>:** 3,675 psi or maximum flange rating per ASME B16.5

**Suitable Pressure Span, Minimum<sup>2</sup>:**

Gauge (Range<sup>3</sup>):

2½", ≥ 15 psi

4 or 4½", ≥ 15 psi

**Pressure Transmitters (TRONIC)<sup>4</sup>:** ≥ 15 psi

**Operating Temperature<sup>5</sup>:** -130°F to 752°F (-90°C to 400°C)

Notes:

1. Pressure rating based on solid metallic components
2. Typical values, dependant on pressure instrument and application
3. Includes compound ranges
4. Absolute pressure - check with factory
5. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

### Available Options

- Other materials
- Additional process connections, DIN, JIS
- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.12**.

## Type L990.12

| L990.12 Smart Code Configuration |  |                                 |
|----------------------------------|--|---------------------------------|
| Field No.                        | Code                                   |                                 |
| 1                                | Process Connection Type                |                                 |
|                                  | A                                      | ASME B16.5                      |
|                                  | D                                      | DIN 2501                        |
|                                  | ?                                      | Other - please specify          |
|                                  | Process Connection                     |                                 |
| 2                                | 80                                     | 1/2"                            |
|                                  | 81                                     | 3/4"                            |
|                                  | 82                                     | 1"                              |
|                                  | 83                                     | 1 1/2"                          |
|                                  | 84                                     | 2"                              |
|                                  | ?                                      | Other - please specify          |
| 3                                | Nominal Pressure Rating DIN            |                                 |
|                                  | 1                                      | Class 150                       |
|                                  | 2                                      | Class 300                       |
|                                  | 4                                      | Class 600                       |
|                                  | 6                                      | Class 1500                      |
|                                  | ?                                      | Other - please specify          |
|                                  | Sealing Face                           |                                 |
| 4                                | 3                                      | RF 125 - 250 RMS                |
|                                  | 4                                      | RJF groove                      |
|                                  | 6                                      | RFSF code for Teflon & Tantalum |
|                                  | ?                                      | Other - please specify          |
| 5                                | Upper Housing Material                 |                                 |
|                                  | AP                                     | Carbon steel 1018 nickel-plated |
|                                  | AR                                     | Stainless steel 316L (1.4435)   |
|                                  | AE                                     | Titanium grade 2 (3.7035)       |
|                                  | ??                                     | Other - please specify          |
|                                  | Diaphragm Material                     |                                 |
|                                  | AR                                     | Stainless steel 316L (1.4435)   |
|                                  | A5                                     | Hastelloy B2 (2.4617)           |
|                                  | A7                                     | Hastelloy C276 (2.4819)         |
|                                  | A8                                     | Monel 400 (2.4360)              |
| A9                               | Inconel 600 (2.4816)                   |                                 |
| AA                               | Incoloy 825 (2.4858)                   |                                 |
| AB                               | Tantalum                               |                                 |
| AC                               | Nickel 200 (2.4066)                    |                                 |
| AE                               | Titanium grade 2 (3.7035) <sup>1</sup> |                                 |
| C2                               | Carpenter 20                           |                                 |
| BA                               | SS 316L with PTFE foil                 |                                 |
| BB                               | SS 316L with PFA-coating               |                                 |
| BD                               | SS 316TI (1.4571) w/ gold plating      |                                 |
| ??                               | Other - please specify                 |                                 |
| 6                                | Lower Housing Material                 |                                 |
|                                  | AP                                     | Carbon steel 1018 nickel-plated |
|                                  | AR                                     | Stainless steel 316L (1.4435)   |
|                                  | A7                                     | Hastelloy C276 (2.4819)         |
|                                  | A8                                     | Monel 400 (2.4360)              |
|                                  | A9                                     | Inconel 600 (2.4816)            |
|                                  | AA                                     | Incoloy 825 (2.4858)            |
|                                  | AB                                     | Tantalum lining <sup>2</sup>    |

| L990.12 Smart Code Configuration |   |  |
|----------------------------------|---|--|
| Field No.                        | Code                                      |  |
| 7                                | AC  | Nickel 200 (2.4066)                    |
|                                  | AE  | Titanium grade 2 (3.7035)              |
|                                  | C2  | Carpenter 20                           |
|                                  | SW  | SS With PTFE lining white <sup>2</sup> |
|                                  | AH  | SS With PFA-coating <sup>2</sup>       |
|                                  | ??  | Other - please specify                 |
| 8                                | Fastening Parts (Retainer Flange & Bolts) |  |
|                                  | A   | Galvanized steel                       |
|                                  | B   | Stainless steel                        |
|                                  | C   | SS and high tensile bolts              |
|                                  | Gasket (Process Seal)                     |  |
| 9                                | Z   | Without                                |
|                                  | J   | Viton (FPM) max. 400 °F                |
|                                  | G   | BUNA-N (NBR) max. 212 °F               |
|                                  | E   | Teflon (PTFE) max. 500 °F              |
|                                  | C   | Metal seal form C, SS/ silver          |
|                                  | D   | Metal seal form C, Inconel / silver    |
| 10                               | ?   | Other - please specify                 |
|                                  | Connection to Pressure Instrument         |  |
|                                  | 4   | 1/4" NPT-female                        |
|                                  | 3   | 1/2" NPT-female                        |
|                                  | 5   | Axial weld-in connection               |
| 11                               | ?   | Other - please specify                 |
|                                  | Flushing Connection                       |  |
|                                  | 1   | Without                                |
|                                  | 2   | 1 x 1/8" NPT                           |
|                                  | 3   | 1 x 1/4" NPT                           |
|                                  | 4   | 2 x 1/8" NPT                           |
| 12                               | 5   | 2 x 1/4" NPT                           |
|                                  | ?   | Other - please specify                 |
|                                  | System Fillport                           |  |
| 13                               | A   | Without                                |
|                                  | ?   | Other - please specify                 |
|                                  | Quality Certificates                      |  |
| 14                               | Z   | Without                                |
|                                  | 1   | Quality certificates                   |
|                                  | Additional Order Details                  |  |
| 14                               | Z   | Without                                |
|                                  | T   | Additional order details               |

<sup>1</sup> Titanium upper housing required

<sup>2</sup> No Flushing ports available.

\*Additional order details \_\_\_\_\_

Order Code:      1    2    3    4    5    6    7    8    9    10    11    12    13    14\*

**L990.12** -                -



Diaphragm Seals > Flanged Seals > L990.FA

## Type L990.FA

The Type L990.FA flanged seal is constructed of an upper and lower housing, two O-rings and a diaphragm. The clamped diaphragm provides a method of replacing only the diaphragm when damage or excessive wear occurs.



### Standard Features

**Pressure Rating, Maximum:** 2,500 psi or maximum flange rating per ASME B16.5

**Suitable Pressure Span, Minimum<sup>1</sup>:**

Gauge (Range<sup>2</sup>):

2½", ≥ 15 psi

4 or 4½", ≥ 15 psi

**Pressure Transmitters (TRONIC)<sup>3</sup>:** ≥ 15 psi

**Operating Temperature<sup>4</sup>:** -130°F to 500°F (-90°C to 260°C)

Notes:

1. Typical values, dependant on pressure instrument and application
2. Includes compound ranges
3. Absolute pressure - check with factory
4. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

### Available Options

- Other materials
- Additional process connections, DIN, JIS
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet [L990.FA](#).

## Type L990.FA

| L990.FA Smart Code Configuration |  |                                 |
|----------------------------------|--|---------------------------------|
| Field No.                        | Code                                   |                                 |
| 1                                |  | Process Connection Type         |
|                                  | A                                      | ASME B16.5                      |
|                                  | ?                                      | Other - please specify          |
| 2                                |  | Process Connection              |
|                                  | 80                                     | 1/2"                            |
|                                  | 81                                     | 3/4"                            |
|                                  | 82                                     | 1"                              |
|                                  | 83                                     | 1½"                             |
|                                  | 84                                     | 2"                              |
|                                  | ??                                     | Other - please specify          |
| 3                                |  | Nominal Pressure Rating         |
|                                  | 1                                      | Class 150                       |
|                                  | 2                                      | Class 300                       |
|                                  | 4                                      | Class 600                       |
|                                  | 6                                      | Class 1500                      |
| 4                                | ?                                      | Other - please specify          |
|                                  |  | Sealing Face                    |
|                                  | 2                                      | RF 125 ... 250 RMS              |
|                                  | 4                                      | RJF groove                      |
| 5                                | 6                                      | RFSF code for Tantalum          |
|                                  | ?                                      | Other - please specify          |
|                                  |  | Upper Housing Material          |
|                                  | AP                                     | Carbon Steel 1018 nickel-plated |
|                                  | A2                                     | Stainless steel 316L (1.4435)   |
|                                  | ??                                     | Other - please specify          |
|                                  |  | Diaphragm Material              |
|                                  | A2                                     | Stainless steel 316L (1.4435)   |
|                                  | A5                                     | Hastelloy B2 (2.4617)           |
|                                  | A7                                     | Hastelloy C276 (2.4819)         |
| A8                               | Monel 400 (2.4360)                     |                                 |
| A9                               | Inconel 600 (2.4816)                   |                                 |
| AA                               | Incoloy 825 (2.4858)                   |                                 |
| AB                               | Tantalum                               |                                 |
| AC                               | Nickel 200 (2.4066)                    |                                 |
| AE                               | Titanium grade 2 (3.7035) <sup>1</sup> |                                 |
| AG                               | SS 316 Ti (1.4571) w/ PTFE lining      |                                 |
| AH                               | SS 316 Ti (1.4571) with PFA coating    |                                 |
| 6                                | C2                                     | Carpenter 20                    |
|                                  | ??                                     | Other - please specify          |
|                                  |  | Lower Housing Material          |
|                                  | AP                                     | Carbon steel 1018 nickel-plated |
|                                  | A2                                     | Stainless steel 316L (1.4435)   |
|                                  | A5                                     | Hastelloy B2 (2.4617)           |
|                                  | A7                                     | Hastelloy C276 (2.4819)         |
|                                  | A8                                     | Monel 400 (2.4360)              |
|                                  | A9                                     | Inconel 600 (2.4816)            |
|                                  | AA                                     | Incoloy 825 (2.4858)            |
|                                  | AB                                     | Tantalum lining <sup>2</sup>    |
|                                  | AC                                     | Nickel 200 (2.4066)             |

| L990.FA Smart Code Configuration |         |   |
|----------------------------------|---------|---|
| Field No.                        | Code    |   |
| 7                                | AE      | Titanium grade 2 (3.7035)                 |
|                                  | AH      | SS 316L with Teflon coating <sup>2</sup>  |
|                                  | C2      | Carpenter 20                              |
| 8                                | ??      | Other - please specify                    |
|                                  |         | Fastening Parts (Retainer Flange & Bolts) |
|                                  | A       | Galvanized steel                          |
|                                  | B       | Stainless steel                           |
| 9                                | C       | SS with high tensile bolts                |
|                                  |         | Gasket (Process Seal)                     |
|                                  | J       | Viton (FPM) max. 400 °F                   |
|                                  | E       | Teflon (PTFE) max. 500 °F                 |
|                                  | G       | BUNA-N (NBR) max. 212 °F                  |
| 10                               | ?       | Other - please specify                    |
|                                  |         | Connection to Pressure Instrument         |
|                                  | 3       | 1/2" NPT-female                           |
|                                  | 4       | 1/4" NPT-female                           |
| 11                               | 5       | Axial weld-in connection                  |
|                                  | ?       | Other - please specify                    |
|                                  |         | System Fillport                           |
| 12                               | A       | Without                                   |
|                                  | C       | Filler hole M6 set screw                  |
|                                  |         | Flushing Connection                       |
|                                  | 1       | Without                                   |
|                                  | 2       | 1 x 1/8 NPT                               |
|                                  | 3       | 1 x 1/4 NPT                               |
|                                  | 4       | 2 x 1/8 NPT                               |
|                                  | 5       | 2 x 1/4 NPT                               |
|                                  | ?       | Other - please specify                    |
|                                  |         | Quality Certificates                      |
| Z                                | Without |   |
| 13                               | 1       | Quality certificates                      |
|                                  |         | Additional Order Details                  |
|                                  | Z       | Without                                   |
| 14                               | T       | Additional order details                  |

<sup>1</sup> Titanium upper housing required

<sup>2</sup> No Flushing ports available.

\*Additional order details \_\_\_\_\_

Order Code:      1    2    3    4    5    6    7    8    9    10    11    12    13    14

**L990.FA** -                -

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

Diaphragm Seals > Flanged Seals > L990.FC

## Type L990.FC

Type L990.FC, 1" and 1½", flanged seal configuration is comprised of a two-piece lower housing (flange and insert). The flange on this seal contains through holes for mounting with the end user's flange. The construction of this seal allows for numerous materials to be used for the process-wetted components.



### Standard Features

**Design:** The insert on the flanged connection is bolted to the flange and upper housing and sealed with an O-ring. The flange and upper housing can be constructed of plated carbon steel or stainless steel. All process wetted components can be comprised of numerous materials, solid or lined.

**Process Rating, Maximum:** 600 psi or maximum flange rating per ASME B16.5

**Suitable Pressure Span, Minimum<sup>1</sup>:**

Gauge (Range<sup>2</sup>):

2½", ≥ 15 psi

4 or 4½", ≥ 15 psi

**Pressure Transmitters (TRONIC)<sup>3</sup>:** ≥ 15 psi

**Operating Temperature<sup>4</sup>:** -130°F to 752°F (-90°C to 400°C)

Notes:

1. Typical values, dependant on pressure instrument and application
2. Includes compound ranges
3. Absolute pressure - check with factory
4. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

### Available Options

- Other materials
- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.FC**.



Diaphragm Seals > Flanged Seals > L990.FD

## Type L990.FD

The L990.FD is a process industry diaphragm seal used in combination with pressure gauges. The design of this seal consists of an internal clamped diaphragm with a threaded process connection. The L990.FD diaphragm seal is intended for corrosive, contaminated, hot or viscous pressure media.



### Standard Features

**Pressure Rating, Maximum:** 600 psi or maximum flange rating per ASME B16.5

**Suitable Pressure Span, Minimum<sup>1</sup>:**

Gauge (Range<sup>2</sup>):

2½", ≥ 15 psi

4 or 4½", ≥ 15 psi

**Pressure Transmitters (TRONIC)<sup>3</sup>:** ≥ 15 psi

**Operating Temperature<sup>4</sup>:** -130°F to 500°F (-90°C to 260°C)

Notes:

1. Typical values, dependant on pressure instrument and application
2. Includes compound ranges
3. Absolute pressure - check with factory
4. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

### Available Options

- Other materials
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.FD**.





Diaphragm Seals > Flanged Seals > L990.FB

## Type L990.FB

WIKA Type L990.FB, WIKA's all-welded flanged seal configuration is comprised of an upper and lower housing welded together with an internal diaphragm providing a leak-free design. This all-welded design is ideal for applications where emissions to the environment are tightly monitored.



### Standard Features

**Pressure Rating, Maximum:** 1,500 psi or maximum flange rating per ASME B.16.5

**Suitable Pressure Span, Minimum<sup>1</sup>:**

Gauge (Range<sup>2</sup>):

2½", ≥ 15 psi

4 or 4½", ≥ 15 psi

**Pressure Transmitters (TRONIC)<sup>3</sup>:** ≥ 15 psi

**Operating Temperature<sup>4</sup>:** -130°F to 752°F (-90°C to 400°C)

Notes:

1. Typical values, dependant on pressure instrument and application
2. Includes compound ranges
3. Absolute pressure - check with factory
4. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

### Available Options

- Other process connections, DIN, JIS
- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.FB**.





## Type L990.26

Type L990.26 flanged diaphragm seal is a one-piece design. The diaphragm is recessed from the end user's gasket-sealing surface. A variety of process wetted materials are available, such as solid metallic, metal or plastic lined. This seal is commonly installed on transmitters and pressure gauges.

### Standard Features

**Design:** This seal contains a recessed diaphragm to the gasket-sealing surface. This seal is a one-piece design removing all requirements for internal gaskets and O-rings.

All exotic metal and Teflon® lined stainless steel are available; process wetted surfaces and 316 series stainless steel flange material is standard for WIKA. Additional sealing faces and flange standards are available.

**Pressure Rating, Maximum:** 725 psi maximum flange rating per ASME B16.5

**Suitable Pressure Span, Minimum<sup>1</sup>:**

Gauge (Range<sup>2</sup>):  
 2½", ≥ 15 psi  
 4 or 4½", ≥ 15 psi

**Pressure Transmitters (TRONIC)<sup>3</sup>:** ≥ 15 psi

**Operating Temperature<sup>4</sup>:** -130°F to 752°F (-90°C to 400°C)

#### Notes:

1. Typical values, dependant on pressure instrument, diaphragm diameter, process connection size and application
2. Includes compound ranges
3. Absolute pressure - check with factory
4. Can vary based on selection of materials

### Available Options

- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.26**.

\*Additional order details \_\_\_\_\_

| L990.26 Smart Code Configuration |      |  |
|----------------------------------|------|--|
| Field No.                        | Code |  |
| 1                                |      | Process Connection Type                |
|                                  | A    | ASME B16.5                             |
|                                  | ?    | Other - please specify                 |
| 2                                |      | Process Connection                     |
|                                  | 80   | 1/2" (Dm. 1.3")                        |
|                                  | 81   | 3/4" (Dm. 1.5")                        |
|                                  | 82   | 1" (Dm. 2.1")                          |
| 3                                | ??   | Other - please specify                 |
|                                  |      | Nominal Pressure Rating                |
|                                  |      | DIN                                    |
|                                  | 1    | Class 150                              |
| 4                                | 2    | Class 300                              |
|                                  | ?    | Other - please specify                 |
|                                  |      | Sealing Face                           |
| 5                                | 2    | RF 250 RMS                             |
|                                  | 3    | RF 125 RMS                             |
|                                  | 6    | RFSF code for Teflon & Tantalum        |
|                                  | ?    | Other - please specify                 |
|                                  |      | Material of Wetted Parts               |
|                                  | AR   | Stainless steel 316L (1.4435)          |
| 6                                | A6   | Hastelloy C4 (2.4610)                  |
|                                  | A7   | Hastelloy C276 (2.4819)                |
|                                  | A8   | Monel 400 (2.4360)                     |
|                                  | A9   | Inconel 600 (2.4816)                   |
|                                  | AA   | Incoloy 825 (2.4858)                   |
|                                  | AB   | Tantalum lined                         |
|                                  | AC   | Nickel 200 (2.4066)                    |
|                                  | AE   | Titanium grade 2 (3.7035) <sup>1</sup> |
|                                  | C2   | Carpenter 20                           |
|                                  | ??   | Other - please specify                 |
|                                  |      | Connection to Pressure Instrument      |
| 7                                | 3    | 1/2" NPT-female                        |
|                                  | 4    | 1/4" NPT-female                        |
|                                  | 5    | Axial weld-in connection               |
|                                  | ?    | Other - please specify                 |
| 8                                |      | System Fillport                        |
|                                  | A    | Without                                |
|                                  | C    | Filler hole M6 set screw               |
| 9                                |      | Quality Certificates                   |
|                                  | Z    | Without                                |
|                                  | 2    | Certificate 2.2 EN 10204               |
|                                  | 3    | Certificate 3.1 EN 10204               |
| 9                                |      | Additional Order Details               |
|                                  | Z    | Without                                |
|                                  | T    | Additional order details               |

<sup>1</sup> Titanium upper housing required

Order Code:    1    2    3    4    5    6    7    -    8    9\*

**L990.26** - 

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
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Diaphragm Seals > Flanged Seals > L990.27

## Type L990.27

Type L990.27 flanged, flush diaphragm seal is a one-piece design. The diaphragm is flush with the end user's gasket-sealing surface which removes all internal cavities, avoiding clogging and media build-up. A wide variety of process wetted materials are available, such as solid metallic, metal or plastic-lined, and coated. This seal is commonly installed on transmitters and pressure gauges.



### Standard Features

**Design:** This seal contains a diaphragm flush on the gasket-sealing surface.

This seal is a one-piece design removing all requirements for internal gaskets and O-rings. All exotic metal process wetted surfaces use the patented WIKA metal bonding process for diaphragm attachment that removes all welds from being exposed to the process media. 316 series stainless steel flange material is standard for WIKA. Additional sealing faces and flange standards are available.

**Pressure Rating, Maximum:** Maximum flange rating per ASME B16.5

**Suitable Pressure, Minimum<sup>1</sup>:**

Gauge Mechanical, Range:  $\geq 15$  psi

Switch or Transmitter, Span: 200" H<sub>2</sub>O

Differential Switch or Transmitter, Span: 10" H<sub>2</sub>O differential

**Operating Temperature<sup>2</sup>:** -130°F to 752°F (-90°C to 400°C)

Notes:

1. Typical values, dependant on pressure instrument, diaphragm diameter, process connection size and application
2. Can vary based on selection of materials

### Available Options

- Other materials
- Other process connections, DIN, JIS
- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.27**.



## Type L990.27

DIAPHRAGM SEALS

| L990.27 Smart Code Configuration |                             |                               |                 |
|----------------------------------|-----------------------------|-------------------------------|-----------------|
| Field No.                        | Code                        |                               |                 |
| 1                                | Process Connection Type     |                               |                 |
|                                  | A                           | ASME B16.5                    |                 |
|                                  | D                           | DIN 2501                      |                 |
|                                  | ?                           | Other - please specify        |                 |
|                                  | Process Connection DIN 2501 |                               |                 |
|                                  | 83                          | 1½" DN40                      |                 |
|                                  | 84                          | 2" DN50                       |                 |
| 2                                | 85                          | 3" DN80                       |                 |
|                                  | 86                          | 4" DN100                      |                 |
|                                  | 87                          | 5" DN125                      |                 |
|                                  | ??                          | Other - please specify        |                 |
|                                  | Nominal Pressure Rating DIN |                               |                 |
| 3                                | 1                           | Class 150 PN 10               |                 |
|                                  | 2                           | Class 300 PN 16               |                 |
|                                  | 4                           | Class 600 PN 40               |                 |
|                                  | 5                           | Class 900 PN 63               |                 |
|                                  | 6                           | Class 1500 PN 100             |                 |
|                                  | 7                           | Class 2500 PN 160             |                 |
|                                  | ?                           | Other - please specify        |                 |
| 4                                | Sealing Face                |                               |                 |
|                                  | 2                           | RF 250 RMS Form C             |                 |
|                                  | 3                           | RF 125 RMS                    |                 |
|                                  | 4                           | RJF groove Form N             |                 |
|                                  | 6                           | RFSF Form E                   |                 |
| ?                                | Other - please specify      |                               |                 |
| 5                                | Material of Wetted Parts    |                               |                 |
|                                  | AR                          | Stainless steel 316L (1.4435) |                 |
|                                  | A5                          | Hastelloy B2 (2.4617)         |                 |
|                                  | A6                          | Hastelloy C4 (2.4610)         |                 |
|                                  | A7                          | Hastelloy C276 (2.4819)       |                 |
|                                  | A8                          | Monel 400 (2.4360)            |                 |
|                                  | A9                          | Inconel 600 (2.4816)          |                 |
|                                  | AA                          | Incoloy 825 (2.4858)          |                 |
|                                  | AB                          | Tantalum                      |                 |
|                                  | AC                          | Nickel 200 (2.4066)           |                 |
|                                  | AE                          | Titanium grade 2 (3.7035)     |                 |
|                                  | BG                          | SS 316 with PTFE-lining       |                 |
|                                  | BH                          | SS 316 with PFA-coating       |                 |
|                                  | BJ                          | SS 316 with ECTFE-coating     |                 |
|                                  | BD                          | SS 316 with gold-lining       |                 |
|                                  | C2                          | Carpenter 20                  |                 |
|                                  | ??                          | Other - please specify        |                 |
|                                  | 6                           | System Fillport               |                 |
|                                  |                             | 4                             | 1/4" NPT-female |
| 3                                |                             | 1/2" NPT-female               |                 |
| 5                                |                             | Axial weld-in connection      |                 |
| 6                                |                             | Radial weld-in connection     |                 |
| ?                                | Other - please specify      |                               |                 |

| L990.27 Smart Code Configuration |                          |                          |
|----------------------------------|--------------------------|--------------------------|
| Field No.                        | Code                     |                          |
| 7                                | System Fillport          |                          |
|                                  | A                        | Without                  |
|                                  | C                        | Filler hole M6 set screw |
| 8                                | Quality Certificates     |                          |
|                                  | Z                        | Without                  |
|                                  | 2                        | Certificate 2.2 EN 10204 |
|                                  | 3                        | Certificate 3.1 EN 10204 |
| 9                                | Additional Order Details |                          |
|                                  | T                        | Additional order details |

\*Additional order details \_\_\_\_\_

Order Code:      1      2      3      4      5      6      7      8      9\*

**L990.27** -           -

Diaphragm Seals > Flanged Seals > L990.FR

## Type L990.FR

Type L990.FR flanged, flush diaphragm seal is a two-piece design. The diaphragm is flush with the end user's gasket-sealing surface which removes all internal cavities, avoiding clogging and media buildup. A wide variety of process wetted materials are available, such as solid metallic, metal- or plastic lined, and coated. This seal is commonly installed on transmitters and pressure gauges.



### Standard Features

**Design:** This seal contains a diaphragm flush on the gasket-sealing surface.

This seal is a two-piece design removing all requirements for internal gaskets and O-rings. All exotic metal process wetted surfaces use the patented WIKA metal bonding process for diaphragm attachment that removes all welds from being exposed to the process media. 316 series stainless steel flange material is standard for WIKA. Additional sealing faces and flange standards are available.

**Pressure Rating, Maximum:** Maximum flange rating per ASME B16.5

**Suitable Pressure, Minimum<sup>1</sup>:**

Gauge Mechanical, Range:  $\geq 15$  psi

Switch or Transmitter, Span: 200" H<sub>2</sub>O

Differential Switch or Transmitter, Span: 10" H<sub>2</sub>O differential

**Operating Temperature<sup>2</sup>:** -130°F to 752°F (-90°C to 400°C)

Notes:

1. Typical values, dependant on pressure instrument, diaphragm diameter, process connection size and application
2. Can vary based on selection of materials

### Available Options

- Other materials
- Other process connections, DIN, JIS
- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.FR**.

Diaphragm Seals > Flanged Seals > L990.FR

## Type L990.FR

DIAPHRAGM SEALS

| L990.FR Smart Code Configuration  |                             |                                  |
|-----------------------------------|-----------------------------|----------------------------------|
| Field No.                         | Code                        |                                  |
| 1                                 | Process Connection Type     |                                  |
|                                   | A                           | ASME B16.5                       |
|                                   | D                           | DIN 2501                         |
|                                   | ?                           | Other - please specify           |
|                                   | Process Connection DIN 2501 |                                  |
|                                   | 84                          | 2" DN50                          |
|                                   | 85                          | 3" DN80                          |
| 2                                 | 86                          | 4" DN100                         |
|                                   | 87                          | 5" DN125                         |
|                                   | ??                          | Other - please specify           |
|                                   | Nominal Pressure Rating DIN |                                  |
|                                   | 1                           | Class 150 PN 10                  |
| 3                                 | 2                           | Class 300 PN 16                  |
|                                   | 4                           | Class 600 PN 40                  |
|                                   | 5                           | Class 900 PN 63                  |
|                                   | 6                           | Class 1500 PN 100                |
|                                   | ?                           | Other - please specify           |
|                                   | Sealing Face                |                                  |
| 4                                 | 2                           | RF 250 RMS Form C                |
|                                   | 4                           | RJF groove Form N                |
|                                   | 6                           | RFSF Form E                      |
|                                   | ?                           | Other - please specify           |
| Material of Wetted Parts          |                             |                                  |
| 5                                 | A2                          | Stainless steel 316L (1.4435)    |
|                                   | A5                          | Hastelloy B2 (2.4617)            |
|                                   | A7                          | Hastelloy C276 (2.4819)          |
|                                   | A8                          | Monel 400 (2.4360)               |
|                                   | A9                          | Inconel 600 (2.4816)             |
|                                   | AA                          | Incoloy 825 (2.4858)             |
|                                   | AC                          | Nickel 200 (2.4066)              |
|                                   | AE                          | Titanium grade 2 (3.7035)        |
|                                   | AH                          | SS 316Ti (1.4571) w/ PFA coating |
|                                   | AP                          | SS 316L (1.4435) w/ gold lining  |
|                                   | ??                          | Other - please specify           |
| Connection to Pressure Instrument |                             |                                  |
| 6                                 | 3                           | 1/2" NPT-female                  |
|                                   | 4                           | 1/4" NPT-female                  |
|                                   | 5                           | Axial weld-in connection         |
|                                   | ?                           | Other - please specify           |

| L990.FR Smart Code Configuration |                          |                          |
|----------------------------------|--------------------------|--------------------------|
| Field No.                        | Code                     |                          |
| 7                                | System Fillport          |                          |
|                                  | A                        | Without                  |
|                                  | C                        | Filler hole M6 set screw |
| 8                                | Quality Certificates     |                          |
|                                  | Z                        | Without                  |
|                                  | 2                        | Certificate 2.2 EN 10204 |
|                                  | 3                        | Certificate 3.1 EN 10204 |
| 9                                | Additional Order Details |                          |
|                                  | Z                        | Without                  |
|                                  | T                        | Additional order details |

Order Code:    1    2    3    4    5    6    7    8    9\*

**L990.FR** -        -

\*Additional order details \_\_\_\_\_

## Type L990.28



Type L990.28 pancake diaphragm seal is a one-piece design. The diaphragm is flush with the end user's gasket-sealing surface which removes all internal cavities, avoiding clogging and settlement buildup. This seal is installed between the end user's process flange and a blind back-up flange (up to 2500# classification per ASME B16.5). A wide variety of process wetted materials are available, such as solid metallic, metal- or plastic-lined, and coated. This seal is commonly installed on transmitters and pressure gauges.

### Standard Features

**Pressure Rating, Maximum:** Maximum flange rating up to 2500# classification per ASME B16.5

**Suitable Pressure Minimum<sup>1</sup>:**

- Gauge Mechanical, Range:  $\geq 15$  psi
- Switch or Transmitter, Span: 200" H<sub>2</sub>O
- Differential Switch or Transmitter, Span: 10" H<sub>2</sub>O differential

**Operating Temperature Range<sup>2</sup>:**

-130°F to 752°F (-90°C to 400°C)

**Notes:**

1. Typical values, dependant on pressure instrument, diaphragm diameter, nominal pipe size and application
2. Can vary based on selection of materials

### Available Options

- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.28**.

| L990.28 Smart Code Configuration |                                   |                           |
|----------------------------------|-----------------------------------|---------------------------|
| Field No.                        | Code                              |                           |
| 1                                | Process Connection Type           |                           |
|                                  | A                                 | ASME B16.5                |
|                                  | D                                 | DIN 2501                  |
|                                  | ?                                 | Other - please specify    |
|                                  | Process Connection DIN 2501       |                           |
| 2                                | 83                                | 1½" DN40                  |
|                                  | 84                                | 2" DN50                   |
|                                  | 85                                | 3" DN80                   |
|                                  | 86                                | 4" DN100                  |
|                                  | 87                                | 5" DN125                  |
| 2                                | ??                                | Other - please specify    |
| 3                                | Sealing Face                      |                           |
|                                  | 2                                 | RF 250 RMS standard       |
|                                  | 3                                 | RF 125 RMS                |
|                                  | 4                                 | RJF groove Form N         |
|                                  | 6                                 | RF SF Form E              |
|                                  | ?                                 | Other - please specify    |
|                                  | Material of Wetted Parts          |                           |
| AR                               | Stainless steel 316L (1.4435)     |                           |
| A5                               | Hastelloy B2 (2.4617)             |                           |
| A7                               | Hastelloy C276 (2.4819)           |                           |
| A8                               | Monel 400 (2.4360)                |                           |
| A9                               | Inconel 600 (2.4816)              |                           |
| AA                               | Incoloy 825 (2.4858)              |                           |
| AB                               | Tantalum                          |                           |
| AC                               | Nickel 200(2.4066)                |                           |
| AE                               | Titanium grade 2 (3.7035)         |                           |
| BG                               | SS 316 with PTFE-foil             |                           |
| BH                               | SS 316 with PFA-coating           |                           |
| BJ                               | SS 316 with ECTFE-coating         |                           |
| BD                               | SS 316 with gold-lining           |                           |
| C2                               | Carpenter 20                      |                           |
| 4                                | ??                                | Other - please specify    |
| 5                                | Connection to Pressure Instrument |                           |
|                                  | 6                                 | Radial weld-in connection |
| 5                                | ?                                 | Other - please specify    |
| 6                                | System Fillport                   |                           |
|                                  | C                                 | Filler hole M6 set screw  |
| 7                                | Quality Certificates              |                           |
|                                  | Z                                 | Without                   |
|                                  | 1                                 | Quality certificates      |
| 8                                | Additional Order Details          |                           |
|                                  | Z                                 | Without                   |
|                                  | T                                 | Additional order details  |

DIAPHRAGM SEALS

Order Code:      1      2      3      4      5      6      7      8\*

**L990.28** -       -

\*Additional order details \_\_\_\_\_

Diaphragm Seals > Flanged Seals > L990.41

## Type L990.41

Type L990.41, WIKA's large displacement volume flange seal configuration, is comprised of an upper and lower housing with a welded diaphragm. This construction allows for a variety of materials to be used to meet specific requirements of applications. The large diameter diaphragm is excellent for use on low-pressure applications and with switches that contain a large displacement volume.



### Standard Features

**Pressure Rating, Maximum<sup>1</sup>:** 1,500 psi or maximum flange rating

**Suitable Pressure Span, Minimum<sup>2</sup>:**

Gauge Mechanical, Range:  $\geq 15$  psi

Switch or Transmitter, Span: 200" H<sub>2</sub>O

Differential Switch or Transmitter, Span: 10" H<sub>2</sub>O differential

**Operating Temperature<sup>3</sup>:** -130°F to 752°F (-90°C to 400°C)

Notes:

1. Pressure rating based on solid metallic components
2. Typical values, dependant on pressure instrument and application
3. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

### Available Options

- Other materials
- Other process connections, DIN, JIS
- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.41**.





# Type L990.22

WIKA's Type L990.22 Tri-Clamp® sanitary process connection is designed to mate with an equal sized fitting. This seal is designed to facilitate ease of assembly and disassembly from its mating fitting. This seal and mating fitting are held together via a clamp to minimize impurities entering the process during the removal and reinstallation of the seal. This seal meets the criteria set by "3A" standards. This seal is designed for applications in the pharmaceutical and food and beverage industries.



## Standard Features

**Design:** This seal is designed to mate with a Tri-Clamp® sanitary process connection. The external flush diaphragm with gasket provides a hygienic process connection. The standard material of construction is 316 stainless steel. Electropolished process wetted surfaces are available as an option.

**Pressure Rating, Maximum** (clamping device dependent, ref. MSHHS clamp):

1½" = 600 psi, 2" = 550 psi, 2½" = 450 psi,  
3" = 350 psi, 4" = 250 psi

**Suitable Pressure, Minimum<sup>1</sup>:**

Gauge Mechanical, Range:

1½" process connection:

2½" -30" Hg to 60 psi up to -30" Hg to 600 psi  
4 & 4½" -30" Hg to 400 psi up to -30" Hg to 600 psi

2" process connection:

2½" -30" Hg to 0 psi up to -30" Hg to 550 psi  
4 & 4½" -30" Hg to 100 psi up to -30" Hg to 550 psi

2½", 3", & 4" process connection:

-30" Hg to 0 psi up to -30" Hg to maximum pressure rating

Gauge & Absolute Switch or Transmitter, Span<sup>2</sup>:

200" H<sub>2</sub>O

Differential Switch or Transmitter, Span<sup>2</sup>:

10" H<sub>2</sub>O differential

**Operating Temperature<sup>3</sup>:** -10°F to 572°

F (-23°C to 300°C)

## L990.22 Smart Code Configuration

| Field No. | Code |                                   |
|-----------|------|-----------------------------------|
|           |      | Process Connection                |
|           | A83  | 1½"                               |
|           | A84  | 2"                                |
|           | A91  | 2½"                               |
|           | A85  | 3"                                |
|           | A86  | 4"                                |
| 1         | ???  | Other - please specify            |
|           |      | Material of Wetted Parts          |
|           | A2   | SS 316L (1.4435)                  |
|           | B2   | SS 316L (1.4435) electropolished  |
|           | A7   | Hasstelloy® C276 (2.4819)         |
| 2         | ??   | Other - please specify            |
|           |      | Gasket (Process Seal)             |
| 3         | Z    | Without                           |
|           |      | Connection to Pressure Instrument |
|           | 3    | 1/2" NPT-female                   |
|           | 4    | 1/4" NPT-female                   |
|           | 5    | Axial weld-in connection          |
| 4         | ?    | Other - please specify            |
|           |      | System Fillport                   |
|           | A    | Without                           |
| 5         | C    | Filler hole M6 set screw          |
|           |      | Quality Certificates              |
|           | Z    | Without                           |
|           | 2    | Certificate 2.2 EN 10204          |
| 6         | 3    | Certificate 3.1 EN 10204          |
|           |      | Additional Order Details          |
|           | Z    | Without                           |
|           | 3    | 3A Logo etched on seal            |
| 7         | T    | Additional order details          |

**Notes:**

1. Typical values, dependant on pressure instrument, process connection size and application
2. Value is dependant on process connection size
3. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

Order Code:                    1            2            3            4            5                                    6            7\*

**L990.22** -      -

\*Additional order details \_\_\_\_\_

DIAPHRAGM SEALS

Diaphragm Seals > Plastic Seals > L990.31

# Type L990.31

Type L990.31 is WIKA's version of a large threaded seal with a plastic body. The upper housing is made of PP. The diaphragm is clamped between the plastic upper and lower housing. This seal is made for applications where typical metallic components cannot withstand the process media (acids, chlorines, etc.) This seal is not designed for vacuum applications.



## Standard Features

**Design:** The plastic lower is available in PP, PVC, and PVDF. The diaphragm is a CSM rubber (Hypalon®) with a PTFE (Teflon®) overlay. The diaphragm and upper and lower housing are bolted together.

**Pressure Rating, Maximum:** 160 psi

**Suitable Pressure, Minimum<sup>1</sup>:**

Gauge Mechanical, Range: ≥ 60 psi  
Switch or Transmitter, Span: 60 psi

**Operating Temperature<sup>2</sup>:**

32°F to 104°F (0°C to 40°C)

Notes:

1. Typical values, dependant on pressure instrument and application
2. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.31**.

| L990.31 Smart Code Configuration |                                   |                          |
|----------------------------------|-----------------------------------|--------------------------|
| Field No.                        | Code                              |                          |
| 1                                | Process Connection                |                          |
|                                  | GN2                               | 1/4" NPT-female          |
|                                  | GN4                               | 1/2" NPT-female          |
| 2                                | Lower Housing Material            |                          |
|                                  | AK                                | PVC grey                 |
|                                  | AL                                | PP grey                  |
|                                  | AM                                | PVDF white, translucent  |
|                                  | ??                                | Other - please specify   |
| 3                                | Connection to Pressure Instrument |                          |
|                                  | 3                                 | 1/2" NPT-female          |
|                                  | 4                                 | 1/4" NPT-female          |
| 4                                | Quality Certificates              |                          |
|                                  | Z                                 | Without                  |
|                                  | 1                                 | Quality certificates     |
| 5                                | Additional Order Details          |                          |
|                                  | Z                                 | Without                  |
|                                  | T                                 | Additional order details |

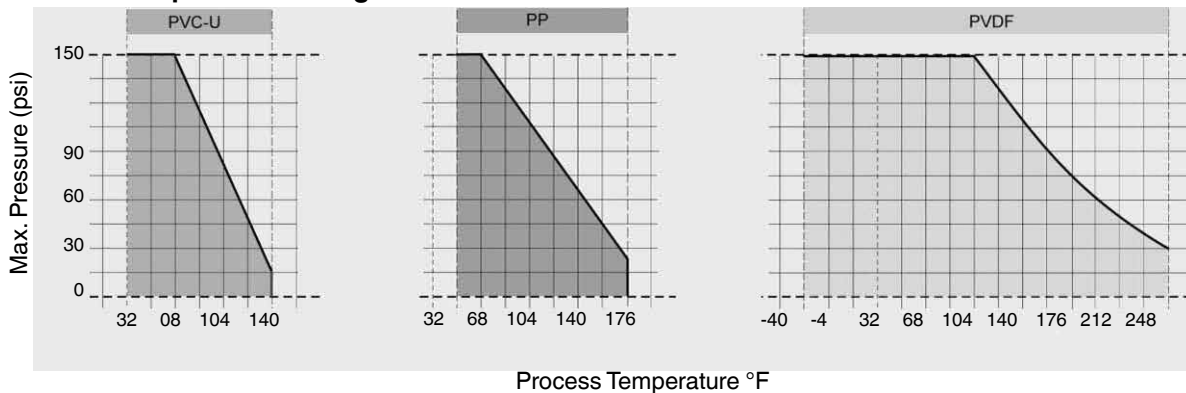
DIAPHRAGM SEALS

Order Code:            1            2            3            4    5\*

**L990.31** -    -

\*Additional order details \_\_\_\_\_

## Pressure-Temperature Rating



Diaphragm Seals > INLINE Seals™ > L981.10

## Type L981.10

WIKA's Type L981.10 wafer INLINE SEAL™ is for flow pressure measurement. This seal becomes an integral part of the process piping system resulting in no obstructions to the direction of the flow. Suited for rapidly flowing pressure media with low to medium viscosity. This seal is designed for applications in the petrochemical, chemical and most other flow



### Standard Features

**Design:** This wafer seal is designed for bolting between two end user pipe flanges.

The outside diameter of the seal assists to obtain correct alignment during installation.

The welded seal diaphragm contains no protrusions or interruptions to the process flow.

316L stainless steel is the most common material of construction, but additional materials are available.

**Pressure Rating, Maximum:** Maximum flange rating up to Class 2500 classification per ASME B16.5

**Suitable Pressure Minimum<sup>1</sup>:**

Gauge Mechanical, Range:  $\geq 15$  psi

Switch or Transmitter, Span: 50" H<sub>2</sub>O

Differential Switch or Transmitter, Span: 10" H<sub>2</sub>O differential

**Operating Temperature<sup>2</sup>:** -130°F to 752°F (-90°C to 400°C)

Notes:

1. Typical values, dependant on pressure instrument, diaphragm diameter, nominal pipe size and application
2. Can vary based on selection of materials

### Available Options

- Other materials
- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L981.10**.

# Type L981.10

| L981.10 Smart Code Configuration |      |                                   |
|----------------------------------|------|-----------------------------------|
| Field No.                        | Code |                                   |
| 1                                |      | Process Connection Type           |
|                                  | A    | ASME B16.5                        |
|                                  | ??   | Other - please specify            |
|                                  |      | Process Conn. (nominal size)      |
|                                  | 82   | 1"                                |
|                                  | 83   | 1½"                               |
|                                  | 84   | 2"                                |
|                                  | 85   | 3"                                |
| 2                                | 86   | 4"                                |
|                                  | ??   | Other - please specify            |
| 3                                |      | Sealing Face                      |
|                                  | 2    | RF 125-250 RMS std.               |
|                                  | 3    | RF 125 RMS                        |
|                                  | 4    | RJF groove                        |
|                                  | 6    | RF5F [order if special material]  |
|                                  | ?    | Other - please specify            |
| 4                                |      | Internal Diameter For Sizes:      |
|                                  | 0285 | 1.122" (28.5 mm) 1"               |
|                                  | 0430 | 1.692" (43 mm) 1½"                |
|                                  | 0545 | 2.145" (54.5 mm) 2"               |
|                                  | 0825 | 3.248" (82.5 mm) 3"               |
|                                  | 1070 | 4.212" (107 mm) 4"                |
|                                  | ???  | Other - please specify            |
| 5                                |      | Overall Length                    |
|                                  | A92  | 2.36" (60 mm) standard            |
|                                  | A93  | 3.94" (100 mm)                    |
|                                  | A??  | Other - please specify            |
| 6                                |      | Lower Housing Material            |
|                                  | A1   | Stainless steel 316L (1.4571)     |
|                                  | A2   | Stainless steel 316L (1.4435)     |
|                                  | A5   | Hastelloy B2 (2.4617)             |
|                                  | A7   | Hastelloy C276 (2.4819)           |
|                                  | A8   | Monel 400 (2.4360)                |
|                                  | AB   | Tantalum                          |
|                                  | AE   | Titanium grade 2(3.7035)          |
|                                  | BH   | SS 316 with PFA-coating           |
|                                  | BJ   | SS 316 with ECTFE-coating         |
| 7                                | ??   | Other - please specify            |
|                                  |      | Connection to Pressure Instrument |
|                                  | 3    | 1/2" NPT-female                   |
|                                  | 4    | 1/4" NPT-female                   |
| 7                                | 6    | Radial weld-in connection         |
|                                  | ?    | Other - please specify            |

| L981.10 Smart Code Configuration |      |                          |
|----------------------------------|------|--------------------------|
| Field No.                        | Code |                          |
| 8                                |      | System Fillport          |
|                                  | A    | Without                  |
|                                  | C    | Filler hole M6 set screw |
| 9                                |      | Quality Certificates     |
|                                  | Z    | Without                  |
|                                  | 2    | Certificate 2.2 EN 10204 |
|                                  | 3    | Certificate 3.1 EN 10204 |
| 10                               |      | Additional Order Details |
|                                  | Z    | Without                  |
|                                  | T    | Additional order details |

DIAPHRAGM SEALS

Order Code:      1      2      3      4                      5                      6      7      8                      9      10\*

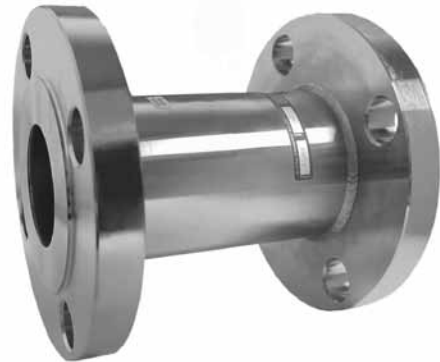
**L981.10** -             -

\*Additional order details \_\_\_\_\_



## Type L981.27

The Type L981.27 flanged INLINE SEAL™ is designed for flow pressure measurements. The flanged INLINE SEAL™ is installed between two end user flanges and becomes an integral part of the piping system. This seal replaces "T"s in the process piping system for installing pressure-measuring instruments. This seal is non-disruptive to the process flow and assists in obtaining a true pressure reading. Suited for rapidly flowing pressure media with low to medium viscosity, this seal is designed for a variety of applications.



### Standard Features

**Design:** This seal contains two ASME flange process connections. The welded thin walled cylindrical diaphragm extends the entire length of the seal body. The diaphragm does not contain any protrusions or interruptions to the process flow. 316L stainless steel is the most common material of construction, but additional materials are available. Additional flange configurations are available.

**Pressure Rating, Maximum:** Maximum flange rating per ASME B16.5

**Suitable Pressure, Minimum<sup>1</sup>:**

- Gauge Mechanical, Range:  $\geq 15$  psi
- Switch or Transmitter, Span: 50" H<sub>2</sub>O
- Differential Switch or Transmitter, Span: 10"H<sub>2</sub>O differential

**Operating Temperature** <sup>2,3</sup>: -130°F to 752°F (-90°C to 400°C)

Notes:

1. Typical values, dependant on pressure instrument and application
2. Can vary based on selection of materials
3. For cleaning procedure, contact factory

### Available Options

- Other materials
- Other process connections, DIN, JIS
- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L990.27**.

Diaphragm Seals > INLINE Seals™ > L981.27

# Type L981.27

| L981.27 Smart Code Configuration |                             |                                       |
|----------------------------------|-----------------------------|---------------------------------------|
| Field No.                        | Code                        |                                       |
| 1                                | A                           | Process Connection Type<br>ASME B16.5 |
|                                  | Process Connection          |                                       |
|                                  | 82                          | 1"                                    |
|                                  | 83                          | 1½"                                   |
|                                  | 84                          | 2"                                    |
|                                  | 85                          | 3"                                    |
|                                  | 86                          | 4"                                    |
| 2                                | ??                          | Other - please specify                |
|                                  | Nominal Pressure Rating     |                                       |
| 3                                | 1                           | Class 150                             |
|                                  | 2                           | Class 300                             |
|                                  | 4                           | Class 600                             |
|                                  | ?                           | Other - please specify                |
| 4                                | Sealing Face                |                                       |
|                                  | 2                           | RF 125-250 RMS standard               |
|                                  | 3                           | RF 125 RMS                            |
|                                  | 4                           | RJF groove                            |
|                                  | 6                           | RF SF                                 |
|                                  | ?                           | Other - please specify                |
| 5                                | Internal Diameter For Sizes |                                       |
|                                  | 0266                        | 1.047" (26.6 mm) 1"                   |
|                                  | 0430                        | 1.692" (43 mm) 1½"                    |
|                                  | 0525                        | 2.067" (52.5 mm) 2"                   |
|                                  | 0780                        | 3.070" (78 mm) 3"                     |
|                                  | 1023                        | 4.027" (102.3 mm) 4"                  |
|                                  | ???                         | Other - please specify                |
| 6                                | Overall Length For Sizes    |                                       |
|                                  | A82                         | 4.49" (114 mm) 1"                     |
|                                  | A83                         | 5.75" (146 mm) 1½"                    |
|                                  | A84                         | 6.14" (156 mm) 2"                     |
|                                  | A91                         | 6.54" (166 mm) 3" & 4"                |
| ???                              | Other - please specify      |                                       |
| 7                                | Material of Wetted Parts    |                                       |
|                                  | A2                          | Stainless steel 316L(1.4435)          |
|                                  | A5                          | Hastelloy B2(2.4617)                  |
|                                  | A7                          | Hastelloy C276(2.4819)                |
|                                  | A8                          | Monel 400(2.4360)                     |
|                                  | AB                          | Tantalum                              |
|                                  | AE                          | Titanium grade 2(3.7035)              |
|                                  | BH                          | SS 316 with PFA-coating               |
|                                  | BJ                          | SS 316 with ECTFE-coating             |
|                                  | ??                          | Other - please specify                |

| L981.27 Smart Code Configuration |                          |   |
|----------------------------------|--------------------------|---|
| Field No.                        | Code                     |   |
| 8                                | 4                        | Connection to Pressure Instrument<br>1/4 NPT-female |
|                                  | 3                        | 1/2 NPT-female                                      |
|                                  | 6                        | Radial weld-in connection                           |
|                                  | ?                        | Other - please specify                              |
| 9                                | System Fillport          |   |
|                                  | A                        | Without   |
|                                  | C                        | Filler hole M6 set screw                            |
| 10                               | Quality Certificates     |   |
|                                  | Z                        | Without   |
|                                  | 2                        | Certificate 2.2 EN 10204                            |
| 11                               | 3                        | Certificate 3.1 EN 10204                            |
|                                  | Additional Order Details |   |
| 11                               | Z                        | Without   |
|                                  | T                        | Additional order details                            |

DIAPHRAGM SEALS

Order Code:    1    2    3    4    5    6    7    8    9    10 11\*

**L981.27** -             -

\*Additional order details \_\_\_\_\_

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

# Type L981.31

Type L981.31, the Concrete INLINE SEAL™ is designed for flow pressure measurements with abrasive process media. This flanged INLINE SEAL™ is installed between two end user flanges and becomes an integral part of the piping system. This seal replaces "T"s in the process piping system for installing pressure-measuring instruments. This seal is designed for the mining, wastewater, slurries and other abrasive applications. Applications within the minimum vacuum are acceptable.



## Standard Features

**Pressure Rating, Maximum:** Maximum flange rating per ASME B16.5

**Suitable Pressure, Minimum<sup>1</sup>:**

- Gauge Mechanical, Range: ≥ 60 psi
- Switch or Transmitter, Span: 60 psi

**Operating Temperature:** -4°F to 140°F (-20°C to 60°C)

## Available Options

- Other materials
- Cooling element
- Capillary tubing

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L981.31**.

## L981.31 Smart Code Configuration

| Field No. | Code |                                   |
|-----------|------|-----------------------------------|
| 1         | A    | Process Connection Type           |
|           |      | ASME B16.5                        |
|           |      | Process Connection                |
|           | 84   | 2"                                |
|           | 85   | 3"                                |
|           | 86   | 4"                                |
| 2         | 87   | 5"                                |
|           | 88   | 6"                                |
| 2         | ??   | Other - please specify            |
|           |      | Nominal Pressure Rating           |
| 1         |      | Class 150                         |
|           | 2    | Class 300                         |
| 3         | ??   | Other - please specify            |
|           |      | Sealing Face                      |
| 6         |      | RF5F                              |
|           | ??   | Other - please specify            |
| 4         |      | Body and Flange Material          |
|           | CS   | Carbon steel, black-painted       |
| 5         | SS   | 316 stainless steel               |
|           | ??   | Other - please specify            |
| 6         |      | Diaphragm Material                |
|           | PU   | Polyurethane                      |
|           |      | Connection to Pressure Instrument |
|           | 4    | 1/4 NPT-female                    |
| 3         |      | 1/2 NPT-female                    |
|           | ??   | Other - please specify            |
| 8         |      | System Fillport                   |
|           | A    | Without                           |
| 9         | C    | Filler hole M6 set screw          |
|           |      | Quality Certificates              |
| Z         |      | Without                           |
|           | 1    | Quality certificates              |
| 10        |      | Additional Order Details          |
|           | Z    | Without                           |
| 11        | T    | Additional order details          |

Notes:  
1. Typical values, dependant on pressure instrument and application

Order Code:    1    2    3    4    5    6    7    8    9    10\*

**L981.31** -         -

\*Additional order details \_\_\_\_\_

# Type L981.22



Type L981.22, WIKA's Sanitary INLINE SEAL™, is for flow pressure measurement applications. This seal becomes an integral part of the process piping system removing disturbing turbulence, cornering dead volume, and piping "T" or other obstacles that can occur in the direction of the flow. Suited for rapidly flowing pressure media with low to medium viscosity. This seal meets the criteria set by "3A" standards. This seal is designed for applications in the pharmaceutical and food & beverage industries.

## Standard Features

### Pressure Rating, Maximum:

1" and 1½" = 500 psi, 2" = 450 psi, 2½" = 400 psi,  
3" = 350 psi, 4" = 200 psi

### Suitable Pressure, Minimum<sup>1</sup>:

Gauge Mechanical, Range: -30" Hg to 0 psi up to -30 Hg to maximum pressure rating

Gauge and Absolute Switch or Transmitter, Span: 50" H<sub>2</sub>O  
Differential Switch or Transmitter, Span: 10" H<sub>2</sub>O differential

### Operating Temperature <sup>2,3</sup>: -10°F to 572°F (-23°C to 300°C)

#### Notes:

1. Typical values, dependant on pressure instrument and application
2. Can vary based on selection of materials, O-ring, assembly hardware, process temperature and system fill fluid
3. For cleaning procedure, contact factory

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L981.22**.

| L981.22 Smart Code Configuration |                                |                        |                        |
|----------------------------------|--------------------------------|------------------------|------------------------|
| Field No.                        | Code                           |                        |                        |
| 1                                | Process Connection             |                        |                        |
|                                  | A81                            | ¾"                     |                        |
|                                  | A82                            | 1"                     |                        |
|                                  | A83                            | 1½"                    |                        |
|                                  | A84                            | 2"                     |                        |
|                                  | A91                            | 2½"                    |                        |
|                                  | A85                            | 3"                     |                        |
|                                  | A86                            | 4"                     |                        |
| 1                                | ???                            | Other - please specify |                        |
| 2                                | Internal Diameter    Nom. Size |                        |                        |
|                                  | 0150                           | 0.590" (15 mm)    ¾"   |                        |
|                                  | 0254                           | 1.000" (25.4 mm)    1" |                        |
|                                  | 0380                           | 1.496" (38 mm)    1½"  |                        |
|                                  | 0480                           | 1.889" (48 mm)    2"   |                        |
|                                  | 0600                           | 2.362" (60 mm)    2½"  |                        |
|                                  | 0730                           | 2.874" (73 mm)    3"   |                        |
|                                  | 0976                           | 3.842" (97.6 mm)    4" |                        |
|                                  | 2                              | ????                   | Other - please specify |

| L981.22 Smart Code Configuration |                                   |                                  |
|----------------------------------|-----------------------------------|----------------------------------|
| Field No.                        | Code                              |                                  |
| 3                                | Overall Length    Nom. Size       |                                  |
|                                  | A80                               | 3.78" (96 mm)    ¾"              |
|                                  | A82                               | 4.49" (114 mm)    1"             |
|                                  | A83                               | 5.75" (146 mm)    1½"            |
|                                  | A84                               | 6.14" (156 mm)    2" and longer  |
| 3                                | ???                               | Other - please specify           |
| 4                                | Clamp Diameter                    |                                  |
|                                  | 1                                 | 0.98" (25 mm)                    |
|                                  | 3                                 | 1.99" (50.5 mm)                  |
|                                  | 4                                 | 2.50" (64 mm)                    |
|                                  | 5                                 | 3.10" (77.5 mm)                  |
|                                  | 6                                 | 3.58" (91 mm)                    |
|                                  | 7                                 | 4.17" (106 mm)                   |
|                                  | 8                                 | 4.70" (119 mm)                   |
| 5                                | Material of Wetted Parts          |                                  |
|                                  | A2                                | SS 316L (1.4435)                 |
|                                  | B2                                | SS 316L (1.4435) electropolished |
| 5                                | ??                                | Other - please specify           |
| 6                                | Gasket (Process Seal)             |                                  |
|                                  | Z                                 | Without                          |
| 7                                | Connection to Pressure Instrument |                                  |
|                                  | 4                                 | 1/4 NPT-female                   |
|                                  | 3                                 | 1/2 NPT-female                   |
|                                  | 6                                 | Radial weld-in connection        |
|                                  | ?                                 | Other - please specify           |
| 8                                | System Fillport                   |                                  |
|                                  | A                                 | Without                          |
|                                  | C                                 | Filler hole M6 set screw         |
| 9                                | Quality Certificates              |                                  |
|                                  | Z                                 | Without                          |
|                                  | 2                                 | Certificate 2.2 EN 10204         |
| 10                               | Additional Order Details          |                                  |
|                                  | Z                                 | Without                          |
|                                  | T                                 | Additional order details         |

DIAPHRAGM SEALS

Order Code:                    1                    2                    3                    4                    5                    6                    7                    8                    9                    10\*

**L981.22** -             -

\*Additional order details

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

Diaphragm Seals > Seal Accessories > L910.27

## Type L910.27

Type 910.27, WIKA's flushing ring is made to be sandwiched between the end user's flange and WIKA's flanged seal configurations without a lower housing. A flushing ring facilitates the purging of trapped gas pockets or settlement from the process cavity adjacent to the seal diaphragm. This flushing ring can also be used as ports for calibration. This accessory can be made of various solid materials.



### Standard Features

**Pressure Rating, Maximum<sup>1</sup>:** Maximum flange rating per ASME B16.5

Notes:

1. Maximum flange rating per ASME B16.5 for mating process flanges

### Available Options

- Other materials
- Other process connections, DIN, JIS

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L910.27**.

### L910.27 Smart Code Configuration

| Field No. | Code                     |                              |
|-----------|--------------------------|------------------------------|
| 1         | A                        | Process Connection Type      |
|           |                          | ASME B16.5                   |
|           |                          | Process Connection           |
|           | 83                       | 1½"                          |
|           | 84                       | 2"                           |
| 2         | 85                       | 3"                           |
|           | 86                       | 4"                           |
|           | ??                       | Other - please specify       |
|           |                          | Nominal Pressure Rating      |
| 3         | 1                        | Class 150                    |
|           | 2                        | Class 300                    |
|           | 4                        | Class 600                    |
|           | 6                        | Class 1500                   |
|           |                          | Sealing Face                 |
| 4         | 2                        | RF 125 RMS to 250 RMS        |
|           | 3                        | RF 125 RMS                   |
|           | 4                        | RJF groove                   |
|           | 6                        | RFSF                         |
|           | ?                        | Other - please specify       |
| 5         |                          | Material of Wetted Parts     |
|           | AR                       | Stainless Steel 316L(1.4435) |
|           | A7                       | Hastelloy C276(2.4819)       |
|           | A8                       | Monel 400(2.4360)            |
| ??        | Other - please specify   |                              |
| 6         |                          | Flushing Connection          |
|           | 5                        | 2 x 1/4" NPT                 |
|           | 7                        | 2 x 1/2" NPT                 |
| ?         | Other - please specify   |                              |
| 7         |                          | Sealing Screw                |
|           | Z                        | Without                      |
|           | 1                        | Plugs provided               |
| ?         | Other - please specify   |                              |
| 8         |                          | Quality Certificates         |
|           | Z                        | Without                      |
|           | 2                        | Certificate 2.2 EN 10204     |
| 3         | Certificate 3.1 EN 10204 |                              |
| 9         |                          | Additional Order Details     |
|           | Z                        | Without                      |
| T         | Additional order details |                              |

Order Code:    1    2    3    4    5    6    7    8    9\*

**910.27** -        -

\*Additional order details \_\_\_\_\_



Diaphragm Seals > Seal Accessories > L910.ZA

## Type L910.ZA

The Type L910.ZA saddle seal is made to measure process flow pressure. The saddle portion of this seal (lower housing) is welded to the external surface of a pipe with a hole opening to the process flow. This seal can be used with low to high viscous process media. This construction allows for a wide variety of usable materials to be assembled to meet the requirements of most flow applications.



### Standard Features

**Design:** The diaphragm is welded to the upper housing of the seal that allows for the removal from the lower housing without jeopardizing the integrity of the system fill fluid and installed instrument. The upper and lower housing are bolted together and sealed by use of an O-ring. The radius on this lower housing is machined to fit the contour of the outside diameter of the process pipe.

**Pressure Rating, Maximum:** 1,500 psi

**Suitable Pressure Span, Minimum<sup>1</sup>:**

Gauge (Range<sup>2</sup>):

2½", ≥ 15 psi

4 or 4½", ≥ 15 psi

**Pressure Transmitters (TRONIC)<sup>3</sup>:** ≥ 15 psi

**Operating Temperature<sup>4</sup>:** -130°F to 500°F (-90°C to 260°C)

Notes:

1. Typical values, dependant on pressure instrument and application
2. Includes compound ranges
3. Absolute pressure - check with factory
4. Can vary based on selection of materials, O-ring, assembly hardware and system fill fluid

### Available Options

- Insert available as Model L990.15
- 4" and larger
- Saddle or insert can be ordered separately

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **L910.ZA**.

Diaphragm Seals > Seal Accessories > L910.ZA

## Type L910.ZA

DIAPHRAGM SEALS

| L910.ZA Smart Code Configuration |   |   |
|----------------------------------|---|---|
| Field No.                        | Code                                      |   |
| 1                                | Process Connection Type                   |   |
|                                  | RD  | 2 1/2" (radius 1.496") / DN 65 (radius 38 mm) |
|                                  | RF  | 3" (radius 1.772") / DN 80 (radius 45 mm)     |
|                                  | RG  | 4" (radius 2.244") / DN 100 (radius 57 mm)    |
|                                  | RK  | 5" (radius 2.756") / DN 125 (radius 70 mm)    |
|                                  | RM  | 6" (radius 3.346") / DN 150 (radius 85 mm)    |
|                                  | RN  | 8" (radius 3.976") / DN 200 (radius 101 mm)   |
|                                  | RO  | 10" (radius 5.000") / DN 250 (radius 127 mm)  |
|                                  | RP  | 12" (radius 5.984") / DN 300 (radius 152 mm)  |
|                                  | RQ  | 14" (radius 7.007") / DN 350 (radius 178 mm)  |
| 2                                | Upper Housing Material                    |   |
|                                  | ZZ  | Without (saddle only)                         |
|                                  | AP  | Carbon steel 1018 nickel-plated               |
|                                  | A2  | Stainless steel 316L                          |
|                                  | AE  | Titanium grade 2 (3.7035)                     |
| 3                                | ??  | Other - please specify                        |
|                                  | Diaphragm Materialg                       |   |
|                                  | A2  | Stainless steel 316L (1.4435)                 |
|                                  | A5  | Hastelloy B2 (2.4617)                         |
|                                  | A7  | Hastelloy C276 (2.4819)                       |
|                                  | A8  | Monel 400 (2.4360)                            |
|                                  | A9  | Inconel 600 (2.4816)                          |
|                                  | AA  | Incoloy 825 (2.4858)                          |
|                                  | AB  | Tantalum                                      |
|                                  | AC  | Nickel 200 (2.4066)                           |
|                                  | AE  | Titanium grade 2 (3.7035) <sup>1</sup>        |
|                                  | AG  | SS (316L) with PTFE-foil                      |
|                                  | BB  | SS (316L) with PFA-coating                    |
|                                  | C2  | Carpenter 20                                  |
|                                  | D1  | Duplex 2205                                   |
|                                  | ZZ  | Without                                       |
|                                  | 4   | Saddle Material                               |
| ZZ                               |   | Without                                       |
| AP                               |   | Carbon steel 1018 nickel plating              |
| A2                               |   | Stainless steel 316L (1.4435)                 |
| A7                               |   | Hastelloy C276 (2.4819)                       |
| 5                                | ??  | Other - please specify                        |
|                                  | Fastening Parts (Retainer Flange & Bolts) |   |
|                                  | Z   | Without retainer flange                       |
|                                  | A   | Galvanized steel                              |
|                                  | B   | Stainless steel                               |
| 6                                | ?   | Other - please specify                        |
|                                  | Gasket (Process Seal)                     |   |
|                                  | Z   | Without                                       |
|                                  | J   | Viton O-ring (FPM, Tmax = 400°F)              |
|                                  | E   | Teflon O-ring (PTFE, Tmax = 500°F)            |
| ?                                | Other - please specify                    |   |

| L910.ZA Smart Code Configuration |                                   |                          |
|----------------------------------|-----------------------------------|--------------------------|
| Field No.                        | Code                              |                          |
| 7                                | Connection to Pressure Instrument |                          |
|                                  | 3                                 | 1/2" NPT-female          |
|                                  | 4                                 | 1/4" NPT-female          |
|                                  | 5                                 | Axial weld-in connection |
|                                  | ?                                 | Other - please specify   |
| 8                                | System Fillport                   |                          |
|                                  | A                                 | Without                  |
|                                  | C                                 | Filler gole M6 set screw |
| 9                                | Quality Certificates              |                          |
|                                  | Z                                 | Without                  |
|                                  | 1                                 | Quality certificates     |
| 10                               | Additional Order Details          |                          |
|                                  | Z                                 | Without                  |
|                                  | T                                 | Additional order details |

<sup>1</sup> Titanium upper housing required

Order Code:                    1                    2                    3                    4                    5                    6                    7                    8                    9                    10\*

**L910.ZA** -         -

\*Additional order details \_\_\_\_\_

# Request For Quote Form

This form contains spaces for all pertinent information when selecting the proper diaphragm seal. Please make a copy of this form and fill in as much information as you have available when requesting quotations or technical help from the factory.

Contact Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 \_\_\_\_\_


Company Name: \_\_\_\_\_






Telephone # \_\_\_\_\_ Fax #: \_\_\_\_\_


E-mail Address \_\_\_\_\_



Please choose one of the three possible instruments below

## SECTION 1

**Gauge**  Model # \_\_\_\_\_  
 Case Size (Inches): [ 2" ] [ 2½" ] [ 3½" ] [ 4" ] [ 4½" ] [ 6" ]  
 Range: \_\_\_\_\_ to \_\_\_\_\_ [ psi ] [ bar ] Other \_\_\_\_\_

-or- Location of Instrument Connection: [ LM ]  [ LBM ]  [ CBM ]   
 Instrument Connection Size and Type: [ ¼" NPT ] [ ½" NPT ] [ Female ]  [ Male ]  Other \_\_\_\_\_

**Transmitter**  Model # \_\_\_\_\_  
 Range: \_\_\_\_\_ to \_\_\_\_\_ [ psi ] [ bar ] Other \_\_\_\_\_

-or- Instrument Connection Size and Type: [ ¼" NPT ] [ ½" NPT ] [ Female ]  [ Male ]  Other \_\_\_\_\_

**Switch**  Please provide specifics \_\_\_\_\_  
 \_\_\_\_\_

Pressure Switch Point (Upscale): \_\_\_\_\_ [ psi ] [ bar ] Other \_\_\_\_\_

Pressure Switch Point (Downscale): \_\_\_\_\_ [ psi ] [ bar ] Other \_\_\_\_\_

## SECTION 2

### Process Media

Common Name / Description: Example: Sulfuric Acid 90% Conc.

Temperature (°C): Process @ Max. Pressure: Min. \_\_\_\_\_ Normal \_\_\_\_\_ Max. \_\_\_\_\_

Transmitter/Gauge: Min. \_\_\_\_\_ Normal \_\_\_\_\_ Max. \_\_\_\_\_

Ambient: Min. \_\_\_\_\_ Normal \_\_\_\_\_ Max. \_\_\_\_\_

Pressure (psi): Static (Working Press.): Min. \_\_\_\_\_ Normal \_\_\_\_\_ Max. \_\_\_\_\_

Vacuum (psia @ °C): Normal \_\_\_\_\_ @ \_\_\_\_\_ °C

Max. \_\_\_\_\_ @ \_\_\_\_\_ °C

## Request For Quote Form

### SECTION 3

#### Diaphragm Seal

Model Number: \_\_\_\_\_

Process Connection: Threaded: [ 1/8" NPT ] [ 1/4" NPT ] [ 1/2" NPT ] [ 3/4" NPT ] [ 1" NPT ]; [ Male ]  [ Female ]

Sanitary: [ 3/4" ] [ 1" ] [ 1 1/2" ] [ 2" ] [ 3" ] [ 4" ] Other \_\_\_\_\_; [ Tri-Clover ] or Other \_\_\_\_\_

Pipe/Flange Size: [ 1/2" ] [ 3/4" ] [ 1" ] [ 1 1/2" ] [ 2" ] [ 3" ] [ 4" ] Other \_\_\_\_\_

ASME Pressure Classification: [ 150# ] [ 300# ] [ 600# ] [ 900# ] Other \_\_\_\_\_

Instrument Connection: [ 1/4" NPT ] [ 1/2" NPT ] [ Male ]  [ Female ]  [ Capillary ]

Flushing Connection: [ Yes ]  [ No ]  If Yes; [ 1/8" NPT ] [ 1/4" NPT ] [ 1/2" NPT ]

Diaphragm: [ Clamped ]  [ Welded ]

Model # 990.29 & 990.35 Extension Length: [ 2" ] [ 3" ] [ 4" ] [ 6" ] Other \_\_\_\_\_

### SECTION 4

#### Materials for Diaphragm Seal

Diaphragm: [ 316SS ] [ HastC276 ] Other \_\_\_\_\_

Additional Wetted: [ CS/Nickel ] [ 316SS ] [ HastB2 ] [ HastC276 ] [ Monel ] [ Tant. ] Other \_\_\_\_\_  
[ Teflon® ]

Non-Wetted (Flange and Support Ring): [ CS/Nickel ] [ SS ] Other \_\_\_\_\_

Gasket: [ Viton® ] [ Teflon® ] [ 316SS/Ag ] [ Buna-N ] Other \_\_\_\_\_

Nuts and Bolts: [ CS ] [ SS ] Other \_\_\_\_\_

### SECTION 5

#### Instrument Mounting

Type: [ Direct ] [ Cooling Element ] [ Capillary ]

Length of Capillary: \_\_\_\_\_ ft. (5 Feet Increments, 50 Feet Max. Limit)

Type of Capillary: [ Armor ] [ No Armor ] [ PVC Coated Armor ]

Height Difference: \_\_\_\_\_ ft. [ Instrument Below Seal ] [ Seal Below Instrument ]

Connection: [ 1/4" NPT ] [ 1/2" NPT ] [ Male ]  [ Female ]  [ Welded ]

**System Fill Fluid** [ Glycerine ] [ Silicone ] [ Halocarbon ] [ Mineral Oil ] [ Food Grade Silicone ]

[ High Temp. Oil ] [ Fluorolube ] [ DC200-10 ] Other \_\_\_\_\_

**Special Requirements** please specify

Sanitary - Autoclave [ Yes ] [ No ]

**Technical Assistance** Is technical assistance, collaboration or simulation required for the above diaphragm seal application?

[ Yes ] [ No ]

## Mounting Options

### Cooling Element

The cooling element is intended to protect the pressure instrument from high or low process temperature. Air flow across heat exchanging fins reduces or increases the temperature of the system fill fluid to protect the pressure measuring instrument.

The cooling element is recommended for process temperatures above 300°F. It is "direct mounted" between the pressure instrument and the diaphragm seal. Silicone fill is recommended. Effective for temperature reductions of 200°F, depending upon ambient conditions. The all stainless steel construction is back welded to the stainless steel upper housing or flange.

### Capillary line

Stainless steel capillary with or without stainless steel armor provides a connection between the pressure instrument and the diaphragm seal. It protects the pressure instrument from high or low process temperatures and provides distant or remote reading.

The capillary should be selected as short as possible, since changes in ambient temperature conditions may considerably affect the accuracy and response time of the pressure instrument. Standard length is five feet; other lengths are available upon request.

Installation on mechanical gauges normally requires a gauge support and gauge adaptor or other surface mounting provisions.

Any level difference between pressure instrument and diaphragm seal will cause a pressure indication error. The level difference can be compensated for during calibration of the diaphragm seal assembly if the level difference is known.

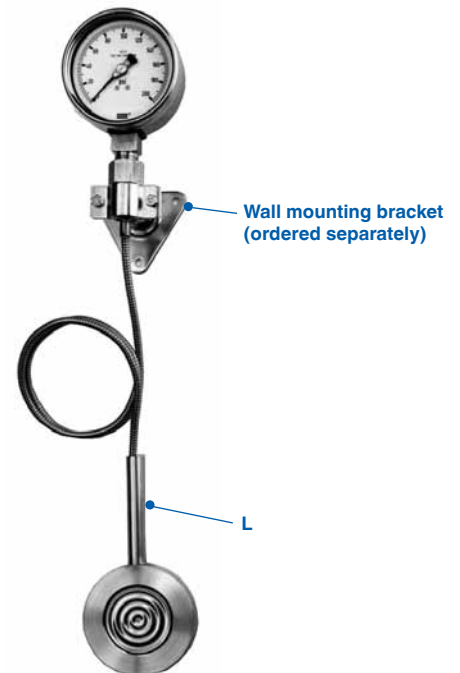
Minor corrections can be made on site by means of an adjustable pointer or zero adjustment of the pressure instrument.

### Gauge Support and Adaptor

The gauge support and adaptor provides wall mounting of the pressure instrument by clamping it to the gauge adaptor. Material: gauge support - aluminum or stainless steel, gauge adaptor - stainless steel.



Diaphragm Seal Assembly with Cooling Element.  
(Cooling element always welded to upper housing)





## Diaphragm Seal Accessories

Filling Liquids Specifications

| Fill Fluid              | WIKA Code No. | Suitable Temperature Range   |                              | Specific Gravity at Temperature |      | Viscosity at Temperature |      | Notes                          |
|-------------------------|---------------|------------------------------|------------------------------|---------------------------------|------|--------------------------|------|--------------------------------|
|                         |               | P <sub>abs</sub> <15psi [°F] | P <sub>abs</sub> ≥15psi [°F] | [Sg]                            | [°F] | [cSt]                    | [°F] |                                |
| Silicone Oil DC 200/50  | KN 2          | -4 to +250                   | -4 to +392                   | 0.96                            | +77  | 50                       | +77  | Standard                       |
| Silicone Oil DC200/10   | KN 68         | -40 to +250                  | -40 to +400                  | 0.934                           | +77  | 10                       | +77  | Standard                       |
| Silicone Oil (4 cSt)    | KN 17         | -130 to +176                 | -130 to +356                 | 0.91                            | +68  | 4                        | +77  | Low Temperature                |
| High Temperature Oil    | KN 3.2        | +4 to +392                   | -4 <sup>1</sup> to +750      | 1.07                            | +68  | 39                       | +77  | High Temperature & High Vacuum |
| Halocarbon® 6.3         | KN 21         | -40 to +176                  | -40 to +347                  | 1.97                            | +68  | 14                       | +68  | Oxygen and Chlorine Service    |
| Fluorolube® FS-5        | KN 8          | N/A                          | -40 to +392                  | 1.86                            | +77  | 5                        | +68  | Oxygen and Chlorine Service    |
| Glycerine               | KN 7          | N/A                          | +60 to +462                  | .26                             | +68  | 1110                     | +68  | Food & Beverage                |
| Glycerine / Water       | KN 12         | N/A                          | +14 to +248                  | 1.22                            | +68  | 88                       | +68  | Food & Beverage                |
| Food Grade Silicone Oil | KN 93         | N/A                          | 0 to +572                    | 0.97                            | +77  | 350                      | +77  | Food & Beverage                |
| Neobee M20              | KN 59         | -10 to +200                  | -10 to +400                  | 0.917                           | +77  | 9.8                      | +77  | Food & Beverage                |
| Mineral Oil             | KN 92         | -4 to +338                   | -4 to +482                   | 0.85                            | +59  | 57                       | +68  | Food & Beverage                |

Notes:

<sup>1</sup> +14 °F when used with transmitters (+4 response time will be very slow!)

# Diaphragm Seal Accessories

## Assembly for Diaphragm Seals

Assembly of the diaphragm seal and capillary or cooling element to the pressure instrumentation includes filling liquid, sealing, securing the displacement system, and calibration at room temperature.

Extra charges apply to instrument mounting brackets, calibration other than room temperature, calibration certifications, additional modifications, transmitter assembly, and for "at level" differences between the instrument and the diaphragm seal. Consult factory for more information.

For the following assemblies:

| Diaphragm Seal Assembly<br>For Use with Pressure Gauges and Pressure Switches |                              |          |                           |                  |                              |  |                           |                           |                         |
|---|------------------------------|----------|---------------------------|------------------|------------------------------|--|---------------------------|---------------------------|-------------------------|
| Application   | Fill Fluid <sup>1</sup>      | Code No. | Temp Min/Max <sup>6</sup> | Mini Seal Direct | Direct Mounting <sup>2</sup> | With Cooling Element or Capillary Up to 9' | With Capillary 10' to 19' | With Capillary 20' to 29' | With Capillary over 29' |
| Standard  | Silicone Oil                 | KN2      | -4 to +392°F              | 281              | 219                          | 220  | 221                       | 222                       | 223                     |
| Low Temp.   | Silicone Oil                 | KN17     | -130 to +176°F            | 370              | 238                          | 296  | 269                       | 273                       | 349                     |
| Food Application  | Glycerine <sup>3</sup>       | KN7      | +60 to +462°F             | 280              | 215                          |  |                           |                           |                         |
|   | Glycerine/Water <sup>3</sup> | KN12     | +14 to +248°F             |                  | 216                          | 298  |                           | 308                       |                         |
|   | Mineral Oil                  | KN92     | +14 to +400°F             | 423              | 262                          | 424  | 351                       | 344                       | 425                     |
|   | Food Grade Silicone Oil      | KN93     | 0 to 372°F                | 363              | 263                          | 264  | 309                       |                           |                         |
| High Temp   | High Temp Oil <sup>4,5</sup> | KN3.2    | -4 to +750°F              |                  | 266                          | 267  | 268                       | 299                       | 313                     |
| Inert   | Halocarbon 6.3               | KN 21    | -40 to +347°F             | 283              | 212                          | 213  | 247                       | 248                       | 249                     |
|   | Fluorolube FS-5              | KN 8     | -40 to +392°F             | 369              | 240                          | 365  | 329                       |                           | 366                     |

<sup>1</sup>Contact factory for additional system fill fluids

<sup>2</sup>Not available for Type 990.28

<sup>3</sup>KN7 and KN12 not suitable for vacuum or compound ranges

<sup>4</sup>All threads welded during assembly

<sup>5</sup>+14°F when used with transmitters

<sup>6</sup>Temperature ranges atmospheric pressure & up

Diaphragm Seals > General Seal Information > Diaphragm Seal Accessories

## Diaphragm Seal Accessories

### Assembly Prices for Diaphragm Seals

Assembly of the diaphragm seal and capillary or cooling element to the pressure instrument include filling liquid, sealing, securing the displacement system, and calibration at room temperature.

Extra charges apply to instrument mounting brackets, calibration other than room temperature, calibration certifications, additional modifications, transmitter assembly and for at level differences between the instrument and the diaphragm seal. Consult factory for more information.

For the following assemblies, Differential Transmitters 2 seals x 2:

| Diaphragm Seal Assembly<br>For Use with Pressure Transmitters |                              |          |                           |                              |  |                           |                           |                         |
|---|------------------------------|----------|---------------------------|------------------------------|--|---------------------------|---------------------------|-------------------------|
| Application   | Fill Fluid <sup>1</sup>      | Code No. | Temp Min/Max <sup>6</sup> | Direct Mounting <sup>2</sup> | With Cooling Element or Capillary Up to 9' | With Capillary 10' to 19' | With Capillary 20' to 29' | With Capillary Over 29' |
| Standard  | Silicone Oil                 | KN2      | -4 to +392°F              | 323                          | 324  | 325                       | 326                       | 359                     |
| Low Temp.   | Silicone Oil                 | KN17     | -130 to +176°F            |                              |  |                           |                           |                         |
| Food Application  | Glycerine <sup>3</sup>       | KN7      | +60 to +462°F             |                              |  |                           |                           |                         |
|   | Glycerine/Water <sup>3</sup> | KN12     | +14 to +248°F             |                              |  |                           |                           |                         |
|   | Mineral Oil                  | KN92     | +14 to +400°F             |                              |  |                           |                           |                         |
|   | Food Grade Silicone Oil      | KN93     | 0 to 372°F                |                              |  |                           |                           |                         |
| High Temp   | High Temp Oil <sup>4,5</sup> | KN3.2    | -4 to +750°F              | 337                          | 338  | 339                       | 340                       | 341                     |
| Inert   | Halocarbon 6.3               | KN 21    | -40 to +347°F             |                              |  |                           |                           |                         |
|   | Fluorolube FS-5              | KN 8     | -40 to +392°F             |                              |  |                           |                           |                         |

<sup>1</sup> Contact factory for additional system fill fluids

<sup>2</sup> Not available for Type 990.28

<sup>3</sup> KN 7 and KN 12 not suitable for vacuum or compound ranges

<sup>4</sup> All threads welded during assembly

<sup>5</sup> +14°F when used with transmitters

<sup>6</sup> Temperature ranges atmospheric pressure & up

**WARNING:** Glycerine, silicone, or any oils should not be used in applications involving oxidizing media such as oxygen, chlorine, nitric acid, hydrogen peroxide and others, due to the danger of a spontaneous chemical reaction. Halocarbon or Fluorolube should be used with these types of media.

Items shown with part numbers indicate readily available standard WIKA products. Items without part numbers are available on special order.

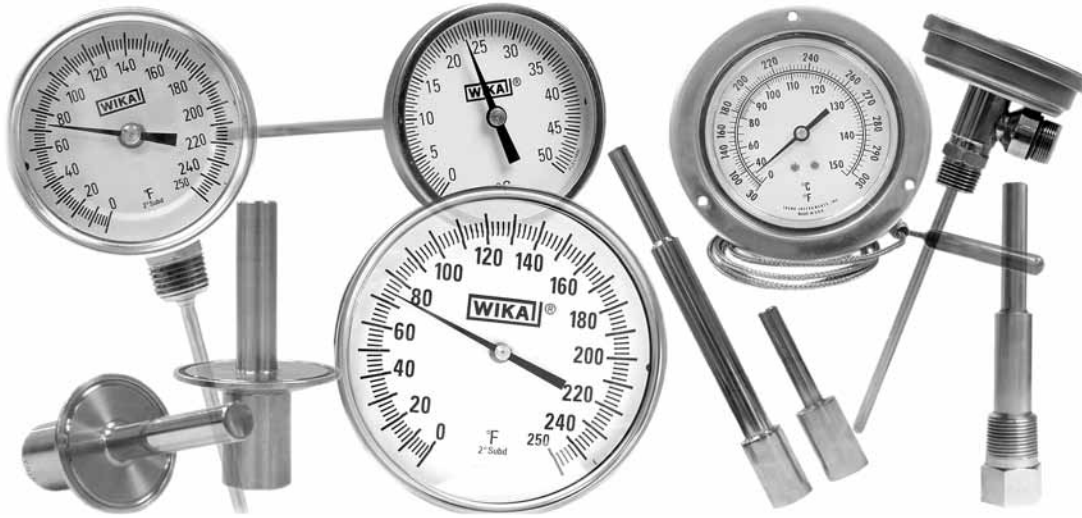
# Diaphragm Seal Accessories

| Diaphragm Seal Accessories and Special Requirements |                 |                                    |                  | Part Number    |
|---|-----------------|------------------------------------|------------------|----------------|
| Cooling Element                                     | Model 910.24    | 1/2" NPT-male x 1/2" NPT-female    |                  | 1584510        |
|   | Material 316SS  | 1/4" NPT-male x 1/4" NPT-female    |                  | 1600885        |
| Unarmored Capillary <sup>1</sup>                    | 5 ft. length    | 1/2" NPT-male x 1/2" NPT-female    |                  | 1030841        |
|   |                 | 1/4" NPT-male x 1/4" NPT-female    |                  | 1030868        |
|   |                 | Additional cost for over 5 ft.     |                  |                |
| Armored Capillary <sup>1</sup>                      | 5 ft. length    | 1/2" NPT- male x 1/2" NPT-female   |                  | 1030850        |
|   |                 | 1/4" NPT-male x 1/4" NPT-female    |                  | 1030876        |
|   |                 | Additional for over 5 ft.          |                  | please specify |
|   |                 | PVC sleeving for armored capillary |                  | please specify |
| Gauge Support:<br>4" overhang<br>with adapter       | Support         | Adapter                            | Instrument Conn. |                |
|   | Aluminum        | Stainless steel                    | 1/4" NPT         | 4380866        |
|   |                 |                                    | 1/2" NPT         | 4295898        |
|   | Stainless steel | Stainless steel                    | 1/4" NPT         | 4380857        |
|   |                 |                                    | 1/2" NPT         | 4384046        |
| Vacuum service                                      |                 |                                    |                  |                |
| Gauge tack-welded to seal (SS only)                 |                 |                                    |                  | 291            |
| Gauge back-welded to seal (SS only)                 |                 |                                    |                  | 292            |
| Cleaning for oxygen service                         |                 |                                    |                  | 290            |
| Certificate of Compliance                           |                 |                                    |                  | 776            |
| Calibration Certificate *                           |                 |                                    |                  |                |
| Material Certificate (MTR) per EN 10201 3.1         |                 |                                    |                  | 784            |
| Hydrostatic test 1.5X                               |                 |                                    |                  | 781            |
| Hydrostatic test 2.0X                               |                 |                                    |                  | C/F            |
| Material Certificate NACE                           |                 |                                    |                  | 788            |

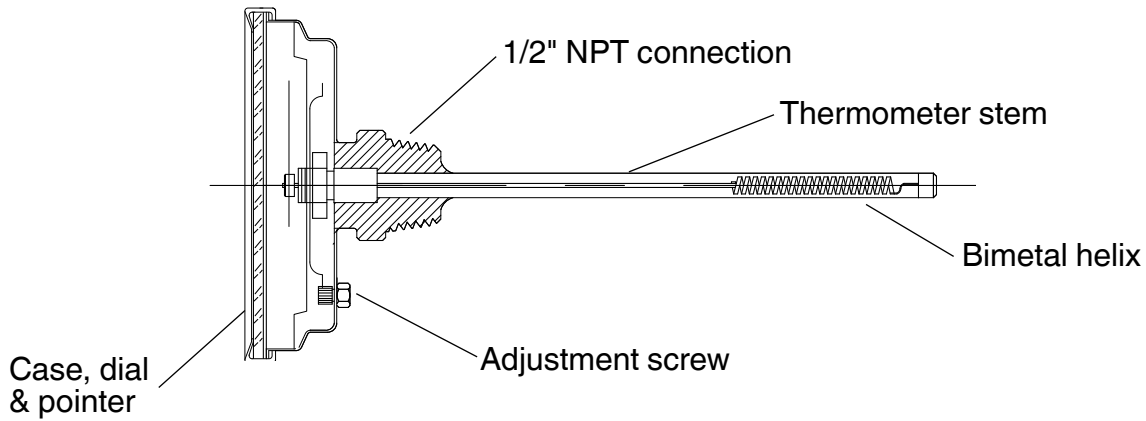
\* Per measurement instrument

<sup>1</sup>Standard I.D. is 0.079"; also available: 0.024" and 0.039"  
Refer to Data Sheet ACS 90.MO for specifications

## Bimetal Operating Principle



The temperature is measured with a bimetal system inside the thermometer stem. The bimetal system consists of two metal strips bonded together that have different expansion coefficients. Therefore, one strip will expand faster than the other causing the bimetal strip to curl in proportion to its temperature. The bimetal system is helically wound and heat treated for long term stability. Temperature variations cause the bimetal strip to unwind or wind tighter, which in turn rotates the pointer.





## Bimetal Thermometers General Specifications

**Case:** Sturdy, corrosion resistant series 304 stainless steel case and bezel. Designed and constructed to provide a hermetic seal (IP65, NEMA 4X) which prevents crystal fogging and damage caused by moisture to the working components. Install thermometer so the maximum temperature case is kept below 200°F at all times.

**Dial:** Anti-parallax heavy gauge aluminum with white matte finish to reduce glare. Dished form with Celsius on lower inner plane and Fahrenheit on raised outer plane offers accurate indication of both scales (if equipped with dual scales).

**External Reset:** (comes standard on all process grade bimetal thermometers) A slotted-hex adjustment head offers screwdriver or wrench use to field calibrate the thermometer. This feature allows maximum accuracy at a selected area of temperature range. O-ring gasket prevents leakage and maintains weather tight seal. Note - use well-agitated bath and accurate test thermometer when making any adjustment.

**Standards:** WIKA manufactures ASME B40.3 bimetal thermometers, which meet or exceed the standard issued by the American Society of Mechanical Engineers.

**Window:** Optically clear, strong glass, gasketed to maintain weather tight integrity. Acrylic and Lexan windows are available as an option but not recommended for case temperature exceeding 200°F maximum (150°F for plastic/acrylic window).

**Pointer:** Balanced, lightweight aluminum with matte black finish.

**Stem:** 304 SS welded at tip and case connector to prevent leakage. ¼" diameter is standard, ⅜" is available. Stem lengths to 72" are available as well as 316 SS stem and connector assemblies.

**Immersion:** For accurate temperature readings, immerse the stem a minimum of 2" in agitated liquid or 4" in moving air or gas.

**Over Range:** Temporary over or under range of 50% of scale up to 500°F or 260°C will not affect the instrument's accuracy.

**Bimetal Element:** An extremely responsive temperature sensing helix which has been carefully sized and tested, heat treated and aged to relieve inherent stresses and ensure continued accuracy.

**Accuracy:** Guaranteed to be accurate to within 1% of full scale (Grade A per ASME B40.3). Calibration is to standards traceable to the National Institute of Standards and Technology.

**Hermetic Seal:** Hermetically sealed per ASME B40.3. Guaranteed not to fog up. (IP65, NEMA 4X)

**Dampening:** Inert gel to minimize pointer oscillation.

**7-Year Warranty:** WIKA extends a 7-YEAR WARRANTY on standard types 30, 31, 50, 51, 32, & 52. Such units are guaranteed to be free from defects in material and workmanship under normal use and service. For all other models, WIKA extends a 1-year warranty. Complete details available upon request.

**Filled Thermometer Policy:** Silicone filling is available on selected types for ranges between -40°F and 500°F. WIKA does not recommend use of filled instruments for continual use at operating temperatures above of 400°F (204°C) or below -100°F (-70°C). Under no circumstances will an instrument warranty apply or will WIKA assume any liability for use above these temperatures. Per ASME B40.3, plain glass windows must not be used on filled thermometers due to expansion of fill fluid and potential lens breakage. Note: for stem lengths over 24"- consult factory.

**Thermowells are recommended for pressure, corrosive, fluid or high velocity applications.**



Mechanical Temperature > Bimetal Thermometers > TI.1005

## Type TI.1005

Type TI.1005 is a bimetal dial thermometer requiring no power to deliver its quick, accurate readings. The 1" dial is easy to read. Stem length is 5". Thermometer includes pocket case which can be used to hold the stem.



### Standard Features

|                    |                                 |                       |   |
|--------------------|---------------------------------|-----------------------|---|
| <b>Scale:</b>      | As indicated                    | <b>Reset:</b>         | Yes; 7/16" hex hub adjustment                 |
| <b>Range:</b>      | (°F); As indicated              | <b>Stem diameter:</b> | 1/4"  |
| <b>Window:</b>     | Lexan                           | <b>Accuracy:</b>      | ±1% of full range span (ASME B40.3 - Grade A) |
| <b>Connection:</b> | Plain, 7/16" hex hub adjustment |                       |   |

| Type        | TI.1005         |
|-------------|-----------------|
| Connection  | Plain           |
| Dial Size   | 1"              |
| Stem Length | 5"              |
| Scale       | °F              |
| -40/160 °F  | <b>1005219D</b> |
| 0-220 °F    | <b>1005223D</b> |
| 50/550 °F   | <b>1005216D</b> |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **TI.1005**.

Stock items shown in **blue** print.

Mechanical Temperature > Bimetal Thermometers > TI.ST

## Type TI.ST

WIKA dual magnet surface mount thermometers are problem solvers. Type TI.ST is an inexpensive, easy-to-use, accurate surface mounting thermometer, which attaches to any ferrous metal surface, giving unlimited localized temperature indication. The specially-designed bimetal sensing element and housing provide quick readings with an accuracy of ±2% of full scale range. These 2" dial thermometers feature steel cases, glass windows, polished aluminum dials with very legible graduations, and are available in ranges listed below. WIKA dual magnet mount surface thermometers are the ideal choice for ovens, boilers, process lines, motors, generators, or anywhere a temporary or permanent surface temperature is to be measured.



### Standard Features

|                  |                        |
|------------------|------------------------|
| <b>Dial:</b>     | 2"                     |
| <b>Depth:</b>    | 1/2"                   |
| <b>Accuracy:</b> | ±2% of full range span |
| <b>Reset:</b>    | No                     |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **TI.ST**.

| Type        | TI.ST          |
|-------------|----------------|
| Connection  | Surface        |
| Dial Size   | 2"             |
| Stem Length | N/A            |
| Scale       | °F or °C       |
| 0/250 °F    | <b>ST206MW</b> |
| 0/500 °F    | <b>ST228MW</b> |
| -20/120 °C  | <b>ST106MW</b> |
| -70/70 °C   | <b>ST101MW</b> |

Stock items shown in **blue** print.

Mechanical Temperature > Bimetal Thermometers > TI.20

## Type TI.20

Type TI.20 thermometers are high-quality, economical thermometers designed for limited space and OEM applications. All Type TI.20 bi-metal thermometers carry a 1-year warranty.



### Standard Features

|                       |  |                         |  |
|-----------------------|--|-------------------------|--|
| <b>Case:</b>          | 304 stainless steel  | <b>Over Range:</b>      | Temporary over or under range tolerance of 50% of scale up to 500°F (260°C)  |
| <b>Dial:</b>          | Anti-parallax or flat dial, heavy gauge aluminum with white matte finish | <b>Accuracy:</b>        | ±1% of full range span per Grade A, ASME B40.3   |
| <b>Window:</b>        | Fully gasketed glass; Lexan available                                    | <b>Connection:</b>      | ¼" NPT, 304 stainless steel  |
| <b>Reset:</b>         | N/A  | <b>Stem Lengths:</b>    | 2½" to 24"   |
| <b>Hermetic Seal:</b> | Per ASME B40.3   | <b>Shipping Weight:</b> | Stem length 2½" - 9" = 6oz.** (**weights of individual thermometers)   |
| <b>Stem:</b>          | ¼" diameter; 304 stainless steel, TIG welded at tip and case connection  | <b>Note:</b>            | Silicone fill not available. Thermowells are recommended for pressure, corrosive, fluid or high velocity applications. |
| <b>Dampening:</b>     | Inert gel to minimize pointer oscillation                                |                         |  |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **TI.20**.

| Type          | TI.20         |
|---------------|---------------|
| Connection    | 1/4" NPT Back |
| Dial Size     | 2"            |
| Stem Length   | 2½"           |
| Scale         | °F & °C       |
| 0/250 °F & °C | 20025D006G2   |

Stock items shown in **blue** print.

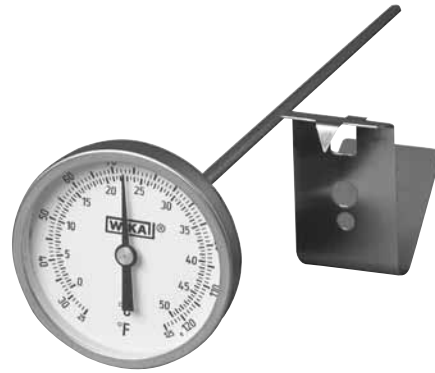
Stem lengths are available from 2½" to 24". Ranges from -100°F (-70°C) to 1,000°F (550°C) are available.

# BI-METAL THERMOMETERS

Mechanical Temperature > Bimetal Thermometers > TI.T20/TI.T17

## Type TI.T20/TI.T17

Count on WIKA laboratory/thin stem thermometers to deliver fast, extremely accurate readings. These thermometers include beaker clip and reset feature on plain connections only. No external adjustment available on threaded connections. All Type TI.T20 bimetal thermometers carry a 1-year warranty.



### Standard Features

|                       |   |
|-----------------------|---|
| <b>Case:</b>          | 304 stainless steel   |
| <b>Dial:</b>          | Heavy gauge aluminum with white matte finish                                |
| <b>Window:</b>        | Fully gasketed glass standard; Lexan available                              |
| <b>Reset:</b>         | 7/16" hex hub adjustable (not available with threaded connection)           |
| <b>Hermetic Seal:</b> | Per ASME B40.3; guaranteed not to fog up                                    |
| <b>Stem:</b>          | 0.150" diameter; 304 stainless steel, TIG welded at tip and case connection |
| <b>Dampening:</b>     | To minimize pointer oscillation   |

|                         |   |
|-------------------------|---|
| <b>Over Range:</b>      | Temporary over or under range tolerance of 50% of scale up to 500°F (260°C) |
| <b>Accuracy:</b>        | ±1% of full range span Grade A per ASME B40.3                               |
| <b>Connection:</b>      | Plain, 7/16" hex hub with no threads  |
| <b>Stem Lengths:</b>    | 5", 8", 12", 18"  |
| <b>Stem Diameter:</b>   | .150"   |
| <b>External Reset:</b>  | Adjustable on plain connection only   |
| <b>Shipping Weight:</b> | Stem length 2.5"- 9"= 4oz.** (**weights of individual thermometers)         |

Sample Part Number: T20 050 2 24 D0 G 0 S C

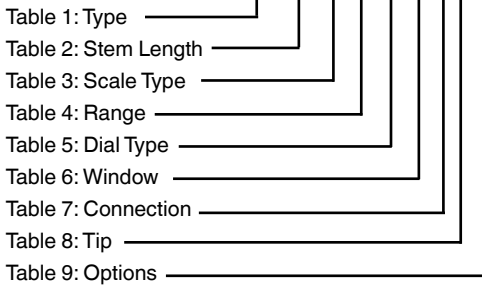


Table 1 & 2 - Type & Stem Length

| Type TI.T17 - 1 3/4" Back Connected |      |     |     |     |     |     |
|-------------------------------------|------|-----|-----|-----|-----|-----|
| Stem Length                         | 2.5" | 5"  | 8"  | 12" | 15" | 18" |
| Code                                | 025  | 050 | 080 | 120 | 150 | 180 |
| Type TI.T20 - 2" Back Connected     |      |     |     |     |     |     |
| Stem Length                         | 2.5" | 5"  | 8"  | 12" | 15" | 18" |
| Code                                | 025  | 050 | 080 | 120 | 150 | 180 |

Table 3 - Scale Type

| Code | Description        |
|------|--------------------|
| 0    | Dual Scale °F & °C |
| 1    | °C Only            |
| 2    | °F Only            |

Table 7 - Connection

| Code | Description |
|------|-------------|
| 0    | Plain       |
| 1    | 1/8" NPT*   |
| 2    | 1/4" NPT*   |

\* No external adjustment

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets TI.T20/TI.T17.

Table 4 - Standard Ranges

| Code             | Description          | °C Only   | °F Only   |
|------------------|----------------------|-----------|-----------|
| 03 <sup>1)</sup> | 25/125°F & -5/50°C   | 0/50°C    | 25/125°F  |
| 04 <sup>2)</sup> | 0/140°F & -20/60°C   | N/A       | 0/140°F   |
| 05 <sup>2)</sup> | 0/200°F & -15/90°C   | 0/100°C   | 0/200°F   |
| 08               | 50/300°F & 10/150°C  | 0/150°C   | 50/300°F  |
| 10 <sup>2)</sup> | 50/500°F & 10/260°C  | 0/250°C   | 50/500°F  |
| 11               | 150/750°F & 65/400°C | 0/300°C   | 150/750°F |
| 19 <sup>2)</sup> | -40/160°F & -40/70°C | -40/70°C  | -40/160°F |
| 24 <sup>2)</sup> | 0/220°F & -10/110°C  | -10/110°C | 0/220°F   |
| 34 <sup>2)</sup> | 0/180°F & -18/82°C   | -18/82°C  | 0/180°F   |

1) Minimum 3: stem - all connectors

2) Minimum 3: stem threaded connections

Table 5 - Dial Type

| Code | Description   |
|------|---------------|
| D0   | WIKA Standard |

Table 6 - Window

| Code | Description |
|------|-------------|
| G    | Glass       |
| L    | Lexan       |

Table 8 - Tip

| Code | Description |
|------|-------------|
| S    | Sharp       |
| B    | Blunt       |

Table 9 - Options

| Code | Description |
|------|-------------|
| C    | Beaker clip |
| 0    | None        |



Mechanical Temperature > Bimetal Thermometers > TI.30/TI.50

## Type TI.30/TI.50

WIKA bimetal thermometers are ideal for most rugged industrial temperature measurement applications. The hermetically-sealed case offers protection from weather and dust, and is guaranteed against fogging up. WIKA Type TI.30 and TI.50 thermometers are guaranteed for 7 years.



### Standard Features

|                        |  |                         |  |
|------------------------|--|-------------------------|--|
| <b>Case:</b>           | 304 stainless steel  | <b>Over Range:</b>      | Temporary over or under range tolerance of 50% of scale up to 500°F (260°C)                                    |
| <b>Dial:</b>           | Anti-parallax, heavy gauge aluminum with white matte finish                                    | <b>Accuracy:</b>        | ±1% full range span (ASME B40.3 Standard)  |
| <b>External Reset:</b> | Slotted hex adjustment   | <b>Shipping Weight:</b> | Type 30: stem length 2½"-9"=12oz.<br>Type 50: stem length 2½"-9"=1lb.8oz. (weights of individual thermometers) |
| <b>Window:</b>         | Fully gasketed glass   |                         |  |
| <b>Hermetic Seal:</b>  | Per ASME B40.3, IP65, NEMA 4X  |                         |  |
| <b>Stem:</b>           | ¼" diameter; 304 stainless steel, TIG welded at tip and case connection. ⅜" diameter available |                         |  |
| <b>Dampening:</b>      | Inert gel to minimize pointer oscillation.   |                         |  |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets **TI.30/TI.50**.

| Type               | TI.30              |                    |                    |             |             |
|--------------------|--------------------|--------------------|--------------------|-------------|-------------|
| <b>Connection</b>  | 1/2" NPT Back      |                    |                    |             |             |
| <b>Dial Size</b>   | 3"                 |                    |                    |             |             |
| <b>Stem Length</b> | 2½"                | 4"                 | 6"                 | 9"          | 12"         |
| -40/120 °F         | 30025D202G4        | 30040D202G4        | 30060D202G4        | 30090D202G4 | 30120D202G4 |
| 0/250 °F           | <b>30025D206G4</b> | <b>30040D206G4</b> | <b>30060D206G4</b> | 30090D206G4 | 30120D206G4 |
| 50/550 °F          | <b>30025D216G4</b> | <b>30040D216G4</b> | 30060D216G4        | 30090D216G4 | 30120D216G4 |
| -40/120 °F & °C    | 30025D002G4        | 30040D002G4        | 30060D002G4        | 30090D002G4 | 30120D002G4 |
| 0/250 °F & °C      | <b>30025D006G4</b> | <b>30040D006G4</b> | <b>30060D006G4</b> | 30090D006G4 | 30120D006G4 |
| 50/500 °F & °C     | 30025D010G4        | 30040D010G4        | 30060D010G4        | 30090D010G4 | 30120D010G4 |

| Type               | TI.50         |             |             |             |
|--------------------|---------------|-------------|-------------|-------------|
| <b>Connection</b>  | 1/2" NPT Back |             |             |             |
| <b>Dial Size</b>   | 5"            |             |             |             |
| <b>Stem Length</b> | 2½"           | 4"          | 6"          | 9"          |
| -40/120 °F         | 50025D202G4   | 50040D202G4 | 50060D202G4 | 50090D202G4 |
| 0/250 °F           | 50025D206G4   | 50040D206G4 | 50060D206G4 | 50090D206G4 |
| 50/550 °F          | 50025D216G4   | 50040D216G4 | 50060D216G4 | 50090D216G4 |
| -40/120 °F & °C    | 50025D002G4   | 50040D002G4 | 50060D002G4 | 50090D002G4 |
| 0/250 °F & °C      | 50025D006G4   | 50040D006G4 | 50060D006G4 | 50090D006G4 |
| 50/500 °F & °C     | 50025D010G4   | 50040D010G4 | 50060D010G4 | 50090D010G4 |

Stock items shown in **blue print**.

### Available Options

- Stem lengths: (in inches) 2½" to 72"
- Silicone fill
- Custom dials
- Min-max pointer
- Union locknut
- Dampened movement
- Window: Lexan, acrylic, shatterproof



Mechanical Temperature > Bimetal Thermometers > TI.31/TI.51

## Type TI.31/TI.T51

WIKA TI.31 and TI.51 bimetal thermometers offer the same features as the TI.30 and TI.50, with a fixed lower mount (bottom) connection. The hermetically-sealed case offers protection from weather and dust, and is guaranteed against fogging up. The TI.31 and TI.51 have a 7-year guarantee.



### Standard Features

|                        |  |                         |  |
|------------------------|--|-------------------------|--|
| <b>Case:</b>           | 304 stainless steel  | <b>Over Range:</b>      | Temporary over or under range tolerance of 50% of scale up to 500°F (260°C)  |
| <b>Dial:</b>           | Anti-parallax, heavy gauge aluminum with white matte finish                                    | <b>Accuracy:</b>        | ±1% full range span per ASME B40.3   |
| <b>External Reset:</b> | Slotted hex adjustment   | <b>Shipping Weight:</b> | Type 31: stem length - 2½" - 9" = 12oz.**<br>Type 51: stem length - 2½" - 9" = 1lb. 10oz.**<br>(*weights of individual thermometers) |
| <b>Window:</b>         | Fully gasketed glass standard  |                         |  |
| <b>Hermetic Seal:</b>  | Per ASME B40.3, IP65, NEMA 4X  |                         |  |
| <b>Stem:</b>           | ¼" diameter; 304 stainless steel, TIG welded at tip and case connection. ⅜" diameter available |                         |  |
| <b>Dampening:</b>      | Inert gel to minimize pointer oscillation.   |                         |  |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets [TI.31/TI.51](#).

| Type               | TI.31                                 |             |             |
|--------------------|---------------------------------------|-------------|-------------|
| <b>Category</b>    | Process grade thermometer, resettable |             |             |
| <b>Data Sheet</b>  | TI.31                                 |             |             |
| <b>Connection</b>  | 1/2" NPT Lower                        |             |             |
| <b>Dial Size</b>   | 3"                                    |             |             |
| <b>Stem Length</b> | 2½"                                   | 4"          | 6"          |
| -40/120 °F         | 31025D202G4                           | 31040D202G4 | 31060D202G4 |
| 0/250 °F           | 31025D206G4                           | 31040D206G4 | 31060D206G4 |
| 50/550 °F          | 31025D216G4                           | 31040D216G4 | 31060D216G4 |

### Available Options

- Stem lengths: (In inches) 2½" to 72"
- Silicone fill, custom dials, min-max pointer, union locknut, union connection
- Window: Lexan, acrylic, shatterproof, sharp tip, dampened movement
- RS= Ride side connection location
- LS= Left side connection location
- TS= Top side connection location

Note: TI.51, 5" dial thermometer also available. Consult factory for details.

Stock items shown in blue print.

Mechanical Temperature > Bimetal Thermometers > TI.32/TI.52

## Type TI.32/TI.52

WIKA TI.32 and TI.52 bimetal thermometers are similar to TI.30 and TI.50 but with an all-angle swivel connection. The hermetically-sealed case offers protection from weather and dust, and is guaranteed against fogging up. WIKA TI.32 and TI.52 Thermometers are guaranteed for 7 years.



### Standard Features

|                        |  |                         |   |
|------------------------|--|-------------------------|---|
| <b>Case:</b>           | 304 stainless steel  | <b>Over Range:</b>      | Temporary over or under range tolerance of 50% of scale up to 500°F (260°C)                                       |
| <b>Dial:</b>           | Anti-parallax, heavy gauge aluminum with white matte finish                                    | <b>Accuracy:</b>        | ±1% of full scale per ASME B40.3  |
| <b>External Reset:</b> | Slotted hex adjustment   | <b>All Angle Case:</b>  | Rotation of 360° and stem variation of more than 180°.  |
| <b>Window:</b>         | Fully gasketed glass   | <b>Shipping Weight:</b> | Type 32: stem length 2½"- 9"= 1lb.<br>Type 52: stem length 2½"- 9"= 2lbs.<br>(weights of individual thermometers) |
| <b>Hermetic Seal:</b>  | Per ASME B40.3, IP65, NEMA 4X  |                         |   |
| <b>Stem:</b>           | ¼" diameter; 304 stainless steel, TIG welded at tip and case connection. ⅜" diameter available |                         |   |
| <b>Dampening:</b>      | Inert gel to minimize pointer oscillation.   |                         |   |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets **TI.32/TI.52**.

| Type               | TI.32              |                    |             |             |             |
|--------------------|--------------------|--------------------|-------------|-------------|-------------|
| <b>Connection</b>  | 1/2" NPT all angle |                    |             |             |             |
| <b>Dial Size</b>   | 3"                 |                    |             |             |             |
| <b>Stem Length</b> | 2½"                | 4"                 | 6"          | 9"          | 12"         |
| -40/120 °F         | 32025D202G4        | 32040D202G4        | 32060D202G4 | 32090D202G4 | 32120D202G4 |
| 0/250 °F           | <b>32025D206G4</b> | <b>32040D206G4</b> | 32060D206G4 | 32090D206G4 | 32120D206G4 |
| 50/550 °F          | 32025D216G4        | <b>32040D216G4</b> | 32060D216G4 | 32090D216G4 | 32120D216G4 |

| Type               | TI.52              |                    |                    |             |             |
|--------------------|--------------------|--------------------|--------------------|-------------|-------------|
| <b>Connection</b>  | 1/2" NPT all angle |                    |                    |             |             |
| <b>Dial Size</b>   | 5"                 |                    |                    |             |             |
| <b>Stem Length</b> | 2½"                | 4"                 | 6"                 | 9"          | 12"         |
| -40/120 °F         | 52025D202G4        | <b>52040D202G4</b> | <b>52060D202G4</b> | 52090D202G4 | 52120D202G4 |
| 0/250 °F           | 52025D206G4        | <b>52040D206G4</b> | 52060D206G4        | 52090D206G4 | 52120D206G4 |
| 50/550 °F          | 52025D216G4        | 52040D216G4        | <b>52060D216G4</b> | 52090D216G4 | 52120D216G4 |
| -40/120 °F & °C    | 52025D002G4        | 52040D002G4        | 52060D002G4        | 52090D002G4 | 52120D002G4 |
| 0/250 °F & °C      | 52025D006G4        | <b>52040D006G4</b> | 52060D006G4        | 52090D006G4 | 52120D006G4 |
| 50/500 °F & °C     | 52025D010G4        | 52040D010G4        | 52060D010G4        | 52090D010G4 | 52120D010G4 |

Stock items shown in **blue print**.

### Available Options

- Stem lengths: (In inches) 2½" to 72"
- Silicone fill, custom dials, min-max pointer, Union locknut, Union connection
- Window: Lexan, acrylic, shatterproof

Mechanical Temperature > Bimetal Thermometers > TI.33/TI.34, TI.53/TI.54

## Type TI.33/TI.34, TI.53/TI.54

WIKA's industrial grade bimetal dial thermometers, TI.33, 34, 53, 54 are an ideal choice where a weather-resistant, tamper-proof thermometer is needed. There is a 1 year warranty.



### Standard Features

|                       |  |
|-----------------------|--|
| <b>Case:</b>          | 304 stainless steel  |
| <b>Dial:</b>          | Anti-parallax, heavy gauge aluminum with matte finish  |
| <b>Window:</b>        | Fully gasketed glass   |
| <b>Hermetic Seal:</b> | Per ASME B40.3, IP65, NEMA 4X  |
| <b>Stem:</b>          | 1/4" diameter; 304 stainless steel, TIG welded at tip and case connection. 3/8" diameter available |
| <b>Accuracy:</b>      | ±1% of full range span per Grade A, ASME B40.3   |
| <b>Over Range:</b>    | Temporary over or under range tolerance of 50% of scale up to 500°F (260°C)                        |

|                         |  |
|-------------------------|--|
| <b>Shipping Weight:</b> | Type 33 & 34: stem length - 2 1/2" - 9" = 12oz.<br>Type 53: stem length - 2 1/2" - 9" = 1lb. 8oz.<br>Type 54: stem length - 2 1/2" - 9" = 12oz.<br>(*weights of individual thermometers) |
|-------------------------|--|

**Note:** Silicone-filled, dampened movement, min/max pointer, dry with plug, .375 stem and 316 wetted parts not available

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets [TI.33](#), [TI.34](#), [TI.53](#), [TI.54](#).

| Type               | TI.33                       |                             |                             |             |
|--------------------|-----------------------------|-----------------------------|-----------------------------|-------------|
| <b>Connection</b>  | 1/2" NPT back               |                             |                             |             |
| <b>Dial Size</b>   | 3"                          |                             |                             |             |
| <b>Stem Length</b> | 2 1/2"                      | 4"                          | 6"                          | 9"          |
| 0/250 °F           | <a href="#">33025D206G4</a> | <a href="#">33040D206G4</a> | <a href="#">33060D206G4</a> | 33090D206G4 |
| 50/550 °F          | <a href="#">33025D216G4</a> | 33040D216G4                 | <a href="#">33060D216G4</a> | 33090D216G4 |

Stock items shown in blue print.

### Available Options

- Stem lengths from 2 1/2" to 24"
- Ranges from -100°F (-70°C) to 1,000°F (550°C)
- Special ranges, custom dials, stems, connections and windows
- Window: Lexan, acrylic, shatterproof
- Sharp tip

### Type Descriptions

|  |
|--|
| Type 33 (TI.33) = 3" back connection   |
| Type 34 (TI.34) = 3" bottom connection |
| Type 53 (TI.53) = 5" back connection   |
| Type 54 (TI.54) = 5" bottom connection |

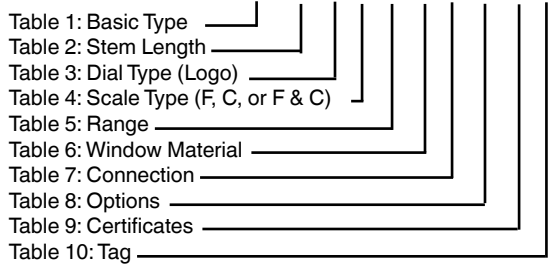


# BI-METAL THERMOMETERS

Mechanical Temperature > Bimetal Thermometers > Ordering Bimetal Thermometers

## Ordering Bimetal Thermometers

Sample Part Number: 30 025 D 2 06 G 4 XX X X



| Table 1 - Basic Type       |                     |                                   |                     |
|----------------------------|---------------------|-----------------------------------|---------------------|
| Process Grade - Resettable |                     | Industrial Grade - Non-Resettable |                     |
| Type                       | Description         | Type                              | Description         |
| 30                         | 3" Back connected   | 20                                | 2" Back connected   |
| 31                         | 3" Bottom connected | 33                                | 3" Back connected   |
| 32                         | 3" Adjustable angle | 34                                | 3" Bottom connected |
| 50                         | 5" Back connected   | 53                                | 5" Back connected   |
| 51                         | 5" Bottom connected | 54                                | 5" Bottom connected |
| 52                         | 5" Adjustable angle |                                   |                     |

Stem lengths above 24" are not available with non-resettable models

| Table 2 - Stem Length - (specify as XX.X" with no decimal point, see "code") |           |     |     |     |     |     |     |     |     |     |     |     |     |
|--|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Stem Length  | 2.5" - 9" | 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | 54" | 60" | 66" | 72" |
| Code   |           |     |     |     |     |     |     |     |     |     |     |     |     |

| Table 3 - Dial Type |                    |
|---------------------|--------------------|
| Code                | Description        |
| D                   | WIKA Standard logo |
| X                   | Special            |

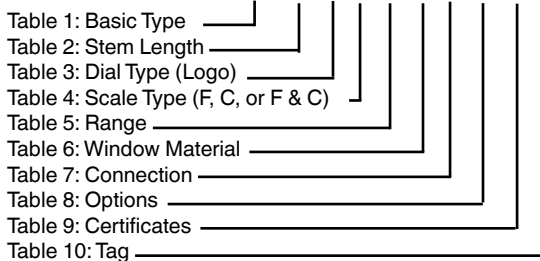
| Table 4 - Scale Type |                    |
|----------------------|--------------------|
| Code                 | Description        |
| 0                    | Dual scale °F & °C |
| 1                    | Single scale °C    |
| 2                    | Single scale °F    |

| Table 5 - Range   |             |             |      |           |             |      |              |           |
|-------------------|-------------|-------------|------|-----------|-------------|------|--------------|-----------|
| Code              | Dual Scale  |             |      |           |             |      | Single Scale |           |
|                   | °F Range    | Figure Int. | Div. | °C range  | Figure Int. | Div. | °F Range     | °C Range  |
| 01 <sup>3</sup>   | -100/150°F  | 20°         | 2°   | -70/70°C  | 10°         | 1°   | -100/150°F   | -70/70°C  |
| 13                | -80/120°F   | 20°         | 2°   | -60/50°C  | 10°         | 1°   | -80/120°F    | -60/50°C  |
| 02                | -40/120°F   | 20°         | 2°   | -40/50°C  | 10°         | 1°   | -40/120°F    | -50/50°C  |
| 14                | -20/120°F   | 20°         | 2°   | -30/50°C  | 10°         | 1°   | -20/120°F    | -30/50°C  |
| 19                | -40/160°F   | 20°         | 2°   | -40/70°   | 10°         | 1°   | -40/160°F    | -40/70°C  |
| 23 <sup>1</sup>   | 0/100°F     | 10°         | 1°   | -20/40°C  | 5°          | ½°   | 0/100°F      | -20/40°C  |
| 03 <sup>1</sup>   | 25/125°F    | 10°         | 1°   | -5/50°C   | 5°          | ½°   | 25/125°F     | 0/50°C    |
| 15 <sup>1</sup>   | 30/130°F    | 10°         | 1°   | 0/55°C    | 5°          | ½°   | 30/130°F     | 0/55°C    |
| 04                | 0/140°F     | 10°         | 1°   | -20/60°C  | 5°          | ½°   | 0/140°F      | -20/60°C  |
| 05                | 0/200°F     | 20°         | 2°   | -15/90°C  | 10°         | 1°   | 0/200°F      | 0/100°C   |
| 06                | 0/250°F     | 20°         | 2°   | -20/120°C | 10°         | 1°   | 0/250°F      | -20/120°C |
| 07                | 20/240°F    | 20°         | 2°   | -5/115°C  | 10°         | 1°   | 20/240°F     | -10/110°C |
| 08                | 50/300°F    | 20°         | 2°   | 10°/150°C | 10°         | 1°   | 50/300°F     | 0/150°C   |
| 09                | 50/400°F    | 50°         | 5°   | 10/200°C  | 20°         | 2°   | 50/400°F     | 0/200°C   |
| 10                | 50/500°F    | 50°         | 5°   | 10/260°C  | 20°         | 2°   | 50/500°F     | 0/250°C   |
| 16 <sup>3</sup>   | 50/550°F    | 50°         | 5°   | 10/290°C  | 20°         | 2°   | 50/550°F     | 10/290°C  |
| 17 <sup>3</sup>   | 0/600°F     | 100°        | 10°  | -20/315°C | 50°         | 5°   | 0/600°F      | -20/315°C |
| 11 <sup>3</sup>   | 150/750°F   | 100°        | 10°  | 65/400°C  | 50°         | 5°   | 150/750°F    | 0/300°C   |
| 18 <sup>3</sup>   | 100/800°F   | 100°        | 10°  | 40/425°C  | 50°         | 5°   | 100/800°F    | 0/450°C   |
| 12 <sup>2,3</sup> | 200/1,000°F | 100°        | 10°  | 100/540°C | 50°         | 5°   | 200/1,000°F  | 100/550°C |

(1) Not available with 2½" stem  
 (2) Not recommended for continued use over 800°F  
 (3) Silicone fill not available

## Ordering Bimetal Thermometers

Sample Part Number: 30 025 D 2 06 G 4 XX X X



| Table 6 - Window                              |                   |
|---|-------------------|
| Code  | Description       |
| A   | Acrylic lens      |
| L   | Lexan® lens       |
| S <sup>1</sup>                                | Shatterproof lens |
| G <sup>1</sup>                                | Glass             |
| <sup>1</sup> not available with silicone fill |                   |

| Table 7 - Process Connection |             |
|------------------------------|-------------|
| Code                         | Description |
| 0                            | Plain conn. |
| 1                            | 1/8 NPT     |
| 2                            | 1/4 NPT     |
| 3                            | 3/8 NPT     |
| 4                            | 1/2 NPT     |
| 5                            | G 1/2 B     |
| 7                            | Union conn. |

| Table 8 - Options  |                   |
|--|-------------------|
| Code   | Description       |
| DM   | Dampened movement |
| SF   | Silicone fill     |
| ST   | Sharp tip         |
| MM   | Min/max pointer   |
| LS   | Left side         |
| RS   | Right side        |
| TS   | Top side          |
| DF <sup>2</sup>  | Dry w/plug        |
| <sup>2</sup> Prepares unit for liquid case filling and shipped dry |                   |

| 0.375 Stem Diameter Upgrade Option |                     |
|------------------------------------|---------------------|
| Code                               | Description         |
| HA                                 | Full length         |
| HD                                 | Reduced tip         |
| HS                                 | Reduced w/sharp tip |

| 316 SS Wetted Parts Upgrade for 0.250 Stem Diameter |                     |
|---|---------------------|
| Code  | Description         |
| SS  | 316 SS wetted parts |

| Table 9 - Certificates               |      |
|--------------------------------------|------|
| Description                          | Code |
| NIST Factory Certificate of Accuracy | I    |

| Accessories |  |
|-------------|--|
| Part Number | Description  |
| TA-600-011  | 1/2" Union locknut   |
| TA800-0T85  | T-85 conv. kit   |
| TA800-0020  | 1/2" NPT duct flange                                       |
| 2256045     | 5.3 oz. tube heat transfer compound for use in thermowells |

### ABBREVIATIONS

N/A - this option is not available  
 Std - this option comes standard

Certificate of compliance available at no charge



## Bimetal Thermometers Options



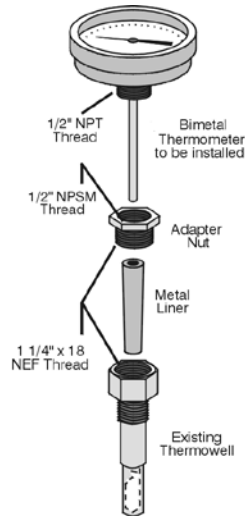
### DAMPENED MOVEMENT

#### Dampened Movement

Engineered solution providing benefits of case fill in a dry configuration. This silicone-free option provides dampening in tough environments at all available temperature ranges. Available in all process grade models.

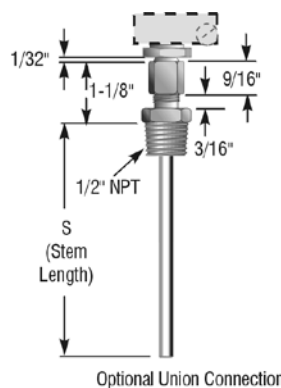
#### T-85 Thermowell Conversion Kit

This conversion kit offers an easy, inexpensive way to install a WIKA bimetal thermometer in a glass industrial thermometer's thermowell. For more information, please consult factory. To order, specify part number **TA800-0T85**.



#### Adjustable Union Connection

The WIKA Adjustable Union Connection allows for the installation of a Type 32 or 52 adjustable angle thermometer without rotating the case. Ideal for use in a confined space.



#### Left, Right or Top Connection

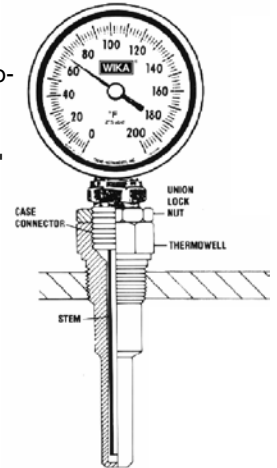
All WIKA 3" and 5" Bottom Connected thermometers are available with the connection oriented to the left, right or top. Please see "How to Order" on next page for this option.

#### Not Shown

- Heavy duty 3/8" stems and 5/8" stems with 2 1/2" x 1/4" OD sensitive portion available
- Thermometers may be ordered with sharp tips for piercing media to be measured
- 316 stainless steel wetted parts are available
- 1/2" NPT duct flange
- Acrylic, Lexan, shatterproof and glass windows
- Stainless steel tags are available options
- Silicone fill
- Certificates of Conformance, Origin and Calibration available
- Please see these options on Table 8 of "Ordering Bimetal Thermometers" on pages 391, 392
- Other options are available. Please consult factory

#### Union Lock Nut

The WIKA Union Lock Nut provides a simple and inexpensive means to mount WIKA bimetal thermometers with 1/2" NPT so that the dial is oriented for proper viewing. For more information, please consult factory. To order, specify part number **TA600-0111**.



#### Maximum or Minimum Indicating Pointer

This option allows operator to view what the highest or lowest temperature has been in the process. High vibration environments are not recommended.



Mechanical Temperature > Digital Thermometers > TI.80/TI.82

## Type TI.80/TI.82

WIKA's solar-powered digital thermometers are ideal for power utilities, petrochemical, and quality control applications, where exact readings are required. TI.80 and TI.82 offers easy-to-read digital temperature in single-degree increments in either Fahrenheit or Celsius scales. TI.80 has a center back mount, while the TI.82 has an adjustable angle, hermetically-sealed case.



### Standard Features

- Case:** 304 stainless steel
- Stem:** 304 stainless steel, lengths from 1" to 24"
- Window:** Glass standard, acrylic available
- Connection:** 1/2" NPT, others available
- Sensor System:** Ceramic thermistor requiring lighting of only 35 LUX to operate the 3-volt solar cell. The circuitry offers a fast 15-second update time and accuracy to within 1% of scale. A patented safety circuit prevents false readings
- Accuracy:** ± 1% of full range span

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets **TI.80**, **TI.82**.

| Type        | TI.80         |           |           |           |           |           |           |           |
|-------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Connection  | 1/2" NPT Back |           |           |           |           |           |           |           |
| Dial Size   | 3"            |           |           |           |           |           |           |           |
| Stem Length | 2 1/2"        | 4"        | 6"        | 9"        | 12"       | 15"       | 18"       | 24"       |
| -50/300 °F  | 80025D2G4     | 80040D2G4 | 80060D2G4 | 80090D2G4 | 80120D2G4 | 80150D2G4 | 80180D2G4 | 80240D2G4 |
| -50/150 °C  | 80025D1G4     | 80040D1G4 | 80060D1G4 | 80090D1G4 | 80120D1G4 | 80150D1G4 | 80180D1G4 | 80240D1G4 |

| Type        | TI.82                                |           |           |           |           |           |           |           |
|-------------|--------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Connection  | 1/2" NPT Just-Right Adjustable Angle |           |           |           |           |           |           |           |
| Dial Size   | 3"                                   |           |           |           |           |           |           |           |
| Stem Length | 2 1/2"                               | 4"        | 6"        | 9"        | 12"       | 15"       | 18"       | 24"       |
| -50/300 °F  | 82025D2G4                            | 82040D2G4 | 82060D2G4 | 82090D2G4 | 82120D2G4 | 82150D2G4 | 82180D2G4 | 82240D2G4 |
| -50/150 °C  | 82025D1G4                            | 82040D1G4 | 82060D1G4 | 82090D1G4 | 82120D1G4 | 82150D1G4 | 82180D1G4 | 82240D1G4 |

| Options     |      |  |
|-------------|------|--|
|             | Code | Description                                      |
| Connection  | 0    | Plain  |
|             | 2    | 1/4" NPT   |
|             | 3    | 3/8" NPT (TI.80 only)                            |
| Window      | A    | Acrylic  |
| Accessories | ST   | Sharp tip  |
|             | SS   | 316 SS wetted parts                              |
| Stem        | HD   | 3/8" dia. stem w/ 2 1/2" L x 1/4" dia. tip       |
|             | HS   | 3/8" dia. stem w/ 2 1/2" L x 1/4" dia. sharp tip |

Stock items shown in blue print.

Mechanical Temperature > Twin-Temp Thermometers > TT.30/TT.32, TT.50/TT.52

## Type TT.30/TT.32, TT.50/TT.52

The Twin-Temp thermometer combines the convenience, simplicity, and self-powered actuation of a bimetal thermometer and data acquisition capabilities of a thermocouple or RTD electrical output. With standards traceable to the NIST, the Twin-Temp offers simplified calibration for ISO 9001 compliance and other statistical process control requirements. It is ideal in applications requiring quick and easy readability at the point of process, while still affording a means of electronic data acquisition and digital panel remote read-out. The Twin-Temp puts two temperature sensors to work at one location.



### Standard Features

**Case and Bezel:** 304 stainless steel  
**Case:** All angle or back connected  
**Dial Size:** 3" or 5"  
**Process Connection:** ½" NPT standard  
**External Reset:** Slotted hex head, fully gasketed  
**Window:** Glass, fully gasketed  
**Hermetic Seal:** Per ASME B40.3  
**Stem:** 304 stainless steel, TIG welded at tip and case connector to prevent leakage. ¼" diameter standard, lengths available from 2½" to 48" for Thermocouple, 4" to 48" for RTD.

**Over Range:** Maximum exposure 500°F  
**Thermocouple:** Type K grounded junction thermocouple standard  
 Types J, E, & T available  
**RTD:** 100-Ohm thin film platinum DIN Curve (.00385 Ohm/Ohm/°C), 3 wire standard  
**Accuracy:** ± 1% of full range span  
**Warranty:** 1 year  
**Wiring:** Twin-Temp (RTD): red-terminal 1, green-terminal 2, black-terminal 3  
 Twin-Temp (T/C): negative-red always, positive-colored (depends on t/c type)

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets [TT.30](#), [TT.32](#), [TT.50](#), [TT.52](#).

**Note:** Silicone fill not available

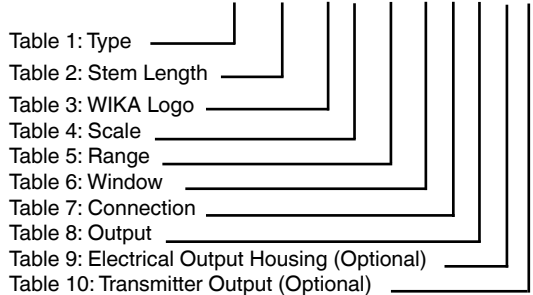
Mechanical Temperature > Twin-Temp Thermometers > Ordering Twin-Temp Thermometers

## Ordering Twin-Temp Thermometers

### HOW TO ORDER:

Select the appropriate codes and combine to complete thermometer part number.

Sample Part Number: 30 060 D 0 01 G 4 R1 A R



| Table 1 - Basic Type |                                |
|----------------------|--------------------------------|
| Code                 | Description                    |
| 30                   | 3" Back connected (with reset) |
| 32                   | 3" All angle (with reset)      |
| 50                   | 5" Back connected (with reset) |
| 52                   | 5" All angle (with reset)      |

| Table 2 - Stem Length<br>(Pick stem length from either thermocouple or RTD table) |  |
|---|--|
| Code  | Description  |
| XXX   | Length in inches with one decimal place (XX.X) RTD available only in 4" to 48" (040-480) stem length. Thermocouple available 2½" to 48" (025-480). |

| Thermocouples - Types J, K, E, T Grounded Thermocouple Output (consult factory for ungrounded) |     |     |     |     |     |     |     |     |     |     |     |     |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Stem Length  | 2.5 | 4   | 6   | 9   | 12  | 15  | 18  | 24  | 30  | 36  | 42  | 48  |
| Code   | 025 | 040 | 060 | 090 | 120 | 150 | 180 | 240 | 300 | 360 | 420 | 480 |

Note: Thermocouple junction is welded to tip of stem

or

| 100 Ohm RTD Output |     |     |     |     |     |     |     |     |     |     |     |     |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Stem Length        | 2.5 | 4   | 6   | 9   | 12  | 15  | 18  | 24  | 30  | 36  | 42  | 48  |
| Code               | 025 | 040 | 060 | 090 | 120 | 150 | 180 | 240 | 300 | 360 | 420 | 480 |

Note: RTD is placed in stem above bimetal helix (requires minimum 3½" insertion)

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

# TWIN-TEMP THERMOMETERS

Mechanical Temperature > Twin-Temp Thermometers > Ordering Twin-Temp Thermometers

| Table 3 - Dial Type |               |
|---------------------|---------------|
| Code                | Description   |
| D                   | WIKA standard |
| X                   | Special       |

| Table 4 - Scale Type |                    |
|----------------------|--------------------|
| Code                 | Description        |
| 0                    | Dual scale °F & °C |
| 1                    | Single scale °C    |
| 2                    | Single scale °F    |

ABBREVIATIONS  
N/A - this option is not available

| Table 5 - Ranges |                      |                 |                 |
|------------------|----------------------|-----------------|-----------------|
| Code             | Dual Scale °F & °C   | Dual Scale      |                 |
|                  |                      | Single Scale °C | Single Scale °F |
| 02*              | -40/120°F & -40/50°C | -50/50°C        | -40/120°F       |
| 03*              | 25/125°F & -5/50°C   | 0/50°C          | 25/125°F        |
| 04*              | 0/140°F & -20/60°C   | -20/60°C        | 0/140°F         |
| 5                | 0/200°F & -15/90°C   | 0/100°C         | 0/200°F         |
| 6                | 0/250°F & -20/120°C  | -20/120°C       | 0/250°F         |
| 7                | 20/240°F & -5/115°C  | -10/110°C       | 20/240°F        |
| 8                | 50/300°F & 10/150°C  | 0/150°C         | 50/300°F        |
| 9                | 50/400°F & 10/200°C  | 0/200°C         | 50/400°F        |
| 10               | 50/500°F & 10/260°C  | 0/250°C         | 50/500°F        |
| 16               | 50/550°F & 10/260°C  | 10/290°C        | 50/550°F        |

\* Not available with 2 1/2" stem

| Table 6 - Window |              |
|------------------|--------------|
| Code             | Description  |
| G                | Plain glass  |
| A                | Acrylic      |
| L                | Lexan®       |
| S                | Shatterproof |

| Table 7 - Connection |             |
|----------------------|-------------|
| Code                 | Description |
| 2                    | 1/4" NPT    |
| 4                    | 1/2" NPT    |

Choose an electrical output configuration from either the left column only or right column only

| Table 8 - Electrical Output & Connection Type Selections   |   |
|--|---|
| Order from this column for direct thermocouple (female plug) or RTD (mini 3-pos terminal block) output only; <b>will not accept transmitter or enclosure head options.</b> |   |
| Electrical weatherproof housing connection is a 7/8-20 UNEF.<br>Thermocouple = female plug<br>RTD = 3-wire mini-terminal block   |   |
| Code   | Description                                 |
| TJ   | Thermocouple output, Type J (female plug)   |
| TK   | Thermocouple output, Type K (female plug)   |
| TE   | Thermocouple output, Type E (female plug)   |
| TT   | Thermocouple output, Type T (female plug)   |
| RA   | 100 Ohm RTD output, 3-wire (terminal block) |

| Table 9 - Electrical Output Housing Options  |  |
|--|--|
| (Match code to Table 8 output)   |  |
| <b>For non-transmitter units.</b> Plug-in (RTD output wire-in) field connections only. (Match code to output selection in Table 8) |  |
| Code   | Description  |
| X  | None   |
| J  | Straight barrel weather proof housing (7/8-20 UNEF) & plug |
| K  | Straight barrel weather proof housing (7/8-20 UNEF) & plug |
| E  | Straight barrel weather proof housing (7/8-20 UNEF) & plug |
| T  | Straight barrel weather proof housing (7/8-20 UNEF) & plug |
| R  | Straight barrel weather proof housing (7/8-20 UNEF)        |

| Table 10 - Transmitter Output   |  |
|---|--|
| <b>For non-transmitter equipped units.</b><br>Plug-in (RTD output wire-in) field connection only. |  |
| Code  | Description  |
| X   | None (mandatory on all non-transmitter models, must use this code "X" for all TJ/TK/TE/TT/RA from Table 8) |

| Table 8 - Electrical Output & Connection Type   |                             |
|---|-----------------------------|
| Order from this column for unit with lead wires for both thermocouple or RTD output; <b>will accept enclosure head for transmitter or terminal block housing options.</b> |                             |
| Electrical enclosure connection is a 1/2" NPT.<br>Thermocouple or RTD is 6" flying lead wire.   |                             |
| Code  | Description                 |
| J1  | Thermocouple output, Type J |
| K1  | Thermocouple output, Type K |
| E1  | Thermocouple output, Type E |
| T1  | Thermocouple output, Type T |
| R1  | 100 Ohm RTD output, 3-wire  |

| Table 9 - Electrical Output Housing Options      |                              |
|--|------------------------------|
| <b>For transmitter-equipped units.</b>           |                              |
| Code   | Description                  |
| X  | None                         |
| A  | *Std aluminum head enclosure |
| H  | *Exp. proof head             |
| * 1/2" NPT Twin-Temp x 3/4" NPT field connection |                              |

| Table 10 - Transmitter Output          |   |
|--|---|
| <b>For transmitter-equipped units.</b> |   |
| Code                                   | Description   |
| X                                      | None (mandatory on all non-transmitter models; must use this code "X" for all TJ/TE/TT/RA from Table 8) |
| T                                      | <sup>1,3</sup> 4-20mA transmitter for all Thermocouple output   |
| R                                      | <sup>2,3</sup> 4-20mA transmitter for all "R1" RTD output (from Table 8)                                |
| B                                      | <sup>3</sup> Terminal block (for field wiring termination, when transmitter no used)                    |

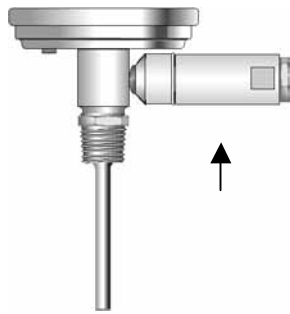
<sup>1</sup> only compatible with codes J1/K1/E1/T1

<sup>2</sup> only compatible with code R1

<sup>3</sup> must use code A or H from Table 9 for enclosure



# Twin-Temp Configurations



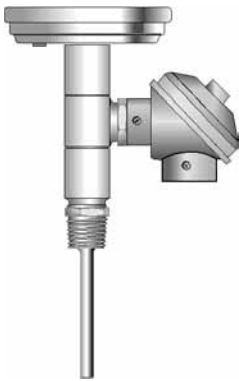
### 1. Weatherproof Housing and Plug

$\frac{7}{8}$ -20 UNEF threaded barrel with bushing and compression nut provide environmental protection to thermocouple/RTD connection. (Order code J,K,E,T or R from Table 9)



### 2. 1/2" NPT electrical connection with lead wire

Available in thermocouple or RTD. This allows site installation using other enclosures or piping systems. (Order code J1, K1, E1, T1, or R1 from Table 8)



### 3. Enclosure Head

A protective enclosure threads onto the optional 1/2" NPT electrical connection. The housing protects electrical connections from the environment. Houses a 4-20 mA transmitter or terminal block. Aluminum housing is standard. (Order code A from Table 9)

### 4. Terminal Block

Provides a connection point for the thermocouple or RTD. Mounts to thermocouple head with two screws. Requires lead-wire output connection (order code J1/K1/E1/T1/R1 from Table 8) and aluminum head enclosure. (Order code A from Table 9)



### 5. T-12 Thermocouple or T-24- RTD, 4-20 mA Transmitter

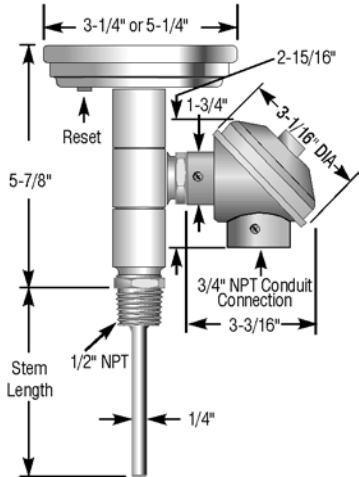
Provides a clean 4-20 mA signal to control room, data acquisition equipment, panel readout, etc. Requires lead-wire output connection (order code J1/K1/E1/T1/R1 from Table 8) and aluminum head enclosure (order code from Table 9).

| Spare Parts  |             |
|--|-------------|
| Description  | Part Number |
| Std aluminum head  | 102-02      |
| Terminal block   | 2246228     |
| Weather-proof housing  | TA6S0-0608  |
| <sup>1</sup> When order separate of a Twin-Temp, range must be specified |             |

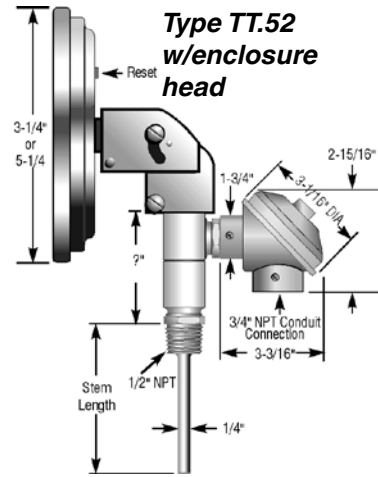
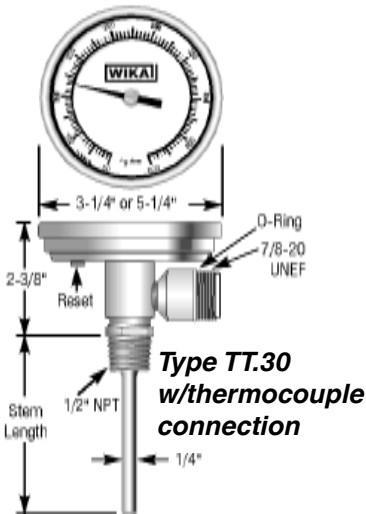
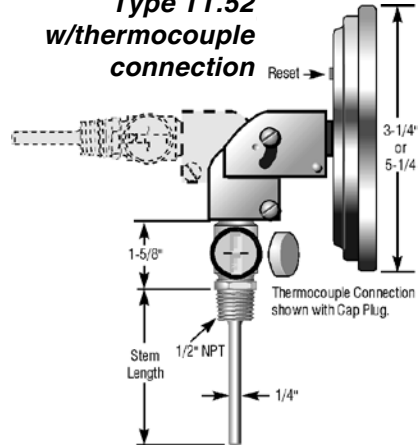


# Twin-Temp Configurations

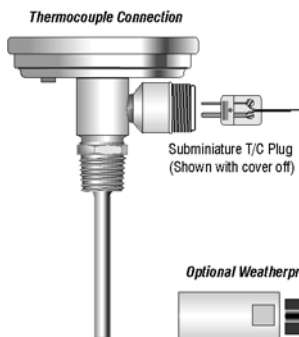
**Type TT.30  
w/enclosure head**



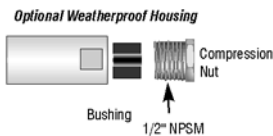
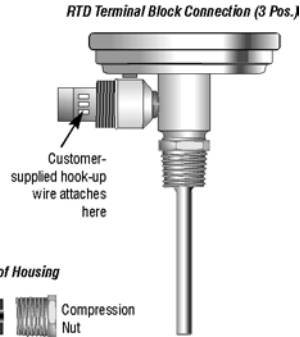
**Type TT.52  
w/thermocouple  
connection**



**Type TT.30  
w/thermocouple Plug-in**



**Type TT.30  
w/RTD terminal block**



MECHANICAL TEMPERATURE



# TWIN-TEMP SOLAR THERMOMETERS

Mechanical Temperature > Twin-Temp Solar Thermometers > TT.80, TT.82

## Type TT.80, TT.82

This unique thermometer has the convenience of a LCD digital output and the data acquisition capabilities of a thermocouple or RTD electrical output in one process location.



### Standard Features

|                            |   |                  |  |
|----------------------------|---|------------------|--|
| <b>Case and Bezel:</b>     | 304 stainless steel   | <b>RTD:</b>      | 100-Ohm thin film platinum<br>DIN Curve (.00385 Ohm/Ohm/°C),<br>3 wire standard  |
| <b>Case:</b>               | All angle or back connected   | <b>Accuracy:</b> | ± 1% of full range span  |
| <b>Dial Size:</b>          | 3"  | <b>Warranty:</b> | 1 year   |
| <b>Process Connection:</b> | ½" NPT standard   | <b>Wiring:</b>   | Twin-Temp (RTD): red-terminal 1,<br>green-terminal 2, black-terminal 3<br>Twin-Temp (T/C): negative-red<br>always, positive-colored<br>(depends on t/c type) |
| <b>Window:</b>             | Glass, fully gasketed   | <b>Note:</b>     | Silicone fill not available  |
| <b>Hermetic Seal:</b>      | Per ASME B40.3  |                  |  |
| <b>Stem:</b>               | 304 stainless steel, TIG welded at<br>tip and case connector to prevent<br>leakage. ¼" diameter standard,<br>lengths available from 2½" to 24". |                  |  |
| <b>Thermocouple:</b>       | Type K grounded junction<br>thermocouple standard. Types J,<br>E, T available   |                  |  |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets **TT.80, TT.82**.

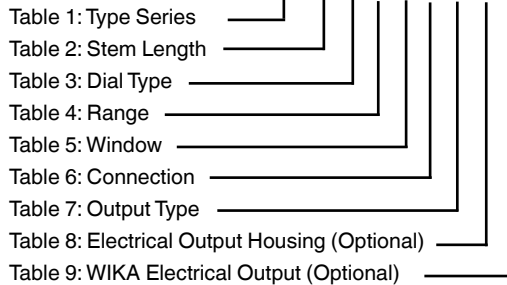
Mechanical Temperature > Twin-Temp Solar Thermometers > Ordering Twin-Temp Solar Thermometers

## Ordering Twin-Temp Solar Thermometers

### HOW TO ORDER:

Select the appropriate codes and combine to complete thermometer part number.

Sample Part Number: 80 040 D 6 G 4 R1 A R



| Table 1 - Basic Type |                   |
|----------------------|-------------------|
| Code                 | Description       |
| 80                   | 3" Back connected |
| 82                   | 3" All angle      |

| Table 2 - Stem Length |             |
|-----------------------|-------------|
| Code                  | Description |
| 025                   | 2.5"        |
| 040                   | 4"          |
| 060                   | 6"          |
| 090                   | 9"          |
| 120                   | 12"         |
| 150                   | 15"         |
| 180                   | 18"         |
| 240                   | 24"         |

| Table 3 - Dial Type |               |
|---------------------|---------------|
| Code                | Description   |
| D                   | WIKA standard |

| Table 4 - Ranges |             |
|------------------|-------------|
| Code             | Description |
| 1                | -50/300 °F  |
| 2                | -50/150 °C  |

| Table 5 - Window Material |             |
|---------------------------|-------------|
| Code                      | Description |
| G                         | Plain glass |
| A                         | Acrylic     |

| Table 6 - Process Connection |             |
|------------------------------|-------------|
| Code                         | Description |
| 4                            | 1/2" NPT    |

| Table 7 - Electrical Output |                             |
|-----------------------------|-----------------------------|
| Code                        | Description                 |
| J1                          | Thermocouple output, Type J |
| K1                          | Thermocouple output, Type K |
| E1                          | Thermocouple output, Type E |
| T1                          | Thermocouple output, Type T |
| R1                          | 100 Ohm RTD output, 3-wire  |

| Table 8 - Electrical Output Housing Options |                             |
|---|-----------------------------|
| Code  | Description                 |
| X   | None                        |
| A   | Std Aluminum head enclosure |

| Table 9 - Transmitter Output |   |
|------------------------------|---|
| Code                         | Description   |
| X                            | None  |
| T                            | 4-20mA transmitter for all Thermo-couple output               |
| R                            | 4-20mA transmitter for all "R1" RTD output (see output table) |
| B                            | Terminal block (for field wiring termination)                 |

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

## Gas Actuated Thermometers Operating and Installation

Gas actuated thermometers fall within “Class IV, gas-filled with absorbent” definition. They use a thermal system filled with gas and an absorbent (such as activated granular carbon) in the bulb. This technology allows for a significantly reduced bulb size. WIKA gas actuated thermometers offer extremely high accuracy, low ambient error, and extreme over-range capability. With the same small bulb diameter throughout the offered ranges, the WIKA thermometer can be installed in most existing piping and tank applications.

WIKA gas actuated thermometers provide the solution to mercury-free requirements in food processing, refrigeration, or other mercury-sensitive environments. A variety of case types, sizes and materials provides a custom made instrument for each application in ranges between -320° Fahrenheit and +1200° Fahrenheit or equivalent Celsius. Dual reading scales (F & C) are standard.

WIKA gas actuated dial thermometers are available as direct reading or remote reading with stainless steel bulbs and armored capillary. WIKA extends a one-year warranty against defects in material and workmanship on standard gas actuated dial thermometers.

**Installation Guidelines:** While WIKA gas actuated dial thermometers are highly accurate and rugged instruments, there are some guidelines that should be followed in their application and installation. Consideration must be given to the measured medium. Is it corrosive, abrasive, turbulent, or under pressure? Can the sensing bulb be placed to give an accurate indication of the temperature?

The sensing bulb should be placed in a non-turbulent area of piping or ducting and as close the center of the flow as possible. In tanks, it should be placed in an area of the tank that will provide a good average of the temperature of the fluid contained. The bulb should be protected from corrosive or abrasive media and excessively high pressures. The usual method of protection is the use of a thermowell.

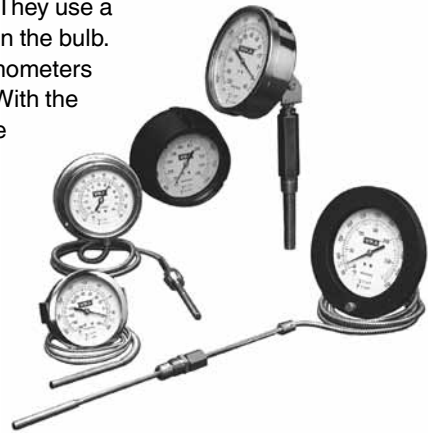
When a remote reading thermometer is installed, consideration must be given to the location of the bulb, the dial indicator, and the routing of the capillary. The capillary must be located where it will not be damaged by workers or equipment used in future maintenance. Remember that the capillary CANNOT be cut to facilitate installation or relocation.

### For Installation and Use of WIKA Filled System Dial Thermometers

**General:** Before installing a thermometer, consideration should be given to temperature, humidity, vibration, shock and other climatic and ambient conditions of the service application. Bulbs may be installed in thermowells or directly into the medium for temperature measurement. The filled system of the thermometer is a sealed unit and must remain sealed. The connecting tubing of remote units should be kept coiled to avoid sharp bends or kinks. Connecting tubing must not be cut. Thermometers can be rendered inaccurate during shipment despite care taken in packaging. To insure conformance to the accuracy to which the thermometer was manufactured, it should be checked before use.

**Installation Procedure:** The bulb should be located in the process at the point that will provide the temperature indication that is most representative of the process temperature. Circulation of the medium around the bulb is necessary for optimum response time and accuracy. For Direct Reading thermometers, use wrench flats when provided to install the thermometer. For Remote Reading thermometers – do not twist, kink, strain or cut the connecting tube. After the case has been mounted, uncoil and stretch out the connecting tubing, placing the bulb at its intended location. After installing the bulb, fasten the connecting tubing to a wall or other support to prevent damage. Position the connecting tubing to avoid extreme temperature. Since the connecting tubing length cannot be altered, any excess should be coiled on a 3" minimum radius and supported near the case.

Gas actuated thermometers have the following options and accessories:  
 Flush Mounting Ring: Adapts the phenolic case for flush panel mounting.  
 Windows: Optional acrylic or shatterproof glass available.





# GAS ACTUATED THERMOMETERS

Mechanical Temperature > Gas Actuated Thermometers > Gas Actuated Thermometers Operating and Installation

## Gas Actuated Thermal Systems

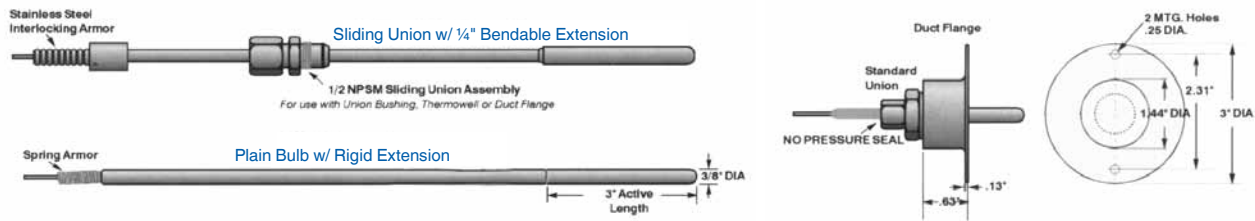
The WIKA Gas Actuated dial thermometer systems are available in several bulb and material configurations. The application should be the determining factor in deciding both the type and material of the thermal system. For use in corrosive or otherwise more demanding installations, WIKA offers a 316 stainless steel bulb and capillary. The stainless steel system is protected with stainless steel spring armor or an optional stainless steel interlocking armor. **It should be noted that the unions on these systems DO NOT provide a pressure seal.** For pressure seals, always use in conjunction with a thermowell.

For installations requiring a pressure seal between the process and the atmosphere, a thermowell should be used. The bendable extension with a sliding union allows for variable insertion depths to place properly the active portion of the sensing bulb in the process for maximum accuracy. Aluminum duct flanges are available for threading union fitted bulbs into duct work to provide temperature indication of ducted air or gases.

### Thermal Systems

| Code No. | Bulb Type             | Bulb Material       | Capillary Material  | Capillary Protection           |
|----------|-----------------------|---------------------|---------------------|--------------------------------|
| 0        | Just-Rite®            | 316 stainless steel | N/A                 | N/A                            |
| 1        | Plain                 | 316 stainless steel | 316 stainless steel | Stainless steel spring armor** |
| 8        | ½" NPSM Sliding Union | 316 stainless steel | 316 stainless steel | Stainless steel spring armor** |

\*\*Stainless steel interlocking armor is available and must be used on systems longer than 40 feet.



Bulbs available on WIKA gas actuated dial thermometers have 3/8" diameters to allow for installation in most existing piping and tanks. As the bulb is the temperature sensing element of the system, it must be placed where the most accurate temperature reading can be obtained. In piping, this is usually the center of the flow in an area of least turbulence. In tanks, this is an area that will represent a good average of the fluid temperature - usually close to the center of the tank. Available materials, lengths, and insertion depths for standard bulbs are listed in the accompanying chart.

### Bulbs (All bulbs with threaded connections are ½" NPT)

| Code No | Bulb Type         | Bulb Material | Bulb Length | Extension Length | Insertion - "U" Thermowell Standard | Dimension Thermowell Lag Extension |
|---------|-------------------|---------------|-------------|------------------|-------------------------------------|------------------------------------|
| 1       | Plain w/extension | 316 SS        | 3"          | 12"              | 2½" - 10½"                          | -                                  |
| 4       | Just-Rite         | 316 SS        | 4"          | -                | 2½"                                 | -                                  |
| 6       | Just-Rite         | 316 SS        | 6"          | -                | 4½"                                 | 2½"                                |
| 9       | Just-Rite         | 316 SS        | 9"          | -                | 7½"                                 | 4½"                                |
| X       | Just-Rite         | 316 SS        | 12"         | -                | 10½"                                | 6½"                                |
| 7       | Sliding union     | 316 SS        | 3"          | 12"              | 2½" - 10½"                          | 2½" - 7½"                          |
| 8       | Sliding union     | 316 SS        | 3"          | 18"              | 2½" - 16½"                          | 2½" - 13½"                         |

\*3" active length



# GAS ACTUATED THERMOMETERS

Mechanical Temperature > Gas Actuated Thermometers > TI.R45, TI.R60

## Type TI.R45, TI.R60

WIKA gas actuated remote reading dial thermometers are manufactured in three wall-mounted case styles: the cast aluminum back flange case with a 4½" dial size, the phenolic/GRP turret case (also with a 4½" dial size) and the stainless steel back flange case available in 4½" and 6" dial sizes. All may be specified with back or lower connected capillaries.



### Standard Features

|                              |  |                       |  |
|------------------------------|--|-----------------------|--|
| <b>Accuracy:</b>             | ±1% of full range span   | <b>Capillary:</b>     | 316 stainless steel with stainless steel spring armor, or 316 stainless steel with stainless steel interlocking armor. 99' maximum |
| <b>Over Range:</b>           | 50% of span above top of range or 1300°F, which ever is lower                      | <b>Dials:</b>         | White coated aluminum with black marking   |
| <b>Cases:</b>                | Drawn stainless steel, aluminum and Phenolic/GRP; for stem, surface or panel mount | <b>Pointer:</b>       | Adjustable, balanced, aluminum with matte black finish   |
| <b>Sizes:</b>                | 4½", 6"  | <b>Ambient Error:</b> | 0.25% at midscale of span per 25° F change in ambient temp   |
| <b>Mounting Connections:</b> | Lower or back on remote reading thermometers; adjustable angle on Just Rite        |                       |  |
| <b>Bulb:</b>                 | 3/8" dia. x 3" active length standard in stainless steel; plain, sliding union     |                       |  |

**Case Styles:** Wall mount-manufactured in 3 wall-mounted case styles: cast aluminum back flange case with 4½" dial size, the phenolic/GRP turret case with 4½" dial size, and stainless steel back flange case in 4½" and 6" dial sizes; may be specified with back or lower-connected capillaries.

Just-Rite's standard bulb/stem thermal system is available in 4", 6" and 9" lengths; only 3" of the tip is active. Panel mount WIKA gas actuated remote reading dial thermometers accommodate most panel mounting requirements. Stainless steel "U" clamp cases are available in 4½" and 6". Aluminum front flange cases offer 4½" and 6" dial sizes. A stainless steel semi-flush front flange case is available in 4½" and 6" dial sizes. All panel mount thermometers are back connected. Turret phenolic case is available in 4½". Just-Rite is available in 4½" and 6".

Adjustable angle-flangeless, stainless steel case with bayonet bezel and 360° rotation. Stainless steel bulb can be rotated 180° to either side of the vertical axis of the stem to allow mounting from the top, bottom, or either side of an installation. Union fitted bulb can be threaded directly into a process connection or into a thermowell or duct flange.

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets **TI.R45, TI.R60**.

Mechanical Temperature > Gas Actuated Thermometers > Ordering Gas Actuated Thermometers

## Ordering Gas Actuated Thermometers

### HOW TO ORDER:

Select the appropriate codes and combine to complete thermometer part number.

Sample Part Number: R45 E L 3 8 7 10 004 00 WI

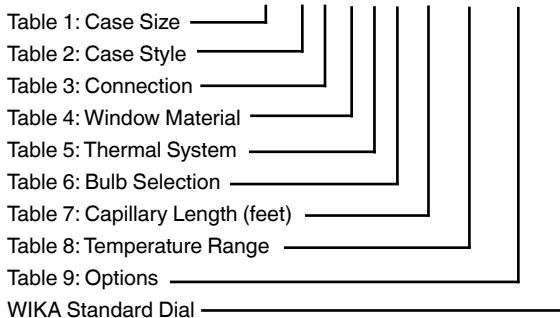


Table 1 - Basic Type

| Code | Description |
|------|-------------|
| R45  | 4½" Case    |
| R60  | 6" Case     |

Table 2 - Case Type & Material

| Code | Description                           | Material | Dial Size |
|------|---------------------------------------|----------|-----------|
| K    | Back flange, bayonet ring             | SS       | 4½", 6"   |
| B    | Back flange, bayonet ring             | Aluminum | 4½", 6"   |
| E    | Turret, threaded ring                 | Phenolic | 4½"       |
| F    | Front flange, hinged ring             | Aluminum | 4½", 6"   |
| S    | Semi-flush front flange, bayonet ring | SS       | 4½", 6"   |
| U    | U-clamp, bayonet ring                 | SS       | 4½"<br>6" |
| *V   | Just-Rite, adjustable angle           | SS       | 4½"<br>6" |

\* Capillary is not available. Fixed stem length only as specified in Table 6.





# GAS ACTUATED THERMOMETERS

Mechanical Temperature > Gas Actuated Thermometers > Ordering Gas Actuated Thermometers

| Code | Description      | Case Size | Case Type                  |
|------|------------------|-----------|----------------------------|
| B    | Back connection  | 4½", 6"   | All                        |
| L    | Lower connection | 4½", 6"   | 4½" (K, B, E); 6" (K only) |
| *A   | Adjustable angle | 4½", 6"   | V only                     |

\* Capillary is not available. Fixed stem length only as specified in Table 6.

| Code | Description         | Case Size | Case Type     |
|------|---------------------|-----------|---------------|
| 3    | Acrylic             | 4½"       | B, E          |
| 4    | Glass               | 4½", 6"   | All           |
| 5    | Shatter-proof glass | 4½"       | E, K, E, U, V |

| Code | Bulb Type               | Bulb Material | Capillary Material | Capillary Protection |
|------|-------------------------|---------------|--------------------|----------------------|
| 0    | Adjustable angle ½" NPT | 316 SS        | N/A                | **N/A                |
| 1    | Plain                   | 316 SS        | 316 SS             | Spring armor*        |
| 8    | Sliding union ½" NPT    | 316 SS        | 316 SS             | Spring armor*        |

\* For systems up to 40 ft.; Spiral interlock required on all systems over 40 ft. (see "SI" options, Table 9)  
 \*\* Capillary is not available; fixed stem length only as indicated in Table 6.

**Special Table 5 & 6 Note:**  
 The only possible thermal system/bulb combinations are as follows:  
**Plain Bulb: (11)**  
**Adjustable Angle: (04), (06), (09), (0X)**  
**Sliding Union: (87), (88)**

| Code   | Description  | To fit Thermowells with: |                      |
|--|--|--------------------------|----------------------|
|  |  | OA Length                | Thermowell Insertion |
| <b>ADJUSTABLE ANGLE Code 0, Table 5</b>                              |  |                          |                      |
| 4  | 3/8" Dia. x 3" length (active), total 4"                 | 4¼"                      | U = 2½"              |
| 6  | 3/8" Dia. x 3" length (active), total 6"                 | 6¼"                      | U = 4½"              |
| 9  | 3/8" Dia. x 3" length (active), total 9"                 | 9¼"                      | U = 7½"              |
| X  | 3/8" Dia. x 3" length (active), total 12"                | 12¼"                     | U = 10½"             |
| <b>PLAIN BULB - REMOTE Code 1, Table 5</b>                           |  |                          |                      |
| 1  | 3/8" Dia. x 3" length (active) + 12" rigid extension     |                          |                      |
| <b>SLIDING UNION (½" NPSM) BULB W/ BENDABLE EXT. Code 8, Table 5</b> |  |                          |                      |
| 7  | 3/8" Dia. x 3" length (active) w/ 12" bendable extension | 3 to 12"                 | U = 2½" to 10½"      |
| 8  | 3/8" Dia. x 3" length (active) w/ 18" bendable extension | 3 to 18"                 | U = 2½" to 16½"      |

Note: Gas-actuated thermometers use standard process type 3/8" bore thermowells, if required. Order separately.

| Code | Description           |
|------|-----------------------|
| 05   | 5 feet                |
| 10   | 10 feet               |
| 20   | 20 feet               |
| 30   | 30 feet               |
| 40   | 40 feet               |
| *50  | 50 feet               |
| *80  | 80 feet               |
| XX   | Adjustable angle case |

\* Requires "SI" option, see Table 9

| Code  | Dual Scale °F & °C |           |
|-------|--------------------|-----------|
| *001  | -320/100°F         | -200/40°C |
| 002   | -120/120°F         | -80/50°C  |
| 003   | 0/120°F            | -20/50°C  |
| 004   | 0/160°F            | -20/70°C  |
| 005   | -40/180°F          | -40/80°C  |
| 006   | 20/240°F           | -10/115°C |
| 007   | 0/300°F            | -20/150°C |
| 008   | 50/550°F           | 0/300°C   |
| 009   | 50/750°F           | 0/400°C   |
| **010 | 400/1,200°F        | 200/650°C |
| 11    | 50/400°F           | 0/200°C   |

\* Requires "LT" option, See Table 9  
 \*\* Requires "HT" option, See Table 9

**Note:**  
 Ranges marked with an asterisk(\*) indicated in Table 8 reference Table 9 and require additional cost as indicated.

**Note:**  
 Capillary can be configured to any whole foot, 99' and below. I.E. - 08 = 8' capillary

| Code  | Description                        | Case Size | Case Type |
|-------|------------------------------------|-----------|-----------|
| 00    | Without accessories                | All       | All       |
| FR    | Flush mounting ring                | 4½"       | E         |
| *LT   | Low temperature (Cryogenic -320°F) | All       | All       |
| **HT  | High temperature (1200°F)          | All       | All       |
| ***SI | 316 SS interlocking armor          | All       | All       |
| DM    | Dampened movement                  | All       | All       |

\* Requires Temperature Range Code "001", See Table 8  
 \*\* Requires Temperature Range Code "010", See Table 8  
 \*\*\* Required for all systems over 40 feet

| Code | Description |
|------|-------------|
| WI   | WIKA        |
| BL   | Blank       |

**ABBREVIATIONS**  
 N/C - there is no charge for this option

# Gas Actuated Thermometers

## Temperature Switch Gauge Operating and Installation

Operation: WIKA's TI.TSG60 Temperature Switch Gauge is a patented technology that offers the best accuracy and least ambient error in remote temperature technology. Our direct drive edge-welded Bourdon tube offers a linear 180° dial arc while maintaining positive operation of micro switches with a 1½% accuracy full scale with better than ½% repeatability. Most important is the extremely low ambient error due to the NiSpan Bourdon tube and carbon-filled molecular sieve gas actuated patented technology. The cam adjustable switches offer little resistance to the powerful direct drive system offering consistent switch action with low repeatability error.

Our dual system SCADA version offers dual independent outputs with a failsafe redundant system. Total independence offers accuracy of remote electronics plus the reliability of the local mechanical dial readout all within one unit. The SCADA system comes fully calibrated and requires no field calibration.

**Switching:** Up to four filled adjustable switches are available with standard ratings of 10 AMP @ 125/250 VAC, non-inductive; 5 AMP @ 120 VAC, inductive; ½ AMP @ 125 VDC, non-inductive; ¼ AMP @ 250 VDC, non-inductive. The differential is 3% of the range. Switches are fully adjustable within the full range of the instrument. Switches can be set within 2° C of each other.

**Mounting/Installation:** The TI.TSG60 Temperature Switch Gauge is ideal for general industrial installations. Switches can be adjusted from the front of the unit without having to shut down or remove the instrument from the process.

**Adjustment of the Set Points:** The TI.TSG60 has up to four fully adjustable set points adjustable from the front of the unit. The set point indicators are easily adjusted and then locked in place with the following procedure:

1. Unscrew and remove the front bezel and lens counter-clockwise, as it is shipped from the factory hand tightened.
2. Using a small straight screwdriver, loosen the Set Point indicator and, using two fingers, position the indicator to the desired Set Point, and re-tighten the Set Point indicator.
3. Replace the bezel and lens and, using a strap wrench, rotate the bezel and lens clockwise 3/8" beyond hand tight to fully engage the waterproof gasket. Do not over tighten.

**Max. Hand Setting:** The TI.TSG60 is available with a maximum registering hand that will indicate the highest temperature the unit records by staying at that point. To re-set the max, hand turn the knob counter-clockwise until it rests against the pointer.

## Type TI.TSG60

WIKA's TI.TSG60 offers users an unprecedented combination of industrial strength performance with unmatched precision. This 6" gas actuated thermometer is accurate to within 1½% of scale and can tolerate up to 50% over range temperatures. Sealed inside the rugged stainless steel case are up to four single pole, double throw 10 amp switches for enabling a variety of switching actions. The thermal system is stainless steel, and filled with inert nitrogen making the TI.TSG60 ideal for steel and paper mills, refineries, petrochemical, and food and pharmaceutical plants.

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **TI.TSG60**.

### Standard Features

|                        |  |                       |   |
|------------------------|--|-----------------------|---|
| <b>Case and Bezel:</b> | 304 stainless steel, 6.25" diameter  | <b>Over Range:</b>    | 50% up to 500°F, except 10% on 0 -120°C and 0 - 250°F   |
| <b>Case Style:</b>     | Bottom connected back flange   | <b>Capillary:</b>     | Stainless steel with stainless steel interlocking armor; up to 99'  |
| <b>Process Conn:</b>   | 3/8" x 3" 316 stainless steel bulb with 12" or 18" bendable extension, and ½" NPT one-time compression fitting | <b>Switch Rating:</b> | 10 amp @ 125/250 VAC, non-inductive; 5 amp @ 120 VAC, inductive; ½ amp @ 125 VDC, non-inductive; ¼ amp @ 250 VDC, non-inductive |
| <b>Window:</b>         | Lexan®   |                       |   |
| <b>Range:</b>          | 11 standard ranges available. See "How to Order"   |                       |   |





# GAS ACTUATED THERMOMETERS

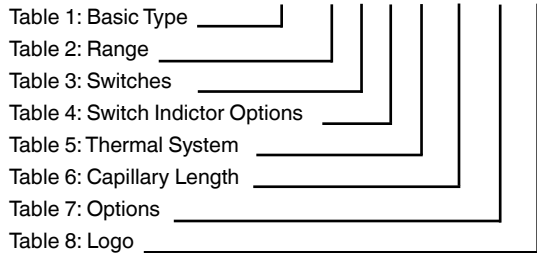
Mechanical Temperature > Gas Actuated Thermometers > Ordering Temperature Switch Gauges

## Ordering Temperature Switch Gauges

### HOW TO ORDER:

Select the appropriate codes and combine to complete thermometer part number.

**Sample Part Number:** TSG60 03 2 A2 X7 05 SG WI



| Table 1 - Basic Type |  |
|----------------------|--|
| Code                 | Description  |
| TI.TSG60             | 6" Back flange Temperature Switch Gauge with Conxall Connector Harness<br>5" wire length |

| Table 2 - Range |             |      |             |
|-----------------|-------------|------|-------------|
| Code            | Description | Code | Description |
| 01*             | -450/50°F   | 07   | 0/1000°F    |
| 02*             | -320/200°F  | 08   | -20/120°    |
| 03              | 0/250°F     | 09   | -20/160°C   |
| 04              | -50/350°F   | 10   | -20/180°C   |
| 05              | 50/550°F    | 11   | -20/200°C   |
| 06              | 50/750°F    |      |             |

| Table 3 - Switches |  |
|--------------------|--|
| Code               | Description                                    |
| 1                  | One adjustable switch (amphenol connector)     |
| 2                  | Two adjustable switches (amphenol connector)   |
| 3                  | Three adjustable switches (amphenol connector) |
| 4                  | Four adjustable switches (amphenol connector)  |

| Table 4 - Standard Switch Indicator Options |  |
|---|--|
| Code  | Description  |
| A1  | Center switch indicator (1 switch)                     |
| A2  | Right & left switch indicators (2 switches)            |
| A3*   | Right, left & center switch indicators (3 switches)    |
| A4*   | Right, left, right, left switch indicator (4 switches) |

\* For adjacent switches, right and left side indicators will allow for closest proximity of switch settings

| Table 5 - Thermal System |   |
|--------------------------|---|
| Code                     | Description   |
| X7                       | 3/8" x 3" bulb w/12" bendable extension, 1/2" NPT one-time adjustable compression fitting |
| X8                       | 3/8" x 3" bulb w/18" bendable extension, 1/2" NPT one-time adjustable compression fitting |

| Table 6 - Capillary Length |                          |
|----------------------------|--------------------------|
| Code                       | Description              |
| XX                         | Capillary length in feet |

| Table 7 - Options |                 |
|-------------------|-----------------|
| Code              | Description     |
| SG                | Safety glass    |
| EX                | Explosion proof |

| Table 8 - Logo |             |
|----------------|-------------|
| Code           | Description |
| EH WI          | WIKA        |
| EH BL          | Blank       |

**ABBREVIATIONS**  
N/C - there is no charge for this option

Mechanical Temperature > Vapor Actuated Thermometers > TI.V20/TI.V25, TI.V35/TI.V45

## Type TI.V20/ TI.V25, TI.V35/ TI.V45

WIKA's vapor actuated thermometers are highly accurate and provide remote reading. They are available in U-clamp, front flange or back flange case configurations. WIKA's vapor actuated thermometers are well suited for refrigeration, solar heating, and water treatment applications.

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets [TI.V20](#), [TI.V25](#), [TI.35](#), [TI.45](#).



### Standard Features

|                            |   |
|----------------------------|---|
| <b>Case:</b>               | Stainless steel   |
| <b>Accuracy:</b>           | ±1 scale division   |
| <b>Movement:</b>           | Heavy duty brass, rotary type   |
| <b>Ring:</b>               | Snap-in O-ring  |
| <b>Window:</b>             | Glass or polycarbonate  |
| <b>Pointer:</b>            | Aluminum, adjustable, black finish  |
| <b>Dial:</b>               | Aluminum, white background, black graduations   |
| <b>Bourdon Tube:</b>       | Phosphor bronze, soldered to socket and tip   |
| <b>Process Connection:</b> | Plain, union or thermowell  |
| <b>Bulb:</b>               | Copper or stainless steel   |
| <b>Capillary:</b>          | Copper- plain or with braid armor;<br>stainless steel- plain; stainless steel or<br>with stainless steel interlocking armor |

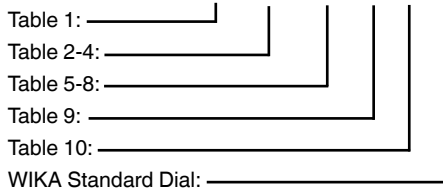
Mechanical Temperature > Vapor Actuated Thermometers > Ordering Vapor Actuated Thermometers

## Ordering Vapor Actuated Thermometers

### HOW TO ORDER:

Select the appropriate codes and combine to complete thermometer part number.

Sample Model No: V25 UB3 5331 05 04 WI



| Code | Description |
|------|-------------|
| V20  | 2"          |
| V25  | 2½"         |
| V35  | 3½"         |
| V45  | 4½"         |

| Code | Case Type                | Material | Case Size | Case Conn. |
|------|--------------------------|----------|-----------|------------|
| F    | Front flange             | SS       | 2", 2½"   | B          |
| U    | U-clamp                  | SS       | 2", 2½"   | B          |
| Q    | U-clamp                  | SS       | 3½"       | B          |
| B    | Back flange              | SS       | 3½", 4½"  | B, L       |
| R    | Front flange, semi-flush | SS       | 3½", 4½"  | B          |



# VAPOR ACTUATED THERMOMETERS

Mechanical Temperature > Vapor Actuated Thermometers > Ordering Vapor Actuated Thermometers

## Ordering Vapor Actuated Thermometers

| Code | Description      | Case Size | Type |
|------|------------------|-----------|------|
| B    | Back connection  | All       | All  |
| L    | Lower connection | 3½", 4½"  | B    |

| Code | Description                                | Case Size | Case Type |
|------|--|-----------|-----------|
| 3    | Lexan snap-in lens                         | All       | All       |
| 4    | Glass lens w/ SS ring                      | 2", 2½"   | F, U      |
| 5    | Glass lens w/ chrome-plated brass ring     | 3½"       | All       |
| 7    | Glass lens w/ rubber ring                  | 4½"       | B, R      |
| 8    | Glass lens w/ crimped SS ring, water-proof | 2", 2½"   | U         |
| 9    | Lexan threaded lens                        | 2" 2½"    | F, U, Q   |

| Code | Bulb Type | Bulb Mat'l | Capillary Mat'l | Cap Protection  |
|------|-----------|------------|-----------------|-----------------|
| 1    | Plain     | Copper     | Copper          | None            |
| 2    | Plain     | Copper     | Copper          | Cu. braid       |
| 3    | Plain     | 316 SS     | 316 SS          | None            |
| 4    | Union     | Copper     | Copper          | None            |
| 5    | Union     | Copper     | Copper          | Cu. braid       |
| 8    | Union     | 316 SS     | 316 SS          | Interlock armor |
| 9    | Union     | 316 SS     | 316 SS          | None            |

**Note: Available combinations for Thermal System (Table 5) and Bulb Selection (Table 6):**

**Plain:** 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 32, 33, 34, 35, 36

**Union:** 41, 42, 43, 44, 45, 51, 52, 53, 54, 55, 81, 82, 83, 84, 85, 91, 92, 93, 94, 95

**Also must consider Capillary Length (Table 9).**

| Use Codes below for Plain Bulb for Non-threaded Process Connection (Codes 1-3 in Table 5) |          |        |                  |  |
|---|----------|--------|------------------|--|
| Code  | Diameter | Length | Max. Sys. Length |  |
| 2   | 3/8"     | 3.4"   | 25 feet          |  |
| 3   | 3/8"     | 4.9"   | 50 feet          |  |
| 4   | 3/8"     | 7.9"   | 99 feet          |  |
| 5   | 3/8"     | 9.4"   | 99 feet          |  |
| 6   | 3/8"     | 2.5"   | 5 feet           |  |
| Use Codes below for Union Bulb for Threaded Process Connection (Codes 4-9 in Table 5)     |          |        |                  |  |
| 1   | 7/16"    | 2.5"   | 10 Feet          |  |
| 2   | 7/16"    | 3.4"   | 25 feet          |  |
| 3 <sup>1</sup>  | 7/16"    | 5.4"   | 50 feet          |  |
| 4   | 7/16"    | 7.4"   | 99 feet          |  |
| 5   | 7/16"    | 9.4"   | 99 feet          |  |

<sup>1</sup> Required for lagging extension thermowell, see Table 7

| Code | Description  |
|------|--|
| 1    | Union ½" NPT   |
| 2    | Union ¾" NPT   |
| 3    | Thermowell ½" NPT  |
| 4    | Thermowell ¾" NPT  |
| 5*   | Thermowell ½" NPT with 2" lag ext.                               |
| 6*   | Thermowell ¾" NPT with 2" lag ext.                               |
| 7    | Aluminum air duct flange (union only)                            |
| 9    | Plain bulb (always select "plain bulb" - table 5; codes 1, 2, 3) |

\* Lag only available with #3 bulb

| Code | Description  |
|------|--|
| 0    | None (plain bulb only, always select for Codes 1-3 in Table 5) |
| 1    | Brass  |
| 2    | 304 SS   |
| 3    | 316 SS   |
| 5    | Aluminum (air duct flange only)                                |

| Code | Description |
|------|-------------|
| 05   | 5 feet      |
| 10   | 10 feet     |
| 15   | 15 feet     |
| 20   | 20 feet     |
| 30   | 30 feet     |
| 50   | 50 feet     |
| 80   | 80 feet     |

**Note:**  
Capillary can be configured to any whole foot, 99' and below. I.E. - 08 = 8' capillary

| Code | Description   |
|------|---------------|
| 01   | -40/60 °F&°C  |
| 02   | -40/110 °F&°C |
| 03   | -20/100 °F&°C |
| 04   | 0/150 °F&°C   |
| 05   | 0/180 °F&°C   |
| 06   | 20/220 °F&°C  |
| 07   | 40/240 °F&°C  |
| 08   | 30/300 °F&°C  |
| 09   | 100/350 °F&°C |
| 10   | 200/450 °F&°C |

| Code | Description |
|------|-------------|
| WI   | WIKA        |
| BL   | Blank       |

ABBREVIATIONS: N/C - there is no charge for this option

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).



Mechanical Temperature > Industrial Glass Thermometers > TI.61102/TI.61104, TI.62102/TI.62104

## Type TI.61102/TI.61104, TI.62102/TI.62104

WIKa's 6" industrial glass thermometers are ideal for process piping, HVAC/R applications, diesel engines, compressors, and brine lines. This series of thermometers is manufactured in straight and back connected configurations, and come with a standard dual threaded brass socket with both 1/2" and 3/4" NPT connections.

### Standard Features

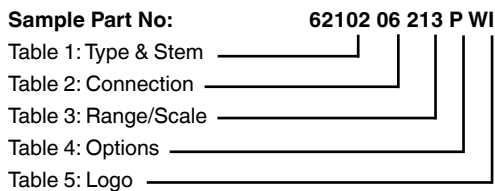
- Case:** V-shaped gray GE Valox®; wide angle construction
- Glass Front:** Protective glass cover retained within outer edges of case. Spring pressure created by V-scale secures glass against case and prevents rattling. Cover plate completes assembly.
- Tube and Scale:** Blue spirit fill liquid (non-mercury fill). V-shaped scale designed with extra large black numbers. Crosslocked scale holding device prevents loosening or shifting of scale and removes holes and screws that interfere with scale markings or numerals.
- Stem and Socket Assembly:** Brass stem ensures fast response to temperature changes. The standard socket is made of brass and dual threaded for 1/2" and 3/4" NPT.
- Accuracy:** ±1% of full scale range



For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet [TI.61102](#), [TI.61104](#), [TI.62102](#), [TI.62104](#).

Mechanical Temperature > Industrial Glass Thermometers > Ordering Industrial Glass Thermometers

## Ordering TI.61102/TI.61104, TI.62102/TI.62104 Thermometers



### HOW TO ORDER:

Select the appropriate codes and combine to complete thermometer part number.

### ABBREVIATIONS

N/C - there is no charge for this option.

| Code  | Description           | Stem Length |
|-------|-----------------------|-------------|
| 61102 | Straight with 2" stem | 1.31"       |
| 62102 | Back with 2" stem     | 1.31"       |
| 61104 | Straight with 4" stem | 3.31"       |
| 62104 | Back with 4" stem     | 3.31"       |

| Code | Description                  |
|------|------------------------------|
| 00   | None - swivel nut connection |
| 06   | 1/2" and 3/4" brass well     |

| °F ONLY |         |            | °C ONLY |        |            | DUAL SCALE °F & °C |                    |            |
|---------|---------|------------|---------|--------|------------|--------------------|--------------------|------------|
| Code    | °F      | Scale Div. | Code    | °C     | Scale Div. | Code               | °F & °C            | Scale Div. |
| 201     | -40/110 | 2          | 115     | -40/45 | 1          | 001                | -40/110 (-45/45 C) | 2/1        |
| 203     | 20/120  | 2          | 102     | -5/50  | 1          | 003                | 20/120 (0/50 C)    | 2/1        |
| 213     | 20/180  | 2          | 118     | 0/110  | 2          | 013                | 20/180 (0/80 C)    | 2/2        |
| 207     | 30/240  | 2          | 108     | 0/150  | 2          | 007                | 30/240 (5/110 C)   | 2/2        |
| 208     | 30/300  | 5          | 106     | 10/200 | 5          | 008                | 30/300 (0/150 C)   | 5/2        |
| 209     | 50/400  | 5          | n/a     | n/a    | n/a        | 009                | 50/400 (10/200 C)  | 5/5        |

| Code | Description    |
|------|----------------|
| P    | Plastic window |

| Code | Description |
|------|-------------|
| WI   | WIKa        |

| Model # | Description                            |
|---------|--|
| 6110206 | Straight form with "U" dimension 1.31" |
| 6210206 | Back form with "U" dimension 1.31"     |
| 6110406 | Straight form with "U" dimension 3.31" |
| 6210406 | Back form with "U" dimension 3.31"     |

| Model # | Description                            |
|---------|--|
| 6110200 | Straight form with "U" dimension 1.31" |
| 6210200 | Back form with "U" dimension 1.31"     |
| 6110400 | Straight form with "U" dimension 3.31" |
| 6210400 | Back form with "U" dimension 3.31"     |

Mechanical Temperature > Solar Industrial Glass Thermometer > TI.D01

## Type TI.D01

WIKA's TI.D01 solar industrial thermometer offers fast, accurate, and easy-to-read temperature indications. This thermometer features a totally adjustable case to permit viewing at any angle, and its bulb and socket are completely interchangeable with standard industrial glass thermometers. The solar industrial thermometer is switchable between Fahrenheit and Celsius, and offers a sensing range of -50 to 300°F and -50 to 150°C, resolved in tenths of a degree, with accuracy to within ±1% of reading.

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets **TI.D01**.

### Standard Features

|                                       |  |
|---------------------------------------|--|
| <b>Range:</b>                         | -50/300°F (-50/150°C)                            |
| <b>Accuracy:</b>                      | ±1% of reading or 1°, whichever is greater       |
| <b>Resolution:</b>                    | 1/10° between -19.9/199.9°F (-28/93°C)           |
| <b>Lux Rating:</b>                    | 10 lux (one foot candle)                         |
| <b>Update:</b>                        | 10 seconds                                       |
| <b>Ambient Operating Temperature:</b> | -30/140°F (-35/60°C)                             |
| <b>Humidity:</b>                      | 100% maximum                                     |
| <b>Ambient Temperature Error:</b>     | None   |
| <b>Case:</b>                          | High-impact ABS                                  |
| <b>Display:</b>                       | 7/16" LCD digits, wide ambient temperature range |
| <b>Sensor:</b>                        | Glass passivated thermistor                      |

Stock items shown in blue print.

| Factory Stock |                           |
|---------------|---------------------------|
| Part Number   | Description               |
| D010300WI     | 3½" stem, no thermowell   |
| D010600WI     | 6" stem, no thermowell    |
| D010301WI     | 3½" stem, with thermowell |
| D010601WI     | 6" stem, with thermowell  |

| Non-Stocked Items |   |
|-------------------|---|
| Part Number       | Description                                       |
| D010304WI         | 3-1/2" stem, with reversible flange air duct stem |
| D010604WI         | 6" stem, with reversible flange air duct stem     |
| D010901WI         | 9" stem with thermowell                           |

| Accessories |                                |
|-------------|--------------------------------|
| Part Number | Description                    |
| TA600-0216  | Clear plastic protective cover |



Mechanical Temperature > Industrial Glass Thermometers > TI.701/TI.901

## Type TI.701/TI.901

WIKA's TI.701 (7") and TI.901 (9") industrial glass thermometers offer quick, easy-to-read temperature measurement for tough applications. Glass/mineral reinforced GE Valox® housings and spring mounted windows contribute to impact, shock and vibration resistance. WIKA industrial glass thermometers are the ideal choice for process piping, HVAC/R applications, diesel engines and compressors.

### Standard Features

|                        |   |                            |   |
|------------------------|---|----------------------------|---|
| <b>Case:</b>           | V-shaped case parts are molded of rugged GE Valox® 735 polyester, finished in textured black. Heavy glass window is spring-mounted to prevent rattles.  | <b>Adjustable Joint:</b>   | Matching GE Valox® joint completely encloses capillary for thermal system protection.   |
| <b>Stem:</b>           | To ensure sensitivity, bulb chambers are precision ground aluminum, tapered for a close-tolerance metal-to-metal contact with matching tapered socket. Graphite is used as a conductor between bulb chamber and glass tube. | <b>Tube and Capillary:</b> | Blue spirit-fill liquid (non-mercury fill) standard; magnifying lens tube is silicone shock-mounted to increase service life. Guaranteed accurate to within ±1% of scale range. |
| <b>Locking Device:</b> | Independent adjustable case lock-nut and angle adjusting screw provide 360° positioning of case and stem.   | <b>Scale:</b>              | Permanently baked-on, bold black graduations are printed on white-coated aluminum. No mounting screws obscure scale. Scale adjusts through locking device at top of instrument. |
|                        |   | <b>Accuracy:</b>           | ±1% of full scale range   |

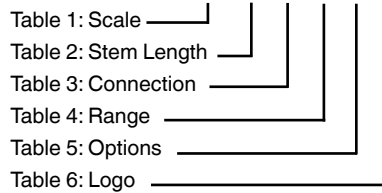
For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets **TI.701**, **TI.901**.

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).



## Ordering TI.701/TI.901 Thermometers

Sample Part No: 901 03 01 004 P WI



### HOW TO ORDER:

Select the appropriate codes and combine to complete thermometer part number.

| Table 1 - Scale |   |
|-----------------|---|
| Code            | Description                               |
| 701             | 7" scale, swivel-nut connection           |
| 901             | 9" scale, swivel-nut connection           |
| 702             | 7" scale, perforated stem for duct flange |
| 902             | 9" scale, perforated stem for duct flange |

| Table 2 - Stem Length |             |
|-----------------------|-------------|
| Code                  | Description |
| 03                    | 3½" stem    |
| 06                    | 6" stem     |
| 09                    | 9" stem     |
| 12                    | 12" stem    |

| Table 3 - Connection |   |
|----------------------|---|
| Code                 | Description   |
| 00                   | Swivel-nut connection (no thermowell)               |
| 01                   | ¾" NPT brass, thermowell                            |
| 02                   | ¾" NPT brass with lagging extension                 |
| 03                   | ¾" NPT brass union hub                              |
| 04                   | Duct flange, reversible with or without lagging ext |

| Table 4 - Single Scale Ranges |         |               |      |        |               |
|-------------------------------|---------|---------------|------|--------|---------------|
| Code                          | °F      | °F Scale Div. | Code | °C     | °C Scale Div. |
| 201                           | -40/110 | 2             | 101  | -40/50 | 1             |
| 204                           | 0/120   | 1             | 104  | 0/100  | 1             |
| 205                           | 0/160   | 2             | 105  | 0/160  | 2             |
| 206                           | 30/180  | 2             |      |        |               |
| 207                           | 30/240  | 2             |      |        |               |
| 208                           | 30/300  | 5             |      |        |               |
| *210                          | 50/550  | 5             |      |        |               |

\* Requires aluminum case

| Table 4 - Dual Scale Ranges |         |        |               |               |
|-----------------------------|---------|--------|---------------|---------------|
| Code                        | °F      | °C     | °F Scale Div. | °C Scale Div. |
| 001                         | -40/110 | -40/43 | 2             | 1             |
| 004                         | 0/120   | -17/49 | 1             | 1             |
| 005                         | 0/160   | -15/70 | 2             | 1             |
| 006                         | 30/180  | 0/80   | 2             | 1             |
| 007                         | 30/240  | 0/115  | 2             | 1             |
| 008                         | 30/300  | 0/150  | 5             | 2             |
| *010                        | 50/550  | 10/290 | 5             | 5             |

\* Requires aluminum case

| Table 5 - Options |                         |
|-------------------|-------------------------|
| Code              | Description             |
| P                 | 7" plastic window       |
| P                 | 9" plastic window       |
| A*                | 7" or 9" aluminum case* |

\* required above 300°F / 160°C

| Table 6 - Logo |             |
|----------------|-------------|
| Code           | Description |
| WI             | WIKA        |

| Factory Stock       |   |
|---------------------|---|
| Part Number         | Description   |
| 9010300004WI        | 9" scale, 3½" stem, 0/120°F & °C                          |
| 9010300007WI        | 9" scale, 3½" stem, 30/240°F & °C                         |
| <b>9010300204WI</b> | 9" scale, 3½" stem, 0/120°F                               |
| <b>9010300205WI</b> | 9" scale, 3½" stem, 0/160°F                               |
| <b>9010300206WI</b> | 9" scale, 3½" stem, 30/180°F                              |
| <b>9010300207WI</b> | 9" scale, 3½" stem, 30/240°F                              |
| 9010301204WI        | 9" scale, 3½" stem, with ¾" NPT brass thermowell 0/120°F  |
| 9010301207WI        | 9" scale, 3½" stem, with ¾" NPT brass thermowell 30/240°F |
| 9010300005WI        | 9" scale, 3½" stem, 0/160°F & °C                          |
| 9010600204WI        | 9" scale, 6" stem, 0/120°F                                |
| 9010600208WI        | 9" scale, 6" stem, 30/300°F                               |
| 9010601208WI        | 9" scale, 6" stem, with ¾" NPT brass thermowell 30/300°F  |

Stock items shown in blue print.



# INDUSTRIAL GLASS THERMOMETERS

Mechanical Temperature > Industrial Glass Thermometers > Ordering Industrial Glass Thermometers

## Ordering TI.701/TI.901 Thermometers

### Custom (Non-Stock) Industrial Glass Thermometers

**7" & 9" Scale Industrial Thermometers with Swivel-nut Connection (no Thermowell)**

| Model # | Connection | Range     | Logo | Description        |
|---------|------------|-----------|------|--------------------|
| 70103   | 00         | See chart | WI   | 7" scale, 3½" stem |
| 70106   | 00         | See chart | WI   | 7" scale, 6" stem  |
| 70109   | 00         | See chart | WI   | 7" scale, 9" stem  |
| 70112   | 00         | See chart | WI   | 7" scale, 12" stem |
| 90103   | 00         | See chart | WI   | 9" scale, 3½" stem |
| 90106   | 00         | See chart | WI   | 9" scale, 6" stem  |
| 90109   | 00         | See chart | WI   | 9" scale, 9" stem  |
| 90112   | 00         | See chart | WI   | 9" scale, 12" stem |

**T-85 Thermowell Conversion Kit**

| Part Number | Description   |
|-------------|---|
| TA800-0T85  | This conversion kit offers an easy, inexpensive way to install a WIKA bimetal thermometer in a glass industrial thermometer's thermowell. For more information, please consult factory. |

**7" & 9" Scale Industrial Thermometers with ¾" NPT Brass Thermowell, with or without Lagging Extension**

| Model # | Connection | Range     | Logo | Description   |
|---------|------------|-----------|------|---|
| 70103   | 01         | See chart | WI   | 7" scale, 3½" stem with thermowell  |
| 70106   | 01 or 02   | See chart | WI   | 7" scale, 6" stem with thermowell (01) or well with lagging extension (02)  |
| 70109   | 01 or 02   | See chart | WI   | 7" scale, 9" stem with thermowell (01) or well with lagging extension (02)  |
| 70112   | 01 or 02   | See chart | WI   | 7" scale, 12" stem with thermowell (01) or well with lagging extension (02) |
| 90103   | 01         | See chart | WI   | 9" scale, 3½" stem with thermowell  |
| 90106   | 01 or 02   | See chart | WI   | 9" scale, 6" stem with thermowell (01) or well with lagging extension (02)  |
| 90109   | 01 or 02   | See chart | WI   | 9" scale, 9" stem with thermowell (01) or well with lagging extension (02)  |
| 90112   | 01 or 02   | See chart | WI   | 9" scale, 12" stem with thermowell (01) or well with lagging extension (02) |

**7" & 9" Scale Industrial Thermometers Complete with Flange**

| Model # | Connection | Range     | Logo | Description   |
|---------|------------|-----------|------|---|
| 70203   | 04         | See chart | WI   | 7" scale, 3½" stem with reversible duct flange (with or without lagging ext.) |
| 70206   | 04         | See chart | WI   | 7" scale, 6" stem with reversible duct flange (with or without lagging ext.)  |
| 70209   | 04         | See chart | WI   | 7" scale, 9" stem with reversible duct flange (with or without lagging ext.)  |
| 70212   | 04         | See chart | WI   | 7" scale, 12" stem with reversible duct flange (with or without lagging ext.) |
| 90203   | 04         | See chart | WI   | 9" scale, 3½" stem with reversible duct flange (with or without lagging ext.) |
| 90206   | 04         | See chart | WI   | 9" scale, 6" stem with reversible duct flange (with or without lagging ext.)  |
| 90209   | 04         | See chart | WI   | 9" scale, 9" stem with reversible duct flange (with or without lagging ext.)  |
| 90212   | 04         | See chart | WI   | 9" scale, 12" stem with reversible duct flange (with or without lagging ext.) |

**Single Scale Ranges**

| Code | °F      | °F Scale Div. | Code | °C     | °C Scale Div. |
|------|---------|---------------|------|--------|---------------|
| 201  | -40/110 | 2             | 101  | -40/50 | 1             |
| 204  | 0/120   | 1             | 104  | 0/100  | 1             |
| 205  | 0/160   | 2             | 105  | 0/160  | 2             |
| 206  | 30/180  | 2             |      |        |               |
| 207  | 30/240  | 2             |      |        |               |
| 208  | 30/300  | 5             |      |        |               |
| *210 | 50/550  | 5             |      |        |               |

\* Requires aluminum case

**Dual Scale Ranges**

| Code | °F      | °C     | °F Scale Div. | °C Scale Div. |
|------|---------|--------|---------------|---------------|
| 001  | -40/110 | -40/43 | 2             | 1             |
| 004  | 0/120   | -17/49 | 1             | 1             |
| 005  | 0/160   | -15/70 | 2             | 1             |
| 006  | 30/180  | 0/80   | 2             | 1             |
| 007  | 30/240  | 0/115  | 2             | 1             |
| 008  | 30/300  | 0/150  | 5             | 2             |
| *010 | 50/550  | 10/290 | 5             | 5             |

\* Requires aluminum case

MECHANICAL TEMPERATURE

## Type Threaded, Flanged, Sanitary, Socket, Weld, Weld-in

Thermowells for temperature instruments are recommended for all process systems where pressure, velocity or viscous, abrasive and corrosive materials are present individually or in combination. A properly selected thermowell protects the temperature instrument from possible damage resulting from these process variables. Furthermore, a thermowell permits removal of the temperature instrument for replacement, repair or testing without affecting the process media or the system.



### Standard Features

|                               |  |
|-------------------------------|--|
| <b>Process Connections:</b>   | Threaded, flanged, sanitary, socket, weld, weld-in   |
| <b>Instrument Connection:</b> | ½" NPSM standard (National Pipe Standard Mechanical; a straight pipe thread for mechanical joints) |
| <b>Shank Configurations:</b>  | Reduced, straight, tapered   |
| <b>Bore Diameter:</b>         | .260", .385"   |
| <b>Materials:</b>             | Brass, AISI 304, AISI 316  |
| <b>Surface Finish:</b>        | Brass: 60-100 Ra; AISI 304 & AISI 316: 60-100 Ra<br>sanitary (AISI 304 & AISI 316): 16-20 Ra       |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets [TW.FL](#), [TW.SC](#), [TW.SW](#), [TW.TH](#), [TW.VS](#), [TW.WI](#).



## Thermowell Terminology

**Process Connection:** External means to connect thermowell to process piping system. Wells can be threaded, bolted (to matching flange), clamped or welded in place.

**Instrument Connection:** Internal threads to connect temperature instrument to thermowell.

**"U" Dimension:** Length of well inserted into the piping system. Measured from the base of the process connection to the end tip of well.

**"T" Dimension:** Also called lagging extension. Extends length between the instrument and process connections to accommodate vessel or piping insulation. Standard length is 3" (2" for a well with a 2½" "U" dimension).

**"S" Dimension:** Instrument insertion length into well.

**Bore Diameter:** Dimension of internal bore to match the diameter of the instrument stem/bulb inserted into the well. The .260" and .385" bore sizes fit instrument stem/bulb diameters of ¼" and ⅜" respectively. Bore length equals "S" dimension.

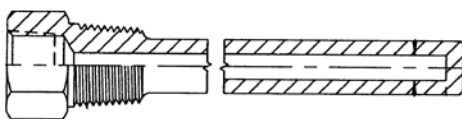
**Root Diameter:** Diameter of well shank below process connection. This dimension varies with process connection and/or shank design.

**Tip Diameter:** Diameter of well shank at the end tip of well. This dimension may vary with process connection and/or shank design.

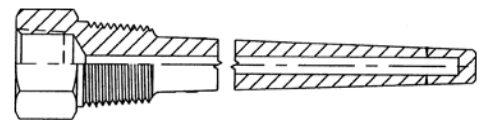
**Reduced Shank:** Also called reduced tip. The shank O.D. is reduced over the last 2½" of the "U" dimension from the standard root diameter to a ½" O.D. The stepped shank is available with a .260" bore size only.

**Straight Shank:** Shank O.D. is the same from the root diameter to the tip diameter. The straight shank is generally used with a .385" bore size but a .260" bore size is available.

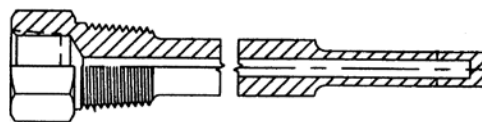
**Tapered Shank:** Shank O.D. is gradually reduced from the root diameter to the tip diameter. Available with a .260" or .385" bore size. The tapered shank is recommended for heavy duty applications characterized by high vibration, pressure, temperature and/or velocity.



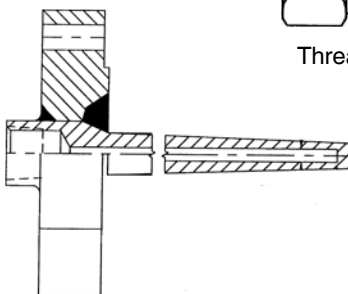
Threaded Straight Configuration



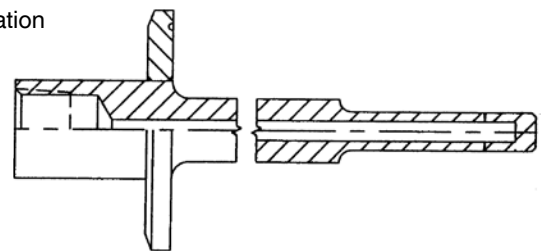
Threaded Tapered Configuration



Threaded Reduced (Stepped) Configuration



Flanged Tapered Configuration



Sanitary Reduced Configuration

## Thermowells For Bimetal & Gas Actuated Thermometers

| CODING EXAMPLES |                      |                    |               |        |               |          |          |        |        |
|-----------------|----------------------|--------------------|---------------|--------|---------------|----------|----------|--------|--------|
| Type            | Part Number          | Process Connection | Bore/Type     | Lag    | Shank Design  | "U" Dim. | Material | Rating | Facing |
| Threaded        | 75-TH2R-045-CC       | ¾" NPT             | .260/threaded | None   | Stepped       | 4½"      | 304SS    |        |        |
| Threaded        | 75-TH2LT-055-SS-T5   | ¾" NPT             | .260/threaded | 5" Lag | Tapered shank | 5½"      | 316SS    |        |        |
| Flanged         | 15-FL2T-070-SS-150RF | 1½" flanged        | .260/flanged  | None   | Tapered shank | 7"       | 316SS    | 150#   | RF     |
| Sanitary        | 10-SC2R-045-SS       | 1" sanitary        | .260/sanitary | None   | Stepped shank | 4½"      | 316SS    |        |        |
| Socket weld     | 75-SW2R-045-CC       | ¾" NPT             | .260/skt weld | None   | Stepped       | 4½"      | 304SS    |        |        |

| WIKA THERMOWELL PRODUCT CODING EXPLANATION |                        |                |              |                                  |                 |                 |  |             |
|--|------------------------|----------------|--------------|----------------------------------|-----------------|-----------------|--|-------------|
| Process Connection                         | Type / Bore Dia.       | Lag            | Shank Design | Standard "U" Dimensions (No Lag) |                 | For Stem Length | Standard Material                            | Cap & Chain |
|  |                        |                |              | Type FL                          | All Other Types |                 |  |             |
| 50 = ½"                                    | TH2 = Threaded/.260    | Blank=No lag   | R = Reduced  | N/A                              | *015 = 1 5/8"   | 2 1/2"          | BR=Brass                                     | 2= ST.ST.   |
| 75 = ¾"                                    | TH3 = Threaded/.385    | L=Standard lag | S = Straight | 020 = 2"                         | 025 = 2 1/2"    | 4"              | CC=304ss                                     |             |
| 10 = 1"                                    | FL2 = Flanged/.260     |                | T = Tapered  | 040 = 4"                         | 045 = 4 1/2"    | 6"              | SS=316ss                                     |             |
| 12 = 1 1/4"                                | FL3 = Flanged/.385     |                |              | 070 = 7"                         | 075 = 7 1/2"    | 9"              | CS=Carbon steel                              |             |
| 15 = 1 1/2"                                | SC2 = Sanitary/.260    |                |              | 100 = 10"                        | 105 = 10 1/2"   | 12"             | MO=Monel                                     |             |
| 20 = 2"                                    | SC3 = Sanitary/.385    |                |              | 130 = 13"                        | 135 = 13 1/2"   | 15"             | CP=Carp.20                                   |             |
|  | SW2 = Socket weld/.260 |                |              | 160 = 16"                        | 165 = 16 1/2"   | 18"             | IN=Inconel 600                               |             |
|  | SW3 = Socket weld/.385 |                |              | 220 = 22"                        | 225 = 22 1/2"   | 24"             | NI=Nickel                                    |             |
|  |                        |                |              | Standard "U" with lag ("T")      |                 |                 | HB=Hastelloy B                               |             |
|  |                        |                |              | Type FL                          | All Other Types |                 | HC=Hastelloy C                               |             |
|  |                        |                |              | 020 = 2"                         | 025 = 2 1/2"    |                 | TA=Tantalum                                  |             |
|  |                        |                |              | (T=2")                           | (T=2")          | 6"              | TI=Titanium                                  |             |
|  |                        |                |              | 040 = 4"                         | 045 = 4 1/2"    |                 | TC= Teflon coated                            |             |
|  |                        |                |              | (T=3")                           | (T=3")          | 9"              | Other material, consult factory for pricing. |             |
|  |                        |                |              | 070 = 7"                         | 075 = 7 1/2"    |                 |  |             |
|  |                        |                |              | (T=3")                           | (T=3")          | 12"             |  |             |
|  |                        |                |              | 100 = 10"                        | 105 = 10 1/2"   |                 |  |             |
|  |                        |                |              | (T=3")                           | (T=3")          | 15"             |  |             |
|  |                        |                |              | 130 = 13"                        | 135 = 13 1/2"   |                 |  |             |
|  |                        |                |              | (T=3")                           | (T=3")          | 18"             |  |             |
|  |                        |                |              | 190 = 19"                        | 195 = 19 1/2"   |                 |  |             |
|  |                        |                |              | (T=3")                           | (T=3")          | 24"             |  |             |

| For Flanged Well, Specify Rating & Facing |                       |
|---|-----------------------|
| Rating                                    | Facing                |
| 150#                                      |                       |
| 300#                                      | FF=Flat Face flange   |
| 600#                                      | RF=Raised Face flange |
| 900#                                      | RJ=Ring Joint flange  |
| 1500#                                     |                       |

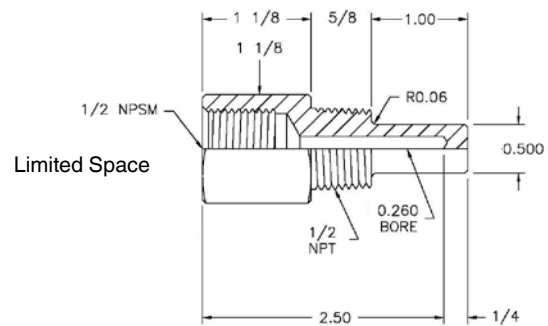
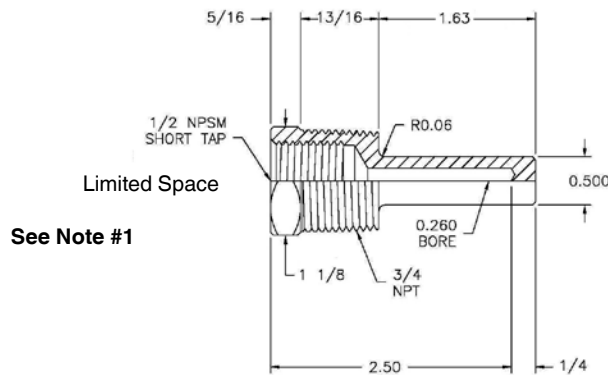
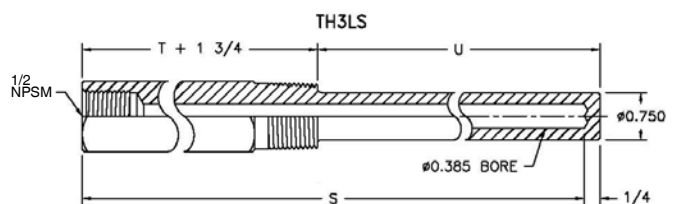
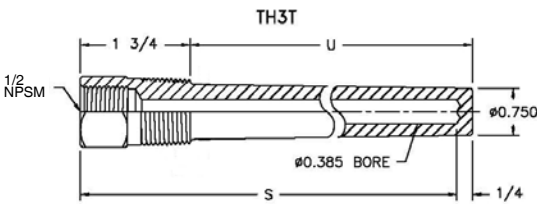
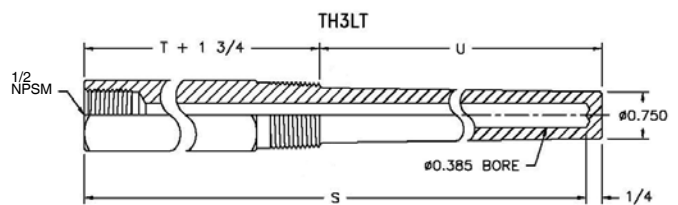
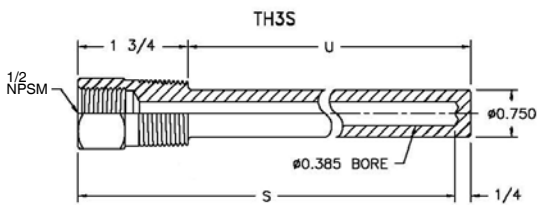
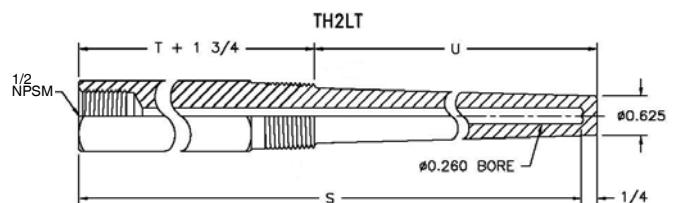
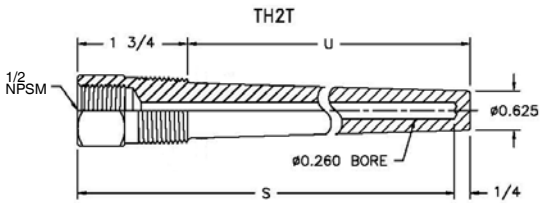
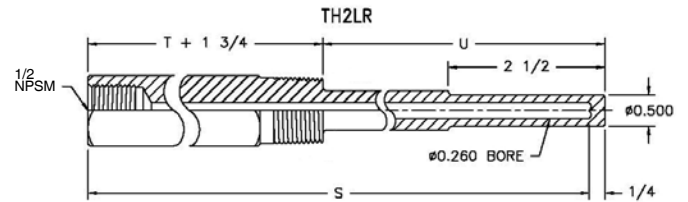
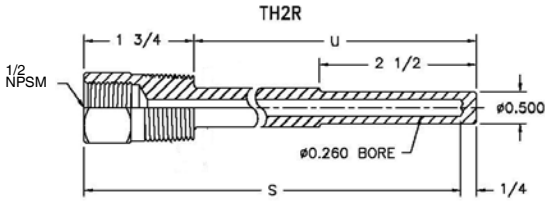
\*Note: For ½" NPT process connection the "U" dimension becomes 1" to accommodate ½" NPSM female thread. Order as \*010", i.e. 50TH2R010CC.

| Threaded Thermowell Factory Stock |              |             |             |             |
|-----------------------------------|--------------|-------------|-------------|-------------|
| Part Number                       |              |             |             |             |
| 75TH2R015BR                       | 75TH2R015CC  | 75TH2R015SS | 75TH2R025BR | 75TH2R025CC |
| 75TH2R025SS                       | 75TH2LR025SS | 75TH2R045CC | 75TH2R045SS | 75TH2R045BR |
| 75TH2R045CC                       | 75TH2LR045SS | 75TH2R075SS | 50TH2R010CC | 50TH2R010SS |
| 50TH2R025BR                       | 50TH2R025CC  | 50TH2R025SS |             |             |

Stock items shown in blue print.



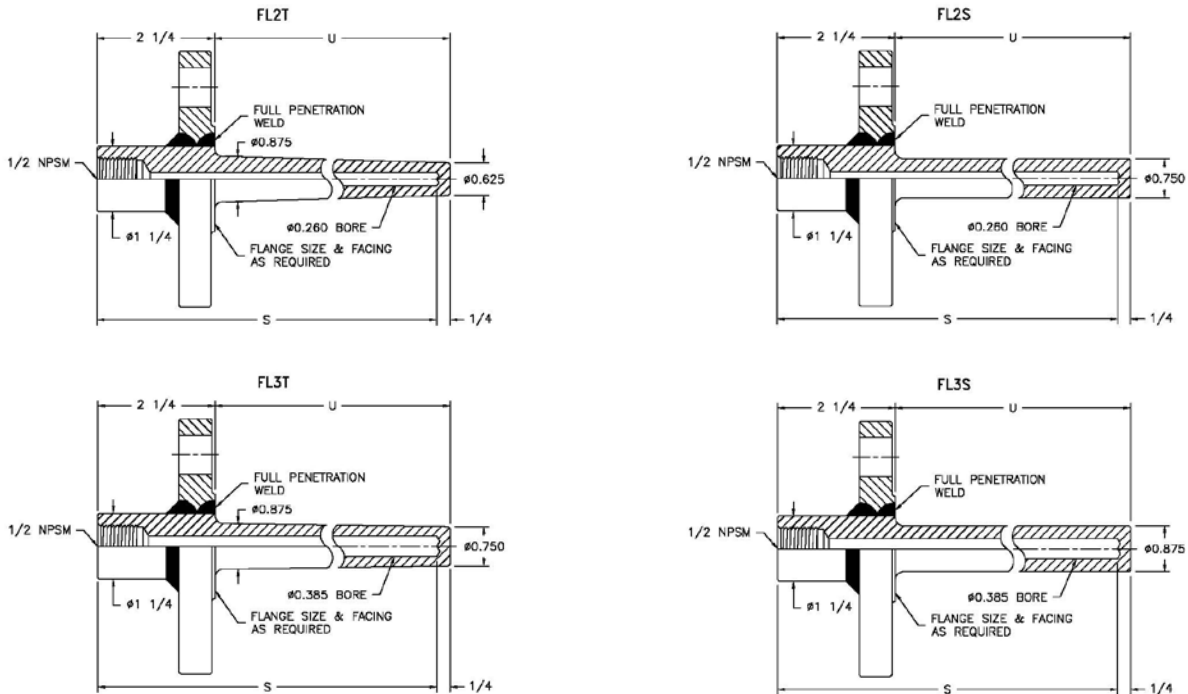
# Threaded Configuration



**Notes:**

1. Normal "U" dimension on limited space well is 15/8" for 3/4" NPT and 1" NPT process connection. (For 1/2" NPT process connection, "U" dimension becomes 1" to accommodate 1/2" NPSM female thread. Order as "010", i.e. 50TH2R010CC.

## Flanged Configuration

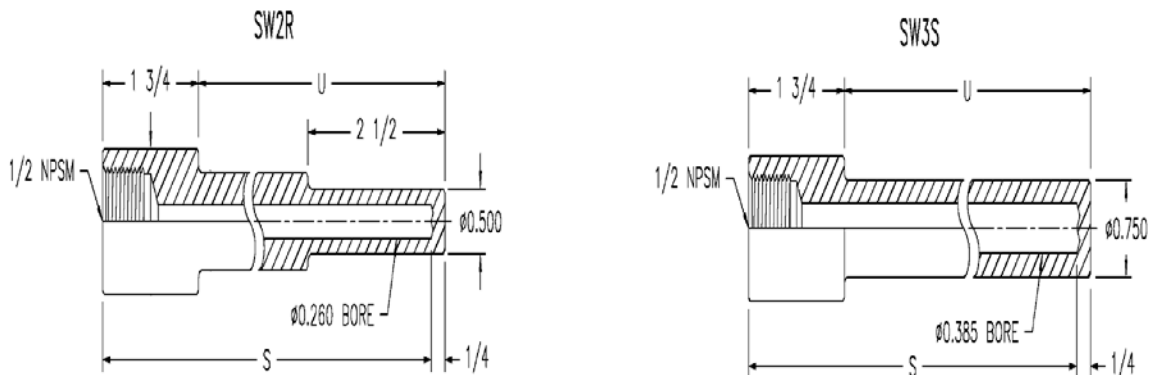


### HOW TO ORDER

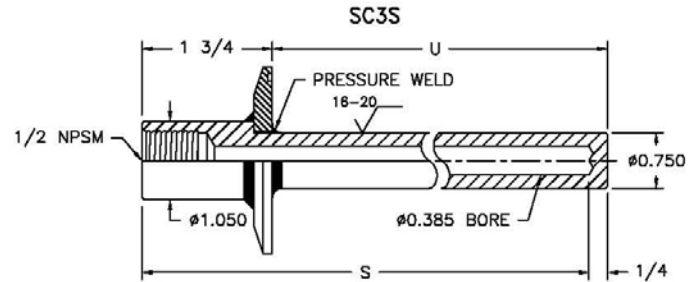
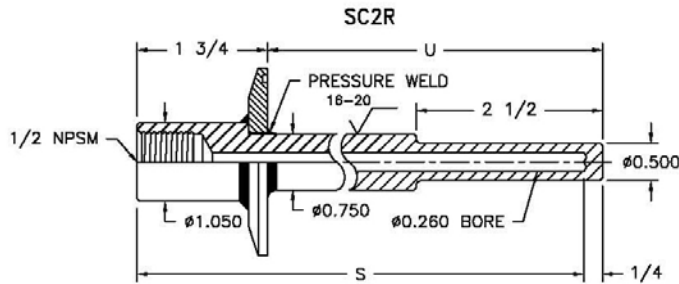
Specify flange size, rating and facing, thermowell "U" dim., bore dia. and material.

Raised face flange supplied as standard ANSI serrated. Specify 125 RMS smooth face if required at no extra charge.

## Socket Weld Configuration



## Sanitary Configuration



Meets USDA and 3A Sanitary Standard 74-03.  
Available with 1", 1½", 2", and 3" solid end caps.  
Special designs available upon request.  
Standard finish AISI 304 and AISI 316, 16-20 Ra.

Note: Minimum stem length is 4"

### Sanitary Thermowells - Stepped or Straight Shank

Type SC2 (.260 Bore) & SC3 (.385) bore, stepped or straight shank, with or without lag

| Size            | Model | No Lag<br>U Dim | With Lag |       | S Dim |
|-----------------|-------|-----------------|----------|-------|-------|
|                 |       |                 | U Dim    | T Dim |       |
| 1"<br>or<br>1½" | SC2R  | 2½              | --       | --    | 4     |
|                 | SC2LR | 4½              | 2½"      | 2     | 6     |
|                 | SC3S  |                 |          |       |       |
|                 | SC3LS | 7½              | 4½"      | 3     | 9     |

| Size | Model | No Lag<br>U Dim | With Lag |       | S Dim |
|------|-------|-----------------|----------|-------|-------|
|      |       |                 | U Dim    | T Dim |       |
| 2"   | SC2R  | 2½              | --       | --    | 4     |
|      | SC2LR | 4½              | 2½"      | 2     | 6     |
|      | SC3S  |                 |          |       |       |
|      | SC3LS | 7½              | 4½"      | 3     | 9     |

### Sanitary Thermowells - Tapered Shank

Type SC2 (.260 Bore) & SC3 (.385) bore, tapered shank, with or without lag

| Size            | Model | No Lag<br>U Dim | With Lag |       | S Dim |
|-----------------|-------|-----------------|----------|-------|-------|
|                 |       |                 | U Dim    | T Dim |       |
| 1"<br>or<br>1½" | SC2T  | 2½              | --       | --    | 4     |
|                 | SC2LT | 4½              | 2½"      | 2     | 6     |
|                 | SC3T  |                 |          |       |       |
|                 | SC3LT | 7½              | 4½"      | 3     | 9     |

### Accessories

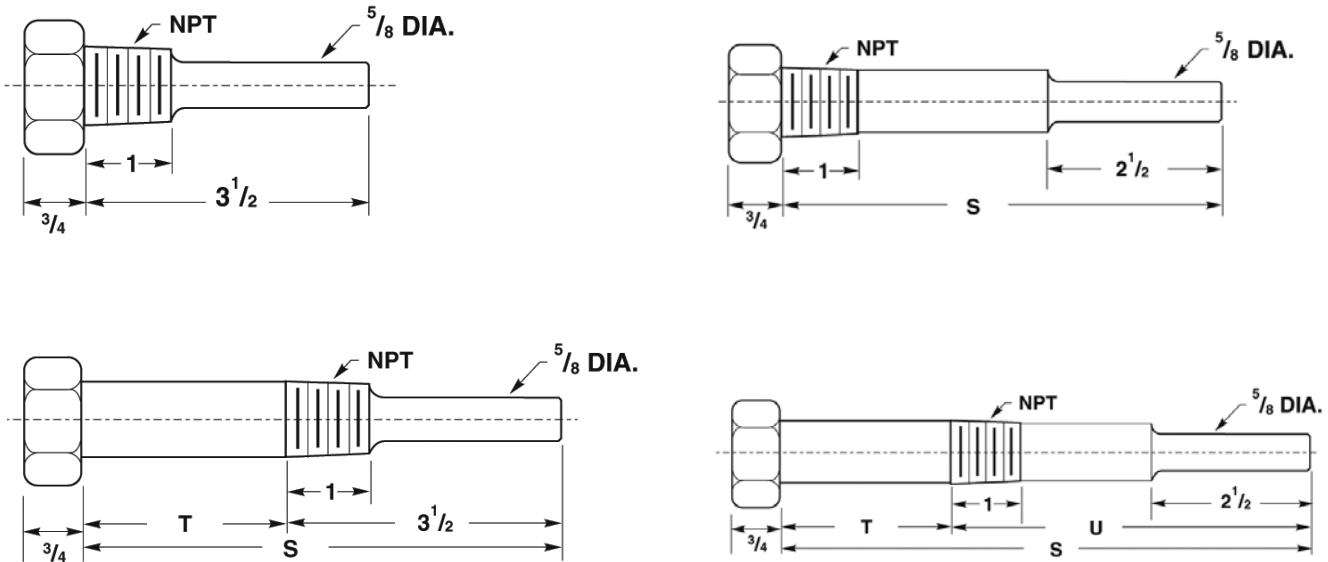
| Description                         | Part Number | Code   |
|-------------------------------------|-------------|--------|
| SS cap & chain                      |             | Code 2 |
| Stamping on well                    |             | --     |
| 5.3 oz. tube heat transfer compound | 2256045     | --     |
| Paper tag                           |             | --     |

| Size | Model | No Lag<br>U Dim | With Lag |       | S Dim |
|------|-------|-----------------|----------|-------|-------|
|      |       |                 | U Dim    | T Dim |       |
| 2"   | SC2T  | 2½              | --       | --    | 4     |
|      | SC2LT | 4½              | 2½"      | 2     | 6     |
|      | SC3T  |                 |          |       |       |
|      | SC3LT | 7½              | 4½"      | 3     | 9     |

Note: Sanitary thermowells are polished to 16-20 Ra per 3A Sanitary Standards



## Thermowells for Industrial Glass Thermometers



### Thermowell Product Coding Explanation

| Process Connection   | Type / Bore Dia.                    | Lag                              | Shank Design | Nominal Bulb Length                  | For Stem Length    | Standard Material                    | Cap & Chain            |
|----------------------|-------------------------------------|----------------------------------|--------------|--------------------------------------|--------------------|--------------------------------------|------------------------|
| 75 = 3/4"<br>10 = 1" | TH5 = Threaded /<br>0.625 min. dia. | Blank = No lag<br>L=Standard lag | R = Stepped  | 035 = 3 1/2"<br>060 = 6"<br>090 = 9" | 3 1/2"<br>6"<br>9" | BR=Brass<br>CC=304 SS<br>SS = 316 SS | 1=Brass<br>2=St. Steel |

### WIKA Industrial Thermowell Coding Explanation

Model TH5 (0.625 bore) stepped shank, with or without lag

| Size             | Model         | No lag   | with lag |         | "S"    |
|------------------|---------------|----------|----------|---------|--------|
|                  |               |          | "U" Dim. | "T" Dim |        |
| 3/4"<br>or<br>1" | TH5R<br>TH5LR | 2-9/16"  | -----    | -----   | 3 1/2" |
|                  |               | 5-1/16"  | 2-9/16"  | 2 1/2"  | 6"     |
|                  |               | 8-1/16"  | 5-1/16"  | 3"      | 9"     |
|                  |               | 11-1/16" | 8-1/16"  | 3"      | 12"    |

### Factory Stock

Threaded Thermowell for Industrial Glass Thermometers

| Part Number  |
|--------------|
| 75TH5R035BR  |
| 75TH5R060BR  |
| 75TH5LR035BR |

Accessories > Gauge Cocks > 910.10

## Type 910.10

WIKA gauge cocks provide an economical method for isolating the instrument from the process and for throttling line pressure. They also act as an adjustable flow orifice and are rated to 200 psi. WIKA's 910.10 gauge cocks are intended for use on light-duty air applications.



### Standard Features

- Pressure Rating:** Brass: 200 psi
- Operating Temperature:** Media: max. 140°F (+93°C); min. 0°F (-18°C)
- Valve Body:** Brass
- Handle:** Brass, available with "T" or lever type handle
- Stem Seals:** None
- Standard Threaded Connection Size:** ¼" NPT or ½" NPT M & F

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 910.10.

| Type                 |              | 910.10  |               |                 |                |
|----------------------|--------------|---|---------------|-----------------|----------------|
| Pressure Gauge Cocks |              |   |               |                 |                |
| Material             | Lever Type   | Connection  | Press. Rating | Max Temp Rating | Part Number    |
| Brass                | "T" handle   | ¼" X ¼" NPT-female                                | 200 psi       | 140°F           | <b>4339631</b> |
| Brass                | "T" handle   | ¼" NPT-female X ¼" NPT-male                       | 200 psi       | 140°F           | <b>4339640</b> |
| Brass                | Lever handle | ¼" X ¼" NPT-female                                | 200 psi       | 140°F           | <b>4339658</b> |
| Brass                | Lever handle | ½" X ½" NPT-female                                | 200 psi       | 140°F           | <b>4339674</b> |
| Brass                | Lever handle | ¼" NPT-female X ¼" NPT-male with union connection | 200 psi       | 140°F           | <b>4339666</b> |

NOTE: In applications where process media leakage may result in possible personal injury or property damage, gauge cocks should not be specified as they contain no packing gland and leakage may result. For tight shut-off and prevention of leakage, use of a WIKA Needle Valve is required.

Stock items shown in **blue print**.

Accessories > Needle Valves > 910.11

## Type 910.11

Type 910.11 needle valves can be used to isolate a pressure instrument from the application. For general applications, the hard seat version is the industry standard. Soft seat versions are ideal for gaseous media where a bubble tight seal is required. Both in-line and angle versions are available.



### Standard Features - Carbon Steel Model

- Pressure Rating:** hard seat -10,000 psi @ 200°F max.  
soft seat - 6,000 psi @ 200°F max.
  - Valve Body:** 12L14 carbon steel
  - Bonnet:** 12L14 carbon steel
  - Valve Stem:** 316 stainless steel
  - Handle:** 12L14 carbon steel
  - Handle Bolt:** Carbon steel
  - Bonnet Lock:** Carbon steel
  - Stem Seals:** Viton® O-ring, Teflon® back-up ring
  - Stem Seal Lock:** Carbon steel (soft seat model)
  - Stem Seat:** Delrin (soft seat model)
- Nickel-plated finish on carbon steel valves**

### Standard Features - Stainless Steel Model

- Pressure Rating:** hard seat -10,000 psi @ 200°F max.  
soft seat - 6,000 psi @ 200°F max.
  - Valve Body:** 316 stainless steel
  - Bonnet:** 316 stainless steel
  - Valve Stem:** 316 stainless steel (hard seat models with hard chromed tip and stem threads)
  - Handle:** 316 stainless steel
  - Handle Bolt:** Stainless steel
  - Bonnet Lock:** Stainless steel
  - Stem Seals:** Viton® O-ring, Teflon® back-up ring
  - Stem Seal Lock:** Stainless steel (soft seat model)
  - Stem Seat:** Delrin (soft seat model)
- Electropolish finish on stainless steel valves**

| Type                                 |                 | 910.11   |             |             |
|--------------------------------------|-----------------|----------|-------------|-------------|
| Hard Seat or Soft Seat Needle Valves |                 |          |             |             |
| Connection                           | Body Material   | Size     | Hard Seat   | Soft Seat   |
|                                      |                 |          | Part Number | Part Number |
|                                      | Carbon steel    | 1/4" NPT | 9698838     | 9698919     |
|                                      |                 | 3/8" NPT | 4339925     |             |
|                                      |                 | 1/2" NPT | 9698846     | 9698927     |
|                                      |                 | 3/4" NPT | 4339933     |             |
|                                      | Stainless steel | 1/4" NPT | 9698855     | 9698935     |
|                                      |                 | 3/8" NPT | 4339941     |             |
|                                      | Carbon steel    | 1/4" NPT | 9698871     | 9698952     |
|                                      |                 | 1/2" NPT | 9698889     | 9698960     |
|                                      | Stainless steel | 1/4" NPT | 9698897     | 9698978     |
|                                      |                 | 1/2" NPT | 9698901     | 9698986     |

| Type                              |                 | 910.11   |             |  |
|-----------------------------------|-----------------|----------|-------------|--|
| Hard Seat 90° Angle Needle Valves |                 |          |             |  |
| Data Sheet                        |                 | 910.11   |             |  |
| Connection                        | Body Material   | Size     | Part Number |  |
|                                   | Carbon steel    | 1/4" NPT | 9799295     |  |
|                                   |                 | 1/2" NPT | 9799308     |  |
|                                   | Stainless steel | 1/4" NPT | 9799316     |  |
|                                   |                 | 1/2" NPT | 9799325     |  |
|                                   | Carbon steel    | 1/4" NPT | 9799333     |  |
|                                   |                 | 1/2" NPT | 9799341     |  |
|                                   | Stainless steel | 1/4" NPT | 9799359     |  |
|                                   |                 | 1/2" NPT | 9799367     |  |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 910.11.

Stock items shown in blue print.

Accessories > Mini-Needle Valves > 910.11.100

# Type 910.11.100

Type 910.11.100 mini-needle valves can be used to isolate a pressure instrument from the application where space is limited. Three connection versions are available from stock.



Brass mini-valves supplied with knurled knob standard.



Carbon steel and stainless steel mini-valves supplied with T-handle.

## Standard Features

- Operating Temperature:** Media: max. 200°F (+93°C); min. 0°F (-18°C)
- Flow Rate:** Max.  $C_v = 0.42$
- Orifice Size:** 0.172" (4.37mm)

### Standard Features Brass Model

- Pressure Rating:** 6,000 psi
- Valve Body:** Brass
- Bonnet:** Brass
- Valve Stem:** Brass
- Handle:** Knurled knob, brass
- Handle Bolt:** Brass, 360
- Stem Seals:** Viton® O-ring, Teflon® back-up ring

### Standard Features Carbon Steel Model

- Pressure Rating:** 10,000 psi
- Valve Body:** Carbon steel
- Bonnet:** Carbon steel, 12L14
- Valve Stem:** 316 stainless steel
- Handle:** T, carbon steel
- Handle Bolt:** Carbon steel, 12L14
- Stem Seals:** Viton® O-ring, Teflon® back-up ring

### Standard Features Stainless Steel Model

- Pressure Rating:** 10,000 psi
- Valve Body:** 316 ss, electropolished
- Bonnet:** 316 ss, electropolished
- Valve Stem:** 316 ss, electropolished
- Handle:** T, 316 ss, electropolished
- Handle Bolt:** Stainless steel
- Stem Seals:** Viton® O-ring, Teflon® back-up ring

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 910.11.100.

| Type                      | 910.11.100      |          |                |
|---------------------------|-----------------|----------|----------------|
| Mini Needle Valves        |                 |          |                |
| Connection                | Body Material   | Size     | Part Number    |
| Female-Female<br>         | Brass           | 1/8" NPT | 4266120        |
|                           |                 | 1/4" NPT | <b>4266138</b> |
|                           | Carbon steel    | 1/8" NPT | 4266146        |
|                           |                 | 1/4" NPT | <b>4266154</b> |
|                           | Stainless steel | 1/8" NPT | 4266162        |
|                           |                 | 1/4" NPT | <b>4266171</b> |
| Male-Female<br>flow →<br> | Brass           | 1/8" NPT | 4266189        |
|                           |                 | 1/4" NPT | <b>4266197</b> |
|                           | Carbon steel    | 1/8" NPT | 4266201        |
|                           |                 | 1/4" NPT | <b>4266219</b> |
|                           | Stainless steel | 1/8" NPT | 4266227        |
|                           |                 | 1/4" NPT | <b>4266235</b> |
| Male-Male<br>             | Brass           | 1/8" NPT | 4266243        |
|                           |                 | 1/4" NPT | 4266251        |
|                           | Carbon steel    | 1/8" NPT | 4266260        |
|                           |                 | 1/4" NPT | 4266278        |
|                           | Stainless steel | 1/8" NPT | 4266286        |
|                           |                 | 1/4" NPT | <b>4266294</b> |

Stock items shown in blue print.

# Type 910.11.200

Intended to isolate the pressure gauge from the measured fluid or to provide a means of throttling or dampening pressure pulsation. Allows pressure to be bled-off prior to instrument removal or replacement.



## Standard Features

- |  |  |                                     |  |
|--|--|-------------------------------------|--|
| <b>Valve Body:</b>                       | 12L14 carbon steel, nickel plated, or 316 stainless steel, electropolished | <b>Stem Seat (soft seat model):</b> | Delrin   |
| <b>Bonnet:</b>                           | 12L14 carbon steel or 316 stainless steel                                  | <b>Orifice Size:</b>                | 0.187 inches (4.75 mm)   |
| <b>Valve Stem:</b>                       | 316 stainless steel (hard chromed on hard seat models)                     | <b>Pressure Rating:</b>             | Hard seat models-10,000 psi @ 200°F max.<br>Soft seat models- 6,000 psi @ 200°F max.     |
| <b>Handle:</b>                           | 12L14 carbon steel or 316 stainless steel                                  | <b>Operating Temperature:</b>       | Media: max. 200°F (+93°C); min. 0°F (-18°C)  |
| <b>Handle Bolt:</b>                      | 12L14 carbon steel or 18-8 stainless steel                                 | <b>Flow Rate:</b>                   | Hard seat models- Max. C <sub>v</sub> 0.44<br>Soft seat models- Max. C <sub>v</sub> 0.76 |
| <b>Stem Seals:</b>                       | Viton® O-ring with PTFE back-up ring                                       |                                     |  |
| <b>Stem Seal Lock (soft seat model):</b> | 12L14 carbon steel or 316 stainless steel                                  |                                     |  |

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 910.11.200.

| Type                      |           | 910.11.200                  |           |                |        |                |
|---------------------------|-----------|-----------------------------|-----------|----------------|--------|----------------|
|                           |           | Block & Bleed Needle Valves |           |                |        |                |
| Connection                |           | Body Material               | Size      | Part Number    |        |                |
| Female-Female<br>         | Hard seat | Carbon steel                | ¼" NPT    | 4339682        |        |                |
|                           |           |                             | ½" NPT    | <b>4339691</b> |        |                |
|                           |           | Stainless steel             | ¼" NPT    | <b>4339704</b> |        |                |
|                           |           |                             | ½" NPT    | <b>4339712</b> |        |                |
| Male-Female<br>flow →<br> | Hard seat | Carbon steel                | ¼" NPT    | 4339721        |        |                |
|                           |           |                             | ½" NPT    | <b>4339739</b> |        |                |
|                           |           | Stainless steel             | ¼" NPT    | <b>4339747</b> |        |                |
|                           |           |                             | ½" NPT    | <b>4339755</b> |        |                |
| Female-Female<br>         | Soft seat | Carbon steel                | ¼" NPT    | 4339763        |        |                |
|                           |           |                             | ½" NPT    | 4339771        |        |                |
|                           |           | Stainless steel             | ¼" NPT    | 4339780        |        |                |
|                           |           |                             | ½" NPT    | <b>4339798</b> |        |                |
|                           |           | Male-Female<br>flow →<br>   | Soft seat | Carbon steel   | ¼" NPT | 4339801        |
|                           |           |                             |           |                | ½" NPT | <b>4339810</b> |
| Stainless steel           | ¼" NPT    |                             |           | <b>4339828</b> |        |                |
|                           | ½" NPT    |                             |           | <b>4339836</b> |        |                |

Stock items shown in blue print.



Accessories > Multi-Port Valves > 910.11.300

# Type 910.11.300

Intended to isolate the pressure gauge from the measured fluid or to provide a means of throttling or dampening pressure pulsation. Allows additional instrument connections without adding permanent piping.



## Standard Features

|                     |   |  |  |
|---------------------|---|--|--|
| <b>Valve Body:</b>  | 12L14 carbon steel, nickel plated, or<br>316 stainless steel, electropolished | <b>Stem Seal Lock (soft seat model):</b> | 12L14 carbon steel or<br>316 stainless steel   |
| <b>Bonnet:</b>      | 12L14 carbon steel or<br>316 stainless steel                                  | <b>Stem Seat (soft seat model):</b>      | Delrin   |
| <b>Valve Stem:</b>  | 316 stainless steel<br>(hard chromed on hard seat models)                     | <b>Orifice Size:</b>                     | 0.187 inches (4.75 mm)   |
| <b>Handle:</b>      | 12L14 carbon steel or<br>316 stainless steel                                  | <b>Pressure Rating:</b>                  | Hard seat models<br>-10,000 psi @ 200°F max.<br>Soft seat models 6,000 psi<br>@ 200°F max. |
| <b>Handle Bolt:</b> | 12L14 carbon steel or<br>18-8 stainless steel                                 | <b>Operating Temperature: Media:</b>     | max. 200°F (+93°C);<br>min. 0°F (-18°C)  |
| <b>Stem Seals:</b>  | Viton® O-ring with<br>PTFE back-up ring                                       | <b>Flow Rate:</b>                        | Hard seat models-Max. C <sub>v</sub> 0.44<br>Soft seat models- Max. C <sub>v</sub> 0.64    |

## Available Options

- Panel mounting bracket
- NACE MRO 175-93 Certification  
(soft-seat models only)

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **910.11.300**.

| Type                     |                | 910.11.300      |                             |                |
|--------------------------|----------------|-----------------|-----------------------------|----------------|
| Multi-Port Needle Valves |                |                 |                             |                |
| Connection               | Seat           | Body Material   | Size                        | Part Number    |
|                          | Hard seat      | Carbon steel    | 1/2" NPT                    | <b>4339844</b> |
|                          |                | Stainless steel | 3/4" male X 1/2" female NPT | 4339852        |
|                          |                |                 | 1/2" NPT                    | <b>4339861</b> |
|                          | Soft seat      | Carbon steel    | 3/4" male X 1/2" female NPT | 4339879        |
|                          |                |                 | 1/2" NPT                    | <b>4339887</b> |
|                          |                | Stainless steel | 3/4" male X 1/2" female NPT | 4339895        |
| 1/2" NPT                 | <b>4339909</b> |                 |                             |                |
|                          |                | Stainless steel | 3/4" male X 1/2" female NPT | <b>4339917</b> |

Stock items shown in blue print.

Accessories > Snubbers > 910.12.100, 910.12.200, 910.12.300

# Type 910.12.100, 910.12.200, 910.12.300

Pressure snubbers protect pressure instruments against surges and pressure shocks. Porous snubbers are suitable for general purpose applications. Piston snubbers are supplied with three pistons to adapt to varying applications. Throttling snubbers have a built-in needle valve that allows you to adjust the amount of snubbing externally.

## Standard Features

**Pressure Connection:** 1/4" NPT or 1/2" NPT male x female (see selection chart)

**Material:** Brass or stainless steel

**O-ring material (adjustable snubber only):**

Brass: Buna-N

Stainless steel: Viton®

**Pressure Rating:** Brass: 3,000 psi - 5,000 psi;  
SS: 5,000 psi - 15,000 psi  
(see selection chart)

**Temperature Rating:** 14°F to 248°F (-10°C to 120°C)



## Available Options

- Other threaded connections
- Cleaned for use in oxygen service
- Monel® version
- Porous snubbers for different media types (specify media when ordering)

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 910.12.

| Type             |          | 910.12.100      |                 |                 |
|------------------|----------|-----------------|-----------------|-----------------|
| Porous Snubbers  |          |                 |                 |                 |
| Application      | Material | Connection      | Pressure Rating | Part Number     |
| Air, Steam, Gas  | Brass    | 1/4" M x 1/4" F | 5,000 psi       | <b>4341503</b>  |
| Light Oil, Water | Brass    | 1/4" M x 1/4" F | 5,000 psi       | <b>4341511</b>  |
| Air, Steam, Gas  | SS       | 1/4" M x 1/4" F | 15,000 psi      | <b>4001524</b>  |
| Air, Steam, Gas  | Brass    | 1/2" M x 1/2" F | 5,000 psi       | <b>50409671</b> |
| Air, Steam, Gas  | SS       | 1/2" M x 1/2" F | 15,000 psi      | <b>50409662</b> |

| Type                         |            | 910.12.200      |                |  |
|------------------------------|------------|-----------------|----------------|--|
| Piston Snubbers <sup>1</sup> |            |                 |                |  |
| Material                     | Connection | Pressure Rating | Part Number    |  |
| Brass                        | 1/4" NPT   | 5,000 psi       | 4201639        |  |
|                              | 1/2" NPT   | 5,000 psi       | <b>4201647</b> |  |
| 316 SS                       | 1/4" NPT   | 15,000 psi      | 4201655        |  |
|                              | 1/2" NPT   | 15,000 psi      | <b>4201663</b> |  |

<sup>1</sup> Supplied with five pistons for light to heavy snubbing

| Type                             |            | 910.12.300      |                 |  |
|----------------------------------|------------|-----------------|-----------------|--|
| Throttling Snubbers <sup>2</sup> |            |                 |                 |  |
| Material                         | Connection | Pressure Rating | Part Number     |  |
| Brass                            | 1/4" NPT   | 3,400 psi       | <b>50334603</b> |  |
|                                  | 1/2" NPT   | 3,400 psi       | <b>50334611</b> |  |
| 316 SS                           | 1/4" NPT   | 5,800 psi       | <b>50334620</b> |  |
|                                  | 1/2" NPT   | 5,800 psi       | <b>50334638</b> |  |

<sup>2</sup> Includes a stainless steel needle valve

Stock items shown in blue print.

Accessories > Overpressure Protector > 910.13

# Type 910.13

Type 910.13 overpressure protectors protect pressure instruments from damaging spikes or surges. At a “pre-set” pressure, the overpressure protector “shuts-off” the pressure to the instrument thus preventing damage to the pressure sensing element and protecting the calibration. The set-point is externally adjustable. Type 910.13 overpressure protectors also feature an adjustable piston valve which is designed to dampen system pulsation.



## Description

The overpressure protector consists of a spring loaded piston valve. Under normal pressure conditions the spring holds the valve open. When the system pressure exceeds the set pressure, the force exerted by the spring is overcome and the valve closes. The valve will remain closed until the system pressure drops approximately 25% below the closing pressure, where upon the force of the spring will open the valve.

Overpressure protectors must not be used as process control devices.

### Standard Features

- Pressure connection:**  
1/2" NPT male inlet, female outlet
- Body:** 316Ti stainless steel
- Piston Valve:** 316Ti stainless steel
- O-Ring:** FPM (Viton)
- Operating Temperature:**  
176 °F (80 °C maximum)
- Flow Direction:**  
Male thread to female thread

### Special Features

- 7 different setting ranges selectable
- Minimum pressure to 6 psi (0.4 bar)
- Maximum pressure to 8,700 psi (600 bar)
- Overpressure safe up to 14,500 psi (1,000 bar)
- Vacuum safe

### Special Options

- Other thread connections:  
1/4" NPT, G1/4B and G1/2B
- Other materials: Brass, Monel® 400
- Material Certificate (3.1 acc. to EN 10 204)
- Nace Certificate (2.2 acc. to EN 10 204)
- Oxygen service (oil and grease free)
- Mounted on pressure gauge with customer specifications, includes SS tag (note 2)
- Overpressure protector set to customer specifications, includes SS tag (note 2)

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **910.13**.

| Type   | 910.13      |                 |
|--|-------------|-----------------|
| Overpressure Protector                       |             |                 |
| Range (psi)                                  | Range (bar) | Part Number     |
| 6 to 35                                      | 0.4 to 2.5  | <b>9091963</b>  |
| 30 to 85                                     | 2 to 6      | <b>9091971</b>  |
| 85 to 365                                    | 5 to 25     | <b>9091980</b>  |
| 290 to 870                                   | 20 to 60    | <b>0690600</b>  |
| 725 to 3625                                  | 50 to 250   | <b>0690619</b>  |
| 3,500 to 5,800                               | 240 to 400  | <b>1615130</b>  |
| 5,800 to 8,700                               | 400 to 600  | <b>50311115</b> |
| Factory Set Overpressure Protectors (note 2) |             |                 |
| 6 to 35                                      | 0.4 to 2.5  | <b>50681222</b> |
| 30 to 85                                     | 2 to 6      | <b>50681231</b> |
| 85 to 365                                    | 5 to 25     | <b>50681249</b> |
| 290 to 870                                   | 20 to 60    | <b>50681257</b> |
| 725 to 3625                                  | 50 to 250   | <b>50681265</b> |
| 3,500 to 5,800                               | 240 to 400  | <b>50681273</b> |
| 5,800 to 8,700                               | 400 to 600  | <b>50681281</b> |

Stock items shown in **blue print**.

**Note 2:** Items come pre-set from factory. Customer must specify set or closing pressure. Choose factory set part numbers for pressure gauge mounting and/or factory preset.

Accessories > Test Port Plugs > 910.14.100

## Type 910.14.100

WIKA's 910.14.100 pressure and temperature test port plugs allow media access ideally for hydronic pressure and temperature measurement, without disturbing the process. The pressure and temperature units are equipped with a self-sealing pierceable rubber diaphragm and are rated at 1000 psi and 200°F (350°F available).

### Standard Features

|   |   |
|---|---|
| <b>Pressure Connection:</b>             | 1/4" NPT or 1/2" NPT male                     |
| <b>Material:</b>                        | Brass body; neoprene or nordel diaphragm core |
| <b>Self-Sealing Diaphragm Material:</b> | Neoprene or nordel                            |
| <b>Pressure Rating:</b>                 | 1000 psi                                      |
| <b>Temperature Rating:</b>              | Neoprene 32-200°F max.; Nordel 32-350°F max.  |



| Type            | 910.14.100    |                 |           |                  |             |
|-----------------|---------------|-----------------|-----------|------------------|-------------|
| Test Port Plugs |               |                 |           |                  |             |
| Material        | Connection    | Pressure Rating | Plug Core | Max. Temp Rating | Part Number |
| Brass           | 1/4" NPT-male | 1,000 psi       | Neoprene  | 200°F            | 4339950     |
| Brass           | 1/2" NPT-male | 1,000 psi       | Neoprene  | 200°F            | 4339968     |
| Brass           | 1/4" NPT-male | 1,000 psi       | Nordel    | 350°F            | 4343591     |
| Brass           | 1/2" NPT-male | 1,000 psi       | Nordel    | 350°F            | 4343603     |

Stock items shown in blue print.

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **910.14.100**.

Accessories > Adaptors > 910.14.200

## Type 910.14.200

Type 910.14.200 pressure gauge adaptors and fittings are used for the installation of pressure gauges and pressure gauge accessories.

### Standard Features

|                             |  |
|-----------------------------|--|
| <b>Male-Female Adaptor:</b> | For adapting NPT to G (metric connections) |
| <b>Pressure Connection:</b> | See sizes and other dimensions on chart    |
| <b>Materials:</b>           | Brass, 316 stainless steel                 |

### Special Options Available

- Chrome-plated brass
- Alternate thread sizes

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **910.14.200**.



| Type                   | 910.14.200                    |             |
|------------------------|-------------------------------|-------------|
| NPT to Metric Adaptors |                               |             |
| Material               | Description                   | Part Number |
| Brass                  | 1/4" NPT-female to G1/4B male | 0084514     |
| Brass                  | 1/2" NPT-female to G1/2B male | 0187143     |
| Stainless steel        | 1/4" NPT-female to G1/4B male | 1247573     |
| Stainless steel        | 1/2" NPT-female to G1/2B male | 0634603     |

Note: Sealing "O-ring" on "G" connection not included

Stock items shown in blue print.

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

Accessories > Couplings > 910.14.300

## Type 910.14.300

WIKA offers couplings in a variety of connection sizes and materials. Couplings can be used for adapting siphons and any other instrumentation to the process.



### Standard Features

**Male-Male Adaptor:** For joining two male connections, e.g. pressure gauge and gauge siphon, standard versions

**Pressure Connection:** Sizes and other dimensions on chart

**Materials:** Brass, carbon steel, 316 stainless steel

### Available Options

- Chrome-plated brass
- Alternate thread sizes

| Type                      | 910.14.300      |             |
|---------------------------|-----------------|-------------|
| Couplings (for siphons)   |                 |             |
| Connection                | Body Material   | Part Number |
| 1/4" X 1/4"<br>NPT female | Brass           | 1652974     |
|                           | Steel           | 1652982     |
|                           | Stainless steel | 1652990     |
| 1/2" X 1/2"<br>NPT female | Brass           | 1653008     |
|                           | Steel           | 1653016     |
|                           | Stainless steel | 1653024     |
|                           | Chr. Moly       | 1601040     |

Stock items shown in blue print

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **910.14.300**.

Accessories > Mini-Siphon > 910.24

## Type 910.24

The WIKA mini-siphon is designed specifically to replace the old pigtail and coil siphon. The mini-siphon has a thermal barrier which protects the pressure gauge from harmful steam, hot vapors and liquids, and contains a unique inner chamber that reduces pressure surges and “water hammer”. The mini-siphon also eliminates gauge whip and vibration that is typically found on traditional siphons by mounting the gauge closer to the process.

### Standard Features

**Materials:**

- Body: 316Ti stainless steel (1.4571)
- Internal Chamber: 316Ti stainless steel (1.4571)

**Mounting Position:** Vertical or horizontal

**Connection:** 1/2" NPT-male to 1/2" NPT-female

**Flow:** Male to female connection

**Inlet Orifice:** 0.1575 inches (4mm)

**Maximum Media Pressure:** 6,164 psi (425 bar)

**Maximum Media Temperature:** 840°F (450°C)

### Available Options

- Other thread connections: 1/4" NPT, G1/4B and G1/2B
- Other materials: Monel 400, Hastelloy, Titanium, and Duplex
- Material Certificate (3.1 acc. to EN 10 204)
- NACE Certificate (2.2 acc. to EN 10 204)
- Oxygen service (oil and grease free)

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet **910.24**.



| Type            | 910.24     |                 |              |                 |
|-----------------|------------|-----------------|--------------|-----------------|
| Mini-Siphon     |            |                 |              |                 |
| Body Material   | Conn. Size | Pressure Rating | Temp. Rating | Part Number     |
| Stainless steel | 1/2" NPT   | 6,164 psi       | 840 °F       | <b>50673670</b> |

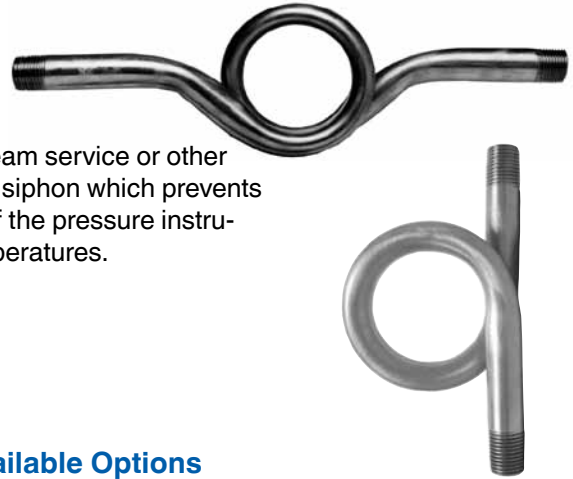
Stock items shown in blue print

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).



Accessories > Siphons > 910.15.100, 910.15.200

## Type 910.15.100, 910.15.200



Siphons should be used to protect pressure instruments in live steam service or other hot vapor applications. The vapor condenses inside the coil of the siphon which prevents the high temperature vapors from reaching the sensing element of the pressure instrument. Additionally siphons assists in lowering process media temperatures.

### Standard Features

- Forms:** Pigtail siphon, Coil siphon
- Materials:** Brass, Steel A120 schedule 40, Steel A106B schedule 80 & 160, 316 stainless steel schedules 40, 80 & 160, Chrome Moly steel (A335 P22) XX Heavy
- Media Temperature Reduction:** Approximately 75°F for each 1 foot lineal section of pipe. Actual reduction dependent on process/application variables.

### Available Options

- Alternate threads
- Special alloy material
- Cleaned for oxygen service
- Material certificate

Note: When first installed, siphon should be filled with water or any other suitable separating liquid.

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheet 910.15.

| Type           | 910.15.100     |        |               |              |             |
|----------------|----------------|--------|---------------|--------------|-------------|
| Pigtail Siphon |                |        |               |              |             |
| Siphon Form    | Body Material  | Size   | Press. Rating | Temp. Rating | Part Number |
| d              | Brass          | ¼" NPT | 250 psi       | 400 °F       | 4201779     |
|                | Steel, sch 40  | ¼" NPT | 500 psi       | 400 °F       | 4201787     |
|                | 316 SS, sch 40 | ¼" NPT | 500 psi       | 400 °F       | 4201761     |
|                | 316 SS, sch 80 | ½" NPT | 2,600 psi     | 500 °F       | 4362719     |

| Type        | 910.15.100      |        |               |              |             |
|-------------|-----------------|--------|---------------|--------------|-------------|
| Coil Siphon |                 |        |               |              |             |
| Siphon Form | Body Material   | Size   | Press. Rating | Temp. Rating | Part Number |
| p           | Brass           | ¼" NPT | 250 psi       | 400 °F       | 4201809     |
|             | Steel, sch 40   | ¼" NPT | 500 psi       | 400 °F       | 4201817     |
|             | Steel, sch 80   | ¼" NPT | 3,360 psi     | 400 °F       | 4201825     |
|             | Steel, sch 80   | ½" NPT | 3,000 psi     | 400 °F       | 4201833     |
|             | Steel, sch 160  | ½" NPT | 3,620 psi     | 700 °F       | 4201841     |
|             | 316 SS, sch 80  | ½" NPT | 2,650 psi     | 500 °F       | 4201850     |
|             | 316 SS, sch 160 | ½" NPT | 5,600 psi     | 500 °F       | 4201795     |
|             | Chr. Moly       | ½" NPT | 8,205 psi     | 750 °F       | 4201868     |

Stock items shown in blue print

# CP3000/CP4000

WIKA indicating pressure switches combine local pressure indication with alarm and control capabilities into a single economical, reliable and compact system. Superior to conventional gauge and switch connections, WIKA indicating pressure switches are extremely reliable, have low hysteresis, resist corrosion, and have easy set point adjustments. WIKA pressure switches are ideally suited for alarm and control functions on hydraulic, pneumatic and general industrial machinery and equipment. Additionally, pressure switches are used in process industry installations, including chemical and petrochemical plants, oil refineries, electric power plants, pulp and paper mills, and water and waste water treatment plants.



### Standard Features

**Area of Installation:** Non-hazardous  
**Indicating Pressure Range:** 0-60 to 0-20,000 psi  
**Set Point Pressure Range:** 0-30 to 0-20,000 psi  
**Contact Rating AC:** 24-220VAC, 65VA  
**Switching Hysteresis:** ± 3.0%

### Available Options

■ Contact assembly available for 6" process gauge (2XX.34)

For full specifications and dimensional drawings, visit [www.wika.com](http://www.wika.com) to download datasheets **CP3000/CP4000**.

| Type   |                     | CP3000                 |                 |
|--|---------------------|------------------------|-----------------|
| <b>Magnetically Assisted Alarm Contacts for 4½" Process Gauges</b> |                     |                        |                 |
| Contact Type   | Contact Arrangement | Installed <sup>1</sup> | Sold Separately |
|  |                     | Part Number            | Part Number     |
| 828.1  | N.O.                | 828.1                  | 774901          |
| 828.2  | N.C.                | 828.2                  | 774910          |
| 828.11   | N.O./N.O.           | 828.11                 | 774928          |
| 828.12   | N.O./N.C.           | 828.12                 | 691178          |
| 828.21   | N.C./N.O.           | 828.21                 | 691186          |
| 828.22   | N.C./N.C.           | 828.22                 | 774936          |
| Adder to remove Triacs for DC Service                              |                     | NO TRIAC               |                 |
| Silicone fill (intalled only) <sup>2</sup>                         |                     | SIL                    |                 |

<sup>1</sup> Does not include price of the process gauge; <sup>2</sup> For Lower Back Mount (LBM) - add \$11.57 List Each

| Type   |                     | CP4000                 |                 |
|--|---------------------|------------------------|-----------------|
| <b>Inductive Proximity Alarm Contacts for 4½" Process Gauges</b> |                     |                        |                 |
| Contact Type   | Contact Arrangement | Installed <sup>1</sup> | Sold Separately |
|  |                     | Part Number            | Part Number     |
| 838.1  | N.O.                | 838.1                  | 771775          |
| 838.2  | N.C.                | 838.2                  | 1193368         |
| 838.11   | N.O./N.O.           | 838.11                 | 771791          |
| 838.12   | N.O./N.C.           | 838.12                 | 1193376         |
| 838.21   | N.C./N.O.           | 838.21                 | 1193384         |
| 838.22   | N.C./N.C.           | 838.22                 | 1193392         |
| Permanently attach reset knob <sup>2</sup>                       |                     |                        | 2069334         |

<sup>1</sup> Does not include price of the process gauge; <sup>2</sup> Reset Key Knob P/N0018147 (sold separately - \$1.93 List Each)  
 NOTE: Intrinsically Safe (Type SN) with Fail/Safe Control is available as a special order option.

Abbreviations  
 N.O. - Normally open  
 N.C. - Normally closed

Stock items shown in blue print

# CP3000/CP4000

## CP 3000 - Magnetically-Assisted Contacts

CP 3000 magnetically assisted contacts feature one or two magnetically-assisted mechanical contacts. The contact assembly includes a built-in Triac switching amplifier which minimizes contact wear and allows load switching to 65VA. In this design, a movable contact couples to the gauge pointer through a special adaptor. As the contact approaches the set pointer, the magnetic force of a small permanent magnet attached to the set pointer assists in closing and holding the contacts in place. This avoids arching and reduces contact wear. The switching amplifier further reduces potential wear by its ability to switch large load currents with small control current. The technical specifications are listed in Table 1 on the next page. These switches are designed for use on alternating current (for DC consult WIKA).

## CP 4000 - Inductive Proximity Sensors

CP 4000 inductive proximity sensors feature one or two inductive non-contact proximity sensors in place of mechanical contacts and provide a high degree of reliability and operating safety. The system consists of a sensing head, containing two axial coils with air gap, a metallic control flag and a switching amplifier. The sensing head is carried by the set pointer, while the control flag is coupled to the gauge pointer by way of a special adaptor. Movement of the control flag in and out of the air gap causes an impedance change in the transistor oscillator circuit formed by the two coils which in turn triggers the switching amplifier. When the flag is inside the slot, circuit impedance is high and the contact relay is de-energized. Conversely, when the flag is outside the slot, the relay is energized. The technical specifications are listed in Table 1 on the next page.

## Control Units for CP 4000

The switching amplifier and control relay are housed in a separate control unit. Depending on the type of control unit used, inductive proximity sensor systems can be furnished in the following versions: standard for nonhazardous locations; intrinsically safe for hazardous locations; intrinsically safe with fail-safe circuitry. Control units are FM approved for use in Division I, Classes I and II, Groups A through G hazardous locations. The control units must be located outside the hazardous area. (See Table on next page).

## Fail Safe Circuitry

Type SN inductive proximity sensor together with control unit Type 904.17 is self monitoring, and its function is superimposed on the regular control function. Should any fault occur in the sensing head (such as short or open circuit, power failure or component failure), the control wiring or the control unit, the output relay is automatically de-energized.

## Control Units

required for inductive proximity alarm contacts - sold separately

| Type   | 904.XX |                                 |                             |             |
|--|--------|---------------------------------|-----------------------------|-------------|
| Control Units for Inductive Proximity Alarm Contacts |        |                                 |                             |             |
| Contact Rating                                       | Type   | Use                             | For Use With                | Part Number |
| 220 VAC, 5A,<br>1100 VA                              | 904.25 | General use                     | Single contacts Type 838.X  | 1195298     |
|  | 904.26 | General use                     | Double contacts Type 838.XX | 1195310     |
| 250 VAC, 4A,<br>500 VA                               | 904.15 | Intrinsically safe <sup>1</sup> | Single contacts Type 838.X  | 2367446     |
|  | 904.16 | Intrinsically safe <sup>1</sup> | Double contacts Type 838.XX | 2314762     |
|  | 904.17 | Intrinsically safe <sup>1</sup> | Fail safe (for one contact) | 2014548     |

<sup>1</sup> Intrinsically Safe (FM Approved)

Stock items shown in blue print

## CP3000/CP4000

**Table 1**

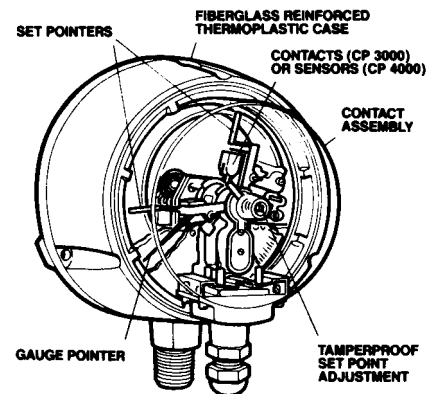
| Contact                    | Magnetic CP3000                | Inductive Proximity CP4000 |                    |                                   |                     |                                   |
|----------------------------|--------------------------------|----------------------------|--------------------|-----------------------------------|---------------------|-----------------------------------|
|                            |                                | Non-Hazardous              |                    | Hazardous Environment <FM>Control |                     |                                   |
| Unit #                     | (Built-in Triac)               | 904.25<br>MSR010-1         | 904.26<br>MSR020-1 | 904.15<br>WE77/EX-1               | 904.16<br>WE77/EX-2 | 904.17 Fail-safe<br>WE77/EX-SH-03 |
| Indicating Pressure Range  | 0/60 to 0/20,000 psi           | 0/30 to 0/20,000 psi       |                    |                                   |                     |                                   |
| Set Point Pressure Range   | 30 - 20,000 psi                | 5 - 20,000 psi             |                    |                                   |                     |                                   |
| Momentary Pressure         | 130%                           | 130%                       |                    |                                   |                     |                                   |
| Indicating Accuracy        | ± 3.0% FS                      | ± 1.0% FS                  |                    |                                   |                     |                                   |
| Operating Voltage          | 110 VAC/60Hz                   | 110 VAC/60Hz               |                    |                                   |                     |                                   |
| Contact Rating             | 24-220 VAC, 65 VA <sup>1</sup> | 220 VAC, 5A, 1100VA        |                    | 250 VAC, 4A, 500VA                |                     | 30V, 1.6A                         |
| Switching Frequency (Max)  | ---                            | 20 Hz                      |                    | 10Hz                              |                     | 0.5 Hz                            |
| Control Circuit            |                                |                            |                    |                                   |                     |                                   |
| Voltage                    | ---                            | ---                        |                    | 8 VDC                             |                     | 8 VDC                             |
| Current                    | min 30mA                       | ---                        |                    | 100 Ohms                          |                     | ---                               |
| Allowable Ext. Inductance  | ---                            | ---                        |                    | 31 mH / 7.6 mH                    |                     | 32 mH                             |
| Allowable Ext. Capacitance | ---                            | ---                        |                    | 609 nF / 539 nF                   |                     | 804 nF                            |
| Ambient Temperature Range  | -10° to 140° F                 | -10° to 140°F              |                    | -10° to 140° F                    |                     | -10° to 140°F                     |

**Table 2**

| Contact Type                | Control System                            | Area of Installation | # Of Contacts | Control Unit <sup>2</sup> | Control Unit Type Number |
|-----------------------------|---|----------------------|---------------|---------------------------|--------------------------|
| Magnetically-assisted       | Standard                                  | Non-hazardous        | 1             | --- 0                     |                          |
|                             |   |                      | 2             | --- 0                     |                          |
| Inductive Proximity         | Intrinsically safe                        | Hazardous            | 1             | 904.25                    | 1                        |
|                             |   |                      | 2             | 904.26                    | 2                        |
|                             |   | Non-hazardous        | 1             | 904.15                    | 3                        |
|                             |   |                      | 2             | 904.16                    | 4                        |
| Inductive Proximity Type SN | Intrinsically safe with fail-safe control | Non-hazardous        | 1             | 904.17                    | 5                        |
|                             |   |                      | 2             | 904.17 <sup>3</sup>       | 6                        |

**Table 3**

| Contact Arrangement |             |
|---------------------|-------------|
| Function            | Type Number |
| N.O.                | 8X8.1       |
| N.C.                | 8X8.2       |
| N.O. / N.O.         | 8X8.11      |
| N.O. / N.C.         | 8X8.12      |
| N.C. / N.O.         | 8X8.21      |
| N.C. / N.C.         | 8X8.22      |



<sup>1</sup> Minimum current of 10 mA must continuously flow from load.  
<sup>2</sup> Type 904 control units are combination power supply, switching modules for panel or relay rack mount. 904.15 & 904.25 units are 1.57" (40mm) wide, 2.76" (70mm) high and 4.33" (110mm) deep with mounting holes on 1.18" (30mm) horizontal & 2.36" (60mm) vertical centers. The wider 904.16/17 and 904.26 units are 2.35" (60mm) wide with 1.96" (50mm) horizontal mounting centers. Minimum mounting screw clearance is .19" (4.8mm).  
<sup>3</sup> Requires 2 units, one per contact.

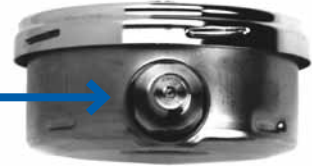
Accessories > Socket Restrictor/Drag Pointer/Alarm Contacts

## Socket Restrictor/Drag Pointer/Alarm Contacts

WIKA offers a full line of gauge accessories, including socket restrictors, drag pointers, and alarm contacts. Each of these products is an enhancement to the extensive WIKA product line.

### Socket Restrictor

Available in brass, stainless steel, or Monel®, the socket restrictor reduces the size of the internal bore. The restrictor dampens the effects of pulsation which in turn helps prevent internal damage to the Bourdon tube and movement and extends the life of the gauge.



### Drag Pointer (High Point Indicator)

The red drag pointer follows the regular pointer on increasing pressure, and remains at the highest point until it is reset by a knob on the front of the window. Drag pointers are best suited for dry gauges.



### Alarm Contacts

Many WIKA 2" (830.1E), 2½", 4", 4½" & 6" pressure gauges can be supplied with alarm contacts. Both inductive and magnetically-assisted contacts are available for dry and liquid-filled gauges. In addition, alarm contact assemblies are available for intrinsically-safe environments. Available on models 212.20, 23X.30, 23X.50, 2XX.34, 4XX.XX, and 7XX.XX.





# Pressure Gauge Accessories

| Alternate Window Assemblies |                 |                               |           |                 |
|-----------------------------|-----------------|-------------------------------|-----------|-----------------|
| Gauge Size                  | Gauge Type      | Window Type                   | Installed | Sold Separately |
|                             |                 |                               | Code      | Part Number     |
| 2½"                         | 611.10          | Instrument glass <sup>1</sup> | GLS       | 1208152         |
|                             | 21X.40          | Instrument glass              | GLS       | 1208160         |
|                             | 21X.40          | Safety glass                  | SG        | 1206761         |
|                             | 23X.30          | High temp glass               | HT        | 1327001         |
|                             | 23X.30          | Instrument glass              | GLS       | 1208195         |
|                             | 23X.30          | Safety glass                  | SG        | 1613367         |
|                             | 23X.54          | (PMMA) acrylic                | PMMA      | 1397796         |
| 4"                          | 612.20          | Safety glass                  | SG        | 54380           |
|                             | 21X.40          | Safety glass                  | SG        | 1208190         |
|                             | 2XX.54          | PC/Lexan                      | PC        | 1376675         |
| 4½"                         | 2X2.34 / 632.34 | Instrument glass              | GLS       | 561134          |
|                             | 2X2.34 / 632.34 | Safety glass                  | SG        | 561150          |
| 6"                          | 2XX.34          | Safety glass                  | SG        | 154075          |

<sup>1</sup> Includes black steel friction ring

| Adjustable Pointers |            |                 |
|---------------------|------------|-----------------|
| Gauge Size          | Gauge Type | Sold Separately |
|                     |            | Part Number     |
| 2½"                 | 232.54     | 1552813         |
|                     | 232.30     | 060992          |
| 4"                  | 232.54     | 1398709         |
| 6"                  | 232.50     | 061000          |

| Liquid Fill Adders (Add to the list price of a liquid fillable gauge) |      |      |                  |      |
|---|------|------|------------------|------|
| Fill Type   | 2½"  | 4"   | 4½" <sup>1</sup> | 6"   |
| Silicone  |      |      |                  |      |
|   | SIL  | SIL  | SIL              | SIL  |
| Halocarbon  |      |      |                  |      |
|   | HALO | HALO | HALO             | HALO |
| Fluorolube  |      |      |                  |      |
|   | FLR  | FLR  | FLR              | FLR  |

<sup>1</sup> Includes installation of membrane and fill plug for LM only.

NOTE: Only inert (Halocarbon/Fluorolube) fill fluid is compatible for use with oxygen service.

**NOTE: Any discount that applies to a pressure gauge also applies to its related accessories. All "Assemblies" sold separately include any additional parts (i.e. screws, gaskets, etc.) needed for installation.**

## Pressure Gauge Accessories

| Drag Pointer Assemblies                          |                 |              |                 |           |                 |
|--|-----------------|--------------|-----------------|-----------|-----------------|
| Gauge Size                                       | Gauge Type      | Window Type  | Reset Knob Type | Installed | Sold Separately |
|  |                 |              |                 | Code      | Part Number     |
| 2½"³   | 232.30³         | Acrylic      | Permanent       | DP        | 759805          |
|  | 213.40¹         | Acrylic      | Permanent       | DP        | 738344 ⁴        |
|  | 2XX.53³         | Acrylic      | Permanent       | DP        | 1193864 ⁴       |
|  | 2XX.54³         | Acrylic      | Permanent       | DP        | 1416405         |
| 4"   | 213.40¹         | Glass        | Removeable      | DP GLR    | 738352 ⁴        |
|  | 213.40¹         | Acrylic      | Permanent       | DP        | 1326651 ⁴       |
|  | 213.40¹         | Acrylic²     | Permanent       | DP        | 738395 ⁴        |
|  | 2XX.53 / 2XX.54 | Acrylic      | Permanent       | DP        | 1416570 ⁴       |
|  | 2XX.53 / 2XX.54 | Acrylic      | Removeable      | DP PMMAR  | 1410911         |
|  | 232.30 / 232.50 | Acrylic      | Permanent       | DP        | 1326635         |
|  | 232.30 / 232.50 | Acrylic²     | Permanent       | DP PMMA   | 1206133         |
|  | 232.30 / 232.50 | Acrylic      | Removeable      | DP PMMAR  | 738360          |
|  | 232.30 / 232.50 | Glass        | Permanent       | DP GL     | 1326678         |
|  | 232.30 / 232.50 | Glass²       | Permanent       | DP GL     | 738425          |
|  | 232.30 / 232.50 | Glass        | Removeable      | DP GLR    | 738387          |
|  | 232.30 / 232.50 | Safety glass | Permanent       | DP SG     | 1326660         |
| 4½"  | 2X2.34          | Acrylic      | Permanent       | DP        | 738441          |
|  | 2X2.34          | Acrylic      | Removeable      | DP PMMAR  | 738433          |
| 6"   | 232.50 / 312.20 | Acrylic      | Permanent       | DP        | 738492          |
|  | 232.50 / 312.20 | Acrylic      | Removeable      | DP PMMAR  | 738450          |
|  | 232.50 / 312.20 | Glass        | Permanent       | DP GL     | 738506          |
|  | 232.50 / 312.20 | Glass        | Removeable      | DP GLR    | 738476          |
|  | 232.50 / 312.20 | Safety glass | Permanent       | DP SG     | 738484          |
|  | 232.50 / 312.20 | Safety glass | Removeable      | DP SGR    | 738468          |
| Attach "removeable" knob with permanent adhesive |                 |              |                 | 2069334   |                 |

¹ Minimum pressure range of 160 psi is required. Due to its high viscosity, the standard glycerine filling is replaced with a glycerine/water filling.

Accuracy is reduced to ± 5.0% of full span.

² Use for pressures equal to or below 30 psi full span.

³ For 2½" drag pointers: For pressure ranges ≤100 psi ; Additional accuracy reduction: DRY: ±3%FS, LF:±5%

⁴ For pressure ranges > 100 psi; Additional accuracy reduction: DRY: ± 1.5%FS, LF:±3%

Special tooling required for Part Numbers 738344, 1193864, 738352, 1326651, 738395 & 1416570

| Certificates of Calibration<br>Traceable to NIST standards |             |
|--|-------------|
| NIST Standard  | Part Number |
| ± 0.1% accuracy<br>(Type 342.XX)                           | CC          |
| ± 0.25% accuracy<br>(Type 3X2.20 / 332.X4)                 | CC          |
| ± 0.5% to ±3/2/3%<br>accuracy¹                             | CC          |

¹Any discount that applies to a pressure gauge also applies to this NIST certificate

| Certifying Gauges to ASME B40.100 Cleanliness Level IV<br>(Includes cap on socket. Individually bagged and labeled) |                 |
|---|-----------------|
| Gauge Type  | Sold Separately |
| 111.XX  | 2250578         |
| 2X2.53, 2X2.54, 132.53,<br>2X2.34 LM, 2X2.25HR,<br>& 332.54   | 2250560         |
| 712.XX  | 2250586         |

NOTE: For high volume orders, contact factory about a special order production to lower costs.

**NOTE: Any discount that applies to a pressure gauge also applies to its related accessories. All "Assemblies" sold separately include any additional parts (i.e. screws, gaskets, etc.) needed for installation.**

Accessories >> General Information > Pressure Gauge Accessories

# Pressure Gauge Accessories

| <b>Front Flange Assemblies - Sold Separately</b><br>(Includes screws to mount to case where necessary) |                           |                           |                          |             |
|--|---------------------------|---------------------------|--------------------------|-------------|
| Gauge Size   | Fits Gauge                | Description               | Mounting                 | Part Number |
| 2"   | 111.12                    | Black painted steel       | screw retained           | 1327080     |
|  | 111.12                    | Chrome plated steel       | screw retained           | 1327082     |
|  | 21X.53                    | Stainless steel polished  | arbor press <sup>1</sup> | 1184954     |
| 2½"  | 111.10                    | Black painted steel       | screw retained           | 1327084     |
|  | 111.10                    | Chrome plated steel       | screw retained           | 1327086     |
|  | 113.13                    | Black ABS plastic         | snap-fit                 | 572861      |
|  | 213.40                    | Brass polished            | screw retained           | 1327116     |
|  | 213.40                    | Chrome plated steel       | screw retained           | 1327118     |
|  | 213.40                    | Stainless steel polished  | screw retained           | 1327114     |
|  | 23X.30/50                 | Stainless steel polished  | bayonet                  | 50618393    |
|  | 2XX.53                    | Stainless steel polished  | arbor press <sup>1</sup> | 4005899     |
|  | 23X.54                    | Stainless steel polished  | arbor press <sup>1</sup> | 4005902     |
|  | 611.10                    | Chrome plated brass (CBM) | screw retained           | 659606      |
| 611.10   | Black painted steel (CBM) | screw retained            | 659614                   |             |
| 4"   | 212.20                    | Stainless steel polished  | bayonet lock             | 659576      |
|  | 213.40                    | Chrome plated brass       | screw retained           | 501115      |
|  | 2XX.53 / 54               | Stainless steel polished  | arbor press <sup>1</sup> | 1418556     |
|  | 232.30/50                 | Stainless steel polished  | bayonet lock             | 659576      |
|  | 612.20                    | Stainless steel polished  | bayonet lock             | 659576      |
|  | 632.50                    | Stainless steel polished  | bayonet lock             | 659576      |
| 4½" Panel Adapters   | 213.40                    | Stainless steel polished  | screw-retained           | 738549      |
|  | 2XX.53/2XX.54             | Stainless steel polished  | arbor press <sup>1</sup> | 1653903     |
|  | 2XX.34                    | Stainless steel polished  | hand-threaded            | 738581      |
| 6"   | 212.20                    | Stainless steel polished  | bayonet lock             | 659584      |
|  | 232.30/50                 | Stainless steel polished  | bayonet lock             | 659584      |
|  | 312.20                    | Stainless steel polished  | bayonet lock             | 659584      |

<sup>1</sup> Special arbor press and fixtures required for installation. Contact factory for price and availability of press and fixtures.

| <b>Rear Flange Assemblies - Sold Separately</b><br>(Includes screws to mount to case where necessary) |            |                              |                                  |             |
|---|------------|------------------------------|----------------------------------|-------------|
| Gauge Size  | Fits Gauge | Description                  | Mounting                         | Part Number |
| 2½"   | 213.40     | Polished brass               | screw retained <sup>2</sup>      | 1206621     |
|   | 2XX.53     | Polished stainless steel     | snap-fit, crimp tab <sup>1</sup> | 1491695     |
|   | 2XX.54     | Polished stainless steel     | snap-fit, crimp tab <sup>1</sup> | 2256096     |
| 4"  | 111.10     | Black ABS plastic            | screw-retained                   | 1207555     |
|   | 213.40     | Chrome plated brass          | screw retained <sup>2</sup>      | 1206630     |
|   | 2XX.53     | Polished stainless steel     | snap-fit, crimp tab <sup>1</sup> | 1572865     |
|   | 2XX.54     | Polished stainless steel     | snap-fit, crimp tab <sup>1</sup> | 1572865     |
| 4½"   | 111.25     | Satin-finish stainless steel | spot welded                      | 4001605     |
| 6"  | 212.20     | Polished stainless steel     | spot welded                      | 1353217     |
|   | 312.20     | Polished stainless steel     | spot welded                      | 1353217     |
|   | 23X.50     | Polished stainless steel     | spot welded                      | 1353217     |

<sup>1</sup>Rear flange snaps onto case. Two tabs must be crimped to secure flange to the case. Special tool available. Contact factory.

<sup>2</sup> Special case required. Must be factory installed.

**NOTE: Any discount that applies to a pressure gauge also applies to its related accessories. All "Assemblies" sold separately include any additional parts (i.e. screws, gaskets, etc.) needed for installation.**

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

# ACCESSORIES

## U-clamp Assemblies - Sold Separately

Includes profile ring, bracket, & screws (where necessary)

| Gauge Size | Fits Gauge | Profile Ring Material    | Bracket Material  | Mounting                 | Part Number          |
|------------|------------|--------------------------|-------------------|--------------------------|----------------------|
| 2"         | 21X.53     | Polished stainless steel | Zinc plated steel | twist-on socket          | 1184890              |
| 2 1/2"     | 213.40     | Chrome plated steel      | Zinc plated steel | screw retained           | 0659665              |
|            | 2XX.53     | Polished stainless steel | Zinc plated steel | snap-fit bracket         | 9092331              |
|            | 2XX.53     | Polished stainless steel | Stainless steel   | snap-fit bracket         | 1405829              |
|            | 23X.54     | Polished stainless steel | Zinc plated steel | snap-fit bracket         | 1410334 <sup>2</sup> |
|            | 23X.54     | Polished stainless steel | Stainless steel   | snap-fit bracket         | 1410342 <sup>2</sup> |
| 4"         | 213.40     | Chrome plated steel      | Zinc plated steel | screw retained           | 659673               |
|            | 2XX.53     | Polished stainless steel | Zinc plated steel | snap-fit bracket         | 1487850              |
|            | 2XX.53     | Polished stainless steel | Stainless steel   | snap-fit bracket         | 1487841              |
|            | 23X.54     | Polished stainless steel | Zinc plated steel | arbor press <sup>1</sup> | 1410318              |
|            | 23X.54     | Polished stainless steel | Stainless steel   | arbor press <sup>1</sup> | 1410326              |

<sup>1</sup> Installation requires special tooling. Contact factory for more information.

<sup>2</sup> Includes U-Clamp and standoff ring

## Individual Restrictors - Sold Separately

| Gauge Size           | Description                             | Thread | Orifice      | Part Number |
|----------------------|---|--------|--------------|-------------|
| 212.20/21X.34        | Brass threaded                          | M4     | .023" (.6mm) | 0004324     |
| 26X.34               | Monel threaded                          | M4     | .023" (.6mm) | 0607797     |
| 111.10/111.12/21X.53 | Brass, press-in                         | --     | .012" (.3mm) | 0525340     |
| All others           | SS threaded for 1 1/2", 2", 2 1/2"      | M3.5   | .012" (.3mm) | 0165522     |
|                      | SS threaded for 2 1/2", 4", 4 1/2" & 6" | M4     | .023" (.6mm) | 0029122     |
|                      | Brass threaded                          | M3.5   | .020" (.5mm) | 0030872     |

Threaded restrictors require gauges to have an internal tap. (Internal tap is standard on all 4 1/2" Type 2xx.34 process gauges).

Press-in restrictors require a special tool for insertion.

<sup>1</sup>Use M4 size restrictor for current Type 23X.5X with welded case-to-socket connection.

## Miscellaneous Accessories

| Gauge Size | Fits Gauge                                 | Description                             | Part Number |
|------------|--|---|-------------|
| 2 1/2"     | 111.10 / 113.13 / 21X.53 / 23X.53 / 23X.50 | Blue rubber cover - LM                  | 9090894     |
|            | 111.10 / 113.13 / 21X.53 / 23X.53 / 23X.50 | Red rubber cover - LM                   | 9090886     |
|            | 111.12 / 21X.53 / 23X.53 / 23X.50          | Blue rubber cover - CBM                 | 2169542     |
| 4"         | 13X.53 / 21X.53 / 23X.53 / 23X.50          | Blue rubber cover - LM                  | 9090916     |
| 2"         | 111.12                                     | Clear plastic adaptor ring <sup>1</sup> | 644838      |
|            | 111.12                                     | Black plastic adaptor ring <sup>1</sup> | 1601105     |
| 2 1/2"     | 111.12                                     | Clear plastic adaptor ring <sup>1</sup> | 646989      |
|            | 111.12                                     | Black plastic adaptor ring <sup>1</sup> | 658332      |

<sup>1</sup> For CBM Only

## Pressure Gauge Tools

| Description                                  | Part Number |
|--|-------------|
| Cover ring remover for Type 213.40 - 2 1/2"  | 1456784     |
| Pointer puller tool                          | 9091823     |
| Spare tip for pointer puller tool            | 1400401     |
| Threaded ring tool (for Type 2XX.34- 4 1/2") | 1031589     |
| Pointer puller adaptor for "Long-Hub"        | 2246954     |
| Pointers (use with #9091823 above)           |             |

**NOTE: Any discount that applies to a pressure gauge also applies to its related accessories. All "Assemblies" sold separately include any additional parts (i.e. screws, gaskets, etc.) needed for installation.**

## Fill Liquids - Sold Separately

| Fill Liquid      | Size (Volume)         | Part Number |
|------------------|-----------------------|-------------|
| Glycerine        | Gallon (128 oz.)      | 251         |
|                  | Squirt bottle (8 oz.) | 204         |
| Silicone oil     | Gallon (128 oz.)      | 279         |
|                  | Squirt bottle (8 oz.) | 207         |
| DC 200 -1000 cst | Squirt bottle (8 oz.) | 206         |
| Fluorolube       | Squirt bottle (8 oz.) | 277         |

## Tags

| Size | Fits Gauge | Description  | Code |
|------|------------|--|------|
| All  | All        | SS tag (attached) with up to 10-char single-line imprint | TAG  |
| All  | All        | Paper tag  | PTAG |

# Pressure Gauge Accessories

| Standard Pressure Ranges for all Sizes<br>(All ranges not stocked) |           |               |                               |            |               |
|--|-----------|---------------|-------------------------------|------------|---------------|
| Single Scale Ranges  |           |               | Dual Scale Ranges (psi / ...) |            |               |
| psi  | bar       | kPa           | /kg-cm <sup>2</sup>           | /bar       | /kPa          |
| 30"Hg/0 (VAC)  | -1        | -100          | -1                            | -1         | -100          |
| 30"Hg/0/15 psi   | -1 / +1   | -100 / +100   | -1 / +1                       | -1 / +1    | -100 / +102   |
| 30"Hg/0/30 psi   | -1 / +2.5 | -100 / +250   | -1 / +2.1                     | -1 / +2    | -100 / +205   |
| 30"Hg/0/60 psi   | -1 / +4   | -100 / +400   | -1 / +4.2                     | -1 / +4    | -100 / +410   |
| 30"Hg/0/100 psi  | -1 / +6   | -100 / +600   | -1 / +7                       | -1 / +6.8  | -100 / +680   |
| 30"Hg/0/160 psi  | -1 / +10  | -100 / +1,000 | -1 / +11                      | -1 / +11   | -100 / +1,100 |
| 30"Hg/0/200 psi  | -1 / +16  | -100 / +1,600 | -1 / +14                      | -1 / +13.5 | -100 / +1,380 |
| 0/10   | 0/0.6     | 0/60          | --                            | --         | 0/69          |
| 0/15   | 0/1       | 0/100         | 0/1.04                        | 0/1.02     | 0/100         |
| 0/30   | 0/2.5     | 0/250         | 0/2.1                         | 0/2.05     | 0/200         |
| 0/60   | 0/4       | 0/400         | 0/4.2                         | 0/4.1      | 0/410         |
| 0/100  | 0/6       | 0/600         | 0/7                           | 0/6.8      | 0/690         |
| 0/160  | 0/10      | 0/1,000       | 0/11.2                        | 0/11       | 0/1,100       |
| 0/200  | 0/16      | 0/1,600       | 0/14                          | 0/13.5     | 0/1,350       |
| 0/300  | --        | --            | 0/21                          | 0/20.5     | 0/2,050       |
| 0/400  | 0/25      | 0/2,500       | 0/28                          | 0/27       | 0/2,700       |
| 0/600  | 0/40      | 0/4,000       | 0/43                          | 0/41       | 0/4,100       |
| 0/800  | --        | --            | 0/56                          | 0/55       | 0/5,400       |
| 0/1,000  | 0/60      | 0/6,000       | 0/70                          | 0/68       | 0/6,800       |
| 0/1,500  | 0/100     | 0/10,000      | 0/104                         | 0/102      | 0/10,200      |
| 0/2,000  | 0/160     | 0/16,000      | 0/140                         | 0/135      | 0/13,500      |
| 0/3,000  | 0/250     | 0/25000       | 0/210                         | 0/205      | 0/20,500      |
| 0/5,000  | --        | --            | 0/350                         | 0/340      | 0/34,000      |
| 0/6,000  | 0/400     | 0/40000       | 0/420                         | 0/410      | 0/41,000      |
| 0/7,500  |           |               | 0/530                         | 0/517      | 0/50,000      |
| 0/10,000   | 0/600     | 0/60,000      | 0/700                         | 0/690      | 0/68,000      |
| 0/15,000   | 0/1,000   | 0/100,000     | 0/1,050                       | 0/1,030    | 0/102,000     |
| 0/20,000   | 0/1,600   | 0/160,000     | 0/1,400                       | 0/1,380    | 0/137,000     |

| PSI / Ft. H <sub>2</sub> O Dual Scales<br>For Type 2XX.34 - 4 1/2" |                      |
|--|----------------------|
| PSI  | Ft. H <sub>2</sub> O |
| 30/0/15  | -34/0/34             |
| 30/0/30  | -34/0/70             |
| 30/0/60  | -34/0/140            |
| 15   | 34                   |
| 30   | 70                   |
| 60   | 140                  |
| 100  | 230                  |
| 160  | 370                  |
| 200  | 460                  |

NOTE:  
WIKA is capable of producing almost any type of custom artwork, including special scales, fonts and logos. Please contact your WIKA distributor or the factory for availability, price and lead times.

To order Type 2XX.34 gauges with dual scale psi/ft. H<sub>2</sub>O dials, specify gauge part number + the following numbers:

XXX = psi range desired

Ex: 232.34 4 1/2" XXX / psi / ft. H<sub>2</sub>O 1/2" L



**Accuracy + 3/2/3%, 2.5%, 1.5% ± 2/1/2 & 1.0% F.S.**  
Types 1XX.XX and 2XX.XX  
(not including Type 2XX.34 Process Gauges)

| PRESSURE RANGES                 |                          | Size 1 1/2", 2" & 2 1/2"  |                          | Size 3 1/2", 4" & 6"      |                          |
|---------------------------------|--------------------------|---------------------------|--------------------------|---------------------------|--------------------------|
| Range                           | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) |
| PSI                             | PSI                      | PSI                       | PSI                      | PSI                       | PSI                      |
| 10                              | 2                        | 0.2                       | --                       | --                        | --                       |
| 15                              | 3                        | 0.2                       | 3                        | 0.2                       | 0.2                      |
| 30                              | 5                        | 0.5                       | 5                        | 0.5                       | 0.5                      |
| 60                              | 10                       | 1                         | 10                       | 1                         | 1                        |
| 100                             | 20                       | 2                         | 10                       | 1                         | 1                        |
| 160                             | 20                       | 2                         | 20                       | 2                         | 2                        |
| 200                             | 50                       | 5                         | 20                       | 2                         | 2                        |
| 300                             | 50                       | 5                         | 50                       | 5                         | 5                        |
| 400                             | 100                      | 10                        | 50                       | 5                         | 5                        |
| 600                             | 100                      | 10                        | 100                      | 10                        | 10                       |
| 800                             | 200                      | 20                        | 100                      | 10                        | 10                       |
| 1,000                           | 200                      | 20                        | 100                      | 10                        | 10                       |
| 1,500                           | 300                      | 20                        | 300                      | 20                        | 20                       |
| 2,000                           | 500                      | 50                        | 200                      | 20                        | 20                       |
| 3,000                           | 500                      | 50                        | 500                      | 50                        | 50                       |
| 5,000                           | 1,000                    | 100                       | 500                      | 50                        | 50                       |
| 7,500                           | 1,000                    | 100                       | --                       | --                        | --                       |
| 10,000                          | 2,000                    | 200                       | 1,000                    | 100                       | 100                      |
| 15,000                          | 3,000                    | 200                       | 3,000                    | 200                       | 200                      |
| 20,000                          | ---                      | ---                       | 2,000                    | 200                       | 200                      |
| <b>VACUUM RANGE<sup>1</sup></b> |                          |                           |                          |                           |                          |
| Range                           | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) |
| 30-0 "Hg                        | 5 "Hg                    | 0.5 "Hg                   | 5 "Hg                    | 0.5 "Hg                   | 0.5 "Hg                  |
| <b>COMPOUND RANGES</b>          |                          |                           |                          |                           |                          |
| Range                           | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) |
| "Hg PSI                         | "Hg PSI                  | "Hg PSI                   | "Hg PSI                  | "Hg PSI                   | "Hg PSI                  |
| 30-0- 15                        | 10 5                     | 1 0.5                     | 5 3                      | 1 0.5                     | 0.5                      |
| 30-0- 30                        | 10 10                    | 2 1                       | 10 5                     | 1 0.5                     | 0.5                      |
| 30-0- 60                        | 30 20                    | 2 2                       | 10 10                    | 2 2                       | 2                        |
| 30-0- 100                       | 30 20                    | 5 2                       | 30 10                    | 5 2                       | 2                        |
| 30-0- 160                       | 30 20                    | 10 5                      | 30 20                    | 5 5                       | 5                        |
| 30-0- 200                       | 30 50                    | 10 5                      | 30 20                    | 5 5                       | 5                        |

**ABBREVIATIONS**  
**Fig. Inter. -** spacing between numbers (figures) printed on dial  
**Grad. Inter. -** spacing between tick marks (graduations) printed on dial  
**F.S. -** full scale. All accuracies are percentages of the full scale range of the gauge.

**Accuracy + 1.5% F.S.**  
Type 6XX.XX Low Pressure Gauges

| PRESSURE RANGE                  |                          | Size 2 1/2"               |                          | Size 4"                   |                          |
|---------------------------------|--------------------------|---------------------------|--------------------------|---------------------------|--------------------------|
| Range (dual scale)              | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) |
| Inch. (mm) Water                | Inch. (mm) Water         | Inch. (mm) Water          | Inch. (mm) Water         | Inch. (mm) Water          | Inch. (mm) Water         |
| 15 (380)                        | 5 (100)                  | 0.5 (10)                  | 3 (50)                   | 0.2 (5)                   | 0.2 (5)                  |
| 30 (760)                        | 5 (200)                  | 0.5 (20)                  | 5 (100)                  | 0.5 (10)                  | 0.5 (10)                 |
| 60 (1,500)                      | 10 (500)                 | 1 (50)                    | 10 (300)                 | 1 (20)                    | 1 (20)                   |
| 100 (2,500)                     | 20 (500)                 | 2 (50)                    | 10 (500)                 | 1 (50)                    | 1 (50)                   |
| 200 (5,000)                     | 50 (1,000)               | 5 (100)                   | 20 (1,000)               | 2 (100)                   | 2 (100)                  |
| Range (dual scale)              | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) |
| Oz./ (mm) Sq.in. Water          | Oz./ (mm) Sq.in. Water   | Oz./ (mm) Sq.in. Water    | Oz./ (mm) Sq.in. Water   | Oz./ (mm) Sq.in. Water    | Oz./ (mm) Sq.in. Water   |
| 10 (400)                        | 2 (100)                  | 0.2 (10)                  | 1 (100)                  | 0.1 (10)                  | 0.1 (10)                 |
| 15 (660)                        | 5 (100)                  | 0.5 (10)                  | 3 (100)                  | 0.2 (10)                  | 0.2 (10)                 |
| 20 (880)                        | 5 (200)                  | 0.5 (20)                  | 2 (200)                  | 0.2 (20)                  | 0.2 (20)                 |
| 30 (1,320)                      | 5 (200)                  | 0.5 (50)                  | 5 (200)                  | 0.5 (20)                  | 0.5 (20)                 |
| 35 (1,540)                      | 5 (500)                  | 0.5 (50)                  | 5 (300)                  | 0.5 (20)                  | 0.5 (20)                 |
| 60 (2,640)                      | 10 (500)                 | 1 (50)                    | 10 (500)                 | 1 (50)                    | 1 (50)                   |
| Range (dual scale)              | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) |
| Oz./ (In. Sq.in. Water)         | Oz./ (In. Sq.in. Water)  | Oz./ (In. Sq.in. Water)   | Oz./ (In. Sq.in. Water)  | Oz./ (In. Sq.in. Water)   | Oz./ (In. Sq.in. Water)  |
| 20 (34)                         | 5 (10)                   | 0.5 (1)                   | --                       | --                        | --                       |
| 32 (55)                         | 5 (10)                   | 0.5 (1)                   | --                       | --                        | --                       |
| Range                           | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) |
| PSI                             | PSI                      | PSI                       | PSI                      | PSI                       | PSI                      |
| 3                               | 0.5                      | 0.05                      | 0.5                      | 0.05                      | 0.05                     |
| 5                               | 1                        | 0.1                       | 0.5                      | 0.5                       | 0.5                      |
| 10                              | 2                        | 0.2                       | 1                        | 0.1                       | 0.1                      |
| <b>VACUUM RANGE<sup>1</sup></b> |                          |                           |                          |                           |                          |
| Range (dual scale)              | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) | Grad. Inter. (dual scale) | Fig. Inter. (dual scale) |
| Inch. (mm) Water                | Inch. (mm) Water         | Inch. (mm) Water          | Inch. (mm) Water         | Inch. (mm) Water          | Inch. (mm) Water         |
| 30-0 (760)                      | 5 (200)                  | 0.5 (20)                  | 5 (100)                  | 0.5 (10)                  | 0.5 (10)                 |

Numbers in *italic* are dual scale ranges which are printed in red on dual scale dials

GENERAL INFORMATION

Standard Dial Layouts

# Standard Dial Layouts

## Accuracy + 0.1% of span Type 342.11 Precision Test Gauges

| PRESSURE RANGE            |             |              |
|---------------------------|-------------|--------------|
| Size 10"                  |             |              |
| Range                     | Fig. Inter. | Grad. Inter. |
| 10                        | 0.5         | 0.02         |
| 15                        | 0.5         | 0.02         |
| 20                        | 1           | 0.05         |
| 30                        | 1           | 0.05         |
| 60                        | 2           | 0.1          |
| 100                       | 5           | 0.2          |
| 150                       | 5           | 0.2          |
| 200                       | 10          | 0.5          |
| 300                       | 10          | 0.5          |
| 400                       | 20          | 1            |
| 600                       | 20          | 1            |
| 800                       | 20          | 1            |
| 1,000                     | 50          | 2            |
| 1,500                     | 50          | 2            |
| 2,000                     | 100         | 5            |
| 3,000                     | 100         | 5            |
| 4,000                     | 200         | 10           |
| 5,000                     | 500         | 10           |
| 6,000                     | 200         | 10           |
| 7,500                     | 500         | 20           |
| 10,000                    | 500         | 20           |
| 15,000                    | 500         | 20           |
| 20,000                    | 1,000       | 50           |
| Range                     | Fig. Inter. | Grad. Inter. |
| in. Water                 | in. Water   | in. Water    |
| 300                       | 10          | 0.5          |
| 400                       | 20          | 1            |
| 500                       | 20          | 1            |
| 600                       | 20          | 1            |
| 800                       | 20          | 1            |
| 1,000                     | 50          | 2            |
| VACUUM RANGE <sup>1</sup> |             |              |
| Range                     | Fig. Inter. | Grad. Inter. |
| 30-0 "Hg                  | 2 "Hg       | 0.1 "Hg      |
| COMPOUND RANGES           |             |              |
| Range                     | Fig. Inter. | Grad. Inter. |
| "Hg PSI                   | "Hg PSI     | "Hg PSI      |
| 30-0-15                   | 5 5         | 0.2 0.1      |
| 30-0-30                   | 5 5         | 0.5 0.2      |
| 30-0-60                   | 10 5        | 1 0.5        |
| 30-0-100                  | 10 10       | 1 0.5        |
| 30-0-160                  | 30 10       | 2 1          |
| 30-0-200                  | 30 20       | 2 1          |

<sup>1</sup>Pointer travel in vacuum range gauges is counter-clockwise

## Accuracy + 0.25% of span Type 3XX.XX Test Gauges

| PRESSURE RANGES           |             |              |
|---------------------------|-------------|--------------|
| Size 4" & 6"              |             |              |
| Range                     | Fig. Inter. | Grad. Inter. |
| 15                        | 1           | 0.05         |
| 30                        | 2           | 0.1          |
| 60                        | 5           | 0.2          |
| 100                       | 10          | 0.5          |
| 160                       | 10          | 1            |
| 200                       | 20          | 1            |
| 300                       | 20          | 1            |
| 400                       | 50          | 2            |
| 600                       | 50          | 2            |
| 800                       | 100         | 5            |
| 1,000                     | 100         | 5            |
| 1,500                     | 100         | 5            |
| 2,000                     | 200         | 10           |
| 3,000                     | 200         | 10           |
| 5,000                     | 500         | 20           |
| 10,000                    | 1,000       | 50           |
| 15,000                    | 1,000       | 50           |
| 20,000                    | 2,000       | 100          |
| VACUUM RANGE <sup>1</sup> |             |              |
| Range                     | Fig. Inter. | Grad. Inter. |
| 30-0 "Hg                  | 2 "Hg       | 0.1 "Hg      |
| COMPOUND RANGES           |             |              |
| Range                     | Fig. Inter. | Grad. Inter. |
| "Hg PSI                   | "Hg PSI     | "Hg PSI      |
| 30-0-15                   | 5 5         | 0.2 0.1      |
| 30-0-30                   | 5 5         | 0.5 0.2      |
| 30-0-60                   | 10 5        | 1 0.5        |
| 30-0-100                  | 10 10       | 1 0.5        |
| 30-0-160                  | 30 10       | 2 1          |
| 30-0-200                  | 30 20       | 2 1          |

## Accuracy + 0.5% of span Type 2XX.34 Process Gauges

| PRESSURE RANGES           |             |              |
|---------------------------|-------------|--------------|
| Size 4 1/2" & 6"          |             |              |
| Range                     | Fig. Inter. | Grad. Inter. |
| 15                        | 1           | 0.1          |
| 30                        | 5           | 0.2          |
| 60                        | 5           | 0.5          |
| 100                       | 10          | 1            |
| 160                       | 20          | 1            |
| 200                       | 20          | 2            |
| 300                       | 50          | 2            |
| 400                       | 50          | 5            |
| 600                       | 50          | 5            |
| 800                       | 100         | 10           |
| 1,000                     | 100         | 10           |
| 1,500                     | 200         | 10           |
| 2,000                     | 200         | 20           |
| 3,000                     | 500         | 20           |
| 5,000                     | 500         | 50           |
| 10,000                    | 1,000       | 100          |
| 15,000                    | 2,000       | 100          |
| 20,000                    | 2,000       | 200          |
| VACUUM RANGE <sup>1</sup> |             |              |
| Range                     | Fig. Inter. | Grad. Inter. |
| 30-0 "Hg                  | 5 "Hg       | 0.2 "Hg      |
| COMPOUND RANGES           |             |              |
| Range                     | Fig. Inter. | Grad. Inter. |
| "Hg PSI                   | "Hg PSI     | "Hg PSI      |
| 30-0-15                   | 5 3         | 0.5 0.2      |
| 30-0-30                   | 10 5        | 1 0.5        |
| 30-0-60                   | 10 10       | 1 1          |
| 30-0-100                  | 30 10       | 2 1          |
| 30-0-160                  | 30 20       | 5 2          |
| 30-0-200                  | 30 20       | 5 2          |

## Accuracy + 1.5% & 2.5% of span Type 4XX.XX Sealgauges<sup>®</sup>

| PRESSURE RANGES                       |             |              |
|---------------------------------------|-------------|--------------|
| Sealgauges <sup>®</sup> Sizes 4" & 6" |             |              |
| Range                                 | Fig. Inter. | Grad. Inter. |
| in. Water                             | in. Water   | in. Water    |
| 5                                     | 1           | 0.10         |
| 10                                    | 1           | 0.10         |
| 15                                    | 3           | 0.25         |
| 30                                    | 5           | 0.50         |
| 60                                    | 10          | 1            |
| 100                                   | 10          | 1            |
| 200                                   | 20          | 2            |
| Range                                 | Fig. Inter. | Grad. Inter. |
| Oz./Sq. in.                           | Oz./Sq. in. | Oz./Sq. in.  |
| 5                                     | 1           | 0.10         |
| 10                                    | 1           | 0.10         |
| 15                                    | 3           | 0.25         |
| 20                                    | 2           | 0.20         |
| 30                                    | 5           | 0.50         |
| 35                                    | 5           | 0.50         |
| 60                                    | 10          | 1            |
| 100                                   | 20          | 2            |
| 180                                   | 50          | 5            |
| Range                                 | Fig. Inter. | Grad. Inter. |
| PSI                                   | PSI         | PSI          |
| 10                                    | 1           | 0.2          |
| 15                                    | 3           | 0.5          |
| 30                                    | 5           | 0.5          |
| 60                                    | 10          | 1            |
| 100                                   | 10          | 1            |
| 160                                   | 20          | 2            |
| 200                                   | 20          | 2            |
| 300                                   | 50          | 5            |
| 400                                   | 50          | 5            |
| 600                                   | 50          | 5            |
| VACUUM RANGE <sup>1</sup>             |             |              |
| Range                                 | Fig. Inter. | Grad. Inter. |
| 30-0 "Hg                              | 5 "Hg       | 0.5 "Hg      |
| COMPOUND RANGES                       |             |              |
| Range                                 | Fig. Inter. | Grad. Inter. |
| "Hg PSI                               | "Hg PSI     | "Hg PSI      |
| 30-0-10                               | 5 2         | 0.5 0.2      |
| 30-0-15                               | 5 3         | 1 0.5        |
| 30-0-30                               | 10 5        | 1 0.5        |
| 30-0-60                               | 10 10       | 2 2          |
| 30-0-100                              | 10 10       | 5 2          |
| 30-0-160                              | 30 20       | 5 2          |
| 30-0-200                              | 30 20       | 5 2          |
| 30-0-300                              | 30 50       | 5 2          |
| 30-0-400                              | 30 50       | 10 5         |



# GENERAL INFORMATION

## How to convert from °Celsius to °Fahrenheit, or °Fahrenheit to °Celsius

Locate the known temperature (either Fahrenheit or Celsius) in the center shaded column.

Read left to convert from Celsius to Fahrenheit,

or right to convert from Fahrenheit to Celsius.

| To °F  | From | To °C  | To °F | From | To °C | To °F | From | To °C  | To °F | From | To °C  | To °F | From | To °C  | To °F  | From | To °C  | To °F | From | To °C |
|--------|------|--------|-------|------|-------|-------|------|--------|-------|------|--------|-------|------|--------|--------|------|--------|-------|------|-------|
| -148.0 | -100 | -73.33 | 75.2  | 24   | -4.44 | 298.4 | 148  | 64.44  | 521.6 | 272  | 133.33 | 744.8 | 396  | 202.22 | 968.0  | 520  | 271.11 |       |      |       |
| -144.4 | -98  | -72.22 | 78.8  | 26   | -3.33 | 302.0 | 150  | 65.56  | 525.2 | 274  | 134.44 | 748.4 | 398  | 203.33 | 971.6  | 522  | 272.22 |       |      |       |
| -140.8 | -96  | -71.11 | 82.4  | 28   | -2.22 | 305.6 | 152  | 66.67  | 528.8 | 276  | 135.56 | 752.0 | 400  | 204.44 | 975.2  | 524  | 273.33 |       |      |       |
| -137.2 | -94  | -70.00 | 86.0  | 30   | -1.11 | 309.2 | 154  | 67.78  | 532.4 | 278  | 136.67 | 755.6 | 402  | 205.56 | 978.8  | 526  | 274.44 |       |      |       |
| -133.6 | -92  | -68.89 | 89.6  | 32   | 0.00  | 312.8 | 156  | 68.89  | 536.0 | 280  | 137.78 | 759.2 | 404  | 206.67 | 982.4  | 528  | 275.56 |       |      |       |
| -130.0 | -90  | -67.78 | 93.2  | 34   | 1.11  | 316.4 | 158  | 70.00  | 539.6 | 282  | 138.89 | 762.8 | 406  | 207.78 | 986.0  | 530  | 276.67 |       |      |       |
| -126.4 | -88  | -66.70 | 96.8  | 36   | 2.22  | 320.0 | 160  | 71.11  | 543.2 | 284  | 140.00 | 766.4 | 408  | 208.89 | 989.6  | 532  | 277.78 |       |      |       |
| -122.8 | -86  | -65.56 | 100.4 | 38   | 3.33  | 323.6 | 162  | 72.22  | 546.8 | 286  | 141.11 | 770.0 | 410  | 210.00 | 993.2  | 534  | 278.89 |       |      |       |
| -119.2 | -84  | -64.44 | 104.0 | 40   | 4.44  | 327.2 | 164  | 73.33  | 550.4 | 288  | 142.22 | 773.6 | 412  | 211.11 | 996.8  | 536  | 280.00 |       |      |       |
| -115.6 | -82  | -63.33 | 107.6 | 42   | 5.56  | 330.8 | 166  | 74.44  | 554.0 | 290  | 143.33 | 777.2 | 414  | 212.22 | 1000.4 | 538  | 281.11 |       |      |       |
| -112.0 | -80  | -62.22 | 111.2 | 44   | 6.67  | 334.4 | 168  | 75.56  | 557.6 | 292  | 144.44 | 780.8 | 416  | 213.33 | 1004.0 | 540  | 282.22 |       |      |       |
| -108.4 | -78  | -61.11 | 114.8 | 46   | 7.78  | 338.0 | 170  | 76.67  | 561.2 | 294  | 145.56 | 784.4 | 418  | 214.44 | 1007.6 | 542  | 283.33 |       |      |       |
| -104.8 | -76  | -60.00 | 118.4 | 48   | 8.89  | 341.6 | 172  | 77.78  | 564.8 | 296  | 146.67 | 788.0 | 420  | 215.56 | 1011.2 | 544  | 284.44 |       |      |       |
| -101.2 | -74  | -58.89 | 122.0 | 50   | 10.00 | 345.2 | 174  | 78.89  | 568.4 | 298  | 147.78 | 791.6 | 422  | 216.67 | 1014.8 | 546  | 285.56 |       |      |       |
| -97.6  | -72  | -57.78 | 125.6 | 52   | 11.11 | 348.8 | 176  | 80.00  | 572.0 | 300  | 148.89 | 795.2 | 424  | 217.78 | 1018.4 | 548  | 286.67 |       |      |       |
| -94.0  | -70  | -56.67 | 129.2 | 54   | 12.22 | 352.4 | 178  | 81.11  | 575.6 | 302  | 150.00 | 798.8 | 426  | 218.89 | 1022.0 | 550  | 287.78 |       |      |       |
| -90.4  | -68  | -55.56 | 132.8 | 56   | 13.33 | 356.0 | 180  | 82.22  | 579.2 | 304  | 151.11 | 802.4 | 428  | 220.00 | 1040.0 | 560  | 293.33 |       |      |       |
| -86.8  | -66  | -54.44 | 136.4 | 58   | 14.44 | 359.6 | 182  | 83.33  | 582.8 | 306  | 152.22 | 806.0 | 430  | 221.11 | 1058.0 | 570  | 298.89 |       |      |       |
| -83.2  | -64  | -53.33 | 140.0 | 60   | 15.56 | 363.2 | 184  | 84.44  | 586.4 | 308  | 153.33 | 809.6 | 432  | 222.22 | 1076.0 | 580  | 304.44 |       |      |       |
| -79.6  | -62  | -52.22 | 143.6 | 62   | 16.67 | 366.8 | 186  | 85.56  | 590.0 | 310  | 154.44 | 813.2 | 434  | 223.33 | 1094.0 | 590  | 310.00 |       |      |       |
| -76.0  | -60  | -51.11 | 147.2 | 64   | 17.78 | 370.4 | 188  | 86.67  | 593.6 | 312  | 155.56 | 816.8 | 436  | 224.44 | 1112.0 | 600  | 315.56 |       |      |       |
| -72.4  | -58  | -50.00 | 150.8 | 66   | 18.89 | 374.0 | 190  | 87.78  | 597.2 | 314  | 156.67 | 820.4 | 438  | 225.56 | 1130.0 | 610  | 321.11 |       |      |       |
| -68.8  | -56  | -48.89 | 154.4 | 68   | 20.00 | 377.6 | 192  | 88.89  | 600.8 | 316  | 157.78 | 824.0 | 440  | 226.67 | 1148.0 | 620  | 326.67 |       |      |       |
| -65.2  | -54  | -47.78 | 158.0 | 70   | 21.11 | 381.2 | 194  | 90.00  | 604.4 | 318  | 158.89 | 827.6 | 442  | 227.78 | 1166.0 | 630  | 332.22 |       |      |       |
| -61.6  | -52  | -46.67 | 161.6 | 72   | 22.22 | 384.8 | 196  | 91.11  | 608.0 | 320  | 160.00 | 831.2 | 444  | 228.89 | 1184.0 | 640  | 337.78 |       |      |       |
| -58.0  | -50  | -45.56 | 165.2 | 74   | 23.33 | 388.4 | 198  | 92.22  | 611.6 | 322  | 161.11 | 834.8 | 446  | 230.00 | 1202.0 | 650  | 343.33 |       |      |       |
| -54.4  | -48  | -44.44 | 168.8 | 76   | 24.44 | 392.0 | 200  | 93.33  | 615.2 | 324  | 162.22 | 838.4 | 448  | 231.11 | 1220.0 | 660  | 348.89 |       |      |       |
| -50.8  | -46  | -43.33 | 172.4 | 78   | 25.56 | 395.6 | 202  | 94.44  | 618.8 | 326  | 163.33 | 842.0 | 450  | 232.22 | 1238.0 | 670  | 354.44 |       |      |       |
| -47.2  | -44  | -42.22 | 176.0 | 80   | 26.67 | 399.2 | 204  | 95.56  | 622.4 | 328  | 164.44 | 845.6 | 452  | 233.33 | 1256.0 | 680  | 360.00 |       |      |       |
| -43.6  | -42  | -41.11 | 179.6 | 82   | 27.78 | 402.8 | 206  | 96.67  | 626.0 | 330  | 165.56 | 849.2 | 454  | 234.44 | 1274.0 | 690  | 365.56 |       |      |       |
| -40.0  | -40  | -40.00 | 183.2 | 84   | 28.89 | 406.4 | 208  | 97.78  | 629.6 | 332  | 166.67 | 852.8 | 456  | 235.56 | 1292.0 | 700  | 371.11 |       |      |       |
| -36.4  | -38  | -38.89 | 186.8 | 86   | 30.00 | 410.0 | 210  | 98.89  | 633.2 | 334  | 167.78 | 856.4 | 458  | 236.67 | 1310.0 | 710  | 376.67 |       |      |       |
| -32.8  | -36  | -37.78 | 190.4 | 88   | 31.11 | 413.6 | 212  | 100.00 | 636.8 | 336  | 168.89 | 860.0 | 458  | 237.78 | 1328.0 | 720  | 382.22 |       |      |       |
| -29.2  | -34  | -36.67 | 194.0 | 90   | 32.22 | 417.2 | 214  | 101.11 | 640.4 | 338  | 170.00 | 863.6 | 460  | 238.89 | 1346.0 | 730  | 387.78 |       |      |       |
| -25.6  | -32  | -35.56 | 197.6 | 92   | 33.33 | 420.8 | 216  | 102.22 | 644.0 | 340  | 171.11 | 867.2 | 462  | 240.00 | 1364.0 | 740  | 393.33 |       |      |       |
| -22.0  | -30  | -34.44 | 201.2 | 94   | 34.44 | 424.4 | 218  | 103.33 | 647.6 | 342  | 172.22 | 870.8 | 464  | 241.11 | 1382.0 | 750  | 398.89 |       |      |       |
| -18.4  | -28  | -33.33 | 204.8 | 96   | 35.56 | 428.0 | 220  | 104.44 | 651.2 | 344  | 173.33 | 874.4 | 466  | 242.22 | 1400.0 | 760  | 404.44 |       |      |       |
| -14.8  | -26  | -32.22 | 208.4 | 98   | 36.67 | 431.6 | 222  | 105.56 | 654.8 | 346  | 174.44 | 878.0 | 468  | 243.33 | 1418.0 | 770  | 410.00 |       |      |       |
| -11.2  | -24  | -31.11 | 212.0 | 100  | 37.78 | 435.2 | 224  | 106.67 | 658.4 | 348  | 175.56 | 881.6 | 470  | 244.44 | 1436.0 | 780  | 415.56 |       |      |       |
| -7.6   | -22  | -30.00 | 215.6 | 102  | 38.89 | 438.8 | 226  | 107.78 | 662.0 | 350  | 176.67 | 885.2 | 472  | 245.56 | 1454.0 | 790  | 421.11 |       |      |       |
| -4.0   | -20  | -28.89 | 219.2 | 104  | 40.00 | 442.4 | 228  | 108.89 | 665.6 | 352  | 177.78 | 888.8 | 474  | 246.67 | 1472.0 | 800  | 426.67 |       |      |       |
| 0.4    | -18  | -27.78 | 222.8 | 106  | 41.11 | 446.0 | 230  | 110.00 | 669.2 | 354  | 178.89 | 892.4 | 476  | 247.78 | 1490.0 | 810  | 432.22 |       |      |       |
| 3.3    | -16  | -26.67 | 226.4 | 108  | 42.22 | 449.6 | 232  | 111.11 | 672.8 | 356  | 180.00 | 896.0 | 478  | 248.89 | 1508.0 | 820  | 437.78 |       |      |       |
| 6.8    | -14  | -25.56 | 230.0 | 110  | 43.33 | 453.2 | 234  | 112.22 | 676.4 | 358  | 181.11 | 899.6 | 480  | 250.00 | 1526.0 | 830  | 443.33 |       |      |       |
| 10.4   | -12  | -24.44 | 233.6 | 112  | 44.44 | 456.8 | 236  | 113.33 | 680.0 | 360  | 182.22 | 903.2 | 482  | 251.11 | 1544.0 | 840  | 448.89 |       |      |       |
| 14.0   | -10  | -23.33 | 237.2 | 114  | 45.56 | 460.4 | 238  | 114.44 | 683.6 | 362  | 183.33 | 906.8 | 484  | 252.22 | 1562.0 | 850  | 454.44 |       |      |       |
| 17.6   | -8   | -22.22 | 240.8 | 116  | 46.67 | 464.0 | 240  | 115.56 | 687.2 | 364  | 184.44 | 910.4 | 486  | 253.33 | 1580.0 | 860  | 460.00 |       |      |       |
| 21.2   | -6   | -21.11 | 244.4 | 118  | 47.78 | 467.6 | 242  | 116.67 | 690.8 | 366  | 185.56 | 914.0 | 488  | 254.44 | 1598.0 | 870  | 465.56 |       |      |       |
| 24.8   | -4   | -20.00 | 248.0 | 120  | 48.89 | 471.2 | 244  | 117.78 | 694.4 | 368  | 186.67 | 917.6 | 490  | 255.56 | 1616.0 | 880  | 471.11 |       |      |       |
| 28.4   | -2   | -18.89 | 251.6 | 122  | 50.00 | 474.8 | 246  | 118.89 | 698.0 | 370  | 187.78 | 921.2 | 492  | 256.67 | 1634.0 | 890  | 476.67 |       |      |       |
| 32.0   | 0    | -17.78 | 255.2 | 124  | 51.11 | 478.4 | 248  | 120.00 | 701.6 | 372  | 188.89 | 924.8 | 494  | 257.78 | 1652.0 | 900  | 482.22 |       |      |       |
| 35.6   | 2    | -16.67 | 258.8 | 126  | 52.22 | 482.0 | 250  | 121.11 | 705.2 | 374  | 190.00 | 928.4 | 496  | 258.89 | 1670.0 | 910  | 487.78 |       |      |       |
| 39.2   | 4    | -15.56 | 262.4 | 128  | 53.33 | 485.6 | 252  | 122.22 | 708.8 | 376  | 191.11 | 932.0 | 498  | 260.00 | 1688.0 | 920  | 493.33 |       |      |       |
| 42.8   | 6    | -14.44 | 266.0 | 130  | 54.44 | 489.2 | 254  | 123.33 | 712.4 | 378  | 192.22 | 935.6 | 500  | 261.11 | 1706.0 | 930  | 498.89 |       |      |       |
| 46.4   | 8    | -13.33 | 269.6 | 132  | 55.56 | 492.8 | 256  | 124.44 | 716.0 | 380  | 193.33 | 939.2 | 502  | 262.22 | 1724.0 | 940  | 504.44 |       |      |       |
| 50.0   | 10   | -12.22 | 273.2 | 134  | 56.67 | 496.4 | 258  | 125.56 | 719.6 | 382  | 194.44 | 942.8 | 504  | 263.33 | 1742.0 | 950  | 510.00 |       |      |       |
| 53.6   | 12   | -11.11 | 276.8 | 136  | 57.78 | 500.0 | 260  | 126.67 | 723.2 | 384  | 195.56 | 946.4 | 506  | 264.44 | 1760.0 | 960  | 515.56 |       |      |       |
| 57.2   | 14   | -10.00 | 280.4 | 138  | 58.89 | 503.6 | 262  | 127.78 | 726.8 | 386  | 196.67 | 950.0 | 508  | 265.56 | 1778.0 | 970  | 521.11 |       |      |       |
| 60.8   | 16   | -8.89  | 284.0 | 140  | 60.00 | 507.2 | 264  | 128.89 | 730.4 | 388  | 197.78 | 953.6 | 510  | 266.67 | 1796.0 | 980  | 526.67 |       |      |       |
| 64.4   | 18   | -7.78  | 287.6 | 142  | 61.11 | 510.8 | 266  | 130.00 | 734.0 | 390  | 198.89 | 957.2 | 512  | 267.78 | 1814.0 | 990  | 532.22 |       |      |       |
| 68.0   | 20   | -6.67  | 291.2 | 144  | 62.22 | 514.4 | 268  | 131.11 | 737.6 | 392  | 200.00 | 960.8 | 514  | 268.89 | 1832.0 | 1000 | 537.78 |       |      |       |
| 71.6   | 22   | -5.56  | 294.8 | 146  | 63.33 | 518.0 | 270  | 132.22 | 741.2 | 394  | 201.11 | 964.4 | 516  | 270.00 |        |      |        |       |      |       |

°F = ( 9/5 °C ) + 32    °C = 5/9 ( °F - 32 )

For additional information, please call 1-888-945-2872 or visit [www.wika.com](http://www.wika.com).

# Pressure Units Cross Reference Charts

| PSI      | atms.    | " H <sub>2</sub> O | mm H <sub>2</sub> O | cm H <sub>2</sub> O | oz/in <sup>2</sup> | Kg/cm <sup>2</sup> | "Hg      | mm Hg (Torr) | cm Hg   | mbar   | bar      | Pa (Nm <sup>2</sup> ) | kPa    | MPa      |
|----------|----------|--------------------|---------------------|---------------------|--------------------|--------------------|----------|--------------|---------|--------|----------|-----------------------|--------|----------|
| 1        | 0.0681   | 27.71              | 703.8               | 70.38               | 16                 | 0.0704             | 2.036    | 51.715       | 5.17    | 68.95  | 0.0689   | 6895                  | 6.895  | 0.0069   |
| 14.7     | 1        | 407.2              | 10,343              | 1,034.3             | 235.1              | 1.033              | 29.92    | 760          | 76      | 1013   | 1.013    | 101,325               | 101.3  | 0.1013   |
| 0.0361   | 0.00246  | 1                  | 25.4                | 2.54                | 0.5775             | 0.00254            | 0.0735   | 1.866        | 0.187   | 2.488  | 0.00249  | 248.8                 | 0.249  | 0.00025  |
| 0.001421 | 0.000097 | 0.0394             | 1                   | 0.1                 | 0.0227             | 0.0001             | 0.00289  | 0.0735       | 0.00735 | 0.098  | 0.000098 | 9.8                   | 0.0098 | 0.00001  |
| 0.01421  | 0.000967 | 0.3937             | 10                  | 1                   | 0.227              | 0.001              | 0.0289   | 0.735        | 0.0735  | 0.98   | 0.00098  | 98                    | 0.098  | 0.0001   |
| 0.0625   | 0.00425  | 1.732              | 43.986              | 4.40                | 1                  | 0.0044             | 0.1273   | 3.232        | 0.323   | 4.31   | 0.00431  | 431                   | 0.431  | 0.00043  |
| 14.22    | 0.968    | 394.1              | 100,010             | 1,001               | 227.6              | 1                  | 28.96    | 735.6        | 73.56   | 980.7  | 0.981    | 98,067                | 98.07  | 0.0981   |
| 0.4912   | 0.03342  | 13.61              | 345.7               | 34.57               | 7.858              | 0.0345             | 1        | 25.4         | 2.54    | 33.86  | 0.0339   | 3386                  | 3.386  | 0.00339  |
| 0.01934  | 0.001316 | 0.536              | 13.61               | 1.361               | 0.310              | 0.00136            | 0.0394   | 1            | .1      | 1.333  | 0.001333 | 133.3                 | 0.1333 | 0.000133 |
| 0.1934   | 0.01316  | 5.358              | 136.1               | 13.61               | 3.10               | 0.0136             | 0.394    | 10           | 1       | 13.33  | 0.01333  | 1333                  | 1.333  | 0.00133  |
| 0.0145   | 0.000987 | 0.4012             | 10.21               | 1.021               | 0.2321             | 0.00102            | 0.0295   | 0.75         | 0.075   | 1      | 0.001    | 100                   | 0.1    | 0.0001   |
| 14.504   | 0.987    | 401.9              | 10,210              | 1021                | 232.1              | 1.02               | 29.53    | 750          | 75      | 1000   | 1        | 100,000               | 100    | 0.1      |
| 0.000145 | 0.00001  | 0.00402            | 0.102               | 0.0102              | 0.00232            | 0.00001            | 0.000295 | 0.0075       | 0.00075 | 0.01   | 0.00001  | 1                     | 0.001  | 0.000001 |
| 0.14504  | 0.00987  | 4.019              | 102.07              | 10.207              | 2.321              | 0.0102             | 0.295    | 7.5          | 0.75    | 10     | 0.01     | 1,000                 | 1      | 0.001    |
| 145.04   | 9.869    | 4019               | 102,074             | 10,207              | 2321               | 10.2               | 295.3    | 750          | 750     | 10,000 | 10       | 1,000,000             | 1,000  | 1        |

To use this chart:

1. Find the column with the units you want to convert from.
2. Move down that column until you find the "1".
3. Staying in the same row, move horizontally to the column with the units you are converting to.
4. Multiply the number in that box by the amount you are changing from to get the converted value.







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