

# WIKA's Featured Products

for Pressure, Temperature, Level,  
Flow, & Force Measurement







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# Solutions and Services for Pressure, Temperature, Level, Flow, and Force Measurement

At WIKA USA, we go to great lengths to ensure the quality of our measurement technology. From standard products to engineered solutions, quality control starts with our production systems, which are based on Kaizen, Lean Manufacturing and Six Sigma principles.

This focus on quality is consistent throughout the WIKA group of companies around the globe, which offer an extensive portfolio of pressure, temperature, level, flow, and force measurement solutions and services.

Wherever you are in the world, you can rely on WIKA quality.



# WIKA USA: Your Reliable Partner for Measurement Technology

## WIKA USA's LeanSigma® Methodology

WIKA USA understands that customers in today's business environment demand high-quality products and services at competitive prices, customized to individual requirements and with quick deliveries. To better serve our customers' needs, WIKA USA has developed a manufacturing philosophy named LeanSigma®.

Lean manufacturing and business processes utilize a systematic approach to identifying waste through continuous improvement. Lean manufacturing retains only those activities that transform materials and information into the products and services that customers need.

The benefits are:

- Over 50,000 different product configurations with lead times of a few days.
- 1,400 stock items that are readily available to our customers for same day shipping.
- Elimination of large inventories to overcome out-of-stock situations.

The result is WIKA USA having the industry's shortest lead times. You will get exactly what you want, when you need it!

## WIKA USA's Customized Dial Printing Capabilities

WIKA USA's customized printing capabilities are among the best in the industry. WIKA USA utilizes a wide variety of printing methods to meet any unique requirement, match any PMS color, and create custom logo designs for dial artwork. WIKA utilizes proprietary digital printing technology which drastically reduces lead times from days to minutes.

## WIKA USA's NIST Traceable Calibration Lab

WIKA USA's in-house and traceable NIST Laboratory offers customers maximum precision and quality, certified in accordance with NIST calibration standards. If required, instrumentation products will receive a NIST Certificate of Calibration to verify that a product is within its stated tolerance of accuracy.

A variety of instruments, including mechanical and electronic pressure measuring instruments, deadweight testers, temperature sensors, resistance thermometers, and dry well calibrators can all be calibrated and certified by WIKA USA.

# Mechanical Pressure Measurement

WIKA USA offers pressure measurement technologies to help you monitor the absolute, gauge, vacuum, and differential pressure of your operations. Our solutions are designed to ensure durability and reliability even in the most aggressive conditions.

We maintain consistent quality across product offerings to guarantee you have trusted data to keep running efficiently and safely.





# Mechanical Pressure Measurement

Utility Gauges - Dry



111.10

Utility Gauge, Lower Mount

- Case size: ■ 1.5", 2", 2.5" & 4"
- Pressure Ranges: ■ -30...0"Hg up to 0...5000 psi
- Wetted Parts: ■ Copper alloy
- Case: ■ Black plastic
- Accuracy: ■ ± 3/2/3% of full span
- Unique Features: ■ Special case materials (optional)
- Data Sheet: ■ 111.10



111.12

Utility Gauge, Back Mount

- Case size: ■ 1.5", 2", 2.5" & 4"
- Pressure Ranges: ■ -30...0"Hg up to 0...5000 psi
- Wetted Parts: ■ Copper alloy
- Case: ■ Black plastic
- Accuracy: ■ ± 3/2/3% of full span
- Unique Features: ■ Special case materials (optional)
- Panel mount w/u-clamp (optional)
- Data Sheet: ■ 111.12



111.11

Regulator Gauge

- Case size: ■ 1.5", 2" & 2.5"
- Pressure Ranges: ■ -30...0"Hg up to 0...5000 psi
- Wetted Parts: ■ Copper alloy
- Case: ■ Steel gold plated
- Accuracy: ■ ± 3/2/3% of full span
- Unique features: ■ UL 252 & UL 404 approvals
- Free of oil and grease
- Other case materials (optional)
- Data Sheet: ■ 111.11



111.25

Contractor Gauge

- Case size: ■ 4.5"
- Pressure Ranges: ■ -30...0"Hg up to 0...5000 psi
- Wetted Parts: ■ Copper alloy
- Case: ■ 304 stainless steel
- Accuracy: ■ ± 1.0 % of full span
- Unique Features: ■ Surface mounting flange (optional)
- Data Sheet: ■ 111.25



113.13

Utility Gauge, Liquid Filled

- Case size: ■ 1.5", 2" & 2.5"
- Pressure Ranges: ■ -30...0"Hg up to 0...5000 psi
- Wetted Parts: ■ Copper alloy
- Case: ■ Black plastic, glycerin filled
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 3/2/3 % of full span
- Unique Features: ■ Factory glycerin filled
- 1.5" only available in CBM
- Data Sheet: ■ 113.13



213.53

Hydraulic Gauge, Economy Style

- Case size: ■ 2", 2.5" & 4"
- Pressure Ranges: ■ -30...0"Hg up to 0...15000 psi
- Wetted Parts: ■ Brass
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 2/1/2 % of full span
- Unique Features: ■ Factory glycerin filled
- 100% case fill with FlexWindow option (2 1/2") only
- Easily adaptable with u-clamp bracket & front flange (optional)
- Data Sheet: ■ 21X.53

# Hydraulic Gauge Liquid Filled

213.40

- Case Size** 2 1/2" & 4"
- Pressure Ranges** -30...0"Hg up to 0...15000 psi
- Wetted parts** Copper alloy
- Case** Cast brass
- Ingress Protection** IP 65
- Accuracy** ± 2/1/2 % of full span
- Unique Features** Factory glycerin filled  
ABS gold colored cover ring
- Data Sheet** 213.40



- Best Hydraulic Gauge in the industry
- Serves the US market for 50 years
- One-piece cast brass case & socket
- Extremely shock and vibration resistant design

- Bourdon tube soldered into the case
- Factory liquid filled with 99.7% Glycerin
- Comes standard with ABS Gold colored cover ring
- Several mounting options (surface/panel) available

# FlexWindow™ Available Models

213.53 2 1/2" & 233.53/54/55 2 1/2"

- Made from clear silicone rubber
- High UV and chemical resistance, similar to glass
- No yellowing & high temperature resistance (> 300°F)
- Scratch and crack resistant, repels water

## Advantages

- Built-in internal pressure compensation without the need of a vent plug for ranges ≤ 300 psi
- 100% case fill = Guaranteed no bubbles in vertical position!
- No reading impairment due to large bubbles
- Easy panel mounting due to missing lever plug
- Increased ingress protection IP66





# Mechanical Pressure Measurement

NSF-61-G Approved Drinking Water Gauges



# Mechanical Pressure Measurement

All Stainless Steel Gauges



232.53, 233.53

Crimped Bezel,  
Field Liquid Fillable

- Case size: ■ 2", 2.5" & 4"
- Pressure Ranges: ■ -30...0"Hg up to 0...15,000 psi
- Wetted Parts: ■ 316 stainless steel
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 2 1/2 % of full span (2" & 2.5")  
■ ± 1 % of full span (4")
- Unique Features: ■ Field fillable  
■ 100% case fill with FlexWindow option (2 1/2") only  
■ Easily adaptable with u-clamp bracket & front flange (optional)  
■ Liquid filled version 233.53
- Data Sheet: ■ 23X.53



111.10DW, 111.12DW

Drinking Water Gauge,  
Lower Mount, Back Mount

- Case size: ■ 1.5" BM, 2", 2.5" & 4"
- Pressure Ranges: ■ -30...0"Hg up to 0...600 psi
- Wetted Parts: ■ Lead free brass (≤ 0.25%)
- Case: ■ Black plastic (standard)
- Accuracy: ■ ± 3/2 % of full span
- Unique Features: ■ NSF 61 G approved  
■ Meets "Safe drinking water act" of 2015.

Data Sheet: ■ 111.10DW, 111.12DW



111.25DW

Drinking Water Gauge,  
Contractor Style

- Case size: ■ 4.5"
- Pressure Ranges: ■ -30...0"Hg up to 0...600 psi
- Wetted Parts: ■ Lead free brass (≤ 0.25%)
- Case: ■ 304 Stainless steel
- Accuracy: ■ ± 3/2 % of full span
- Unique Features: ■ NSF 61 G approved  
■ Meets "Safe drinking water act" of 2015.

Data Sheet: ■ 111.25DW



213.53DW

Drinking Water Gauge,  
Liquid Filled

- Case size: ■ 2.5"
- Pressure Ranges: ■ -30...0"Hg up to 0...600 psi
- Wetted Parts: ■ Lead free brass (≤ 0.25%)
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 2 1/2 % of full span
- Unique Features: ■ NSF 61 G approved  
■ Meets "Safe drinking water act" of 2015.  
■ Factory liquid filled.

Data Sheet: ■ 213.53DW



232.54, 233.54

Bayonet Bezel,  
Field Liquid Fillable

- Case size: ■ 2.5" & 4"
- Pressure Ranges: ■ -30...0"Hg up to 0...15,000 psi
- Wetted Parts: ■ 316 stainless steel
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 2 1/2 % of full span (2.5")  
■ ± 1 % of full span (4")
- Unique Features: ■ Field fillable  
■ 100% case fill with FlexWindow option (2 1/2") only  
■ Easily adaptable with u-clamp bracket & front flange (optional)  
■ Liquid filled version 233.54

Data Sheet: ■ 23X.54



233.55

Panel Builder Gauge,  
Factory Filled Case

- Case size: ■ 2.5"
- Pressure Ranges: ■ -30...0"Hg up to 0...15,000 psi
- Wetted Parts: ■ 316 stainless steel
- Case: ■ 316 stainless steel
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 2 1/2 % of full span
- Unique Features: ■ Case, ring & FF 316 stainless steel  
■ Case factory filled with Glycerin  
■ 100% case fill with FlexWindow option (2 1/2") only  
■ Front flange spot welded to case  
■ LBM connection position

Data Sheet: ■ 233.55



232.50, 233.50

Bayonet Bezel, European Style,  
Field Liquid Fillable

- Case size: ■ 2.5", 4", 4.5" & 6"
- Pressure Ranges: ■ -30...0"Hg up to 0...15,000 psi
- Wetted Parts: ■ 316 stainless steel
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 2 1/2 % of full span (2.5")  
■ ± 1 % of full span (4", 4.5" & 6")
- Unique Features: ■ Field fillable  
■ Liquid filled version 233.50

Data Sheet: ■ 23X.50 / 23X.50 4.5





## Process Gauge

### Solid Front Design, Field Liquid Fillable

232.34, 233.34 XSEL®

- Case Size

Pressure Ranges

Wetted parts

Case

Ingress Protection

Accuracy

Unique Features

Data Sheet
- 4½" & 6"

-30"Hg up to 0...30,000 psi

316L stainless steel

Black thermoplastic (Pocan)

IP 65 (LBM IP 54)

± 0.5 % of full span  
± 1.0 % (ranges 0/20,000 psi & up)

Field fillable (LM only)  
Liquid filled version (233.34)

23X.34



232.30, 233.30

### Bayonet Bezel, Solid Front Design, Field Liquid Fillable

- Case size:

Pressure Ranges:

Wetted Parts:

Case:

Ingress Protection:

Accuracy:

Unique Features:

Data Sheet:
- 2.5", 4", 4.5" & 6"

■ -30...0"Hg up to 0...20,000 psi  
■ Case size 2.5" up to 15,000 psi

■ 316 stainless steel  
■ 304 stainless steel

■ IP 65

■ ± 2/12 % of full span (2.5")  
■ ± 1 % of full span (4", 4.5" & 6")

■ Field fillable  
■ Size 4.5" and 6" available in lower mount only.  
■ Liquid filled version 233.30 (LM only)

■ 23X.30 / 23X.30 4.5



### Set Point Indicator

Red

- Case size:

Material:

P/N:

Unique Features:
- 4.5"

■ Red plastic

■ 52600050

■ Attaches to the outside of the window ring  
■ Adjustable over 360 degrees  
■ Fits all 4.5" turret style cases



### 910.18.100

Gauge Cover

- Case size:

Material:

P/N:

Unique Features:

Data Sheet:
- 4.5"

■ Clear PVC, 0.025" (25 mil) thick  
■ Flammability rating V-0 per UL-94  
■ 52551890

■ Ideally to protect gauge from spills, splashes and other environmental contaminations.

■ 910.18.100



# Mechanical Pressure Measurement

US Process Type Gauges

# Mechanical Pressure Measurement

Low Pressure Capsule Gauges



212.34, 213.34 XSEL

Process Gauge, Solid Front Design, Field Liquid Fillable

- Case size: ■ 4.5" & 6"
- Pressure Ranges: ■ -30"Hg up to 0...1,000 psi
- Wetted Parts: ■ Copper alloy
- Case: ■ Black thermoplastic (Pocan)
- Ingress Protection: ■ IP 65 (LBM IP 54)
- Accuracy: ■ ± 0.5 % of full span
- Unique Features: ■ Field fillable (LM only)
- Liquid filled version 213.34
- Data Sheet: ■ 21X.34



262.34, 263.34 XSEL

Process Gauge, Solid Front Design, Field Liquid Fillable

- Case size: ■ 4.5" & 6"
- Pressure Ranges: ■ -30"Hg up to 0...15,000 psi
- Wetted Parts: ■ Monel M400
- Case: ■ Black thermoplastic (Pocan)
- Ingress Protection: ■ IP 65 (LBM IP 54)
- Accuracy: ■ ± 0.5 % of full span
- Unique Features: ■ Field fillable (LM only)
- Liquid filled version 263.34
- Data Sheet: ■ 26X.34



212.25, 232.25

"Hinged Ring" Panel Mount Process Gauge, Solid Front

- Case size: ■ 4.5" & 6"
- Pressure Ranges: ■ -30"Hg up to 0...20,000 psi (232.25)
- -30"Hg up to 0...1,000 psi (212.25)
- Wetted Parts: ■ 316 stainless steel (232.25)
- Copper alloy (212.25)
- Case: ■ Aluminum black painted with steel
- black ring and 304SS blow-out back
- Ingress Protection: ■ IP 54
- Accuracy: ■ ± 0.5 % of full span
- ± 1.0 % (range 0/20,000 psi)
- Unique Features: ■ Access to adjustable pointer for zero point adjustment by removing the hinged ring.
- Data Sheet: ■ 212.25, 232.25



611.10

Low Pressure Capsule Gauge, Standard Design

- Case size: ■ 2" & 2.5"
- Pressure Ranges: ■ 0...25 InWC to 0...250 InWC (2" case size)
- 0...10 InWC to 0...250 InWC (2.5" case size)
- Wetted Parts: ■ Copper alloy
- Case: ■ Steel black
- Ingress Protection: ■ IP 33
- Accuracy: ■ ± 1.6 % of full span
- Unique Features: ■ With zero-adjustment screw on dial
- For dry, non-aggressive gaseous media only
- Case size 2" only available in CBM only
- Data Sheet: ■ 611.10



632.50, 633.50

Low Pressure Capsule Gauge, Industrial Design, All Stainless Steel

- Case size: ■ 2.5", 4" & 6"
- Pressure Ranges: ■ 0...16 InWC to 0...250 InWC (2.5" case size)
- 0...6 InWC to 0...250 InWC (4" case size)
- 0...1 InWC to 0...250 InWC (6" case size)
- Wetted Parts: ■ 316 stainless steel
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 54
- Accuracy: ■ ± 1.6 % of full span
- Unique Features: ■ With zero-adjustment screw on dial
- For dry, gaseous media only
- Silicone case filling (optional, 633.50, in sizes 4" & 6" for ranges 0...25 InWC & up)
- Data Sheet: ■ 632.50



612.34, 632.34, 633.34

Low Pressure Capsule Gauge, Process Type

- Case size: ■ 4.5"
- Pressure Ranges: ■ 0...10 InWC to 0...250 InWC
- Wetted Parts: ■ Copper alloy (612.34)
- Stainless steel (632.34)
- Case: ■ Black thermoplastic (POCAN)
- Ingress Protection: ■ IP 54
- Accuracy: ■ ± 1.6 % of full span
- Unique Features: ■ For dry, gaseous media only
- Silicone case filling (optional, 633.34 for ranges 0...40 InWC & up)
- Data Sheet: ■ 6X2.34



# Mechanical Pressure Measurement

Low Pressure Sealgauges™ (diaphragm gauges)



432.50, 433.50

### Low Pressure Sealgauge™, Standard Design

- Case size: ■ 4" & 6"
- Pressure Ranges: ■ 0...6 InWC to 0...100 InWC (6" flange size)  
■ 0...6 psi to 0...360 psi (4" flange size)
- Wetted Parts: ■ 316 stainless steel & PTFE lined diaphragm
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 54
- Accuracy: ■ ±2.5 % of full span
- Unique Features: ■ 5x overpressure safe, not exceeding 600 psi  
■ 1/2"NPT female process connection  
■ Glycerin/Water case filling (optional, 433.50)  
■ Solid front version (optional 432.30 & 433.30)
- Data Sheet: ■ 43X.50



452.50, 453.50

### Low Pressure Sealgauge™, PTFE Wetted Parts

- Case size: ■ 4" & 6"
- Pressure Ranges: ■ 0...6 InWC to 0...100 InWC (6" flange size)  
■ 0...6 psi to 0...360 psi (4" flange size)
- Wetted Parts: ■ PTFE lined stainless steel
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 54
- Accuracy: ■ ±2.5 % of full span
- Unique Features: ■ 5x overpressure safe, not exceeding 600 psi  
■ Open flange process connection  
■ Glycerin/Water case filling (optional, 453.50)  
■ Solid front version (optional 452.30 & 453.30)
- Data Sheet: ■ 45X.50



432.56, 433.56

### Low Pressure Sealgauge™, High Overpressure Safe

- Case size: ■ 4" & 6"
- Pressure Ranges: ■ 0...6 InWC to 0...100 InWC (6" flange size)  
■ 0...6 psi to 0...360 psi (4" flange size)
- Wetted Parts: ■ 316 stainless steel
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 54
- Accuracy: ■ ±1.6 % of full span
- Unique Features: ■ High overpressure safe up to 600 psi, 1500 psi, or 6000 psi independent of the pressure range  
■ Glycerin/Water case filling (optional, 433.56)  
■ Solid front version (optional 432.56 & 433.56)
- Data Sheet: ■ 43X.56



712.15, 732.15

### Liquid Level Cryo Gauge

- Case size: ■ 4" & 6"
- DP Ranges: ■ 0...16 InWC to 0...700 InWC (4")  
■ 0...16 InWC to 0...1600 InWC (6")
- Wetted Parts: ■ Brass, stainless steel, NBR (712.15)  
■ Stainless steel, NBR (732.15)
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 2.5 % of full span
- Unique Features: ■ Max. over-/working pressure 725 psi  
■ 2 x 1/4"NPT female process connection  
■ Manifold & integrated working pressure gauge (optional)  
■ Switches and transmitters (optional)
- Data Sheet: ■ 7X2.15



732.51, 733.51

### Differential Pressure Gauge, All Stainless Steel, All Welded Construction

- Case size: ■ 4" & 6"
- DP Ranges: ■ 0...6 InWC to 0...100 InWC (114 mm flange size)  
■ 0...6 psi to 0...360 psi (78 mm flange size)
- Wetted Parts: ■ 316 stainless steel & Inconel 718 diaphragm
- Case: ■ 304 stainless steel
- Accuracy: ■ ± 1.6 % of full span
- Unique Features: ■ Max. over-/working pressure 360 psi, depending on pressure range.  
■ 2 x 1/4"NPT female process connection  
■ Glycerin/Water case (optional, 733.51)  
■ Solid front version (optional, 732.31 & 733.31)
- Data Sheet: ■ 732.51



732.25, 733.25

### Differential Pressure Gauge, Dual Diaphragm High Overpressure Safe

- Case size: ■ 4.5" & 6"
- DP Ranges: ■ 0...100 InWC to 0...600 psi
- Wetted Parts: ■ 316 stainless steel & Inconel 718 diaphragm Viton O-ring
- Case: ■ Black anodized aluminum
- Accuracy: ■ ± 1.0 % of full span
- Unique Features: ■ 2 x 1/4"NPT female back connection  
■ Panel mount kit included  
■ Max. over-/working pressure 3000 psi  
■ Glycerin case filling (optional, 733.25)  
■ NACE MR-0175 compliant
- Data Sheet: ■ 732.25



732.14, 733.14

### Differential Pressure Gauge, Dual Diaphragm High Overpressure Safe

- Case size: ■ 4" & 6"
- DP Ranges: ■ 0...6 InWC to 0...100 InWC (140 mm flange size)  
■ 0...6 psi to 0...360 psi (82 mm flange size)
- Wetted Parts: ■ 316 stainless steel & Inconel 718 diaphragm, Viton O-ring
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 54
- Accuracy: ■ ± 1.6 % of full span
- Unique Features: ■ Max. over-/working pressure 600 psi (standard) 1500 psi, 3600 psi or 6000 psi (optional)  
■ Glycerin/Water case fille (733.14)  
■ Monel wetted parts (optional, 762.14, 763.14)  
■ Hastelloy C276 wetted parts (optional)
- Data Sheet: ■ PM 07.13



# Mechanical Pressure Measurement

Differential Pressure Gauges

# Mechanical Pressure Measurement

Differential Pressure Gauges



732.26

Differential Pressure Gauge, Dual Diaphragm for Liquid Level Applications & O2 Service

- Case size: ■ 4.5" & 6"
- DP Ranges: ■ 0...100 InWC to 0...400 psi
- Wetted Parts: ■ 316 Stainless steel & Inconel 718 diaphragm
- PTFE O-ring (halocarbon oil system fill)
- Case: ■ Black anodized aluminum
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 1.0 % of full span
- Unique Features: ■ 2 x 1/4"NPT female top/bottom connection
- Panel mount kit included
- Max. over-/working pressure 600 psi
- Data Sheet: ■ 732.26



700.04, 703.04

Differential Pressure Gauge, Piston Type

- Case size: ■ 2.5" & 4.5"
- DP Ranges: ■ 0...5 psi to 0...100 psi
- Wetted Parts: ■ Aluminum black anodized sensor housing, Ceramic magnet, SS spring & Viton O-ring
- Case: ■ Fiberglass reinforced thermoplastic
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 2.0 % of full span (on increasing pressure)
- Unique Features: ■ 2 x 1/4"NPT female back connection
- Max. working pressure 6000 psi
- Panel mount kit included
- End connection (optional)
- Stainless steel sensor housing (optional)
- Case filling (optional, 703.04)
- Data Sheet: ■ 700.04



700.05, 703.05

Differential Pressure Gauge, Piston Type with Separating Membrane

- Case size: ■ 2.5" & 4.5"
- DP Ranges: ■ 0...50 InWC to 0...100 psi
- Wetted Parts: ■ Aluminum black anodized sensor housing, ceramic magnet, SS spring & Buna-N membrane
- Case: ■ Fiberglass reinforced thermoplastic
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 2.0 % of full span (ranges ≤ 15 psi)
- ± 5.0% of full span (ranges < 15 psi) (on increasing pressure)
- Unique Features: ■ 2 x 1/4"NPT female back connection
- Max. working pressure 3000 psi
- Panel mount kit included
- Top/bottom connection (optional)
- Stainless steel sensor housing (optional)
- Case filling (optional, 703.05)
- Data Sheet: ■ 700.05



712.25DP

Differential Pressure Gauge, Bourdon Tube

- Case size: ■ 4.5" & 6"
- DP Ranges: ■ 0...15 psi to 0...1000 psi
- 15/15 psi to 500/500 psi (bi-directional)
- Wetted Parts: ■ Copper alloy
- Case: ■ Black epoxy coated aluminum
- Ingress Protection: ■ IP 33
- Accuracy: ■ ± 2/1/2 % of full span
- Unique Features: ■ 2 x 1/4"NPT male lower connection
- DP indication via subtracting movement and one pointer
- Data Sheet: ■ 712.25DP



712.25DX

Duplex Differential Pressure Gauge

- Case size: ■ 4.5" & 6"
- DP Ranges: ■ 0...15 psi to 0...1000 psi
- Wetted Parts: ■ Copper alloy
- Case: ■ Black epoxy coated aluminum
- Ingress Protection: ■ IP 33
- Accuracy: ■ ± 2/1/2 % of full span
- Unique Features: ■ 2 x 1/4"NPT male lower connection
- Duplex indication via red & black pointer:Black pointer on top indicates plus (+) side, Red pointer on bottom indicates minus (-) side
- Data Sheet: ■ 712.25DX



# High Precision Test Gauges

# Calibration Equipment



**332.54**  
**4" Inspector Test Gauge, Accuracy Grade 3A**

- Case size: ■ 4"
- Pressure Ranges: ■ 0...15 psi to 0...20,000 psi
- Wetted Parts: ■ Stainless steel
- Case: ■ Stainless steel
- Ingress Protection: ■ IP 65
- Accuracy: ■ Ranges < 1000 psi and > 1500 psi: ± 0.25 % of full span, per ASME B40.100 Grade 3A  
■ Ranges 0...800 psi to 0...1500 psi: ± 0.5% of full span per ASME B40.100, Grade 3A
- Unique Features: ■ Mirror band dial  
■ Micro-adjustable knife-edge pointer  
■ Zipped carrying pouch
- Data Sheet: ■ 332.54



**CPG1500**  
**Precision Digital Pressure Gauge, Grade 4A**

- Case size: ■ 4" with 5-1/2 digit 7-segment display
- Pressure Ranges: ■ 0...1.5 psi to 0...150,000 psi
- Wetted Parts: ■ 316 Stainless steel
- Case: ■ Die-cast aluminum
- Ingress Protection: ■ IP 65
- Accuracy: ■ ± 0.1 % of full span, per ASME B40.100 Grade 4A  
■ ± 0.2 % of full span for ranges 0...1.5 psi  
■ ± 0.15 % of full span for ranges 0...3 & 0...5 psi
- Unique Features: ■ Case rotatable over 330 degrees  
■ Multiple pressure units to select from  
■ Integrated data logger  
■ WIKA-Cal compatible  
■ Data transfer via WIKA wireless  
■ Accuracy ± 0.05% (optional, calibration certificate included)
- Data Sheet: ■ CT 10.51



**CPH6200**  
**Hand-Held Pressure Indicator**

- Dimension: ■ 5.6 x 2.8 x 1.4 inches (142 x 71 x 36 mm)
- Display: ■ 4-1/2 digits depending on range
- Pressure Ranges: ■ 0...0.4 psi up to 0...14,500 psi
- Wetted Parts: ■ 316 Stainless steel (transmitter)
- Case: ■ Impact resistant ABS
- Accuracy: ■ ± 0.2 % of full span
- Unique Features: ■ Eight selectable pressure units  
■ Integrated data logger  
■ Differential pressure measurement (optional)  
■ Accuracy ± 0.1% (optional, calibration certificate included)
- Data Sheet: ■ CT 11.01



**332.34**  
**4.5" Process Type Test Gauge, Accuracy Grade 3A**

- Case size: ■ 4.5"
- Pressure Ranges: ■ 0...15 psi to 0...20,000 psi
- Wetted Parts: ■ 316 Stainless steel
- Case: ■ Black thermoplastic (POCAN)
- Accuracy: ■ Ranges < 800 psi and > 1500 psi: ± 0.25 % of full span, per ASME B40.100 Grade 3A  
■ Ranges 0...800 psi to 0...1500 psi: ± 0.5% of full span per ASME B40.100, Grade 3A
- Unique Features: ■ Mirror band dial  
■ Micro-adjustable knife edge pointer
- Data Sheet: ■ 332.34



**312.20**  
**6" Precision Test gauge, Accuracy Grade 3A**

- Case size: ■ 6"
- Pressure Ranges: ■ 0...10 psi to 0...10,000 psi
- Wetted Parts: ■ Copper alloy
- Case: ■ 304 stainless steel
- Ingress Protection: ■ IP 54
- Accuracy: ■ ± 0.25 % of full span, per ASME B40.100 Grade 3A
- Unique Features: ■ Mirror band dial  
■ Micro-adjustable knife edge pointer
- Data Sheet: ■ 312.20



**342.11**  
**10" High Precision Test gauge, Accuracy Grade 4A**

- Case size: ■ 10"
- Pressure Ranges: ■ 0...10 psi to 0...23,000 psi
- Wetted Parts: ■ 316 Stainless steel socket and Ni-Fe-alloy Bourdon Tube
- Case: ■ Die-cast Aluminum, black-silver finish
- Ingress Protection: ■ IP 54
- Accuracy: ■ ± 0.1 % of full span per ASME B40.100 Grade 4A
- Unique Features: ■ Front side external zero-adjustment  
■ Mirror band dial  
■ Knife edge pointer  
■ Calibration certificate per EN 10204-3.1
- Data Sheet: ■ 342.11



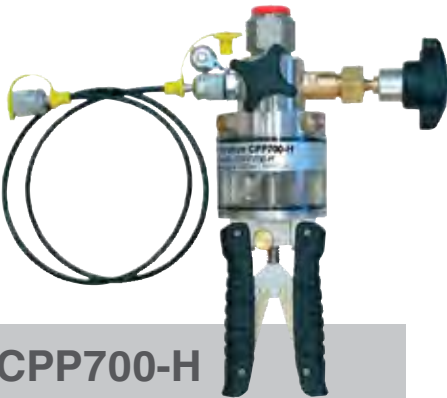
**CPH6300**  
**Hand-Held Pressure Indicator**

- Dimension: ■ 6.4 x 3.4 x 1.7 inches (163 x 86 x 42 mm)
- Display: ■ 4-1/2 digits depending on range
- Pressure Ranges: ■ 0...0.4 psi up to 0...14,500 bar
- Wetted Parts: ■ 316 Stainless steel (transmitter)
- Case: ■ Impact resistant ABS
- Ingress Protection: ■ IP 65 & IP 67
- Accuracy: ■ ± 0.2 % of full span
- Unique Features: ■ Robust and waterproof case  
■ Nine selectable pressure units  
■ Integrated data logger  
■ Differential pressure measurement (optional)  
■ Accuracy ± 0.1% (optional, calibration certificate included)
- Data Sheet: ■ CT 12.01



**CPP30**  
**Pneumatic Hand Pump**

- Dimension: ■ 8.7 x 4.1 x 2.5 inches (220 x 105 x 63 mm)
- Weight: ■ 1.1 pounds (0.5 kg)
- Measuring Range: ■ -950 mbar...+35 bar (-28"Hg/500 psi)
- Materials: ■ Brass, chromium-plated anodized aluminum, heavy duty plastic for handles
- Medium: ■ Air
- Connection: ■ G1/2 female on top for reference gauge 1.5 Ft. tube with G1/4 female for test device
- Unique Features: ■ Selectable pressure and vacuum generation  
■ Compact design  
■ Fine adjustment valve  
■ Set with NPT adapters available
- Data Sheet: ■ CT 91.06



**CPP700-H**  
**Hydraulic Hand Pump**

- Dimension: ■ 11.0 x 6.7 x 4.7 inches (280 x 170 x 120 mm)
- Weight: ■ 4.2 pounds (1.9 kg)
- Measuring Range: ■ 0...700 bar (0...10,000 psi)
- Materials: ■ Brass, anodized aluminum, stainless steel, ABS
- Medium: ■ Hydraulic fluid on mineral oil basis or distilled water
- Connection: ■ G1/2 female on top for reference gauge  
■ 3.2 Ft. HP tube with G1/4 female for test device
- Unique Features: ■ Fine adjustment valve  
■ Set with NPT adapters available
- Data Sheet: ■ CT 91.07



# Valves & Manifolds



## IV10, IV11

### Needle Valve and Multiport Valve

- Sizes: ■ 1/4" to 1"  
Pressure Ranges: ■ 6000 - 10000psi  
Connections: ■ FNPT, MNPT, Compression, Socket/Butt weld  
Materials: ■ 316st/st - Exotic alloys  
Packing Material: ■ PTFE / Graphoil packing  
Data Sheet: ■ AC 09.22



## IV20, IV21

### Block-And-Bleed Valve

- Sizes: ■ 1/4" to 1"  
Pressure Ranges: ■ 6000, 10000psi  
Connections: ■ FNPT, MNPT, Compression  
Materials: ■ 316st/st - Exotic Alloys  
Packing Material: ■ PTFE / Graphoil Packing  
Data Sheet: ■ AC 09.19



## IV30, IV31, IV50, IV51

### Valve Manifold

- Sizes: ■ 1/4" , 1/2"  
Pressure Ranges: ■ 6000, 10000psi  
Connections: ■ Remote mount, Direct flanged mount  
Materials: ■ 316st/st - Exotic alloys  
Packing Material: ■ PTFE / Graphoil packing  
Centers: ■ 37mm & 54mm centers  
Data Sheet: ■ AC 90.23



## IVH

### Instrument Ball Valve

- Sizes: ■ 1/4" to 1"  
Connections: ■ FNPT, MNPT, BSP, Compression  
Materials: ■ 316st/st - Exotic Alloys  
Pressure Ranges: ■ 6000, 10000psi  
Seat/Seal Material: ■ PTFE / PEEK seats and seals



## IVM

### Monoflange

- Sizes: ■ 1/4" to 3"  
Pressure Class: ■ Class 150 to 2500  
Connections: ■ RF - RTJ  
Materials: ■ 316st/st , LF2, A105 and exotic alloys  
Packing Material: ■ PTFE / Graphoil packing  
Data Sheet: ■ AC 09.17



## IVB

### DBB Valve

- Sizes: ■ 1/4" to 2"  
Bore Sizes: ■ 10mm bore  
Pressure Class: ■ Class 150 to 2500  
Materials: ■ 316st/st, LF2, A105, Exotic alloys  
Seat/Seal Material: ■ PTFE / PEEK / Graphoil seats and seals





# Pressure Gauge Options

## Dampened Movement

- Availability** Most industrial and process type pressure gauges
- Material** Brass and stainless steel
- Application** For severe pulsations we recommend to include a restrictor



# Pressure Gauge Options

## Gauge Jacket XSEL® Process Gauge

- Case Size** 4½"
- Material** Aluminum cloth with silica aerogel insulator
- Part Number** 52735671
- Unique Features** Protects gauge from external heat source. Internal temp. drop of 170°F when exposed to 250°F



## InSight™ Dial Options

- Available Colors** Fluorescent yellow, fluorescent orange, Reflective white and reflective glow-in-the-dark
- Available Models** 21X.53 2.5" & 4"  
23X.53 2.5" & 4"  
23X.54 2.5" & 6"  
2XX.34 4.5" & 6"  
2X2.25 4.5" & 6"  
TI.30, TI.31, TI.32, TI.50, TI.51 and TI.52
- Application** For better visibility and to indicate critical installations

## Red Drag Pointer

- Availability** Most industrial and process type pressure gauges
- Material** Aluminum red on safety glass or plastic window
- Adjustment** Externally adjustable with fixed or removable key
- Application** For indication of maximum pressure values



## Case Filling

- Availability** Most industrial and process type pressure gauges
- Fill Types** Glycerin (99.7%):  
Used in most standard applications  
Glycerin/Water:  
Used on gauges which require a lower viscosity  
Silicone Oil:  
Used in low temperature applications up to -40°F  
Halocarbon Oil:  
Inert oil used in O2 or chlorine applications
- Application** For severe vibrations and pulsations to dampen and lubricate internal parts  
For severe pulsations we recommend to include a restrictor in combination with the case filling



## Restrictors

- Availability** Most gauges with male process connection
- Material** Brass, 316 stainless steel & Monel
- Application** For severe pulsations and pressure spikes



## Mounting Options

- Availability** Most utility, industrial & process type gauges
- Mounting Types** U-clamp bracket for panel mounting  
Front flanges for panel mounting  
Rear flanges for surface/wall mounting
- Application** For installations into panels or onto surfaces



# Pressure Gauge Accessories



## Overpressure Protector

910.13

**Application** To protect pressure gauge from damaging pressure spikes and surges

**Material** 316 stainless steel

**Data Sheet** 910.13

# Pressure Gauge Accessories



## Needle Valves

910.11, 910.11.100, 910.11.200, 910.11.300

**Application** To isolate pressure gauges from the measured media

**Material** Brass (910.11.100 only), carbon steel or 316 stainless steel

**Data Sheet** 910.11, 910.11.100, 910.11.200, 910.11.300

## Pressure Snubbers

910.12.100, 910.12.100, 910.12.200

**Application** To protect pressure gauge from pulsations and pressure spikes

**Material** Brass & stainless steel

**Data Sheet** 910.12



## Mini Siphon

910.15.400

**Application** For the protection of pressure gauges from high temperature in steam applications and where space restrictions apply. Reduces pressure surges and “water hammer”

**Material** 304 stainless steel

**Data Sheet** 910.15.400



## Cooling Adapters

910.32.100, 910.32.200

**Application** For the protection of pressure gauges in high temperature applications exceeding the allowable media temperature range of the instrument

**Material** 316 stainless steel

**Data Sheet** 910.32.100, 910.32.200



## Siphons

910.15.100, 910.15.200

**Application** For the protection of pressure gauges in high temperature applications

**Material** brass, steel & 316 stainless steel

**Data Sheet** 910.15





# POLARgauge® & POLARvalve®

Pressure gauges for extreme low ambient temperature



**PG23LT**  
Process Grade Bourdon Tube Gauge, All Stainless Steel

- Case size: ■ 2.5", 4" & 6"
- Pressure Ranges: ■ 1/10 psi up to 0/15000 psi
- Wetted Parts: ■ 316 stainless steel
- Case Material: ■ 304 stainless steel
- Case Filling: ■ Silicone oil
- Ambient Temp: ■ -94°F ... 140°F
- Ingress Protection: ■ IP65 (size 2.5")  
■ IP66/67 (size 4" & 6")
- Accuracy: ■ ± 1.6 % (size 2.5")  
■ ± 1.0 % (size 4" & 6")
- Data Sheet: ■ PM 02.22



**733.51**  
Differential Pressure, All Stainless Steel

- Case size: ■ 4" & 6"
- Pressure Ranges: ■ 0/10 inWC up to 0/600 psi
- Wetted Parts: ■ 316 stainless steel
- Case Material: ■ 304 stainless steel
- Case Filling: ■ Silicone oil
- Ambient Temp: ■ -94°F ... 140°F
- Ingress Protection: ■ IP65
- Accuracy: ■ ± 1.6%
- Data Sheet: ■ PM 07.05



**55**  
Bimetal Thermometer, All Stainless Steel

- Case size: ■ 4" & 6"
- Pressure Ranges: ■ -100°F to 250°F
- Wetted Parts: ■ Stainless steel
- Case Material: ■ Stainless steel
- Case Filling: ■ Silicone oil
- Ambient Temp: ■ -94°F ... 140°F
- Ingress Protection: ■ IP66, IP67
- Accuracy: ■ Class 1.0 per EN 13190
- Data Sheet: ■ TM 55.01



**73**  
Gas Actuated Thermometer, All Stainless Steel

- Case size: ■ 4" & 6"
- Pressure Ranges: ■ -200°C to 700°C
- Wetted Parts: ■ Stainless steel
- Case Material: ■ Stainless steel
- Case Filling: ■ Silicone oil
- Ambient Temp: ■ -94°F ... 140°F
- Ingress Protection: ■ IP66, IP67
- Accuracy: ■ Class 1.0 per EN 13190
- Data Sheet: ■ TM 73.01



**IV1X, IV2X, IV3X, IV5X**  
Polar Needle Valves and Manifolds

- Nominal Pressure: ■ 6000 psi
- Body Material: ■ 316 stainless steel
- Material Packing: ■ Low temperature PTFE
- Ambient Temp: ■ -94°F ... 140°F
- Ingress Protection: ■ IP66, IP67
- Certification: ■ NACE MR0175
- Data Sheet: ■ AC 09.19, AC 09.22, AC 09.23







# Mechatronic Pressure Measurement



PGS11

Utility Grade,  
Externally Adjustable

- Case size: 1.5, 2" & 2.5"
- Pressure Ranges: 0...60 psi up to 0...6000 psi
- Wetted Parts: Copper alloy
- Case: 304 stainless steel
- Ingress Protection: IP 41
- Switch Type: Magnetic snap-action
- Accuracy: ± 2.5 % of full span
- Unique Feature: Up to 2 contacts available
- Data Sheet: PV 21.01



PGS21

Utility Grade, Fixed Set Point

- Case size: 1.5, 2" & 2.5"
- Pressure Ranges: 0...60 psi up to 0...6000 psi
- Wetted Parts: Copper alloy
- Case: 304 stainless steel
- Ingress Protection: IP 65
- Switch Type: Magnetic snap-action
- Accuracy: ± 2.5 % of full span
- Unique Features: Fixed, factory set switch point  
Silicone oil case filling (optional)
- Data Sheet: PV 21.02



PGS23.063

Process Grade,  
All Stainless Steel

- Case size: 2.5"
- Pressure Ranges: 0...60 psi up to 0...6000 psi
- Wetted Parts: 316 stainless steel
- Case: 304 stainless steel
- Ingress Protection: IP 54, IP 65 (optional)
- Switch Type: Magnetic, Inductive, Reed & Electronic
- Accuracy: ± 1.6 % of full span
- Unique Feature: Solid front safety design
- Data Sheet: PV 22.03

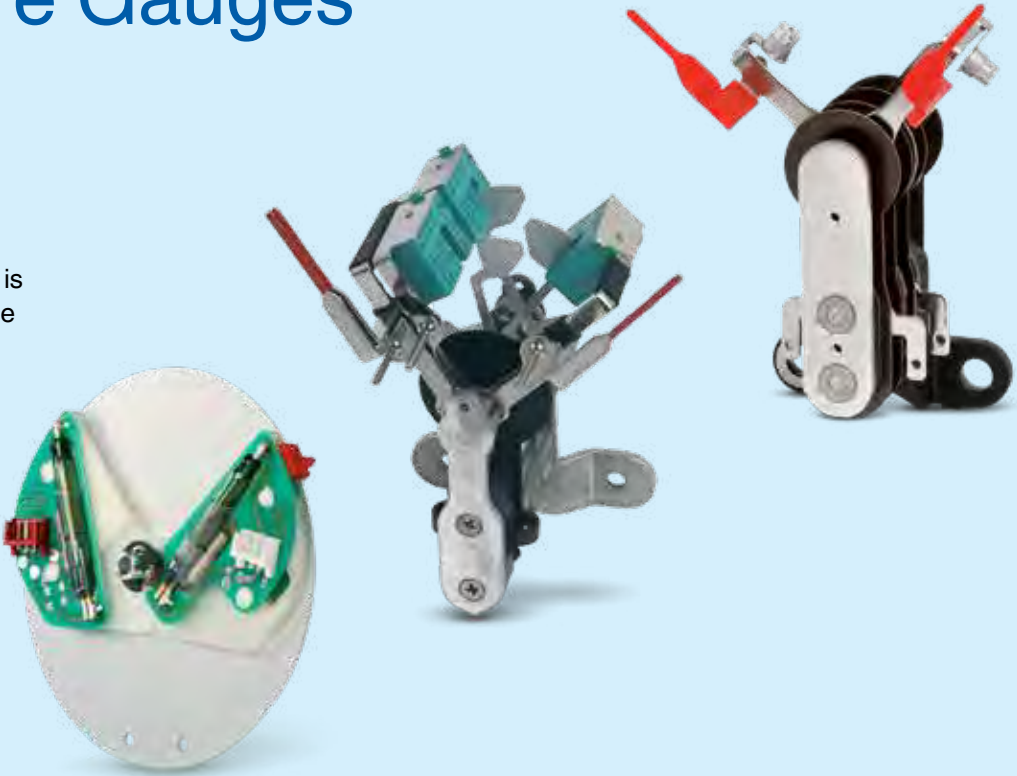
## SwitchGAUGES – Pressure Gauges with Switch Output

Control systems are becoming more important in industrial and process applications. Critical applications often require an alarm and the capability to open or close an electrical circuit. The WIKA USA switchGAUGE combines the local indication of a mechanical pressure gauge with the functions of a mechanical switch. One of the advantages of most WIKA USA switchGAUGES is the capability to easily adjust the set point externally between 10 and 90% of the pressure scale without the additional use of a separate reference gauge.

Depending on the gauge model the following switch types are available:

- Magnetic snap-action contact
- Inductive contact
- Electronic contact
- Reed switch
- Micro switch
- Transistor output NPN or PNP

All instruments with inductive contacts are considered intrinsically safe and can be certified in accordance with ATEX Ex II 2 GD c TX.



PGS23.100/160

Industrial/Process Grade,  
All Stainless Steel

- Case size: 4" & 6"
- Pressure Ranges: -30"Hg...0 up to 0...15000 psi
- Wetted Parts: 316 stainless steel
- Case: 304 stainless steel
- Ingress Protection: IP 65
- Switch Type: Magnetic, Inductive, Reed & Electronic
- Accuracy: ± 1.0 % of full span
- Unique Feature: Solid front safety design (optional)  
Silicone case filling (optional)
- Data Sheet: PV 22.02



PGS43.100/160

Diaphragm Type,  
All Stainless Steel

- Case size: 4" & 6"
- Pressure Ranges: 0...10"WC up to 0...360 psi
- Wetted Parts: 316 stainless steel
- Case: 304 stainless steel
- Ingress Protection: IP 54, optional IP 65 (liquid filled)
- Switch Type: Magnetic, Inductive, Reed & Electronic
- Accuracy: ± 1.6 % of full span
- Unique Features: Solid front safety design (optional)
- Data Sheet: PV 24.03



# IntelliGAUGES – Pressure Gauges with Electrical Output Signal

# Mechatronic Pressure Measurement

The multi-functional intelliGAUGES provides a cost-effective and reliable solution for nearly all pressure measurement applications. They combine the local display of a mechanical pressure gauge with the electrical output signal of a pressure transmitter. These hybrid instruments are available with all commonly used electrical signals. The sensor is non-frictional without any mechanical influence on the measurement signal. Many of the instruments are available in accordance to ATEX Ex II 2 G ia. For pressure gauges in case sizes 4" and 6" the electrical output signal can also be combined with a switch contact.



**PGT21**  
Utility Grade, Brass Internals

- Case size: ■ 2" & 2.5"  
Pressure Ranges: ■ -30"Hg...0 up to 0...6000 psi  
Wetted Parts: ■ Copper alloy  
Case: ■ 304 stainless steel  
Ingress Protection: ■ IP 65, optional IP 67  
Output Signal: ■ Various, depending on power supply  
Accuracy: ■ ± 1.6 % or ± 2.5 % of full span  
Data Sheet: ■ PV 11.03



**PGT23.063**  
Process Grade, All Stainless Steel

- Case size: ■ 2.5"  
Pressure Ranges: ■ -30"Hg...0 up to 0...15000 psi  
Wetted Parts: ■ 316 stainless steel  
Case: ■ 304 stainless steel  
Ingress Protection: ■ IP 54, optional IP 65 (liquid filled)  
Output Signal: ■ 4...20 mA  
Accuracy: ■ ± 2/1/2% of full span  
Unique Features: ■ Solid front safety design (standard)  
■ Silicone case filling (optional)  
Data Sheet: ■ PV 12.03



**PGT23.100/160**  
Process Grade, All Stainless Steel

- Case size: ■ 4" & 6"  
Pressure Ranges: ■ -30"Hg...0 up to 0...30000 psi  
Wetted Parts: ■ 316 stainless steel  
Case: ■ 304 stainless steel  
Ingress Protection: ■ IP 54, optional IP 65 (liquid filled)  
Output Signal: ■ Various, ATEX version optional  
Accuracy: ■ ± 1.0 % of full span  
Unique Features: ■ Solid front safety design (standard)  
■ Switch options available  
Data Sheet: ■ PV 12.04



**PGT43.100/160**  
Diaphragm Type, All Stainless Steel

- Case size: ■ 4" & 6"  
Pressure Ranges: ■ 0...10"WC up to 0...360 psi  
Wetted Parts: ■ 316 stainless steel  
Case: ■ 304 stainless steel  
Ingress Protection: ■ IP 54, optional IP 65 (liquid filled)  
Output Signal: ■ Various, ATEX version optional  
Accuracy: ■ ± 1.6 % of full span  
Unique Features: ■ Solid front safety design (standard)  
■ 5-times OP safe, up to 600 psi  
■ Switch options available  
Data Sheet: ■ PV 14.03



**DPGT43.100/160**  
Differential Pressure Type, All Stainless Steel

- Case size: ■ 4" & 6"  
Pressure Ranges: ■ 0...10"WC up to 0...360 psi  
Wetted Parts: ■ 316 stainless steel  
Case: ■ 304 stainless steel  
Ingress Protection: ■ IP 54, optional IP 65 (liquid filled)  
Output Signal: ■ Various, ATEX version optional  
Accuracy: ■ ± 1.6 % of full span  
Unique Features: ■ Solid front safety design (standard)  
■ Max working pressure 360 psi, depending on range  
■ Switch options available  
Data Sheet: ■ PV 17.05



**DPGT43HP.100/160**  
Differential Pressure Type, High Overpressure Safe

- Case size: ■ 4" & 6"  
Pressure Ranges: ■ 0...25"WC up to 0...600 psi  
Wetted Parts: ■ 316 stainless steel  
Case: ■ 304 stainless steel  
Ingress Protection: ■ IP 54, optional IP 65 (liquid filled)  
Output Signal: ■ 4...20 mA, 2-wire, ATEX version optional  
Accuracy: ■ ± 1.6 % of full span  
Unique Features: ■ High overpressure safe up to 600 psi and optional up to 1500 psi, 3600 psi or 6000 psi.  
■ Switch options available  
Data Sheet: ■ PV 17.13





# Mechatronic Pressure Measurement



DPGS43.100/160

Differential Pressure Type, All Stainless Steel

Case size:

■ 4" & 6"

Pressure Ranges:

■ 0...10"WC up to 0...360 psi

Wetted Parts:

■ 316 stainless steel

Case:

■ 304 stainless steel

Ingress Protection:

■ IP 54, optional IP 65 (liquid filled)

Switch Type:

■ Magnetic, Inductive, Reed & Electronic

Accuracy:

■ ± 1.6 % of full span

Unique Features:

■ Max working pressure 360 psi, depending on range

■ Solid front safety design (optional)

Data Sheet:

■ PV 27.05



DPGS43HP.100/160

Differential Pressure Type, High Overpressure Safe

Case size:

■ 4" & 6"

Pressure Ranges:

■ 0...25"WC up to 0...600 psi

Wetted Parts:

■ 316 stainless steel

Case:

■ 304 stainless steel

Ingress Protection:

■ IP 54, optional IP 65 (liquid filled)

Switch Type:

■ Magnetic, Inductive & Electronic

Accuracy:

■ ± 1.6 % of full span

Unique Features:

■ High overpressure safe up to 600 psi and optional

■ up to 1500 psi, 3600 psi or 6000 psi.

■ Silicone case filling (optional)

Data Sheet:

■ PV 27.13



CP3000, CP4000

Alarm Contacts for 4-1/2" XSEL Process Gauge

Case size:

■ 4.5"

Pressure Ranges:

■ 0...60 psi up to 0...20000 psi (CP3000)

Wetted Parts:

■ 316 stainless steel

Case:

■ Black thermoplastic (Pocan)

Switch Type:

■ Magnetic (CP3000), Inductive (CP4000)

Unique Features:

■ Field installable

Data Sheet:

■ CP3000, CP4000

# Electronic Pressure Measurement

General Purpose Industrial Applications



CE ENEC

S-11, F-21

Standard Industrial Grade Transmitters, Flush Diaphragm

Non-Linearity:

■ Up to ± 0.125% B.F.S.L. of full span

Measuring Ranges:

■ 0...50"WC up to 0...8,000 psi

■ Positive/negative gauge pressure and absolute pressure

Output Signal:

■ 4...20 mA, DC 0...5 V, 0...10 V & other current & voltage output signals

Unique Features:

■ Flush process connection for viscous media

■ Compact design and rugged construction

■ High temperature version up to 300°F (optional)

Data Sheet:

■ PE 81.02



UL US ENEC CE

A-10

General Purpose Transmitter

Accuracy:

■ Up to ± 0.25% B.F.S.L. of full span

Measuring Ranges:

■ 0...20"WC up to 0...15,000 psi

■ Positive/negative gauge pressure and absolute pressure

Output Signal:

■ 4...20 mA, DC 0...5 V, 0...10 V & other voltage & ratiometric output signals

Unique Features:

■ Suitable for most general industrial applications

■ Compact design

■ Test report included with unit

■ Exceptional number of variations

Data Sheet:

■ PE 81.60



CE ENEC

DG-10-S, DG-10-E

Digital Pressure Gauges

Accuracy:

■ Up to ± 0.25% of full span B.F.S.L.

Measuring Ranges:

■ 0...100 psi up to 0...10000 psi

■ Positive/negative gauge pressure

Ingress Protection:

■ IP 65

Unique Features:

■ Local indication with transmitter accuracy

■ 3.15" (80 mm) case diameter

■ Battery powered (2 x 1.5V AA batteries)

■ Enhanced version (DG-10-E) includes black rubber boot, illuminated display, second display for min/max and with tare feature

■ DG-10-E rotatable over 300°

Data Sheet:

■ PE 81.66

## Standard Industrial Grade Transmitter



Non-Linearity

Measuring Ranges

Output Signal

Unique Features

Data Sheet

Up to ± 0.125% B.F.S.L. of full span

0...10 psi up to 0...20,000 psi

Positive/negative gauge pressure and absolute pressure

4...20 mA, DC 0...5 V, 0...10 V & other current, voltage & ratiometric output signals

Robust design for use in harsh environments.

Extreme shock & vibration resistant.

Test report included with each unit

With NEMA 4X connection head.

PE 81.61





# Electronic Pressure Measurement

General Purpose Industrial Applications

# Electronic Pressure Measurement

Special Purpose Industrial Applications



**PSD-4**  
Pressure Transmitters with Integral LED Display and Switch Options

- Non-Linearity: ■ ± 0.25% B.F.S.L. of full span
- Measuring Ranges: ■ 0...15 psi up to 0...8000 psi
- Positive/negative gauge pressure and absolute pressure
- Output Signal: ■ Dual PNP/NPN switch output & 4-20mA or 0-10V
- Unique Features: ■ User selectable NPN or PNP switch type, and optional user selectable 4-20mA or 0-10V output.
- Over 320° rotatable case and display
  - I/O link compatible
  - Optional available with flush diaphragm
- Data Sheet: ■ PE 81.86



**TSD-30**  
Temperature Transmitter with Integral LED Display and Switch Options

- Non-Linearity: ■ ± 0.50% B.F.S.L. of full span
- Measuring Ranges: ■ -4...+176°F (user selectable for °C)
- Output Signal: ■ Dual PNP switch output & 4...20 mA or 0...10V
- Dual NPN switch output & 4...20 mA
- Probe Length: ■ From 25 mm (0.93") up to 350 mm (13.78")
- Unique Features: ■ Over 320° rotatable case and display
- I/O link compatible
- Data Sheet: ■ TE 67.03



**FSD-4**  
Level Transmitter with integral LED Display and Switch Options

- Non-Linearity: ■ ± 0.50% B.F.S.L. of full span (analog output)
- Measuring Ranges: ■ 189 mm (7.44") to 730 mm (26.34")
- Output Signal: ■ Dual PNP switch output & 4...20 mA or DC 0...10V
- Dual NPN switch output & 4...20 mA
- Sensor Length: ■ From 250 mm (9.84") up to 730 mm (28.74")
- Unique Features: ■ Over 320° rotatable case and display
- User selectable units in mm, cm & %
- Data Sheet: ■ LM 40.01



**HP-2-S, HP-2-D, HP-2-E**  
High Pressure Transmitters

- Non-Linearity: ■ Up to ± 0.25% B.F.S.L. of full span
- Measuring Ranges: ■ 0...23000 psi up to 0...215,000 psi
- Output Signal: ■ 4...20 mA, DC 0...5 V, 0...10 V output signals
- Unique Features: ■ Very high long-term stability
- Excellent load cycle
  - Diaphragm impact protection system (HP-2-D)
  - Exchangeable process connection (HP-2-E)
- Data Sheet: ■ Test report included with each unit
- PE 81.53



**P-30, P-31**  
High Precision Pressure Transmitters

- Non-Linearity: ■ ± 0.05 % B.F.S.L. of full span
- Measuring Ranges: ■ 0...100"WC up to 0...10,000 psi
- Positive gauge pressure and absolute pressure
- Output Signal: ■ 4...20 mA, 0...20 mA, DC 0...5 V, DC 0...10 V USB & CANopen®
- Unique Features: ■ Zero thermal error in the range of 50...140°F
- Outstanding signal to noise ratio
  - On-Site calibration via product software
  - Test report included with every unit
  - Optional available with flush diaphragm (P-31)
- Data Sheet: ■ PE 81.54



**UPT-20, UPT-21**  
Universal Process Transmitter

- Non-Linearity: ■ ± 0.15 % B.F.S.L. of full span
- Measuring Ranges: ■ 0...10 psi up to 0...15,000 psi
- Positive/negative gauge pressure
- Output Signal: ■ 4...20 mA, HART®
- Unique Features: ■ Large multi-functional and rotatable display
- Freely scalable measuring ranges
  - 100:1 turndown
  - Stainless steel case optional
  - Optional available with flush diaphragm (P-31)
- Data Sheet: ■ PE 86.05



# Electronic Pressure Measurement

Submersible Pressure Transmitters

# Electronic Pressure Measurement

Submersible Pressure Transmitters



## LF-1

### High Performance Submersible Level Transmitter

- Non-Linearity: ■ ± 0.5% B.F.S.L. of full span
- Measuring Ranges: ■ 0...50 inWC up to 0...100 psi positive pressure, absolute ranges available as well
- Output Signal: ■ 4...20mA, HART, 0.1 ... 2.5V low power
- Ingress Protection: ■ IP 68 for permanent submersion up to 325 feet (100 m) water column
- Unique Features: ■ Optional Explosion protection in accordance with FM, CSA, IECEx and ATEX
- Optional Hastelloy body
- Optional lightning protection
- Data Sheet: ■ LM 40.04



## LH-20

### High Performance Submersible Level Transmitter for Measurements in Hazardous Areas

- Non-Linearity: ■ up to ± 0.1% B.F.S.L. of full span
- Measuring Ranges: ■ 0...50 inWC up to 0...300 psi positive gauge and absolute pressure
- Output Signal: ■ 4...20 mA, HART®
- Ingress Protection: ■ IP 68 for permanent submersion up to 984 feet (300 m) water column
- Unique Features: ■ Ideal for harsh environmental conditions
- Optional Titanium body for high resistance
- Optional lightning protection
- Data Sheet: ■ Test report included with each unit
- PE 81.56



# Wika LevelGuard™

## Fits Level Transmitters

LS-10, LF-1

- Unique Features**
- All 316 stainless steel construction.
  - 2" diameter diaphragm for excellent sensitivity.
  - Diaphragm protected from physical damages and turbulences.
  - Added weight prevents movement of transmitter.
- Data Sheet**
- LevelGuard



## LS-10

### Standard Submersible Level Transmitter

- Non-Linearity: ■ ± 0.25% B.F.S.L. of full span
- Measuring Ranges: ■ 0...100 inWC up to 0...160 psi positive pressure
- Output Signal: ■ 4...20 mA
- Ingress Protection: ■ IP 68 for permanent submersion up to 328 feet (100 m) water column
- Unique Features: ■ Robust design
- Field assembly with vented polyurethane cable
- Cable supports up to 220 lbs. (100 kg) of strain
- Data Sheet: ■ PE 81.55



# Electronic Pressure Measurement

Hazardous Area Applications

# Electronic Pressure Measurement

Digital Pressure Transmitters



## E-10, E-11

### Explosion Proof Pressure Transmitters

- Non-Linearity: ■  $\pm 0.25\%$  B.F.S.L. of full span
- Measuring Ranges: ■ 0...5 psi up to 0...15000 psi
- Output Signal: ■ 4...20 mA, DC 0...5 V, 0.5...4.5 V, 1...5 V & 0...10 V
- Unique Features: ■ For sour gas applications (NACE)
- FM/CSA approved as "explosion proof" for class I, div. 1 hazardous areas
- ATEX approved as "flameproof enclosure" for II 2 G Ex d II C
- Low-power version (optional)
- Optional available with flush diaphragm (E-11)
- Data Sheet: ■ PE 81.27

## IS-3

### Intrinsically Safe Pressure Transmitters

- Non-Linearity: ■  $\pm 0.25\%$  B.F.S.L. of full span
- Measuring Ranges: ■ 0...50inWC up to 0...15,000 psi
- Output Signal: ■ 4...20 mA
- Unique Features: ■ Class I Division I Intrinsically Safe (ia)
- IP68 and IP69K electrical connections
- Optional available with flush diaphragm
- Data Sheet: ■ PE 81.58

## N-10, N-11

### Non-Incendive Pressure Transmitters

- Non-Linearity: ■  $\pm 0.25\%$  B.F.S.L. of full span
- Measuring Ranges: ■ 0...50inWC up to 0...15,000 psi
- Output Signal: ■ 4...20 mA or DC 1...5 V low power output signal
- Unique Features: ■ Wetted parts NACE MR0-175 compliant
- FM/CSA approved non-incendive for Class I, Div. 2, dust-ignition proof for Class II, Div. 1
- Optional available with flush diaphragm (N-11)
- Data Sheet: ■ N-10/N-11

## D-20-9, D-21-9

### Pressure Transmitter with CANopen Interface

- Non-Linearity: ■  $\pm 0.2\%$  B.F.S.L. of full span
- Measuring Ranges: ■ 0...4 psi up to 0...15000 psi
- Output Signal: ■ Positive/negative gauge pressure and absolute pressure
- CANopen protocol per CiA DS-301
- Unique Features: ■ CANopen interface per DS-301
- Device profile DS-404
- Compact size
- Optional with integrated Y-connector
- Optional available with flush diaphragm (D-21-9)
- Data Sheet: ■ PE 81.39

## Certified Safety & Reliability

Quality measurement technologies are essential for safe, reliable operations. WIKA USA's pressure, temperature, level, flow, and force solutions have withstood rigorous testing of national and international authorizing bodies, and have earned a wide range of approvals and certifications worldwide.





# Diaphragm Seal Systems Provide Protection to Ensure Safety & Reliability

Diaphragm seal systems protect gauges from hot, viscous, contaminated, or corrosive media. This added layer of protection ensures that the media doesn't reach the gauge, helping to prevent gauge failure that can cause safety issues for operations and personnel.

### Diaphragm Seals

- Prevent clogging, corrosion, or contamination of your pressure gauges
- Reduce fugitive emissions
- Extend the service life of the pressure instrument, which reduces process downtimes
- Reduce or eliminate maintenance costs

## WIKA USA Combines Expertise and Technology to Provide Custom, Quality Systems

WIKA USA's Lean manufacturing-focused factory produces custom solutions for diaphragm seal systems.

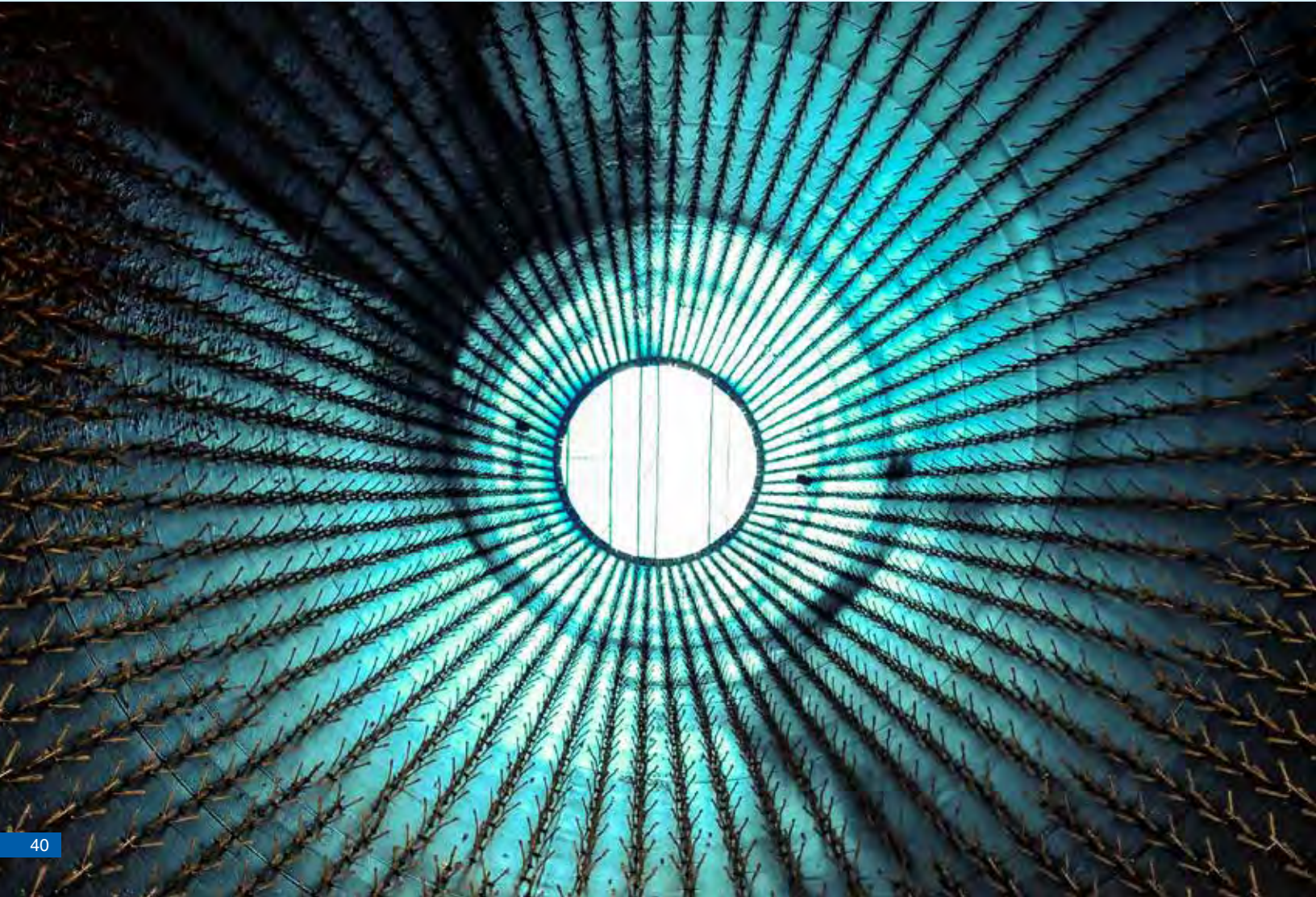
WIKA USA's toolbox of modular solutions and proprietary software help determine results of newly configured systems prior to manufacturing. This process minimizes the design cycle, improves lead times, optimizes safety and assures performance of your diaphragm seal solutions.

# Diaphragm Seals



## All Welded System AWS M93X.D1

<b>Ranges</b>	-30"HG up to 5000 psi
<b>Case Size</b>	4½"
<b>Case</b>	Fiberglass reinforced thermoplastic
<b>Wetted Parts</b>	316L, HC276, Monel
<b>Process</b>	½" NPT-M connection
<b>Accuracy</b>	± 0.5 % of span
<b>Options</b>	Consult factory
<b>Data Sheet</b>	M93X.D1



990.10, 990.12

### Standard Design, Threaded / Flanged

<b>Instrument:</b>	■ ¼" of ½" NPT-F
<b>Process:</b>	■ ¼" to 1" NPT threaded ■ ½" to 2" NPS flanged ■ ANSI B16.5 Class 150 to 1500
<b>Wetted parts:</b>	■ 316L, Monel, HC276, Tantalum
<b>Options:</b>	■ consult factory ■ Express lane item



990.TA, 990.TB

### Mini Seals

<b>Instrument</b>	■ ¼" of ½" NPT-F
<b>Process:</b>	■ ¼" to 1" NPT threaded
<b>Wetted parts:</b>	■ 316L, Monel, HC276,
<b>Options:</b>	■ consult factory ■ Express lane item



990.27,990.28,990.29

### Flange Types, Flush & Extended

<b>Instrument</b>	■ ¼" of ½" NPT-F
<b>Process:</b>	■ 2" – 5" NPS flanged 2"-6" extension ■ ANSI B16.5 Class 150 to 1500
<b>Wetted parts:</b>	■ 316L, Monel, HC276, Tantalum
<b>Technology:</b>	■ Diaphragm per TIG, Metal bonding, Seam or Laser Welding technic applied
<b>Options:</b>	■ consult factory



# Diaphragm Seals



# Sanitary Solutions



## Sanitary Diaphragm Pressure Gauge with Integrated Diaphragm Monitoring and Double Containment

PG43SA-D

Case Size	4"
Pressure Ranges	-30"Hg...30 psi up to 0...200 psi
Wetted Parts	316L stainless steel and Inconel® 718 diaphragm
Case	304 stainless steel electro polished
Ingress Protection	IP 54
Accuracy	± 1.6 % of full span
Unique Features	High over pressure safety (depending on range) Ranges > 36 psi suitable for vacuum typical of CIP or SIP cleaning Electropolishing per ASME BPE SF4 optional (wetted parts) optional PM 04.17

- Mechanical pressure transmission without the use of a system fluid.
- Patented diaphragm monitoring system to emphasize highest safety requirements.
- Red warning sign will indicate breach of diaphragm element.
- Two barriers for secure separation of the process from the atmosphere.
- Completely autoclavable, suitable for CIP and SIP.
- Standard with external zero point adjustment (± 15°).

Data Sheet



990.FR, 990.ER

### Flange Types, Flush & Extended - Rotatable

Instrument	■ ¼" of ½" NPT-F
Process:	■ 2" – 5" NPS flanged 2" -6" extension ■ ANSI B16.5 Class 150 to 1500
Wetted parts:	■ 316L, Monel, HC276, Tantalum
Technology:	■ Diaphragm per TIG, Metal bonding, Seam or Laser Welding technic applied
Options:	■ Consult factory



910.ZA, 910.ZB

### Saddle & Block Flanges

Instrument	■ ¼" of ½" NPT-F
Process:	■ Saddle design ■ 1/2" – 3" socket or butt weld & flanged
Wetted parts:	■ 316L, Monel, HC276
Options:	■ Consult factory



981.10, 981.27

### Inline Diaphragm Seals

Instrument	■ ¼" of ½" NPT-F
Process:	■ Wafer & Flange designs 1" – 4"
Wetted parts:	■ 316L, Monel, HC276, Tantalum
Options:	■ Consult factory



Sanitary Bimetal Thermometer  
Tri-Clamp® process connection  
TG58SA

- Unique Features
- Sanitary Tri-Clamp® process connection 3/4" through 2" in accordance with ASME BPE (Hygienic clamp)  
All stainless steel construction  
316L stainless steel process wetted surfaces, Ra ≤ 20µin (Ra ≤ 0.51µm), in accordance with ASME BPE designation SF1  
3-A approved
- Data Sheet
- TM 53.02



SA-11  
High Temperature Sanitary Pressure Transmitter

- Non-Linearity:
- ± 0.25% B.F.S.L. of full span
- Measuring Ranges:
- 0...100 "WC up to 0...400 psi positive/negative gauge pressure and absolute pressure  
■ Large variety of sanitary connections available  
■ Fully welded version  
■ Suitable for media temp. up to 300°F (150°C)  
■ Suitable for CIP & SIP maintenance processes  
■ Available with NEMA 4X connection head (IP67)
- Output Signal:
- 4...20 mA, 0...20 mA & 0...10 V
- Unique Features:
- PE 81.80
- Data Sheet:
- 



PSA-31  
Pressure Switch with Display

- Accuracy:
- < 1% of span
- Measuring Ranges:
- 0 ... 15 to 0 ... 300 psi relative  
■ 0 ... 15 to 0 ... 300 psi absolute  
■ -30 ... 0 inHg to -30 in HG ... 300 psi vacuum  
■ 1 or 2 (PNP or NPN)
- Switching output:
- 4 ... 20 mA
- Analog output:
- DC 0 ... 10 V (optional)
- Data Sheet:
- PE81.85



TR21-C, TR21-A  
Miniature Sanitary Temperature Transmitter

- Accuracy:
- Class A per in accordance with IEC 60751
- Measuring Ranges:
- -22...+300°F (-30...+150°C) and -22...+480°F (-30...+250°C)
- Output Signal:
- 4...20 mA, Pt100 & Pt1000
- Unique Features:
- Compact design, ideal for areas with space with limitations  
■ Intrinsically version optional available  
■ Large variety of sanitary connections available With thermowell (TR21-A)
- Data Sheet:
- TE 60.28 (TR21-C), TE 60.26 (TR21-A)



M932.3A, M933.3A  
Diaphragm Seal Sanitary Gauge

- Case size:
- 2.5" & 4"
- Pressure Ranges:
- -30"Hg...0 up to 0...600 psi
- Wetted Parts:
- 316L stainless steel electro polished
- Case:
- 304 stainless steel electro polished
- Ingress Protection:
- IP 65
- Accuracy:
- ± 2/1/2 % of full span (2.5") & ± 1.0 % (4")
- Unique Features:
- Availalbe with liquid filled case or dry case  
■ Serial # and part # engraved in the gauge case  
■ Material ID & heat # engraved in seal body or case  
■ Food grade glycerin case filling optional (M933.3A)
- Data Sheet:
- M93X.3A



PG43SA-S  
Sanitary Gauge with Dry Diaphragm

- Case size:
- 4"
- Pressure Ranges:
- -30"Hg...30 psi up to 0...200 psi
- Wetted Parts:
- 316L stainless steel electro polished
- Case:
- 304 stainless steel electro polished
- Ingress Protection:
- IP 54
- Accuracy:
- ± 1.6 % of full span
- Unique Features:
- Mechanical pressure transmission without internal transmission fluid  
■ Standard with external zero adjustment (± 15°)  
■ Visible Leak Monitoring included  
■ High overpressure safe up to 5x full scale value
- Data Sheet:
- PM 04.16



M932.25, M933.25  
Diaphragm Seal Sanitary Gauge

- Case size:
- 2.5"
- Pressure Ranges:
- -30"Hg...30 psi up to 0...600 psi
- Wetted Parts:
- 316L stainless steel electro polished
- Case:
- 304 stainless steel polished
- Ingress Protection:
- IP 65
- Accuracy:
- ± 2/1/2 % of full span
- Unique Features:
- Available with 3/4" or 1" Tri-Clamp® connection  
■ External zero adjustment optional  
■ Food grade glycerin case filling optional (M933.25)  
■ Integral cooling element (max. 300°F) optional
- Data Sheet:
- M93X.25



# Mechanical Temperature Measurement

Twin Temp Thermometers



## Process Grade Bimetal Thermometer

Combined with a Temperature Sensor

TT.30, TT.32, TT.50, TT.52

Ranges	3" & 5"
Measuring Ranges	-100°F (-70°C) up to 550°F (260°C)
Stem Material	304 stainless steel
Case Material	304 stainless steel
Stem Length	2-1/2" up to 48" (Thermocouple) 4" up to 48" (RTD) Bulb diameter 1/4"
Accuracy	± 1.0 % of full span
Unique Features	Thermocouple or RTD electrical output Explosion proof housing (optional) With 4...20 mA output signal (optional)
Data Sheet	TT.32/TT.52, TT.30 & TT.50

- This rugged twin-temp system features two independent sensors in one unit.
- Allows independent local and remote reading and data acquisition from one insertion point.
- Easy installation and interchangeable with any existing standard thermometer.
- Allows for remote trouble shooting or calibration without removing the instrument from the thermowell.

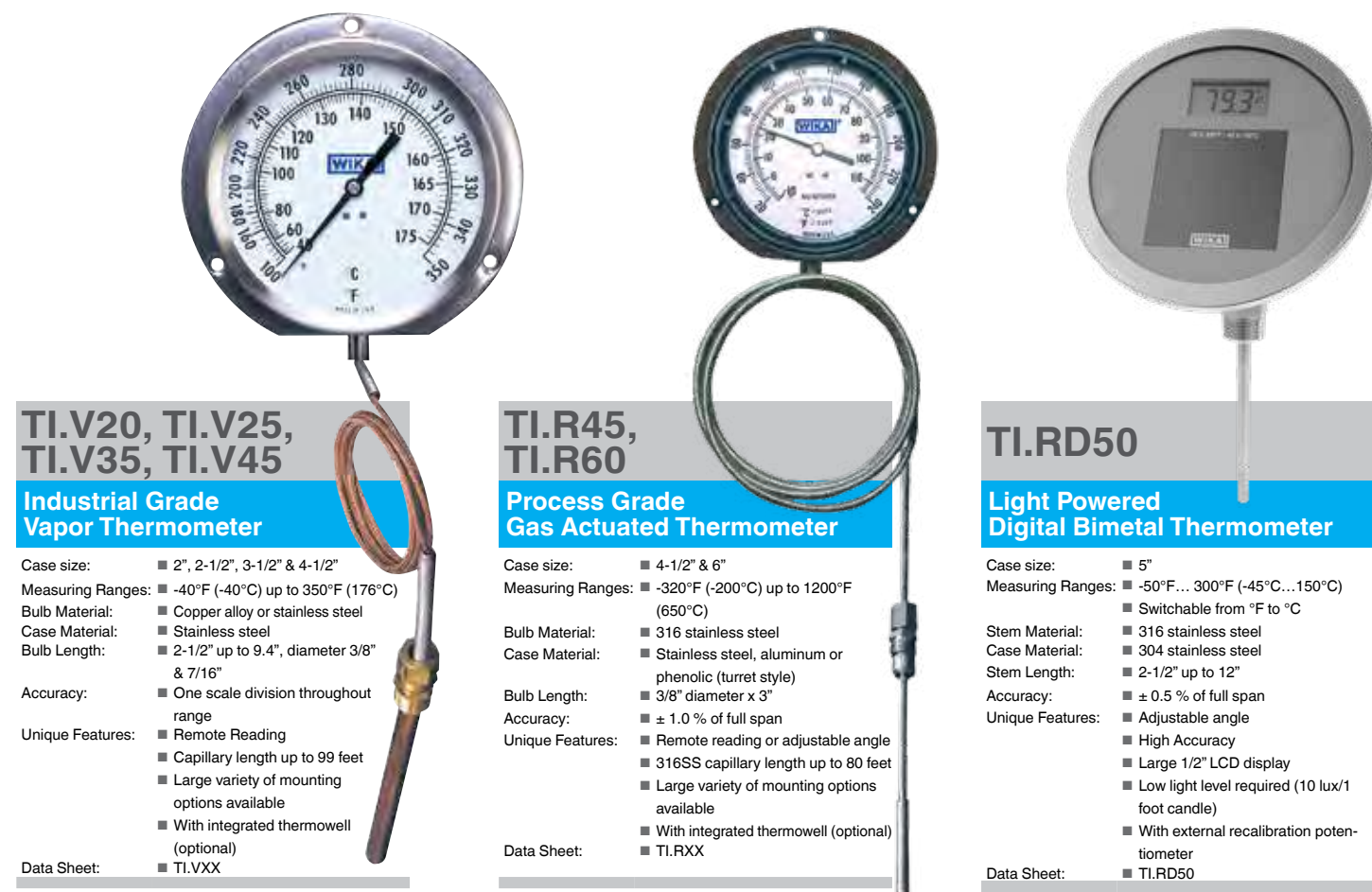
# Mechanical Temperature Measurement

Bimetals, Vapor, & Gas Actuated Thermometers



<b>TG53</b>	<b>TG51</b>
<b>Process Grade Bimetal Thermometer</b>	<b>Process Grade Bimetal Thermometer</b>
Case size: ■ 3", 4", 5" & 6"	Case size: ■ 3" & 5"
Measuring Ranges: ■ -100°F (-70°C) up to 1000°F (550°C)	Measuring Ranges: ■ -100°F (-70°C) up to 1000°F (550°C)
Stem Material: ■ 304 stainless steel	Stem Material: ■ 304 stainless steel
Case Material: ■ 304 stainless steel	Case Material: ■ 304 stainless steel
Stem Length: ■ 2½" to 114"	Stem Length: ■ 2½" to 24"
Stem Diameter: ■ ¼" & ¾"	Stem Diameter: ■ ¼"
Accuracy: ■ ± 1.0 % of full span	Accuracy: ■ ± 1.0 % of full span
Unique Features: ■ External zero adjustment ■ NEMA 4X (IP 66) weather protection ■ Dampened Movement (optional) ■ InSight™ dial (optional) ■ Silicone case filling (optional) ■ 316 stainless steel wetted parts (optional) ■ All 316 stainless steel model (optional)	Unique Features: ■ NEMA 4X (IP 66) weather protection ■ ¼" & ½" process connection
Data Sheet: ■ TG53	Data Sheet: ■ TG51

<b>TI.20</b>
<b>Industrial Grade Bimetal Thermometer</b>
Case size: ■ 2"
Measuring Ranges: ■ -100°F (-70°C) up to 1000°F (550°C)
Stem Material: ■ 304 stainless steel
Case Material: ■ 304 stainless steel
Stem Length: ■ 2½" up to 24"
Stem Diameter: ■ ¼"
Accuracy: ■ ± 1.0 % of full span
Unique Features: ■ NEMA 4X (IP66) weather protection ■ External reset ■ ¼" back mount (CBM) process connection ■ Guaranteed no to fog ■ NSF approval available
Data Sheet: ■ TI.20



<b>TI.V20, TI.V25, TI.V35, TI.V45</b>	<b>TI.R45, TI.R60</b>
<b>Industrial Grade Vapor Thermometer</b>	<b>Process Grade Gas Actuated Thermometer</b>
Case size: ■ 2", 2-1/2", 3-1/2" & 4-1/2"	Case size: ■ 4-1/2" & 6"
Measuring Ranges: ■ -40°F (-40°C) up to 350°F (176°C)	Measuring Ranges: ■ -320°F (-200°C) up to 1200°F (650°C)
Bulb Material: ■ Copper alloy or stainless steel	Bulb Material: ■ 316 stainless steel
Case Material: ■ Stainless steel	Case Material: ■ Stainless steel, aluminum or phenolic (turret style)
Bulb Length: ■ 2-1/2" up to 9.4", diameter 3/8" & 7/16"	Bulb Length: ■ 3/8" diameter x 3"
Accuracy: ■ One scale division throughout range	Accuracy: ■ ± 1.0 % of full span
Unique Features: ■ Remote Reading ■ Capillary length up to 99 feet ■ Large variety of mounting options available ■ With integrated thermowell (optional)	Unique Features: ■ Remote reading or adjustable angle ■ 316SS capillary length up to 80 feet ■ Large variety of mounting options available ■ With integrated thermowell (optional)
Data Sheet: ■ TI.VXX	Data Sheet: ■ TI.RXX

<b>TI.RD50</b>
<b>Light Powered Digital Bimetal Thermometer</b>
Case size: ■ 5"
Measuring Ranges: ■ -50°F... 300°F (-45°C...150°C)
Stem Material: ■ 316 stainless steel
Case Material: ■ 304 stainless steel
Stem Length: ■ 2-1/2" up to 12"
Accuracy: ■ ± 0.5 % of full span
Unique Features: ■ Adjustable angle ■ High Accuracy ■ Large 1/2" LCD display ■ Low light level required (10 lux/1 foot candle) ■ With external recalibration potentiometer
Data Sheet: ■ TI.RD50



# Electrical Temperature Measurement



# Electrical Temperature Measurement



## TR10-2

### Spring Loaded RTD Assembly

- Sensor Element: ■ Pt10, Pt100, Pt1000  
Measuring Ranges: ■ -328°F... 1382°F (-200°C up to 750°C)  
Sensor Type: ■ Single/Dual  
Wiring Configuration: ■ 2, 3, and 4 wire  
Probe Diameter: ■ 1/4" or 6 mm  
Sheath Material: ■ 316 stainless steel, Alloy 600  
Connection Head: ■ Aluminum, 1/2"NPT x Conduit 3/4"NPT  
Unique Features: ■ Designed to be mounted directly in a thermowell  
Data Sheet: ■ TR10-2



## TR15-2

### Remote Mount RTD Assembly, Fixed or Spring Loaded

- Sensor Element: ■ Pt10, Pt100, Pt1000  
Measuring Ranges: ■ -328°F... 1382°F (-200°C up to 750°C)  
Sensor Type: ■ Single/Dual  
Wiring Configuration: ■ 2, 3, and 4 wire  
Probe Diameter: ■ 1/4" or 6 mm  
Sheath Material: ■ 316 stainless steel, Alloy 600  
Connection Head: ■ Aluminum, 1/2"NPT x Conduit 3/4"NPT  
Unique Features: ■ To be used with thermowell or directly into process  
Data Sheet: ■ TR15-2



## TC10-2

### Spring Loaded Thermocouple Assembly

- Sensor Element: ■ Type J, K, E, T  
Measuring Ranges: ■ -328°F... 2300°F (-200°C up to 1260°C)  
Junction: ■ Grounded/Ungrounded, Single/Dual  
Probe Diameter: ■ 1/4" or 6 mm  
Sheath Material: ■ 316 stainless steel, Alloy 600  
Connection Head: ■ Aluminum, 1/2"NPT x Conduit 3/4"NPT  
Unique Features: ■ Designed to be mounted in a thermowell  
Data Sheet: ■ TC10-2



## TC15-2

### Remote Mount Thermocouple Assembly, Fixed or Spring Loaded

- Sensor Element: ■ Type K, J, T, E  
Measuring Ranges: ■ -328°F... 2300°F (-200°C up to 1260°C)  
Junction: ■ Grounded/Ungrounded, Single/Dual  
Probe Diameter: ■ 1/4" or 6 mm  
Sheath Material: ■ 316 stainless steel, Alloy 600  
Connection Head: ■ Aluminum, 1/2"NPT x Conduit 3/4"NPT  
Unique Features: ■ To be used with thermowell or directly into process  
Data Sheet: ■ TC15-2



## TC40

### Cut to Length Thermocouple Sensor

- Sensor Element: ■ Type K, J, E, N or T  
Measuring Ranges: ■ -328°F... 2300°F (-200°C up to 1260°C)  
Termination: ■ Stripped leads, Connectors  
Junction: ■ Grounded / Ungrounded, Single/Dual  
Probe Diameter: ■ 0.020" ... 3/8"  
Sheath Material: ■ 316 stainless steel, Alloy 600  
Cable: ■ PTFE, Fiberglass, PVC, Silicone  
Process Connections: ■ Compression fitting, fixed bushing  
Data Sheet: ■ TE 65.40



## TR40

### Cut to Length RTD Sensor

- Sensor Element: ■ PT100, PT1000, Pt10  
Measuring Ranges: ■ -320 ... +1,112 °F (-196 ... +600 °C)  
Sensor Type: ■ Single, Dual  
Wiring Configuration: ■ 2, 3, and 4 wire  
Termination: ■ Stripped leads, Connectors  
Probe Diameter: ■ 1/8" ... 3/8"  
Sheath Material: ■ 316 stainless steel, Alloy 600  
Cable: ■ PTFE, Fiberglass, PVC, Silicone  
Process Connections: ■ Compression fitting, fixed bushing  
Data Sheet: ■ TE 60.40



## T15

### Digital Temperature Transmitter

- Input: ■ Resistance temperature sensors, potentiometers  
Accuracy: ■ < 0.1%  
Output Signal: ■ 4...20 mA  
Unique Features: ■ Extremely easy and fast configuration  
Data Sheet: ■ TE 15.01



## T32.1S, T32.3S

### Digital Temperature Transmitter with HART® Protocol

- Accuracy: ■ <0.1 %  
Measuring Ranges: ■ -454°F... +3308°F (-270°C up to +1820°C), depending on sensor device  
Input: ■ RTD, Thermocouples, Potentiometers  
Output Signal: ■ 4...20 mA, HART® protocol  
Unique Features: ■ Configurable with a variety of open configuration tools  
■ Rail mount version available (T32.3S)



# Tubeskins & Multipoints



**TC59-W**  
Weld Pad Thermocouple

Sensor element: ■ Type K, J, E, or N  
Measuring range: ■ 0 ... +1,260 °C, +32 ... +2,300 °F  
Measuring point: ■ Grounded or ungrounded  
Process connection: ■ Surface mount welded  
Data sheet: ■ TE 65.58



**TC59-X**  
Tubeskin Thermocouple Assembly  
Gayesco Xtracto-Pad®

Sensor element: ■ Type K, J, E or N  
Measuring range: ■ 0 ... +1,260 °C, 32 ... +2,300 °F  
Measuring point: ■ Grounded or ungrounded  
Process connection: ■ Surface mount removable / shielded  
Data sheet: ■ TE 65.57



**TC59-R**  
Tubeskin Thermocouple Assembly  
Gayesco Refracto-Pad®

Sensor element: ■ Type K, J, E or N  
Measuring range: ■ 0 ... +1,260 °C, 32 ... +2,300 °F  
Measuring point: ■ Grounded or ungrounded  
Process connection: ■ Surface mount removable / shielded  
Data sheet: ■ TE 65.56



**TC95**  
Multipoint Thermocouple In  
Band Design

Sensor element: ■ Types K, J, E, N or T  
Measuring range: ■ 0 ... 1,200 °C, 32 ... 2,192 °F  
Measuring point: ■ Ungrounded or grounded  
Process connection: ■ Various process connections  
Data sheet: ■ TE 70.01



**TC96-R**  
Gayesco Flex-R® Flexible  
Multipoint Thermometer

Sensor element: ■ Types K, J, E, or N  
Measuring range: ■ 0 ... 1,200 °C, 32 ... 2,192 °F  
Measuring point: ■ Ungrounded or grounded  
Process connection: ■ Various process connections  
Data sheet: ■ TE 70.10



**TC96-O**  
Gayesco Flex-O® Flexible  
Multipoint Thermometer

Sensor element: ■ Types K, J, E, or N  
Measuring range: ■ 0 ... 1,200 °C, 32 ... 2,192 °F  
Measuring point: ■ Ungrounded or grounded  
Process connection: ■ Various process connections  
Data sheet: ■ TE 70.11



**TC59-V**  
Tubeskin Thermocouple  
V-Pad®

Sensor element: ■ Type K, J, E or N  
Measuring range: ■ 0 ... +1,260 °C, 32 ... +2,300 °F  
Measuring point: ■ Grounded  
Process connection: ■ Surface mount welded  
Data sheet: ■ TE 65.59



**TC59-X**  
Tubeskin Thermocouple Assembly  
Gayesco Xtracto-Pad®

Sensor element: ■ Type K, J, E or N  
Measuring range: ■ 0 ... +1,260 °C, 32 ... +2,300 °F  
Measuring point: ■ Grounded or ungrounded  
Process connection: ■ Surface mount removable / shielded  
Data sheet: ■ TE 65.57



**TC59-R**  
Tubeskin Thermocouple Assembly  
Gayesco Refracto-Pad®

Sensor element: ■ Type K, J, E or N  
Measuring range: ■ 0 ... +1,260 °C, 32 ... +2,300 °F  
Measuring point: ■ Grounded or ungrounded  
Process connection: ■ Surface mount removable / shielded  
Data sheet: ■ TE 65.56



**TC95**  
Multipoint Thermocouple In  
Band Design

Sensor element: ■ Types K, J, E, N or T  
Measuring range: ■ 0 ... 1,200 °C, 32 ... 2,192 °F  
Measuring point: ■ Ungrounded or grounded  
Process connection: ■ Various process connections  
Data sheet: ■ TE 70.01



**TC96-R**  
Gayesco Flex-R® Flexible  
Multipoint Thermometer

Sensor element: ■ Types K, J, E, or N  
Measuring range: ■ 0 ... 1,200 °C, 32 ... 2,192 °F  
Measuring point: ■ Ungrounded or grounded  
Process connection: ■ Various process connections  
Data sheet: ■ TE 70.10



**TC96-O**  
Gayesco Flex-O® Flexible  
Multipoint Thermometer

Sensor element: ■ Types K, J, E, or N  
Measuring range: ■ 0 ... 1,200 °C, 32 ... 2,192 °F  
Measuring point: ■ Ungrounded or grounded  
Process connection: ■ Various process connections  
Data sheet: ■ TE 70.11





# Thermowells



# Thermowells



**TW15**  
**Threaded Type (Solid Machined)**  
Thermowell Form: ■ Tapered, straight or stepped  
Process Connection: ■ 1/2"NPT, 3/4"NPT or 1"NPT  
Bore Diameter: ■ 0.260", 0.385", others  
Unique Features: ■ Large variety of materials available  
Data Sheet: ■ TW.TH/TW15



**TW20, TW25**  
**Socket Weld & Weld-In Type (Solid Machined)**  
Thermowell Form: ■ Tapered, straight or stepped  
Weld-In Diameter: ■ Up to 2" pipe size  
Bore Diameter: ■ 0.260", 0.385", others  
Unique Features: ■ Large variety of materials available  
Data Sheet: ■ TW.SW/TW20, TW.WI/TW25



**TW60**  
**Sanitary Type (Solid Machined)**  
Thermowell Form: ■ Straight or stepped  
Material: ■ 316L (1.4435) stainless steel  
Process Connection: ■ Wide variety of sanitary connections available  
Bore Diameter: ■ 0.260", 0.385", others  
Unique Features: ■ Surface Finish Ra ≤ 25 µin (Ra ≤ 0.64 µm) per ASME BPE, SF2 (optional)  
Data Sheet: ■ TW 95.22

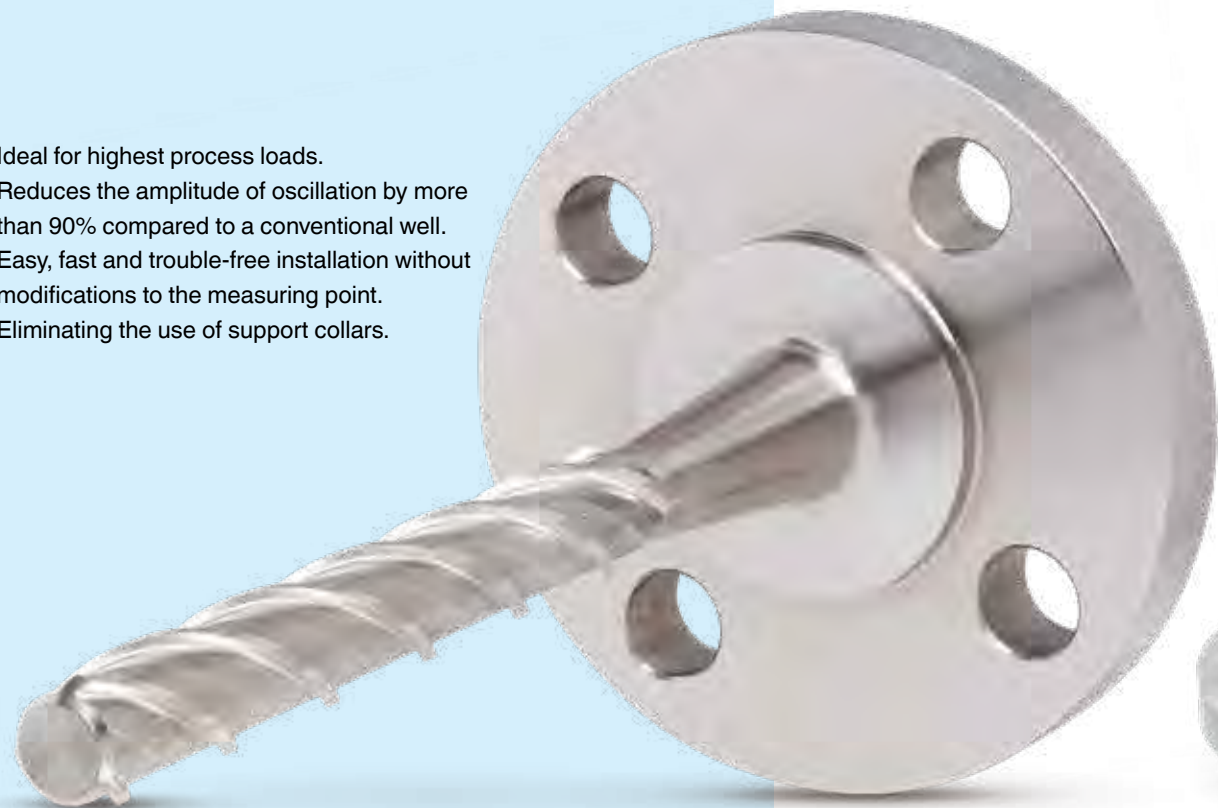
## ScrutonWell® Design Option

<b>Thermowell Form</b>	Engineered Helical Strake
<b>Material</b>	Various threaded, flanged or Vanstoneprocess connection
<b>Process Connection</b>	Various threaded or flanged process connection
<b>Bore Diameter</b>	0.260", 0.385", others
<b>Data Sheet</b>	SP 05.16



Helical strakes break up the flow and thus impede the formation of a clearly defined Kármán vortex street.

- Ideal for highest process loads.
- Reduces the amplitude of oscillation by more than 90% compared to a conventional well.
- Easy, fast and trouble-free installation without modifications to the measuring point.
- Eliminating the use of support collars.

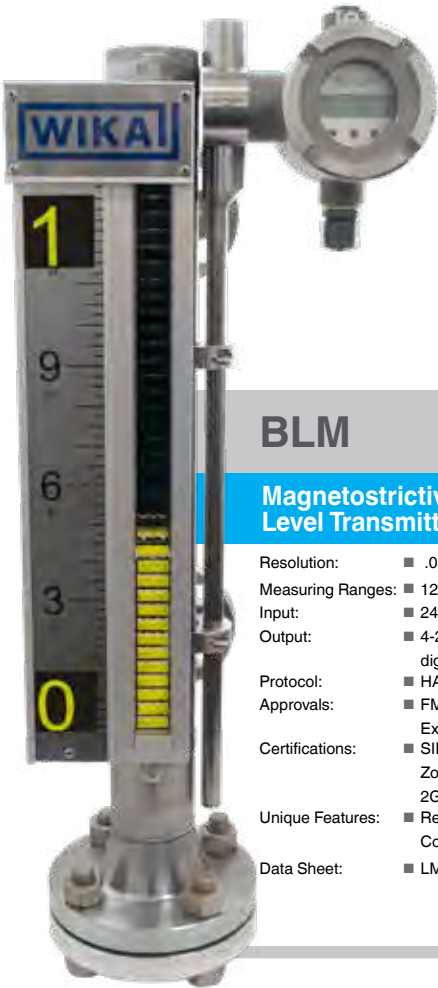


**TW10**  
**Flanged Type**  
Thermowell Form: ■ Tapered, straight or stepped  
Flange Size: ■ 1" up to 4" per ASME B16.5  
Flange Rating: ■ 150 lbs to 2500 lbs  
Flange Face: ■ RF or RTJ  
Bore Diameter: ■ 0.260", 0.385", others  
Unique Features: ■ Full penetration weld standard  
■ Large variety of flange & thermowell material  
Data Sheet: ■ TW.FL/TW10



# Level Measurement

Magnetic Level



## BLM

### Magnetostriuctive Level Transmitter

- Resolution: ■ .04" / < 0.1 mm  
Measuring Ranges: ■ 12" – 240"  
Input: ■ 24 VDC  
Output: ■ 4-20mA with or without digital display  
Protocol: ■ HART  
Approvals: ■ FM, ATEX Exi, Exd, EAC, NEPSI Exi, Exd  
Certifications: ■ SIL 2, CL.I Gr.ABCD/CL.II Gr.EFG, Zone 1 II 2G Ex d IIB T3 ... T6 Gb, II 2G Ex ia IIB T3 ... T6  
Unique Features: ■ Requires no calibration, All 316ss Construction, rated to 365 F / 185 C  
Data Sheet: ■ LM 10.05



## WRS, WCS, BGU

### Level Switch

- Contact: ■ SPDT (Reed), DPDT (Reed), Dry Contact  
Switch Power: ■ 230VAC, 60 VA, 1 A DC 230 V, 30 W, 0.5 A, ■ 230V AC, 200VA, 5A or 230V DC, 60W, 2A  
Approvals: ■ FM, CSA, ATEX Exi, Exd, DNV-GL, EAC, or IEC Exd  
Certifications: ■ CL.I Div.1 Gr.BCD/CL.II Gr.EFG/CL.III (CSA, FM) ■ EEx d IIC T6 CL.I Zone 1 (ATEX) Ex d IIC T6 CL.I ■ Zone 1 (IEC) Type 4X / IP66  
Unique Features: ■ Adjustable design, SS heads available, rated to 716 F / 380 C  
Data Sheet: ■ WRS WCS, BGU



# BNA

## Magnetic Level with Bypass Chamber

- Chamber 2" - 3"  
Temperature Ranges -320°F... 1,000°F (-195°C... 537°C)  
Pressure Full vacuum to 5,000 psi or 344 bar  
Material 316/L, 304/L, 317, 321, 347 SS, Hastelloy C, Monel 400, Alloy 20, Inconel 625, AL-6XN, PVC, ETFE  
Connection ANSI, DIN, EN, JIS Flanges, MNPT/ FNPT, O-let, weld ends  
Sizes From ½" to 8" standard  
Unique Features Interface measurement, Externally mounted switches/ transmitters  
Data Sheet BNA

- Dependable level indication for years with little to no maintenance required
- Hundreds of designs available for easy reto-fit replacement of traditional sight glass
- High vibration designs available
- High temperature insulation, cryogenic insulation, steam tracing, electrical heat tracing, liquid gas chamber construction
- Built to ASME B31.3, B31.1, U-Stamp, PED-Stamp, EAC, DNV, ABS, and ATEX Exd,

## FLR-SBDF

### Reed Chain Float Level Transmitter

- Resolution: ■ 5, 10, 15, 18mm  
Measuring Ranges: ■ 6" – 240"  
Input: ■ 24 VDC  
Output: ■ 4-20mA, 0-100 Ohms, with or without DIH-50 digital display  
Protocol: ■ HART, FF or Profibus  
Approvals: ■ FM, CSA, UL, ATEX Exi, Exd, DNV-GL, ABS, EAC, or IEC Exd  
Certifications: ■ CL.I Gr.BCD/CL.II Gr.EFG/CL.III (CSA, FM, UL) EEx d IIC T6 CL.I Zone 1 (ATEX) Ex d IIC T6 CL.I Zone 1 (IEC) Type 4X / IP66  
Unique Features: ■ Requires no calibration, SS head option, rated to 660 F / 350 C, Impervious to electromagnetic interference  
Data Sheet: ■ FLR-SBDF, WIR/WFR, LM 20.02



## WFS, FLS

### Float Level Reed Switch

- Process Connection: ■ ANSI, DIN, MNPT, BSP, Tri-Clamp, Etc  
Temp Ranges: ■ -320°F... 660°F (-196°C...350°C)  
Pressure Ranges: ■ Vacuum up to 580 PSI/ 40 Bar  
Specific Gravity: ■ .30 ... 2.0  
Material: ■ 316/L, Titanium Gr 2, PVC, PP, PVDF  
Measuring Range: ■ 6" ... 236"  
Switch Power: ■ AC ≤ 230 V; 40 VA; 1 A DC ≤ 230 V; 20 W; 0.5 A  
Switch Points: ■ Up to 6  
Approvals: ■ FM, 3A, ATEX Exi, Exd, IEC Exd, DNV-GL, LR, ABS, BV  
Unique Features: ■ Patented Sanitary design, Complete plastic construction, angular designs available  
Data Sheet: ■ WFS, LM 20.01







FLC-FL

Venturi Meter

Application:

- Gas processing, power, petrochemical, refinery and water
- Gas, liquid, steam

Fluids of Measurement:

- ISO 5167-4, ASME PTC 19.5 & ASME MFC-3M

Standards:

- 2" thru 48" (Note: large diameter meters are available upon request)

Line Size:

- Meter bodies are fabricated with a wide variety of pressure taps, common sizes ½" to 1"

Pressure Taps:

- Plate or machined bar-forgings in carbon steel, stainless steel or various other material depending on the process application

Material:

- Raised face/RTJ flanged or weld-in connections

End Connections:

- ≤ ±0.5% of actual flow rate. By means of a calibration a higher accuracy can be achieved

Accuracy:

- Available upon request

Calibration:



FLC-OP

Orifice Plate

Standards:

- ISO 5167-2, ASME MFC3M

Material:

- 316L SS, Hastelloy C276, Monel M400, Duplex & others

Pipe Size:

- ≥ 2" (≥ 50 mm)

Beta Ratio  $\beta = d/D$ :

- Depending on version

Accuracy:

- ± 0.5...2.5% of full scale flow rate

Unique Features:

- Repeatability 0.1% of flow rate
- Max. operating temperature up to 1472°F (800°C)
- Max. working pressure up to 5800 psi (400 bar)

Data sheet:

- FL 10.01



FLC-FL

Orifice Flange

Standards:

- ISO 5167-2

Flange Material:

- Carbon steel, ASTM A105, ASTM A350 LF2 & other

Pipe Size:

- ≥ 2" (≥ 50 mm)

Beta Ratio  $\beta = d/D$ :

- Depending on version

Accuracy:

- ± 0.5...2.5% of full scale flow rate

Unique Features:

- Two 1/2"NPT threads in each flange standard
- Wide range of materials available
- Nominal size & pressure rating available in accordance with all relevant standards.

Data sheet:

- FL 10.01



FLC-RO-ST, FLC-RO-MS

Single-Step and Multi-Step Restriction Orifice

Flange Material:

- 304/304L & 316/316L stainless steel, Monel 400, Duplex, Super Duplex, Hastelloy C276 & other

Unique Features:

- Suitable for liquids, gases and steam
- Multi-bore option to reduce noise level
- Multi-step restriction orifices reduce the pressure by more than 50% of the inlet valve.

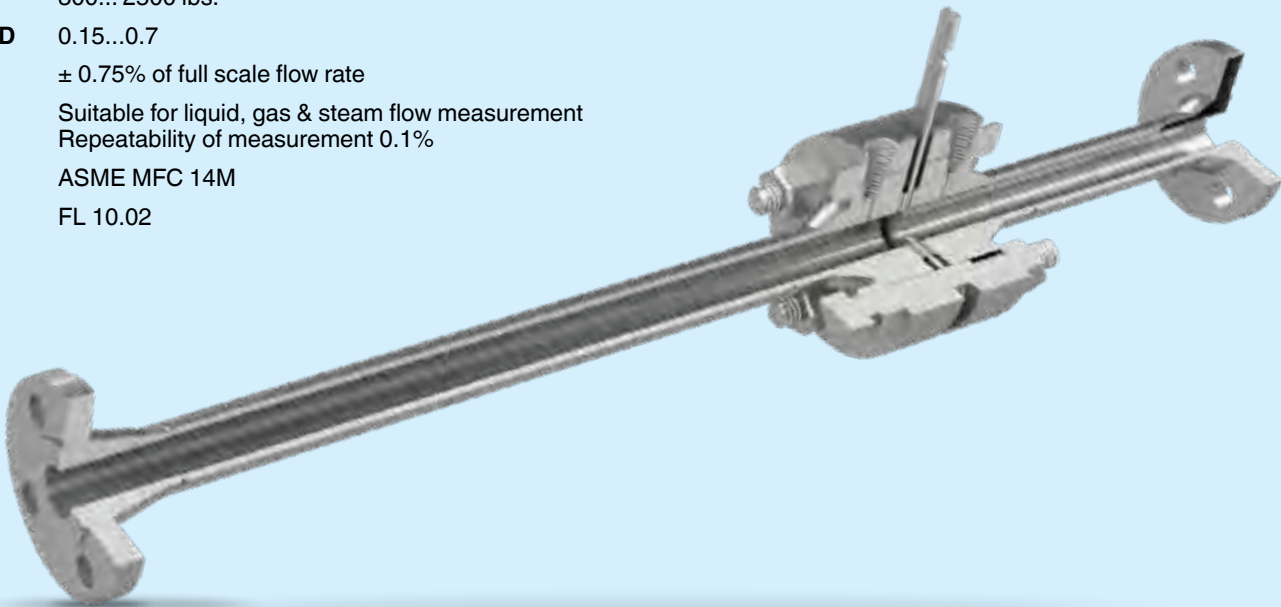
Data sheet:

- FL 20.01



Honed  
Meter Runs  
FLC-MR

Flange Material	Wide range of materials available
Pipe Size	½" ... 1½" (12... 40mm)
Pressure Rating	300... 2500 lbs.
Beta Ratio $\beta = d/D$	0.15...0.7
Accuracy	± 0.75% of full scale flow rate
Unique Features	Suitable for liquid, gas & steam flow measurement Repeatability of measurement 0.1%
Standards	ASME MFC 14M
Data Sheet	FL 10.02







**XLU68f**  
Miniature  
Tension/Compression

- Load Range: ■ 0...1000 g to 0...10000 lbs.  
Output: ■ 1.5 mV/V (to 1000 g)  
■ 2 mV/V (>5 lbs.)  
Size: ■ 0.75" to 1.38" Diameter  
Accuracy: ■ ±0.25% Combined  
Operation: ■ Tension/Compression  
Construction: ■ Welded Stainless Steel



**XLC86**  
Subminiature  
'Button' Load Cell

- Load Range: ■ 0...50 g to 0...1000 lbs.  
Output: ■ 2 mV/V  
■ 0.38" to 0.75" Diameter  
Size: ■ ±1.00% Linearity  
Accuracy: ■ ±0.50% Hysteresis  
Operation: ■ Compression Only  
Options: ■ Overload Stops Available



**XLP58**  
Low Profile  
Pancake Load Cell

- Load Range: ■ 0...5 lbs. to 0...500000 lbs.  
Output: ■ Voltage or current  
Size: ■ 2.50" to 14" Diameter  
Accuracy: (>50lbs.) ■ ±0.10% Linearity  
■ ±0.08% Hysteresis  
Operation: ■ Tension/Compression  
Construction: ■ Welded Stainless Steel



**XLD150/300**  
Thru-Hole  
'Donut' Load Cell

- Load Range: ■ 0...5 lbs. to 0...100000 lbs.  
Output: ■ Voltage or current  
Size: ■ 1.50" to 3" Diameter  
Accuracy: (>50lbs.) ■ ±0.1% Repeatability  
Operation: ■ Compression Only  
Construction: ■ Welded Stainless Steel  
Feature: ■ 150% Safe Overload



**F5301 & F53C1**  
Industrial  
Load Pin

- Load Range: ■ 0...1100 lbs. to 0...45000 lbs.  
Output: ■ Voltage or current  
Size: ■ 20mm to 70mm Diameter  
Accuracy: ■ ±2.0% Linearity  
■ ±0.20% Hysteresis  
Element: ■ Thin Film Technology  
Construction: ■ Welded Stainless Steel  
Feature: ■ ATEX Approval



**XLRM**  
Rod End, Male/Male  
Load Cell

- Load Range: ■ 0...2000 lbs. to 0...750000 lbs.  
Output: ■ Voltage or current  
Size: ■ 1.50" to 6.63" Diameter  
Accuracy: ■ ±0.05% Repeatability  
Operation: ■ Tension/Compression  
Construction: ■ Welded Stainless Steel  
Feature: ■ Hermetically Sealed



# WIKA USA



For over 75 years, WIKA has continuously advanced instrumentation for pressure, temperature, level, flow, and force measurement. Our broad selection of standard and custom solutions, as well as services, work to support operational safety, productivity and profitability. A global leader in lean manufacturing, WIKA can be your reliable partner anywhere in the world.

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