REOTEMP

INSTRUMENTS

PRESSURE PRODUCTS

Pressure Gauges • Diaphragm Seals • Pressure Transmitters • Sanitary Products
Pressure Switches • Pressure Accessories

RPP.0906

"Service Inspired, Quality Driven"

REOTEMP INSTRUMENTS

REO*TEMP* Instrument Corporation

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ISO 9001 REGISTERED

Established in 1965 and located in San Diego, California, REO*TEMP* Instrument Corporation is recognized as a leading manufacturer of pressure and temperature instrumentation. REO*TEMP* provides bimetal thermometers, pressure gauges, diaphragm seals, RTD's, thermocouples, and related accessories to a variety of process markets worldwide. Recognized for high quality products, exceptional customer service, on-time deliveries and innovative engineering services, REO*TEMP* is an ISO 9001 certified manufacturer.

Markets Served

Oil, Gas & Petrochemical	Waste Water
Pharmaceutical	Compost
Food & Beverage	Military
Paper & Pulp	Dairy
Mining	Power Generation
Utilities	Refrigeration
Marine	And More!

Ph (800) 648-7737 Fx (858) 784-0720 sales@reotemp.com www.reotemp.com
10656 Roselle St. San Diego, CA 92121

GENERAL SPECIFICATIONS

REO*TEMP* Pressure Gauges, manufactured under ISO 9001 quality standards, are offered in a wide variety of sizes, ranges, and configurations to meet the demands of any application. From the most rugged process gauges to the cost effective general purpose gauge, you can count on REO*TEMP* pressure gauges for long and reliable service.

General Specifications:

Dials: Aluminum, black figures on white background. Custom dials, logos, etc. are available - consult factory.

Dial sizes: 1.5", 2", 2.5", 3", 3.5", 4", 4.5", and 6" dials are standard.

Pointers: Balanced black aluminum pointers are standard on most models. Adjustable pointers are standard on series PR and PT, and are available on certain other models.

Windows: Glass, plastic, laminated safety, and tempered glass are available.

Cases: Case materials are black steel, stainless steel, phenolic and ABS plastic. Series PC, PD, PH and PL cases are intended for dry service; all other cases can be filled at the factory, or in the field. Series PT features solid front design, which provides maximum safety with a solid wall between the window and the Bourdon tube. The entire rear of the case is designed to blow out and provide pressure relief should the Bourdon tube fail due to over pressure, corrosion, or fatigue.

Movements: The movement is the heart of the pressure gauge; its function is to accurately position the pointer in response to movement of the Bourdon tube. Reotemp movements are designed for smooth movement, low friction, and minimal play. Reotemp movements use high precision gears and low friction bearings to enhance performance, reduce hysteresis, and provide long-term accuracy and reliability. The effects of vibration on the movement can be reduced by liquid filling of the case, which both dampens movement, and lubricates contact points. For dry gauges, a special silicone dampened movement can be installed.

Bourdon Tubes: To suit a variety of media applications, Reotemp Bourdon tubes are available in phosphor bronze, AISI 316 stainless steel, and monel. If the process fluid is not compatible with any of these materials, a chemical (diaphragm) seal may be necessary. Reotemp Bourdon tubes undergo special heat treating to reduce hysteresis effects, relieving localized stresses in the solder or weld zones and enhancing long-term accuracy of the gauge.

Warranty: REO*TEMP* warrants all pressure gauges and pressure products against defective workmanship or materials under normal use and service for one year following date of shipment. Reotemp's liability is limited to repair or replacement at the factory, shipping charges prepaid. This warranty does not cover deterioration from normal wear and tear, exposure to corrosive materials, exposure to temperatures or pressures in excess of those recommended, excessive vibration, or forces or abrasion which cause deformation of component parts. This warranty is expressly in lieu of any other warranty, expressed or implied. Reotemp shall not be liable for any direct or consequential damages arising out of any defects or from any cause whatsoever.

PRESSURE GAUGE PRODUCT SELECTION

APPLICATION INFORMATION

WARNING: All gauge components should be selected after consideration of the pressure, temperature, and media characteristics, to prevent mis-application problems. Mis-application or improper installation can cause gauge damage or failure, which can result in damage to other equipment or personal injury. We suggest that users of pressure gauges become familiar with ANSI-B40.1 entitled "Gauges, Pressure and Vacuum indicating Dial Type - Elastic Element." This specification is available from American Society of Mechanical Engineers, website: www.americansocietyofmechanicalengineers.com.

To ensure safety, accuracy, and gauge life, good practice requires consideration of the following factors when selecting a pressure gauge:

Pressure Ranges: Reotemp Bourdon tube pressure gauges can measure pressures from full vacuum to 40,000 psi. Generally, a range of twice the working pressure is recommended, with maximum working pressure not exceeding 75% of the range. If pulsation occurs, working pressure should not exceed 65% of the range. Never use a gauge at pressure greater than the maximum range on the dial. Pounds per square inch (psi) ranges are standard, and several alternate single and dual ranges are available (see Ranges, p.14).

Pressurized Fluid Properties Composition: All pressure gauge components should be selected to suit the characteristics of the fluid being measured. For steam service, a siphon is required. For corrosive chemicals, stainless steel (or monel) wetted parts, or a diaphragm seal should be considered (monel wetted parts are available on special order). For fluids that solidify or leave deposits, a diaphragm seal should be considered. For oxidizing fluids, no oil should be present .

Process Temperature: Gauges with stainless steel wetted parts have welded tube and socket, and will withstand 750°F (400°C). Gauges with soldered copper alloy joints will withstand 150°F (65°C); with silver brazed joints, 250°F (120°C). Maximum process temperatures should only be reached intermittently to avoid rupture, and may result in loss of calibration or damage to other parts of the gauge.

Ambient Temperature: Normal ambient temperature limits for Reotemp pressure gauges are -30°F to 150°F (-35°C to +65°C) for dry gauges, and 23°F to 140°F (-5°C to +60°C) for glycerine filled gauges. Reotemp gauges are calibrated at 70°F (20°C). Change in ambient temperature causes +/–0.3% error per 18°F (10°C) rise/fall, respectively. Ambient error for Reotemp test gauges is +/–0.05% per +/–18°F (10°C), respectively.

> **In very hot ambient conditions**, a gauge can be remotely mounted using a diaphragm seal and/or capillary, to place the gauge in a cooler spot.

Moisture and Weather Effects: Case material should be chosen with atmospheric conditions in mind. For outdoor use, stainless steel or plastic cases are recommended. Case filling with glycerine can prevent condensation in case.

Severe Conditions: In applications involving severe pulsation, the use of snubbers and/or restrictors is recommended. Also, for vibrating or pulsating applications, liquid filling will help prevent wear and extend the service life of the gauge. Glycerine is the standard fill material. Also available (with special gasketing) are silicone and Halocarbon. Halocarbon, though quite costly, is recommended for service with oxidizing agents such as oxygen, hydrogen peroxide, chlorine, nitric acid, etc.

Mounting Method: NPT connections are located in the center back (), lower back (), or bottom () of the case in most models. Rear flanges (also known as "back flanges" or "wall flanges") are available for surface mounting. For panel mounting, front flanges or "U" or "O" clamps are available. Special threads (BSP, Metric, SAE) are also available; consult Reotemp Customer Service. All Reotemp pressure gauges should be mounted in the upright position.

Accuracy: Gauges are available with accuracies from +/–0.25% (ASME grade 3A) to +/–3/2/3% (ASME grade B). Percent accuracies are expressed as percent of full scale. As a rule, higher accuracies are found in larger gauges, and/or reflect more costly components.

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Industrial Heavy-Duty Repairable Stainless Gauges

Series PR

- **Stainless Steel Case and Bayonet Ring**
- **Stainless Steel Wetted Parts**
- **Repairable**
- **All Welded Construction (4”& 6”)**
- **Glycerine Filled or Dry/Fillable**
- **Blowout Relief (Safety Feature - 4”& 6”)**

Specifications

Case: 304 Stainless Steel

Ring: Stainless Steel Bayonet, Repairable

Lens: Laminated Safety Glass (4” & 6”), Plastic (2.5”, 3.5”)

Dial: Aluminum, Black Figures on White Background

Pointer: Adjustable

Wetted Parts: 316 Stainless Steel with Restrictor Screws

Accuracy: 1.6% Full Scale (2.5”, 3.5”)
1.0% Full Scale (4” & 6”)

Applications

The PR Series gauge offers rugged, all-welded stainless steel construction. In 4” and 6” dials, the tube, socket and case are all welded together, offering superior case sealing and gauge integrity. The stainless steel case, tube and socket make the gauge ideal for applications involving corrosive environment or media. Liquid Filling (at the factory or in the field) is usually recommended for severe service. The removable bayonet ring makes the PR gauge field repairable.

How to Order

PR — 40 — S — 1 — C — 2 — P23 — G

Dial:
- **25** = 2.5”
- **35** = 3.5”
- **40** = 4”
- **60** = 6”

Case:
- **S** = 304 St. Steel, Bayonet Ring

Plastic Lens (2.5”)

Laminated Glass (4” & 6”)

Tube & Socket:
- **1** = 316 St. Steel
- **3** = Monel

Mounting:
- **A** = Bottom
- **B** = Bottom/Rear Flange
- **C** = Back
- **D** = Back /“U” or “O” Clamp
- **E** = Back/Front Flange

Connection:
- **4** = 1/4” NPT (2.5”, 4”)
- **2** = 1/2” NPT (4”, 6”)
- **5** = 1/4” High Pressure Female Conn.
- **8** = 1/8” NPT (2.5”)

Range Code:

See Page 12 for Range Codes

Standard Ranges:

2.5”,3.5” vac to 10,000 PSI
4”,6” vac to 15,000 PSI
Higher Ranges Available to 50,000 PSI

Filling:
- **D** = Dry (Fillable)
- **G** = Glycerine

Other fills on request.

Options:
- Custom / Logo Dials
- Chemical Seals
- Removed Restrictor Screw
- Peak Indicators (2.5” & 4”)
- Electric Contacts 4” optional

Service Inspired, Quality Driven

SERIES PM

INDUSTRIAL STAINLESS STEEL GAUGES

- **Stainless Steel Case and Crimped Ring**
- **Stainless Steel Wetted Parts**
- **Glycerine Filled or Dry/Fillable**

Specifications

Case: 304 Stainless Steel

Ring: Stainless Steel, Crimped

Lens: Plastic (1.5”, 4”)
Glass* (2.5”)
*Some 2.5” crimped items may be shipped with plastic lens

Dial: Aluminum,
Black Figures on White Background

Wetted Parts: 316 St. Steel w/ restrictor screw

Accuracy: 1.6% Full Scale (4”)
3-2-3% (1.5”) 2-1.6-2% (2.5”)

Applications

The PM Series features stainless steel tube, socket and case, making the gauge resistant to corrosion from both environment and media. Liquid filling is recommended for severe service. The economical and attractive crimp ring design, along with a variety of convenient panel mounting adapters, make this popular gauge the right choice for many applications.

HOW TO ORDER

PM ___ [25] — [C] — [1] — [A] — [4] — [P23] — [G]

Dial:
- **15** = 1.5
- **25** = 2.5”
- **40** = 4”

Case:
- **C** = 304 St. Steel, Crimped Ring

Tube & Socket:
- **1** = 316 St. Steel

Mounting:
- **A** = Bottom (1.5”, 2.5”, 4”)
- **B** = Bottom/Rear Flange (2.5”, 4”)
- **C** = Back (2.5”) (1.5”)
- **D** = Back /“U” or “O” Clamp (2.5”) (1.5”)
- **E** = Back/Front Flange (2.5”) (1.5”)
- **F** = Bottom/Front Flange (2.5”)

Connection:
- **4** = 1/4” NPT (1.5”, 2.5”, 4”)
- **2** = 1/2” NPT (4”)
- **8** = 1/8” NPT (1.5”, 2.5”optional)

Range Code:
See Page 12 for Range Codes

Available Ranges:
All ranges from vacuum 8,000 PSI

Filling:
- **D** = Dry (Fillable)
- **G** = Glycerine

Other fills on request.

Options:
- Custom / Logo Dials
- Chemical Seals
- Alternate lenses available

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SERIES PG

- **Stainless Steel Case**
- **Copper Alloy Wetted Parts**
- **Glycerine Filled or Dry/Fillable**
- **Convenient Panel Mounting Adapters**

Specifications

Case: Stainless Steel

Ring: Stainless Steel Crimped or Bayonet

Lens: Bayonet style - Glass

Crimped style - Plastic (1.5", 4")

Note: *Some 2.5" crimped items may be shipped with plastic lens

Dial: Aluminum,
Black Figures on White Background

Wetted Parts: Copper Alloy w/ restrictor screw

Temperature: 0° to 150°F

Accuracy: 1.6% Full Scale (All Bayonet & 4" crimped)
3-2-3% (1.5", 2.5" crimped)

Applications

The PG Gauge is an economical choice where ambient corrosion and vibration are of concern. Its stainless steel case and ring offer excellent corrosion resistance, and the PG is fillable for vibration or pulsation applications. Suitable for all fluids compatible with copper alloys.

HOW TO ORDER

PG — 25 — C — 2 — A — 4 — P23 — G

Dial:
15 = 1.5"
25 = 2.5"
35 = 3.5"
40 = 4"

Case:
C = Stainless Steel Crimped Ring, (1.5", 2.5", 4")
Plastic Lens (all sizes)
S = Stainless Steel, Bayonet Ring (2.5", 3.5", 4")

Tube & Socket:
2 = Copper Alloy

Mounting:
A = Bottom (All)
B = Bottom/Rear Flange (2.5", 3.5", 4")
C = Back (2.5", 1.5") (4")
D = Back /"U" or "O" Clamp (4") (1.5", 2.5")
E = Back/Fr. Flange (2.5", 1.5") (4")

Connection:
8 = 1/8" NPT (1.5", 2.5")
4 = 1/4" NPT (2.5", 3.5", 4")
2 = 1/2" NPT (4")

Range Code:
See Page 12 for Range Codes

Available Ranges:
Vacuum compound, and 15 PSI to 6,000 PSI (Higher Ranges Available on Request)

- Peak Indicator (2.5" & 4" with "S" case)
- Electrical Contacts (4" with "S" case)

Filling:
D = Dry (Fillable)
G = Glycerine
Other fills on request.

Options:
- Custom / Logo Dials
- Removed Restrictor Screw
- Chemical Seals
- Alternate lenses available

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SERIES PD

GENERAL PURPOSE GAUGES (DRY)

- **Black Steel or Stainless Cases**
- **Copper Alloy Wetted Parts**
- **Cost Effective Design**
- **Standard 3-2-3% Accuracy**

Specifications

Case: Black Painted Steel or Stainless Steel

Ring: Snap-In Window, Push-On Bezel, or Bayonet

Lens: Snap-In Plastic or Glass

Dial: Aluminum, Black Figures on White Background

Wetted Parts: Copper Alloy

Temperature: -10° to 140°F

Accuracy: 3-2-3% (1.6% Available)

Applications

The PD Series offers a wide variety of economical gauges for applications where ambient or process corrosion are not of concern. Suitable for non-vibrating applications. More economical movements are available where 1.6% accuracy is not required.

HOW TO ORDER

PD — [40] — [Y] — [2] — [C] — [2] — [P23]

Dial:

15 = 1.5”
20 = 2”
25 = 2.5”
30 = 3”
40 = 4”
60 = 6”

Case:

N = Black Steel Snap-In Plastic Lens (1.5”, 2”,2.5” Dial)
X = St. Steel Snap-In Plastic Lens (1.5”, 2”, 2.5” Dial)
B = Blk Steel Push-On Bezel with glass window (1.5”, 2”, 2.5”, 3”, 4” Dial)
Z = St. Steel Push-On Bezel with glass window (1.5”, 2”,2.5 Dial)
Y = Blk Steel Bayonet Removable Glass Lens (4”, 6” Dial)
S = St. Steel Bayonet Removable Glass Lens (4”, 6” Dial)

Tube & Socket:

2 = Copper Alloy

Mounting:

A = Bottom
B = Bottom/Rear Flange (2.5”, 3”, 4”, 6”)
C = Back (1.5”, 2”, 2.5”) (4”, 6”)
D = Back /“U” or “O” Clamp (not avail. on “y” case)
E = Back/Front Flange (2.5”) (4”, 6”)

Connection:

8 = 1/8” NPT (1.5”, 2”, 2.5”)
4 = 1/4” NPT (All Sizes)
2 = 1/2” NPT (4”, 6”)

Range Code:

See Page 12 for Range Codes

Available Ranges:

All ranges from vacuum to 6,000 p.s.i. (1.5”, max = 600 p.s.i.) (2”, max = 3,000 p.s.i.)

Options:

- Custom / Logo Dials
- Restrictor Screw
- High Temperatures (up to 380°F)

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4½" Process Gauges

Series PT

- **Solid Front / Blowout Back**
- **All Stainless Steel Internal Parts**
- **Adjustable Pointer**
- **Glycerine Filled or Dry/Fillable**
- **Repairable**

Specifications

Case: "Phenolic" (Fiberglass Reinforced Thermoplastic) Solid Front, Blowout Back

Ring: Fiberglass Reinforced Thermoplastic Screwed Ring, Removable

Lens: **Tempered** Glass

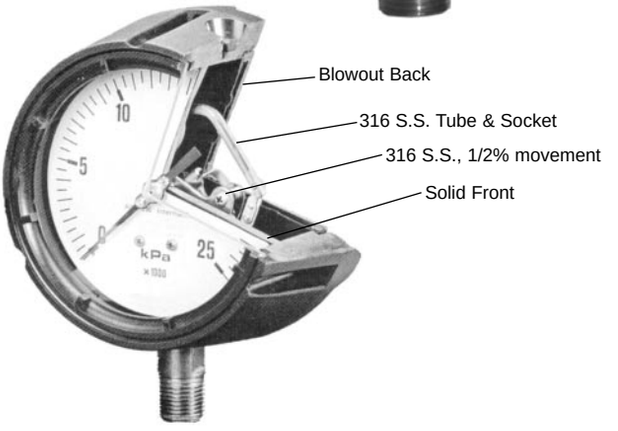
Dial: Aluminum, Black Figures on White Background

Pointer: Adjustable, Aluminum, Black

Wetted Parts: 316 St. Steel with Restrictor screw

Temperature: Ambient: 0 to 150°F (Glycerine Filled)
Process: -30 to 400°F (Dry)

Accuracy: 0.5% Full Scale



Applications

Reotemp Series PT Process Gauge is designed to withstand corrosive atmospheres and media, pulsation and vibration; a very rugged gauge engineered for the process industries. The solid front/blowout back provides a high degree of user safety.

How to Order

PT — 45 — P — 1 — A — 4 — P23 — G

Dial:	Case:	Tube & Socket:	Mounting:	Connection:	Range Code:	Filling:
45 = 4.5"	**P** = Fiberglass Reinforced Thermoplastic	**1** = 316 St. Steel **3** = Monel	**A** = Bottom, Direct with Wall Mount	**4** = 1/4" NPT **2** = 1/2" NPT	**See Page 12 for Range Codes** **Available Ranges:** Vacuum, compound, and 15 psi to 20,000 psi	**D** = Dry (Fillable) **G** = Glycerine Other fills on request.

Options:

- Custom / Logo Dials
- Removed Restrictor Screw
- Chemical Seals
- Plastic Lens
- Laminated Safety Glass
- Flush Mounting Ring
- Electric Contacts
- Peak Indicator

Service Inspired, Quality Driven

SERIES PL

TEST GAUGES INDUSTRIAL, STAINLESS STEEL

- **Stainless Steel Case and Bayonet Ring**
- **Stainless Steel or CuBe Wetted Parts, Repairable**
- **All-Welded Construction**
- **Blow Out Plug (Safety Feature)**

Specifications

Case: 304 Stainless Steel (non-fillable)

Ring: Stainless Steel, Bayonet, Repairable

Lens: Glass

Dial: Aluminum, Black Figures on light background
Anti-Parallax Mirror

Pointer: Micro-Adjustable, Knife Edge

Wetted Parts: 316 St. Steel (0.5%)
Copper Alloy (0.25%)

Temperature: Calibrated at 70°F (20°C)
Ambient temp error: +.03% per +10°F, and -.03% per-10°F.

Accuracy: 0.5% Full Scale (Case "L")
0.25% Full Scale (Case "M")

How to Order

PL- 60 — M — 1 — A — 2 — P23

Dial:	Case:	Tube & Socket:	Mounting:	Connection:	Range Code:
60 = 6"	**L** = St. Steel, Bayonet, 0.5% accuracy **M** = 304 St. Steel, Bayonet, 0.25% accuracy	**1** = 316 St. Steel ("L" case only) **2** = CuBe, Tube, SS Socket ("M" case only)	**A** = Bottom **C** = Back	**4** = 1/4" NPT **2** = 1/2" NPT	**See Page 12 for Range Codes** **Available Ranges:** Vacuum to 6,000 p.s.i. Consult factory for higher ranges **Options:** • Custom / Logo Dials

Applications

Reotemp Series PL Test Gauges are designed for use in laboratories, testing or recalibration facilities, or wherever accuracy and repeatability are of prime importance. Rugged, all-welded stainless steel construction makes this gauge suitable for almost any test application. Accuracies of 1/2% and 1/4% are available. Reading error due to parallax is eliminated by use of a knife-edge pointer and mirror dial.

SERIES PC

LOW PRESSURE DIAPHRAGM (CAPSULE) GAUGES

- **Sensitive Diaphragm /Capsule Mechanism**
- **Black Steel or Stainless Case**
- **Zero Reset**
- **2.5", 4" or 6" Case**

Specifications

Case: Black Painted Steel (2.5") / 304 S.S. (4", 6") (**non-fillable**)

Ring: Snap In Window (2.5") / Bayonet (4", 6")

Lens: Snap In Plastic (2.5") / Glass (4", 6")

Dial: Aluminum, Black Figures on White Background

Wetted Parts: Copper Alloy (2.5", 4", 6") / 316 S.S. (4", 6")

Temperature: 0° to 150°F **Accuracy:** 1.6% Full Scale

Applications

The PC Series are designed for use in low pressure applications, such as exhaust systems, blowers, etc., with dry gasses that are compatible with bronze and brass. Pressure ranges available thru 300" H_2O.

How to Order

PC — 40 — S — 1 — A — 2 — P52 — ___

Dial:	Case:	Capsule & Socket:	Mounting:	Connection:	Range Code:	Options:
25 = 2.5" **40** = 4" **60** = 6"	**N** = Blk Steel, Snap In Plastic Window (2.5") Zero correction **S** = Stainless Steel, Bayonet Removable Zero correction from front	**1** = 316 St. Steel (4", 6") **2** = Copper Alloy (2.5", 4", 6")	**A** = Bottom **B** = Bottom/Rear Flange (4", 6") **C** = Back, Direct (2.5", 4", 6") **E** = Back/Front Flange (4", 6")	**4** = 1/4" NPT (2.5", 4", 6") **2** = 1/2" NPT (4", 6")	**See Page 12 for Range Codes** **Available Ranges:** Vacuum to 300" Water Column (2.5", 4", 6")	• Custom / Logo Dials • Restrictor Screw

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Other Pressure Gauges

Series DD Duplex Gauge

- Measures two sources simultaneously
- 4.5" & 6.0" Dial
- Brass or 316SS Internals
- 1% Accuracy

Series PA

- Rugged, Corrosion-Resistant ABS Case, 4" Dial
- Fillable, Field Repairable
- Stainless or Copper Alloy Tube/Socket

Series PH "Schaeffer" Gauge

- Stainless Diaphragm isolates gauge from process 4"& 6" dial
- Mechanical link - no fluid necessary
- Well Suited for Low Pressure, High Corrosion use

Series PN Boiler Gauge

- Heavy Duty Black Steel Case
- 4.5" & 6.0" Dials
- 1%Accuracy, Full scale
- Brass Tube & Socket
- Plastic Lens

Series PN Contractor Gauge

- S.S Case, Brass Tube/Socket
- 4 1/2" Dial
- 1 % Accuracy, Full Scale
- Non-fillable

Series PI Aluminum Case Process Gauge

- 4 1/2" or 6" Dial
- Ring Flange/ Hinged Front
- 0.5% Accuracy, Full Scale
- 316 S.S. Tube/Socket

REFRIGERATION GAUGE

- Several Ammonia & refrigerant ranges
- 2 1/2" & 6" Dials
- Custom Dials available

Series PRT Transmitter Gauge

- Built in Transmitter
- All Stainless Steel
- 4" or 6" Dial
- Fillable
- 1% Accuracy

Series PRS Switch Gauge

- Built in Micro Switch
- 2.5" Dial, 316SS Case
- 0.1 A @ 30 Vdc Switch

Pressure Gauge Ranges & Codes

Below are codes for standard pressure ranges. Many other ranges are available - consult REO*TEMP* or your REO*TEMP* distributor.

Vacuum Ranges

psi		DUAL SCALE psi & metric						Single Scale-METRIC					
psi		psi & bar		psi & kg/cm2		psi & kPa		bar		kg/cm2		kPa	
Code	Range	Code	Range	Code	Range	Code	Range	Code	Range	Code	Range	Code	Range
P01	-30/0 "Hg	D01	"Hg & -1/0 bar	G01	"Hg & -1/0 kg/cm2	L01	"Hg & -100/0 kPa	B00	-1/0 bar	K00	-1/0 kg/cm2	A00	-100/0 kPa

Compound Ranges

psi		DUAL SCALE psi & metric						Single Scale-METRIC					
"Hg/0/psi		psi & bar		psi & kg/cm2		psi & kPa		bar		kg/cm2		kPa	
Code	Range	Code	Range	Code	Range	Code	Range	Code	Range	Code	Range	Code	Range
P02	-30"Hg/0/15 psi	D02	psi & -1/0/1 bar	G02	psi & -1/0/1 kg/cm2	L02	psi &-100/0/100 kPa	B01	-1/0/1 bar	K01	-1/0/1 kg/cm2	A01	-100/0/100 kPa
P03	-30/0/30	D03	psi & -1/0/2	G03	psi & -1/0/2	L03	psi &-100/0/200	B02	-1/0/2	K02	-1/0/2	A02	-100/0/200
P04	-30/0/60	D04	psi & -1/0/4	G04	psi & -1/0/4	L04	psi &-100/0/400	B04	-1/0/4	K04	-1/0/4	A04	-100/0/400
P05	-30/0/100	D05	psi & -1/0/7	G05	psi & -1/0/7	L05	psi &-100/0/700	B07	-1/0/7	K07	-1/0/7	A07	-100/0/700
P06	-30/0/160	D06	psi & -1/0/11	G06	psi & -1/0/11	L06	psi &-100/0/1,100	B011	-1/0/11	K011	-1/0/11	A011	-100/0/1,100
P07	-30/0/200	D07	psi & -1/0/14	G07	psi & -1/0/14	L07	psi &-100/0/1,400	B014	-1/0/14	K014	-1/0/14	A014	-100/0/1,400
P08	-30/0/300	D08	psi & -1/0/20	G08	psi & -1/0/20	L08	psi &-100/0/2,000	B020	-1/0/20	K020	-1/0/20	A020	-100/0/2,000

Pressure Ranges

psi		DUAL SCALE psi & metric						Single Scale-METRIC					
psi		psi & bar		psi & kg/cm2		psi & kPa		bar		kg/cm2		kPa	
Code	Range	Code	Range	Code	Range	Code	Range	Code	Range	Code	Range	Code	Range
P15	0-15 psi	D15	psi & 0-1 bar	G15	psi & 0-1 kg/cm2	L15	psi & 0-100 kPa	B1	0-1 bar	K1	0-1 kg/cm2	A1	0-100 kPa
P16	0-30	D16	psi & 0-2	G16	psi & 0-2	L16	psi & 0-200	B2	0-2	K2	0-2	A2	0-200
P17	0-60	D17	psi & 0-4	G17	psi & 0-4	L17	psi & 0-400	B4	0-4	K4	0-4	A4	0-400
P18	0-100	D18	psi & 0-7	G18	psi & 0-7	L18	psi & 0-700	B7	0-7	K7	0-7	A7	0-700
P19	0-160	D19	psi & 0-11	G19	psi & 0-11	L19	psi & 0-1,100	B11	0-11	K11	0-11	A11	0-1,100
P20	0-200	D20	psi & 0-14	G20	psi & 0-14	L20	psi & 0-1,400	B14	0-14	K14	0-14	A14	0-1,400
P21	0-300	D21	psi & 0-20	G21	psi & 0-20	L21	psi & 0-2,000	B20	0-20	K20	0-20	A20	0-2,000
P22	0-400	D22	psi & 0-28	G22	psi & 0-28	L22	psi & 0-2,800	B28	0-28	K28	0-28	A28	0-2,800
P23	0-600	D23	psi & 0-40	G23	psi & 0-40	L23	psi & 0-4,000	B40	0-40	K40	0-40	A40	0-4,000
P24	0-800	D24	psi & 0-55	G24	psi & 0-55	L24	psi & 0-5,500	B55	0-55	K55	0-55	A55	0-5,500
P25	0-1,000	D25	psi & 0-70	G25	psi & 0-70	L25	psi & 0-7,000	B70	0-70	K70	0-70	A70	0-7,000
P30	0-1,500	D30	psi & 0-100	G30	psi & 0-100	L30	psi & 0-10,000	B100	0-100	K100	0-100	A100	0-10,000
P31	0-2,000	D31	psi & 0-140	G31	psi & 0-140	L31	psi & 0-14,000	B140	0-140	K140	0-140	A140	0-14,000
P32	0-3,000	D32	psi & 0-200	G32	psi & 0-200	L32	psi & 0-20,000	B200	0-200	K200	0-200	A200	0-20,000
P33	0-4,000	D33	psi & 0-280	G33	psi & 0-280	L33	psi & 0-28,000	B280	0-280	K280	0-280	A280	0-28,000
P34	0-5,000	D34	psi & 0-350	G34	psi & 0-350	L34	psi & 0-35,000	B350	0-350	K350	0-350	A350	0-35,000
P35	0-6,000	D35	psi & 0-400	G35	psi & 0-400	L35	psi & 0-40,000	B400	0-400	K400	0-400	A400	0-40,000
P36	0-8,000	D36	psi & 0-550	G36	psi & 0-550	L36	psi & 0-55,000	B550	0-550	K550	0-550	A550	0-55,000
P37	0-10,000	D37	psi & 0-700	G37	psi & 0-700	L37	psi & 0-70,000	B700	0-700	K700	0-700	A700	0-70,000
P38	0-15,000	D38	psi & 0-1,000	G38	psi & 0-1,000	L38	psi & 0-100,000	B1K	0-1,000	K1K	0-1,000	A1K	0-100,000
P39	0-20,000	D39	psi & 0-1,400	G39	psi & 0-1,400	L39	psi & 0-140,000						
P40	0-30,000	D40	psi & 0-2,000	G40	psi & 0-2,000	L40	psi & 0-200,000						
P41	0-40,000	D41	psi & 0-2,800	G41	psi & 0-2,800	L41	psi & 0-280,000						
P42	0-50,000	D42	psi & 0-3,500	G42	psi & 0-3,500	L42	psi & 0-350,000						
P60	3-15 (receiver - several ranges available - specify.)												

Low Pressure Ranges (for use on PC Series)

INWC		oz/in^2		mbar		Other Low Pressure Ranges Avail.	CUSTOM RANGES
Code	Range	Code	Range	Code	Range		
P50	0-10"WC					mm H_2O	We will draw a custom range for your application - contact factory or your REO*TEMP* distributor
P51	0-15	Z51	0-8 oz/in^2	M51	0-40 mbar	mmHg(torr)	
P52	0-30	Z52	0-20	M525	0-100	kPa	examples: Tons on Ram
P53	0-60	Z53	0-30	M53F	0-150		Refrigeration Scales
P54	0-100			M54	0-250		Tank level
P55	0-160			M55	0-400		
P56	0-200	Z56	0-100	M56	0-500		

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PRESSURE CONVERSION TABLE								
psi	atms.	bar	kPa	Kg/cm^2	oz/in^2	in. Hg	mm Hg (Torr)	in. H_2O
1	0.068	0.069	6.895	0.07	16	2.036	51.72	27.68
14.7	1	1.013	101.3	1.033	235.1	29.92	760	406.8
14.5	0.967	1	100	1.02	232.1	29.53	750.1	401.9
0.145	0.01	0.01	1	0.01	2.321	0.295	7.501	4.019
14.22	0.968	0.981	98.07	1	227.6	28.96	735.6	393.7
0.063	0.004	0.004	0.431	0.004	1	0.127	3.232	1.73
0.491	0.033	0.034	3.386	0.035	7.858	1	25.4	13.6
0.019	0.001	0.001	0.133	0.001	0.309	0.039	1	0.535
0.036	0.002	0.002	0.249	0.003	0.578	0.074	1.868	1

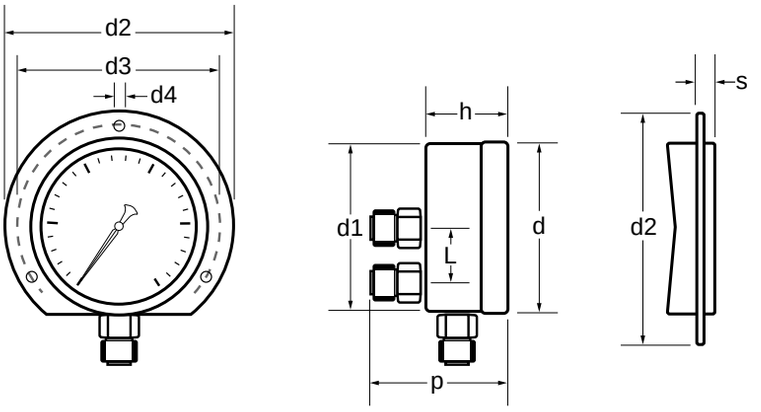
ASME B40.1 ACCURACY GRADES			
Grade	Accuracy	Grade	Accuracy
4A	+/- 0.1% f.s.	A	2-1-2% (+/- 1% f.s. over middle 1/2 of scale)
3A	+/- 0.25% f.s.	B	3-2-3% (+/- 2% f.s. over middle 1/2 of scale)
2A	+/- 0.5% f.s.	C	4-3-4% (+/- 3% f.s. over middle 1/2 of scale)
1A	+/- 1.0% f.s	D	+/- 5% f.s.

Chemical Compatibility Table

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

Note: this table is provided as a reference only and is accurate to the best of Reotemp's knowledge. Reotemp assumes no responsibility for the accuracy of this information.

PRESSURE GAUGE TECHNICAL REFERENCE



Pressure Gauge Dimensions

		D	D1	D2	D3	D4	H	L	S	P	P dim based on
PD15N,X	mm	44	40	-	-	-	24	-	-	44	1/8”NPT
	in.	1.73	1.57				0.94			1.73	
PD20N,X	mm	55	50.8	71	60	3.6	28	-	-	50	1/8”NPT
	in.	2.17	2.00	2.80	2.36	0.14	1.10			1.97	
PD25N,X	mm	68	62.5	85	75	3.6	29	-	4	50	1/4”NPT
	in.	2.68	2.46	3.35	2.95	0.14	1.14		0.16	1.97	
PD40Y,S	mm	101.5	98	130	118	6	42	29.5	5.5	80	1/2”NPT
	in.	4.00	3.86	5.12	4.65	0.24	1.65	1.16	0.22	3.15	
PD60Y,S	mm	160	158	190	178	6	9	29.5	5.5	80	1/2”NPT
	in.	6.30	6.22	7.48	7.01	0.24	1.93	1.16	0.22	3.15	
PD40B	mm	101.5	98	130	118	6	32	-	-	-	-
	in.	4.00	3.86	5.12	4.65	0.24	1.26				
PC25N	mm	62.5	62.5	85	75	3.6	34	-	4	50	1/4”NPT
	in.	2.46	2.46	3.35	2.95	0.14	1.34		0.16	1.97	
PC40S	mm	101	98.5	130	116	6	49	-	5.5	80	1/4”NPT
	in.	3.98	3.88	5.12	4.57	0.24	1.93		0.22	3.15	
PC60S	mm	160	153	190	178	6	49	-	5.5	80	1/4”NPT
	in.	6.30	6.02	7.48	7.01	0.24	1.93		0.22	3.15	
PM25C	mm	68	63	85	75	3.6	30	135	7	54	1/4”NPT
	in.	2.68	2.48	3.35	2.95	0.14	1.18	5.3	0.28	2.13	
PM40C	mm	110	101	130	118	6	47	-	-	-	-
	in.	4.33	3.98	5.12	4.65	0.24	1.85				
PG25C	mm	68	63	85	75	3.6	30	-	7	54	1/4”NPT
	in.	2.68	2.48	3.35	2.95	0.14	1.18	-	0.28	2.13	
PG35S	mm	89	80	110	95	5	31	19	15	60	1/4”NPT
	in.	3.5	3.15	4.32	3.75	0.2	1.23	0.73	0.6	2.36	
PG40C	mm	110	101	130	118	6	47	34.5	12.5	65	1/2”NPT
	in.	4.33	3.98	5.12	4.65	0.24	1.85	1.36	0.49		
PR40S	mm	111	101	130	118	6	48	34.5	19	80	1/2”NPT
	in.	4.37	3.98	5.12	4.65	0.24	1.89	1.36	0.75	3.15	
PR60S	mm	161	150	190	175	6	50	53	25	80	1/2”NPT
	in.	6.34	5.91	7.48	6.89	0.24	1.97	2.09	0.98	3.15	
PA40A	mm	114	100	130	118	6	48	-	-	-	-
	in.	4.49	3.94	5.12	4.65	0.24	1.89				
PS40S	mm	111	100	130	116	6	61	-	-	-	-
	in.	4.37	3.94	5.12	4.57	0.24	2.40				
PS60S	mm	162	150	190	175	6	64	-	-	-	1/2”NPT
	in.	6.38	5.91	7.48	6.89	0.24	2.52				
PL60	mm	161	150	190	175	6	50	53	25	88	1/2”NPT
	in.	6.34	5.91	7.48	6.89	0.24	1.97	2.09	0.98	3.46	
PT45P	mm	129	148	148	137	6	87	-	-	-	-
	in.	5.08	5.83	5.83	5.39	0.24	3.43				

Note: diagrams not to scale.

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Differential Pressure Gauges

Series 20

0-5psid to 110psid

- **Simple, Rugged Piston Design**
- **Use for Filters, Strainers, Flow indication**
- **Cost effective Differential Pressure**

Specifications:

Temperature Limitations: -40°F (-40°C) to 200°F (93°C)
Max Working Pressure: 6,000 psi (5,000 psi for Monel)
Proof Pressure: 2x rated working pressure or 10,000 psi, whichever is lower, at ambient
Accuracy: 3-2-3%
Sensing Element: Piston

D20 — 25 — P — SS — B — B — 50P — TS

Dial Size	Dial Case	Wetted: Body/Internals	Wetted: Seals	Connections	Range	Options
25 = 2.5" 35 = 3.5" 40 = 4.0"	P = Plastic A = Aluminum	SS = 316SS/316SS AS = Aluminum/316SS MM = Monel/Monel ZM = Alum. Bronze/Monel	B = Buna N (std.) V = Viton N = Neoprene T = Teflon	B =1/4" NPTF Back (std.) L = 1/4" NPTF end 7 = 7/16" - 20 SAE/O-ring (back only)	See range table, p.17 e.g. 50P = 0/50 psid	See p.17 for all options & accessories

Series 40&42

Series 40

Series 42

- **Convoluted Diaphragm Design**
- **Ideal for dissimilar fluids, wet gas**
- **Recommended for fluids with high solids content**
- **For use with Diaphragm Seals**

Specifications:

Temperature Limitations: -40°F (-40°C) to 200°F (93°C)
Max Working Pressure: 3,000 psi (1,500 psi for Brass)
Proof Pressure: 2x rated working pressure or 6,000 psi, whichever is lower at ambient
Accuracy: 3-2-3% or 5% (10" H_2O or lower)
Sensing Element: Diaphragm

40 - 0-30psid to 100psid
42 - 0-20"H_2O to 690"H_2O (25psi)

D — 40 — 25 — P — AS — B — B — 50P — TS

Dial Size	Dial Case	Wetted: Body/Internals	Wetted: Seals & Diaphragm	Connections	Range	Options
25 = 2.5" 35 = 3.5" 45 = 4.5"	P = Plastic A = Aluminum	AS = Aluminum/316SS BS = Brass/316SS SS = 316SS/316SS	B = Buna N (std.) V = Viton (60" H2O min.) S = Silicone N =Neoprene (25psid max) *Other consult Factory	B = 1/4" NPTF Back (std.) D = 1/4" NPTF Dual Top & Bottom	See range table, p.17 e.g. 50P = 0/50 psid	See p.17 for all options & accessories

Service Inspired, Quality Driven

SERIES 30

DIFFERENTIAL PRESSURE GAUGES

0-5" H_2O to 400" H_20 (15 psid)

- **Convoluted Diaphragm Design**
- **General Purpose Differential Pressure**
- **Works with vacuum or pressure**
- **Suitable for clean liquids/gases**

Specifications:

Temperature Limitations: -40°F (-40°C) to 200°F (93°C)
Max Working Pressure: 500 psi (300 psi for polysulfone)
Proof Pressure: 2x rated working pressure
Accuracy: 3-2-3% (above 10" H_2O)
5% (0-5" H_2O to 9.9" H_2O)
Sensing Element: Diaphragm

D30 — 35 — P — PS — B — B — 50P — TS

		Wetted				
Dial Size	**Dial Cases**	**Body/Internals**	**Seals & Diaphragm**	**Connections**	**Range**	**Options**
35 = 3.5" **45** = 4.5"	**P** = Plastic **A** = Aluminum	**PS** = Polysulfone/316SS **AS** = Aluminum/316SS **BS** = Brass/316SS **SS** = 316SS/316SS **HH** = Hast C/Hast C	**B** = Buna N (std.) **V** = Viton **S** = Silicone **E** = Ethylene Propylene (100 INWC max)	**B** =1/4" NPTF Back (std.) **T** = 1/4" NPTF Top **L** = 1/4" NPTF bottom	See range table, p.17 e.g. **50P** = 0/50 psid	See p.17 for all options & accessories

SERIES 05, 06, 09

- **High Accuracy +/- 1% (F.S.)**
- **Diaphragm - Bellows type (05, 06)**
- **Bourdon Tube type (09)**

05 - 0-10" H_2O to 80" H_2O
06 - 0-100" H_2O to 400" H_2O
09 - 0-15 psid to 6000 psid

Specifications:

Temperature Limitations: -40°F (-40°C) to 200°F (93°C)
Max Working Pressure: 1,500 psi (500 psi brass); up to 6,000 psi available
Proof Pressure: 2x rated static pressure or 10,000 psi, whichever is lower at ambient
Accuracy: 1% (std.), 0.5% (avail. 15 psi & up)
Sensing Element: 05 & 06 = Diaphragm/Bellows; 09 = Bourdon Tube

D — 05 — 45 — P — A — B — D — 50P — TS

		Wetted				
Dial Size	**Dial Material**	**Body/Internals**	**Seals**	**Connections**	**Range**	**Options**
45 = 4.5" **60** = 6.0"	**P** = Plastic	**AB** = Alum./ Copper Alloy **AS** = Aluminum/316SS **CB** = Carbon Stl./ Cu. Alloy **CS** = Carbon Steel/316SS **SS** = 316SS/316SS	**B** = Buna N (std.) **V** = Viton **N** =Neoprene	**D** = 05 & 06 - 1/4" NPTF Dual, Top & Bottom (std.) **B** = 09 - 1/4" NPTF Back (std.)	See range table, p.17 e.g. **50P** = 0/50 psid	See p.17 for all options & accessories

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OPTIONS

Optional Switches

Specifications (for resistive loads):

Reed Switch
SPDT, 3W, 0.25 Amp @ 125 VAC/VDC
Switch adjustable range 10% - 90%
NEMA 4X enclosure

Available on models: 20, 30, 40, 42

SD1N4 = Single Switch
SD2N4 = Two (independent) Switches

Accessories

TS

Accessories

TS	= SS Tags	G	= Glycerin Fill
OXY	= Oxygen Cleaning	S	= Silicon Fill
PMK	= Pipe Mounting kit	SGL	= Laminated Safety glass lens (std. is shatter-resistant acrylic)
WMK	= Wall Mounting Kit		
MP	= Max Pointer (avail. on 09, 20, 30, 40, 42)		

Diaphragm Seals*

Note:
Available only on the Series 40 & 42. Diaphragm Seals are not typically recommended for use with Differential Pressure gauges, and can affect gauge accuracy. However when required the 40 and 42 series will work using the following diaphragm size and material guide. The proper material and size can then be utilized with most styles of Diaphragm Seals.
Series 40: Size 5 Seal (Viton diaphragm,) or
Size 6 Seal (Teflon diaphragm,) or
Size 7 Seal (Metal diaphragm)
Series 42: Size 6 Seal (Teflon diaphragm)

For complete Diaphragm Seal Style and Part Number refer to pages 22 - 23 of this catalog.

Consult with factory for specific Diaphragm Seal solutions.

Ranges - Availabiltiy By Series

Differential Ranges Code		30	05	06	09	20	40	42
Low	(INWC)							
05H	0 - 5	5% Y						
10H	0 - 10	3 - 2 - 3 % Y	1 % Y					
15H	0 - 25	Y	Y					
20H	0 - 20	Y	Y					3 - 2 - 3 % Y
25H	0 - 25	Y	Y					Y
30H	0 - 30	Y	Y					Y
50H	0 - 50	Y	Y					Y
75H	0 - 75	Y	Y					Y
100H	0 - 100	Y		1 % Y				Y
200H	0 - 200	Y		Y		3 - 2 - 3 % Y		Y
300H	0 - 300	Y		Y		Y		Y
400H	0 - 400	Y		Y		Y		Y
Medium	(psid)							
05P	0 - 5	Y		Y		Y		Y
10P	0 - 10	Y		Y		Y		Y
15P	0 - 15	Y		Y	Y	Y		Y
20P	0 - 20				Y	Y		Y
25P	0 - 25				Y	Y		Y
30P	0 - 30				Y	Y	3 - 2 - 3 % Y	
50P	0 - 50				Y	Y	Y	
75P	0 - 75				Y	Y	Y	
100P	0 - 100				Y	Y	Y	
High	(psid)				1 % Y			
300P	0 - 300				Y			
600P	0 - 600				Y			
10CP	0 - 1000				Y			
15CP	0 - 1500				Y			

Other Scales Available:

- **Metric Scales**
  - -Bar
  - -mbar
  - -mm H_2O
  - -kg/cm^2
  - -KPa
  - -etc.
- **Bi-directional scales:** available for Series 05, 06, 09, 20 (with zero at center of dial) & on application.
- **Square Root Scales**
- **Flow Scales** (GPM, SCFM, etc.)
- **Other Custom Scales** logos available- consult factory

SERIES SG

SANITARY PRESSURE GAUGES

REO*TEMP* sanitary gauges are specially designed to meet the demanding sanitary requirements of food, dairy, beverage, pharmaceutical, and biotech applications.

- **Quick connecting Tri-clamp design**
- **Fast removal and installation of instruments, to allow flushing or changing the process media**
- **Ideal for clean-in-place, or equipment washdown**
- **Designed to meet 3-A sanitary standards**
- **Comes with 3-A certification**
- **All welded 316 SS Tube, Socket, Seal, and Diaphragm**

Specifications:

Dial sizes: 2", 2.5", 3.5", 4"
Wetted Parts: 316L polished SS
Case & Ring: 300 series polished SS
Process Connection: Tri-clamp, lower or back
Other connections optional
System Filling: USP Glycerin (standard), Silicone, Neobee (optional)
Windows: Polycarbonate (2.5"& 3.5")
Laminated Safety Glass (4"), Glass (2")
Accuracy: **Standard Seal:** 1.5% for ranges 100 psi and above. 2% for compound and below 100 psi ranges.
Fractional Seal: Ranges 60 psi & above - 2.5% up scale†, up to 4% downscale.

¾ Triclamp (Fractional) seal Limitations: Due to the compact nature of the ¾" triclamp fractional seal, several factors can affect accuracy. Use of the fractional seal generally involves a compromise in performance for the convenience of the small size. The fractional sanitary gauge provides repeatable pressure reference in a stable temperature environment, but the larger 1 ½" or 2" triclamp seals are recommended for greater accuracy whenever possible.

Gasket: The REO*TEMP* fractional gauge is calibrated using a standard ¾" Buna gasket. When choosing a gasket for installation, care should be taken so the gasket does not push on the diaphragm.

Temperature: The fractional seal's temperature effect varies with the range selected, but is generally greater than +/- 0.5% per 10 °F change in process temperature. The fractional seal is recommended for stable process temperatures from 40°F to 120°F.

Pressure Range: The fractional seal is most accurate in ranges over 160 psi.

Options:
Liquid Filled Case - Glycerin - USP Food Grade, Other fills requested
Alternate Process Connections - Cherry-Burrell "I" line or Bevel seat type
Alternate Seal fill fluids - Neobee M-20, Silicone 200, Vegetable Oil
Calibration - Traceability certs, with or without logged points

To Order:	Specify Part Number + Range Code			
Standard Seal Sizes (1.5", 2" Tri-clamp)				
Part Number	Gauge Size	Connection Location	Tri-clamp Size	Available Ranges (psi)*
SG20 A TC 15 SG20 C TC 15	2"	Bottom Back	1.5" 1.5"	All
SG20 A TC 20 SG20 C TC 20		Bottom Back	2" 2"	
SG25 A TC 15 SG25 C TC 15	2.5"	Bottom Back	1.5" 1.5"	All
SG25 A TC 20 SG25 C TC 20		Bottom Back	2" 2"	
SG35 A TC 15 SG35 C TC 15	3.5"	Bottom Back	1.5" 1.5"	All
SG35 A TC 20 SG35 C TC 20		Bottom Back	2" 2"	
SG40 A TC 15 SG40 C TC 15	4"	Bottom Back	1.5" 1.5"	0/60 to 0/1000
SG40 A TC 20 SG40 C TC 20		Bottom Back	2" 2"	
SG60 A TC 15	6"	Bottom	1.5"	0/160 to 0/1000
SG60 A TC 20		Bottom	2"	

*Pressures over 600 psi may require special clamps

Fractional Seals (3/4" Tri-clamp)				
SG20 A TC 75 SG20 C TC 75	2"	Bottom Back	3/4"	30"Hg/0/30psi to 0/1000
SG25 A TC 75 SG25 C TC 75	2.5"	Bottom Back	3/4"	0/160 to 0/1000

Fractional Seals come with 3/4"triclamp and buna gasket.

To Order: Specify part number and range code (see "How to Order")

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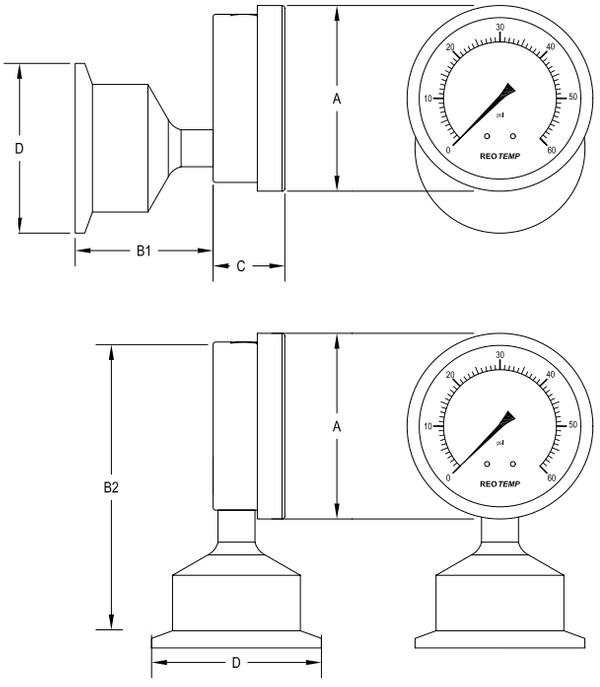
SERIES SG



Triclamp Size	"D" Diameter	
3/4"	0.98	(24.8)
1.5"*	1.98	(50.3)
2"	2.58	(65.5)
2.5"	3.05	(77.5)
3"	3.57	(90.7)
4"	4.68	(119)

*1.5" triclamp seal fits 1.5" and 1" triclamp fittings.

Dial Size	A	B 1*	C
2"	2.05 (52)	1.6 (41)	1.11 (28.2)
2.5"	2.69 (68.4)	2.5 (64)	1.19 (30.2)
3.5"	3.5 (89)	2.4 (61)	1.25 (31.7)
4"	4.4 (112)	5.1 (130)	1.95 (49.5)

Dial Size	A	B 2*	C
2"	2.05 (52)	3.6 (91.4)	1.11 (28.2)
2.5"	2.69 (68.4)	4.8 (122)	1.19 (30.2)
3.5"	3.5 (89)	5.7 (145)	1.25 (31.7)
4"	4.4 (112)	7.0 (178)	1.95 (49.5)
6"	6.2 (157.5)	9 (228.6)	2 (50.8)

Dimensions are in inches (mm).
* "B" dimensions are for 1.5" and 2" triclamps.

Process Connection

SG — 25 — A — TC — 15 — P18 — PL

Gauge Size:
- **20** = 2"
- **25** = 2.5"
- **35** = 3.5"
- **40** = 4"
- **60** = 6"*

*Available in bottom conn. only.

Location:
- **A** = Bottom
- **C** = Lower Back
- **R** = Right Side
- **L** = Left Side
- **T** = Top

Clamp Type:
- **TC** = Tri-Clamp
- **CI** = "I" Line

(Other connections on application)
CP = CPM type
TH = Tuchenhagen

Clamp Size:
- **15** = 1.5"
- **20** = 2"
- **25** = 2.5"
- **30** = 3"
- **40** = 4"
- **75** = 3/4

PRESSURE (PSI)

P15	0/15
P16	0/30
P17	0/60
P18	0/100
P19	0/160
P20	0/200
P21	0/300
P22	0/400
P23	0/600
P24	0/800
P25	0/1000

VACUUM

P01	-30"Hg/0

COMPOUND

P02	30"Hg/0/15psi
P03	30"Hg/0/30psi
P04	30"Hg/0/60psi
P05	30"Hg/0/100psi
P06	30"Hg/0/160psi
P07	30"Hg/0/200psi
P08	30"Hg/0/300psi

(Other ranges available on application)

Options:
- **PL** = Polysulfone lens (for autoclaving)
- **MP** = Max pointer (2 1/2", 4" only)
- **EP** = Electropolished wetted parts
- **CC3** = Cert. Of calibration (3 pt.)
- **CC5** = Cert. Of calibration (5 pt.)

Case Fills (for vibration)
- **CFG** = Glycerin
- **CFN** = Neobee
- **CFS** = Silicone

Alternate Seal Fill Fluids (std. is glycerin)
- **SFN** = Neobee
- **SFS** = Silicone
- **SFV** = Vegetable oil

Alternate Wetted Materials
- **H** = Hast. C
- **T** = Teflon coated 316SS

DIAPHRAGM SEALS

INTRODUCTION

REO*TEMP* Diaphragm Seals (or Chemical Seals) use a flexible barrier, or *diaphragm*, to isolate a pressure sensor (gauge, switch, transmitter, or transducer) from adverse effects of the process fluid.

Diaphragm seals are useful to:

1.) *Protect the sensor* from the process media (corrosive, abrasive, viscous, or crystallizing media)

2.) *Protect the process* from the sensor (sanitary process requiring clean-out, or high purity media).

HOW IT WORKS:

A diaphragm seal, when properly mounted to its sensor and filled, will accurately transmit process pressure to the instrument. Pressure exerted on the flexible diaphragm is transmitted hydraulically to the instrument through the fill fluid, which fills the void between the diaphragm and the instrument, (including the bourdon tube, in the case of a pressure gauge.)

APPLICATION CONSIDERATIONS: The following should be considered when choosing a diaphragm seal:

1. Process Characteristics: Pressure, temperature, (see tables, this page) chemical compatibility and viscosity.
2. Seal Mounting: Connection to process (threaded, flanged, clamped, in-line) Connection to instrument (usually NPT).
3. Ambient Characteristics: Temperature, corrosive atmosphere, etc.
4. Instrument Considerations: Sufficient fluid displacement is required to drive instrument through its full range (this means, for example, you can't put a large gauge on a small seal); remote instrument placement requires a capillary connecting instrument to seal.
5. Vacuum Considerations: High vacuums (over 25" Hg vac.) or vacuums with high temperatures require special fill selection, preparation, and procedures, as well as careful diaphragm selection.

NOTE: Improper selection may result in system failure and possible damage or injury. REO*TEMP* can provide application assistance, but final compatibility is the responsibility of the buyer. Proper selection of seal can reduce or eliminate any additional system error caused by adding a Diaphragm Seal to your instrument.

SEAL TYPES:

Standard Seals (pp 22-23): include Threaded off-line, threaded in-line, and flanged off-line types in many materials for a variety of applications:

Sanitary Seals (pg 28): are designed for food, pharmaceutical and other sanitary applications. Available to fit most standard piping systems, including "Tri-clamp", "I" line, and others. For straight- thru and in-line sanitary seals with no crevices, see our lit #ILS.

Mini-Seals (pg 27): are designed for low-displacement applications where size or economy are considerations.

SPECIAL DESIGNS: REO*TEMP* is ready to work with you on any high-performance diaphragm seal application, (that might exceed the stated limit below) such as high vacuum, high temperature, high sterility, custom design or high static pressure with a low differential span, or high vacuum with high temperature.

Temperature Limits

Maximum Temperature	Diaphragm Material	Lower Housing
650°F	Welded metal	Metal
450°F	Teflon	Metal
300°F	Viton	Metal
140°F	–	Nonmetal

Pressure Limits

	psi	Lower Housing	
Maximum working pressure	1,500	metal, with ss bolting	(at 100°F)
	2,500	metal, std bolting	(at 100°F)
	5,000	metal, hi-press bolting	(at 100°F)
	per flange rating	ASA flange	(per flange spec)
	300	non-metallic	(at 140°F)

	Diaphragm	size 5 seal	size 6 seal
Min. working Pressure	Metal	25 psi	10 psi
	Teflon	20 psi	8" W.C.
	Viton	5" W.C.	n/a
Vacuum Limits	Metal	-21" Hg	-24" Hg
	Teflon	-23" Hg	-26" Hg
	Viton	-29" Hg	n/a

MATERIALS: Lower housings: 316SS standard, with a large selection to suit a wide variety of applications (see Table 1, pg. 23)

Diaphragms: Standard metal diaphragms are convoluted and made of 316SS. Many other materials are available, for corrosion resistance or extra sensitivity. (See Table 6, pg. 23)

Gaskets: Standard gaskets are teflon on the process side of diaphragm (grafoil for hi temp.), and viton on the fill side. Other materials are available.

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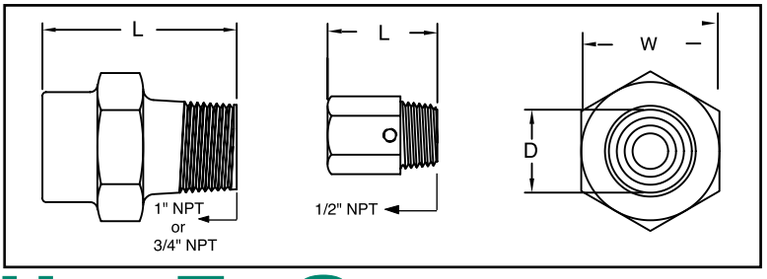
Threaded Flush Face Seals

Dimensional Drawing



REO*TEMP*'s Flush-Face diaphragm seals are useful in applications where a continuous flow of process across the diaphragm is required to prevent solids buildup.

How To Order

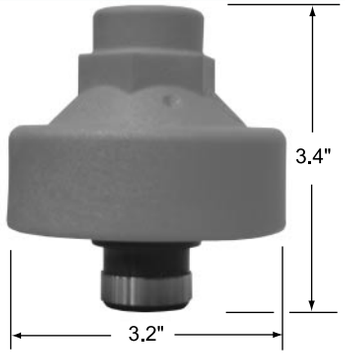
Model	Instrument Conn.	Process Conn.	Max working Pressure (@100F)	Minimum Recommended Pressure Range Gauges (psi) 2 1/2"	4"	Transducers
DSFF21S DSFF41S	1/2" NPT 1/4" NPT	1" NPT	1500 psi	0-15	0-60	30 psi
DSFF23S DSFF43S	1/2" NPT 1/4" NPT	3/4" NPT	2500 psi	0-60	N/A	15 psi
DSFF42S	1/4" NPT	1/2" NPT	5000 psi	0-100	N/A	100 psi
DSF4G1S	1/4" NPT	1" BSPP	8000 psi	0-30	0-60	30 psi

*Note: Use largest diaphragm possible, for smallest temperature effect.

Dimensions (inches)

Process Conn. NPT	Diaphragm Diameter "D"	Overall Length "L"	Width "W"
1"	1.125"	2.65"	1.75"
3/4"	.875"	2.47"	1.75"
1/2"	.675"	1.43"	.875"
1" BSPP	.980"	----	1.62"

Series PLS - Plastic Seals



- **Teflon Diaphragm**
- **Isolate Pressure Instruments from Corrosive Media**
- **High Chemical Resistance**
- **Upper housing is glass filled polypropylene**
- **Heavy Duty Design for Safety**
- **Ideal for waste water treatment**

REO*TEMP*'s Series PLS Plastic Seals allow pressure gauges, switches, or transmitters to be used in corrosive applications compatible with wetted materials.

How To Order

PLS1 — [4] — [4] — [T] — [P]

wetted

Instrument Connection:	Process Connection:	Diaphragm Material:	Lower Housing: Z=PVC, P=Polypropylene, K=Kynar (PVDF)				Options:
			Code	*MWP at 68˚ F	*MWP at 140˚ F	*MWP at 170˚ F	Operating temp. range	
4=1/4 NPT 2=1/2 NPT	4=1/4 NPT 2=1/2NPT	T= Teflon (PTFE) Bonded Hypalon	Z =	150 psi	15 psi	------	14/140˚ F	-Pressure Gauge -Gauge mount & fill (glycerin or silicone)
			P =	150 psi	65 psi	15 psi	46/176˚ F	
			K =	150 psi	105 psi	75 psi	22/248˚ F	

*MWP = Max Working Pressure

DIAPHRAGM SEALS

HOW TO ORDER

TABLE 1 Seal Series	TABLE 2 Seal Size	TABLE 3 Configuration	TABLE 4 Instrument Connection	TABLE 5 Process Connection	TABLE 6 Diaphragm Material	TABLE 7 Lower (process) Housing Material	TABLE 8 Upper (instrument) Housing Material
EXAMPLE:							
W	5	15	4	2	S	S	C

TABLE 1 Seal Series

- **W** - Welded metal diaphragm
- **T** - Teflon diaphragm (high sensitivity, chemical resistance)
- **V** - Viton diaphragm - (most sensitive, for low pressures)

TABLE 2 Seal Size

- **5** - Standard size Seal dia. = 3.25" in threaded models Diaphragm dia. = 2.25"
- **6** - Large size - (Preferred for low pressure, hi displacement, or hi sensitivity.) Seal dia. = 4" in threaded models Diaphragm dia. = 3"
- **7** - Large size Seal diameter; 5.2" Diaphragm dia. = 4.1"

TABLE 4 Instrument Connection

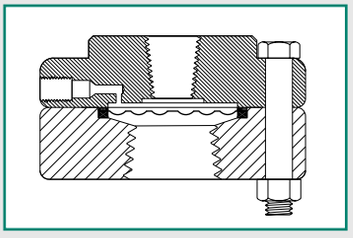
- **4** - 1/4" NPTF
- **2** - 1/2" NPTF

TABLE 5 Process Connection

- **4** - 1/4" NPTF
- **2** - 1/2" NPTF
- **3** - 3/4" NPTF
- **1** - 1" NPTF
- **F** - Flanged - specify flange size and pressure rating (e.g. 1 1/2", 150 lb) or insert "V" codes from Table A see p. 24 (e.g. V41=1 1/2" 150#)

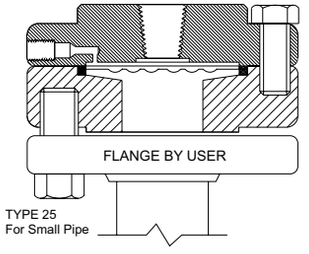
TABLE 3 - Configuration

Threaded, Off-Line

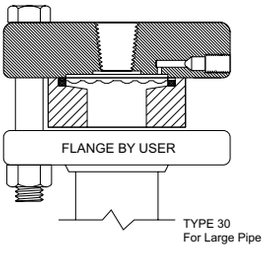


- **10** - Replaceable diaphragm - non cleanout (not available with series "W")
- **11** - Same as 10, with flush port
- **15** - Cleanout style - lower housing can be removed without losing fill. (Available with Series W, T, V)
- **16** - Same as 15, with flush port

Flanged, Off-Line - with cleanout

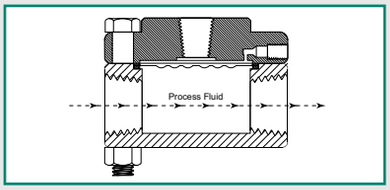


- **25** - for 1/2", 3/4" pipe size (1" in size 6)
- **26** - Same as 25, with flush port



- **30** - for 1 1/2" pipe to 3" pipe size (1" in size 5)
- **31** - Same as 31, with flush port

In-Line, Flow-Thru - with cleanout



- **35** - Threaded (shown) - for 1/4" to 1" pipe
- **40** - Socket Weld - for 1/4" to 1" pipe
- **45** - Saddle Weld - for 1" to 8" pipe
- **50** - Butt Weld - for 1" to 12" pipe

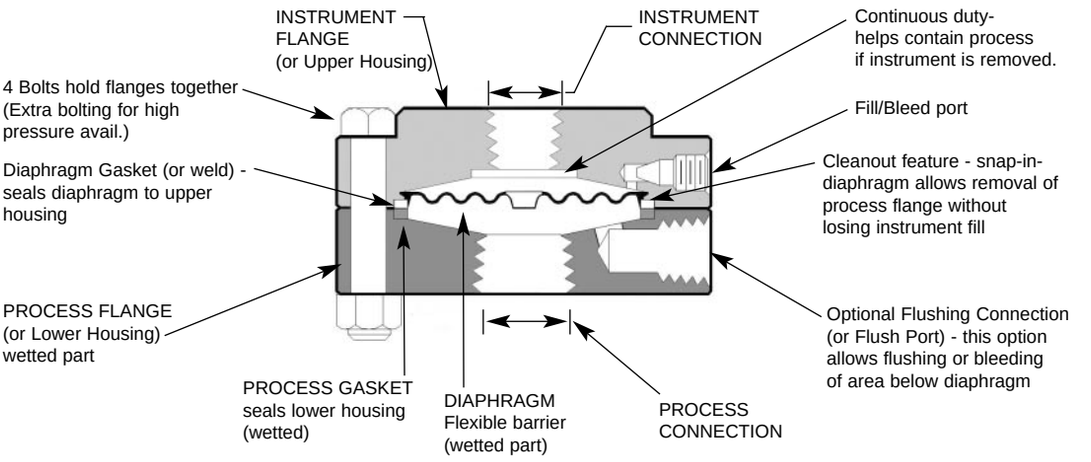


TABLE 6
Diaphragm Material (wetted)

MOST COMMON

- **S** - 316 S.S.
- **T** - Teflon
- * **V** - Viton
- **D** - Carpenter 20
- * **F** - 304 S.S.
- **G** - Hastelloy B
- **H** - Hastelloy C
- **J** - Titanium
- **L** - 316LSS, teflon coated
- **M** - Monel
- **N** - Nickel
- **U** - Tantalum
- **X** - Gold Plated Diaphragm
- * **Y** - Inconel

**Size 5 only.*

TABLE 7
Lower Housing Material (wetted)

MOST COMMON

- **S** - 316 S.S.
- **T** - Teflon
- * **L** - Teflon lined
- **Z** - PVC
- **B** - Brass
- **C** - Steel
- **D** - Carpenter 20
- **F** - 304 S.S.
- **G** - Hastelloy B
- **H** - Hastelloy C-276
- **J** - Titanium
- **K** - Kynar
- **M** - Monel
- **N** - Nickel
- **P** - Polypropylene
- **U** - Tantalum
- **UL** - Tantalum Lined
- **W** - CPVC
- **Y** - Inconel

**Available only on types 25 & 30, 1" and larger.*

TABLE 8
Upper Housing Material (including bolts)

- **C** - Carbon Steel (standard)
- **S** - 316 Stainless
- **F** - 304 Stainless

OPTIONS:

- Hi Pressure bolting
- Non-Stick Teflon coating on metal diaphragm
- Socket weld connections
- High temp. gasketing
- Stainless steel bolting (reduces pressure rating up to 50%)
- Capillary Lines

Fill Fluids

Fill Fluids should be chosen with care. The fluid must be compatible with the process medium in case the diaphragm is ruptured. Compatibility of fill fluid with process is the user's responsibility.

FLUID	TEMPERATURE LIMITS	VISCOSITY, CS, 77° F	NOTES
Silicone, DC 200	-50 to 450° F	20	our standard fill
Silicone, DC 704	+50 to 600° F	44	Hi-temp fill
Silicone, DC 710	+30 to 700° F	500	Hi-temp fill
Neobee M-20	-4 to 320° F	10	food grade
Glycerin	+30 to 300° F	1110	for food; not recomm. for capillary
Halocarbon	-40 to 400° F	6	inert, for use with oxidizers (must not contact Al, Mg)

not to be used with strong oxidizers, such as chlorine, oxygen, etc.

Other fills available: consult factory.

Credits: Viton, Teflon, Kynar, TM DuPont, Inc.; Carpenter 20 - TM Carpenter Steel Co.; Inconel, Monel - TM Huntington Alloys, Inc.; Hastelloy - TM Cabot Corp.; Halocarbon - TM Halocarbon Corp.

Flush Face Flanged Seals

REO*TEMP*'s Flush-Face diaphragm seals are useful in applications where a continuous flow of process across the diaphragm is required to prevent solids buildup, and a one-piece, all-welded construction is desired.

- **Flange type with bolt holes**
- **Seal is bolted to raised-face flange in process**
- **Center instrument exit**
- **Instrument can be mounted directly or connected via capillary**
- **Ideal for gauges, transmitters, or dP transmitters**

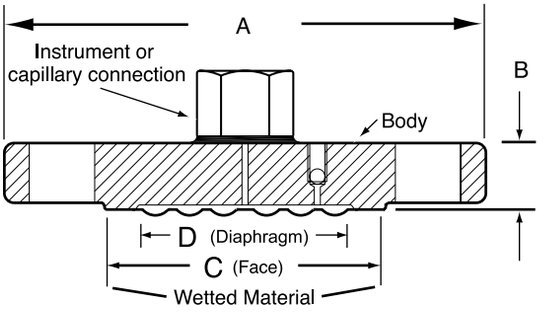


Table Ⓐ
Process/ Instrument Connection Codes

Process Connection		Instrument Connection		
ANSI RFF		1/4" NPT	1/2" NPT	Welded Capillary
1"	150#	V21	V22	W22
1 1/2"		V41	V42	W42
2"		V51	V52	W52
3"		V61	V62	W62
4"		V71	V72	W72
1"	300#	V23	V24	W24
1 1/2"		V43	V44	W44
2"		V53	V54	W54
3"		V63	V64	W64
4"		V73	V74	W74
1 1/2"	600#	V45	V46	W46
2		V55	V56	W56
3		V65	V66	W66

Other configurations available - call factory.

Table Ⓑ Dimensions (inches)

Process Connection (ANSI RFF)		A	B*	C	D (nominal)
1 1/2"	150#	5.00	.69	2.88	1.5
2"		6.00	.75	3.62	2.4
3"		7.50	.94	5.0	3.5
4"		9.0	.94	6.19	3.5
1 1/2"	300#	6.12	.81	2.88	1.5
2"		6.50	.88	3.62	2.4
3"		8.25	1.12	5.0	3.5
4"		10.0	1.25	6.19	3.5
1 1/2"	600#	6.1	1.13	2.88	1.5
2"		6.5	1.25	3.62	2.4
3"		10.0	1.50	5.0	3.5

*Note: For insert body design (for exotic wetted parts), add .03 to "B"

How To Order

M9 — [Seal type: BF] — [Flange Process Connection: V41] — [Welded Diaphragm Material (wetted): S] — [Body Material: S] — [Options]

Seal type	Flange Process Connection	Welded Diaphragm Material (wetted)	Body Material (wetted (BF only))	Options
BF = Std. Seal (body is Wetted) **BRF** = Integral face/Diaphragm (Body material is not wetted)	Choose Flange Connection Code from table Ⓐ example: **V41** = 1/4" NPT x 1 1/2" 150#	**S** = 316SS **G** = Hast B2 **H** = Hast C276 **Y** = Inconel 600 **M** = Monel 400 **N** = Nickel 200 **U** = Tantalum **J** = Titanium (requires titanium body)	**C** = Carbon Steel **S** = 316SS	**H** = Handles (for flanges over 600#)

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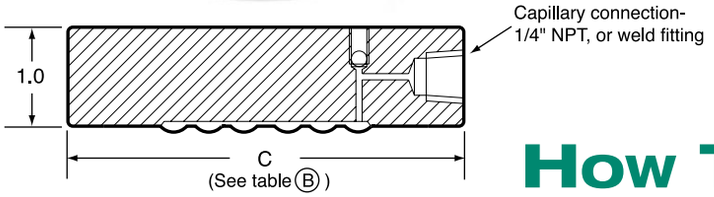
Pancake (Wafer) Seals



- **Flange type - no bolt holes.**
- **Mounts between open process flange and cover flange**
- **Instrument connected via side capillary connection**
- **Ideal for gauges, transmitters, or dP transmitters**

How To Order

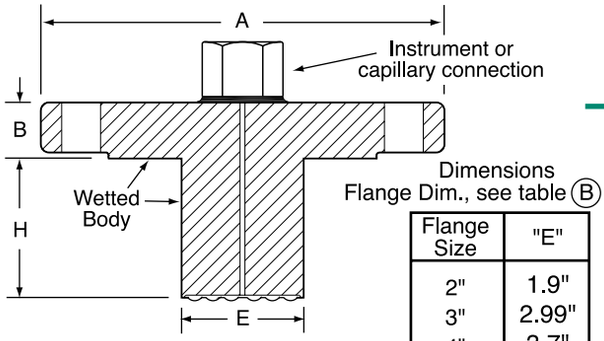
	Diaphragm Style	Flange Size	Instrument Connection	Diaphragm Material	Body Material
M9 —	BC	2	4	S	S

Diaphragm Style	Flange Size	Instrument Connection	Diaphragm Material (wetted)	Body Material (wetted (BC only))
BC = Diaph. + Body wetted	**2** = 2" (150# to 2500#)	**4** = 1/4" NPTF Capillary fitting	**S** = 316SS	**S** = 316SS
BRC = Body not wetted	**3** = 3" (150# to 2500#)	**W** = 10 mm Capillary weld fitting	**H** = Hast . C	**C** = Carbon SH.
	4 = 4" (150# to 1500#)		**M** = Monel	**H** = Hast. C
			U = Tantalum	**M** = Monel
			J = Titanium	**J** = Titanium

(Note: Titanium diaph. requires titanium body)

To Order Cover Flange: M9XCF- (2",3", or 4") **-** (150# to 2,500#) **-** (**S** = 316SS, **C** = Carbon Steel) example: **M9XCF- 2" - 150#- S**

Extended Flanged Seals



Dimensions
Flange Dim., see table Ⓑ p.24

Flange Size	"E"
2"	1.9"
3"	2.99"
4"	3.7"

- **Standard & Custom Lengths**
- **Ideal for highly viscous and dry powder applications**
- **Eliminates dead space in piping**
- **Used for flush mounting in thick-walled vessels**

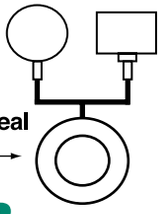
How To Order

	RF Flange Size/ Process Conn.	Welded Diaph. Material	Body/Face Material	Flange Material	Extension Length (H)
M9 EXT —	V52	S	S	S	2

RF Flange Size/ Process Conn.	Welded Diaph. Material (wetted)	Body/Face Material (wetted)	Flange Material (wetted)	Extension Length (H)
See Table Ⓐ, p. 24	**S** = 316SS	**S** = 316SS	**S** =316SS	**2** = 2.0"
Example	**H** = Hast C 276	**F** = 304SS	**C** = Carbon Steel	**4** = 4.0"
V52 = 2", 150#, 1/2" NPT	**F** = 304SS	**H** = Hast C 276		**6** = 6.0"
W52 = 2", 150#, welded capillary connection	**M** = Monel 400	**M** = Monel		
Flange Sizes: 2", 3", 4"				
Rating: 150#, 300#, 600#	Other materials available			

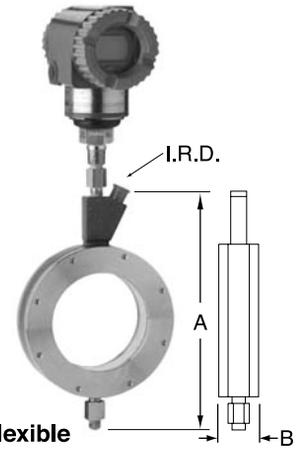
ISO - RING SEAL

- **In-Line Flow-thru design**
- **Mounts between pipe flanges**
- **Ideal for waste water, slurries, abrasives**
- **Tough but sensitive elastomer lining**
- **Can mount multiple instruments on one seal**



Dimensions ISO-Ring

Pipe Size	A	B	Approx. Shipping Wt.
2"	6- 15/16"	2"	3 lbs
3"	8- 3/16"	2"	6 lbs
4"	9"	1- 1/2"	8 lbs
5"	10- 1/4"	1- 1/2"	10 lbs
6"	11- 3/16"	1- 1/2"	12 lbs
8"	13- 3/8"	1- 1/2"	16 lbs
10"	15- 9/16"	1- 1/2"	20 lbs
12"	17- 9/16"	1- 3/4"	25 lbs
14"	19- 15/16"	1- 3/4"	50 lbs
16"	21- 15/16"	2"	60 lbs
18"	24- 3/16"	2"	70 lbs
20"	26- 1/16"	2"	80 lbs



HOW TO ORDER

	Wafer or Bolt Thru	Body Material	End Flange Material	Type	Pipe Size	Inner Flexible wall
OR —	R	CS	1	N	020	1
			wetted			wetted
	R = Wafer (mounts between two existing flanges) **B** = Bolt - thru (with complete flange)	**CS** = Carbon Steel **SS** = 316SS	**1** = Carbon Steel **2** = 316SS **3** = Carbon Steel with Teflon envelope **4** = 316SS with Teflon envelope **5** = CPVC	**N** = Without IRD** **D** = With IRD** **IRD: Instrument Removal Device - Permits easy removal of instrumentation for calibration, repair, or replacement without the need to shut down process flow	**010** = 1" **080** = 8" **015** =1.5" **100** = 10" **020** = 2" **120** = 12" **025** = 2.5" **140** = 14" **030** = 3" **160** = 16" **040** = 4" **180** = 18" **050** = 5" **200** = 20" **060** = 6'	**1** = Buna-N (up to 225° F) **2** = Viton (up to 350° F) **3** = Teflon (up to 350° F) **4** = Silicone (up to 450° F) **5** = White Neoprene (up to 225° F) **6** = Natural rubber (up to 225° F)

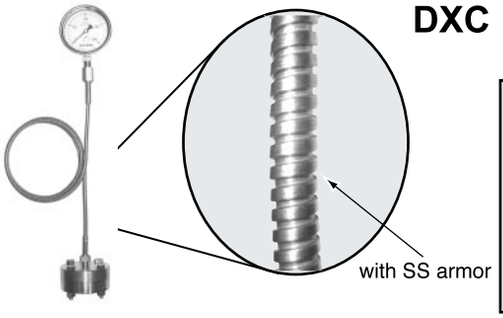
DIAPHRAGM SEAL ACCESSORIES

Flushing Ring

DXFR — 1.5 — 41 — S

1.5	41	S (wetted)
1.5 = 1 1/2"	**41** = 1/4" NPTF (one port)	**S** = 316SS
2 = 2"	**42** = 1/4" NPTF (two ports)	**F** = 304SS
3 = 3"	**21** = 1/2" NPTF (one port)	**H** = Hast C.
4 = 4"	**22** = 1/2" NPTF (two ports)	**M** = Monel

Stainless Capillary (2.0mm i.d.)



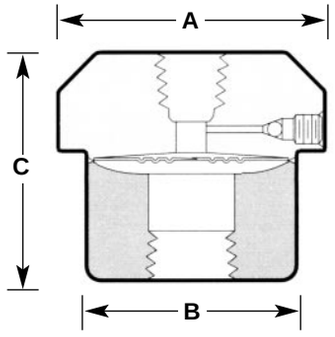
DXC — Instrument Fitting: 4F — Seal Fitting: 4M — Length: 05 — Protection: A

Instrument Fitting	Seal Fitting	Length	Protection
4M = 1/4" NPTM	**4M** = 1/4" NPTM	**05** = 5ft.	**A** = SS Armor
4F= 1/4" NPTF	**4F** = 1/4" NPTF	**06** = 6ft	**B** = bare
2M = 1/2" NPTM	**2M** = 1/2" NPTM	**10** = 10ft	
2F = 1/2" NPTF	**2F** = 1/2" NPTF	etc.	
W = weld fitting (10mm dia.)	**W** = weld fitting (10mm dia.)		

MINI SEALS

MINI-SEALS are all-welded, gasketless, threaded off-line seals. The mini-seal is an economical choice for isolation of smaller gauges, or where high sensitivity is not required.

MINI SEAL



	A	B	C	Min. Range
4G	1.73”	1.5”	1.5”	0-100 psi
6G	2.25”	1.95”	1.6”	0-15 psi
4H	2.0”	1.75”	1.6”	0-100 psi

HOW TO ORDER:

Size:
- **4G** - Low volume, for up to 3 1/2” gauge. Max 2000 psi @ 100° F
- **6G** - Std. volume with larger diaphragm, for up to 4 1/2” gauge. Max 1,000 psi
- **4H** - High Pressure, for up to 3 1/2” gauge. Max 5,000 psi @ 100° F

Instrument Connection (Female NPT):
- **4** = 1/4” NPT
- **2** = 1/2” NPT

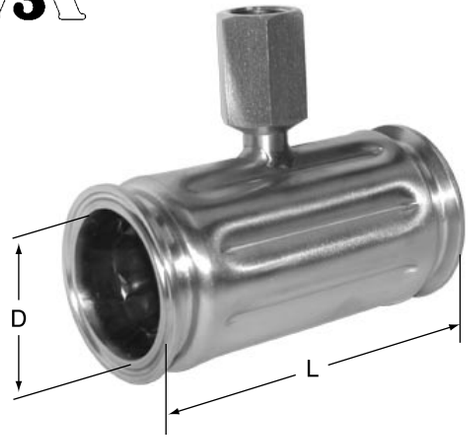
Process Connection (Female NPT):
- **4** - 1/4” NPT 4M = 1/4” NPT Male
- **2** - 1/2” NPT 2M = 1/2” NPT Male

Material:
- **S** = 316 Stainless (Standard)
- **H** = Hastelloy C
- **F** = 304 Stainless

Options:
- **F** = Flushing Connection

MS - 4 G - 4 4 S ☐

SANITARY IN-LINE PRESSURE SEALS



REO*TEMP* IN-LINE SEALS are the solution to many difficult pressure measurement applications. These seals are designed to 3-A standards, and allow unobstructed flow-through of process media.

TO ORDER: Tri-Clamp type, 1/4" NPT conn., 316SS

Pipe Size (D)	Tri-Clamp Conn.	Part Number	L (length)
1/2"	1/2"	ILS-TC05	7.87"
3/4"	3/4"	ILS-TC75	4.33"
1"	1"	ILS-TC10	4.33"
1 1/2"	1.5"	ILS-TC15	4.33"
2"	2"	ILS-TC20	4.33"
3"	3"	ILS-TC25	2.36"

Specifications:

Pipe material:	316LSS
Diaphragm Material:	316LSS standard (other material available on request)
Instrument Connections:	1/4" NPT std., (1/2" NPT, BSP threads cooling element or capillary line available)
Pipe connections:	Tri-clamp, (ANSI Flange (or metric connection types avail. - consult factory)
Pressure Limits:	600 psi (other styles to 6,000 psi)
Pipe sizes:	1/2" to 4"
Filling Fluids:	Glycerin, vegetable oil or any food - compatible fluid
Leak checking:	All seals are helium leak tested

OTHER DIAPHRAGM SEALS

REO*TEMP* provides many special-use or custom diaphragm seals. Consult factory for specific application assistance.

SADDLE

- Welded In-Line Flow-Thru
- 3" and Larger Process Pipe Sizes
- 2.4" Diaphragm

SANITARY SEAL

- 3-A Sanitary Seal
- Tri-Clamp sizes 1 1/2", 2", 3", 4"

CHERRY BURELL "I" Line

- Sanitary Seal
- 1.5", 2.0", 3.0" Sizes

CPM FITTING SEAL

- Eliminates/ Reduces Process "Dead-Leg"
- Available in Triclamp or Auto-Weld Styles
- 316LSS ID-15RA, EP Finish

Tree Seal Assembly

- "Tree" mounting of multiple instruments on one seal

IN-LINE FLOW THRU

- Unobstructed Flow of Process media
- No Recesses or Constrictions
- "ANSI" Flange Connections

BUTTON SEAL

- For High Pressures
- 0.9" Dia. Diaphragm
- Connections: Homogenizer, Flanged, Threaded

SANITARY TANK SPUD

- 2.0" & 6.0" Extensions
- Weld Spud Available

WEDGE TYPE SEAL

- Flow Meter Seal
- Wedge Type Connection

DIAPHRAGM SEAL OPTIONS AVAILABLE

- Calibration Rings for Flanged Seals
- Gold Plated Diaphragms
- Low Volume Nipples
- Capillary

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PRESSURE TRANSMITTERS

TRANS P LINE

REO*TEMP* TRANS-P LINE **Pressure Transmitters and Transducers *** all convert applied pressure to an electrical signal that can be interpreted by a computer or other interpretive device, where it can be used to display or control a process variable.

Output: Reotemp transmitters produce either a 4-20 mA signal (the most common output), or a variety of voltage outputs, such as 1-5 VDC and 0-10 VDC (3 wire).

Sensors: Piezoresistive diffused semiconductor technology is standard for pressures up to 300 psi. For higher pressures (up to 60,000 psi), sputtered thin film technology is used. These sensors are exceptionally stable, shock resistant, and durable. Our piezoresistive and thin-film sensors are made with no epoxies or bonding agents, virtually eliminating signal instability or drift.

Unit Integrity: Sensor durability, along with mechanical integrity of the stainless case and all-welded process connection, produce a rugged instrument designed to provide consistent performance under severe industrial conditions.

Accuracy: Accuracies from 0.5% to 0.025% are available. Each unit is temperature compensated to provide stable accuracy over large ambient variations and long periods of time.

Ready to Go: Whether shipped alone or with a Digital Indicator, each Reotemp transmitter is inspected and calibrated prior to shipment to assure it is 100% "Ready to Go" right out of the box!

Large Transmitter Stock: Reotemp stocks many transmitter models in a large variety of ranges, mainly with 4-20 mA output, because of their popularity. See the range table on page 39 for indication of our in-stock offering.

**Transmitter or Transducer?* "Transmitter" is often used when referring to a pressure sensor with variable current (mA) output, whereas "Transducer" usually implies voltage output. For simplicity, we use the term "transmitter" for all sensors offered in this catalog.

WARRANTY

REO*TEMP* Instrument Corp. warrants all TRANS-P line transmitters against defective workmanship or materials under normal use and service for three years following date of shipment (for transmitters) and one year (for series DM indicators.) Reotemp's liability is limited to repair or replacement at the factory, shipping charges prepaid.
This warranty does not cover deterioration from normal wear and tear, chemical or environmental corrosion, exposure to temperatures, pressures, or vibration beyond those recommended, or forces or abrasion which cause deformation of component parts.
This warranty is expressly in lieu of any other warranty, expressed or implied. Reotemp shall not be liable for any direct or consequential damages arising out of any defects or from any cause whatsoever.

All product designs and specifications are subject to change without notice.

SELECTING A TRANSMITTER

Consider the following issues *to help you to choose the best pressure transmitter for your application:*

1. **Special Needs:** Series **TG** (general purpose transmitter) is a good choice for general industrial applications. For special needs or circumstances, other models will be more suitable:

   High Accuracy: Choose series **TH** for up to 0.1% accuracy (BFSL). For reference, the standard TG accuracy is 0.5%.)
   Hazardous Environments: Consider series **TX** (intrinsically safe) or series **TE** (Explosion proof transmitters.)
   Total Submersion: Choose series **TS**.
   Clogging Media: Consider series **TG** mounted to a diaphragm seal, or series **THF**, which comes with flush diaphragm.
   Sanitary Applications: Choose series **THS**, which comes with sanitary Tri-clamp connection.
   Low Cost: For OEM use, or for applications where low cost is a necessity, consider series **TM**.
   Local Indication: Consider **DM3** digital meter, or **XTDM-1** piggy-back display.

2. **Pressure Range:** Choose a range that places your working pressure at 50% to 90% of the transmitter pressure range. Pressure spikes up to proof pressure will not harm the transmitter but may affect calibration; pressures beyond burst pressure will cause damage.

3. **Accuracy:** Series **TG**, with 0.5% BFSL accuracy, and with 0.05% repeatability, suits many industrial applications. Higher accuracies (0.25% and 0.1%) are available, generally at higher cost.

   BFSL (Best Fit Straight Line) expresses maximum deviation from a straight line positioned to minimize maximum deviation.

4. **Output:** Current output (4 mA to 20 mA) is the most popular for industrial use because it is less susceptible to electrical noise and can be transmitted through copper wires up to thousands of feet with little signal loss. Several voltage outputs are also available, and are suitable for shorter distances. Typical voltage outputs include 0-5 VDC, 1-5 VDC, and 0-10 VDC.

5. **Process Connection:** 1/4" NPT and 1/2" NPT are the most common connections in industrial process applications. In hydraulic applications, 7/16-20 UNF SAE male with o-ring seal is commonly used. For sanitary applications, Tri-Clamp connections on the **THS** series are available in several sizes, with 1 1/2" triclamp the most common. Other process connections, such as G1/2, G1, and 1/4"NPT female are available as well.

6. **Electrical Connection:** All Trans-P series transmitters require wire hookup for both power and output. 4-20 mA output uses 2 wires, which carry both loop power and output signal (loop current). Voltage output usually uses three wires, with 4 wires available. The standard Hirschmann connector (Din 43650) in standard or mini size allows easy connection to 2, 3, or 4 wires, with internal screw terminals and cable gland. Also available are integral cable (with or without 1/2"NPT male conduit threads), bendix 4- and 6-pin, and M12 types, as well as a Hirschmann with 1/2"NPT female conduit connection.

7. **Severe Conditions:** Reotemp Trans-P transmitters are rugged instruments intended for industrial use. However, temperatures, corrosion, vibration, or pulsation beyond operational limits should be addressed to prolong the life of the instrument:

   High process temperatures: Temperature at the instrument can be lowered by using a dead-leg extension. Using 1/4" stainless tubing, each 2 inches of extension will lower the process temperature about 100F. For high temperature with clogging media, a diaphragm seal with capillary can be used.
   High Ambient temperatures: The instrument can be removed from the hot zone using piping, tubing, or capillary with a diaphragm seal.
   Corrosive media: A chemically compatible diaphragm seal can isolate the transmitter from the corrosive media.
   Pulsation: Pressure fluctuations in an incompressible fluid can cause damaging pulsation (such as water hammer). This is a common cause of failure in pressure transducers, and measures should be taken to avoid this condition. Use of a snubber or restrictor screw (threaded orifice) should be considered.

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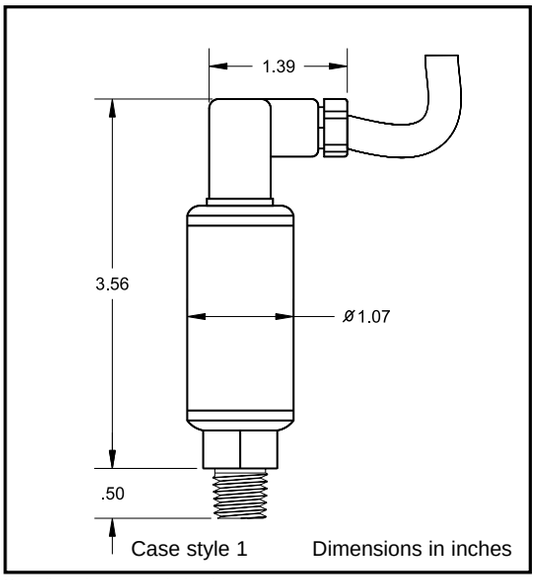
SERIES TG

- **0.5% or 0.25% accuracy, for general industrial use**
- **All-stainless welded body and wetted parts**
- **4-20 mA or Voltage Output**
- **Rugged, with protection from shock, over-range, & over-voltage. Internals potted in silicone gel.**
- **Internal zero & span adjustments**
- **Compatible with Reotemp DM series Digital Indicators**
- **100% inspected, "Ready-to-go" out of the box**

Applications:

Process control, engine testing, hydraulics, injection molding, stamping presses, machine controls, most general industrial pressure applications.

TG series transmitters are compatible with Reotemp DM series digital indicators (p.37). Each Reotemp transmitter is inspected and calibrated prior to shipment, to ensure it is 100% "Ready-to-Go" right out of the box!



Note: dimensions are nominal and may vary.
Check with Reotemp sales if dimensions are critical.

Specifications: **(Also see General specs, page 39)**

Output Signal: 4-20 mA, 2 wire (std)
0-5 V, 0-10 V, 1-6 V, or 1-11 VDC (3 wire)

Pressure Ranges: Vacuum, compound, pressure to 15000PSI; gauge and absolute

Proof and Burst Pressures	Proof pressure	Burst pressure
0/5 thru 0/200psi	3 x range	3.8 x range
0/300 thru 0/10,000 psi	1.75 x range	4 x range
0/15,000 psi	1.5 x range	3 x range

Accuracy (BFSL): (incl. repeatability, hysteresis, and linearity): +/- 0.5% of span (standard)
+/- 0.25% of span (optional)

Adjustment: +/- 10% full scale, zero & span

Input: 12-30 VDC (for current output)
14-30 VDC (for voltage output)

Temperature: Compensated: +32 to 175 deg F
Effect: +/- 0.02% of span / deg F
Media: -22 to 212˚F (-30/100C)
Ambient: -40 to 185˚F (-40 to 85˚C)

Weight: Approx. 3.5 oz (90g)

HOW TO ORDER

TG — 1 — P20 — 1 — A — 4 — A

TG1 = General Purpose Transmitter (Case style 1)*	Range: SEE PAGE 39 FOR RANGE CODES Vacuum, Compound, Pressure 0/5psi to 0/15,000psi	Accuracy: 1 = +/-0.5% Full Scale (std) 2 = +/-0.25% Full Scale	Output Signal: A = 4-20mA, (2 wire) (std) B = 0-5 VDC, 3 wire C = 1-5 VDC, 3 wire D = 1-6 VDC, 3 wire E = 0-10 VDC, 3 wire F = 1-11 VDC, 3 wire	Process Connection: 4 = 1/4" NPT (Male) 7 = 7/16-20UNF Male (SAE J-514) 8 = 1/8" NPT (Male)	Electrical Connection: A = Mini-Hirschmann (w/36" cable) B = Mini-Hirschmann (no cable) E = 4 pin Bendix* F = 6 pin Bendix* J = 1/2" NPT Conduit (w/36" cable)	Options: 1 = Threaded Orifice (SS, M3.5) 2 = Restrictor Screw S = Snubber (Diaphragm Seals available)

*Note: All dimensions and specs. are for case style 1. Other case styles available.

*Mating Connector sold separately

SERIES TH

HEAVY DUTY, HIGH ACCURACY TRANSMITTERS

- **Heavy-duty, 0.25% or 0.12% accuracy**
- **All-stainless welded Body and Wetted Parts**
- **Very low to very high Pressure Ranges**
- **Engineered for high stability, shock resistance, and durability - (internal electronics potted in silicone gel.)**
- **Internal zero & span adjustments**
- **4-20 mA, or choice of several voltage outputs**

TH series transmitters are compatible with Reotemp DM series digital indicators (p.37). Each Reotemp transmitter is inspected and calibrated prior to shipment, to ensure it is 100% "Ready-to-Go" right out of the box!

Applications:

Process control, hydraulics, lab or test, where higher performance is needed. Model THF with flush diaphragm is suitable for measurement of slurries or viscous media.

Specifications: (Also see General specs, page 39)

Output Signal: 4-20 mA, 2 wire (std)
0-5 VDC, or 1-10 VDC (3 wire)

Pressure Ranges: Vacuum, compound, pressure to 60,000 PSI; gauge and absolute

Proof & Burst Pressures	Proof pressure	Burst pressure
0/5 thru 0/200psi	3 x range	3.8 x range
0/300 thru 0/10,000 psi	1.75 x range	4 x range
0/15,000 psi	1.5 x range	3 x range
0/20,000 thru 0/120,000 psi	1.2 x range	1.5 x range

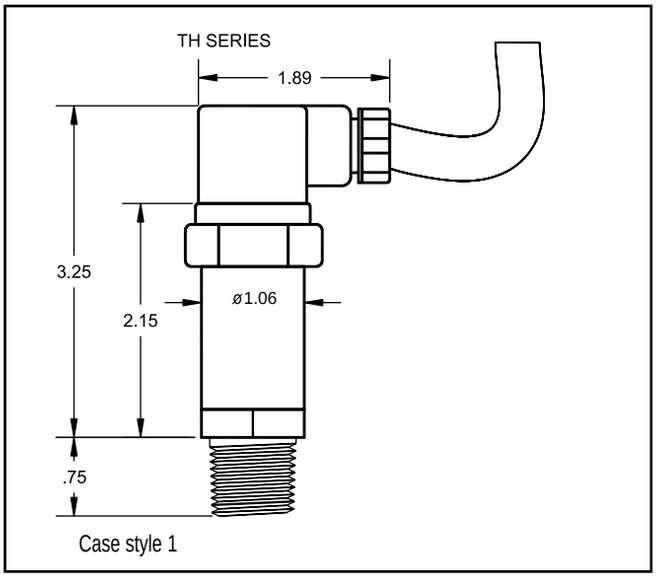
Accuracy (BFSL): (incl. repeatability, hysteresis, and linearity): +/- 0.25% of span (standard)
+/- 0.11% of span (optional)

Adjustment: +/- 10% full scale, zero & span

Input: 10-30 VDC (for current output)
14-30 VDC (for voltage output)

Temperature: Compensated: +32 to 175˚F (0/80˚C)
Effect: +/- 0.01% of span / deg F (on zero and span)
Media: -20 to 212˚F (-30/100˚C)
Ambient: -15 to 175˚F (-10 to 80˚C)

Weight: Approx. 7.2 oz (187g)



Note: dimensions are nominal and may vary.
Check with Reotemp sales if dimensions are critical.

HOW TO ORDER

TH — 1 — P20 — 2 — A — 4 — C

TH1 = High-Accuracy Transmitter (case style 1)*	Range:	Accuracy:	Output Signal:	Process Connection TH1:	Electrical Connection:	Options:
	SEE PAGE 39 FOR RANGE CODES Vacuum, Compound, Pressure: 0/55INWC...to 60,000psi (TH1) 0/55INWC...to 7,500psi (THF)	2 = +/-0.25% Full Scale (std) 3 = +/-0.12% Full Scale	A = 4-20mA, 2 wire (std) B = 0-5 VDC, 3 wire C = 1-5 VDC, 3 wire E = 0-10 VDC, 3 wire	2 = 1/2" NPT(std) 4 = 1/4" NPT 9 = 9/16-18 aminco** (std on 30,000 to 60,000 psi)	C = Hirschmann (w/36" cable) D = Hirschmann (DIN 43650) F = 6 pin Bendix† J = 1/2" NPT conduit (w/36" cable) N = 1/2" NPTF ISO 4400 flex conduit conn.	1 = Threaded Orifice (SS, M3.5) 2 = Restrictor Screw Weld-in adapters for G1, G1/2 Diaphragm Seals, Snubbers

*Note: All dimensions and specs. are for case style 1. Other case styles available.

**Also known as Autoclove F250C. †Mating Connector sold separately

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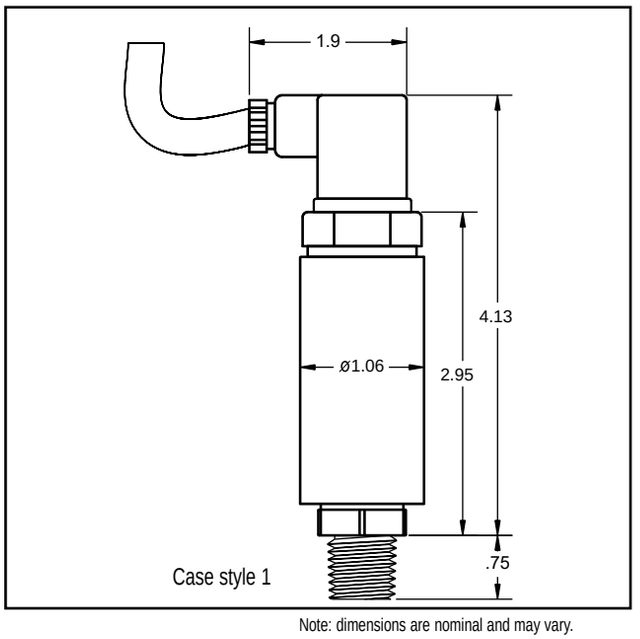
Intrinsically Safe Transmitters

Series TX

- **Intrinsically safe for Hazardous Environments**
- **Heavy-duty, 0.25% or 0.1% accuracy**
- **Very low to very high Pressure Ranges**
- **Internal zero & span adjustments**
- **All-stainless welded Body and Wetted Parts**
- **Shock-proof - internals potted in epoxy**

Applications:

Petrochemicals, chemicals, and other hazardous applications requiring Class I, Division I protection.



Note: dimensions are nominal and may vary.
Check with Reotemp sales if dimensions are critical.

TX series transmitters are compatible with Reotemp DM series digital indicators (p.37). Each Reotemp transmitter is inspected and calibrated prior to shipment, to ensure it is 100% "Ready-to-Go" right out of the box!

Specifications: **(Also see General specs, page 39)**

Approvals: FM, CSA, CENELEC, BASEEFA, and PTB approved for Class I, II, III; Division 1, groups A, B, C, D, E, F, G. Nonincendive for Class I, Div 2, Groups A, B, C, D.

Output Signal: 4-20 mA, 2 wire

Pressure Ranges: Vacuum, compound, pressure to 15000PSI; gauge and absolute

Proof & Burst Pressures	Proof pressure	Burst pressure
0/5 thru 0/200psi	3.5 x **range**	3.5 x range
0/300 thru 0/10,000 psi	2 x range	**2** x **range**
0/15,000 psi	1.5 x **range**	**2** x **range**
0/25,000 and 0/60,000 psi	1.2 x **range**	**2** x **range**

Accuracy (BFSL): +/- 0.25% of span (standard) +/- 0.12% of span (optional) (incl. repeatability, hysteresis, and linearity)

Adjustment: +/- 10% full scale, zero & span

Input: 10-30 VDC

Temperature: Compensated: +32 to 175˚F (0/80C)
Effect: +/- 0.01% of span / deg F (on zero and span)
Media: -5 to 120˚F (-20/50˚C)
Ambient: -5 to 120˚F (-20/50˚C)

How to Order

TX — 1 — P20 — 2 — A — 4 — C — 2

TX1 =	**Range:**	**Accuracy:**	**Output Signal:**	**Process Connection TX1:**	**Electrical Connection:**	**Options:**
Intrinsically Safe transmitter-(case style 1)*	**SEE PAGE 39 FOR RANGE CODES** Vacuum, Compound, Pressure 0/55INWC...to 30,000psi (TX1) 0/55INWC...to 7,500psi (TXF)	**2** = +/-0.25% Full Scale (std) **3** = +/-0.12% Full Scale	**A** = 4-20mA, 2 wire	**4** = 1/4" NPT **2** = 1/2" NPT(std)	**C** = Hirschmann (w/36" cable) **D** = Hirschmann (DIN 43650) **N** = 1/2" NPTF ISO 4400 flex conduit conn.	**1** = Threaded Orifice (SS, M3.5) **2** = Restrictor Screw Weld-in adapters for G1, G1/2 Diaphragm Seals, Snubbers

*Note: All dimensions and specs. are for case style 1. Other case styles available.

Service Inspired, Quality Driven

SERIES TS

SUBMERSIBLE, LIQUID-LEVEL TRANSMITTERS

- **Accurate Level Measurements from 5" WC to 300 psi**
- **316 Stainless Steel and Polyurethane wetted parts**
- **0.25% or 0.1% accuracy**
- **Vented, Strong Submersible Cable**
- **Lightning, short circuit, reverse polarity protection**
- **NEMA 6/IP68 protection, submersible to 1000 ft.**

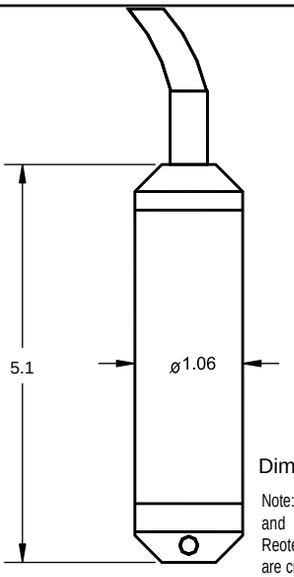
TS series transmitters are compatible with Reotemp DM series digital indicators (p.37). Each Reotemp transmitter is inspected and calibrated prior to shipment, to ensure it is 100% "Ready-to-Go" right out of the box!

Applications:

Tank level, well level; municipal and industrial applications requiring watertight protection.

Specifications: (Also see General specs, page 39)

Output Signal: 4-20 mA, 2 wire
0-5 VDC, 0-10 VDC, or 0.5-2.5 VDC (3 wire)
Pressure Ranges: 0-2PSI thru 0-500PSI
Proof Pressure: 2 x range
Burst Pressure: 4 x range
Accuracy (BFSL): +/- 0.25% of span (standard)
(incl. repeatability, hysteresis, and linearity): +/- 0.125% of span (optional)
Input: 12-30 VDC (for current output)
14-30 VDC (for VDC output)
6 VDC (for 0.5 to 2.5VDC output)
Temperature: Compensated: +32 to 122˚F (0/50˚C)
Effect: +/- 0.01% of span / deg F (on zero and span)
Media: -14 to 175˚F (-10/80C)
Environmental Protection: NEMA 6, IP68 (submersible to 1,000 ft.)
Electrical Protection: Reverse polarity, short circuit, and lightning protection.
Submersible Cable: Vented, watertight, polyurethane jacketed.
Tensile strength: maximum 220 pounds
Wetted Parts: Body – 316 stainless
Cable – polyurethane (teflon available)
Nose cone – Polyamide



Dimensions in inches

Note: dimensions are nominal and may vary. Check with Reotemp sales if dimensions are critical.

HOW TO ORDER

TS — 1 — P20 — 2 — A — N — S — 50

TS1 =	Range:	Accuracy:	Output Signal:	Process Connection:	Electrical Connection:	Cable Length:
Submersible Liquid Level Transmitter (case style 1)*	See p. 39 for std. Range codes thru 0/500psi. Special INWC ranges for TS1: IN50 =0/50 IN100 =0/100 IN150 =0/150 IN200 =0/200 IN400 =0/400	**2** = +/-0.25% Full Scale (std) **3** = +/-0.125% Full Scale (optional)	**A** = 4-20mA, (2 wire) (Std) **B** = 0-5 VDC, 3 wire **E** = 0-10 VDC, 3 wire **H** = 0.5-2.5 VDC, 3 wire	**N** = Nose Cone (std) **W** = Nose Cone w/added weight	**S** = Submersible cable	Specify length in feet

*Note: All dimensions and specs. are for case style 1. Other case styles available.

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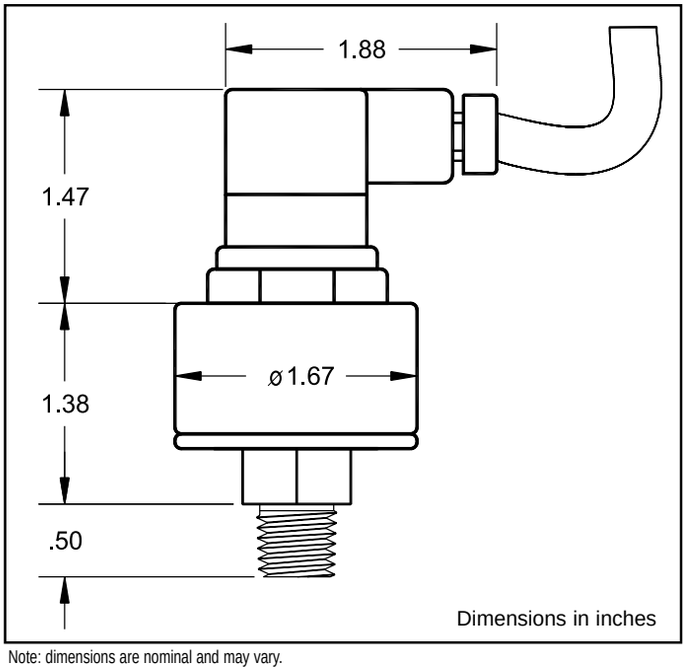
OEM TRANSMITTERS

SERIES TM

- **Reliable, Economical, 0.5% accuracy**
- **Shock Resistant, High over-range Protection**
- **4-20 mA or voltage output**
- **All-stainless Body and Wetted Parts**

Applications:

Hydraulics, refrigeration, robotics, machine controls; industrial or OEM applications where performance, reliability, and value are needed.



Note: dimensions are nominal and may vary.
Check with Reotemp sales if dimensions are critical.

TM series transmitters are compatible with Reotemp DM series digital indicators (p.37). Each Reotemp transmitter is inspected and calibrated prior to shipment, to ensure it is 100% "Ready-to-Go" right out of the box!

Specifications: **(Also see General specs, page 39)**

Output Signal: 4-20 mA, 2 wire (std)
0-10 VDC (3 wire)

Pressure Ranges: Vacuum, compound, pressure to 15,000PSI

Proof & Burst Pressures	Proof pressure	Burst pressure
0/5 thru 0/200psi	3 x range	3.8 x range
0/300 thru 0/10,000 psi	1.75 x range	2.6 x range
0/15,000 psi	1.5 x range	3 x range

Accuracy (BFSL):
(incl. repeatability,
hysteresis, and linearity): +/- 0.5% of span

Input: 10-30 VDC (for current output)
14-30 VDC (for voltage output)

Temperature: Compensated: +32 to 175 deg F
Effect: +/- 0.02% of span / deg F (on zero and span)
Media: -22 to 212˚F (-30/100˚C)
Ambient: -22 to 175˚F (-30/80˚C)

Certifications: CE

HOW TO ORDER

TM — 1 — P20 — 1 — A — 4 — C — 1

TM1 = Heavy Duty OEM Transmitter (case style 1)*	Range: SEE PAGE 39 FOR RANGE CODES. Pressure 0/5psi to 0/15,000psi	Accuracy: 1 = +/-0.5% Full Scale	Output Signal: A = 4-20mA, (2 wire) (Std) C = 1-5 VDC, 3 wire D = 1-6 VDC, 3 wire E = 0-10 VDC, 3 wire	Process Connection: 4 = 1/4" NPT (std) 8 = 1/8" NPT male	Electrical Connection: C = Hirschmann (w/36" cable) D = Hirschmann (DIN 43650) N = 1/2" NPTF ISO 4400 flex conduit conn.	Options: 1 = Threaded Orifice (SS, M3.5) 2 = Restrictor Screw Diaphram Seals, Snubbers

*Note: All dimensions and specs. are for case style 1. Other case styles available.

Service Inspired, Quality Driven

SERIES THS

3A SANITARY TRANSMITTERS

- **3A, Tri-clamp Sanitary Connection**
- **316 Stainless Wetted Parts**
- **Designed for "Clean-in-place" and "Sterilize-in-place" procedures**
- **Media temperatures to 250F (121C)**
- **Internal zero & span adjustments**

Applications:

Food, dairy, pharmaceutical, beverage, biotech.

THS series transmitters are compatible with Reotemp DM series digital indicators (p.37). Each Reotemp transmitter is inspected and calibrated prior to shipment, to ensure it is 100% "Ready-to-Go" right out of the box!

Specifications: (Also see General specs, page 39)

Output Signal: 4-20 mA, 2 wire (std)
1-5 VDC, 1-6 VDC, or 1-11 VDC (3 wire)

Pressure Ranges: Vacuum, compound, pressure 0/2 to 0/1000 PSI gauge and absolute. Ranges 60psi and below not recommended with 3/4" tri-clamp.

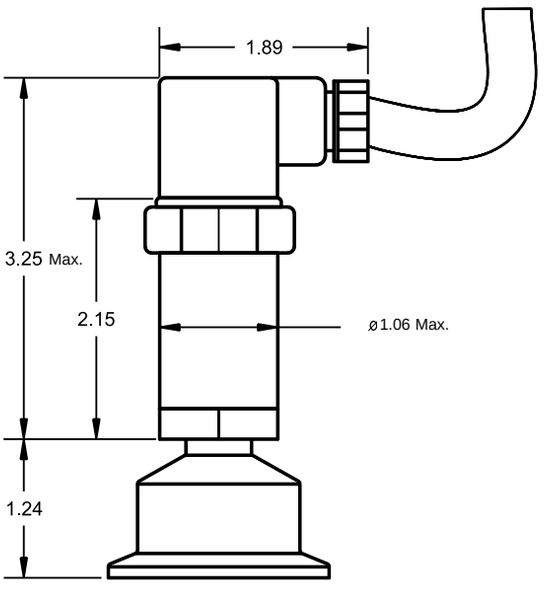
Proof & Burst Pressures	Proof pressure	Burst pressure
0/5 thru 0/200psi	3 x range	3.8 x range
0/300 thru 0/1,000psi	1.75 x range	4 x range

Accuracy (BFSL): +/- 0.5% of span (standard)
+/- 0.25% of span (optional)

Adjustment: +/- 5% full scale, zero & span

Input: 10-30 VDC (for current output)
14-30 VDC (for voltage output)

Temperature: Temperature effect with 1.5" or 2" triclamp:
+/- 0.1% of span / 10˚F (for zero & span)
or +/- 0.02psi/ 10˚F (greater of)
Note: 3/4" Triclamp not recommended for temperature variations. Effect is < = +/- 0.9psi/ 10˚F



Dimensions in inches

Note: dimensions are nominal and may vary.
Check with Reotemp sales if dimensions are critical.

HOW TO ORDER

THS — P20 — 1 — A — C — C — G

THS =	Range:	Accuracy:	Output Signal:	Process Connection:	Electrical Connection:	Fill Fluid:
Sanitary Transmitter	**SEE PAGE 39 FOR RANGE CODES** Vacuum, Compound, Pressure RANGES: 0/5psi to 0/1,000psi	**1** = +/-0.5% Full Scale **2** = +/-0.25% Full Scale	**A** = 4-20mA, (2 wire) (Std) **C** = 1-5 VDC, 3 wire **D** = 1-6 VDC, 3 wire **F** = 1-11 VDC, 3 wire	**C** = 1.5" Triclamp **L** = 2" Triclamp **A** = 2.5" Triclamp **CI** = 2" Cherry-Burrell "I"-line **M*** = 3/4" Triclamp (other connections available)	**A*** = Mini Hirschmann (w/36" cable) **B*** = Mini Hirschmann (no cable) **C**** = Hirschmann (w/36" cable) **D**** = Hirschmann (no cable) **F** = 6 pin Bendix **J** = 1/2" NPT male conduit (w/36" cable) * Used for all .5% acc. except <5 psi ** Used for all .25 acc. and all <5 psi	**G** = Glycerin (std) **S** = Silicone **N** = Neobee M-20 **H** = Halogenated inert fluid **V** = Vegetable oil

*Note: REO*TEMP* recommends 1.5" or 2" triclamp for variable temperature service.

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DIGITAL INDICATORS
POWER SUPPLY

SERIES DM

- **Built-in Transmitter Power Supply.**
- **4-20 mA or voltage input (optional- Thermocouple or RTD.)**
- **Factory Scaled and Calibrated to your specs - "Ready-to-Go"**
- **Advanced technology for drift-free readout**
- **Max and Min Memory.**
- **Easy Menu-driven Programming, with lockout.**
- **NEMA 4X/IP65 sealed front bezel.**
- **4 1/2 Digit display (-19,999 to 99,999)**
- **Optional 4-20 mA, Voltage, Relay, RS-232 Output, or Modbus**

HOW TO ORDER

Specify Model + Options (example DM31-A1)

Model	Input
DM31	4-20mA (std)
DM32	Voltage (specify)
DM38	Thermocouple (specify)
DM39	RTD (specify)

Options

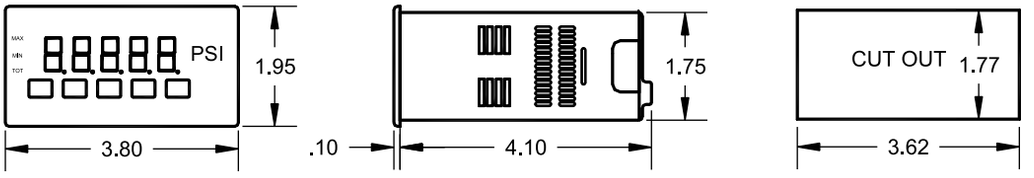
Code	Description		
00	No expansion capability.		
01	No options, but expansion capable.		
A1	Analog Output (4-20 mA or 0-10VDC)		
R2	Relay Output (2 relays, form C, 5A @ 240VAC)		
R3	Relay output (4 relays, form A, 3A @ 250VAC)		
D1	RS-232 Output		
E1	Enclosure, NEMA 4	E2	Units Label Kit

REO*TEMP* will calibrate the indicator to your transmitter and scale it to your specs. Just tell us how you want it, and it will arrive "Ready-to-Go."

DM3 – Specifications:

Display: 4 1/2 digit, 0.56" red LED (-19999 to +99,999)
Power: 85 to 250 VAC , 50/60 Hz, 15 VA
(optional- 11 to 36 VDC or 24 VAC)
Signal Input Range: 4-20 mA DC or VDC to 300 V max.
Accuracy: 0.01% of span + 1 digit (18/28 deg. C, 10/75%RH)
0.04% of span + 1 digit (0/50 deg. C, 0/85%RH)
Input Impedence: 20 ohm @ 20 mA (500 Kohm @ 10VDC)
Update rate: 1 to 10 updates/sec. (programmable)
Excitation power: 24 VDC, +/- 5%, regulated, 50 mA max
Environmental Conditions: Operating, 0/50 deg. C
Storage: -40/60 deg. C
Certifications: Electromagnetic Immunity to EN 50082-2
Electromagnetic Emissions to EN50081-2
Construction: One-piece bezel/case, rated to NEMA 4X/IP65 indoor use (when properly installed).
Weight: 10.4 oz. (295g)
Optional Output: 4-20 mA, 0-10VDC, relay, RS232, or Modbus

Note: Recommended minimum clearance (behind panel) for mounting clip installation is 2.1"H X 5.0"W.

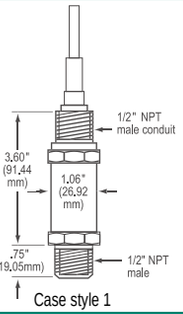


Dimensions in inches

Service Inspired, Quality Driven

SERIES TE

EXPLOSION PROOF TRANSMITTER



Case style 1

- **Approved for Hazardous Environments**
- **All Welded 316SS and Elgiloy**
- **4-20 mA or Low Power Voltage Outputs**
- **Accuracy to +/- 0.125% Full Scale (BFSL)**

Specifications

Output signals: 4-20 mA (2 wire); 1-5Vdc, .5-4.5 Vdc (3 wire)
Accuracy: 0.25% (std) ; 0.125% (optional)
Ranges: Vacuum, compound, pressure 0/15psi to 0/15,000psi
Proof/Burst pressures: Same as series TG (page 31)
Power Supply: 10-30 Vdc for 4-20mA; 6-30Vdc for low power voltage output (<=2mA for power supply <= 12Vdc)

Temperature: Compensated 32 to 176˚F
Effect: +/- 0.011% FS/˚F
Ambient and Media: -25 to 212˚F
(-58/221˚F optional)
Environmental Rating: IP67
Wetted Material: 316 SS (ranges up to 300psi); 316SS with Elgiloy (ranges above 300psi)
Hazardous Approvals: FM; Explosion proof with entity approval
Cl. I, Div. 1, A,B,C,D
Dust/Ignition proof Cl. II/III, Div. 2, E,F,G

*Note: All dimensions and specs. are for case style 1. Other case styles available.

HOW TO ORDER

TE1— P20 **—** 2 **—** A **—** 4 **—** U

Range:	Accuracy:	Output:	Process Connection:	Electrical Connection:
SEE P. 39 FOR RANGE CODES Vacuum, compound, pressure 0/15 to 0/15,000 psi	**2** = +/- 0.25% (std) BFSL **3** = +/- 0.125% BFSL	**A** = 4-20 mA (2 wire, std.) **B** = 1-5 Vdc, low power (3 wire) **N** = 0.5 – 4.5 Vdc, low power (3 wire)	**4** = 1/4" NPT male **2** = 1/2" NPT male **7** = 7/16-20 UNF (SAE #4) male	**U** = 1/2" NPT conduit w/6 ft. cable **R** = 1/2" NPT conduit w/6 ft. flying leads

XTDM-1

"PIGGYBACK" DIGITAL INDICATOR

Dimensions in inches

- **Mounts to 4-20 mA transmitter**
- **Simply plug in between Hirschmann connector and transmitter body**
- **4-20 mA or 0-10VDC signal**
- **316SS & Viton wetted parts**

Specifications

Display: 0.4" high LCD
Programmable Range: -1999 to + 1999
Accuracy: +/- 0.2% full scale, +/- 1 digit
Update rate: 5 /sec
Filtering: Field selectable, 0.2 – 1.5 sec
Power: Loop powered. Voltage drop, 3 VDC.
Temperature: Ambient: 32 to 122˚F (0 to 50˚C)
Storage: -22 to 176˚F (-30 to 80˚C)
Effect: -0.1% per 10˚C (18˚F)
Rating: CE compliant to EMC norm EN LI326 1997/AI:1998
Weight: 3oz. approx.

HOW TO ORDER

1. **Specify P/N XTDM-1**
2. **Indicate display range**
   4 mA= _____
   20 mA= _____

e.g., for 0-200 range: XTDM-1 (4 mA = 0 20 mA = 200)

REOTEMP INSTRUMENTS
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General Specifications

For Reotemp Pressure Transmitters shown on pp 31-38. (See specific specs on each product page.)

Wetted Parts: 316SS (ranges under 400 psi). Hi press. Ranges, 17-4 PH SS diaphragm and 300 series SS pressure chamber

Repeatability: 0.05% of scale (model TM, 0.2%)

Hysteresis: 0.1% full scale

Stability: 0.2% full-scale (model TM, 0.5%)

Response time: < 1 ms (between 10-90% of scale). [Model TM, <5 ms]

Operating Life: 100 million cycles

Electromagnetic rating: CE compliant to EMC norm EN61326:1997/A1: 1998 RFI, EMI and ESD protection

Electrical Protection: Reverse Polarity, over voltage, and short circuit protection

Shock: Less than +/- 0.05% full scale effect for 1000 g's @ 2ms on any axis (model TM: 600 g's)

Vibration: Less than +/- 0.01% full scale effect for 15 g's @ 0-2000 Hz on any axis (Model TG: less than 0.05% full scale effect for 20 g's @ 5-2000 Hz on any axis.)

Temperature Range for Storage: -40 to 212 degrees F (series 612, -22 to 175 degrees F).

Environmental protection: NEMA 4x (DIN IP65) (series TS, NEMA 6, IP68)

Electromagnetic ratings: CE compliant to EMC norm EN61326: 1997/A1:1998. RFI, EMI, and ESD protection.

Proof Pressure and Burst Pressure can be found for individual models on product pages.

At Proof Pressure, zero and span may shift but no permanent damage has occurred.

At Burst Pressure, permanent, non-recoverable damage may occur.

Note: Specifications are subject to change.

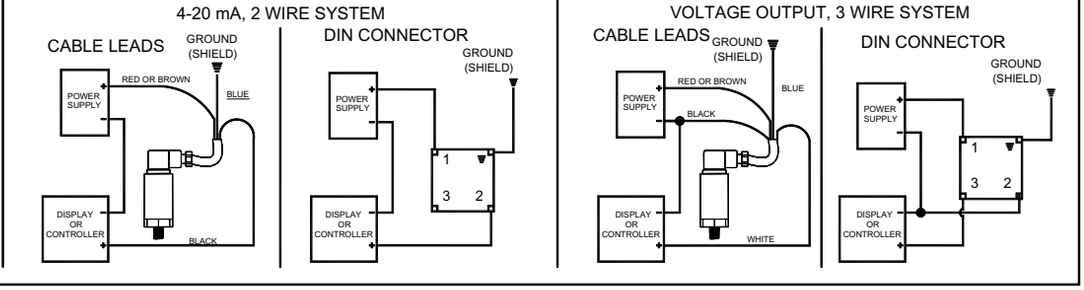
	TYPE	TG1				TH1	TX1	TE	TS	THS	TM	
Code	Range	General Purpose				Hi-Acc	I.S.	Expl. Prf.	Sub-mersible	Sanitary	OEM	
Output signal		4-20mA	0-5V	0-10V	1-11V	4-20mA	4-20mA	4-20mA	4-20mA	4-20mA	4-20mA	0-10VDC
Std. Process Connection		1/4NPT	1/4NPT			1/2NPT	1/2NPT	1/2NPT	Nose	Triclamp	1/4"NPT	
Vacuum												
P01	-30"Hg VAC	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
Compound Ranges												
P02	-30"Hg/0/15psi	Y	Y	Y	Y	Y	Y			Y		
P03	-30/0/30 psi	Y	Y	Y	Y	Y	Y	Y		Y		
P04	-30/0/60 psi	Y	Y	Y	Y	Y	Y	Y		Y		
P05	-30/0/100psi	Y	Y	Y	Y	Y	Y	Y		Y		
P06	-30/0/150psi	Y	Y	Y	Y	Y	Y			Y		
P07	-30/0/200psi	Y	Y	Y	Y	Y	Y	Y		Y		
P08	-30/0/300psi	Y	Y	Y	Y	Y	Y			Y		
Pressure Ranges												
L11	0-55 INWC					Y	Y		See	Y		
L12	0-80 INWC					Y	Y		page	Y		
L13	0-140 INWC	Y				Y	Y		34 for	Y		
L14	0-280 INWC	Y				Y			ranges	Y		
P11	0-2 psi					Y	Y		Y	Y		
P12	0-3 psi					Y	Y		Y	Y		
P13	0-5 psi	Y	Y	Y	Y	Y	Y		Y	Y		
P14	0/10 psi	Y	Y	Y	Y	Y			Y	Y		
P15	0/15 psi	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P16	0/30/ psi	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P17	0/60 psi	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P18	0/100 psi	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P19	0/150 psi	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y
P20	0/200 psi	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P21	0/300 psi	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P26	0/500 psi	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P23	0/600 psi	Y	Y	Y	Y	Y	Y			Y	Y	Y
P27	0/750 psi	Y	Y	Y	Y	Y	Y			Y	Y	Y
P25	0/1000 psi	Y	Y	Y	Y	Y	Y	Y			Y	Y
P30	0/1500 psi	Y	Y	Y	Y	Y	Y	Y			Y	Y
P31	0/2000 psi	Y	Y	Y	Y	Y	Y	Y			Y	Y
P32	0/3000 psi	Y	Y	Y	Y	Y	Y	Y			Y	Y
P33	0/4000 psi					Y						
P34	0/5000 psi	Y	Y	Y	Y	Y	Y	Y				Y
P35	0/6000 psi	Y	Y	Y	Y	Y	Y				Y	Y
P28	0/7500psi	Y	Y	Y	Y	Y	Y				Y	Y
P37	0/10000 psi	Y	Y	Y	Y	Y	Y	Y			Y	Y
P38	0/15000 psi	Y	Y	Y	Y	Y	Y				Y	Y
P39	0/20000 psi					Y						
P40	0/30000 psi					Y						
P41	0/40000 psi					Y						
P42	0/50000 psi					Y						
P43	0/60000psi					Y						
Absolute Pressure Ranges												
A15	0/15 psia	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
A16	0/30/ psia	Y	Y	Y	Y	Y	Y			Y	Y	Y
A17	0/60 psia	Y	Y	Y	Y	Y	Y			Y	Y	Y
A18	0/100 psia	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
A19	0/150 psia	Y	Y	Y	Y	Y	Y			Y	Y	Y
A20	0/200 psia	Y	Y	Y	Y	Y	Y			Y		
A21	0/300 psia	Y	Y	Y	Y	Y	Y			Y		

Standard, in-stock ranges (for 4-20ma) are shaded (Subject to availability - May be changed without notice)

Y = Available Y =normally in stock

Wiring Diagrams

(for transmitter p.p. 31-38)



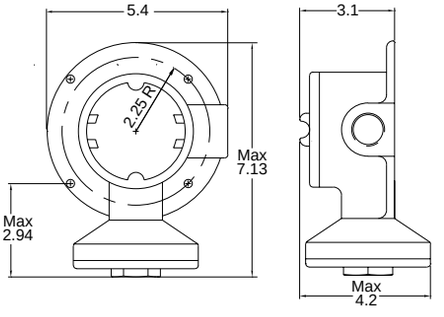
MECHANICAL PRESSURE SWITCHES

REO*TEMP*'s Mechanical Pressure Switches are suited for a variety of process applications, where electrical devices must be turned on/off in response to changing process pressure.

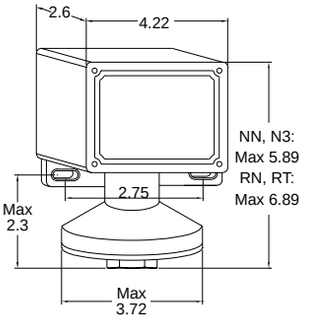
- **Reliable** Piston-Actuated, Force Balanced construction
- **Rugged**, high cycle rate tolerance
- **Precise** resolution of set points
- **Field-Adjustable** set points (No - charge factory calibration)
- **Simple Installation** - no special tools
- **Long Service Life** - no required periodic service - no spare parts required
- UL, CSA **certified** switching elements

Dimensions

Explosion Proof Case



NEMA 4 Case



Dimensions in inches

Standard Specifications

Switching Elements: SPDT, or DPDT

Current Capacity: 15A at 250VAC; 5A at 30VAC

Housing: NEMA 4, 4X, or Explosion Proof
(Class.1, Group C & D; Class.2, Group E,F,G, Division 1, 2)

Electrical Outlet: 3/4" NPTF

Adjustable Setpoints: From full vacuum to 550psi

Wetted Diaphragm: Teflon/Buna, 316 SS/Viton.

Wetted Pressure Ports: 316 SS, Aluminum, Cast Iron

Overrange: 200 psi to 1,500 psi

Warranty: 3 years

Note: Specifications are for standard switches shown on next page. A wide variety of alternate housings, ranges, switches, wetted parts and options are available on request.

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Mechanical Pressure Switches

How to Order

Pressure Switch	Pressure Range	Housing	Switch	Diaphragm (wetted)	Pressure Port (wetted)	Options
PS	0630	NN	K	N4	C2	

Pressure Range

Overrange	Proof	Pressure Range (Set point must be within range)		Typical Dead Band (at mid point)
		Pressure		
		Code	Range	
200 psi	400 psi	1264	2.5 - 45 INWC	0.8 INWC
		1220	.04 - 2.0 psi	0.1psi
		1250	.75 - 12 psi	0.1psi
750 psi	1000 psi	0440	2 - 25 psi	0.3psi
		0450	3 - 50 psi	0.4psi
1500 psi	2500 psi	0630	12 - 100 psi	0.9psi
		0650	20 - 180 psi	1.4psi
		0530	25 - 240 psi	2.2psi
		0545	45 - 550 psi	3.9psi
		Vacuum		
750 psi	1000 psi	5418	-30" Hg	0.5" Hg
		Compound		
200 psi	400 psi	5217	-40/0/40 INWC	1.1 INWC
1500 psi	2500 psi	5626	-30 Hg/0/10 psi	1" Hg/.5 psi
		5636	-30 Hg/0/80 psi	1.4" Hg/.7 psi

Housing

Weather tight:NEMA 4, 4X, IP65:

NN = Aluminum, One Outlet (R)

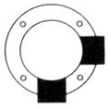
N3 = Aluminum, two Outlets (L,R)

RN = Aluminum, with 6-place Terminal Block
One outlet (R)

RT = 316SS, with 6-place Terminal Block
One outlet (R)

Explosion Proof
(Class 1, Group C & D; Class II, Group E, F & G, Division. 1, 2)

L = Cast Iron, One Outlet (R)
(Housing is weather tight with CG option)



Switch

K = Single (SPDT)

KK = Dual (DPDT) - (KK has 6x dead band multiplier)
Both Switches: 15 A @ 250 VAC, 5A @ 30 VDC

Options / Accessories

MM= Vacuum protector plate (STD with vacuum + compound range)
CG= Cemented Cover Gasket
YY= Epoxy coating (Exterior)
RR= Stainless Steel tag (TT = H.D. Tag)
SP= Specify set point (set by factory, N/C)
Example: SP 50A = 50psi ascending
(If set point not specified, factory will set at mid point.)

316SS Diaphragm Seals
(Max working pressure = 1,500 psi)

Process Connection	Code for 04-,05-,06-, 54-,56- ranges	Code for 12-,54-,56- ranges
1/2"NPTF	W52S	W62S
1/4"NPTF	W54S	W64S
ANSI Flange	W5FS	W6FS
(Specify Size)	std. fill = silicone	

Other diaphragm seals available - consult factory.

Pressure Port (Wetted)

316SS

C1 = 1/4" NPTF

C2 = 1/2" NPTF

Sanitary Triclamp
(3-A) Max. 600psi with Std. clamp

C8 = 1 1/2" Triclamp
(ranges 05-,06-,56-)

C9 = 2" Triclamp
(ranges 04-,05-,06-,54-,56-)
Other Triclamp sizes available.
std. fill = glycerin

Aluminum
(Available on ranges beginning:12, 04, 52, 54)

B1 = 1/4" NPTF
B2 = 1/2" NPTF

Cast Iron
(Available on ranges beginning 06, 05, 56)

F1 = 1/4" NPTF
F2 = 1/2" NPTF

Diaphragm (Wetted)

N4 = Teflon - coated Polyamide w/ Buna O - ring
M4 = 316SS w/ Viton O - ring (required with 56- ranges)

Service Inspired, Quality Driven

TRI-MODE PRESSURE SENSOR

Model S G T®

Switch

- Two SPST Switches
- Switches are Independent, Programmable (to SPDT, DPST, HH, LL, HL)
- Adjustable Setpoints, dead bands
- Display shows switch status
- Open or closed failsafe

Gauge

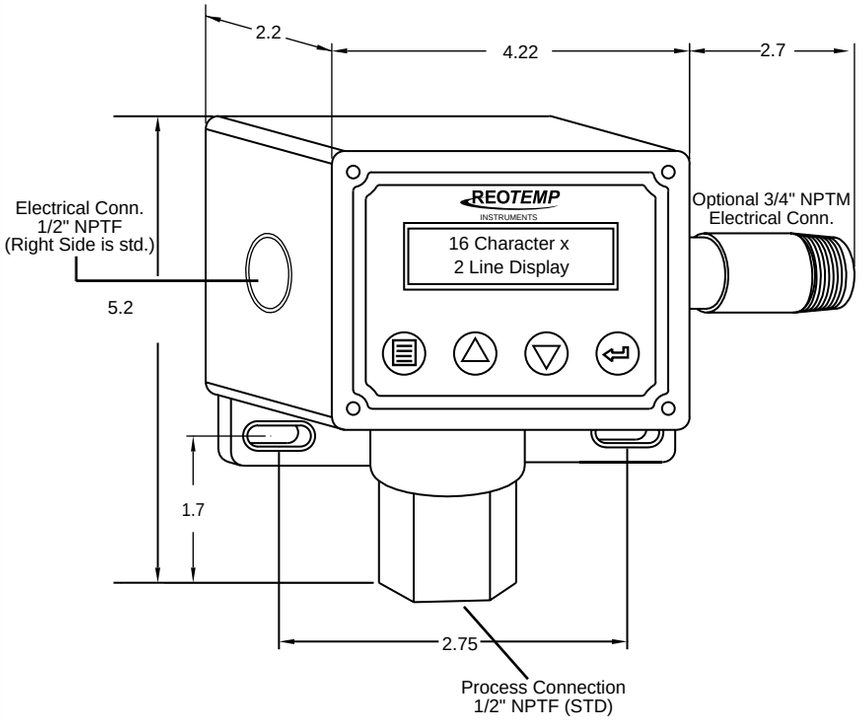
- Local Indicator
- Ranges VAC., 10psi to 2,000psi
- 13 selectable engineering units
- 0.5% Accuracy
- Bench recalibrator

Transmitter

- 4-20 mA Output
- Easy to Program
- Zero & span adjustable
- Up to 5:1 turndown
- + 10% zero offset
- High or low failsafe

All in One Easy-to-use Device

- Loop Powered (14-30VDC)
- NEMA 4, 4X, IP65
- Easy, Intuitive programming
- 2 - Line x 16 character display
- 316SS, Hast. C-276, or Monel pressure port



The **REO*TEMP*** SGT Pressure Switch is a convenient, multi-purpose indicator for local and remote pressure sensing. The SGT® combines three pressure instruments in one easy to use, self-diagnostic configuration:

Switch: Two independent, programmable SPST Solid State Relays

Gauge: Local digital pressure indicator.

Transmitter: Independent 4-20mA Output for remote display.

Operating the SGT is made simple with a descriptive menu structure with a helpful escape function. The SGT is ideal for applications requiring multiple pressure sensors in a confined area, or consolidating space in a process line.

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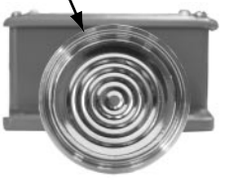
TRI-MODE PRESSURE SENSOR

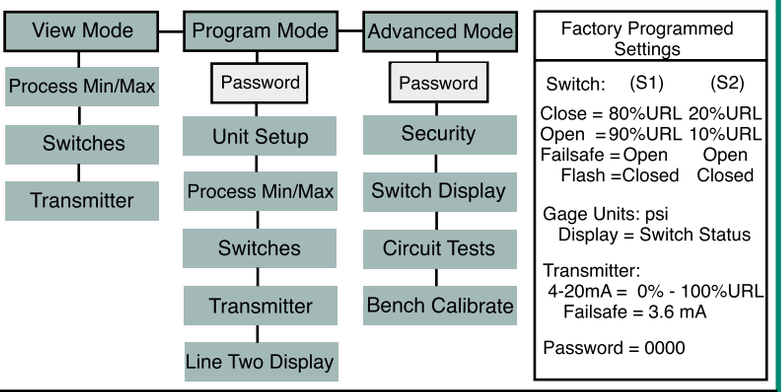
SGT® Specifications

Ranges: Vaccum, pressure to 2,000psi
Over-pressure: 1.5 x range
Temperature (˚F): Process: -20/250˚F Ambient: -20/160˚F
Compensated: -20/160˚F Storage: -40/185˚F
Long-Term Accuracy: 0.5% URL Stability: 0.5% URL per yr.
Power: Supply: 14-30VDC (loop powered)
Electrical Protection: reverse polarity, EMI/RFI
Memory: Non-volatile
Transmitter Response Time: Sensor Sampling Rate: 20 ms
Switches: ≤ 10 ms Transmitter (90% FSO): ≤ 15 mg
Self-Diagnostic: ≤ 1 sec. Gauge Update: 600 ms (nom.)
Switch: two independent solid state MOS relays: SPST, NO
Ratings: 1 A @ 25˚C; 0.6 A @ 71˚C; 125VAC/120VDC
Max. inrush: 3A @ 23˚C
Off-State Leakage Current: 10 μa Range: 0 to 100% URL
Deadband: 0.2 to 100% URL Failsafe: open or closed
Gauge: Range: 0 to 150% of URL (Vacuum, 100%, of URL)
Resolution: ≤ 0.1% URL
Engineering Units: 13 selectable
Transmitter: Analog, Loop powered: 4-20 mA, 2-wire
Zero Offset: +10% URL Span: 20% to 100% URL
Failsfe: 3.6 mA or 22mA (per NAMUR NE43)
Wetted Parts: (Std.) Sensor: Ceramic (AL_2O_3)
Process Port: 316SS, 1/2" NPTF O-ring: Viton
Enclosure(Std.): Aluminum with 1 or 2 3/4" NPT conduit connections
Terminal Block: 14-28 AWG
Protection: NEMA 4X, 1P65
Mechanical: Vibration: 2g @ 15-150 Hz.; 1g @ 150-2,000 Hz
Drop/Topple: per SAMA PMC 31.1 Weight: 1.68 lb
Agency Approvals: UL, cUL (Class I, II, III; Div 2; Nonincendive
ATEX Directive 94/9/EC Ex II 3 G/D

SGT with optional 316SS
3-A Triclamp Sanitary Connection



Menu structure



HOW TO ORDER

Pressure Range	Electrical Connection	Process Connection	Wetted Materials	Options/ Accessories
SGT — 20	— 2R	— 2F	— VS	— RR

Ranges

10 = 0-10psig	**500** = 0-500psig
20 = 0-20psig	**1K** = 0-1000psig
50 = 0-50psig	**2K** = 0-2000psig
100 = 0-100psig	**30V** = 30"-0 Hg Vac

Absolute ranges available.

Other Engineering units (menu - selectable):
inH_2O, ftH_2O, in Hg, bar, mbar, mmH, mH_2O, mmHg, kg/cm, Pa, kPa, MPa

Electrical Connection

	2R = 1/2" NPTF (Right) (std.)
	2L = 1/2" NPTF (Left)
	2B = 1/2" NPTF (R + L)
Atex/CE Compliant	**3R** = 3/4" NPTM (Right)
	3L = 3/4" NPTM (Left)
	3B = 3/4" NPTM (R+L)

Process Connection

2F = **1/2" NPTF (std.)**	
2M = 1/2" NPTM	
BF = G1/2" (F)	
Sanitary Triclamp (3-A) Max 600psi with std. clamp	
C8 = 1 1/2" Triclamp	
C9 = 2" Triclamp	
Other Triclamp sizes available. std. fill = glycerin	

Wetted

O-Rings	Temp °F
V = **Viton(std)**	**(-20/250 °F)**
B = Buna-N	(-40/200 °F)
N = Neoprene	(0/200 °F)
E = EPR	(-40/200 °F)
K = Kalrez	(40/250 °F)
Pressure Port	
S = **316SS (std)**	
H = Hast. C-276	
M = Monel	
Triclamp Wetted Parts	
SS = All 316SS	

Options

AB =	Absolute Pressure Range
RR =	S.S. Tag
PK =	Pipe Mounting Kit
CE =	Atex Approved CE compliant configuration (requires # 3 elec. conn.)
PP =	Fiber Tag
W52S =	Diaphragm Seal, 316SS, w/ 1/2" NPTF (other seals available) (Max press.= 1,500 psi) std. fill = silicone
CC =	Cert. of Calibraton
CM =	Cert. of Wetted Materais

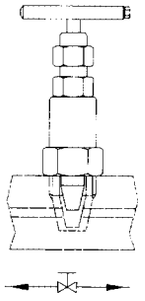
Service Inspired, Quality Driven

NEEDLE VALVES

PRESSURE ACCESSORIES

REO*TEMP* needle valves are high-quality, instrument grade valves that are designed for reliable operation and extended service life in a variety of environments. Standard features such as non-rotating tips, packing below stem threads, mirror finish packing surfaces and bonnet locking pins provide for smooth, safe, and trouble-free service.

SOFT SEAT



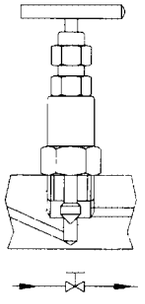
Soft, replaceable Delrin seat. Ideal for fluids containing solid particles or viscous fluids Max. temp: 212°F.

- Straight thru path
- Roddable for easy cleanout
- Delrin seat
- High throughput
- Bidirectional

	PART NUMBERS	
NPT, max pressure @ 100C	**CARBON STEEL**	**316 S.S.**
1/2" MXF, 6000#	G5C166MF	G5SS166MF
1/2" MXF, 6000#, NACE		G5SS166MF-NC
1/2" FXF, 6000#	G5C166FF	G5SS166FF
1/4" MXF, 6000#	G5C144MF	G5SS144MF
1/4" FXF, 6000#	G5C144FF	G5SS144FF

Optional seat materials: KEL-F, PEEK, PTFE

HARD SEAT



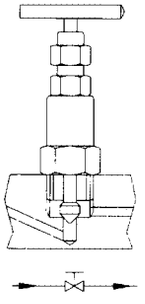
Metal seat and tip for high-pressure isolation of instrument lines. Suitable for liquid or gas service. Max. temp: 460°F.

- Angled flow path for finer metering
- Metal-to-Metal bubble tight seal

	PART NUMBERS	
NPT, max pressure @ 100C	**CARBON STEEL**	**316 S.S.**
1/2" MXF, 6000#	N2C166MF	N2SS166MF
1/2" MXF, 10,000#	N2C266MF	N2SS266MF
1/2" MXF, 10,000#, NACE		N2SS266MF-NC
1/2" FXF, 6000#	N2C166FF	N2SS166FF
1/2" FXF, 10,000#	N2C266FF	N2SS266FF
1/4" MXF, 6000#	N2C144MF	N2SS144MF
1/4" FXF, 6000#	N2C144FF	N2SS144FF

Note: for "Block & Bleed" design with integral bleed, substitute B8 for N2.

SOFT TIP



Soft Delrin tip on metal stem. Ideal for gas service. Max. temp: 212°F.

- Angled flow path for finer metering
- Delrin tip / metal seat
- Bubble-tight seal

	PART NUMBERS	
NPT, max pressure @ 100C	**CARBON STEEL**	**316 S.S.**
1/2" MXF, 6000#	F3C166MF	F3SS166MF
1/2" FXF, 6000#	F3C166FF	F3SS166FF
1/4" MXF, 6000#	F3C144MF	F3SS144MF
1/4" FXF, 6000#	F3C144FF	F3SS144FF

Optional items available: Angle pattern valves, high temperature assemblies (to 1,000°F), high pressure tip assemblies, oxygen cleaning, NACE certification, compression fitting ends, multi-outlet valves, valve manifolds.

Optional valve materials: Brass, Monel, Hastelloy C, 304 S.S., 316 S.S.

Also Available: Mini Needle Valves; Manifolds.

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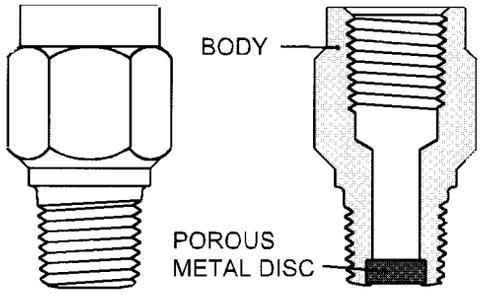
SNUBBERS

REOTEMP Snubbers are a simple cost-effective solution to harmful pressure surges and pulsation. When a REOTEMP Snubber is installed it absorbs pulsation and surges - protecting your instrumentation and stabilizing the pointer for easier readings. Available in an adjustable self-cleaning piston design or economical porous disc type.

POROUS DISC TYPE

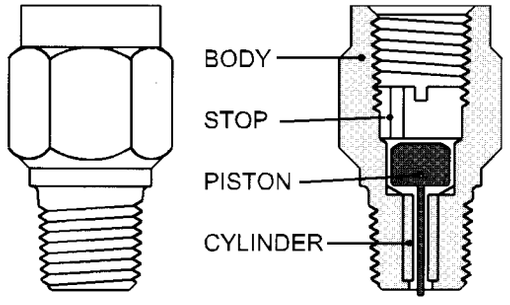


- Economical choice for non-clogging applications
- Different porosities available for various viscosities

Material	Max. PSI	NPT	Porosity	Part #
Brass	5,000	1/4	Liquid	PXS-722BE
			Gas	PXS-722BG
		1/2	Liquid	PXS-723BE
			Gas	PXS-723BG
303SS	15,000	1/4	Liquid	PXS-722SE
			Gas	PXS-722SG
		1/2	Liquid	PXS-723SE
			Gas	PXS-723SG

Other Porosities available: "D"= for thick oils
"HX" = for Hi-pressure gas

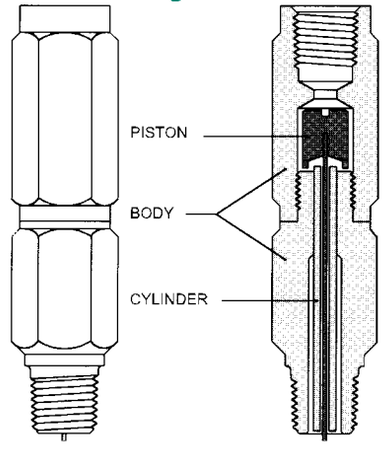
PISTON TYPE - Short Orifice



- Moving Piston Design for self-cleaning action
- Solid Body for High pressure resistance
- Three pistons included for adjustable snubbing

Material	Max. PSI	NPT	Length (in.)	Part #
Brass Monel	5,000	1/4	1.5	PXS-022B PXS-022M
303SS 316SS	15,000			PXS-022S PXS-022SS
Brass Monel	5,000	1/2	2.0	PXS-023B PXS-023M
303SS 316SS	15,000			PXS-023S PXS-023SS

PISTON TYPE - Long Orifice



- Moving Piston Design for self-cleaning action
- Long orifice for smoother snubbing
- Three pistons included for adjustable snubbing
- Center Joint (1/4" and brass models) for easier adjustment

Material	Max. PSI	NPT	Length (in.)	Part #
Brass	3,000	1/4	3.46	PXS-010B
303SS 316SS	5,000			PXS-010S PXS-010SS
Brass	5,000	1/2	3.61	PXS-060B
303SS 316SS	10,000			PXS-060S PXS-060SS

PRESSURE GAUGE ACCESSORIES

Siphons

Pigtail siphons are used in steam service to protect the instrument from direct exposure to high temperature steam.

Common Siphon Part #'s

NPT	Material	Sched.	180 deg.	90 deg.	360 deg
1/4"	Steel	40	PXS21SS	PXS22SS	PXS24SS
1/4"		80	PXS21SX	PXS22SX	PXS24SX
1/2"		80	PXS51SX	PXS52SX	PXS54SX
1/4"	304SS	40	PXS214S	PXS224S	PXS244S
1/4"		80	PXS214X	PXS224X	PXS244X
1/2"		80	PXS514X	PXS524X	PXS544X
1/2"	316SS	40	PXS516S	PXS526S	PXS546S

= normally in stock

How to Specify Siphons:

PXS — 2 — 1 — 4 — X				
Pressure Accessory Siphon	(NPT)	(Style)	(Material)	((Pipe Schedule)
	2= 1/4" 5=1/2"	1=180° 2= 90° 3=270° 4=360°	A=Carbon Steel (or alloy Stl Welded) S= Carbon Steel Seamless 4= 304SS 6= 316SS 1= Chrome Moly P11 2= Chrome Moly P22	S= Sch 40 X= Sch 80 1= Sch 160 (1/2" only) D= xx heavy (1/2" only)

Gauge Cocks

1/4" NPT Brass, Max 100 p.s.i.

Female - Male Union
#PXG-3101

Female - Female
#PXG-1380

Female - Female
#PXG-1440

Restrictor Screws

A restrictor screw (or throttle screw) is threaded into the process opening of the pressure gauge and helps to dampen rapid pressure fluctuations. This reduces pointer flutter, and can prolong the life of the gauge. Many REO*TEMP* industrial gauges are shipped with restrictor screw installed.

Specify part # **PXR**.

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OTHER PRESSURE ACCESSORIES & SERVICES

ELECTRICAL (ALARM) CONTACTS

- **Two easily adjustable setpoints**
- **Can be used to open or close on rise**
- **0.7A max current (higher loads can be run through relay)**
- **Available on 4” dial (P/N PXEM21-40) or 4 1/2” dial (P/N PXEM21-45)**

MAX POINTER INDICATORS

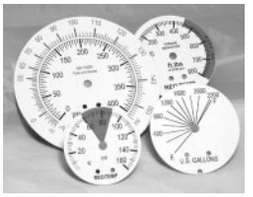
- **Indicates max pressure reached**
- **Easily reset**
- **Liquid fillable (Works best dry, though)**
- **Available for: 2 1/2” dial (MP-PR25)**
  4” dial (MP-PR40)
  4 1/2” dial (MP-PT45)

CUSTOM DIALS

REO*TEMP* can provide custom dials with:

- **Special Ranges or designs**
- **Custom logos**
- **Colored zones**

Consult factory for assistance with dial designs



OPTIONAL WINDOWS

- **Polycarbonate**
- **Laminated Safety Glass**
- **Polysulfone (for autoclaving)**

PRESSURE SERVICES

Pressure Instrument Repair Services**– Reotemp will be glad to quote on your repair and servicing needs for pressure gauges, transmitters, switches, and diaphragm seal systems.**

Calibration and Certification **– Services include testing, calibration, and certification of pressure gauges, transmitters, switches, and diaphragm seal systems. All certification is NIST traceable.**

Certificate Description	Part#
Conformance/ calibration to NIST	**CNISTPG**
General calibration sticker	**CALSTKPG**
3 Logged Points - sticker & Cert.	**CCALPG-3**
5 Logged Points - sticker & Cert.	**CCALPG-5**
Switch setpoint cert	**CCALSW**

Oxygen Cleaning - removes oil from gauge intended for oxygen service.

Diaphragm Seal Application Assistance - REO*TEMP* will assist you in designing and specifying the most effective diaphragm seal system for your pressure or vacuum application. Contact factory for details.

Other REO*TEMP* Products

Temperature Products (Catalog # TI)

- Bimetal Thermometers
- Thermowells
- Sanitary Thermometers & Thermowells
- Filled System Thermometers
- Digital Thermometers
- Surface & Pocket Thermometers
- Temperature Switches

Thermocouples & RTD's (Catalog # RTDTC)

- Head Assemblies
- Stem Assemblies
- Custom Lead Wire Configuration
- Sanitary 3-A RTD's
- Transmitters
- Digital displays
- Thermowells & Accessories
- Specialty Thermocouples
  - -Cut-to-Length
  - -Ceramic Tube
  - -Metal Tube
  - -Bare Wire
  - -Plastics
  - -Melt Bolt
- Bulk Thermocouple Wire

REO*TEMP* Warranty Information

One Year Warranty

REO*TEMP* warrants all pressure gauges and pressure products against defective workmanship or materials under normal use and service for one year following date of shipment. Reotemp's liability is limited to repair or replacement at the factory, shipping charges prepaid. This warranty does not cover deterioration from normal wear and tear, exposure to corrosive materials, exposure to temperatures or pressures in excess of those recommended, excessive vibration, or forces or abrasion which cause deformation of component parts. This warranty is expressly in lieu of any other warranty, expressed or implied. Reotemp shall not be liable for any direct or consequential damages arising out of any defects or from any cause whatsoever. Suitability of product for the customer's application rests with the customer; REO*TEMP* does not warrant suitability of its product for the application selected by customer.

REO*TEMP* reserves the right to make product improvements and change its specification stated throughout this catalog at anytime without notification. Please contact the factory on all critical dimensions and specifications for verification.

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