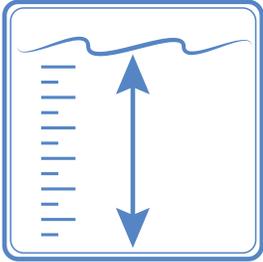


# Product Guide

- LEVEL MEASUREMENT
- PRESSURE MEASUREMENT
- TEMPERATURE MEASUREMENT
- FACTORY AUTOMATION

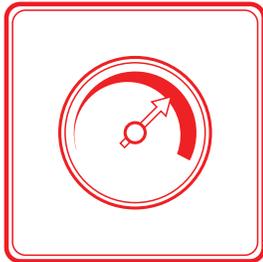


**AMETEK is a global leader in electronic instruments and electromechanical devices with manufacturing facilities around the world.**



### **LEVEL MEASUREMENT**

AMETEK is home to some of the best name brands in the pressure & level measurement world. With brands like Drexelbrook, BW Controls, US Gauge and PMT Products our success has been based upon decades of proven performance in the most demanding applications. Ametek supports you by helping to specify the perfect technology and product solution for your needs. From configuration to commissioning and installation we are there through every step of the process to insure years of trouble free performance with our products.

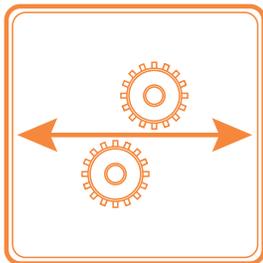


### **PRESSURE MEASUREMENT**

AMETEK-US Gauge pressure products range from General Equipment; Test Gauges; Process Gauges; Liquid Filled Gauges; Specialty Application Gauges for many different types of applications including: welding, specialty gas, medical, refrigeration, sprinkler systems, and boiler systems gauges.

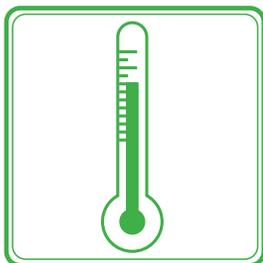
Diaphragm Seals are manufactured in many different materials including 316 SST, Hastelloy, Monel, and Tantalum, for use with Process and Liquid Filled Gauges, as well as pressure transmitters or switches.

AMETEK PMT Product pressure transducers and transmitters are some of the most long term stable units on the market, due to our solid state silicon piezoresistive sensing element. Standard, intrinsically safe, and explosion proof transducers and transmitters are available in off-the-shelf models for quick delivery, or custom configurations. PMT specializes in small volume manufacturing lots, customizing transducers and transmitters designs for unique applications. Other PMT pressure products include pneumatic controllers and ultra high purity gauges, switches, and transmitters.



### **FACTORY AUTOMATION**

GEMCO is AMETEK Factory Automation's flagship product line that includes Linear and Rotary Position Sensors, PLC & Network Interface Products, Press Automation, Programmable Limit Switches, Catrac Cable & Hose Carriers, Industrial brakes, and more. These products are designed for applications where high accuracy, high speed and high reliability in harsh environments is important. Patented technology allows GEMCO products to out-last competitive products in steel mills, lumber mills, stamping presses, and heavy moveable structures.



### **TEMPERATURE MEASUREMENT**

AMETEK-US Gauge offers digital and analog Temperature Products, including 3" and 5" Bimetallic Thermometers for industrial applications, and Themowells in many different configurations, and exotic materials. US Gauge's new explosion proof DT-8300 EX Digital Thermometer can be used in hazardous location for temperature measurement.

**AMETEK Factory Automation manufactures a complete line of position feedback devices that are known for their robustness and high performance.**

**AMETEK U.S. Gauge is a worldwide manufacturer of bourdon tube and diaphragm capsule pressure gauges.**

# DREXELBROOK®

AMETEK Drexelbrook is known throughout the world as a leader in level measurement technology. We've earned our reputation for excellence from over five decades of experience in providing level solutions to virtually every industry including oil and gas, chemical, petrochemical, refining, power, water and wastewater, food, pharmaceutical, pulp and paper, mining, automotive, and many others.



AMETEK – US Gauge is one of the world's leading suppliers of high quality, competitively priced pressure gauges and diaphragm seals. Founded in 1904, USG's product offering includes bourdon tube and diaphragm pressure gauges, from 1-1/2" to 6" in size, with brass, Monel, or 316L SST internals. USG also offers a complete line of Diaphragm Seals with threaded, flanged, flow through and sanitary connections. Both the Process Gauges and Diaphragm Seals are manufactured at our Largo, FL, USA, facility.



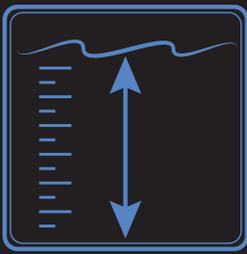
AMETEK – PMT Products manufactures transducers, transmitters, pneumatic controllers, and ultra high purity products, located in Feasterville, PA, USA. The transducer and transmitter product line ranges from low cost, fixed range industrial transducers to field adjustable transmitters with intrinsically safe or explosion proof approvals. The ultra high purity gauges, switches, and transmitters are manufactured in a Class 100 clean room in our Feasterville plant. PMT also manufactures pressure pneumatic controllers that meet the EPS NSPS 0000 (Quad 0) standard.



The GEMCO brand of automation process controls, position feedback products, cable / hose carrier systems, and industrial brakes have over 65 years of proven performance in the world's harshest environments. Conditions of high shock, vibration, temperature, contaminants, and ultra-high speed processing are applications and manufacturing challenges we deal with and satisfy daily.

The Gemco line of Linear Displacement Transducers use advanced filed proven Magnetostrictive technology to solve complex linear positioning applications. Engineered to perform and built to last, the Gemco linear displacement products and their complementary components will meet and exceed your process and positioning needs.

**AMETEK PMT Products' transducers and transmitters are available in fixed range as well as full featured, field adjustable models with 5:1 span turndown.**



# Point Level Measurement



## IntelliPoint

- Line Powered and 2-wire options available
- Ignores changes in dielectric or conductivity
- Response time of less than one second
- Self Checking Autoverify™ Feature
- Full approvals for hazardous environments



## The Point

- Line Powered and 2-wire options available
- Auto Calibration - simply install and apply power... that's it!
- Response time of less than one second
- Full approvals for hazardous environments



## Z-tron IV

- Quick and simple calibration
- Sensitivity: 0.3 pF or less
- General purpose environment



## TF-100 Vibrating Level Switch

- Relay, current, or PNP outputs
- Temperatures from -58 to 302°F, Pressure from vacuum to 928 psi
- No calibration required



## VeriGAP - Ultrasonic Gap Switch

- Ideal for high and low point level measurement in clean liquids
- Response time of 2 seconds
- Verify circuitry check that the system is functioning correctly for guaranteed safety



## Floating Roof Tanks - Spill Prevention

- Specifically designed for Internal/ External Floating Roof Tanks with a flexible probe
- Field adjustable lengths from 1' - 18' (0.3 to 5.48m) to 12" - 216" (305mm to 5486mm)
- Continuous Self-Test Feature monitors circuits and sensing elements for faults



## Dumpstar - for Oil/Water Interface

- Compact, retractable, reliable indication of crude oil/water interface levels in oil production separators
- No moving parts reduces repair and downtime
- Cote-Shield electronics ensure repeatable level indication regardless of temperature or density changes



## Clear Line, In Line Fluid Detector

- No Maintenance, dependable detection regardless of conductive coatings or product build-up on the sensor
- Easy to Install, Mounts directly into existing pipelines
- Factory calibrated. No field adjustments



## MultiPoint II

- Offers up to four control points on a single sensing element
- Available in integral or remote mounted versions
- Operating point range of 0-200ft depending on sensing element



## Plugged Chute Detector

- Detects the presence of powders to heavy abrasive materials plugged in chutes
- Electronics can be remote mounted to a convenient, safe location
- Response time of less than one second

# DREXELBROOK®

**DREXELBROOK - Level and Analytical Solutions Provider**

Reliability • Service • Quality



# Continuous Level Measurement



## Universal IV Pro and Lite

- Accurate measurement within 0.25% of range
- Measurement span from 1" (25mm) to 800ft (244mm) with no dead zone
- Over 125 probe types for a wide variety of applications



## USonic - Ultrasonic Level Transmitter

- SMART GAIN circuitry ignores false echoes from internal tank obstructions
- Superior accuracy - 0.15% of range
- 2-wire HART intrinsically safe or explosion proof, suitable for Class 1, Division 1, hazardous locations
- Can make measurements in pipes as small as 2"



## DR7000 - Level Radar

- 2-wire intrinsically safe design ensures false echo rejection, even with agitators
- Allows level measurements in liquids, slurries, solids and granulars up to 131ft
- High temperature and high pressure design



## DR6300 - Non contact radar for Solids

- Unique Drop Antenna design prevents build up in dusty applications
- $\pm 0.12$  in. ( $\pm 3$ mm) standard accuracy
- Measuring range up to 260ft (80m)



## DR5200 - 2 wire Radar Level Meter

- Modular design: horizontal or vertical installation is suitable for nearly all installations
- Measuring range up to 98.4ft (30m)
- Universal measurement device for liquids, pastes, and slurries



## DR7100 - Guided Wave Radar

- 2-wire design with superior Time Base Stability provides increased reliability
- 5 different probe designs to measure level and interface
- Accuracy to 3mm in liquids; not affected by product variations



## DR2000 - Modular TDR Level Meter

- 2-wire, loop powered HART level meter for liquids and solids
- Measuring range up to 131ft (40m)
- Remote converter can be installed up to 328ft (100m) from the probe



## Level Mate III - Level Measurement System

- Displays data from the transmitter, provides excitation voltage, and transmits an analog signal for remote recording, alarm or control functions
- Rugged stainless steel housing with programmable displays and function keys
- Intrinsically safe models available



## DM231 - Magnetostrictive Level Meter

- Accurately measures total level, interface, and temperature with magnetostrictive technology
- Accuracy of 0.01%
- 4-20mA, modbus and other outputs



## Impulse™ - Guided Wave Radar

- Low cost TDR
- 2 wire, loop powered, HART®, level meter
- 50 foot measuring range
- $\pm 3$ mm accuracy



## Drexelbrook - Water Cut Meter

- Universal IV Water Cut Meter
- 0-50% in Light Oil and 0-80% in Heavy Oil
- Accuracy:  $\pm 0.03$  variance in 0-1% range
- Temperature Compensation
- In-line spool piece design also available

In a class by itself:  
The Drexelbrook® Water in Oil  
Cut Monitor



# Pressure and Temperature



## Model 1981 4-1/2" Process Gauge

- 316L SST seamless bourdon tube
- Milled movement teeth
- Field Liquid Fillable EZ Fill PET Case



## XR Series Gauges & Diaphragm Seal

- Leak proof, tamper resistant gauge and seal
- Model 1981: 316 SS socket and 316L SS seamless bourdon tube
- Model 1986: Monel socket and Monel seamless bourdon tube



## Model 656 Liquid Filled Gauge

- 316L SST bourdon tube and socket
- 2-1/2" (63mm) and 4" (100mm) sizes
- Available factory filled with glycerin, silicone, or mineral oil



## Model P-500 General Utility Gauge

- Accuracy:  $\pm 3-2-3\%$  or  $\pm 1.6\%$  full scale
- Sizes: 1 1/2", 2", 2 1/2", 3 1/2" and 4 1/2" steel
- English or metric connections in center-back and lower mount configurations



## Diaphragm Seals

- Threaded, flanged, flow through, saddle mount, and sanitary seals
- Available in over 20 different materials including 316L, Hastelloy, and Monel
- Factory mounts gauges before shipping



## Model IPS - High Purity Switch Gauge

- No power required – magnetically actuated reed switch
- Low alarm and high alarm configurations available
- Available in VCR or NPT connections



## Model IDT - I.S. Pressure Transmitter

- Intrinsically Safe for hazardous area applications
- 0.2% typical accuracy
- Plug and play reliability; Factory pre-calibrated



## Model DCT Pressure Transducer

- Designed for a wide range of applications
- Pressure ranges from 1 psi up to 3,000 psi
- Accuracy: less than  $\pm 0.3\%$  full scale over pressure and less than  $\pm 1.0\%$  full scale over a compensated temperature range



## Model 831 Transmitter

- Available in Differential Pressure, Low Power or Standard versions
- All welded 316L stainless steel construction
- Pressure ranges from 6 psig to 6000 psig; from 6 psid to 500 psid



## Model 88 Pressure Transmitter

- Stainless steel transmitter available in Standard and Flushmount versions
- Accuracy: 0.25%
- Ranges from 0-3 through 0-5,000 psi



## Model 40 Pneumatic Controller

- Modular design and pre-calibrated elements for quick field changes
- Meets EPA Quad Zero requirements when used on natural gas supply
- 3-15, 3-27, 6-30, and 12-60 psi outputs



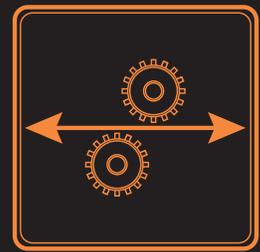
## Temperature Products

- DT-8300 EX explosion proof digital thermometer; adjustable and back mount
- 3" and 5" Bimetallic Thermometers
- Thermowells



U.S. Gauge - one of the world's leading suppliers of high quality, competitively priced pressure and temperature measurement products

# Factory Automation



## 953 VMAX LDT

- Stroke lengths from 1" to 300"
- Available with analog, digital Start/Stop, PWM and SSI outputs
- Lab tested - Shock resistant to 1,000G's, Vibration to 30G's
- Competitive connectors for drop-in replacement



## ReadyLink EtherNet/IP LDT

- Available in Rod (953N) & Profile (957N) style packages
- Supports Star, Line and DLR (Device Level Ring) Topology
- RapidRecall™ Configuration Module stores all User settings



## 955 eBRIK II

- Economically priced - Low Profile, non-contact Magnetostrictive technology in a Brik style package
- Programmable Zero & Span points
- Voltage or Current outputs in stroke lengths to 74"



## 950 Mill Duty Housing

- 304 Stainless Steel Mill Duty protective housing for Rod Style LDT's
- Simplified two point mounting and ease of replacement help reduce downtime
- Stroke lengths to 20 feet



## 955 BRIK

- Low Profile, non-contact Magnetostrictive technology in a Brik style package
- Diagnostic LED, Programmable Zero & Span points
- Analog, Digital Start/Stop, PWM and Quadrature outputs available in strokes up to 180"



## 956 BLOK Housing Option

- Rod & Barrel style housing
- 2 chamber design separates moving piston from electronics
- Stroke lengths to 36"



## 1980 Rotating Cam Limit Switch

- 2 to 40 circuits – with or without Resolver
- Nema 1, 4, 5, 7, 9 & 12 enclosures
- Gear reducers / multipliers
- No special tools required to adjust cams



## 2000 / 2006 Rotary Limit Switch

- Nema 1, 4, 7, 9 7 12 enclosures
- Ratios from 5:1 to 5333:1
- SPDT and DPDT switches available



## 1986 Resolvers

- Precision resolvers allow up to 14-Bit resolution for absolute feedback
- Internal precision gear reducers for multi-turn applications
- Multiple package styles available to meet mounting requirements



## 2500 Programmable Limit Switch

- High Speed Programmable Limit switch - 100µS update
- 8 to 64 high speed outputs
- 12-Bit resolution
- Brake monitor, motion detect, die protection and speed compensation and fault check are standard in every unit



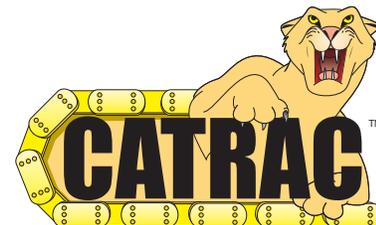
## 2110 / 2120 PLC Interface Module

- Use as a simple indicator of position, or as a PLC interface module generating digital or analog signals
- Resolver or LDT input
- Designed for Shut Height and Factory Automation



## CATRAC - Cable and Hose Carrier

- Prevents twisting and wear of cables and hoses for machines in motion
- Available in a variety of heights, widths and lengths to meet your needs
- All steel or nylon construction



**Gemco manufactures a complete line of position feedback devices that are known for their robustness and high performance**

**AMETEK Drexelbrook's comprehensive product offering enables us to provide our customers with the best level measurement solution for any application.**



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**Other Products**



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ROTA-REEL™  
Enclosed Static Grounding Reels



DuraReel™  
Antimicrobial Medical Cord Reels