

# GLASS-TRAC™

#### (FORMERLY DANIEL LEVEL GAGE & VALVE)

#### ARMORED REFLEX GAGES

Glass-Trac (formerly Daniel Level Gage & Valve) Reflex Gages are supplied with specially molded glass having prisms on the process side. The purpose of the prisms are to reflect light in the vapor phase of the process. Where the liquid fills the prisms, the display will be nearly black, regardless of the actual color of the liquid.

This high contrast makes observation of the liquid/vapor interface very clear, even with clear liquids, and visible from a distance. Reflex Gages are made in:

- Three Pressure Series [Max. 4000 PSIG @ 100°F]
- Tapped for ½" or ¾" NPT Connection
- Materials are Available to Meet your Specific Process Conditions
- Standard to Fully Engineered Designs



### ARMORED TRANSPARENT GAGES

Glass-Trac Transparent Gages use clear, flat glass on both sides of the chamber. Both the color and the interface of liquids can be viewed. Back lighting gage illuminators are available for use with transparent gages to provide enhanced viewing of liquid levels in dimly lit areas. Transparent Gages are made in:

- Three Pressure Series (Max. 3000 PSIG @ 100°F)
- Tapped for  $\frac{1}{2}$ " or  $\frac{3}{4}$ " NPT Connection
- Materials are Available to Meet your Specific Process Conditions
- Standard to Fully Engineered Designs



## TUBULAR GAGE GLASS ASSEMBLIES

Glass-Trac Tubular Glass Gages are available in any length desired and can be fitted with tubular style gage valves. These gages provide 360° of visibility of the liquid level through strong, clear glass or red line. Guard rods, plastic tubular protector, and metal mesh are available for protection.



### SIMPLE LED SOLUTION TO SEE YOUR LIQUID LEVEL

**How Questtec Solves Your Issues.** 

- Questtec offers the most wide LED color offering to best suit your individual application or site preferences
- LED colors: White, Green, and Amber
- Long Life ~ 100,000 hours
- Heavy duty housing for improved durability in plant conditions
- Excellent lead times and flexibility to meet urgent needs
- Engineering support readily available for unique applications and mounting
- Explosion Proof Power Supply

#### Easy Fitment:

- Questtec model easily mounts to any brand in the field
- Questtec offers standard sizes to fit any industry standard size sight glass





White LED Recommended for Interface



Green LED

# STEAM-TRACTM

#### MEETS ASME SECTION 1

ST-350 UP TO 350 PSI

Steam-Trac ST-350 is designed specifically for steam service to 350 PSI. The reflex borosilicate glass has prisms molded into the process side which will display black for water and white for steam. All connections and materials fully comply with ASME requirements. The gage may be used as a Direct Reading Sight Glass as required by ASME Section I, PG.60.

- · Fully ASME compliant
- Multiple sections, continuous one-piece chamber
- · Spring washers for consistent torque
- · Custom built per specifications
- Nickel plated bolts, nuts, and washers
- · High temperature coating
- · Recessed gasket face in chamber and cover



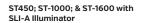
ST-350 with valves

ST-450, ST-1000; & ST-1600

Steam-Trac ST-450, ST-1000, & ST-1600 steam gages are ruggedly built to set the industry standard for reliability in the difficult mid-pressure range from 450 to 1600 PSI working steam pressure. The gage may be used as a Direct Reading Sight Glass as required by ASME Section I. PG.60.

- · Fully ASME compliant
- · Multiple sections with minimum 1" overlap to ensure continuous visibility
- · Spring washers for constant torque
- · Recessed gasket face in chamber and cover
- Custom built per specifications
- · Nickel plated bolts, nuts, and washers
- · High temperature coating
- · See-Level Illuminator with Amber lighting for easy viewing of levels of steam applications









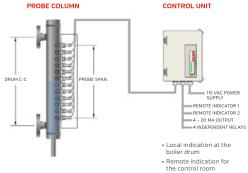
The Steam-Trac STB-3000A Bi-Color Ported Gage must be used with a red/green filter illuminator. The gage chamber is constructed with opposing ports at an angle so that red light will pass unimpeded through the gage in the steam phase. When water is present, refraction will only allow green light to pass through, resulting in a clear visual indication of water level. The gage may be used as a Direct Reading Sight Glass as required by ASME Section I, PG.60.

The STBI-3000A Illuminator matches long lasting LED lamps to a rugged fabricated enclosure to set an unsurpassed standard of reliability for bicolor water gage illumination

- · Fully ASME compliant
- Large, easy to read ports
- · All lengths with continuous chamber
- Innovative Illuminator design
- · Nickel plated fasteners
- · High temperature coating



## PRODUCT SUMMARY LEVEL-TRAC



#### REMOTE LEVEL INDICATOR



- [4] Relays for the switch points L/LL/H/HH

#### • 4-20mA Output

#### PROBE MANI-FOLDS/ WATER **COLUMNS**

The Questtec Solutions Level-Trac product line includes a complete and versatile line of probe manifolds, control units, and remote displays. Control units are available based on three different core technologies. Our depth of experience allows us to custom tailor a system to replace and improve field installations, regardless of the brand, or to maximize value on new installations. The Questtec manufacturing facility is state of the art and is committed to supply custom fabricated products to meet your specifications.



LT-502 High Pressure Water Column

#### CONTROL/ **DISPLAY UNIT**

Level-Trac Control Units are available in four models:

LT-210, LT 230, LT-220, LT-310 solid state circuitry

All remote displays use bi-color LEDs for maximum life span and minimal power consumption. Most units ship out of stock and are pre-programmed per customer requirements.







LT-310 Control Unit: Internal view (left) External View (RIGHT)

Remote Indicator

#### **POINT LEVEL** WATER **INDICATOR**

Questtec Level-Trac LT-40/41 probe fixtures are simple devices which provide a means of point level water indication to be used for alarms or trips. The fixture is designed to be piped into a vertical configuration to track the contents of a steam drum or other pressure vessel.

The LT-40/41 probe fixture has the following model numbers:

- LT-40-01: One Type 800, TFE insulated probe, rated to 1000 PSI
- LT-40-02: Two Type 800, TFE insulated probe, rated to 1000 PSI
- LT-41-01: OneType 810, Zirconia insulated, brazed probe, rated to 2000 PSI
- LT-41-02 : Two Type 810, Zirconia insulated, brazed probe, rated to 2000 PSI







## GWR SOLUTION Eliminate Water Density Errors!

The Questtec LT-430 provides an exclusive means of achieving accuracy with Guided Wave Radar when used in a water column to determine level in a high pressure steam

#### PKSTYEN GUIDED WAVE RADAR

- · Receives PT signal for actual drum pressure
- · Receives TE signal for actual temperature
- · Local controller performs density error calculations: resulting bicolor local and remote indicators always indicated true density compensated level, regardless of pressure / temperature.
- Level Gauge may be mounted to the column to declutter service area
- Meets 2019 ASME PG60.1.1.2 "when two independent remote water level indicators are in reliable operation (continuously indicating water level), the one required gage glass may be shut off, but shall be maintained in the serviceable condition.'
- Associated accessories available: Hot/Cold Insulation, Steam Tracing, Block Valves, Vent/Drain Valves

#### GUIDED WAVE RADAR BOILER LEVEL SYSTEM BREAKDOWN

115 VAC THERMOCOUPLE

## MAGNE-TRAC

The Magne-Trac product line provides one of the safest and most economical ways to meet your level measurement requirements. In applications for extreme pressure, temperature, vibration, and highly corrosive or hazardous material, Magne-Trac gages will perform where others struggle. Features include lower installation costs, easy to read liquid level indication, and low maintenance.

## MAGNE-TRAC

- · Innovative design maximizing magnetic field
- · Wide flag enhanced indicator view
- Impact-resistant polycarbonate indicator window
- · Corrosion resistant moving parts
- · Modular design with many options
- Available to ASME B31.1/31.3
- · Non-mercury switches



- · Mounts externally to the Magne-Trac
- · Requires no maintenance or recalibration
- · Continuous level measurement
- · FM approved Explosion Proof/ IS
- NEMA 4X/7 enclosure
- RFI/EMI protection
- · Adjustable output damping



- · Mounts in bridle chamber to the Magne-Trac
- · No wet calibration required
- · Simultaneous acquisition of interface layer and total level of clear and emulsions interface
- · Not affected by density of the medium
- · Models available to meet applications up to 842°F at 5800 psi



- Extensions
- Insulation Jackets / Heat Blankets
- · Electric & Steam Heat Tracing
- · Wide variety of Scale Options
- Cryogenic Insulation & Non-Frost Flashing Application Solutions
  - Econo-Trac for Low Pressure **Applications**
  - · Reed Switches & Pnuematic Switches



Questtec Solutions offers a wide variety of magnetic level gage float options. Customized to meet each individual application. Engineered according to the maximum operating pressure, maximum operating temperature, and specific gravity. QTS offers both oblong and spherical ball float designs. Float materials include, but are not limited to, the following: 316 SST, Titanium, CPVC, & Hastelloy C. Questtec uses an orbital welding machine to fusion-weld the two float halves together which only uses heat and no filler metal. This process produces a smooth weld, without bead which could interfere with the floats motion.





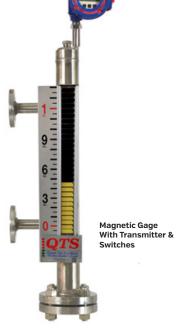






CPVC

Float



Magnetic Gage With Guided

Wave Radar

# INSTRUMENT BRIDLE SOLUTIONS

The QTS Bridle-Trac is an ideal means of utilizing the power of many technologies without mounting directly into the vessel.

The QTS Bridle-Trac external chamber is a self-contained cage designed for use with our top mounting level transmitters or switches. Quality construction and a wide selection of configurations make this cage an ideal means of utilizing the power of our many technologies without mounting directly into the process vessel. The chamber is suitable for use with Guided Wave Radar, RF Capacitance Transmitters, Electronic point sensors and top mounted displacer switches. In addition, mount Level Gages and Valves to your Instrument Bridle for ease of maintenance.

#### **FEATURES**

Sealed or flanged-top chamber options

2" and 4" nominal chamber diameters to accommodate all sensing elements

Carbon steel or 316 stainless steel materials of construction

Rugged Questtec commercial construction available as well as ASME B31.3, ASME B31.1, NACE or combined NACE and ASME B31.3 construction options

Rated for pressures up to 5000 psi (345 bar)

For applications to 842°F (450°C)

Lengths for measuring ranges to twenty feet [6.1 m]

Broad selection of process connections sizes and types

Head flange bolting included with flange-top models

Suitable for use with RF capacitance transmitters, all electronic point sensors and top mounted displacer switches

Optimal design for use with Guided Wave Radar transmitter:

- Smallest possible chamber diameters
- Pressure rating to match High Temperature, High Pressure (HTHP) and High Pressure (HP) probes
- Temperature rating to match HTHP probe
- Space above and below measuring range to accommodate measurement transition zones

## ADVANTAGES



SINGLE POINT RESPONSIBILITY INSTRUMENTS, BRIDLE, WELDING, TESTING, DOCUMENTATION



AVOID INTERFERENCE BETWEEN OTHER DEVICES



REDUCES
TURBULENCE &
FOAM IMPROVES
MEASUREMENT
ACCURACY



ISOLATION EASE OF CALIBRATION AND MAINTENANCE



# ARMORED TUBULAR & SIGHT FLOW

**Questtec Solutions** new Armored Tubular product line provides customers a low pressure straight column alternative to traditional multi-section bridle assemblies. The straight column design offers the benefit of a light-weight lower complexity model with easy installation at a reduced cost. Armored Tubular models are virtually maintenance free and do not need to be disassembled for inspections or cleanings. QTS Armored Tubular line is a go to for low pressure applications that require ultimate visibility. Also available, QTS Sight Flow Indicators, based on your application.



## AFTER MARKET

Regardless of original equipment manufacturer, **Questtec Solutions** can supply replacement parts for nearly any system. All parts supplied by Questtec meet or exceed the original parts and are warranted for complete fit, form, and function.









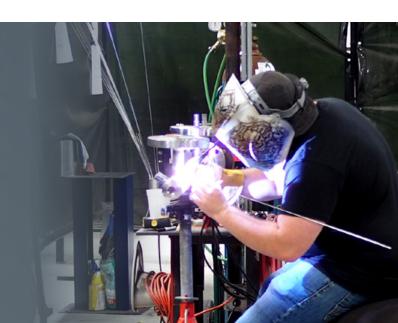


**Questtec** is an International Company with Representatives based throughout the world. Our Partners can assist with Commissioning, Start Up and Calibration, 24 Hour Service and Repair Support.

866.240.9906

#### IMMEDIATE HELP VIA-REMOTE MAINTENANCE

Using the remote maintenance service TeamViewer, the QTS service technician can assist you immediately, check the instrument configuration and perform certain analysis.





# Questtec

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