



FLOAT & TAPE GAUGES

Simple, Safe and Reliable Inventory-Grade
Level Measurement

2500 Automatic Tank Gauge



The 2500 Automatic Tank Gauge (ATG) is a mechanically operated, float & tape instrument designed to provide continuous liquid level measurement in bulk storage applications.

Key Benefits

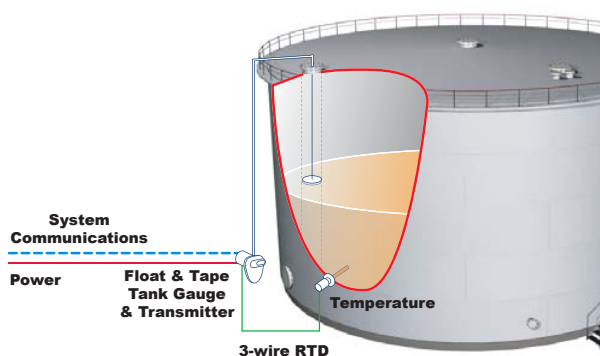
Long product history, first 2500 developed in the 1940s
Meets API Chapter 3.1B regulations for inventory control applications
Low cost, continuous measurement – up to 0.2" (4 mm) accuracy
No power required for continuous operation
Easy to read display – metric or imperial in decimals or fractions
ATEX approved for use in potentially explosive atmospheres
Optional Negator Cassette for reduced maintenance and increased safety

Key Features

Accuracy rate up to 0.2 in (4 mm)
Specific gravity range of 0.7 to 1.9 g/cc (700-1900 kg/m ³)
Atmospheric pressure to 2.5 PSI (17.24 kPa) for aluminum and 14.9 PSI (102.73 kPa) for cast iron
Ranges: Standard 0 – 60 ft (18 m) / Extended 0 – 96 ft (29 m)
Ambient temperature -40 °F to +185 °F (-40 °C to +85 °C)
Mounting for optional transmitters or limit switches
2520 ATG High pressure version available - 150, 220 or 300 PSI gauge
Floats available for standard, interface, or stilling well applications

2520 Automatic Tank Gauge

(High pressure applications)



Float and tape gauges work with a variety of tank and product types.

Tank Installation Types

Roof or ground reading	Internal floating roofs (pans)
Stillingwells	Bolted tanks
External floating roofs	Floatwells
Extreme pressures	Spheres and bullets

Product Types

Crudes	Chemicals and solvents
Gasoline	Additives
Jet Fuel	Asphalt
AV (aviation) gas	Liquefied Gases
Diesel	Water

FLOAT & TAPE GAUGES

Float and tape gauges, also known as “automatic tank gauges”, have been in the marketplace for over 90 years. This tried and true method works by using a large float inside the tank attached to a negator spring via a perforated tape. The negator spring provides constant tension, which balances the float on the liquid. The perforated tape engages pins on a sprocket wheel that, in turn, drives the counter assembly. Alternatively, when a gauge board is used to display level, the negator spring is replaced by a counter weight system. The liquid level in the tank is displayed on the gauge counter or indicated on the gauge board.

Dual entries in the precision die-cast housing allow the 2500 ATG to be mounted at the tank side or on the tank roof.

The large, easy-to-read display is available in metric or imperial units.

The display is driven via a direct drive manufactured from brass bushings for smooth accurate operation.

The float operation check knob allows the technician to ensure the gauge is operating correctly.

Various shapes and sizes of hollow shell floats are available that suit different applications.

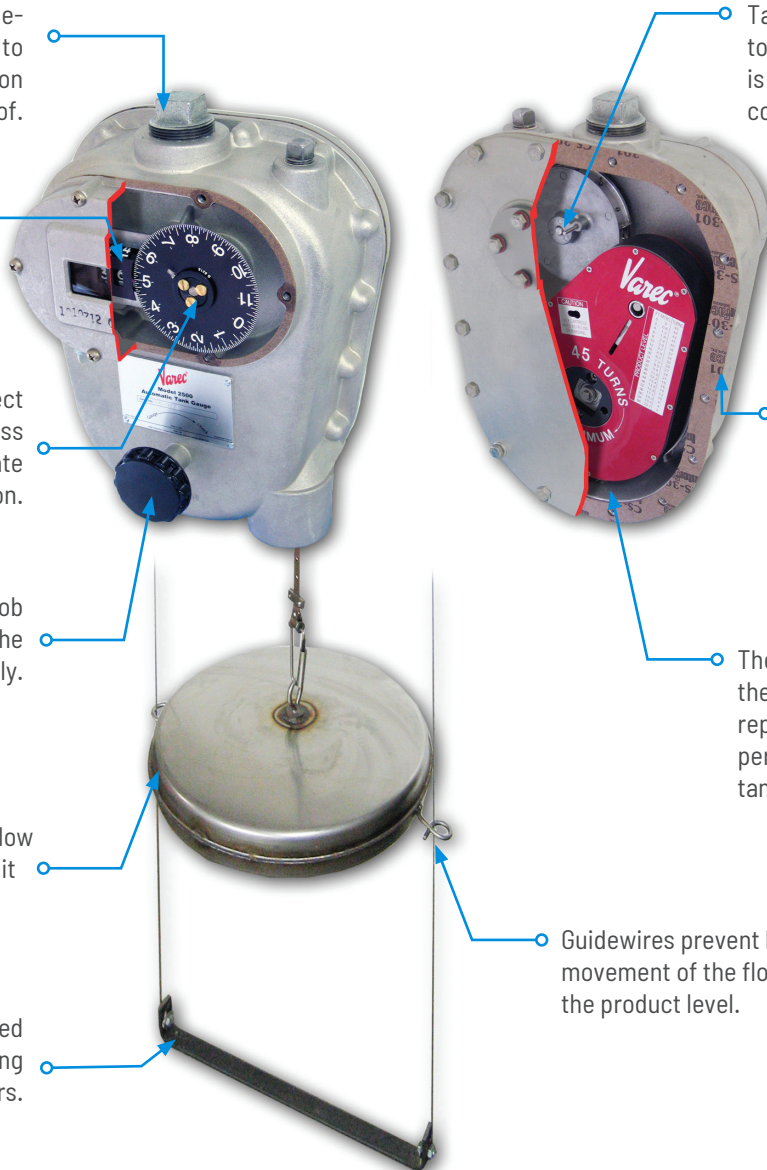
Guidewires can be installed while the tank is in service using weighted anchors.

Tank gauge transmitter attaches to the back of the gauge and is engaged on the direct drive coupling.

The 2500 ATG is FM and ATEX approved for use in potentially explosive atmospheres.

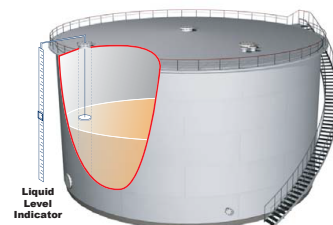
The negator cassette simplifies the process of negator motor replacement and improved the performance of your float and tape tank gauge.

Guidewires prevent horizontal movement of the float as it follows the product level.



6700 Liquid Level Indicator

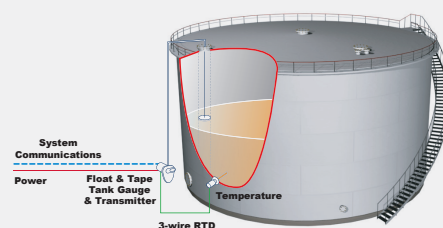
The 6700 Liquid Level Indicator (LLI) is a tank side device that uses a target and gauge board to indicate product level in a bulk storage tank.



Key Benefits	Key Features
Simplest measurement product on the market today	Accurate to 1 in (25 mm)
Extremely cost effective	Durable aluminum gaugeboard with vinyl facing
No power required for continuous operation	Level indication in feet/inches or meters/decimeters
Easy to read from a distance	Full travel or half travel designs
Use with magnetic limit sensors for level alarms	Various application options, i.e. standard, clean liquids, asphalt, and corrosive liquids
Replace gauge board, float or tape without replacing the hard mounted tank fittings	Vertical cone roof and bolted tank models

2920 Float and Tape Transmitter

The 2920 Float & Tape Transmitter (FTT) provides data from the tank side to the control room for use in inventory management applications. It accurately converts mechanical level measurement from the connected tank gauge, integrates temperature and HART devices, and provides digital inputs and digital outputs for the indication of alarms or drive relays.



Key Benefits	Key Features
The most accurate encoder technology available	Industry Standard Protocols - ModBus, GPU Bi-Phase Mark, Mark/Space, and TankWay
Digital display with capacitive touch control interface to configure for all connected devices	Integrate ancillary equipment and sensors - supports up to 4 HART devices and provides an on-board 3-wire RTD temperature input
Level and temperature available tank side	Activate alarms or relays with; 2 discrete inputs (standard), 4 discrete inputs and 4 contact outputs (optional), or 2-or-4 SPDT cam-operated switches (optional)
Standard operating temperature: -13°F to +185°F (-25°C to +85°C) (cFMus), -4°F to +185°F (-20°C to +85°C) (ATEX/IECEX)	Extended operating temperature: -40°F to +185°F (-40°C to +85°C) (cFMus), -40°F to +185°F (-40°C to +85°C) (ATEX/IECEX)
Easy in-service installation - mounts directly to most mechanical tank gauges, including Varec, L&J, and GSI	Explosion proof enclosure made of die-cast aluminum rated IP66 (NEMA-4)
Encoder requires no service and no battery back-up	Approved for hazardous areas: cFMus, ATEX, IECEx

Onsite Service and Maintenance

With our maintenance and service programs, a certified field service engineer will visit your site to conduct all service and/or provide training to staff. Our goal is to ensure that Varec float and tape gauges at your facility maintain their peak performance year after year.

For facilities seeking to have us manage the service and maintenance of the Varec 2500 Automatic Tank Gauge (ATG), one of our certified field service engineers will conduct a site survey and provide a detailed plan of action. For service work we perform, we guarantee:

- Two-year warranty on the service work performed
- Two year warranty on parts
- Overall gauge accuracy to specifications
- Only genuine Varec spare parts will be used
- No required minimum number of tanks
- Documented service records (per tank) of all work performed



Certified Maintenance Training

Our maintenance training program empowers facility employees by providing them the knowledge to properly execute the correct assembly and maintenance techniques for Varec tank gauges and gaugeboards. We provide training for all float and tape products.

Our engineers train operators how to:

- Align all parts to prevent tape breakage
- Eliminate gauge hang-ups
- Identify which parts should be lubricated and which lubricant to use to keep the gauge running smoothly
- Identify and correct bad applications to improve gauge or transmitter performance
- Achieve improved mean time to repair
- Maintain the gauge and know which spare parts are needed to prevent problems occurring
- Follow procedures for overhauling mechanical gauges during an API 653 tank inspection
- Optimize the installation, configuration, and maintenance of Varec transmitters

***This program is ideally suited to be conducted inline
with an API 653 tank overhaul.***

Spare Parts

We are the only manufacturer of genuine Varec spare parts. In addition to single spare parts, we have used our experience to create a number of spare parts kits for specific maintenance tasks from basic maintenance to an overhaul kit for a gauge on a tank undergoing an API 653 inspection.

To assist your technicians, we have created a complete set of documents that are available from our website or sales representatives. Each document will help you identify the part you require and simplify the order process.

Replacing parts in a Varec product with parts that are manufactured by third parties will reduce the effectiveness of your instrument and may void the hazardous area approval certification.