

2500/2520 Automatic Tank Gauge

Mechanically operated, float and tape gauges for continuous liquid level measurement in bulk storage tanks



2500 ATG (foreground) 2520 ATG (background)

Features

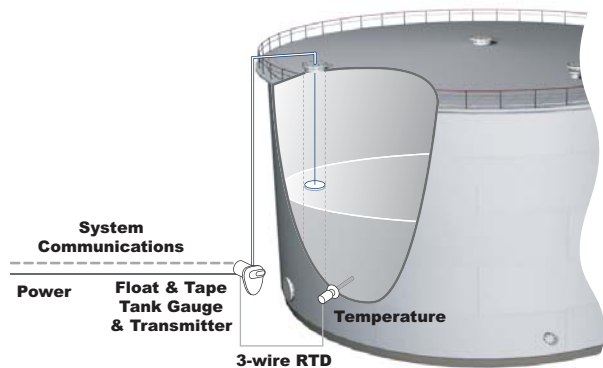
- Low cost, continuous measurement - up to 0.2" (4 mm) accuracy
- No power required for continuous operation
- Meets API Chapter 3.1B regulations for inventory control applications
- Large, easy to read display - Metric or English in decimals or fractions
- Cone roof, floating roof, stilling well, sphere and cylinder tank installation kits available
- Wide variety of materials available for extreme products or environmental conditions
- Mounting for optional transmitters or limit switches for future upgrades to inventory management systems
- Model 2520 ATG provides 150 or 300 PSIG (1.1 and 2.2 MPa) service ratings
- Floats available for standard, interface or stilling well applications

Applications

The 2500 series of Automatic Tank Gauges (ATG) are float and tape operated instruments designed to provide continuous liquid level measurement in bulk storage applications.

The gauge can be installed on the tank roof or at the tank side and is available with a wide variety of accessories for virtually every tank gauging application.

These simple and reliable Varec products, have been the market leaders in float and tape instrumentation for over 50 years.



Function and System Design

The 2500/2520 Automatic Tank Gauges (ATG) are designed to provide continuous liquid level measurement for bulk storage applications.

The 2520 High Pressure Automatic Tank Gauge is designed to provide continuous liquid level measurement of products stored in pressurized vessels. The 2520 provides the specific considerations or options for installation on high pressure vessels.

The level measurement is displayed using a dial and counter built into the gaugehead. The gaugehead can be installed on the tank roof or at the tank side (at grade), which would facilitate ground level reading by the operator. If electronic transmission of level data or temperature measurement integration is required in the control room, then the gauge can be fitted with an optional tank gauging transmitter.

Tank Gauge Operation

As standard, the 2500 ATG utilizes a large stainless steel float that is attached to the stainless steel perforated tape to detect the liquid level. The float follows the liquid level as it rises and falls due to the constant pullback tension provided by a powerful negator spring or cartridge motor. The precisely perforated tape engages pins on a sprocket wheel that in turn drive the counter assembly. This simple design and operation allows the gauge to perform with negligible maintenance throughout its working life.

Due to high pressure conditions, the 2520 ATG utilizes a magnetic drive that operates the dial reading mechanism. This drive provides a positive seal-off of the counter compartment and the transmitter housing, eliminating danger of glass breakage, loss of product and the escape of vapors, making it an important safety feature for both personnel and plant facilities.

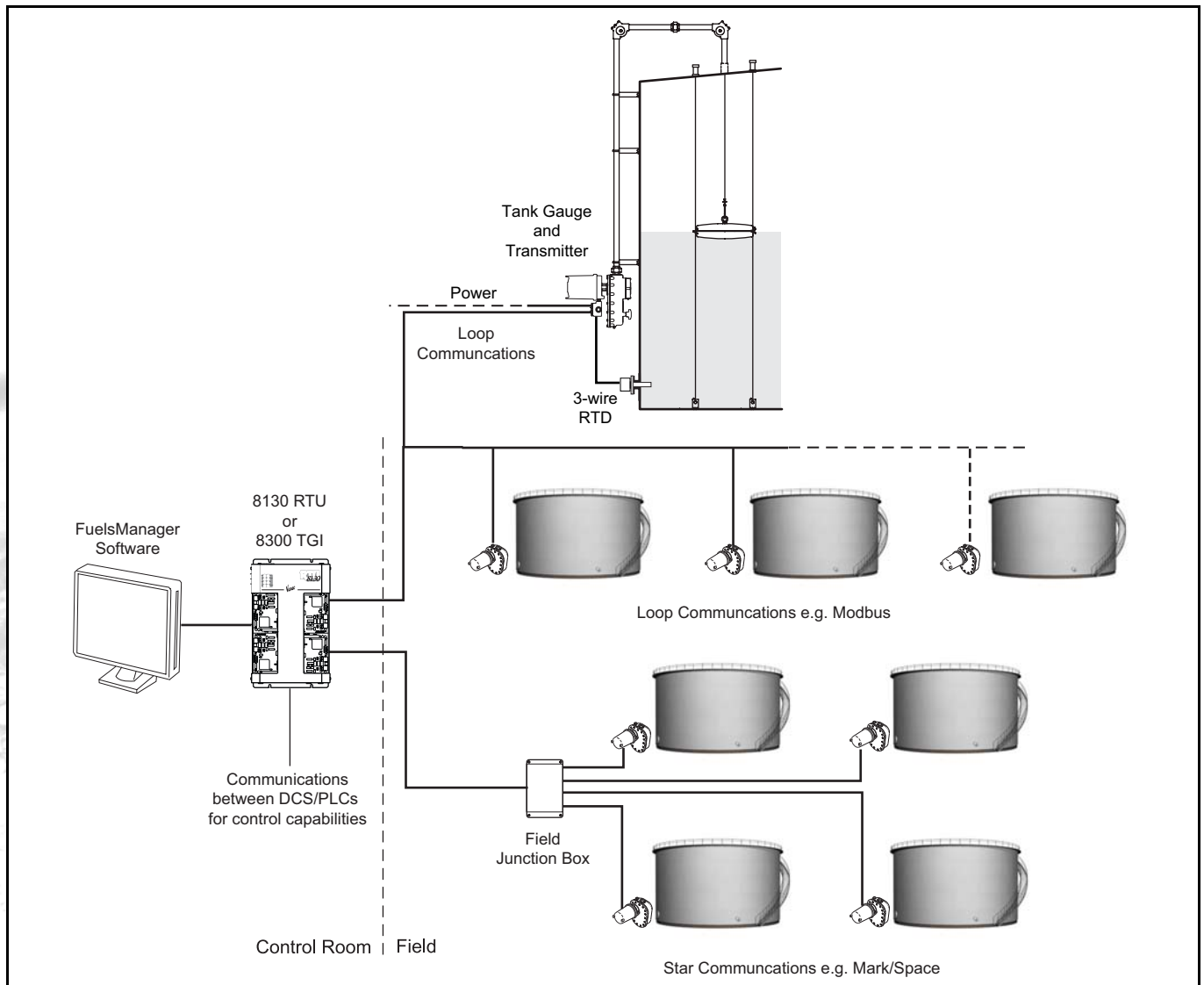
System Integration

A range of analog and digital tank gauge transmitters is available that mounts directly to mechanical tank gauges.

Right - 2500 ATG with a 2900 Float & Tape Transmitter



Level measurement data is encoded by the transmitter and output via industry standard communications to the control room. Some transmitters also offer spot temperature measurement integration that can be used for inventory control applications. When a tank gauge transmitter is used, communications and power are required at the gaugehead. Varec transmitters do not require an adaptor flange. When connecting third party equipment, a specific adaptor flange, depending on the transmitter, is often required.



2900 FTT System Diagram

Installation Guidelines

Various installation options and accessories are available to suit user installation requirements. The following information should be used as a guide only; please refer to the operation and maintenance manual for complete installation instructions.

All parts of the gaugehead, tape and float should move freely to reduce wear and maintenance. This section recommends general considerations when installing a float and tape operated tank gauge.

In-service vs. Out-of-service Installations

For in-service and out-of-service installations, how a guidewire is anchored at the tank bottom and welding parts to or in the tank are major considerations.

Floating Roof Tank Installations

In floating roof tank installations, it is recommended that gauges be installed in a floatwell, rather than attaching the tape directly to the tank roof. The floatwell should contain a baffle to prevent the float from escaping, but also allow sufficient product movement to equalize the liquid level. No tape should be exposed, outside of the roof or pipework. If any section of the tape is currently exposed it should be replaced with a stainless steel, flexible cable. This will reduce measurement error due to winddrift. The connector between the tape and cable should not run over a conduit elbow (or pulley).

Note! An internal floating roof is often referred to as a "Pan", e.g. a cone roof tank with a pan and floatwell

Guidewires

Varec recommends guidewire installations for the 2500 and 2520 ATGs with standard guidewire centers of 17" (432 mm) when a standard 14.5" (368 mm) diameter Type 316 stainless steel hollow shell float is used. Guidewires provide stability for the float during turbulent conditions and provide increased accuracy by reducing the horizontal movement of the float across the surface of the product. The guidewires should be installed centered and free of twists or kinks. Check the movement of the float for friction or impeded movement before final operation.

Note! Varec recommends guidewire installations or stilling well installations where possible.

Guidewire Anchors

Varec provides two options for tank bottom, guidewire anchors, in-service and out-of-service anchors. The in-service anchor (weight) hangs from the roof to a level just above the tank bottom. The out-of-service anchor can be welded to the tank bottom. See the accessories below for further details. Varec top guidewire anchors can be screwed or welded into the tank roof, maintenance hatch or manhole cover.

Support Brackets

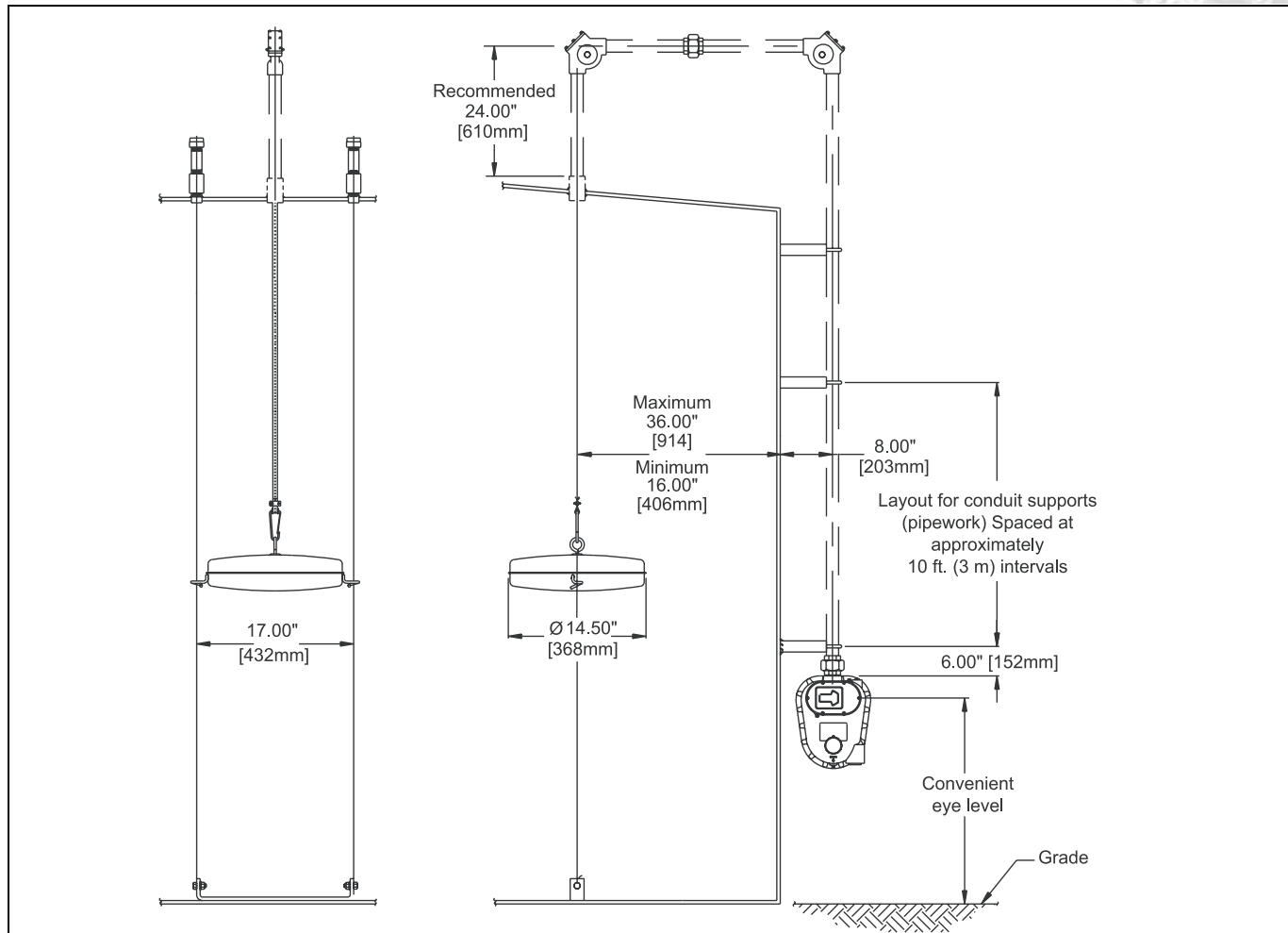
"A" frame brackets support the conduit (pipework) that carries the tape. These brackets can be welded or bolted to the tank and should be placed at regular intervals (approx. 10ft or 3 meters) to provide uniform support. The pipework should be held rigidly in place and correctly aligned so that the tape does not touch or rub the internal pipework.

Conduit Couplings

Conduit (pipework) couplings can be used to easily connect sections of pipework together without welding. They also provide a means to maintain the pipework, tape and gaugehead.

Tank Roof Entry

Note! Varec can provide manhole or inspection covers for ease of installation and maintenance of the float, tape and guidewires. Tape conduit and guidewire anchor entries into the tank roof should be near an existing manhole cover or be made through a manhole cover. See accessories below for further details.



Example details of a cone roof tank installation. Note the measurements may vary depending on the specific tank type and installation.

Installation Options

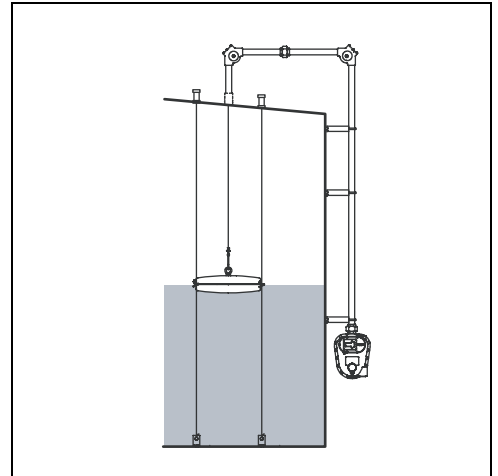
Various accessories are provided, depending on the installation type selected, in the product order codes.

Cone Roof Tank

Order Code T01, T11, T21, T22, T23, T24, T31, T33, T34 T41, T42

Installation parts supplied include:

- 90° Elbow assembly (x2)
- Gauge 'U' bolt kit
- Guidewire bottom anchor
- Guidewires
- Support bracket (x6)
- Gaugehead and tape
- Float
- Guidewire top anchors (x2)
- Tape connectors

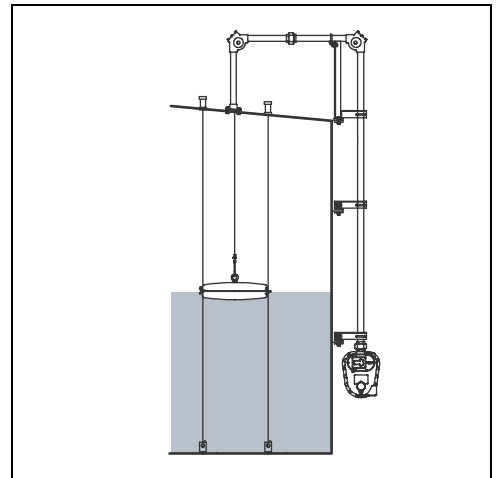


Bolted Tank

Order Code T05, T15

Installation parts supplied include:

- 90° Elbow assembly (x2)
- Guidewire bottom anchor
- Guidewires
- Support bracket assembly
- Support bracket (x7)
- Gaugehead and tape
- Float
- Guidewire top anchors (x2)
- Tape connectors
- 1-1/2 Deck flange

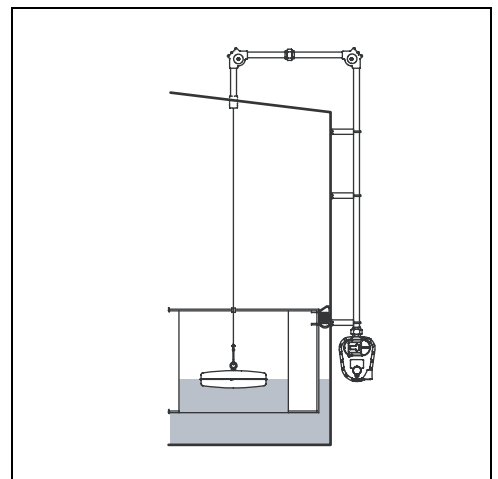


Cone Roof Tank with Pan and Floatwell

Order Code T02, T12

Installation parts supplied include:

- 90° Elbow assembly (x2)
- Gauge 'U' bolt kit
- Support bracket (x6)
- Gaugehead and tape/cable
- Float
- Tape/cable connectors

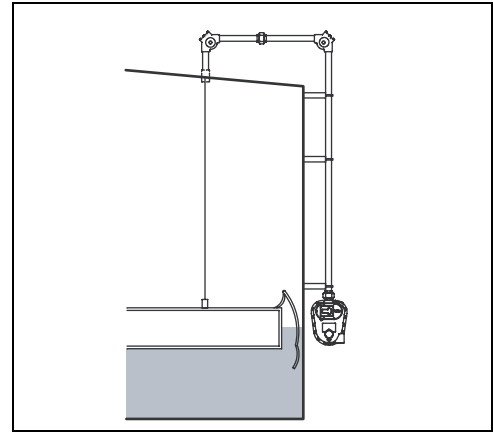


Cone Roof Tank and Pan: No Floatwell

Order Code T07, T17

Installation parts supplied include:

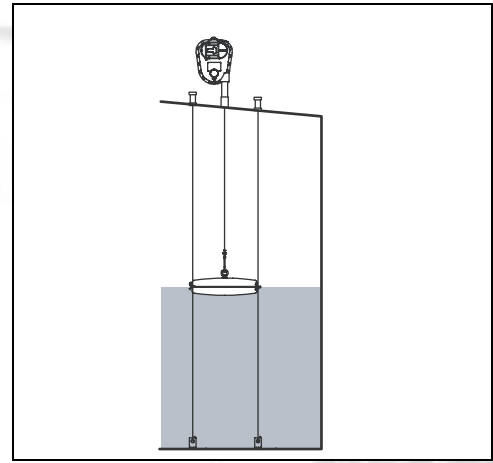
- 90° Elbow assembly (x2)
- Gauge 'U' bolt kit
- Support bracket (x6)
- Gaugehead and tape/cable
- Tape/cable connectors

**Tank Top Mounting**

Order Code T04, T14, T24, T32

Installation parts supplied include:

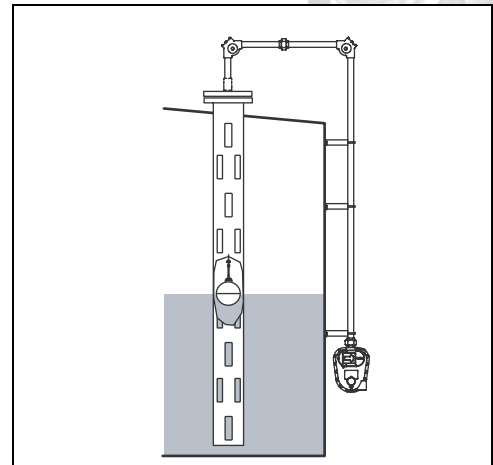
- Gauge 'U' bolt kit
- Guidewire bottom anchor
- Guidewires
- Gaugehead and tape
- Float
- Guidewire top anchors (x2)
- Tape connectors

**Stilling Well Service Cone Roof Tank 6" Diameter Float**

Order Code T55, T56

Installation parts supplied include:

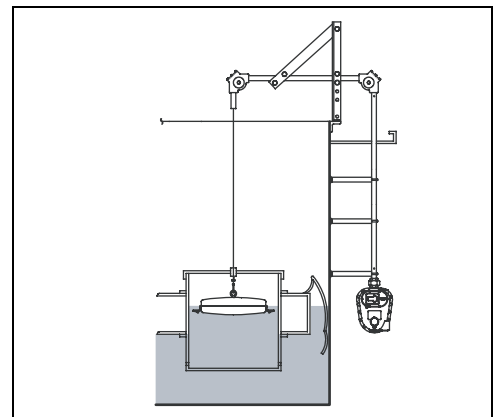
- 90° Elbow assembly (x2)
- Gauge 'U' bolt kit
- Guidewire anchor weight
- Guidewires
- Support bracket (x6)
- Gaugehead and tape
- Float
- Guidewire top anchors (x2)
- Tape connectors

**Floating Roof Tank and Floatwell**

Order Code T03, T13

Installation parts supplied include:

- 90° Elbow assembly (x2)
- Gauge 'U' bolt kit
- Support bracket assembly
- Support bracket (x6)
- Gaugehead and tape/cable
- Float
- Tape/cable connectors

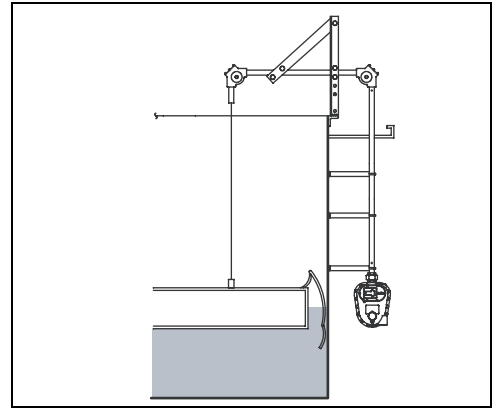


Floating Roof Tank: no Floatwell

Order Code T06, T16

Installation parts supplied include:

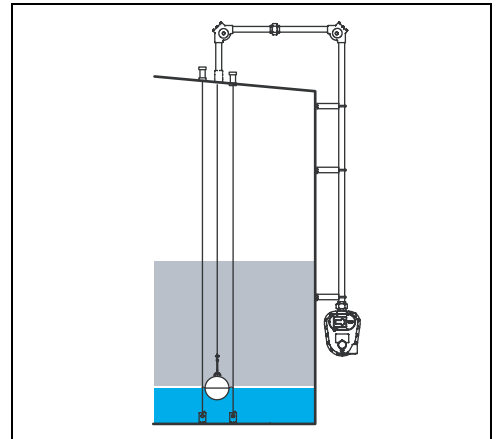
- 90° Elbow assembly (x2)
- Gauge 'U' bolt kit
- Support bracket assembly
- Support bracket (x6)
- Gaugehead and tape/cable
- Tape/cable connectors

**Interface Service**

Order Code T51, T52, T53, T54

Installation parts supplied include:

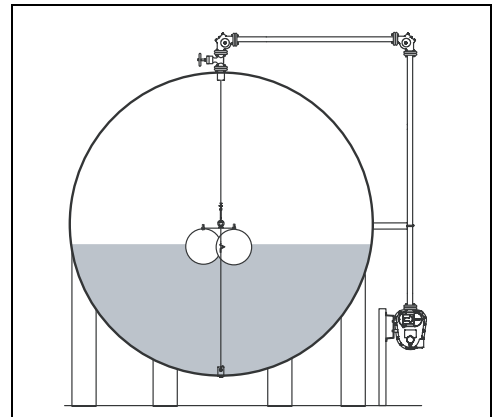
- 90° Elbow assembly (x2)
- Gauge 'U' bolt kit
- Guidewire bottom anchor
- Guidewires
- Support bracket (x6)
- Gaugehead and tape
- Interface float
- Guidewire top anchors (x2)
- Tape connectors

**Sphere Tank to 16ft (4.9 m) or Horizontal Cylinder Tanks**

Order Code T01, T05

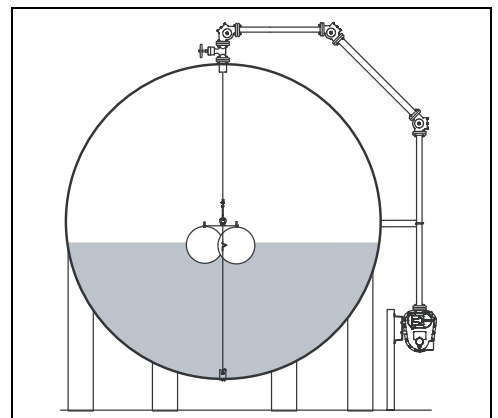
Installation parts supplied include:

- 90° Elbow assembly (x2)
- Guidewire bottom anchor
- Guidewires
- Support bracket (x2)
- Gaugehead and tape
- Float
- Guidewire top anchors (x2)
- Tape connectors
- MTG bracket

**Sphere Tank to 48ft (14.6 m) or Horizontal Cylinder Tanks**

Order Code T02, T06 – Installation parts supplied include:

- 90° Elbow assembly (x1)
- 45° Elbow assembly (x2)
- Guidewire bottom anchor
- Guidewires
- Support bracket (x2)
- Gaugehead and tape
- Float
- Guidewire top anchors (x2)
- Tape connectors
- MTG bracket

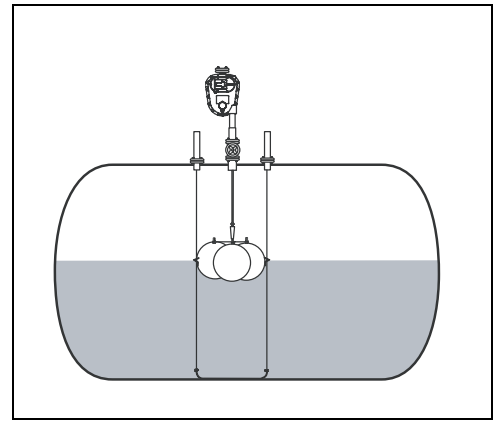


Top Mounting for Sphere or Horizontal Cylinder Tanks

Order Code T03, T07

Installation parts supplied include:

- Guidewire bottom anchor
- Guidewires
- Gaugehead and tape
- Float
- Guidewire top anchors (x2)
- Tape connectors

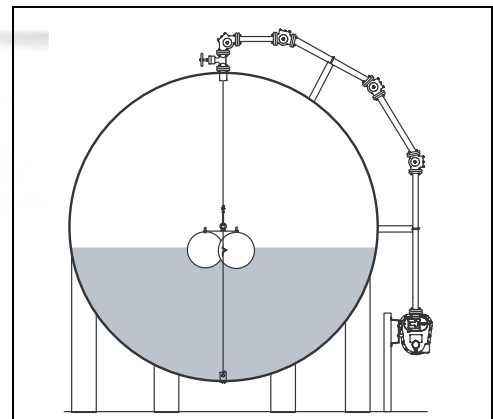


Sphere Tank to 60ft (18.3 m) or Horizontal Cylinder Tanks

Order Code T04, T08

Installation parts supplied include:

- 90° Elbow assembly (x1)
- 30° Elbow assembly (x3)
- Guidewire bottom anchor
- Guidewires
- Support bracket (x2)
- Gaugehead and tape
- Float
- Guidewire top anchors (x2)
- Tape connectors
- MTG bracket



Model Options

English and Metric Configurations

Varec provides the following three measurement and display configurations:

- English fractional – feet/inches/16ths
- English decimal – feet/inches/10ths
- Metric configurations – meters/10ths/100ths

English reading gauges are manufactured with a reversible fractional/decimal dial. For example, if the customer desires a decimal level display, the dial can be removed, reversed and reinstalled to show decimal units. All dial/counters reflect product innage. For outage reading requirements, Varec offers a conversion kit (**Part #13-08774**) for English units of measure only.

Check Knob

An operation checker, provided as a standard feature on both the 2500 and 2520 ATG, permits your technician to check the instrument for correct operation.

Negator Cassette

The negator cassette improves the performance of your mechanical tank gauge by self-aligning the tape and motor as it provides the constant pullback tension required for the float to follow the liquid level. The cassette increases reliability and reduces maintenance by protecting internal moving parts from pipe debris that could cause stretching or corrosion. It also allows for safer, easier and quicker service as there is no tape to pull out or negator hubs to unwind in your hands.

Float Crank

The float crank allows your operators to manually raise and lower the float. This can be useful during turbulent mixing conditions so that the float or tape is not damaged.

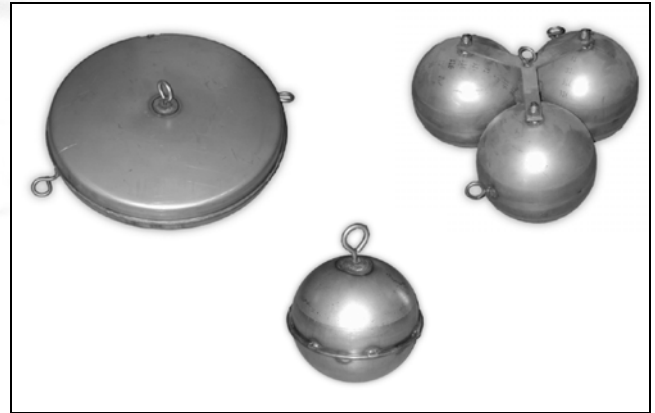
Plug Valve

Varec recommends the use of the Model 275 Rubber Plug Gate Valve when installing the 2520 ATG on high pressure vessels. This permits the user to seal off tank working pressure from the gaugehead and tape piping

system for routine inspection and maintenance. The plug valves have 1½" (38 mm) ANSI RF flanges, Viton-A plug and are rated for either 150 or 300 PSIG (1.1 MPa and 2.2 MPa) service.

Transmitter Adapters

When directly mounting a transmitter or SPDT cam-operated limit switch to the 2520 ATG, Varec recommends the use of a 2581 (Oil Tight) Transmitter Adapter.



Standard 2500 ATG flat hollow shell float (left), Standard 2520 ATG Multi-sphere float (middle), 6" interface float (right)

Floats

The 2500 ATG is provided with a standard 17" (432 mm) diameter Type 316 stainless steel hollow shell float. Depending on the type of service kit selected, moderate, severe or extreme, one of the floats may be supplied shown in the table below.

The 2520 ATG is provided with a standard 8" (203 mm) diameter multi-sphere 316 stainless steel float. In order to ensure the highest possible measurement accuracy, the specific gravity of the product being measured is required to properly adjust the weight of the float.

Service Kit Materials

2520 ATG

Description	Standard	Moderate	Severe	Extreme (NaOH)	Extreme (H2SO4)
Gaugehead	Aluminum	Aluminum	Cast iron	Cast iron	Cast iron
Elbow assembly	Aluminum	316 S.S.	Cast iron	Cast iron	Cast iron
Top anchors	Steel	316 S.S.	Steel	Steel	Stl/Carp. 20
Guidewire weight	Steel	316 S.S.	316 S.S.	Monel	Carp. 20
Guidewires	316 S.S.	316 S.S.	316 S.S.	Monel	Carp. 20
Perforated tape	316 S.S.	316 S.S.	316 S.S.	Monel	Carp. 20
Standard float	316 S.S.	316 S.S.	316 S.S.	Monel	Carp. 20

2520 ATG

Description	Material
Gaugehead	Cast carbon steel ASTM A 216, WCB
Counter housing & cover	Aluminum 356-T6
Sprocket, Motor Storage and Tape storage sheaves	Cast aluminum
Negator spring, Perforated tape and Sprocket Pins	Type 301 stainless steel Type 316 stainless steel Type 303 stainless steel
Bearings	Stainless steel

Floats

Part #	Material	Net Weight	Size
BM9074-000	316 S.S.	8.8 lb (4 kg)	17" (432 mm) Flat
BM1 2339-000	Carp. 20	10.7 lb (4.9 kg)	17" (432 mm) Flat
BM1 2338-000	Monel	10.5 lb (4.8 kg)	17" (432 mm) Flat
BM1 2411	316 SS	11 lb	8" (203 mm) Multi-sphere
BM1 7777-006	316 SS	Depends on specific gravity of product - contact factory	8" (203 mm) Sphere (interface)
BM1 7782-006	316 SS		6" (152 mm) Sphere (interface)
BM1 7783-006	316 SS		10" (254 mm) Sphere (interface)
P29-43	Fibre glass	9 lb	17" (432 mm) Flat

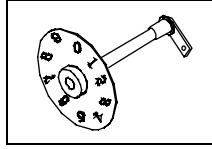
Conduit Elbows

Part #	Angle	Description	Pressure Rating	Conduit Material	Wheel Material
BM3661	90°	Elbow	150 PSIG (1.1 MPa)	Cast iron	316 SS
BM3491	90°	Elbow	300 PSIG (2.2 MPa)	Cast iron	316 SS
BM3490	45°	Elbow	300 PSIG (2.2 MPa)	Cast iron	316 SS
BM3489	30°	Elbow	300 PSIG (2.2 MPa)	Cast iron	316 SS
06-08564	90°	Elbow	Atmospheric	Aluminum	Delrin
06-07726	90°	Elbow	Atmospheric	Aluminum	316 SS
BM4675	90°	Elbow	Atmospheric	Cast iron	316 SS
BM5074	90°	Elbow	Atmospheric	316 Stainless steel	316 SS
BM3480	135°	Elbow	Atmospheric	Aluminum	Delrin
BM3481	180°	Elbow	Atmospheric	Aluminum	Delrin
BM3621	NA	Tape carrier	Atmospheric	Aluminum	Delrin

Accessories

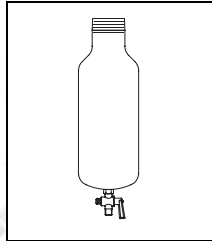
Dual Calibrator Assembly

The dual calibrator allows level transmitters with absolute encoders to be calibrated without disassembling the transmitter from the gaugehead. The calibrator is accessed by removing the counter assembly cover. By simply turning the calibrator, the counter and the transmitter can both be set to the proper level. The dual calibrator can be retrofitted to existing 2500 ATG installations (**Part #13-08948**).



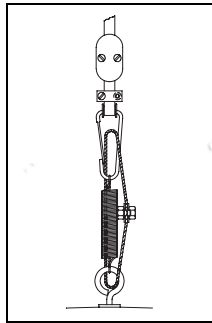
Condensate Reservoir

The condensate reservoir is designed to collect condensate that would otherwise accumulate in the gaugehead. Its use is recommended where an excessive amount of condensate could develop or in oil filled gauge applications (**Part #DA4051**).



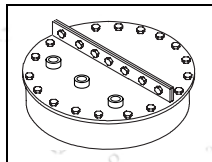
Shock Absorber

The Shock Absorber reduces wear and maintenance on a 2500 ATG by minimizing the transfer of wave energy from the float to the perforated tape and gaugehead components. It prevents the float from becoming detached from the tape by wave action and should always be used in tanks with turbulent conditions near inlet or outlet piping and near a mixer (**Part #DA6138**).



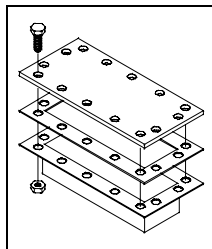
Manhole Cover

This manhole cover (Model 226) allows for in-service installation of the 2500 ATG through a tank's existing manway. Each of the three port entries is threaded for simple installation of pipework or guidewire anchors. (**Part #BM3443 for 20"**, **Part #BM3607 for 24"**).



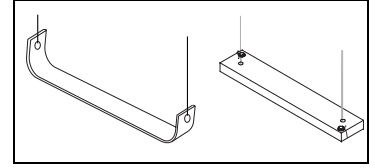
Inspection Cover

This inspection cover (Model 228) can be installed onto an existing manhole cover, to provide an easily removable inspection plate (**Part #BM6746**).



Guidewire Anchor

Varec can supply two different guidewire anchors (also referred to as bottom anchors or weights), depending on the installation type. An anchor that can be welded to the tank bottom is used when the tank is out-of-service (**Part #BA4481**). A cast iron weight can be used as an alternative when the installation is performed while the tank is in-service (**Part #A2117-003**).

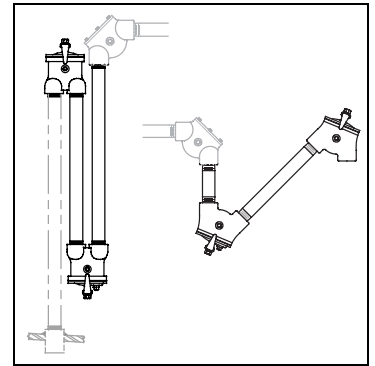


Conduit Elbows

Conduit elbows reduce wear on the tape and provide various installation options, depending on the tank type. Varec can provide various angles, materials and low/high pressure options.

Conduit Oil Seals

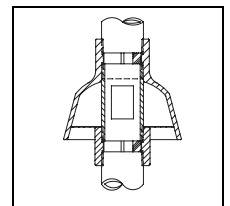
Oil seals designed into the conduit pipework during installation can help reduce wear and maintenance on the tape, conduit and gaugehead parts. The seals also prevent the loss of damaging fumes or corrosive vapors. Depending on the installation, the following oil seals are available:



Part #	Material	Oil seal
10-01994-AAA	Aluminum	8.5" (216mm) Water column operating pressure
10-01994-BAA	Cast iron	8.5" (216mm) Water column operating pressure
10-02861-AAA	Aluminum	27" (686mm) Water column operating pressure

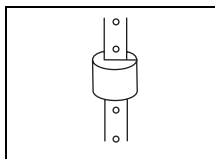
Tape Conduit Vent

This vent (Model 2542) is designed for use on liquid level gauging installations on storage tanks where corrosive vapors are involved. The unit vents gauge piping to the atmosphere, thereby preventing vapors from entering the gaugehead. Special construction is designed to prevent damage to the vent due to pipe alignment (**Part #BM4084**).



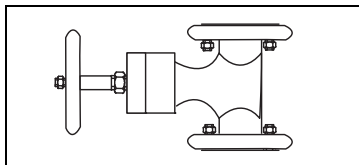
Teflon Tape Wipe

Generally used with the conduit vent, the Tape Wipe (Model 2546) can also be used alone. The Tape Wipe mounts in the conduit between the top of the tank and the first elbow and removes excess residue from the tape. It minimizes vapor loss from the tank into the conduit and helps prevent vapors and liquids from contaminating the gaugehead (**Part #BA13924**).



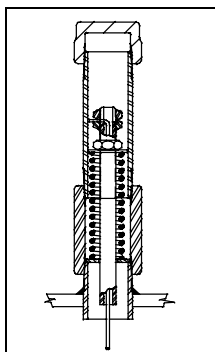
Plug Gate Valve

Varec recommends the use of the 275 Rubber Plug Gate Valve when installing the 2520 ATG on high pressure vessels. This permits the user to seal off tank working pressure from the gaugehead and tape piping system for routine inspection and maintenance. The plug valves have 1-½" (38 mm) ANSI RF flanges and are rated for 150 PSIG (**Part #2751V**) or 300 PSIG (**Part #2752V**) (1.1 and 2.2 MPa) service.



Guidewire Top Anchors

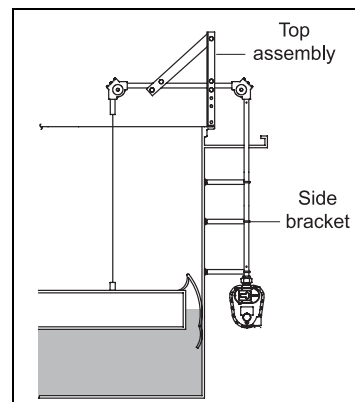
Guidewire top anchors provide a point on the tank roof to connect the guidewire during installation. The internal spring provides a constant tension on the guidewire, which reduces horizontal movement of the float due to turbulent conditions. Guidewire top anchors can be screwed or welded directly onto the tank roof or into an existing manhole cover.



Part #	Material	Pressure rating
BM5200	Steel	Atmospheric
BM5088	316 Stainless Steel	Atmospheric
BM3646	Steel	150 PSIG (1.1 MPa)
BM3647	Steel	300 PSIG (2.2 MPa)

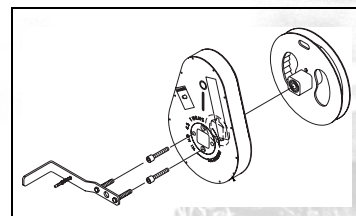
Support Brackets

"A" frame brackets support the conduit (pipework) that carries the tape. The steel pipe support bracket is used on the side of the tank (**Part #B5643-003**) and the upper support bracket assembly is used at the tank top (**Part #BM717**).



Negator Cassette

The negator cassette improves the performance of your mechanical tank gauge by self-aligning the tape and motor as it provides the constant pullback tension

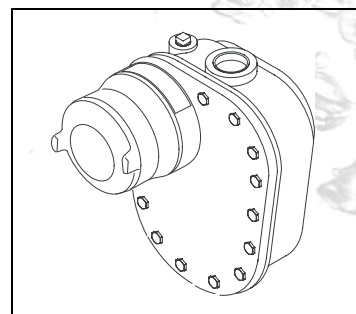


required for the float to follow the liquid level. The cassette increases reliability and reduces maintenance by protecting internal moving parts from pipe debris that could cause stretching or corrosion. It also allows for safer, easier and quicker service as there is no tape to pull out or negator hubs to unwind in your hands.

The negator cassette fits all aluminum Varec 2500 (model B) Automatic Tank Gauge and can be ordered as an option, a Cassette Kit for negator motor to cassette conversion kit (shown) (**Part #13-10652**) or a Cassette Assembly only (**Part #06-10368**).

2557 Alarm Limit Switch

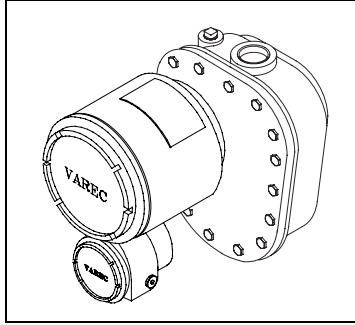
The 2557 Alarm Limit Switch (ALS) is designed to mount directly to the 2500 Automatic Tank Gauge (ATG) or at a conduit elbow. It provides a contact closure or opening at a pre-set cam position to allow for alarm indications. The 2557 ALS is available with 2, 4 or 6 switches that can be used to activate alarms or relays at any level selected by the user. For further information, refer to product documentation.



It is recommended to use a 2581 (Oil Tight) Transmitter Adapter (**Part #BM1990-100**) when directly mounting a transmitter or SPDT cam-operated limit switch to a 2520 ATG.

4000 Advanced Technology Transmitter

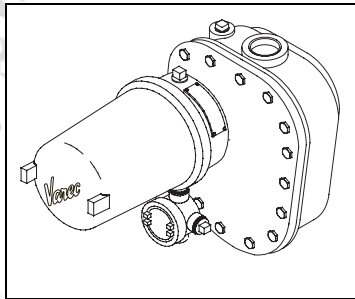
The 4000 Advanced Technology Transmitter (ATT) mounts to all standard float gauges and provides temperature inputs (terminations for 3-wire spot RTDs are standard). It provides simple, on-site calibration; no need to remove it from the gaugehead, just enter level calibration with a handheld terminal or download from a host. It is rugged enough for even the most hazardous environment – die-cast explosion proof and aluminum enclosure NEMA 4 (IP65). Level and temperature information is transmitter via one of the following field communications protocols:



- Mark/Space
- Mark Space (Matrix)
- MODBUS
- Whessoe Bus
- TankWay (L&J)
- TIWAY
- GPE
- GSI MODBUS

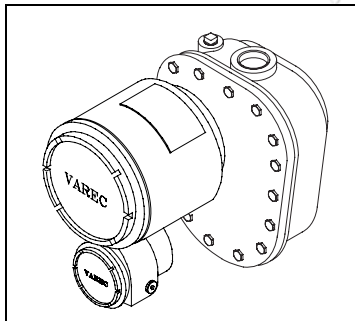
8200 Current Output Transmitter

The 8200 Current Output Transmitter (COT) is a precision analog transmitter designed to relay level information via field communications to the control room. The 8200 COT is designed to provide an increase in current output with a rising level using a 4–20 mA or 10–50 mA signal, which varies in direct proportion to the liquid level.



4110 HART Level Encoder

The 4110 HART Level Encoder (HLE) mounts directly to the 2500 Automatic Tank Gauge and provides precision encoding of level data and then transmits the data via a HART communication bus to a HART host. The 4110 HLE is compatible with various HART masters; including the 4200 Multifunction Transmitter (MFT), 8130 RTU or PLCs.



Maintenance

A regular schedule of maintenance is recommended. The frequency of such inspections depends on the specific environmental conditions and operation. Due to the various conditions, even from tank to tank on the same site, installations should be studied and a routine of inspection and maintenance should be planned that is best suited to individual needs.

Varec can provide spare parts, maintenance kits and preventive maintenance advice, training, or warranties. Please consult your product Installation, Operations and Maintenance Manual or a representative for further details.

Part #	Description
13-08766	2500 Basic Maintenance Kit – English
13-08767	2500 Basic Maintenance Kit – Metric
13-08768	2500 Extended Maintenance Kit – English
13-08769	2500 Extended Maintenance Kit – Metric
13-08770	2500 Overhaul/Refurbishing Kit – English
13-08771	2500 Overhaul/Refurbishing Kit – Metric
13-08772	Extended Range Modification Kit – English
13-08773	Extended Range Modification Kit – Metric
13-08774	Outage Reading Conversion Kit – English
13-08784	2520 ATG Basic Maintenance Kit – English
13-08785	2520 ATG Basic Maintenance Kit – Metric
13-08786	2520 ATG Overhaul/Refurbishing Kit – English
13-08787	2520 ATG Overhaul/Refurbishing Kit – Metric
13-07924	English Counter Kit
13-07925	Metric Counter Kit
BM16541	English to Metric Conversion Kit
BM16540	Metric to English Conversion Kit

Technical Specifications

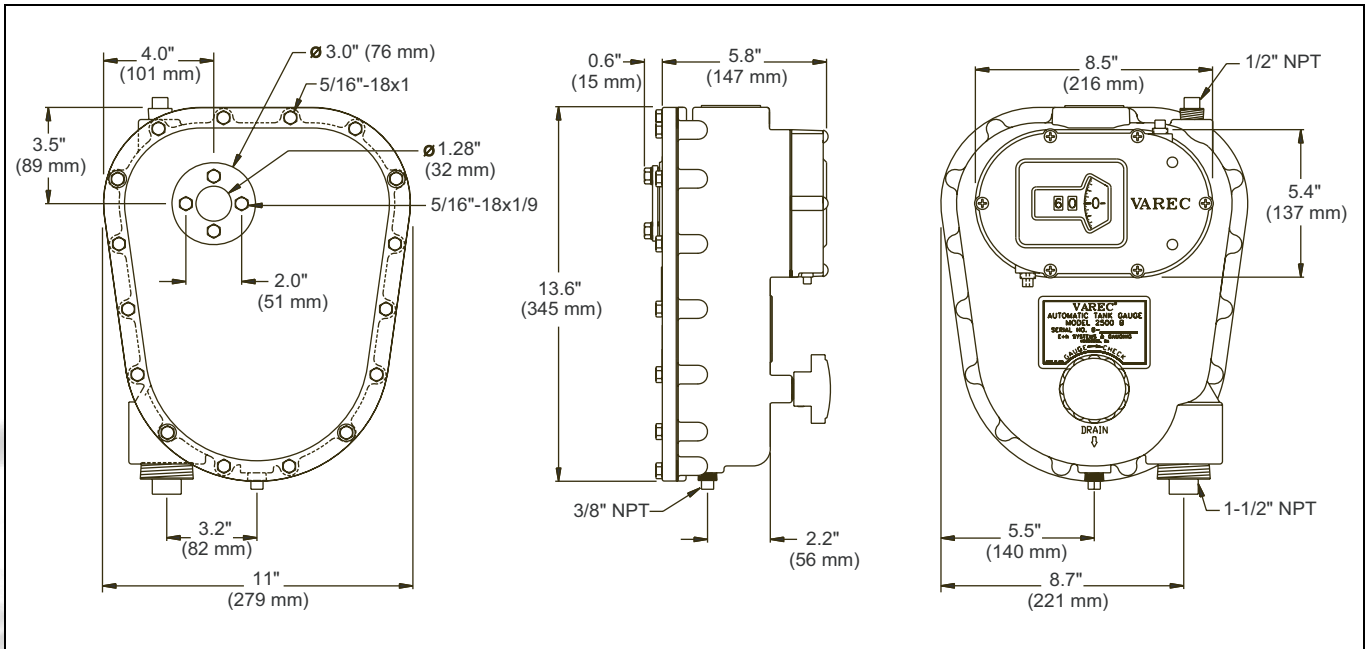
2500 ATG

Product gravity range	0.7 to 1.9 g/cc (700–1900 kg/m ³) specific gravity
Service rating	Atmospheric to 2.5 PSIG (119 kPa)
Gauging range	0 – 60 ft (18 m)
Extended range	0 – 96 ft (29 m) Fixed roof tanks only, requires extended range kit
Ambient temperature ranges	–30...+160 °F (–34...+71 °C)
Materials	Dependent on installation type and parts selected
Shipping weight	Varies with model 70 lb (32 kg) to 110 lb (50 kg)

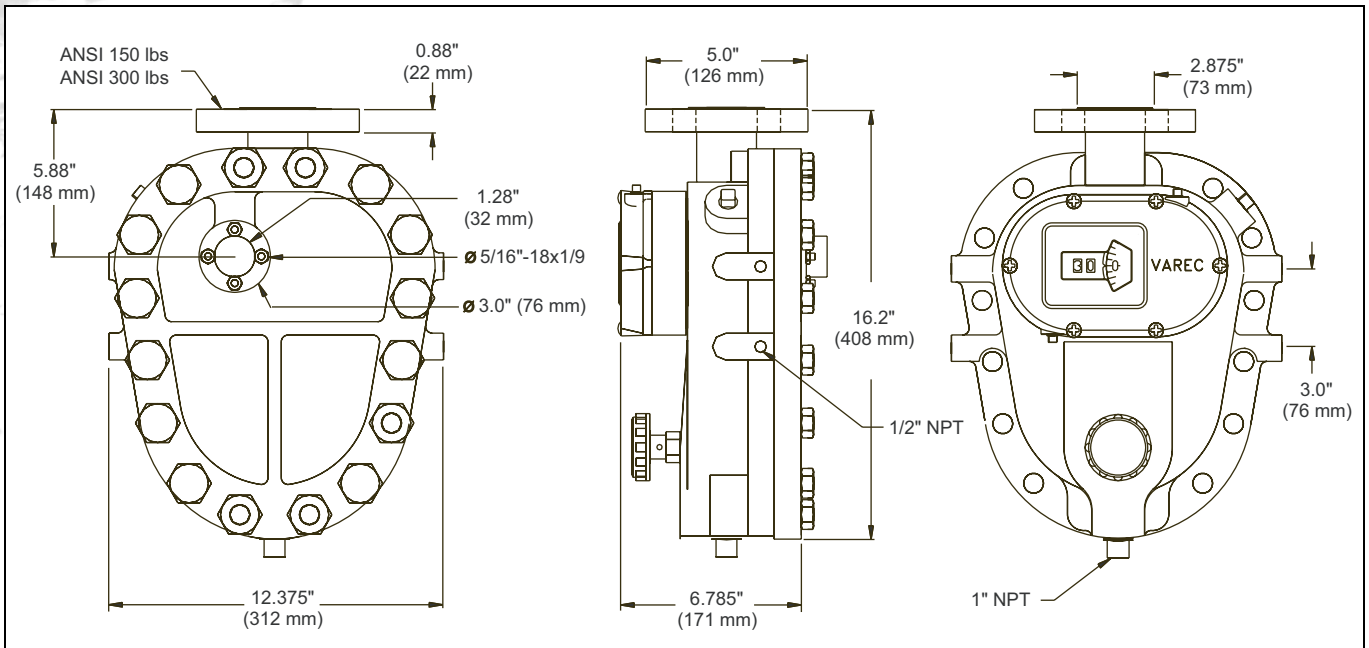
2520 ATG

Product gravity range	0.7 to 1.9 g/cc (700–1900 kg/m ³) specific gravity
Service rating	Atmospheric to 150 PSIG (1136 kPa) or 300 PSIG (2170 kPa)
Gauging range	0 – 60 ft (18 m)
Ambient temperature ranges	–30...+160 °F (–34...+71 °C)
Materials	Dependent on installation type and parts selected
Shipping weight	Varies with model 100 lb (32 kg) to 110 lb (50 kg)

2500 ATG Product Dimensions



2520 High Pressure ATG Product Dimensions



2500 ATG Order Codes

Aluminum Gaugehead – English Configuration –

Negator Motor

10	Tank Type
	T01 Standard service cone roof tank
	T02 Standard service cone roof tank with pan & floatwell
	T03 Standard service floating roof tank & floatwell
	T04 Standard service tank top mounting
	T05 Standard service bolted tank
	T06 Standard service floating roof tank; no floatwell
	T07 Standard service cone roof tank with pan; no floatwell
	T41 Moderate service cone roof tank
	T51 Interface service cone roof tank; 15 min. s.g. differential
	T52 Interface service cone roof tank; 25 min. s.g. differential
	T55 Stilling well service cone roof tank 6" dia. float
N250001 –	Complete product designation

Aluminum Gaugehead – Metric Configuration –

Negator Motor

10	Tank Type
	T11 Standard service cone roof tank
	T12 Standard service cone roof tank with pan & floatwell
	T13 Standard service floating roof tank with floatwell
	T14 Standard service tank top mounting
	T15 Standard service bolted tank
	T16 Standard service floating roof tank; no floatwell
	T17 Standard service cone roof tank with pan; no floatwell
	T42 Moderate service cone roof tank
	T53 Interface service cone roof tank; 15 min. s.g. differential
	T54 Interface service cone roof tank; 25 min. s.g. differential
	T56 Stilling well service cone roof tank 6" dia. float
N250003 –	Complete product designation

Aluminum Gaugehead – English Configuration –

Float Crank

10	Tank Type
	T01 Standard service cone roof tank
	T05 Standard service bolted tank
N250002 –	Complete product designation

Aluminum Gaugehead – Metric Configuration –

Float Crank

10	Tank Type
	T11 Standard service cone roof tank
N250004 –	Complete product designation

Iron Gaugehead – English Configuration

10	Tank Type	
	T21	Severe service cone roof tank SS316
	T22	Extreme service cone roof tank; monel
	T23	Extreme service cone roof tank; carp.20
	T24	Severe service tank top mounting
N250005 –		Complete product designation

Iron Gaugehead – Metric Configuration

10	Tank Type	
	T31	Severe service cone roof tank
	T32	Severe service tank top mounting
	T33	Extreme service cone roof tank; monel
	T34	Extreme service cone roof tank; carp.20
N250006 –		Complete product designation

Aluminum Gaugehead – English Configuration – Negator Cassette

10	Tank Type	
	T01	Standard service cone roof tank
	T02	Standard service cone roof tank with pan & floatwell
	T03	Standard service floating roof tank with floatwell
	T04	Standard service tank top mounting
	T05	Standard service bolted tank
	T06	Standard service floating roof tank; no floatwell
	T07	Standard service cone roof tank & pan; no floatwell
	T41	Moderate service cone roof tank
	T55	Stilling well service cone roof tank
N250011 –		Complete product designation

Aluminum Gaugehead – Metric Configuration – Negator Cassette

10	Tank Type	
	T11	Standard service cone roof tank
	T12	Standard service cone roof tank with pan & floatwell
	T13	Standard service floating roof tank & floatwell
	T14	Standard service tank top mounting
	T15	Standard service bolted tank
	T16	Standard service floating roof tank; no floatwell
	T17	Standard service cone roof tank & pan; no floatwell
	T42	Moderate service cone roof tank
	T56	Stilling well service cone roof tank
N250013 –		Complete product designation

2520 ATG Order Codes

Steel Gaugehead – English Configuration – 150 PSIG (1.1 MPa)

10	Tank Type	
	T01	Tank spheres to 16 ft (4.9 m) diam. or horizontal cylinder tanks
	T02	Tank spheres to 48 ft (14.6 m) diameter
	T03	Top mounting on tank spheres or horizontal cylinder tanks
	T04	Tank spheres to 60 ft (18.3 m) diam. or horizontal cylinder tanks
20	Plug Valve	
	0	Plug valve not used
	1	1½" (38 mm) Plug valve (Viton -A plug)
30	Transmitter Adapter	
	0	Transmitter adapter not used
	1	2581 Transmitter adapter
N252001 –		Complete product designation

Steel Gaugehead – Metric Configuration – 150 PSIG (1.1 MPa)

10	Tank Type	
	T01	Tank spheres to 16 ft (4.9 m) diam. or horizontal cylinder tanks
	T02	Tank spheres to 48 ft (14.6 m) diameter
	T03	Top mounting on tank spheres or horizontal cylinder tanks
	T04	Tank spheres to 60 ft (18.3 m) diam. or horizontal cylinder tanks
20	Plug Valve	
	0	Plug valve not used
	1	1½" (38 mm) 150 psig Plug valve (Viton -A plug)
30	Transmitter Adapter	
	0	Transmitter adapter not used
	1	2581 Transmitter adapter
N252002 –		Complete product designation

Steel Gaugehead – English Configuration – 300 PSIG (2.2 MPa)

10	Tank Type	
	T05	Tank spheres to 16 ft (4.9 m) diam. or horizontal cylinder tanks
	T06	Tank spheres to 48 ft (14.6 m) diameter
	T07	Top mounting on tank spheres or horizontal cylinder tanks
	T08	Tank spheres to 60 ft (18.3 m) diam. or horizontal cylinder tanks
20	Plug Valve	
	0	Plug valve not used
	1	1½" (38 mm) 300 psig Plug valve (Viton -A plug)
30	Transmitter Adapter	
	0	Transmitter adapter not used
	1	2581 Transmitter adapter
N252003 –		Complete product designation

Steel Gaugehead – Metric Configuration – 300 PSIG (2.2 MPa)

10	Tank Type	
	T05	Tank spheres to 16 ft (4.9 m) diam. or horizontal cylinder tanks
	T06	Tank spheres to 48 ft (14.6 m) diameter
	T07	Top mounting on tank spheres or horizontal cylinder tanks
	T08	Tank spheres to 60 ft (18.3 m) diam. or horizontal cylinder tanks
20	Plug Valve	
	0	Plug valve not used
	1	1½" (38 mm) 300 psig Plug valve (Viton -A plug)
30	Transmitter Adapter	
	0	Transmitter adapter not used
	1	2581 Transmitter adapter
N252004 –		Complete product designation





www.varec.com

Corporate Headquarters

5834 Peachtree Corners East
Norcross, GA 30092
Tel: +1 (770) 447-9202
Toll Free: +1 (866) 698-2732
Fax: +1 (770) 662-8939

North American Sales

9801 Westheimer, Suite 302
Houston, TX 77042
Tel: +1 (281) 498-9202
Fax: +1 (281) 498-0183



If no official representative is listed here, please visit www.varec.com to find your local representative.
© 2006 Varec, Inc. An SAIC Company. All Rights Reserved. This document is for information purposes only. Varec, Inc. makes no warranties, express or implied, in this summary. The names of actual companies and products mentioned herein may be the trademarks of their respective owners.