Liquid Level Gauges

Shipbuilding & Offshore

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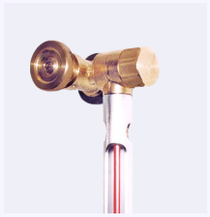


The Seetru ‘G35’ Seemag® Magnetic Gauge

The Seetru Seemag® tank content indicator or gauge is a high quality yet economical magnetic level indicator. Its unique design offers considerable advantages over conventional magnetic gauges including accurate step-less reading with a wide angle of visibility and the option of high/low level alarms with remote digital reading.

The Seemag® Gauge meets the requirements of SOLAS (Safety Of Lives At Sea), for use with tanks containing flammable liquids.

Magnetic Bypass Design

The gauge utilises a marker strip on a movable carriage fitted on the outside of a stainless steel tube, which by way of magnets moves up and down in unison with a float inside the tube. The marker strip is adjustable to suit the specific gravity of the liquid to be measured.

Ease Of Installation and Maintenance

The Seemag liquid level gauge can be provided with a variety of end fittings to customer requirement. These include stub pipe for welding, ball valves, and flanges. The gauge is fitted with blanking plugs at the top & bottom of the gauge column. These can be easily removed to allow cleaning of the gauge column.

Tank Calibration

A scale plate graduated in mm is incorporated into the Perspex front cover of the Seemag gauge. Other scale plates can be supplied graduated to customer requirement.

Tank Connection

Seemag gauges are closed circuit design and both the top and bottom of the gauge is fitted to the tank

Alarms and Electronic/Digital Outputs

Options available include electronic high and low level alarm sensors, continuous electronic read out signals and displays as well as a digital data feed for direct computer interfaces and digital control systems.

Heating Systems for High Viscosity Liquids

The Seemag gauge is available with an electrical, steam or thermal oil trace heating system. This heats the tube to allow the measurement of high viscosity fluids, such as heavy fuel oils on ships.

The Seetru ‘G35’ Seemag® Magnetic Gauge

Maximum Temperature	180°C
Maximum Pressure	22 Bar g. (18 Bar g. for marine applications)
Valve Materials	Stainless steel
Connections	• Threaded connections • Flanged connections • Stub pipe for welding
Seal Materials	PTFE
Guard Tube Material	Polycarbonate
Lengths	• Minimum 500mm • Maximum 5000mm
Valve Types	Valveless (¼ Turn ball isolation valves available)
Densities	0.7 to 1.3 SG (Others available on request)
Viscosity	Maximum 2000 cSt (The gauge is suitable for more viscous liquids with trace heating, available on request)

The Seetru ‘G31’ Seeflex Gauge

The Seetru Seeflex gauge is designed for use within the marine and offshore industries for tanks containing flammable liquids. The Seeflex gauge meets the requirements of SOLAS (Safety Of Lives At Sea), and is also type approved by many worldwide shipping authorities including Det Norske Veritas (DNV), RINA, Lloyds Register of Shipping, Nippon Kaiji Kyokai and Bureau Veritas. Commonly used for fuel oil, hydraulic oil and lubrication oil tanks of cargo ships and work boats.

The Seelex Gauge meets the requirements of SOLAS (Safety Of Lives At Sea), for use with tanks containing flammable liquids.

Push-Button Operation
Except when a reading is being taken, the gauge is permanently isolated from the contents of the tank. To take a reading the spring loaded valve is opened by pressing a push-button. When released, the connection between the tank and gauge is automatically resealed.

Protected From External Damage
Due to the design of the push-button isolation valve, not amount of damage to the gauge or external fittings on the tanks can break the liquid seals. In such an event the fluid cannot escape.

Hydraulic actuation
Hydraulic actuation can be supplied as an optional extra. This is designed to enable both push-button valves to be operated at the same time. Recommend for tall gauges where it would otherwise be difficult to operate the upper and lower push-button valves simultaneously.

Open Circuit Design
This is only allowable when it is possible for the gauge column to extend above the top of the tank by at least 100 mm. The upper end of the gauge can be supplied with an automatic safety vent valves or, alternatively, a pipe union connection. The automatic safety vent will allow air to pass, but will seal against a liquid level. In the case of the pipe union connection design, a 10 mm o/d steel vent pipe is returned to the tanks or into the tank vent pipe.

Closed Circuit Design
The closed circuit design penetrates the tank wall at both top and bottom connections. The options for the top connection are either a push-button self closing valve or valveless tank return.

Graduation
Where a measure of the precise storage volume is required, an engraved scale plate can be provided marked with the capacity units.

The Seetru ‘G31’ Seeflex Gauge

Maximum Temperature	80°C
Maximum Pressure	2.67 Bar g.
Valve Materials	• Brass • Stainless Steel
Connections	• 42mm weld bosses • Mild steel or stainless steel / flanged or threaded connections available upon request
Seal Materials	Elastomer O’rings
Glass	Toughened borosilicate reflex glass DIN 7080/7081
Column Materials	• Mild Steel • Rust Protected Stainless Steel
Lengths	• Maximum: 8900mm
Valve Types	Push button self closing valves

The Seetru ‘G21’ Tubular Marine Gauge

The Seetru Marine Gauge is designed for use within the marine and offshore industries. Due to it’s tubular design this gauge is suitable only for use with non-flammable liquids. For flammable liquid applications please see either G35 Seemag or G31 Seeflex.

This gauge is commonly used for the water storage and coolant tanks on board cargo ships, tugs and military vessels.

Push-Button Operation
Except when a reading is being taken, the gauge is permanently isolated from the contents of the tank. To take a reading the spring loaded valve is opened by pressing a push-button. When released, the connection between the tank and gauge is automatically resealed.

Protected From External Damage
Due to the design of the push-button isolation valve, not amount of damage to the gauge or external fittings on the tanks can break the liquid seals. In such an event the fluid cannot escape.

Instant Dismantling & Re-Assembly
The gauge can be removed from the tank for cleaning or servicing while valves remain sealed and the tank remains leak-proof.

Ease of Viewing
The level of colourless liquid is indicated by magnification of a coloured strip on the sight tube.

Hydraulic Actuation
Hydraulic actuation can be supplied as an optional extra. This is designed to enable both push-button valves to be operated at the same time. Recommend for tall gauges where it would otherwise be difficult to operate the upper and lower push-button valves simultaneously.

Graduation
Where a measure of the precise storage volume is required, an engraved scale plate can be provided marked with the capacity units.

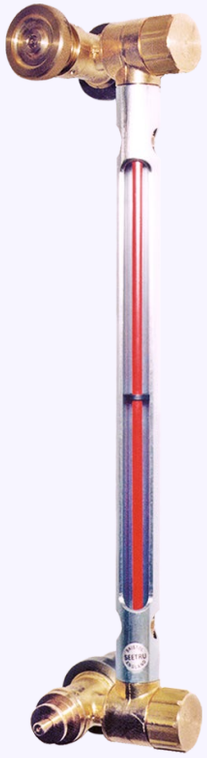
The Seetru ‘G21’ Tubular Marine Gauge.

Maximum Temperature	150°C[1]
Maximum Pressure	3.68 Bar g.[1]
Valve Materials	• Brass • Stainless Steel
Connections	• 42mm weld bosses • Mild steel or stainless steel / flanged or threaded connections available upon request
Seal Materials	Elastomer O’rings
Glass	• Borosilicate glass BS 3463 • Polycarbonate Plastic
Guard Tube Materials	• Brass • Aluminium • Stainless Steel • Mild Steel
Lengths	To suit requirements (minimum 150mm)
Valve Types	• Push button self closing valves • Valveless tank return available for top connection

The Seetru ‘G20’ Admiralty Gauge

The Seetru Admiralty liquid level gauge has been specifically designed to meet the stringent standards required by the Ministry of Defence for design, material selection and certification, including shock testing. With a tubular glass indicator the G20 utilises an ingenious flexible fixing system which enables multi-angle and directional mounting capabilities.

For flammable liquid applications please see either Seeflex (G31) or Seemag gauges (G35).



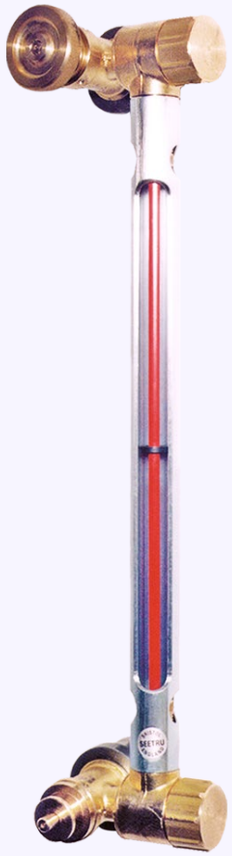
Push-Button Operation
Except when a reading is being taken, the gauge is permanently isolated from the contents of the tank. To take a reading the spring loaded valve is opened by pressing a push-button. When released, the connection between the tank and gauge is automatically resealed.

Graduation
Where a measure of the precise storage volume is required, an engraved scale plate can be provided marked with the capacity units

Electronic & Digital Readout
Remote reading system and/or computer interface options provide a dual system with the advantages of both electronic and sight glass systems. Level alarms can also be implemented (suitable for gauges fitted with screw down valves only).

Heating Systems for High Viscosity Liquids
Hydraulic actuation can be supplied as an optional extra. This is designed to enable both push-button valves to be operated at the same time. Recommend for tall gauges where it would otherwise be difficult to operate the upper and lower push-button valves simultaneously.

The Seetru ‘G20’ Admiralty Gauge



Maximum Temperature	150°C[1]
Maximum Pressure	22 Bar g.[1]
Valve Materials	• Bronze • Stainless Steel
Connections	• 42mm weld bosses
Seal Materials	Elastomer
Tube Materials	• Borosilicate glass BS 3463 • Polycarbonate Plastic
Guard Tube Materials	• Anodised aluminium • Brass • Stainless steel • Zinc plated mild steel
Lengths	To suit requirements (minimum 150mm)
Valve Types	Hand wheel isolation valves and/or push-button closing valves

The Seetru ‘G22’ Quickmount Tubular Gauge

The Seetru Quickmount liquid level gauge is a direct reading, tubular design for general industrial use. The unique isolating valve and collar design, allows for maintenance of the gauge column without tools and the need to drain the tank. Available with automatic safety shut off valves and drain valve. Suitable for a wide range of pressures and temperatures, the gauge is fitted with elastomer seals in materials to suit the required service.

Tubular Sight Glass Design
Sight tubes are available in glass or polycarbonate. Metal protecting tubes are available in a variety of materials with optional supplementary transparent polycarbonate protecting tube.

Ease Of Installation and Maintenance
The Quickmount liquid level gauge can be installed without the use of special tools. Threaded end units are screwed into female tank bosses. The gauge collars slip over these units and are secured by hand tightening retaining nuts. ‘O’ ring sealing is used throughout. The isolating valves will allow column removal without need to drain the tank.

Tank Calibration
A scale plate graduated in mm is incorporated into the Perspex front cover of the Seemag gauge. Other scale plates can be supplied graduated to customer requirement.

Tank Connection
A closed circuit or open circuit pattern may be selected for the gauge.

Closed Circuit Pattern
Direct connection from the top of the gauge to the tank can be made with a screw-down valve or a valveless unit.

Open Circuit Pattern
The upper end of the liquid level gauge can be supplied with an automatic safety vent valve or, alternatively, a pipe union connection. The automatic safety vent valve will allow air to pass, but will seal against a liquid level. In the case of the pipe union connection design, a 10 mm o/d steel vent pipe is returned to the tank or into the tank vent pipe. Open circuit connection is only allowable when it is possible for the gauge column to extend above the top of the tank.

Electronic & Digital Readout
Remote reading system and/or computer interface options provide a dual system with the advantages of both electronic and sight glass systems. Level alarms can also be implemented.

The Seetru ‘G22’ Quickmount Tubular Gauge

Maximum Temperature	150°C[1]
Maximum Pressure	22 Bar g.[1]
Valve Materials	• Brass • Stainless steel • Polypropylene
Connections	BSP & NPT threaded connections or ANSI/DIN flanges
Seal Materials	Elastomer
Tube Materials	• Borosilicate glass BS 3463 • Polycarbonate Plastic
Guard Tube Materials	• Anodised aluminium • Brass • Stainless steel • Zinc plated mild steel
Lengths	To suit requirements (minimum 150mm)
Valve Types	• Manual screw down • Manual screw down with automatic safety shut-off valve

Approvals

Seetru Liquid Level Gauges carry a wide range of international approvals and are supplied worldwide.

Please visit our website to see a Full List of Approvals

(American Bureau of Shipping)

(Det Norske Veritas)

(Germanischer Lloyds)

(Lloyds Register)

(RINA Italy)

(Russian Maritime Register of Shipping)

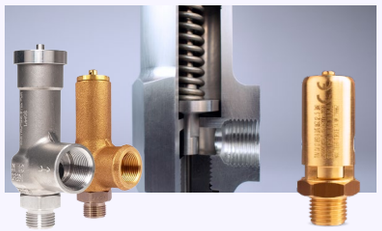
(Russian River Register)

(EAC Customs Union DECLARATION - Russia, Kazakhstan & Belarus)

*The Seemag® gauge meets the requirements of **SOLAS (Safety Of Lives At Sea)**, for use with tanks containing flammable liquids*

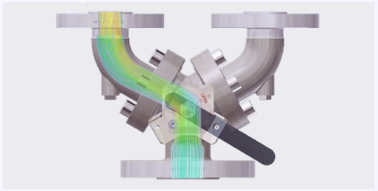
Seetru Products and Services

Seetru offers a wide range of products and services including; screwed safety and relief valves, flanged safety valves, auxiliary valves, testing equipment, site surveying, testing and refurbishment services, source and supply services.



The Seetru range of safety valves are compact, highly efficient and incorporate the exclusive Tutchtite– seal technology for repeatable bubble-tight sealing performance: designed for applications including air/gas compressors, specialist gas plants, chemical equipment and piping, pressure vessels, thermal relief and medical gases etc. These valves are manufactured in bronze, brass or stainless steel and offer a wide range of connections, for applications up to 250°C. View Range

LGS® (Liquid, Gas & Steam) valves have a robust and reliable construction designed for the widest range of industrial applications. The LGS®range is suitable for a wide variation in flow characteristics, coping with both low volume and high relief capacity applications. The single trim design means that the components are all common across liquid, gas and steam; and that any LGS® valve can be used in any of these applications. View Range

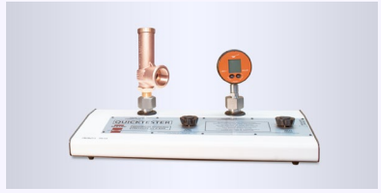


Change-over valves (sometimes referred to as selector valves or three-way valves) enable the switching of flow from one safety valve to another. Typically used where plant shutdown is impossible or undesirable for process, engineering, or commercial reasons. With these valves, it is possible to switch over between parallel safety valves without interrupting operation, so that maintenance work can be carried out on each safety valve in turn. View Range

The Seetru P3W Pressure & Temperature relief valve provides protection against both excess temperature as well as over pressurisation. The valve will automatically discharge hot water at a predetermined set pressure and/or temperature. Each of the lift mechanisms will work independently of each other. The valve is designed to be used in hot water boiler applications.

View Range

Seetru liquid level gauges are primarily of two types, sight gauges and magnetic float by-pass gauges. Many of the gauges are direct reading though most have optional electronic remote reading systems and computer interfaces. The range includes the Quickmount, Seemag and CPI gauges for industrial and chemical applications and the Seeflex and Seemag for marine applications. View Range



The Seetru Quicktester™ is a light-weight, portable valve testing system for compliance with pressure systems safety & equipment regulations. It can be used with plant generated air supplies or with mobile bottled gas. This test bench is supplied with a range of adaptors allowing connection between 1/4" to 1" BSP as standard, additional adaptors are available increasing the connection sizes up to 2" BSP. The Quicktester™ is also available with NPT connection adaptors on request. More Information

Seetru circular window sight glasses are compact low cost assemblies that provide reliable level indication and positive indication when liquid is present. These screw-in plugs are fitted with high quality glass. They are suitable for a wide variety of liquids including water, oils and lubricants. They operate at temperatures up to 180°C and pressures up to 24 bar g.

More Information

Seetru Engineering Services (SES) are the service arm of Seetru Limited who are a long established Safety Valve manufacturer of over 68 years. SES has been founded on the ability to react to customers individual requirements and to deliver total engineering solutions that improve the safety, quality, and value of our customer's activities. SES offer a range of 'on-site' and 'off-site' refurbishment and testing services for Safety and Relief Valves. More information about Seetru Engineering Services