Tubular Level Gauges

Features

- Tubular level gauge applicable upto 10 kg/cm² and upto 150 deg cent
- Forged bodies
- Toughened borosilicate glass with designs to suit pressure and temperature rating
- For applicability in critical acidic, non acidic, and in high temperature zone
- Available with C Channel options with SS, CS, MS with anticorrosion powder coat, MS
- NACE, H2S service compatibility applicable
- CE applicability
- Also available with 1.6 to 4 mm lining PTFE / PFA with SS
- Applicable for refinery, petrochemical, chemical, power, radioactive, fertilizer, food, pharma, metal industry applications

Concept and Principle of operation

The tubular type level gauge is the simplest shape of direct reading level apparatus for maximum pressure up to 10 bar and maximum temperature of 150°C. The gauge glass is built in the protective tube. Check balls inserted in the upper and lower valve to stop flow instantaneously when the glass is broken. The protector having a circular form is constructed to prevent glass breakage from external sources. For glass tube gauges only of center to center dimensions in excess of 2.000 mm, it is possible to manufacture any required c to c by using coupling in the middle of the gauge. Depending on the nature of the liquid, tubes made from various PFA, Acrylic or Vinyl tube are also available. Tubular glass with a linear red coating on the back is available to make level observation more clear.

This Liquid Level Gauge provides direct observation of liquid level in a tank/ vessel. Rising and falling level of the liquid inside the tank /vessel can be observed through the glass assembled in the gauge. Tubular Liquid Level Gauges, designed and built for a wide range of temperature and pressure applications. Our tubular level gauge is used to make, besides other applications include observation of the level of corrosion-proof and chromatic liquids.

The most advantage of this type is for easy level reading of boiling liquids restricting in temperature application rating. When liquids are boiling, their bubbles make the surface level indistinct. The manual adjustment of isolation valve at the input of the media entering the chamber reduces the bubbling. Therefore the level gauge ease to read the level or bubbling liquids. It also provides advantages for highly dense and viscous liquids, as the body is made of seamless pipe. This level gauge is designed and manufactured for easy and accurate reading the liquid level of highly foamy liquids. The gauge has a relatively spacious internal area where foamy liquid is held from forming foams.
**Tubular Level Gauges**

**Technical Specifications: Technical Data**

<table>
<thead>
<tr>
<th>Type of Gauge</th>
<th>Tubular Level Gauge - TULG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting</td>
<td>Top-Bottom</td>
</tr>
<tr>
<td>Pressure</td>
<td>Upto 10 kg/cm²</td>
</tr>
<tr>
<td>Temperature</td>
<td>Upto 150°C</td>
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<tr>
<td>CCD</td>
<td>Max. upto 2000mm</td>
</tr>
<tr>
<td>MOC of Wetted Parts</td>
<td>CS, SS304, SS304L, SS316, SS316L, PP and other on request</td>
</tr>
<tr>
<td>Glass Tube</td>
<td>OD 16mm or 19mm</td>
</tr>
<tr>
<td>Glass Protection</td>
<td>a) M.S. Tie Rod</td>
</tr>
<tr>
<td></td>
<td>b) SS Tie Rod</td>
</tr>
<tr>
<td></td>
<td>c) MS powder Coated ‘C’ Channel</td>
</tr>
<tr>
<td></td>
<td>d) SS ‘C’ Channel</td>
</tr>
<tr>
<td>Process Connection</td>
<td>Screwed / Flanged / Socket Weld and other on request</td>
</tr>
<tr>
<td>Isolation Valve</td>
<td>Auto Ball Check Valve</td>
</tr>
<tr>
<td></td>
<td>a) Screwed Bonnet offset construction</td>
</tr>
<tr>
<td></td>
<td>b) Material Construction as per wetted part</td>
</tr>
<tr>
<td>Vent</td>
<td>½” Plugged / ½” Needle Valve / ½” Ball Valve / ½” Gate Valve / ½” Globe Valve</td>
</tr>
<tr>
<td>Drain</td>
<td>½” Plugged / ½” Needle Valve / ½” Ball Valve / ½” Gate Valve / ½” Globe Valve</td>
</tr>
<tr>
<td>Calibration Scale</td>
<td>Aluminium, Aluminium with powder coated, SS304, SS316, Acrylic</td>
</tr>
<tr>
<td>Special</td>
<td>P.T.F.E. lined on wetted part - Flange orientation</td>
</tr>
</tbody>
</table>

**Construction and Dimensional Cross Sectional Overview**

The gauge consists of a body having machined to have a liquid where high temperature are liable to occur, the glass is heavy borosilicate glasses are used. These tubular gauges preferably used for all applications with the simplest solution keeping the temperature and pressure rating known.

The tubular level gauge is assembled firmly with heavy toughened borosilicate glass with tie rods or C Channel, special packing arrangement is made to ship larger CCD with tie rods and or with C Channel, as the delicacy with glass oriented design is subjected to damage in transit.

The most advantage of this type is that it has no invisible sections (dead band). Our standard overlapped section is 10 mm as minimum and the gauge is so designed that supporting brackets can be equipped to protect a long multiple connected gauge from distortion of fall down. The scale plate to mount alongside the gauge may be available on request by customers to observe the liquid level more accurately.
### Ordering Information

**TULG** 1000-F03-ZE-VD-16-YZ-UW-QU-RU-SO-XX-Z

#### Special Features
- **PE**: PTFE Lined, CS Flange
- **PF**: PTFE Lined, SS304 Flange
- **PG**: PTFE Lined, SS304L Flange
- **PH**: PTFE Lined, SS316 Flange
- **PI**: PTFE Lined, SS316L Flange
- **XX**: Any Other*
- **Z**: NIL

#### Calibrated Scale
- **SQ**: Aluminium with power coat
- **SP**: Aluminium
- **SO**: SS304
- **SR**: SS316
- **SS**: Acrylic

#### Process Connection

<table>
<thead>
<tr>
<th>Flanged Connection</th>
<th>Threaded Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F01</strong> 1/2&quot;, 150# RF</td>
<td><strong>B04</strong> 1/2&quot;BSP (M)</td>
</tr>
<tr>
<td><strong>F02</strong> 3/4&quot;, 150# RF</td>
<td><strong>B05</strong> 3/4&quot;BSP (M)</td>
</tr>
<tr>
<td><strong>F03</strong> 1&quot;, 150# RF</td>
<td><strong>B06</strong> 1&quot;BSP (M)</td>
</tr>
<tr>
<td><strong>F04</strong> 1.5&quot;, 150# RF</td>
<td><strong>B07</strong> 1.5&quot;BSP (M)</td>
</tr>
<tr>
<td><strong>F05</strong> 2&quot;, 150# RF</td>
<td><strong>B08</strong> 2&quot;BSP (M)</td>
</tr>
<tr>
<td><strong>F09</strong> 1/2&quot;, 300# RF</td>
<td><strong>XX</strong>: Any Other*</td>
</tr>
<tr>
<td><strong>F10</strong> 3/4&quot;, 300# RF</td>
<td></td>
</tr>
</tbody>
</table>

#### MOC of Connection
- **ZA**: CS (A105)
- **ZB**: CS (A106)
- **ZC**: SS 304
- **ZD**: SS 304L
- **ZE**: SS 316
- **ZF**: SS 316L
- **ZI**: PP
- **XX**: Any Other*

#### MOC of Wetted Parts
- **VA**: CS
- **VB**: SS 304
- **VC**: SS 304L
- **VD**: SS 316
- **VE**: SS 316L
- **VF**: PP
- **XX**: Any Other*

#### Drain
- **RU**: 1/2" NPT (F), Plug
- **RV**: 3/4" NPT (F), Plug
- **RW**: 1/2" Needle Valve

#### Vent
- **QU**: 1/2" NPT (F), Plug
- **QV**: 3/4" NPT (F), Plug
- **QW**: 1/2" Needle Valve

#### Isolation Valves
- **QU**: 1/2" NPT (F), Plug
- **QV**: 3/4" NPT (F), Plug
- **QW**: 1/2" Needle Valve

#### Glass Protection
- **VZ**: M.S. Tie Rods
- **WZ**: SS Tie Rods
- **XZ**: MS Powder Coated ‘C’ Channels
- **YZ**: SS ‘C’ Channels

#### Glass Tube
- **16**: 16 mm O.D.
- **19**: 19 mm O.D.

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**Note:** * Please consult factory

www.generalinstruments.co.in