

### General Description

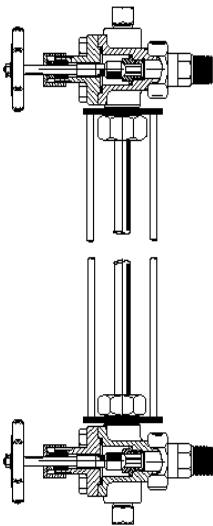
Simco Tubular Liquid Level gauges, are a cost effective method of visual liquid level indication for tanks operating at low pressures. The instruments consist of a toughened continuous section of borosilicate glass tube which is connected at both the top and bottom to an isolation valve. The connection between the valve and glass is sealed by means of a rubber gasket contained within a union on the valve. The isolation valves used on this type of instrument are most commonly the 'off set' pattern type as this allows for the gauges to be cleaned (Roddable).

The continuous glass section is protected by four stainless steel guard rods which run between the valves and the pressures within which the gauges can operate are limited by the maximum allowable pressure for the glass.

Due to the limited protection available to the glass Tubular level gauges are not often used in environments which are subject to a high probability of the gauge being subjected to medium to strong outside forces.

### Tubular Gauge

Side view



### Isolation Valves / Gauge Cocks

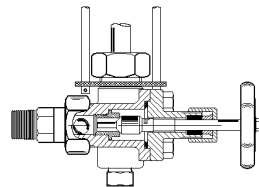
Simco type 156 isolation valves have been specifically designed for use with tubular liquid level gauges and are available in a variety of materials, for different temperatures and also containing a special sealing feature between the glass and valve.

Valves are available in offset pattern designs with outside screw and yolk (OS&Y) or inside screw configurations and have a selection of vessel and gauge connections to fit a variety of mounting requirements.

A standard feature with Simco Valves is the automatic safety ball checks. In the event of the glass breaking the ball check seats to prevent the loss of vessel contents. All valves may be repacked under pressure with the back seating arrangement ensuring complete shut off. A typical selection of valve types / arrangements can be seen below with other arrangements available on request.

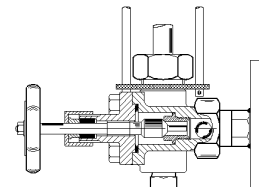
#### Example

Type 156 Offset Pattern Inside Screw  
NPT Vessel Connection  
Union Gauge Connection to Tubular Glass  
Vent / Drain Connection NPT Plugged



#### Example 2

Type 156 Offset Pattern Inside Screw  
SO Flange c/w Union Vessel Connection  
Union Gauge connection to Tubular Glass  
Drain / Vent Connection NPT Plugged



### Material Specifications

#### Valve Body / Bonnet

A105N, A350 LF2 Carbon steel, 316/316L or 304/304L  
Stainless Steel

#### Guide Rods

316 Stainless Steel

#### Glass

Tempered borosilicate tubular glass  $\frac{3}{4}$ " or  $\frac{5}{8}$ " outer diameter—maximum length 1524mm (60")

#### Typical Vessel Connection

Threaded -  $\frac{1}{2}$ ",  $\frac{3}{4}$ " NPT c/w Union  
Flanged -  $\frac{1}{2}$ ",  $\frac{3}{4}$ ", 1", 1.5", 2" SO or WN Class 150# & 300#  
ANSI Class 150# & 300#

#### Typical Vent / Drain Connection

Threaded -  $\frac{1}{2}$ ",  $\frac{3}{4}$ " NPT  
Flanged -  $\frac{1}{2}$ " &  $\frac{3}{4}$ " ANSI Class 150# & 300#

### Selection of Available Accessories

#### Calibrated Scale

Manufactured from traffolyte / 316 stainless steel and engraved with units which reflect individual clients requirements.

#### Red Line Glass

The tubular glass contains a thick red line fused vertically between the top and bottom which improves the ability to read liquid levels especially for clear fluids.

#### Vent / Drain Needle Valves

Needle valves for both the vent and drain can be supplied in the same material as the isolation valve body.