

REFLEX LEVEL GAUGE SERIES 1000

General Description

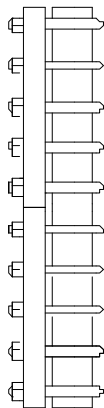
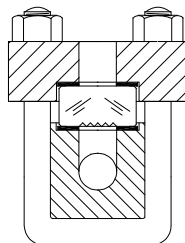
Simco series 1000 Reflex level gauges are designed to operate based on the difference in the refractive indices of liquid and vapour. The liquid flows through the gauge chamber behind the viewing glass located on only one side of the instrument and which is clamped to the gauge body. The viewing glass is made from toughened borosilicate glass and has prismatic right-angled grooves on the side facing the liquid and vapour space. Light entering from outside the gauge is then absorbed or reflected depending upon whether it strikes the liquid or vapour space. When liquid is present the glass will appear black where it is in contact with the process medium and when no liquid is present the glass is silvery / white thus the level can be seen.

This type of gauge is used for measuring the total liquid level of clean fluids in a vessel.

Series 1000 Reflex gauges are available in nine standard lengths and constructed with a single piece chamber.

Series 1000 Gauge

Cross sectional and side view



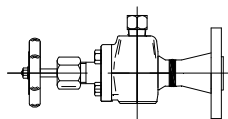
Isolation Valves / Gauge Cocks

Simco isolation valves have been specifically designed for use with liquid level gauges and are available in a variety of materials, for temperature and pressure ranges to meet most specifications. Valves are available in both straight and 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.

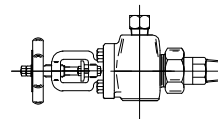
Example 1

Type 16 Offset Pattern Inside Screw
Flanged Vessel Connection
Gauge Connection NPT
Vent / Drain Connection NPT Plugged



Example 2

Type 26 Offset Pattern (OS&Y)
Union Vessel Connection
Gauge con. NPT - Drain / Vent NPT Plugged
Vent / Drain Connection NPT Plugged



Typical Material Specifications

Chamber / Cover / Flanges

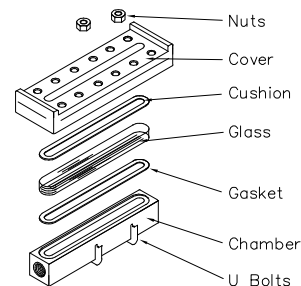
A105N, A350 LF2, 304 / 304L, 316 / 316L, F44, F51, F55

Bolting

Carbon Steel -A193 2H A194 (Zinc Plated & Passivated)

Carbon Steel -A193 2H A194 (Hot Dip Galvanized)

Stainless Steel -A193 B8M / A194 8M



Typical Vessel Connection

Threaded - 1/2", 3/4" NPT (Union connections avail.)

Flanged - 1/2", 3/4", 1", 1.5", 2" & 3"

ANSI Class 150#, 300#, 600#

Typical Gauge Connection

Threaded - 1/2", 3/4" NPT (Union connections avail.)

Socket Welded - 1/2", 3/4"

Butt Welded - 1/2", 3/4"

Typical Vent / Drain Connection

Threaded - 1/2", 3/4" NPT

Flanged - 1/2" & 3/4" ANSI Class 150#, 300#, 600#

Selection of Available Accessories

Non-Frosting Extention

For low temperature applications protecting against the build up of frost.

Calibrated Scale

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

Internal Heating System

A small diameter tube containing the heating system which is then in direct contact with the process and situated in the centre of the chamber.

External Heating System

The medium may be heated or cooled using either a square or small diameter tube attached to the outside of the chamber. Connections are 1/4" NPT female.