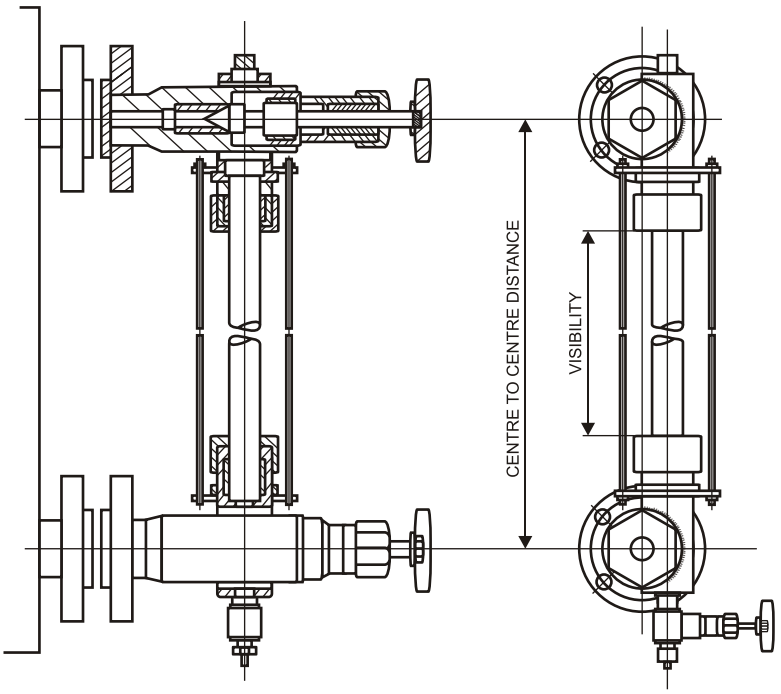
Tubular Level Gauge

Tubular type Level Gauges are used for direct level indication in Tanks and Vessels under Pressure and Temperature. A top and a bottom fitting can be fixed on suitable nozzles or bosses at top and bottom of a Tank with a Glass Tube fitted between them. The liquid level in Glass Tube indicates the level of liquid in Tank.

The top and bottom Valve fittings can be provided with Isolating Needle Valves Handwheel operated. The minimum Centre to Centre Distance is about 600 mm.



Top fitting can have Vent Valve (Needle type Valve) instead of Plug (normally ½" NPT/BSP). Similarly bottom fitting can have Drain Valve. The end connections can be Flanged (normally 20/25 NB Flanged to BS/IS/ANSI/DIN Standard) or Socket Weld type (3000 psi rated-normally 20/25 NB) or Screwed type through Union (20/25 NB BSP/NPT- Male; can be Female also).

The material of construction can be Carbon Steel, Stainless Steel (SS-304)/316), PVC, Polypropylene, etc. Maximum Hydraulic Test Pressure is 3 Kg/cm² in case of PVC / Polypropylene material of construction. The fittings can be Fabricated (Carbon Steel, SS-304/316). The Valves have Screwed Bonnets. Valve Packing can be Graphoil, Teflon 'V' Ring or Teflon Rope and Glass Tube Packing can be Graphoil, Rubber Cone, Teflon 'V' Ring or Teflon Rope.

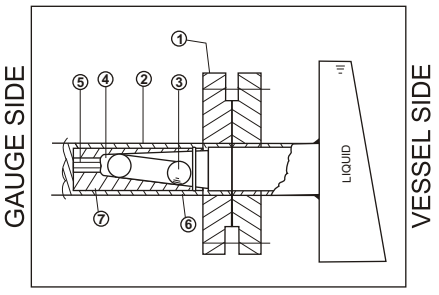
Top and bottom fittings are provided with Safety Ball Sealing arrangements to prevent gushing out of liquid and gas under pressure in case of Glass Tube breakage. Needle Valve Spindles are provided with End Pins to disengage Ball if gets stuck in Closed position.

For Glass Tube protection against mechanical damage. Twin mild Steel (Epoxy painted) Protector, Metal Tube Protector, 4-Guard Rod Protector (with or without Wire Mesh wrapping) or 3-Glass Protector can be provided.

Tubular Level Gauges are normally not recommended for Pressure and Temperature higher than 15 Kg/cm² and 200°C.

Function of Autoball Check

Autobail "check facility is provided to prevent " liquid loss" from vessel during breakage of gauge glass. It consists of a capsule located along the 'neck' of the gauge and contains a 'ball', which moves freely along its inner race, between the stopper & orifice. During breakage, the pressure on 'ball' from gauge side will be atmospheric, whereas higher pressure from the vessel side ("operating pressure + liquid column") will cause the ball to move and block the orifice whereby liquid loss will be minimized.



1. PROCESS FLANGE, 2. NECK,
3. BALL,
4. ORIFICE, 5. NEEDLE,
6. BALL STOPPER,
7. CHECK CAPSULE

Installation :
Side mounted through tank nozzles, having matching counter flanges / threads, ensuring that CC distance between nozzles corresponds with CC distance (R) of the gauge.

SALIENT FEATURES

19 mm OD (2/3 mm Wall Thickness)
Borosilicate Glass Tube as per BS: 3463.

360 Visibility.

Auto ball check is built into end block for preventing liquid loss during glass breakage.

Deep Stuffing Boxes with Teflon 'V' Ring Packings for Vacuum application.

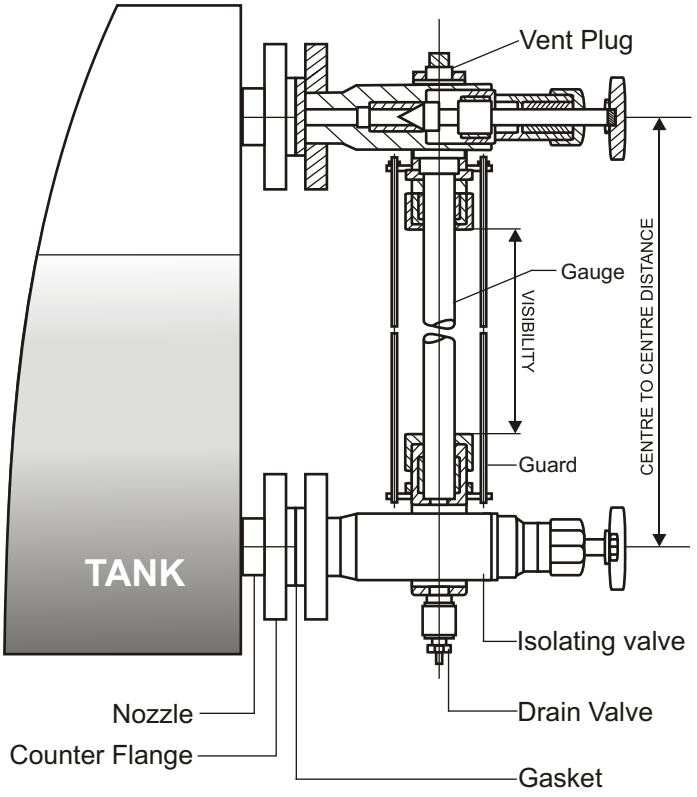
Glass removal / replacement possible without dismentling of gauge.

Offset isolating valves permit cleaning of glass guage without removal.

With IBR Certificate, if required.

Aluminium or Acrylic Plastic Scale with engraved graduations (Min. Graduation is normally 10 mm).

Intermediate Support (Straight or Off-set) in case of Centre to Centre Distance more than 1400 mm.



Installation

Standard Specifications:

Gauge	:	Heavy walled Borosillicate Glass Tube with 16/19 mm OD for regular liquids and 25 mm OD for viscous liquids.
Packing	:	Ptfe.
Glands	:	CI or SS 316.
End Blocks	:	MS, SS 304, SS 316 or PP with or without Isolating Offset Needle Valves.
Guards	:	MS c-channels or tie-rods.
Process Conn.	:	¾" or 1" flanged or screwed to various standards.
Vent/Drain	:	½" threaded plugs or ½" plug / valve.
Calibrated Scale	:	Anodized AL. (LC=10mm).
CC dist. (R)	:	3000 mm. (Max.) In single length. Extended range through couplers.
Visibility	:	R-150 mm.
Maximum Temp.	:	200°C (PP Blocks: 90°C).
Test Pressure	:	10 kg/cm² at amb. Temp. (PP Blocks: 2 kg/cm²).

Model No.

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- With IBR T.C.- I
- Non Ibr — N
- Glass size
  - 19 MM O.D.- 1
  - 25 MM O.D.- 2
- 25 NB Side Flanges-1
- 20 NB Side Flanges-0
- MOC
  - 0 - MS
  - 1 - CS (EN-8)
  - 2 - ASTM A 105
  - 3 - SS 304
  - 4 - SS 316
  - 5 - PP
- CC Of Side flanges in MM

Applications: Petro-Chemical, Fertilizer, Power generation, Pharmaceutical, Automobile, Water / Waste Water / Effluent treatment plants, Cooling / Lubricating / Filtration Systems, Liquid Sewerage tanks, Chemical dosing system, Chemical reactors etc.

Operating Information
Specify → Liquid,
CC Distance of side flanges,
Operating Temperature & Pressure

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