

Transparent Tubular Level Gauge - TTG

Simple low cost and reliable for direct reading of clean liquid levels at low pressure & temperature conditions.

Construction & Operation :

Gauge is fitted between two end blocks through gland packings. The gauge is mounted parallel to tank so as to form a close loop causing tank liquid to seek its level in the gauge. 'C' channels / Tie rods are provided to protect gauge from accidental blows. End blocks are provided with vent plug, drain valve & integral offset valves.

Salient Features :

- 360° visibility with Tie-rod guards.
- Offset valves permit cleaning of gauge glass & its removal on line.
- IBR certified gauge for steam service (on demand)
- Rubber lined gauge for corrosive liquids (on demand)

Specifications :

Gauge	: Tempered Borosilicate Glass (HW) x 16 mm OD (25mm OD for viscous liquids)
End Block MOC	: CS / SS 304 / SS 316 / PP / PVDF
End Block Type	: w/o Valve/with Integral Offset Valve/with Integral Offset Valve + Autoball check
Guards	: 'C' Channel (CS/SS304/FRP); Tie Rods (CS/SS304)
Gland MOC	: CI / SS 316 / PP
Packing	: PTFE
Process conn.	: 1" Flanged (ANSI 150#) or BSP Screwed (M)
Vent / Drain	: Plug / Ball valve
Calibrated Scale	: Polycarbonate (LC=2mm) / SS(LC=10mm)
CC Dist.	: 300 to 1500mm (single gauge) 1500 to 3000mm (2 gauges) through coupler
Visibility	: CC Dist - 150mm
Maximum Temp.	: 200°C (Metallic)/100°C (PVDF)/70°C(PP)
Test Pressure	: Vacuum to 10 Kg/cm ² (Metallic) Vacuum to 2 Kg/cm ² (PVDF/PP)

Special Features (Optional) :

Glass Protector	: 3mm thk perspex shield to protect gauge glass & personnel safety
Auto Ball Check	: SS316 or PTFE Ball to minimise liquid loss during glass breakage
Frostfree	: 20mm thk x 35mm extension Perspex Shield to prevent frost formation on outer surface of glass for clear visual reading of liquid at low temp.
Illuminator	: To provide uniform light along the length of gauge glass. It consists of Perspex Reflector, illuminated through a LED Bulb (80 to 250VAC)with AI Enclosure IP65/Ex-p Gr IIB or IIC. The length of single illuminator is 1200mm (max). For length beyond 1200mm, two illuminators are joined together.
Jacketing	: For prevention of process liquid solidification. It consists of a ss pipe with "NPT(F)" inlet & outlet at bottom & top end blocks for heating/cooling agent.

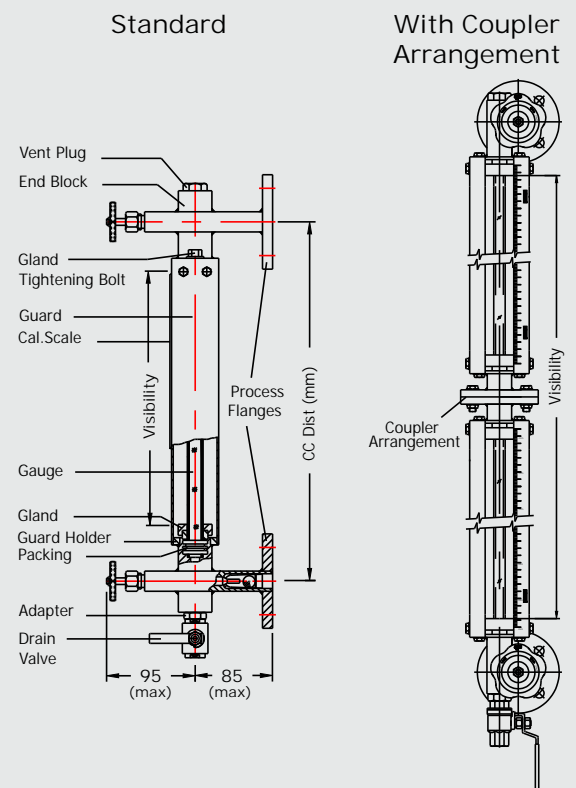


Metallic Flanged



PP Flanged

Schematic Diagram :



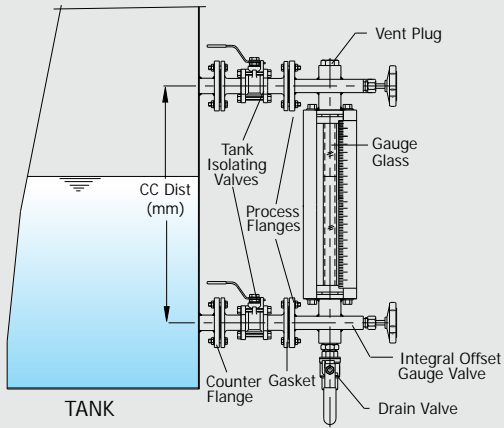
Accessories (Optional) :

- 1) Tank Isolation Valves (1 pair) with nuts, bolts & gaskets for gauge removal.
- 2) Counter flanges with nuts, bolts & gaskets.

Note 1 - All CI/CS components are epoxy powder coated

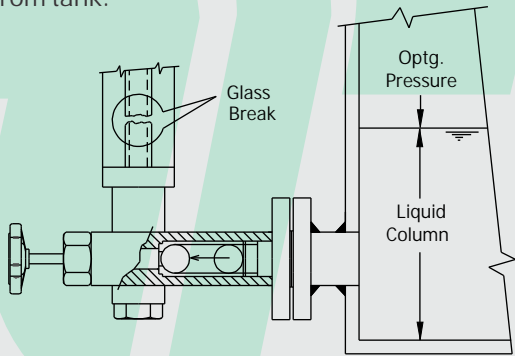
Note 2 - Separate Datasheets are available for IBR & Rubber Lined Gauges

Typical Installation with Tank Isolating Valves

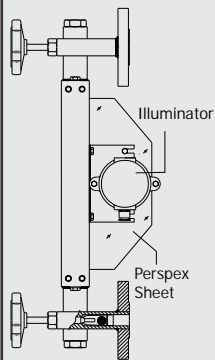


Working of Autoball Check during Glass Breakage

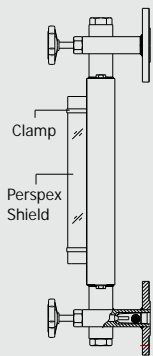
It consists of a capsule and free moving ball along its inner race, between the stopper & orifice. During glass breakage, the high pressure from vessel side (Optg. Pr. + Liquid Column) moves the ball to block the orifice and minimize liquid loss from tank.



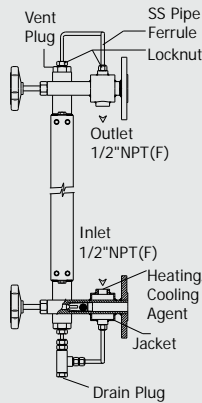
Illuminator



Frost Free



Jacketing



Model Identification :

TTG -													
Gauge Size	16mm.OD. x B. Glass (HW)	1											
	25mm.OD. x B. Glass (HW)	2											
	Others	0											
End Block Moc	CS		M										
	SS 304		N										
	SS316		S										
	PP		P										
	PVDF		D										
	Others		O										
End Block Type	W/O Valve							W					
	Integral Offset Valve							V					
	Integral Offset Valve with Auto Ball Check							A					
	Others							O					
Guards	CS 'C' Channels									1			
	FRP 'C' Channels									2			
	SS 304 'C' Channels									3			
	CS Tie Rods									4			
	SS 304 Tie Rods									5			
	With Glass Protector									6			
	Others									0			
Gland Moc	CI										I		
	SS 316										S		
	PP										P		
	Others										O		
Process Connections	Flanged											F	
	Screwed (M)											S	
	Others											O	
Vent x Drain	Plug x Plug											1	
	Plug x Ball Valve											2	
	Others											0	
Cal. Scale	Polycarbonate												P
	SS 304												S
	Others												O
Special Features	None												
	Frost Free												W
	Illuminator												F
	Jacketing												I
													J

Ordering Information :

Model No x Liquid x Optg. Temperature & Pressure x Accessories (optional)

