Technical Specifications: Technical Data

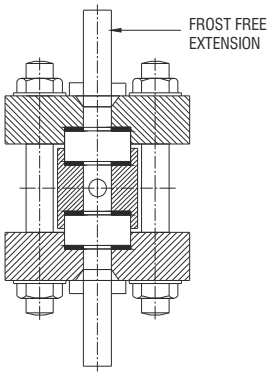
Isolation Valve	Auto Ball Check Valve a) Screwed bonnet offset construction suitable upto 50 kg/cm^2 b) Bolted bonnet offset construction suitable above 50 kg/cm^2 c) Material construction as per wetted part
Vent	½" Plugged / ½" Needle Valve / ½" Ball Valve / ½" Globe Valve / ½" Gate Valve, other on request
Drain	½" Plugged / ½" Needle Valve / ½" Ball Valve / ½" Globe Valve / ½" Gate Valve, other on request
Optional	a) Protection Shield for temperature upto 550°C - Mica Shield b) Illuminator - Weatherproof IP 67 c) Illuminator - Flameproof Gr.IIA/IIB d) Illuminator - Flameproof Gr.IIC e) Non-Frost Extension for extreme low temperature application f) Heating Jacket - to read the level of high congelable or ebullient liquid g) IBR Certification

Special Application

Cryo Application

If a conventional level gauge is used for extreme low temperature applications, it becomes difficult to observe the level of liquid as the gauge front tends to freeze. To get rid of this problem, an acrylic non-frosting plate is mounted in front of the gauge. So the observation of the liquid level is much easier this way.

Our Non-Frosting Transparent Level Gauges are classified depending on the process temperature, they height of the non-frosting plate window may be selected from 80 to 250 mm.



Transparent

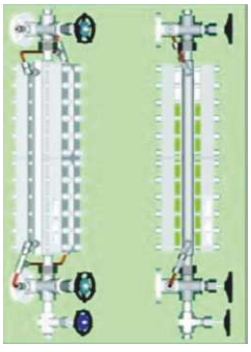
Technical Specifications: Temp. rating and dimensions of non-frosting plates

Temperature °C	0…-20	-21…-45	-46…-100	-101…-160	-161…-200
Recommended Materials	LTCS	LTCS	304SS	316SS	316LSS
Acrylic Height mm	80	100	150	200	250

Jacket Type

For a jacket type requirement application. This gauge is used to read the level of high congealable or ebullient liquids. The principle is to inflow a steam for congealable liquids and a cold water for enbullient liquids through the inside of the jacket to ensure accurate and reliable level observation.

This type is used for observing the fluid by changing it into state of liquid after heating or cooling it through jacket according to fluid's features. Our standard is that the inlet of the jacket for steam or cold water is ½" NPT(M) and or 15 NB flange. Others are available on request.

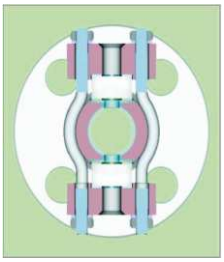


Transparent Level Gauges

Special Application

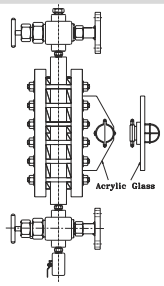
Corrosion Application

More severe demands may often be required on liquid level gauges in terms of resistance to corrosion, and this is accomplished by lining or coating all wetted parts. The most important aspect of this process is the preparation of the metal substrate.



Illuminator

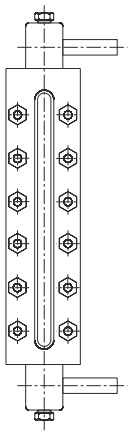
Transparent level gauges with illuminator are useful for observing the fluid level in a dim place or at night by using an explosion-proof and weather-proof. The illuminator can be mounted on all types of transparent level gauges.



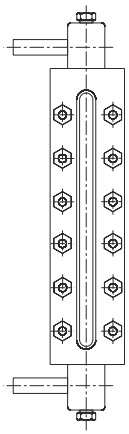
Technical Specifications: Illuminator Specifications

Rating	Upto 15 W / 25W GLS Lamp or 15W LED Lamp with or without Flashing 240 VAC
Construction	In cast alloy LM6
Gas Group	IIA, IIB, IIC as per IS 2148 / 2004
Deg of protection	IP66 as per IS : 12063 /1987
CCE Certificate	A/P/HQ/MH/104/1817
Earthing	2 Nos. External & 1 No. Internal
Paint	Epoxy Powder Coated Light Grey shade 631 of IS:5
Cable Entry	2 Nos. 3/4" ET With cable glands
Mounting	Transparent acrylic sheet with mounting bracket

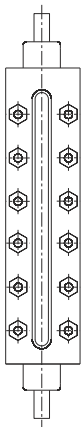
Process Orientation



Side-Side (Left)



Side-Side (Right)



Top Bottom

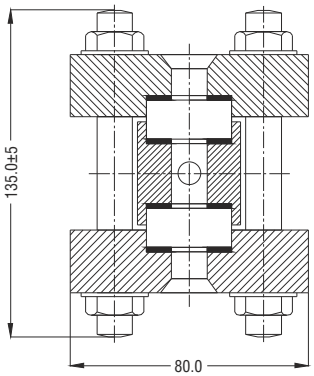
Transparent Level Gauges

Construction and dimensional cross sectional overview

The gauge consists of a body having machined to have a liquid where high temperature and corrosions are liable to occur, it can be furnished with a mica shield to prevent it from being corroded. There types are preferably used for reservoir tanks that require a relatively long visible length by constructing the supporter.

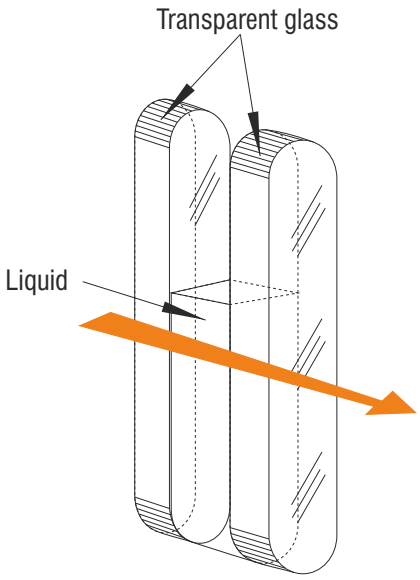
The transparent level gauge is assembled firmly with gasket, transparent glass, cushion gasket and gauge cover on the body by stud-bolts. The most advantage of this type is that it has no invisible sections (dead band). Our standard overlapped section is 10 mm as minimum and the gauge is so designed 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.

The gauge is used with a special reflex type gauge glass which has wider V-shaped refractive grove and red coating on the outside of the glass. It provides a clear observation of liquid level because of made refracting red colour on th V-groove for steam or beyond portion of the level and it's colour of fluid itself for liquid portions.

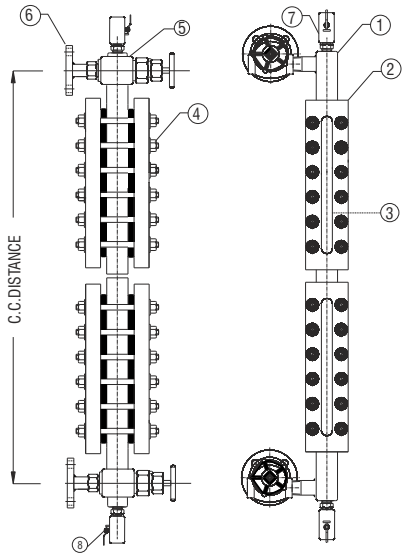


Transparent

Construction (Sectional View)



Principle of transparent level glass



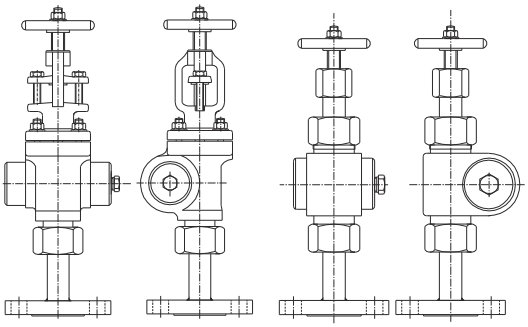
Specification

1 Main Chamber
2 Cover plate
3 Transparent Glass
4 Bolt & Nuts
5 Isolation Valve
6 Process Connection
7 Vent Ball Valve
8 Drain Ball Valve

Isolation Valve

Bolted and screwed bonnet offset construction to attain device durability, high stability, low hysteresis, high leakage class, bolted bonnet construction for high temperature and pressure, all construction in forged only with the best level 1 radiographed and attain high leakage class of 10(-5) mbar lt/sec.

Screwed connection for low temperature and pressure with full forged construction and with best of level 1 radiography and attain high leakage sealing class of 10(-4) mbar lt/sec.



Bolted Bonnet **Screwed Bonnet**

Isolation Valve

10/17 REV.: 00

Ordering Information

TLG AA-TL-1000-F03-ZE-VD-WD-VW-WW-XW-UW-QV-RV-SO-Z

Type	
AA	Low Pressure - 30kg/cm^2
AB	Medium Pressure - 100kg/cm^2
AC	High Pressure - 200kg/cm^2

Orientation of Process Connection	
TK	Top-Bottom Vertical (Partial Visibility)
TL	Side-Side Right (Full Visibility)
TM	Side-Side Left (Full Visibility)

Centre to Centre Distance	
1000	Indicate the required Centre to Centre Distance in mm

Process Connection			
Flanged Connection			
F01	1/2", 150# RF	F11	1", 300# RF
F02	3/4", 150# RF	F12	1.5", 300# RF
F03	1", 150# RF	F13	2", 300# RF
F04	1.5", 150# RF	F19	1", 600# RF
F05	2", 150# RF	F20	1.5", 600# RF
F09	1/2", 300# RF	F21	2", 600# RF
F10	3/4", 300# RF	XX	Any Other*
Threaded Connection			
B04	1/2"BSP (M)	N04	1/2"NPT (M)
B05	3/4"BSP (M)	N05	3/4"NPT (M)
B06	1"BSP (M)	N06	1"NPT (M)
B07	1.5"BSP (M)	N07	1.5"NPT (M)
B08	2"BSP (M)	N08	2"NPT (M)
XX	Any Other*		

MOC of Connection			
ZA	CS (A105)	ZJ	Monel 400
ZB	CS (A106)	ZK	Monel 500
ZC	SS 304	ZL	Titanium
ZD	SS 304L	ZM	Hastelloy 'B'
ZE	SS 316	ZN	Hastelloy 'C'
ZF	SS 316L	ZO	Inconel 600
ZI	PP	XX	Any Other*

MOC of Chamber			
VA	CS	VG	Monel 400
VB	SS 304	VH	Monel 500
VC	SS 304L	VI	Titanium
VD	SS 316	VJ	Hastelloy 'B'
VE	SS 316L	VK	Hastelloy 'C'
VF	PP	VL	Inconel 600
XX	Any Other*		

Optional			
NF	Non-frost Extension	IQ	Illuminator -FlameProof Gr. IIA/ IIB
HJ	Heating Jacket	IR	Illuminator -FlameProof Gr. IIC
SX	Mica Shield	IB	IBR
IP	Illuminator -WeatherProof	XX	Any other*
Z	NIL		

Calibration Scale			
SO	Aluminium with Powder Coat	SQ	SS304
SP	Aluminium	SR	SS316
		SS	Acrylic

Drain			
RU	1/2" NPT (F), Plug	RX	1/2" Ball Valve
RV	3/4" NPT (F), Plug	RY	1/2" Gate Valve
RW	1/2" Needle Valve	RZ	1/2" Globe Valve

Vent			
QU	1/2" NPT (F), Plug	WX	1/2" Ball Valve
QV	3/4" NPT (F), Plug	QY	1/2" Gate Valve
QW	1/2" Needle Valve	QZ	1/2" Globe Valve

Isolation Valve	
UW	Screwed Bonnet Offset Construction
UX	Bolted Bonnet Offset Construction
UY	Nipple
UZ	Needle Valve

Gasket	
XW	C.A.F.
XX	P.T.F.E.
XY	Graphoil

Cusion	
WW	C.A.F.
WX	P.T.F.E.
WY	Graphoil

Fasteners	
VV	ASTM A 193 Gr. B7 / ASTM A 194 Gr. 2H
VW	SS
VX	Anodized Aluminium
VY	CS Plated

MOC of Cover Plate			
WA	CS	WG	Monel 400
WB	SS 304	WH	Monel 500
WC	SS 304L	WI	Titanium
WD	SS 316	WJ	Hastelloy 'B'
WE	SS 316L	WK	Hastelloy 'C'
WF	PP	WL	Inconel 600
XX	Any Other*		

Note: * Please consult factory