

## **GTLG SERIES GLASS TUBE LIQUID LEVEL GAUGE (Tubular Level Gauge) TOP & BOTTOM CONNECTION ORIENTATION / SIDE-SIDE MOUNTED TYPE (VIPL-GTLG)**

Simplest design, offers accurate reading in water, chemicals, petroleum products and corrosive liquid Level measurement. Standard visible length is always less than C-C distance. The maximum operating pressure range is 10 kg/cm' and maximum operating temperature range is 300 ° C. Special featured valves with ball check arrangement. Isolation valves prevent the spillage of medium in the air. MS / SS-Tie rods/ or C-Channel protects the Glass Tube from any mechanical impact.

SS scale fitted adjacent to glass tube offers local reading effectively.  
Fix and relax design in level metering. Vent/Drain provision - Plug or Valve.

### **Pair of Valves**

VA-2500 Offset with integral bonnet and Ball check arrangement-pair of Isolation Valves.

### **Specification**

C/C Distance: Up to1500mm in single glass tube, if more please contact factory

Materials: Carbon steel, Stainless steel, PP as standard

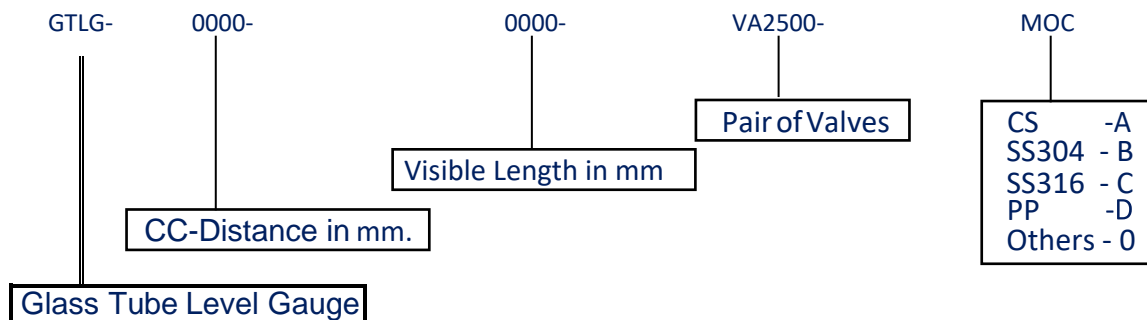
Glass: Borosil Tube of 12mm-19mm dia.

Glass Protector: MS/SS304 Tie rods / C-Channel

Valves: Auto - shut - off ball check



### **ORDERING INFORMATION (TUBULAR LEVEL GAUGE)**



VIPL - GTLG - mm - mm - VA 2500 - MOC

## **RLG SERIES GLASS PLATED LIQUID LEVEL GAUGE (Reflex Level Gauge) TOP & BOTTOM CONNECTION ORIENTATION / SIDE-SIDE MOUNTED TYPE (VIPL-RLG)**

These gauges are used for measuring the level in a vessel. These can be used for maximum pressure of up to 150kg/cm' and a maximum temperature of 400' C. Constructional features include up to 2.5 metre single piece Construction with multiple glasses between process connections. A pair of auto shut off ball check valves in

### **Working Principle**

The principle of Reflex Level Gauges is based on the difference in the refractive principle of liquid and vapour. The liquid column is contained within the recess of the liquid chamber behind the sight glass which is clamped to the gauge body. The sight glass has prismatic right angled grooves on the side facing the liquid and vapor space. Light rays entering from outside the gauge are either absorbed or reflected depending upon whether they enter the liquid or vapour space. When the ray of light encounters the surface of one of the grooves in the vapor space, it is the opposite surface of the groove and from there, totally reflected back to

the direction of observation. Thus vapour space appears as silvery white. When the light ray encounters the surface of the grooves in the liquid space, it is totally absorbed thereby the liquid behind the glass appear black.

Max. Temperature: 400°C  
 Max. Pressure: 150kg /cm'  
 Pair of Valves: VA-2500 Offset, integral bonnet with ball check arrangement  
 VA-5500 Offset design, bolted bonnet, renewable seats and ball check arrangement

**Note:** In multi sections, the gap between two sections is up to 5 mm.  
 : Indication Assembly can be rotated by 360° to get unhindered view of liquid from any angle.

### Specification:

C/C Distance: Upto100"; single piece liquid chamber.  
 Chamber: CS, SS-304, SS-316, PP  
 Cover plate: CS, SS-304, SS-316, PP  
 Flange: CS, SS-304, SS-316, PP  
 Valves: CS, SS-304, SS-316, PP  
 Glass: Toughened Borosilicate  
 Connections: Flanged, Screwed or Socket weld.  
 Gauge Valve: Auto- shut-off ball check, off-set pattern, Bolted or Screwed bonnet.  
 Drain/Vent Valve: Ball Type  
 Options: Anti-frost extension for low temperature service. Heating / cooling arrangements  
 Glass Sizes: a) 340 x 30 x 17 mm  
 b) 280 x 30 x 17 mm  
 c) 250 x 30 x 17 mm



## TLG SERIES TRANSPARENT GLASS TYPE LIQUID LEVEL GAUGE (Transparent Level Gauge) TOP & BOTTOM CONNECTION ORIENTATION / SIDE-SIDE MOUNTED TYPE (VIPL-TLG)

These gauges are used for measuring the level in a vessel. These can be used for maximum pressure of up to 150kg/cm' and a maximum temperature of 400' C. Constructional features include 2.5 metre single piece construction with multiple glasses between process connections. A pair of auto shut off ball check valves in material of construction Carbon Steel or Stainless Steel and Polypropylene as optional.

### Working Principle

Transparent Level Gauges employ two transparent glasses and a liquid chamber. The liquid level is indicated as a result of difference in the transparent properties of the two media. For water /steam applications, an illuminator is mounted on the rear side of the gauge with its light rays deflected upward into the water column. This enables the observer to see the illuminated surface of the water as the light rays impinge on the surface of separation between water and steam are reflected back to the eye of the observer. For High Temperature application mica shield is used.

### Specification

C/C Distance : Up to100" single piece liquid chamber.  
 Chamber : CS, SS-304, SS-316, PP  
 Cover plate : CS, SS-304, SS-316, PP  
 Flange : CS, SS-304, SS-316, PP  
 Valves : CS, SS-304, SS-316, PP  
 Glass : Toughened Borosilicate  
 Connections : Flanged, Screwed or Socket weld / NPT  
 Gauge Valve : Auto- shut-off ball check, off-set pattern, Bolted or Screwed bonnet.  
 Drain/Vent Valve : Ball Type



Illuminator : 230/110 VAC, 50/60 Hz.  
 Options : Anti-frost extension for low temperature service.  
 Heating / Cooling arrangements  
 Glass Sizes : a) 340 x 30 x 17 mm  
 b) 280 x 30 x 17 mm  
 c) 250 x 30 x 17 mm

**Note:** In multi sections, the gap between two sections is up to 5 mm.  
 : Indication Assembly can be rotated by 360° to get unhindered view of liquid from any angle.

## Guide to Arrive at Visible Length (Reflex/Transparent Type)

Gauges are assembled with multiglass assembled sections. Below are details of the Glass Length / Sectional Length & Visible Portion.

Glass Section Length	Glass Length	Visible Length
360 mm	340 mm	320 mm
300 mm	280 mm	260 mm
270 mm	250 mm	230 mm

## Model No. Example (Reflex/Transparent Type)

**VIPL-RLG-1500-1480-122-A-0-0-28-120-E-1-A-A-N** (Refer Last Page for Model Decodification)

### Guide Line for selecting Glass section

Kindly select Glass sections in such manner so that visibility comes near to C-C distance For Example for C-C distance 1500mm we will choose glass section as under.

360mm-1 No }  
 300mm-2 No } Sr. No. 4<sup>th</sup> of the Model Decodification  
 270mm-2 No }

### Decodification of the Model No.

Reflex type Level Gauge for C-C distance of 1500mm with offset integral bonnet with ball check arrangement, MOC Carbon Steel, Pressure 28Kg/cm<sup>2</sup>, Temp. 120°C., Process Connection Size 2" x 150 # Side-Side Mounted, Vent & Drain Plug required.

## FORMULA FOR CALCULATING VISIBILITY VISE-VIS CENTER TO CENTER DISTANCE

(Example for 1500mm C-C Distance)

(Add the No of Selected Section) + [5 x (No of Select Section-1)] - 40 = Visibility

(360 + 300 + 300 + 270 + 270) + [5 x (5-1)] - 40 = 1480mm is the Visibility

Model DE codification	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Type of Level Gauge</b>	Please Specify	Please Specify	Please Specify	Please Specify	Please Specify	Please Specify	Please Specify	Please Specify	Please Specify	Please Specify	Please Specify	Please Specify	Please Specify	Please Specify
RLG.....														
TLG.....														
<b>C-C Distance</b>														
0-2500mm.....														
<b>Visible Length</b>														
As per Selected Glass Section.....														
<b>No of Glass Section</b>														
First Digit: For 360mm Section.....														
Second Digit: For 300mm Section.....														
Third Digit: For 270mm Section.....														
<b>Valve Type</b>														
VA2500.....					A									
VA5500.....					B									
<b>Chamber Material</b>														
Carbon Steel.....						1								
SS304.....						2								
SS316.....						3								
PP.....						4								
Others.....						0								
<b>Cover Plate Material</b>														
Carbon Steel.....							5							
SS304.....							6							
SS316.....							7							
PP.....							8							
Others.....							0							
<b>Pressure</b>														
0-150Kg/cm2.....														
<b>Temperature</b>														
0-400°C.....														
<b>Process Connection</b>														
1" NPT.....														
1" SW.....										A				
1" 150#.....										B				
1" 300#.....										C				
2" 150#.....										D				
2" 300#.....										E				
Others.....										F				
										G				
<b>Orientation</b>														
Side-Side.....											1			
Top-Bottom.....											2			
Others.....											3			
<b>Vent</b>														
Plug.....														
Ball Valve.....												H		
Others.....												J		
												K		
<b>Drain</b>														
Plug.....													1	
Ball Valve.....													2	
Others.....													3	
<b>Special Features</b>														
Heating Arrangement.....														L
Cooling Arrangement.....														M
Frost Free Arrangement.....														P
Illuminator (For TLG only).....														R
Others.....														S
Not Applicable.....														T