



## Automatic Tank Level Gauge With Magnetically Coupled Float 133M Low Pressure - Upto 7 Kg/cm<sup>2</sup>

### INTRODUCTION

The tank level gauge with magnetically coupled float 133-M, for Low pressure applications is a derivative of our field proven Automatic Tank Level Gauge, Series IL-133 (ATLG), which meets the requirement of level measurement of liquids stored under pressure. It is recommended only for clean liquids and services. A spherical float, which floats on the liquid level, is magnetically coupled to ATLG. The level reading is displayed on ATLG and can be transmitted to a remote indicator / controller using accessories like Two Wire Transmitter (TWT), Smart Tank Data Transmitter (STDT) and Limit Switch Assembly (LSA).

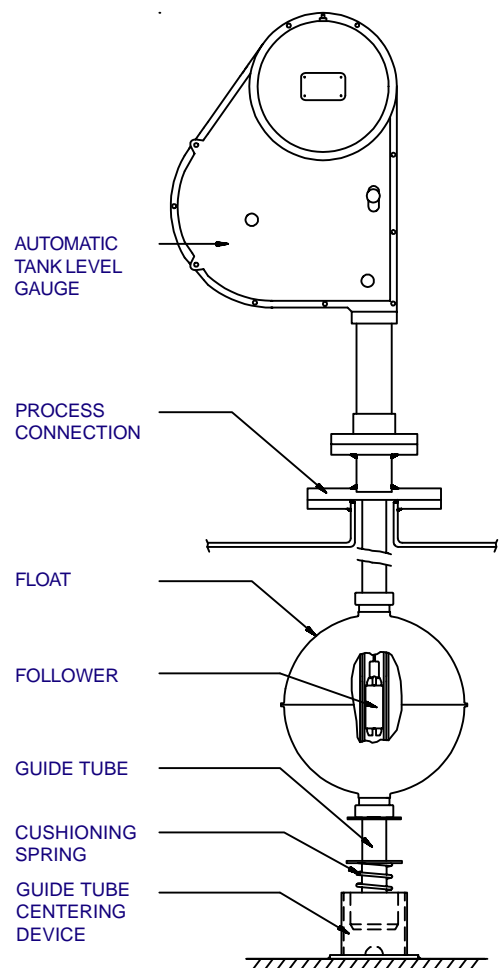
### OPERATION AND SYSTEM COMPONENTS

The spherical float of 133M floats on liquid surface and travels up or down over a guide tube of non magnetic stainless steel. It engages a magnetic follower inside the guide tube which is attached to the punched tape of the tank level gauge. The sealed guide tube provides isolation, thereby preventing ingress of product vapours/ fumes into the ATLG. It is strongly recommended that the gauge be mounted on a nozzle in close proximity to a menhole of minimum diameter of 200 mm for insertion / removal of float.

**AUTOMATIC TANK LEVEL GAUGE :** The automatic tank level gauge is a field proven instrument employing a constant force spring, sprocket and a mechanical counter to display level. It is connected to the magnetic follower.

**SPHERICAL FLOAT :** The float is spherical & designed to withstand the rated pressure. Prior to final sealing of the float a magnet is inserted into the float.

**GUIDE TUBE :** The upper end of the guide tube is a spool piece which connects the tank level gauge with the process connection nozzle. Bottom of the guide tube is sealed and has a cushioning spring fitted.



**FOLLOWER :** It remains magnetically locked to the float assembly and tracks liquid level. If the follower uncouples from the float the follower moves to the top.

**GUIDE TUBE CENTERING DEVICE :** This device is welded to the tank bottom and is recommended whenever the guide tube length exceeds 5 meters. This ensures verticality of guide tube at all times.

### OPTIONAL ACCESSORIES

- Two Wire Transmitter with / without Limit Switch Assembly OR Smart Tank Data Transmitter (STDT)

## SPECIFICATIONS

Range (L)	: 5000 mm (Max.)
Accuracy	: $\pm 3$ mm *
Resolution	: 1 mm
Operating pressure	: 6 Kg/cm <sup>2</sup> (Max.)
Operating density	: 0.6 to 1.2 gm/cc
Operating temperature	: 0°C to 120°C
Process connection	: 2" ( 50 NB)
Float (Spherical)	: $\phi$ 240 mm
Guide tube	: SS 316, 1" ( 25 NB )
Magnets	: Alnico

\* For liquid density = 1.0 gm/cc.

In case of side mounting, the accuracy reduces marginally.

## SCOPE OF SUPPLY

- 1 Automatic Tank level gauge with 1 1/2" (40 NB) flange with welded 1 1/2" BSP (40 NB) socket.
- 2 Guide tube assembly.
- 3 Spherical float assembly.
- 4 Follower assembly with tape to follower joint.
- 5 Guide tube centering device.

## ORDERING CODE

1 3 3 M

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### MOUNTING

LOW PRESSURE SIDE MOUNTED S  
LOW PRESSURE TOP OF TANK MOUNTED T

### FLOAT MATERIAL

SS 316 1

### GUIDE TUBE MATERIAL

SS 316 1

RANGE , L, IN mm

### LIQUID DENSITY ( $\pm 0.05$ gm/cc)

- 1 0.5 gm/cc
- 2 0.7 gm/cc
- 3 0.8 gm/cc
- 4 0.9 gm/cc
- 5 1.0 gm/cc
- 6 1.1 gm/cc
- 7 1.2 gm/cc

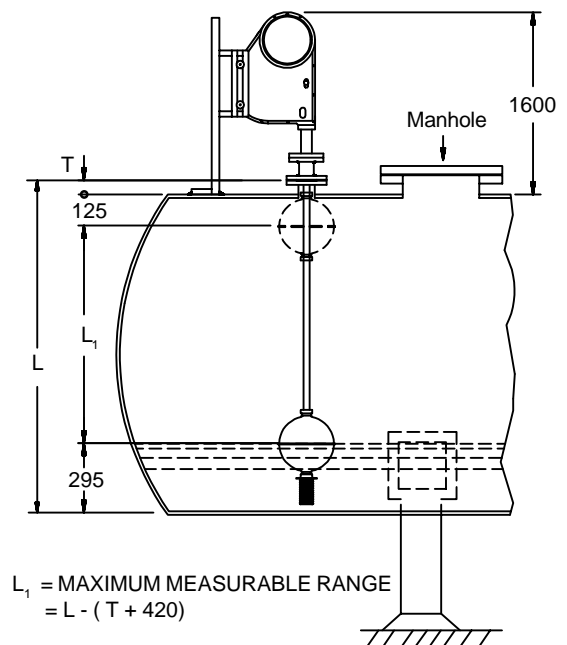
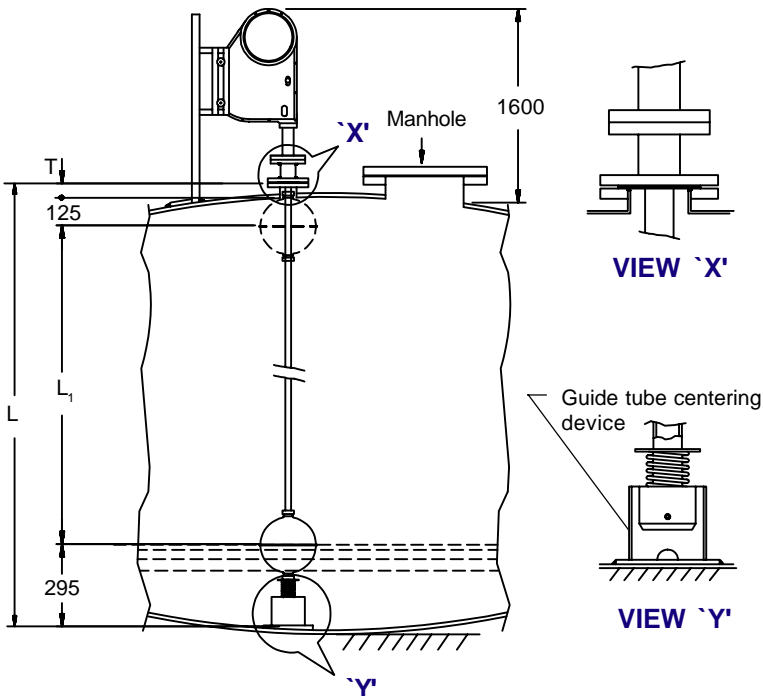
### PROCESS CONNECTION

- 1 2" ANSI, RF, 150 #

Note : 1 It is strongly recommended that the gauge be mounted on a nozzle in close proximity to a manhole of minimum diameter 300 mm for insertion / removal of float.

## INSTALLATION ( UPTO 5 MTRS.)

## INSTALLATION ( UPTO 3 MTRS.)



\*\*\* Continuous developments may necessitate changes without prior notice

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## SBEM Pvt. Ltd.

39, Electronic Co-Operative Estate, Pune-Satara Road, Pune - 411 009 (INDIA)

Tel. : 91-20-4220505, 4223375 Fax - 91-20-4215670

Email : [sales@sbem.co.in](mailto:sales@sbem.co.in) [sbemsales@vsnl.com](mailto:sbemsales@vsnl.com)

Web: [www.sbem-india.com](http://www.sbem-india.com)

Works : Bibwewadi Industrial Estate, 691/A/2, Pune-Satara Road, Pune-411 037(India)

Email : [mfg@sbem.co.in](mailto:mfg@sbem.co.in)

Office : MUMBAI

CHENNAI

NEW DELHI

VADODARA

Tele. : 91-22-2782 3601, 2782 3603

91-44-2445 1235, 2441 2947

91-11-2656 0647, 2696 9679

91-265-233 5196, 235 8184

Fax : 91-22-2782 3603

91-44-2441 2947

91-11-2696 9679

91-265-233 0906

Email : [mumbai@sbem.co.in](mailto:mumbai@sbem.co.in)

[chennai@sbem.co.in](mailto:chennai@sbem.co.in)

[newdelhi@sbem.co.in](mailto:newdelhi@sbem.co.in)

[vadodara@sbem.co.in](mailto:vadodara@sbem.co.in)

