

# FLOAT & BOARD TANK GAUGE - 'FBG'

It is an economical, easy to install for liquid level indication in bulk storage tanks under low pressure condition. It is assembled at site by the user.

## Salient Features :

- Durable aluminium powder coated gauge board (white) with black graduations & numerals.
- Level Indication in 'cms' and accurate to 5mm.
- Option of half travel scale.
- Option of Seal pot for fuming liquids.
- Option of one or two adjustable switches with potential free contacts.

## Construction & Operation :

1) **Guided** : (Fig 1 overleaf) It consists of a float connected to a pointer through a rope via a set of pulleys. The pointer with nylon roller guides smoothly over a calibrated gauge board, positioned parallel to the tank. The float accurately follows liquid level variations in vertical direction. The horizontal float movement is restricted by two guide wires firmly anchored to tank bottom. As such, the pointer is in `TOP POSITION' when tank is `EMPTY' and in `BOTTOM POSITION' when `FULL'. Pointer indicates 'Level'. The gauge board is supplied in 1mtr sections and multiple gauge boards are connected through gauge brackets as per ordered measuring range.

**Applications** : Liquid storage tanks upto 15mtrs having moderate turbulence

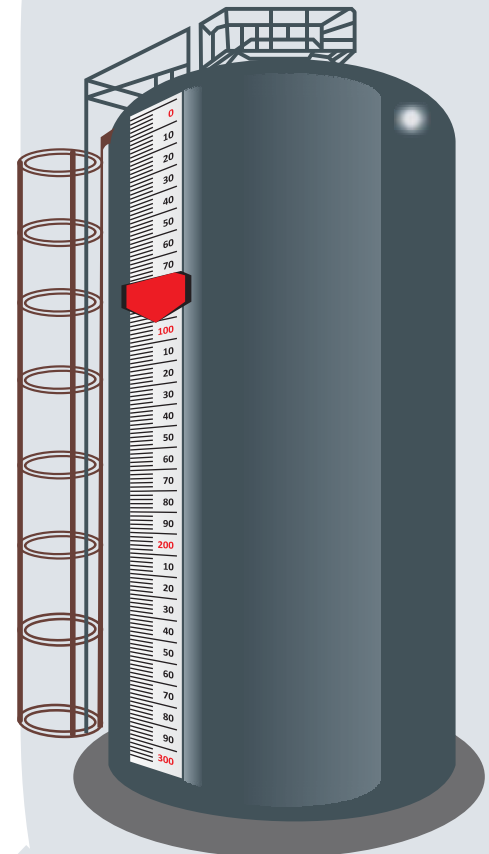
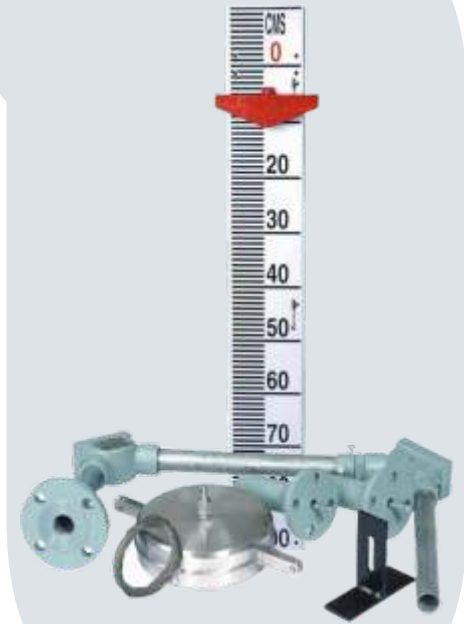
2) **Unguided** : Construction is similar to (1), except guide wires are not provided, as the horizontal float movement is negligible.

**Applications** : Liquid storage tanks upto 3mtrs having minimum turbulence

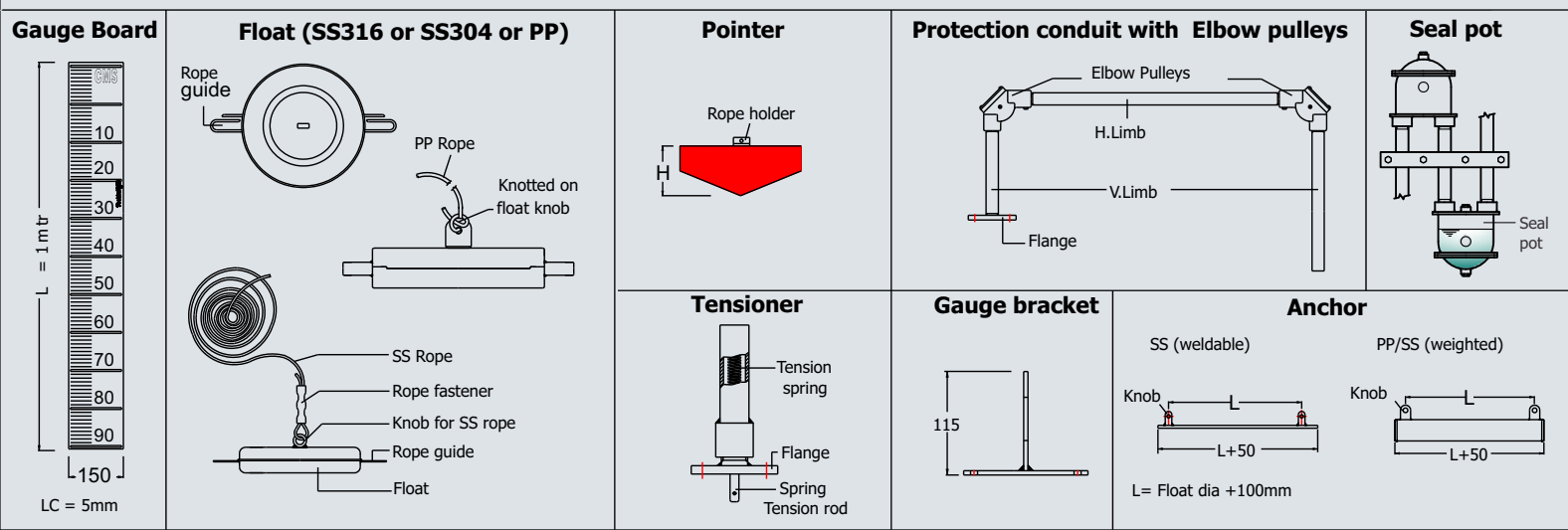
## Specifications:

| Construction            | 1. Guided   | 2. Unguided   |     |      |                                 |    |    |     |          |     |       |
|-------------------------|---|---|-----|------|---------------------------------|----|----|-----|----------|-----|-------|
| Measuring Range         | : Guided  | 7.5 mtrs. with Ø200mm float<br>15 mtrs. with Ø350mm float |     |      |                                 |    |    |     |          |     |       |
|                         | Unguided  | 3mtrs. with Ø200mm float                                  |     |      |                                 |    |    |     |          |     |       |
| Travel                  | : Full or Half corresponding to range.  |   |     |      |                                 |    |    |     |          |     |       |
| Least Count             | : 5 mm  |   |     |      |                                 |    |    |     |          |     |       |
| Max Temperature         | : 80°C (PP) / 150°C (SS)  |   |     |      |                                 |    |    |     |          |     |       |
| Max Pressure            | : Atm   |   |     |      |                                 |    |    |     |          |     |       |
| Float                   | : SS304/SS316/PP - Ø200mm & Ø350mm  |   |     |      |                                 |    |    |     |          |     |       |
| Float/Guide Wire Rope   | : SS304/SS316 x Ø1.6mm (multi strand) ,<br>PP x Ø3mm (multi strand)   |   |     |      |                                 |    |    |     |          |     |       |
| Calibrated Gauge Board  | : 6" wide x aluminium powder coating with black graduations & numerals.   |   |     |      |                                 |    |    |     |          |     |       |
| Pointer                 | : Red powder coated steel with measuring rope holder<br>Height 60mm / 80mm for 7500 / 15000 range respectively  |   |     |      |                                 |    |    |     |          |     |       |
| Protection Conduit      | : Vertical & horizontal limb in galvanized steel or PP pipe.<br>V limbs - 20NB x 285& 195mm (2 nos)<br>H limb - 20NB x 650mm long (1 no) -<br>(Telescopic arrangement (optional) for metallic MOC)  |   |     |      |                                 |    |    |     |          |     |       |
| Elbow pulley            | : Cadmium plated steel or PP pulley with PTFE bush and<br>ss shaft housed in weatherproof aluminium or PP enclosure.  |   |     |      |                                 |    |    |     |          |     |       |
| Tensioner               | : Cadmium plated steel spring housed in CS or PP enclosure.   |   |     |      |                                 |    |    |     |          |     |       |
| Anchor                  | : 1. Weldable - SS304/SS316 plate (25mmx6mm thk)<br>2. Weighted - SS304/SS316 (Ø33mm) or (Ø50mm) for all  |   |     |      |                                 |    |    |     |          |     |       |
| Rope Fasteners          | : SS304 / SS316   |   |     |      |                                 |    |    |     |          |     |       |
| Gauge Brackets          | : Powder coated steel   |   |     |      |                                 |    |    |     |          |     |       |
| Alarm S/W ( Adjustable) | : Microswitch - 5A, 250VAC (SPDT) in ABS enclosure (IP65)   |   |     |      |                                 |    |    |     |          |     |       |
| Seal pot                | : <table border="1"> <thead> <tr> <th>MOC</th> <th>mmWC</th> <th>Vol. of sealant oil (our scope)</th> </tr> </thead> <tbody> <tr> <td>AI</td> <td>50</td> <td>200</td> </tr> <tr> <td>CS or SS</td> <td>200</td> <td>1 Ltr</td> </tr> </tbody> </table> |   | MOC | mmWC | Vol. of sealant oil (our scope) | AI | 50 | 200 | CS or SS | 200 | 1 Ltr |
| MOC                     | mmWC  | Vol. of sealant oil (our scope)                           |     |      |                                 |    |    |     |          |     |       |
| AI                      | 50  | 200   |     |      |                                 |    |    |     |          |     |       |
| CS or SS                | 200   | 1 Ltr   |     |      |                                 |    |    |     |          |     |       |

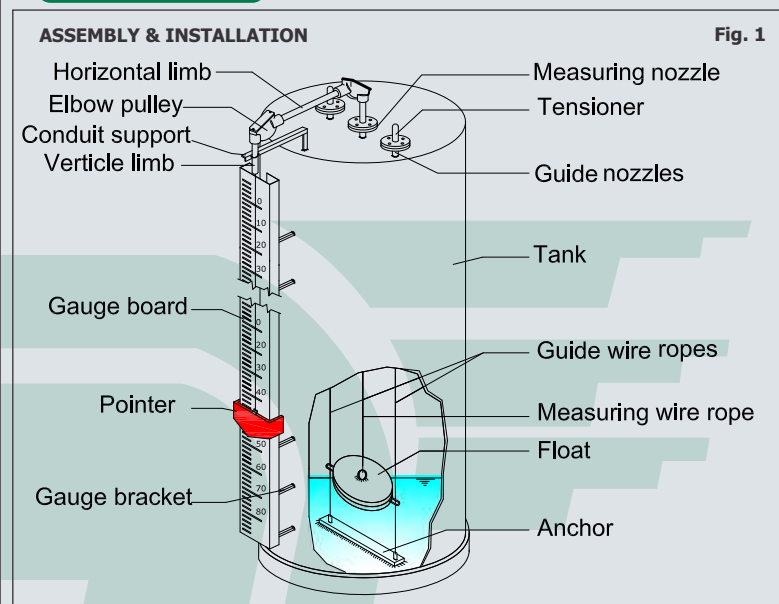
Note : PP seal pot is filled with water for fuming acidic services



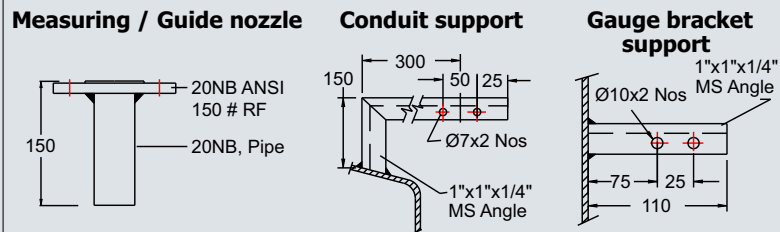
# Components & Sub Assemblies



## Installation



## Components to be fabricated by 'User'



## Model Identification

**FBG or FBG (H) :** [ ] X Range (mm)

### Construction

Guided — G  
Unguided — C

### Float x Dimensions

SS 304 x Ø200mm — N1  
SS 304 x Ø350mm — N2  
SS316 x Ø200mm — S1  
SS316 x Ø350mm — S2  
PP x Ø200mm — P1  
PP x Ø350mm — P2

### Seal Pot

50mm WC — 1  
200mm WC — 2  
Without — W

### Alarm Switches

Adjustable Microswitch x 1 — 1  
Adjustable Microswitch x 2 — 2  
Without — W

### Installation

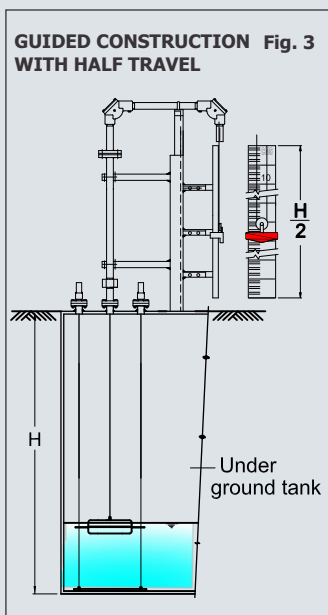
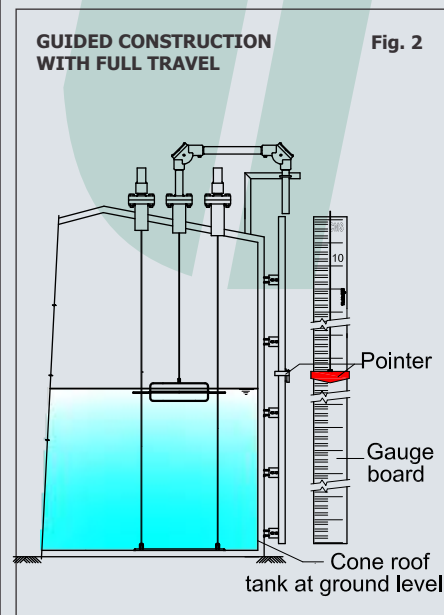
Ground Level Tank — G  
Under Ground Tank (Sump) — U  
Overhead Tank — H

**FBG : Full travel scale. FBG(H) : Half travel scale**

**Additional Information to be provided :**

Range x Service liquid x Temp. x Pressure

Units in mm



**FBG can be installed on tank "when empty" or "in service"**

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Custom built specs./options available on demand. We reserve the right to modify design and specifications without prior notice.



R A T E D  
**NSIC-CRISIL SE1A**