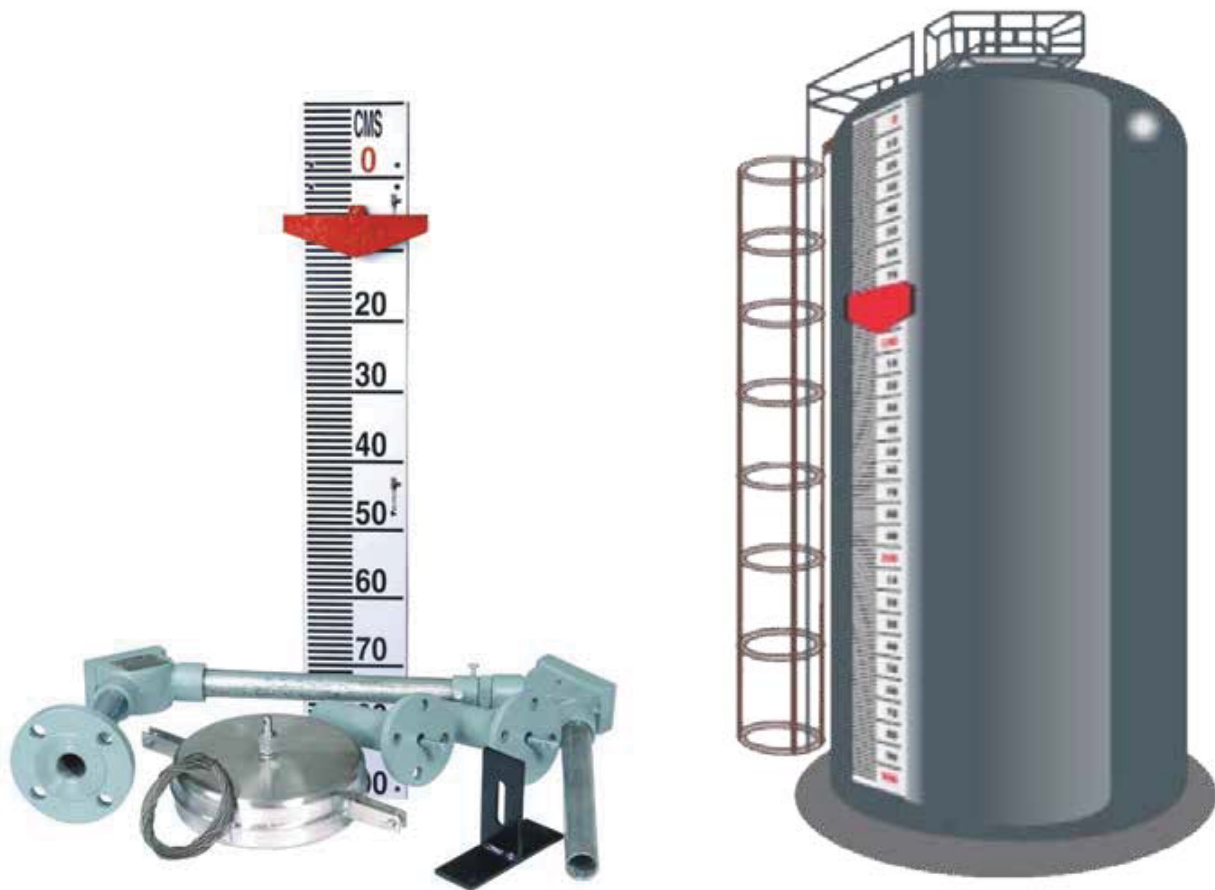


# Float & Board Tank Gauge "FBG"

*An economical, easy to install gauge for level indication of liquids in bulk storage tanks under atmospheric condition.*



## SALIENT FEATURES

- Durable aluminium powder coated gauge board
- Gauge board markings visible from distance

## OPTIONS

- SS304, SS316, PP or ECTFE coated SS to suit various liquids
- Half travel gauge board for underground tanks
- Seal pot for fuming liquids
- Adjustable alarm switches (max 4)
- Volumetric calibration in Litres or KL or BBL

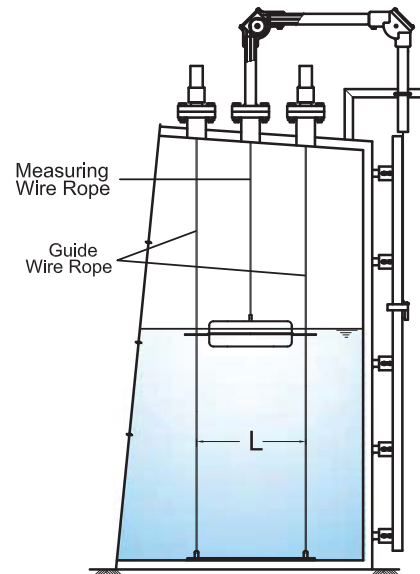
## CONSTRUCTION & OPERATION

**1. Guided :** (fig 1) It consists of a float connected to a pointer through a rope via a set of pulleys. The pointer with nylon roller glides 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 between 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'. The pointer indicates level. The gauge board is supplied in 1 meter sections and multiple gauge boards are connected through gauge board brackets as per ordered measuring range.

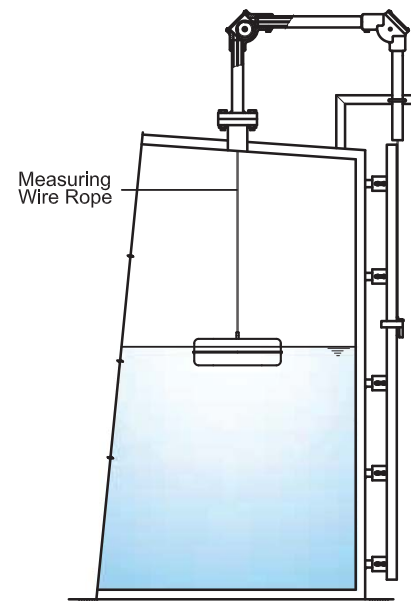
**Applications :** Liquid with moderate turbulence.

**2. Unguided :** In this construction the float movement is not restricted through the guide wire as its movement is negligible.

**Applications :** Liquid with minimum turbulence.



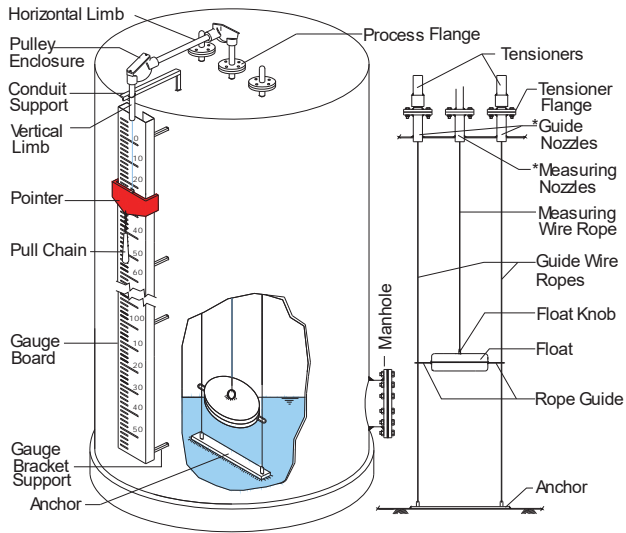
Guided Construction



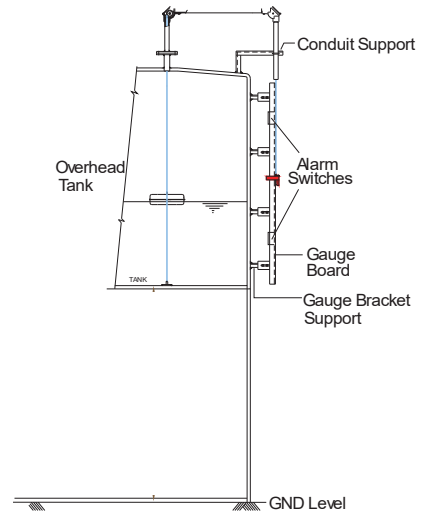
Unguided Construction

**TYPICAL INSTALLATION**

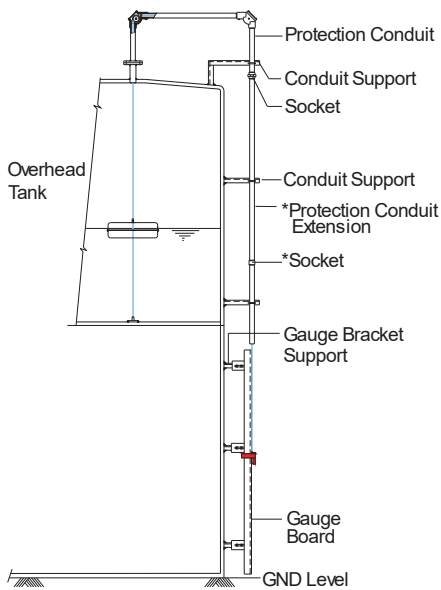
**Fig 1. Gauge board with Full Travel, Mounted on Side of Ground Level Tank**



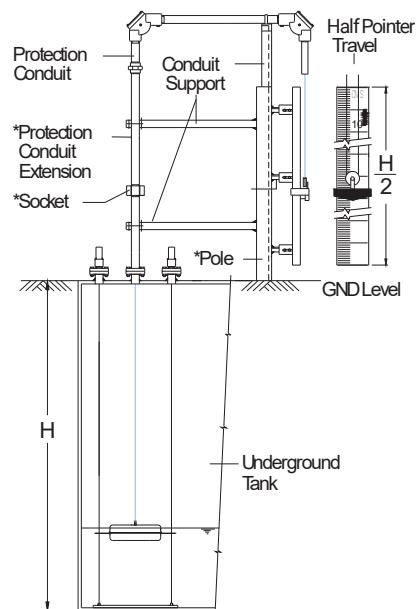
**Fig 2. Gauge board with Full Travel, Mounted on Side of Elevated Tank**



**Fig 3. Gauge board with Full Travel, Mounted below Elevated Tank**

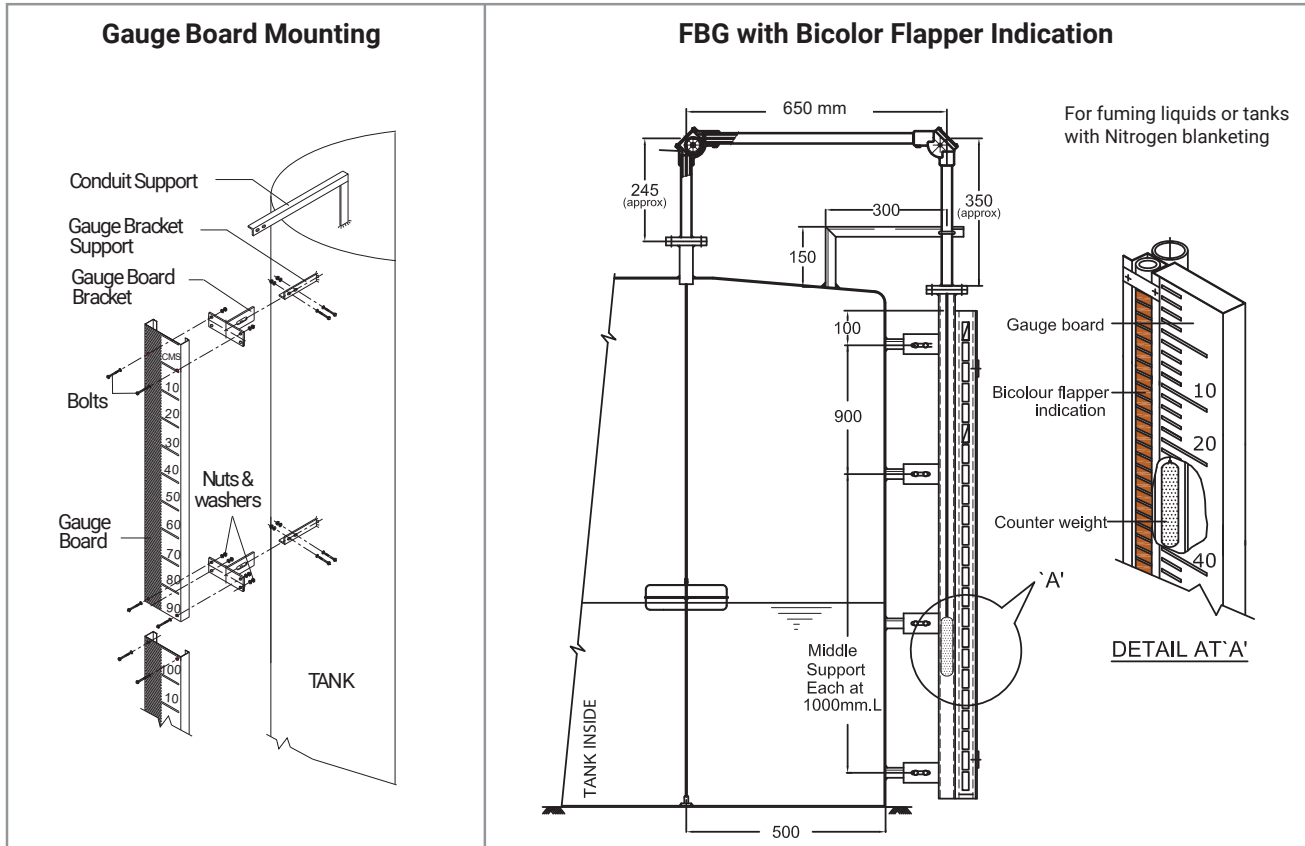


**Fig 4. Gauge board with Half Travel, Mounted on Underground Tank**



## COMPONENTS AND SUBASSEMBLIES ASSEMBLED AT SITE

<h3>Gauge Boards</h3> <p>A) Full Travel    B) Half Travel</p> <p>L = 1 mtr</p> <p>(LC = 5 mm)    (LC = 10 mm)</p>	<h3>Floats</h3> <p>(A) SS Rope guides</p> <p>(B) PP Rope</p> <p>SS Rope Rope Fastener Knob</p> <p>PP Rope Knob</p>	<h3>Conduit Support</h3> <p>Ø7x2 Nos 1"x1"x 1/4" MS Angle Tank</p>
<h3>Protection Conduit</h3>	<h3>Anchor</h3> <p>(A) Knob Plate</p> <p>(B) Knob</p> <p>Weldable</p> <p>Pipe</p> <p>Weighted</p> <p>L = 300 mm (Ø 200 float); L = 450 mm (Ø 350 float)</p> <h3>Tensioner</h3> <p>Tension spring</p> <p>Enclosure</p> <p>Flange</p> <p>Spring Tension rod (connected to guide rope)</p>	<h3>Gauge Bracket</h3>
<h3>Adjustable Alarm Switch</h3> <p>P NG NC 5A / 250VAC</p>	<h3>Pointers</h3> <p>For Full Travel Gauge Board (A)</p> <p>For Half Travel Gauge Board (C)</p> <p>(B) With Pull Chain</p>	<h3>Gauge Bracket Support</h3> <p>1"x1"x1/4" MS Angle</p>
	<h3>Protection Conduit with Seal Pot</h3> <p>H.Limb</p> <p>Sealpot with Pulley</p> <p>Process Connection</p>	<h3>Accessories Provided on Demand</h3> <h4>1. Counter Flange</h4> <p>To be welded to tank nozzles</p> <h4>2. Measuring/ Guide Nozzles</h4> <p>Guide Nozzle    Measuring Nozzle    Guide Nozzle</p> <p>150</p> <p>d</p> <p>d</p> <p>d</p> <p>3/4"NB, 150 # Flange</p> <p>3/4"NB, Pipe</p> <p>d=150 (Ø200m Float), 225 (Ø350 Float)</p> <p>(To be welded to tank)</p>



## SPECIFICATIONS

Construction	Guided	Unguided
Range	1. 7.5 meters with Ø200 float 2. 15 meters with Ø350 float	3 meters with Ø200 float
Installation	Ground level tank or underground tank or elevated tank	
Liquid Specific Gravity	≥ 0.8	
Max Temperature	80 °C (PP), 100 °C (ECTFE Ctd SS), 150 °C (SS)	
Max Pressure	Atmospheric	
Float MOC x Size	SS304/316/316L, PP, ECTFE (Hallar) coated SS304/316 x Ø200 or Ø350	
Float/Guide Wire	SS304/316/316L, PTFE ctd SS304/316 x Ø 1.6 mm (multistrand)	
Rope	PP x Ø3 mm (multistrand)	

Process/Tensioner Connection MOC	CS, CS A105, PP, SS304 or SS316	
Process Connection	¾" or 1" or 1-1/2" NB ASME 150# flange	
Tensioner Connections	¾" or 1" or 1-1/2" ASME 150# flanges (2 nos.)	Not Applicable
Tensioner (2 nos.)	<ol style="list-style-type: none"> <li>1. Cadmium pltd. steel spring in CS powder coated or PP enclosure</li> <li>2. SS304 spring housed in SS304 enclosure</li> <li>3. SS316 spring housed in SS316 enclosure</li> </ol>	Not Applicable
Calibrated Gauge Board	<ol style="list-style-type: none"> <li>1. 6" wide, white powder coated Aluminium or SS304 MOC with black graduations and numerical markings in black (minor) per 10 cm and in red (major) per 100 cm (34 mm height) for full travel.</li> <li>2. As above, but numerical markings in black (minor) per 20 cm and in red (major) per 200 cm for half travel.</li> <li>3. Volumetric scale in Litres or KL or BBL on request.</li> </ol>	
Resolution (Gauge Board)	5 mm (full travel), 10 mm (half travel)	
Pointer	Red powder coated CS or SS304 Pointer height= 60 mm for 7.5 meters range and 80 mm for 15 meters range	
Pointer Travel	<ol style="list-style-type: none"> <li>1. Full for ground level, elevated tanks and underground tanks (&lt; 4 meters)</li> <li>2. Half for underground tanks from 4 to 8 meters depth</li> </ol>	
Pull Chain	Nylon rope with PP handle for highly viscous liquids, which tend to solidify at ambient temp	
Protection Conduit	¾" x GI or PP or SS304 pipe MOC <ol style="list-style-type: none"> <li>1. Two vertical limbs of 285 &amp; 195 mm</li> <li>2. One horizontal limb of 650 mm</li> </ol>	
Pulley & Pulley Enclosure (2 nos)	<ol style="list-style-type: none"> <li>1. Cadmium plated steel with PTFE bush &amp; SS shaft in powder coated cast Al enclosure (WP)</li> <li>2. PP pulley with PTFE bush &amp; PVC shaft in PP enclosure (WP)</li> <li>3. SS304/316 pulley with PTFE bush &amp; SS shaft in WP Cast Al. powder coated enclosure (WP)</li> <li>4. SS304 pulley with PTFE bush &amp; SS shaft in SS304 enclosure (WP)</li> <li>5. SS316 pulley with PTFE bush &amp; SS shaft in SS316 enclosure (WP)</li> </ol>	
Anchor	<ol style="list-style-type: none"> <li>1. Welded : SS304/316/316L plate, 25 W x 6 Thick (metallic tanks)</li> <li>2. Weighted : SS304/ 316/ 316L or ECTFE coated SS304 pipe (1" NB) or PP 50 mm OD</li> </ol> <p>Note : Length of anchor (L)= 300 (Ø200 float) and 450 mm (Ø350 float)</p>	Not Applicable
Rope Fasteners	SS316	
Gauge Board Brackets	Powder coated steel	
Conduit Support	MS (Red oxide painted)	
Gauge Bracket Support	MS (Red oxide painted)	
Seal Pot	<ol style="list-style-type: none"> <li>1. 50 mmWC - Cast aluminium/ SS316/ PVC coated cast aluminium</li> <li>2. 200 mmWC - CS or SS316</li> </ol>	
Adjustable Alarm Switches	Micro switch, mono-stable, SDPTx ABS enclosure IP65, Switch rating- 5A, 250VAC One to four numbers (max)	
Accessories	<ol style="list-style-type: none"> <li>1. Counter flanges (CS, red oxide painted), nuts, bolts (CS) &amp; CAF gaskets</li> <li>2. Measuring/ guide nozzles with flange (CS, red oxide painted), nuts, bolts (CS) &amp; CAF gaskets</li> </ol>	

## MODEL IDENTIFICATION

FBG -																		
<b>1. Construction x Pointer Travel</b>																		
Guided x Full Travel	F																	
Guided x Half Travel	H																	
Unguided x Full Travel	U																	
<b>2. Float MOC</b>																		
SS304	N																	
SS316	S																	
SS316L	L																	
PP	P																	
ECTFE coated SS304	H																	
ECTFE coated SS316	V																	
Others	O																	
<b>3. Float Size</b>																		
Ø 200 mm																		
Ø 350 mm																		
<b>4. Seal Pot</b>																		
Without																		
50 mmWC x Aluminum																		
50 mmWC x SS316																		
50 mmWC x PVC coated Aluminum																		
200 mmWC x CS																		
200 mmWC x SS316																		
Others																		
<b>5. No. of Alarm Switches</b>																		
Without																		
One..... Four																		
<b>6. Installation</b>																		
Ground Level Tank																		
Under Ground Tank (Sump)																		
Elevated Tank																		
<b>7. Calibrated Gauge Board x Pointer MOC</b>																		
Aluminum Gauge Board x CS Pointer																		
Aluminum Gauge Board x CS Pointer with Pull Chain																		
SS304 Gauge Board x CS Pointer																		
SS304 Gauge Board x CS Pointer with Pull Chain																		
SS304 Gauge Board x SS304 Pointer																		
SS304 Gauge Board x SS304 Pointer with Pull Chain																		
<b>8. Process/ Tensioner Connection MOC</b>																		
CS																		
CS A105																		
SS304																		
SS316																		
PP																		
Others																		
<b>9. Process Connection</b>																		
¾" NB ASME 150# Flange																		
1" NB ASME 150# Flange																		
1-1/2" NB ASME 150# Flange																		
Others																		

<b>10. Tensioner Connections (2 nos.)</b>						
Without (Unguided)	W					
¾" NB ASME 150# Flange	1					
1" NB ASME 150# Flange	2					
1-1/2" NB ASME 150# Flange	3					
Others	4					
<b>11. Tensioner (Spring + Enclosure)</b>						
Without (Unguided Construction)	W					
Cadmium plated Steel Spring x CS powder coated Enclosure	1					
Cadmium plated Steel Spring x PP Enclosure	2					
SS304 Spring x SS304 Enclosure	3					
SS316 Spring x SS316 Enclosure	4					
Others	0					
<b>12. Protection Conduit</b>						
GI x ¾" NB Protection Conduit		1				
SS304 x ¾" NB Protection Conduit		2				
GI x ¾" NB Protection Conduit with Extension (Elevated or Underground Tanks)		3				
SS304 x ¾" NB Protection Conduit with Extension (Elevated or Underground Tanks)		4				
PP x ¾" NB Protection Conduit		5				
Others		0				
<b>13. Pulley x Pulley Enclosure</b>						
Cadmium plated steel Pulley x Cast Al powder coated Enclosure			1			
SS304 Pulley x Cast Al powder coated Enclosure			2			
SS304 Pulley x SS304 Enclosure			3			
SS316 Pulley x Cast Al powder coated Enclosure			4			
SS316 Pulley x SS316 Enclosure			5			
PP Pulley x PP Enclosure			6			
<b>14. Anchor</b>						
Without (Unguided)					W	
SS304 x Welded					A	
SS304 x Weighted					B	
SS316 x Welded					C	
SS316 x Weighted					D	
SS316L x Welded					E	
SS316L x Weighted					F	
PP x Weighted					G	
ECTFE coated SS304 x weighted					H	
<b>15. Accessories</b>						
Without					W	
Counter Flanges (CS) + Nuts, Bolts (CS) + CAF Gaskets					F	
Measuring/Guide Nozzles with Flange (CS) + Nuts, Bolts (CS) + CAF Gaskets					N	
Others					O	

## ORDERING INFORMATION

Model No x Range x Service Liquid and its Specific Gravity, Operating Temperature & Pressure

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