

FLOAT & TAPE TANK GAUGE- 'FTG'

It is reliable and accurate level gauge for continuous level indication of liquid in almost all product applications and tank types. Very commonly used for custody transfer (inventory control).



With Switch cum Transmitter

CE 2014/68/EU



Without Switch cum Transmitter

SALIENT FEATURES

- Maximum Range upto 20 mtrs
- Easy to Install or Retrofit on Existing Tanks
- High Accuracy of ± 2 mm
- Dual Scale Dial– Black & Red Graduations/Numerals with Two Pointers for Meter & MM resp.
- Seal Pot for Fuming Liquids (optional)
- Four Adjustable Alarm Switches (optional)
- Transmitter Output 4-20 mA or 4-20 mA + HART (optional)

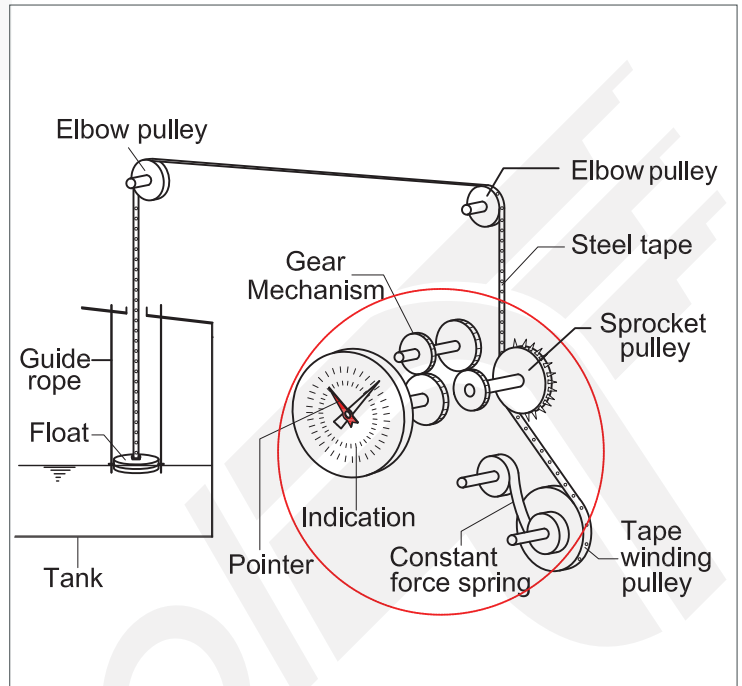
CONSTRUCTION & OPERATION

The gauge comprises of a float and an enclosure that houses a steel tape with evenly spaced holes, wound on a tape pulley, carrying a constant force spring to maintain tape under tension and a gear mechanism for pointer movement.

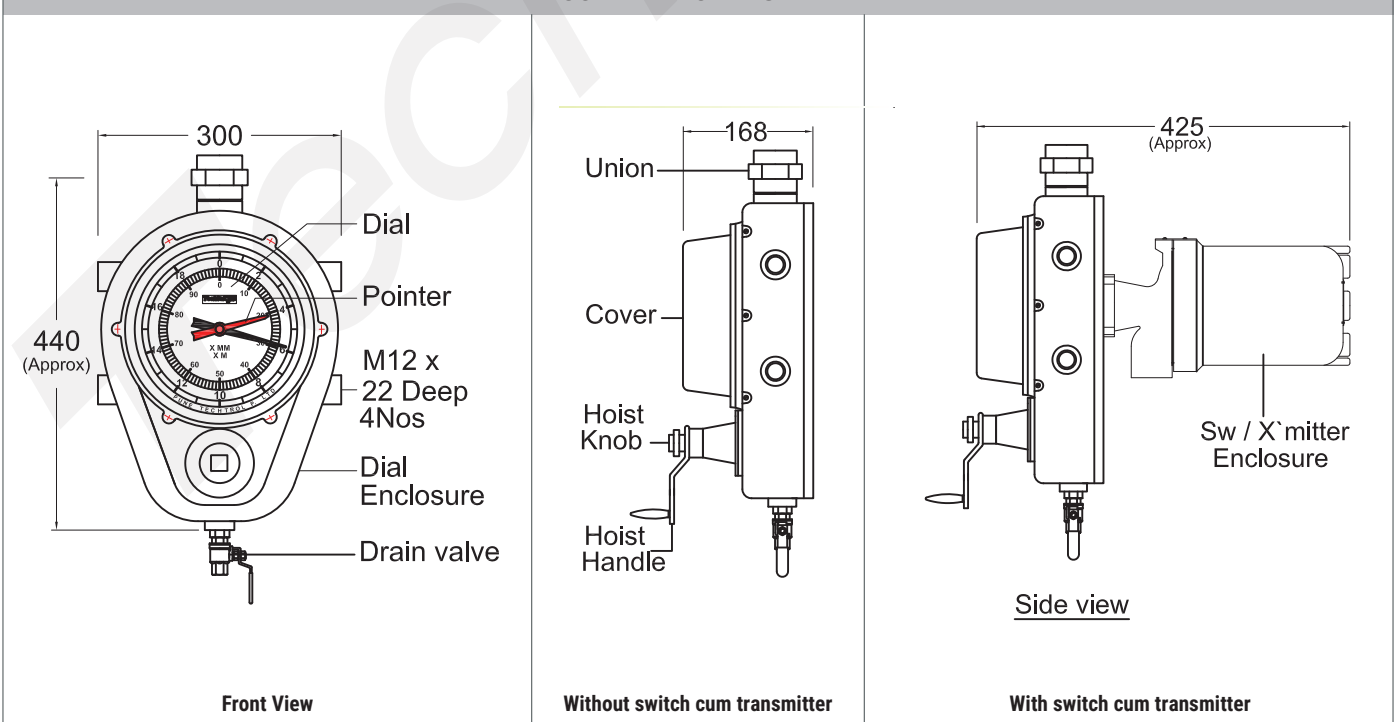
The float attached to a steel tape follows rising liquid level and equi-distant tape holes get engaged with sprocket pins to get wound on a tape pulley.

During fall in liquid level, float weight is balanced by constant force spring and the tape gets unwound to follow liquid level. The rotation of sprocket pulley is transferred to the pointer through gear mechanism to indicate liquid level, which is shown on dial using two distinct scales: black graduations and numerals in meters with a black pointer, and red graduations and numerals in mm with a red pointer.

The gauge is also provided with two guide ropes which are firmly anchored to tank bottom to restrict horizontal float movement.



SCHEMATIC DIAGRAM



SPECIFICATIONS

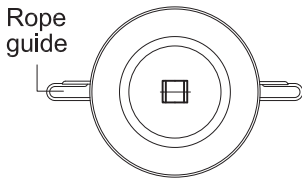
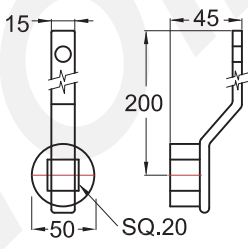
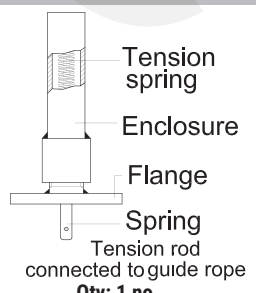
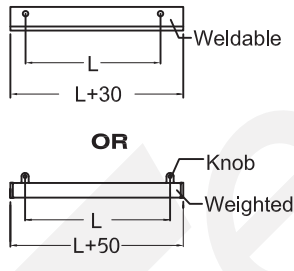
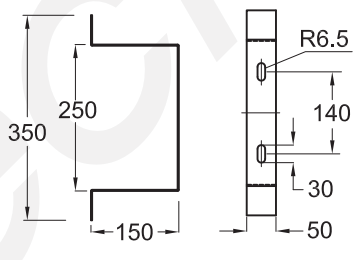
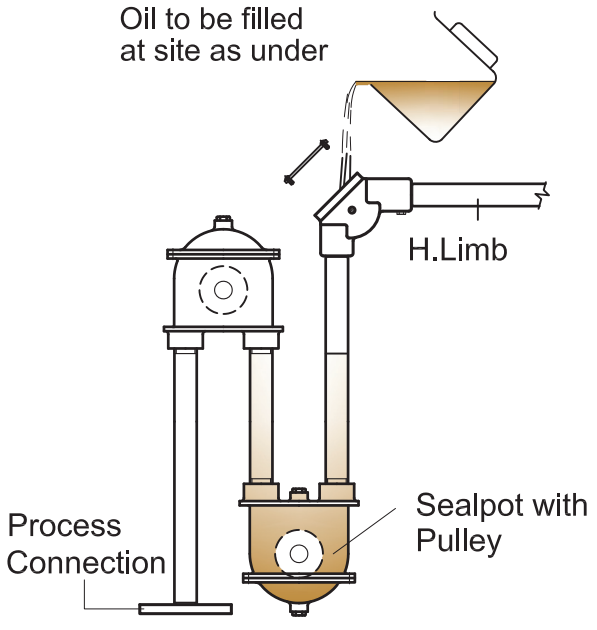
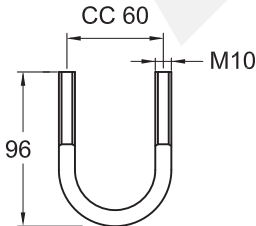
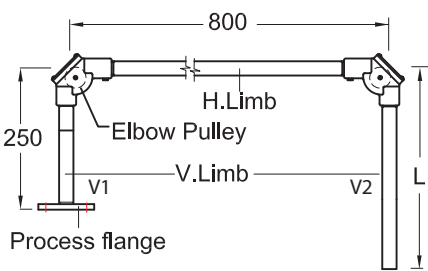
Installation	Side	Top
Standard Ranges	0 - 4, 0 - 8, 0 - 12, 0 - 16, 0 - 20 meters	
Accuracy/ Resolution	± 2 mm / ± 1 mm	
Liquid Specific Gravity	≥ 0.8	
Max. Temperature	120 °C	
Max. Pressure	Atmospheric	
Installation	Side/ Top	
Construction	Guided or unguided	
Calibrated Dial	Aluminium (210 mm OD) with Graduations & Numerical in Black (meter) and Red (mm)	
Pointers (2 nos.)	Brass, Black for Meter Indication and Red for Millimeter Indication	
Dial Cover	Polycarbonate	
Dial Enclosure	Cast Al. IP65	
Hoist Mechanism	With Handle for High Viscous Liquids	
Drain	Brass x 1/4" BSP Ball Valve	MS x 1/4" BSP Plug
Float	SS316, 400 mm Ø.	
Tape	SS316	
Guide Wire Rope	SS316 x 1.6 Ø mm	
Process Connection	CS, A105, SS304 or SS316 x 1-1/2" NB ASME Flange or 1-1/2" BSP Socket	
Tensioner Connection	CS, A105, SS304 or SS316 x 1-1/2" NB ASME Flange or 1-1/2" BSP Socket (2 nos.)	
Tensioner	1. Cadmium Plated CS Spring in CS Enclosure 2. SS304 Spring in SS304 Enclosure 3. SS316 Spring in SS316 Enclosure	
Protection Conduit	GI or SS304 x 40 NB pipe Horizontal Limb = 800 mm long Vertical Limb (V1) = 250 mm long Vertical Limb (V2) = as per tank height	NA
Elbow Pulley	1. Cadmium Pltd. Steel Pulley with PTFE bush & SS shaft x WP, Cast Al. Pwdr. Ctd. Enclosure 2. SS316 Pulley with PTFE Bush & SS shaft x WP SS316 enclosure	NA
Anchor	1. Welded - SS304 or SS316 Angle 25 x 25, 3 Th x 480 L mm (metallic tanks) 2. Weighted - SS304 or SS316, Ø 33 mm x 500 mm L (non-metallic tanks)	
Gauge Mounting Bracket	CS Epoxy Powder Coated	NA
Conduit Support	In user's scope	NA
'U' bolt	MS Zinc Plated (for GI conduit) or SS304 (for SS304 conduit)	NA
Seal Pot (optional)	50 mm WC - Cast Aluminium (with GI conduit) or SS316 (with SS conduit) 200 mm WC - Cast Aluminium (with GI conduit) or SS316 (with SS conduit)	

Alarm Switch & Transmitter Arrangement

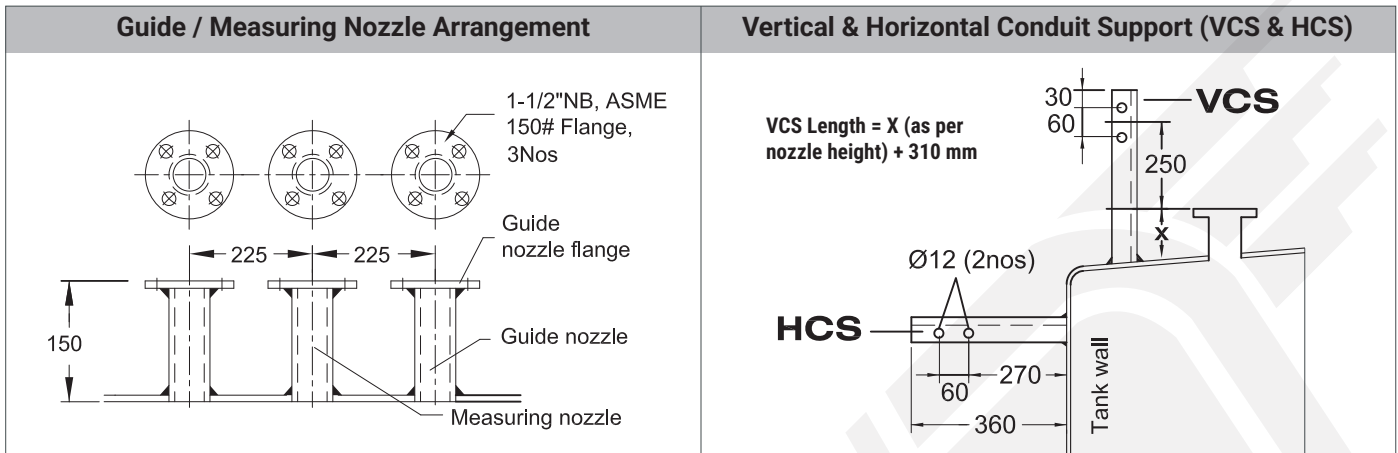
General:

Enclosure	: Cast Al. IP65 or Cast Al. Ex-proof CCOE Exd IIC T6, IP65 or Cast Al. Ex-proof ATEX Exd IIC T6, IP65
Conduit Connection	: ¾" NPT DC Cable Gland
Alarm Switch (4 nos)	: Micro Switch, SPDT Potential Free Contacts, 5A@ 250 VAC (Resistive Load), Adjustable
Transmitter:	
Supply	: 24 VDC $\pm 10\%$
Output	: 4-20 mA (2 wire) or 4-20 mA with HART (2 wire)
Accuracy	: $\pm 0.5\%$ FSD
Max. Load	: 400 Ohms (4-20 mA o/p), 600 Ohms (4-20 mA with HART)

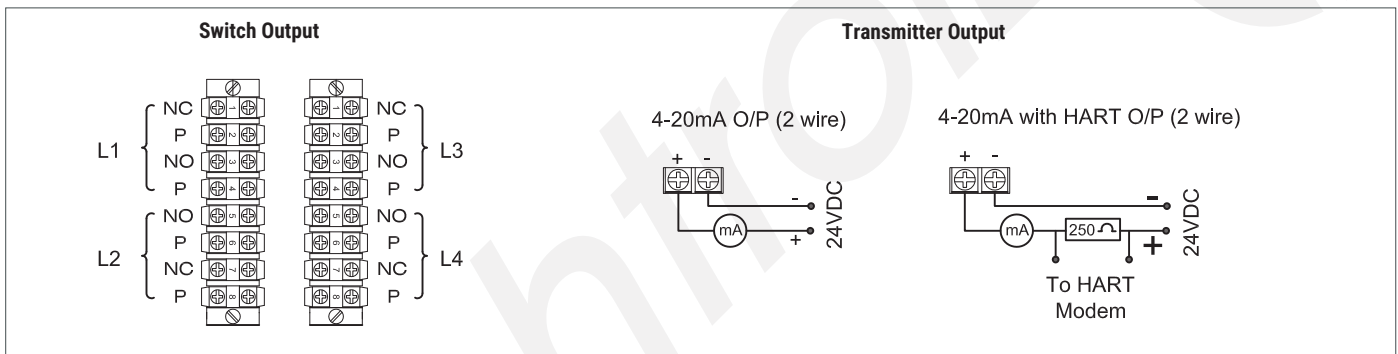
COMPONENTS & FITTINGS SUPPLIED WITH GAUGE

Float (Ø400 mm)	Guide Rope (Ø1.6mm)	Hoist Handle (Optional)	Tensioner
 Rope guide Qty: 1 no.	 Qty: 1 no./mtr of range Rope L= Range + 500 mm	 Qty: 1 no.	 Qty: 1 no.
Anchor	Gauge Mounting Bracket	Seal Pot (Optional)	
 Weldable OR Knob Weighted Qty: 1 no.	 Qty: 1 no.	 Oil to be filled at site as under H.Limb Process Connection Sealpot with Pulley Qty: 1 no.	
U bolt	Protection Conduit with Elbow Pulley		
 Qty: 1 no per mtr range	 Qty: 1 no.		

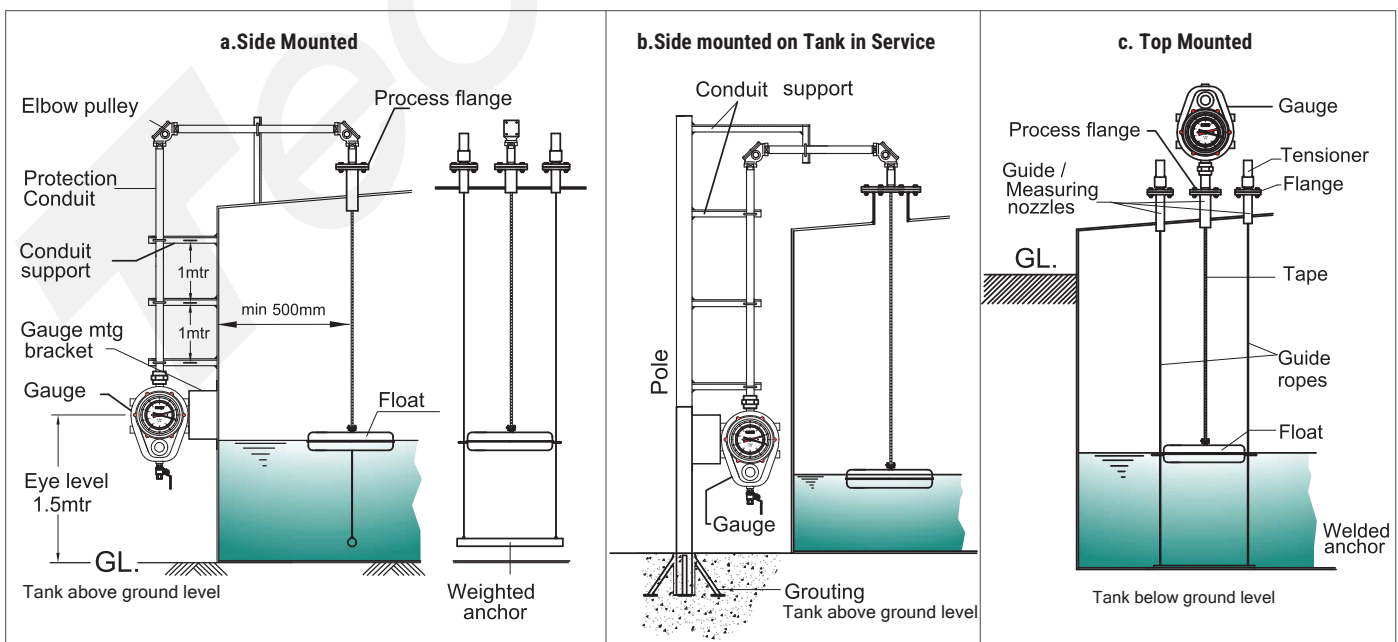
COMPONENTS TO BE FABRICATED BY CUSTOMER



TERMINATIONS



INSTALLATIONS



INSTALLATION NOTES

1. For retrofit on existing tanks/new non-metallic tanks, use weighted anchor.
2. For existing tank, gauge body should be mounted on grouted pole (installation fig b above) as its welding may not be permissible on tank.

APPLICATIONS

Water, corrosive liquids, hydrocarbons, oils, chemicals, varnishes and other valuable liquids

MODEL IDENTIFICATION

FTG -	S	A	A	C	1	T	1	G	1	W	J	W	W
1. Installation													
Side	S												
Top	T												
2. Measuring Range													
0 - 4 m		A											
0 - 8 m		B											
0 - 12 m		C											
0 - 16 m		D											
0 - 20 m		E											
Others		O											
3. Float													
400 mm Ø, SS316		A											
Others		O											
4. Process Connection MOC													
CS				C									
A105				A									
SS304				N									
SS316				S									
Others				O									
5. Process Connection													
1-1/2"NB ASME 150 # Flange					1								
1-1/2" BSP Socket (F)					2								
Others					O								
6. Tensioner													
Without						W							
CS Cadmium Plated Spring + CS Enclosure						T							
SS304 Spring + SS304 Enclosure						N							
SS316 Spring + SS316 Enclosure						S							
Others						O							

7. Anchor Type & MOC									
Without	W								
Weldable SS316	1								
Weighted SS316	2								
Weldable SS304	3								
Weighted SS304	4								
8. Protection Conduit									
Without	W								
GI x 40 NB Pipe	G								
SS304 x 40 NB Pipe	N								
Others	O								
9. Elbow Pulley									
Without	W								
Cadmium Pltd Steel Pulley x Cast Al. Powder Ctd. Enclosure	1								
SS316 Pulley x SS316 enclosure	2								
Others	O								
10. Seal Pot Assembly									
Without	W								
50 mmWC x Cast Aluminium	1								
50 mmWC x SS316	2								
200 mmWC x Cast Aluminium	3								
200 mmWC x SS316	4								
Others	O								
11. Enclosure									
Cast Al. IP65 (without or with switch/ transmitter)							J		
Cast Al. Exd IIC T6 IP65 (with switch/ transmitter only)							E		
Cast Al. ATEX Exd IIC T6 IP65 (with switch/ transmitter only)							F		
Others							O		
12. Special Features									
Not Provided							W		
With Alarm Switches (4 nos.)							S		
With Transmitter							T		
With Alarm Switches (4 nos.) and Transmitter							C		
13. Transmitter Output									
Not Provided							W		
4-20mA (2 wire)							1		
4-20mA + HART (2 wire)							2		
Others							O		

ORDERING INFORMATION

Model Number, Tank Height alongwith Liquid & its Specific Gravity, Operating Temperature & Pressure.

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*All dimensions in mm except specified