



**PETROTECH ENGINEERS**

## FLOAT AND TAPE LEVEL GAUGE



**CONTACT: PETROTECH ENGINEERS**

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

Email- [info@petrotechengineers.com](mailto:info@petrotechengineers.com)

# FLOAT AND TAPE LEVEL GAUGE

## PRODUCT DESCRIPTION

**Petrotech Float and tape Level gauge** consisting of steel tape Wound on storage drum, Carrying constant torque spring to maintain tape under continuous tension and corresponding Gear mechanism for pointer movement.

The float, attached to SS tape follows liquid level closely in vertical direction during rise in liquid And equi-spaced holes in SS tape engage with sprocket pins and get wound on a storage drum. During fall in liquid level, float Weight is balanced by constant torque spring and SS tape gets Unwound from sprocket pulley to follow liquid level downwards. This rotation of sprocket pulley Is transferred to the pointer through gear mechanism to indicate accurate liquid level in tank. The gauge is provided with guide ropes which have to be firmly anchored to tank bottom to Restrict horizontal float movement.

## APPLICATION

- Floating Roof Tank,
- Gasoline,
- Cone Roof Tank,
- Underground tanks,
- Water Effluent & Chemicals, Etc

## FEATURES

- High Reliability.
- Minimum maintenance.
- Easy to install or retrofit on existing tanks.
- High Accuracy.
- Can be used with analogue to digital converter for transmission of tank level or alarms.
- Local Indicating mechanism of 2 Pointer Dial.
- Seal pot for fuming liquids.



# FLOAT AND TAPE LEVEL GAUGE

## TECHNICAL SPECIFICATION

Range	: 2.5,5,10,16,20,30 Meters
Indication	: Pointer and Dial : Option – Mechanical Counter
Accuracy	: +/- 2 mm
Resolution	: 1 mm
Min Liquid Sp. Gr	: 0.8
Process Pressure	: 0.2 kg/cm <sup>2</sup>
Process Temperature	: + 200 Deg C Max
Ambient Temperature	: -20 to + 60 Deg C
Installation	: Side / Top
Housing	: Epoxy Coated Cast Aluminum
Protection	: IP 65
Process Connection	: CS, A 105 or SS 304/316
Float	: 400 mm X SS 316
Tape	: SS 316
Guide Rope	: SS 316 X 1.6 MM
Elbow pulley	: Cadmium Plated Steel Pulley with PTFE bush and SS Shaft Housed in Weather Proof Cast Aluminum
Protection Conduits	: 40 NB Galvanized Steel or SS 304 PIPE
Tensioner Flange	: ¾ "NB ANSI Flange (2 Nos)
Anchor	: Welded – SS 316 or SS 304 Plate (25mm X 6mm Thick) Weighted: SS 316 OR SS 304 Pipe (33 mm)
Seal Pot	: Aluminum / SS, Provided with Sealant Oil

# FLOAT AND TAPE LEVEL GAUGE

## INSTALLATIO

## SIDE MOUNTED

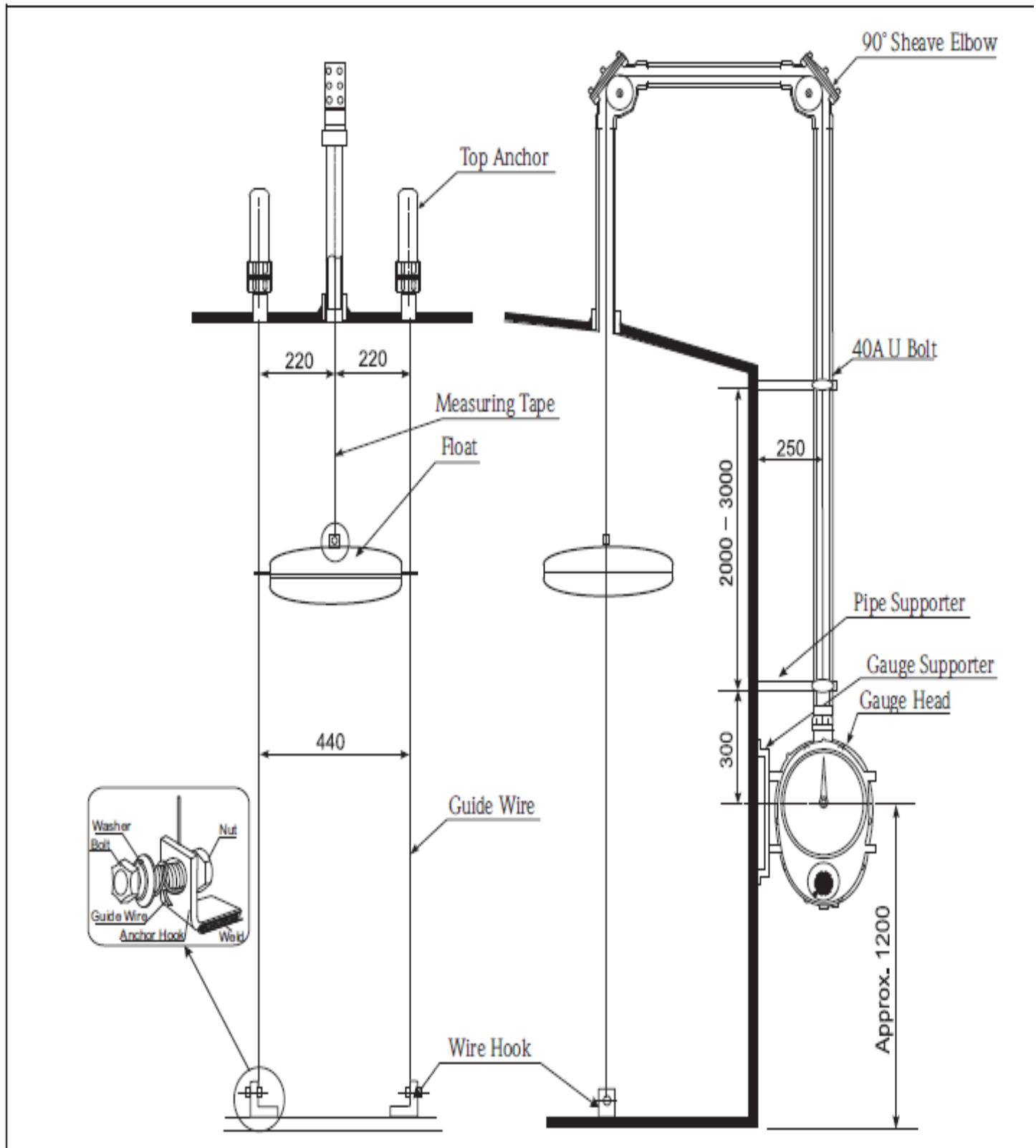


Figure 2: Coon Roof Tank (CRT)

# FLOAT AND TAPE LEVEL GAUGE

## TOP MOUNTED

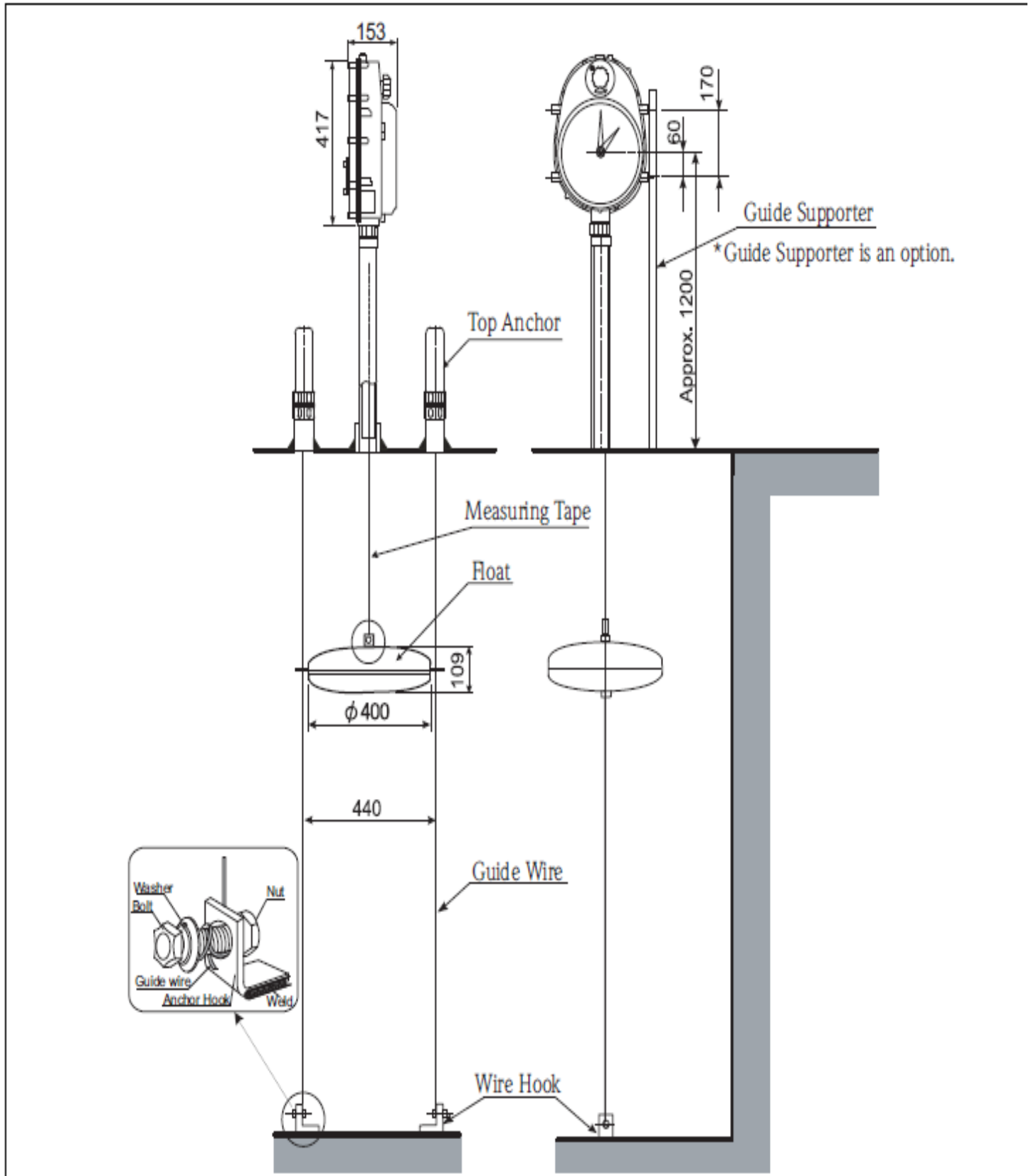


Figure 3: Tank Top Mount (Underground Tank)

# FLOAT AND TAPE LEVEL GAUGE

## ANALOG LEVEL TRANSMITTER 2WIRE/4 WIRE

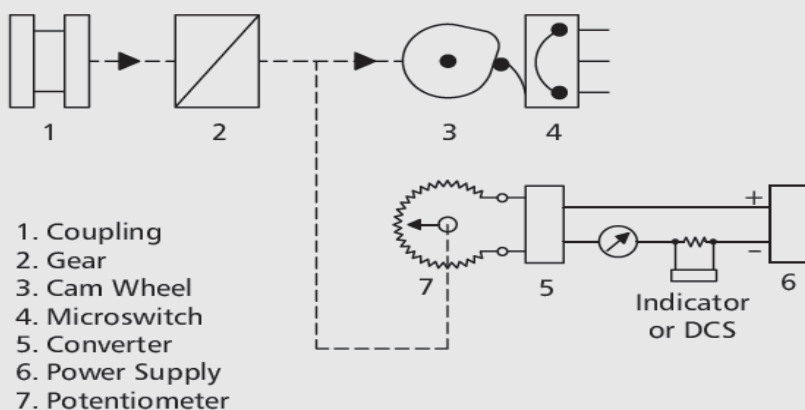
**Petrotech Float and tape Level Transmitter** is used in combination with Tank Level Gauge. It receives rotary angular displacement Signal as input from Tank Level Gauge and converts it into corresponding current signal proportional to the level. The Analog Level Transmitter is used to continuously transmit level of the tank. It has gear mechanism and potentiometer to provide current signal. The current output from Analog Level Transmitter can be further converted in to corresponding display with the help of digital Indicator or Digital controls system (DCS).

**4-20 MA MODUAL**



## TECHNICAL SPECIFICATION

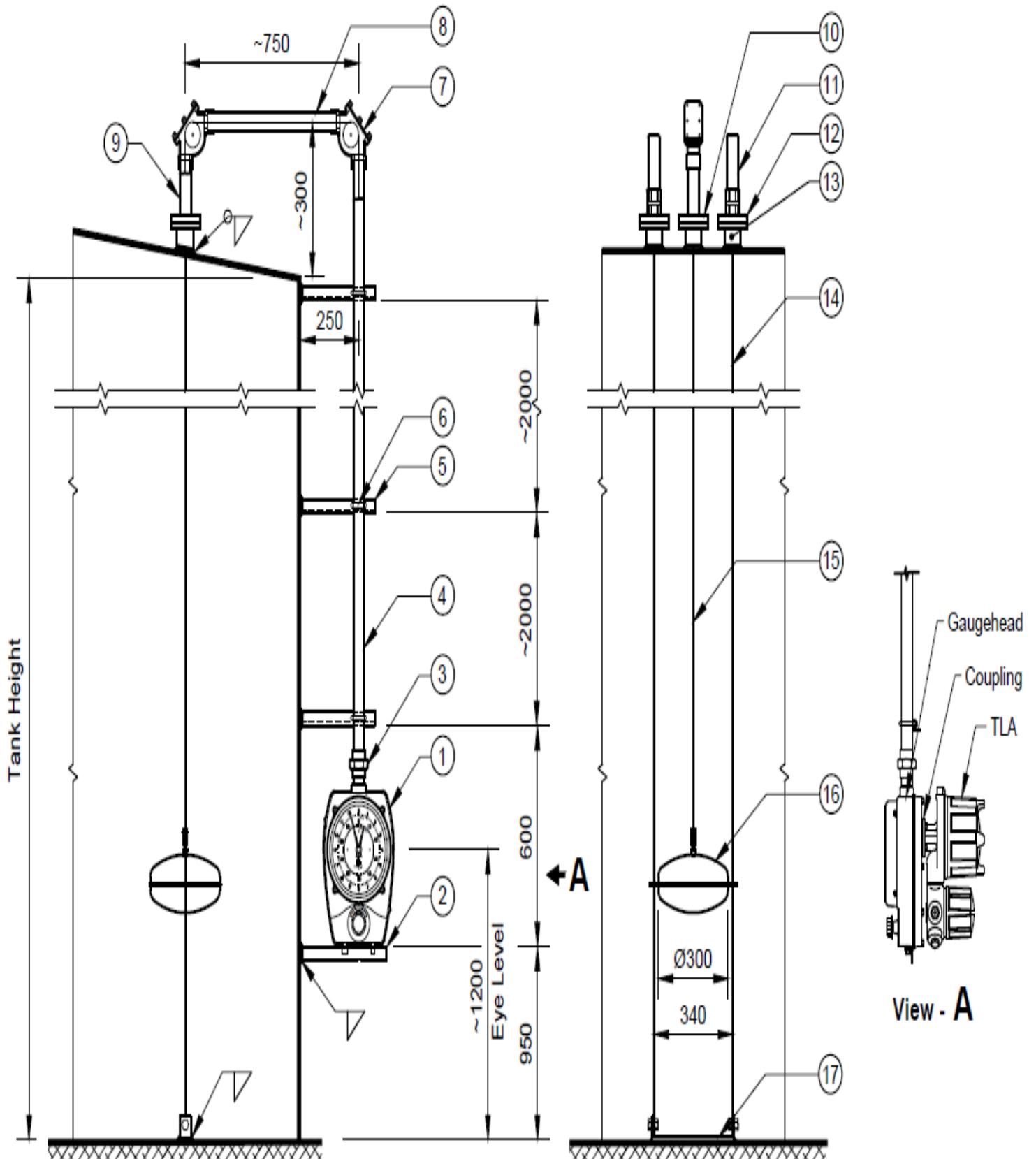
Range	: 2.5,5,10,16,20,30 M
Accuracy	: +/- 1 % of full span
Output	: 2 Wire (24 VDC), 4 Wire (110 VAC/230 VAC)
Load Resistance	: 600 Ohms (Max)
Power Supply	: 110 / 230 VAC ±10%, 50Hz Option: 24 VDC
Ambient Temperature	: -20 to + 60 Deg C
Housing	: Cast Aluminum
Installation	: Side / Top
Protection	: Weather Proof (IP 65) Option : Explosion Proof, as per IS/IEC 60079-0:2004, IS/IEC 60079-1:2007 for gas group (group IIA & IIB)
Alarm Contacts	: Maximum 6, Potential Free Microswitch Output Contact Rating: 1.5 Amp 30 VDC



The figure here shows the transmitter's operating principle. The drive shaft is connected to the tank level gauge through coupling (1) The Gear Train (2) drives Potentiometer (7) at the same time also drives one or more Cam Wheel & Microswitch assembly. The Cam Wheel (3) actuates the Microswitch assembly (4), at predetermined set values. The switching conditions thus generated are subsequently process as High / Low level information. Any change in potentiometer output due to change in level is converted by R/I converter into proportional current output.

# FLOAT AND TAPE LEVEL GAUGE

## ANALOG LEVEL TRANSMITTER 2WIRE/4 WIRE



## FLOAT AND TAPE LEVEL GAUGE

<b>FLOAT AND TAPE LEVEL GAUGE</b>			
<b>SR.NO</b>	<b>SELECTION</b>	<b>SUFFIX CODES</b>	<b>DESCRIPTION</b>
1	<b>Level Gauge Model</b>		
		FTLG - 300	Float and tape Level gauge
2	<b>Installation</b>		
		T	Top
		S	Side
3	<b>Measuring Range</b>		
		2.5	0-2.5 m
		5	0-5 m
		10	0-10 m
		16	0-16 m
		20	0-20 m
		30	0-30 m
		O	Other
4	<b>Float</b>		
		1	350 mm
		2	400 mm
		O	Other
5	<b>Process Connection MOC</b>		
		C	CS
		A	ASTM A 105
		S4	SS 304
		S6	SS 316
		O	Other
6	<b>Process Connection Size</b>		
		1	1 1/2" 150# Flange
		2	1 1/2" BSP
		O	Other
7	<b>Tensioner</b>		
		W	Without
		T	CS cadmium Plated Spring + CS Flange
		S4	SS 304 Spring + SS 304 Enclosure
		S6	SS 316 Spring + SS 316 Enclosure
		O	Other



## FLOAT AND TAPE LEVEL GAUGE

8	<b>Anchor Type MOC</b>		
		W	Without
		WS4	Weldable SS 304
		KS4	Weighted SS 304
		WS6	Weldable SS 316
		KS6	Weighted SS 316
		O	Other
9	<b>Protection Conduit</b>		
		W	Without
		G	GI Pipe
		S4	SS 304 Pipe
		O	Other
10	<b>Seal Pot Assembly</b>		
		W	Without
		1	50 mm WC
		2	200 mm WC
		O	Other
11	<b>Option</b>		
		1	4-20 ma
		2	4-20 ma with Switch
		O	Other

**Ordering Example:**

FTLG - 300-S-10-1-A-A-T-WS4-W-W-1

Note : Due to continuous improvement, the specification may vary from time to time.

For non standard products/optional items, please contact factory for delivery and minimum quantity of order.



## **Petrotech Engineers**

Office: 485-486/ A-3

Makarpura GIDC

Vadodara – 390010.Gujarat. India

Website: [www.petrotechengineers.com](http://www.petrotechengineers.com)

Email : [info@petrotechengineers.com](mailto:info@petrotechengineers.com)