

# STM Series Precision Turbine Flow Meters

Smooth Flowmeters



## Features:

- ◆ Measurement Accuracy of  $\pm 0.5\%$  of measured value. Repeatability  $\pm 0.05\%$ .
- ◆ Modular meter. Dual pick ups for greater accuracy.
- ◆ Suitable for pulsating & low flows.
- ◆ Max. Static Pressure 300 bars.
- ◆ Explosion proof Amplifier Assembly.
- ◆ Pneumatic or electronic filling controls.
- ◆ Meter mounted & remote displays.
- ◆ Rugged Design & Reliable Functions.
- ◆ Complete tailor made solutions to meet requirement.
- ◆ Meters with Sanitary End connections & Specifications.
- ◆ Versions with Teflon coated internals for corrosive applications.

## Description:

A turbine flow meter is a volumetric flow metering device. The meter consists of a rotor and bearing assembly suspended on a shaft, which is mounted to a support device. This assembly is mounted inside a housing of a calibrated internal diameter. As fluid passes through the flow meter housing, the rotor will spin at a rate proportional to the volume of liquid passing through the housing. A magnetic or modulated pick-off sensor is used to detect the passage of each rotor blade and generate a frequency output. The frequency output can be read directly with the end users electronics or further processed to convert to a linear analog output.

## Applications:

- ◆ **Pharmaceuticals:** Water, Injection water, Solvents. Clean Meters with Tri clamps.
- ◆ **Water Industry :** Cooling Water, Treated Water, Waste Water, Drinking water, Irrigation water.
- ◆ **Food Industry :** Hot water, Chilled water, Milk, DM Water, Boiler Feed Water, Alcohol, ENA, Beer, Soft drinks.
- ◆ **Automobiles:** Gear oil, Engine oil, Coolant, Windshield liquid, Hydraulic oil, Diesel, Petrol, Aviation fuel, AIR, LPG .
- ◆ Construction, Mining & Agriculture Machinery.
- ◆ Defence, R & D, Navy & Ship Applications of conductive & non conductive liquids.

## Advantages:

- ◆ Low total cost of ownership.
- ◆ Suitable for conductive as well as non conductive media.
- ◆ Long Life with low maintenance.
- ◆ Long term accuracy without recalibration.
- ◆ Minimum pressure drop & Bidirectional Flow Measurement.
- ◆ Excellent Resistance to corrosion, high pressure & temperature changes.
- ◆ Can handle severe services with less maintenance.
- ◆ Wide range of fluid applications, fast response, stability.

## Benefits In Complete System :

We supply & support various custom made skids / systems such as:

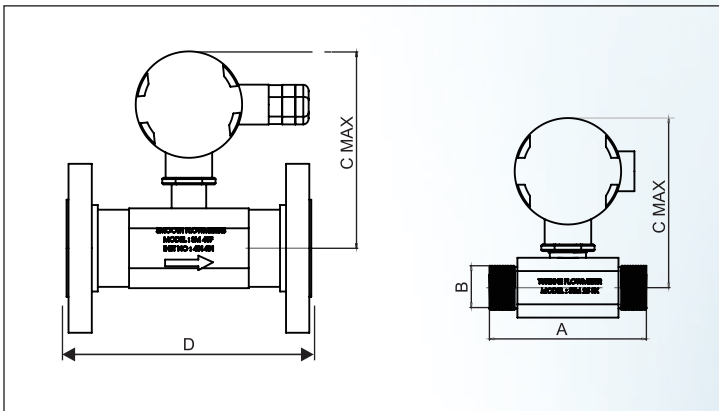
- ◆ Alcohol & ENA Custody Transfer in a Sugar mill / Distillery. (W + M Approval).
- ◆ Ethanol & Petrol Blending system.
- ◆ Tanker Unloading system through pump or gravity.
- ◆ Batching of various solvents in a pharmaceutical industry.
- ◆ System for Tank / Truck mounting of Petrol, Diesel, oils.

**We Measure And Control Every Drop & Molecule**

## Technical Data

Nominal Diameter DN / mm Inch	15 3/4"	20 3/4"	25 1"	40 1 1/2"	50 2"	80 3"	100 4"	150 6"	200 8"
Min / Max. Flow Range (M <sup>3</sup> /Hr)	0.4 - 4	0.8 - 8	1.6 - 16	3.4 - 34	6.8 - 68	13.5-133	27 - 270	55 -550	110 -1100
Rated Nominal Pressure Bar	400 (Screwed Meter)								
Max Temperature	120°C (Special 300°C on request)								
Viscosity Range	upto 100 cp								
End Connections	Screwed / Flanged (ANSI, DIN)								
Linearity	±0.5% (of Actual Flow)								
Repeatability	0.05%								
Rangeability	10 - 100%								
Pressure Drop	0.2 Bar								
Material of Construction	Rotor : ANC 21, Meter Body : SS 316			Bearings : Tungsten Carbide /PTFE Flange : St. Steel / C.S.					
Output Signal	Square Wave Voltage Pulses								
Supply Voltage	230V AC / 24 V DC for Remote Mounted Indicator Battery Operated Local Display (Ex Version)								

## Dimensions & Weights:



### FLOWMETERS DIMENSIONS IN MM

MODEL	A	B	C	D
SM - 12	92	1/2" BSP - M	150	120
SM - 15	98	3/4" BSP - M	150	120
SM - 20	114	3/4" BSP - M	150	140
SM - 25	118	1" BSP - M	200	150
SM - 40	146	1 1/2" BSP - M	200	184
SM - 50	150	2" BSP - M	200	200
SM - 75	N/A	N/A	200	260
SM - 100	N/A	N/A	300	360
SM - 150	N/A	N/A	300	380
SM - 200	N/A	N/A	300	460

## Outputs & Display Options :

### Meter Mounted / Remote Digital Display

- ◆ Total Flow.
- ◆ Resettable Total .
- ◆ Flow Rate Display .
- ◆ Pulse output.
- ◆ 4-20 MA Output (Active / Passive).
- ◆ Batch controller.
- ◆ RS 232 RS485 modbus.
- ◆ Consumption Flow Rate (Supply Minus Return)
- ◆ Intrinsic safe / Ex Proof versions.

### Accessory :

Pick up coils (1 or 2)

Pre Amplifiers, F/I Converters, Isolation Amplifier, Strainers, Air Eliminators, Pneumatic / Digital Control valves.

## WATER FLOW CALIBRATION SETUP

Smooth Flowmeters is having a well equipped Calibration Laboratory. The systems is designed in standard (ISO-RP-31) Gravimetric Method with master weighing Scale. The calibration is done on the most precise weighing scale having least count of 100 gms on the maximum scale of 2000 Kgs. 10gms on the maximum scale of 100 Kgs. Both Weighing Scales are Calibrated in NABL Accreditation LAB. The Weighing Scale accuracy is endorsed by the Weights & Measures Dept. of Govt. of Maharashtra. The setup is designed for calibration of size ranging from 10 mm to 150 mm. We do 100% Calibration of each unit at our precise calibration setup.

**Note:** Development Dictates That From Time To Time The Data Shown Above Is Subject To Change Without Notice..pl Obtain A Offer.

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