

Flow

P. D. Flow Meter



Taurus Series P. D. Flowmeter

The Taurus series Positive Displacement Flowmeters are an efficient and highly accurate positive displacement flow meter. Proven design of Tri- rotor ensures minimal wear and longer service life.

The unique design of no metal to metal contact maintains a thin layer of capillary seal which results in high accuracy and sustained repeatability. This innovative design offers low pressure drop across metering loop and thus ensures low pumping cost.

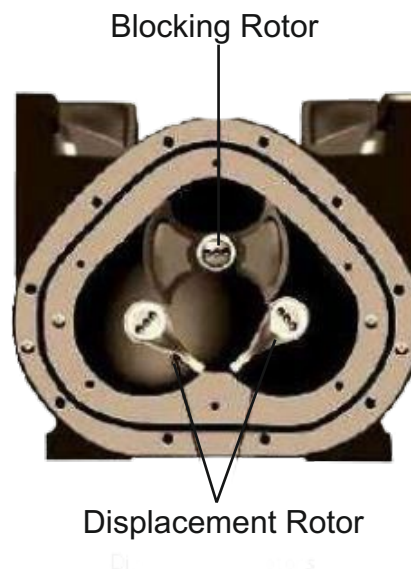
Taurus Series P. D. Meters are available in Single case and Double case constructions. The Taurus series Double case meters are for higher system pressure applications. The metering chamber are housed in separate spherical steel case.

DESIGN FEATURES

- High Accuracy
- Lack of internal friction (No metal to metal contact)
- Bi-directional liquid flow
- Suitable for wide range of liquids
- Meets world wide Metrological Standards
- Long service life
- Single case and double case option



Fig 1. Meter with Mechanical Counter



PRINCIPLE OF OPERATION

The Taurus series P. D. flowmeters have a simple and robust design. It consists of a housing and three rotors. The rotors are supported by bearing plates. The calibrator captures the rotor rotation in a calibrated manner and transmits to a counter.

SPECIFICATIONS

Type	: Positive Displacement (PD) Tri-rotor
Size	: Upto 6"
Flow Range	: Upto 3000 LPM
Standard Unit	: Liters, (Gallons Optional)
Repeatability	: 0.02 %
Working Temperature	: -30°C to +70°C
Connections	: Flanged ANSI (or as specified)
Pressure	: 10.5 BAR (150 PSI) (Higher Pressure build optional)

MATERIALS OF CONSTRUCTION

Housing	: Aluminum Alloy / SS 316 / Carbon Steel
Rotors	: Aluminum Alloy/SS 316
Bearings	: Carbon / PTFE / PB
Rubber Parts	: Buna-N (Nitrile) / Viton/PTFE

Counter Options

- Vermont Counter (V01) & Register (V02)
- Electronic Digital Readout
- Veeder Root Counters / Mechanical & Electromechanical



Fig 2. Meter with Mechanical Preset Assembly

APPLICATIONS

Truck Mounted Metering

- Aviation Fuel
- Refined Fuels
- Lube Oil & Additives
- LPG

Terminal/Depot Metering

- Refined Petroleum Products
- Solvents/Chemicals
- Marine Fuel Oil

Industrial Process Metering

- Industrial Liquids
- Barrel Filling
- Batching/Blending
- Dispenser Metering

Others

- Ship Bunkering and Barge Loading
- Rail Wagon Loading
- Railway Consumer Depot (RCD)



Fig 3. Meter in LPG application



Fig 4. Meter with Electronic Batch Controller



Fig 5. Single Case Flowmeter



Fig 6. Double Case Flowmeter

Model Configuration: Taurus Series P. D. Flowmeters

Model Designation	Size "(mm)	Flow Range (LPM)	Working Pressure	Casing Option
T - 550 (1)	1 ½" (40 mm)	Upto 250	150 PSI	Single
T - 550 (2)	2" (50 mm)	Upto 360	150 PSI	Single
T - 550 (3)	2" (50 mm)	Upto 550	150/300 PSI	Single/Double
T - 1500	3" (80 mm)	Upto 1200	150/300 PSI	Single & Double
T - 2000	4" (100 mm)	Upto 2000	150/300 PSI	Single & Double
T - 3000	6" (150 mm)	Upto 3000	150/300 PSI	Single & Double

- Higher Pressure options are available
- Read out in Liters, Kilo Liters, Gallons or Barrels
- Mechanical and Digital readout
- Complete package of accessories: Strainers, Control Valves, Air separators, Large Display
- Approvals by PESO & Legal Metrology (Weights & Measures)
- Skid options available

Meter Accessories

A. Counters

Veeder Root 7887 or Vermont V01 for volume indication, 5 digit large numerical reset with 8 digit non-reset totaliser. Litres, Dekalitres, Gallons indication.



Veeder Root 7889 or Vermont V02 Preset Counter selects predetermined volume for precise batch control.



Veeder Root EMR4 Electronic display counter with remote indication, 4-20 mA output, data logging facility.



Veeder Root Ticket Printer 7888 provides an imprinted ticket for delivery transaction. Accumulative or Zero start options available.



Electronic Registration Ex proof as well as Panel mounted WP options to perform multiple functions and pulse output, RS232/485 communication.



B. Pulse Transmitter

The electronic pulse signal output, to transmit to other flow control or data acquisition.



C. Strainer and Air Eliminator

For efficient operation of meter, removes free air or vapour and provides protection from debris entering into flowmeter.



Air Separator

Air separator efficiently separates and releases air or gas from liquid products before they are metered.



D. Mechanical Preset Valve

Preset valves provide an accurate and automatic control of a predetermined quantity of liquid to be delivered through the P. D. flowmeter. A typical preset arrangement consists of a Preset Valve mounted on the P. D. flowmeter outlet and connected by a mechanical linkage to the preset register fitted below the P. D. flowmeter counter.



E. Digital Control Valve

Electrically actuated, hydraulically operated multifunction control valve. The valve also offers an in-built flow governing function. Two stage valve also available.



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