



# CREATIVE ENGINEERS



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## OVAL GEAR METER

We are pleased to introduce our new **“TORQUE”** make positive displacement flow meters For oil, diesel, petrol, kerosene or any slightly viscous non corrosive liquids; this is reset type, Mechanical flow meters.



### APPLICATIONS:-

Oval gear flow meter is a kind of positive displacement meter to Measure the liquid flow or instantaneous flow of the pipe tube. it is a Kind of accumulate meter. with characteristics of high accuracy, small change by the fluid Viscosity, it is widely used to measure oil kind liquid, but it is forbidden to measure corrosive Liquid



### WORKING PRINCIPAL:-

The measurement part of oval gear flow meter is posed by two elliptical Gears mesh with each other and its shell (measuring room).

The figure shows that the flow meter works by two elliptical gears to mesh With each other, its working process are as follows: P1 in the figure shows The pressure of liquid from inlet side, to show the outlet pressure, the Bottom rotor has no rotating torque even it effected by the liquid pressure, but the above Gears will move by the rotating

“TORQUE” caused by liquid pressure. as the two gears mesh with each other, they move with O1, O2 axis of rotation direction of the arrow, meanwhile, gear O1 will push the liquid out From half-moon space. In the status of the above gear is driving gear, and the bottom gear is Driven gear. both of these two gears have rotating torque by the liquid pressure, and they Move with the direction of the arrow to space the gear space is opposite to, the bottom gear is Driving gear, and above gear is driven gear. The bottom gear pushes the liquid out from the Half-moon space under the liquid press pushes liquid volume four times of “measurement Room”. So, as long as the rotation of gears, the liquid volume can be counted. ure. such Continues working, the gears turn a circle, it pushes liquid volume four times of “Measurement room”. so, as long as the rotation of gears, the liquid volume can be counted.

## **TECHNICAL DATA:-**



**OGM-25-D**

MODEL	OGM-25	OGM-40	OGM - 50	OGM - 80	OGM - 100
SIZE	1"	1 1 / 2"	2"	3"	4"
MIN FLOW (L/min)	12	25	30	100	160
MAX FLOW (L/min)	120	250	300	1000	1600
ACCURACY (%)	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
REPEATABILITY	≤ 0.03%	≤ 0.03%	≤ 0.03%	≤ 0.03%	≤ 0.03%
MAX VISCOSITY (CPS)	1000	1000	1000	1000	1000
MAX PRESSURE (Mpa)	3.4	1.8	1.8	1.6	1.6

## **CAST IRON OVAL GEAR METER (3" and 4"):-**

Cast Iron Oval Gear meter has the ability to handle a wide range of fluid viscosities with exceptional levels of repeatability and durability , applying in the petroleum , chemical , food Industry etc.

- Compact size ,
- easy maintenance
- Easy to read and operate mechanical display
- Flexibility of Installation Options.
- Low Pressure drop



## **1/2" DIGITAL OVAL GEAR METER:-**

Accuracy + / - 0.5 %

Flow range : 7-40 LPM

Max Temp : - 70 C

Max Pressure: 7 bar

## **FEATURES:-**

- 5 Digital liquid crystal display
- Lit/gallon options
- Reset button
- Correction factor
- Operated on 2 alkaline battery



# **OVAL GEAR FLOW SENSOR**

## **Oval gear Flow Sensor**

### **(positive displacement flow sensor)**



### **Technical Specifications:-**

#### **Material of construction**

Enclosure :Aluminium anodize / SS 304 / SS 316

Rotor :Aluminium anodize / SS 316 / PPS

O-ring : NBR / Viton

Shaft : Hard Stainles Steel-316

Accuracy (standard installation position) : + 1% RS

Maximum working pressure 10Mpa (35~85% RH)

Fluid & Ambient temperature :- 40 to 80°C

Power voltage : -5/24 V DC

Output :

High electric level : Less than 4.5 VDC (input voltage 5 VDC)

Low electric level : Higher THAN 0.5 vdc (INPUT VOLTAGE 5 VDC)

Connection : Thread (M/F) or Flange

## Application:

Aluminum body and rotor : Flow measurements of kerosene, Gasoline, diesel, light oil, heavy oil. S.S. body and rotor : Flow measurements of Pharmaceutical drug, food oil, and all Application

## Technical Data Sheet

<u>MODEL NO</u>	<u>FLOW RANGE</u>	<u>PULSE/LITTER</u>
<b>BT-DOFS-006</b>	(5~150L/H)	0.000661 P/L
<b>BT-DOFS-008</b>	(20~300L/H)	0.0025 P/L
<b>BT-DOFS-010</b>	(50~800L/H)	0.0025 P/L
<b>BT-DOFS-015</b>	(80~1,500L/H)	0.0085 P/L
<b>BT-DOFS-020</b>	(150~2,000L/H)	0.0154 P/L
<b>BT-DOFS-025</b>	(200~4,000L/H)	0.0256 P/L
<b>BT-DOFS-040</b>	(500~10,000L/H)	0.086 P/L
<b>BT-DOFS-050</b>	(600~20,000L/H)	0.19 P/L
<b>BT-DOFS-065</b>	(800~30,000L/H)	0.36 P/L
<b>BT-DOFS-080</b>	(1,000~50,000L/H)	0.54 P/L
<b>BT-DOFS-100</b>	(2,000~100,000L/H)	1.0 P/L
<b>BT-DOFS-150</b>	(5,000~150,000L/H)	3.2 P/L

## Electric connection



