S S FLOW_OGFM

OVAL GEAR FLOWMETER

KEY FEATURES

- **Accuracy:** Oval gear flowmeters are known for their high accuracy, often achieving ±0.5% to ±0.1% accuracy of reading, depending on the model and application.
- **Viscosity Range:** They can handle a wide range of fluid viscosities, from low-viscosity fluids like fuels and oils to high-viscosity liquids such as polymers and heavy oils.

- **Measurement Stability:** These flowmeters provide stable and repeatable measurements over time, making them reliable for both process control and custody transfer applications.
- **Wide Flow Range:** Oval gear flowmeters are capable of measuring a broad range of flow rates, typically from very low flow rates up to higher flow rates, depending on the size and type of the meter.
- **Longevity:** With proper maintenance, oval gear flowmeters can have a long operational life, contributing to cost-effectiveness over time.

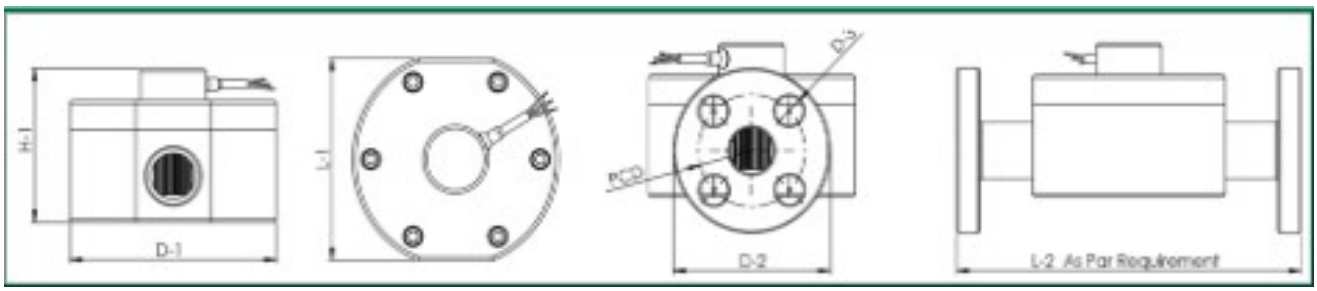
WORKING PRINCIPLE

The working principle of an oval gear flowmeter revolves around the movement of two oval gears within a chamber that is part of the flow path. Here's a step-by-step explanation of how oval gear flowmeters operate. The flowmeter has a chamber through which the liquid flows. This chamber contains two oval-shaped gears that are closely fitted and mesh together.As the liquid flows through the flowmeter, it enters the chamber where the oval gears are located. The gears are designed such that they rotate as the liquid flows past them.The gears are in close proximity and mesh together. As they rotate, they displace a known volume of liquid per rotation. This displacement action is crucial for the measurement principle.The flowmeter measures the volume of liquid passing through it based on the rotation of the gears. The rotation of the gears is directly proportional to the volume of liquid passing through the flowmeter.Typically, oval gear flowmeters are equipped with sensors that detect the rotation of the gears. This rotation is then converted into electrical signals (such as pulses or frequency signals) that can be processed by electronics to calculate the flow rate.The design of the oval gears ensures that the flowmeter provides accurate measurements, even for fluids with varying viscosities. The precision comes from the consistent volume displacement per rotation of the gears.

TECHNICAL SPECIFICATION

Line Size	DN4 to DN100
Ratio of Measuring Range	1 : 20
Instrument Material	SS316 / SS304 / Alumunium Anodized
Conditions of use	Environment temperature: -30°C—60°C
	Medium temperature: -100°C—100°C/120°C/150°C
Pressure Level	Up to 16 bar / High Pressure Model Available
Power Supply	12-24VDC / 230v AC
Power Consumption	≤1W
Signal Output	Pulse / 4-20mA / RS485(Modbus-RTU)
Protection Level	IP65 (IP67 can be customized)
Explosion-proof Level	Ex-Proof Model Available on request
Display	Instantaneous flow , accumulative flow unit Select-able

DIMENSIONS DETAILS



PART NAME	H-1	D-1	L-1	Thread	Class 150 Flange	D-2	Hole	PCD
SSFLOW-OGFM-003	57	63	59	1/4"BSP	1/2"	88.9	15.74X4	60.45
SSFLOW-OGFM-006	57	63	59	1/4"BSP	1/2"	88.9	15.74X4	60.45
SSFLOW-OGFM-009	60	67	61	3/8"BSP	1/2"	88.9	15.74X4	60.45
SSFLOW-OGFM-013	66	86	81	1/2"BSP	1/2"	88.9	15.74X4	60.45
SSFLOW-OGFM-020	73	97	91	3/4"BSP	3/4"	98.55	15.74X4	69.85
SSFLOW-OGFM-025	83	117	109	1"BSP	1"	107.95	15.74X4	79.24
SSFLOW-OGFM-040	103	195	183	1-1/2"BSP	1-1/2"	127	15.74X4	98.55
SSFLOW-OGFM-050	128	195	183	2"BSP	2"	152.4	19.05X4	120.65
SSFLOW-OGFM-080	159	240	220	3"BSP	3"	190.5	19.05X4	152.4

LINE SIZE VRS FLOW RATE

Meter Size Vrs Flow Range			
SSFLOW-OGFM-003	3mm	1/4" BSP	0.5 – 35 L/H
SSFLOW-OGFM-006	6mm	1/4” BSP	5 - 150 L/H
SSFLOW-OGFM-009	9mm	3/8” BSP	15 - 300 L/H
SSFLOW-OGFM-013	13mm	1/2” BSP	100 - 1500 L/H
SSFLOW-OGFM-020	19mm	3/4" BSP	200 - 2200 L/H
SSFLOW-OGFM-025	25mm	1” BSP	500 -4000 L/H
SSFLOW-OGFM-040	40mm	1 ½” BSP	1000 - 10000 L/H
SSFLOW-OGFM-050	50mm	2” BSP	5000 – 20000 L/H
SSFLOW-OGFM-080	80mm	3” BSP	10000-100000 L/H

APPLICATION

- Chemical Processing: Oval gear flowmeters are used to measure the flow rate of chemicals, solvents, and other liquids in various processes
- Petrochemical Industry: These flowmeters are used to measure the flow rate of crude oil, refined petroleum products, and other hydrocarbons in refineries, pipelines, and storage facilities.

- Food and Beverage: Oval gear flowmeters are used to measure the flow rate of beverages, such as juice, milk, and wine, in bottling lines and packaging facilities.
- Pharmaceutical Industry: These flowmeters are used to measure the flow rate of pharmaceutical liquids, such as syrups, suspensions, and solutions, in manufacturing processes.
- Research and Development: These flowmeters are used in laboratory settings to measure the flow rate of various liquids in research and development applications.

ORDERING INFORMATION

SS FLOW_OGFM_LINE SIZE			
MOC	1 – SS304 2 - SS316 3 – Alumunium Anodized	**Protection**	1 - IP 65 2 – IP67
Pressure	1 – Up to 16 Bar 2 – Other	**Explosion Proof**	1 - Yes 2 - No
Connection	1 – Flange 2 – Thread 3 – Clamp 4 – Insertion	**Output :**	1 - 4 to 20mA 2 – RS485 3 – 4 to 20mA + HART 4 – 4 to 20mA + RS485 5 - NPN or PNP
Temperature	1 – 80 Degree C 2 – 120 Degree C 3 - 150 Degree C 4 – Above 150 Degree C	**Relay**	1 - Switching 2 – Batching 3 – With Addition Output 4 – NA
Power	1 – 24vDC 2 – 230V DC 3 – Other	**Test Certificate**	1 – Factory Calibration 2 – NABL lab
Display	1 - Without 2 – Integral 3 – Remote Type	**Any Other Details**	Please specify

WE UNDERSTAND FLOW

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