



NXL FLOW INSTRUMENTS

Oval gear flowmeters

- For high accuracy use or with high viscosity fluids.
- Positive displacement
- Temp up to 200°C (70°C std.)
- Pressures up to 670 Bar (20 Bar Std)
- Reed switch/Solid State Hall Effect
- Viscosities 1 to 1000000 cP (1000 CP Std)
- 0.5 and 1% accuracies
- Low pressure loss
- Excellent chemical resistance
- 0.1% Repeatability
- Compact design
- Flows from 1mL/Min (150cP)
- In house designed & Manufactured
- Wide rangeability
- Choice of materials
- Inherently linear
- Bi-directional
- Only two moving parts
- Screwed, Flanged or Tri-Clamp Connection options
- Body's available in Aluminum, Stainless Steel
- Electronic Display options



DESCRIPTION

The NXL positive displacement oval gear flowmeters designed for applications requiring high accuracy measurement of clean liquids with viscosity's less than 1000cP standard, or up to 1 million cP with rotors (gears) cut for high viscosity. All meters are available with a pulse output from a reed switch for remote registration and/or totalization. The optional LED displays offer rate, resettable total and the option for simple batch. All meters are available with PPS rotors (gears) as standard. Also available as an option are SS rotors (gears). Hastelloy C® rotor (gear) shafts is specially designed for corrosive liquid service when the optional Hastelloy C shafts are selected.

PRINCIPLE OF OPERATION

The NXL oval meter is a positive displacement meter. As the fluid being measured passes through the meter, it rotates 2 oval gears in a measuring chamber to displace a precision volume of fluid. A sensor detects the gear rotation to determine displaced volume and flow rate. Fluid pressure rotates the oval gears, Figure 1. In position 1, the fluid exerts a clockwise driving force on Gear A. There is no net driving force on Gear B. It is perpendicular to the flow so the fluid forces are balanced around the shaft. As the gears rotate to position 2, the fluid begins to exert a force on Gear B. At position 3, all the driving force is on Gear B. This alternating driving force provides a smooth rotation of almost constant torque. The meter design minimizes the slippage between the gears and the measuring chamber wall. As a result, the oval meter is less affected than other designs by the liquid's viscosity and lubricity.

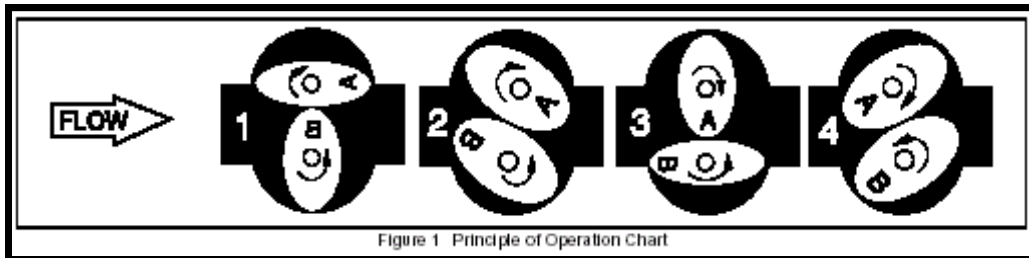


Figure 1 Principle of Operation Chart

TYPICAL APPLICATION :

Totalizing Flow: Inventory Control and Measurement of liquids consumed by various departments (or) processes may be obtained by using an Oval Gear Meter.

Batching Controlling: Automatic Dispensing of a predetermined quantity of liquid from an inventory holding (or) process area can be accomplished by equipping a NXL flow meter.



Flow Capacities

Model /Size	Flow Range	Std.Fitting	Accuracy in %
2805/ 6 NB	1-50 LPH	¼ " BSP	1.0
2811/ 6 NB	5-100 LPH	¼ " BSP	1.0
2812/ 6NB	25-500 LPH	¼ " BSP	1.0
815/15 NB	1-35 LPM	½ " BSP	0.5
2820/20 NB	1-35 LPM	¾ " BSP	0.5
2825/25 NB	6-120 LPM	1" BSP	0.5
2840/40 NB	10-250 LPM	1½" BSP	0.5
2850/50 NB	15-350 LPM	2" BSP	0.5
2875/80 NB	66-616 LPM	3" FLANGE	0.5

Maximum/Minimum flow rates are dependant on viscosity of Fluid.



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