

HEG Oval Wheel Gear Flow Meter

Product Introduction



HEG oval wheel gear flow meters are mainly used to measure high-viscosity media. The products are widely used in petroleum, petrochemical, natural gas, chemical, paper making and other industries to measure small flow meters with small diameters.

The working principle of the oval wheel gear flow meter is that the liquid drives a pair of oval gears to rotate; the volume of each cavity is a fixed volume; the gear speed is drawn, the sensor sends out a synchronous pulse count, and the oval gear rotates through a magnetic seal coupling and a transmission reduction mechanism. Passed to the counter directly indicates the total amount flowing through the flow meter. If the sending device is attached, and then equipped with an electric display instrument, it can realize the remote instantaneous flow and cumulative flow.

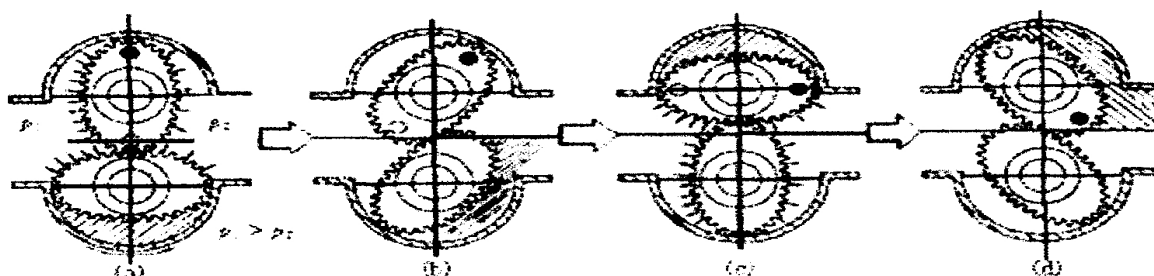
Product Features

The flow measurement has nothing to do with the flow state of the fluid. This is because the oval gear flow meter relies on the pressure head of the measured medium to push the oval gear to rotate for measurement. The greater the viscosity of the medium, the smaller the leakage from the gear and the metering gap. Therefore, the greater the sticky skin of the nuclear test medium, the smaller the leakage error, and the more beneficial it is for measurement. The elliptical gear flow meter has high measurement accuracy and is suitable for measuring the flow of high-viscosity media, but not suitable for fluids containing solid particles (solid particles will jam the gear, so that the flow cannot be measured). If the measured liquid medium contains gas, it will also cause measurement

errors. The oval gear flow meter is a type of positive displacement flow meter, used for continuous or discontinuous measurement of the flow or instantaneous flow of liquid in the pipeline. It is especially suitable for flow measurement of heavy oil, polyvinyl alcohol, resin and other high viscosity media.

Working Principle

The measurement part of the oval wheel gear flow meter is mainly composed of two oval gears meshing with each other and their casing (measuring chamber), as shown in the figure below:



Specification

Parameter	Specification
Shell Material	Aluminum, stainless steel, medium and high pressure stainless steel, PPS, bronze
Bearing material	Ceramic, bronze, Hastelloy, carbide, PPS, stainless steel
Shaft material	316 stainless steel
O-ring material	VITON, Viton, stainless steel, Teflon
Accuracy	$\pm 1\%$, $\pm 0.5\%$
Range ratio	10:1, up to 50:1
Repeatability	$\pm 0.03\%$
Pressure	Up to 551bar
Diameter (MM)	DN10-DN150
Maximum viscosity	1,000 000CP
Temperature	-10~80°C

Technical Performance

Model	DN	Min. flow	Max.flow	Accuracy	Working Pressure (Mpa)
LC—8	8	0.04	0.4	0.5, 0. 2	1.6, 2. 5, 4. 0, 6. 4
LC—15	15	0.16	1.5		
LC—20	20	0.3	3		
LC—25	25	0.6	6		
LC—40	40	1.5	15		
LC—50	50	2.4	24		
LC—80	80	6	60		
LC—100	100	10	100		
LC—150	150	12	120		