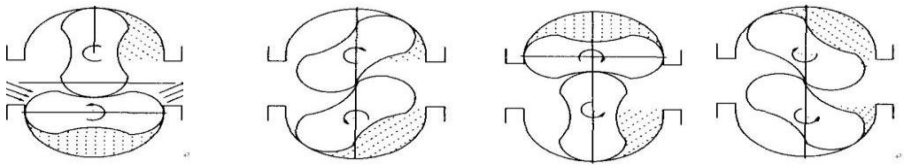
Roots Flowmeter

Overview

LL Roots Flowmeter has two types: one is a traditional mechanical meter, the other is a mechatronic electronic meter. LLE Intelligent Roots Flowmeter (hereinafter referred to as the meter) is a new type of intelligent mechatronic volumetric flowmeter, it is our patent product. It absorbs the advantage of high measuring accuracy of volumetric flowmeter, and the internal error correction of system performed by the microcomputer, in order to achieve series production of high accuracy flow meters. Except the error compensation to mechanical system, LLE Intelligent Roots Flowmeter can also increase the temperature compensation, pressure compensation and other functions according to the users' requirements.

Operating Principle and Structure

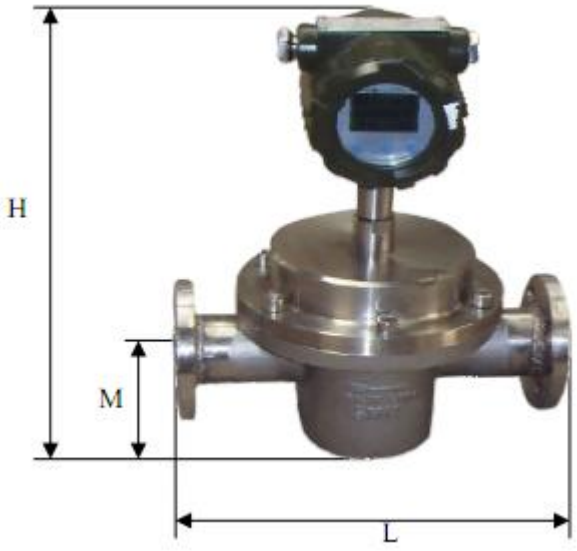
LL Roots Flowmeter consists of a waist-wheel transmitter and a counter. The principle of it is taking input and output pressure difference of a pair of waist-wheels in transmitter as the driving force, making rotary motion in the metering chamber, in the process of rotating, when one of the waist rotates to a position that the major axis is parallel to the import and export, two waist-wheels and two end caps as well as side walls of the metering chamber forms a closed measuring chamber, to calculate the volume of liquid in metering chamber, will get a constant quantity, as the basic measurement of the transmitter. Measurement equivalent and accumulation of revolutions of the waist-wheel in unit time are the flow value of transmitter. Display the flow though counter.



Main Technical Parameters

Inside Nominal Diameter (mm)	15~300
Accuracy	Grade 0.1, 0.2, 0.5
Pressure Loss	0~100Mpa.s<80kpa
Operating Pressure	1.6, 2.5, 4.0, 6.3, 10, 16, 25, 42MPa
Temperature Range	20℃~+350℃
Medium Viscosity	0.1~1000 Mpa.s
Environmental Conditions	Temperature: -30℃~+70℃ Humidity: 5%~95% Air pressure: 95kpa~106kpa
Connecting Flange	National Standard, can also produce according to customized flange standard.
Explosion-proof Grade	ExiaII CT4, ExdII BT4

Dimension Figure



Inside Nominal diameter (mm)	L Distance Between Flanges	Total Height	Center Hight	Installation Way(s)
		H	M	
15	180	280	70	Horizontal type
20	240	350	80	Horizontal type
25	240	350	80	Horizontal type
40	280 (250)	500	80	Horizontal type
50	280 (250)	500	80	Horizontal type
80	400 (380)	700	154	Horizontal type, Vertical type
100	400 (380)	740	190	Horizontal type, Vertical type
150	650 (460)	840	220	Horizontal type, Vertical type
200	700	1180	450	Horizontal type, Vertical type
250	1000	1210	500	Horizontal type, Vertical type
300	1000	1400	650	Horizontal type, Vertical type

Ordering Models

Basic Model	1	2	3	4	5	6	7	Illustration
	Counter	Inside Nominal diameter	Nominal Pressure	Material	Output Method	Operating Temperature	Accuracy	
LL								Roots flowmeter

	J							Mechanical counter
	E							Electronic counter
	H							Back to zero counter
		8~300						Inside nominal diameter 8~300mm
			1.6~42					Nominal pressure 1.6~42mpa
				C304				Rotor: 304 stainless steel
				C316				Rotor: 316 stainless steel
				CC304				Case, rotor: 304 stainless steel
				CC316				Case, rotor: 316stainless steel
					F			Pulse output
					I			4-20mA Current output
					R			RS485, Mudbus
					H			Hart protocol output
						A		Operating temperature -20℃~+80℃
						B		Operating temperature -20℃~+350℃
							0.5	Grade: 0.5
							0.2	Grade: 0.2