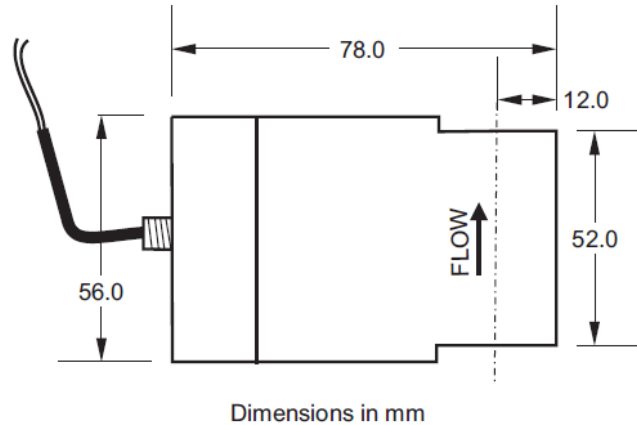




LOW FLOW SCREWED LIQUID TURBINE FLOW METER

The Low Flow Screwed Liquid Turbine Flow Meter uses the Pelton wheel principle to measure the extremely low flow rates required in process plants, research facilities and laboratories. It will cover flow ranges from 1 to 420 litres/hour.



Specification

Size:	1/4 "
Body connections:	Screwed BSP Female
Linearity:	+/- 1% of full scale (FLF/350 & FLF/420 are +/- 1% of reading)
Repeatability:	+/-0.2% of reading
Maximum working pressure:	69 Barg (special high pressure designs available)
Temperature range:	100 deg C Max
Maximum Viscosity:	20 cst

Materials of Construction

Body, Cartridge, Jet, Headcap:	316 stainless steel
Rotor:	PFA with 316 Stainless Steel Tips
Bearings:	Tungsten carbide balls, Synthetic sapphire cups
Gasket:	Mica

Sensor Specification

Type:	Namur
Supply:	8 V DC
Max Temp:	100 deg C
Output:	Current Pulse. High > 3mA, Low < 1mA

Application

The Low Flow Screwed Liquid Turbine Flow Meter is used to measure extremely low flow rates of clean liquids, chemicals, additives, demineralised water, oil and fats. Applications include dosing of chemicals, batching, injection into food and animal feeds processes, blending, monitoring and pH adjustment.

Instrumentation

The pulse from the flow meter is fed into an instrument and can be used for flow rate indication, totalising, blending, dosing, controlling and batching. The flow meter can be used in hazardous areas. We can provide a range of instruments to suit your application.

Principle of Operation

The PFA Pelton wheel rotor has stainless steel rods embedded within the tips of the vanes. Tungsten carbide balls are integral to the rotor. The tungsten balls of the rotor spin in sapphire cups mounted in stainless steel bearing housings. The flow of liquid causes the rotor to turn and a proximity sensor detects the passing of the rotor tips. The speed of the rotor and the frequency of the signal is directly proportional to the flow rate.

Construction

The flow meter has a strong stainless-steel body that is corrosion resistant and withstands high pressures. The flowmeter is designed for use on clean liquids although particles up to 200 micrometres can be entrained in the liquid without any effect on the overall performance. The two wire Namur sensor is fitted into the head cap of the flow meter and is supplied with a 2-metre length of cable for connection to remote instruments.

Calibration

The turbine flow meters are individually calibrated with water and are traceable to national standards. They are supplied with a test certificate for each meter showing the number of pulses per litre, which is used to set the instrumentation.

Model No	Flow Range Ltr/Hour	K factor pulses / litre [#]
FLF/10	1-10	8000
FLF/25	1-25	5500
FLF/60	3-60	4800
FLF/97	2-97	2750
FLF/150	5-150	2750
FLF/250	10-250	1850
FLF/350	20-350	1200
FLF/420	30-420	1050