

# HF2 ALL PLASTIC BEARINGLESS FLOWMETER



**The Hover-flow will accurately measure the flow of highly corrosive, aggressive and non lubricating liquids and chemicals.**

- l **All plastic bearingless design**
- l **No maintenance**
- l **Well proven**
- l **No corrosion**
- l **No drift or wear**
- l **Accurate measurement of difficult liquids**
- l **Individual calibration certificates**



## **Application:**

This range of flowmeters is used for measuring highly corrosive solutions such as nitric, sulphuric, hydrochloric and hydrofluoric acids. It is ideal for measuring aggressive and non-conductive liquids which have proven to be incompatible with most magnetic and mechanical flowmeters.

The long term reliability and stability of the Hover-flow make it ideal for both batch and continuous process operation.

In hazardous areas you can use the flowmeters with the IS pick-off coil (ATEX compliant)

The signal can be used in the IS area with our range of Fluidwell LCD Instrumentation or transmitted to the safe area using the intrinsically safe P5 preamplifier and suitable barriers.

## **Principle of Operation**

The flowmeter has two turbines connected by a central shaft. The liquid flows through both turbines, spinning the shaft whilst it hovers. The lower turbine has magnets sealed in the rim which are detected by the sensor to generate pulses. The frequency of the pulses is proportional to your flow rate.

## **Instrumentation**

The signal can be used for a local display, remote display or converted for transmission to a separate control system. We have a range of instruments to suit all your requirements: Rate/Total/Alarms/Batching

## **Construction**

All wetted parts are either PVC or PVDF for maximum chemical resistance. The seals are PTFE or Viton. The meter combines the advantages of a turbine flowmeter without the problems of bearing wear.

## **Calibration**

All flowmeters are individually calibrated with water and are traceable to national standards.

We provide you with a test certificate for each meter showing the number of pulses per litre, which is used to set the instrumentation.

## **Installation**

The flowmeter is installed horizontally in the pipeline.

To reduce turbulence and achieve the best results from your flowmeter we recommend that you install it in a straight section of pipe with at least 10 pipe diameters upstream and 5 pipe diameters downstream.

Control valves should be installed downstream of the flowmeter. The flowmeter must be kept full of liquid and reverse flow must be avoided.

An amplifier is required if you need to transmit the signal more than 4 metres, or if there is an electrically noisy environment close to pumps, solenoids, switchgear or high current cables.

Intrinsically safe systems always require an IS pick-off coil. The IS P5 preamplifier is required for transmission to the safe area through barriers.

## Specifications

Linearity:	+/- 0.5% (+/-1.0% for 15mm) of reading in linear range
	+/-1.0% of maximum reading for the overall range
Repeatability:	+/-0.125% of reading
Pressure drop:	0.85 bar at maximum flow
Maximum pressure:	PVC body 8 bar at 20 °C
	PVDF body 16 bar at 20 °C
Temperature range:	PVC -10 to 60 °C
	PVDF -10 to 110 °C
Body connections:	Socket weld or stub flanges with backing rings
Pickoff coil output :	Sine wave mV high frequency signal

## Materials of construction

Body:	PVC or PVDF
Cartridge carrier:	PVC or PVDF
Measuring cartridge and rotor:	PVC or PVDF
Upper and lower sealing plates:	PVC or PVDF with 316 s/s cover plate
Studs and nuts:	Stainless steel
O rings:	Viton or PTFE

## Flow Ranges

Size mm	Cartridge material	Overall flow range litres/min	Linear flow range litres/min	Pulses/ litre
15	PVC	3.5 - 35	7-35	160
15	PVDF	4 -35	7.5-35	160
25	PVC	10-110	22-110	83
25	PVDF	12-110	22-110	83
40	PVC	15-250	40-250	29
40	PVDF	18-250	50-250	29
50	PVC	35-440	85-440	17
50	PVDF	42-440	85-440	17
80	PVC	70-1000	220-1000	10.5
80	PVDF	85-1000	240-1000	10.5