HOVERFLO 2 ALL PLASTIC BEARINGLESS FLOWMETER

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

All plastic bearingless design ✓
- No maintenance
- No corrosion
- No wear

Accurate metering of difficult liquids ✓
- Well proven
- Reduce waste and costs
- Improve product quality

High quality manufacture ✓
- ISO 9001 certified company
- Approvals for use in hazardous areas
- 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 agressive and non-conductive liquids which have proven to be incompatible with most magnetic and mechanical flowmeters.
The long term reliability and stability of the Hoverflo make it ideal for both batch and continuous process operation.
In hazardous areas you can use the flowmeters with the Apollo IS pick-off coil, approved to ATEX II 1G EEx ia IIC T5/T4. The signal can be used in the IS area 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. Apollo have a range of instruments to suit all your requirements.

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 Apollo 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.

APOLLO

Hoverflo 2 Flowmeter

Specification

Linearity:	+/- 0.5% (+/-1.0% for 15mm) of reading throughout 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^{0}C
		3 bar at 60^{0}C
	PVDF body	16 bar at 20^{0}C
		10 bar at 60^{0}C
		5 bar at 110^{0}C
Temperature range:	PVC	-10 to 60^{0}C
	PVDF	-10 to 110^{0}C
Body connections:	Socket weld Stub flanges with backing rings to ANSI 150 DIN ND 16 BS10 Table D, E	
Pickoff coil output :	Sine wave mV high frequency signal	
Preamplifier output:	Sine wave current pulse 1.5-12mA	

Materials of Construction

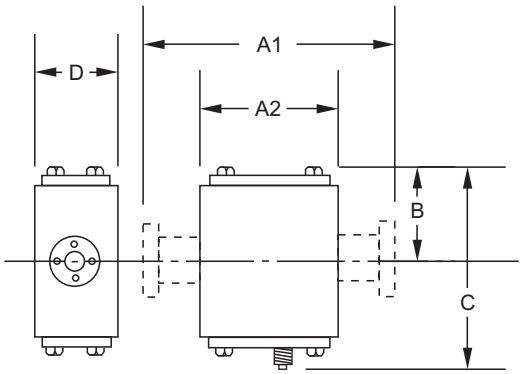
Body:	PVC or PVDF
Cartridge carrier:	PVC or PVDF
Measuring cartridge and rotor:	PVC or PVDF
Upper and lower sealing plates:	PVC or PVDF supported by 316 stainless steel cover plate
Studs and nuts:	Stainless steel
O rings:	Viton or PTFE

Performance

Size mm	Cartridge material	Overall flowrange litre/min	Linear flow range litre/min	K Factor Pulses/ litre	Maximum particle size mm
15	PVC	3.5 - 35	7-35	160	0.4
15	PVDF	4 -35	7.5-35	160	0.4
25	PVC	10-110	22-110	83	1.0
25	PVDF	12-110	22-110	83	1.0
40	PVC	15-250	40-250	29	1.5
40	PVDF	18-250	50-250	29	1.5
50	PVC	35-440	85-440	17	2.0
50	PVDF	42-440	85-440	17	2.0
80	PVC	70-1000	220-1000	10.5	3.0
80	PVDF	85-1000	240-1000	10.5	3.0

Flow Path Diagram

Dimensions



Dimensions in mm

Size mm	A1 Flanged	A2 Socket	B	C	D
15	150	85	55	150	64
25	200	115	65	170	70
40	250	150	90	220	125
50	280	180	105	250	125
80	430	245	160	340	190

Contact our flow measurement specialists for advice on your application

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