



Introduction

A turbine flowmeter operating on the Pelton wheel principle for low flowrate applications on low viscosity fluids.

Conventional axial flow turbine meters become increasingly difficult to manufacture in very small sizes and bearing drag becomes more significant. The Pelton wheel on the other hand still retains a manageable diameter allowing close machining tolerances whilst being capable of handling very low flowrates with reasonable accuracy.

The units may be used for additive flows, fuel consumption metering, perfumes, colourings etc and the output is compatible with our standard range of secondary readout instruments.

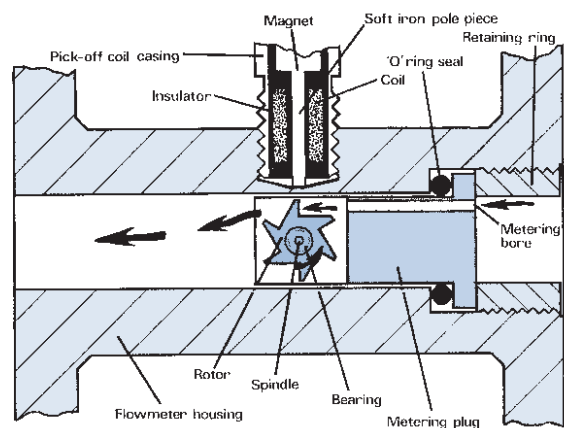
With this design a range of interchangeable metering plugs may be provided within one body size, such that flow ranges may be changed very simply.

Construction is in stainless steel as standard but other materials may be used to suit the corrosive properties of the metered fluid. Flanges to ANSI, BS4504 or BS10 may be fitted and a design is also available with Ermeto or BSP couplings for high pressure hydraulic work.



Operating principle

In operation a star shaped paddle wheel is housed within a metering plug containing a small jet hole such that a high velocity jet is imparted tangentially on the rotor. Rotational speed and hence frequency are directly proportional to flowrate. The sharp edges of the rotor are detected by a reluctance pick off coil and an alternating voltage is thus generated.



Sizing table

Type Number	Flow Range l/min	K factor pulse/ltr	Pressure drop (bar)
NS 500/063	0.18-1.8	20700	0.5
NS 500/093	0.45-3.2	14500	0.4
NS 500/110	1.1-5.4	12500	0.4
NS 500/125	1.3-6.5	10500	0.4



Parts and materials

Technical data

1	Connector	Die-cast Aluminium
2	Pick off coil	st/stl body
3	Body	316 st/stl
4	'O' Ring	Butyl rubber or PTFE
5	Rotor	431 st/stl or Ferralium Tungsten Carbide Bush
6	Metering Plug	316 st/stl
7	Retaining Screw	316 st/stl
8	Spindle	Tungsten Carbide

Measuring range	8-1
Accuracy	±1.0%
Repeatability	±0.25%
Maximum operating temperature	150°C
Maximum operating pressure	Limited only by coupling design
Transmission length	Up to 300 mtrs.
Overall length	flanged 114 mm screwed 95 mm

