

## NS Series Pelton Wheel Flowmeter

### NS SERIES LOW FLOW PELTON WHEEL FLOWMETER

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 flow rates with reasonable accuracy.

The units may be used for additive flows, fuel consumption metering, perfumes, colourings etc. 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.

### SPECIFICATION

<b>Measuring Range</b>	8 to 1
<b>Accuracy</b>	±1.0%
<b>Repeatability</b>	0 to 25°C
<b>Operating Temperature</b>	120°C max
<b>Operating Pressure</b>	Limited only by coupling design
<b>Transmission Length</b>	Up to 300 metres
<b>Overall Length</b>	Flanged 114mm Screwed 95mm

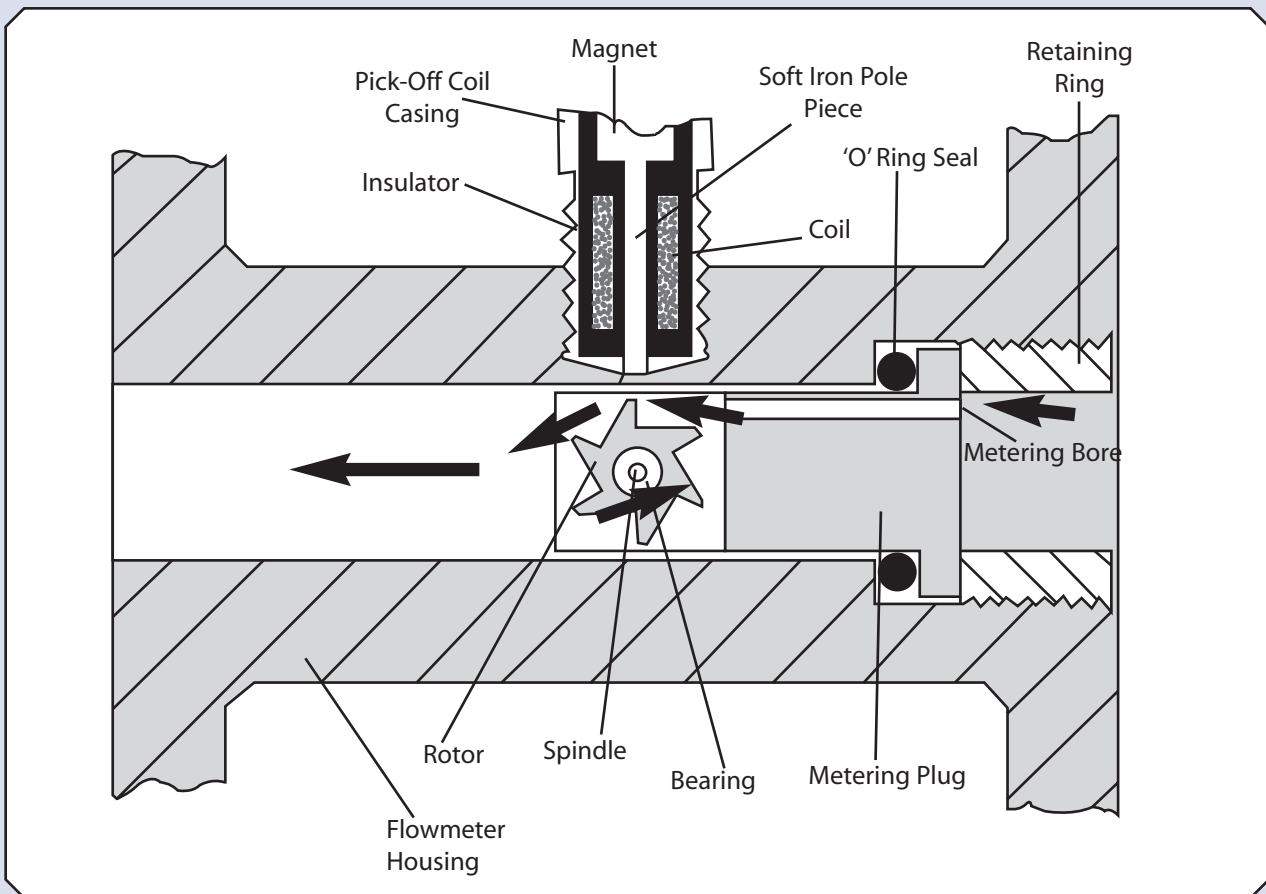


## SIZING TABLE

Type No	Flow Range L/min	K Factor Pulse/ltr	Pressure Drop (bar)
NS500/063	0.18-1.8	20700	0.5
NS500/093	0.45-3.2	14500	0.4
NS500/110	1.1-5.4	12500	0.4
NS500/125	1.3-6.5	10500	0.4

## PARTS & MATERIALS

1. Connector	Die-cast Aluminium
2. Pickoff Coil	316 Stainless Steel Body
3. Body	316 Stainless Steel
4. O-ring	Butyl Rubber or PTFE
5. Rotor	431 Stainless Steel or Ferralium, Tungsten Carbide Bush
6. Metering Plug	316 Stainless Steel
7. Retaining Screw	316 Stainless Steel
8. Spindle	Tungsten Carbide



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