

## LFT Turbine Flowmeters

The LFT range of Turbine Flowmeters meet the demands of most liquid measurement applications .

They are well suited to the measurement of low viscosity lubricating and non-lubricating fluids, although versions for slurry applications as well as gases are available. A high degree of accuracy and repeatability are attainable using this time served flowmetering principle, which is easily field serviced and re-calibrated.

### Technique

The Rotor blades sweep out the full bore of the meter except for a small tip clearance space . As the blade tips pass the magnetic pick up they initiate a pulse . Flow rate is determined by the frequency of the pulses and Totalised Flow is obtained by summing the pulses .

“ Fluidwell “ Totalisers , which sum the pulses automatically and display Flow Rate and Total Flow instantly on the readout , can be mounted on the Turbine or fitted remotely . Options include: linearisation, pulse/4-20 retransmit , batch control, RS comms, with various power options including 7 year Battery. (EEx ia versions available)

### GENERAL SPECIFICATIONS

#### Materials

|                  |                           |
|------------------|---------------------------|
| Body             | : 316 Stainless Steel .   |
| Rotor Supports   | : 316 Stainless Steel .   |
| Journal Bearings | : Tungsten Carbide .      |
| Thrust Ball      | : 316 Stainless Steel .   |
| Rotor            | : ANC1A Stainless Steel . |
| Rotor Shaft      | : Tungsten Carbide .      |



#### Performance

|               |                                                                                                                               |
|---------------|-------------------------------------------------------------------------------------------------------------------------------|
| Linearity     | : $\pm 0.5\%$ ( better than $\pm 0.2\%$ when used with “Fluidwell “ Totaliser ) .                                             |
| Repeatability | : $\pm 0.1\%$ .                                                                                                               |
| Temperature   | : $-30^{\circ}\text{C}$ to $+120^{\circ}\text{C}$ ( maximum $+350^{\circ}\text{C}$ with optional High Temperature Pick Up ) . |
| Pressure Drop | : 250 mbar at maximum quoted Flow rate .                                                                                      |

#### Code/Style

|     |                          |     |                          |
|-----|--------------------------|-----|--------------------------|
| BSP | : BSPP Male Threaded .   | NPT | : NPT Male Threaded .    |
| FL1 | : ANSI 150 Flanged .     | FL2 | : ANSI 300 Flanged .     |
| FL3 | : BS 4504 ( DIN ) PN16 . | FL4 | : BS 4504 ( DIN ) PN25 . |
| WAF | : Wafer .                | TRI | : Tri – Clamp .          |



#### Example Options

|    |                                |
|----|--------------------------------|
| HT | : High Temperature Pick Up .   |
| IS | : Intrinsically Safe Pick Up . |
| 2P | : Second Pick Up fitted .      |

LFT Turbines fitted with the intrinsically safe pick up ( IS option ) are suitable for Hazardous Installations ( Eex ia IIC T4 ) .

### BSP & NPT Style

Maximum Pressure : 250 Bar

| Style<br>Size | Connection         | Flow Range ( litres / min ) | Length ( mm ) |
|---------------|--------------------|-----------------------------|---------------|
| 3/8 "         | 1/2 " BSP or NPT   | 1 – 10                      | 70            |
| 1/2 "         | 1/2 " BSP or NPT   | 2 - 20                      | 70            |
| 5/8 "         | 3/4 " BSP or NPT   | 5 – 50                      | 76            |
| 3/4 "         | 3/4 " BSP or NPT   | 14 – 140                    | 76            |
| 1"            | 1" BSP or NPT      | 27 - 270                    | 88            |
| 1 1/2 "       | 1 1/2 " BSP or NPT | 55 – 550                    | 114           |
| 2 "           | 2 "BSP or NPT      | 114 – 1140                  | 133           |

### FL1 Style

Maximum Pressure : 19 Bar

### FL2 Style

Maximum Pressure : 29 Bar

### FL3 Style

Maximum Pressure : 16 Bar

### FL4 Style

Maximum Pressure : 25 Bar

| Style<br>Size | Connection                     | Flow Range ( litres / min ) | Length ( mm ) |
|---------------|--------------------------------|-----------------------------|---------------|
| 3/4 "         | 3/4 " FL1 , FL2 , FL3 or FL4   | 14 - 140                    | 140           |
| 1 "           | 1 " FL1 , FL2 , FL3 or FL4     | 27 – 270                    | 152           |
| 1 1/2 "       | 1 1/2 " FL1 , FL2 , FL3 or FL4 | 55 – 550                    | 165           |
| 2 "           | 2 " FL1 , FL2 , FL3 or FL4     | 114 – 1140                  | 165           |
| 3 "           | 3 " FL1 , FL2 , FL3 or FL4     | 227 – 2270                  | 165           |
| 4 "           | 4 " FL1 , FL2 , FL3 or FL4     | 454 – 4540                  | 210           |
| 6 "           | 6 " FL1 , FL2 , FL3 or FL4     | 908 - 9080                  | 240           |

### WAF Style

Maximum Pressure : 100 Bar

| Style<br>Size | Connection           | Flow Range ( litres / min ) | Length ( mm ) |
|---------------|----------------------|-----------------------------|---------------|
| 3/4 "         | 43 mm R.F. Diameter  | 14 – 140                    | 50            |
| 1 "           | 52 mm R.F. Diameter  | 27 - 270                    | 50            |
| 1 1/2 "       | 73 mm R.F. Diameter  | 55 – 550                    | 64            |
| 2 "           | 92 mm R.F. Diameter  | 114 – 1140                  | 76            |
| 3 "           | 127 mm R.F. Diameter | 227 – 2270                  | 100           |

### TRI Style

Maximum Pressure : 68 Bar

| Style<br>Size | Connection      | Flow Range ( litres / min ) | Length ( mm ) |
|---------------|-----------------|-----------------------------|---------------|
| 3/4 "         | 1 " Ferrule     | 14 – 140                    | 50            |
| 1 "           | 1 1/2 " Ferrule | 27 - 270                    | 64            |
| 1 1/2 "       | 2 " Ferrule     | 55 – 550                    | 88            |
| 2 "           | 2 1/2 " Ferrule | 114 – 1140                  | 100           |

Order code : LFT / Style / Size / ( Option-see price list for options available )

e.g. : LFT / WAF / 2 " / HT

Internals Kit 's ( calibrated ) can be supplied , which are very easy to retrofit in to an existing Body on location , ( eliminating the need to return the Turbine ) .

LFT Internals Kit Order code LFT / Style / Size

e.g. : LFT / NPT / 1/2