

# LTE Series Turbine Flowmeters

Up to

- 400 lpm, 100 US gpm
- 420 bar, 6000 psi

The LTE range of turbine flowmeters provides a complete solution to the flow measurement of hydraulic systems on test stands, machine tools and other fixed or mobile applications. The flowmeter can be installed anywhere in the hydraulic circuit for production testing, commissioning, development testing and control systems. The compact design allows the LTE series flowmeters to be installed where space is limited.

A wide range of readouts and signal converters are available which provide the instrumentation needed to analyse the performance of pumps, motors, valves and hydrostatic transmissions.



Manufacturers of hydraulic components and test equipment  
for the Mobile, Industrial and Agricultural industries



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## Features

- **FLOW:** 3.0 - 400 lpm, 0.8 - 100 US gpm
- **PRESSURE:** Up to 420 bar, 6000 psi
- **ACCURACY:**  $\pm 1\%$  of indicated reading over a wide range (depending on readout)
- **BI-DIRECTIONAL:** operation
- **TEMPERATURE:** sensor built-in
- **FLUIDS:** Wide range of hydraulic, lubrication oil, and fuels
- **CALIBRATION:** 21 cSt as standard. Special calibration possible



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## Specifications

Model Number	Main ports	Top ports	Flow range	Max Pressure
LTE60-FM-B-B-6	3/4" BSPP	1/4" BSPP	3 - 60 lpm	420 bar
LTE60-FM-S-S-6	1-1/16" -12UN #12 SAE ORB	7/16" -20UN #4 SAE ORB	0.8 - 16 US gpm	6000 psi
LTE150-FM-B-B-6	3/4" BSPP	1/4" BSPP	5 - 150 lpm	420 bar
LTE150-FM-S-S-6	1-1/16" -12UN #12 SAE ORB	7/16" -20UN #4 SAE ORB	1.3 - 40 US gpm	6000 psi
LTE300-FM-B-B-6	1" BSPP	1/4" BSPP	8 - 300 lpm	420 bar
LTE300-FM-S-S-6	1-5/16" -12UN #16 SAE ORB	7/16" -20UN #4 SAE ORB	2 - 80 US gpm	6000 psi
LTE400-FM-B-B-6	1" BSPP	1/4" BSPP	10 - 400 lpm	420 bar
LTE400-FM S-S-6	1-5/16" -12UN #16 SAE ORB	7/16" -20UN #4 SAE ORB	2.5 - 100 US gpm	6000 psi

### Functional specification

<b>Ambient temperature:</b>	5 to 40°C (41 - 104°F)
<b>Fluid type:</b>	Oils, fuels, water glycol, water oil emulsions
<b>Fluid temperature:</b>	5 to 90°C (41 - 194°F) continuous use.
<b>Accuracy:</b>	15 to 100% of range - 1% of indicated reading Below 15% fixed accuracy of 1% of 15% of full scale To obtain 1% of indicated readings a DHCR must be used. Accuracy with other readouts 1% of full scale.
<b>Output:</b>	Frequency - 20 -2000 Hz
<b>Impedance:</b>	3700 Ohm
<b>Inductance:</b>	1kHz: 1.55H

### Construction material

<b>Flow body:</b>	High tensile Aluminium 2011 T3
<b>Internal parts:</b>	Aluminium, Steel, Stainless Steel.
<b>Transducer body:</b>	Steel electroless nickel plated, Aluminium and stainless steel
<b>Seals:</b>	Viton seals as standard EPDM are available - please consult sales office.

### Operation

As fluid is passed through the flow block it rotates a precision turbine. The flow straighteners and turbine design minimise the effects of turbulence and swirl. The turbine blades are detected by the magnetic reluctance transducer which produces a pulse output. The flow meter block has ports for pressure or temperature sensors which can be supplied as an option.

### Filtration

It is recommended that a 25-micron filter is installed in the circuit prior to the flow block.

### Top ports

All flow meters have two additional ports (see table for configuration) in the top face of the flow meter to enable the user to connect both a temperature and pressure sensor.

### Calibration

All testers are calibrated with 21cSt oil as standard. Calibration certificates are available on request - this is a chargeable option. Other calibration on request - please consult the sales office.

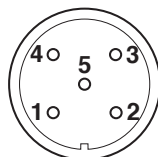
### Installation

The turbines have built-in flow straighteners so the normal recommended length of 10 diameters of straight tube can be reduced to 8 where space is limited. Inlet and outlet connections should always be of a similar bore size to that of the flowmeter to prevent venturi or constriction effects. The range of flow meters can be used for intermittent or continuous testing of flow in either direction. The flow meter can be mounted in any orientation. For heavy duty applications where the flow meter will be used constantly with continuous pressure spikes please contact sales to discuss your application.

### Ordering

To order an LTE flow meter please quote the model number from the table above. eg: LTE125-B-B-6.

## Connection Details



### Pins

- 1 - Freq +ve
- 2 - Freq -ve
- 3 - Temp
- 4 - Temp
- 5 - N/C

### Description

Connecting cable (5m)  
Connecting cable (10m)  
Connector M12

### Part number

FT10228-05  
FT10228-10  
FT9880