

# FI750/1500 Series

## Brass In-Line Flow Indicator

Up to

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

Flow Indicators are designed for continuous monitoring or intermittent use commissioning and servicing hydraulic systems.

The large clear 63 mm (2 1/2") diameter dial ensures that quick checks can be made to determine pump performance and setting of flow control valves.

Since these brass body units contain no carbon steel parts or wetted seals they can be used with water and water-oil emulsions systems.

These direct acting flow indicators can be installed in hazardous areas or on applications where no power is available. The flow indicator design ensures good reliability and minimizes the effects of contamination.

The flow indicator consists of a sharp edged orifice and tapered metering piston. The piston movement is directly proportional to flow rate and the sharp edged orifice minimises the effects of viscosity. The piston is magnetically coupled to the rotary pointer assembly which registers on a clear 63mm (2 1/2") scale displayed in lpm for water and oil.



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### Features

- **FLOW:** 2 - 400 lpm, 0.5 - 100 US gpm
- **PRESSURE:** Up to 420 bar, 6000 psi
- **ACCURACY** within 4% FSD
- **BUILT-IN** thermometer available
- **DIRECT** reading
- **DUAL** scale water/oil
- **HORIZONTAL** or vertical mounting
- **LARGE** clear dial
- **LOW** cost rugged design
- **PRESSURE** gauge port
- **WIDE** operating range



Hydraulic measurement and control

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## Specifications

Model Number with temperature	Model number without temperature	Calibrated flow range		Main ports	Top port	Max pressure
		Water	Oil			
FI750-30BBWT	FI750-30BBW	2 - 30 lpm	2 - 30 lpm	3/4" BSPP	1/4" BSPP	420 bar
FI750-30BNWT	FI750-30BNW	0.5 - 8 US gpm	0.5 - 8 US gpm	3/4" NPSF	1/4" NPTF	6000 psi
FI750-60BBWT	FI750-60BBW	3 - 70 lpm	2 - 60 lpm	3/4" BSPP	1/4" BSPP	420 bar
FI750-60BNWT	FI750-60BNW	0.8 - 8 US gpm	0.5 - 16 US gpm	3/4" NPSF	1/4" NPTF	6000 psi
FI750-120BBWT	FI750-120BBW	4 - 140 lpm	4 - 120 lpm	3/4" BSPP	1/4" BSPP	420 bar
FI750-120BNWT	FI750-120BNW	1 - 37 US gpm	1 - 32 US gpm	3/4" NPSF	1/4" NPTF	6000 psi
FI1500-200BBWT	FI1500-200BBW	10 - 200 lpm	10 - 200 lpm	1-1/2" BSPP	1/4" BSPP	350 bar
FI1500-200BSWT	FI1500-200BSW	2.5 - 50 US gpm	2.5 - 50 US gpm	1-7/8" -12UN #24 SAE ORB	1/4" NPTF	5000 psi
FI1500-400BBWT	FI1500-400BBW	20 - 400 lpm	20 - 400 lpm	1-1/2" BSPP	1/4" BSPP	350 bar
FI1500-400BSWT	FI1500-400BSW	5 - 100 US gpm	5 - 100 US gpm	1-7/8" -12UN #24 SAE ORB	1/4" NPTF	5000 psi

Note: All NPTF threads are to ANSI B1.20.3 -1976 Class 1. As stated in the standard it is recommended that "sealing is accomplished by the means of a sealant applied to the thread". NPT fittings may also be used to connect to NPTF ports (also with a sealant applied to the thread)

### Functional specification

#### Ambient temperature:

-10 to 50°C (14 to 122°F)

#### Fluid type:

Hydraulic oils/water

#### Fluid temperature:

20 to 80°C (65 - 176°F) continuous use. Intermittently (<10 minutes) up to 110°C (230°F)

#### Accuracy:

Flow: ± 4% of full scale. Temperature: ± 2.5°C (± 5°F)

#### Dimensions:

FI750: 146 x 74 x 49mm (5-3/4" x 3" x 2") FI1500: 199 x 87 x 74mm (7-3/4" x 3-1/2" x 3")

#### Weight:

FI750: 3.8 kg (8.4 lbs) FI1500: 9.2 kg (20.2 lbs)

### Construction material

#### Main block:

Brass

#### Internal parts:

Mainly brass

#### Seals:

Viton

### Operation

The flow indicator consists of a sharp edged orifice and tapered metering piston. The piston movement is directly proportional to the flow rate and the sharp edge orifice minimises the effects of viscosity. The piston is magnetically coupled to the rotary pointer assembly which registers on a clear 63 mm (2.5") scale displayed in lpm and USgpm. The flow indicators should not be installed in circuits where the flow is reversed.

The unit is aluminium free and is fully sealed.

### Calibration

All units are calibrated with 28cSt oil as standard. Calibration certificates are available on request - this is a chargeable option. Other calibration on request - please consult sales office.

### Installation

The unit can be installed in any position, horizontal, vertical or anywhere in between. The unit is designed to panel mount

or pipe mount. When panel mounting ensure that rear and bottom faces of the unit are at least 12 mm (1/2") from any ferrous material such as an iron panel or base. The piston contains a magnet that can be affected by close proximity of ferrous material. The front face can be mounted directly to ferrous panels. Two 9 mm (0.35") diameter holes are provided for this purpose.

The indicator can be connected into pressure or return lines, however, do not reverse flow; the flow indicator may be damaged and will act as a non return valve. All hydraulic connections should be made by suitably trained personnel.

### Accessories

Pressure gauge fitted directly into block or remotely connected by micro bore hose - See pressure gauge bulletin.

## Performance

Typical pressure drop curves. Oil viscosity 25 centistokes. (1 bar = 14.5 psi, 10 lpm = 2.64 US gpm)

