



**FI750 Flow Indicators  
user manual**

**Bedienungsanleitung  
FI750 Durchflussanzeiger**

**Manuel d'utilisation des FI750  
Indicateurs de débit**

**Manual de usuario de los  
indicadores de caudal FI750**

38 067 571 00 37  
38 050 371 37 00  
38 067 552 28 7  
38 050 344 99 7  
Сайт hydro-maximum.com.ua  
Почта hydro-maximum@ukr.net

**[www.webtec.com](http://www.webtec.com)**

## Introduction

Flow Indicators are designed for continuous monitoring or intermittent use commissioning and servicing hydraulic systems up to 420 bar (6000 psi). The large clear 63 mm (2.5") diameter dial ensures that quick checks can be made to determine pump performance and setting of flow control valves. They can be used on mobile and industrial hydraulic circuits, also lubrication and coolant systems using oil. 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 minimises the effects of contamination.

**The FI range of products is divided into two families:**

1. FI750
2. FI1500

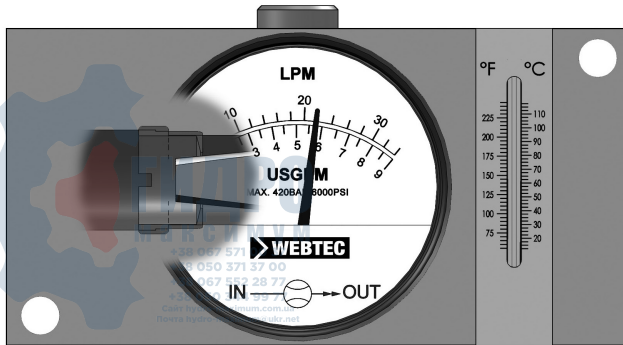
**This manual covers the FI750 range of products.**

Before first operating the equipment read the whole of these instructions. Safety may be impaired if they are not followed.

Webtec have been designing and manufacturing flow meters and hydraulics components for over 50 years. We operate within a Quality Management System that complies with the requirements of BS EN ISO 9001:2000 which is externally audited and certificated each year. Beyond compliance to the standard, Webtec is committed to continually improving in everything we do; with particular emphasis on understanding what matters to our customers and suppliers, and designing our systems and work to meet their needs. We are always keen to hear from customers who may have special requirements not covered by our standard ranges

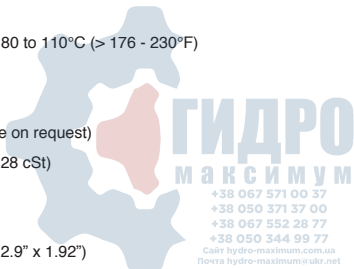
## Basic operation

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 FI750 flow indicators should not be installed in circuits where the flow is reversed. See our RFI series for reverse flow capability.



## Specification

- **Ambient temperature:** -10 to 50°C (14 to 122°F)
- **Fluid temperature:**  
Continuous: 20 to 80°C (65 - 176°F)  
Intermittent use (less than 10 minutes) > 80 to 110°C (> 176 - 230°F)
- **Humidity:** 10 - 90 % RH
- **Fluid:** see model configuration
- **Seals:** FKM as standard (EPDM available on request)
- **Accuracy:** 4% of full scale (calibrated at 28 cSt)
- **Pressure:** 420 bar (6000 psi)
- **Flow range:** see model configuration
- **Dimensions:** 146 x 74 x 49 mm (5.75" x 2.9" x 1.92")
- **Weight:** Aluminium: 1.4 kg (3 lbs), Brass: 3.8 kg (8.4 lbs)



## Installation guidance

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.

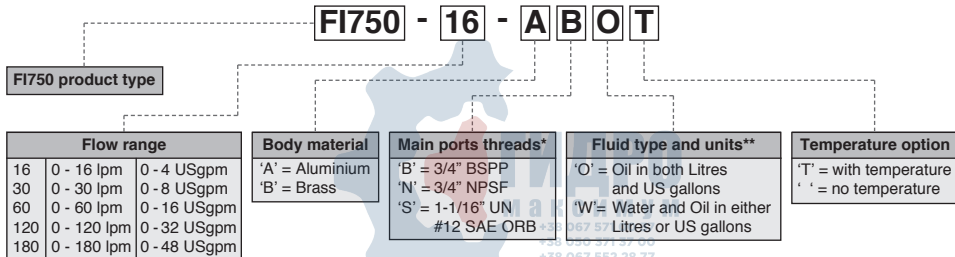
The indicator can be connected into pressure or return lines, however, do not reverse flow; the flow indicator may be damaged and will act as a non return valve.

Problems are generally few but debris from contaminated oil sometimes adheres to the piston or lodges between the piston and seat. This jams the piston partially open, causing the flow needle to fail to return to zero. For recalibration or repair please contact the service centre listed on the rear cover of this manual. Care should be taken to ensure that the flow indicator is installed in a position which is not subjected to excessive pulsation as this can cause incorrect readings. Connections can be by flexible hoses or steel pipes.

For heavy-duty applications, for example installation close to a piston pump, consult the Webtec Products sales office.

+38 067 371 00 37  
+38 050 371 37 00  
+38 050 344 99 77  
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Пошта [hydro-maximum@ukr.net](mailto:hydro-maximum@ukr.net)

## Model configuration



\* Pressure gauge ports follow main port - 'B' main port - 1/4" BSPP pressure port  
'S' or 'N' Main port - 1/4" NPTF pressure port

\*\* Units on 'W' fluid type follow main port - Scale in litres for BSPP main ports  
Scale in US gallons for main ports in UN or NPSF

## Models available as standard

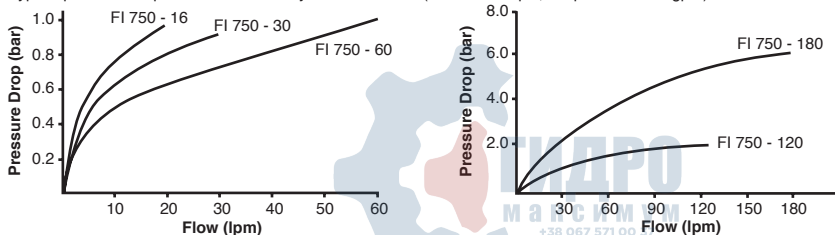
Model number		
FI 750-16-ABO	FI 750-16-ANOT	FI 750-30-BBW
FI 750-30-ABO	FI 750-30-ANOT	FI 750-60-BBW
FI 750-60-ABO	FI 750-60-ANOT	FI 750-120-BBW
FI 750-120-ABO	FI 750-120-ANOT	FI 750-30-BBWT
FI 750-180-ABO	FI 750-180-ANOT	FI 750-60-BBWT
FI 750-16-ABOT	FI 750-16-ASO	FI 750-120-BBWT
FI 750-30-ABOT	FI 750-30-ASO	FI 750-30-BNW
FI 750-60-ABOT	FI 750-60-ASO	FI 750-60-BNW
FI 750-120-ABOT	FI 750-120-ASO	FI 750-120-BNW
FI 750-180-ABOT	FI 750-180-ASO	FI 750-30-BNWT
FI 750-16-ANO	FI 750-16-ASOT	FI 750-120-BNWT
FI 750-30-ANO	FI 750-30-ASOT	FI 750-120-BNWT
FI 750-60-ANO	FI 750-60-ASOT	
FI 750-120-ANO	FI 750-120-ASOT	
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Webtec are always happy to hear from customers who have unique requirements please contact Webtec or your local distributor to discuss your requirements

## Technical Information

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



### Maintenance and service

For calibration please return the flow indicator to Webtec or your local distributor.

### Calibration

The FI750 is calibrated at a mean viscosity of 28 cSt using ISO32 hydraulic mineral oil to ISO11158 category HM.

Recommended period between calibrations is 12 months. Maximum period between calibrations is 36 months. Unit accuracy may be affected by operating cycle, fluid condition or extended periods between recalibrations.

### Accessories

Optional 63 mm (2.5") diameter glycerine filled pressure gauge fitted directly into a connection in the block or remotely connected by micro bore hose and test point. External load valve to enable a system to be tested under load. For accessories specifications please consult Webtec or your local distributor.

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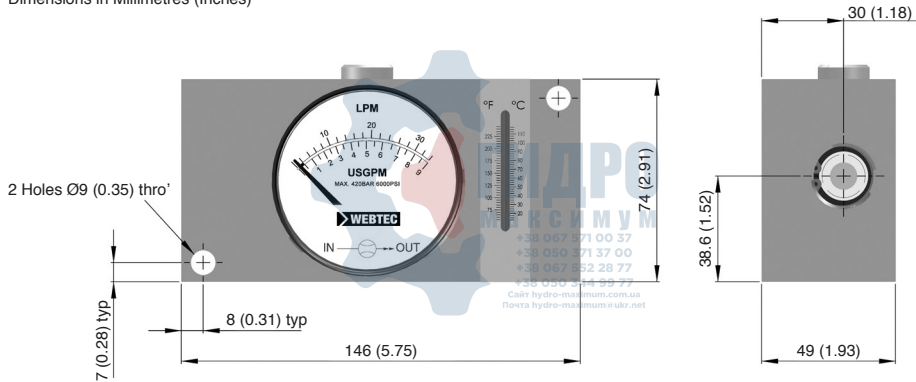
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## Installation

Dimensions in Millimetres (Inches)



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Contact Service commercial & maintenance - Para más información sobre ventas y servicios contactar con



St. Ives, Cambs, PE27 3LZ, UK

Tel: +44 (0) 1480 397 400 - sales-uk@webtec.com

中国

Tel: +852-34624900 - sales-hk@webtec.com

Deutschland

Tel: +49 (0)231-9759-747 - vertrieb-de@webtec.com

France

Tel: +33 (0) 3 27 82 94 56 - ventes-fr@webtec.com

U.S.A & Mexico

Tel: +1-800-932-8378 - sales-us@webtec.com

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