

**GMI****Gas Measurement Instruments Ltd**

## ***FI 2000***

### ***Flame Ionisation Detector***

The GMI FI 2000 combines quality, ruggedness and advanced GMI technology in a user friendly portable flame ionisation detector. The FI 2000 is used for general hydrocarbon detection and leak location in the gas industry.

The FI 2000 employs the latest in micro-processor technology to produce a low cost instrument offering the user accurate and reliable instrumentation.



The unit has a rapid speed of response and a low detection threshold.

Two measuring ranges allow a wide range of activities to be undertaken and gas concentration monitored. The integral probe can be used to carry out a general survey sweep or pinpoint leaks.

The display provides an instant indication of changing gas concentrations and switchable backlighting allows the FI 2000 to be used in poor lighting conditions.

The instrument's high intensity audible alarm warns the user if the preset gas alarm limits are

exceeded. Its rugged design and powerful alarm make it an ideal partner in arduous conditions.

The FI 2000 offers auto ignition in the event of flame out with an audible operator warning, maximizing operator safety and convenience.

### ***FEATURES***

- ♦ 2 Ranges - Search and Center
- ♦ Keypad zeroing
- ♦ Compact design and light weight
- ♦ Adjustable alarm setpoints
- ♦ Backlit LCD for survey work in poor lighting conditions
- ♦ Adjustable probe for sweep or pinpoint surveying
- ♦ Auto Ignition - On start up and at flame out during survey work.  
Flame out audible alarm and visual display flag
- ♦ Long battery life
- ♦ Up to 5 hours usage from a rechargeable fuel bottle.  
Pressure gauge indicates amount of fuel remaining.

**PROTECTING ENVIRONMENTS ...WORLDWIDE**



### **OPERATION AND USE**

The FI 2000 uses the process of flame ionisation to detect hydrocarbons present in the sample.

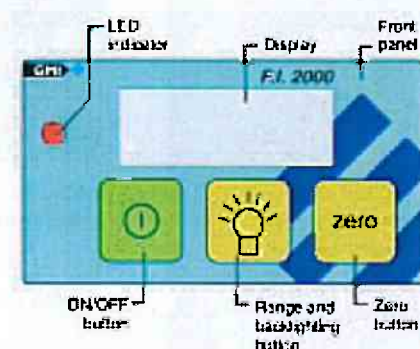
The compact lightweight and balanced design, together with a shoulder harness which is supplied with the instrument, enable the FI 2000 to be used for long periods by the operator without fatigue.

The probe sleeve can be extended or retracted, as shown below.

This allows the probe to be used in either the rigid or flexible state, depending on application.



Operator controls are kept to a minimum with only 3 push buttons, as shown below.



The three instrument switches allow several other functions to be carried out, for example:

- Adjust alarm setpoint
- Adjust alarm volume ; etc.

### **AUTO RANGING**

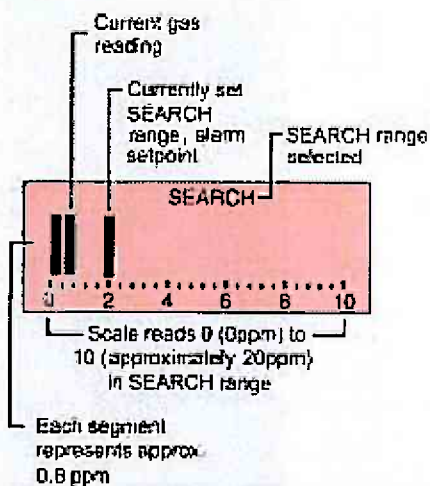
The FI 2000 displays two ranges (Methane Calibration):

- 0 to 20 ppm (SEARCH range)
- 0 to 800 ppm (CENTER range)

Additionally, the instrument displays over 800 ppm for indication purposes only.

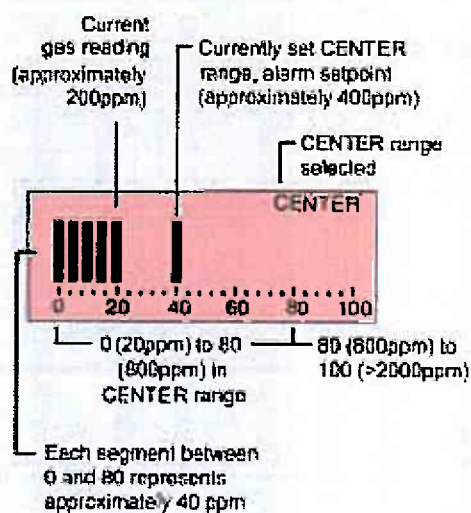


**SEARCH RANGE** is designed to locate the general area of the gas leak. When SEARCH range is displayed the FI 2000 is operating normally and can detect less than 1 ppm of gas in air. An example of the SEARCH range display is shown below.



SEARCH range has a user adjustable alarm setpoint

**CENTER RANGE** is normally selected after the general area of the gas leak has been located using the higher sensitivity SEARCH range. When CENTER range is displayed, the FI 2000 can measure gas concentration to the upper limit of 800 ppm of gas in air. An example of the CENTER range display is shown below.



CENTER range also has a user adjustable alarm setpoint

## CALIBRATION

GMI recommend calibration of the instrument every 12 months. The FI 2000 can be calibrated using the front panel buttons making field testing and calibration simple.

## REFILLABLE

The instrument operates for approximately 5 hours on a single aluminium fuel bottle. A standard 40% H<sub>2</sub> 60% N<sub>2</sub> mix provides the fuel source. Fuel bottles can be refilled using the GMI FI 2000 Fuel Bottle Charger (shown below).



Another method of refilling the fuel bottle is by manually transferring gas from a large cylinder containing 40% H<sub>2</sub> 60% N<sub>2</sub> mix and using the Transfiller Connector (shown below).



The Transfiller Connector is available from GMI, with UK, European or USA fitting versions.

FI 2000 contains no moving parts and sample flow is provided by the venturi effect of the burning fuel. The FI 2000 operates on 4 standard AA sized batteries for up to 30 hours (depending upon battery type and flame ignitions).





## PRODUCT CHARACTERISTICS

- 2 Ranges (Methane Calibration)  
0 to 20 ppm (SEARCH range)  
0 to 800 ppm (CENTER range)  
- over 800 ppm Indicative only in  
CENTER range.
- Resolution: 0.8 ppm
- Accuracy: 2 ppm (CH<sub>4</sub> typical)
- Alarms: Fully adjustable  
(both ranges)
- Audio Alarm Level: 80dB  
approximately
- Reaction Time: 3 seconds
- Warm-up Time: 30 seconds
- Weight: 1.8 kg (3.96 lbs)
- Fuel Bottle provides approximately  
5 hours operation
- Fuel Type: 40% H<sub>2</sub> 60% N<sub>2</sub>
- Battery Life (alkaline): up to 30  
hours (4 AA size batteries)
- Flame out indication: display flag  
and audible warning
- Certification: The FI 2000 is not  
intrinsically safe
- Electromagnetic conformance:  
Conforms with current EU  
standards for EMC.

## ORDERING INFORMATION

Description	Part No.	
FI 2000 Package	75000	<input type="checkbox"/>
Includes: 1 Fuel Bottle ; Carry Case ; Shoulder Strap ; Probe ; Cotton Filters ; Batteries ; User Handbook.		
FI 2000 Package (USA)	75206	<input type="checkbox"/>
Includes: Shoulder Strap ; Probe ; Cotton Filters ; Batteries ; User Handbook.		

## Accessories

Description	Part No.	
Probe Assembly	75077	<input type="checkbox"/>
Rubber Funnel Assembly (alternative probe end piece)	75235	<input type="checkbox"/>
Shoulder Harness Assembly	75148	<input type="checkbox"/>
Aluminium Fuel Bottle (removable and refillable)	75089	<input type="checkbox"/>
Fuel Bottle Charger (to refill fuel bottles)	75190	<input type="checkbox"/>
Transfiller Connector (UK) (to refill fuel bottles)	75217	<input type="checkbox"/>
Transfiller Connector (Europe)	75241	<input type="checkbox"/>
Transfiller Connector (USA)	75239	<input type="checkbox"/>
Replacement 'O' Ring (mandatory seals between FI2000 and fuel bottle. Also between fuel bottle and bottle charger)	10032	<input type="checkbox"/>
Replacement 'O' Ring (filter housing)	65018	<input type="checkbox"/>
Glass Fibre Filter	75096	<input type="checkbox"/>
Sintered Filter	75098	<input type="checkbox"/>
Exhaust Filter	75018	<input type="checkbox"/>

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