

## TECHNOLOGY

MPFM Flowatch 3I is a non intrusive, inline system providing real time measurement of oil, water and gas flow rates in the dispersed phase of the flow avoiding the use of large systems based on phase separation.

It is the new generation of Pietro Fiorentini Multiphase Flowmeter, obtained as an evolution of the top selling non radioactive Flowatch model, implementing all the improvements given by Pietro Fiorentini experience, field lesson learnt and customer feedback.



The flow rates of oil, water and gas are calculated based on the measurements of the fluid dielectric properties, of the differential pressure across the venturi inlet. No separating devices, mixers or bypass lines are needed.

The fluid velocity is measured with a new array cross-correlation of the high resolution time signals from three pairs of electrodes within the venturi insert resulting in a higher performance.

## KEY FEATURES

- **Non radioactive**
- **Easy to maintain**
- **Array cross correlation for a more reliable velocity measurement**
- Widest size range on the market
- High repeatability and long term stability due to high quality components
- High flexibility: both onshore and offshore application
- Improved mathematical model (slip model) for all flow patterns
- Suitable for mobile applications (e.g. on trailer or truck)
- Easy Calibration.

## WHAT'S NEW

- New patented metering section
- Retrievable venturi inlet
- Wider range: 0.5" ID size available
- Predisposed for future high speed gamma sensor intallation

## SPECIFICATIONS

|  |   |
|--|---|
| <b>Operating Range</b>                   | <ul style="list-style-type: none"><li>• 0-100% water cut</li><li>• 0-97% gas volume fraction (GVF)</li></ul>  |
| <b>Size</b>                              | From 0,5" up to 8"  |
| <b>Design Pressure &amp; Temperature</b> | Up to 5.000 psi, up to 302°F (150°C)  |
| <b>Body Material</b>                     | AISI316, Duplex, Inconel 625, others on request   |
| <b>Venturi</b>                           | Insert field replaceable, std Beta 0.6, max pressure drop <1 Bar  |
| <b>Communication Interface</b>           | Communication ports: <ul style="list-style-type: none"><li>• RS-485/422 single or redundant, Ethernet</li></ul> Communication protocols: <ul style="list-style-type: none"><li>• Modbus ASCII/RTU, TCP/IP</li></ul>   |
| <b>Electrical Specifications</b>         | <ul style="list-style-type: none"><li>• ATEX certification Ex ia IIB T4 Ga</li><li>• Ambient temperature -40° C/ + 70° C</li></ul>  |
| <b>Flow Computer</b>                     | <ul style="list-style-type: none"><li>• Real Time controller, Operating system VxWorks</li><li>• Ambient temperature -40° C/ + 70° C</li><li>• Power supply: 24VDC, or 110÷240 V 50÷60Hz</li><li>• Power consumption: 15W</li><li>• Enclosure for safety area or for hazardous area</li><li>• Weather protection: IP 65</li><li>• Stainless steel or aluminium enclosure</li><li>• With local display (as optional)</li></ul> |
| <b>HMI</b>                               | HMI for Windows XP, Vista, and 7<br>TCP/IP Wireless   |

For further information, please visit our website:  
<http://www.fiorentini.com>