

## TECHNOLOGY

Flowatch 3I Multiphase Wet Gas meter is a non-intrusive, inline system, providing real time measurement of oil, water and gas flow rates in all multiphase flow regimes without using any radioactive source nor any separation or rotating parts.

It is the third generation of Pietro Fiorentini Multiphase Flowmeters, obtained as an evolution of the Flowatch Multiphase & Wetgas models, implementing the latest state of the art technologies such as the NIR (near infrared) optical probe in order to provide an even more reliable and robust measurement to our customers.



The flow rates of oil, water and gas are calculated based on the measurements of the fluid dielectric properties and of the differential pressure across the venturi inlet..

The fluid velocity is measured both by the impedance sensors and the vortices propagation detectors.

The Watercut is measured by the NIR probe thus the reading is independent from salinity and salinity variation.

## KEY FEATURES

- No radioactive source used
- Velocity module for homogeneous or annular flow
- Water cut measurement, independent from salinity, without transition region
- All multiphase and wetgas flow regimes
- High repeatability and long term stability due to high quality components
- High flexibility: both onshore and offshore application
- Suitable for mobile applications (e.g. on trailer or truck)
- Easy Calibration

## WHAT'S NEW

- Patented metering section
- Patented Near Infrared Water cut Probe

## SPECIFICATIONS

<b>Operating Range</b>	<ul style="list-style-type: none"> <li>• 0-100% water cut</li> <li>• 0-100% gas volume fraction (GVF)</li> </ul>
<b>Salinity Range</b>	0 – 350.000 ppm (measurement is independent)
<b>Size</b>	From 0,5" up to 12"
<b>Design Pressure &amp; Temperature</b>	Up to 10.000 psi, up to 302°F (150°C)
<b>Body Material</b>	AISI316, Duplex, Inconel 625 or others upon request
<b>Venturi</b>	Insert field replaceable Max pressure drop <1 Bar
<b>NIR measurement</b>	<ul style="list-style-type: none"> <li>• Connection: flanged or threaded</li> <li>• ATEX certification Ex d IIB T4</li> </ul>
<b>Velocity module</b>	<ul style="list-style-type: none"> <li>• ATEX certification ia IIB T4 Ga</li> <li>• Retrievable bluff body</li> </ul>
<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: 40W</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

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