

# TM-1000

## Mass Spectrometer



Ultrasonics



Fluorescence



Mass  
Spectrometry

The Advanced Sensors TM-1000 (Total Measurement) is a side stream analyzer that combines numerous technologies to deliver online measurement capabilities that were previously impossible. This is a unique type of analyzer, combining the measurement granularity of mass spectrometry with the speed and data capacity offered by fluorescence.

## Features

- Patented ultrasonic cleaning
- Continuous, real-time online measurement
- Combines membrane inlet Mass Spectrometry and Laser Induced Fluorescence (LIF – optional)
- Identify and measure individual compounds and complete oil compositions within water or gas streams
- Unparalleled wide measurement and detection range capability (ppb to 100%)
- Remote management and diagnostics
- Multiple communications configurations - 4-20mA, HART, Modbus, Extended Ethernet or WiFi
- Powerful post data analysis
- Touch screen (optional)

## Benefits

- Easy to use
- Low Cost Of Ownership (COO) with zero routine maintenance
- Using MS technique allows better and more accurate process management
- Ideal for un-manned and remote locations
- Using a combined MS-UV fluorescence analyzer allows measurement of both fluorescent and non-fluorescent compounds



<b>Measurement Performance</b>	
Measurement principle	Mass Spectrometer: Ionisation of compounds by Electron Impact (EI) - LIF optional
Range	ppb to 100%
Accuracy	±1% of measurement range
Repeatability	85%
Response time	< 4 minutes (depending on concentration, continuous results)
<b>Mass Spectrometer Specification</b>	
Mass range	1-200 amu standard (optional 1-300)
<b>Operating conditions</b>	
Process temperature	0° C to 80° C
Process flow	3L to 10L/min (1" pipe)
Operational ambient temperature	+5°C to 50°C
Cleaning	Ultrasonic (automatic)
<b>Material</b>	
Enclosure material	Stainless Steel
<b>Weight &amp; Dimensions</b>	
Weight	120Kgs inc. stand
Dimensions	660W x 340D x 1,230H mm
Clear space	500mm front and rear
<b>Communications</b>	
4-20 mA	Passive
Ethernet	Standard
HART	Optional
Wireless (WiFi), Extended Ethernet	Optional
Remote access	VNC, Master Remote Manager
Internal data storage	>10 years
Security	Password protection
<b>Additional Information</b>	
Flange fittings	1" ANSI RF standard (optional flange sizes and types available)
Wetted parts	316SS (option of Hastelloy, Inconel, CR25, CR22, Titanium, Monel)
Sample take off point	Integral to analyzer
Viewing window	Standard