

# EX-100/1000

## Side Stream Oil in Water Analyzer



Ultrasonics



Fluorescence



Spectroscopy

The EX-100 is a side stream Oil in Water analyzer that uses fluorescence to provide continuous accurate measurements of oil concentrations in water. Reliable real-time data enables operators to take accurate discharge measurements and to improve efficiency of separation processes enabling cost reductions.

In addition to the EX-100 features, the EX-1000 model offers spectral analysis.

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## Features

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- Patented ultrasonic cleaning
- Laser Induced Fluorescence (LIF)
- Side stream format
- Periodic homogenisation of sample
- Sample point
- Various measurement ranges configurable (0-10ppm, 0-100ppm [...] up to 0-20,000ppm)
- Measurement repeatability  $\pm 1\%$  of full scale
- Remote management and diagnostics
- Easy to install (no sample conditioning required)
- Multiple communications options - 4-20mA, HART, Modbus, Extended Ethernet
- Optional integrated spectrometer

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## Benefits

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- Easy to use
- Low Cost Of Ownership (COO) with no routine maintenance required
- No degradation of signal or recalibration required
- Side stream format offers improved sample control
- Droplet size compensation with homogenized samples
- Sample point facilitates laboratory correlation
- Remote control and monitoring (ideal for un-manned locations and remote process monitoring)



<b>Measurement Performance</b>	
Measurement principle	Laser Induced Fluorescence (LIF)
Range	0-20,000ppm*
* dependent on sample matrix & instrument configuration	
Repeatability	±1% of full scale range
Response time	1 Second, continuous results
<b>Operating Conditions</b>	
Process temperature	Up to 200°C
Process pressure	Up to 35 barg
Process flow	5-25 l/m
Operational ambient temperature	-20°C to 55°C
Cleaning	Ultrasonic (automatic)
<b>Spectrometer Specification (1000 models only)</b>	
Emission wavelength range	400-1,100nm
Resolution	0.5nm
<b>Utilities</b>	
Power supply	110 or 230 VAC (pre configured)
Power frequency	50 or 60 Hz
Power consumption	60W normal, 300W peak
Instrument air	5.5-7 barg (for pneumatic valve; electric valve option available)
<b>Certification</b>	
Ingress protection	IP66
Enclosure material	Aluminium (316L SS optional)
Analyzer	ATEX Ex II 2G Ex d/de IIB T3/T4 Gb, IECEX, USA and Canada Class 1 Div 1, IMO MEPC 107 (49)
<b>Weight &amp; Dimensions</b>	
Weight (including stand, standard pneumatic Stainless Steel valve assembly, termination box and isolation switch)	Aluminium Enclosure: 93.55Kg Stainless Steel Enclosure: 141Kg
Dimensions	670W x 640D X 1112H mm 1120H mm for Stainless Steel enclosure
Clear space	500mm front and rear
<b>Communications</b>	
4-20 Ma (1)	Standard
Ethernet	Standard
HART, Modbus, Extended Ethernet	Optional*
Digital Input (1), Digital Output (1)	Standard
Remote access	Standard
Internal data storage	>10 years
Security	Multiple level password protection
<b>Additional Information</b>	
Flange fitting	1" ANSI RF standard (optional flange, sizes available)
Wetted parts	316L SS (other materials available on request)
Sample take off point	Standard – integral to analyzer
Viewing window	Standard
<b>Sample Conditioning</b>	
Homogenisation	Ultrasonic
Automatic Oil Droplet Size Compensation	Standard

\* HART - PPM internal temperature, flow status - START cycle and STOP cycle functionality only

\* MODBUS RTU only; implemented via HART to MODBUS converter