

# EX-100/1000

SIDE-STREAM OIL IN WATER ANALYSER



Ultrasonics



Fluorescence



Spectroscopy

The EX-100/1000 is a side-stream Oil in Water analyser 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.

Typical Applications include discharge management, oil refineries, process improvement, cooling water, waste-water treatment and leak detection. Please talk to ASL about your specific application




## BENEFITS

- No user required maintenance
- Consistent accurate performance
- No sample conditioning system required
- Accurate OiW measurements over the laser lifetime of 18 months. No recalibration required and no degradation of signal over the period of 18 months
- Automatic compensation for oil droplet size variation
- Same sample used for analyser and lab measurement for better accuracy
- During process shut down, the analyser can be turned to standby mode through remote digital input. Analyser outputs accessible remotely via HART/MODBUS, Ethernet or 4-20mA
- Changes in fluorescence spectra provides indication of process changes
- PPM accuracy achieved for multiple oil types

## FEATURES

- Adaptive Ultrasonic Cleaning
- Laser Induced Fluorescence [LIF]
- Periodic homogenisation of sample
- Optional integrated laboratory sample point
- Remote management and diagnostics
- Easy to install
- Spectrometer [with EX-1000 model]
- Oil type switching [with EX-1000 model]



Measurement Performance		
Measurement principle	Laser Induced Fluorescence (LIF)	
Cleaning	Ultrasonic (automatic)	
Range	0-20,000 ppm*	
Repeatability	±1% of measurement range	
Accuracy	±1% of measurement range***	
Response time	1 Second, continuous results	
Operating Conditions		
Process temperature	Up to 180°C	
Process pressure (MAWP)	Up to 65 bar <sub>g</sub>	
Process flow	Up to 25 l/m**	
Operational ambient temperature	-20°C to +55°C	
Spectrometer Specification (1000 models only)		
Measurement wavelength range	400-1,100 nm	
Resolution	0.5 nm	
Utilities		
Power supply	110 or 230 VAC (Pre-configured)	
Power frequency	50 or 60 Hz	
Power consumption	60 W normal, 300 W peak	
Instrument air	5.5-7 bar <sub>g</sub> (for pneumatic valve; electric valve option available) (air must be filtered to <= 5 µm)	
Air Consumption	450ml per rotation	
Certification		
Ingress protection	IP66 / NEMA 4X	
Enclosure material	316L SS (Aluminium optional)	
Analyser	 II 2g 	Ex db [op is IIC T4 Gb] IIB T4 Gb Max. liquid temperature +100°C Ta = -20°C to +55°C Or Ex db [op is IIC T4 Gb] IIB T3 Gb Max. liquid temperature +180°C Ta = -20°C to +55°C
	Canada + USA:	Class 1 Division 1 Groups C & D T3/T4 Class 1 Division 2 Groups A, B, C, D, T3/ T4 Class 1 Zone 2 AEx d/de IIB T3/T4
	IMO	MEPC-107 (49), ABS Type Approval
	Brazil/ Russian	INMETRO / EAC
	CE Compliant	
Weight & Dimensions (for shipping)		
Weight (including stand, standard pneumatic Stainless Steel valve assembly, termination box and isolation switch)	200kg	
Dimensions	L 92 cm x W 83 cm x H 148 cm	
Communications		
4-20 mA (1)	Passive, Configurable for measurement readings/temperature	
Digital Input (1) Digital Output (s)	Start/Stop cycle control Configurable as alarm contacts	
Remote access	Windows Remote Desktop	
Internal data storage	>10 years	
Security	2 level password protection	
Optional Communications		
Additional 4-20mA	Passive, Configurable for measurement readings/temperature	
HART	Yes	

Modbus RTU	Implemented via HART to Modbus converter
Extended Ethernet	2 wire connection, capable of 1.3km distance
<b>Additional Information</b>	
Flange fitting	1" ANSI RF (various flange ratings available on request)
Wetted parts	316L SS (other materials available on request)
Manual sample take off point	Integral to analyser
Viewing window	Provided as standard
Ultrasonic Homogenisation	Automatic oil droplet compensation

\* Dependent on sample matrix & instrument configuration. User may select any desired measurement from 0-10 ppm, 0-100 ppm [...] up to 20,000 ppm.

\*\* Flow rate through the analyser measurement chamber. Flow control may be implemented external to the analyser to manage higher flow rates.

\*\*\* Under ideal conditions, with a homogenised sample.

## Contact Us

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