



Spectrolytic

Innovative Solutions in Spectroscopy

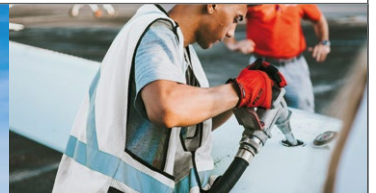
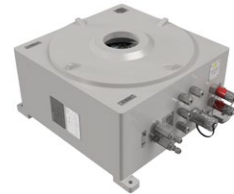
FluidInspectIR[®]
OilConditionMonitoring

Revolutionise your fluid monitoring: maximise cost savings and efficiency with FluidInspectIR®

Demand for a fully integrated Fluid Condition monitoring solution is being driven by the never-ending search for operational efficiency across every industry from Marine to Oil and Gas.

Many organisations see this process as a cornerstone of protecting long term profitability, sustainability and compliance.

Spectrolytic solutions manage support hundreds of businesses, managing thousands of assets and monitoring 10,000's of manhours to protect our customers operations, by creating a fully usable Data set that allows management to make the best proactive decisions in terms of maintenance and fluid usage, creating £millions of savings.



Oil Condition Monitoring

Real-time monitoring for the Marine, Power Generation, Industrial Fluids and Steel & Aluminium Rolling industries.

Fuel Analysis

Remotely monitor FAME levels in BioDiesel, Ethanol in Gasoline and Water content in Jet Fuel.



Extend Asset Life:

Early failure warnings prolong machinery lifespan.



Enhance Bottom Line:

Reduce oil usage and dependency on labs, saving money.



Operational Efficiency:

Minimise human involvement with fully automated systems.

Next generation end-to-end solution for fluid monitoring

Actionable data from a true plug-and-play solution to increase user bottom line returns \$\$\$

Oil Condition Monitoring

Marine



Turbomachinery



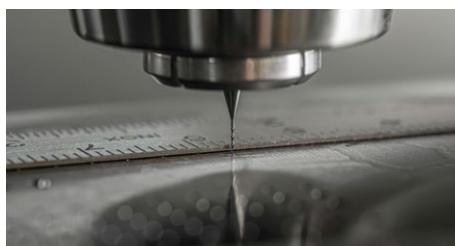
Power Generation



Steel & Aluminium Rolling



Metal Working



Immersion Fluids (datacenters)



Hydraulic Oils



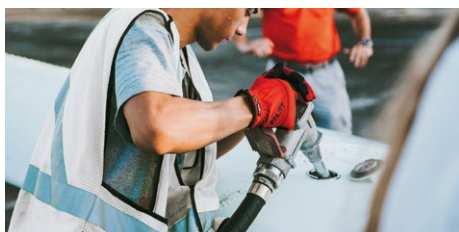
Gear Oils



- Eliminate operational doubt in fluid management
- Remove human machine interface
- 24/7 Actionable Data through real-time measurements
- Increase Bottom line returns

Fuel Analysis

Ethanol In Gasoline



FAME In Biodiesel



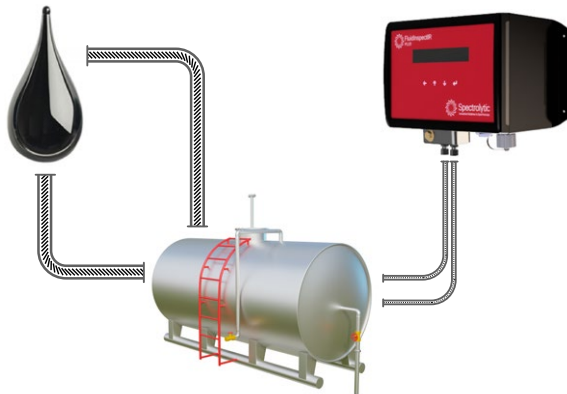
- Control Quality
- Remove human-machine interface
- Create bottom line increase

Plug-and-play connection for easy installation

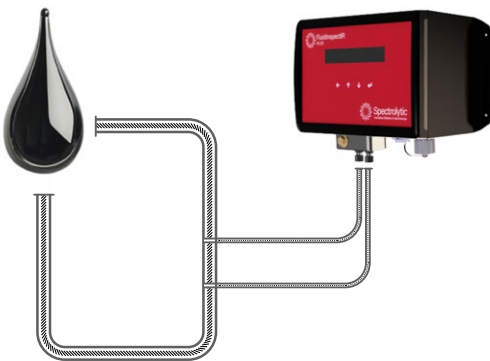
FluidInspectIR® offers multiple installation options, fitting seamlessly into various oil circuit locations, including direct attachment to the oil tank or integration via a bypass link.

- ✓ Simple installation in minutes
- ✓ No operational inconvenience
- ✓ No pain for the customer

Fitted to oil tank



Fitted with bypass link



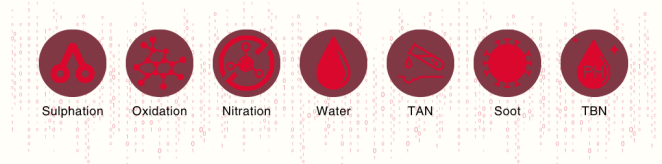
After quick installation the system starts to measure:

- once every hour or less depending on the application,
- then converts the chemical information into actionable data from cloud based control charts with warning / fault alerts.

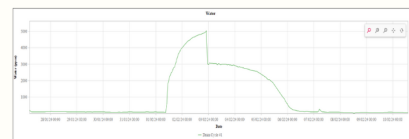
DATA collected by our FluidInspectIR® device



SORTED and analysed by our proprietary algorithms



ARRANGED into clear visual formats



PRESENTED VISUALLY on our cloud based dashboard



EXPLAINED with actionable alerts tailored to your needs



Product Portfolio

INLINE STATIONARY



Inline systems for stationary assets

- Usage**
- Focused on industrial applications
 - Contains mid-infrared sensor, viscometer and OPC

INLINE STATIONARY



Inline systems for stationary assets

- Usage**
- Contains mid-infrared sensor and viscometer

ATEX



Inline system for explosive environments

- Usage**
- II 2 GD
 - Ex db IIC T6 Gb
 - Ex tb IIIC T85°C Db IP6
 - Contains mid-infrared sensor, viscometer and OPC

DEVELOPMENT



Application development platform

- Usage**
- Multi sensor option (>3)

MOVING VEHICLES



Mid-infrared sensor for oil analysis in moving vehicles

- Usage**
- Mobile machinery
 - Agricultural equipment
 - Military

MOVING VEHICLES



Mid-infrared sensor for oil analysis in moving vehicles

- Usage**
- Mobile machinery
 - Agricultural equipment
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PORTABLE



Portable system

- Usage**
- OCM
 - FAME analysis in Biodiesel
 - Ethanol In Gasoline

Monitor critical plant assets



Gas Engine

Real-time monitoring of TAN, TBN, ipH, oxidation, nitration, sulphation, soot, water on natural gas, biogas and landfill gas engines.



Mobile machinery

Engines, gears, transmission and hydraulic systems in heavy machinery.



Metal working

Oil and water-based metal working fluids like cooling and cleaning agents in automotive lines, lubricant and rolling emulsions in steel and Aluminium milling. Measurement of key additives, contamination and oil degradation.



Gear Oils

Real-time monitoring of TAN, oxidation, water and EP additives in gear systems like wind Turbines, steel plants etc.



Marine

Real-time Monitoring of TBN, water, sulphation, oxidation on diesel engine systems and water, TAN, oxidation on EAL (environmentally acceptable lubricants) on ship propulsion systems.



Turbine Oils

Monitoring of oxidation, Anti-oxidants on gas and steam turbines.

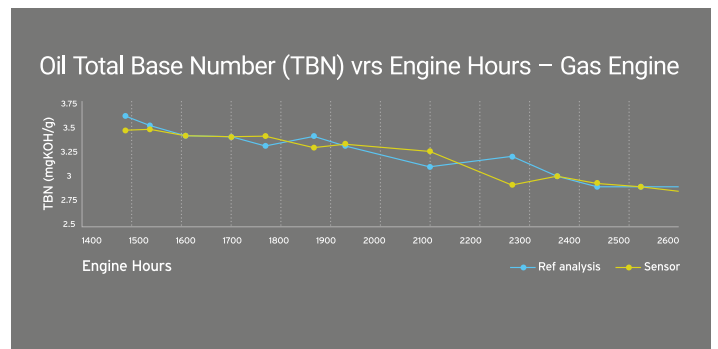
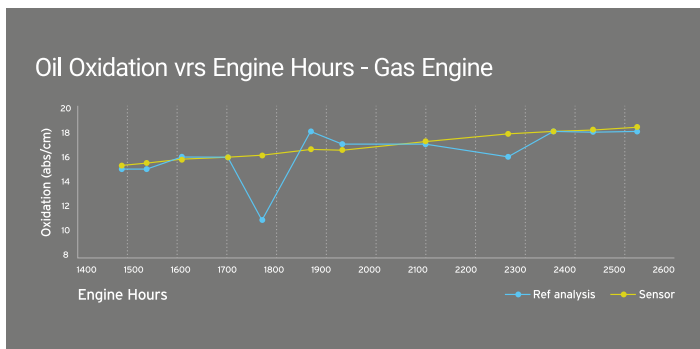


Many More Applications

Hydraulic and transmission oils, compressors oils, EHC fluids. The technology platform can be configured for most fluid applications to solve most measurements problems. *Get in touch for application feasibility.*

Lab accurate results without human error

The FluidInspectIR® Inline removes all human involvement from the oil analysis process resulting in lab accurate results, in the same units as oil lab reports that are easy for a Field Application Engineer to interpret.



No sample taking required



No shipment required



No human intervention

Typical Application Parameter List

	Gas Engine (Landfill or LNG)	Turbomachinery	Hydraulic	Dielectric Oils	Gears and Rollers	Aluminium Rolling	Marine VLSFO / Diesel Engine	Diesel Engine	Marine Stern Tube / Thruster EAL	Metal-Working Fluids/Emulsions
Oxidation – abs/cm	✓	✓	✓	✓	✓		✓	✓	✓	
Nitration – abs/cm	✓							✓		
Sulphation – abs/cm	✓						✓	✓		
ipH	✓									
Water – Low end (<1%)	✓	✓	✓	✓	✓		✓	✓	✓	
Water – Mid end (1-15%)					✓					
Water – High end (>15%)					✓					
Soot wt%							✓	✓		
TBN – mgKOH/g	✓						✓	✓		
TAN – mgKOH/g	✓	✓	✓	✓	✓		✓		✓	
KV100C – cSt (or mm/s ²)	✓						✓	✓	✓	
KV40C – cSt (or mm/s ²)		✓	✓	✓	✓	✓			✓	✓
Fuel Dilution							✓	✓		
Amine AO – %		✓								
Phenol AO – %		✓								
Mobil Wylol 2,4,6,8 – wt%						✓				
Total Concentrate – m/m%										✓
Brix										✓
Specialist Additive Packages – m/m%										✓
Other additives upon request	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ISO 4406 Classification		✓	✓	✓	✓	✓			✓	✓
Wear Particle Classification	✓	✓	✓		✓	✓	✓	✓	✓	

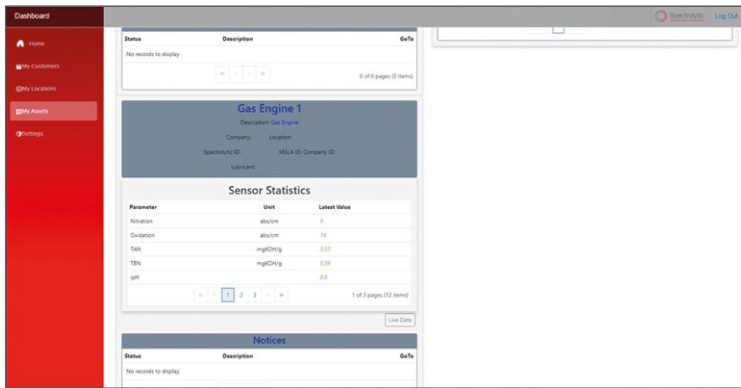
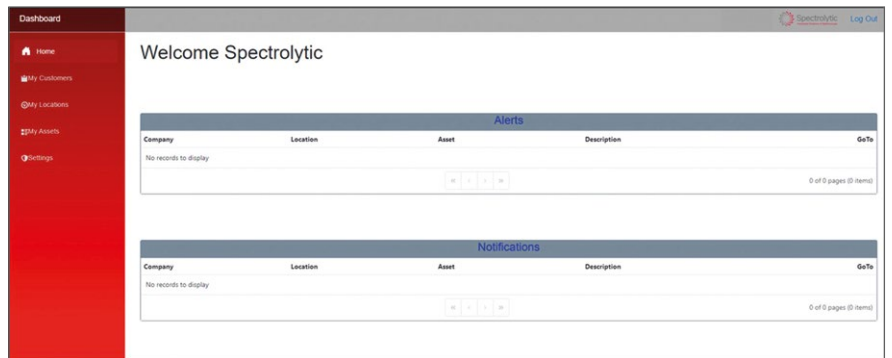
Non-standard parameters available on request

In-depth data analytics



DataInspectIR is Spectrolytic’s data analysis hub. We provide cloud data services and in-depth data analytics based on our inline, real-time sensor data – this will give our customers an enhanced level of understanding on their equipment and allow them to efficiently manage lube cycles, reduce emissions, save costs and increase asset uptime.

Data is sent to Spectrolytic’s cloud. Option to view/download data via a dashboard.

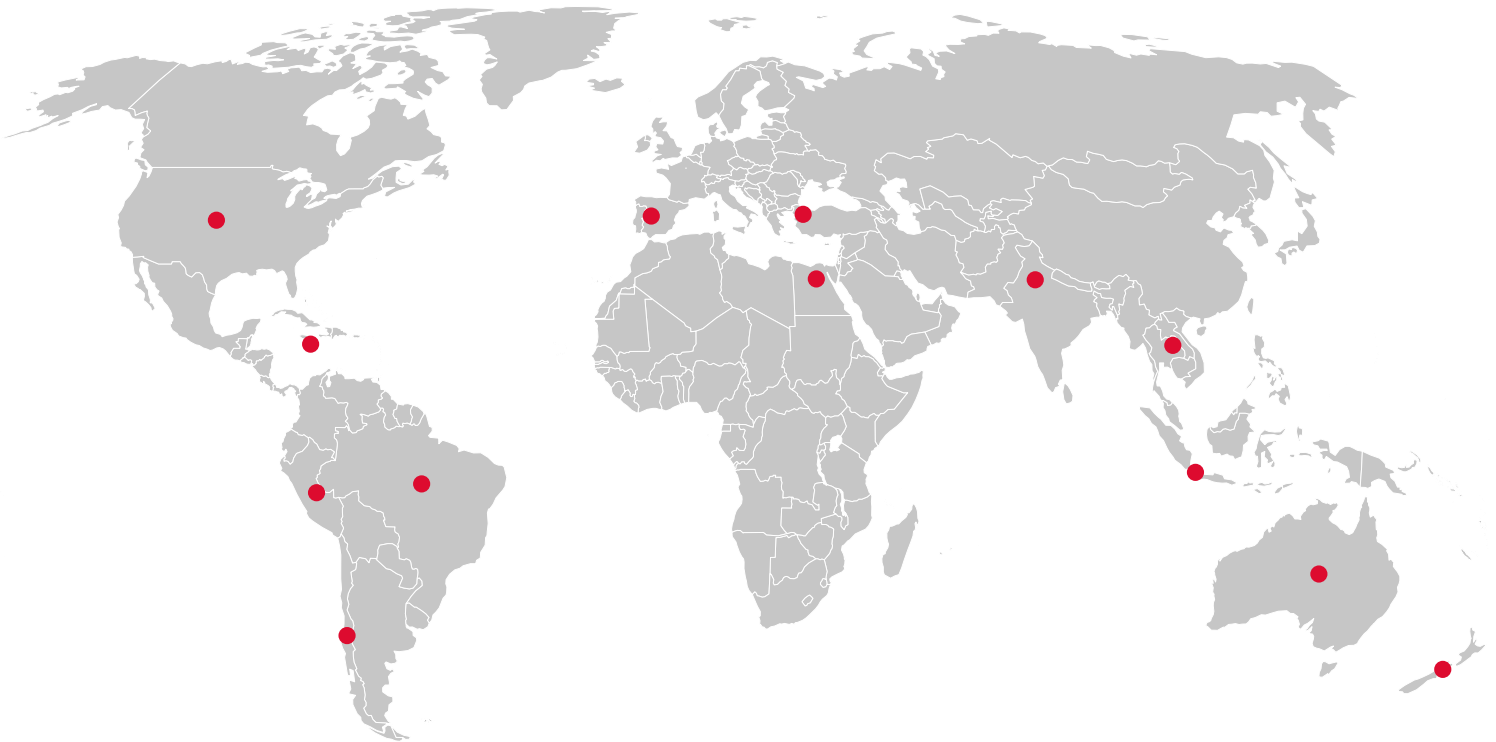


We support customer’s cloud (Azure, AWS) via MQTT or Web API protocols.

Direct integration available with on-site controller systems.



Global sales and distributors



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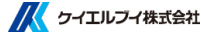


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