



FluidInspectIR[®]

Oil Condition Inline Analyser



Product Description

The FluidInspectIR[®] – Inline is a multi-sensor system for real-time monitoring of the oil condition.

The system is either installed in the main oil circuit via a bypass system or it takes the oil from a reservoir (sump, tank) using an integrated pump. Additional functionality can be provided by integrating an optical particle or wear sensor.

The FluidInspectIR[®] – Inline is a plug & play analyser and can be installed remotely. It provides the user with key oil degradation parameters in the same format, units and accuracy as per standard oil analysis laboratory reports.

Summary Information

- ▶ Measurement of key parameters in oils and lubricants in assets such as gears, engines, turbines, hydraulic and transmission systems, metal working (Steel and Aluminium)
- ▶ Correlates to ASTM / DIN
- ▶ Configuration options for application field
 - Main Module
 - Oil Condition Sensor in main module (degradation parameters, Additive packages, contamination)
 - Series Module Options
 - Particle Counter (ISO grading)
 - Wear Sensor (magnetic and non-magnetic wear elements).
- ▶ All data in conventional laboratory Units and same accuracy as in an oil laboratory
- ▶ Cloud Dashboard Capability
- ▶ Plug and Play remote installation of system

Key Benefits

- ▶ Reduce unplanned downtime
- ▶ Safely change oil drain intervals
- ▶ Reduction in H&S Hazards
- ▶ Data driven maintenance
- ▶ Reduction of CO2 footprint
- ▶ Support for warranty claims





Configuration

- ▶ Main Module with Oil Condition Sensor
- ▶ Additional Module Option for Particle Counter or Wear Sensor or other sensor
- ▶ Configured with electric valve on oil by-pass OR pump to draw oil from sump.
- ▶ Oil temperature: Standard up to 120C. Higher temperature is an option
- ▶ LTE / ethernet/ WiFi, RS232,RS485
- ▶ MODBUS (RTU,TCP) and MQTT
- ▶ 230VAC PS
- ▶ 285mm L x 200mm W x 160mm H (main Module)

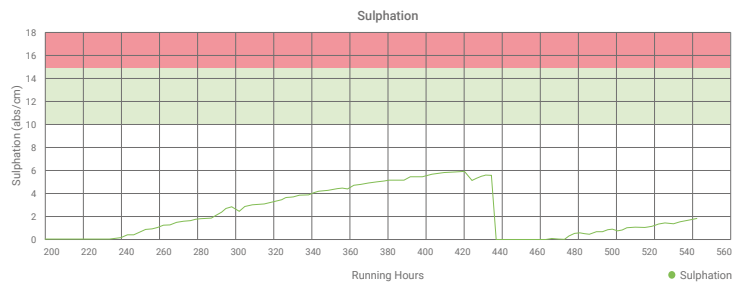
Oil Condition Sensor Parameters

- ▶ Measurable Parameters: Note that not all of these parameters can be measured all at once with same device.
- ▶ Repeatability: <+-5% of measured value
- ▶ Accuracy: <+-5% of measured value
- ▶ Methodology Default: DIN 51453/51451
 - can be calibrated to ASTM/DIN
- ▶ Configurations available in common metal working applications for specialised additive packages and accurate water in oil measurements

Measurable Parameters	Correlates to Standard	Unit
Group I-IV Oils including PAO (PolyAlphaOlefins)		
Base Oil Changes		
Oxidation	ASTM E2412, DIN 51453	A/cm or A/0.1mm
Nitration	ASTM E2412, DIN 51453	A/cm or A/0.1mm
Sulphation	ASTM E2412, D7415	A/cm or A/0.1mm
Properties		
TBN	ASTM D664	mgKOH/g
TAN	ASTM D2896	mgKOH/g
ipH		
Viscosity	ASTM D445	mm ² /s
Additives		
ZDDP AW	ASTM E2412	A/cm or A/0.1mm
Phenol / Amine AO	/	%
Others Upon Request	Correlates to reference analysis	A/cm or A/0.1mm, mg/kg or %
Contaminants		
Soot	ASTM E2412	A/cm or A/0.1mm, wt%
Water	ASTM E2412	A/cm or A/0.1mm, wt% or ppm
Ethylene Glycol	ASTM E2412	A/cm or A/0.1mm, wt%
Diesel	ASTM E2412	A/cm or A/0.1mm, wt%
Gasoline	ASTM E2412	A/cm or A/0.1mm, wt%
Group V Polyolester and Phosphate Ester		
Ester Breakdown 1	ASTM E2412	A/cm or A/0.1mm
Water	ASTM E2412	A/cm or A/0.1mm, ppm
Phenol AO	/	%
Amin AO	/	%
TAN	ASTM D2896	mgKOH/g

Data Acquisition Options

- ▶ 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



Installation process

- ▶ Connect oil supply to Analyser via Swagelok / Minimes connectors
- ▶ Plug in Power cable

