



Modular oil condition sensor for mining, mobile equipment, and moving assets.

The **FluidInspectIR® HUB** is a purpose-built, rugged oil-condition monitoring system designed specifically for mining, mobile equipment, and other high-value moving assets.

The system comprises a central controller unit and dedicated modules for monitoring engine oil, hydraulic oil, and compressor oil. The modules can be seamlessly daisy-chained, enabling comprehensive monitoring of multiple oil systems across high-value mobile assets.

Designed for reliability in harsh operating environments, the FluidInspectIR® HUB provides a flexible, scalable solution for continuous oil-condition monitoring and proactive equipment health management.

FluidInspectIR® HUB provides fast measurement and classification of key fluid condition parameters, including:

☐ **Engine Oil Sensor Module:**

Chemical degradation and additive depletion — assessment of lubricant condition and changes in chemical properties, viscosity and fuel dilution

☐ **Hydraulic Oil Sensor Module**

Chemical degradation and additive depletion — assessment of lubricant condition, OPC in accordance with **ISO 4406**.

☐ **Compressor Oil Sensor Module**

Chemical degradation and additive depletion — assessment of lubricant condition- sophisticated OPC including wear analysis.

Designed for Robust & Harsh Environments

- ☐ The compact and modular system can be configured in any way.
- ☐ The controller automatically detects the module and sends the relevant data packages to the cloud or to a dedicated control server / PLC.
- ☐ The respective modules are installed via a bypass system on the asset; each module requires its own bypass system.
- ☐ The respective modules will be configured to work with the appropriate application oils.

Data Analysis & Trending

Analysis results are displayed directly on screen for immediate assessment. For more advanced data management and condition monitoring, **DataInspectIR®** software provides additional capabilities for Data charting and plotting Historical trend analysis

Controller



Sensor Module



Technical Specifications and Typical Application Measurement parameters

- Dimensions (Modules) - Approx 28 × 18 × 10 cm, weight 10kg
- Dimension controller- 30 x 23 x 10 cm, weight 3kg
Power: 24V DC
- Connectivity - Integrated modem, CAN,

Parameter	Turbomachinery	Hydraulic	Diesel Engine
Oxidation – abs/cm	x	x	x
Nitration – abs/cm			x
Sulphation – abs/cm			x
ipH			
Water (ppm)	x	x	x
TBN – mgKOH/g			x
TAN – mgKOH/g	x	x	
KV100C – cSt (or mm ² /s)			x
KV40C – cSt (or mm ² /s)	x	x	
Fuel Dilution			x
Amine AO – %	x		
Phenol AO – %	x		
Soot (wt%)			x
ISO 4406 Classification	x	x	
Wear Particle Classification	x	x	

Parameter Equivalency +/- 5% to standard lab measurements



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