



WaterSCAN



A new era in asset protection

Online Water &
Soot Measurements

Early warning against
catastrophic failure

Kittiwake WaterSCAN - Total Water Content Sensor

Water and oil don't mix! It is a very well known fact. Even so, water is still the most common contaminant in lube oil samples and causes a multitude of problems.

WaterSCAN from Kittiwake provides real time, high accuracy online measurements of total water and soot levels in your oil. WaterSCAN even works as the oil ages and becomes dirty.

The presence of water alters both chemical and physical properties of the oil. Changes to viscosity, lubricity, stability and additives affect the oils ability to lubricate, provide power and protect your machinery. This decrease in oil quality can rapidly lead to problems such as rust, corrosion, sludge formation, and bacterial growth. These issues, if allowed to develop increase downtime, decrease efficiency and ultimately end in critical failure of the plant or machine.

Water can enter your oil from a multitude of sources including combustion chambers, tank condensation, faulty seals, cooling systems and many more. It is unlikely that you will ever be able to remove all sources of contamination but using WaterSCAN will enable you to monitor the ingress and instantly rectify the problem.

Robust, waterproof housing and temperature stable circuitry ensures that WaterSCAN can provide accurate, repeatable, reliable and real time data in the harshest of conditions. Installation is simple.

- Allows for quick rectification as soon as water content increases
- Real time access to results means no waiting for sample analysis
- Decreases production downtime by monitoring online
- Provides results which are guaranteed to be representative of oil
- Increases component and oil life
- Simple retrofit installation and easy to use



Industries

Marine & Offshore, Power Plants, Wind Power, Construction, Military, Oil Purification, Oil & Gas, Research and testing institutions, Refineries, Pulp & Paper, Cement, Steel Mills, Mining, Petrochemical & many more

Ambient temperature: -10°C to +60°C

Oil pressure range: 1 – 10 bar (regulated)

Maximum oil temperature: < 50°C

Power: 63 to 240V AC 50/60Hz

Analogue Output: 4 – 20mA, 0 – 10V

Connectivity: CANOpen as standard, Modbus & TCP/IP optional extras.

Alarms: Up to 3 programmable alarm levels for water and soot.

Detection Ranges

Water only (clean oils): 0 – 20,000 ppm, (0 – 2% by volume)

Accuracy:

With specific oil calibration* - ±2%

By oil type only - ±5%

Lower level of detection: 100ppm

Soot only (dirty oils): 0 – 10,000ppm, (0 – 1%)

Accuracy: ±10%

Lower level of detection (by weight): 500ppm

Max water level in dirty oils:

For 0.5% soot content - 10,000 ppm by volume

For 1.0% soot content - 500 ppm by volume

*Kittiwake can supply oil specific calibration tables to enable calibration to take place quickly and easily onsite.



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Measurement Principle

Two channel infra red transmission using filtered IR detection with measurements corrected for soot (insolubles) interference.

* Kittiwake reserves the right to adapt the specification prior to launch.