Portable [condition monitoring]

OilCMS PRO + HDV

[ON-SITE PORTABLE SERIES]

OilCMS is the portable, robust, real-time solution featuring Atten[2] optical technology for particle counting and particle morphology analysis in lubrication systems.

The Portable OilCMS utilizes breakthrough digital imaging technology which provides a greater insight into the size and type of particulate in any oil system. Air bubble elimination and shape recognition gives root cause particle analysis. Giving ISO 4406 counts as well as 4, 6, 14, 21, 38 & >70 micron sizing and bubble elimination.

Digital imaging combined with advanced algorithms sorts particles into fatigue wear, cutting wear and sliding wear categories to give root cause analysis.

This powerful technology, when coupled with additional sensors for measuring water content and viscosity & density, gives unprecedented on the spot insight into the condition of your oil.

All Atten[2] technology functionalities available:

- Particle counting according to ISO 4406 standard > 4 microns
- Discrimination and counting of air bubbles
- Classifies particles in 6 ranges (>4, >6, >14, >21, >38, >70 μm)
- Shape analysis

+ **Humidity (%RH)**
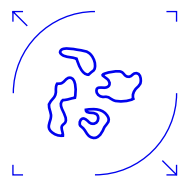
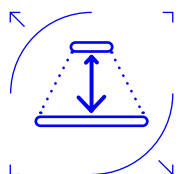+ **Viscosity & Density ***

*kinematic & dynamic

[FEATURES]

Digital Imaging Particulate Counter

Classification and counting of particles larger than 4 microns in 6 ranges. 4, 6, 14, 21, 38 & > 70 microns. Air bubble and water droplet elimination.
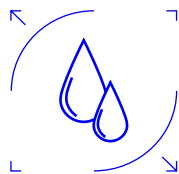
Root cause information

Shape determination to classify fatigue, sliding or cutting wear as well as fibre identification helping to identify the root cause.

Viscosity

Displays live kinematic and dynamic viscosities plus reference viscosity at 40º.

Water sensor

Inbuilt water sensor that provides early diagnosis, reducing potential failures associated with water presence in lubrication and hydraulic systems, improving machine and process reliability.
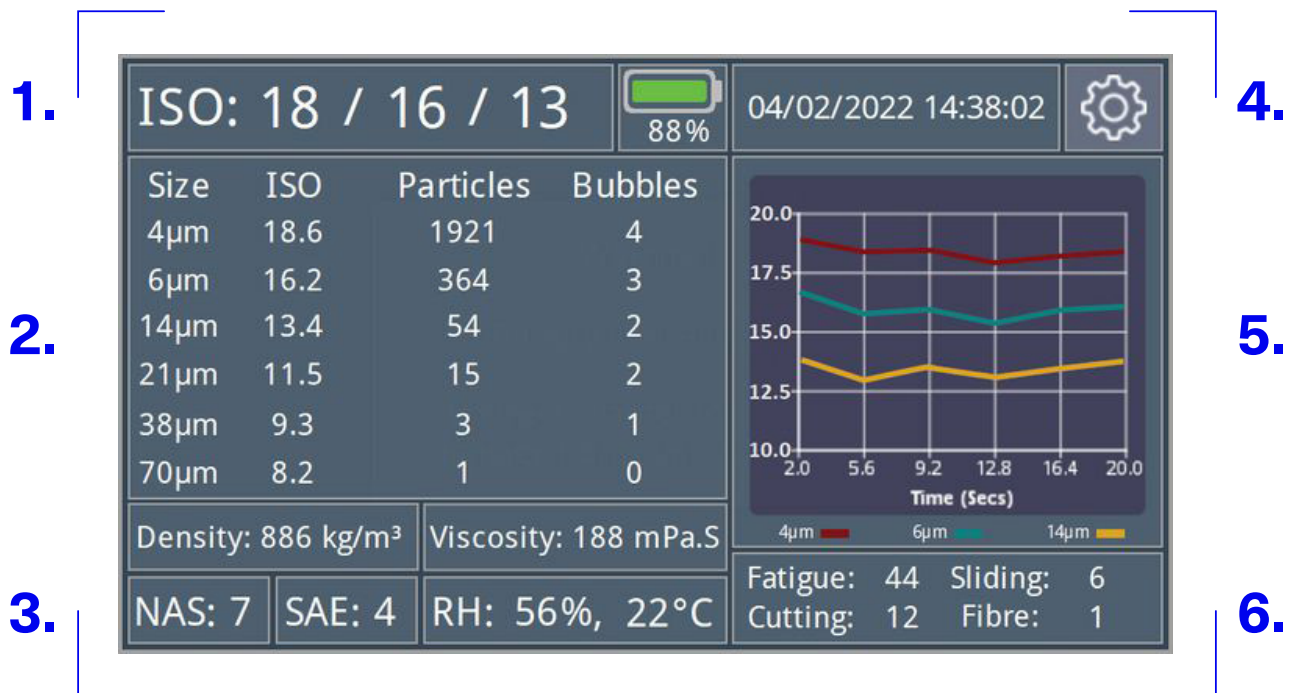
[TECHNICAL INFORMATION]

Fluid compatibility	Synthetic oils, organic oils, mineral oils & diesel fuel (2,400 cSt viscosity limit)
Display information	**Particulate:** ISO 4406, SAE AS4059 & NAS 1638, bubble elimination and particle wear analysis **Water:** relative humidity (RH%). **Viscosity:** Range: 25-400mPa.s Resolution: 0.1mPa.s Accuracy.+/-5% **Density:** Range: 0.6kg/m^3 - 1.3kg/m^3 Resolution: 0.001kg/m^3 Accuracy: +/- 2%
Modes of operation	High-pressure live system sampling (up to 350 bar) - via a high-pressure adaptor Bottle sampling and tank sampling (up to 2,5 bar)
Data	All data stored locally and backed up off-site. Export to CSV.

[DIMENSIONS]

39

17

31

[TOUCH SCREEN DISPLAY]

1.

ISO: 18 / 16 / 13   88%   04/02/2022 14:38:02   ⚙

Size	ISO	Particles	Bubbles
4µm	18.6	1921	4
6µm	16.2	364	3
14µm	13.4	54	2
21µm	11.5	15	2
38µm	9.3	3	1
70µm	8.2	1	0

Density: 886 kg/m³   Viscosity: 188 mPa.S

NAS: 7   SAE: 4   RH: 56%, 22°C

Fatigue: 44   Sliding: 6
Cutting: 12   Fibre: 1

2.

3.

4.

5.

6.

1. Clear and easy to read ISO code which changes between green, white and red to indicate the oil cleanliness

2. Oil cleanliness for each size category details the ISO code, number of particles per mililitre and the bubbles detected

3. Additional sensors give an unprecedent insight into the overall condition of the oil

4. Additional settings allow control of the pump speed for priming and flushing, datalogging, ISO cleanliness alarm limits and changing the time zone

5. Oil cleanliness is trended over time to show how its condition changes

6. Particles are analysed and sorted into fatigue wear, cutting wear, sliding wear and fibre identification to give root cause analysis

Internal Stepper Motor Pump
We've developed a fully controllable stepper motor driven pump to deliver exact flow rates for any oil from 1 to 2,400 cSt. The pump also allows connection to a live system up to 350 bar via a high pressure adaptor.

Battery life
Internal rechargeable lithium battery provides a long life for remote use.