



PREVENTIVE MAINTENANCE MAXIMUM EFFICIENCY



The FMS-PB1000 is a portable and robust solution that incorporates Atten[2] optical technology for particle counting and particle morphology analysis in lubrication systems.

The FMS-PB1000 uses OilWear® technology for the detection and classification of particles in any oil system. Air bubble discrimination and particle shape recognition provide the information needed to identify the root cause of contamination and wear. The solution delivers ISO 4406-based particle counts and classifies particles into 4, 6, 14, 21, 38, and 70 micron ranges.

Digital imaging combined with advanced algorithms classifies particles into fatigue wear, cutting wear, and sliding wear categories.

This powerful technology provides unprecedented on-site insight into oil condition, enabling real-time monitoring of fluid condition and service life.

TECHNOLOGICAL FEATURES

- Particle counting according to ISO 4406 > 4 microns
- Classifies particles into 6 ranges: >4, >6, >14, >21, >38, 70 µm
- Air bubble discrimination and counting
- Particle shape analysis (wear diagnostics)
- Image storage

+ Lubricant degradation (OD - Oil Degradation)

FEATURES



Digital image-based particle counter

Classification and counting of particles larger than 4 microns in 6 ranges: 4, 6, 14, 21, 38 & >70 microns. Elimination of air bubbles and water droplets.



Root cause information

Shape identification to classify fatigue, sliding, or cutting wear, as well as fiber identification, helping determine the root cause.



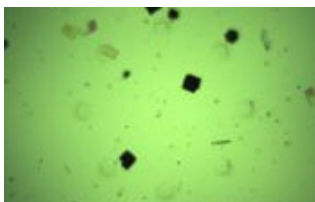
DIMENSIONS



SPECIFICATIONS

Fluid Compatibility	Synthetic oils, organic oils, mineral oils, and diesel fuel (viscosity limit up to 680 cSt)
Display Information	Particles: ISO 4406, SAE AS4059 and NAS 1638, bubble elimination, and particle wear analysis
Operating Modes	Live system sampling at high pressure (up to 350 bar) through a high-pressure adapter Container and tank sampling (up to 2.5 bar)
Data	All data is stored locally and backed up off-site. CSV export available.
Calibration	500 profiled oils. Includes self-calibration capability for any oil through a single-cycle process.

REAL IMAGE VISUALIZATION



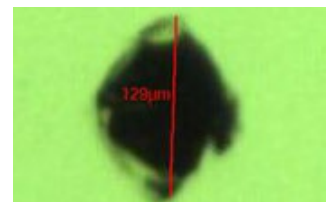
Oil enters the sensor for continuous analysis, and images are captured periodically.



Air bubbles can be seen in the image, where they are classified by size and excluded from the particle count.

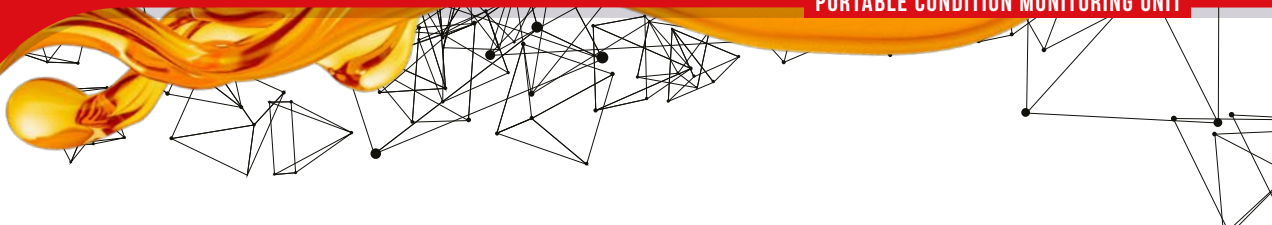


Fibers can be visually inspected to analyze their origin.



Images can be enlarged for analysis and measurement.





Particle Analysis



Software

A 10" touchscreen LCD display allows users to view data in great detail, including zoom, trends, and analysis breakdowns. The software includes oil aging profiles for more than 500 oils.



Trend monitoring graphs

A multi-stage infographic helps users quickly understand the condition of their oil based on all data collected by the internal sensors.



Stepper motor-driven pump

We have developed a fully controllable stepper motor-driven pump to deliver precise flow rates for any oil from 1 to 680 cSt. The pump also allows connection to a live system up to 350 bar through a high-pressure adapter.



Battery

The internal rechargeable lithium battery provides extended operating time for remote use.

