

## MIDAS™

### Ferrous Metal Debris Monitor

*Detect excessive wear through offline ferrous debris concentration analysis*



## PRODUCT OVERVIEW

Routine wear metal analysis of machinery lubricants provides early warning of impending faults. Midas™ provides an accurate, easy-to-use solution for offline and at-line measurements of ferrous wear debris concentrations. Resulting measurements provide the insight necessary to determine if equipment is operating normally or if additional analyses are required.

Wear debris monitoring provides exceptional sensitivity to emerging problems and can often detect problems well in advance of vibration analysis, thermography, or other indirect monitoring methods.

Midas™ is a standalone device that analyzes a small sample of oil for ferrous debris. The rapid and simple operation of Midas™ is accompanied by its outstanding sensitivity, making the device a perfect complement to any on-site or laboratory oil analysis.

## APPLICATIONS

- Oil Analysis Labs
- Wind Energy
- Oil & Gas Processing
- Oil Refineries
- Power Generation
- Gas Compression
- Manufacturing
- Pulp & Paper
- Transportation
- Aerospace
- Process Machinery
- Military

## KEY FEATURES

- Avoid unpredicted failures; facilitate planned maintenance
- Monitor system commissioning ("break in")
- Assess filter performance and integrity
- Easy-to-use and only a small sample volume needed
- Lightweight, robust and portable
- Calibration independent of base fluid used

### TECHNICAL SPECIFICATIONS

<b>Sensitivity (ferrous)</b>	Concentration down to 1 microgram/ml
<b>Range Maximum</b>	2 mg/ml
<b>Repeatability</b>	± 1 count typical
<b>Sample Size</b>	2 ml in plastic micro-tube
<b>Display</b>	3.5 digital LCD with HOLD
<b>Power Supply</b>	External 12 Vdc supply at 50 mA, or battery pack
<b>Temperature Range</b>	10 to 55 °C operating (-20 to 70 ° storage)
<b>Dimensions</b>	80 H, 110 W, 150 D (mm)
<b>Weight</b>	980 g (Midas™ unit only)

### OPERATING MIDAS™

#### How It Works

Midas™ provides repeatable and accurate determination of ferromagnetic material concentration down to single ppm levels. It provides a mass proportional output from any size or quantity of ferrous contaminant particles, even sub-micron particles. A lubricant sample is placed in a standard 2 ml laboratory sample tube. A debris reading is then taken by simply dropping the plastic sample tube into the sensing chamber and reading the updated display.

#### Calibration

Midas™ response is proportional to mass of ferrous material present and calibrations are performed using test standards at the time of manufacture. Particle size does not affect the measurement (in contrast to spectrometric methods). Readings are unaffected by properties (dielectric) of fluid base, or additive package, or water content. Readings are straightforward and are presented in mass/volume standard units, i.e.; mg Fe per liter, or PPM.

#### Kit Contents

Midas™ is supplied in a protective foam lined plastic case. Complete with operating instructions, 12 Vdc universal mains adapter and a calibration check tube. Ready to use with 100 empty sample tubes. Additional tubes are readily available from stock.



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