Metavision RX

Extremely rugged oil analyser

METAL POWER

Oil analysis using RDE-OES

www.metalpower.net

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The ***Metavision-RX*** redefines excellence in oil and lubricant analysis. Leveraging a cutting-edge Rotating Disc Electrode (RDE) mechanism allied with a high-resolution multi-CMOS optical system, it delivers unmatched accuracy and actionable insights through wear metal analysis in lubricants, engine oils and more for applications involving engines, transmissions, hydraulic systems, and gearboxes. Its rapid and reliable elemental analysis provides significant benefits for a wide range of industries such as railways, aviation, automotive, maritime, mining, petrochemicals, heavy machinery, and many others, across areas such as routine maintenance, fault diagnosis, leakage assessment, additive analysis, and many more.

Metavision-RX: Designed for Accurate Oil Analysis

The ***Metavision-RX*** features thermally stabilised multi-CMOS optics with a high-resolution holographic grating, ensuring high sensitivity and accurate multi-element analysis across a 165-800 nm wavelength span. Its front-mounted excitation chamber excites the oil between the graphite rod and disc electrode while maintaining the analytical gap for consistent plasma generation.

With these meticulously engineered components, the ***Metavision-RX*** ensures high-quality, reproducible results, making it a trusted choice for oil and lubricant analysis.

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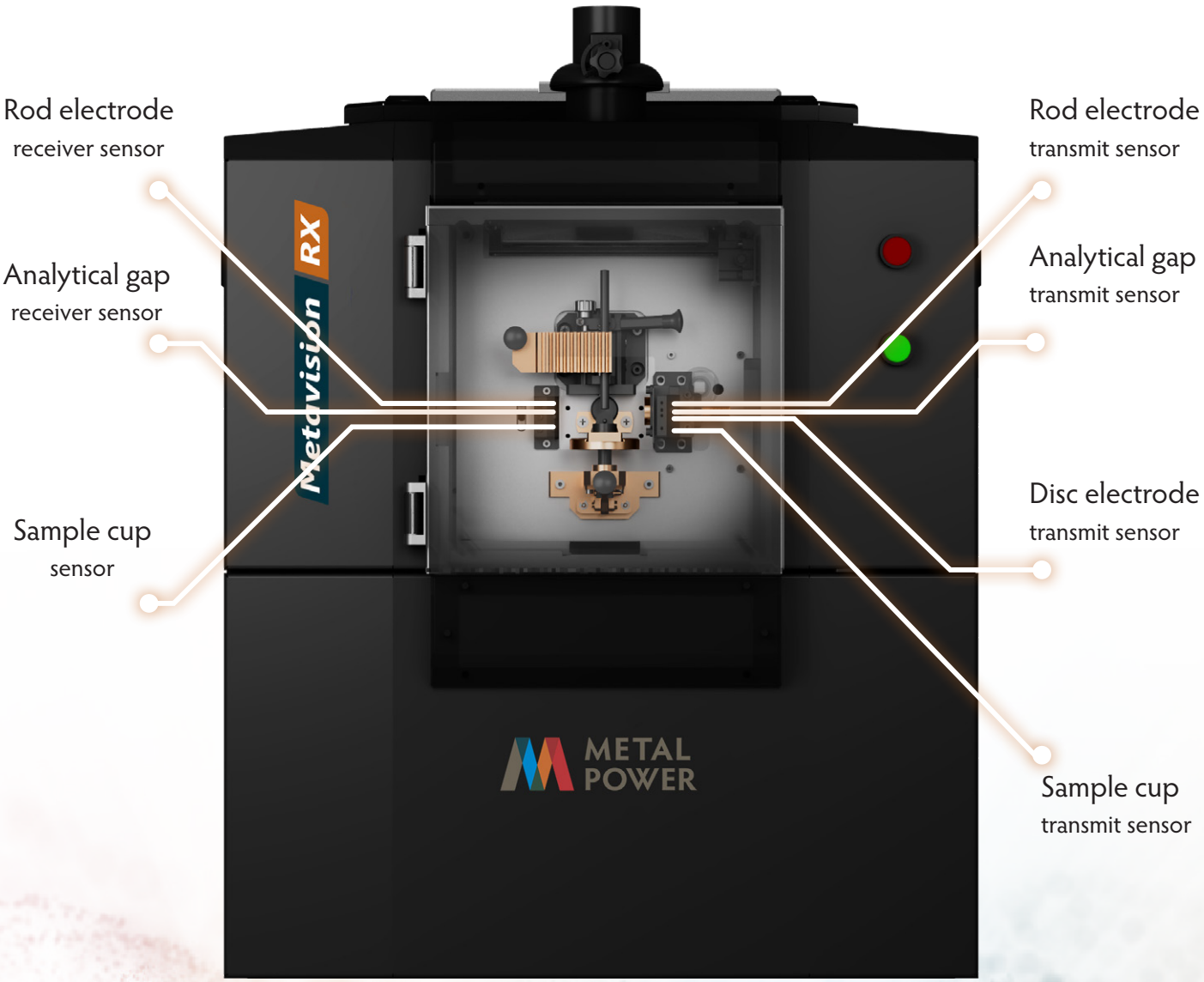
Automatic Sensing Mechanism

The ***Metavision-RX*** is equipped with an automatic sensing mechanism that enhances user convenience and operational safety. This system continuously monitors critical parameters, such as the presence of the disc and rod electrodes, analytical gap, and proper placement of the sample cup on the stand. Additionally, it ensures the secure closure of the sample stand door, indicated by a simple LED light signal, minimising errors and ensuring seamless analysis.



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Key Features and Benefits

- **Wide Range of Elements:** ***Metavision-RX*** offers coverage for a wide range of elements, simultaneously detecting 33+ elements.
- **Sub-ppm Detection Limits:** Provides exceptional accuracy for wear metals, additives, and contaminants down to 0.1 ppm.
- **Global Standards Compliance:** The ***Metavision-RX*** is fully compliant with ASTM D6595 (Oil) and ASTM D6728 (Fuel), ensuring reliability and consistency.
- **Comprehensive Applications:** Ideal for turbines, locomotives, industrial gearboxes, and compressors.
- **Rugged Design:** Engineered for durability, ensuring consistent performance in demanding environments.

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Technical Specifications

Parameter	Specification
General	
Technology	Rotating Disc Electrode Optical Emission Spectrometry
Optics	
Optics Configuration	Dual vacuum-free optics
Wavelength Range	165 to 800 nm
Element Coverage	33+ elements Wear metals: Al, Cd, Cr, Cu, Fe, Pb, Mg, Mn, Mo, Ni, Ag, Sn, Ti, V, Zn Contaminants: B, Ca, K, Si, Na Additives: Ba, B, Ca, Cr, Cu, Mg, Mo, P, Si, Zn Additional elements: As, Bi, Ce, Co, In, W, Zr, Be
Detector Type	CMOS
Resolution (RLD)	≤ 1 nm/mm
Grating (grooves/mm)	3,600 & 2,400
Applications	
Applications	Determination of additives, wear metals and contaminants in lubricating oils, hydraulic fluids, gas turbine & diesel engine fuel, heavy fuel oil (HFO), crude oil, glycol coolants, etc.
Available Test Methods	ASTM D6595 ASTM D6728
Correlation To	ASTM D5185 (ICP-AES)
General	
Source	Fully Digital PWM
Input Voltage & Frequency	90-270 VAC; 50/60 Hz
Argon Consumption	Advanced Argon saver (applicable for optional DUV Optics)
Size (Benchtop)	950 mm (L) × 540 mm (B) × 645 mm (H)
Weight (Benchtop)	≈ 80 Kgs
Consumables	
Accessories	eSharp (electrode sharpener)
Starter Kit	Graphite discs (1000 pcs) Graphite electrodes (100 pcs) Sample cups (2 ml) (1000 pcs)

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MPA LabTab

Access your OES from anywhere and on any device

Armour Safe

Protect your OES against unstable power and temperature for optimal performance

Wireless RTDS

Transmit your readings from lab to melting platform wirelessly

[FP]-LIMS

Digitise and connect your analysis instruments to manage data seamlessly

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