



**Metavision 1008i**

Laboratory powerhouse

**MID-RANGE  
POWERHOUSE WITH  
NITROGEN ANALYSIS  
IN STEELS!**

## **Metavision 1008i**

Laboratory powerhouse

Delivers analysis of 99.9+% for all pure metals, with some going well beyond 99.95% purity as well.

Research in the field of spectrometry has continually been focused on ever-lower detection limits and faster analysis time coupled with high precision and accuracy. At Metal Power, our R&D team focuses on these, while not losing sight of the need to deliver economic value across the product lifecycle. The **Metavision-1008i**, exemplifies all these endeavours, offering rapid and highly precise and accurate analysis of an extremely wide range elements at very low levels in ferrous and non-ferrous metals, while also offering exceptional economic value.





### Innovative optics unlocking higher value

The dual-optics system on the *Metavision-1008i* was the first to utilize Metal Power's patented D-Scan optics system. Leveraging this technology, the *Metavision-1008i* doubles detector resolution and improves detection limits, precision and accuracy multi-fold over conventional optical design. The D-Scan system reduces costs as well, delivering tremendous value. The optical system spans a wide range of wavelengths with complete spectral coverage in the range – ensuring that 45+ elements are analysed in standard factory calibrations across metals and alloys.

Equally at ease in ferrous and non-ferrous applications for all manner of pure metals and alloys, the *Metavision-1008i* delivers limits as low as 15 ppm for Carbon (C) and 10 ppm for Sulphur (S) in steels. Added to this, Nitrogen (N) is also analysed down to 20 ppm, making the *Metavision-1008i* ideal for the vast majority of analytical requirements. In non-ferrous metals too, the *Metavision-1008i* delivers analysis of 99.9+% for all pure metals, with some (Cu, Pb etc.) going well beyond 99.95% purity as well.

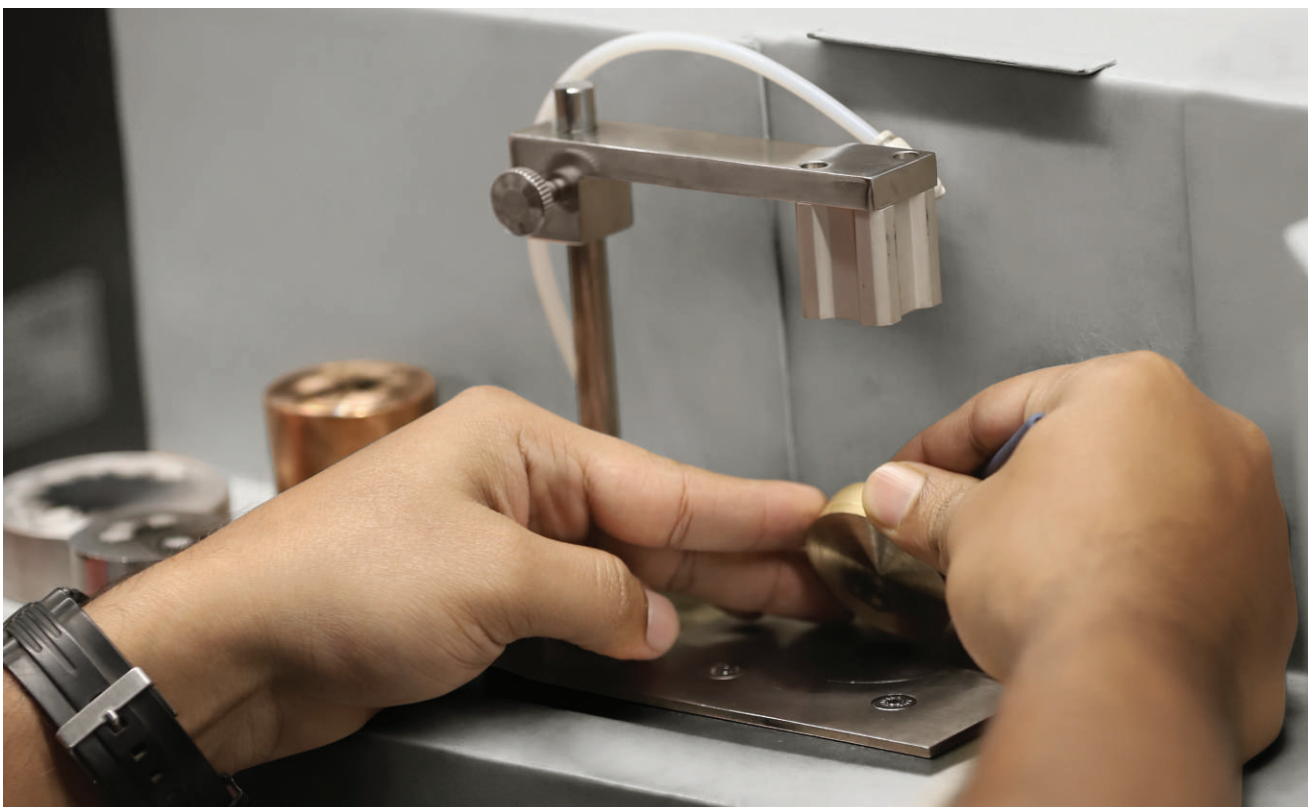
### Powering the best results

For any spectrometer, the quality as well as the stability of analyses are very closely correlated with the quality of the power source – and the stability of the current discharge it provides. Additionally,

the ability to tailor output at a granular level is critical to ensure that analysis is optimized for each element in every application. The innovative digital plasma generator of the *Metavision-1008i* comprises a fully current-controlled source with a wide range of outputs for each parameter of the discharge. With ultra-granular computer-based control over each parameter, the power unit ensures the highest levels of plasma stability and the ability to generate the ideal spectra for different applications. Designed for inputs of 90-270 V AC, this is also truly global and can be used in any part of the world without restriction.

### Modular design

The *Metavision-1008i* has been built to be very easy to service and maintain. Fully modular in its build, the instrument has optimized isolation of sub-systems to deliver twin benefits – no interference / noise and easy access for maintenance and servicing. Each system is easily and independently accessible to engineers for servicing and to operators for routine maintenance tasks. The design also ensures that no sub-system is at risk during any activity including cleaning and changing any of the consumables.



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## Colour Options



Warm Grey



Cool Grey



Classic Grey



Space Grey



Matte Black

## Highlights

- 45+ elements in standard calibrations; Includes N, C, S, P, B etc. all to low levels
- Dual-optics for improved sensitivity and detection limits
- Unique capability -  $\leq 20$  ppm limits in the analysis of C, N, S, and P in steels, as well as phosphorus in aluminium
- Thermally stabilized optics ensuring consistent high levels of accuracy and precision
- Extreme flexibility - any number of bases and matrices, including on-site additions
- Fully digital pulsed current-controlled power source
- Latest generation processing software for noise-free clear spectra for low detection limits ensuring uncompromised accuracy in the analysis.
- Grade Identification library for quick identification of grade and matrix, ARQC etc.,
- Vacuum-free optics enabling lower capital and maintenance costs and very rapid stabilization
- Special applications for wires rods (2.2 mm dia.), thin sheets (0.05 mm thickness), and many more

## Technical Specifications

### Optics

- Dedicated optics for UV and Visible range
- Latest-generation, high-resolution detectors
- Resolution: Down to 13 pm ( $1 \text{ pm} = 10^{-12} \text{ m} / 10^{-3} \text{ nm}$ )
- Thermally Stabilized optics to ensure high accuracy and precision
- Patented D-Scan Technology

### Source

- Digital Pulsed Current Controlled Source
- 90-270 VAC; 50/60 Hz

### Accessories and Options

- Wire and Wire Rod Adaptors
- Spectrometer Sample Surface Polishing Machines
- CleanSharp
- Certified Reference Materials (CRMs)
- Argon Purifiers

## Applications

In any spectrometer, far beyond design specifications and feature-sets, it is the nature, quality and usability of analytical outputs that drive value. To this end, the *Metavision-1008i* has been equipped with features that meet the vast majority of needs of users across sectors. This spans not just the elemental coverage and detection limits, but also the additional outputs the spectrometer and analytical suite deliver. On the analytical capabilities, this is delivered through capabilities across the vast majority of elements needed in every base. From C, S, P and N to V, Sb, Hg and As, the *Metavision-1008i* provides an immense range of coverage with low detection limits.

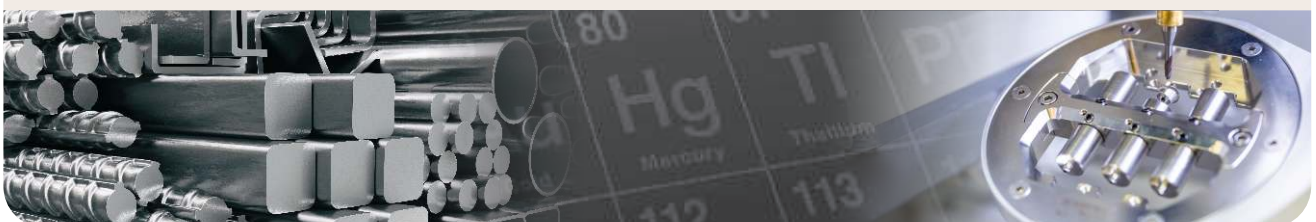
This apart, the analytical suite has also been crafted to deliver value through both standard and optional features. Equipped with a powerful and customizable report writing engine, the Analyst suite on the *Metavision-1008i* also offers a host of other features. Ranging from gas quality checks and proactive alert systems to Grades and CRM Libraries – both pre-loaded and user-configurable – as well as the ability to add customized Melt Addition Programs, the suite leaves no stone unturned in ensuring that the instrument enables Laboratories to maximize the value a spectrometer delivers.

Steel Plants and makers of all manner of ferrous alloys require analysis of a wide range of elements with a focus on high accuracy and precision. The *Metavision-1008i* analyses 29+ elements in ferrous metals – including Nitrogen down to 20 ppm – and covers all the key elements, excluding Oxygen, down to a level of 10-20 ppm for most elements with some being analysed to even lower levels. This makes the instrument ideal for most firms making or processing alloy steels, cast iron, alloyed cast irons and also stainless steels.

In non-ferrous applications, the *Metavision-1008i*'s high resolution results in wide analytical ranges across

elements. This ensures it analyses all manner of low as well as high alloys with exceptional analytical accuracy and precision, delivering not just trace analysis but also master alloy analysis. For pure metal producers such as those in Lead, Zinc, Copper, Titanium etc., the *Metavision-1008i* offers low limits of detection across a wide range of elements including heavy elements such as Lead, Arsenic, Cadmium etc., enabling users to meet purity requirements and also ensure compliance with regulatory norms. In pure metal applications, the *Metavision-1008i* offers detection limits that enable analysis of metals of up to 99.95+% purity with exceptionally high precision.

Commercial laboratories cater to a whole host of industries, often analysing several hundreds of samples daily for different bases, matrices etc. For such laboratories, having a spectrometer with a high throughput, low operating costs and wide range of covered elements and detection ranges is essential to ensure satisfaction of a varied clientele. The *Metavision-1008i* has a rapid analysis time assuring high throughput and low detection limits that meet the analytical requirements of just about every industrial user, making it the ideal solution for most Commercial Laboratories.



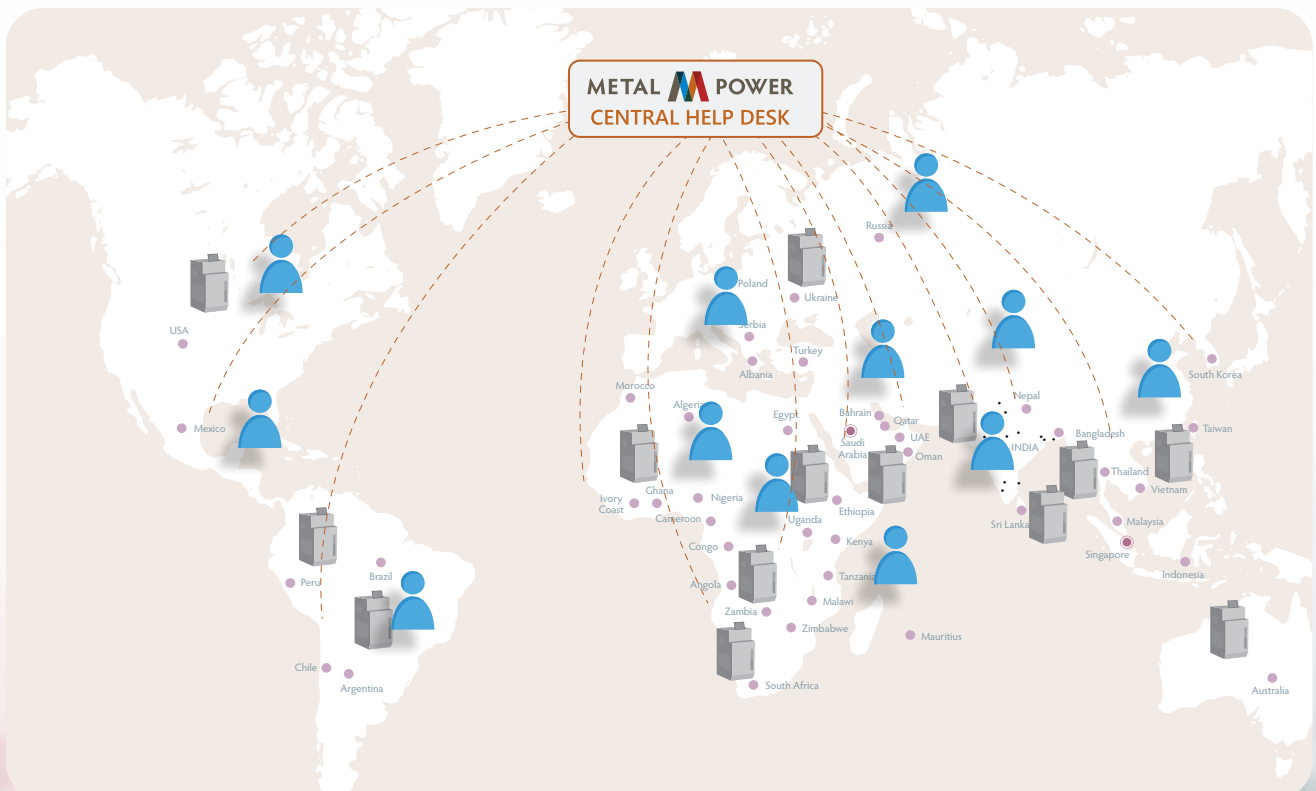
## The Metal Power Advantage

The *Metavision-1008i* offers some unique features that truly set it apart from other instruments in its class. These include the analysis of rods and wires and of foils as thin as 50 microns (0.05 mm). Metal Power also offers Master Alloy calibrations to meet the needs of alloy-makers who are now able to accurately assess major as well as trace elements accurately even in the master alloys. These apart, through our in-house Applications Lab, Metal Power also offers custom development of applications to meet specific and unique needs of individual users.

## World-wide service support

Metal Power offers multi-modal Service support to all customers globally and prioritizes customer proximity through true omnichannel access. Underpinned by our Salesforce system, all customers get immediate access to Service and call-logging through the MetaCloud mobile app, website forms, telephonic access, email and WhatsApp chat. Each call is logged instantly on the CRM and is tracked against stringent SLAs. Customers too can track the progress and status of any call via MetaCloud which provides them instant updates from the CRM. For addressing calls with immediacy, apart from direct site visits, we ensure that customers always have access to online / remote support as well.

With a team of 35+ in-house engineers and a large and high-quality pool of trained engineers through our partners, we guarantee the highest level of service and delight. Each of our engineers is a highly-skilled professional and we ensure that all possess extensive knowledge and experience in the field, allowing us to address any customer needs promptly and efficiently. All our engineers and partners, and therefore our customers are also supported by our dedicated Central Helpdesk that provides guidance, coordination and also Applications Support based on what each situation demands. Each Service interaction is closely monitored, with internal assessments and customer feedback being used to continuously improve service levels and Customer Delight.





A comprehensive ecosystem for your *Metavision-10008i*



Our other Spectrometers

**Metavision-10008X**  
The zenith of sensitivity

**Metavision-1008i<sup>3</sup>**  
When excellence is not good enough

**Metavision-RX**  
Extremely rugged oil analyzer

**Mobile-OES**  
High performance on wheels

**MOSS**  
Compact and affordable

Founded in 1987, Metal Power provides a comprehensive range of products, applications and services to meet the analytical needs of Production and Quality Control/Assurance Laboratories. Our product portfolio spans Laboratory (Stationary) as well as Mobile Optical/Atomic Emission Spectrometers (OES/AES) for metals analysis, Rotating Disc Electrode (RDE) Spectrometers for analysis of oil samples, Sample Preparation Machines for spectrometers as well as a wide range of accessories and allied instruments that help optimize the analytical outputs of our spectrometers.

Today the Company boasts over 35 years of experience in spectrometry and has a truly global presence, directly and indirectly supplying and servicing our customer base across 35+ countries spread over 6 continents.

True pioneers in the field of CCD- and CMOS-based Spectrometers, our product philosophy is driven by the focus on offering a range of models, each tailored to meet specific customer needs – both analytical and financial. As an outcome, we offer the world's widest range of spectrometers – with each offering positioned to be best-in-class in terms of features as well as on economic value.

Metal Power Analytical offers both Stationary (Laboratory) as well as Mobile OES for metals analysis. Our stationary spectrometer range spans from the R&D-grade *Metavision-10008X*, that delivers virtually every feature known in spectrometry, through the Laboratory-grade *Metavision-1008i<sup>3</sup>* and *Metavision-1008i*, to the entry-level *MOSS* – the world's smallest, most economical and first truly scalable OES. In mobile OES too, we offer different models, each with a choice of probes – Arc, Spark, UV and combined probe options – to meet every user need.

The *Metavision-RX* RDE-OES offers the very best option for customers that wish to analyze oil samples for contaminants, additives and/or wear metals. Including the option of Sulphur analysis, the instrument offers the widest elemental coverage, and leverages all our expertise in the field of CMOS/CCD detector-based optics to offer low detection limits with exceptional accuracy and precision.



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