



Metavision 108NN+

Rugged and Versatile Thoroughbred



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The *Metavision-108NN+* spectrometers are designed to deliver industry-leading performance across the widest range of industries, applications and environments. The CCD based *Metavision-108NN+* spectrometers are compact and consume less energy and argon, making them extremely economical to procure, operate and maintain. The truly innovative design delivers rapid, precise, accurate and certifiable elemental analysis in weight percentages and stands the test of time. Many of our customers use them round-the-clock with a few of them doing more than 1,000 burns in a shift. In fact, the more you run them, the better they function!

Routine maintenance requirements are minimal, and the instruments are designed to be operable by laymen after basic training delivered at the time of installation. The software suite is not just extremely powerful, but also intuitive and extremely user-friendly, ensuring that every key analytical requirement is addressed, and value-added features are provided to enable firms to unlock unmatched value through their investment. Factory calibrations are provided for 31+ elements (including Nitrogen in steels) across multiple bases including Fe, Cu, Al, Zn, Ni, Pb, Sn, Mg, Co, Ti etc. More bases can be added at any point in time, at factory or on-site, to meet specific application needs.

Class-defining efficiency

The *Metavision-108NN+* spectrometers are the product of sustained R&D based on our customers' inputs. Within extremely compact frames, these instruments pack a substantial punch, featuring latest-generation technologies in detectors, gratings, power source and also electronics and processing systems. These models have not just been designed to be powerful and flexible but also extremely rugged and tremendously economical. With their compact sizes, the latest technology for Argon-saving, extremely low power consumption, low running and consumables costs and ruggedness that requires very low maintenance as well, the *Metavision-108NN+* Spectrometers set the benchmark for economy and efficiency on virtually every aspect.



Highlights

- 31+ elements in standard calibrations; Includes N, C, S, P, B etc.
- Extreme flexibility - any number of bases and matrices, including on-site additions
- Fully digital pulsed current-controlled power source
- Thermally stabilized optics to ensure high accuracy and precision
- Grade Identification library for quick identification and confirmation of grades
- Advanced features including auto-identification of grade and matrix, ARQC etc.
- Vacuum-free optics enabling lower capital and maintenance costs and very rapid stabilization
- Special applications for master alloy calibrations, melt addition programs and more
- Latest-generation processing software for noise-free clear spectra for low detection limits with high precision and accuracy

Carrying the same Analyst operating and applications software suite that powers even our high-end OES including the *Metavision-10008X* spectrometers, the *Metavision-108NN+* offers multiple advanced features including analysis of Nitrogen in all manner of Steels. Aside from routine applications to analyse pure metals and alloys, there is also a range of proven special applications – including thin foils, special tool steel, wires, rings, coins, pig iron and several more.

Uncompromising performance

In line with our philosophy of always prioritizing performance over all else, the *Metavision-108NN+* spectrometers are the only ones in their class to feature fully digital current-controlled sources. The innovative digital plasma generator has ratings that ensure an exceptionally wide range of outputs for each parameter of the current discharge and also offers granular, computer-based control over each parameter, thereby delivering exceptionally high plasma stability and the ability to generate the ideal spectra for different applications. This provides accuracy, precision and stability that is truly unmatched in its class. Furthermore, the ability to tailor each individual parameter of the discharge enables the spectrometer to optimise the analysis of each individual element.

Modular design

The *Metavision-108NN+* spectrometers have 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.

Applications

In any spectrometer, far beyond design specifications and feature-sets, it is the nature, quality and usability of analytical outputs that drive value. The *Metavision-108NN+* spectrometers have been designed to balance analytical horsepower with economy. As such, the instruments cover 31+ elements across bases to ensure that they meet the elemental coverage needs of the vast majority of users. Lower detection limits are in the 30-50 ppm range for most elements, while on the upper side, there is immense flexibility – ensuring that even high alloys are easily analysed with high precision and accuracy.

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 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.

Rolling mills, foundries and workshops need spectrometers to meet multiple needs. An OES is used to analyse a wide variety of incoming raw material, including scrap, as well as for testing finished goods to obtain valid test certificates. With its unmatched flexibility, industry-leading cost-per-analysis and ease-of-use, the *Metavision-108NN+* spectrometers offer the ideal solution to such users, providing them with accurate analyses and significant cost savings.

Alloy manufacturers can save substantial amounts in cost by getting the mix just right. Even small savings in percentage terms could mean millions over the year. For such users, the *Metavision-108NN+* spectrometers offer the ability to optimize their manufacturing and

achieve these benefits with ease. Given their flexibility and performance levels coupled with the ability to economically and easily take well over 1,000 burns a day, it's no surprise that the *Metavision-108NN+* has rapidly emerged a favourite in this segment.

Medium-sized industries typically face a dilemma when evaluating OES procurement. The prospect of high capital costs can be daunting and there is always the temptation to utilize external labs. This however compromises time as well as confidentiality leading to an attempt to rationalize testing – which then has an adverse impact on the customer base that can be targeted. With their wide elemental range, (including N in steels), the *Metavision*

-108NN+ spectrometers are ideal for such users, offering a class-leading price-performance ratio and meeting just about every possible testing need.

Large plants typically have multiple spectrometers of varying capabilities – each meeting specific testing needs. Any downtime however is extremely damaging, resulting in inventory pile-ups and time delays. Having backup or standby units of similar calibre to the main units is however a very expensive proposition. The *Metavision-108NN+* offers the ideal solution for such users – offering a robust backup to those that use higher-end OESes like the *Metavision-1008i³* or *Metavision-10008X* as their main production units.

Metavision-108NN+

Technical Specifications

Optics

- CCD-based design to ensure full spectral coverage within the range
- Open sample stand to accommodate a wide array of sample sizes and geometries
- Thermally stabilized optics to ensure high precision and stability

Source

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

Accessories and Options

- Wire Analysis Adapters
- Spectrometer Sample Surface Polishing Machines
- CleanSharp
- Certified Reference Materials (CRMs)
- Argon Purifiers

*Specifications are subject to change on account of product upgrades



The Metal Power Advantage

In addition to these, the *Metavision-108NN+* spectrometers also offer some unique features that set them well above any competitor. 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.

Highest Level of Customer Satisfaction

Our primary objective is to provide the industry with reliable and rugged instruments at affordable prices. In each category, Metal Power's spectrometers offer industry-leading performance, coupled with the lowest costs of ownership. We understand the criticality of our instruments to the operations of our customers and are committed to ensuring minimum downtime.

Our extensive team of dedicated and highly trained service engineers are equipped to handle service issues on our products. This is supported by an efficient call-logging system that is accessible to all customers via our phone lines, email or website.

For customers in the Indian sub-continent, Metal Power offers direct service support and a toll-free helpline (India-only) with a direct field-support team of 35+ in-house engineers spread across 17 locations. In all other markets, Metal Power assures the highest level of service through our authorized partners' engineers, with each trained in regular programs conducted by Metal Power.

All our engineers and partners are supported by our dedicated Central Helpdesk and also provided access to Applications Support when the situation so demands.

Our other products

Metavision 10008X

The zenith of sensitivity



Metavision 1008i³

When excellence is not good enough



Metavision 1008i

Laboratory Powerhouse



MOSS

Compact and affordable



Metavision M Series

High performance on wheels



H/SCAN

Rugged, accurate & economical



Argon Purifier+



CleanSharp



Wire Adaptors



Sampling Mould



Sample Surface Preparation Machines



Certified Reference Materials



Proficiency Testing Services



Founded in 1987, Metal Power provides a comprehensive range of products, applications and services to meet the analytical needs of metal industries. Our product portfolio spans Laboratory Optical / Atomic Emission Spectrometers (OES / AES), Mobile Spectrometers, Hydrogen analysers for molten Aluminium, Certified Reference Materials (CRM), Sample Preparation Machines for spectrometers as well as a wide range of accessories.

Apart from the product range, Metal Power through its Laboratory Division also offers services in Material Analyses and Proficiency Testing for other laboratories. Today the Company boasts over 30 years of experience serving the needs of ferrous and non-ferrous metals industries and has a truly global presence, spread across more than 35 countries in 5 continents.

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

Our stationary spectrometer range spans from the high-end R&D-grade **Metavision-10008X**, that delivers virtually every feature known in spectrometry, through the rugged, Laboratory-grade **Metavision-1008i³**, **Metavision-1008i** and **Metavision-108NN+**, 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 and UV – to meet every user need.

The common denominator across all our offerings – products, applications and services – remains our commitment to deliver the highest level of quality, reliability and uptime, while also offering the lowest cost over the product lifecycle, through low acquisition costs supported by the highest quality of service and after-sales support to our customers – wherever they may be.



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