

**Metavision 8i**



**Segment leading OES**  
with dual optics and  
multi-base capabilities





Low Nitrogen detection in Steels and CI/DI

Dual optics system with dedicated optics for the Deep UV spectrum

55+ elements in standard calibration, including low C, S, P, B, N, etc.

Latest generation, high-resolution CMOS detectors

Enhanced Carbon in Cast Iron analysis

Sodium and Lithium detection down to 1 ppm in non-ferrous bases

Thermally stabilised optics to ensure high precision and stability

Digital, current-controlled source for plasma generation

**M METAL POWER**

**Metavision 8i**

CMOS

55+

CMOS

Lightning bolt icon

Microscope icon

Thermometer icon

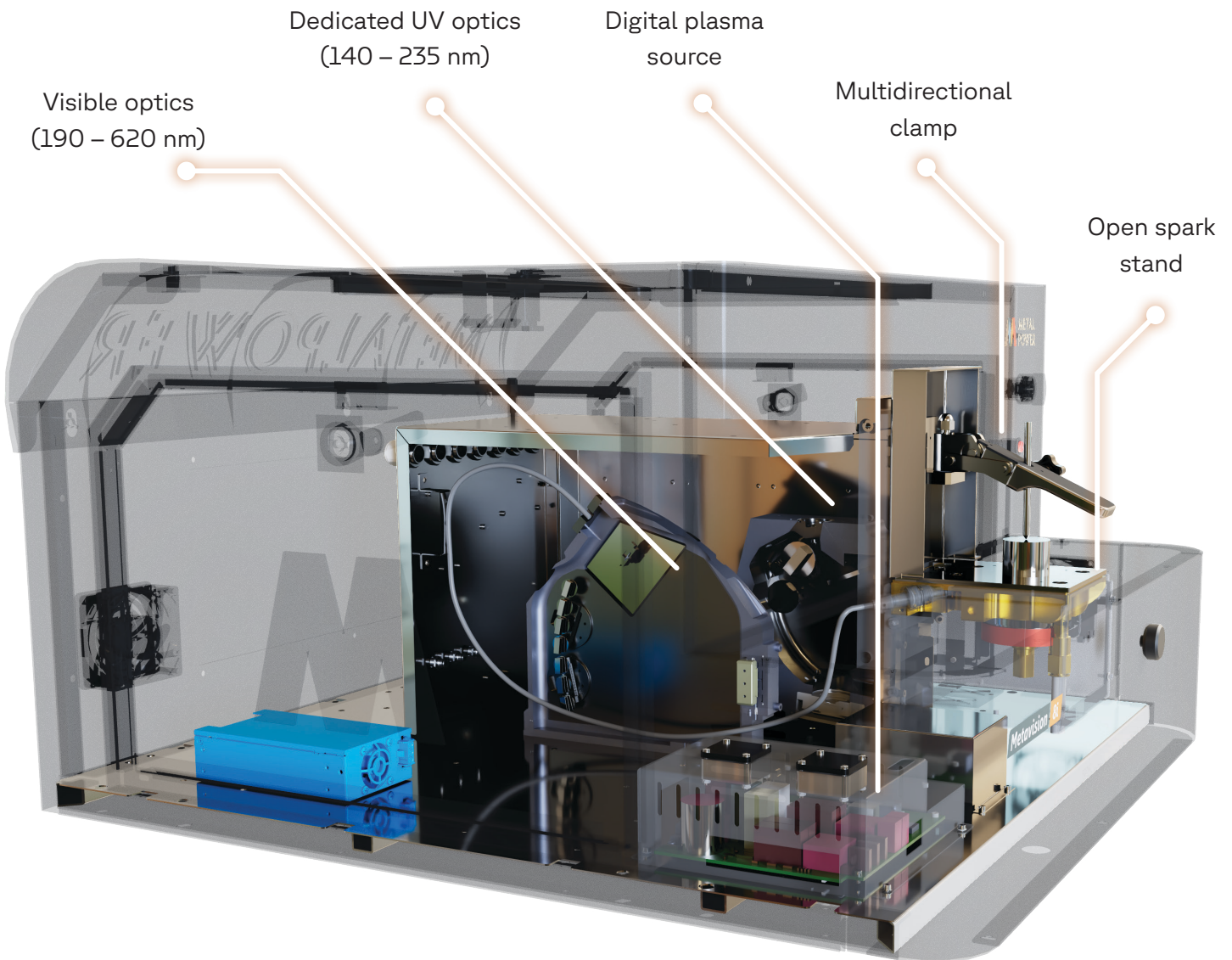
Target icon

Flask icon

Atom icon

Stack of cubes icon

The Metavision-8i is a state-of-the-art stationary OES designed for budget-conscious users with critical, high-productivity applications. Featuring a state-of-the-art dual-optics design and equipped with the latest generation CMOS detectors, the Metavision-8i is truly best-in-class and delivers elemental coverage for 55+ elements, low detection limits, high performance and application features typically associated with higher segments.



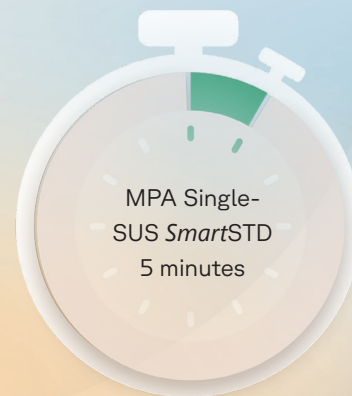
## Key Features and Benefits

- **Dual Optics Design:** The Metavision-8i is the only OES in its class to feature a thermally stabilised, dual-optics design with a dedicated chamber for the Deep UV span.
- **Cutting-edge CMOS Detectors:** Featuring the latest-generation CMOS detectors, the OES delivers higher sensitivity, faster processing, and virtually no dark noise.
- **Class-leading Efficiency:** Reduced Argon consumption and low energy consumption lower the operational costs for users without compromising accuracy or precision. The Metavision-8i is particularly suitable for facilities with high throughput, given its ultra-fast processing speed and low-maintenance design.
- **Enhanced Carbon (C) Analysis in Cast Iron/Ductile Iron:** The Metavision-8i covers the crucial 148 nm wavelength for Carbon, enabling it to automatically assess and account for graphitisation in CI/DI samples and deliver Carbon results at par with combustion analysers.
- **Nitrogen (N) in Steel:** Delivers low-ppm Nitrogen analysis in Steels and CI/DI, with detection limits down to 20 ppm.
- **Aluminium alloys:** It offers analysis down to 1 ppm for Sodium and Lithium and also analyses ROHS elements.
- **Pure Metal Analysis:** Delivers up to 99.98% purity in Copper, Zinc, and Silver with low detection limits for each.

## SmartSTD Advantage



Traditional multi-point standardisation/recalibration methods require about 30 minutes across multiple samples for restandardisation, resulting in delays, higher costs, and loss of productivity.



MPA's *SmartSTD* uses just a single sample for the restandardisation/recalibration process and delivers a productivity upside of ~85%, along with substantial cost savings.

*SmartSTD* comes accompanied with in-built intelligence to identify the optimal burn quality, eliminating the risk of operator errors, delivering a process that is not merely accurate, fast, and economical, but also user-friendly.



# Technical Specifications

Parameter	Specification	Benefit
<b>Wavelength Coverage</b>	140 – 620 nm	Comprehensive analysis across 55+ elements, including trace elements.
<b>Detector Type</b>	Fully CMOS	Superior precision with high resolution and reduced noise for accurate results.
<b>Resolution (RLD)</b>	1.6 nm/mm	Ultra-high resolution ensures exceptional sensitivity and stability.
<b>Optics Configuration</b>	Dual vacuum-free optics	Provides superior performance without the need for vacuum pumps, reducing operational costs.
<b>Plasma Source</b>	Fully Digital PWM	Stable plasma generation with granular control, delivering consistent results across applications.
<b>Peak Discharge Current</b>	100 A	Ensures high-energy sparks for better analysis and enhanced accuracy, even for complex materials.
<b>Max Discharge Frequency</b>	1,000 Hz	Fast analysis with minimal delay for high throughput testing and productivity.
<b>Argon Consumption</b>	Low, optimised for extended usage	Reduces operational costs through efficient Argon consumption and extended system life.
<b>Spark Stand</b>	Heavy-duty, Low-maintenance design	Minimises downtime, ensuring continuous operation and durability over long-term use.
<b>Standardisation Time</b>	<5 minutes	Boosts productivity by 85%, significantly reducing setup time and costs.
<b>Size (Benchtop)</b>	810 mm (L) x 730 mm (W) x 470 mm (H)	Compact footprint for space-efficient installation without compromising on performance.
<b>Weight (Benchtop)</b>	Approx. 50 kg	Robust design for high stability and reliable operation even in demanding environments.
<b>Software Compatibility</b>	<p><b>MetaLib Pro:</b> World's largest library for metal grade identification.</p> <p><b>MPALabTab:</b> Access your OES data anytime, anywhere.</p> <p><b>LIMS:</b> Advanced data integration and analysis tool.</p> <p><b>Charge Correction:</b> Real-time melt process optimisation tool.</p>	

### **Sample Preparation Machine**

Prepare sample surfaces  
for quality analysis

### **MPALabTab**

Access your OES  
data from anywhere  
and on any device

### **WirelessRTDS**

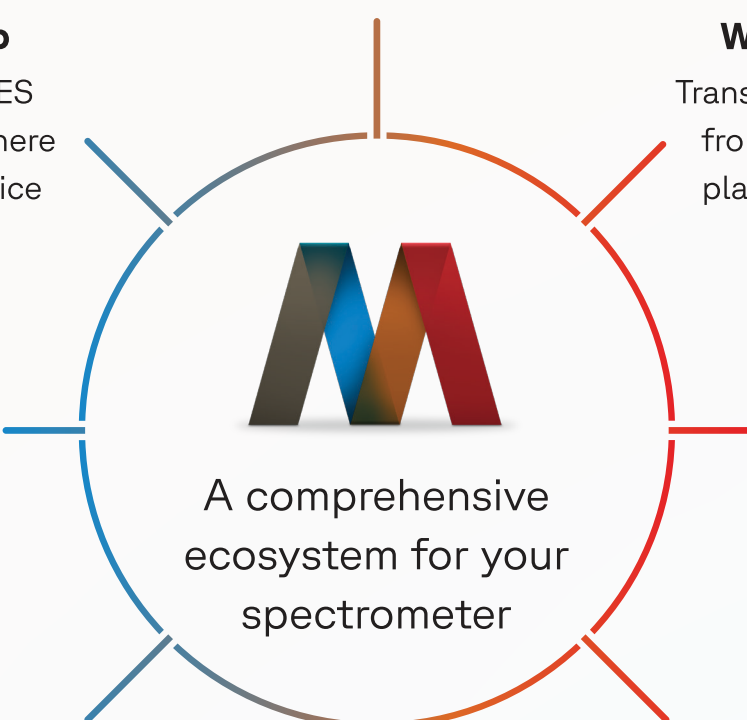
Transmit your readings  
from lab to melting  
platform wirelessly

### **ArmourSafe**

Safeguard your  
instruments against  
power anomalies in  
real-time

### **MetaLib Pro**

Access the world's  
most comprehensive  
library for metal  
grade identification



A comprehensive  
ecosystem for your  
spectrometer

### **Charge Correction**

Integrated IT solution for  
best practice in melting  
and furnace operations

### **LIMS**

Digitise and connect your  
analysis instruments to  
manage data seamlessly