

VAS[®]

SPECTROMETERS



**Precision Analysis with Advanced Performance
High Stability | Reliable Results**

www.vasspectrometers.com

Gold Plus Xe

Cutting-Edge Innovation



1. Product Introduction

The Gold Plus Xe is designed to be a compact and high-performance Optical Emission Spectrometer (OES) capable of delivering:

- Accurate and reliable elemental analysis
- Consistent analytical performance across multiple metal bases
- High stability for industrial quality control applications
- Efficient operation with low maintenance requirements
- Reliable results in demanding industrial environments

Engineered for metal testing laboratories and production facilities, the Gold Plus Xe is designed to achieve high standards of:

- Performance
- Reliability
- Operational efficiency
- Long-term stability

The instrument combines advanced optical design, a stable spark excitation system, and intuitive analysis software to ensure dependable analytical performance.

2. Highlights

- 40+ element analysis capability across multiple metal matrices
- Detection limits down to 50 ppm for trace element analysis
- V-MAP Spark Source for stable spark excitation
- Monoblock optical design for long-term stability
- Optimized argon-saving system
- Failsafe hardware with surge protection
- Low maintenance design with high uptime
- Suitable for steel plants, foundries, rolling mills, aerospace, and auto component industries

3. Technology & Engineering Excellence

3.1 The Heart of GOLD PLUS Xe – Monoblock Optical System

The optics of GOLD PLUS Xe is built around flat field skewed sinusoidally modulated holographic grating based optical system.

Optical Architecture

- Flat field skewed sinusoidally modulated for stable and accurate optical dispersion
- CCDs placed in a brick-like configuration for seamless wavelength range coverage
- The optical system is closely temperature-controlled, ensuring:
 - better short-term stability
 - better long-term stability

This design delivers long-term measurement reliability and stable performance in demanding industrial environments.

3.2 V-MAP Spark Excitation Source – Precision & Real-Time Regulation

The GOLD PLUS Xe integrates a V-MAP digital current-controlled excitation source to provide high repeatability and stable sparking performance.

Excitation Source Capabilities

- V-MAP digital current-controlled source with true 100KHz real-time regulation system
- Fully software-controlled excitation source
- Multi-frequency spark source up to 1KHz
- High energy micro-melt for better precision (internally software controlled)
- High precision spark condensed spark source
- Analytical program parameter selected automatically by software
- Maintenance-free operation

3.3 Superior Spark Source – Rugged & Protected Performance

The GOLD PLUS Xe OES is equipped with a unique evolutionary arc/spark plasma source.

Spark Source Advantages

- Arc/spark circuitry powered by V-MAP digital current-controlled source design
- Employs cutting-edge active true real-time linear regulated power
- Allows flexibility of source parameter optimizations for different elements
- Operates over a wide input voltage range without compromising:
- The optical system is closely temperature-controlled, ensuring:
 - reliability
 - stability
 - ruggedness
- Built-in high voltage protection as an added feature
- High power circuitry over-designed for extra headroom to prevent failure due to unanticipated power fluctuations
- Powered by true real-time 100KHz linear regulated power source

4. Software & Analysis

4.1 Analysis Suite – Super-Intuitive Software

The Gold Plus Xe operates using a powerful Analysis Suite software platform designed to simplify spectrometer operation.

The interface resembles a control panel, allowing operators to start tests, review results, and generate reports with minimal training.

4.2 Software and Analysis Features

- Factory calibrated analytical programs
- Automatic inter-element interference correction
- Display of Mean, Standard Deviation (SD), and RSD
- Flexible program standardization
- Logging and storage of analysis data
- Quick retrieval of historical results
- Easy report generation
- Export results to Excel

4.3 Data Handling & Reporting

- Real-time analysis display
- Automatic result storage
- Customizable reporting formats
- Easy integration with laboratory data systems



5. Technical Specification

5.1 Excitation Source

- Spark OES excitation system
- V-MAP voltage-mapped current controlled spark source
- Stable spark discharge for accurate measurements

5.2 Optical System

- Monoblock spectrometer optical system
- High-performance diffraction grating
- CCD-based detector system
- Stable wavelength measurement for multi-element analysis

5.3 Spark Source / Gas Management

- Argon flushed spark stand
- Optimized gas flow design
- Argon consumption typically < 3 L/min
- Tungsten electrode

5.4 Sample Clamp & Maintenance

- Mechanical quick-engage sample clamp
- Compatible with multiple sample sizes
- Removable sample base for easy maintenance

5.5 Control & Data Processing

- Ethernet / USB connectivity
- Windows-based analysis software
- External computer interface
- High-performance data acquisition system

5.6 Weight & Dimensions

- Instrument weight: 80 kg
- Instrument Dimensions: Approx. 900 × 760 × 610 mm (L × W × H)

5.7 Environmental Requirements

- Operating temperature: 15 – 32°C
- Storage temperature: –10 – 70°C

5.8 Electrical Requirements

- Power supply: 230 V AC
- Frequency: 50 Hz





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Leading Innovation in Spectroscopy