

RELIABLE
INNOVATION IN
OES SPECTROSCOPY



SILVER PLUS

METAL ANALYZER

- Upto 22+ elements in each alloy program as per alloy chemistry
- Overall 35+ elements in all bases
- Analysis down upto 80PPM, in some cases 40-50PPM
- Ready for analysis within 30min
- Monoblock volume-optimized super stable optical system
- Specially designed & developed for SMEs
- Revolutionary 100KHz regulator system
- New spark stand design for reduced gas consumption
- All optic parts from reliable source (from Europe)
- Super Stable
- Lowest operation cost
- Most user friendly spectrometer software ever!



www.spectrometers.in
www.vasbharat.net
www.vas-spectrometers.com

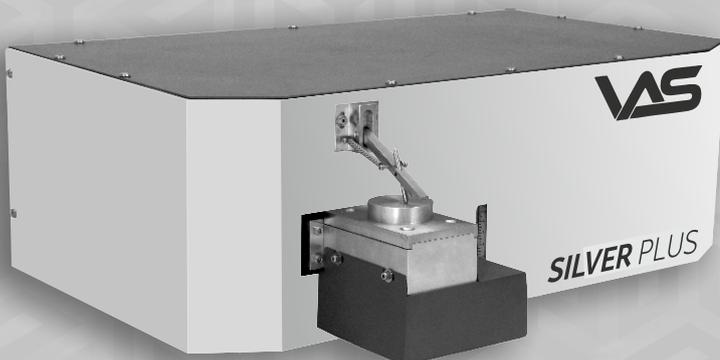
HIGH PERFORMANCE
@LOW COST
EASY TO OPERATE
EASY TO MAINTAIN

The VAS Philosophy

- VAS, is a team of young technocrats that excel at developing and manufacturing world class cutting edge spectrometers to meet your demanding metals analysis requirements.
- We design all our products with extremely reliable parts and follow the finest engineering practices to achieve ZDT (Zero Down Time) so that our customers have maximum productivity.
- We are committed to providing our customers with prompt response and the Industry's highest standard of service.
- We are committed to develop, design and engineer the most accurate and most affordable Optical emission spectrometers in the world.
- We do extensive research in various fields of engineering including embedded systems, high power electronics, analog system design, mechanical engineering, optical engineering and software engineering, to serve our customers with the most suitable products depending on their requirements and application needs.

Focus on Metal Analyzer (OES)

- The VAS SILVER PLUS spectrometer is the result of extensive and focused R&D in the field of spectroscopy for more than 15 years.
- The single most important design goal for the SILVER PLUS was to develop an instrument most suitable for metals production.
- We understand the Importance of 'Zero Down Time' and huge losses that customers face due to an instrument breakdown.
- The SILVER PLUS has the Industry's lowest failure rates even when operated in unstable power conditions found at many places in India.
- The instrument is designed from the ground-up with special emphasis on repeatability and long term stability. This results in minimum start-up time and on-the-go analysis.
- Need high throughput? designed for heavy duty operations, the SILVER PLUS is your friend here too.
- The SILVER PLUS is offered in multi-base and multi-element configurations for ferrous and non-ferrous applications.
- We provide solutions for special analysis requirements like wire-rod, wire and thin sheet analysis.

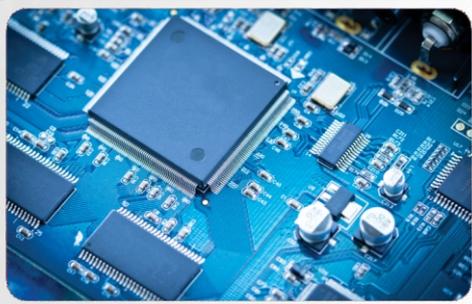


SILVER PLUS

SPECTROMETER FOR QUANTITATIVE METALS ANALYSIS

Designed and optimized to be the most suitable instrument for metals production.

Superior Spark Source

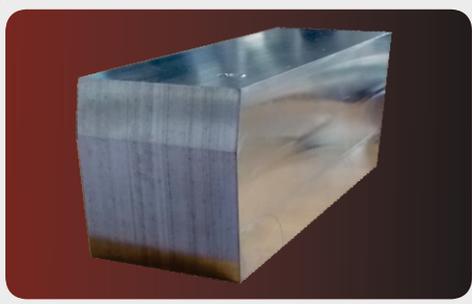


V-MAP current controlled source with true real time 100KHz linear regulated power source.

- The SILVER PLUS Spectrometer is equipped with a unique revolutionary spark plasma source.
- The spark circuitry is powered by a V-MAP current controlled source design which besides employing a cutting edge active, true real time linear regulated power, also provides the flexibility of source parameter optimizations for different elements.
- This enables the spark source to operate over a wide input voltage range without compromising on reliability and stability.
- The spark source has a built-in high voltage protection as an added feature.

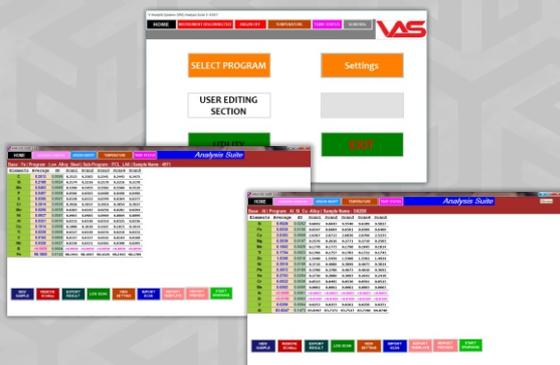
- Moreover the high power circuitry is carefully over-designed providing extra headroom for operations. This helps in preventing failure due to un-anticipated power fluctuations commonly found in India.

Superb Optical System



- The SILVER PLUS employs a unique optical system, in that, the entire optical system is machined out of a single block of aircraft grade aluminum thus making it a true mono-block design.
- The mono-block design helps in mathematically modeling ambient temperature conditions in order to provide active compensation to the gathered spectral information. The optical system is placed in a highly accurate temperature

Super-Intuitive Software Design

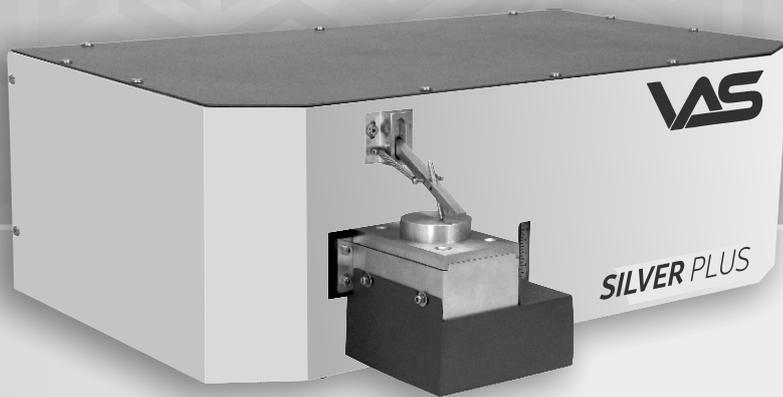


4th Generation Analysis Suite Software

- The SILVER PLUS analysis software called 'Analysis Suite 4' is arguably the most user-friendly software ever designed for an optical emission spectrometer.
- Now in its 4th generation, the software is the result of our expansive knowledge of user interface and user experience.
- The analysis software interface is 'control panel-like' which enables a layman to operate the machine with minimal training. Very little computer literacy is required to operate the instrument.



Spark-Stand specially designed c-shaped sample plate to prevent warping and deformations over long periods of usage.



SILVER PLUS
Metal Analyzer

Technical Specifications

Excitation Source

- V-MAP current controlled source with true 100KHz real-time regulation system
- Fully software controlled excitation source
- High precision spark condensed spark source
- Analytical program parameter selected automatically by software
- Maintenance free

Software & Analysis

- Extremely user friendly operation
- Factory calibrated
- Automatic inter element interface corrections
- Display of Mean SD or RSD
- User flexibility to standardize each analytical program
- User configurable type standardization
- Logging of the analysis data
- Quick retrieval of results from historical data
- User friendly report generation
- Option to transfer data to Excel spreadsheet

Optical System

- Monoblock volume-optimized super stable optical system
- Temperature stabilized sealed against dust and contamination
- High performance holographic diffraction grating
- Wavelength range 163-417nm
- High resolution CCD detector array with more than 3600 pixels (1 pixel corresponds to 1 element channel)
- Profiling - automatic & real time, software controlled

Spark Source

- Specially designed C shaped sample plate to prevent warping and deformations over long periods of usage
- Argon flashed with automatic adjusted low flow in standby and analytical modes
- Tungsten electrode
- Automatic sample clamp - Flexible for large and small sample size
- Easily removable sample base for chamber cleaning and maintenance

Control & Data Processing

- Ethernet and USB connectivity
- Windows® based software
- Complete and accurate control of instrument through a high performance data acquisition system
- Work with standard desktop personal computer (connected externally)

Weight & Dimensions

- Instrument Weight 42kg approx.
- Instrument size 750 x 510 x 230mm (W x D x H)

Environmental Requirements

- Operating temperature 15 to 32°C
- Storage temperature -10 to 70°C

Electrical Requirements

- 230V AC, 50Hz (maximum 320VAC continuous)