

**SPECTRO**

**AMETEK**  
MATERIALS ANALYSIS DIVISION

Introducing  
**SPECTROMAXx LMX09**  
ARC/SPARK OES ANALYZER



**Next-generation improvements lead the way for ultra-reliable performance**

# Best-selling analysis for the foundry floor SPECTROMAXx

Foundries demand fast, accurate elemental analysis of metals everywhere from incoming materials to in-process testing to final quality inspection. Iron; nonferrous; and die, sand, and mold casting operations alike require productivity, traceability, and profitability at every step. One analytical instrument delivers all that for foundries worldwide.

Its record reliability has helped make SPECTROMAXx perhaps the industry's best-selling arc/spark *optical emission spectrometry (OES)* analyzer. Its fast, accurate, cost-effective measurements add essential certainty in critical supply chains.

Like its predecessors, this ninth-generation SPECTROMAXx furnishes outstanding speed, so users get ultrafast information to react to changing process conditions. It also provides drastically reduced cost of ownership — with lower consumables plus advanced diagnostics and easy maintenance to increase availability and prevent expensive downtime.



## FAST, SIMPLE STANDARDIZATION WITH ICAL 2.0

Using conventional analyzers, standardization can take 30+ minutes, demand multiple samples, and require reruns whenever site conditions change. By contrast, in most cases SPECTRO's proprietary iCAL 2.0 calibration logic needs only 5 minutes and a single sample per day. Plus it automatically compensates for most changes in environmental temperature or pressure. So SPECTROMAXx delivers outstanding stability, productivity, and savings, time after time.

## NEW REDUCED ARGON CONSUMPTION

The new SPECTROMAXx has significantly cut its use of expensive argon (Ar) gas, even more than in previous generations. Depending on the model, users reduce argon consumption during operation by 6% to 12% — and during standby by 18% to 64%! All without impacting analytical performance.

## NEW EXTENDED WAVELENGTH RANGE

The new generation includes a number of technologies adopted from SPECTRO's top-of-the-line SPECTROLAB S. That includes the option of a new UV optic to handle a spectral range from 120 nanometers (nm) to 235 nm. This enables foundries' process control to extend reliable analysis to elements such as nitrogen (N), carbon (C), sulfur (S), and phosphorus (P), or hydrogen (H) and oxygen (O) in titanium (Ti) base materials.

## NEW EASE OF USE

SPECTROMAXx users now get routine, trouble-free analysis of 10 matrices, 68 methods, and 56 elements — via convenient controls for operation and safety; easier access for use and maintenance; and new software features such as stored spectrum reloading and extended data support functions.

# SPECTROMAXx

flexibility, stability, and ease  
of use for foundry operations

## SPECTROMAXx AND SPECTROMAXx ADVANCED

The new generation offers two models, differing only in their optical systems.

Basic **SPECTROMAXx** features the single air optic with high-resolution CCD sensors already proven in thousands of installed SPECTRO models. Its famously solid design resists fluctuations due to ambient temperature changes. It handles elemental wavelengths from 233 nm to 670 nm — including the matrices aluminum (Al), zinc (Zn), magnesium (Mg), copper (Cu), tin (Sn) and lead (Pb) for die-casting.

New **SPECTROMAXx Advanced** offers all the base model's advantages, including the air optic, while adding a new UV optic with four high-resolution CMOS detectors (adopted from SPECTROLAB S). Its extended wavelength range covers elements in the range of 120 nm to 235 nm. A closed system circulates gas through SPECTRO's UV Plus cleaning cartridge, eliminating extra argon consumption and contamination risks.

Both versions feature a temperature-stabilized system, heating both optics and requiring no external cooling. Both versions are available as floor-mounted units with optional PC stand, or benchtop models.



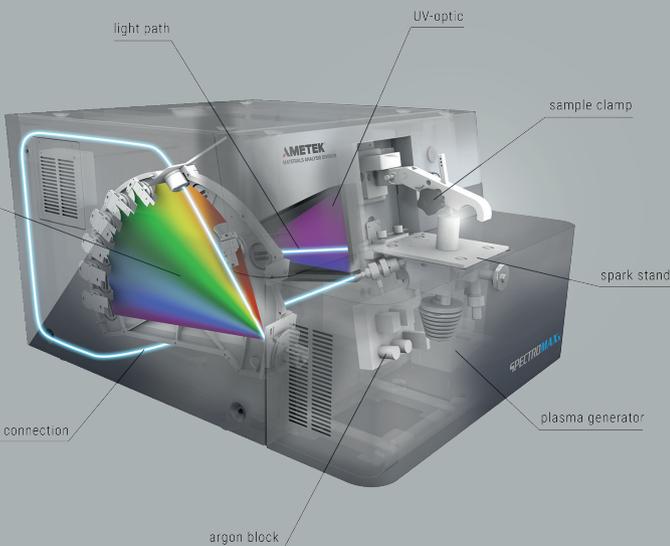
### HIGH-PERFORMANCE HARDWARE

### EASY-TO-USE SOFTWARE

Even for less experienced personnel, SPECTRO's SPARK ANALYZER Pro software takes effortless operation to a new level. User favorites include application profiles (which can be tailored to predetermined user requirements); automatic program selection (which can automatically choose the right submethod for a given material); and argon saver (which can shut off gas flushes until a user-determined time).

Software function highlights:

- **Ability to recall stored spectra** — results can be re-evaluated/ recalculated later, even if samples have been consumed
- **Extended data export functions** — users can choose reporting formats including XML files, ASCII files, or TCP/IP transmission
- **Quick-check programs** — main elements for iron and aluminum materials can be rapidly identified and analyzed in less than 12 seconds
- **Onsite upgrades/additions of analytical methods** — new spectral lines, analytical methods, and even complete matrices can be remotely added to installed units without any hardware changes



# SPECTROMAXx additional advantages



## CARBON IN NODULAR CAST IRON CAPABILITY

SPECTRO Analytical Instruments has developed an analytical solution that combines the accuracy of the combustion method with the speed and ease-of-use of OES. Incorporated in its SPECTROMAXx systems, this advanced OES technology now makes it possible to precisely detect and analyze samples containing free graphite, with results comparable to those achieved by combustion analysis.

SPECTROMAXx instruments can monitor carbon during the pre-spark phase to detect the presence of free graphite, and select analytical conditions that minimize its effects. This approach also uses a statistical method to detect bad samples automatically.



## SUPERIOR SERVICE AND SUPPORT

So that every analyzer is ready when needed, SPECTRO's AMECARE performance services options offer global support that many other suppliers can't match. This industry-leading program fields more than 200 service engineers in 50+ countries, helping deliver optimal performance and the longest possible equipment life. Users can choose proactive performance maintenance, performance upgrades, application solutions, expert consultation, and targeted training.

SPECTRO also offers global remote monitoring via AMECARE's M2M program. So 24/7 diagnostics and critical-function alerts maximize instrument availability for high-volume, high-productivity analysis.

Call your SPECTRO representative today. Find out when and how to send your samples to our analytical technology centers in Europe, Asia, and the Americas to arrange a personal SPECTROMAXx demo — on-site or virtual!

[www.spectro.com](http://www.spectro.com)

## COMPLETE LINE OF METAL ANALYZERS

This next-generation SPECTROMAXx model takes its place among today's most comprehensive suite of advanced stationary metal analyzers. It stands beside SPECTRO's flagship SPECTROLAB, a market leader for ultra-precise analysis, plus the entry-level SPECTROCHECK, offering high performance and dependability at a low, very competitive price.

Complementing these are SPECTRO's mobile metal analyzers: the SPECTROTEST mobile analyzer, the SPECTROPORT portable metal analyzer, and the SPECTRO xSORT XRF handheld analyzer.



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