

INNOVATIVE SPECTROMETERS FOR METALS ANALYSIS

MERLIN 4



Established 1987

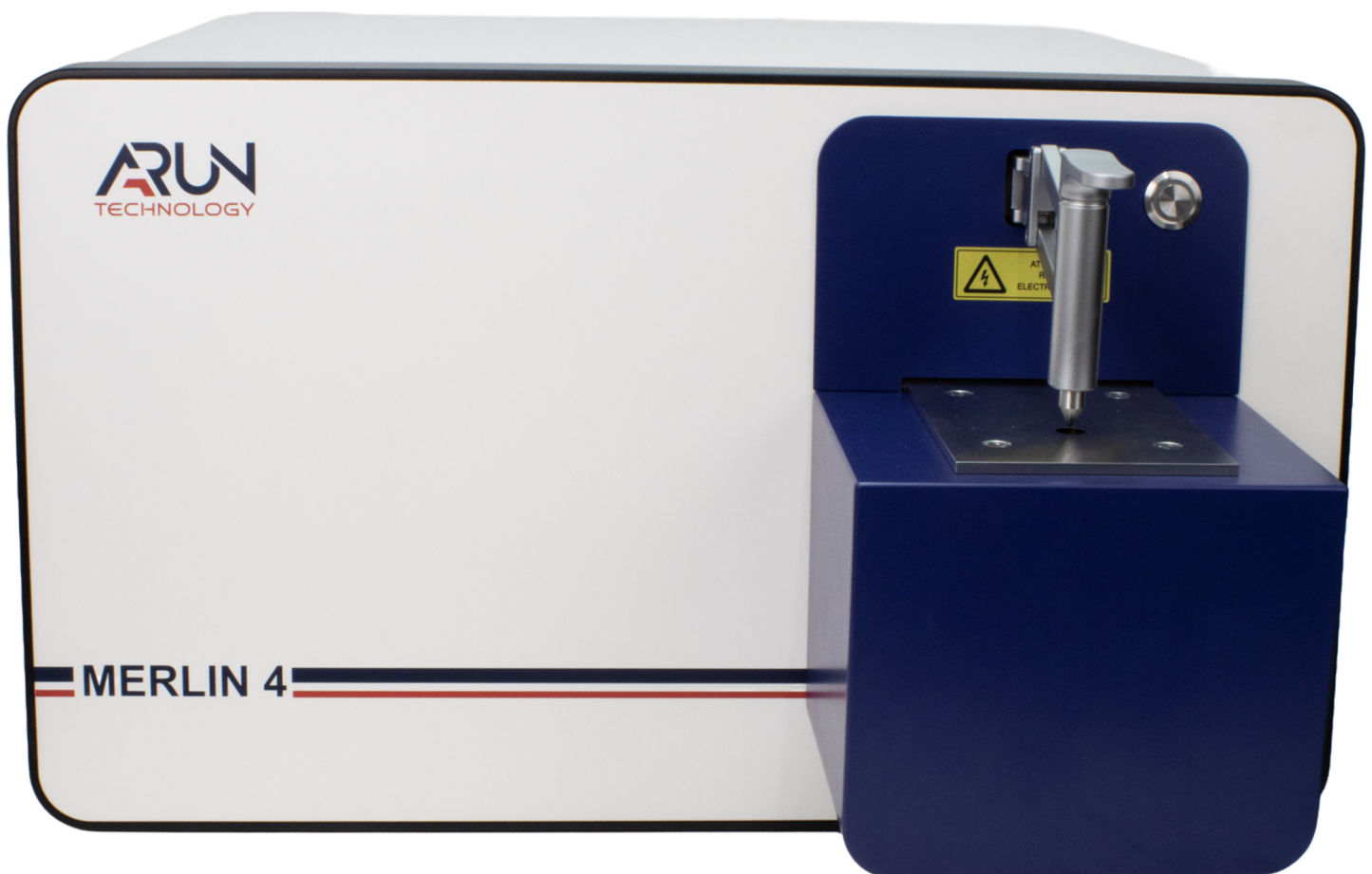
ARUN
TECHNOLOGY
MADE TO MEASURE

MERLIN 4 (OES)

SMALL DESIGN

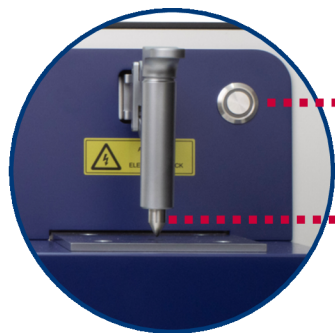
BIG ON PERFORMANCE

The MERLIN 4 is a mid-range CMOS spectrometer widely used within the metal production, processing, and recycling industries. Quality Control and Assurance are essential to making your business successful. The MERLIN 4 is the ideal companion for incoming material, in-process testing and final quality inspection.



MERLIN 4 (OES)

"PRECISION YOU CAN TRUST,
PERFORMANCE YOU CAN RELY ON"



Push-button simplicity
for hassle-free operation

Clamp

Performance
optimised with
fast, high
resolution
cutting edge
CMOS detectors

User friendly software

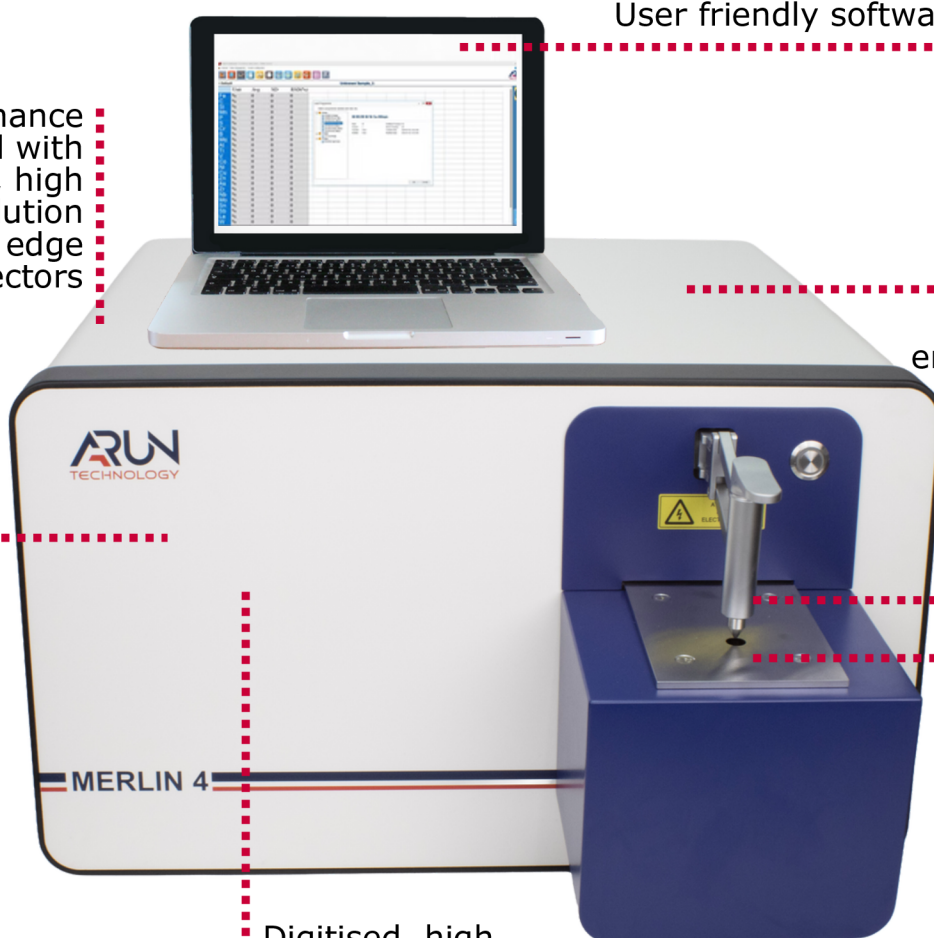
Functional
ergonomic design

Low Argon
consumption

Large
spark plate

3-sided open
spark stand

Digitised, high
precision generator

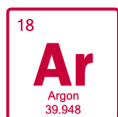


PRODUCT SPECIFICATIONS



LARGE SPARK PLATE

This 3-sided open spark stand with XY-sample clamp has a corrosion resistant surface. Its heat dissipation composition ensures 24 hours of uninterrupted and stable analysis.



LOW ARGON CONSUMPTION

The MERLIN 4 is designed to minimise argon consumption - 5L/min flow rates during burns are reduced to 0.5L/min during standby. In extended idle periods, it enters sleep mode and only consumes 0.1L/min of argon.



USER FRIENDLY SOFTWARE

The intuitive and simple to use ARUN Analytical software package makes the MERLIN 4 instrument accessible to users with minimal training required - analysis is triggered at the press of a button, with results displayed instantly on the main interface. Grade matching, quality control and data export are all available directly from the toolbar, with advanced features accessible through password protected admin and engineer user profiles.



SELF-DIAGNOSTIC SYSTEM

The self-diagnosing system will allow the user to see any issue that may arise such as a board malfunction or low argon pressure. Being able to quickly diagnose any matters will reduce manufacturing down time.



CMOS DETECTOR TECHNOLOGY

Advanced CMOS detector technology lies at the heart of MERLIN 4, delivering high-resolution spectral detection with exceptional speed, sensitivity, and accuracy - even in demanding conditions.



CONTROLLED OPTICS, CLEAR RESULTS

The sealed optical system maintains constant pressure and temperature settings for the optimal detection environment, and is self-purified to prevent moisture build up.



CALIBRATED FOR VERSATILITY

Each MERLIN 4 unit can be configured with bespoke calibrations to suit a wide range of metal bases and alloy types, ensuring precise and reliable results across diverse applications and industry requirements.

PRODUCT SPECIFICATIONS



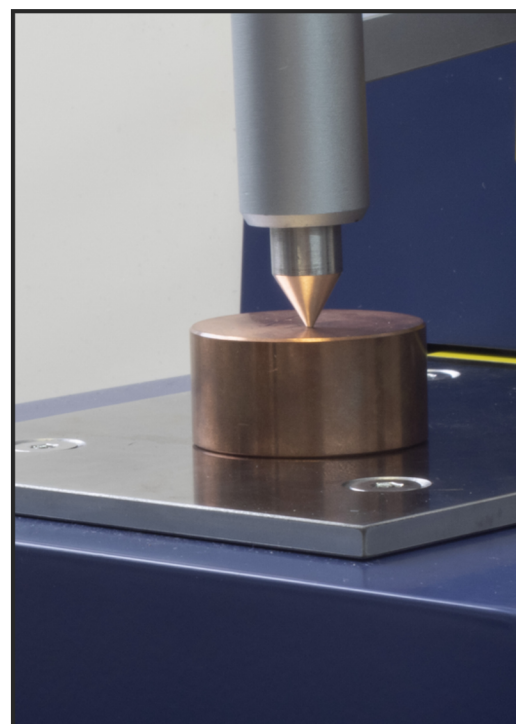
WORLDWIDE COMPATIBILITY

Designed for global use, MERLIN 4 is fully compatible with all international power supplies and current configurations, making it a truly flexible solution for operations anywhere in the world.



GRADE LIBRARIES FOR SMARTER INSPECTION

Extensive built-in grade libraries, combined with intelligent software-based quality control features, streamline the inspection process and support faster, more accurate decision-making in the field.

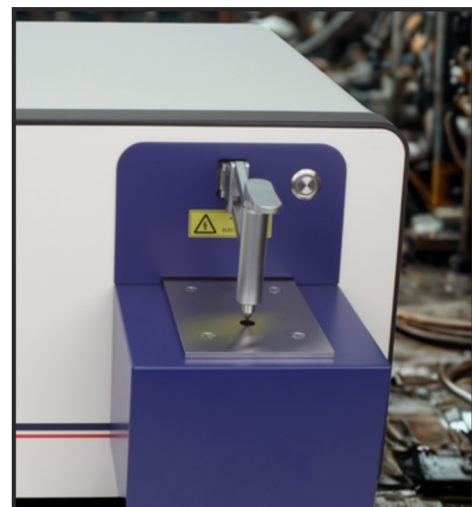


Optical System	Paschen-Runge
Wavelength Range	175-521nm (Ultra) 205-521nm (Visible)
Power Supply	Line input 90 or 260 volts AC 50 - 60 Hz
EMC	IEC61000-4-2, IEC61000-4-4, IEC61000-4-5
Working Temperature	10° to 35°C
Operating Humidity	20-80%
Argon Purity	99.998% Minimum 99.999% Ideal
Argon Flow	When burning - 5L/min Standby mode - 0.5L/min Sleep mode - 0.1/min
Software	Intuitive software for simple routine operation. Various user levels for secure and task-specific operations.
Dimensions	65x39x79cm
Weight	67kg

PERFORMANCE OVERVIEW

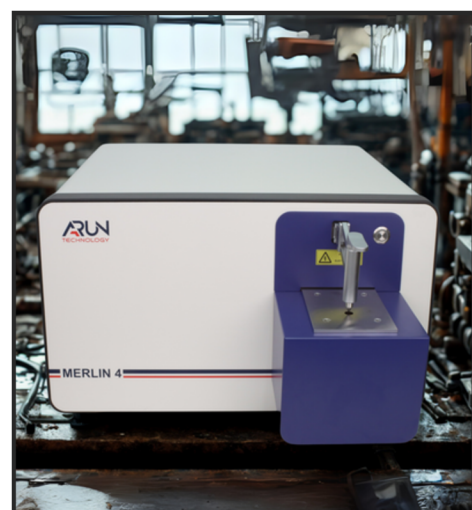
ACCURACY

With powerful hardware and unique software algorithms, the MERLIN 4 delivers exceptional precision and accuracy in elemental analysis across a wide range of materials. Enjoy hassle-free sample handling for smooth, efficient operation.



STABILITY

Optimised Paschen-Runge configuration with thermal stabilisation and insulation ensure maximum analytical stability. A maintenance-free digital source delivers ultra-stable spark generation.

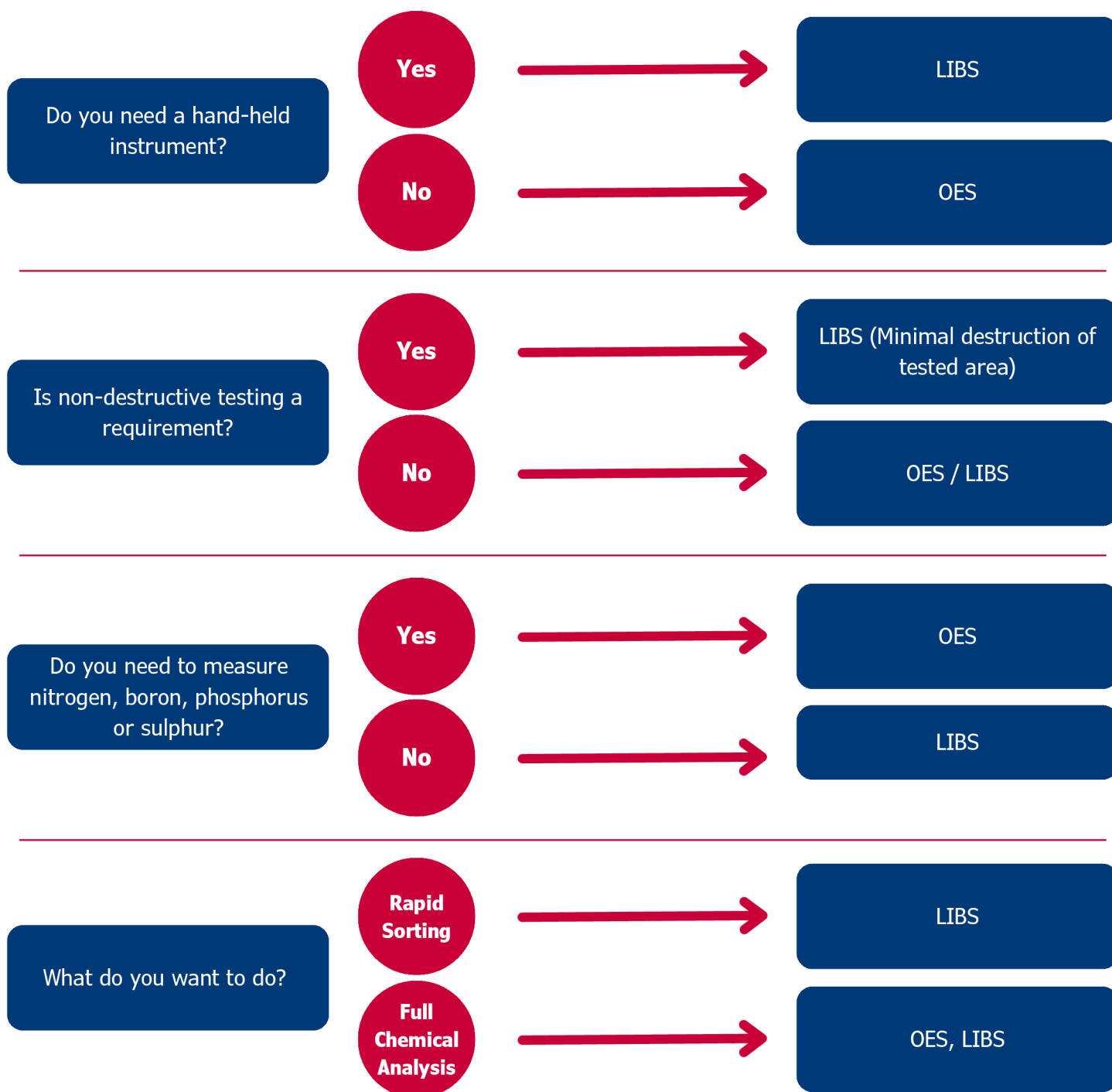


SPEED

Experience fast measurements with high resolution and exceptional data quality. Ultra-fast readings, combined with multiple state-of-the-art CMOS sensors, delivers outstanding efficiency of spectral detection.



OES OR LIBS ?



OES and LIBS are both used for accuracy and precision of results in elemental analysis.

OES offers high-precision results, ideal for lab-based analysis.

LIBS, provides fast, portable testing with minimal sample prep. Perfect for rapid, on-site alloy verification.

OUR SERVICE COMMITMENT

At ARUN Technology, we take pride in delivering exceptional customer care - before, during, and after your purchase.

Our dedicated ARUN Service Support team is here to help protect and maintain your spectrometers, providing reliable coverage to prevent faults and minimise downtime. ARUN Technology is committed to keeping your operations running smoothly with expert after-sales care.

Our services include:



ANNUAL PREVENTATIVE MAINTENANCE

Protect the long-term performance of your OES instrument with regular servicing and expert support.



COMPONENT REPLACEMENT & INTERNAL CLEANING

Key optical components and replenishable parts are replaced before degradation, while internal cleaning prevents contamination and unplanned downtime.



MATRIX CALIBRATION CHECKS

Performed by experienced engineers using certified samples to ensure accuracy. Fine-tuning is carried out to optimise key elements within your specific grades and alloys.



CERTIFICATES OF CALIBRATION

Issued after service work is completed to certify instrument performance and support compliance for auditing purposes.



TELEPHONE HELP DESK

Expert support when you need it, helping resolve issues quickly and efficiently.



CONSUMABLES & SPARE PARTS

A full range of consumables, including electrodes and spare part kits, is available to support ongoing use. Consumables and spares are ready for immediate dispatch from our UK office.



3 YEAR WARRANTY

Enjoy the peace of mind with 3 year coverage to protect your investment and avoid unexpected costs

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Certificate Number: 1122
ISO 9001, ISO 14001
ISO 45001, ISO 27001

