

# OES

## FOUNDRY-MASTER Xpert

Benchtop spectrometer for materials analysis in all metals processing



*The Business of Science®*



# FOUNDRY-MASTER Xpert

Accurate and precise identification of materials

## Metals analysis without compromises

Seamless quality control is essential for any metalworking, starting with tramp element analysis for scrap, inspection of in-coming materials, QS/QA in the foundry process and goods issue.

The **FOUNDRY-MASTER Xpert** is the ideal cost-effective solution for all metal processing industries. There is virtually no restriction on the element selection. The highest levels of accuracy and precision of the analytical results and a powerful yet easy-to-use software package covers almost every application.

This robust benchtop optical emission spectrometer analyses even critical trace tramp and inoculating elements with low detection limits.

## Product highlights

- Low detection limits of a wide range of elements
- Highest analytical performance using robust yet reliable technology
- New CCD readout design provides superior precision of results
- High resolution Multi-CCD optics for best spectral line separation
- Widest spectral range from 130 to 750 nm, covering nearly all interesting elements, including nitrogen in steel
- Excellent long-term stability, ensured by peak position alignment (PPA)

## Vacuum optical system

- Highest UV light transparency for excellent analytical performance
- Stable conditions: no peak shifts caused by ambient pressure changes
- Cost saving due to less argon consumption
- Minimal and easy maintenance:
  - No contamination caused by impurities in the purge gas
  - No oil contamination
  - Cleaning of windows and lenses without opening the vacuum system



## Typical applications

- Analytical mode / identification
- Majority of metals and their alloys
- Virtually all relevant elements
- Fe: alloys, cast-iron alloys
- Al: alloys, cast alloys,...
- Cu: bronze, brass, CuNi alloys...
- Ni: hastelloy / inconel / monel,...
- Ti: Ti pure, Ti.6-4 / Ti.8-Mn,...
- Mg-, Zn alloys, solders and more,...
- Calibration extendable & customizable

## Ease of use

### and low operating costs

#### Ease-of-use

The intuitive user interface and numerous features make analysis work easy and simple. Just place the sample on the sample stand, start the measurement and read the results.

- Daily routine functions easily performed and monitored
- Special protected user levels for untrained personnel ensure integrity of data and results
- Familiar Windows® based user interface
- Fully integrated system self-diagnostics

#### Low operating costs

The argon consumption is remarkably lower compared to gas purged optical systems. The concentric electrode shielding Argon flow technology reduces air gaps and optimizes the gas flow, which means:

- Lowest operating costs in its class
- Easy cleaning of the work surface

*Sample adaptors*



#### Unique sample stand

The spark stand is accessible from three sides, suitable for samples with complex and irregular shapes and sizes.



#### Results at your fingertips

- A wide variety of result forms available: concentration, grade ID, intensity and statistical data
- Automatic storage, printout, transmission to remote devices
- Direct output of results to productivity tools such as word processors and spreadsheets
- Flagging beyond calibration range or out of material specs

#### GRADE Database included

The largest metals database for fast and easy grade identification is already installed. It offers more than 10 million records for over 320,000 materials from 69 countries and standards. You can update your instrument's grade database with a few clicks – no time consuming research in norms and grade catalogues.

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## Technical specifications

Height / width / depth	380 mm / 15.0"	740 mm / 29.1"	880 mm / 34.6"
Weight	100 kg / 220 lbs		
Power	90 - 250 V AC, 50 / 60 Hz		
Operating / standby	600 W / 70 W		

### Optical System

Multi-CCD	In Paschen-Runge mounting, optimized pixel resolution
Wavelength range	130 - 780 nm
Focal length	350 mm
Holographic grating	3000 grooves / mm

### Solid state source

	Computer controlled parameters, DSP 160 MHz 16 bit
Frequency	50 - 500 Hz
Voltage	250 - 500 V
	High energy pre spark (HEPS)

### Readout system

External PC workstation	Microsoft® Windows® user interface
	18 inputs for CCDs
	DSP controller 600 MHz / High speed 16 bit ADC

### Environmental conditions

Temperature	0 - 40 °C / 50 - 104 °F
Humidity	10 - 90 % not condensating

### Options

Wire adapter set	Sample preparation devices
Spare parts kit	All-in-one computer system with wireless desktop
Consumables kit	

### OiService

Our global network of service hubs provides a full range of technical support:

- Telephone help-desk
- On-line diagnostic
- Rental instrument
- Maintenance
- Training
- Extended warranty
- Consumables and accessories
- Repair service

Please ask about details of our comprehensive range of products or visit our website at:

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