



# SPECTRO iSORT

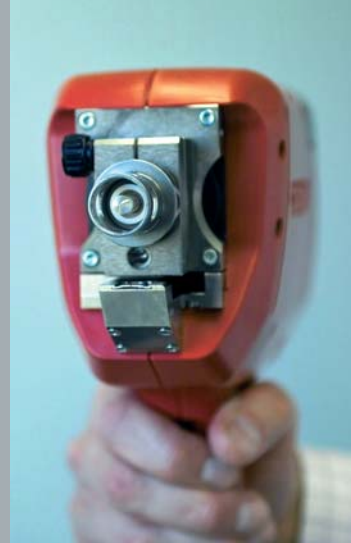
**–The New Arc for Metal Analysis;  
Simpler, Safer, Faster ...**



# SPECTRO iSORT

–The New Arc for Metal Analysis;

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## 1 Sample Probe

Weighing less than 1300 grams (3 lbs), the SPECTRO iSORT sample probe is a true lightweight.



The SPECTRO iSORT is a powerful and flexible **handheld spectrometer** for the identification and analysis of metals and their alloys. It consists of a sample probe and a spectrometer unit with a replaceable rechargeable battery. It requires neither argon nor a radioactive source: The consequence is **simple operation**. The PDA with Windows Operating System integrated into the sample probe assumes control of the instrument and data processing. The **extensive scope of delivery** includes a soft-sided case with shoulder strap, transport case, charging station, ICAL control sample, universal sample adapter and consumables.

Conducting a measurement with the SPECTRO iSORT is easier than ever: Hold the sample probe to the sample and press the start button – that's it. The SPECTRO iSORT uses the **"Fingerprinting"** method to automatically do the rest: It recognizes the material and selects the optimal instrument settings for the measurement. The SPECTRO iSORT identifies and analyzes iron, nickel, titanium, aluminum, copper and cobalt metals without the operator having to change parameters or otherwise intervene – as is the case with conventional spectrometers.

For the **analysis of carbon** in iron base, the SPECTRO iSORT utilizes a scrubbing system that prepares the atmosphere between the electrode and sample enabling the precise measurement of carbon with arc excitation in air like never before.

The instrument software continuously monitors the operational status of the SPECTRO iSORT; the ICAL function eliminates the need for time consuming recalibration every time the spectrometer is moved or the environmental conditions change. The optimum instrument conditions for all measurement programs are set with the **measurement of a single control sample**.

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#### 2 Everything you need

The scope of delivery includes all accessories necessary for operation, transport and storage.

#### 3 Charging station

With a fully charged battery, several hundred measurements can be performed.

#### 4 Software

Sorting, identification, analysis – the SPECTRO iSORT software makes operation simple.



The **software** enables sorting, grade identification and grade verification as well as determination of the elemental composition. It fulfils all expectations for modern, intuitive and simple operation while remaining easy-to-learn. Program modules for data processing, evaluation and documentation round out the program.

The sample probe, including arc excitation, weighs less than 1300 grams (less than 3 lbs). Optimal weight distribution ensures **fatigue-free operation**. The PDA is fastened in an easy-to-read angle on the back of the probe. Necessary information, e.g., sample number, can be entered using the PDA **touch screen**.

Interfaces, including Bluetooth, are available for connection to an external PC for the further processing and printout of stored measurement results.

A cable connects the sample probe to the spectrometer unit, which houses the optical system, the readout system, the power distribution, the scrubbing system for the analysis of carbon and the rechargeable battery power supply. It weighs approximately 4.5 kg (10 pounds) and is carried comfortably in the soft-sided **case with shoulder strap**.

The measuring range of the optic extends from **275-554 nm**; covering the complete relevant wavelength range. All components are integrated into the **sealed protective housing** where, the individual wavelengths are recorded using CCD detectors. The readout system instantaneously transfers the data to the PDA for calculation and display of the measurement results.

The range of use for the SPECTRO iSORT is wide and includes, for example: Incoming quality control, material testing in production, identification of components in chemical and petrochemical plants, material failure analysis and weld seams, the rapid determination of metal grades when buying and selling scrap metal, the sorting of mixed scrap, the classification of expensive alloys and many other applications in the metal producing, processing and recycling industries.

- Optics**
- High-resolution CCD multi-detectors
  - Usable Wavelength range 275-554 nm
  - Automatic Profiling

- Sample probe**
- Excitation with direct-current arc and high-voltage ignition
  - Adapters and electrodes can be exchanged without tools
  - Start and reset buttons on probe handle

- Spectrometer control**
- Removable PDA integrated in sample probe
  - Windows Mobile 5.0
  - SD / Compact Flash card slots
  - Bluetooth, Wireless LAN
  - USB

- Software**
- ICAL (Intelligent Calibration Logic)
  - Data Manager: Post-processing of stored measurement values and protocols

- Analysis**
- Automatic Fingerprint-Analysis
  - Grade Identification
  - Grade search/verification
  - Optional display of analysis and/or Grade identification
  - Pass/Fail sorting
  - Pass/Fail display
  - Log reports

- Scope of delivery**
- Soft-sided case with shoulder strap
  - Transport case
  - Battery pack
  - Charging station
  - ICAL control sample
  - Universal sample adapter
  - Consumables

- Spectrometer data**
- Weight
  - Sample probe: 1,3 kg (3 lbs)
  - Spectrometer unit: 4,5 kg (10 lbs)
  - Battery operation
  - 300 W during analysis
  - 10 W in stand-by



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

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**Technical Specifications**