TEST-MASTER PRO

Tougher than the rest

TEST-MASTER PRO is a robust, mobile spectrometer for precise analysis, quick grade ID and sorting of metallic samples. It is optimised for continuous operation, and is ideally suited for heavy industrial and fully automated applications.

The **TEST-MASTER** PRO exhibits the unique capability to produce precise carbon analysis with a surprisingly short 4 second test.

A software controlled digital high frequency power source, produces a controlled spark in argon or a direct- current arc in air.

Current, voltage, frequency and inductance can be separately monitored and adjusted to optimise the most efficient parameters for the particular application.

Frequencies and voltages up to 500 Hz / 500V as well as an arc current of up to 6 amps allow for trouble-free excitation. A particular plus is that even grey cast iron excitation in spark-mode is possible.

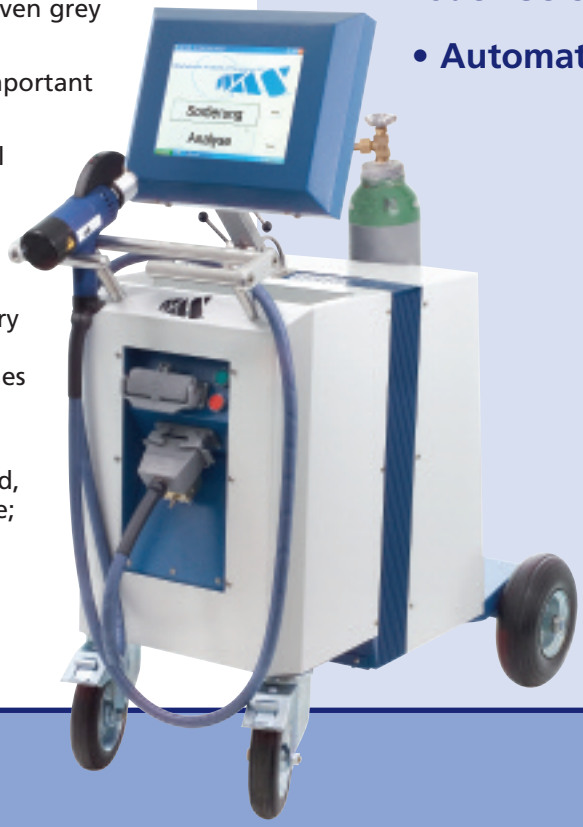
Speed of analysis, precision and user-friendliness were the most important factors in the development of the **TEST-MASTER** PRO.

The Multi-CCD-Optic´s readout system uses DSP technology (Digital Signal Processing). The 14 CCD-detectors each have a dedicated processor, evaluated the data from the complete wavelength range in microseconds.

Cooling within the case of the instrument has been revolutionised, the **TEST-MASTER** PRO is equipped with a secondary cooling-circuit with heat exchanger. The conventional cooling fan arrangement and air-convection found in most instruments becomes redundant. Heat is dispelled via a specially designed jacket, efficiently cooling the instrument without moving parts.

Additionally the **TEST-MASTER** PRO´s housing is hermetically sealed, dust particles or other impurities can't get into the instrument case; this is generally the most common reason for instrument failure.

- **Heat exchanger for cooling**
- **Rapid sorting**
- **Light weight sample probe**
- **High performance**
- **Input via Touch-Screen**
- **Automation**



Worldwide Analytical Systems AG

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The Business of Science™

OXFORD INSTRUMENTS

- Heat exchanger for cooling
- Rapid sorting including carbon determination
- Light weight sample probe
- High performance
- Input via Touch-Screen
- Automation

Technical Data

Height	910 mm (35,8“)
Width	510 mm (20,1“)
Depth	640 mm (35,4“)
Weight	70 kg (154 lbs)
Mains Power	230-110 V (50/60 Hz)

Solid State Source Spark/arc

Computer controlled parameters

Frequency	100 – 500 Hz
Voltage	300 – 500 V

High Energy pre Spark (HEPS)

Pistol/probe

Multifunctional adapter head, LEDs for Go / No Go sorting, Jet-Stream Technology, quick-change sample contact

Weight	800 g (1.8 lbs)
Spark	500 V / 500 Hz
Arc	15 Ampere
Cable length	5 m (9`8“) / 8 m (26`2“)

Readout System

Internal PC-Workstation incorporating up-to-date technology

Optical System

Multi CCD optical-system with Paschen-runge Mount

Resolution CCD	6 Pico-meter
Reciprocal dispersion	0,9 nm/mm (1st order)
Focal length	400 mm
Holographic grating	3,000 grooves/mm
Wavelength	185 – 420 nm

Options

UV-PRO Mini Optic for analysing UV-elements and low carbon contents, Bluetooth printer, independent power supply, external keyboard, sample preparation devices, spare parts kit, consumables kit

Typical Applications

Analytical mode / identification
1.4301 / 1.4306 ~ 304 / 304 L
1.4301 /1.4401 / 1.4571 ~ 304 / 316
1.4301 / 1.4305
Carbon steels C 15 ~ C 35 ~ C 45 ~ C 70S6
S235J2G3 (ST 37) ~ S355J2G3 (ST 52)

Sorting

usually with arc excitation in air
C 15 / C 15 Pb
ST 52 / 15 Mo3
1.4301 / 1.4401
1.4401 / 1.4571
1.4131 / 17225
C 15 / C 45 (with spark excitation in argon)

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