

# 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 / 500 V as well as an arc current of up to 6 amps allow the trouble-free excitation. An added advantage 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 so that dust particles or other impurities can't get into the instrument case causing instrument failure.

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



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

## Oxford Instruments Industrial Analysis

### UK

Halifax Road, High Wycombe  
Bucks, HP12 3SE England  
Tel: +44 (0) 1494 442255  
Fax: +44 (0) 1494 461033  
Email: analytical@oxinst.com

### China

Beijing  
Tel: (8610) 6518 8160/1/2  
Fax: (8610) 6518 8155  
Email: info@oichina.cn

### Finland

Espoo  
Tel: +358 9 329 411  
Fax: +358 9 3294 1300  
Email: FI-Espoo\_Info@oxinst.com

### France

Saclay, Cedex  
Tel: +33 (0) 1 69 85 25 24  
Fax: +33 (0) 1 69 41 86 80  
Email: analytical-info@oxford-instruments.fr

### Germany

**WAS Worldwide Analytical Systems AG**  
Wellesweg 31 D-47589 Uedem  
Tel: +49 (0) 2825 9383 0  
Fax: +49 (0) 2825 9383 100  
Email: info@was-ag.com  
www.was-ag.com

### Japan

Tokyo  
Tel: +81 (0) 3 5245 3591  
Fax: +81 (0) 3 5245 4466/4477  
Email: oikkma@oxinst.co.jp

### Latin America

Clearwater FL  
Tel: +1 727 538 7702  
Fax +1 727 538 4205  
Email: oxford@gate.net

### Singapore

Tel: +65 6337 6848  
Fax: +65 6337 6286  
Email: xrf.sales@oxford-instruments.com.sg

### North America

Elk Grove Village IL  
Tel: +1 847 439 4404  
Fax: +1 847 439 4425  
Email: sales@msys.oxinst.com

[www.oxford-instruments.com](http://www.oxford-instruments.com)



an Oxford Instruments company



### 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)

Click onto [www.oxford-instruments.com](http://www.oxford-instruments.com) for more information

Oxford Instruments, at High Wycombe, UK, operates Quality Management Systems approved to the requirements of BS EN ISO 9001. This publication is the copyright of Oxford Instruments Analytical Limited and provides outline information only which (unless agreed by the company in writing) may not be used, applied or reproduced for any purpose or form part of any order or contract or be regarded as a representation relating to the products or services concerned. Oxford Instruments' policy is one of continued improvement. The company reserves the right to alter, without notice, the specification, design or conditions of supply of any product or service. Oxford Instruments acknowledges all trade marks and registrations.

© Oxford Instruments Analytical Ltd, 2008. All rights reserved.

As part of Oxford Instruments' environmental policy this brochure has been printed on FSC paper.



Certificate No FM29142

Part no: OIIA/031/A/0108