

# SCRAP

## X-MET8000 Series

Sort scrap metal accurately, fast and maximise profits



*The Business of Science®*



# METALS

## X-MET8000 Series

### Maximise sorting throughput and improve profitability

Metals recycling is a multi-billion dollar industry which involves the processing of ferrous and non ferrous metal scrap into secondary raw material for the smelting of new metals. Over 400 million tonnes of scrap are processed each year. Sorting scrap metal through testing adds value at all stages of the metal recycling process, from sorting mixed scrap into low value and high value materials, to determining the composition of the scrap that goes into the melts and the quality of the output.

Handheld X-ray fluorescence (XRF) analysers are commonly used in the scrap yards, as they offer rapid, on-site alloy identification and chemistry.

Capitalising on the success of its **X-MET7000 Series**, Oxford Instruments has raised the bar with its latest range of handheld XRF analysers, the **X-MET8000 Series**. The optimised combination of a high performance X-ray tube and Oxford Instruments' large area silicon-drift detector (SDD) delivers the speed and performance required in even the most demanding metals applications.

#### Ultimate performance for reliable alloy identification and chemistry

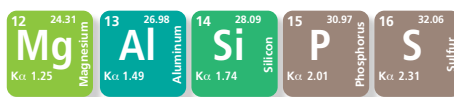
- Superior light elements (Mg to S) analysis for fast and accurate analysis of most commercial alloys, including aluminium, titanium, bronze, high temperature alloys, etc.
- Low limits of detection, for accurate grading and determination of impurities and penalty elements
- Fast and accurate analysis for high speed sorting
- Optimum efficiency: lightweight (1.5kg), small, and ergonomic design, with up to 10-12 hours battery life
- Fast start-up: be up and running in seconds
- Automatic sample size compensation for accurate testing of cables, wires down to 1mm diameter, fasteners, turnings, chips, etc.



Main menu

ELEMENT	%	+/-	LIMIT
Fe	69.20	0.427	60.00 - 73.00
Cr	16.18	0.201	16.00 - 18.00
Ni	10.20	0.195	10.00 - 14.00
Mo	2.09	0.031	2.00 - 3.00
Mn	1.85	0.153	0.00 - 2.00
Si	0.20	0.051	0.00 - 1.00
Ti	0.16	0.049	0.00 - 0.20
Cu	0.12	0.035	

Results screen





# RECYCLING



Designed  
for the toughest  
environments

## Easy to use

- Proven “point and shoot” simplicity
- Intuitive, icon-driven user interface: minimal operator training required
- Large 4.3” colour touchscreen for excellent results visibility, even in direct sunlight; easy operation with gloves on
- Quick-swap analysis window: no tool required to change the analysis window when broken or dirty
- Customisable results screen for fast decision making: display information that is important to you, e.g. alloy grade, elemental composition, pass/fail messages, elements listed in your chosen order
- Compact and balanced design
- Optional integrated camera for accurate measurement positioning



Quick-swap  
window with  
shield

## Rugged for low cost of ownership

- IP54 compliant (equivalent to NEMA 3) for superior protection against dust and water
- Shield (optional on **X-MET8000 Expert** and **X-MET8000 Optimum**) or robust, thick Kapton® window (on **X-MET8000 Smart**) to prevent detector and X-ray tube damage when testing small components and sharp objects
- Impact-resistant housing with environmental sealing, and rubber bumpers around the screen, nose and battery for protection against shocks
- Large heat sink for optimum robustness and stability, even in hot environments

# GRADE AND

## The Smart Choice

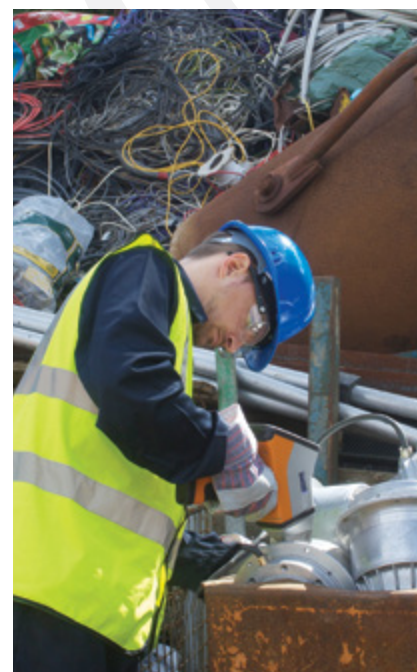
### Top performance in a compact rugged analyser

#### Optimised calibrations for results you can trust

The **X-MET8000** offers the best of both worlds with a robust fundamental parameters (FP) method, and empirical calibrations (traceable to certified reference materials) for superior precision and accuracy. Simply select the application that meets your requirements, and analyse alloys in seconds.



Superior  
precision &  
accuracy



#### Powerful data management

- Store up to 100,000 results including spectra and sample image (if camera is fitted)
- Download results and reports directly to a USB memory stick, to a PC or a network share using Wifi or Bluetooth, using a CSV format or tamper-proof PDF for ultimate data integrity
- Create customised, professional looking reports using the **X-MET** report generator (no software installation needed): include company logo, sample image, results, spectra, additional sample information (e.g. description, location, batch number) etc.
- Use real-time averaging for effortless batch evaluation

OXFORD INSTRUMENTS						
X-MET8000 TEST REPORT						
Name	Class	Date	Time	Duration		
Noname 1	Alloy FP	28/08/2014	15:14:25	16.5 s		
Element	Fe %	Cr %	Ni %	Mo %	Mn %	Si %
±	86.19	16.94	11.50	2.21	1.83	0.20
	0.205	0.157	0.170	0.028	0.099	0.054
Grade: S5316 (0.02)						
Reference:						
Name: John Smith						
Registration: K254 XXL						
Weight In: 4.19g						
Weight Out: 2.90g						
J. Mills						



# TRADE



Largest  
grade  
library



## Extensive, customisable grade library for accurate alloy identification

The **X-MET8000** includes the most comprehensive grade library: the pre-installed, user-selectable AISI (>650 grades), DIN, JIS, and GB libraries include a total of over 1600 alloys. Users can modify the existing libraries, add new grades (specialty or exotic alloys) or create their own library.

The pre-loaded grade libraries include:

- Nickel alloys
- Stainless steels
- Copper alloys
- Aluminium alloys
- Cobalt alloys
- Low alloy steels
- Tool steels
- Titanium alloys
- Zirconium alloys
- And more...








# X-MET8000

## Configuration Options

Our latest range of high performance analysers to suit your analysis needs and budget



	X-MET8000 Smart	X-MET8000 Optimum	X-MET8000 Expert
			
<b>Description</b>	The smart choice for the rapid sorting of common alloys	Optimised for the high speed sorting and analysis of alloys, from aluminiums to bronzes to stainless steels etc	Our top performer provides the ultimate performance for the testing of the widest variety of alloys; with superior light elements (Mg, Al, Si, P and S), tramps and penalty elements analysis
<b>X-ray tube</b>	40kV	50kV for enhanced heavy elements analysis (e.g. Sn, Ag, Cd)	
<b>X-ray tube filters</b>	Single filter	6 position filter wheel for the optimised analysis of all elements from Mg to U	
<b>Detector</b>	Large area SDD	Large area SDD	Large area SDD
<b>Element range</b>	K - U	Mg - U	
<b>Max. sample temperature</b>	400°C	100°C 400°C with HERO™ (heat resistant) window (optional)	
<b>IP54 rating</b>	Yes	Yes	Yes
<b>Protection against detector window damage</b>	Thick Kapton® window	Optional window shield	
<b>Calibrations</b>	Standardless	Standardless (includes light elements analysis)	Standardless + automatic selection of empirical calibrations (traceable to certified reference materials) for superior precision and accuracy



# SERIES

## Hardware and software options:

Feature	X-MET8000 Smart	X-MET8000 Optimum	X-MET8000 Expert
Bluetooth	Option	Included	Included
WiFi	Option	Included	Included
Integrated camera	Option	Option	Included
Small-spot collimator	Not available	Option	Option
Report generator	Included	Included	Included

## Optional accessories for maximised productivity and operator safety:



**Holster and belt:**  
for hands-free on-site transportation of the analyser

**Light radiation shield:** to minimise scattered radiation when analysing light alloys (e.g. Al alloys)



**Portable Bluetooth printer:**  
print results on paper or sticky labels, and attach them to the tested pieces; convenient and mix-up free

**Light stand and safety shield:** for the on-the-go analysis of small samples (e.g. screws, fasteners); fit in the **X-MET** case for total portability



# Oxford Instruments: the only instruments supplier to meet all your scrap analysis needs

**Handheld LIBS:** Latest technology for 1-second alloy identification, even of Al alloys, with no X-rays



**Handheld XRF:** For fast, reliable, non-destructive identification and analysis of alloys, car catalysts, and waste plastics



**Mobile and portable OES:** For high performance analysis of alloyed and trace elements, nitrogen analysis in duplex steels.



## OiService - Here to help

OiService aims to keep your **X-MET8000** working as hard as you do. Our global network of Service hubs provides a full range of technical support:

- **Telephone help-desks** – For a fast response to your problem
- **On-line diagnostics** – In-depth support over the internet
- **Rental instruments** – To keep you working when your analyser is not
- **Recertification and maintenance** – Ensures your analyser produces the right result every time
- **Training** – Understand your analyser and its features
- **Extended warranties** – Avoid unplanned costs
- **Consumables and accessories** – From spare batteries to benchtop stands
- **Repairs** – Fast and efficient turn around

**X-MET8000** service agreements provide a great way to avoid unplanned costs and ensure your analyser is maintained in excellent condition. Purchasing an agreement with your analyser provides seamless coverage for up to 5 years.

visit [www.oxford-instruments.com/X-MET8000](http://www.oxford-instruments.com/X-MET8000) for more information or email: [industrial@oxinst.com](mailto:industrial@oxinst.com)

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