

X-MET8000 Series

Trust but verify: ensure safety and compliance at plants world-wide



OXFORD
INSTRUMENTS

The Business of Science®



X-MET8000 Series

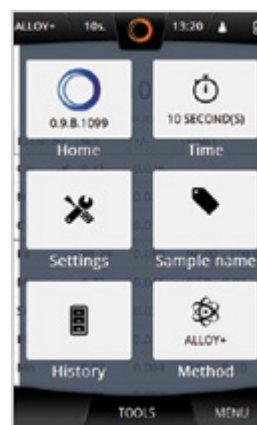
Minimise laboratory testing and reduce costs

Failures at petroleum, petrochemical and power generation facilities can have catastrophic consequences. Positive Material Identification (PMI) programmes allow plants operators and maintenance professionals to test critical process components before and after they are put in service, so they do not have to just rely on the suppliers' certificates. This approach can potentially save lives by reducing the risk of serious accidents due to the failure of critical components. Handheld X-ray fluorescence (XRF) analysers are commonly used in PMI programmes as they offer rapid, on-site alloy analysis.

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 performance required for the most demanding PMI applications.

Ultimate performance for safety-critical applications

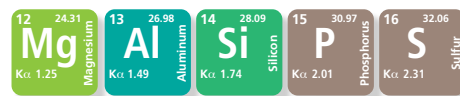
- Superior light elements (Mg to S) analysis for tight control of components and systems
- Low limits of detection, for accurate trace/tramp elements analysis
- Fast analysis and accurate grade identification, with the most comprehensive grade library
- Optimum efficiency: lightweight (1.5kg), small, ergonomic design, with up to 10-12 hours battery life
- Fast start-up: be up and running in seconds
- Optimised nose design to test material inside bends and corners
- Optional small-spot collimator (3mm diameter) to isolate specific features (e.g. welds) from surrounding materials and measure them accurately
- High temperature applications: analyse alloys at up to 400°C accurately with Oxford Instruments' unique HERO™ (heat resistant) window, including elements Mg to S. No tilting or spacer needed.



Main menu

ELEMENT	Wt %	+/-	LIMIT
Cu	0.21	0.026	
Ni	0.16	0.026	0.00 - 0.30
Cr	0.15	0.015	0.00 - 0.30
Fe	98.29	0.089	96.00 - 100.00
Mn	0.73	0.041	0.60 - 0.90
Si	0.28	0.036	
Pb	0.08	0.024	
Mo	0.02	0.004	0.00 - 0.10

Results screen



Accurate weld analysis

On-site non destructive testing



Pre-installed
grade
libraries



Extensive, customisable grade library for accurate alloy identification

The **X-MET8000** includes the most comprehensive grade library: the pre-installed, user-selectable AISI, DIN, JIS, and GB libraries include a total of over 1600 alloys. Users can modify the existing libraries, add new grades (such as manufacturer or location specific grades), or create their own library, for example specific welding material.

The pre-loaded grade libraries include:

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



INSPECTION

Trust but verify

100% PMI with 100% confidence

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, in 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.

PMI INSPECTION

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CERTIFICATE OF VERIFICATION

Name	Class	Date	Time	Duration				
Weld	AbbyLEFP	26/08/2014	13:14:25	10 s				
Element	Fe %	Mn %	Si %	Cu %	Ni %	Cr %	Pb %	Mo %
±	98.29	0.73	0.28	0.21	0.16	0.15	0.08	0.02
	0.089	0.041	0.036	0.026	0.026	0.015	0.024	0.004

Grades: C-1028 (0.00)
Reference:



Easy to use

- Intuitive, icon-driven user interface: minimal operator training required
- Large 4.3" colour touchscreen for excellent results visibility, even in direct sunlight. Easy operation, even with gloves on
- 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
- Quick-swap analysis window: no tool required to change the analysis window when broken or dirty
- Optional integrated camera for accurate measurement positioning



Compact and balanced design

Rugged for low cost of ownership




- Designed for the toughest environments
- IP54 rating (equivalent to NEMA3) for superior protection against dust and water
- 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
- 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

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
			
Description	The smart choice for the routine identification and analysis of common alloys	Optimised for the high speed grade identification and analysis, from aluminiums to high temperature alloys to 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, S), tramp and residual elements analysis
X-ray tube	40kV	50kV for enhanced heavy elements analysis (e.g. Sn, Ag, Cd)	
X-ray tube filters	Single filter	Multiple filters for the optimised analysis of all elements from Mg to U	
Detector	Large area SDD	Large area SDD	Large area SDD
Element range	K - U	Mg - U	
Max. sample temperature	400°C	100°C 400°C with HERO window (optional)	
IP54 rating	Yes	Yes	Yes
Protection against detector window damage	Thick Kapton® window	Optional window shield	
Calibrations	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:

Portable Bluetooth printer:

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



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



Benchtop stand: Transform the X-MET8000 into a benchtop analyser in seconds, to increase productivity and operator safety when measuring irregular shape pieces. The large chamber enables the measurement of a wide variety of sample shapes and sizes.

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



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



Bluetooth barcode scanner: prevent typing errors when entering sample labels or additional information in the X-MET user interface. Simply scan the sample barcode to fill in the information in your chosen field on the X-MET screen



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

Handheld LIBS: 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.



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 for more information or email: industrial@oxinst.com

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