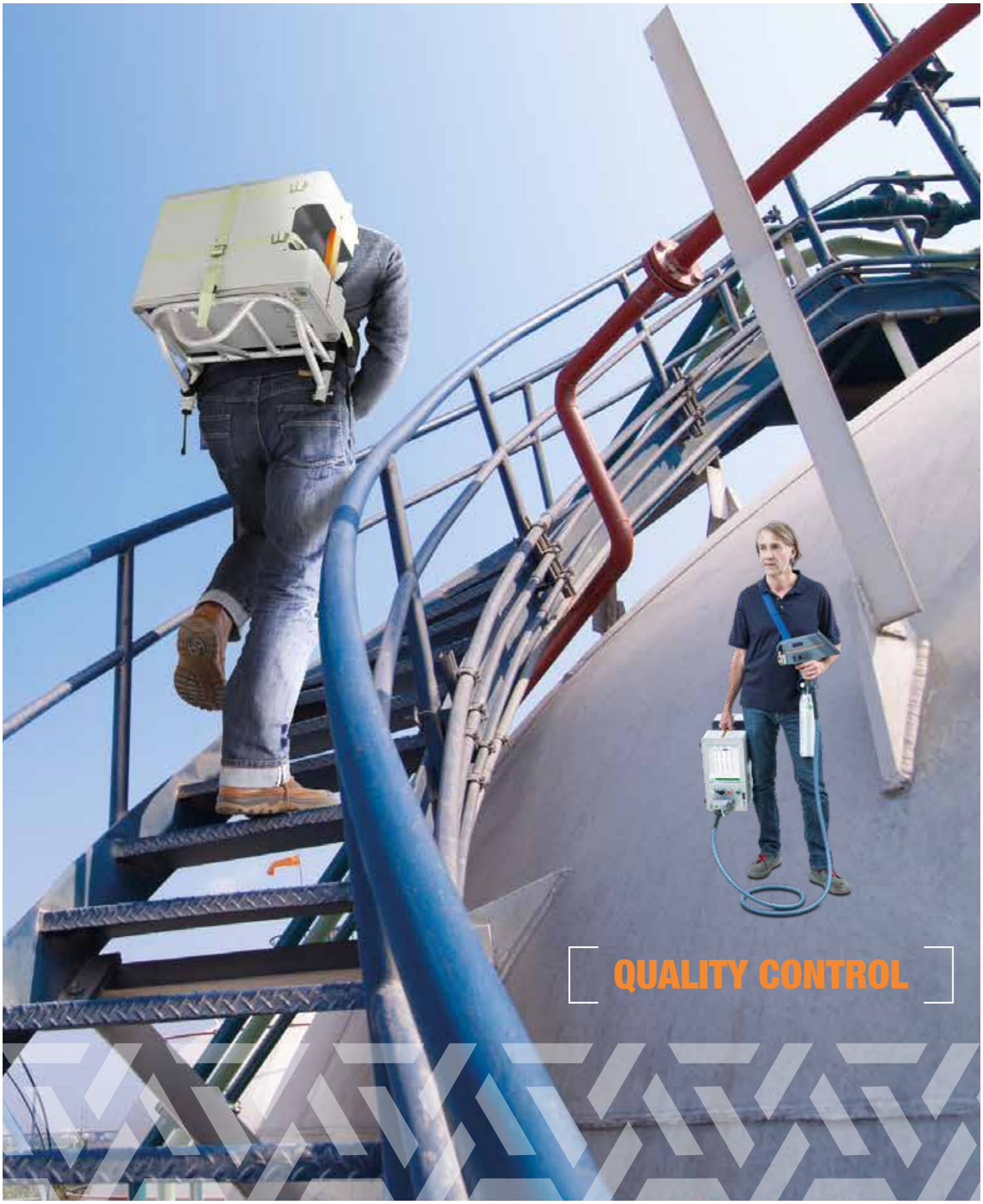
PMI-MASTER SMART

HITACHI
Inspire the Next

Superior metals analysis in difficult to reach places



PMI on the go

Seamless quality control is essential for any metalworking, especially for safety critical positive material identification on-site. But very often the spot of analysis is difficult to access e.g. plant components.

The PMI-MASTER Smart is a breakthrough for optical emission spectroscopy (OES) analysis in hard to reach places. It's the only truly portable high performance OES analyser on the market. Weighing just 15 kg / 33 lbs the spectrometer can be easily carried to the point of analysis.

This robust spectrometer is designed for the precise analysis of key elements, rapid material verification, PMI and metal sorting. Despite its light weight and compact size the PMI-MASTER Smart offers high analytical performance, unparalleled portability, convenience and ease of use.





Truly portable with various transport options

PORTABLE

Easy to carry, weighs only 15 kg / 33 lbs, compact dimensions.

TRANSPORTABLE

Ready to ship in rugged stackable cases, drag with foldable trolley.

BACK PACK FRAME

To comfortably and safely carry the PMI-MASTER Smart on the back.

MOBILE

When needed intensively within a certain area.



State-of-the-art technology

STABLE MEASURING RESULTS...

- ...even in motion and temperature change with patented high resolution carbon fibre Multi-CCD optics.
- Virtually unlimited number of channels for total spectrum analysis.

ANALYSIS OF SAMPLES WITH IRREGULAR SHAPES

- Concentric electrode shielding Argon flow technology for reducing air gaps.
- Single universal adapter for measuring wires, down to 1 mm thickness.
- Analysis of curved surfaces with unique rubber seal (e.g. pipes, rods, valves, storage tanks, turbines).

CONVENIENT OPERATION SOFTWARE

- Windows®-based WASLab software with convenient touch screen operation.
- Wide and customisable information display, e.g. concentrations, material name, intensity and statistical key figures.
- Display, storage and printout of entire sample spectrum.
- Easy to use and customisable report generator.
- Transmission of results to remote devices & export of results into other software, e.g. Excel®.
- Flagging results outside calibration range or material specifications.
- Easy to use sorting function.
- User defined access levels.

EASY TO USE

- Optical system is fully and automatically re-adjusted.
- Free from regulatory constraints.

Easy operation

Simply hold the probe to the sample, push the trigger and read the result. The alloy grade and the full chemical composition appear within a few seconds on the integrated touch screen. Tailored to your specific application, different operation modes offer complete analysis, grade identification or sorting of metals. The PMI-MASTER Smart identifies the metal grade automatically and indicates where concentration limits are exceeded.

UVTOUCH PROBE

- Low levels of carbon, phosphorus, sulphur, boron, arsenic and tin in low alloy and stainless steels.
- L grade separation.
- Nitrogen in duplex steels.
- Display of analysis results.
- Control of main spectrometer functions.
- Extended wavelength range of probe's optic: 165 to 210 nm.

ARC PROBE

- Ideal for the sorting of metals with arc in air atmosphere.
- No Argon required.
- Analysis in only 3 seconds.
- For tubes, wires and small parts.

SPARK PROBE

- Reliable spark analysis of standard elements, incl. C.
- Robust construction.
- Various sample adapters available.



GRADE Database included

The largest metals database for fast and easy grade identification is preinstalled on the PMI-MASTER Smart.

It offers more than 12 million records for over 339,000 materials from 69 countries and standards. You can update your instrument's grade database with a few clicks – no time consuming research in norms and grade catalogues.





Technical Specifications

Weight	15 kg / 33 lb
Power	28.8 V DC
Max. consumption	500 W
In stand by	25 W
Optical System (patented)	
Focal length	ca. 300 mm
Wavelength range	185–420 nm
	Peak coverage up to 671 nm (for Cu, Na, Li)
Excitation source (solid state)	
	Computer controlled parameters
Max. pulse current	110 A Arc current 1.8–2.5 A
Frequency	100–350 Hz
Voltage	250–350 V
	High energy pre spark (HEPS)
Battery	
Technology	$LiFePO_4$
Spark measurements	Up to 300 (using standard parameters)
Arc measurements	Up to 200 (using standard parameters)
Computer System	
Internal computer unit	Microsoft® Windows®



Highlights and applications

Low operating costs

- Minimised Argon consumption.
- Easy maintenance.

Built to last

- Optimised for the use in tough environments.
- Robust and dust-proof TFT touch screen.
- Temperature monitoring with protection against overheating.
- Shock resistant.

Cordless and durable

- The rechargeable battery pack provides power for approx. 10 h in standby.
- 300 measurements in spark mode, 200 measurements in arc mode (depending on measurement conditions).
- Operation also with external power supply/ charger, with or without battery and even while recharging.

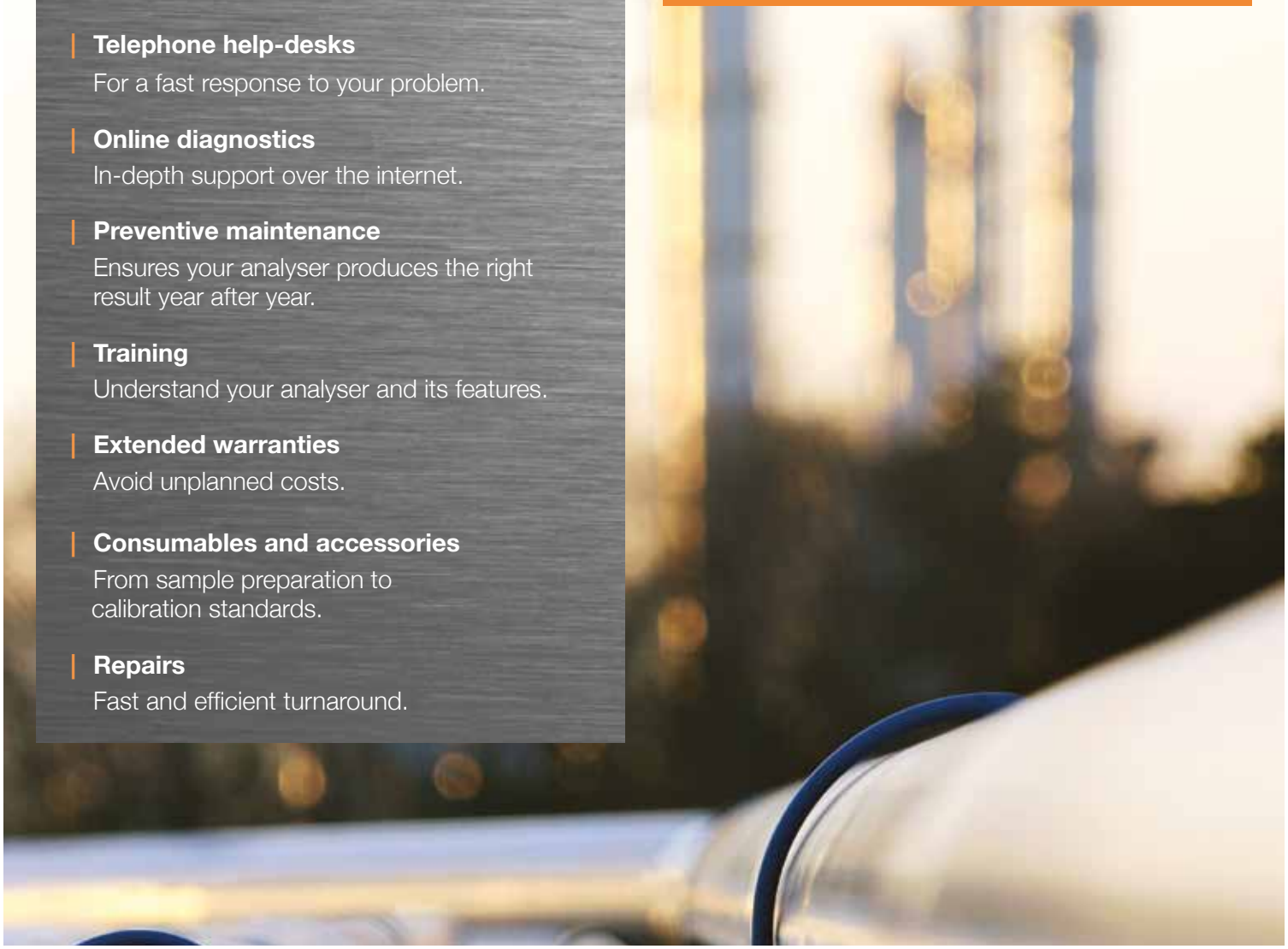
Our Service

Our global network of service hubs offers a full range of technical support to keep you up and running.

- **Telephone help-desks**
  For a fast response to your problem.
- **Online diagnostics**
  In-depth support over the internet.
- **Preventive maintenance**
  Ensures your analyser produces the right result year after year.
- **Training**
  Understand your analyser and its features.
- **Extended warranties**
  Avoid unplanned costs.
- **Consumables and accessories**
  From sample preparation to calibration standards.
- **Repairs**
  Fast and efficient turnaround.

MORE INFORMATION

To find out more about the PMI-MASTER range of analysers, visit **www.hitachi-hightech.com/hha**



Other products

We have been providing industrial analysis products for the manufacturing industry for over 40 years.

- **Handheld LIBS:** latest technology for 1-second alloy identification with no X-rays.
- **Handheld XRF:** for fast, reliable, non-destructive identification and analysis of alloys.

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Science for a better tomorrow

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