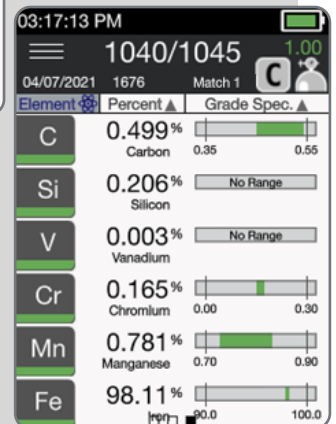# KT-500

CUTTING-EDGE LASER-BASED METAL ALLOY ANALYSIS, INCLUDING CARBON STEELS

Featuring the first carbon-capable miniaturized high resolution echelle spectrometer, known as HiRES Technology™, the Rigaku KT-500 analyzer represents the next advancement in handheld laser induced breakdown spectroscopy (LIBS). Its carbon capability, along with accurate alloy analysis, makes the KT-500 the analyzer of choice for:

- **Quality assurance in metal fabrication**

- **Positive material identification (PMI) in mission-critical applications, such as in petrochemical facilities and supply chain, power generation and aerospace**

The KT-500 handheld analyzer strengthens the capabilities of LIBS technology, adding carbon capability, and expands the user advantages, such as:

- **High-performance metal alloy analysis, including steels and high-temperature alloys with and without purge gas**

- **Carbon steel analysis including difficult-to-analyze carbon**

- **Small, ultraportable IP-54 design for less fatigue, increased ruggedness and more analysis at the point of need**

- **No X-rays, no licensing, no headaches**

KT-500 PROVIDES:

Advanced Performance

Proprietary 1064 Class 3B excitation with UV excitation capability and low nominal ocular hazard distance (NOHD)

Miniature, high-resolution echelle spectrometer (HiRES Technology) with 2D detector for optimized performance

Spectral range covering the most relevant alloying elements, including carbon

User selectable "Drill Down" for additional surface preparation to enable improved analysis

QuickID™ Software

Multiple application for easy selection of gas purge and air metal alloy analysis

Rapid matrix selection, chemical composition and grade ID.

Password protected with automatic "sleep mode" for improved safety and battery life

"Hot swap" capability to allow for easy swapping of battery without powering off analyzer

On-board microcamera for capturing analysis images and sample images

Accessories

Battery docking/charging station

2 Rechargeable Li-ion batteries

Steel verification sample

Miniature gas regulator and lightweight tubing for use with 14l disposable cartridge

Other Specifications

FDA 1040, CE, ISO 9001:2015 Certified Manufacturing Facility

External battery charger: 100~240VAC

Operating temperature of 0 to 40°C

Warranty of 12 months

Sophistocated Ergonomics

Pistol shaped for optimal one-handed operation: 27.2 cm L x 9.3 cm W x 28.1 cm H (10.7"L x 3.7"W x 11"H) and weighing 2.25 kg (5 lbs)

IP-54 rated aluminum housing and design for best heat dissipation and ruggedness

Quick connect / disconnect purge gas nozzle

Choice of user interface:
- Smartphone-inspired touchscreen provides fast learning curve
- Large Softkey buttons for one-handed operation while wearing protective gloves
- Unique "Quick Launch" handle buttons enable one-handed operation

3.5" high-resolution tilt-able screen allows for high visibility in confined spaces and outdoors

Connectivity

USB, WiFi connection for simple viewing and download to any PC or mobile device

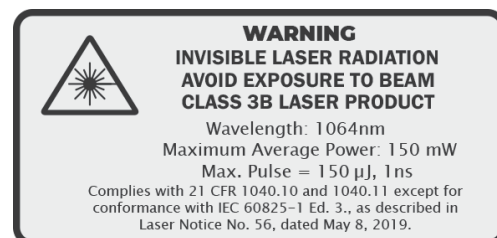Easy addition of any alloy grade using Rigaku Library Editor software

Generate verification certificates that include company logo, photo, data entry and analysis results

Additional Services

On-board System/Calibration verification program

Standard flat plate with slotted aperture and easy-to-access and clean front safety glass

Optional slotted aperture for accessing narrow welds

WARNING
INVISIBLE LASER RADIATION
AVOID EXPOSURE TO BEAM
CLASS 3B LASER PRODUCT
Wavelength: 1064nm
Maximum Average Power: 150 mW
Max. Pulse = 150 µJ, 1ns
Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825−1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.