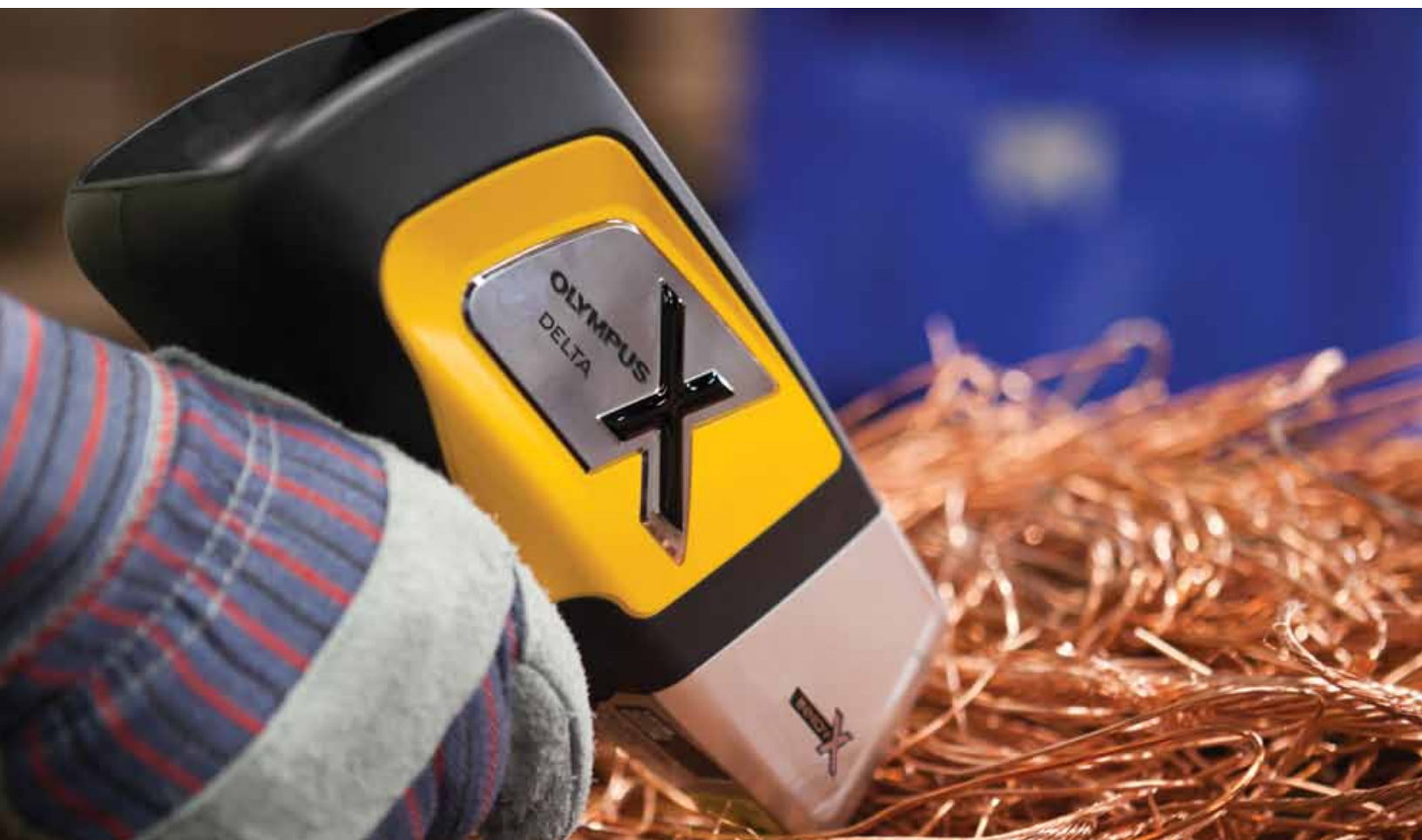


DELTA Handheld XRF for Scrap Sorting and Recycling



The Powerful Handheld XRF
for Fast, Decisive Results

The DELTA Handheld XRF

for Scrap Sorting and Recycling

The New Generation DELTA Alloy Analyzer has an ergonomically advanced, forward-looking design incorporating the latest in electronics, components, and software technology. This new DELTA has even better sensitivity and precision in faster time for more materials than before.

Configured with a standard package of more than 25 elements, the DELTA provides alloy chemistry and grade ID in seconds. From simple sorting to challenging grade separations, the DELTA provides highly specific material chemistry in order to rapidly and accurately identify pure metals and alloy grades. DELTA SmartSort maximizes scrap sorting throughput.

Where Ruggedness and Performance Converge



Tough on the Outside, Smart on the Inside

- Aluminium alloys
- Chrome-moly steels
- Cobalt alloys
- Copper alloys
- Exotic alloys
- Magnesium alloys
- Nickel alloys
- Nickel-cobalt alloys
- Precious metals
- Stainless steels
- Tool steels
- Titanium alloys
- Wrought aluminium alloys
- Zinc alloys
- Zirconium alloys



Non-ferrous Alloys

DELTA analyzers excel with ease at quick analysis and ID of stainless steels, Ni superalloys, and other high alloy materials. Sort out heavy alloys based on low levels of Si and Al content. Use SmartSort to maximize speed and accuracy.

Precious Metals

The DELTA provides nondestructive chemistry analysis, in addition to karat determination. Gold, silver, and platinum alloys, and more can be tested confidently. The DELTA is available with an integrated camera and small spot collimation for detailed analysis of complex materials.

Electronics

Sort out electronics components with precious metal content (Ag, Au, Pd, etc.). Separate and identify poisons and Pb-containing solders. Evaluate copper content in shredded materials. The DELTA is available with an integrated camera and small spot collimation for detailed analysis of complex materials.

Copper

Within seconds, separate brasses, bronzes, leaded alloys, and aluminum and silicon-containing alloys. Sort out Be-Copper using the DELTA's nominal chemistry feature.

Glass

Quickly sort out Pb-containing glass and glass-ceramic from recycling streams. Detect toxic elements.

Aluminum and Light Alloy

With the technical advances of the DELTA analyzers, the range of light alloy capabilities continues to expand. Their outstanding Mg sensitivity enables you to confidently sort aluminum alloys once relegated to OES systems.

Car Catalysts

Olympus has partnered with industry experts to develop calibrations ideal for the analysis of auto catalyst materials for precious metal content, including Pd, Pt, and Rh.

Slags

Monitor the chemistry of slags during melts for quality control and furnace life prediction. Sort and evaluate recovered slags from different melt operations.

Low Alloy Steels

Verify residual content in steels. Confirm Si, S and P content, along with Mn and alloying element levels. Measure trace levels of Mn, Cr, Ni, Cu, or Mo. Confirm Si, S, and P content.



DELTA for Scrap Sorting and Recycling

With Newly Available X-act Count Technology

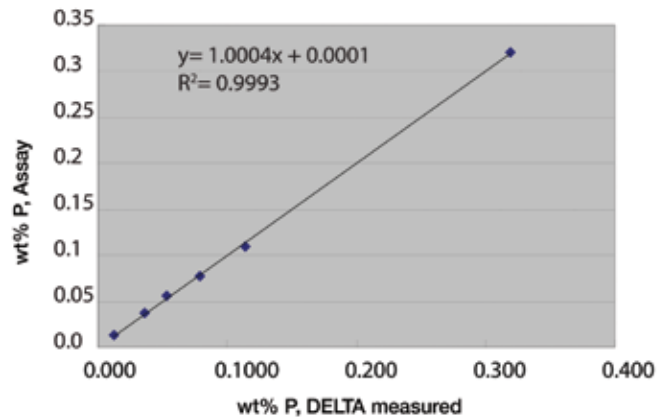
Superior Light Element Analysis

Traditionally a difficult area for handheld XRF, the analysis of light alloys and elements (Mg, Al, Si, P, S) can now be routine with the DELTA Alloy and Metal XRF Silicon Drift Detector (SDD) Analyzer with the newly available X-act Count Technology. Its integration with a 40kV Rh-anode tube and automatic filtering provides fast, precise

analysis of transition and heavy metals, and sensitive measurement of light element content. SmartSort maximizes testing throughput – sample by sample, testing is automatically extended or terminated – maximizing accuracy and throughput.

DELTA SDD Analyzer Benefits

- Magnesium (Mg) detection down to 0.20%
- Quick and accurate quantification of S content in stainless and low alloy steels
 - Reliable identification of 303 and 416 grades
- Measures Si and Al in stainless, bronzes and other alloys
- Measures P in carbon steel down to 0.014% with exclusive 3-beam Alloy Plus calibration
- Extensive grade library combined with SmartSort provides nominal chemistry for light elements when the fastest testing speeds are required



Ultimate Aluminum Analysis

The new Olympus DELTA SDD Analyzer offers unmatched Al performance. It easily and directly sorts and grades Aluminum and Aluminum-containing materials.

Aluminum Alloys

- Accurately measures Mg content in 5000 series alloys and separates Mg-containing alloys. Sorts 3003 and 3004; 1100 and 6063; 2014 and 2024

Titanium Alloys

- Accurately determines the Al content in Ti alloys, including CP Ti cut with Al

Red Metals

- Accurately classifies Al and Si bronzes

High-Temperature Cast Stainless

- Measures Al in high-temp, Ni/Co superalloys

	%	+/-	Spec (356)
Mg	0.38	0.13	[0.20-0.45]
Al	92.31	0.19	[89.75-93.30]
Si	6.90	0.04	[6.50-7.50]
Mn	0.021	0.006	[0.00-0.35]
Fe	0.17	0.01	[0.00-0.60]
Ni	0.027	0.003	Tramp[0.05]
Cu	0.055	0.004	[0.00-0.25]
Zn	0.076	0.004	[0.00-0.35]
Pb	0.019	0.002	Tramp[0.05]
Bi	0.034	0.002	Tramp[0.05]

DELTA alloy results screen

По всем вопросам обращайтесь в наш офис ООО "ТИ-Системс":

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Innovative Features

The analytical capabilities of Handheld XRF continue to expand, and new features are continually enabling operators to be more effective and efficient. Make sure that your analyzer is a DELTA for the latest Handheld XRF loaded with innovative features for scrap sorting and recycling.

Tough on the Outside

Ideally suited for the harsh scrap recycling environment, the DELTA is equipped with weatherproof, protective housing.

Smart on the Inside

Engineered with advanced technology, yet so simple to use. The intuitive user interface makes navigation easy for both non-technical and more advanced operations.

Within seconds, the DELTA provides an easy-to-interpret results screen that can be viewed in a customizable list or spectral format. Simple, fast data export is achieved via USB or Bluetooth® to Microsoft Excel spreadsheet, or printed directly via a wireless printer.

SmartSort Mode

SmartSort automates sorting decisions, enabling even inexperienced operators to maximize both speed and sorting accuracy.

- Maximizes efficiency for speed testing – automatically extends tests for light elements (Mg, Al, Si, P, S) when absolutely necessary eliminating unnecessarily long tests AND mix-ups
- Stop over-paying! SmartSort knows when to extend testing to find the Aluminum in red metals or Nickel grades

Element	%	+/-
Si	0.42	0.09
S	0.31	0.03
Cr	12.30	0.11
Mn	0.35	0.04
Fe	85.87	0.34
Ni	0.25	0.04
Mo	0.07	0.01

Exact match results

El	%	+/-	Spec (Ti 15-3-3-3)
Al	3.0	Nom.	[2.00-4.00]
Ti	76.62	0.57	[72.00-82.00]
V	14.67	0.25	[13.00-17.00]
Cr	2.69	0.17	[2.50-3.50]
Fe	0.10	0.03	Tramp[0.20]
Sn	2.92	0.04	[2.50-3.50]

"Nominal" value display

El	%	+/-	Spec (C 836)
Ni	0.42	0.02	[0.00-1.00]
Cu	84.02	0.19	[84.00-86.00]
Zn	4.87	0.05	[4.00-6.00]
Sn	4.68	0.08	[4.00-6.00]
Pb	6.01	0.09	[4.00-6.00]

Real-time GMM

Grade Match Message

Leaded Red Brass - aka 85 5-5-5;

OK

GMM Popup assignment

Nominal Chemistry

- Nominal chemistry is provided for 'invisible' elements, based on grade ID
- In just a second, get a warning that a bronze is an "aluminum bronze" or a that a copper is a "beryllium copper"; get the price right when you accurately identify Al and Si bronzes

Tramp Library

- Enables the operator to set a max tolerated concentration for tramp and residual elements in grade families
- The DELTA comes preloaded with a tramp library based on industry standards
- The DELTA reports tramp material and uses the tramp library to improve grade IDs based on residual content fluctuations
- Fast, confident grade ID

Grade Match Messaging (GMM)

- GMM offers superior user efficiency and effectiveness for:
 - Immediate sorting instructions
 - Reduced operator training
 - Increased efficiency and higher throughput
 - Assign a match message to any grade.
- Use real time or pop up messages or both

The DELTA Series

Everything You Need in Handheld XRF with State-of-the-Art Innovation

The New Generation DELTA Handheld XRF Analyzers are ergonomically advanced with a forward looking design incorporating the latest in electronics, components, and software technology.



DELTA Professional

The DELTA Professional with a 40kV tube and SDD detector is the best value solution from Olympus for handheld XRF analyzers. It provides superior performance in speed, LODs, and elemental range.



DELTA Premium

The DELTA Premium with advanced 40kV tube and large area SDD detector is best for ultra quick, analytically demanding applications, such as trace levels and light elements in low alloy steel, soil, mining, and metallurgical samples.



DELTA Classic Plus

The DELTA Classic Plus with a 40kV tube and SiPin detector is ideal for simple applications. It provides quick ID, screening, sorting, and elemental and metals analysis.

The newly available DELTA X-act Count Technology can provide even better sensitivity and precision in faster time for more materials than before. Throughput is increased with the same or better precision in half the time for most elements.

Features and Benefits

Powerful 4W X-ray tube, 200 μ A current (max), optimized beam settings

Tight geometry for exceptional LODs and high analysis throughput

Large-Area SDD and customized X-ray tube options for exceptional sensitivity and precision for more elements and materials

Patent-pending automatic barometric pressure correction that adjusts calibration as needed for more accurate analysis of light element.

Lightning-fast data acquisition for faster testing time

Floating Point Processor: Provides more calculations in less time, and leverages more advanced calibration algorithms

Integrated Bluetooth® for data input and output available in most countries

Integrated wide area heat sinks throughout the DELTA body for high power use in extreme temperatures

Analysis indicator lights visible from 360° to help ensure safe use

Advanced colortouch LCD screen for clarity, brightness, responsiveness, and energy efficiency for indoor/outdoor use

Accelerometer technology puts the unit into sleep mode to save energy when not in use; logs impacts for tool management

DELTA PC Software for enhanced data analysis, calibration modeling, and optional closed beam workstation operation

USB interface port for high-speed downloads and seamless PC control

Ergonomic rubberized handle for enhanced grip

Docking Station and Hot Swap Batteries



The unique DELTA Docking Station frees you from having to power down the analyzer. The station charges the analyzer battery and a spare, and performs periodic calibration checks. DELTAs can be operated 24/7 in the field with hot swap battery replacement.

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DELTA Accessories



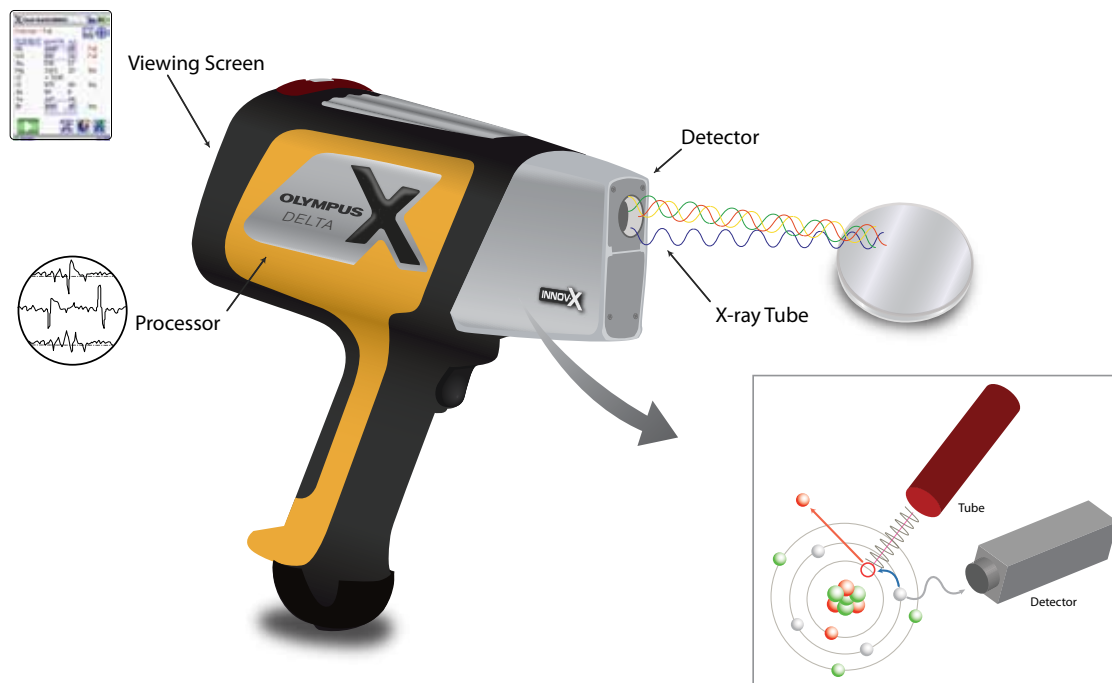
1. DELTA Portable Workstation

Portable workstation with integrated safety-lock shielding is convenient for small objects; a PC is connected for remote control of this closed-beam DELTA set-up.

2. DELTA Holster

The holster keeps the DELTA by your side and within easy reach.

DELTA Handheld XRF Configuration



The DELTA brings the power and flexibility of handheld X-ray fluorescence spectrometry to the field. Ruggedized and ultra portable, this dramatically fast 24/7 technology provides accelerated testing times, allowing for hundreds more tests to be conducted per day with analytical confidence. The DELTA series analyzers are configured with powerful

miniature X-ray tubes, Si-PIN detectors or highly advanced Silicon Drift Detectors (SDD), specialized filters, and multi beam optimization for the ultimate in XRF field analysis. The DELTA's real overall value is to help make decisions in real time with minimal reliance on off-site laboratory testing.