



**VANTA Series** 

# VANTA Rugged. Revolutionary. Productive.



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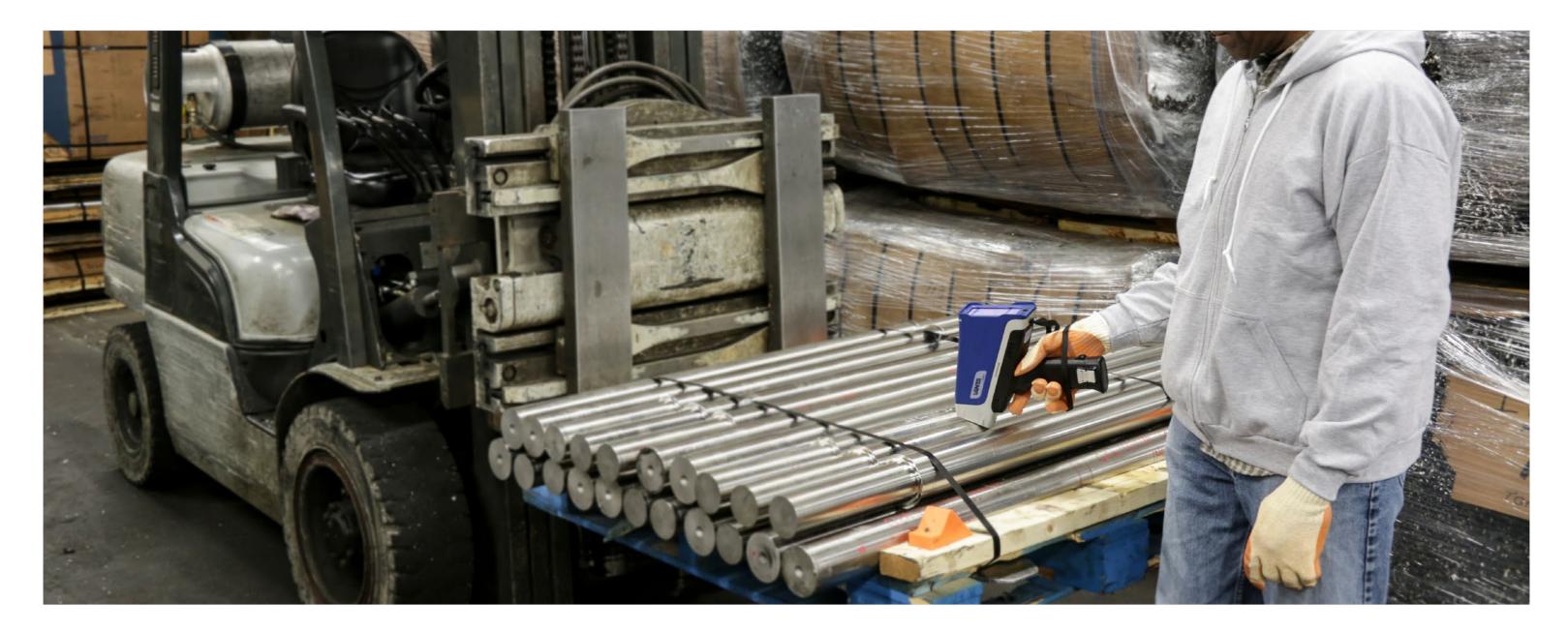
QUEBEC 164, St-Jean-Baptiste Mercier, QC J6R 2C2 T: (450) 691-9090

## ONTARIO

275 Sheldon Drive, Unit 3 Cambridge, ON N1T 1A3 T : (519) 894-9069

# www.qnde.ca





Olympus' Vanta<sup>™</sup> analyzer is our most advanced handheld X-ray fluorescence (XRF) device. These rugged, powerful, and intuitive instruments provide rapid, accurate element analysis and alloy identifications to customers who demand laboratoryquality results in the field.

Vanta handheld XRF analyzers are some of the toughest devices Olympus has ever made. Their rugged and durable design makes them resistant to damage for greater uptime and a lower cost of ownership. With intuitive navigation and configurable software, the Vanta series are easy to use with minimal training for high throughput and fast return on investment. Olympus' innovative Axon Technology™ means Vanta analyzers give you accurate results and help boost productivity no matter the environment or working conditions.

- Exceptional durability under extreme conditions
- Analytical excellence
- Optional wireless LAN and Bluetooth® for real-time data sharing
- Intuitive user interface

# Rugged

Working conditions can be tough on electronic devices, often causing breakdowns that cost time and money. Vanta<sup>™</sup> analyzers are durable for increased uptime and a low cost of ownership. The Vanta series are drop tested using U.S. Department of Defense methods (MIL-STD-810G), reducing the risk of damage and costly repairs when a device is dropped or jostled. And with an included three-year warranty, you can be assured that we stand by the ruggedness of Vanta analyzers.

Vanta devices are also IP65\* rated dust and water resistant to protect against the hazards found in even the most challenging environments. Able to withstand a temperature range of -10 °C to 50 °C (14 °F to 122 °F) at full duty cycle, Vanta analyzers ensure you achieve 100% uptime without wasting time waiting for your analyzer to cool, even in hot environments.\*\* The detector shutter on C and M series models helps prevent punctures so you can analyze rough surfaces with confidence.

# Revolutionary

Every circuit, contour, and interface of Vanta handhelds is engineered to be the best of its kind. Vanta analyzers incorporate Olympus' new Axon Technology™, a breakthrough in XRF signal processing that delivers accurate and repeatable test results. Axon Technology uses ultra-low-noise electronics enabling higher X-ray counts per second and faster results. Coupled with a quad-core processor, Axon Technology makes Vanta analyzers remarkably responsive, pushing the limits of performance so you get the best results in the least amount of time. Axon Technology provides both test-to-test and instrument-to-instrument repeatability. Whether it's your first test on your first analyzer or your thousandth test with your hundredth analyzer, the Vanta handheld XRF gives you a consistent result.

## Productive

Vanta analyzers maximize user throughput and make data archiving easy. Application-specific software features improve user productivity for fast ROI.

- A new, intuitive interface (UI) enables the user to quickly navigate the device's settings and software functions.
- The UI can be configured based on a customer's specific needs. Users can customize which software features and functions are displayed on the main screen.
- Data are easily exported via a USB flash drive, wireless LAN, or Bluetooth<sup>®</sup>. Vanta analyzers are designed to enable powerful cloud applications.
- Vanta analyzers feature a clear, bright LCD touch screen that is readable in any light.
- Ergonomic buttons and an industrial-grade, push-button joystick enable users to easily navigate the system with gloved hands.
- Olympus' Vanta handheld XRF offers embedded GPS so users can pair results with precise GPS coordinates to document and map the location of elements. The optional 5-megapixel panoramic camera combines images of XRF data with GPS coordinates for inclusive archiving and streamlined reporting which provides unmatched data traceability to the field.



Vanta<sup>™</sup> analyzers provide fast results in a diverse range of applications from alloy identification (ID) to archaeological site evaluation. Olympus' range of application-specific software features enable operators to get the most out of their analyzers with simplified report creation and traceable results.

#### **Scrap Sorting**

Vanta analyzers for scrap sorting feature a SmartSort function that intuitively lengthens or shortens test times based on material to save time while providing the best possible match. The software automatically compares results to a library of alloy compositions to quickly match unknown materials to known alloys. The Grade Match Messaging feature enables users to program messages for each grade to display warnings or instructions. These messages make it easy for operators to use the analyzer with little training, putting the knowledge of your most experienced person to work for everyone.

#### Positive Material Identification (PMI) and Manufacturing Quality Control/Assurance

Vanta analyzers help ensure that refineries, petrochemical plants, and other processing facilities are safe by verifying that correct alloys are installed in critical locations by following American Petroleum Institute Recommended Practice 578 (API-RP-578). Manufacturers and installers of expensive or mission-critical components and machinery can rest easy knowing that they are manufactured with the correct alloy grades, regardless of the material source. The Vanta series' integrated GPS, optional panoramic camera, user-defined input fields, connectivity features, and extensive data reporting capabilities maximize inspector confidence and traceability to the field.

#### **Regulatory and Safety Screening**

The Vanta series screens for Pb, Cd, As, Hg, Cr, and other toxic metals in consumer products such as toys, apparel and footwear, and electronics to comply with RoHS regulations. With an optional camera, Vanta handhelds automatically archive sample images and results, making it the ideal tool for a reasonable testing program. Excellent sensitivity enables it to achieve low detection limits for pass/ fail results of regulated elements.

#### **Geochemistry and Mining Exploration**

The Vanta<sup>™</sup> handheld analyzer is the preferred tool for mining exploration including surface mapping and core analysis. It provides accurate and reproducible results in any environment. Vanta analyzers work all day even in the high temperatures found in desert or jungle environments; remote areas where instrument downtime cannot be afforded. Georeferenced XRF data transfer wirelessly, via Bluetooth or Wi-Fi, for real-time geochemical mapping on a GIS-equipped tablet or laptop. Map, visualize, assess, and follow-up on targets in the field for faster in-field geological exploration and decision-making.

#### **Jewelry/Precious Metals ID**

Vanta analyzers can provide on-the-spot characterization of a range of jewelry and precious metals including Au, Ag, Pt, and Pd. The analyzer accurately classifies the purity of gold alloys (0–24 karat) and can also detect plating. With the high price of precious metals, return-on-investment is rapid.







#### **Research and Education**

Vanta instruments provide quantitative, semi-quantitative, and qualitative elemental information to guide research and identification of unknown or complex materials. Fast results keep students engaged with relevant data in applicable science-based projects.

#### Environmental Assessments

The Vanta analyzer readily screens soil and other materials for pollutant metals. Paired with GPS data, the results can be wirelessly transferred to a GIS to create pollutant metal maps. Get fast, decisive results for site characterizations, assessments, property evaluations, and contamination tracking.

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# The Vanta Series

No matter the model, the rugged, fast, and reliable Vanta<sup>™</sup> analyzer features Olympus Axon Technology<sup>™</sup> and is rated to pass a 4-foot drop test. C and L Series models are IP65 rated, and M Series models are IP64 rated.



### **M** Series

Our most powerful Vanta analyzers feature exceptional performance. Each M Series analyzer comes equipped with a large-area silicon drift detector, your choice of either a rhodium (Rh) or tungsten (W) anode, and a 50 kV X-ray tube.

## C Series

The C Series combine value with superior speed, limits of detection (LODs), and elemental range. Each C Series analyzer is equipped with a silicon drift detector and your choice of a 40 kV X-ray tube with a rhodium (Rh) or tungsten (W) anode, or a 50 kV X-ray tube with a silver anode.

## **L** Series

Get the ruggedness, ease of use, and data management features of Vanta analyzers in a cost-effective PIN instrument. The L Series is designed for maximum uptime and a lower cost of ownership for reliability in the field.

#### Olympus

Olympus is a leader in XRF technology with a reputation for quality and accuracy. We are committed to providing the best technical support and after-sales service for our products, applications, training, and technologies through our global network of sales and customer service teams.



# **VANTA Specifications**



# Vanta<sup>™</sup> Handheld XRF Analyzer Rugged. Revolutionary. Productive.

Vanta<sup>™</sup> handheld XRF analyzers are rugged and built for analytically demanding applications in the harshest environments. Vanta analyzers are IP rated for protection against dust and water, are drop tested, and built to withstand extreme ambient temperatures.

Vanta analyzers provide fast, accurate elemental analysis. Each device features Olympus' Axon Technology<sup>™</sup>, a revolution in XRF signal processing that provides accurate, repeatable results for greater productivity and a fast return on investment. Vanta analyzers feature an intuitive interface so new users can work with the device with minimal training. Data is easily exported wirelessly or via USB.

# The Vanta<sup>™</sup> Series

No matter the model, each Vanta<sup>™</sup> analyzer is engineered for durability and analytical superiority. Olympus manufactures Vanta analyzers to suit a variety of applications, depending on your needs.

## **M** Series

Our fastest, most powerful Vanta analyzers feature exceptional performance.

## C Series

The C series combine value with superior speed, limits of detection (LODs), and elemental range.

## **L** Series

The L series is an economical yet full-featured PIN detector analyzer.

## Element

The Vanta Element provides ease of use and efficient data management in an entry level package with streamlined capabilities.

## Vanta Specifications

Dimensions ( $W \times H \times D$ )	8.3 cm × 28.9 cm × 24.2 cm (3.25 in. × 11.4 in. × 9.5 in.)
Weight	M series, C series, and L series: 1.70 kg (3.75 lb) with battery, 1.48 kg (3.24 lb) without battery Element: 1.54 kg (3.39 lb) with battery, 1.32 kg (2.91 lb) without battery
Excitation Source	4-watt X-ray tube with application-optimized anode material (rhodium (Rh), silver (Ag), or tungsten (W)) M series (Rh & W) and C series (Ag): 8–50 kV C series (Rh & W): 8–40 kV L series (W) and Element (W): 35 kV (2 watts)
Primary Beam Filtration	M and C series: 8-position autoselected filter per beam per mode; optional collimation to 3 mm diameter beam spot L series and Element: Fixed aluminum filter and no internal collimation
Detector	M series: Large-area silicon drift detector C series: Silicon drift detector L series and Element: Silicon PIN detector
Power	Removable 14.4 V Li-ion battery with hot-swap capability (M, C, and L series only) or 18 V power transformer 100–240 VAC, 50–60 Hz, 70 W max
Display	800 × 480 (WVGA) LCD with capacitive touch screen supporting gesture control
Operating Environment	Temperature range for the M, C, and L series: -10 °C to 50 °C (14 °F to 122 °F), (continuous duty cycle with optional fan) Temperature range for the Element: -10 °C to 45 °C (14 °F to 113 °F) Humidity: 10% to 90% relative humidity non-condensing
Drop Test	Military Standard 810-G 4-foot (1.3 M) drop test
IP Rating and Detector Shutter	M series, and Element IP54: dust protected and protected against water splashing from all directions C and L series IP55: dust protected and protected against water jets from all directions M and C series: Solid detector shutter to help prevent detector damage
Pressure Correction	M and C series: Built-in barometer for automatic altitude and air density correction
GPS	M, C, and L series: Embedded GPS / GLONASS receiver
Operating System	Linux <sup>®</sup> Cloud enabled with user fleet manager capability
Data Storage	microSD <sup>™</sup> slot with removable 1 GB industrial SD card included
USB	<ul> <li>(2) USB 2.0 type A host ports for accessories such as wireless LAN, Bluetooth<sup>®</sup>, and USB flash drives.</li> <li>(1) USB 2.0 type mini-B port for connection to computer.</li> </ul>
Wireless LAN	Supports 802.11 b/g/n (2.4 GHz) cable optional USB adaptor
Bluetooth	Supports Bluetooth® with an optional USB adaptor
Aiming Camera	Full VGA CMOS camera (Optional on M, C, and L series)
Panoramic Camera	5-megapixel CMOS camera with autofocus lens (Optional on M, C, and L series)
Warranty	M, C, and L series: Three-year warranty; Element: One-year warranty
Selected Optional Accessories	M, C, and L series: Field Stand, Soil Foot, Holster, Work Station, Weld Mask, Hot Heel, Probe Shield, and VLW Collimatio Mask (L series only) Element: Field Stand, Soil Foot, and Holster

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