

Commercial Proposal

Global Service, Spare Parts, Repair & Remote Diagnostics for XRF/OES Analytical Instruments — Full Lifecycle Support by Metal-Asia.pw

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Service Regions: North America, EU, UK, APAC, Middle East, Latin America, Africa

Compliance: ISO 9001:2015, ISO 17025:2017, ISO/IEC 17020, ANSI/NCSL Z540.3, ILAC-MRA, CE

Executive Summary

Metal-Asia.pw operates authorized service depots across four continents, providing full-lifecycle support for XRF and OES analytical instrumentation from Evident Scientific (USA), Bruker Elemental (Germany), Thermo Fisher Scientific (USA/Switzerland), Hitachi High-Tech (Japan/UK), Rigaku (Japan), and Malvern Panalytical (Netherlands).

Our service infrastructure is designed for industrial clients who cannot tolerate unplanned downtime: scrap processors running 24/7 shifts, foundries with melt-control SLAs, pipeline operators under regulatory PMI mandates, and environmental labs processing EPA-mandated sample volumes.

This catalog details our spare parts inventory, repair tier structure, remote diagnostic protocols, calibration & metrology services, and annual service contracts.

Service Compliance & Procurement Integrity

Why Authorized Service Matters for Audit Defensibility

In regulated industries (nuclear, aerospace, automotive, environmental), analytical data must be traceable to a documented chain of calibration and maintenance. Using non-authorized parts or uncertified service voids:

- Manufacturer warranty
- ISO 17025 accreditation scope
- Regulatory compliance (EPA, NRC, ASME, API)
- Insurance coverage for product liability

Metal-Asia.pw guarantees authorized parts, factory-trained technicians, and full documentation for every intervention.

Section 1: Spare Parts — Global Depot Inventory

1.1 Portable XRF — Evident Vanta Spare Parts

Item	Part Number	Compatibility	Availability	Price (USD)
SDD Detector (Large Area)	VANTA-DET-SDD-LA	Vanta Max, Core (Rh/Ag)	EU / NA / ME depots	\$12,500
SDD Detector (Standard)	VANTA-DET-SDD-STD	Vanta Core, Element-S	EU / NA / ME depots	\$9,800
PIN Detector	VANTA-DET-PIN	Vanta Element, L-Series	EU / NA / ME depots	\$5,200
X-Ray Tube 4W Rh Anode	VANTA-TUBE-4W-RH	Vanta Max, Core	EU / NA depots	\$7,200
X-Ray Tube 4W Ag Anode	VANTA-TUBE-4W-AG	Vanta Core, Element-S	EU / NA depots	\$6,900
X-Ray Tube 2W W Anode	VANTA-TUBE-2W-W	Vanta Element	7–14 days	\$4,800
Prolene Window Kit (10 pcs)	VANTA-WIN-PROL-10	All models	All depots	\$140
Kapton Window Kit (5 pcs)	VANTA-WIN-KAPT-5	All models	All depots	\$95
Li-Ion Battery 14.4V	VANTA-BAT-LION	M/C/L series	All depots	\$290
Li-Ion Battery 18V	VANTA-BAT-18V	Element series	All depots	\$320
Charger Unit	VANTA-CHG-STD	All models	All depots	\$185
LCD Display 800x480 WVGA	VANTA-DISP-WVGA	M/C/L series	3–5 days	\$650
Mainboard (Axon)	VANTA-MB-AXON	All models	14–21 days	\$1,450
GPS/GNSS Module	VANTA-GPS-MOD	M/C/L series	All depots	\$220
Barometric Sensor	VANTA-BARO-SENS	M/C series	All depots	\$85
VGA Target Camera	VANTA-CAM-VGA	M/C/L (option)	3–5 days	\$350
5 MP Panoramic Camera	VANTA-CAM-5MP	M/C/L (option)	3–5 days	\$480
Pelican Transport Case	VANTA-CASE-PEL	All models	All depots	\$240

Item	Part Number	Compatibility	Availability	Price (USD)
Benchtop Stand	VANTA-STAND-DESK	All models	7 days	\$550
Hot Heel Thermal Shield	VANTA-ACC-HOTH	M/C/L series	7–14 days	\$380
WeldMask Adapter	VANTA-ACC-WELD	M/C/L series	7 days	\$280
3 mm Collimator	VANTA-ACC-COLL3	M/C series (option)	14 days	\$420

1.2 Portable XRF — Bruker S1 TITAN Spare Parts

Item	Part Number	Compatibility	Availability	Price (USD)
FAST SDD Graphene 20 mm²	S1-DET-FASTSDD	800, 600, 500S	EU / NA / APAC depots	\$13,500
Standard SDD Detector	S1-DET-STD-SDD	500, 300	EU / NA depots	\$9,200
Rh Anode Tube 4W 6-50kV	S1-TUBE-RH-4W	800	EU / NA depots	\$8,200
Rh Anode Tube 2W 40kV	S1-TUBE-RH-2W	500, 500S	EU / NA depots	\$6,400
PROLENE Windows (10 pcs)	S1-WIN-PROL-10	All models	All depots	\$150
TITAN Detector Shield	S1-ACC-TDS	All models	All depots	\$380
Battery Kit (2 pcs + charger)	S1-BAT-SET-02	All models	All depots	\$340
TFT Display 640x480	S1-DISP-TFT	All models	3–5 days	\$580
SharpBeam Collimator 5 mm	S1-COL-5MM	800, 600 (option)	7 days	\$350
SharpBeam Collimator 3 mm	S1-COL-3MM	800 (option)	7 days	\$420
Integrated CMOS Camera	S1-CAM-CMOS	All models (option)	7 days	\$520
Pelican Case	S1-CASE-PEL	All models	All depots	\$230

Item	Part Number	Compatibility	Availability	Price (USD)
Benchtop Stand	S1-ACC-BENCH	All models	14 days	\$1,480
Weld Adapter	S1-ACC-WELD	All models	7 days	\$390
Barcode Scanner	S1-ACC-BCR	All models	7 days	\$190
Mobile Printer	S1-ACC-PRT	All models	14 days	\$440
GPS Module	S1-ACC-GPS	All models	7 days	\$240
Field Geo Kit	S1-ACC-GEOKIT	All models	14 days	\$680
Alloy Check Sample Kit	S1-CRM-ALLOY	All models	7 days	\$620

1.3 OES Spectrometers — Consumables & Parts

Bruker Q4 TASMAN / Q2 ION / Q8 MAGELLAN

Item	Part Number	Availability	Price (USD)
Diffraction Grating Carl Zeiss	Q4-OPT-GRAT-3600	21–30 days	\$18,500
Peltier-Cooled CCD Detector	Q4-DET-CCD-PELT	14–21 days	\$9,800
Digital PWM Spark Generator	Q4-GEN-SPARK	14 days	\$4,500
Coaxial Spark Stand	Q4-STAND-COAX	7–14 days	\$3,200
Cu/Ag Electrodes (kit 50 pcs)	Q4-ELEC-SET50	All depots	\$190
Argon Cylinder 40 L	OES-AR-40L	2 days	\$125
Pre-burn Electrode	Q4-PREBURN-ELEC	All depots	\$85
Spark Stand Seal Kit	Q4-SEAL-KIT	All depots	\$150
CRM Fe Set	Q4-CRM-FE-SET	7 days	\$1,650
CRM Al Set	Q4-CRM-AL-SET	7 days	\$1,550
CRM Cu Set	Q4-CRM-CU-SET	7 days	\$1,480

Thermo ARL easySpark / iSpark

Item	Part Number	Availability	Price (USD)
UV-Resistant Peltier CCD	ARL-DET-CCD-UV	21–30 days	\$10,500
IntelliSource Spark Source	ARL-SRC-INTELLI	14–21 days	\$5,800

Item	Part Number	Availability	Price (USD)
Safe Open Stand	ARL-STAND-SAFE	14 days	\$2,900
Electrode Kit	ARL-ELEC-SET	All depots	\$220
Argon Cylinder 40 L	ARL-AR-40L	2 days	\$125

Hitachi PMI-MASTER Pro2 / Smart

Item	Part Number	Availability	Price (USD)
Peltier-Cooled CCD Detector	HIT-DET-CCD	14–21 days	\$8,750
UV Spark Stand	HIT-STAND-UV	7–14 days	\$2,650
Integrated Argon Cylinder	HIT-AR-TANK	All depots	\$180
Electrode Kit (20 pcs)	HIT-ELEC-SET	All depots	\$145
CRM Set	HIT-CRM-SET	7 days	\$1,350

Section 2: Setup & Commissioning

2.1 New Instrument Standard Commissioning (Included in Delivery)

Phase	Description	Duration	Technician
1. Unpacking & Inspection	Completeness check; transport damage inspection	30 min	Metal-Asia Field Engineer
2. Software Installation & Update	Current version OS installation; OTA firmware update	1–2 h	Field Engineer
3. Optical / Detector Alignment	Detector position verification; Mn K-alpha resolution check	1 h	Field Engineer
4. Calibration Package Loading	Base calibration loading (Alloy, GeoChem, Soil, etc.)	30 min	Field Engineer
5. CRM Acceptance Testing	Accuracy verification on 3–5 certified reference materials	1–2 h	Field Engineer + Customer QA
6. Operator Training	Theory (XRF/OES methodology) + hands-on operation	4–8 h	Field Engineer
7. Documentation Handover	Commissioning certificate; calibration certificates; manuals	30 min	Field Engineer

2.2 Extended Setup Services (Optional)

Service	Description	Price (USD)
Non-Standard Matrix Calibration	Method development for specialty alloys (superalloys, refractory metals)	From \$850
LIMS / ERP Integration	Connection to SAP, LIMS, or equivalent systems	From \$1,200
Automated Reporting Setup	Branded report templates; PDF/Excel export; email distribution	From \$450
Network & Cloud Configuration	Wi-Fi/4G, remote access, cloud data storage setup	From \$350
Group Training (4–8 personnel)	Extended theory and practice with competency certificate	\$650

Section 3: Repair Services – Tiered Structure

3.1 Repair Tier Definitions

Tier	Description	Turnaround	Price Range (USD)
Tier 1 – Consumable Replacement	Prolene windows, batteries, filters, electrodes, seals	1–3 hours	\$80–\$450
Tier 2 – Component Replacement	Detector, tube, display, GPS, camera, mainboard	1–3 days	\$2,800–\$14,500
Tier 3 – Restorative Repair	Power board repair, optical restoration, CCD reballing	5–14 days	\$1,800–\$8,500
Tier 4 – Major Overhaul	Full rebuild; all worn components; full recalibration	14–30 days	\$6,500–\$21,000
Tier 5 – Emergency Field Repair	Emergency engineer dispatch; detector/tube replacement on-site	24–72 hours	\$950–\$16,500

3.2 Common Faults & Repair Costs — Portable XRF

Symptom	Probable Cause	Resolution	Price (USD)
"No spectrum" / tube fails to fire	X-ray tube failure	Tube replacement; voltage tuning	\$4,800–\$8,200
Blurred peaks, degraded resolution	SDD detector degradation	Detector replacement; recalibration	\$9,200–\$13,500
Software hangs, error codes	Software corruption / outdated version	Reinstallation; firmware update	\$150–\$350

Symptom	Probable Cause	Resolution	Price (USD)
Inaccurate results on CRMs	Drifted energy calibration	Recalibration against CRMs; stability check	\$250–\$550
Unit does not power on / charge	Battery wear / charger fault	Battery/charger replacement	\$180–\$340
Housing cracks	Impact / drop damage	Housing replacement; optical inspection	\$450–\$850
Contaminated detector window	Worn Prolene without replacement	Window replacement; cleaning; inspection	\$80–\$180

3.3 Common Faults & Repair Costs — Stationary OES

Symptom	Probable Cause	Resolution	Price (USD)
High background, excessive noise	Spark stand contamination; worn electrodes	Stand cleaning; electrode replacement; argon purge	\$150–\$350
Results drift	Optical thermal drift; grating degradation	Thermal stabilization; alignment; grating replacement	\$850–\$18,500
No arc / weak spark	Generator fault; capacitor wear	Generator diagnostics; component replacement	\$1,200–\$4,500
CCD errors (dead pixels)	CCD array degradation	CCD replacement; recalibration	\$8,750–\$10,500
Increased argon consumption	System leak; seal degradation	Leak diagnostics; seal replacement	\$120–\$280
No vacuum (for 130 nm systems)	Vacuum pump fault; seal failure	Pump repair/replacement; vacuum verification	\$450–\$1,200

Section 4: Remote Diagnostics

4.1 Remote Diagnostic Service Menu

Service	Description	Duration	Price (USD)
Software Health Check	Version verification; update availability; log analysis	30 min	\$150
Spectral Data Analysis	Peak shape evaluation; resolution; background noise from uploaded spectra	1 h	\$180

Service	Description	Duration	Price (USD)
Calibration Verification	Customer results vs. certified CRMs; drift assessment	1–2 h	\$250
Parameter Optimization	Remote gain, acquisition time, filter adjustment	30 min	\$150
Comprehensive Diagnostic + Report	Full system check with written technical report	2–4 h	\$350
Emergency After-Hours Diagnostic	Evening / night / weekend sessions	1–2 h	\$550

4.2 Secure Remote Connection Protocols

Protocol	Requirements	Security
Vanta Connect API	Ethernet / Wi-Fi, port 443, HTTPS	TLS 1.3 encryption; certificate-based authentication
Bruker Instrument Toolbox Remote	Wi-Fi / 4G / Ethernet	VPN tunnel; two-factor authentication
TeamViewer / AnyDesk	Windows PC connected to analyzer	Standard session encryption; session password
SSH / FTP (OES)	Local network; spectrum file access	Key-based authentication; firewall rules

Privacy & Compliance: All remote diagnostic sessions require written customer authorization. Access logs are retained for 12 months. Customer data is not disclosed to third parties. Sessions comply with GDPR (EU), CCPA (California), and local data protection regulations.

Section 5: Calibration & Metrological Services

5.1 Instrument Calibration

Instrument Type	Recommended Interval	Price (USD)	Accreditation
Portable XRF (Vanta, TITAN, etc.)	Every 12 months	\$350–\$550	NIST-traceable; ISO 17025 available
Benchtop XRF (GX, NEX QC, Epsilon)	Every 12 months	\$450–\$650	NIST-traceable; ISO 17025 available
OES Spectrometer (Q4, ARL, PMI-MASTER)	Every 12 months	\$550–\$850	NIST-traceable; DAkkS crossover available

Instrument Type	Recommended Interval	Price (USD)	Accreditation
Mobile OES (PMI-MASTER)	Every 12 months	\$450– \$650	NIST-traceable; ISO 17025 available

5.2 Method Development & Validation

Service	Description	Price (USD)
Measurement Method Development	Documented Standard Operating Procedure (SOP) for custom matrices	From \$1,200
Method Validation for Accreditation	Repeatability, reproducibility, bias studies; documentation package	From \$850
Internal QA Documentation	Reproducibility protocols; sign-off by QA manager	\$350
Audit Support Package	Assistance during external accreditation audits (ISO 17025, IATF, AS9100)	\$750

Section 6: Annual Service Contracts (SLA-Based)

6.1 Bronze Contract — Base Protection

Included	Quantity	Annual Price (USD)
Planned Maintenance (2x per year)	2 site visits	—
Consumables Replacement (Prolene, electrodes, seals)	Per standard schedule	—
Remote Diagnostics	6 sessions	—
Priority Support Line	Phone + email	—
Total		\$1,950

6.2 Silver Contract — Professional Protection

Included	Quantity	Annual Price (USD)
All Bronze services	—	—
Detector Replacement (on wear indication)	1 unit	—
X-Ray Tube Replacement (on wear indication)	1 unit	—
Calibration / Verification	1 cycle	—
Emergency Engineer Dispatch	2 incidents	—

Included	Quantity	Annual Price (USD)
New Operator Training	1 session (up to 3 personnel)	—
Total		\$4,850

6.3 Gold Contract — Enterprise Protection

Included	Quantity	Annual Price (USD)
All Silver services	—	—
Full Equipment Insurance	Theft / damage coverage	—
Unlimited Component Replacement	No additional charge	—
24/7/365 Emergency Dispatch	Unlimited incidents	—
Loaner Instrument During Repair	Available	—
Full Metrological Support	Complete	—
Total		\$12,500

Contact Information

Channel	Contact
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For all inquiries, please reach out via the contacts on our website: www.metal-asia.pw

Service catalog valid April 2025. Parts availability confirmed at time of inquiry. All prices in USD, inclusive of standard depot service. Extended warranty and insurance terms available upon request. Payment terms: Net 30 for corporate accounts.