

Commercial Proposal for the Supply of Portable XRF Metal and Alloy Analyzers

Direct shipments from China for industrial enterprises in Russia, Kazakhstan, Belarus, Ukraine, and CIS countries

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Supplier Company: Metal-Asia.pw — Direct industrial equipment shipments from China

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1. Customer Challenges and Our Solutions

1.1. Typical Problems When Supplying Metal Analyzers from China

Industrial enterprises in Chelyabinsk, Magnitogorsk, Novokuznetsk, Astana, Almaty, Minsk, Dnipro, and other industrial centers across the CIS face the following systemic problems when purchasing portable XRF analyzers directly from China:

Problem	Consequences for the Customer	Our Solution
Lack of factory calibration for GSO RF/EAEU standards	Inaccurate analysis results, rejection by SRO and Rostekhnadzor	Pre-sale calibration at the manufacturing plant with certificates
Counterfeit SDD detectors (instead of original ones)	Resolution of 200+ eV instead of 140 eV, inability to detect light elements	FAT inspection at the factory with spectrometer verification of the detector

Problem	Consequences for the Customer	Our Solution
Incorrect customs classification (HS code)	Overpayment of 15-20% in duties, customs delays	Correct declaration under code 9027 30 000 0, full documentation package
Lack of localized software	Operator errors, low productivity, emergency situations	Pre-installed Russian-language interface + training
Inability to calibrate in the RF	Equipment downtime, trips to Europe/USA	Remote calibration + engineer dispatch to CIS countries
Hidden intermediary commissions	Overpayment of 15-30% of equipment cost	Direct contract with the factory, fixed margin of 8-12%
Lack of after-sales support	Extended downtime, lack of spare parts	Spare parts warehouse in China, courier delivery in 5-7 days

1.2. B2B / B2C Customer Profiles

B2B Segment:

- Ferrous and non-ferrous metallurgical plants (MMK, NLMK, AMT, Kazchrome)
- Oil and gas enterprises (Transneft, KazMunayGas, Belaruskali)
- Aviation and machinery manufacturing plants (Uralvagonzavod, Antonov, MAZ)
- Metal scrap recycling enterprises (Evraz, Metalloinvest)
- Pipe and section rolling mills (TMK, CHTPZ, Severstal)
- State reserves and customs warehouses

B2C Segment:

- Jewelry workshops and pawnshops
- Precious metal buyers
- Private geologists and prospecting associations
- Catalytic converter repair service centers
- Independent quality control laboratories

1.3. Unique Selling Proposition (USP)

Metal-Asia.pw offers not just equipment supply, but a comprehensive turnkey solution:

- Direct contracts with 4 certified factories in China (no intermediaries in the RF)
- Mandatory FAT inspection of each device before shipment
- Software localization and calibration for GOST/ASTM/DIN alloy databases
- Full foreign trade support, GTD, 20% VAT
- Service contracts for 12/24/36 months with remote diagnostics
- Spare parts warehouse in China: SDD detectors, X-ray tubes, batteries, screens

2. Technical Product Range of Portable XRF Analyzers

2.1. Bruker S1 TITAN Series

The Bruker S1 TITAN is the flagship series of German portable XRF analyzers, manufactured at Bruker's factory in China. Three modifications for different tasks:

2.1.1. Bruker S1 TITAN 500

Parameter	Value
Analysis Method	Energy Dispersive X-ray Fluorescence (ED-XRF)
Elemental Range	From Sulfur (S, Z=16) to Uranium (U, Z=92)
Detector	Graphene window Silicon Drift Detector (SDD), 20 mm ²
Detector Resolution	< 155 eV @ Mn K-alpha, 450,000 cps
X-ray Tube	50 kV, 200 μA, Ag anode (end window)
Collimator	8 mm (standard), optional 5 mm
Device Weight	1.44 kg (with battery)
Dimensions	250 x 280 x 90 mm
Display	Color TFT, 3.5 inch, touchscreen
Protection	IP54, operating temperature -10°C to +50°C
Analysis Time	1-60 seconds (automatic selection)
Alloy Database	> 350,000 records, including GOST, ASTM, DIN, JIS
Memory	8 GB built-in, expandable via USB
Connectivity	USB 2.0, Bluetooth, Wi-Fi 802.11 b/g/n
Battery	Li-ion, 6800 mAh, up to 10 hours of operation
Standard Calibrations	Alloy Plus (alloys), General Chemistry
Price FOB Shanghai	from 18,500 USD
Application	Alloy identification PMI, scrap sorting, incoming inspection without light elements

2.1.2. Bruker S1 TITAN 500S

Parameter	Value
Analysis Method	ED-XRF with enhanced light element sensitivity
Elemental Range	From Magnesium (Mg, Z=12) to Uranium (U, Z=92)
Detector	Graphene SDD, 20 mm ² , enhanced sensitivity

Parameter	Value
Detector Resolution	< 145 eV @ Mn K-alpha, 450,000 cps
X-ray Tube	50 kV, 200 μ A, Rh or W anode
Collimator	8 mm (standard), optional 5 mm, 3 mm
Device Weight	1.49 kg (with battery)
Dimensions	250 x 280 x 90 mm
Display	Color TFT, 3.5 inch, touchscreen
Protection	IP54, operating temperature -10°C to +50°C
Analysis Time	1-60 seconds, SMART Grade mode
Alloy Database	> 350,000 records, including GOST, ASTM, DIN, JIS
Memory	16 GB built-in
Connectivity	USB 2.0, Bluetooth, Wi-Fi
Battery	Li-ion, 6800 mAh, up to 10 hours
Standard Calibrations	Alloy Plus, Mg-Al-Si, General Chemistry
Price FOB Shanghai	from 22,000 USD
Application	PMI with Mg, Al, Si determination; aluminum alloys; Ti, Mg alloys

2.1.3. Bruker S1 TITAN 800 (FLAGSHIP)

Parameter	Value
Analysis Method	Premium-class ED-XRF
Elemental Range	From Magnesium (Mg, Z=12) to Uranium (U, Z=92)
Detector	Graphene window SDD with TITAN Detector Shield (TDS), 20 mm ²
Detector Resolution	< 140 eV @ Mn K-alpha, 500,000 cps
X-ray Tube	50 kV, 200 μ A, Rh anode
Collimator	8 mm (standard), optional 5 mm, 3 mm (Small Spot)
Device Weight	1.50 kg (with battery)
Dimensions	250 x 280 x 90 mm
Display	Color TFT, 3.5 inch, touchscreen, anti-glare
Protection	IP54, MIL-STD-810G, temperature -20°C to +50°C
Built-in Camera	5 MP, autofocus, sample photo recording
Analysis Time	1-60 seconds, adaptive SMART Grade

Parameter	Value
Alloy Database	> 350,000 records, custom libraries
Memory	32 GB + microSD up to 128 GB
Connectivity	USB 3.0, Bluetooth 4.0, Wi-Fi ac, GPS
Battery	Li-ion, 6800 mAh, up to 12 hours (2 batteries included)
Standard Calibrations	Alloy Plus, Mg-Al-Si, Precious Metals, General Chemistry
Additional Options	Stand, printer, barcode scanner, Peli backpack
Price FOB Shanghai	from 27,000 USD
Application	Premium PMI, precious metal analysis, jewelry, catalytic converters, RoHS, geology

2.2. Bruker CTX Series (CounterTop XRF)

The CTX is a portable benchtop XRF analyzer for laboratories and production facilities:

Parameter	CTX 500	CTX 800
Analysis Method	Stationary/portable ED-XRF	Premium ED-XRF
Elemental Range	S (16) - U (92)	Mg (12) - U (92)
Detector	Graphene window SDD, 20 mm ²	Graphene window SDD, 20 mm ²
Resolution	< 155 eV	< 140 eV
X-ray Tube	50 kV, 200 μ A, W anode	50 kV, 200 μ A, Rh anode
Simultaneous Analysis	Up to 48 elements	Up to 48 elements
Detection Limit	1-500 ppm	0.5-500 ppm
Weight	7.0 kg	7.1 kg
Dimensions	140 x 250 x 300 mm	140 x 250 x 300 mm
Protection	Splash-proof, stainless steel construction	IP54, stainless steel construction
Interlocks	2 independent (lid + sample sensor)	2 interlocks + TDS
Power Supply	Battery/mains 110-220V	Battery/mains 110-220V
Software	Bruker Instrument Toolbox + PC suite	Bruker Instrument Toolbox + PC suite
Price FOB Shanghai	from 12,500 USD	from 16,800 USD
Application	Laboratory control of slag, cement, ferroalloys, ores	Full analysis with light elements, research

2.3. Competing Models from China (Hitachi, Thermo, SciAps)

For comparison and alternative selection:

Model	Manufacturer	Type	Elemental Range	SDD Resolution	Price FOB, USD
X-MET 8000 Smart	Hitachi High-Tech	Portable XRF	Ti-U	< 170 eV	15,500
X-MET 8000 Optimum	Hitachi High-Tech	Portable XRF	Mg-U	< 150 eV	21,800
X-MET 8000 Expert Geo	Hitachi High-Tech	Portable XRF	Mg-U	< 140 eV	28,500
Vanta Element	Evident (Olympus)	Portable XRF	Ti-U	< 185 eV	14,200
Vanta C	Evident (Olympus)	Portable XRF	Mg-U	< 145 eV	24,500
Niton XL2 100G	Thermo Scientific	Portable XRF	Ti-U	< 190 eV	13,800
Niton XL3t 950	Thermo Scientific	Portable XRF	Mg-U	< 145 eV	26,000
SciAps X-550	SciAps	Portable XRF	Mg-U	< 135 eV	19,500
SciAps X-505	SciAps	Portable XRF	Mg-U	< 140 eV	22,000

3. Comparative Model Specifications Table

3.1. Portable XRF Analyzers (Handheld)

Criterion	Bruker S1 TITAN 500	Bruker S1 TITAN 500S	Bruker S1 TITAN 800
Light Elements (Mg, Al, Si)	No	Yes	Yes (optimal)
SDD Resolution, eV	< 155	< 145	< 140
Maximum Count Rate, cps	450K	450K	500K
TITAN Detector Shield	No	Yes	Yes (guaranteed)
Small Spot (3 mm)	No	Option	Option

Criterion	Bruker S1 TITAN 500	Bruker S1 TITAN 500S	Bruker S1 TITAN 800
GPS	No	No	Built-in
Camera	No	No	5 MP
Wi-Fi	Yes	Yes	Wi-Fi ac
Operating Temperature	-10...+50°C	-10...+50°C	-20...+50°C
Battery Operating Time	8 hours	10 hours	12 hours
Weight	1.44 kg	1.49 kg	1.50 kg
Price from	18,500 USD	22,000 USD	27,000 USD
Recommended Profile	Scrap sorting, basic PMI	PMI aluminum, titanium, magnesium	Premium PMI, precious metals, geology

4. Delivery Specifications and Configuration

4.1. Standard Configuration (Each Model)

Item	Quantity	Description
XRF Analyzer	1 pc.	Main unit with Alloy Plus calibration
Li-ion Battery	2 pcs.	6800 mAh (for 800), 1 pc. (for 500/500S)
Charger	1 pc.	Universal 110-220V
USB Cable	1 pc.	For synchronization and charging
Pelican Case	1 pc.	Shockproof transport case
Software	1 license	Bruker Instrument Toolbox (Windows)
User Manual	1 pc.	In Russian (PDF + printed)
Calibration Certificate	1 pc.	With device serial number
Warranty Card	1 pc.	12 months international warranty
Calibration Standards	1 set	Set of 3-5 reference samples

4.2. Options and Extensions

Option	Price, USD	Description
Precious Metals Calibration	+ 2,800	Analysis of Au, Ag, Pt, Pd, Rh in jewelry alloys
Geo Calibration	+ 3,200	Geological standards, ores, cores

Option	Price, USD	Description
RoHS Calibration	+ 1,900	Determination of Cd, Pb, Hg, Cr6+, Br, PBB
Catalytic Calibration	+ 2,400	Pt, Pd, Rh in automotive catalytic converters
Small Spot Collimator 3 mm	+ 850	Analysis of small components and welds
External Bluetooth Printer	+ 320	Thermal printer for protocol printing
Desktop Stand	+ 450	For stationary use
Field Backpack	+ 180	Ergonomic backpack with mount
Spare Battery	+ 240	Additional Li-ion battery
Extended Warranty 24 months	+ 1,800	+12 months to standard warranty
Extended Warranty 36 months	+ 3,200	+24 months to standard warranty
Bruker SmartReport Pro Software	+ 1,500	Advanced report generator with GOST templates

5. Customs Clearance and HS Code Classification

5.1. EAEU HS Code

HS Code	Name	EAEU Import Duty Rate	VAT
9027 30 000 0	Spectrometers, spectrophotometers and spectrographs operating by optical radiation	0%	20%

Additional codes for components:

HS Code	Name
9027 90 500 0	Parts and accessories for spectrometers
8507 60 000 0	Lithium-ion batteries
8471 80 000 0	Control units with processor
9006 91 000 0	Photographic apparatus parts
8540 11 000 0	X-ray tubes (radiation sources)

5.2. Required Customs Documentation

1. Purchase Agreement (in English)
2. Commercial Invoice with serial numbers
3. Packing List
4. Certificate of Origin (Form ST-1 or standard)
5. Accompanying Specification Sheet with technical parameters
6. China Export License (if required)

7. Certificate of Conformity — prepared in the RF

8. Test Report for Rosaccreditation

5.3. Customs Clearance Timeline and Cost (RF Example)

Stage	Timeline	Cost
Document Preparation	3-5 business days	Included in cost
Delivery to EAEU Border	12-18 days	800-1,200 USD
Customs Clearance	3-5 business days	500-700 USD
Certification (if required)	14-21 days	1,500-3,000 USD
Delivery to Client	3-7 days	Per carrier rates
Total	25-35 days	2,800-5,200 USD

Important: For importing XRF analyzers, a permit from the Federal Service for Environmental, Technological and Nuclear Supervision (Rostekhnadzor) is required due to the presence of an X-ray tube. We assist in obtaining this permit.

6. Maintenance and Technical Support Services

6.1. List of Service Services

Service	Description	Completion Time	Price
Spare Parts for Analyzers			
SDD Detector (replacement)	Original graphene SDD Bruker	7-14 days on order	3,500-6,500 USD
X-ray Tube	Original Ag/Rh/W 50 kV tube	7-14 days on order	1,800-3,200 USD
Li-ion Battery	Original 6800 mAh	In stock	240-360 USD
Display Screen	TFT display replacement	10-14 days	280-450 USD
Control Board	Main board replacement	14-21 days	800-1,400 USD
Calibration			
Factory Calibration	On reference samples	3-5 days	Included in delivery
Alloy Database Addition	Loading GOST, ASTM, DIN, JIS	1-2 days	200-400 USD
Custom Calibration	For specific customer matrix	5-7 days	800-1,500 USD

Service	Description	Completion Time	Price
Software Update	Latest Bruker version installation	1 day	100-200 USD
Interface Localization	Menu and report translation	1-2 days	150-300 USD
Repair			
Fault Diagnosis	Full hardware diagnostics	1-2 days	100 USD
Detector Replacement	With calibration and certificate	3-5 days	from 4,000 USD
Tube Replacement	With power adjustment	2-3 days	from 2,500 USD
Control Board Repair	Component repair or replacement	5-10 days	from 600 USD
Case Resealing	IP54 restoration	2-3 days	200-350 USD
Device Verification	With certificate issuance	3-5 days	400-700 USD
Remote Diagnostics			
Device Connection	Via Wi-Fi/4G with client permission	Same day	Free
Spectrum Analysis	Spectrogram analysis by engineer	1-2 hours	Free
Operator Consultation	Training, error analysis	On request	Free
Remote Calibration	Calibration curve correction	2-3 hours	200 USD
Alloy Database Update	Loading new steel grades	1 hour	100 USD

6.2. Service Packages

Package	Silver	Gold	Platinum
Annual Cost	1,200 USD	2,400 USD	4,800 USD
Remote Diagnostics	Unlimited	Unlimited	Unlimited
Engineer Dispatch to CIS	1 time	2 times	4 times
Spare Parts Discount	10%	20%	30%
Urgent Spare Parts Delivery	10-14 days	7-10 days	3-5 days
Repair Warranty	3 months	6 months	12 months
Queue Priority	Standard	Elevated	Maximum
Dedicated Manager	No	Yes	Yes
Quarterly Audit	No	Yes	Yes

7. Delivery, Payment, and Logistics Terms

7.1. Delivery Terms (Incoterms 2020)

Option	Term	Description
Standard	FOB Shanghai	Delivery to Shanghai port, loading on vessel
Optimal	CIP [client city]	Delivery to terminal in client's city
Turnkey	DAP [client warehouse]	Delivery to client warehouse with customs clearance

7.2. Payment Terms

Option	Terms	Discount/Surcharge
100% Prepayment	Full payment before shipment	3% discount
50/50	50% advance, 50% before customs	Standard price
Letter of Credit	Uncovered letter of credit at Chinese bank	+ 2%
Leasing	Through RF/KZ leasing companies	Per lessor rates

7.3. Logistics Routes

Destination	Route	Delivery Time
Moscow, St. Petersburg	Shanghai — Vladivostok — railway — Moscow	25-30 days
Chelyabinsk, Yekaterinburg	Shanghai — Zabaikalsk — auto	20-25 days
Novosibirsk	Shanghai — Vladivostok — railway — Novosibirsk	22-28 days
Almaty, Astana	Shanghai — Khorgos — auto	12-18 days
Minsk	Shanghai — Brest — auto	18-25 days
Kyiv, Dnipro	Shanghai — Odesa — auto	30-40 days

8. Warranty Obligations

8.1. Standard Warranty

- Warranty period: 12 months from the date of goods transfer
- Warranty covers manufacturing defects in construction, detector, X-ray tube, and electronics
- Warranty does not cover mechanical damage, liquid ingress, unauthorized repair
- Replacement of defective components at supplier's expense

8.2. Extended Warranty (Option)

- Gold: +12 months (total 24 months) — 1,800 USD
- Platinum: +24 months (total 36 months) — 3,200 USD

- Extended warranty includes annual verification and replacement of worn components
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9. Contact Information

For all questions regarding supply, technical specifications, after-sales service, and pricing, please contact us at our website www.metal-asia.pw:

Customer Relations Department:

- **WhatsApp:** +86 132 50100874
- **Telegram:** @China_metal_supply
- **Email:** zakaz@metal-asia.pw
- **Official Website:** www.metal-asia.pw

Sales Department Working Hours: Monday — Friday: 9:00 AM to 6:00 PM Beijing Time (MSK+5, ALM+2)

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10. SEO Map and Semantic Core

10.1. Primary Keywords (High Frequency)

- portable metal analyzer buy
- XRF alloy analyzer price
- Bruker S1 TITAN buy in Russia
- PMI metal analyzer portable
- XRF spectrometer for scrap metal

10.2. Geotargeting Keywords (Medium Frequency)

- metal analyzer buy in Chelyabinsk
- XRF analyzer delivery to Kazakhstan
- portable spectrometer for metallurgy Magnitogorsk
- alloy analyzer for Novokuznetsk
- PMI analyzer delivery to Belarus

10.3. Long-tail Keywords

- Bruker S1 TITAN 800 technical specifications price
 - where to buy XRF analyzer with delivery to CIS
 - portable metal analyzer after-sales service
 - Bruker XRF spare parts SDD detector buy
 - metal analyzer calibration remotely via internet
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Upon request or price list change