

DISTRIBUTION TRANSFORMER PORTFOLIO

TRANSFORMER PRODUCTS

Commercial Proposal | 2026

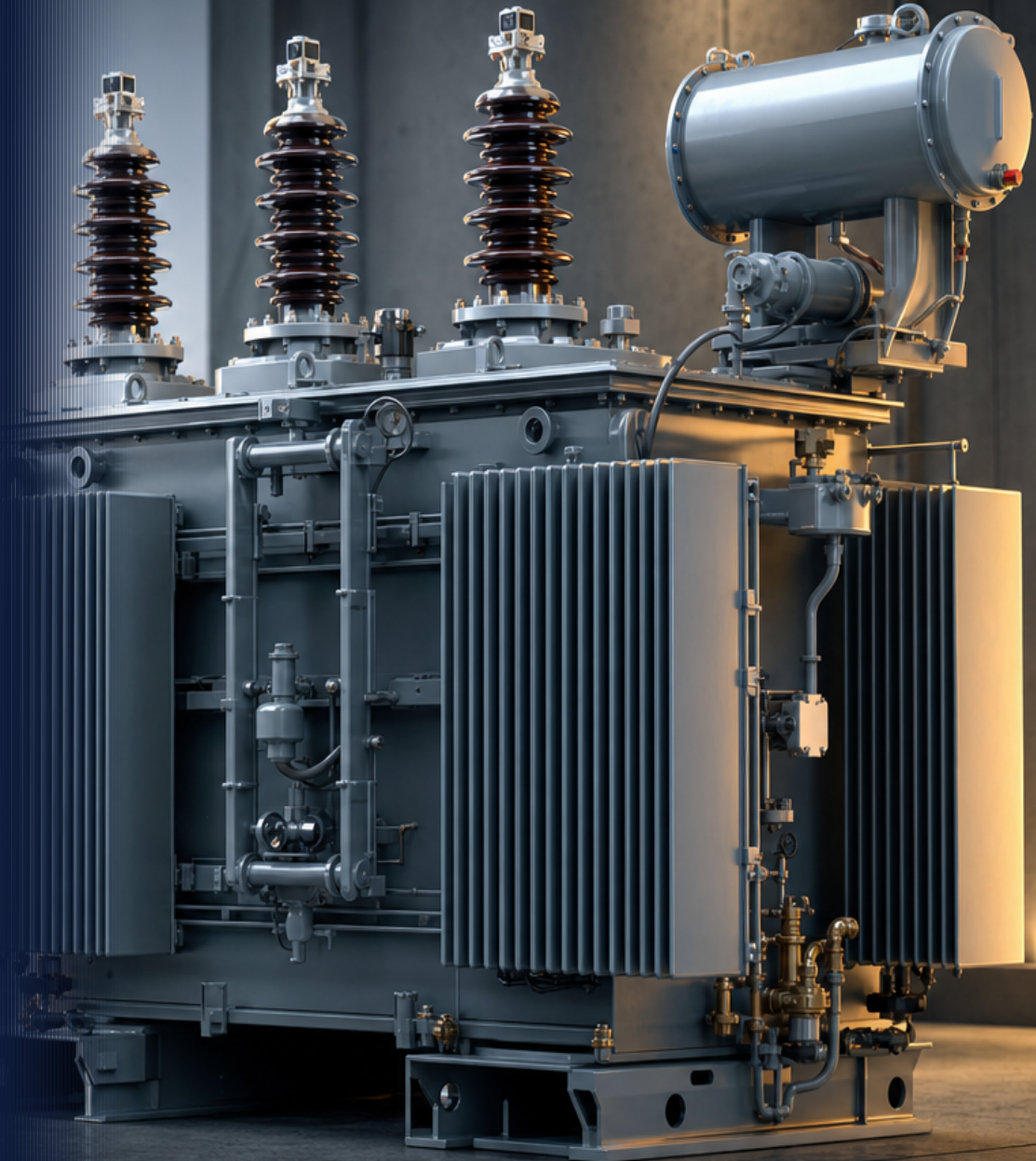
Professional, reliable, and efficient power equipment solutions for utilities, EPC contractors, and industrial infrastructure projects worldwide.

62 PRODUCT REFS
26,199 UNITS
\$56.1M VALUE

PRODUCT FAMILIES

- OIL-IMMERSED
- PAD-MOUNTED
- POLE-MOUNTED
- UNDERGROUND
- WEATHERPROOF
- OEM/ODM

GLOBAL DISTRIBUTION & PROJECT SUPPLY
MIDDLE EAST • AFRICA • LATIN AMERICA • ASIA-PACIFIC





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A structured commercial proposal covering FGK's transformer product line, manufacturing capabilities, and commercial offer.

01 COMPANY INTRODUCTION & COOPERATION MODEL

- Foshan Gaochen Kuaiyu Technology Co., Ltd. — FGK
- Manufacturing Partner Profile — Zhejiang ROOQ Electric
- Core Competencies, Standards & International Experience
- Business Advantages & Cooperation Framework

02 DISTRIBUTION TRANSFORMER PRODUCT LINE OVERVIEW

- Product Portfolio & Design Goals
- Major Product Categories — Single, Three-Phase, Pad, Pole, Underground
- Engineering, Quality, Testing & Customization
- Commercial Offer, Terms & Itemized Pricing



FOSHAN GAOCHEN KUAIYU TECHNOLOGY

FGK Group leads the international supply, sourcing, and project delivery of distribution transformer solutions for utilities, infrastructure, industrial, and energy clients worldwide.



PRODUCT SCOPE

Distribution transformers including single-phase, three-phase, pad-mounted, pole-mounted, underground/submersible, and weatherproof stainless steel configurations — customized to client voltage and capacity requirements.



TARGET INDUSTRIES

Power utilities, EPC contractors, renewable energy developers, oil & gas, mining, industrial parks, infrastructure projects, and government-led electrification programs across MENA, Latin America, Africa, Asia and beyond.



COMPANY ADVANTAGES

Integrated commercial-technical capability combining FGK's global trade infrastructure with established Chinese manufacturing partners. Single-point project ownership, multi-currency contracting, and full export logistics.

26,199

UNITS OFFERED

62

PRODUCT REFERENCES

\$56.1M

TOTAL CONTRACT VALUE

18

MONTHS PRODUCTION CAPACITY





01 | MANUFACTURING PARTNER

ZHEJIANG ROOQ ELECTRIC

FGK's principal manufacturing partner for distribution transformers — providing established production capacity, engineering depth, and certified quality systems.



MANUFACTURING PARTNER PROFILE

ZHEJIANG ROOQ ELECTRIC

FOUNDED

2008

REGISTERED CAPITAL

108 Million RMB

HEADQUARTERS

Yueqing, Zhejiang Province, China

CORE EXPERTISE

Distribution Transformer R&D and Manufacturing

PRODUCTION SCALE

Multi-line oil-immersed transformer facility

MARKET FOCUS

Domestic utilities & international export projects





EQUIPMENT & ENGINEERING CAPABILITY

Comprehensive in-house capability spanning the full equipment lifecycle — from design to delivery, with integrated engineering and after-sales support.



EQUIPMENT SERIES

- **Oil-Immersed Distribution Transformers**
Single & three-phase configurations, multiple capacity ranges
- **Pad-Mounted Transformers**
Compact ground-level enclosures for urban and commercial use
- **Pole-Mounted Transformers**
Suspended units for overhead distribution networks
- **Underground & Submersible Units**
Sealed designs for vault, manhole, and submerged applications
- **Weatherproof Stainless Steel**
Coastal, island, desert, and high-humidity environments
- **Custom Special-Voltage Configurations**
Project-specific OEM voltage and capacity engineering



ENGINEERING & SERVICE

- **Project Engineering Design**
Site-specific electrical and mechanical engineering
- **Voltage System Configuration**
Tailored primary/secondary voltage design
- **Quality Inspection & Testing**
Routine, type, and special factory acceptance testing
- **Export Packaging & Logistics**
FOB, CIF, and EPC-ready shipping coordination
- **Technical Documentation**
Datasheets, drawings, manuals, certificates of conformity
- **After-Sales Technical Support**
Installation guidance, troubleshooting, warranty support



CERTIFICATIONS & COMPLIANCE

Production aligned with international quality, safety, and environmental management standards required for global infrastructure projects.



ISO 9001

QUALITY MANAGEMENT SYSTEM

Comprehensive quality management framework governing design, manufacturing, inspection, and after-sales processes.



ISO 14001

ENVIRONMENTAL MANAGEMENT

Environmental responsibility standards covering production operations, waste reduction, and resource efficiency.



CE MARKING

EUROPEAN CONFORMITY

Compliance with applicable European directives for safety, electromagnetic compatibility, and product conformity.



EAC CERTIFICATE

EURASIAN CONFORMITY

Customs Union certification supporting export to Russia, Belarus, Kazakhstan, and broader Eurasian Economic Union markets.

QUALITY ASSURANCE FRAMEWORK

Full traceability across raw material sourcing, in-process inspections, factory acceptance testing, and final export packaging. All units delivered with conformity declarations, type test reports, and project-specific quality documentation.





GLOBAL PROJECT FOOTPRINT

Established export track record across multiple regions, with proven capability in voltage standards, climate adaptation, and project logistics for diverse markets.

01



CENTRAL ASIA

KAZAKHSTAN, UZBEKISTAN, KYRGYZSTAN

Power distribution and grid modernization projects across Central Asian republics, including utility-scale rollouts.

02



MIDDLE EAST

GCC, IRAQ, LEVANT, EGYPT

Energy infrastructure for utilities and EPC contractors — high-temperature and arid-climate adapted designs.

03



AFRICA

NORTH, WEST, EAST & SOUTHERN AFRICA

Rural electrification, industrial parks, and mining sector transformer supply across the African continent.

04



SOUTHEAST ASIA

INDONESIA, PHILIPPINES, VIETNAM, THAILAND

Tropical-climate, island, and coastal applications with humidity and corrosion-resistant configurations.

05



SOUTH AMERICA

MEXICO, CENTRAL AMERICA, ANDEAN REGION

Latin American voltage standards (120/240V, 220Y/127V, 13.2-34.5kV) — pad-mounted and pole-mounted supply.





COMMERCIAL & OPERATIONAL STRENGTHS

Six structural advantages that position FGK as a trusted long-term supplier for distribution transformer requirements.



COST EFFECTIVENESS

Direct factory-to-project supply chain eliminates intermediary margins, delivering competitive pricing without compromising specification or quality.



FLEXIBLE CUSTOMIZATION

Project-specific voltage, capacity, accessory, and enclosure configurations engineered to match exact site and grid requirements.



PRAGMATIC ENGINEERING

Design philosophy centered on real-world reliability, serviceability, and lifecycle economics — not over-specification.



EFFICIENT DELIVERY

Established production scheduling, export packaging, and freight coordination ensuring predictable project timelines.



EXPORT EXPERIENCE

Track record spanning Central Asia, Middle East, Africa, Southeast Asia, and Latin America — proven multi-jurisdictional logistics.



CUSTOMER SUPPORT

Dedicated commercial-technical interface, responsive issue resolution, and warranty support across the project lifecycle.



DESIGN GOALS & PORTFOLIO

FGK's transformer portfolio is engineered around three foundational principles — reliability, efficiency, and adaptability to diverse operating environments.



DESIGN GOALS

RELIABLE | EFFICIENT | ADAPTABLE

FGK transformers are designed for long service life, low total cost of ownership, and operation in challenging environments — from desert heat and coastal humidity to high-altitude and grid-instability conditions. Every unit prioritizes electrical efficiency and mechanical durability.

PRODUCT PORTFOLIO

FULL DISTRIBUTION RANGE

Single-phase and three-phase oil-immersed transformers; pad-mounted, pole-mounted, underground, and submersible configurations; weatherproof stainless steel enclosures; and fully customized OEM voltage and capacity designs for project-specific requirements.



OIL-IMMERSED DISTRIBUTION TRANSFORMERS

The cornerstone of FGK's transformer business — oil-immersed distribution units engineered for utility-grade reliability across global voltage and climate standards.

OIL-IMMERSED PLATFORM

WHY OIL-IMMERSED?

- **Superior Cooling Performance**
Mineral oil dielectric absorbs heat efficiently for sustained loading.
- **Robust Insulation System**
Liquid-paper insulation handles high voltage stress and transient surges.
- **Extended Service Life**
Proven 25-40 year operational lifespan with proper maintenance.
- **Lower Lifecycle Cost**
Lower per-kVA cost than dry-type alternatives across most ratings.
- **Outdoor & Severe Climate Ready**
Sealed tank construction suited to dust, humidity, and temperature swings.
- **Standardized Maintenance**
Globally familiar service procedures supported by available spare parts.





EIGHT CORE PRODUCT FAMILIES

FGK supplies eight distinct transformer families — each engineered for specific application environments and grid requirements.



SINGLE-PHASE

Residential, rural & light commercial distribution



THREE-PHASE

Commercial, industrial & utility distribution



POLE-MOUNTED

Overhead line-suspended distribution units



PAD-MOUNTED

Ground-level enclosure for urban networks



UNDERGROUND

Vault and manhole-installed sealed units



SUBMERSIBLE

Fully sealed for submerged or flood-prone sites



WEATHERPROOF STAINLESS

Coastal, island, desert corrosion-resistant



CUSTOM SPECIAL VOLTAGE

OEM voltage & capacity engineering



02 | SINGLE-PHASE SERIES

SINGLE-PHASE TRANSFORMER SERIES

Compact, cost-efficient distribution units optimized for residential, rural electrification, and light commercial applications.



SINGLE-PHASE SERIES

KEY CHARACTERISTICS

TYPICAL CAPACITY RANGE

10 - 100 kVA

PRIMARY VOLTAGE STANDARDS

13.2 kV / 22.86 kV / 33 kV

SECONDARY VOLTAGE

120 / 240 V

COMMON APPLICATIONS

Rural distribution, residential service drops, light commercial loads

MOUNTING OPTIONS

Pole-mounted, pad-mounted, conventional or self-protected (SP/SS) variants

STANDARDS COMPLIANCE

ANSI / IEC equivalents — configurable per project requirement





02 | THREE-PHASE SERIES

THREE-PHASE TRANSFORMER SERIES

Workhorse units for commercial, industrial, and utility-scale distribution — engineered for sustained loading across a wide capacity range.



THREE-PHASE SERIES

KEY CHARACTERISTICS

TYPICAL CAPACITY RANGE

15 - 500 kVA (extendable to 2,500 kVA)

PRIMARY VOLTAGE STANDARDS

13.2 / 22.86 / 23 / 33 / 34.5 kV

SECONDARY VOLTAGE

220Y/127 V (configurable per project)

COMMON APPLICATIONS

Commercial complexes, industrial parks, municipal distribution, mining sites

CONFIGURATIONS

Conventional, self-protected (SP), self-protected current-limiting (SPCA), pad-mounted (SS)

CONNECTION GROUPS

Dyn11 standard — alternative vector groups available on request





POLE-MOUNTED DISTRIBUTION UNITS

Suspended overhead distribution transformers — the global standard for low-density rural networks and overhead utility distribution.



COMPACT FOOTPRINT

Optimized weight and size for safe and economical pole-top installation.



SEALED TANK CONSTRUCTION

Hermetically sealed designs minimize oil contamination and field service intervention.



INTEGRATED PROTECTION

Lightning arresters, fuse cut-outs, and overload protection available as standard or factory-fitted options.



INTERNATIONAL VOLTAGES

Configurable for 13.2 / 22.86 / 33 kV primary across regional standards.



SERVICE FRIENDLY

Standardized mounting interfaces simplify replacement and field operations.



COST-OPTIMIZED

Lowest total installed cost for low-load-density distribution networks.



PAD-MOUNTED DISTRIBUTION UNITS

Compact ground-level enclosures designed for urban, residential, and commercial underground distribution networks where overhead lines are not permitted.



PAD-MOUNTED PLATFORM

DESIGN HIGHLIGHTS

- Tamper-resistant enclosure with hex-head lockable doors
- Dead-front bushing system for operator safety
- Loadbreak / non-loadbreak elbow connectors per project spec
- Integrated grounding system and oil-containment design
- Compatible with underground cable distribution networks
- Available in radial-feed and loop-feed switching configurations
- Color and finish customizable to utility specifications



UNDERGROUND & SUBMERSIBLE MODELS

Sealed transformer configurations for vault installations, manhole deployments, and flood-prone or submerged operating environments.



UNDERGROUND VAULT UNITS

Engineered for installation in concrete vaults and underground rooms. Sealed tank construction with stainless steel components for long service life in below-grade environments.



SUBMERSIBLE DESIGNS

Fully sealed enclosure capable of intermittent or sustained submerged operation — ideal for flood-prone urban areas, harbor facilities, and coastal infrastructure.



COMPACT MANHOLE FORMAT

Reduced-footprint variants designed to fit standard utility manhole and pit dimensions, simplifying urban distribution upgrades and retrofits.



SPECIALTY MATERIALS

Stainless steel tank construction, marine-grade coatings, and corrosion-resistant fittings ensure extended service life in aggressive environments.



OPERATING RANGE & VOLTAGE STANDARDS

FGK transformers cover the full distribution voltage and capacity spectrum required for utility and industrial applications worldwide.



CAPACITY RANGE

10 kVA — 500+ kVA

SINGLE-PHASE

10 • 15 • 25 • 37.5 • 50 • 75 • 100 kVA

THREE-PHASE STANDARD

15 • 30 • 45 • 75 • 112.5 • 150 kVA

THREE-PHASE HEAVY

225 • 300 • 500 kVA

EXTENDED CAPACITY

Higher capacities (up to 2,500 kVA) on project basis



VOLTAGE STANDARDS

13.2 — 34.5 kV PRIMARY

PRIMARY VOLTAGE

13.2 • 22.86 • 23 • 33 • 34.5 kV

SECONDARY VOLTAGE

120 / 240 V (single-phase) • 220Y/127 V (three-phase)

CONNECTION VARIANTS

Wye-grounded, delta-wye, dual-secondary

CUSTOM CONFIGURATIONS

Project-specific voltage ratios available on request



ENGINEERING & MANUFACTURING QUALITY

Seven engineering disciplines combine to deliver transformer units that meet the most demanding utility and industrial reliability requirements.



MAGNETIC CORE

High-grade grain-oriented silicon steel with low-loss laminations and step-lap construction for minimal no-load losses.



WINDINGS

Copper conductor windings, precision-wound and electrically tested. Optional aluminum on cost-sensitive ratings.



INSULATION SYSTEM

Class A insulation with kraft paper and mineral oil dielectric — IEC and ANSI compliant insulation coordination.



STEEL TANK

Welded steel construction, pressure-tested for leak integrity. Stiffened design for transport and lifting.



SURFACE FINISHING

Multi-stage surface preparation, primer, and powder coating. Optional marine-grade finish for coastal environments.



BUSHINGS & ACCESSORIES

Porcelain or polymer bushings; off-circuit tap changers; pressure relief valves; thermometers, oil-level gauges.



MECHANICAL STRENGTH

Short-circuit withstand and mechanical resilience engineered to IEC 60076 and equivalent ANSI standards.



FUNCTIONAL ACCESSORIES & OPTIONS

Configurable accessory packages allowing FGK transformers to be tailored to specific project, environmental, and operational requirements.



CORE PROTECTION

- Lightning arresters (gapless metal-oxide)
- High-voltage fuse cut-outs
- Pressure relief valves
- Surge protection devices
- Earthing terminal blocks



CONDITION MONITORING

- Oil temperature indicator
- Oil level gauge with alarm
- Pressure-vacuum gauge
- Winding temperature sensor (optional)
- Optional SCADA-ready monitoring package



CONNECTION & EXPANSION

- Off-circuit tap changer (5-position standard)
- On-load tap changer (project basis)
- Porcelain or polymer bushings
- Loadbreak / non-loadbreak elbows
- Cable terminal compartments



WEATHERPROOF VERSIONS

Specialized stainless steel and corrosion-resistant configurations engineered for the world's most challenging operating environments.



WEATHERPROOF PLATFORM

ENGINEERED FOR EXTREME CLIMATES

- **Middle East**
High ambient temperatures, desert dust, sandstorm exposure
- **Latin America**
Tropical humidity, coastal salt air, seasonal flooding
- **Southeast Asia**
Monsoon conditions, sustained high humidity
- **Islands & Coastal**
Salt-laden atmosphere, marine corrosion exposure
- **Northern Climates**
Sub-zero temperatures, snow and ice loading
- **Mining Sites**
Vibration, dust, chemical exposure environments



FACTORY TESTING PROTOCOL

Every transformer undergoes a comprehensive seven-stage factory acceptance test sequence before release for shipment.

01 WINDING RESISTANCE

DC resistance measurement at all tap positions to verify winding integrity and connections.

02 VOLTAGE RATIO

Turns ratio test verifying primary-secondary voltage relationship at all tap positions.

03 POLARITY & VECTOR GROUP

Connection vector group verification confirming Dyn11 or specified configuration.

04 NO-LOAD LOSS & CURRENT

Magnetizing current and core losses measured at rated voltage.

05 LOAD LOSS & IMPEDANCE

Copper losses and short-circuit impedance verified at rated current.

06 INSULATION RESISTANCE

Megger test of winding-to-winding and winding-to-ground insulation.

07 DIELECTRIC STRENGTH

Power-frequency withstand and induced overvoltage tests.



COOPERATION & SUPPLY MODELS

Flexible commercial structures supporting the full spectrum of customer needs — from single-unit purchases to long-term framework agreements.



COOPERATION MODELS

FIVE SUPPLY STRUCTURES

- **Single Order Supply**
Stand-alone purchases for individual project requirements.
- **Tender Batch Delivery**
Coordinated multi-unit deliveries supporting utility tender awards.
- **EPC Project Supply**
Direct supply to engineering, procurement, and construction contractors.
- **Framework Agreements**
Long-term supply contracts with agreed unit prices and call-off mechanics.
- **OEM / Private Label**
OEM and ODM manufacturing under client branding and specification.



CUSTOMIZATION CAPABILITIES

Eight dimensions of customization allow FGK transformers to match exact project, regulatory, and environmental specifications.



VOLTAGE ENGINEERING

Custom primary and secondary voltage ratios



CAPACITY SIZING

Project-specific kVA ratings within manufacturing envelope



CLIMATIC ADAPTATION

Temperature, humidity, and altitude-tuned designs



ENCLOSURE CONFIGURATION

Tank shape, dimensions, color, and finishing designs



ACCESSORY PACKAGES

Custom bushings, fittings, and monitoring options



MARKING & LABELLING

Multi-language labels and project-specific data plates



CONNECTION VECTOR GROUPS

Alternative vector groups beyond standard Dyn11



OEM BRANDING

Private-label manufacturing under client identity



COMMERCIAL FRAMEWORK

Commercial terms structured for transparency, contractual clarity, and alignment with international procurement standards.



PRICING

USD

All prices quoted in United States Dollars. Unit and total pricing detailed in itemized schedule (Items 1-62).



INCOTERMS

FOB

Free On Board — Chinese port of shipment. Alternative Incoterms (CFR, CIF, DAP) available on request.



VALIDITY

10 WORKING DAYS

Offer validity period of ten working days from issue. Extended validity available subject to written confirmation.



WARRANTY

12 MONTHS

Twelve-month standard warranty from date of commissioning, or eighteen months from date of shipment, whichever expires first.



PRODUCTION LEAD

18 MONTHS

Standard production capacity of eighteen months for full order completion. Phased delivery schedule by agreement.



PAYMENT TERMS

L/C OR T/T

Letter of Credit or telegraphic transfer per project agreement. Advance payment and milestone-based structures supported.



YOUR RELIABLE SOURCING PARTNER

FOSHAN GAOCHEN KUAIYU TECHNOLOGY CO., LTD.

COOPERATIVE POSITIONING

Long-term strategic partnership focused on mutual growth and project success.

CORE VALUES

Integrity, technical reliability, transparent commercial practice, and customer-first execution.

WHY CHOOSE FGK

Integrated global trade infrastructure, established manufacturing partnerships, and proven multi-region delivery experience.

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