www.giantele-energy.com
Zhejiang Zhegui Electric Co., Ltd.

COMPANY PROFILE

Power Factor Correction Solution Provider



COMPANY ACHIEVEMENT

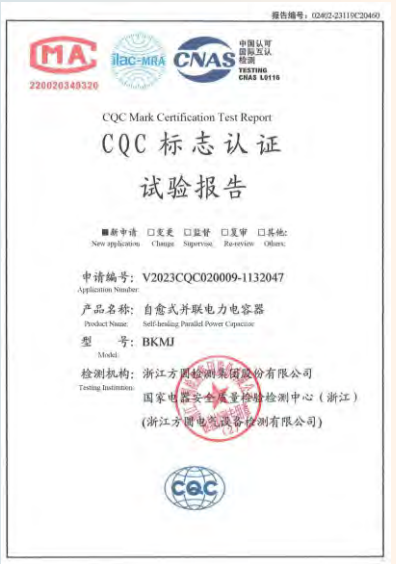
For many years, Zhegui Electric has upheld a spirit of professionalism and excellence, earning corporate honors that testify to our team's efforts and client support.Our ISO 9001 Quality Management System certification demonstrates our commitment to maintaining high standards and requirements in product quality control and service management.











MAIN PRODUCTS

Professional manufacturer of power capacitor,
reactor, APFC capacitor bank, and various electrical accessories.





PRODUCT FUNCTION

Reactive Power Compensation

↓

Power Factor Improvement

↓

Line Loss Reduction

↓

Penalty Exemption

↓

Electricity Saving

↓

Cost Cutting

Key Application Areas



Manufacturing Plant

Plastic Factory
Belt Factory
Leather Factory
Woven Bag Factory
.....



Mining Site



Water Treatment Plant



Hospital



Data Centers



Mall / Office Building



EV Charging Station



PV Plant

Reactive Power Compensation - Monthly Electricity Cost Savings Cases

Factory Scale	Typical Load Type	Typical Active Power	Current→ Target PF	Recommended Capacity	Monthly Base Power Cost (USD)	Monthly Elec. Savings (USD)	Elec. Cost Reduction%
Small Factory	Light motors, tools	100kW	0.7→0.95	33 kvar	21,600	3,605	16.70%
Medium Factory	Machine tools, pumps/fans	500kW	0.75→0.95	277 kvar	108,000	59,746	35.80%
Large Factory	High-power motors, furnaces	2000kW	0.8→0.95	850 kvar	432,000	181,642	29.60%

***Monthly Operating Cost at 0.3 USD/kWh**



Front side

Main protection circuit breaker
Power on/off + protection



MCCB

1

Branch protection circuit breaker
Power on/off + protection



MCB

2

Capacitor switch



Contactor

3

Power Capacitor
Reactive power compensation



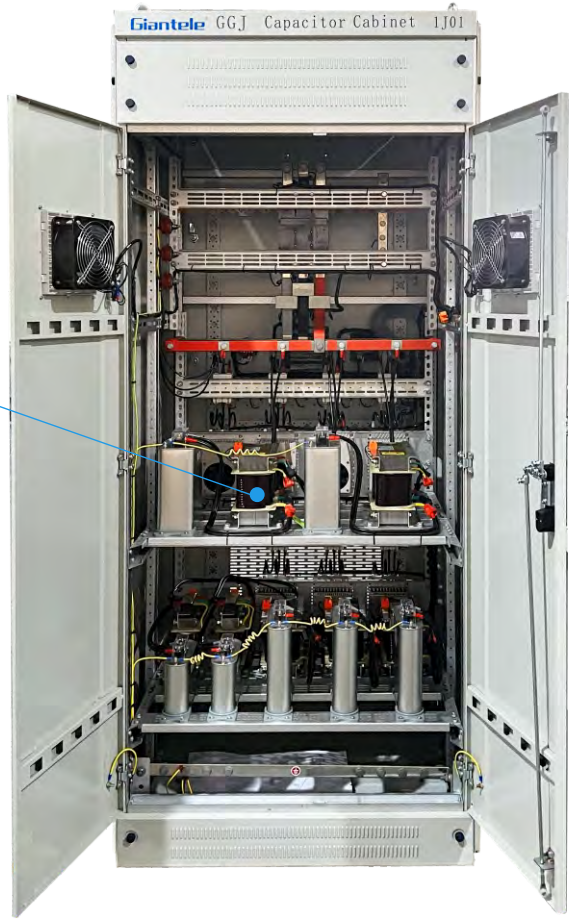


4

5



Reactor
Suppress harmonics
Avoid capacitor overheating/failure



Back side

Application Reference







Manufacturing Plant

Plastic Factory
Belt Factory
Leather Factory
Woven Bag Factory

APF Module / SVG Module



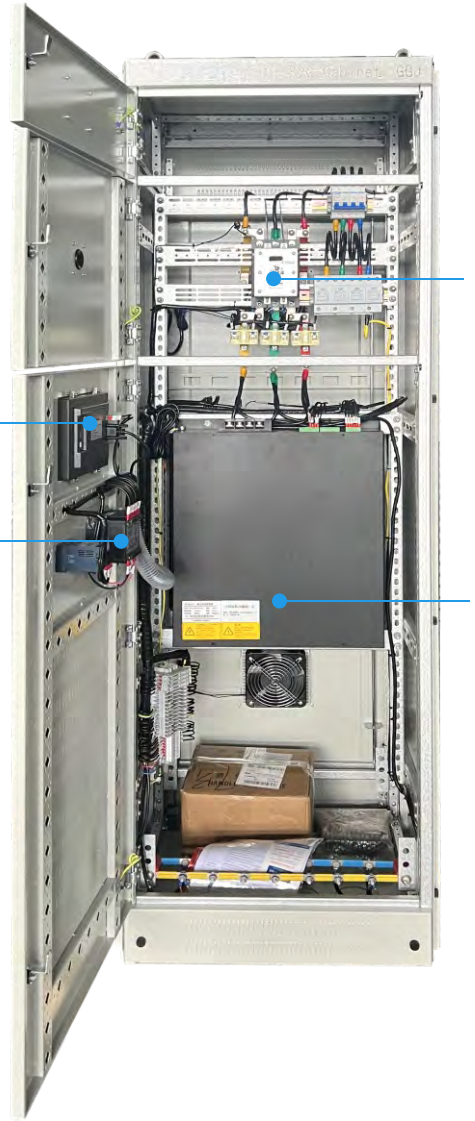
Controller

Control APF/SVG module operation



Display Screen

Monitor operation status



Main circuit breaker

Power on/off + protection



MCCB



Fused Knife Switch

Intelligent Compensation
Harmonic Elimination



SVG Module



APF Module

Application Reference







Precision instrument usage scenarios

Hospital
Data Center

Case Study | Zambia Woven Bag Factory — Capacitor Bank Solution

Industry & Application Background

- **Country:** Zambia
- **Industry:** Woven bag manufacturing factory
- **Application:** Factory power supply system

Power Quality Challenge — No Capacitor Bank Installed

- Low power factor caused a **27,000 ZMW penalty**
- High electricity cost and **unstable power**, leading to production stoppages

Solution Configuration

- 600 kVAR (2 × 300 kVAR) power factor correction solution

Results & Benefits

- Stable power factor at 0.98 achieved
- Penalty removed & Electricity cost reduced



One-line Summary

A 600 kVAR capacitor solution solved power factor penalties, reduced energy cost, and stabilized power supply for a Zambian factory.

Case Study | Uganda $CaCO_3$ Factory—Capacitor Bank Solution

Industry & Application Background

- Country: Uganda
- Industry: Calcium Carbonate (CaCO) manufacturing
- Application: Mineral processing and grinding production lines

Power Quality Challenge

- Unstable current in the power system
- Poor power factor
- High electricity costs

Solution Configuration

- 200 kVAR + 300 kVAR power factor correction solution (March,2025)
- Repeat order of an additional 200 kVAR for another plant(September,2025)

Results & Benefits

- Power factor improved to the required level
- Power system stabilized
- Reliable operation of heavy motor load
- Electricity costs reduced

One-line Summary

Capacitor bank solutions stabilized power quality and reduced energy costs for a Ugandan CaCO factory.





Information Required for Capacitor Bank Quotation

- Voltage
- Required kVAR
- Factory industry / application
- Transformer capacity
- Current power factor
- Expected power factor
- Main load type (motors, pumps, crushers, etc.)
- Preferred circuit breaker brand (if any)

Product Highlights

Key Features

- **Customized Solutions:** Capacitor bank solutions based on actual load conditions for optimal power factor correction.
- **Fast Delivery:** Typical delivery time of around two weeks, much shorter than local lead times in Africa.
- **Proven Local Experience:** Reliable solutions designed for unstable grid conditions, backed by extensive African project experience.
- **Competitive Pricing:** Direct factory supply ensures competitive pricing and strong overall value.



Key Customer Benefits

- Avoid penalties caused by insufficient power factor.
- Improve power quality and significantly reduce electricity costs.
- Protect electrical equipment and enhance overall system efficiency.

Efficient and Cost-Effective Power Factor Correction Solutions for Africa



CUSTOMERS AROUND THE WORLD

In the process of globalization, our products have been sold to more than 30 countries and regions around the world, serving more than 10000 customers. Under our concept of mutual benefit and win-win, we have long-term cooperative relations with a large number of buyers.

Central Asia, Middle East, Southeast Asia, Africa, Europe, South America.

PRODUCTION DELIVERY

Housing manufactured to military specifications

The sheet metal enclosure undergoes laser cutting of cold-rolled steel plates (±0.1mm tolerance), CNC bending to ensure ≤1‰ verticality, full-seam argon arc welding, followed by vibration aging and X-ray inspection, passing 0.4MPa airtightness test and IP54 certification, with full-process MES control ensuring military-grade structural strength and sealing reliability.









Wiring and Commissioning Process

Perform standardized wiring and terminal crimping, conduct insulation testing, then proceed with power-on debugging to verify protection functions and operational logic item by item, and finally ensure reliable system delivery through full machine testing.

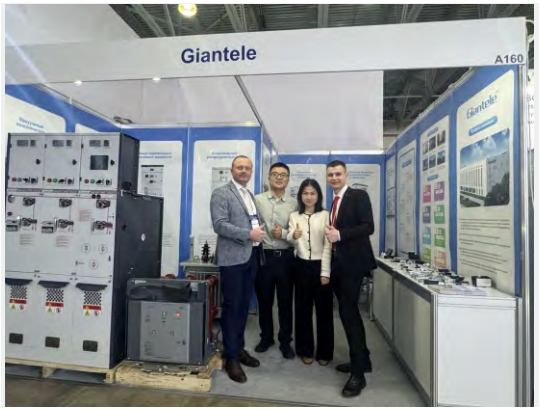






Packing & Shipping Process

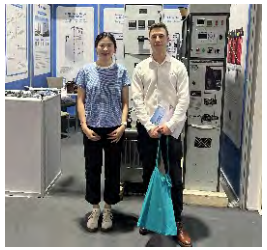
Custom shock-proof packaging → Modular fixation of internal components → Affix unique traceability code and warning labels → Include packing checklist and operation manual → Standard-compliant logistics loading and shipment.













GLOBAL POWER EXHIBITION JOURNEY

We have showcased intelligent power distribution solutions at global exhibitions for consecutive years, with participation spanning Russian Energy Week, Dubai Electricity Expo, Philippine Energy Summit, and Kazakhstan Energy Forum. Through in-depth technical exchanges with international peers, we continuously optimize core metrics including IP ratings and temperature rise control, while identifying growing demand for modular prefabricated systems across Central and Southeast Asian markets. Moving forward, we will accelerate the global deployment of Chinese high-end electrical equipment.












Giantele®
Zhejiang Zhegui Electric Co., Ltd.
Thank you
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