
INTEGRATED ELECTRICAL SYSTEMS FOR GLOBAL INFRASTRUCTURE

SWITCHGEAR & COMPONENTS | TRANSFORMERS | SUBSTATIONS | SMART GRID SOLUTIONS



HJATIS POWER

PRODUCT PORTFOLIO

2026 - 2027 EDITION

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Product Portfolio
2026 - 2027 Edition

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BORN IN CHINA. BUILT FOR THE WORLD.



Founded in **2006**, HJATIS Power began its journey in the precision engineering of smart meters. Driven by a commitment to reliability, we mastered the intricacies of low-voltage components before expanding our horizons.

Over nearly two decades of relentless technological evolution, we have scaled into a comprehensive electrical group enterprise. Today, our global footprint is anchored by our highly digitalized Operation Center, overseeing massive output across our three specialized production hubs.



SWITCHGEAR & COMPONENTS



ADVANCED TRANSFORMERS



ENERGY STORAGE SYSTEMS



THE CHINESE MANUFACTURING ADVANTAGE.

China has developed a highly mature and comprehensive electrical equipment supply chain. Supported by an expansive network of thousands of specialized suppliers and a vast pool of engineering talent, this ecosystem operates at an extraordinary scale. From raw material refinement to ultra-automated assembly, it ensures unmatched production agility and rigorous quality consistency.

HJATIS Power was forged in this highly competitive environment, ingraining a culture of relentless optimization into our corporate DNA. In today's global energy market, the logic is clear: **the deeper your integration with China's electrical supply chain, the easier it becomes to achieve a decisive advantage in cost-effectiveness and project ROI.**

For our international EPC and utility partners, our strategic positioning translates into a profound operational edge: We seamlessly bridge your projects with this immense industrial powerhouse to deliver Tier-1 international quality, significantly shortened lead times, and an optimized CAPEX-to-performance ratio.

END-TO-END POWER SOLUTIONS.

Armed with profound manufacturing capabilities and deep international market insight, HJATIS Power is more than an equipment supplier—we are a comprehensive system integrator. We provide a seamless, fully compatible matrix covering the entire energy lifecycle.



1. Generation & Step-Up

Aggregating utility-scale solar and wind power. Featuring our HJ-CSS-R Substations and Combiner Boxes for maximum renewable yield.



2. Transmission & Grid

The backbone of the grid. Driven by our Primary MV Switchgear, Smart RMUs, and ultra-low loss Amorphous Power Transformers.



3. Terminal Use & PQ

Ensuring clean delivery via ABB authorized LV boards, Advanced MCCs, Active Power Filters (APF), and Smart PFC units.



4. Energy Storage (BESS)

Securing optimized grid resilience. A full matrix from Residential stackable systems to Megawatt-scale containerized microgrid hubs.



VISION. MISSION. VALUES.

OUR MISSION

To deliver exceptionally reliable and cost-effective electrical infrastructure solutions that empower global grids and industries.

OUR VISION

To be the most dependable global partner in power distribution, bridging premium manufacturing with worldwide energy needs for mutual growth.

CORE VALUES: SHARED SUCCESS

1. Uncompromising Reliability

In the electrical industry, stability is everything. We build rugged, strictly IEC-compliant hardware that stands the test of time, ensuring uninterrupted power for critical systems.

2. Global Standards, Optimal CAPEX

We combine rigorous international engineering standards with China's unmatched manufacturing efficiency, delivering a decisive cost advantage to maximize your project's ROI.

3. Customer Success & Synergy

Your project success is our benchmark. We act as your dedicated technical ally, streamlining delivery and minimizing risks to secure your commercial wins worldwide.

HJATIS TEAM



SHIJIAN PENG
Founder/Chairman



FANOS FANG
General Manager



WEIQIONG YAO
Head of R&D



HONGJUN WANG
Head of Production

PRIMARY MV SWITCHGEAR.

THE FLAGSHIP SERIES

The critical backbone for high-capacity distribution networks and large-scale substations.

FEATURED MODELS

01.1 HJ-MCS-40 Series (Up to 40.5 kV)

01.2 HJ-MCS-12 Series (Up to 12 kV)

KEY APPLICATIONS

Utility-Scale Substations

Heavy Metallurgy & Mining

Data Centers (IDC)

Renewable Energy Step-up

HJ-MCS-40 Series

Metal-Clad Switchgear

UP TO 40.5 kV / 2500A / 31.5 kA

A premium 40.5 kV air-insulated, fully metal-clad withdrawable switchgear designed for 3-phase AC 50/60 Hz power systems. Engineered for maximum reliability, it serves as the critical node for power receiving, distribution, and comprehensive grid protection in heavy industrial and utility scenarios.



CORE ADVANTAGES

1. Superior Safety (LSC2B)

Grounded metal partitions separate all high-voltage compartments, helping ensure zero live-part exposure.

3. Internal Arc Withstand

Specialized top pressure relief flaps instantly vent hot gases during faults, protecting personnel (IAC AFLR).

2. Intelligent Interlocks

A robust “five-prevention” mechanical interlocking system strictly governs switching operations, eliminating human error.

4. Optimized EPC CAPEX

Delivers Tier-1 performance and strict IEC compliance at a highly competitive price point for major projects.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations. Custom voltage and current ratings are available based on specific global grid requirements.

SYSTEM & POWER PARAMETERS

Rated Voltage (Ur)	36 kV / 40.5 kV
Rated Frequency (fr)	50 Hz / 60 Hz
Rated Main Busbar Current (Ir)	1250 A / 2000 A / 2500 A / 3150 A

WITHSTAND & PROTECTION RATINGS

Short-Time Withstand Current (Ik)	25 kA / 31.5 kA (3s)
Peak Withstand Current (Ip)	63 kA / 80 kA
Power Frequency Withstand Voltage	95 kV (1 min)
Lightning Impulse Withstand (BIL)	185 kV / 200 kV
Internal Arc Classification (IAC)	AFLR 31.5 kA / 1s
Loss of Service Continuity	LSC2B - PM
Protection Degree	Enclosure IP4X (Doors Closed) Compartment IP2X (Doors Open)
Applicable Standards	IEC 62271-1, IEC 62271-200, GB/T 3906

OPERATING ENVIRONMENT:

- **Ambient Temperature:** -15°C to +40°C (Maximum daily average ≤ 35°C).
- **Altitude:** Standard ≤ 1000 m (Derating formulas applied for high-altitude >1000 m installations).
- **Relative Humidity:** Daily average relative humidity ≤ 95%, Monthly average ≤ 90%.
- **Seismic Intensity:** Up to Magnitude 8 (Custom bracing available for high-seismic zones).

Global Factory Acceptance & Turnkey Support

Every HJ-MCS-40 unit undergoes rigorous routine testing aligned with strict international standards. We proudly support **Remote Video FAT** for our global EPC clients, ensuring total transparency. Fully available in CBU, SKD, or CKD delivery formats.

HJ-MCS-12 Series

Metal-Clad Switchgear

UP TO 12 kV / 4000A / 50 kA

The HJ-MCS-12 Series is a highly reliable 12 kV air-insulated, fully metal-clad withdrawable switchgear designed for 3-phase AC 50/60Hz power systems. Engineered to strict IEC standards, it is the optimized solution for power receiving, distribution, and comprehensive grid protection.



CORE ADVANTAGES

1. Robust Al-Zn Enclosure

Constructed from premium Al-Zn coated steel via CNC multi-folding. Offers exceptional mechanical strength and corrosion resistance.

2. Seamless Withdrawable VCB

High-precision track design ensures smooth operations, helping ensure handcart interchangeability to minimize downtime.

3. Strict "5-Prevention" Safety

A foolproof mechanical interlocking system actively prevents critical misoperations, ensuring total operator safety.

4. Compartmentalized Arc Protection

Functional zones are completely isolated by grounded metal partitions with independent pressure-relief flaps to contain internal arcs.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations. Custom ratings available for specific EPC requirements.

SYSTEM & POWER PARAMETERS

Rated Voltage (Ur)	12 kV
Rated Frequency (fr)	50 Hz / 60 Hz
Rated Main Busbar Current (Ir)	630A / 1250A / 1600A / 2000A / 2500A / 3150A (Custom up to 4000A with forced cooling)

WITHSTAND & PROTECTION RATINGS

Short-Time Withstand Current (Ik)	20 kA / 25 kA / 31.5 kA / 40 kA (Custom up to 50 kA)
Peak Withstand Current (Ip)	50 kA / 63 kA / 80 kA / 100 kA (Custom up to 125 kA)
Power Frequency Withstand Voltage	42 kV (1 min)
Lightning Impulse Withstand (BIL)	75 kV
Short-Time Withstand Current (4s)	20 kA / 25 kA / 31.5 kA / 40 kA (Custom up to 50 kA)
Protection Degree	Enclosure IP4X / Compartment IP2X (Custom IP5X available)

OPERATING ENVIRONMENT:

- **Ambient Temperature:** -15°C to +40°C (Anti-condensation heaters optional).
- **Altitude:** Standard ≤ 1000 m (High-altitude custom designs up to 4000 m+ available).
- **Relative Humidity:** Daily average ≤ 95%, Monthly average ≤ 90%.
- **Seismic Intensity:** Withstands up to Magnitude 8.

Global Factory Acceptance & Turnkey Support

Every HJ-MCS-12 unit undergoes rigorous routine testing aligned with strict international standards before dispatch. We proudly support **Remote Video FAT** for our global EPC clients. Fully available in CBU, SKD, or CKD delivery formats.

SMART RMU & SECONDARY DISTRIBUTION.

SF6-FREE & INTELLIGENT UPGRADES

Driving the future of urban secondary distribution
with SF6-free eco-innovations and intelligent grid
upgrades.

FEATURED MODELS

02.1 HJ-RMU Series

(Smart Edition)

02.2 HJ-RMU-G

(SF6 Gas)

02.3 HJ-RMU-S

(Solid)

02.4 HJ-RMU-E

(Eco-Gas)

02.5 HJ-RMU-A

(Air Insulated)

KEY APPLICATIONS

Urban Smart Grids

Carbon Neutral Projects

Automated Feeder Systems

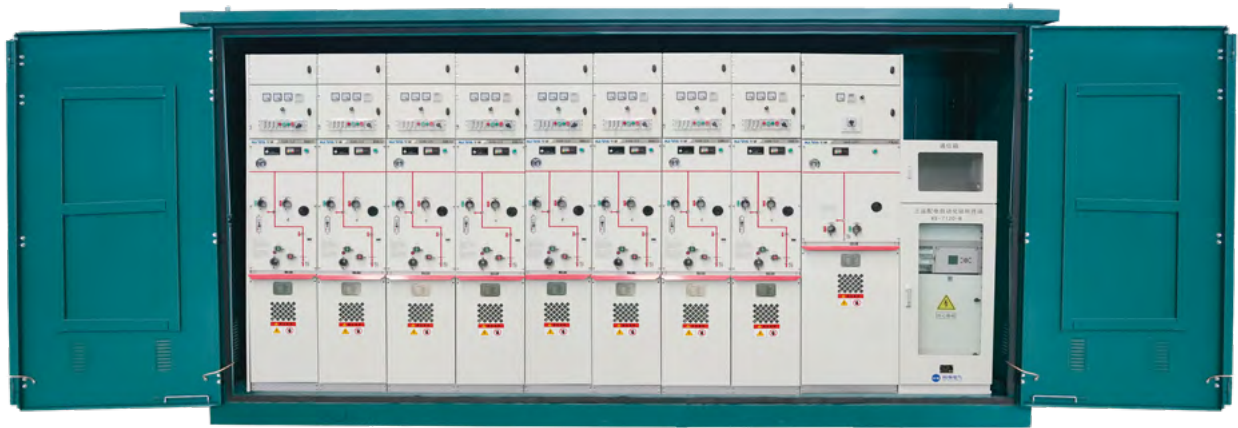
Subterranean Distribution

HJ-RMU Series

Modular Ring Main Unit

SMART INTEGRATED EDITION / 12kV-24kV

An advanced, hardware-ready distribution automation platform designed for modern smart grids. By seamlessly integrating your choice of primary switchgear (Air, SF6, Solid, or Eco-Gas) with secondary terminal units (DTU/FTU) and high-precision sensors directly at our factory, we eliminate complex on-site wiring, providing a robust foundation for rapid SCADA deployment.



CORE ADVANTAGES

1. Multi-Platform Compatibility

Secondary integration technology can be seamlessly applied to any of our 4 primary RMU platforms: Air, SF6, Solid, or Eco-Gas.

2. Flawless Factory Pre-Integration

Eliminates on-site wiring failures. Primary switchgear and secondary control units are flawlessly integrated via heavy-duty aviation plugs.

3. Open-Architecture SCADA Ready

Equipped with standard RS485/Ethernet interfaces and baseline protocols, providing a clean slate for your local system integrators.

4. High-Precision Fault Sensors

Embedded highly accurate EVT/ECTs monitor micro-changes in line conditions, delivering precise raw data to detect single-phase earth faults.

SMART INTEGRATION SPECIFICATIONS

* The parameters below detail the secondary intelligence hardware layer. Primary electrical parameters will depend on your selected base RMU platform.

PRIMARY EQUIPMENT COMPATIBILITY

Compatible Base RMUs [Air-Insulated / SF6 Gas / Solid / Eco-Gas Platforms](#)

Operating Voltage Range 12kV / 17.5kV / 24kV

SECONDARY HARDWARE & SENSING (DTU/FTU)

Terminal Unit Architecture Modular Distribution Terminal Unit (DTU) / Feeder Terminal Unit (FTU)

Sensing Technology Integrated Electronic Voltage/Current Sensors (EVT/ECT)

Measurement Accuracy Voltage/Current: Class 0.5S ; Active/Reactive Power: Class

Hardware Comm. Interfaces 1.0

Supported Protocol Baseline RS485, Ethernet (RJ45) standard
(Reserved slots for 4G/5G/LTE modules)

Internal Connection Method IEC 60870-5-101/104, Modbus-RTU/TCP, DNP3.0
(Mapping & integration by local EPC)

Backup Power Supply Heavy-duty IP67 aviation plugs (Pre-wired & Factory Tested)

Built-in 24V/48V DC battery system (Maintains hardware comms during power loss)

OPERATING ENVIRONMENT

- **Ambient Temperature:** -40°C to +55°C (Built-in automated heater for anti-condensation in the secondary compartment).
- **Electromagnetic Compatibility (EMC):** Exceeds IEC 61000-4 standards for industrial harsh environments.
- **Installation Site:** Outdoor kiosks, road-side compact substations, or underground distribution rooms.

Global Factory Acceptance & Turnkey Delivery

Every Smart HJ-RMU undergoes a rigorous integrated FAT (Factory Acceptance Test). We thoroughly verify primary dielectric withstand, aviation plug continuity, and the baseline physical communication of the DTU/FTU terminal. The unit arrives at your site as a fully assembled hardware node, ready for power connection and software commissioning.

HJ-GIS Series

SF6 Gas-Insulated RMU

MODEL: HSRM16-12 / UP TO 24kV / MODULAR EXTENSIBLE

An IEC-compliant, fully-insulated SF6 Gas Ring Main Unit. With all primary high-voltage circuits and switching components robotically sealed inside an IP67 stainless-steel tank, it offers true "Fit and Forget" performance for long-term reliability in heavy industrial networks, underground vaults, and extreme coastal environments.



CORE ADVANTAGES

1. Hermetically Sealed IP67 Tank

All main circuits are completely enclosed in a robotically welded stainless-steel tank (1.4 bar SF6), providing enhanced immunity against flooding and coastal air.

3. Premium Vacuum Arc Extinguishing

High-voltage currents are broken by dedicated Vacuum Interrupters, offering superior capacity and 10,000 maintenance-free operations.

2. Ultra-Compact Space Optimization

Operates at micro-positive pressure ($\leq 0.02\text{MPa}$). Engineered clearances ensure full withstand capability even at 0 MPa gauge pressure.

4. Smart Grid & Advanced Diagnostics

Functions as an intelligent node with integrated data acquisition, connecting seamlessly to SCADA for remote energy management.

MODULE SPECIFICATIONS MATRIX

* Parameters correspond to standard configurations. Custom voltage ratings (up to 24kV) and specialized metering (M/PT) modules are fully available upon request.

TECHNICAL PARAMETER	C-MODULE (Load Break Switch)	F-MODULE (Switch-Fuse)	V-MODULE (Vacuum Breaker)
Rated Voltage (Ur)	12kV(Up to 24kV)		
Rated Current (Ir)	630A	125A	630A / 1250A
Power Frequency Withstand	42kV (Phase-to-Earth/Phase-to-Phase) / 48kV (Across open contacts)		
Lightning Impulse (BIL)	75kV (Phase-to-Earth/Phase-to-Phase) / 85kV (Across open contacts)		
Short-Time Withstand (4s)	20kA / 25kA	-	20kA / 25kA
Peak Withstand Current	50kA / 63kA	-	50kA / 63kA
Rated Short-Circuit Breaking Current	-	31.5kA (Fuse limit)	20kA / 25kA
Active Load Breaking Current	630A	-	-
Mechanical Endurance	5,000	5,000	10,000
Cable Charging Breaking	25A		
Protection Degree	IP67 (Gas Tank) / IP4X (Outer Enclosure)		

OPERATING ENVIRONMENT

- **Ambient Temperature:** -35°C to +40°C (Maximum 24h average ≤ +35°C).
- **Relative Humidity:** Daily average ≤ 95%, Monthly average ≤ 90%.
- **Annual Gas Leakage:** ≤ 0.05% / year (Ensures 30+ years of operational life).
- **Immersion Test Passed:** Can withstand being submerged under 0.3 bar of water pressure for 24 hours.

Global Factory Acceptance & Turnkey Support

Every HJ-GIS unit undergoes rigorous **partial discharge (PD)** testing and **helium leak detection** to ensure gas-tightness before dispatch. Engineered strictly according to IEC 62271 standards, these compact modules can be freely extended and combined to fit any complex ring network topography flawlessly.

HJ-SIS Series

Solid Insulated RMU

UP TO 24kV / 100% SF6-FREE / ULTRA-COMPACT

The optimized future-proof medium-voltage distribution solution. By replacing SF6 gas with premium epoxy resin vacuum casting, all high-voltage live parts are completely sealed and shielded. It delivers a 100% maintenance-free lifecycle, high-performance, and an ultra-compact footprint starting at just 400mm width.



CORE ADVANTAGES

1. 100% SF6-Free & Eco-Friendly

Utilizes premium epoxy resin vacuum casting to insulate live parts, permanently eliminating SF6 greenhouse gas and the risk of gas leakage.

3. Ultra-Compact Space Optimization

Solid insulation drastically reduces clearances. A standard VCB unit is just 400mm wide, saving valuable real estate in tight underground substations.

2. Extreme Environmental Immunity

Hermetically cast solid dielectric modules perform flawlessly in high-altitude regions, coastal areas with heavy salt fog, and heavily polluted sites.

4. Touch-Safe & Fully Shielded

Solid resin modules feature an external conductive shielding layer that is securely grounded, ensuring a 100% dead-front safety profile for operators.

TECHNICAL SPECIFICATIONS

* The parameters below correspond to standard configurations. Voltage ratings (up to 24kV) and busbar capacities are fully customizable to meet your local utility standards.

ELECTRICAL PARAMETERS	
Rated Voltage (Ur)	12kV / 17.5kV / 24kV (Custom configurations available)
Rated Frequency (fr)	50 Hz / 60 Hz
Rated Normal Current	630A / 1250A (Higher ratings upon request)
Short-Time Withstand Current (Icw)	25kA / 31.5kA(up to 4s)
Peak Withstand Current (Ip)	63kA / 80kA
Lightning Impulse Withstand (BIL)	75 kV (Phase to Earth) / 85 kV (Isolation Fracture)
Power Frequency Withstand Voltage	42 kV (Phase to Earth) / 48 kV (Isolation Fracture)
MECHANICAL & PHYSICAL PROPERTIES	
Insulation Medium	Epoxy Resin Solid Casting (100% SF6-Free)
Operating Mechanism	Spring Energy Storage
Enclosure Protection Degree	IP67 (Primary Live Parts) / IP4X (Outer Enclosure)
Standard Width (W)	400 mm (VCB/Busbar) / 500 mm (LBS with Fuse)
Standard Depth (D) & Height (H)	950 mm (D) × 1650 mm (H)

OPERATING ENVIRONMENT:

- **Ambient Temperature:** -40°C to +55°C.
- **Altitude:** [High-performance at high altitudes](#) (Solid insulation does not suffer from gas density drop).
- **Environmental Immunity:** Highly recommended for areas with severe pollution, salt fog, heavy condensation, and subterranean dampness.
- **Seismic Resistance:** Withstands earthquake intensity up to 8 degrees.

Global Factory Acceptance & Turnkey Support

Every HJ-SIS unit undergoes rigorous **partial discharge (PD) testing** and X-ray inspection of the epoxy casting to ensure zero internal voids. Housed in a robust IP4X outer enclosure, it provides optimized "fit-and-forget" reliability for the most demanding global EPC deployments.

HJ-Eco Series

Eco-Gas Insulated RMU

12kV / 100% SF6-FREE / ZERO GWP

The optimized sustainable solution for medium-voltage distribution. By utilizing a clean, eco-friendly gas mixture (Dry Air or N₂) combined with premium vacuum arc extinguishing technology, it completely eliminates SF₆. Delivering a GWP of strictly < 1, it meets top-tier ESG and carbon-neutrality mandates without compromising reliability.



CORE ADVANTAGES

1. 100% SF6-Free & High-performance

Utilizes clean dry air or N₂ mixtures (GWP < 1), avoiding toxic byproducts and ensuring compliance with impending SF₆ bans.

2. Zero Gauge Pressure Design

Operates at micro-positive pressure ($\leq 0.02\text{MPa}$). Engineered clearances ensure full withstand capability even at 0 MPa gauge pressure.

3. Premium Vacuum Arc Extinguishing

High-voltage currents are broken by dedicated Vacuum Interrupters, offering superior capacity and 10,000 maintenance-free operations.

4. Smart Grid & Advanced Diagnostics

Functions as an intelligent node with integrated data acquisition, connecting seamlessly to SCADA for remote energy management.

MODULE SPECIFICATIONS MATRIX

* Exceptional short-time withstand capacities (up to 31.5kA / 4s) demonstrate extreme heavy-duty capability.

TECHNICAL PARAMETER	C-MODULE (Load Break Switch)	F-MODULE (Switch-Fuse)	V-MODULE (Vacuum Breaker)
Rated Voltage (Ur)	12kV		
Rated Current (Ir)	630A	125A	630A / 1250A
Power Frequency Withstand	42kV (Phase/Earth) / 48kV (Across isolation gap)		
Lightning Impulse (BIL)	75kV (Phase/Earth) / 85kV (Across isolation gap)		
Short-Time Withstand (4s)	25kA	-	25kA / 31.5kA
Peak Withstand Current	63kA	-	63kA / 80kA
Rated Short-Circuit Breaking Current	-	31.5kA (Fuse limit)	25kA / 31.5kA
Active Load Breaking Current	630A	-	-
Mechanical Endurance	5,000	5,000	10,000
Arc Extinguishing Tech	Vacuum Interrupter		
Operating Gas Pressure	0.025 MPa (Micro-positive pressure)		
Protection Degree	IP67 (Gas Tank) / IP4X (Outer Enclosure)		

OPERATING ENVIRONMENT

- **Ambient Temperature:** -25°C to +40°C (Maximum 24h average ≤ +35°C).
- **Altitude:** ≤ 2000m (Solid insulation support elements unaffected by high altitude).
- **Relative Humidity:** Daily average ≤ 95%, Monthly average ≤ 90%.
- **Annual Gas Leakage Rate:** ≤ 0.05% / year (Hermetically sealed laser-welded tank).

Global Factory Acceptance & Turnkey Support

Every HJ-Eco unit undergoes rigorous **partial discharge (PD) testing** and **helium leak detection** to ensure gas-tightness before dispatch. Housed in an IP67 fully sealed stainless-steel tank, these compact modules (C, F, V) can be freely extended and combined to fit any complex ring network topography flawlessly.

HJ-AM Series

Air-Insulated RMU

UP TO 24kV / AIR-INSULATED / HIGHLY CUSTOMIZABLE

The highly reliable and economically optimized foundation for secondary medium-voltage distribution. Utilizing ambient air insulation combined with maintenance-free SF6 load break switches or vacuum circuit breakers, it delivers exceptional operational safety, visible fault isolation, and modular flexibility.



CORE ADVANTAGES

1. Maximum Cost-Efficiency

Utilizes ambient air for an incredibly economical solution. Its modular architecture ensures rapid installation and flexible future capacity expansions.

3. Maintenance-Free Switching

Houses premium SF6 Load Break Switches or Vacuum Circuit Breakers. These hermetically sealed cores deliver reliable arc extinguishing and longevity.

2. Compartmentalized Safety

Features strictly segregated compartments separated by grounded steel plates, plus dedicated pressure relief channels to safely vent internal arc gases.

4. "5-Prevention" Interlocks

Equipped with a foolproof mechanical interlocking system that strictly prevents human misoperations, operating only under safe conditions

TECHNICAL SPECIFICATIONS

* The parameters below correspond to standard configurations. Voltage ratings, busbar capacities, and dimensions are fully customizable.

ELECTRICAL PARAMETERS	
Rated Voltage (Ur)	12kV / 17.5kV / 24kV (Custom configurations available)
Rated Frequency (fr)	50 Hz / 60 Hz
Rated Normal Current	630A / 1250A (Higher ratings upon request)
Short-Time Withstand Current (Icw)	20kA / 25kA(3s)
Lightning Impulse Withstand (BIL)	75 kV / 95 kV / 125 kV(Varies by rated voltage)
Power Frequency Withstand Voltage	42 kV / 50 kV(1 min, varies by rated voltage)
MECHANICAL & PHYSICAL PROPERTIES	
Insulation Medium	Ambient Air (Main Cubicle) + SF6/Vacuum
Enclosure Protection Degree	IP3X (Outer Enclosure)
Standard Depth (D)	918 mm
Standard Width (W)	375 mm / 500 mm / 750 mm(Depending on circuit type)
Standard Depth (D) & Height (H)	1400 mm / 1600 mm (Single-core) 1800 mm (Three-core)
Compliance Standards	IEC 62271-200

OPERATING ENVIRONMENT:

- **Ambient Temperature:** -35°C to +45°C.
- **Altitude:** Standard ≤ 1000m (Consult factory for high-altitude derating).
- **Relative Humidity:** Daily average ≤ 95%, Monthly average ≤ 90%.
- **Seismic Resistance:** Withstands earthquake intensity up to 8 degrees.
- **Installation Environment:** Indoor, strictly free from explosive dust, severe vibration, and highly corrosive gases.

Global Factory Acceptance & EPC Support

Every HJ-AM unit undergoes routine dielectric, mechanical interlock, and functional tests before dispatch. It is delivered as a configurable air-insulated RMU platform for flexible secondary distribution applications.

MV COMPONENTS & OUTDOOR GRID.

OEM-READY CORES & RUGGED DISTRIBUTION

Supplying ultra-reliable switching cores for global panel builders, alongside rugged outdoor distribution equipment engineered to withstand extreme environments.

FEATURED MODELS

03.1	HJ-VCB Series	(Outdoor VCB)
03.2	HJ-SF6 Series	(Indoor SF6 Breaker)
03.3	HJ-ILBS Series	(Indoor LBS)
03.4	HJ-OVCB Series	(Outdoor VCB)
03.5	HJ-OSS Series	(Switching Station)
03.6	HJ-OFP-S Series	(Cable Branch Box)

KEY APPLICATIONS

Switchgear OEM Integration

Overhead Line Protection

Urban & Rural Grid Branching

Harsh Weather Environments

HJ-VCB Series

Vacuum Circuit Breaker

UP TO 40.5kV / EMBEDDED POLES / OEM-READY

The ultra-reliable "heart" of medium-voltage power distribution. Specifically engineered to seamlessly integrate into standard metal-clad switchgear, this comprehensive series offers cutting-edge Embedded Poles (solid-sealed) and Permanent Magnetic Actuators, delivering an unparalleled virtually maintenance-free lifespan for panel builders.



CORE ADVANTAGES

1. Advanced Embedded Pole (EP)

Vacuum interrupters are directly cast into an epoxy resin cylinder (solid-sealed). Helps ensure dielectric strength and protects against dust and condensation.

3. Versatile OEM Mounting

Unmatched flexibility for panel designers. Choose from standard withdrawable handcarts, robust fixed types, or compact Lateral (side-mounted) designs for RMUs.

2. Magnetic Actuator (100k Cycles)

For extremely frequent switching, the Magnetic Actuator variant eliminates traditional spring wear, achieving ultra-fast response and 100,000 operations.

4. Smart Grid & Advanced Diagnostics

Functions as an intelligent node with integrated data acquisition, connecting seamlessly to SCADA for remote energy management.

MODULE SPECIFICATIONS MATRIX

* Detailed dimensional drawings, pin-out diagrams, and custom current ratings are available upon OEM/EPC request.

GLOBAL SERIES	VOLTAGE	POLE TECHNOLOGY	MECHANISM	KEY APPLICATION
HJ-VCB-12/24	12kV / 24kV	Assembled Insulating Cylinder	Spring	Standard reliable distribution
HJ-VCB-12E (Embedded)	12kV	Embedded Pole (Solid)	Spring	Harsh environments
HJ-VCB-12L (Lateral)	12kV	Assembled / Embedded	Spring	Side-mounted for RMUs
HJ-VCB-12M (Lateral)	12kV	Embedded Pole (Solid)	Permanent Magnetic	High-frequency (>100k)
HJ-VCB-40 Series	40.5kV	Assembled Insulating Cylinder	Heavy-Duty Spring	Primary substations

GENERAL ELECTRICAL RATINGS

Rated Normal Current	630A / 1250A / 2000A / 3150A (Up to 4000A with forced cooling)
Rated Short-Circuit Breaking	20kA / 25kA / 31.5kA / 40kA / 50kA
Mechanical Endurance	20,000 to 30,000 operations (Spring) 100,000 operations (Magnetic Actuator)
Installation Options	Withdrawable Handcart (Standardized Cassette) or Fixed Installation

Global Factory Acceptance & OEM Partnership

Every HJ-VCB unit undergoes rigorous factory testing, including **X-ray inspections** for embedded poles, mechanical run-in tests, and precise contact resistance measurements. We supply fully interchangeable breaker trucks with standardized interlocking pin-outs, ensuring a flawless plug-and-play integration experience for global switchgear manufacturers and EPCs.

HJ-SF6 Series

Gas Circuit Breaker

UP TO 40.5kV / SOFT SWITCHING / OVERVOLTAGE-FREE

The optimized safeguard for sensitive inductive and capacitive loads. Utilizing Sulfur Hexafluoride (SF6) gas for superior arc quenching, the HJ-SF6 Series is engineered to deliver "soft breaking" performance—completely eliminating the dangerous current-chopping overvoltages typical of vacuum interrupters. It seamlessly integrates into standard metal-clad switchgear for unparalleled motor and transformer protection.



CORE ADVANTAGES

1. Overvoltage-Free Soft Breaking

Eliminates current chopping phenomena. Safely switches high-voltage motors, capacitor banks, and unloaded transformers without causing insulation-damaging voltage spikes.

3. Smart Gas Monitoring

Cast-resin pole enclosures feature an integrated, temperature-compensated SF6 pressure sensor, providing real-time local gauges and remote SCADA alarm signals.

2. Auto-Puffer Technology

Utilizes advanced thermal expansion and auto-puffer principles for arc extinction, significantly reducing the required mechanical operating energy and extending actuator life.

4. 100% Interchangeable Trucks

Standardized withdrawable cassette designs identical to our VCB series, allowing OEMs to easily swap between vacuum and SF6 breakers in the same switchgear panel.

MODULE SPECIFICATIONS MATRIX

* Detailed dimensional drawings, pin-out diagrams, and custom current ratings are available upon OEM/EPC request.

GLOBAL SERIES	VOLTAGE	ARC QUENCHING	MECHANISM	KEY APPLICATION
HJ-SF6-12	12kV	SF6 Auto-Puffer	Spring	Motor & Capacitor Switching
HJ-SF6-24	24kV	SF6 Auto-Puffer	Spring	Primary Distribution
HJ-SF6-40	40.5kV	SF6 Auto-Puffer	Heavy-Duty Spring	Heavy-duty Substations

GENERAL ELECTRICAL RATINGS

Rated Normal Current	630A / 1250A / 2000A / 3150A
Rated Short-Circuit Breaking	25kA / 31.5kA / 40kA / 50kA
SF6 Gas Pressure	Rated: 0.15 MPa at 20°C Alarm Threshold: Integrated Dual-Stage Relay
Mechanical Endurance	10,000 operations (Class M2)
Electrical Endurance	Class E2 (Frequent switching of nominal currents)
Installation Options	Withdrawable Handcart (VCB-Compatible) or Fixed Type

Strict Leakage Control & Quality Assurance

Because gas integrity is paramount, every HJ-SF6 unit is subjected to stringent **Helium Mass Spectrometry leak detection** in our cleanroom facilities, ensuring an annual leakage rate of less than 0.1%. We supply these breakers as fully sealed, maintenance-free poles for long-term operation.

HJ-ILBS Series

Load Break Switch

UP TO 24kV / VACUUM & SF6 OPTIONS / OEM-READY

The optimized cost-effective switching solution for medium-voltage distribution networks. Engineered to safely make and break load currents and cable charging currents, this series offers unparalleled flexibility for Switchgear OEMs. When paired with high-voltage HRC fuses (Combination Unit), it provides superior protective safeguards for downstream transformers.



CORE ADVANTAGES

1. Versatile Dielectric Options

Choose between eco-friendly Vacuum variants for gas-free distribution, or ultra-compact SF6 Gas insulated variants to drastically reduce panel depth.

3. Flexible Mounting Types

We provide robust Fixed-Mounted units for compact RMUs, and premium Withdrawable (Handcart) configurations for standard metal-clad switchgear.

2. Reliable Switch-Fuse Combo

A cost-effective alternative to VCBs for transformer protection. The HRC fuse striker pin instantly triggers mechanical linkages to trip all three phases simultaneously.

4. Integrated Earthing & Interlocks

Operator safety is engineered into the frame. Features an integrated quick-make earthing switch with a robust "5-Prevention" mechanical interlocking system.

MODULE SPECIFICATIONS MATRIX

* Detailed dimensional drawings, pin-out diagrams, and custom current ratings are available upon OEM/EPC request.

GLOBAL SERIES	INSULATION	MOUNTING	MECHANISM	KEY APPLICATION
HJ-ILBS-V	Vacuum (Air Gap)	Fixed Mounted	LBS / Combo	Eco-friendly, Transparent covers
HJ-ILBS-VW	Vacuum (Air Gap)	Withdrawable	LBS / Combo	Matches standard switchgear tracks
HJ-ILBS-S	SF6 Gas (Tank)	Fixed Mounted	LBS / Combo	Ultra-compact, 3-position mechanism

GENERAL ELECTRICAL RATINGS

Rated Voltage (Ur)	12kV / 24kV (Depends on specific model selection)
Rated Current (Pure LBS)	630A / 1250A
Rated Current (Combo Unit)	Max 125A / 200A (Determined by matched fuse link)
Rated S-C Breaking (Combo Unit)	Up to 31.5kA (Reliant on HRC fuse capability)
Mechanical Endurance	Main switch ≥ 10,000 cycles Earthing switch ≥ 2,000 cycles

Global Factory Acceptance & OEM Partnership

As a trusted partner to global switchgear manufacturers, every HJ-ILBS unit undergoes rigorous mechanical endurance cycling, dielectric testing, and fuse-linkage tripping verification. We empower panel builders by supplying these switches with **comprehensive dimensional drawings**, customized operating mechanisms (manual or motorized), and **tailored phase-to-phase distances** to perfectly fit your proprietary cabinet designs.

HJ-OVCB Series

Outdoor Vacuum Breaker

12kV TO 40.5kV / IP65+ / AUTO-RECLOSER READY

A flagship outdoor switching solution engineered to match top-tier international brands, **proven by over a decade of flawless operation in the China State Grid**. From highly compact 12kV pole-mounted units to heavy-duty 40.5kV substation breakers, we empower global partners with **deep OEM customization and comprehensive turnkey solution designs**. It provides the optimized reliable foundation for auto-reclosing (ACR), fault isolation, and smart grid automation.

IDEAL FOR OVERHEAD GRIDS:

- Standard Pole-Mounted Switching
- Smart Grid Auto-Recloser (ACR)
- Boundary "Watchdog" Nodes
- 33/36kV Outdoor Substations



CORE ADVANTAGES

1. Full-Spectrum Coverage

Unlike singular offerings, the HJ-OVCB series covers every requirement—from 12kV compact units to heavy-duty 40.5kV substation breakers.

3. Extreme Outdoor Resilience

Interrupters are embedded in premium hydrophobic epoxy or UV-resistant silicone rubber, easily withstanding heavy icing, salt fog, and desert radiation (IP65+).

2. Advanced Actuation Tech

Choose between highly optimized motor-spring mechanisms or state-of-the-art Permanent Magnetic Actuators (achieving over 100,000 operations).

4. Hardware-Ready Auto Reclosing

"Smart" variants come pre-wired with precision CT/PTs, ready to seamlessly connect with external Feeder Terminal Units (FTU) for instant ACR logic.

MODEL SELECTION & TECHNICAL MATRIX

* The matrix below maps our comprehensive outdoor series. Detailed dimensional drawings and customized FTU control box configurations are engineered upon OEM/EPC request.

MODEL SERIES	VOLTAGE	CORE INSULATION	KEY FEATURE	APPLICATION
HJ-OVCB-S	12kV / 24kV	Solid Dielectric (Epoxy/Silicone)	Compact, High Reliability	Standard Pole Switching
HJ-OVCB-R	12kV	Solid Dielectric	Smart Recloser & Motorized	Auto-Recloser (ACR)
HJ-OVCB-W	12kV	SF6-Gas (Zero gauge)	Zero-sequence CT Integrated	Boundary "Watchdog"
HJ-OVCB-M	12kV	Solid Dielectric	Permanent Magnetic Actuator	High-frequency Nodes
HJ-OVCB-C	12kV	Vacuum / Air Composite	Classic Rugged Design	Rural Grid Upgrades
HJ-OVCB-40	40.5kV	Porcelain / Silicone Rubber	High Clearance, Heavy Duty	Outdoor Substations (33kV)

GENERAL ELECTRICAL RATINGS

Rated Current	630A / 1250A (Up to 4000A with forced cooling)
Rated Short-Circuit Breaking Current	20kA / 25kA / 31.5kA
Mechanical Endurance	10,000 Operations (Standard Spring) > 100,000 Operations (Permanent Magnetic)
Secondary Control Voltage	24V DC, 48V DC, 110V DC/AC, or 220V DC/AC available.

Global Factory Acceptance & OEM Partnership

Every outdoor breaker is subjected to rigorous weather-simulation and dielectric testing. Beyond just hardware, we offer complete **solution design output capabilities**. We supply complete pole-mounting kits, customized surge arresters, and standardized aviation plug interfaces for your control cubicles, ensuring rapid and safe installation by your local line crews.

HJ-OSS Series

Outdoor Switching Station

UP TO 24kV / NO CIVIL WORKS / 100% IN-HOUSE CORES

An advanced, fully enclosed intelligent power distribution hub engineered to replace expensive traditional brick-and-mortar substations. Built entirely with 100% HJATIS proprietary medium-voltage components, it delivers unmatched quality control and turnkey SCADA-ready power routing for modern urban and industrial grids.

IDEAL FOR RAPID GRID DEPLOYMENT:

- Urban Underground Cable Networks
- Residential & Commercial Centers
- Industrial Parks (Multi-Way Branching)
- Smart Grid Automated Fault Isolation



CORE ADVANTAGES

1. 100% Proprietary Customization

From VCBs to SF6 LBS, we manufacture all core internal components. This vertical integration ensures seamless compatibility and supports limitless multi-way ring setups.

3. SCADA-Ready Intelligence

Pre-engineered with PTs/CTs, UPS, and dedicated FTU/DTU compartments. Enables flawless "Four Remotes" execution for centralized fault monitoring and self-healing.

2. Zero Civil Works (Plug-and-Play)

Eliminates the need for expensive brick-and-mortar buildings. Simply prepare a basic concrete pad for rapid deployment in highly congested urban environments.

4. Unyielding Outdoor Resilience

The double-layered stainless steel enclosure is treated with marine-grade anti-corrosion coatings. Fully sealed and moisture-proof for extreme weather endurance.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations based on the DFWK series. Internal switchgear layouts, dimensions, and capacities are highly customizable.

SYSTEM & POWER PARAMETERS	
Rated Voltage (Ur)	12kV (24kV systems fully customizable)
Rated Current	630A
Internal Core Components	SF6 Load Break Switches / VCBs / Smart Controllers (100% HJATIS Proprietary Manufacture)
Typical Layout Configurations	3-Way, 4-Way, up to multi-circuit ring setups
WITHSTAND & PROTECTION RATINGS	
Rated Short-Time Withstand Current	20kA(4s)
Rated Peak Withstand Current	50kA
Rated Short-Circuit Making Current	50kA
Power Frequency Withstand Voltage	42kV (Phase/Ground) / 48kV (Across contacts)
Lightning Impulse Withstand (BIL)	75kV (Phase/Ground) / 85kV (Across contacts)
Mechanical Endurance	5,000 Operations (Main Switch)
Enclosure Protection Degree	Standard IP54 (Outer Shell) IP4X (Internal Switchgear)

OPERATING ENVIRONMENT:

- **Ambient Temperature:** -35°C to +40°C.
- **Altitude:** Standard ≤ 1000m (High-altitude custom designs available).
- **Relative Humidity:** Daily average ≤ 95%, Monthly average ≤ 90%.
- **Seismic Resilience:** Withstands up to Magnitude 8 earthquake intensity.

Global Factory Acceptance & Turnkey Delivery

Every HJ-OSS unit undergoes a comprehensive integrated FAT (Factory Acceptance Test), verifying all mechanical interlocks and SCADA communication ports under simulated operational conditions. The station is delivered as a fully wired, completely built unit (CBU), ensuring **zero integration headaches on-site**.

HJ-OFP-S Series

Cable Branch Box

UP TO 24kV / VACUUM & SF6 OPTIONS / OEM-READY

An advanced outdoor medium-voltage distribution node equipped with an integrated SF6 Load Break Switch (LBS). Unlike passive feeder pillars, it provides active load switching and precise fault isolation for underground networks. Manufactured with proprietary enclosures and premium cable connectors, it helps ensure SCADA-ready intelligence for modern ring main grids.

IDEAL FOR ACTIVE UNDERGROUND GRIDS:

- High-Density Urban Ring Networks
- Industrial Parks (Load Sectioning)
- Renewable Energy Collection Nodes
- Railway & Critical Infrastructure



CORE ADVANTAGES

1. Active Fault Isolation

The integrated SF6 LBS safely makes and breaks rated load currents. Instantly isolate downstream faults without shutting down the entire main ring network.

3. Flexible Multi-Branch Topologies

Design cable routing without constraints. We offer highly customized configurations from standard 1-in/2-out setups to complex 6-way branch combinations.

2. 100% Dead-Front Architecture

Core switching parts are hermetically sealed in an SF6 tank. Fully insulated shielded cable connectors provide enhanced immunity against flooding and coastal pollution.

4. Automation & Safety Interlocks

Features reserved compartments to accommodate third-party fault indicators. Robust mechanical interlocks ensure all operations follow foolproof safety sequences.

TECHNICAL SPECIFICATIONS

* Parameters cover standard 12kV configurations based on the DFW series. Custom 24kV models and specific branching dimensions are engineered upon EPC request.

SYSTEM & POWER PARAMETERS

Rated Voltage (Ur)	12kV (24kV available upon request)
Rated Current	630A (Main & Branch)
Rated Active Load Breaking Current	630A
Rated Closed-Loop Breaking Current	63kA
Cable Charging Breaking Current	45A

WITHSTAND & PROTECTION RATINGS

Short-Time Withstand Current	20kA(4s)
Peak Withstand / Short-Circuit Making	50kA
Power Frequency Withstand (1 min)	42kV (Phase/Ground) / 48kV (Across open contacts)
Lightning Impulse Withstand (BIL)	75kV (Phase/Ground) / 85kV (Across open contacts)
Mechanical Endurance (LBS)	5,000 Operations
Standard Branching Configurations	1-in 1-out, 1-in 2-out, 2-in 2-out, 2-in 4-out, up to 6-way
Enclosure Protection Degree	IP54 (Outer Enclosure) IP67 (Internal Gas Tank)

OPERATING ENVIRONMENT:

- **Ambient Temperature:** -40°C to +45°C.
- **Altitude:** Standard ≤ 2000m.
- **Environmental Resilience:** Fully operational under heavy rain, 100% humidity, and extreme dust conditions.
- **Installation Site:** Outdoor concrete pads, roadside green belts, or industrial yards.

Global Factory Acceptance & Turnkey Delivery

Every HJ-OFP-S unit is rigorously tested in our facility, verifying SF6 gas tightness, dielectric withstand limits, and mechanical interlock reliability. The units are delivered as completely built systems, pre-fitted with our proprietary **premium cable connectors** and fault indicators, ensuring rapid and secure on-site splicing for EPCs.

ADVANCED TRANSFORMER SOLUTIONS.

ULTRA-LOW LOSS & GREEN EFFICIENCY

Engineered for ultra-low loss and maximum energy efficiency,
serving as the reliable core for critical voltage transformation.

FEATURED MODELS

04.1	HJ-AMT-D Series	(Amorphous Dry)
04.2	HJ-AMT-O Series	(Amorphous Oil)
04.3	HJ-CRT Series	(Cast Resin Dry)
04.4	HJ-MPT Series	(HV Power)
04.5	HJ-ODT Series	(Sealed Oil)
04.6	HJ-VPI Series	(VPI Dry-Type)

KEY APPLICATIONS

- Green Buildings & LEED
- Utility-Scale Substations
- Heavy Industrial Hubs
- Renewable Energy Step-up

HJ-AMT-D Series

Amorphous Transformer

UP TO 35kV / ULTRA-LOW LOSS / FIRE-RETARDANT (DRY)

The optimized synthesis of extreme energy efficiency and enhanced indoor safety. By integrating an advanced **amorphous metal ribbon core** with premium vacuum-cast epoxy resin encapsulation, it drastically slashes no-load losses while completely eliminating fire and explosion risks. It is the premier choice for critical indoor infrastructure demanding rigorous ESG compliance and a maximized Return on Investment (ROI).

IDEAL FOR PREMIUM INDOOR FACILITIES:

- Mega Data Centers (IDC) & Telecom Hubs
- Underground Subways, Railways & Airports
- High-Rise Commercial Towers & Hospitals
- Eco-Friendly (LEED) Smart Buildings



CORE ADVANTAGES

1. Breakthrough Amorphous Efficiency

The randomized atomic structure of the core allows for incredibly easy magnetization, slashing hysteresis and eddy current losses by a staggering **70% to 80%** compared to silicon steel.

3. Exceptional Overload & Low PD

Vacuum resin casting ensures Partial Discharge (PD) levels remain strictly $\leq 10\text{pC}$. When equipped with forced-air (AF) cooling fans, it safely sustains a **40% capacity overload** during peak demands.

2. Enhanced Fire Safety (Zero Oil)

High-voltage windings are hermetically encapsulated in flame-retardant epoxy resin. With zero insulating oil, it eliminates explosion risks, allowing installation directly at indoor load centers.

4. Global Voltage Compliance

Seamlessly merging cutting-edge amorphous tech with mature manufacturing. Custom-engineered for 11kV, 13.8kV, 20kV, 22kV, or 33kV primary networks to flawlessly match your national grid specifications.

PERFORMANCE MATRIX & TECHNICAL SPECIFICATIONS

* The matrix below outlines our standard capacities up to 2500kVA for Amorphous Alloy Dry-Type Transformers. Specific voltages, IP enclosures, and insulation classes are fully adaptable to meet your local utility requirements.

PARAMETER / RATED POWER	50KVA	250KVA	500KVA	1250KVA	2500KVA
Primary Voltage	Up to 35kV (e.g., 10kV, 11kV, 13.8kV, 20kV, 33kV)				
Secondary Voltage	0.4kV / 0.415kV / 0.433kV / 0.480kV				
Cooling Mode	AN / AF	AN / AF	AN / AF	AN / AF	AN / AF
Typical Impedance (%)	4.0%	4.0%	4.0%	6.0%	6.0%
Core Material	Amorphous Metal Ribbon (Ultra-Low Loss)				
Insulation Class	Class F (155°C) / Class H (180°C)				
Enclosure Rating Options	IP00 (Core only) / IP20 (Indoor Box) / IP23 (Outdoor Weather-proof)				
Compliance Standards	IEC 60076-11 / IEEE C57.12.01				

GENERAL SYSTEM RATINGS

Energy Savings Performance	Reduces no-load losses by 70% to 80% (Compared to standard silicon steel cast resin transformers)
Cooling Capacity Boost	Forced air (AF) cooling safely increases rated capacity by up to 40% during temporary peak demands.
Partial Discharge Level	≤ 10 pC, ensuring exceptional long-term dielectric integrity
ESG & Carbon Footprint	Ideal for securing LEED certifications for green buildings and drastically reducing facility OPEX.

Global Factory Acceptance & Green Certification Support

Every HJ-AMT-D transformer undergoes comprehensive testing strictly compliant with IEC 60076-11 and IEEE C57.12.01 standards. We rigorously validate the ultra-low no-load loss metrics alongside dielectric withstand and PD tests. We provide comprehensive FAT reports and carbon-reduction calculations to seamlessly support your project's green energy certifications (e.g., LEED).

HJ-AMT-O Series

Amorphous Transformer

UP TO 35kV / ULTRA-LOW LOSS / HIGH ROI / SEALED OIL

The HJ-AMT-O Series Amorphous Alloy Transformer (Oil-Immersed) represents the pinnacle of energy-efficient power distribution for outdoor environments. By replacing traditional silicon steel with an **advanced amorphous metal ribbon core**, it astonishingly reduces standby losses by up to 70%-80%. Designed within a hermetically sealed, maintenance-free corrugated tank, it is the optimized high-ROI solution for grids with continuous energization but fluctuating loads.

IDEAL FOR ENERGY-CONSCIOUS & FLUCTUATING LOADS:

- Solar PV & Wind Power Collection
- Rural Electrification & Low-Density
- Utility Grid Carbon Reduction Upgrades
- Industrial Parks with Variable Shifts



CORE ADVANTAGES

1. Breakthrough Amorphous Core

The randomized atomic structure allows for incredibly easy magnetization, slashing hysteresis and eddy current losses, and reducing overall no-load losses by up to 70% to 80%.

3. Hermetically Sealed & Maintenance-Free

The core and windings are housed in a fully sealed corrugated oil tank. This isolates the insulating oil from atmospheric oxygen and moisture, ensuring decades of zero-maintenance operation.

2. Maximized ROI for Fluctuating Grids

Perfect for renewables or rural grids carrying peak loads for only a few hours daily. It virtually eliminates standby waste, delivering a rapid Return on Investment (ROI).

4. Global Voltage Matching

Seamlessly merging cutting-edge amorphous technology with mature global manufacturing. Custom-engineered for 11kV to 33kV primary voltages to match your national grid flawlessly.

PERFORMANCE MATRIX & TECHNICAL SPECIFICATIONS

* The matrix below outlines our standard capacities up to 2500kVA for Amorphous Alloy Oil Transformers. Specific voltages, vector groups, and custom dimensions are fully adaptable to meet your local utility requirements.

PARAMETER / RATED POWER	50KVA	250KVA	500KVA	1250KVA	2500KVA
Primary Voltage	Up to 35kV (e.g., 10kV, 11kV, 13.8kV, 20kV, 33kV)				
Secondary Voltage	0.4kV / 0.415kV / 0.433kV / 0.480kV				
Cooling Mode	ONAN	ONAN	ONAN	ONAN	ONAN
Typical Impedance (%)	4.0%	4.0%	4.0%	5.0%	6.0%
Vector Group	Dyn11 / Yyn0 / Custom Configurations				
Core Material	Amorphous Metal Ribbon (Ultra-Low Loss)				
Enclosure Rating Options	Hermetically Sealed Corrugated Tank (Outdoor Weather-proof)				
Compliance Standards	IEC 60076 / IEEE C57.12.00				

GENERAL SYSTEM RATINGS

Energy Savings Performance	Reduces no-load losses by 70% to 80% (Compared to standard silicon steel transformers)
ESG & Carbon Footprint	Significantly lowers lifecycle carbon emissions, aiding in LEED and green utility certifications.
Maintenance Profile	Fully sealed oil tank prevents oil contamination, eliminating the need for periodic oil testing or replacement.
Overload Protection	Excellent thermal stability for handling high ambient temperatures and solar/wind peak generation curves.

Global Factory Acceptance & Turnkey Support

Every HJ-AMT-O transformer is subjected to stringent factory acceptance testing (FAT) per IEC 60076 standards, with a special focus on validating its ultra-low no-load loss parameters. We provide comprehensive FAT documentation and **carbon-reduction calculation estimates** to support your project's ESG and green energy compliance.

HJ-CRT Series

Cast Resin Dry-Type

UP TO 35kV / UP TO 2500kVA / FIRE-RETARDANT

The HJ-CRT Series Cast Resin Dry-Type Transformer is the optimized safe power solution for highly populated and critical indoor environments. Engineered with premium epoxy resin cast under high vacuum, it completely eliminates the fire and explosion risks associated with traditional oil-filled transformers. Leveraging our robust manufacturing capabilities, we deliver ultra-low noise, exceptional moisture resistance, and strict IEC-compliant performance.

IDEAL FOR CRITICAL & HIGH-DENSITY APPLICATIONS:

- High-Rise Commercial & Residential Towers
- Underground Subways, Tunnels & Airports
- Hospitals, Data Centers (IDC) & Critical Hubs
- Highly Polluted or Humid Industrial Plants



CORE ADVANTAGES

1. Enhanced Fire Safety (Zero Oil)

Utilizes self-extinguishing, flame-retardant epoxy resin. Without oil, it eliminates explosion risks, allowing installation directly at indoor load centers to drastically reduce LV cable losses.

3. Exceptional Moisture Resilience

Solid resin encapsulation renders the windings impervious to moisture. It can be safely energized without pre-drying, even in underground environments with 100% relative humidity.

2. Premium Vacuum Resin Casting

High-voltage windings are meticulously cast in a vacuum. This eliminates internal air voids (Partial Discharge $\leq 10\text{pC}$) and prevents thermal cracking, ensuring a lifespan exceeding 30 years.

4. Up to 50% Overload Capacity

When equipped with an automated cross-flow cooling fan system (AF mode), the transformer can safely sustain a **40% to 50% capacity overload** during peak demand periods.

PERFORMANCE MATRIX & TECHNICAL SPECIFICATIONS

* The matrix below outlines our standard capacities up to 2500kVA for Cast Resin Dry-Type Transformers. Specific voltages, enclosure IP ratings, and insulation classes are fully customizable to meet local utility requirements.

PARAMETER / RATED POWER	100KVA	500KVA	1000KVA	1600KVA	2500KVA
Primary Voltage	Up to 35kV (e.g., 10kV, 11kV, 13.8kV, 20kV, 33kV)				
Secondary Voltage	0.4kV / 0.415kV / 0.433kV / 0.480kV				
Cooling Mode	AN / AF	AN / AF	AN / AF	AN / AF	AN / AF
Typical Impedance (%)	4.0%	4.0%	6.0%	6.0%	6.0%
Vector Group	Dyn11 / Yyn0 / Custom Configurations				
Insulation Class	Class F (155°C) / Class H (180°C)				
Enclosure Rating Options	IP00 (Core only) / IP20 (Indoor Box) / IP23 (Outdoor Weather-proof)				
Compliance Standards	IEC 60076-11 / IEEE C57.12.01				

GENERAL SYSTEM RATINGS

Partial Discharge Level	≤ 10 pC (Ensuring long-term void-free insulation integrity)
Cooling Capacity Boost	AF Mode: Forced air cooling safely increases rated capacity by up to 40%-50% during peak loads.
Temperature Controller	Integrated PT100 sensors with digital display and automated fan/trip control outputs.
Environmental Certifications	E2 (Environment), C2 (Climate), F1 (Fire behavior) certified for extreme reliability.

Global Factory Acceptance & Turnkey Support

Every HJ-CRT transformer is rigorously tested in accordance with IEC 60076-11 standards. Tests include lightning impulse, applied voltage, and stringent partial discharge (PD) measurements. Units can be supplied as IP00 (open core) for seamless switchgear integration, or with customized IP20/IP23 protective enclosures featuring integrated smart temperature controllers.

HJ-MPT Series

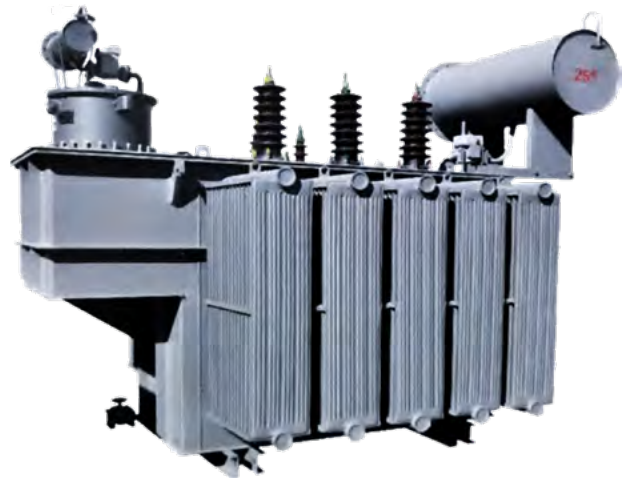
HV Power Transformer

UP TO 35kV / UP TO 31.5MVA / HEAVY-DUTY SUBSTATION CORE

The HJ-MPT Series HV Power Transformer is the heavy-duty powerhouse designed for primary substations and major industrial grid interconnects. Engineered to handle massive energy transfers up to **31,500kVA (31.5MVA)**, this robust oil-immersed unit delivers exceptional short-circuit withstand capabilities, superior thermal management (ONAN/ONAF), and customizable On-Load Tap Changer (OLTC) options for precise voltage regulation.

IDEAL FOR PRIMARY POWER TRANSMISSION:

- Utility Step-Down Substations (e.g. 35kV/10kV)
- Heavy Metallurgy, Steel Mills & Mining
- Large-Scale Wind/Solar Grid Tie-Ins
- Major Industrial Parks & Power Hubs



CORE ADVANTAGES

1. Exceptional Short-Circuit Withstand

Utilizes high-purity oxygen-free copper and an advanced interleaved winding structure with rigid axial/radial compression to effortlessly survive massive electromechanical fault forces.

3. Advanced Thermal Management

Engineered for sustained heavy overloading. High-capacity models (10MVA+) are equipped with high-efficiency radiator banks and automated fan arrays (ONAF) for peak demand cooling.

2. Low-Loss High-Efficiency Core

Precisely stacked using high-permeability, cold-rolled grain-oriented silicon steel sheets with step-lap joints. Drastically reduces no-load losses and minimizes acoustic noise.

4. Precision Voltage Regulation

Maintain grid stability regardless of load fluctuations. Customized with premium On-Load Tap Changers (OLTC) for automated, uninterrupted voltage management.

PERFORMANCE MATRIX & TECHNICAL SPECIFICATIONS

* The matrix below references typical parameters compliant strictly with IEC 60076 and IEEE standards for 35kV class. Voltages, impedances, and vector groups are engineered to your exact single-line diagram.

PARAMETER / MODEL	2500KVA	6300KVA	10000KVA	20000KVA	31500KVA
Rated Power (MVA)	2.5 MVA	6.3 MVA	10 MVA	20 MVA	31.5 MVA
Cooling Mode	ONAN	ONAN	ONAN	ONAN	ONAN
Impedance (%)	6.50%	7.00%	8.00%	8.00%	8.00%
No-Load Loss (kW)	2.9	6.2	9.6	17.7	26.3
Load Loss (kW)	23.5	46.2	64.0	116.0	165.0

GENERAL SYSTEM RATINGS

Typical Primary Voltage	Up to 35kV (e.g., 33kV, 34.5kV)
Typical Secondary Voltage	10kV / 11kV / 13.8kV
Vector Group Options	Ynd11 / Dyn11 / YNyn0 (Custom engineered to grid specs)
Compliance Standards	IEC 60076 / IEEE C57.12.00

Global Factory Acceptance & Specialized Logistics

Manufacturing a Power Transformer is a precise science. Every HJ-MPT undergoes rigorous FAT procedures per IEC 60076 standards, including lightning impulse tests, temperature rise simulations, and partial discharge measurements. Due to its massive scale, we provide specialized logistical planning for our EPC partners, including **impact-monitored shipping** and **expert on-site supervision** for final assembly and vacuum oil filling.

HJ-ODT Series

Sealed Oil Transformer

UP TO 35kV / UP TO 2500kVA / GLOBAL VOLTAGE MATCHING

The HJ-ODT Series Hermetically Sealed Oil Transformer is the highly reliable, cost-effective backbone of global power distribution. Utilizing an advanced fully-sealed corrugated tank design, it completely isolates the insulating oil from the atmosphere, rendering the unit virtually maintenance-free. With our flexible manufacturing capabilities, we precisely match the transformer's voltage ratings to your specific national grid standards.

IDEAL FOR GENERAL POWER DISTRIBUTION:

- Utility Overhead & Underground Networks
- General Manufacturing & Industrial Facilities
- Residential Communities & Commercial Hubs
- Agricultural & Rural Electrification Projects



CORE ADVANTAGES

1. Global Voltage & Customization

Seamlessly adapt to 11kV, 13.8kV, 20kV, or 34.5kV grid standards. From custom tap changers to specific vector groups (e.g., Dyn11), we deliver bespoke grid-compliant solutions.

3. High-Efficiency Core & Windings

Built with premium cold-rolled grain-oriented silicon steel to reduce no-load losses, and high-purity oxygen-free copper windings for superior short-circuit withstand capability.

2. Hermetically Sealed & Maintenance-Free

Eliminates the traditional oil conservator. Corrugated cooling fins dynamically expand and contract to accommodate oil volume changes, ensuring decades of zero-maintenance operation.

4. Robust Anti-Corrosion Treatment

Designed to survive decades outdoors. The tank undergoes stringent multi-stage surface preparation and electrostatic powder coating, providing marine-grade rust and UV resistance.

PERFORMANCE MATRIX & TECHNICAL SPECIFICATIONS

* The matrix outlines standard capacities up to 2500kVA. Specific voltages, vector groups, and efficiency tiers are fully customizable to meet local utility requirements.

PARAMETER / RATED POWER	50KVA	250KVA	500KVA	1250KVA	2500KVA
Primary Voltage	Up to 35kV (e.g., 10kV, 20kV, 35kV)				
Secondary Voltage	0.4kV / 0.415kV / 0.433kV / 0.480kV				
Cooling Mode	ONAN	ONAN	ONAN	ONAN	ONAN
Typical Impedance (%)	4.0%	4.0%	4.0%	5.0%	6.0%
Vector Group	Dyn11 / Yyn0 / Custom Configurations				
Tap Changer Type	Off-Circuit (OCTC) / On-Load (OLTC) optional				
Insulation Level (LI/AC)	LI 75 AC 28 / LI 170 AC 70 / LI 200 AC 85 (Depends on voltage)				
Compliance Standards	IEC 60076 / ANSI / IEEE C57.12				

STANDARD OPERATING ENVIRONMENT

Ambient Temperature	-25°C to +40°C
Installation Altitude	Standard ≤ 1000m (Customizable for high-altitude environments)
Installation Type	Indoor or Outdoor (Pole-mounted configurations or Pad-mounted enclosures)

Global Factory Acceptance & Turnkey Support

Every HJ-ODT transformer undergoes comprehensive routine testing strictly compliant with **IEC 60076** standards, including applied voltage, induced overvoltage, and precise loss measurements. We provide detailed FAT reports and offer **flexible shipping configurations** to ensure safe and highly economical delivery to your global project sites.

HJ-VPI Series

Vacuum Impregnated

CLASS H/C INSULATION / 100% RECYCLABLE / HIGH OVERLOAD

The premier eco-friendly power solution for modern green infrastructure. Manufactured using advanced Vacuum Pressure Impregnation (VPI) technology, the windings are thoroughly treated with high-temperature varnish. Unlike rigid cast-resin transformers, the HJ-VPI is fully repairable and 100% recyclable at the end of its lifecycle, perfectly aligning with strict global ESG (Environmental, Social, and Governance) mandates.

IDEAL FOR ECO-CONSCIOUS & HEAVY-LOAD APPS:

- Marine, Offshore Platforms & Wind Turbines
- Green Commercial Buildings (LEED Certified)
- Underground Subways, Mining & Rail Transit
- Industrial Plants requiring high temporary overload



CORE ADVANTAGES

1. Advanced VPI & Class H/C Insulation

Processed in a highly controlled VPI chamber using premium Nomex® or equivalent high-temp materials. Achieves an outstanding Class H (180°C) or Class C (220°C) insulation rating, confidently handling extreme thermal stresses.

3. Superior Overload Capacity

Thanks to the open-wound VPI structure, natural air convection is highly efficient. When paired with an AF (Air Forced) cooling system, it safely sustains temporary overloads up to 20% to 30% without risking insulation breakdown.

2. Optimized Eco-Friendliness & Repairability

Designed with the circular economy in mind. Containing no solid epoxy encapsulation, the copper/aluminum conductors and silicon core can be easily dismantled and 100% recycled. Individual damaged coils can also be repaired.

4. High Mechanical & Short-Circuit Strength

The entire core-and-coil assembly is mechanically reinforced and baked during the curing process, creating a rigid, moisture-resistant monolithic structure that easily resists severe electrodynamic forces and vibrations.

PERFORMANCE MATRIX & TECHNICAL SPECIFICATIONS

* The matrix below outlines our standard capacities up to 2500kVA for VPI Dry-Type Transformers. Specific voltages, enclosure IP ratings, and custom dimensions are fully adaptable to meet local utility requirements.

PARAMETER / RATED POWER	100KVA	500KVA	1000KVA	1600KVA	2500KVA
Primary Voltage	Up to 35kV (e.g., 10kV, 11kV, 13.8kV, 20kV, 33kV)				
Secondary Voltage	0.4kV / 0.415kV / 0.433kV / 0.480kV / 0.69kV				
Cooling Mode	AN / AF	AN / AF	AN / AF	AN / AF	AN / AF
Typical Impedance (%)	4.0%	4.0%	6.0%	6.0%	6.0%
Vector Group	Dyn11 / Yyn0 / Custom Configurations				
Insulation Class	Class H (180°C) / Class C (220°C)				
Insulation Class	IP00 (Core only) / IP20 (Indoor Box) / IP23 (Outdoor Weather-proof)				
Compliance Standards	IEC 60076-11 / IEEE C57.12.01				

GENERAL SYSTEM RATINGS

ESG & Environmental Impact	100% Recyclable. Free of toxic solids, ensuring zero disposal liabilities at end-of-life.
Cooling Capacity Boost	AF Mode: Forced air cooling safely increases rated capacity by up to 20%-30% to handle peak demands.
Moisture & Fire Resistance	Constructed with non-flammable, self-extinguishing materials compliant with highest fire safety codes.
Temperature Controller	Integrated PT100 sensors embedded in windings with digital display and alarm/trip contacts.

Global Factory Acceptance & Turnkey Support

Every HJ-VPI transformer undergoes rigorous factory acceptance testing (FAT) strictly compliant with **IEC 60076-11** standards. We rigorously verify partial discharge limits, insulation resistance, and dielectric integrity. Units can be supplied in standard **IP00 format** for seamless switchgear integration, or enclosed in custom **IP20 to IP44 NEMA-equivalent** protective housings for diverse site conditions.

PREFABRICATED MODULAR SUBSTATIONS.

PLUG & PLAY EPC SOLUTIONS

Engineered for rapid deployment and renewable energy step-up, resolving critical pain points for overseas EPC projects with turnkey modular architectures.

FEATURED MODELS

05.1 HJ-CSS Series (Compact Euro Type)

05.2 HJ-PMS Series (Pad-Mounted /
Dead-Front)

05.3 HJ-EHouse Series (Turnkey
Container)

KEY APPLICATIONS

Renewable Energy Step-up

Overseas EPC Projects

Mining & Oil Fields

Rapid Grid Expansions

HJ-CSS Series

Compact Substation

UP TO 40.5kV / 2500kVA / PLUG & PLAY

The HJ-CSS Series Compact Secondary Substation (European Type) is a highly integrated, factory-assembled turnkey solution. It seamlessly combines medium-voltage switchgear, a distribution transformer, and low-voltage distribution panels into a single, highly durable modular enclosure. Engineered to drastically reduce on-site civil works and deployment time for massive grid projects.

IDEAL FOR SPACE-CONSTRAINED & HIGH-DEMAND SCENARIOS:

- Urban Public Distribution & Residential
- Industrial Parks & Temp Construction Sites
- Renewable Energy (Solar/Wind) Integration
- Highways, Railways & Infrastructure



CORE ADVANTAGES

1. Highly Integrated & Compact Layout

Available in flexible internal configurations (Linear "I" shape or Triangle "T" shape), drastically minimizing the overall footprint compared to traditional brick-and-mortar substations.

3. Uncompromised Safety & Smart Interlocks

Safety is engineered into every compartment. The MV section is equipped with comprehensive "5-Prevention" mechanical interlocks, ensuring maximum safety for maintenance personnel.

2. Superior Environmental Resilience

The rugged double-layer enclosure features advanced thermal insulation and a labyrinth-style ventilation design to prevent internal condensation and withstand extreme weather.

4. Plug-and-Play Factory Pre-Assembly

Designed for rapid EPC deployment. The entire substation is fully assembled, wired, and tested at our facility. This drastically reduces on-site installation time, labor costs, and CAPEX.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations based on the YB series. Custom capacities and voltage ratings are available for specific EPC requirements.

SYSTEM & POWER PARAMETERS	
Transformer Capacity	50kVA - 2500kVA (Custom larger capacities available via E-House)
Rated Voltage (MV Side)	12kV / 24kV / 35kV (Up to 40.5kV)
Rated Voltage (LV Side)	0.4kV / 0.69kV
Rated Current (MV Side)	Up to 630A (Load Switch) / 125A (Fuse) / 1250A (VCB)
Rated Current (LV Side)	100A - 3150A
WITHSTAND & PROTECTION RATINGS	
Short-Time Withstand Current (MV)	20kA (Standard) (Custom higher withstand available)
Short-Circuit Breaking Current (LV)	15kA - 80kA
Rated Frequency	50 Hz / 60 Hz
Transformer Type Options	Hermetically Sealed Oil-Immersed / Cast Resin Dry-Type
Enclosure Protection Degree	Standard IP3X (Transformer Compartment IP2X) (Customizable up to IP54 for extreme environments)

OPERATING ENVIRONMENT:

- **Ambient Temperature:** -25°C to +40°C.
- **Altitude:** Standard ≤ 1000m (High-altitude custom designs up to 4000m+ available).
- **Installation Site:** Outdoor areas free from severe vibration, explosive dust, or severe chemical corrosion.
- **Wind Speed Resilience:** Withstands outdoor wind pressure up to 34m/s (approx. 700Pa).

Global Factory Acceptance & Turnkey Support

Every HJ-CSS unit undergoes rigorous routine testing aligned with strict IEC standards before dispatch. We proudly support Remote Video FAT for our global EPC clients, ensuring total transparency. To support diverse project logistics, this series is available as a CBU (Completely Built Unit), ready to be lifted and energized immediately upon arrival at the site.

HJ-PMS Series

Pad-Mounted Substation

UP TO 34.5kV / 4000kVA / DEAD-FRONT DESIGN

The HJ-PMS Series Pad-Mounted Substation (American Type) is an ultra-compact, fully insulated, and tamper-resistant distribution center. It seamlessly integrates a highly efficient oil-immersed transformer, medium-voltage load switch, and low-voltage distribution into a single sealed tank. Designed for public safety and rapid installation, it is the preferred choice for modern underground distribution networks.

IDEAL FOR PUBLIC SPACES & RENEWABLES:

- Residential Communities & Commercial Centers
- Renewable Energy (Solar Parks & Wind Farms)
- Street Lighting & Urban Underground Grids
- Mining Facilities & Oil Field Distribution



CORE ADVANTAGES

1. Ultra-Compact & Low Profile Design

Sharing the same oil tank for both the transformer and MV switchgear, it is approx. 1/3 the size of traditional European substations. Blends seamlessly into urban landscapes without complex civil structures.

3. Highly Reliable Dual-Fuse Protection

Safeguarded by an advanced two-stage mechanism: a sensitive bayonet-type expulsion fuse handles secondary short circuits, while a backup current-limiting fuse intercepts high-fault internal currents.

2. Dead-Front & Tamper-Resistant

Public safety is maximized with a fully tamper-proof enclosure featuring no externally accessible screws. The MV section utilizes shielded, touch-safe "dead-front" elbow connectors, eliminating electrocution risks.

4. Flexible Ring Main & Radial Operations

Engineered for versatile grid integration, it effortlessly supports both Ring Main (Loop) and Radial (Terminal) feed network topologies. The robust internal load break switch enables rapid grid reconfiguration.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations based on the ZGS series. Custom capacities and voltage ratings are fully engineered for specific EPC and Renewable requirements.

SYSTEM & POWER PARAMETERS

Transformer Capacity	50kVA - 1600kVA (Custom high-capacity up to 4000kVA for Solar/Wind)
Rated Voltage (MV Side)	12kV / 24kV / 35kV (Compatible with 13.8kV / 34.5kV systems)
Rated Voltage (LV Side)	0.4kV / 0.69kV
MV Feed Topology	Ring Main (Loop Feed) / Radial (Terminal Feed)
Rated Current (MV Load Switch)	315A / 630A

WITHSTAND & PROTECTION RATINGS

Rated Frequency	50 Hz / 60 Hz
Transformer Insulation Type	High-Flashpoint Mineral Oil(FR3 Envirotemp Fluid Custom available)
MV Connection Type	Fully Insulated Dead-Front Elbow Connectors
Enclosure Protection Degree	IP33 Standard (Tamper-resistant NEMA 3R equivalent)

OPERATING ENVIRONMENT:

- **Ambient Temperature:** -30°C to +40°C.
- **Altitude:** Standard ≤ 1000m (High-altitude designs dynamically available).
- **Installation Site:** Outdoor pads, public green spaces, or alongside roads free from explosive dust.
- **Design Standard:** Strictly complies with [IEC 60076](#) and [IEEE C57.12.34](#).

Global Factory Acceptance & Turnkey Support

Every HJ-PMS unit undergoes rigorous routine testing aligned with strict IEC/IEEE standards before dispatch. We proudly support **Remote Video FAT** for our global EPC clients, ensuring total transparency. To support diverse project logistics, this series is shipped fully assembled as a **CBU (Completely Built Unit)**. Simply place it on the pad, connect the cables, and energize.

HJ-EHouse Series

Prefabricated Modular Substation

UP TO 40.5kV / FULLY CUSTOMIZABLE / TURNKEY SOLUTION

The HJ-EHouse Series is a highly engineered, walk-in "Electrical House." It is custom-designed to seamlessly integrate medium voltage switchgear, low voltage MCC panels, transformers, HVAC, and smart SCADA control systems into a single, ruggedized transportable module. It serves as the optimized plug-and-play nerve center for complex, remote, and high-stakes power projects.

IDEAL FOR HARSH ENVIRONMENTS & HEAVY INDUSTRIES:

- Mining, Metallurgy & Oil/Gas Facilities
- Large-Scale Renewable Energy (Solar/Wind Step-up Stations)
- Mega Data Centers (IDC) & Telecom Hubs
- Remote Infrastructure & Mobile Power Solutions



STRATEGIC EPC ADVANTAGES

1. Drastic Reduction in Civil Works

Unlike traditional brick-and-mortar substations, the HJ-EHouse is 100% factory-assembled and wired. This parallel construction methodology shrinks overall project deployment time by up to 50%.

3. Walk-in Design & Smart Climate Control

The spacious walk-in design provides a weather-protected environment for maintenance. Integrated HVAC systems autonomously maintain optimal internal temperatures, extending equipment lifespan.

2. Extreme Environmental Resilience

Utilizes a robust welded steel structural frame combined with fire-retardant sandwich panels. Features marine-grade anti-corrosion coating (up to C5-M) for offshore or desert platforms.

4. Advanced Safety & SCADA Integration

Fully equipped with automated fire detection/suppression systems and access control. Integrated smart grid SCADA systems allow for real-time remote monitoring and unmanned operation.

INTEGRATION & ENGINEERING SPECIFICATIONS

* The HJ-EHouse is a highly customized turnkey solution. The parameters below represent typical project capabilities engineered to precise EPC requirements.

SYSTEM & POWER PARAMETERS	
Maximum System Voltage	Up to 40.5kV
Dimensions (L x W x H)	Fully customized (Single-module or multi-module joined on-site)
Enclosure Construction	Heavy-duty steel base with corrugated steel walls or insulated sandwich panels
Protection Degree (IP / NEMA)	IP54 / IP55 (NEMA 3R / NEMA 4X equivalent)
Anti-Corrosion Rating	C3 to C5-M (Marine Grade available)
Fire Resistance Rating	F60 / F120 standard options
INTEGRATION & COMPLIANCE	
Integrated Internal Equipment	MV Switchgear, LV MCC Panels, Transformers, VFDs, Battery Banks & Chargers
Auxiliary Systems Included	HVAC, Fire Detection & Alarm, General/Emergency Lighting, Access Control
Design Standards	IEC 62271-202, ISO 1461 (Galvanization)

Comprehensive Factory Acceptance & Turnkey Delivery

As a true Turnkey EPC partner, we conduct a comprehensive integrated **Factory Acceptance Test (FAT)** on the entire E-House system (including all internal switchgear, HVAC, and wiring) prior to dispatch. This that the unit is ready to energize immediately upon site positioning.

Depending on project size, the HJ-EHouse can be shipped as a **single transportable skid** or as engineered for seamless on-site bolting and interconnection.

LV SWITCHGEAR & POWER QUALITY.

TERMINAL DISTRIBUTION & GRID EFFICIENCY

Engineered for terminal low-voltage distribution and Motor Control Centers (MCC), delivering optimized reliability and dynamically optimizing grid efficiency.

FEATURED MODELS

06.1	ABB MDmax ST	(Authorized Assembly)
06.2	HJ-MNS Series	(Premium Withdrawable)
06.3	HJ-LVS-C / E	(Compact & Economic)
06.4	HJ-FDS Series	(Fixed-Mounted)
06.5	HJ-APF Series	(Active Power Filter)
06.6	HJ-PFC Series	(Auto Capacitor Bank)
06.7	HJ-GZDW Series	(Substation DC Power)

KEY APPLICATIONS

Motor Control Centers (MCC)
Heavy Industrial Plants
Data Centers & Hospitals
Commercial Complexes
Substation Control Systems
Power Quality Optimization

ABB MDmax ST

Authorized Switchgear

ABB AUTHORIZED / UP TO 6300A / 100kA / IOT READY

The ABB MDmax ST Series is a world-class, fully authorized digital low-voltage switchgear. Manufactured strictly under global ABB engineering standards utilizing **100% genuine ABB core components**. Integrating ABB Ability™ digital technologies, it serves as the optimized intelligent Power Distribution Center (PDC) and Motor Control Center (MCC) for your most critical infrastructure.

MISSION-CRITICAL APPLICATIONS:

- Mega Data Centers (IDC)
- Rail Transit & Advanced Airports
- Oil, Gas & Heavy Metallurgy
- High-End Hospitals & Real Estate



ABB OFFICIAL PARTNER

Certified Manufacturer & System Integrator



CORE ADVANTAGES

1. Certified ABB Global Quality

As an officially authorized partner, every panel is built utilizing 100% genuine ABB components. You get top-tier international quality combined with our agile localized assembly and support.

3. Uncompromised Arc-Fault Containment

Operator safety is enhanced. The robust C-profile modular frame offers internal separation up to **Form 4b**, strictly isolating and containing potential faults to protect adjacent personnel.

2. ABB Ability™ IoT Ready

Step into the smart grid era. Equipped with smart sensors and cloud-connectivity, it provides real-time thermal tracking and predictive maintenance data to drastically reduce OPEX.

4. High-Density Modular Flexibility

Maximize electrical room spatial efficiency. Seamlessly adapts to complex Motor Control Center (MCC) needs by allowing withdrawable, fixed, and mixed modules in the exact same cabinet.

TECHNICAL SPECIFICATIONS

* The MDmax ST is fully compliant with global IEC standards. Specific module configurations and breaking capacities will be strictly tailored to your project's Single-Line Diagram.

ELECTRICAL & SYSTEM PARAMETERS

Compliance Standards	IEC 61439-1 / IEC 61439-2
Rated Operational Voltage (Ue)	Up to 690 V AC / 0.4 kV / 0.69 kV
Rated Insulation Voltage (Ui)	1000V AC
Rated Main Busbar Current (In)	Up to 6300A

WITHSTAND & PROTECTION RATINGS

Rated Short-Time Withstand (Icw)	Up to 100kA(1s)
Rated Peak Withstand Current (Ipk)	Up to 220kA
Form of Internal Separation	Form 1, 2b, 3b, up to Form 4b
Installation / Module Types	Withdrawable / Fixed / Mixed modules (In a single cubicle)
Enclosure Protection Degree	IP30 / IP31 / IP40 / IP41 / IP54

NORMAL OPERATING ENVIRONMENT:

- **Ambient Temperature:** -5°C to +40°C (Average over 24h ≤ +35°C).
- **Altitude:** Standard ≤ 2000m.
- **Relative Humidity:** ≤ 50% at +40°C (Higher humidity allowable at lower temperatures, e.g., 90% at +20°C).
- **Installation Requirements:** Indoor environment without severe dust, chemical corrosion, or intense vibration.

ABB-Standard Factory Acceptance & Global Support

We perform rigorous, **ABB-audited routine tests** on every single panel. For our international EPC partners, we conduct comprehensive **Remote Video FAT** to ensure 100% compliance with your project blueprints before shipment. Whether you require a fully assembled CBU or specialized export packaging for maritime transport, our logistics team ensures your premium ABB switchgear arrives safely and ready for immediate energization.

HJ-MNS Series

Premium Withdrawable

UP TO 6300A / 100kA / FULLY MODULAR MCC

The HJ-MNS Series Premium Withdrawable Switchgear is a highly versatile, modular low-voltage power distribution and Motor Control Center (MCC). Engineered with a robust C-profile frame and advanced hot-swappable withdrawable technology, it ensures maximum operational continuity, operator safety, and spatial efficiency for heavy-duty electrical networks.

IDEAL FOR CONTINUOUS PROCESS INDUSTRIES:

- Power Plants & Major Substations
- Oil, Gas, Petrochemical & Mining Operations
- Paper, Steel & Heavy Manufacturing Facilities
- Data Centers (IDC) & Marine/Offshore Platforms



CORE ENGINEERING ADVANTAGES

1. Standardized C-Profile Architecture

The skeletal frame is built from 2mm zinc-plated steel folded into a rigid "C-profile" with a 25mm hole pitch interval. It offers infinite flexibility for internal configuration and future expansion without on-site welding.

3. Uncompromised Form 4b Separation

Featuring physical internal separation up to Form 4b, isolating the busbar, equipment, and cable compartments. Flame-retardant plastics and arc-proof designs protect operators and prevent fault propagation.

2. High-Density Motor Control Center

Optimize your electrical room's footprint. The highly compact withdrawable design allows multiple functional drawer units to be stacked securely, achieving unparalleled spatial utilization for large-scale motor control.

4. Seamless Hot-Swappable Maintenance

Drawers feature distinct 'Connected', 'Test', and 'Disconnected' mechanical positions. Modules can be safely swapped, inspected, or tested without powering down the entire cabinet, zero downtime.

TECHNICAL SPECIFICATIONS

* Parameters cover standard HJ-MNS configurations. Specific component ratings and layout arrangements will be strictly tailored to your project's single-line diagram.

ELECTRICAL & SYSTEM PARAMETERS	
Compliance Standards	IEC 61439-1 / IEC 61439-2
Rated Operational Voltage (Ue)	400V / 690V AC
Rated Insulation Voltage (Ui)	1000V AC
Rated Main Busbar Current (In)	Up to 4000A / 5000A / 6300A
WITHSTAND & PROTECTION RATINGS	
Short-Time Withstand Current (Icw)	50kA / 65kA / 80kA / 100kA(1s)
Peak Withstand Current (Ipk)	105kA / 176kA / 220kA
Form of Internal Separation	Form 2b, 3b, 4a, Form 4b
Drawer / Module Sizes	8E/4, 8E/2, 8E, 16E, 24E (Up to 36 circuits per cabinet)
Enclosure Protection Degree	IP30 / IP40 / IP54

NORMAL OPERATING ENVIRONMENT:

- **Ambient Temperature:** -5°C to +40°C (Average over 24h ≤ +35°C).
- **Altitude:** Standard ≤ 2000m.
- **Relative Humidity:** ≤ 50% at +40°C (Higher humidity allowable at lower temperatures, e.g., 90% at +20°C).
- **Installation Requirements :** Indoor environment without severe dust, chemical corrosion, or intense vibration.

Global Factory Acceptance & Turnkey Support

Every HJ-MNS unit undergoes rigorous routine testing aligned with strict **IEC 61439** standards before dispatch. We proudly support **Remote Video FAT** for our global EPC clients, ensuring total transparency.

To support local manufacturing and joint ventures, this series is fully available in **CBU (Completely Built Unit)**, **SKD (Semi-Knocked Down)**, or **CKD (Completely Knocked Down)** delivery formats.

HJ-LVS-C Series

Compact Withdrawable

UP TO 4000A / 80kA / COMPACT MOTOR CONTROL

The HJ-LVS-C Series is a highly efficient and economical low-voltage power distribution and Motor Control Center (MCC). Designed for optimized footprint and operational safety, it utilizes a highly dense drawer configuration to maximize the number of control circuits per cabinet, making it an ideal solution for large-scale industrial motor management.

IDEAL FOR SPACE-OPTIMIZED INDUSTRIAL SCENARIOS:

- Power Generation Plants & Substations
- Petroleum, Chemical & Heavy Metallurgy
- Textile, Manufacturing & Light Industries
- High-Rise Commercial Buildings & Facilities



CORE ENGINEERING ADVANTAGES

1. Compact & High-Density MCC

Maximize electrical room footprint. By utilizing compact 1/2 functional drawer units, a single vertical section accommodates up to **22 independent circuits**, drastically reducing overall CAPEX.

3. Secure Withdrawable Mechanism

Maintenance is safe and intuitive. Each drawer features a highly reliable interlocking system with distinct 'Connected', 'Test', and 'Isolated' positions, preventing critical operator errors.

2. Robust Framework & Thermal Stability

Constructed with specialized folded steel profiles (KS/8MF). The optimized busbar arrangement significantly enhances dynamic stability, comfortably handling 4000A main busbar currents.

4. Compartmentalized Safety Design

To ensure maximum operator protection, the cabinet is strictly divided into three physically isolated zones: Busbar (rear), Functional Unit (front left), and Cable Compartment (front right).

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations. Specific ratings and drawer arrangements will be tailored to your project's single-line diagram.

ELECTRICAL & SYSTEM PARAMETERS	
Compliance Standards	IEC 61439-1 / IEC 61439-2
Rated Operational Voltage (Ue)	400V / 690V AC
Rated Insulation Voltage (Ui)	690V / 1000V AC
Rated Main Busbar Current (Horizontal)	Up to 4000A
WITHSTAND & PROTECTION RATINGS	
Rated Vertical Busbar Current (MCC)	1000A
Short-Time Withstand Current (Icw)	Up to 80kA (1s) for Main Busbar Up to 50kA (1s) for Vertical Busbar
Peak Withstand Current (Ipk)	Up to 176kA (Main) / 105kA (Vertical)
Drawer / Module Sizes	1/2, 1, 1.5, 2, 3 Units (Up to 22 circuits per cabinet)
Enclosure Protection Degree	IP30 / IP40 (Custom IP54 available upon request)

NORMAL OPERATING ENVIRONMENT:

- **Ambient Temperature:** -5°C to +40°C (Average over 24h ≤ +35°C).
- **Altitude:** Standard ≤ 2000m.
- **Relative Humidity:** ≤ 50% at +40°C (Higher humidity allowable at lower temperatures, e.g., 90% at +20°C).
- **Installation Requirements :** Indoor environment without severe dust, chemical corrosion, or intense vibration.

Global Factory Acceptance & Turnkey Support

Every HJ-LVS-C unit undergoes rigorous routine testing aligned with strict **IEC 61439** standards before dispatch. We proudly support **Remote Video FAT** for our global EPC clients, ensuring total transparency.

To support local manufacturing and joint ventures, this series is fully available in **CBU (Completely Built Unit)**, **SKD (Semi-Knocked Down)**, or **CKD (Completely Knocked Down)** delivery formats.

HJ-LVS-E Series

Economic Withdrawable

UP TO 4000A / 65kA / COST-EFFECTIVE MCC

An advanced, highly cost-effective low-voltage power distribution and Motor Control Center (MCC). Built upon a flexible assembled frame and standardized withdrawable units, it delivers excellent breaking capacity and dynamic stability without the premium price tag. It is the smartest CAPEX-optimized investment for general industrial infrastructure.

IDEAL FOR BUDGET-CONSCIOUS GENERAL INDUSTRIES:

- General Manufacturing & Assembly Plants
- Commercial Complexes & Public Infrastructure
- Water Treatment & Pumping Stations
- Light Industrial & Material Handling Facilities



CORE ENGINEERING ADVANTAGES

1. Economical & Flexible Architecture

Designed to optimize project CAPEX. The cabinet frame uses standardized FA components, offering infinite structural flexibility while drastically reducing manufacturing costs.

3. Safe & Intuitive Withdrawable Ops

Experience hot-swappable maintenance on a budget. Foolproof mechanical interlocking ensures drawer modules can only be moved or withdrawn when safely de-energized.

2. Reliable Breaking & Thermal Capacity

Despite its cost-effective positioning, optimized busbar arrangements confidently handle main busbar currents up to 4000A and short-time withstands up to 65kA.

4. High Compatibility & Easy Servicing

Highly standardized parts make future capacity expansions incredibly cost-efficient. Distinct compartmentalization of busbars and units ensures faults remain localized.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations based on the economic series. Specific ratings will be tailored to your project's single-line diagram.

ELECTRICAL & SYSTEM PARAMETERS	
Compliance Standards	IEC 61439-1 / IEC 61439-2
Rated Operational Voltage (Ue)	400V / 690V AC
Rated Insulation Voltage (Ui)	690V / 1000V AC
Rated Main Busbar Current (Horizontal)	Up to 3150A (Custom up to 4000A)
WITHSTAND & PROTECTION RATINGS	
Rated Vertical Busbar Current (MCC)	Up to 1000A
Short-Time Withstand Current (Icw)	Up to 65kA (1s) for Main Busbar Up to 50kA (1s) for Vertical Busbar
Peak Withstand Current (Ipk)	Up to 143kA (Main) / 105kA (Vertical)
Enclosure Protection Degree	IP30 / IP40 (Custom higher IP available upon request)

NORMAL OPERATING ENVIRONMENT:

- **Ambient Temperature:** -5°C to +40°C (Average over 24h ≤ +35°C).
- **Altitude:** Standard ≤ 2000m.
- **Relative Humidity:** ≤ 50% at +40°C (Higher humidity allowable at lower temperatures, e.g., 90% at +20°C).
- **Installation Requirements :** Indoor environment without severe dust, chemical corrosion, or intense vibration.

Global Factory Acceptance & Turnkey Support

Every HJ-LVS-E unit undergoes rigorous routine testing aligned with strict **IEC 61439** standards before dispatch. We proudly support **Remote Video FAT** for our global EPC clients, ensuring total transparency.

To support local manufacturing and joint ventures, this series is fully available in **CBU (Completely Built Unit)**, **SKD (Semi-Knocked Down)**, or **CKD (Completely Knocked Down)** delivery formats.

HJ-FDS Series

Fixed-Mounted Switchgear

UP TO 3150A / 50kA / RUGGED & RELIABLE

The HJ-FDS Series is a highly robust, universally applicable low-voltage power distribution board. Designed with a fixed-installation architecture and a simplified internal structure, it offers a straightforward, low-maintenance, and highly economical solution for stable electrical loads without compromising on safety or power capacity.

IDEAL FOR STABLE LOADS & BUDGET-OPTIMIZED PROJECTS:

- Power Plants, Substations & Infrastructure
- General Industrial Factories & Mining Sites
- Commercial Buildings & Lighting Distribution
- Pumping Stations & Water Treatment Facilities



CORE ENGINEERING ADVANTAGES

1. Rugged & Universal Framework

Constructed from high-strength cold-formed steel (8MF profiles) with partial welding and bolting. This rigid structure provides exceptional mechanical endurance and seismic resistance.

3. Exceptional Cost-Efficiency

By utilizing a fixed-mounted design, it significantly reduces complex moving parts and mechanical interlocks. This translates to vastly lower initial CAPEX and practically zero mechanical OPEX.

2. Optimized Thermal Management

Features strategically placed ventilation slots at the top and bottom. Natural convection creates a highly efficient "chimney effect" that prevents internal components from overheating.

4. Ergonomic & Safe Operation

Instrument doors feature concealed hinges allowing a 130-degree opening angle. All structural components are connected using braided copper straps, ensuring a complete protective grounding circuit.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations based on the fixed-mounted series. Specific ratings will be tailored to your project's single-line diagram.

ELECTRICAL & SYSTEM PARAMETERS	
Compliance Standards	IEC 61439-1 / IEC 61439-2
Rated Operational Voltage (Ue)	400V / 690V AC
Rated Insulation Voltage (Ui)	690V / 1000V AC
Rated Main Busbar Current	1000A / 1600A / 2000A / 3150A
WITHSTAND & PROTECTION RATINGS	
Short-Time Withstand Current (Icw)	15kA / 30kA / 50kA (1s)
Peak Withstand Current (Ipk)	30kA / 63kA / 105kA
Operation Mechanism	Fixed Installation, Front Operation, Front/Rear Access
Enclosure Protection Degree	Standard IP30 (Customized IP40 available for harsher environments)

NORMAL OPERATING ENVIRONMENT:

- **Ambient Temperature:** -5°C to +40°C (Average over 24h ≤ +35°C).
- **Altitude:** Standard ≤ 2000m.
- **Relative Humidity:** ≤ 50% at +40°C (Higher humidity allowable at lower temperatures, e.g., 90% at +20°C).
- **Installation Requirements :** Indoor areas strictly free from severe vibration, explosive dust, or severe chemical corrosion.

Global Factory Acceptance & Turnkey Support

Every HJ-FDS unit undergoes rigorous routine testing aligned with strict **IEC 61439** standards before dispatch. We proudly support **Remote Video FAT** for our global EPC clients, ensuring total transparency.

To support local manufacturing and joint ventures, this series is fully available in **CBU (Completely Built Unit)**, **SKD (Semi-Knocked Down)**, or **CKD (Completely Knocked Down)** delivery formats.

HJ-APF Series

Active Power Filter

UP TO 300A PER MODULE / 3-LEVEL TOPOLOGY / THDI < 5%

The HJ-APF Series is an advanced, IGBT-based power electronics solution designed to dynamically eradicate electrical grid pollution. Utilizing high-speed DSP processing, it monitors load currents in real-time and injects exact opposite-phase currents to cancel out harmful harmonics, correct power factor, and balance 3-phase loads, ensuring optimized power quality for your most sensitive equipment.

IDEAL FOR HARMONIC-RICH FACILITIES:

- Data Centers (IDC), Telecom Hubs & Hospitals
- Semiconductor & Precision Manufacturing
- Facilities with Heavy VFD (Drive) Usage
- Rail Transit & Modern Commercial Buildings



CORE ENGINEERING ADVANTAGES

1. Advanced 3-Level IGBT & DSP

Powered by high-performance Digital Signal Processors (DSP), it achieves >97% efficiency and dynamically filters harmonics with an instantaneous response time of < 50μs.

3. Modular N+1 Redundancy

Ultra-compact architecture available in wall, rack, or cabinet configurations. Parallel up to 8 modules to seamlessly scale capacity and ensure N+1 reliability.

2. 3-in-1 Comprehensive Optimization

Delivers triple-action performance: neutralizes harmonic distortion (THDi ≤ 5%), compensates reactive power (PF ≥ 0.99), and strictly corrects 3-phase current unbalance.

4. Smart HMI & SCADA-Ready

Features an intuitive LCD touchscreen for real-time waveform visualization. Equipped with standard RS485/Ethernet interfaces for seamless facility BMS integration.

TECHNICAL SPECIFICATIONS

* Parameters represent standard module capabilities. Total system capacity can be infinitely scaled by paralleling multiple master/slave modules.

ELECTRICAL PARAMETERS	
Rated Working Voltage	380V ± 20% (400V/480V/690V available upon request)
Rated Grid Frequency	50 Hz / 60 Hz ± 5 Hz
Compensation Current per Module	35A / 50A / 75A / 100A / 150A / 200A / 300A
Wiring Network Configurations	3-Phase 3-Wire / 3-Phase 4-Wire
FILTERING PERFORMANCE & TOPOLOGY	
Harmonic Filtering Range	2nd to 50th Harmonics (Selectable or All)
Target Power Factor (PF)	Adjustable from -1 to +1 (Inductive & Capacitive)
Response Time	Instantaneous < 50 µs / Full Response < 5 ms
Inverter Topology & Frequency	3-Level Topology / 20 kHz Switching Frequency
Parallel Expansion	Up to 8 modules in parallel
Installation Type Options	Rack-Mounted, Wall-Mounted, Floor Cabinet

NORMAL OPERATING ENVIRONMENT:

- **Ambient Temperature:** -10°C to +40°C.
- **Altitude:** ≤ 1500m without derating. (Derates 1% for every 100m between 1500m and 4000m).
- **Relative Humidity:** ≤ 95%, non-condensing.
- **Installation Requirements:** Built-in intelligent forced air cooling.

Global Factory Acceptance & Integration Support

Every HJ-APF module undergoes rigorous **full-load thermal testing, harmonic mitigation verification, and aging tests** before dispatch. We provide comprehensive installation manuals, CAD layouts, and remote technical guidance to ensure your local electrical teams can effortlessly integrate and commission the active filters into standard switchboards.

HJ-PFC Series

Automatic Capacitor Bank

HIGH ROI / SMART SWITCHING / HARMONIC-RESISTANT

A highly reliable, microprocessor-controlled reactive power compensation system. Designed to automatically track load fluctuations and precisely switch capacitor steps, it dramatically improves your facility's power factor, eliminates utility penalty charges, reduces line losses, and effectively frees up transformer capacity for future expansion.

IDEAL FOR POWER OPTIMIZATION & ENERGY SAVINGS:

- General Manufacturing & Industrial Plants
- Commercial Complexes, Malls & Hospitals
- Water Treatment Plants & Heavy Pumping
- Utility Substations & Distribution Networks



CORE ENGINEERING ADVANTAGES

1. Intelligent APFC Control

The advanced microprocessor continually monitors real-time active/reactive power. Smart algorithms eliminate hunting (over-compensation) and maintain a Power Factor close to unity (0.99).

3. Flexible Compensation Logic

Seamlessly integrates 3-phase simultaneous compensation (Delta) for balanced loads, and single-phase independent compensation (Wye/Star) for heavily unbalanced circuits.

2. Detuned Harmonic Protection

To prevent dangerous harmonic resonance, the system is factory-fitted with robust detuned series reactors (7% or 14%), protecting capacitors from premature failure.

4. Self-Healing Durability

Utilizes premium, low-loss metallized film capacitors with over-pressure tear-off fuses. Paired with heavy-duty contactors, delivering an extended 100,000-hour operational lifespan.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations. Total compensation capacity and step resolution are fully customizable based on your facility's specific load profile.

ELECTRICAL PARAMETERS	
Compliance Standards	IEC 61439-1 / IEC 61921
Rated Working Voltage	Up to 450V AC (Custom 690V available)
Rated Grid Frequency	50 Hz / 60 Hz
Total Compensation Capacity	150 kVAr to 1000 kVAr per cabinet (Infinitely expandable via parallel cabinets)
SWITCHING & PROTECTION ARCHITECTURE	
Switching Elements	Capacitor-Duty Contactors (Static loads) Thyristor Switches (Dynamic fast-changing loads)
Switching Response Time	≤ 20ms (Thyristor) 1 - 60s adjustable (Contactor)
Inrush Current Limitation	< 25 In
Detuned Reactor Factor	7% (for 5th/7th harmonics) 14% (for 3rd harmonics)
Data Communication	RS-485 (Modbus-RTU) / GPRS module optional
Enclosure Protection Degree	Standard IP30 (Customized IP40/IP54 available)

NORMAL OPERATING ENVIRONMENT:

- Ambient Temperature: -5°C to +40°C.
- Altitude: ≤ 2000m.
- Relative Humidity: ≤ 90% at +20°C, non-condensing.
- Installation Site: Indoor areas strictly free from severe vibration, explosive dust, or severe chemical corrosion.

Global Factory Acceptance & Turnkey Integration

Every HJ-PFC unit undergoes rigorous routine testing, including insulation resistance, full switching sequence validation, and comprehensive functional checks in accordance with IEC 61439 and IEC 61921 standards. We provide fully assembled panels ready for immediate parallel connection to your main distribution board.

HJ-GZDW Series

Substation DC Power

UP TO 220V / 250A / SMART UNATTENDED CONTROL

The HJ-GZDW Series is a highly reliable, microcomputer-controlled critical DC power supply. Serving as the vital "lifeline" of any electrical facility, it provides uninterrupted, ultra-stable DC power for high-voltage switchgear operation, relay protection, and automation controls, ensuring optimized grid safety even during total AC power failures.

IDEAL FOR MISSION-CRITICAL & UNATTENDED FACILITIES:

- 12kV to 220kV Substations & Power Plants
- Heavy Metallurgy, Mining & Petrochemical
- Railway Networks & Telecommunication Hubs
- Data Centers (IDC) & High-Rise Buildings



CORE ENGINEERING ADVANTAGES

1. Seamless Dual AC Switchover

Features a highly dependable dual AC input mechanism that automatically and seamlessly switches to the backup source during primary failures, ensuring continuous charging without human intervention.

3. Ultra-Low Ripple & Stability

Advanced high-frequency switching technology delivers flawless DC output (voltage accuracy $\leq \pm 1\%$, ripple $\leq 1\%$), ensuring sensitive digital protection relays never misoperate due to power fluctuations.

2. Intelligent Battery Management

The microcomputer executes strictly regulated curves. It automates float charge, equalizing charge, and precise temperature compensation, preventing battery deep depletion and maximizing lifespan.

4. SCADA-Ready Unattended Control

Comprehensive self-diagnostics constantly monitor insulation status and module health. Built-in telemetry interfaces seamlessly connect to SCADA, enabling zero-staff remote substation management.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations. Battery capacity and output channels are fully customizable based on your facility's specific protection and control load profile.

ELECTRICAL PARAMETERS	
Rated AC Input Voltage	3-Phase 380V $\pm$ 10%
Input Grid Frequency	50 Hz / 60 Hz
Rated DC Output Voltage	24V / 48V / 110V / 220V DC
Rated DC Output Current	5A to 250A
Battery Capacity Range	10Ah to 400Ah (Maintenance-Free Lead-Acid)
PERFORMANCE METRICS	
Voltage Stabilization Accuracy	$\leq \pm 1\%$
Current Stabilization Accuracy	$\leq \pm 1\%$
Ripple Factor	$\leq 1\%$
System Efficiency	$\geq 90\%$
Acoustic Noise Level	≤ 55 dB
Enclosure Protection Degree	IP20 to IP30

NORMAL OPERATING ENVIRONMENT:

- **Ambient Temperature:** -5°C to +40°C.
- **Altitude:** ≤ 2000 m (High-altitude configurations available).
- **Relative Humidity:** $\leq 90\%$ at +20°C.
- **Installation Site:** Indoor substations or control rooms strictly free from severe vibration, explosive dust, or severe chemical corrosion.

Global Factory Acceptance & Turnkey Support

Every HJ-GZDW unit undergoes rigorous routine testing before dispatch. This includes **automated dual-source switchover validation**, strict **battery discharge profiling**, and full **SCADA communication protocol checks**. We provide fully assembled panels configured precisely to your specific voltage and battery capacity requirements, ready for immediate integration into your substation control room.

RENEWABLE ENERGY SOLUTIONS.

PV & WIND GRID INTEGRATION

Engineered specifically for photovoltaic (PV), wind power, and other renewable energy grid-tie projects, ensuring seamless synchronization and maximum energy yield.

FEATURED MODELS

- 07.1 HJ-CSS-R Series** (Renewabl
Step-Up Sub)
- 07.2 HJ-DCB Series** (PV DC Combiner Box)
- 07.3 HJ-GTC Series** (PV Grid-Tie Cabinet)

KEY APPLICATIONS

Utility-Scale Solar Farms
Wind Turbine Power Plants
Distributed Energy (DER)
Commercial PV Systems

HJ-CSS-R Series Step-Up Substation

UP TO 40.5kV / 6300kVA / SOLAR & WIND READY

A heavy-duty, highly integrated turnkey solution engineered specifically for utility-scale photovoltaic (PV) and wind power generation. It seamlessly aggregates low-voltage AC power from solar inverters or wind turbines (up to 1.14kV) and steps it up directly to medium-voltage transmission grids (up to 40.5kV). Housed in an extreme-weather enclosure, it maximum energy yield with minimal on-site civil works.

IDEAL FOR UTILITY-SCALE RENEWABLE PROJECTS:

- Large-Scale Ground-Mounted Solar Farms
- Onshore Wind Power Generation Plants
- Floating Solar PV Installations (High Humidity)
- Hybrid Renewable Microgrids & Energy Storage (BESS)



STRATEGIC EPC ADVANTAGES

1. Massive Capacity & Tolerance

Engineered to handle fluctuating power outputs up to **6300kVA**. Effortlessly steps up customized inverter voltages (e.g., 0.8kV, 1.14kV) directly to 40.5kV grid voltage.

3. Optimized "Linear/Triangle" Layouts

Highly optimized for space and thermal management. Configurable in "Linear" (M-Type) or "Triangle" (P-Type) layouts to maximize natural and forced-air cooling efficiency.

2. Extreme IP68 Environmental Resilience

Built to survive. The transformer oil tank achieves an unprecedented **IP68 waterproof rating**, operating flawlessly in 85°C ambient temps and 35m/s hurricane winds.

4. Premium Protection Components

Equipped with XRNT high-voltage current-limiting fuses (31.5kA) and YH5WZ gapless metal-oxide surge arresters for optimized defense against grid overvoltages and lightning.

TECHNICAL SPECIFICATIONS

* Parameters cover heavy-duty configurations for Solar/Wind. Specific inverter integration & SCADA are customized based on the EPC scope.

ELECTRICAL & SYSTEM RATINGS	
Transformer Rated Capacity	500kVA - 6300kVA
High Voltage (Grid Side)	12kV / 24kV / 35kV / 36.75kV / 38.5kV / 40.5kV
Low Voltage (Inverter/Turbine Side)	0.27kV / 0.3kV / 0.315kV / 0.4kV / 0.8kV / 1.14kV
Rated Frequency	50 Hz / 60 Hz
Transformer Vector Group	Yd11 / D11 (Customizable)
PROTECTION & STRUCTURAL LAYOUT	
MV Protection (Fuses)	XRNT series High-Voltage Current-Limiting Fuses 31.5kA)
MV Surge Protection	YH5WZ series Gapless Metal-Oxide Surge Arresters
Enclosure Protection Degree	Transformer Oil Tank: IP68 MV/LV Compartments: IP54
Structural Layout Options	"P-Type" (Triangle) / "M-Type" (Linear)

EXTREME OPERATING ENVIRONMENT:

- **Ambient Temperature Range:** -40°C to +85°C.
- **Altitude & Wind:** ≤ 3000m without derating. Withstands maximum wind speeds up to 35m/s.
- **Relative Humidity:** ≤ 90% at +20°C.
- **Installation:** Designed specifically for harsh outdoor environments (deserts, plains, coastal areas).

Global Factory Acceptance & Turnkey Delivery

Every HJ-CSS-R unit undergoes rigorous factory acceptance testing (FAT), simulating the exact thermal loads and harmonic conditions of your specific inverters. We deliver this massive system as a **Completely Built Unit (CBU)** on a heavy-duty steel skid. Simply crane it onto the concrete pad, connect the MV/LV cables, and **instantly synchronize your renewable plant to the grid.**

HJ-DCB Series

PV DC Combiner Box

1000V DC / UP TO 24 STRINGS / IP65 / SMART SCADA

The HJ-DCB Series PV DC Combiner Box is a critical safety and aggregation node for commercial and utility-scale solar power plants. Designed to safely merge up to 24 photovoltaic string outputs into a single robust DC feed for the inverter, it delivers top-tier surge protection, dedicated string-level fusing, and advanced Hall-effect monitoring within a rugged IP65 outdoor enclosure.

IDEAL FOR SOLAR PV INSTALLATIONS:

- Utility-Scale Solar Farms (Ground-Mounted)
- Commercial & Industrial (C&I) Rooftop Solar
- Floating Solar PV Plants & Desert Arrays
- Hybrid Renewable Energy Microgrids



CORE ENGINEERING ADVANTAGES

1. Comprehensive String Protection

Each incoming PV string is individually protected by specialized, touch-safe PV fuses on both positive and negative poles, isolating faults without shutting down the entire array.

3. Smart SCADA-Ready Monitoring

Factory-fitted with precision Hall-effect sensors. It continuously monitors individual string currents, bus voltage, and SPD status, transmitting data via RS485 Modbus-RTU for real-time diagnostics.

2. Premium Surge & Lightning Defense

Equipped with high-capacity PV-specific DC Surge Protection Devices (SPD) capable of withstanding 1000VDC, safely diverting massive lightning overvoltages to protect central inverters.

4. IP65 Extreme Outdoor Resilience

Housed in Hot-Dip Galvanized Steel, Stainless Steel, or UV-resistant plastic. Offers immunity to water, dust, rust, and coastal salt spray in scorching temperatures up to +85°C.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations. Enclosure materials, number of input strings, and smart monitoring features are fully customizable upon EPC request.

ELECTRICAL & POWER PARAMETERS	
Maximum Input Voltage	1000V DC
Number of Input PV Strings	≤ 8 / 12 / 16 / 24 Strings (Configurable to match array layout)
Max Current per Input String	0 - 20A(via dedicated DC Fuses)
Max Output DC Current	100A / 125A / 160A / 200A / 250A(Varies by string count)
PERFORMANCE METRICS	
Input Waterproof Terminals	Standard MC4 Connectors / PG9 / PG11
Output Waterproof Terminals	PG13.5 - PG32 Cable Glands
Smart Monitoring Capabilities	Individual String Current, Bus Voltage, Enclosure Temp, SPD & Breaker Status
Hardware Data Interface	RS485 Port (Modbus-RTU protocol)
Anti-Reverse Function	Optional Anti-Reverse Diode Modules
Enclosure Material Options	Hot-Dip Galvanized Steel / Stainless Steel / Engineering Plastic
Enclosure Protection Degree	IP65 (Outdoor Rated)

EXTREME OPERATING ENVIRONMENT:

- **Ambient Temperature:** -40°C to +85°C.
- **Altitude:** ≤ 4000m (Superior high-altitude dielectric strength).
- **Relative Humidity:** ≤ 95%, without condensation.
- **Installation Requirement:** Designed for direct outdoor installation in environments free of highly corrosive gases.

Global Factory Acceptance & Turnkey Delivery

Every HJ-DCB unit undergoes strict factory testing, including **100% dielectric withstand verification** and physical communication port checks. The units are delivered fully pre-wired with **standard MC4 solar connectors** (or heavy-duty waterproof cable glands) for rapid, error-free "plug-and-play" physical installation on site.

HJ-GTC Series

PV Grid-Tie Cabinet

220V/380V AC / TYPE II SURGE DEFENSE / IP65

The HJ-GTC Series PV Grid-Tie Box (AC Combiner Box) is the vital safety and synchronization interface between solar string inverters and the utility grid. Engineered to seamlessly aggregate AC power, it provides dedicated PV-grade circuit breaking, robust active isolation, and premium Type II surge protection, ensuring your distributed solar plant delivers clean, compliant power to the grid.

IDEAL FOR DISTRIBUTED SOLAR INTEGRATION:

- Commercial & Industrial (C&I) Rooftop Solar
- Residential Solar PV Systems
- Distributed Ground-Mounted Solar Arrays
- Hybrid Microgrids & Energy Storage Systems



CORE ENGINEERING ADVANTAGES

1. Dedicated PV-Grade Circuit Protection

Utilizes specialized PV-rated grid-tie circuit breakers and highly visible pull-ring isolation switches, ensuring rapid, physical disconnection to strictly prevent dangerous islanding effects.

2. Premium Type II AC Surge Defense

Safeguards expensive string inverters. The integrated Type II AC SPD features an ultra-fast response time (<25ns) and handles maximum discharge currents (I_{max}) up to 40kA.

3. IP65 Extreme Weather Resilience

Engineered for relentless outdoor exposure. Constructed from heavy-duty cold-rolled steel with IP66 rated cable glands, offering total immunity against heavy rain and intense solar radiation.

4. Simplified & Foolproof Installation

Designed with the EPC installer in mind. The spacious internal layout offers intuitive cable routing, and standardized wall-mounting brackets allow for rapid deployment right next to the inverters.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations for both Single-Phase and Three-Phase systems. Specific breaker capacities and enclosure dimensions are customizable based on exact inverter output ratings.

ELECTRICAL & SYSTEM PARAMETERS

System Compatibility	Single-Phase / Three-Phase Solar Systems
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Rated Operating Voltage (Un)	Switches, Type II SPD
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Maximum Input Voltage (Uc)	275V AC / 460V AC
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SURGE PROTECTION & ENCLOSURE RATINGS

Nominal Discharge Current (In)	20kA
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Maximum Discharge Current (Imax)	40kA
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Voltage Protection Level (Up)	< 1.8kV
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Surge Protection Response Time	< 25 ns
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Internal Protection Elements	PV-Grade Grid-Tie Breakers, Pull-Ring Isolation Switches, Type II SPD
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Enclosure Protection Degree	IP65 (Main Enclosure) / IP66 (Cable Glands)
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Enclosure Material	Cold-Rolled Steel (Outdoor Powder Coated)
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EXTREME OPERATING ENVIRONMENT:

- Ambient Temperature: -40°C to +85°C.
- Altitude: ≤ 2500m.
- Relative Humidity: ≤ 95%, without condensation.
- Installation Requirement: Designed for outdoor wall-mounting, free from highly corrosive gases.

Global Factory Acceptance & Turnkey Support

Every HJ-GTC unit undergoes rigorous **extreme-temperature stress testing** and precise dielectric withstand checks before leaving our facility. We deliver the panels as fully pre-wired, ready-to-mount **Completely Built Units (CBU)**, ensuring seamless and safe grid synchronization for your solar projects worldwide.

FINAL DISTRIBUTION HUBS.

TERMINAL ROUTING & FEEDER CONTROL

The critical final mile of power delivery. Supplying robust, weather-proof feeder pillars and compact distribution boards designed to safely route low-voltage power directly to end-user facilities, street infrastructure, and industrial loads.

FEATURED MODELS

08.1 HJ-IPC Series

(Integrated Pole
Cabinet)

08.2 HJ-OFP Series

(Outdoor Feeder
Pillar)

08.3 HJ-PDB Series

(Floor-Standing
Board)

08.4 HJ-WDB Series

(Wall-Mounted
Board)

KEY APPLICATIONS

Grid-Deficient Regions

Heavy Mining Camps

Commercial & Hospitals

Utility-Scale Solar & Wind

Telecom Base Stations

HJ-IPC Series

Integrated Pole Cabinet

MODEL: HJ-JP / 3-IN-1 INTEGRATION / UP TO 400kVA

The HJ-IPC (Model: HJ-JP) is an advanced 'All-in-One' outdoor distribution box engineered to be mounted directly on concrete utility poles. It seamlessly integrates precise energy metering, multi-circuit power distribution, and automatic reactive power compensation into a single compact, anti-theft enclosure, drastically reducing overall project CAPEX.

APPLICABLE SCENARIOS:

- Rural Electrification Networks
- Overhead Line Taps & Extensions
- Transformer Pole-Top Distribution
- Agricultural & Public Infrastructure



CORE ENGINEERING ADVANTAGES

1. 3-in-1 Optimized Integration

Eliminate the need for multiple bulky enclosures. Combines energy metering, safe power distribution, and automatic reactive power compensation (PFC), reducing pole loading.

3. Comprehensive Public Safety

Equipped with robust MCB/MCCBs and highly sensitive earth leakage relays (adjustable 30mA-300mA) to provide complete defense against overloads and accidental electrocution.

2. Extreme Outdoor Durability

Manufactured from premium stainless steel or cold-rolled steel. Featuring a specialized rain-proof canopy and labyrinth ventilation, it IP54 protection against heavy rain.

4. Flexible Mounting Configurations

Adapt to any pole structure. Available in both Horizontal (landscape) and Vertical (portrait) formats, ensuring an optimal center of gravity and secure bracket mounting.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations based on the JP series. Internal component layouts and outgoing circuit numbers are fully customizable based on utility requirements.

ELECTRICAL PARAMETERS & CONFIGURATION	
Matched Transformer Capacity	30kVA to 400kVA
Rated Working Voltage	400V AC
Rated Frequency	50 Hz / 60 Hz
Rated Main Current	≤ 630A
Integrated Modules	Metering Room / Outgoing Distribution / Reactive Power Compensation
Earth Leakage Action Current	30mA ~ 300mA (Adjustable)
Enclosure Protection Degree	IP54 (Designed for outdoor pole-mounting)
Enclosure Material	Stainless Steel / Premium Cold-Rolled Steel
Installation Orientation Options	Horizontal (Landscape) / Vertical (Portrait)

NORMAL OPERATING ENVIRONMENT:

- **Ambient Temperature:** -25°C to +40°C.
- **Altitude:** ≤ 2000m.
- **Relative Humidity:** Daily average ≤ 95%, Monthly average ≤ 90%.
- **Installation Site:** Outdoor pole-mounted, free from severe vibration, explosive dust, or severe chemical corrosion.

Global Factory Acceptance & Turnkey Support

Every HJ-IPC unit undergoes stringent factory testing, including dielectric strength, component interlocking, and PFC switching sequence validation. We supply the cabinets as fully wired **CBU (Completely Built Units)**, complete with standard pole-mounting brackets, ready to be hoisted and energized by your local line crews.

HJ-OFP Series

Outdoor Feeder Pillar

MV & LV NETWORKS / FULLY INSULATED / WEATHER-PROOF

The HJ-OFP Series Outdoor Feeder Pillar (Cable Branch Box) is a robust, space-saving solution designed to act as the primary distribution hub for underground cable networks. Available in both Medium Voltage (up to 24kV) and Low Voltage (0.4kV) configurations, it provides secure, weather-resistant, and highly reliable cable branching, ensuring optimal power routing for modern urban and industrial landscapes.

IDEAL FOR UNDERGROUND GRID & OUTDOOR ROUTING:

- Urban Street Distribution & Underground Networks
- Residential Communities & Commercial Campuses
- Renewable Energy (Solar Parks & Wind Farms)
- Railway, Highway Lighting & Infrastructure



CORE ENGINEERING ADVANTAGES

1. Fully Insulated & Dead-Front Safety

MV models utilize APG-casted epoxy resin bushings and touch-safe EPDM rubber plug-in connectors. This "dead-front" architecture eliminates the risk of electrocution, ensuring operation even in flood-prone areas.

3. Flexible Multi-Way Branching

Optimize your cable routing without bulky switchgear. The series supports from 2-way up to 7-way branching for MV networks, and highly customized multi-outlet configurations for LV networks.

2. Extreme Outdoor Resilience

Constructed from high-grade stainless steel or heavy-duty cold-rolled steel with marine-grade anti-corrosion coating. Labyrinth-style ventilation effectively prevents water ingress and internal condensation.

4. Hardware-Ready Grid Monitoring

Factory-equipped with vital hardware to enhance reliability. Options include short-circuit and earth-fault indicators, surge arresters for lightning protection, and integrated LV fuse-switches.

TECHNICAL SPECIFICATIONS

* Parameters cover standard configurations for both MV and LV series. Specific enclosure dimensions and connector types will be tailored to your project's cable layout.

MEDIUM VOLTAGE (MV) FEEDER PILLAR SPECIFICATIONS

Rated Voltage (Ur)	12kV / 24kV
Rated Current	630A (Bolted) / 200A (Plug-in)
Short-Time Withstand Current	20kA (3s)
Peak Withstand Current	50kA
Branching Configurations	2-way, 3-way, 4-way, up to 7-way

LOW VOLTAGE (LV) FEEDER PILLAR SPECIFICATIONS

Rated Voltage	0.4kV (400V AC)
Rated Main Busbar Current	Up to 1250A (Custom larger capacities available)
Short-Time Withstand Current	4.5kW / 7.5kW / 10.5kW

GENERAL MECHANICAL CHARACTERISTICS

Enclosure Protection Degree	Standard IP33 / IP44 (Customizable up to IP54 for extreme environments)
Enclosure Material	Stainless Steel / Cold-Rolled Steel / SMC

OPERATING ENVIRONMENT:

- **Ambient Temperature:** 30°C to +45°C.
- **Altitude:** Standard ≤ 2000m.
- **Wind Resistance:** Withstands wind speeds up to 35m/s.
- **Installation Site:** Outdoor roadside pads, green belts, or industrial zones free from explosive dust.

Global Factory Acceptance & Turnkey Support

Every HJ-OFP unit undergoes rigorous routine testing, including power frequency withstand voltage tests and partial discharge checks (for MV models), before leaving our facility. We deliver fully assembled units equipped with designated cable brackets and connectors, ready for immediate bolting onto your concrete pads and cable splicing.

HJ-PDB Series

Floor-Standing Power Board

UP TO 800A / FLOOR-STANDING / SECONDARY DISTRIBUTION

The HJ-PDB Series Floor-Standing Power Board is a highly reliable, compact, and cost-effective secondary distribution solution. Engineered for robust performance in industrial and commercial environments, it provides safe and efficient power routing, motor control, and lighting distribution for loads up to 800A, ensuring smooth operation at the facility floor level.

IDEAL FOR FLOOR-LEVEL POWER DISTRIBUTION:

- Manufacturing Workshops & Assembly Lines
- Commercial Buildings & High-Rise Facilities
- Water Treatment & Pumping Stations
- Mining, Metallurgy & Light Industrial Plants



CORE ENGINEERING ADVANTAGES

1. Robust Floor-Standing Architecture

Built to withstand demanding industrial environments. Constructed from high-strength folded steel profiles (C-profile or 8MF), providing exceptional structural rigidity.

2. Flexible Component Integration

Tailor your board to exact load requirements. Effortlessly accommodates MCCBs, MCBs, contactors, relays, fuses, and optional earth-leakage modules for enhanced safety.

3. FSafe Front-Access Operation

Designed for user-friendly maintenance. Features a clean, intuitive front-panel layout. All routine operations, inspections, and maintenance can be performed safely from the front.

4. High Cost-Efficiency

Optimized to deliver maximum value for secondary grids. Utilizing a simplified fixed-mounted structure without complex withdrawable mechanisms significantly reduces initial CAPEX.

TECHNICAL SPECIFICATIONS

(Note: Parameters cover standard configurations based on the XL-21 series. Specific breaker selections and enclosure dimensions are tailored to your project's single-line diagram.)

ELECTRICAL PARAMETERS	
Compliance Standards	IEC 61439-1 / IEC 61439-2
Rated Operational Voltage (Ue)	380V / 400V AC (Up to 500V AC)
Rated Insulation Voltage (Ui)	660V AC
Rated Main Circuit Current	≤ 800A
Rated Frequency	50 Hz / 60 Hz
Wiring System Configurations	3-Phase 3-Wire / 3-Phase 4-Wire / 3-Phase 5-Wire
MECHANICAL & PROTECTION ATTRIBUTES	
Enclosure Protection Degree	Standard IP30 (Customizable up to IP54/IP65 for harsh environments)
Standard Dimensions (HxWxD)	1600/1800mm x 600/800mm x 400/500mm
Operation & Access	Front Panel Operation / Front Door Maintenance

NORMAL OPERATING ENVIRONMENT:

- **Ambient Temperature:** -5°C to +40°C (Average over 24h ≤ +35°C).
- **Altitude:** ≤ 2000m.
- **Relative Humidity:** ≤ 50% at +40°C (Higher humidity allowable at lower temperatures, e.g., 90% at +20°C).
- **Installation Site:** Indoor areas with a mounting inclination of ≤ 5°, free from severe vibration or corrosive gases.

Global Factory Acceptance & Turnkey Support

Every HJ-PDB unit undergoes comprehensive routine testing, including insulation resistance and functional sequence validation, before dispatch. We deliver the panels as **CBU (Completely Built Units)**, fully wired and ready for immediate floor mounting and cable termination at your project site.

HJ-WDB Series

Wall-Mounted Box

UP TO 250A / WALL-MOUNTED / INDOOR & OUTDOOR

The HJ-WDB Series Wall-Mounted Distribution Box is a highly versatile, compact, and secure terminal distribution solution. Engineered for final-circuit power routing, lighting control, and motor protection for loads up to 250A, it offers exceptional structural integrity and a wide range of IP ratings, making it the perfect fit for both high-end interior installations and harsh outdoor environments.

IDEAL FOR FINAL-CIRCUIT DISTRIBUTION:

- Residential Complexes & Commercial Malls
- Hospitals, Schools & Public Institutions
- Light Industrial Facilities & Machine Control
- Outdoor Street Lighting & Telecom Stations



CORE ENGINEERING ADVANTAGES

1. Versatile Installation & Aesthetics

Available in Surface-Mounted (exposed) and Flush-Mounted (concealed) configurations. The clean enclosure design features optional viewing windows to blend seamlessly into interiors.

3. Comprehensive Circuit Protection

Efficiently integrates MCBs, MCCBs, and contactors. Delivers comprehensive protection against overloads, short circuits, phase loss, and earth leakage to safeguard end-users.

2. Extreme Indoor & Outdoor Resilience

While indoor models provide IP30/IP40 defense, outdoor variants are engineered with a specialized double-door structure, rain canopies, and rubber gaskets for robust IP65 protection.

4. Robust Enclosure Construction

Manufactured from premium 1.2mm to 1.5mm cold-rolled steel or stainless steel. The specialized hinge design allows doors to open wider than 90 degrees for rapid wiring.

TECHNICAL SPECIFICATIONS

(Note: Parameters cover standard configurations based on the JXF/JFF series. Specific dimensions and internal component layouts are fully customizable based on your project needs.)

ELECTRICAL PARAMETERS

Compliance Standards	IEC 61439-1 / IEC 61439-3
Rated Operational Voltage (Ue)	Up to 500V AC
Rated Current (In)	≤ 250A
Rated Frequency	50 Hz / 60 Hz
Wiring System Configurations	3-Phase 3-Wire / 3-Phase 4-Wire / 3-Phase 5-Wire

MECHANICAL & ENCLOSURE OPTIONS

Enclosure Protection Degree	P20 / IP40 / IP43 / IP54 / IP65 (Model dependent)
Installation Types	Wall-Mounted (Surface exposed / Flush concealed)
Enclosure Material & Thickness	Cold-Rolled Steel / Stainless Steel(1.2mm or 1.5mm)
Door Configuration	Single Door (Metal/Window) Double Door (For outdoor weather protection)

NORMAL OPERATING ENVIRONMENT:

- **Ambient Temperature:** -25°C to +40°C.
- **Altitude:** ≤ 2000m.
- **Relative Humidity:** ≤ 50% at +40°C (Indoor) / Can tolerate higher humidity outdoors.
- **Installation Site:** Free from intense vibration; outdoor models withstand direct sunlight and rain.

Global Factory Acceptance & Turnkey Support

Every HJ-WDB unit undergoes strict quality control, including dielectric strength tests and protective continuity verification, before dispatch. We supply these distribution boxes as either empty enclosures for local assembly or fully pre-wired **CBU (Completely Built Units)** according to your specific single-line diagrams.

ENERGY STORAGE SOLUTIONS.

UNINTERRUPTED POWER & MICROGRID RESILIENCE

From residential backup to megawatt-scale industrial microgrids, our BESS portfolio seamlessly integrates renewable generation to eradicate grid dependency, slash diesel costs, and optimize energy security in the world's most unforgiving climates.

FEATURED MODELS

- 09.1 HJ-BESS-W Series** (Wall-Mounted Storage)
- 09.2 HJ-BESS-R Series** (Modular Hybrid Stack)
- 09.3 HJ-BESS-C Series** (All-in-One C&I Cabinet)
- 09.4 HJ-BESS-M Series** (Containerized MW Hub)

KEY APPLICATIONS

Grid-Deficient Regions
Heavy Mining Camps
Commercial & Hospitals
Utility-Scale Solar & Wind
Telecom Base Stations

HJ-BESS-W Series

Wall-Mounted Storage

5.12kWh - 10.24kWh / ULTRA-SLIM / PLUG & PLAY

The optimized entry-level energy independence solution designed to combat frequent grid load-shedding. This ultra-slim, wall-mounted lithium battery seamlessly pairs with our hybrid inverter to silently power essential household and small business loads. It is the perfect, pollution-free alternative to noisy, high-maintenance petrol generators.

IDEAL FOR ESSENTIAL BACKUP POWER:

- Urban Middle-Class Apartments & Homes
- Roadside Retail Shops & Pharmacies
- Rural Medical Clinics (Cold Chain Backup)
- Off-Grid Telecom & Security Micro-Nodes



CORE ENGINEERING ADVANTAGES

1. The "Petrol Generator Killer"

Zero noise, zero emissions, and zero fuel costs. Enjoy uninterrupted silent power that pays for itself within 2 years compared to running a petrol generator during daily blackouts.

3. Safe Low-Voltage Platform

Utilizes a safe 51.2V DC architecture with premium Grade-A LiFePO4 cells. Delivers extreme thermal stability, zero fire risk, and an exceptional 6,000+ cycle lifespan.

2. Ultra-Slim Wall-Mount Design

Engineered with a minimalist aesthetic and a depth of less than 15cm. It seamlessly integrates into living rooms, hallways, or narrow utility rooms without structural reinforcements.

4. Limitless Parallel Expansion

Need more backup time? The built-in intelligent BMS supports connecting up to 15 identical battery units in parallel, easily scaling up to 150kWh+ as your energy needs grow.

TECHNICAL SPECIFICATIONS

* Parameters cover our standard residential wall-mounted units. Best paired with HJATIS authorized single-phase hybrid inverters for optimal plug-and-play performance.

BATTERY MODULE PARAMETERS

Battery Cell Chemistry	Lithium Iron Phosphate (LiFePO4)
Nominal Voltage	51.2V DC (Low Voltage Safety)
Available Capacities	100Ah (5.12 kWh) 200Ah (10.24 kWh)
Scalability	Up to 15 units in parallel (Max 153.6 kWh)
Expected Cycle Life	> 6,000 cycles (@ 25°C, 80% DOD)

MATCHED HYBRID INVERTER SPECS

Rated Output Power (Single-Phase)	3kW / 5kW / 8kW (230V AC)
Grid Switchover Time (UPS Mode)	< 10 ms (Seamless Transfer)
Maximum PV Input Power	4.5kW / 7.5kW / 10.5kW
MPPT Trackers	1 or 2 independent trackers

PHYSICAL & SMART FEATURES

Enclosure Protection Degree	IP65 (Inverter) / IP54 (Battery Unit)
Communication Ports	RS485 / CAN / WiFi (Mobile App Included)
Mounting Interface	Heavy-duty wall bracket included
International Certifications	CE, UN38.3, IEC62619, MSDS

OPERATING ENVIRONMENT:

- **Ambient Temperature:** -10°C to +50°C (Fanless natural cooling for completely silent indoor operation).
- **Humidity:** 5% to 95% (Non-condensing).
- **Installation Safety:** Designed to be mounted on standard concrete/brick walls. Keep away from direct sunlight or heat sources.

Retail & Distributor Ready (Fast Installation)

Designed specifically for high-volume distribution in emerging markets. The compact, flat-pack packaging maximizes shipping container efficiency. The system features pre-configured BMS logic and standardized Amphenol connectors, allowing local electricians to mount, wire, and **commission the entire system in under 2 hours** without specialized training.

HJ-BESS-R Series

Modular Hybrid Storage

5kW TO 25kW / SCALABLE CAPACITY / UPS-GRADE SWITCH

The optimized flexible power independence solution designed for premium residential and light-commercial applications. Featuring a highly advanced hybrid inverter paired with stackable, high-voltage lithium iron phosphate (LFP) battery modules. It delivers a perfect combination of solar self-consumption, seamless backup power, and intelligent generator control, securing your electricity supply against unpredictable grid failures.

IDEAL FOR HIGH-END RESIDENTIAL & LIGHT C&I:

- Premium Villas & Residential Estates
- Private Clinics & Small Retail Shops
- Telecom Base Stations & Micro-Hubs
- Rural Off-Grid Lodges & Eco-Camps



CORE ENGINEERING ADVANTAGES

1. "Pay-As-You-Grow" Scalability

Start small and expand later. Utilizing stackable 5.12kWh battery blocks, users can seamlessly scale capacity up to 50kWh+ by simply stacking new modules without complex external wiring.

3. UPS-Grade Seamless Switchover

During a grid blackout, the hybrid inverter achieves an ultra-fast transfer time of <10ms. Computers, routers, and sensitive medical devices remain powered without rebooting.

2. Easy Handling & Installation

No cranes or heavy forklifts required. Each lightweight module can be easily carried by two technicians, making it perfect for rapid installations in tight spaces or basements.

4. Smart Generator Integration

Features dedicated dry contacts (Dry-Contact). When battery SOC drops critically low during extended cloudy days, the inverter automatically triggers your backup diesel generator.

TECHNICAL SPECIFICATIONS

* Parameters cover our standard high-voltage (HV) and low-voltage (LV) stackable configurations. System sizing will be strictly tailored to your specific load demands and solar PV capacity.

BATTERY MODULE PARAMETERS

Battery Cell Chemistry	Premium Lithium Iron Phosphate (LiFePO4)
Single Module Capacity	5.12 kWh
System Scalability (Stacking)	Stack up to 8 - 10 modules vertically (Higher capacity available via parallel clusters)
Expected Cycle Life	> 6,000 cycles (@ 25°C, 80% DOD)
Battery Architecture	High-Voltage (HV) for maximum conversion efficiency

HYBRID INVERTER (PCS) PARAMETERS

Rated Output Power (Single-Phase)	5kW / 8kW / 10kW (230V AC)
Rated Output Power (Three-Phase)	10kW / 15kW / 20kW / 25kW (400V AC)
Grid Switchover Time (UPS Mode)	< 10 ms (Seamless Transfer)
PV Input (MPPT)	2 to 4 independent MPPT trackers
Generator Interface	Dedicated Generator Port + Auto-start Relay

SMART FEATURES & PROTECTION

Enclosure Protection Degree	IP65 (Inverter) / IP54 (Battery Stack)
Communication & Monitoring	WiFi / 4G / LAN / RS485 (Smart Cloud App Included)
Certifications	IEC62619, CE, UN38.3, MSDS

OPERATING ENVIRONMENT & LOGISTICS:

- **Ambient Temperature:** -10°C to +50°C (Natural convection cooling, completely silent operation).
- **Installation Method:** Floor-standing vertical battery stack paired with a wall-mounted inverter.
- **Logistics Advantage:** Individual carton packaging makes it extremely suitable for Completely Knocked Down (CKD) containerized shipping, drastically cutting freight costs.

Global Distributor & Installer Support

We empower local distributors and electrical installers across Africa and the Middle East. The HJ-BESS-R system features foolproof plug-in internal connections, eliminating complex DC wiring. Combined with our **remote diagnostic cloud platform**, local partners can easily commission systems and resolve software issues without factory intervention.

HJ-BESS-C Series

All-in-One C&I Storage

UP TO 120kW/241kWh/ SEAMLESS OFF-GRID / IP54 HVAC

The definitive plug-and-play energy storage solution for Commercial & Industrial (C&I) applications. The HJ-BESS-C perfectly integrates premium Grade-A LFP batteries, a bidirectional PCS inverter, BMS, EMS, and industrial HVAC cooling into a single ruggedized IP54 outdoor cabinet. Engineered to eradicate power outages, slash diesel reliance, and create resilient microgrids in the world's most unforgiving climates.

IDEAL FOR GRID-DEFICIENT & MICROGRID SCENARIOS:

- Mining Camps & Remote Oil/Gas Facilities
- Hospitals & Critical Telecom Infrastructure
- High-End Resorts & Commercial Centers
- Diesel Generator Replacement Programs



CORE ENGINEERING ADVANTAGES

1. Seamless Off-Grid Transition

Features a built-in ATS (Automatic Transfer Switch) that instantly flips to off-grid mode during utility blackouts, acting as a massive, silent UPS for your entire facility.

3. Plug-and-Play Integration

Zero complex on-site wiring. The battery racks, inverter, and fire suppression are 100% factory-assembled. Simply connect your AC load and PV panels to begin operation.

2. Extreme HVAC Thermal Mgmt

Designed for the African and Middle Eastern heat. An industrial-grade integrated air conditioner maintains optimal cell temperatures, ensuring the 6,000+ cycle lifespan is uncompromised.

4. Smart EMS & Remote Control

The built-in Energy Management System (EMS) allows fleet operators to monitor cell health, PV generation, and load consumption remotely via cloud SCADA platforms.

TECHNICAL SPECIFICATIONS

* Parameters cover our standard C&I cabinet capacities. Systems can be paralleled on the AC side to easily achieve multi-megawatt (MW) capacities.

BATTERY SYSTEM PARAMETERS

Battery Cell Chemistry	Premium Grade A LFP (LiFePO4)
Standard Models (Power / Capacity)	50kW / 100kWh 120kW / 241kWh
DC Voltage Range	448V - 584V (100kWh) / 600V - 876V (241kWh)
Expected Cycle Life	> 6,000 cycles (@ 25°C, 80% DOD)

AC OUTPUT & PCS PARAMETERS

AC Output Voltage	400V AC (3-Phase, 3W+N+PE)
Grid Frequency	50 Hz / 60 Hz
Maximum Overload Capacity	110% Continuous / 120% for 1 min
Grid-Tied / Off-Grid Switching	Supported (via Integrated ATS)
Isolation Method	Transformerless

MECHANICAL & OPERATING PARAMETERS

Thermal Management	Industrial HVAC (Air Conditioning)
Enclosure Protection Degree	IP54 (Outdoor Rated)
Safety & Fire Suppression	Aerosol generator / Combustible gas sensors
Communication Interfaces	RS485 / CAN / LAN / WiFi
Certifications & Standards	IEC 62619, UN38.3, CE, MSDS

EXTREME OPERATING ENVIRONMENT:

- **Ambient Temperature:** -20°C to +50°C (Actively managed by internal HVAC to protect cell chemistry).
- **Altitude:** ≤ 2000m.
- **Installation Site:** Designed for direct outdoor installation; concrete pad mounting recommended.

Global Factory Acceptance & Plug-and-Play Delivery

Every HJ-BESS-C cabinet undergoes a grueling multi-day testing cycle, including 100% Depth of Discharge (DOD) capacity verification, ATS switchover simulation, and thermal stress tests. Shipped as a fully assembled **Completely Built Unit (CBU)**, it drastically minimizes on-site commissioning time—empowering local technicians to bring microgrids online safely and rapidly.

HJ-BESS-M Series

Containerized Microgrid

MEGAWATT SCALE / ISO CONTAINER / HEAVY-DUTY HUB

The optimized utility-scale and heavy-industry energy storage solution. Housed within ruggedized 20ft or 40ft standard ISO shipping containers, the HJ-BESS-M delivers multi-megawatt (MW) power capacity to remote mining camps, large solar/wind farms, and vulnerable utility grids. Engineered as a turnkey microgrid hub, it seamlessly orchestrates massive renewable arrays and heavy diesel generators to ensure uninterrupted power delivery in the harshest global environments.

IDEAL FOR MEGAWATT-SCALE PROJECTS:

- Remote Mining & Heavy Metallurgy Hubs
- Utility-Scale Solar & Wind Integration
- Off-Grid Islands & Regional Microgrids
- Grid Frequency Regulation & Peak Shaving



CORE ENGINEERING ADVANTAGES

1. Megawatt Microgrid Hub

Acts as the central brain for off-grid operations. Intelligently orchestrates multi-megawatt PV inputs, massive diesel generator arrays, and the battery bank for maximum fuel savings.

3. Advanced Safety & Climate Control

Equipped with dual-redundant HVAC (or optional liquid cooling) and an automated Novec 1230/FM200 fire suppression system to enhance safety in scorching climates.

2. Standard ISO Logistics

Built into standardized 20ft or 40ft High-Cube shipping containers. Drastically simplifies international maritime logistics and completely eliminates complex on-site building construction.

4. Seamless Black Start Capability

Features a heavy-duty bidirectional PCS inverter system capable of black-starting entire remote industrial facilities or isolated grid segments without external grid support.

TECHNICAL SPECIFICATIONS

* Parameters outline standard 20ft/40ft container capacities. Systems can be infinitely paralleled to achieve multi-megawatt configurations (e.g., 10MW / 20MWh+).

BATTERY SYSTEM PARAMETERS

Battery Cell Chemistry	Premium Grade A LFP (LiFePO4)
Standard Container Capacities	20ft Container: Up to 2.5 MWh 40ft Container: Up to 5.0 MWh+
DC Voltage Platform	1000V DC / 1500V DC (High-Voltage)
Expected Cycle Life	> 6,000 to 8,000 cycles (@ 25°C, 80% DOD)

AC OUTPUT & PCS PARAMETERS

PCS Rated Power (per container)	500kW to 2500kW+ (Configurable C-Rate: 0.25C / 0.5C / 1C)
AC Output Voltage	400V / 690V / 800V AC (Direct 11kV/35kV output via integrated step-up transformer)
Grid Frequency	50 Hz / 60 Hz (Auto-Sensing)
Grid-Tied / Off-Grid Switching	Seamless STS / Black Start Supported

MECHANICAL & SAFETY PARAMETERS

Enclosure Type	ISO Standard 20ft / 40ft High-Cube (IP54)
Thermal Management	Redundant Industrial HVAC (Air Cooling) (Advanced Liquid Cooling optional)
Fire Suppression System	Automated NOVEC 1230 / FM200 / Aerosol
Certifications & Standards	IEC 62619, IEC 62477, UN38.3, UL9540A

EXTREME OPERATING ENVIRONMENT:

- **Ambient Temperature:** -30°C to +55°C (Maintained by HVAC/Liquid Cooling).
- **Altitude:** ≤ 2000m (High-altitude derating customization available).
- **Corrosion Resistance:** C4/C5 marine-grade paint finishes for coastal environments.

Global Factory Acceptance & Turnkey Logistics

Every megawatt-scale BESS container undergoes comprehensive multi-system FAT (Factory Acceptance Testing), rigorously simulating high-load microgrid switchovers and thermal stresses before dispatch. Shipped entirely as standard ISO sea freight, it dramatically cuts maritime logistics costs and allows EPC contractors to literally "**drop and energize**" massive power hubs directly onto a simple concrete slab anywhere in the world.

SCENARIO-DRIVEN TURNKEY SOLUTIONS.

EMPOWERING AFRICA & EMERGING MARKETS

Moving beyond standalone equipment supply, HJATIS Power acts as your optimized **System Integrator**. We deeply understand the unique challenges of African and global emerging markets—from highly unstable regional grids to extreme remote operating environments.

By intelligently bundling our robust switchgear, advanced transformers, and cutting-edge energy storage systems, that enhance **power resilience**, **optimize your CAPEX**, and drastically accelerate EPC project delivery., optimize your CAPEX, and drastically accelerate EPC project delivery.



OUR INTEGRATION LOGIC:

Generation → Step-Up → Distribution → Storage → Terminal

4 CORE SCENARIOS.

01



MINING & HEAVY METALLURGY

Overcoming remote locations, harsh dust, and weak grid infrastructure. We deliver fully-sealed E-Houses and MW-scale microgrids to secure uninterrupted extraction operations.

CORE EQUIPMENT:

HJ-EHouse

BESS-M Hub

MCS-40

02



INDUSTRIAL PARKS & SEZS

Special Economic Zones demand rapid deployment and massive power capacity. We provide turnkey compact substations and heavy-duty MCCs for fast-track setup.

CORE EQUIPMENT:

HJ-CSS

HJ-MNS (MCC)

03



UTILITY-SCALE SOLAR PV

Solar farms require flawless grid synchronization and heat resilience. Our dedicated renewable portfolio ensures ultra-low transmission loss from string to grid.

CORE EQUIPMENT:

HJ-CSS-R

HJ-DCB

AMT-O

04



URBAN GRIDS & MICROGRIDS

Addressing frequent load-shedding and limited urban space. We deploy highly compact, SCADA-ready hubs and scalable battery storage to secure community power.

CORE EQUIPMENT:

BESS-C

Smart RMU

HJ-OFD

01 — INDUSTRY SOLUTION

MINING POWER SOLUTION.

RELIABLE. RESILIENT. BUILT FOR EXTREME.

Integrated hybrid power systems designed for remote mining operations. Combining PV, BESS, diesel backup, and robust distribution to ensure uninterrupted power, reduce fuel consumption and total cost of ownership.

KEY CHALLENGES



NO RELIABLE GRID

Remote locations lack stable utility power supply.



HIGH DIESEL COST

Fuel transportation and generation costs drive OPEX up.



HARSH ENVIRONMENT

Extreme heat, dust and humidity demand rugged equipment.



DOWNTIME IS COSTLY

Power interruptions lead to production loss and penalties.

OUR SOLUTION OVERVIEW

A customized hybrid power solution that intelligently blends renewable energy, energy storage and diesel generation to deliver 24/7 reliable power at the lowest life-cycle cost.



30-60%

REDUCTION IN
DIESEL COST



99.9%

POWER
RELIABILITY



PLUG & PLAY

FAST DEPLOYMENT
& EASY EXPANSION



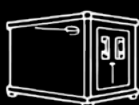
GREENER
OPERATIONS

LOWER EMISSIONS
& CARBON FOOTPRINT

TYPICAL HYBRID POWER ARCHITECTURE



SOLAR PV
ARRAY



BESS
CONTAINER



DIESEL
GENERATOR



COMBINER
BOX



CSS / MV
SUBSTATION



MV
SWITCHGEAR



PROCESS
PLANT



CRUSHING
STATION



CAMP &
FACILITIES



WATER
PUMPING

02 — SOLUTION DETAILS

COMPLETE POWER ECOSYSTEM

HJATIS Power provides a full range of rugged, high-performance equipment engineered to work together seamlessly in the most demanding mining environments.



**MV
SWITCHGEAR**

Reliable primary distribution and protection for mine infrastructure.



TRANSFORMER

Oil-immersed or amorphous options for efficient voltage step-up/down.



RMU

Compact, SF6-free solutions for flexible network branching and loop supply.



**LV SWITCHGEAR
(MCC)**

Motor control centers for pumps, fans, conveyors and critical loads.



**BESS
SYSTEM**

Scalable battery energy storage for peak shaving and backup.



**E-HOUSE /
MODULAR
SUBSTATION**

Plug & play substation for fast installation and easy relocation.

SOLUTION HIGHLIGHTS

- Hybrid integration of PV, BESS and diesel for optimal energy mix
- Intelligent energy management system (EMS) for cost optimization
- Modular design for rapid deployment and site mobility
- Built for extreme conditions: high temp, dust, humidity, vibration
- Remote monitoring & predictive maintenance ready

IDEAL FOR



GOLD MINES



COPPER MINES



IRON ORE



**QUARRIES
MINES**

DELIVERING REAL IMPACT



30-60%

DIESEL COST SAVINGS

24/7

UNINTERRUPTED POWER

LOWER CO₂

REDUCE EMISSIONS

HIGH ROI

LOWER LIFETIME COST



**FROM MINE ENTRANCE TO PROCESSING PLANT—
ONE INTEGRATED POWER SYSTEM.**

**ENGINEERED TO PERFORM.
BUILT TO LAST.**

02 — INDUSTRY SOLUTION

INDUSTRY SOLUTION POWER SOLUTION.

RELIABLE. SCALABLE. SMART.

Integrated power distribution solutions designed for industrial parks and economic zones. Delivering stable power, flexible expansion and intelligent management to support sustainable industrial growth.

KEY CHALLENGES



FREQUENT OUTAGES & VOLTAGE FLUCTUATION

Unstable grid leads to production interruptions and equipment damage.



COMPLEX POWER STRUCTURE

Multi-tenant loads require segmented distribution and protection.



FUTURE EXPANSION UNCERTAINTY

Rapid growth demands flexible, scalable power infrastructure.



ENERGY MANAGEMENT INEFFICIENCY

Lack of monitoring leads to high energy cost and low operational efficiency.

OUR SOLUTION OVERVIEW

An intelligent and scalable power distribution architecture that ensures continuous power, high power quality and efficient energy management for industrial parks.



99.9%

99.9%

POWER
RELIABILITY



20-30%

20~30%

ENERGY COST
REDUCTION



FLEXIBLE
SCALABILITY

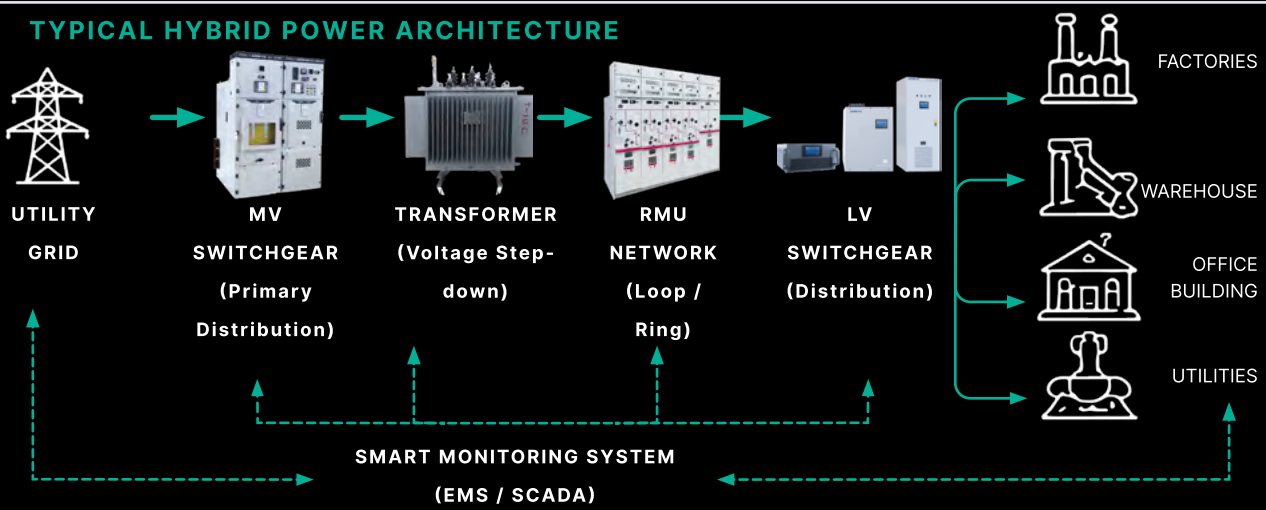
EASY EXPANSION



SMART
MONITORING

REAL-TIME
CONTROL

TYPICAL HYBRID POWER ARCHITECTURE



02 — SOLUTION DETAILS

COMPLETE POWER ECOSYSTEM

HJATIS Power provides a full range of equipment and systems to build a safe, efficient and smart power infrastructure for industrial parks.



MV SWITCHGEAR

Reliable primary distribution and protection for incoming power.



TRANSFORMER

Oil-immersed or amorphous options for efficient voltage step-down.



RMU

Compact, SF6-free solutions for ring network and section switching.



LV SWITCHGEAR

MCC, motor control centers and low-voltage distribution for all types of loads.



POWER QUALITY DEVICES

APF, SVG and capacitor banks to ensure power quality and efficiency.

SOLUTION HIGHLIGHTS

- High reliability design for 24/7 uninterrupted operation
- Modular and scalable architecture for future expansion
- Advanced protection and coordination for system safety
- Power quality optimization for sensitive industrial loads
- Intelligent energy management system (EMS)
- Remote monitoring & predictive maintenance ready
- Compliant with IEC, ANSI and local utility standards

IDEAL FOR



INDUSTRIAL
PARKS



ECONOMIC
ZONES



MANUFACTURING
CLUSTERS



LOGISTICS &
WAREHOUSES

DELIVERING REAL IMPACT



99.9%
POWER RELIABILITY

20~30%
ENERGY COST SAVINGS

HIGH
POWER QUALITY

FLEXIBLE
SCALABILITY



**STABLE POWER. EFFICIENT MANAGEMENT.
STRONGER INDUSTRIAL COMPETITIVENESS.**

**ENGINEERED FOR GROWTH.
BUILT TO PERFORM.**

03 — INDUSTRY SOLUTION

SOLAR PV POWER SOLUTION.

MAXIMIZE YIELD. SECURE CONNECTION.

Integrated PV power solutions engineered for efficiency, reliability and compliance. From DC collection to grid connection, HJATIS Power ensures maximum energy yield and long-term return on investment.

KEY CHALLENGES



GRID INSTABILITY

Fluctuating grid voltage and frequency cause curtailment and revenue loss.



ENERGY CURTAILMENT

Lack of reactive power support and protection leads to power limitation.



COMPLEX INTEGRATION

Multiple equipment and standards increase EPC complexity and risk.



REMOTE ENVIRONMENTS

Harsh climate and remote locations demand rugged, low-maintenance systems.

OUR SOLUTION OVERVIEW

A complete PV power plant solution covering DC collection, conversion, step up transformation, and grid maximum energy yield, safety and long-term reliability.



2-5%

MORE ENERGY
YIELD



99.9%

SYSTEM
RELIABILITY



30-50%

FASTER EPC
DEPLOYMENT



IEC / IEEE

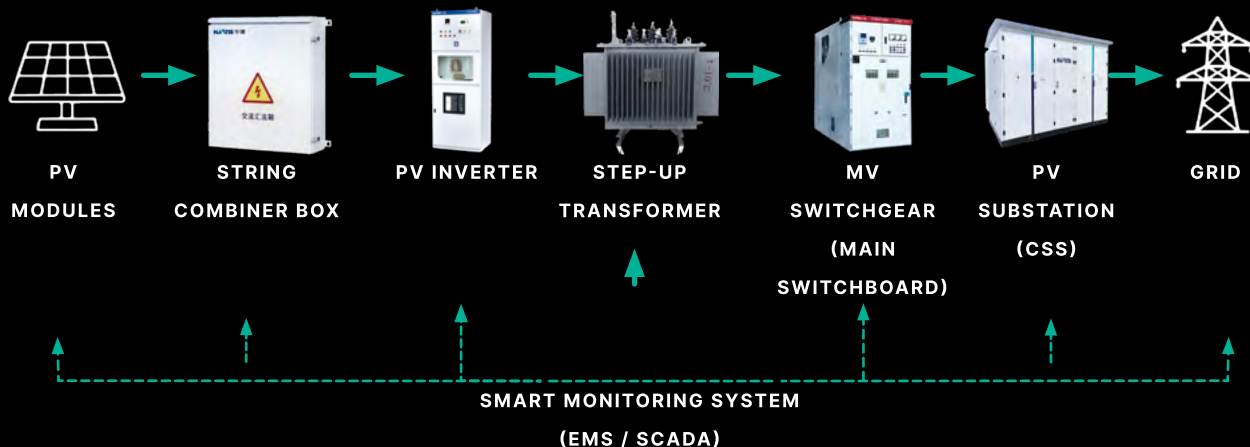
GRID CODE
COMPLIANCE



LOWER LCOE

BETTER ROI &
LONG-TERM
VALUE

TYPICAL HYBRID POWER ARCHITECTURE



03 — SOLUTION DETAILS

COMPLETE POWER ECOSYSTEM

HJATIS Power provides all key equipment for PV power plants, from DC side to grid connection, ensuring safe operation, stable performance and maximum energy generation.



PV COMBINER BOX

String collection, fuse protection, SPD and monitoring.



PV INVERTER

High efficiency conversion, MPPT tracking, grid support.



STEP-UP TRANSFORMER

Oil-immersed or dry-type transformers, low loss, high efficiency.



MV SWITCHGEAR

Reliable protection and control for power evacuation.



PV SUBSTATION (CSS)

Compact, pre-tested substation for fast installation.



PROTECTION & CONTROL

Relay, protection, metering and SCADA communication.

SOLUTION HIGHLIGHTS

- Optimized plant design for maximum energy yield
- Full compliance with IEC, IEEE and local grid code
- Integrated protection and reactive power control
- Pre-engineered CSS for fast installation and testing
- Smart monitoring and SCADA-ready solutions
- Rugged design for high temperature, dust and corrosion
- Engineer-to-Order customization to meet project needs

IDEAL FOR



UTILITY SCALE
PV PLANTS

COMMERCIAL
& INDUSTRIAL PV

REMOTE & OFF-
GRID PV PROJECTS

HYBRID PV +
STORAGE PLANTS

DELIVERING REAL IMPACT



2-5%
MORE ENERGY YIELD

> 98%
PLANT AVAILABILITY

20-30%
LOWER OPEX

LOWER LCOE
HIGHER RETURN ON INVESTMENT



**MAXIMIZE SOLAR YIELD.
SECURE GRID CONNECTION.**

**ENGINEERED FOR PERFORMANCE
BUILT TO LAST.**

URBAN MICROGRIDS

POWERING RESILIENCE. EMPOWERING CITIES.

Engineered to solve Africa's load-shedding challenge, HJATIS Power delivers smart microgrid solutions that integrate BESS, solar, and advanced distribution systems to ensure uninterrupted power for commercial, industrial, and public facilities.

KEY CHALLENGES



FREQUENT BLACKOUTS

Load shedding and grid interruptions severely impact productivity and business continuity.



HIGH ENERGY COSTS

Reliance on diesel generators leads to high fuel costs and maintenance expenses.



AGING DISTRIBUTION

Overloaded and outdated distribution networks cause instability and safety risks.



ENERGY INSECURITY

Lack of reliable power limits economic growth and quality of life in urban areas.

OUR SOLUTION OVERVIEW

HJATIS Urban Microgrid Solution combines BESS, solar PV, and intelligent distribution in a compact, modular system to deliver 24/7 reliable power, reduce costs, and build a smarter, greener city.



> 99%

POWER
RELIABILITY



20-40%

ENERGY COST
SAVINGS



< 10ms

SWITCH TO
BACKUP
POWER



SCALABLE

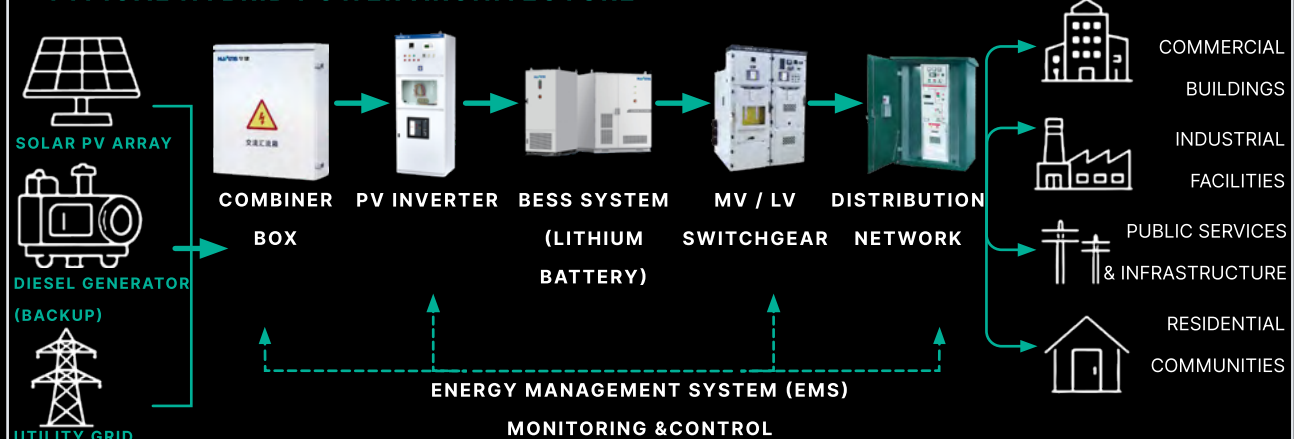
MODULAR
DESIGN EASY
EXPANSION



GREENER

LOWER
EMISSIONS
SUSTAINABLE
FUTURE

TYPICAL HYBRID POWER ARCHITECTURE



04 — SOLUTION DETAILS

COMPLETE POWER ECOSYSTEM

A fully integrated portfolio of equipment and systems working together to deliver a smarter, more resilient urban power network.



BESS SYSTEM (C&I)

Scalable battery energy storage for peak shaving, backup and energy arbitrage.



PV INVERTER

High efficiency conversion with MPPT and grid support functions.



MV / LV SWITCHGEAR

Reliable protection and control for stable power distribution.



TRANSFORMER

Oil-immersed or cast resin options for efficient voltage transformation.



RMU

Compact, SF6-free solutions for ring network distribution.

SOLUTION HIGHLIGHTS

- BESS-C for reliable backup and load management
- Solar + Storage integration for lower operating cost
- Fast transfer to backup power in <10ms
- Smart EMS for real-time monitoring and control
- Modular & containerized design for easy deployment
- Supports islanded and grid-connected modes
- Built for high temperatures, dust and harsh conditions
- Compliant with IEC, ANSI and local utility standards

IDEAL FOR



COMMERCIAL
COMPLEXES



HOSPITALS
& HEALTHCARE



DATA CENTERS
& TELCO



HOTELS
& HOSPITALITY

DELIVERING REAL IMPACT



20-40%

ENERGY COST SAVINGS

> 99%

POWER RELIABILITY

24/7

UNINTERRUPTED POWER

LOWER CO₂

REDUCE EMISSIONS

QUICK ROI

HIGHER RETURN ON INVESTMENT



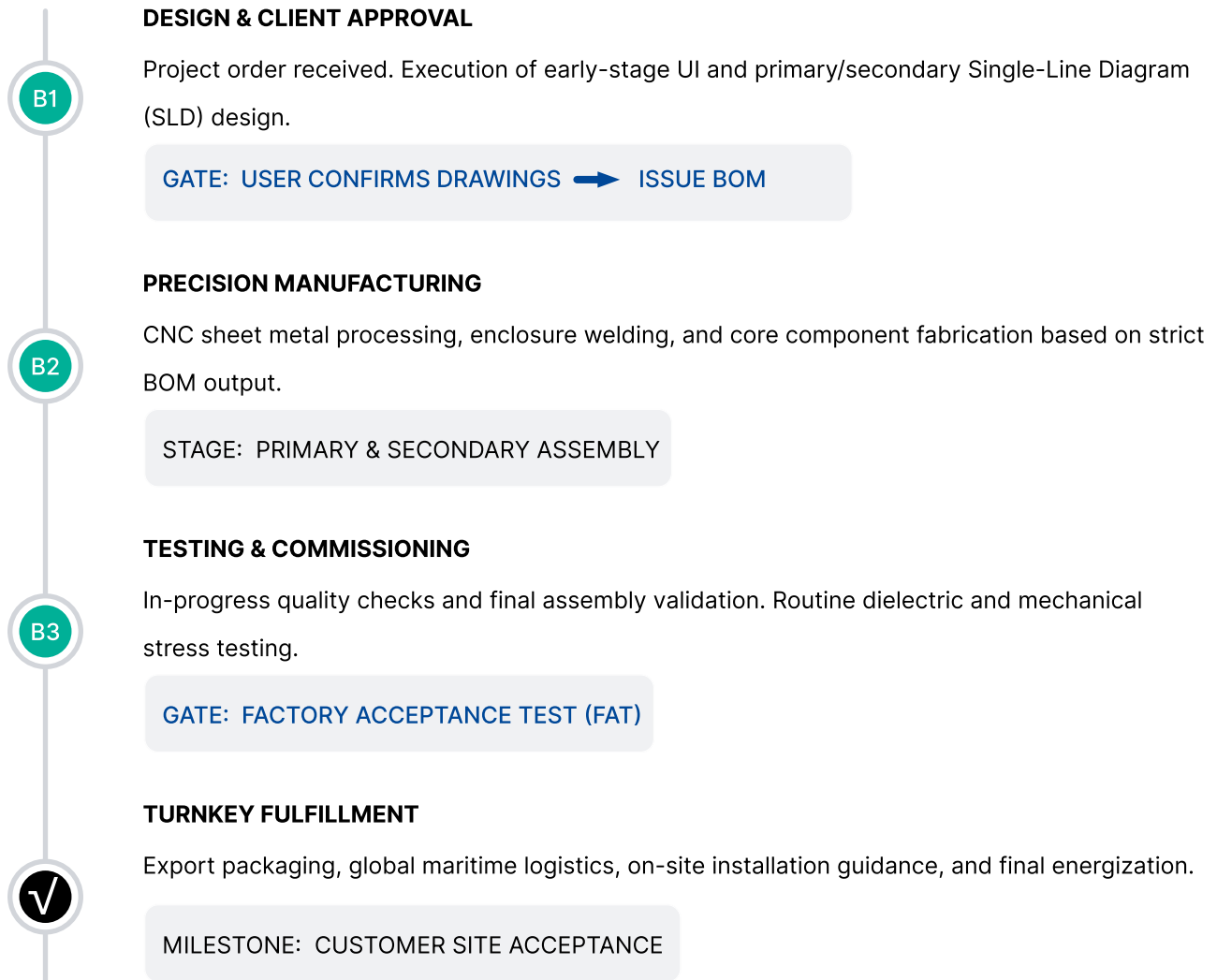
TURN POWER CUTS INTO BUSINESS CONTINUITY.
BUILD SMARTER, RESILIENT CITIES.

ENGINEERED TO PERFORM.
BUILT FOR AFRICA.

ENGINEERED TO ORDER.

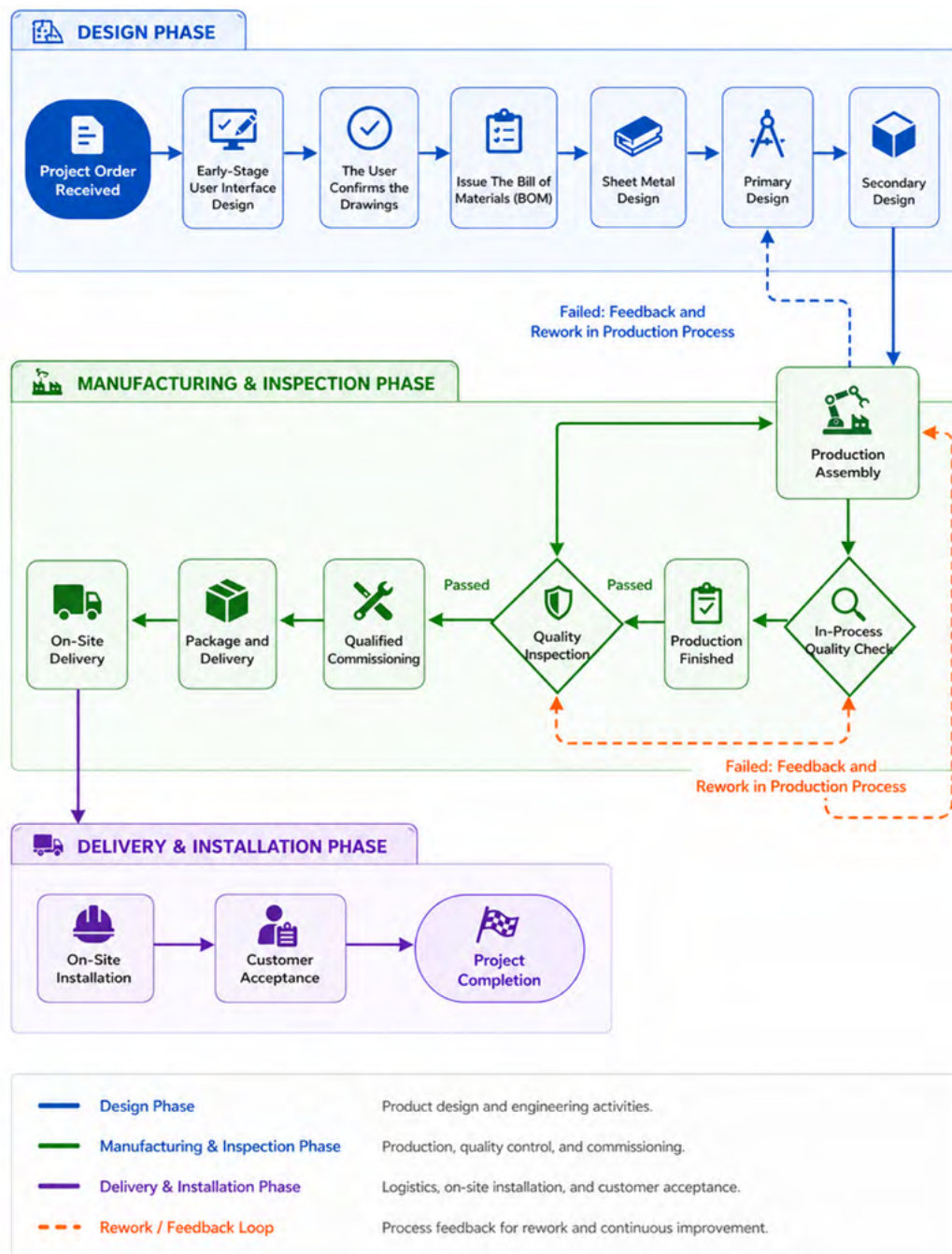
TRANSPARENT & STANDARDIZED LIFECYCLE

Every piece of HJATIS equipment is born from a rigorous, fully transparent 'Engineer-to-Order' framework. From the moment your project specifications are received to the final site energization, our standardized production lifecycle helps ensure precision, eliminating design deviations and schedule overruns.



ZERO-DEFECT PHILOSOPHY.

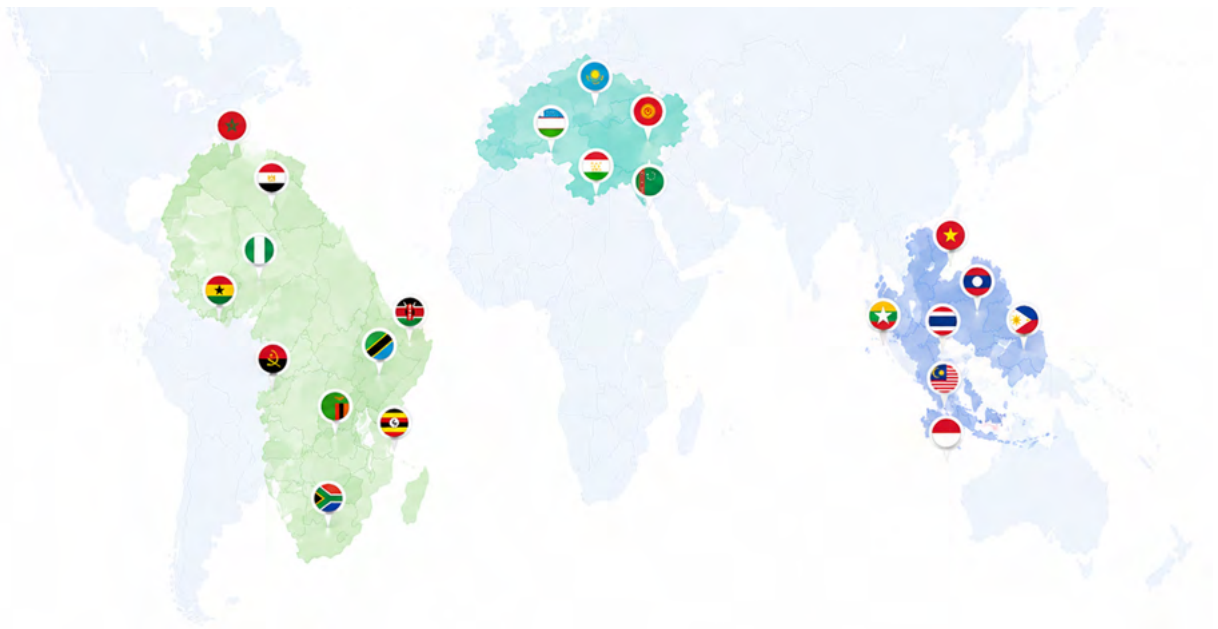
Quality is not merely inspected; it is systematically engineered into every stage. Our QA framework operates on a **strict closed-loop mechanism**. Any deviation from IEC tolerances triggers an immediate halt and rework protocol.



POWERING THE BELT & BEYOND.

Over the past decade, HJATIS Power has successfully evolved from a trusted domestic manufacturer to a vital global energy infrastructure partner. Our footprint now spans across Africa, Southeast Asia, Central Europe, and the Middle East.

By establishing a robust dual-drive strategy—**collaborating deeply with state-owned EPC giants while simultaneously expanding our direct global operational networks**—we deliver customized, high-yield power solutions to the world's most demanding environments.



TRUSTED BY GLOBAL LEADERS & EPCs



LANDMARK INSTALLATIONS.



CNBM Industrial Park Green Energy Supply

Application: Heavy Industrial Microgrid & Green Power



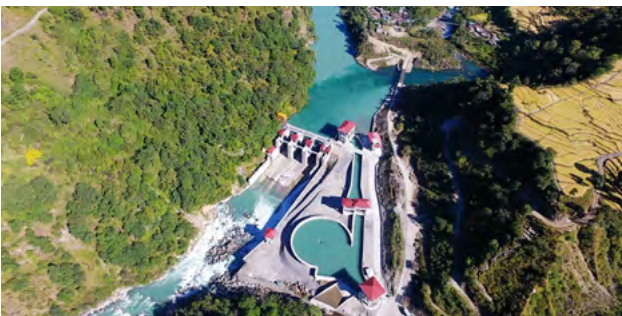
Almid Smelter Centralized PV Plant

Application: Metallurgy & Renewable Tie-in



YTL-APMC Waste Heat Power Generation

Application: Energy Recovery & Distribution



Tamakoshi V Hydroelectric Project

Application: Utility-Scale Hydropower



GBG Bauxite Port Phase I Project

Application: Mining & Port Infrastructure

RELIABLE POWER.

SUSTAINABLE FUTURE.

GLOBAL IMPACT.

HJATIS is committed to delivering reliable, efficient, and sustainable electrical solutions that drive progress worldwide.



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Production Base

Shangli County Industrial Park, Chishan Town,
Pingxiang City, Jiangxi Province, China



Global Operation Center

9th Floor, China-Africa Economic and Trade Cooperation
Headquarters Building, Economic Development Zone



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