HENGFENGYOU ELECTRIC GROUP version 2024-08EN **PRODUCT BROCHURE** 

## HENGFENGYOU ELECTRIC

Smart Electric Global Service provider Make life better!



HENG FENG YOU<sup>®</sup>

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## ABOUT HENGFENGYOU ELECTRIC

HENGFENGYOU ELECTRIC GROUP, is an electrical enterprise with transmission and distribution industry as its main business, integrating product research and development, manufacturing and trade. Designated suppliers for the world's top 500 enterprises .lts main products include power transformers, medium and low voltage switchgear, distribution panel ,circuit breakers, transmission tower ,Cable and other power distribution equipment .The group has five department: Transformer department, Panel department, power transmission tower department, cable department and electrical engineering department. HENG-FENGYOU ELECTRIC GROUP has been working hard to provide the best transmission, distribution solutions for users all over the world.

#### **Key figures**

- ·Since: 1990
- · Revenue in 2018: 635 million yuan
- · 550 employees and 30 Electrical Engineers
- ·6 production sites in China
- · 6% of revenue is invested in R &D

#### Distribution Transformer solutions that drive the global energy transition

With energy demand expanding in both developed and emerging countries, the challenge for HENGFENGYOU Group is to connect energy with people. The group's teams work as closely as possible with projects and decision makers and design and propose technical and process solutions based on global user needs.



#### HENGFENGYOU ELECTRIC

#### · Business area

HENGFENGYOU ELECTRIC GROUP designs, manufactures and sells global solutions and equipment for public utilities and private medium and low voltage distribution networks.

Hengfengyou Electric Group's business area is global power distribution equipment demand, fully meet the different power distribution equipment demand of more than 50 countries around the world.

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#### Grow business with Hengfengyou

Our goal is to become the world's leading manufacturer of electrical equipment. The business, experience and technology accumulated over the years have benefited customers in more than 50 countries around the world. Once our customers establish a cooperative relationship, they are long-term trusted customers, because HENGFENGYOU ELECTRIC GROUP always insists on providing you with our best electrical products and services.

## QINGDAO HENGFENGYOU ELECTRICAL ENGINEERING CO., LTD

Smart Electric Global Service provider, Make life better!

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#### •The team energy

The HENGFENGYOU ELECTRIC team achieves synergy within the team to develop and produce specific solutions that meet all customer needs.

Our equipment is designed and researched by R&D services according to each country's electrical standards and helps manage your distribution network for optimal efficiency.

HENGFENGYOU's state-of-the-art production workshop and production equipment will produce high quality products according to your specifications.

HENGFENGYOU ELECTRIC GROUP has a certified quality control laboratory where electrical products are tested out of factory to ensure the reliability and optimal life of our products.

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#### Innovative development

For more than 30 years, HENGFENGYOU ELECTRIC GROUP has been designing innovative power distribution solutions to improve network security, optimize facility efficiency and become more environmentally friendly.

Every year, HENGFENGYOU ELECTRIC GROUP spends 6% of its revenue on research and development and innovation of energy saving development of distribution transformers; Intellectualization of distribution boards and substations; Research, development and improvement of transmission tower and cable materials. The R&D division has more than 30 engineers and technicians dedicated to designing and deploying new electrical solutions. Continuously meet the global demand for energy saving and intelligent electrical.

Qingdao International academician port Qingdao MINGSI is introduced as the strategic partner of Technology Co., Ltd. to provide smart power consumption solutions for global users. Through the intelligent monitoring of the Internet of things system, it can realize the remote monitoring, early warning, control and management of enterprise power transmission and distribution equipment and power consumption equipment, and finally achieve the goal of reducing fire accidents, reducing operating costs, and improving enterprise management efficiency.

# HENGFENGYOU ELECTRIC GROUP SMART ELECTRIC GLOBAL SERVICE PROVIDER

http://www.hengfengyou.cn (CN) http://www.hengfengyou.com (EN)

## POLE MOUNTED SINGLE-PHASE TRANSFORMER



-Low loss, energy-saving, maximum voltage of 36kV, maximum capacity of 167KVA

-Actual measurements are superior to ANSI and IEE standards, with CSA UL certification.

-Efficient and energy-saving roller iron core structure design, using hanging rod installation.

-Mainly used for suburban power distribution networks, agricultural production, and civil building power supply and distribution systems

-The product has been sold to the Philippines, Australia, the United States, Canada, Japan, South America, etc -Executive standards: IEEE C57, ANSI C57, IEC60076













## PAD-MOUNTED TRANSFORMER





-The ZGS series pad mounted transformer is a combination transformer of related auxiliary equipment such as transformers, switchgear, fuses, tap changers, low-voltage distribution devices, etc. It is designed to withstand various types of environments. ISO CE, CSA, UL certification.

-Rated AC frequency 50Hz/60Hz, maximum working voltage 38.5KV

-This device is widely used in industrial parks, urban residential areas, commercial centers, high-rise buildings, and other places

-Our products are mainly sold to regions such as the United States, East Asia, and Southeast Asia, providing OEM/ODM services

-Executive standards: ANSI C57, DOE, CSA, IEEE, IEC60067





## **OIL IMMERSED DISTRIBUTION TRANSFORMER**



oil immersed transformer

-The actual measurement of the product is superior to GB and IEC standards, CB CE ISO certification, etc -High reliability operation verification from over 50 countries and regions worldwide has been sold to Iraq, Kuwait, United Arab Emirates, Libya, Zimbabwe, South Africa, Uganda, Rwanda, Ethiopia, Ghana, Uzbekistan, Kazakhstan, Pakistan, Vietnam, Nepal, Bangladesh, Indonesia and other countries, with a total of 22598 sets exported -Mainly used in urban distribution networks below 35KV, industrial and mining enterprises, and civil building power supply and distribution systems -Executive standards: IEC 60076 series, IEC 6013, I E C 6 0 2 1 4 - 1 , I E C 6 0 2 9 6 ; G B 1 0 9 4 - 1 9 9 6 , GB/T6451-2008, GB/T5977-2007, etc



33 / 35kV series oil immersed transformer

H61 Distribution Transformer

## **EPOXY RESIN CASTING DISTRIBUTION TRANSFORMER**

-The actual measurement of the product is superior to GB and IEC standards, CB CE ISO certification, etc

-Safer, better fire resistance, F1 level

-High lightning impulse resistance level (95kV for 11kV products)

-Equipped with a comprehensive temperature protection and control system, it can operate at 120% of the rated load under forced air cooling conditions

-High reliability operation verification in over 50 countries and regions worldwide

-Sold to: Iraq, Kuwait, United Arab Emirates, Libya, Zimbabwe, South Africa, Uganda, Rwanda, Ethiopia, Ghana, Uzbekistan, Kazakhstan, Pakistan, Vietnam, Nepal, Bangladesh, Indonesia and other countries, with a total of 13592 sets exported

-Mainly used in urban distribution networks below 35KV, industrial and mining enterprises, and civil building power supply and distribution systems

-Executive standards: IEC 60076 series, GB1094 series, GB/T6451-2008

-The shell materials include aluminum alloy, cold-rolled steel plate, stainless steel, etc. for users to choose from (protection level IP20, IP23, etc.)





#### MINING TRANSFORMER



KBSGZY Dry Type Mining Explosion Isolation Moveable Transformer Substation



KSG Mining Dry-type Transformer



Mining Oil-immersed Transformer

#### **KBSG Mining Dry Transformer:**

>Mining dry-type transformers mainly consist of three parts: dry-type transformers for mining explosion-proof mobile substations, high-voltage vacuum switches for mining explosion-proof mobile substations, and low-voltage protection boxes for mining flameproof mobile substations. High and low voltage switches have functions such as leakage, overload, short circuit, phase failure, voltage loss, and PLC control.

>The mining dry-type transformer consists of a box shell, box cover, iron core components, insulation components, high-voltage leads, low-voltage leads, and a rail car.

>Mainly used for power supply and distribution in various types of mines such as coal mines, iron mines, aluminum plants, copper mines, gold mines, silver mines, zinc mines, titanium mines, manganese and magnesium mines, as well as explosive gas locations such as oil fields, gas fields, and oil stations. Rated capacity: 50KVA-2000KVA. It has the advantages of strong moisture resistance and good flame retardant performance.

#### KS oil immersed/KSG dry type mining transformer:

>Suitable for power transformers with a capacity of up to 1250KVA and a voltage of up to 10KV. This type of mining transformer has no explosion-proof requirements. It is mainly used as a power source for mine lighting or as an electric drive for mine distribution

#### SPECIAL TRANSFORMER

A rectifier transformer is a transformer that converts the power supply of the power grid into the power required for rectifier equipment. Widely used in the chemical industry (the most commonly used industry) to electrolyze non-ferrous metal compounds and produce metals such as aluminum, magnesium, and copper; Electrolytic salt production of chlor alkali; Electrolyze water to produce hydrogen and oxygen. DC power supply for traction, used in the DC power grid of mining or urban electric locomotives

DC power supply for transmission is mainly used to supply power to DC motors in electric power transmission, such as the armature and excitation of rolling mills, DC power supply for electroplating or electrical processing, DC power supply for excitation, and DC power supply for charging and electrostatic dust removal



rectifier transformer

Executive standard: IEC 60076 series



Electric furnace transformer

Electric furnace transformer is a professional transformer planned based on various working principles, load characteristics, and operating characteristics of electric furnaces Including: communication furnace transformers such as electric arc furnace transformers for steelmaking, ladle refining furnace transformers, slag furnace transformers, ore furnace transformers, power frequency furnace transformers, and DC furnace transformers such as medium frequency induction furnace transformers, silicon carbide and graphitization furnace transformers.

Industrial electric furnace transformers are mainly divided into three categories: resistance furnace transformers, arc furnace transformers, and induction furnace transformers. Executive standard: IEC 60076 series

#### 66-232KV POWER TRANSFORMER





The company has voltage levels of 66kV, 110kV, 132kV, 220kV, and 232kV, a capacity of 6300kva-240MVA, and an annual production capacity of 100000 MVA power transformers. The product has been exported to more than 30 countries and regions including Southeast Asia, Africa, South America, and Central Asia. In recent years, it has won multiple bids from national power grids such as Uzbekistan, Kazakhstan, Mongolia, Iraq, Namibia, and Mozambique. Widely used in industries such as power grid transmission, thermal power, hydropower, photovoltaic power generation, wind power generation, steel mills, petrochemicals, rail transit, etc., it enjoys a good reputation among users both domestically and internationally.

The company fully implements the integrated management system of ISO9001 quality management, ISO14000 environmental management, and OHSAS18001 occupational health and safety management. It has passed the AAA level measurement management system, AAA level standardized good behavior confirmation, PCCC electric energy product certification, and energy-saving product certification. 232kV and below power transformers have passed the full set type test of the Chinese national standard.

#### **SWITCHGEAR**

Low voltage complete equipment is suitable for power supply systems with AC 50/60Hz, rated working voltage 660V, rated current 6300A and below. Widely used in low-voltage distribution systems in power plants, substations, industrial and mining enterprises, high-rise buildings, and other fields, as a power receiving, feeding, reactive power compensation, power metering, lighting, and motor control center. Based on the design principles of safety, economy, rationality, and reliability, this product has the characteristics of high breaking capacity, good dynamic and thermal stability, flexible electrical schemes, convenient combination, strong series connection, strong practicality, and novel structure.



This product complies with relevant standards such as IEC61439 and GB/T7251 for low-voltage switchgear and control equipment.

GCK /MNS/GCS/GGD Switchgear



KYN28/61 Switchgear

The KYN28/61 armored mobile AC metal enclosed switchgear (hereinafter referred to as the equipment) is suitable for 3.6-36kV three-phase AC 50/60Hz single busbar and single busbar segmented power systems, and can meet the requirements of an altitude of 3500 meters. Mainly used for power transmission in power plants and small and medium-sized generators, single station distribution in industrial and mining enterprises and institutions, and power collection in secondary substations of the power system. Used for starting distribution power supplies and large high-voltage motors, controlling, protecting, and detecting circuits.

This product meets the requirements of relevant standards such as IEC60298, IEC62271-200, IEC62271-1, GB3906, GB/T 11022, DL/T404, etc. This device has strong applicability and can be configured with circuit breakers such as VS1-12, VD4-12, VEP-12, HVX12, VBG-12, 3AE-EP, VYG-12, EVB-12, and grounding switches such as JN15-12 and EK6 to meet the needs of different users.

## **POWER DISTRIBUTION BOX**



**Electrical Cabinets and Enclosures** 

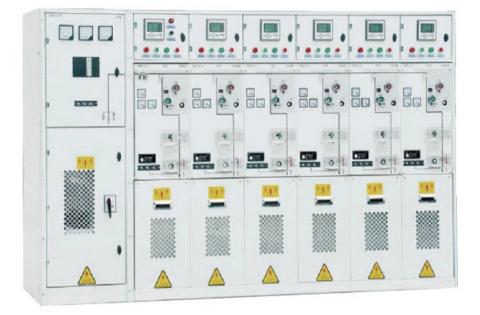
Distribution board is used for outdoor power or lighting distribution in three-phase AC 660V or less distribution system. Cabinet structure: single/double layer, single/double door. Various cabinets and accessories, rated AC frequency 50Z /60HZ, maximum working voltage to 660V, rated current 800A, mainly used in power generation enterprises, industrial and mining enterprises, housing construction and other fields, electrical performance fully comply with the relevant provisions of GB7251 and IEC60439.





**Outdoor Electrical Cabinet and Enclosures** 

## **RING MAIN UNIT (SF6)**



Indoor AC high-voltage sulfur hexafluoride ring network switchgear (hereinafter referred to as "Ring Main Unit") is a new generation of compact and expandable metal enclosed switchgear with sulfur hexafluoride load switch as the main switch and air insulation for the whole cabinet, which is suitable for power distribution automation.

The ring network cabinet has the characteristics of simple structure, flexible operation and reliable interlocking. It can provide satisfactory technical solutions for various applications and different user requirements. The adoption of sensing technology and the latest protective relay, coupled with advanced technical performance and lightweight and flexible assembly scheme, can fully meet the changing requirements of the market.

#### **COMPACT SUBSTATION SERIES**



box-type substation



wind transformer

>The intelligent Compact substation is an outdoor device integrating the primary and secondary of the distribution system, which centrally installs the medium voltage cabinet, transformer, low-voltage cabinet and other equipment in a sealed, moisture-proof and rust proof box.

>It is applicable to the power system with rated voltage of 7.2  $\sim$  40.5kV / 0.4  $\sim$  0.69kv and three-phase AC 50 / 60Hz. It is mainly used in outdoor electric fields such as high-rise buildings, residential quarters, parks, factories and mines, hotels, oil fields, airports, wharfs, railways and temporary facilities for receiving, converting and distributing energy, and controlling, protecting and monitoring the circuit.

>The covering material are: colored KC Series Compact Substation plate, cold rolled plate, stainless steel, glass-fabric special cement, aluminum alloy and copper aluminum zinc plate. The insulating medium of medium voltage s witch device: SF6, atmosphere and Vacuum circuit breaker.



photovoltaic transformer



3150KVA photovoltaic Compact transformer

## **POWER CABLE**

## LOW VOLTAGE CABLE



#### Scope of application

This product is applicable to AC 50Hz transmission and distribution lines with rated voltage of 0.6/1kv.CE、UL. Executive standard

GB/T12706-2008 extruded insulated power cables and accessories with rated voltages from 1kV to 35kV Flame retardant and fire-resistant cables shall also meet GB/T19666-2005 general rules for flame retardant and fire-resistant wires and cables

# **POWER CABLE**

## MEDIUM VOLTAGE CABLE







The 6-35kV extruded insulated power cables produced by Hengfengyou Group are commonly used in urban underground power grids, outgoing lines of power stations, internal power supply of industrial and mining enterprises, and underwater transmission lines across rivers and seas. The laying method can be buried, in the air, bridge, etc.

#### Product executive standard

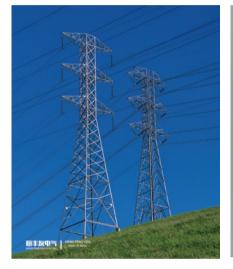
1. GB/T12706.2-2008 extruded insulated power cables and accessories with rated voltage from 1KV (um=1.2kv) to 35kV (um=40.5kv) - Part 2: cables with rated voltage from 6kV (um=7.2kv) to 30KV (um=36kv)

2. GB/T12706.3-2008 extruded insulated power cables and accessories with rated voltage from 1KV (um=1.2kv) to 35kV (um=40.5kv) - Part 3: cables with rated voltage of 35kV (um=40.5kv)

3. GB/T 19666-2005 general rules for flame retardant and fire resistant cables (only applicable to flame retardant and fire resistant cables)

# **TRANSMISSION TOWER**

#### **TRANSMISSION LINE TOWER**



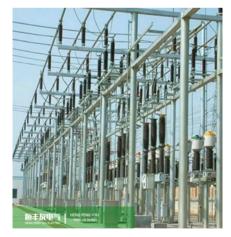




Lattice Steel Tower

Steel Tubular Tower

Steel Pole Tower



Substation architecture

HENGFENGYOU Transmission tower company is subordinate to HENG-FENYOU GROUP. Main products: power structure, power angle steel tower, power steel pole, lightning tower, communication tower, street lamp pole, etc gantry, etc. it is an export-oriented enterprise focusing on steel tower design and production.

According to their shape, power towers can be generally divided into five types: wine cup type, cat head type, upper font type, dry font type and barrel type. According to the purpose, they are divided into: tensile tower, straight tower, corner tower, transposition tower (replacement Wire phase position tower), terminal tower and span tower. Their structural characteristics are that all tower types are

space truss structures. The rods are mainly composed of single equilateral angle steel or combined angle steel. The materials generally use Q235 (A3F) and There are two types of Q345 (16Mn).

## **NEW ENERGY**

#### **PHOTOVOLTAIC POWER GENERATION**



During the day, the solar panel generates photovoltaic current under the sunlight, which charges the battery under the control of the controller and provides power for the electrical equipment. If the sunlight resource is poor, the battery will discharge the stored electricity under the control of the controller to provide power for the electrical equipment. When the sunlight conditions meet the charging requirements, the controller controls the solar cell module to start a new round of charging.

The solar power supply system is mainly composed of solar panels, controllers, batteries and related loads. The product configurations will vary depending on the specific conditions of use

#### WIND POWER GENERATION

>The starting wind speed is low, the volume is small, the appearance is beautiful, and the running vibration is low.

>Use humanized flange installation design to facilitate installation and maintenance.

>The aluminum alloy fuselage and wind turbine blades are made of nylon fiber, with optimized aerodynamic shape design and structural design. The starting wind speed is low, and the wind energy utilization system is high, increasing the annual power generation.



>The permanent magnet rotor alternator is used for power generation, with a special rotor design, which effectively reduces the resistance torque of the generator, which is only 1/3 of that of the ordinary motor. At the same time, the wind turbine and the generator have better matching characteristics, and the unit operation reliability.
>High power tracking intelligent microprocessor control is adopted to effectively regulate current and voltage

NEW ENERGY SERIES | HENGFENGYOU | 20

# **NEW ENERGY SERIES**

## **ENERGY STORAGE**



Compared with the traditional fixed energy storage system, the mobile energy storage system, with its outstanding flexibility and convenience, is used in many fields such as power system transmission and distribution, and is suitable for power dynamic capacity increase, peak load cutting and valley filling, power grid transformation (load is not cut off), temporary power use and standby power supply lights. Standardized container size is adopted, ocean and road transportation are allowed, and hoisting can be carried out by overhead crane, with strong mobility and no geographical restrictions. In addition, the container energy storage system can be factory produced and directly assembled and debugged in the workshop, which greatly saves the construction and operation and maintenance costs of the project and realizes accident isolation.

**21** | HENGFENGYOU | CERTIFICATE

# CERTIFICATE

#### **QUALIFICATION CERTIFICATION**



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#### **OUR PARTNER**

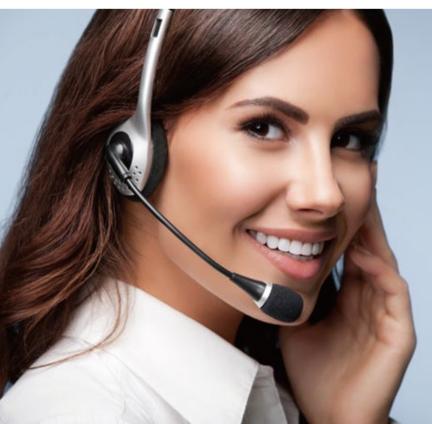


# **PRE-SALE SERVICE:**

- 1.ISO certified excellent Manufacturer
- 2. Third-party authoritative certifications: SGS、BV、CE、CB、CNAS、CQC、CCC、CSA、SABS etc
- 3. Flexible payment: T/T, LC, O/A
- 4. Sufficient inventory, fast delivery time and long validity of the price
- 5. The whole process of picture tracking can be realized in production and transportation
- 6. Experienced professional sales team and a strong technical team
- 7. Sincerely invite customers to visit the company for guidance

## **AFTER-SALES SERVICE:**

- 1. If there is any quality problem after receiving the goods, you can return the goods free of charge or ship new products
- 2. We provide our customers with a 1-year product warranty
- 3. Provide 24-hour, 365-day technical guidance worldwide
- 4. The VIP customers enjoy our promotional activity
- trained by management consultants, is able to provide professional solutions for customers.
- 5. Our customer service team ensures on time delivery.



## Call Us For Detais

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## 智能电气全球服务提供商,让生活更美好

SMART ELECTRIC GLOBAL SERVICE PROVIDER, MAKE LIFE BETTER

#### HENGFENGYOU ELECTRIC GROUP

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