

Purpose

The GGD type AC low-voltage distribution cabinet is suitable for AC 50Hz, rated working voltage of 380V, and rated working current up to 3150A distribution systems for power plants, substations, factories, mines, and other power users. It is used for power conversion, distribution, and control of electrical energy for power, lighting, and distribution equipment

The GGD type AC low-voltage distribution cabinet is a new type of low-voltage distribution cabinet designed based on the requirements of the competent authorities of the Ministry of Energy, power users, and design departments, in accordance with the principles of safety, economy, rationality, and reliability. The product has the characteristics of high breaking capacity, good dynamic and thermal stability, flexible electrical scheme, convenient combination, series, strong practicality, novel structure, and high protection level. It can be used as a replacement product for low-voltage switchgear

The GGD type AC low-voltage distribution cabinet complies with standards such as IEC 439 "Low voltage switchgear and control equipment" and GB7251 "Low voltage switchgear"

产品型号说明

G G D □ - □ □

① ② ③ ④ ⑤ ⑥

①	电力用柜
②	电器元件固定安装、固定接线
③	交流低压配电柜
④	设计序号: 1-- 分断能力为 15kA 2-- 分断能力为 30kA 3-- 分断能力为 50kA
⑤	主电路方案代号
⑥	辅助电路方案代号

Usage conditions

Environmental temperature: not exceeding 50% at a maximum temperature of +40 °C, and allowing for higher relative humidity at lower temperatures. (For example, 90% at +20 °C) should take into account the possibility of occasional condensation due to temperature changes

During equipment installation, the inclination with respect to the vertical plane should not exceed 5%

The equipment should be installed in a place without severe vibration and impact, as well as in a place where electrical components are not susceptible to corrosion

Note: If ordering this product exceeds the above conditions, please consult with our company

电气性能

型号	额定电压 (V)	额定电流 (A)		额定短路开断电流 (KA)	额定短时耐受电流 (1s)(kA)	额定峰值耐受电流 (kA)
GGD1	380	A	1000	15	15	30
		B	600(630)			
		C	400			
GGD2	380	A	1500(1600)	30	30	63
		B	1000			
		C	600			
GGD3	380	A	3150	50	50	105
		B	2500			
		C	2000			

Electrical Performance

1. Main circuit scheme

The main circuit design of GGD cabinet includes 129 schemes and a total of 298 specifications (excluding schemes and specifications derived from functional changes of auxiliary circuits and changes in control voltage)

Among them: 49 schemes and 123 specifications of GGD1 type

GGD2 type 53 schemes and 107 specifications

GGD3 type 27 schemes and 68 specifications

The main circuit scheme was selected based on the opinions of the design and usage departments, and additional schemes were added to meet the needs of the power plant. Rated current up to 3150A, suitable for distribution transformers with 2000kVA and below. In addition, GGJ1 and GGJ2 capacitor compensation cabinets were designed to meet the needs of reactive power compensation, with 4 main circuit schemes and a total of 12 specifications

2. Auxiliary circuit scheme

The design of auxiliary circuit is divided into two parts: power supply scheme and power plant scheme. There is enough space in GGD cabinet to install secondary components. At the same time, a special LMZ3D current transformer has been developed to meet the needs of power plants and special users when attaching relay protection

3. Main busbar

Considering the price ratio and the feasibility of replacing copper with aluminum, single aluminum busbar can be used when the rated current is 1500A or below, and double copper busbar can be used when the rated current is greater than 1500A. The manufacturer shall manufacture a prototype according to this regulation and pass the type test. Of course, the manufacturer can also replace the aluminum busbar with copper busbar of the same current carrying capacity according to the user's requirements. The overlapping surfaces of the busbar are treated with tin coating technology

4. Electrical component selection

GGD cabinets mainly use advanced electrical components that can be mass-produced domestically. At the same time, based on the principles of economy and rationality, some available old products such as DZ10D and DZ20 are retained while fully considering feasibility, and obsolete products are not selected

The HD13BX and HS13BX rotary operated knife switches are specialized components designed to meet the unique structural needs of GGD cabinets. They change the operating mode of the mechanism and retain the advantages of old products, making them a practical new type of electrical component

When the design department selects new electrical components with better performance and more advanced technology according to user needs, the GGD cabinet has good installation flexibility and generally does not cause manufacturing and installation difficulties due to updating electrical components

To further improve the dynamic stability of the main circuit, a ZMJ type combined busbar clamp and insulation support for GGD cabinet were designed.

The busbar clamp is made of high-strength and high flame retardant PPO alloy material thermoplastic molding, with high insulation strength, good self-extinguishing performance, and unique structure. It can be easily combined into a single busbar clamp or a double busbar clamp by adjusting the block type spacer. The insulation support is a sleeve type molded structure with low cost and high strength, which solves the problem of insufficient creepage distance in old products

Installation and Use

After the product arrives at the receiving location, the packaging should first be checked for completeness and damage. If any problems are found, relevant departments should be notified in a timely manner to investigate the cause. For products that are not installed immediately, the usage guidelines should be followed

Place the item in an appropriate location according to regulations. **Product Installation**

After the product arrives at the receiving location, the packaging should first be checked for completeness and damage. If any problems are found, relevant departments should be notified in a timely manner to investigate the cause. For products that are not installed immediately, they should be placed in appropriate locations according to the specified usage conditions

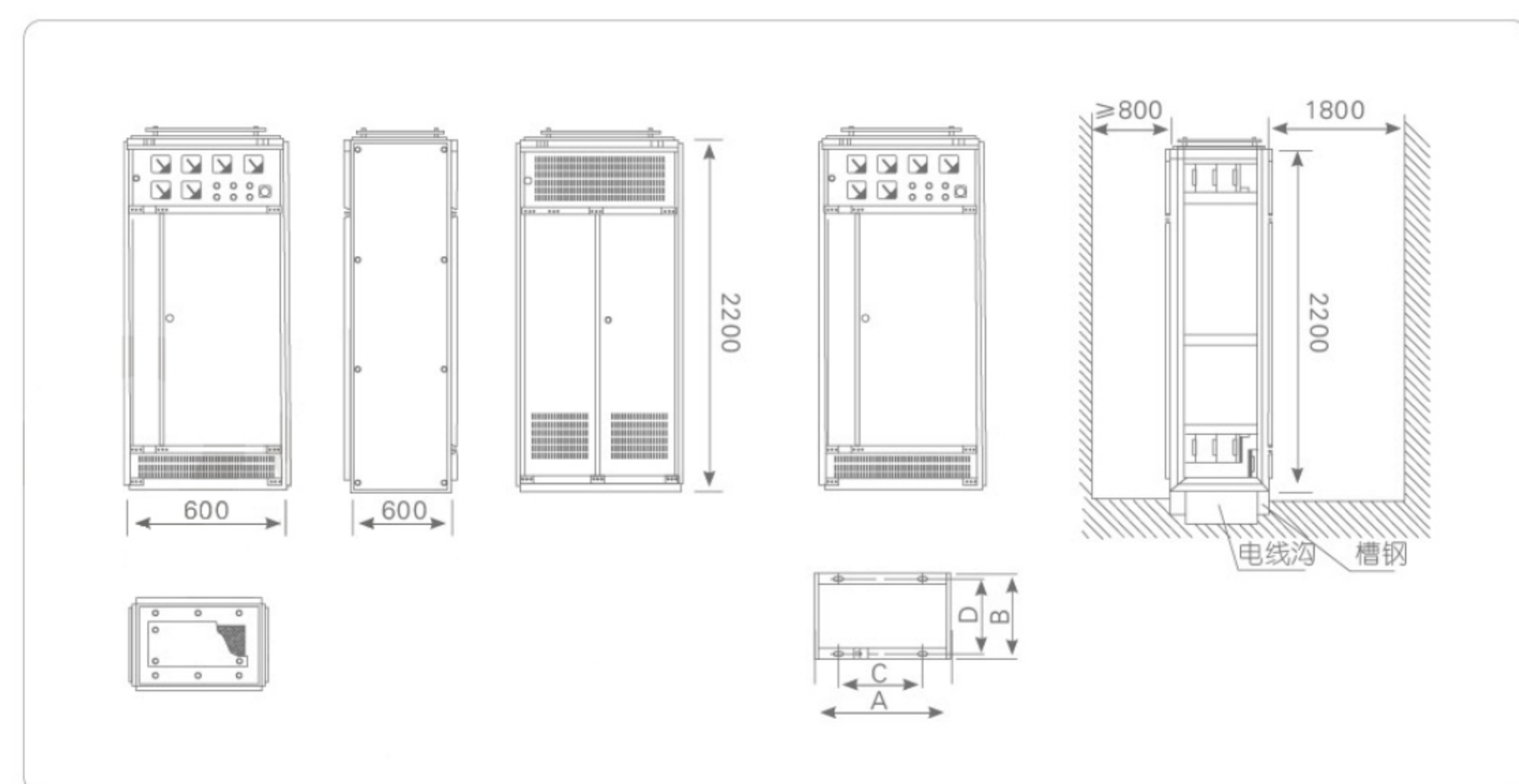
Product installation

The installation of the product should be carried out according to the installation diagram, and the foundation channel steel and bolts should be provided by the user themselves. When installing the main busbar with tin plating, the overlapping surface should be repaired flat, cleaned, coated with neutral Vaseline or other measures, and then firmly bolted

After installation, the product needs to undergo the following inspections and tests before being put into operation

1. Check whether the cabinet's topcoat has peeled off, whether the cabinet is dry and clean
2. Whether the operating mechanism of electrical components is flexible, and there should be no jamming or excessive operating force
3. Whether the on/off of the main and auxiliary contacts of the main electrical appliances is reliable and accurate
4. Whether the instrument indication and the transformation ratio and polarity of the transformer are correct
5. Whether the busbar connection is good, and whether the insulation support, installation parts, and accessories are installed firmly and reliably
6. Whether the auxiliary contacts meet the requirements, whether the specifications of the fuse core of the fuse are correct, whether the setting value of the relay meets the design requirements, and whether the action is reliable and accurate
7. Whether the contacts of the circuit meet the requirements of the electrical schematic
8. Whether the protection circuit system meets the requirements
9. Use a 500 volt megohmmeter to measure the insulation resistance value, which should not be less than 1M Ω

外形及安装尺寸



产品代号	A	B	C	D
GGD06	600	600	450	556
GGD06A	600	800	450	756
GGD08	800	600	650	556
GGD08A	800	800	650	756
GGD10A	1000	600	850	556
GGD10A	1000	800	850	756
GGD12	1200	800	1050	756

Product completeness

Our company provides the following documents and attachments when supplying:

- Packing list
- Product qualification certificate
- User manual
- Factory test report
- Regarding electrical drawings
- Cabinet door key, operating handle, and spare parts specified in the contract

Precautions for use

This product is not installed against the wall, single-sided (front), double-sided door maintenance low-voltage distribution cabinet. The maintenance channel and cabinet door of the product must be entered or opened by qualified professionals for operation, inspection, and maintenance

After multiple cycles of closing and opening, air circuit breakers may cause local burns and carbonization of the main contacts, resulting in increased contact resistance. Regular maintenance and repair of air circuit breakers should be carried out according to their instructions