



# 景观型地理式变电站

Buried Landscape Substation

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# 目录

## CONTENTS

产品概述 Product Overview	2
产品特点 Product Characteristic	
型号说明 Model Coding	3
变电站结构方案图 The structure diagram of substation	
使用条件 Service Condition	5
变压器本体技术参数及外形尺寸 Technical Parameters & Dimensions	
主回路方案 Main circuit proposal	6
基础外形图 Outline of Foundation	7
产品应用领域及销售业绩 Applications & Sales Reference	8
服务承诺 Service Guarantee	9
订货需知 Order Instructions	10

# 景观型埋式变电站 Buried Landscape Substation



## 产品概述

随着城乡现代化建设进程的加快，城市规划、高速公路、公共设施的建设对电力设备的要求越来越高，一种能满足上述领域的埋式配电变压器应运而生，也将成为我们国家城市配网设备改造的趋势，这一点在许多欧、美发达国家已大量使用而得到明确体现。对于目前国内情况而言，最适合采用埋式变电站（一种以埋式变压器为主体的成套设备）的场合有：人口密集的中心城区、街道、高速公路、桥梁、隧道、停车场、机场、港口、旅游景点、别墅、花园小区等，由于安装在地下室或地坑内，安装后不占用地表面积，不影响观瞻，保证供电可靠。

公司自主开发研制景观型埋式变电站内主体变压器——ZGS11-Z·D系列埋式变压器于2003年9月通过沈阳国家变压器质量监督检验中心的特殊试验、型式试验、IP68防护等级试验。ZGSZ11-Z·D系列景观型埋式变电站通过了电力工业电气设备质量检验检测中心检测，其特殊试验、型式试验等各项指标全部符合国家有关标准，并已投放市场，批量生产。

## 产品特点

1. 适合城市环境（安装在地下室或地窖内），尤其适合人口密集的中心城市。
2. 适合街道、高速公路、桥梁、隧道、停车场、机场、港口、旅游景点等的照明和动力系统。
3. 高低压进出线采用防水全密封、全绝缘、全屏蔽的接线方式。
4. 变压器箱体外壳采用防腐型不锈钢制作、全密封制作。
5. 保护系统操作方便、安全可靠。
6. 埋式变压器的负荷开关采用操作棒时，与组合变压器一样的运行方式。
7. 变压器以低损耗与低温度设计，充分满足散热条件的特殊性。
8. 变压器地窖内安装防水进入保护及自动排水装置。

## Product Overview

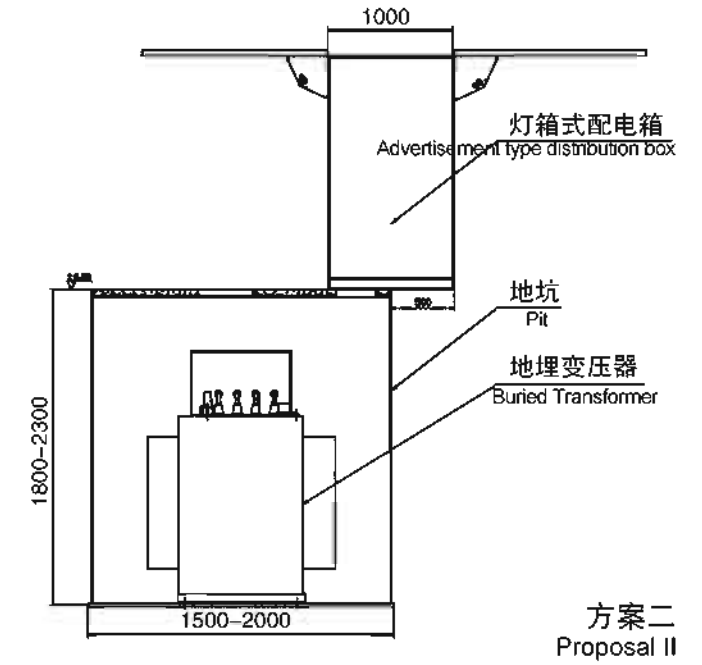
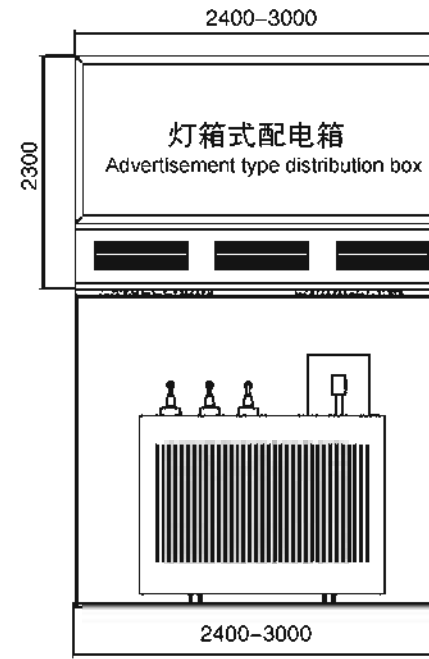
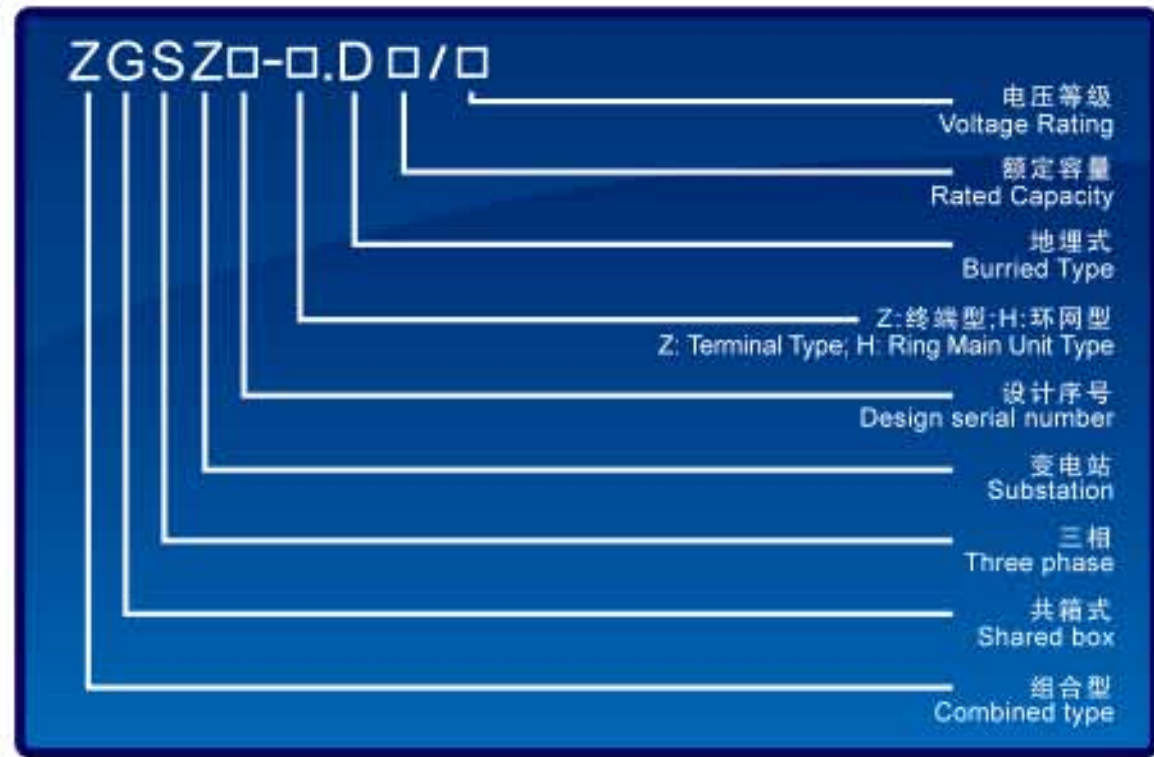
With the modernization development in urban and rural areas, construction of urban planning, highways, public facilities for electrical equipment increasingly demanded. Buried distribution transformer - one can satisfy the above-mentioned areas applications becomes the trend of reformation. For the current domestic situation, the most suitable places for buried substation are: the center of densely populated urban areas, streets, highways, bridges, tunnels, parking, airports, sea ports, tourist attractions, villas, garden district, etc. As a result of the installation in the basement or pit, after the installation of off-surface area, there is no affect of the visual impact, and ensure reliable power supply.

Our self-developed buried landscape substation with the ZGS11-Z·D series buried transformer passed special tests, type tests, IP68 protection grade test in September 2003 in CTQC, Shenyang. ZGSZ11-Z·D series of buried landscape substation are also passed the test carried out in Wuhan Electric Power Research Institute, in July 2008.

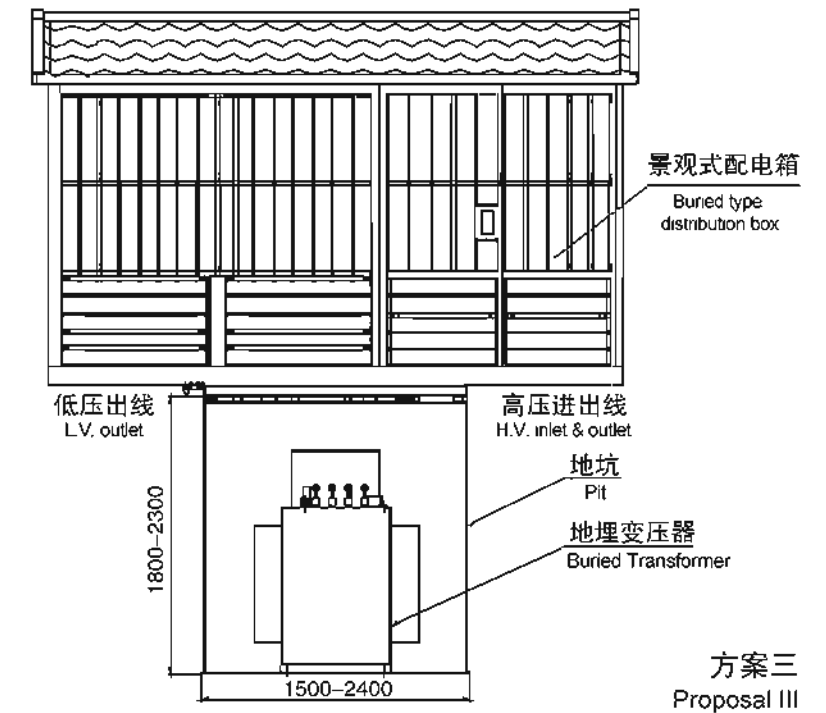
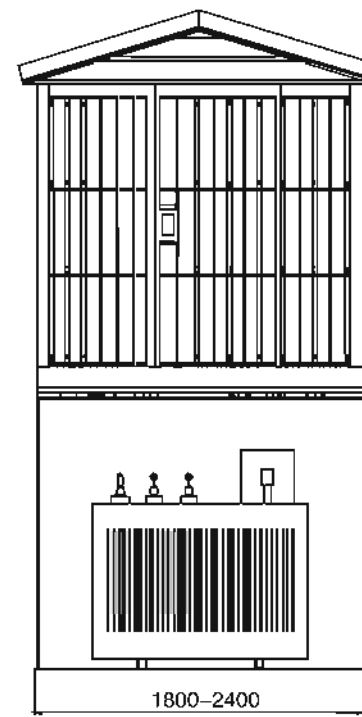
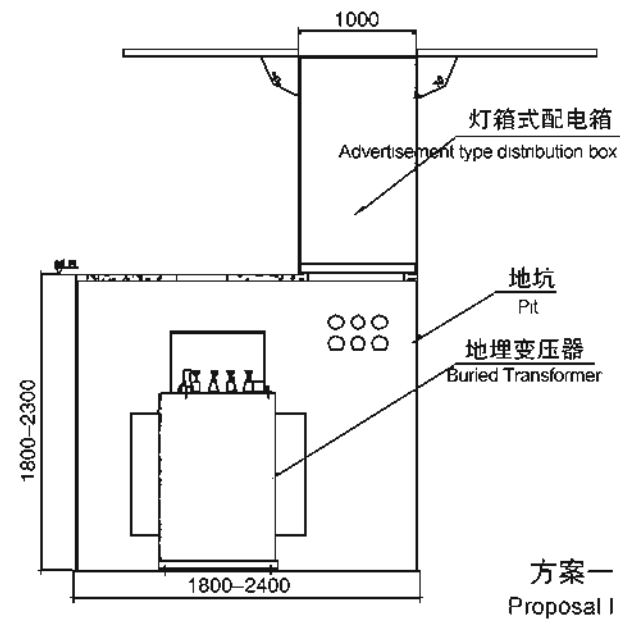
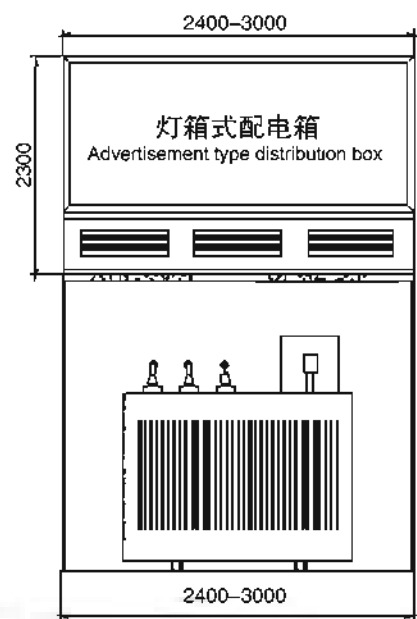
## Product Characteristic

1. Suitable for urban environment (Installed in the basement or cellar), especially suitable for densely populated urban centers.
2. Suitable for streets, highways, bridges, tunnels, car parking, airports, sea ports, tourist attractions, such as the lighting and power systems.
3. Connection for HV & LV outgoing line applies hermetically sealed, full insulation, fully shielded method.
4. Use of anti-corrosion stainless steel for tank shell.
5. Protection system is easy to operate and give full consideration to safety.
6. Use operation rod to operate buried transformers. Operation method is same with combined substation.
7. Giving full consideration to the specificity of cooling conditions, the transformer can offer low-loss and low temperature.
8. Waterproof protection and automatic drainage facilities shall be installed into the cellar.

型号说明 Model Coding



变电站结构方案图 The structure diagram of substation



## 使用条件

1.海拔高度: ≤1000m。

2.环境温度:

- a) 最高气温: +45℃;
- b) 最低气温: -25℃;
- c) 最高月平均温度: +35℃;
- d) 最高年平均温度: +20℃。

3.安装环境

- a) 无爆炸性、腐蚀性液体、气体和粉尘, 安装场所无剧烈振动冲击, 主体变压器允许在一定时间(≤24小时)内浸水运行;
- b) 地震烈度8级。

## Service Condition

1.Altitude above sea level, ≤1000 m

2.Ambient temperature.

- a) Maximum temperature: +45 °C;
- b) Minimum temperature: -25 °C.
- c) Highest monthly average temperature: +35 °C;
- d) Highest annual average temperature: +20 °C

3.Installation Environment

- a) No explosive, corrosive liquids, gases and dust. No violent vibration & impact on installation spot. Main transformer is allowed to operate in water for less than 24 hours.
- b) Seismic intensity: 8

## 变压器本体技术参数及外形尺寸 Technical Parameters & Dimensions

ZGS11-Z·D型地埋式变压器

ZGS11-Z·D Type Buried Transformer

容量(kVA) Capacity	损耗(kW) Loss		空载电流(%) No load current	短路阻抗(%) Short-circuit impedance	外形尺寸(mm) Outer Dimension			重量(kg) Weight
	空载 No-load	负载 Load			长 L	宽 W	高 H	
30	0.10	0.60	1.9	4	1250	950	1360	900
50	0.13	0.91	1.8		1250	950	1360	950
80	0.18	1.31	1.6		1250	950	1360	990
100	0.20	1.58	1.5		1340	980	1450	1030
125	0.24	1.89	1.4		1340	980	1450	1060
160	0.27	2.31	1.3		1380	1020	1450	1150
200	0.33	2.73	1.2		1380	1020	1550	1340
250	0.40	3.20	1.1		1420	1320	1550	1590
315	0.48	3.83	1.0		1420	1100	1610	1730
400	0.57	4.52	1.0		1420	1100	1700	1990
500	0.68	5.41	0.9		1420	1160	1760	2370
630	0.81	6.20	0.8		4.5	1550	1160	1850
800	0.98	7.50	0.8	1760		1200	1890	2990
1000	1.15	10.3	0.7	1930		1250	1890	3320

ZGSH15-Z·D型非晶合金铁心地埋式变压器

ZGSH15-Z·D Type Amorphous Alloy Core Buried Transformer

容量(kVA) Capacity	损耗(kW) Loss		空载电流(%) No load current	短路阻抗(%) Short-circuit impedance	外形尺寸(mm) Outer Dimension			重量(kg) Weight	
	空载 No-load	负载 Load			长 L	宽 W	高 H		
50	0.043	0.87	1.3	4	1380	950	1210	1250	
80	0.06	1.25	1.1		1380	950	1230	1350	
100	0.075	1.50	1.0		1440	950	1270	1400	
125	0.085	1.80	0.9		1440	950	1310	1520	
160	0.10	2.20	0.7		1510	950	1350	1650	
200	0.12	2.60	0.7		1510	950	1350	1720	
250	0.14	3.05	0.7		1570	950	1380	1810	
315	0.17	3.65	0.5		1680	990	1460	1870	
400	0.20	4.30	0.5		1680	1050	1580	2400	
500	0.24	5.15	0.5		1700	1050	1700	2720	
630	0.32	6.20	0.3		4.5	1900	1100	1700	3210
800	0.38	7.50	0.3			1960	1150	1750	3520
1000	0.45	10.30	0.3	2000		1200	1800	3860	

## 主回路方案

## Main circuit proposal

1.高压回路

- a. 可根据用户需要将终端型负荷开关或环网型负荷开关安装在埋地式变压器油箱内;
- b. 如埋地式变压器油箱内不设负荷开关, 可在广告箱内安装终端型或环网型高压柜。

2.低压回路

低压回路可根据用户实际需要进行配置, 确定方案。

1.Main circuit proposal

a. can integrate terminal type load switch or ring main unit load switch into underground (buried) transformer tank upon request.

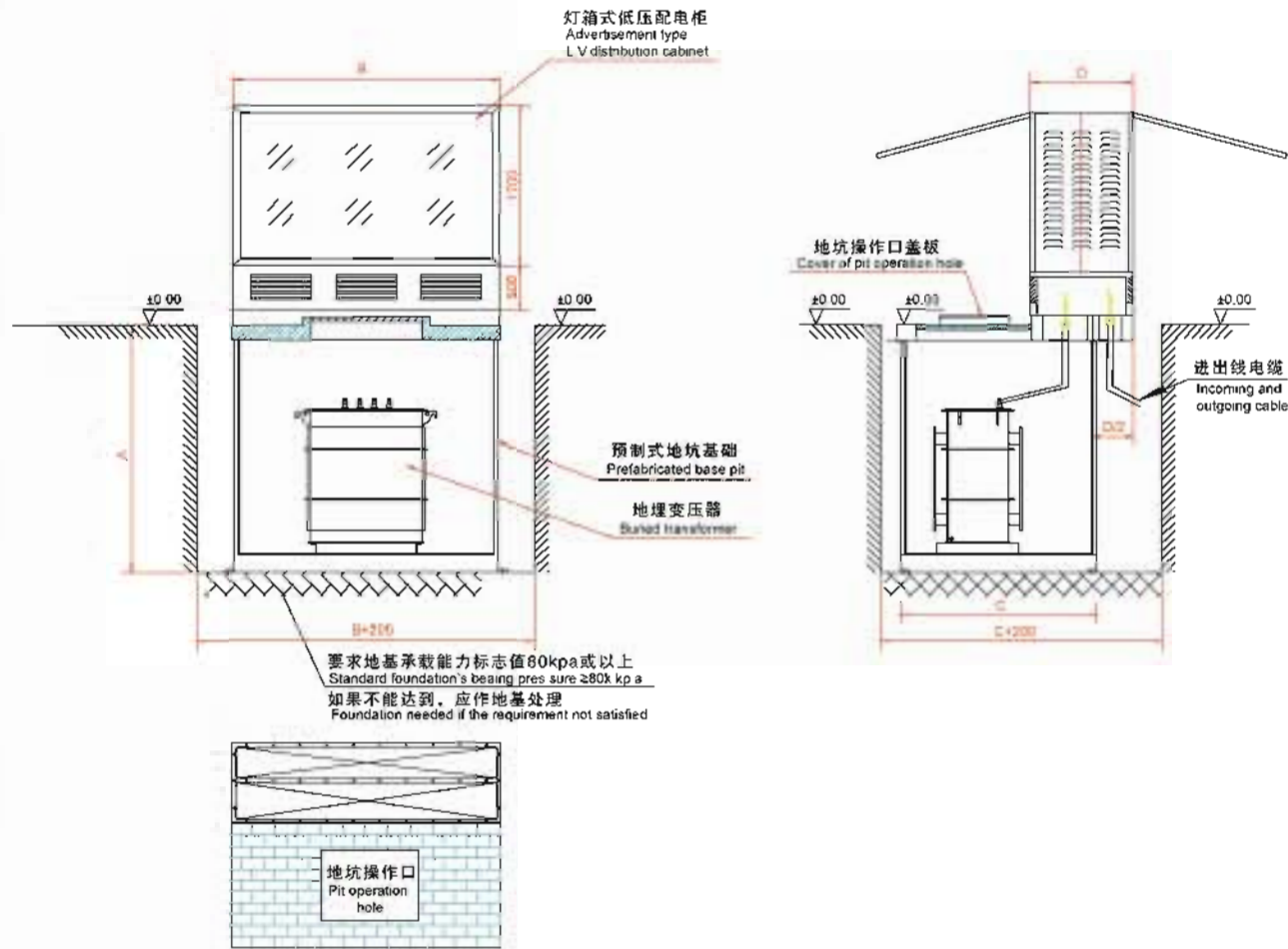
b. can install terminal or ring main unit type HV cabinet in advertisement type distribution box if no load switch required.

2.Low-voltage circuit

Low-voltage circuit can be configured according to the actual needs of the user

## 基础外形图

## Outline of Foundation



说明:

1. 在基础安装前, 先按图预挖土, 并且底部夯实;
2. 建议根据地坑基础的安装尺寸预埋钢板, 待地坑就位后与安装角焊牢固。安装完毕后按地平线回填土, 然后种植草皮;
3. 图中标字母尺寸需根据用户方案确定。

Description:

1. Excavation and soil compaction of bottom before installation;
2. Embedded steel according to pit size. After finish of pit, welded and fixed with installation angle. After installation, fill soil to horizon and plant grass
3. Dimensions of A, B, C in above figure are decided by client.

## 产品应用领域及销售业绩

该产品应用于人口密集的中心城区、街道、高速公路、桥梁、隧道、停车场、机场、港口、旅游景点, 别墅、花园小区等。



## Applications & Sales Reference

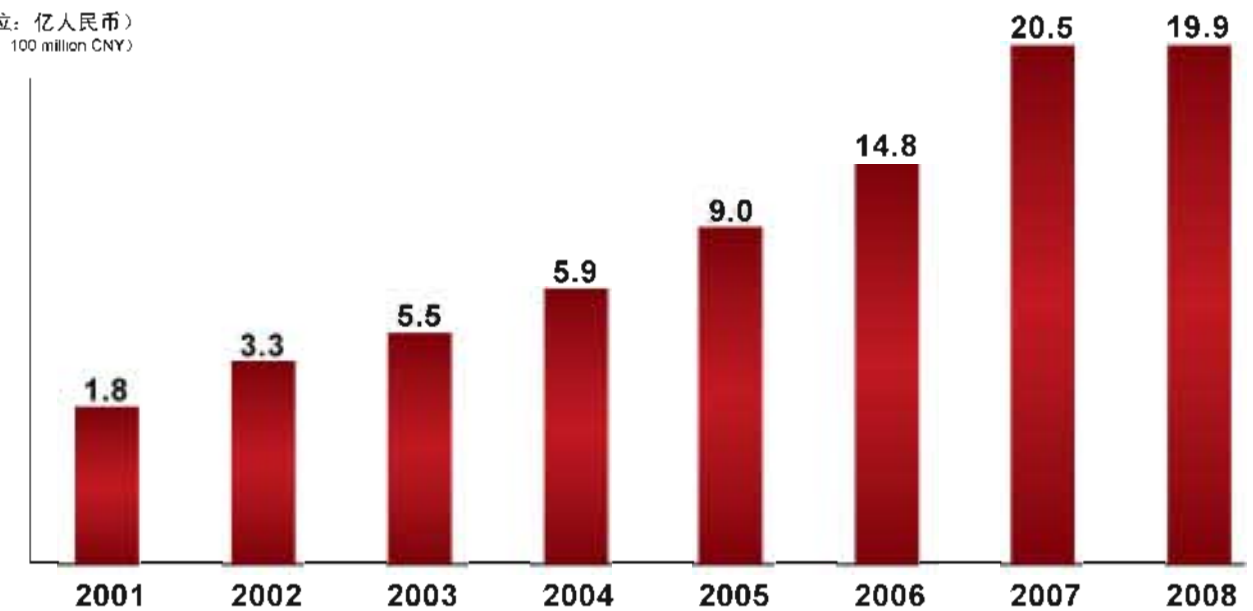
The center of densely populated urban areas, streets, highways, bridges, tunnels, car parking, airports, sea ports, tourist attractions, villas, garden district, etc



公司以实现“国际一流的电气设备供应商”为发展愿景, 通过提供有价值、高质量的产品和服务, 满足客户的需求, 努力使钱江电气成为国内领先、国际上知名的电力电气设备供应商。

QRE tries to be a world-class and leading domestic electrical equipment supplier by providing valuable, high-quality products and services to satisfy customer's demands

(单位: 亿人民币)  
(Unit: 100 million CNY)



## 服务承诺

- 1.及时向顾客提供按合同规定的全部技术资料 and 图纸。有义务在必要时邀请顾客参与供方的技术设计审查。
- 2.按顾客要求的时间到现场进行技术服务，指导顾客按供方的技术资料 and 图纸要求进行安装、调试与整套试运及试生产。
- 3.对于顾客选购的与合同设备有关的配套设备，我方主动提供满足设备接口要求的技术条件和资料。
- 4.严格执行供需双方就有关问题召开会议会议纪要或签订的协议。
- 5.按合同规定为顾客举办有关设备安装、调试、使用、维护技术的业务培训班。
- 6.加强售前、售中、售后服务，把“24小时服务”、“超前服务”、“全过程服务”、“终身服务”贯彻在产品制造、安装、调试、修理的全过程。
- 7.随时满足顾客对备品备件的要求。

## Service Guarantee

- 1.To provide all technical information and drawings as per contract promptly. QRE is obliged to invite client, if necessary, to attend technical design review.
- 2.To carry out spot technical service as per client's schedule, offer guideness for installation and commissioning according to technical information and drawings.
- 3.For relevant auxillary equipment procured by customers, QRE will provide related technical information to meet requirement of equipment interface.
- 4.To execute stipulations in MOU or agreement signed by seller and buyer strictly.
- 5.To train staff from client for equipment installation, commissioning, application, maintenance as stipulated in the contract.
- 6.To reinforce pre-sales, mid-sales, after-sales service, to carry out "24-hour service", "service in advance", "overall process service", "lifelong service" in our manufacturing, installation, commissioning and maintenance.
- 7.To meet spare parts' requirement by customers at any time.

■ 尊敬的客户朋友,如果您有服务需求,可以发送Email给我们,或者直接电话与我们联系:

用户服务中心:0571-82583638, 0571-82583088, 0571-82583928

传 真:0571-82583618, 0571-82582309

Dear clients, if there is any enquiry or requirement, please feel free to send email: intl@qre.com.cn or make phone call directly to service center:

+86-571-82583638, 82583088, 82583928

Fax:+86-571-82583618, 82582309

## 订货需知

订货方在订货时应给本厂提供与产品有关的下列数据:

- a、变电站型号;
- b、变压器型号、名称;
- c、变电站接线方案及选择电器元件的类型和参数;
- d、外壳颜色;
- e、如客户有其它要求可在订货时面洽。

## Order Instructions

Please provide the following information for order:

- a.Substation models;
- b.Transformer type, name;
- c.Substation connection and select type of electrical components and parameters;
- d.Enclosure color;
- e.Other requirements to be discussed.