

HUAQUAN

SHANDONG HUAQUAN POWER CO.,LTD

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HUAQUAN CORPORATE BROCHURE

SHANDONG HUAQUAN POWER CO.,LTD.

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Aerial view of Huaquan Group

ABOUT THE ENTERPRISE

About Huaquan

Development Path

Cultural Construction

Industrial Field

ABOUT HUAQUAN



Shandong Huaquan Power Co., Ltd. was founded in 2010, based in Weifang, facing the world. Adhering to the corporate mission of "Let green energy spread all over the world", HUAQUAN's industry involves high-end power generation equipment, new energy storage equipment, high and low voltage complete sets of equipment, power engineering and other fields, and has created three global brands of "华全", "HQ-POWER" and "Huaquan". At present, the company has developed into a leading brand in the field of global power equipment, leading global sales, cumulative sales of more than 1 million units.

Huaquan has built a leading digital full value chain M2C business model and created a comprehensive sales channel of "domestic + foreign" and "online + offline". Since 2010, the company has developed and produced high-end power generation equipment, new energy storage equipment, high and low voltage complete sets of equipment in Amazon, Alibaba, Aliexpress, Taobao, Tmall, Jingdong and other platforms popular sales, product sales for a long time in the forefront of the industry, the brand's global influence continues to increase.

The company attaches great importance to research and development and innovation, continues to deepen industry-university-research cooperation, and has mastered a number of core technologies in the field of power equipment. Up to now, the company has obtained more than 200 national intellectual property rights certificates, including 14 invention patents, 45 utility models, 30 design patents, 45 software copyrights, 11 layout design rights of integrated circuits, etc. At the same time, the company has won 3 national honors, 7 provincial honors and 5 municipal honors, which are national high-tech enterprises, national specialized and special new "little giant" enterprises, national intellectual property advantage enterprises, Shandong Gazelle enterprises, Shandong high-end equipment manufacturing leading enterprises, and Shandong manufacturing individual champion enterprises. Weifang City industry leading backbone enterprise, Weifang City "hidden champion" enterprise, Weifang City intelligent manufacturing benchmarking enterprise.

In the future, Huaquan will conform to the global trend of green and low-carbon transformation, firmly implement the national dual-carbon strategy, take market demand as the guidance, take scientific and technological innovation as the lead, provide hundreds of millions of users around the world with green energy products and services, and strive to build the world's consumers the most trusted brand of power equipment.

2010-2026

Development Path



Huaquan makes the foundation of dreams more solid

Huaquan Vision

To become the first-class enterprise of
China's national electric power brand

Huaquan Mission

Let green electricity protect
human safety

Huaquan Values

Customers first
Innovation Responsibility Integrity
To the Conscience and the Unity of
Knowledge and Action

Huaquan Spirit

Work hard and pursue
excellence

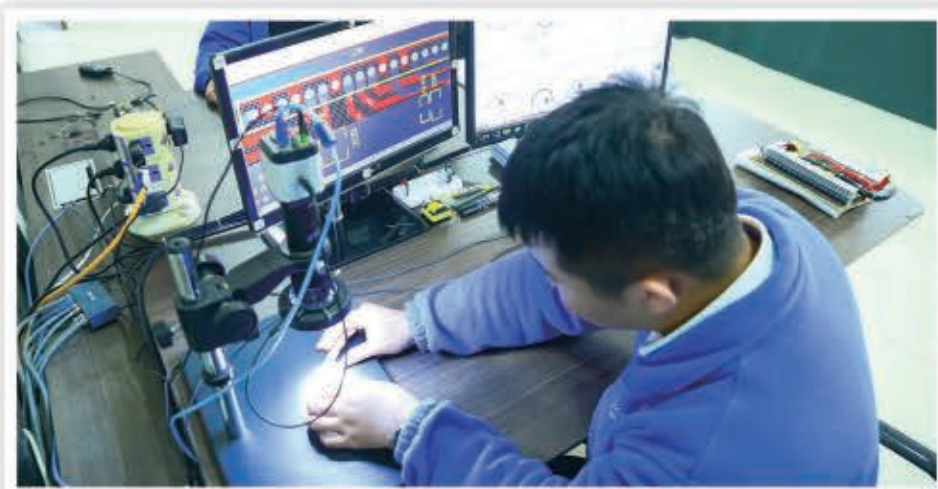
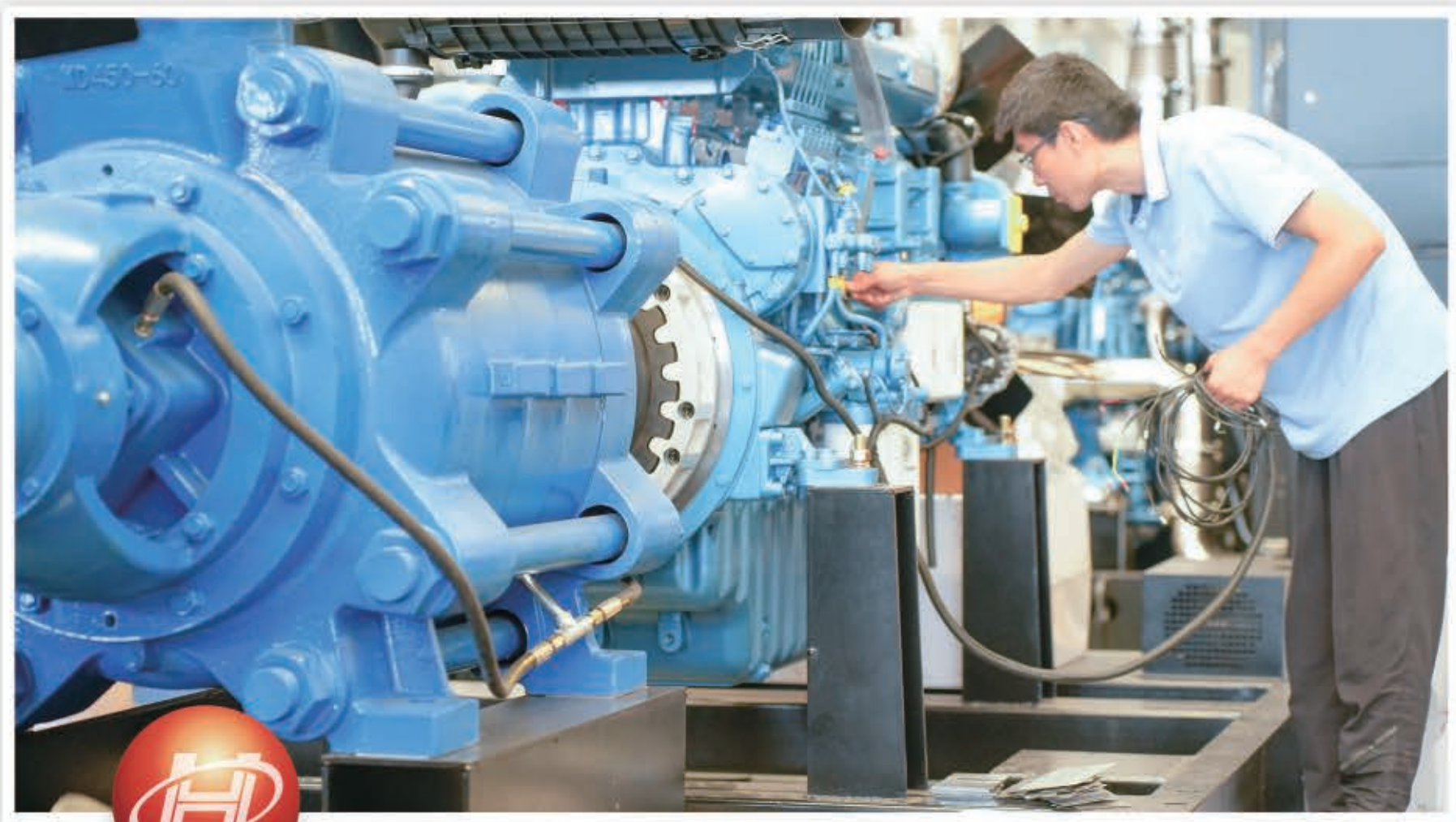




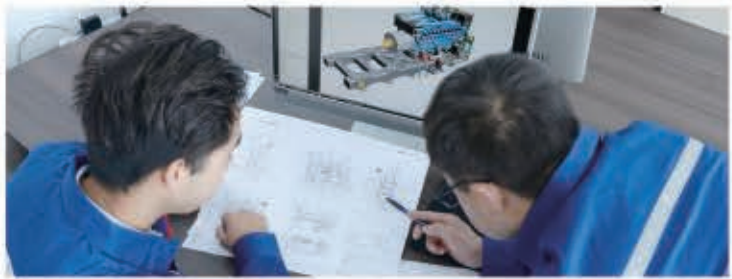
Huaquan Group

STRENGTH

- Technical Skills
- Digital Manufacturing
- Testing Center
- Machine Working Shop
- Cloud Service Platform



Technical Skills



The company has a technology research and development center, which has been approved as a provincial-level research and development innovation platform. The center covers an area of more than 3,000 square meters, and is equipped with more than 300 core professional scientific research and full-time technical personnel. The "Changjiang Scholars" are specially hired as technical leaders to form a scientific research team with reasonable knowledge structure, high professional level, and strong technical research and development capabilities.



Lean production, committed to zero defects and zero tolerance

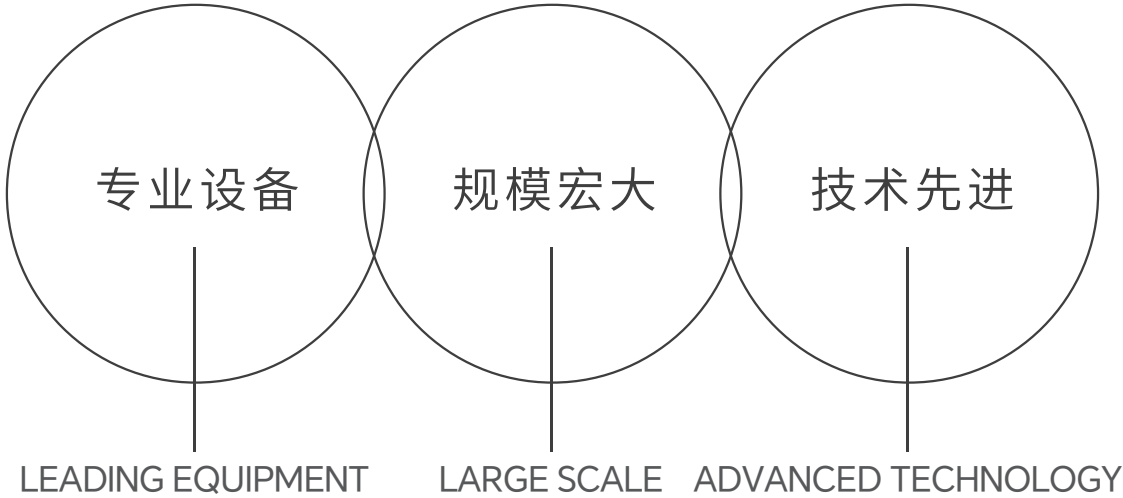
In recent years, the company's technology research and development center has completed 12 scientific and technological achievements, developed more than 40 new products, and authorized 154 intellectual property certificates. It has deep technical accumulation in the fields of product research and development and intelligent manufacturing.



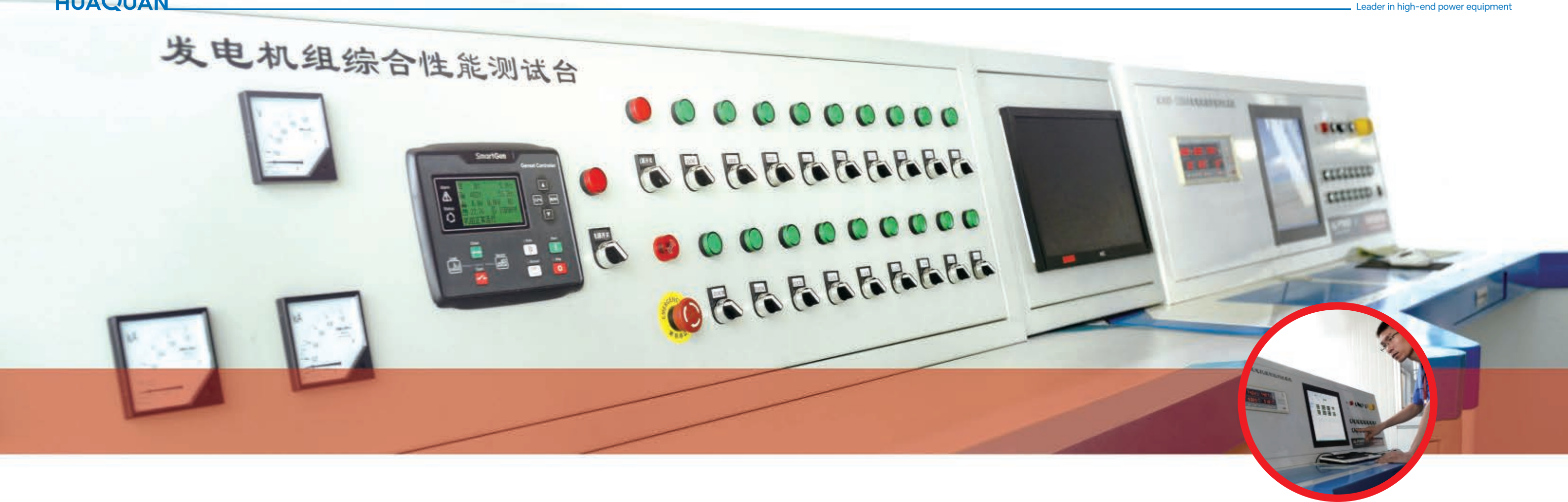


Digital Manufacturing

Based on lean management, the company combines informatization and industrialization, introduces international advanced automatic spraying line, industrial welding robot, AGV intelligent transportation platform, intelligent detection platform, CNC machine tool, etc. by integrating ERP and MES system, the company has realized the whole life cycle digital control of product development, design, production and after-sales service.



The production center covers a total area of 24,000 square meters, which is composed of spraying area, sheet metal processing area, semi-finished product processing area, finished product assembly area and testing center, with an annual production capacity of more than 10,000 sets.



Testing Center



The company has built its own testing center, covering a total area of more than 500 square meters. It supports the detection of 3,000 kW power generation equipment at most, and can complete the detection of 50 generator sets every day. The testing center is equipped with various precision testing instruments and equipment, including automatic test bench for power generation equipment, load box for high-performance resistance detection of power generation equipment, noise meter, phase sequence meter, power quality tester, CMM, waveform tester, temperature tester, insulation tester, universal tool microscope and digital remote monitoring platform.



Green electricity derived from standardized and rigorous testing

The main detection scope of the test center includes the performance, safety and reliability test and special inspection of power generation equipment. Implementation of 100% inspection factory mechanism, production of each product must be strictly tested before leaving the factory. The test shall be carried out in strict accordance with the national standard GB 2820 and the international standard ISO 8528:5-2013, and the high-precision testing equipment shall be used to ensure the accuracy and reliability of the data.





Machine Working Shop

In order to better serve state-owned enterprises, listed companies and other cooperative units, we have improved our supporting capacity. Huaquan Company set up a machining workshop, with turning, milling, planing, grinding, drilling, boring, punching, saw, insert and other machine tools, undertaking all kinds of high, precious, cutting-edge, difficult business, marking the company's fine processing capacity to a new level.



Machining Advantages

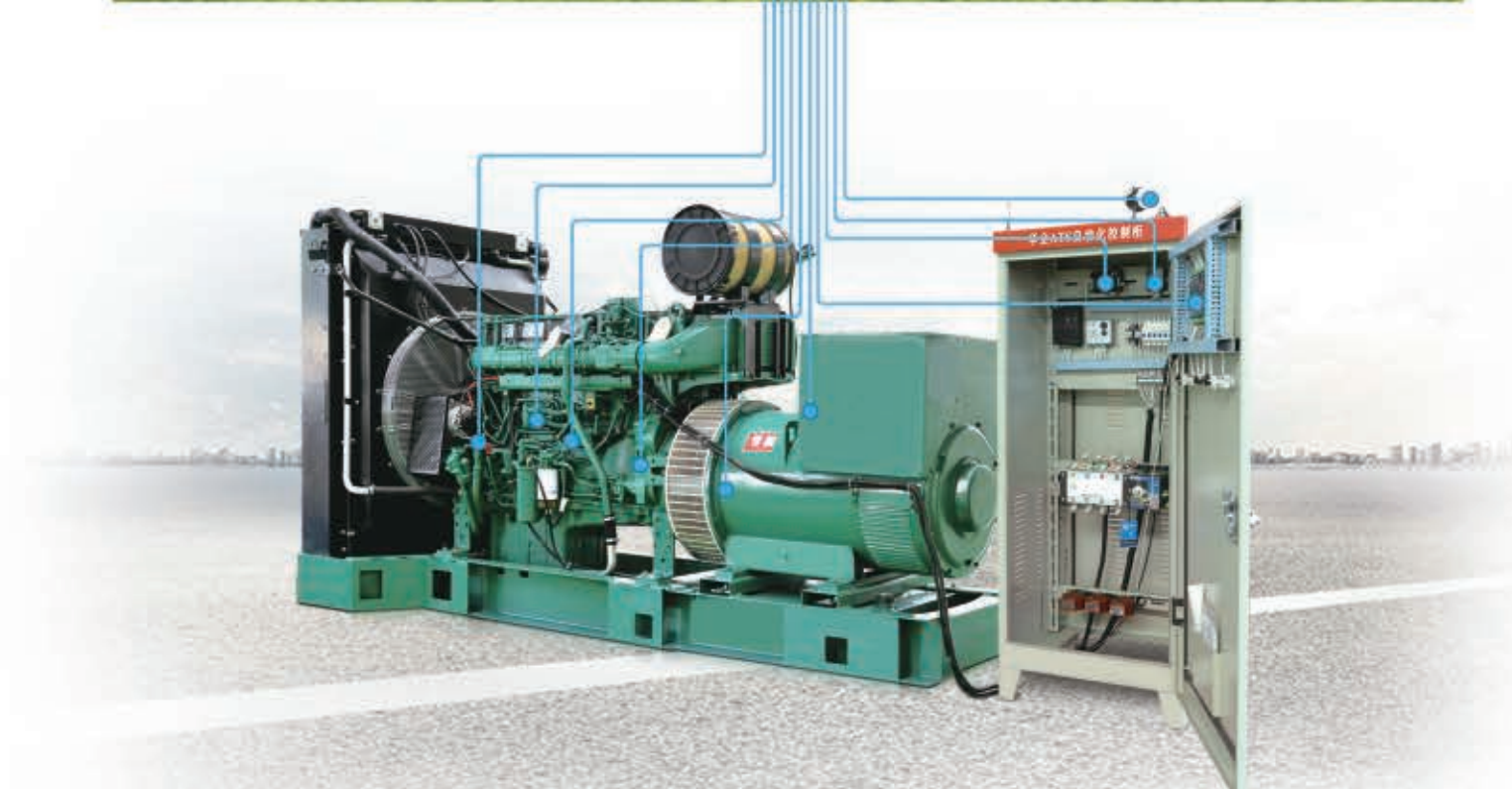
1. Mechanical processing has a very flexible manufacturing capacity and massive production. We can produce precise machining parts and completely different products in a very short time.
2. High machining accuracy. Unmanned intervention is required.
3. Stable processing quality.



Huaquan Cloud

Huaquan's intelligent cloud service platform is based on the cloud. Through the PC computer/mobile phone terminal, the intelligent cloud platform realizes the remote operation and maintenance service of the generator set, which can realize the functions of real-time monitoring of power generation equipment, intelligent fault diagnosis, and maintenance services. Provide customers with intelligent and caring one-stop service.

Huaquan's intelligent cloud service platform uses wireless transmission to connect customer terminal equipment to the Internet and can remotely monitor power generation equipment around the clock. Customers can use the mobile phone APP or computer control terminal to remotely start/stop the power generation equipment, GPS positioning, video monitoring, real-time monitoring of the engine temperature, oil pressure, fuel level, battery voltage, cumulative operating time; remote viewing of three-phase voltage, three-phase current, frequency (HZ), mains; automatic storage of generator fault records, providing data details for maintenance, reminding users to maintain in time; GPS positioning unit, you can view the unit location to prevent theft; with preventive fault diagnosis function, when a potential hazard or failure occurs, the system will automatically send an early warning or alarm to the control terminal within ten seconds to take necessary corrective measures to avoid damage to the equipment, unnecessary property losses, and adverse affecting on customer use.





QUALIFICATION

Production Qualification

HuaQuan Group honor

Production Qualification

No.	Qualification Classification	Qualification Abbreviation	Attribution	Full Name of Qualification
1.1	营业证件	营业执照/注册资金7000万	华全动力	营业执照
1.2	生产许可	生产许可证/安全生产	华全动力	安全生产许可证
1.2	生产许可	生产许可证/ 机电安装 资质	华全动力	建筑机电安装工程专业承包叁级
1.2	生产许可	生产许可证/ 电力施工 资质	华全动力	承装（修、试）电力设施许可证四级
1.2	生产许可	生产许可证/ 电力工程总承包 资质	华全动力	电力工程总承包
1.2	生产许可	生产许可证/环评许可	华全动力	年组装1200台智能发电机组项目环境影响评价批复
1.2	生产许可	生产许可证/环评许可	华全动力	智能发电机组生产技术改造项目环境影响评价批复
1.2	生产许可	生产许可证/ 消防验收	华全动力	建设工程消防验收备案抽查/复查结果通知书（27#）
1.2	生产许可	生产许可证/ 消防验收	华全动力	建设工程消防验收备案凭证（28#）
1.2	生产许可	生产许可证/电信经营资格证	华全动力	增值电信业务经营许可证
1.2	生产许可	生产许可证/ 网络经营 资格证	华全动力	网络文化经营许可证
1.2	生产许可	生产许可证/非公路标许可证	华全动力	非公路标志设置许可证
3.1	荣誉称号	国家级/高新技术企业	华全动力	国家级高新技术企业
3.1	荣誉称号	国家级/专精特新 小巨人 企业/ 上市储备库	华全动力	国家级专精特新“小巨人”企业
3.1	荣誉称号	国家级/知识产权优势企业	华全动力	国家知识产权优势企业
3.1	荣誉称号	山东省/瞪羚企业	华全动力	山东省瞪羚企业
3.1	荣誉称号	山东省/ 单项冠军 企业	华全动力	山东省制造业单项冠军企业
3.1	荣誉称号	山东省/专精特新企业	华全动力	山东省“专精特新”中小企业
3.1	荣誉称号	山东省/高端装备制造业领军企业	华全动力	山东省高端装备制造业领军企业
3.1	荣誉称号	山东省/知识产权优势培育企业	华全动力	山东省知识产权优势培育企业
3.1	荣誉称号	山东省/优质品牌企业	华全动力	山东优质品牌
3.1	荣誉称号	山东省/高端品牌培育企业	华全动力	山东省高端品牌培育企业
3.1	荣誉称号	潍坊市/ 隐形冠军 企业	华全动力	潍坊市“隐形冠军”企业
3.1	荣誉称号	潍坊市专精特新企业	华全动力	潍坊市专精特新中小企业
3.1	荣誉称号	潍坊市/智能制造标杆企业	华全动力	潍坊市智能制造标杆企业
3.1	荣誉称号	潍坊市/ 行业龙头 骨干企业	华全动力	潍坊市行业龙头骨干企业
3.1	荣誉称号	潍坊市/两化融合重点培育企业	华全动力	潍坊市工业化和信息化融合重点培育企业
3.1	荣誉称号	齐鲁股权交易中心/挂牌企业	华全动力	齐鲁股权挂牌企业
3.1	荣誉称号	中国科学院/优质供应商企业	华全动力	优质供应商
3.2	荣誉称号	山东省/一企一技术研发中心	华全动力	山东省一企一技术研发中心
3.2	科研平台	山东省/工业设计中心	华全动力	山东省工业设计中心
3.2	科研平台	潍坊市/企业技术中心	华全动力	潍坊市企业技术中心
3.2	科研平台	潍坊市/工程技术研究中心	华全动力	潍坊市工程技术研究中心
3.2	科研平台	潍坊市/一企一技术研发中心	华全动力	潍坊市一企一技术研发中心
3.2	科研平台	潍坊市/工业设计中心	华全动力	潍坊市工业设计中心
3.2	科研平台	潍坊市/重点实验室	华全动力	潍坊市重点实验室
3.2	科研平台	潍坊市/工程实验室	华全动力	潍坊市工程实验室
3.4	奖励评定	潍坊市 市长质量奖	华全动力	潍坊市市长质量奖
3.4	奖励评定	潍坊市 科学技术奖	华全动力	潍坊市科学技术奖
3.4	奖励评定	潍坊市“市长杯”工业设计奖	华全动力	潍坊市第四届“市长杯”工业设计大赛二等奖
3.4	奖励评定	潍坊市“市长杯”工业设计奖	华全动力	潍坊市第五届“市长杯”工业设计大赛三等奖
3.4	奖励评定	潍坊市专利奖	华全动力	"2019年潍坊市专利奖三等奖-一种环保型柴油发电机组"
3.4	奖励评定	潍坊市专利奖	华全动力	"2019年潍坊市专利奖外观设计奖-大功率移动电站液压升降拖车"
3.4	奖励评定	潍坊市专利奖	华全动力	2020年潍坊市专利奖外观设计奖
3.4	奖励评定	潍坊市专利奖	华全动力	2021年潍坊市专利奖外观设计奖
4.1	信用认证	企业信用等级证书	华全动力	企业信用等级证书
4.2	体系认证	CMMI软件集成3级	华全动力	软件能力成熟度模型集成3级
4.2	体系认证/三体系	质量管理/体系认证	华全动力	质量管理体系认证

No.	Qualification Classification	Qualification Abbreviation	Attribution	Full Name of Qualification
4.2	体系认证/三体系	环境管理/体系认证	华全动力	环境管理体系认证
4.2	体系认证/三体系	职业健康/体系认证	华全动力	职业健康安全管理体系认证
4.2	体系认证	信息安全/管理体系认证	华全动力	信息安全管理體系认证
4.2	体系认证	两化融合/管理体系认证	华全动力	两化融合管理体系认证
4.2	体系认证	知识产权/管理体系认证	华全动力	知识产权管理体系认证
4.2	体系认证/ 国军标	国军标 /管理体系认证	华全动力	武器装备质量管理体系认证
4.2	体系认证/ 售后服务	五星级售后服务 /体系认证	华全动力	五星级售后服务认证
4.2	体系认证	安全生产标准化/体系认证	华全动力	安全生产标准化三级
4.3	产品认证/配电柜	产品/CQC证书/国际	华全动力	CQC证书
4.3	产品认证/配电柜	产品/CQC证书/国际	华全动力	CQC证书
4.3	产品认证/配电柜	产品/CQC证书/国际	华全动力	CQC证书
4.3	产品认证/配电柜	产品/CQC证书/国际	华全动力	CQC证书
4.3	产品认证/配电柜	产品/CQC证书/国际	华全动力	CQC证书
4.3	产品认证/配电柜	产品/CQC证书/国际	华全动力	CQC证书
4.3	产品认证/配电柜	产品/CQC证书/国际	华全动力	CQC证书
4.3	产品认证/配电柜	产品/ 3C证书	华全动力	3C 证书
4.3	产品认证/配电柜	产品/ 3C证书	华全动力	3C 证书
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4.3	产品认证/配电柜	产品/3C证书	华全动力	3C 证书
4.3	产品认证/配电柜	产品/3C证书	华全动力	3C 证书
4.3	产品认证/配电柜	产品/3C证书	华全动力	3C 证书
4.3	产品认证/电源	产品/CE认证/欧盟	华全动力	CE认证
4.3	产品认证/电源	产品/CE认证/欧盟	华全动力	CE认证
4.3	产品认证/电源	产品/FCC认证/美国	华全动力	FCC认证
4.3	产品认证/电源	产品/EMC认证/欧盟	华全电源	电磁兼容（EMC）CE认证证书
4.3	产品认证/电源	产品/FCC认证/美国	华全电源	FCC认证证书
4.3	产品认证/电源	产品/CE认证/欧盟	华全电源	低电压（LVD）安规CE认证证书
4.3	产品认证/电源	产品/ROHS认证/欧盟	华全电源	ROHS认证证书
4.3	产品认证/电源	产品/C-Tick认证/澳大利亚	华全电源	C-Tick认证
4.3	产品认证/电源	产品/CE认证/欧盟	华全动力	CE认证
4.3	产品认证/电源	产品/CE认证/欧盟	华全电源	供应商符合性声明
5.1	电力 /低压成套电气资质	CQC型式试验报告/电力	华全动力	CQC产品认证型式试验报告
5.1	电力 /低压成套电气资质	CQC型式试验报告/电力	华全动力	CQC产品认证型式试验报告
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5.1	电力 /低压成套电气资质	3C型式试验报告/电力	华全动力	3C型式试验报告
5.1	电力 /低压成套电气资质	3C型式试验报告/电力	华全动力	3C型式试验报告
5.1	电力 /低压成套电气资质	3C型式试验报告/电力	华全动力	3C型式试验报告
5.1	电力 /低压成套电气资质	3C型式试验报告/电力	华全动力	3C型式试验报告
5.1	电力 /低压成套电气资质	3C型式试验报告/电力	华全动力	3C型式试验报告
5.1	电力/强制检验报告	电力/ 高压成套电气 /资质	华全动力	检验报告
5.1	电力/强制检验报告	电力/ 高压成套电气 /资质	华全动力	检验报告

No.	Qualification Classification	Qualification Abbreviation	Attribution	Full Name of Qualification
5.1	电力/强制检验报告	电力/高压成套电气/资质	华全动力	检验报告
5.1	电源/检验报告	FCC认证检测报告	华全动力	FCC认证检测报告
5.1	电源/检验报告	IEC62619检测报告	华全动力	IEC62619检测报告
5.1	电源/检验报告	ROHS认证检测报告	华全动力	RoHS认证检测报告
5.2	电源/鉴定报告证	公路/危险物品运输证/电源	华全动力	(公路运输) 货物运输条件鉴定报告
5.2	电源/鉴定报告证	海运/危险物品运输证/电源	华全动力	(海运) 货物运输条件鉴定报告
5.2	电源/鉴定报告证	空运/危险物品运输证/电源	华全动力	(空运) 货物运输条件鉴定报告
5.2	电源/鉴定报告证	铁路/危险物品运输证/电源	华全动力	(铁路运输) 货物运输条件鉴定报告
7.1	人才证书	高级职称-正高级工程师/电力工程	赵立增	高级职称-正高级工程师
7.1	人才证书	高级职称-高级工程师/工艺装备	房生贤	高级职称-高级工程师
7.1	人才证书	中级职称-工程师/电力	赵立增	中级职称-工程师
7.1	人才证书	中级职称-工程师/电气	高雁	中级职称-工程师
7.1	人才证书	中级职称-工程师/机械电气	黄亚	中级职称-工程师
7.1	人才证书	中级职称-工程师/电子信息	胡可	中级职称-工程师
7.1	人才证书	中级职称-工程师/机械工程	牛军华	中级职称-工程师
7.1	人才证书	中级职称-工程师/自动化	王小清	中级职称-工程师
7.1	人才证书	中级职称-工程师/给排水	李涛	中级职称-工程师
7.1	人才证书	中级职称-工程师/制冷空调	梁超	中级职称-工程师
7.1	人才证书	中级职称-工程师/给排水	杨生第	中级职称-工程师
7.1	人才证书	中级职称-工程师/机械设备	李旭	中级职称-工程师
7.1	人才证书	中级职称-工程师/焊接	彭涛	中级职称-工程师
7.1	人才证书	中级职称-工程师/自动化控制	徐斌	中级职称-工程师
7.1	人才证书	中级职称-工程师/给排水	杨海燕	中级职称-工程师
7.1	人才证书	初级职称-助理工程师/电力	赵立增	初级职称-助理工程师
7.1	人才证书	初级职称-助理工程师/电力	梁栋	初级职称-助理工程师
7.1	人才证书	初级职称-助理工程师/电力	赵新崇	初级职称-助理工程师
7.1	人才证书	初级职称-助理工程师/机电	王国涛	初级职称-助理工程师
7.1	人才证书	初级职称-助理工程师/电力	张海峰	初级职称-助理工程师
7.1	人才证书	初级职称-助理工程师/机电一体化	张昊	初级职称-助理工程师
7.1	人才证书/高压电工	特种作业-高压电工	赵新崇	特种作业-高压电工
7.1	人才证书/高压电工	特种作业-高压电工	张昊	特种作业-高压电工
7.1	人才证书/高压电工	特种作业-高压电工	王亚男	特种作业-高压电工
7.1	人才证书/高压电工	特种作业-高压电工	王国涛	特种作业-高压电工
7.1	人才证书/高压电工	特种作业-高压电工	孙国龙	特种作业-高压电工
7.1	人才证书/高压电工	特种作业-高压电工	宋新亮	特种作业-高压电工
7.1	人才证书/高压电工	特种作业-高压电工	刘王波	特种作业-高压电工
7.1	人才证书/高压电工	特种作业-高压电工	刘明龙	特种作业-高压电工
7.1	人才证书/高压电工	特种作业-高压电工	林超	特种作业-高压电工
7.1	人才证书/高压电工	特种作业-高压电工	梁栋	特种作业-高压电工
7.1	人才证书/高压电工	特种作业-高压电工	冯伟	特种作业-高压电工
7.1	人才证书	特种作业-低压电工	宋春龙	特种作业-低压电工
7.1	人才证书	特种作业-低压电工	赵新崇	特种作业-低压电工
7.1	人才证书	特种作业-焊工	曹县淮	特种作业-焊工
7.1	人才证书	特种作业-焊工	陈小山	特种作业-焊工
7.1	人才证书	特种作业-焊工	唐子兵	特种作业-焊工
7.1	人才证书	特种作业-焊工	解家宝	特种作业-焊工
7.1	人才证书	特种作业-焊工	于会平	特种作业-焊工
7.1	人才证书	特种作业-焊工	姜立辉	特种作业-焊工

No.	Qualification Classification	Qualification Abbreviation	Attribution	Full Name of Qualification
7.1	人才证书	特种作业-焊工	栾云锋	特种作业-焊工
7.1	人才证书	特种作业-焊工	曹建磊	特种作业-焊工
7.1	人才证书	特种作业-焊工	李宪英	特种作业-焊工
7.1	人才证书	特种作业-叉车操作工	宋新亮	特种作业-叉车操作工
7.1	人才证书	特种作业-叉车操作工	宋春龙	特种作业-叉车操作工
7.1	人才证书/电工	电工三级（高级）	栾云锋	职业技能等级证
7.1	人才证书/电工	电工三级（高级）	齐砚英	职业技能等级证
7.1	人才证书/电工	电工三级（高级）	陈连东	职业技能等级证
7.1	人才证书/电工	电工三级（高级）	刘明龙	职业技能等级证
7.1	人才证书/电工	电工三级（高级）	宋新亮	职业技能等级证
7.1	人才证书/电工	电工三级（高级）	张昊	职业技能等级证
7.1	人才证书/电工	电工四级（中级）	曹建磊	职业技能等级证
7.1	人才证书/电工	电工四级（中级）	孙磊	职业技能等级证
7.1	人才证书/电工	电工四级（中级）	魏健	职业技能等级证
7.1	人才证书/电工	电工四级（中级）	林超	职业技能等级证
7.1	人才证书/电工	电工四级（中级）	王国涛	职业技能等级证
7.1	人才证书/电工	电工四级（中级）	赵新崇	职业技能等级证
7.1	人才证书/电工	电工四级（中级）	王亚男	职业技能等级证
7.1	人才证书/电工	电工四级（中级）	姜宏伟	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	侯召刚	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	解家宝	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	王加鹏	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	王春厅	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	刘建平	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	赵立娟	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	马秀勇	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	曹县淮	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	吴刘强	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	赵立增	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	于占海	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	郭君武	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	赵笃杰	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	刘王波	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	孙继民	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	刘宁	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	朱雷	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	周雪	职业技能等级证
7.1	人才证书/电气工	电气设备安装工三级（高级）	宋春龙	职业技能等级证
7.1	人才证书	维修电工/二级	齐砚英	职业资格
7.1	人才证书	维修电工/二级	解家宝	职业资格
7.1	人才证书	维修电工/三级	王国涛	职业资格
7.1	人才证书	维修电工/三级	朱雷	职业资格
7.1	人才证书	电工/三级	刘海翔	职业资格
7.1	人才证书	电工/四级	马宁	职业资格
7.1	人才证书	高压线路架设工/二级	宋新亮	职业资格
7.1	人才证书	变电设备安装工/二级	赵立娟	职业资格
7.1	人才证书	计算机操作员	齐砚英	职业资格
7.1	人才证书	汽车维修工	赵立增	职业资格

No.	Qualification Classification	Qualification Abbreviation	Attribution	Full Name of Qualification
7.1	人才证书	钳工	周雪	职业资格
7.1	人才证书	装配钳工	于占海	职业资格
7.1	人才证书	营销师三级	曹丽君	职业资格
7.1	人才证书	建筑施工企业安全生产管理人员	赵立娟	建筑施工企业安全生产管理人员
7.1	人才证书	建筑施工企业安全生产管理人员	赵玉翠	建筑施工企业安全生产管理人员
7.1	人才证书	建筑施工企业安全生产管理人员	姜宏伟	建筑施工企业安全生产管理人员
7.1	人才证书	建筑施工企业安全生产管理人员	张培培	建筑施工企业安全生产管理人员
7.1	人才证书	建筑施工企业安全生产管理人员	赵倩倩	建筑施工企业安全生产管理人员
7.1	人才证书	二级建造师/机电工程	杜翠芝	二级建造师
7.1	人才证书	二级建造师/机电工程	李志福	二级建造师
7.1	人才证书	二级建造师/机电工程	王震	二级建造师
7.1	人才证书	二级建造师/机电工程	赵玉翠	二级建造师
7.1	人才证书	二级建造师/机电工程	周扬	二级建造师
7.1	人才证书	二级建造师/机电工程	孙强	二级建造师
7.1	人才证书	二级建造师/机电工程	魏咏梅	二级建造师
7.1	人才证书	二级建造师/机电工程	赵晴	二级建造师
7.1	人才证书	中级技工（安装起重工）	齐砚英	中级技工
7.1	人才证书	中级技工（通风工）	赵立娟	中级技工
7.1	人才证书	中级技工（电工）	林超	中级技工
7.1	人才证书	中级技工（电工）	刘明龙	中级技工
7.1	人才证书	中级技工（电工）	宋春龙	中级技工
7.1	人才证书	中级技工（电工）	宋新亮	中级技工
7.1	人才证书	中级技工（电工）	赵立增	中级技工
7.1	人才证书	中级技工（焊工）	曹县淮	中级技工
7.1	人才证书	中级技工（焊工）	郭君武	中级技工
7.1	人才证书	中级技工（焊工）	解家宝	中级技工
7.1	人才证书	中级技工（焊工）	于占海	中级技工
7.1	人才证书	中级技工（焊工）	赵倩倩	中级技工
7.1	人才证书	中级技工（焊工）	周雪	中级技工
7.1	人才证书	电子商务师三级（高级）	王英聪	职业技能等级证
7.1	人才证书	电子商务师三级（高级）	李树柏	职业技能等级证
7.1	人才证书	电子商务师三级（高级）	钟行波	职业技能等级证
7.1	人才证书	电子商务师三级（高级）	周立明	职业技能等级证
7.1	人才证书	电子商务师三级（高级）	董新彩	职业技能等级证
7.1	人才证书	电子商务师四级（中级）	张亭亭	职业技能等级证
7.1	人才证书	电子商务师四级（中级）	赵倩倩	职业技能等级证
7.1	人才证书	电子商务师四级（中级）	郝洪鹏	职业技能等级证
7.1	人才证书	电子商务师四级（中级）	李路路	职业技能等级证
7.1	人才证书	电子商务师四级（中级）	王丽杰	职业技能等级证
7.1	人才证书	电子商务师四级（中级）	陈孝菊	职业技能等级证
7.1	人才证书	电子商务师四级（中级）	王建云	职业技能等级证
7.1	人才证书	电子商务师四级（中级）	曹丽君	职业技能等级证
7.1	人才证书	数据中心规划设计工程师专业（高级）	赵立增	信息技术职业资格
7.1	人才证书	数据中心规划设计工程师专业（高级）	姜宏伟	信息技术职业资格
7.1	人才证书	信息化工程师专业（高级）	郝洪鹏	信息技术职业资格
7.1	人才证书	系统运维工程师专业（高级）	赵倩倩	信息技术职业资格
7.1	人才证书	系统集成工程师专业（高级）	赵立娟	信息技术职业资格
7.1	人才证书	系统运维工程师专业（高级）	李树柏	信息技术职业资格

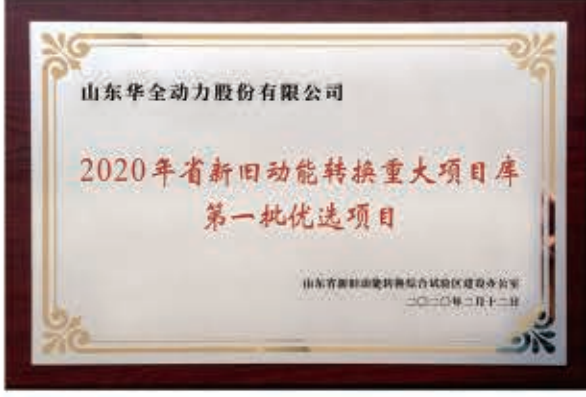
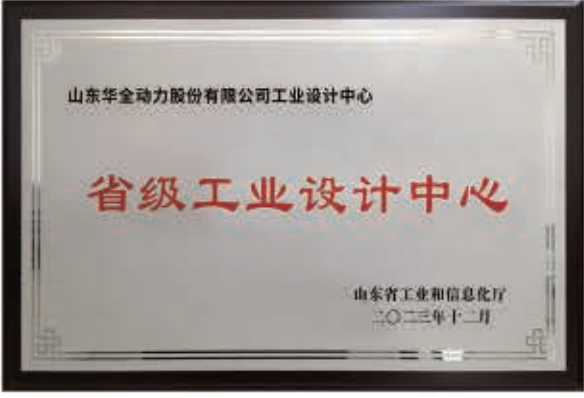
No.	Qualification Classification	Qualification Abbreviation	Attribution	Full Name of Qualification
7.1	人才证书	机电一体化工程师专业（高级）	宋春龙	信息技术职业资格
7.1	人才证书	财务信息化应用（高级）	齐砚英	信息技术职业资格
7.1	人才证书	大数据分析师（高级）	钟行波	信息技术职业资格
7.1	人才证书	信息安全管理（高级）	赵立增	信息技术职业资格
7.1	人才证书	信息系统集成管理（高级）	赵立增	信息技术职业资格
7.1	人才证书	智能化系统工程师（高级）	赵立增	信息技术职业资格
7.1	人才证书	智能化系统工程师（高级）	姜宏伟	信息技术职业资格
7.1	人才证书	主要负责人	赵立增	安全生产管理人员
7.1	人才证书	主要负责人	宋新亮	安全生产管理人员
7.1	人才证书	安全生产管理人员	姜宏伟	安全生产管理人员
7.1	人才证书	安全生产管理人员	齐砚英	安全生产管理人员
7.1	人才证书	消防设施操作员/监控（中级）	李树柏	消防设施操作员
7.1	人才证书	消防设施操作员/维保（中级）	宋新亮	消防设施操作员
7.1	人才证书	消防设施操作员/监控（中级）	王炎宗	消防设施操作员
6.1	发明专利14项	发明专利1	赵立增	一种防雨防尘型静音发电机组
6.1	发明专利14项	发明专利2	赵立增	一种高美观度柴油发电机组
6.1	发明专利14项	发明专利3	华全动力	一种可移动式静音型发电机组
6.1	发明专利14项	发明专利4	赵立增	一种超静音防水型发电机组
6.1	发明专利14项	发明专利5	华全动力	一种高安全性柴油发电机组
6.1	发明专利14项	发明专利6	赵立增	一种高散热性柴油发电机组
6.1	发明专利14项	发明专利7	华全动力	一种环保型柴油发电机组
6.1	发明专利14项	发明专利8	赵立增	一种静音箱型柴油发电机组
6.1	发明专利14项	发明专利9	华全动力	一种高可靠性应急电源用发电机组
6.1	发明专利14项	发明专利10	华全动力	一种启动快速输出稳定的发电机组
6.1	发明专利14项	发明专利11	华全动力	高耐用性低油耗性能稳定柴油发电机组
6.1	发明专利14项	发明专利12	华全动力	快速启动自动并退机性能稳定柴油发电机组
6.1	发明专利14项	发明专利13	华全动力	一种锂电池管理系统
6.1	发明专利14项	发明专利14	华全动力	一种智能化变电站及其使用方法
6.2	实用新型专利	实用新型专利42项	华全动力	一种柴油发电机组发动机尾气循环再利用装置/等
6.3	外观设计专利	外观设计专利28	华全动力	移动电站悬挂式大容量油箱
6.4	软件著作权	软件著作权45	华全动力	PDCA管理系统V1.0
6.5	集成电路设计权	集成电路设计权11	华全动力	发电机组远程控制通讯芯片
6.6	商标	华全商标14	华全动力	“华全”文字第37类
6.7	作品登记证书	作品登记证书39	华全动力	华全发电机组铭牌
2.1	OEM合作	OEM书/潍柴	华全动力	潍柴OEM授权证书
2.1	OEM合作	OEM书/康明斯	华全动力	康明斯OEM授权证书
2.1	OEM合作	OEM书/玉柴	华全动力	玉柴OEM授权证书
2.1	OEM合作	OEM书/上柴	华全动力	上柴股份OEM授权证书
2.1	OEM合作	OEM书/斗山大宇	华全动力	韩国斗山大宇OEM授权证书
2.1	OEM合作	OEM书/英格	华全动力	英国英格发电机OEM授权证书
2.1	OEM合作	OEM书/德科	华全动力	德科发电机OEM授权证书
2.1	OEM合作	OEM书/马拉松	华全动力	马拉松发电机OEM授权证书
2.1	OEM合作	OEM书/美奥迪	华全动力	美奥迪发电机OEM授权证书
2.1	OEM合作	OEM书/利莱森玛	华全动力	利莱森玛OEM授权证书
2.1	OEM合作	OEM书/众智	华全动力	众智OEM授权证书

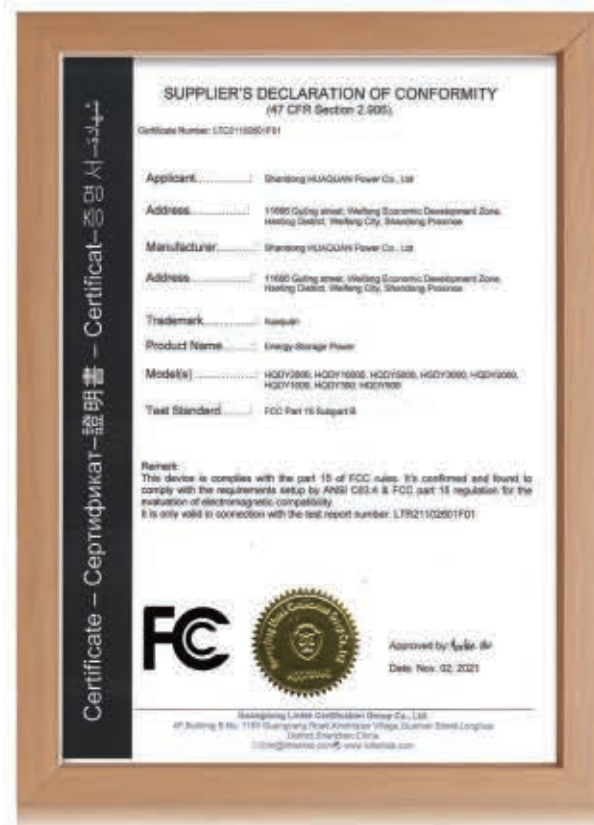
Production qualification

The company has successively obtained the ISO 9001:2015 Quality Management System Certification, ISO 14001:2015 Environmental Management System Certification, ISO 45001:2018 Occupational Health and Safety Management System Certification, Five - Star After - sales Service Certification, CMMI Level 3 International Appraisal Certification, Integration of Informatization and Industrialization Management System Certification, and Intellectual Property Management System Certification.



Second - grade General Contracting for Electric Power Engineering Construction
Second - grade Professional Contracting for Building Mechanical and Electrical Installation Engineering







14 invention patents



45 utility model patents



30 design patents



11 items of integrated circuit layout design



Works registration certificate 39 items



17 trademark registrations



Computer software copyright 45





Unit production line

PRODUCT

- (一) ■ 1.1 Open generator set
- 1.2 Silent generator set
- 1.3 Light tower generator set
- 1.4 Gas generator set
- 1.5 Marine generator set
- (二) ■ 2 Flood control emergency water pump
- (三) ■ 3.1 Automation control cabinet
- 3.2 Four protection control system
- 3.3 Self-starting control system
- 3.4 Parallel control system
- 3.5 Grid-connected control system
- (四) ■ 4.1 Distribution Cabinet
- 4.2 Box type substation
- 4.3 Transformer
- (五) ■ 5.1 Energy storage power supply
- 5.2 Energy storage power station
- 5.3 Photovoltaic power station
- 5.4 Energy storage system

1.1 Open Generator Set

6~3000kVA | 380V,400V,415V

We can provide overall solutions for medium and high voltage generator sets (3,300~13,800V). Please consult the Huaquan sales team for specific projects.


data center


mine emergency


continuous power station


medical system


communication market


petroleum


national bank


large-scale industry



Exceptional Environmental Adaptability

- It can operate stably under environmental conditions ranging from -40°C to 50°C and maintain stable power output at an altitude of 5,000 meters.
- High - standard industrial paint is applied to ensure excellent anti - rust and corrosion - resistant properties.

Excellent Loading Capacity

- It meets the index requirements of the GB/T 2820 standard and has strong one - time loading capacity.
- It can meet the requirements for rapid start - up.

High Power Density

- The product features a compact structure and high strength, with a high specific power.
- It has a small overall size, enabling effective space utilization.

Comprehensive and Reliable Safety Design

- It holds various domestic product certification qualifications and is equipped with an advanced unit safety protection system.

1.2 Silent Generator Set

6~3000kVA | 380V,400V,415V

We can provide overall solutions for medium and high voltage generator sets (3,300~13,800V). Please consult the Huaquan sales team for specific projects.



- 
data center
- 
mine emergency
- 
continuous power station
- 
medical system
- 
communication market
- 
petroleum
- 
national bank
- 
large-scale industry

1.3 Light Tower Generator Set

The light tower generator set supports 360° rotation, remote control, single group and single control, hydraulic support, one-button reset, one-button lifting, lighting and power generation integration, and is equipped with a high-speed mobile trailer with a lifting height of 2.5-12 meters.



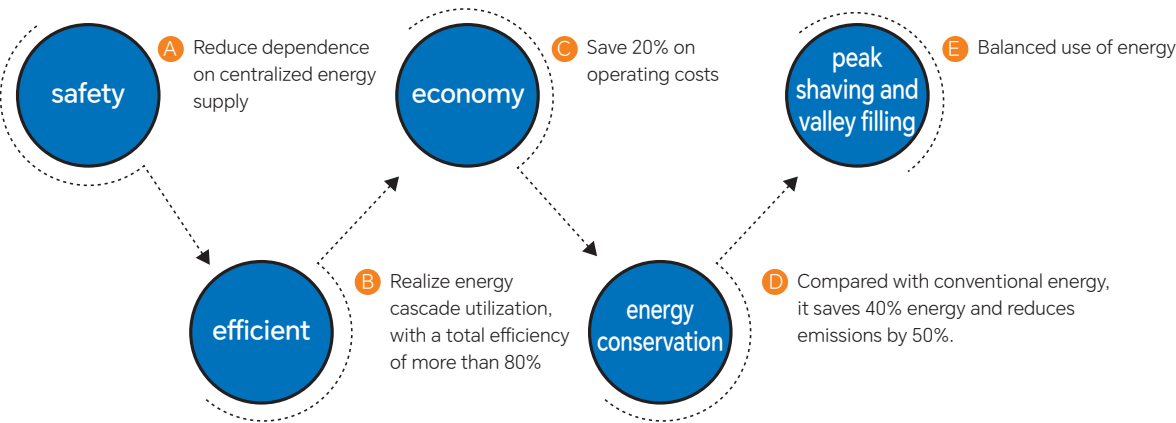
All-round lifting work lights are suitable for large-area high-brightness lighting needs in various large-scale construction operations, accident repairs, emergency rescue and disaster relief, etc. such as railways, electric power, public security, fire protection, petroleum, and petrochemicals.

1.4 Gas Generator Set

The gas generator set is a new generator set developed to meet the world's environmental protection requirements and new market environment. Gas generators use natural gas or harmful gases as fuel, which has the advantages of utilization of harmful gas, safety and convenience of operation, high cost benefit, low pollution emission and adaption of cogeneration (combined heat and power). It is a new type of green environment protection power for replacing fuel oil and coal-fired generating sets.



Gas Unit Advantages



Scope of application

- ★ Single building groups such as: hospitals, schools, hotels, office buildings, government office buildings, data centers, etc.
- ★ City comprehensive business district or business district.
- ★ Large and medium-sized public construction projects such as airports, railway stations, transportation hubs, etc.

1.5 Marine Generator Set

In recent years, more and more diesel generator sets have been used on ships. In addition to being a conventional unit providing shipboard power, it is also widely used for electric propulsion. Due to its advantages, the adoption of full or semi-electric propulsion has become the development trend for large ships and especially for power propulsion system on military ships. The diesel engine is mainly used as the prime mover of the onboard generator set. The fuel cooler is very important for the diesel engine oil cooling of the diesel engine. The diesel engine cools the fuel through the seawater and comes to the diesel engine for the required performance.



Product Performance and Features

- Compact structure, low overall cost, large power
- Simple operation and maintenance
- strong power and high reliability
- Good fuel economy, high thermal efficiency
- The fuel consumption curve is relatively flat and economical
- under low loads.



2 Flood Control Emergency Water Pump

Flood control and drought relief emergency water pump truck is a flood control and drought relief product independently developed by HuaQuan. The product can be equipped with two wheels, four wheels and protective shed according to customer requirements, with flow rate of 100-1600 m³ / h and lift of 10-100 m. Imported or domestic diesel engine can be selected, and the inlet and outlet water pipes are connected by quick flange connection. Equipped with patented cam rotor pump, 5-15 seconds water supply, anti clogging design, can pass through 2.5-10cm winding material.

Main uses:

- 1. Rapid drainage: such as the function of quickly draining the water from underground facilities (mines, subways, underground tunnels, etc.); fast drainage when the city is hit by floods and heavy rainstorms;
- 2. Emergency water supply: it can be used for urban emergency water supply in case of earthquake, tsunami, water source pollution and damage of urban water supply network; in case of drought in local areas, it can deliver a large amount of domestic water to community residents;
- 3. Long distance water delivery: it can quickly transport the water from several kilometers away to the fire site to extinguish the fire, or discharge the urban rainstorm water into the channels or sewers several kilometers away;



3.1 Automation Control Cabinet

Huaquan has its own sheet metal workshop, automatic plastic spraying production line and electrical production workshop. According to the user's needs, it can configure suitable control cabinet and distribution cabinet for users, including box type control box, vertical cabinet control box, split control box, parallel generator cabinet, capacitor compensation cabinet, frequency conversion cabinet, GGD cabinet, MNS cabinet, and various power distribution facilities.



Box Controller

It has a small area and built-in intelligent module, which can monitor the parameters of the generator set in real time and stabilize the performance of the generator set.

High and Low Voltage Cabinet

Provide complete sets of technical services according to customer needs.
The cabinet adopts new generation technology and is stronger.



Vertical and Split Controller

The overall structure design is reasonable and the built-in intelligent module is easy to operate. It can monitor the parameters of the generator set in real time and stabilize the performance of the generator set. ATS can be installed in the cabinet to realize automation and realize automatic generator start and stop of mains and backup power.



Parallel Generator and Grid Cabinet

It adopts HGM9510 intelligent control module and various power distribution schemes to realize automatic paralleling and grid connection.

3.2 Four Protection Control System

The four protection and control system integrates intelligent, digital and network technology, which is used for the operation and monitoring of a single generator set, and realizes the start / stop, data measurement, alarm protection and "three remote" functions of the generator set.

The microprocessor technology is used to realize the functions of precise measurement, constant value adjustment, timing and threshold setting of various parameters. All parameters of the controller can be adjusted from the front panel of the controller, or through USB interface of PC, or adjusted and monitored by PC through RS485 interface.

It is suitable for three-phase four wire, three-phase three wire, single-phase two-wire, two-phase three-wire (120V / 240V) power supply of 50Hz / 60Hz system; it can collect and generate three-phase voltage, three-phase current, frequency and power parameters; and it has various protection functions such as over-voltage and under voltage, over-current, high water temperature, low oil pressure, etc., which is suitable for all kinds of EFI (Electronic Fuel Injection) and ESC (Electronic Speed Control) generator sets.



3.3 Self-Starting Control System

Based on a four-protection system, the automatic starting control system has added the function of mains power detection and Auto-Mains Failure (AMF). The utility detection function collects and displays three-phase voltage, three-phase current, frequency and other parameters. With the user's ATS (Automatic Transfer Switching Equipment) or the optional HuaQuan ATS automatic control cabinet, the generator sets can be started automatically when the power supply is abnormal, and the ATS will switch to the power generation side. After the power supply returns to normal, the ATS will switch to the mains. After that, the sets will stop to cool and wait for the next operation, which realizes the full-automatic switching of unpeople power consumption.



- Standard Module
- Auto-Mains Failure (AMF) Module
- DSE7320
 - AMF25
 - HGM6120

AMF

AMF refers to the Auto-Mains Failure function; that is, the control module detects the mains under-voltage, voltage loss, and phase loss, determines the mains failure, and sends an auto-start command to the generator set, and the unit runs to the rated Automatically closes after the speed voltage is reached, replacing the mains power supply.

3.4 Parallel Control System

Based on self-starting, the parallel control system adds a parallel function (automatic synchronization function), which can automatically adjust the operation of the generator sets (regulated by GOV and AVR), according to the voltage, phase sequence, and frequency of other generating units. After the synchronization is completed, it will automatically send the closing command to complete the parallel operation, which is more rapid, accurate and safer than the old manual parallel operation. Compared with single system, the parallel control system is more flexible, which can maintain the normal operation of other units and open one or more units according to the load conditions.

ORIGINAL IMPORTED
PARALLEL CONTROL
MODULE

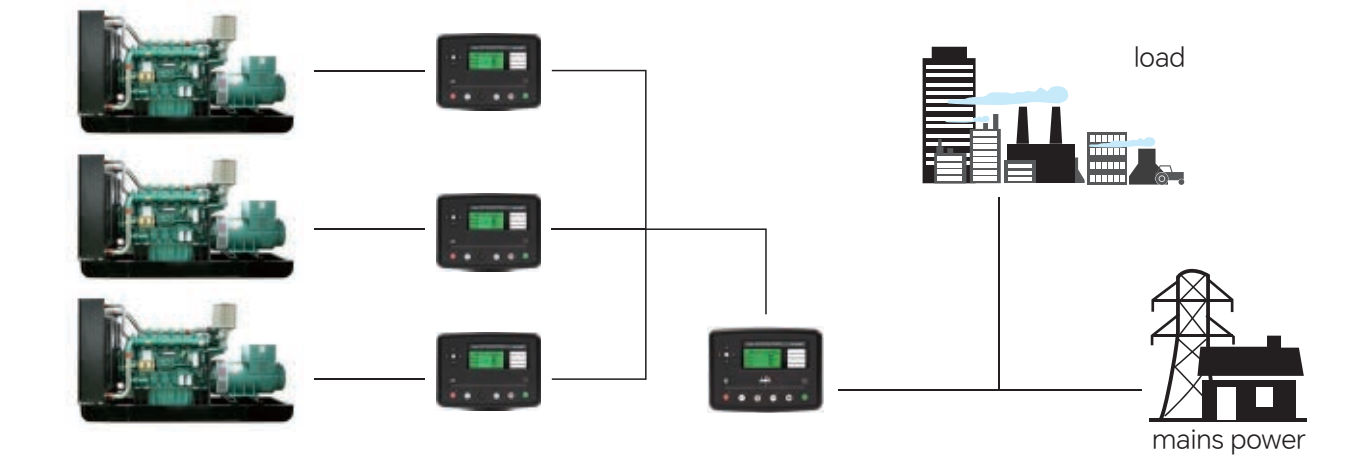
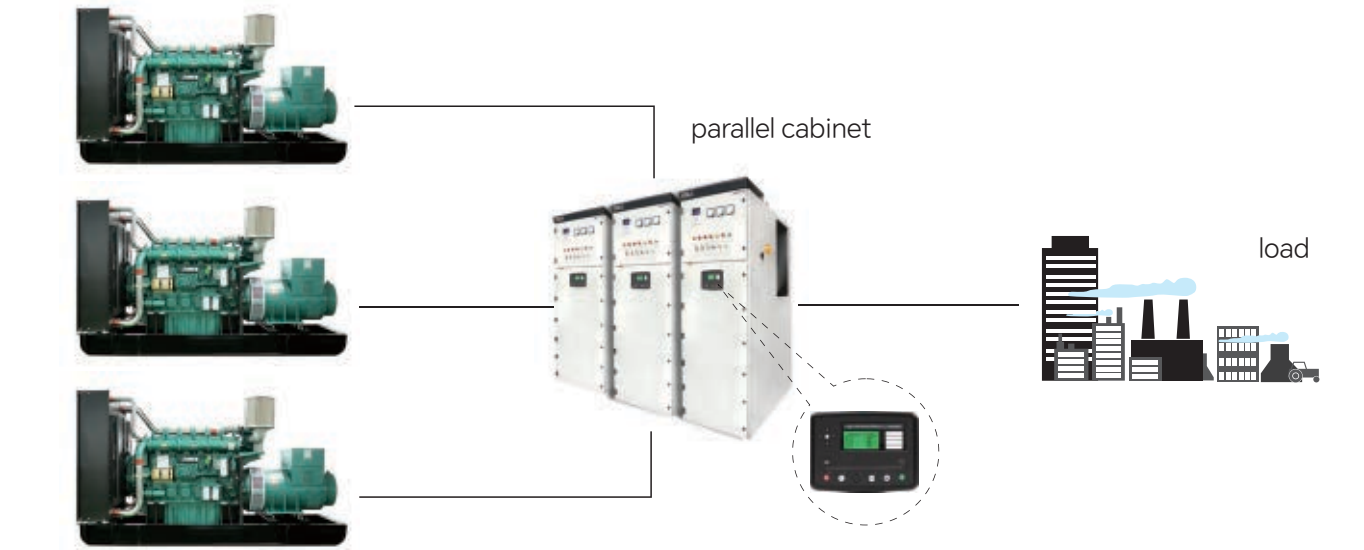
Meet complex and diverse load
distribution needs

- Start the units sequentially
- Realize load peak reduction adjustment
- Automatically balance the running time
of each generator set
- Automatically adjust voltage and
frequency matching
- Automatically adjust the distribution of
active and reactive power
- Help customers use diesel generator
sets more energy-saving and
environmentally friendly



3.5 Grid-Connected Control System

On the basis of self starting, the grid connected control system adds the grid connection function (auto-matic synchronization function), which can automatically adjust the operation of the generator set (regulated by GOV and AVR) according to the voltage, phase sequence and frequency of the municipal power supply. After the synchronization is completed, the grid connection control system can automatically send the closing command to complete the grid connection. Compared with other control systems, the grid connected control system can solve some special needs of users, such as the biogas generating set of the farm, which can generate electricity 24 hours a day by using the grid connected control system, which can directly supply power to the farm together with the power grid, so as to achieve the purpose of saving electricity charges. It can also be used when opening large equipment when the transformer capacity is insufficient.



4 Electric Power Engineering General Contracting

Huaquan Power's main business includes general contracting of power construction projects, power design, power engineering construction, substation operation, power testing, power training, etc., production and sales of high and low voltage power distribution equipment, transformers, power generation equipment, etc.

The business involves: general contracting of power engineering construction, high and low voltage lines and high and low voltage power distribution room renovation and capacity expansion, high and low voltage power distribution room maintenance services, sales of high and low voltage power equipment, power engineering and cost consulting, power and electrical design.

Product certification



CCC type test report



CQC type test report



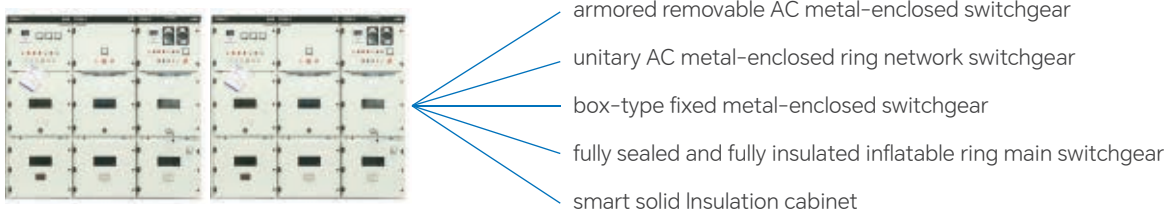
Inspection Report



4.1 Distribution Cabinet

High Voltage Switchgear

It is mainly used for the control and protection of the power system. It can not only put part of the power equipment or lines into or out of operation according to the needs of the power grid operation, but also can quickly remove the faulty part from the power grid when the power equipment or lines fail, thereby ensuring that there is no fault in the power grid. The normal operation of the faulty part and the safety of equipment and operation and maintenance personnel. Therefore, high-voltage complete equipment is a very important power transmission and distribution equipment, and its safe and reliable operation is of great significance to the safe and effective operation of the power system.

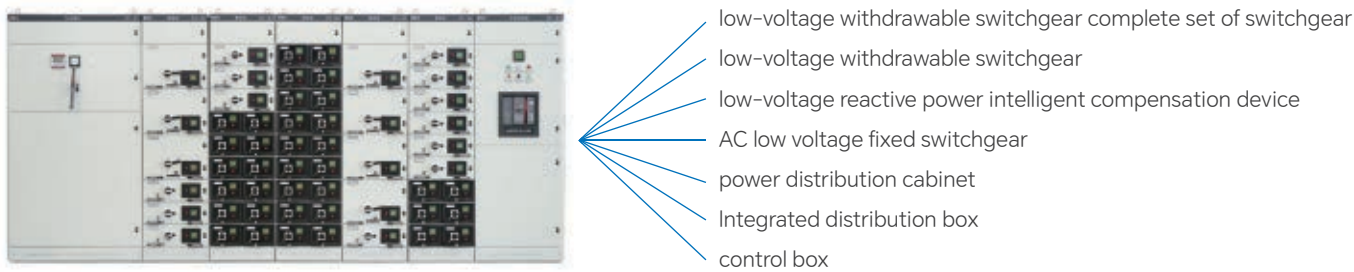


- The cabinet structure adopts assembled type, and the circuit breaker adopts handcart floor-standing structure;
- Equipped with a new type of composite insulated vacuum circuit breaker, which has the characteristics of good interchangeability and easy replacement;
- All operations can be performed with the cabinet door closed;
- The interlocking between the main switch, handcart and switch cabinet door adopts mandatory mechanical locking method to meet the five prevention functions;

Low Voltage Switchgear

Huaquan low-voltage switchgear is suitable for systems with AC 50HZ/60HZ and rated working voltage 660V and below. As a control device for various power generation, transmission, distribution, power conversion and power consumption, it can be widely used in power distribution systems such as various industrial and mining enterprises, residential areas, and municipal construction.

Comply with relevant electrical standards and have relevant power distribution functions and stable performance.



- It adopts an assembled combined structure, and the basic skeleton is assembled from special profiles;
- The parts are highly versatile, have good applicability and have a high degree of standardization;

4.2 Box Type Substation

The prefabricated cabins and box-type substations developed and produced by Huaquan are suitable for residential quarters, urban public substations, bustling downtowns, construction power supplies, etc. Users can choose box-type substations according to different operating conditions and load levels. The Huaquan box-type substation has high safety, and the secondary computer integrated automation system can realize unmanned operation. The whole station is intelligently designed, and the protection system adopts the micro-computer integrated automation device of the substation. Distributed installation is adopted, which realizes “four telemetry control” , including collection, signal, control and adjustment, which can realize remote monitoring. Factory prefabrication, flexible combination, small footprint and beautiful appearance.



Product Performance and Features

- Fully enclosed design;
- High protection level;
- Strong intelligent protection function;
- Good reliability;
- Fully insulated structure;
- Modular structure design;
- Mobility;



4.3 Transformer

The transformer can convert the grid voltage into the voltage required by the system or load, and realize the transmission and distribution of electric energy. By applying new technology on a power distribution equipment, Huaquan Power Transformer is energy-saving and efficient, and conforms to the national standard GB1094 "Power Transformer".

Product Classification and Scope of Application

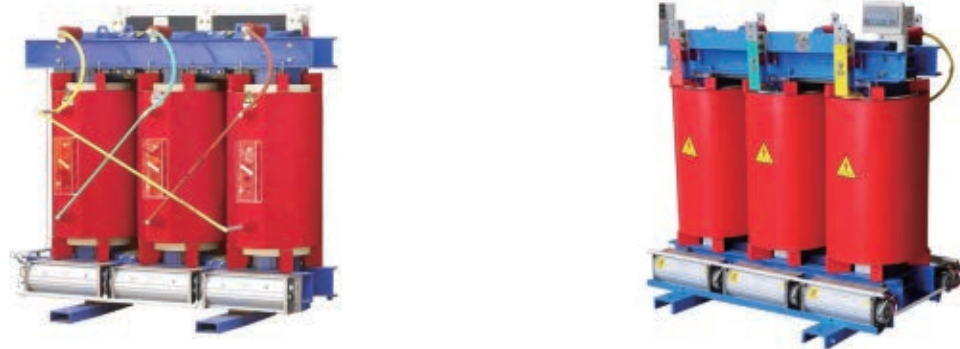
Oil immersed transformer

The core of the oil-immersed transformer is made of high-quality silicon steel sheets, which effectively reduces no-load losses. All fasteners are reinforced to ensure good sealing and prevent oil aging. It is used in various places such as industrial and mining enterprises, agriculture, civil buildings and outdoor power distribution.



Dry-type transformer

The high-voltage winding of the dry-type transformer is made of enameled copper wire, the low-voltage winding is made of copper foil, and the high-voltage winding is filled with glass fiber felt and cast with epoxy resin in a vacuum state. After curing, it forms a solid whole with high mechanical strength and low partial discharge. , high reliability. This transformer is suitable for high-rise buildings, commercial centers, airports, stations, subways, petrochemical industries and other closed places.



5.1 Energy Storage Power Supply

The energy storage power supply is powered by a rechargeable battery. The battery capacity is generally 192Wh~4800Wh, and the output power is mainly 150W~3000W. Generally equipped with 2 to 4 AC sockets, 2 to 4 Type-A USB charging ports, 1 to 2 Type-C fast charging ports, 12V socket, LED lighting, supporting a variety of mainstream ports. With high-power charging scheme, it can be fully charged in about 2 hours.

The energy storage power supply adopts the original zero cycle ferrous lithium phosphate cell that meets the automotive standards or ternary lithium cell, with a cycle life of more than 2000 times. It has the characteristics of small volume, light weight and high safety factor. The main control adopts 32-bit digital signal processing chip, sinusoidal AC output. Multiple DC output outlets can be used at the same time to meet the power supply needs of a variety of digital products.



National standard drafting unit



Group standard setting unit



EU CE certification



EU CE certification



US FCC certification



EU RoHS certification



US UL2743 Amazon Report



US C-TICK-TRF Report



US Supplier Declaration of Conformity

Family Portrait of Energy Storage Power Products

HQDY-A series

0.5kW 0.6kWh
1kW 1.2kWh
2kW 2.4kWh
3kW 4.8kWh

HQDY-B series

0.3kW 0.384kWh 0.5kW 0.46kWh 0.6kW 0.46kWh 1.5kW 0.92kWh

Widely Used

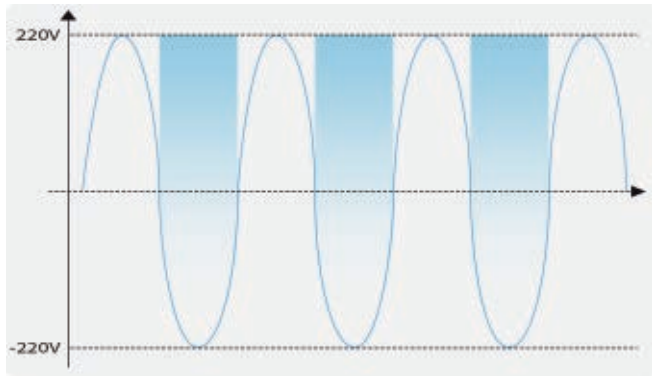
self-driving tour

outdoor construction

aerial photography

family emergency

Advantages of Energy Storage Power Supply



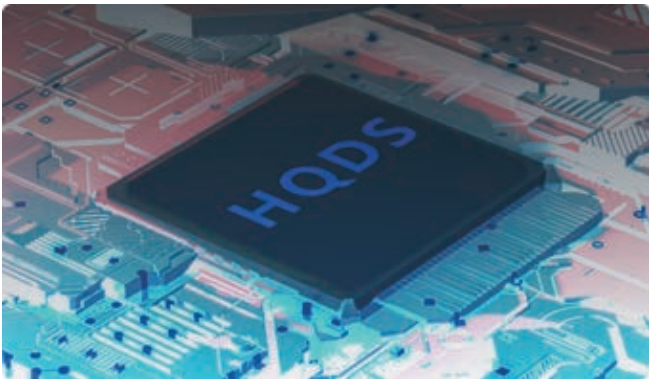
sine wave output, stable performance



ferrous lithium phosphate battery, durable battery



multiple outputs, easy to use electricity



HQDS intelligent protection system, safer to use

It has various protection mechanisms such as short-circuit protection, over-temperature protection, over-voltage protection, over-discharge protection, and overload protection.



LED display screen with backlight function, the display is simple and intuitive, no matter what environment you are in, you can clearly understand the discharge power, charging power, discharge current, charging current, discharge time, charging time, battery remaining precise parameter for the remaining percentage of the battery. battery remaining The precise parameter of the percentage.



The endless solar impulse solution keeps your outdoor trips powered up



Suitable for most electrical equipment on the market



5.2 Energy Storage Power Station

- * Designed specifically for smart grids and smart micro grids, accepting grid dispatching, cutting peaks and filling valleys;
- * With the function of setting the working mode of time period, set a reasonable working method according to the characteristics of the local power grid;
- * The mode is divided into grid-connected (charge-discharge) operation and independent isolated grid operation. It can control active power and reactive power output according to the instructions of the grid dispatching department, and has the ability to operate at full capacity in four quadrants;
- * RS485, CAN bus and other communication interfaces are optional, standard communication protocol, realize remote monitoring;



- *Adopt 32-bit DSP control core driver to improve power station reliability.
- * Has a comprehensive power station protection scheme and complete self-detection and protection functions. It will stop and work when a system failure occurs to protect the safety of the system; the power station has protection functions such as overheating, overload, overcurrent, short circuit, and drive protection to ensure reliable and stable operation of the power station;
- *Supports RS485, Ethernet communication, optional CAN to meet customer remote monitoring and other functions; can display AC and DC side voltage, current, working mode, operating status, fault information, etc., and can upload relevant data to the remote host computer through the communication interface , and can start, stop, parameter settings and other operations on the power supply through the host computer
- * The energy storage power station has DC overvoltage, undervoltage protection, overcurrent protection, input reverse connection protection, AC undervoltage/overvoltage protection, overload protection, overheating protection, over/underfrequency protection, three-phase unbalance protection and alarm, AC reverse phase sequence protection and alarm function.
- * The operating status of energy storage power stations is highly visible. The touch screen serves as the human-machine interface. Through touch operation, real-time operating data, real-time fault data, historical fault data, etc. can be clearly displayed.

Scope of Application

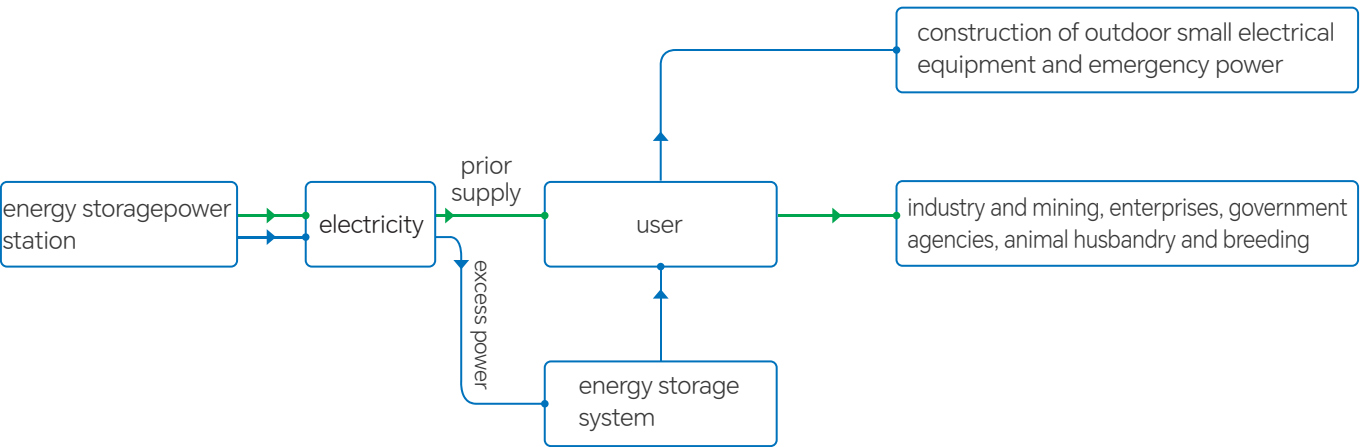
- Power system related application scenarios:
- User-side energy storage applications:
- ★ Substation
 - ★ Thermal power plant, thermal power plant
 - ★ Photovoltaic power plants, wind power plants
 - ★ Charging stations (integrated optical storage and charging), industrial parks, data centers, communication base stations, islands, hospitals, shopping malls
 - ★ Military camps, government buildings, pastoral ecological parks, banks, hotels

Energy Storage Power Station

It adopts Huquan high-speed mobile quiet generator set equipped with Huquan self-research 3kW energy storage power supply. Energy storage power supply adopts lithium iron phosphate cell, which supports fast charging, ultra-large capacity, ultra-long endurance and multi-port output; The generator set supplies power to the equipment and stores the excess power in the energy storage power supply, which is coordinated and complementary with the generator set. The generator set is applied to the large-scale power consumption scenario, and the energy storage power supply is applied to the small-scale power consumption scenario, which greatly facilitates the power consumption demand of users.



Working Principle and Scope of Application



Parameter Configuration

unit power	Unit size	Number and power of energy storage power sources	Trailer type	speed
30kW	4250-1700-2067mm	Equipped with 2 3kw energy storage power supplies	High-speed mobile silent trailer	≤80km/h
50kW	4250-1700-2067mm	Equipped with 2 3kw energy storage power supplies	High-speed mobile silent trailer	≤80km/h

5.3 Photovoltaic Power Station

Photovoltaic power stations use the photovoltaic effect of semiconductor materials to convert solar radiation energy into electrical energy and store it in the battery pack. Combined with the high-speed trailer chassis, it can meet the needs of convenient, fast and environmentally friendly outdoor electricity consumption. Large capacity, provides a variety of energy replenishment methods.

Photovoltaic power stations are mainly composed of solar panels, controllers, high-speed trailer chassis, battery packs and inverters.



Scope of Application

Zero-carbon smart parks, base stations, mountainous areas, island fishing villages, road construction, border posts, emergency rescue, etc.



Ultra-high power single-sided modules

405W
maximum output power

0 ~ +5W
power tolerance

21.1%
maximum efficiency

Product Performance and Features

*Using advanced multi-busbar half-chip technology to convert solar light with higher efficiency

* Waterproof and pressure-resistant, tempered for protection, it can store energy even in rainy days. Can effectively deal with rain, snow, hail and other weather conditions

* Half-cutting technology reduces the resistance of electronic welding ribbons; non-destructive cutting technology makes the cutting surface smooth and crack-free

* High-density packaging technology further reduces battery gaps and optimizes power and efficiency

Parameter Configuration

model	HQDY-30-52		
Battery Type	LITHIUM IRON PHOSPHATE	Inverter power (W)	30,000
Number of battery modules	10	AC output voltage (V)	400AC
Rated voltage(V)	256DC	AC output frequency (Hz)	50
Rated capacity(Ah)	204	Display	TOUCH SCREEN
Voltage range (V)	160 ~ 292DC	Size: L*W*H(mm)	4133*1880*2435
Rated energy (kW·h)	52	Weight(kg)	1600
Self-contained photovoltaic power (W)	1,200	Charging temperature range (°C)	0 ~ 45
Maximum photovoltaic power (W)	39,000	Discharge temperature range (°C)	-20 ~ 60
Standard discharge current (A)	100	Battery cycle life	3000

5.4 Energy Storage System

- Stacked energy storage system
- Rack energy storage system
- Cabinet type energy storage system
- Container energy storage system



charge

electro-discharge



stored energy



emergency power supply



external discharge



peak-load shifting

Application Field of Energy Storage System



Photovoltaic power station energy storage



Household energy storage



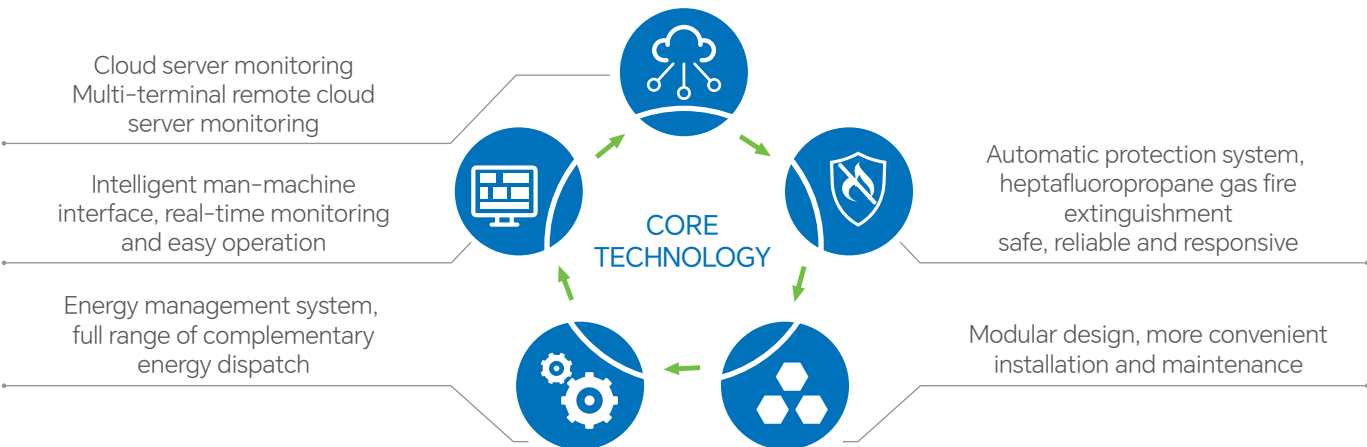
Industrial production energy storage



Communication base station energy storage

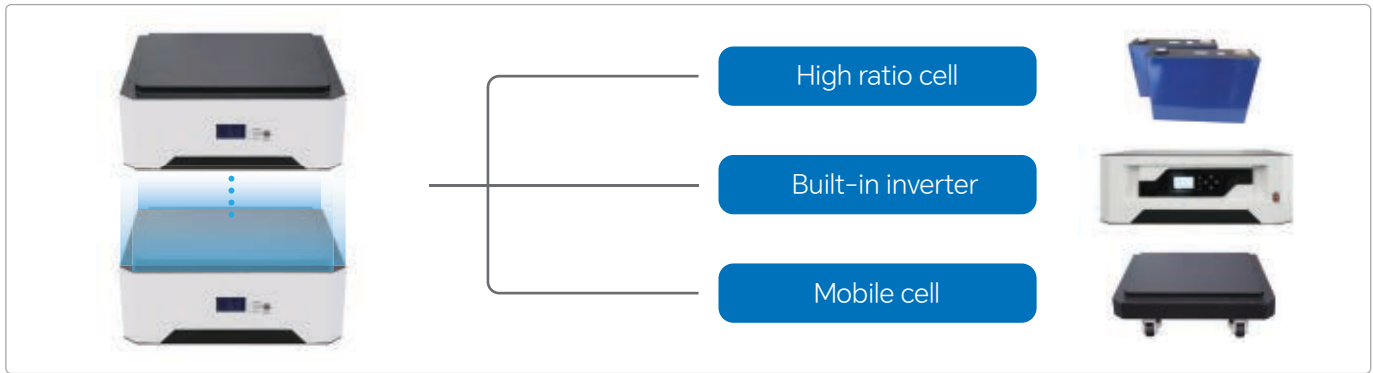
Advantages of Energy Storage System

Ferrous lithium phosphate (LiFePO4) is used as a positive electrode material, which has the characteristics of high safety, long service life and stability. The energy storage system is designed to store solar power and grid power in homes, enterprises, factories, and communication base stations, and supply it to household appliances, enterprise equipment, and communication base stations when needed, thereby reducing energy costs, improving energy efficiency, and achieving sustainable use of energy. The energy storage system can realize the movement, conversion and optimization of energy, and provide a variety of services and functions for the power system, such as smoothing the fluctuations of renewable energy, peak-load shifting, adjusting the frequency and voltage of the grid, improving the stability and reliability of the grid, reducing the cost of electricity and pollution emissions

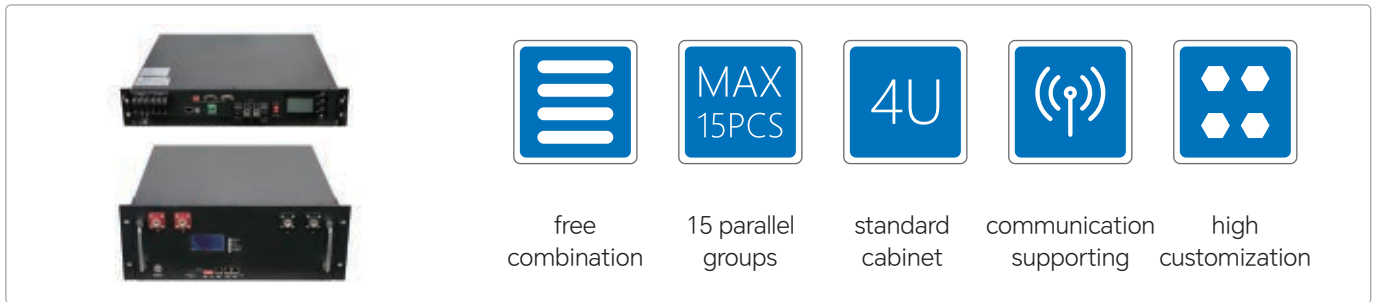


1. Stacked Energy Storage System

- Support a variety of communication protocols;
- Modular structure, easy to install, modular parallel, intelligent visual management;
- High-performance intelligent battery management system, more accurate data, more comprehensive protection;
- Long cycle life;
- Can be used with hybrid inverter, pure sinusoidal output, built-in mppt controller;



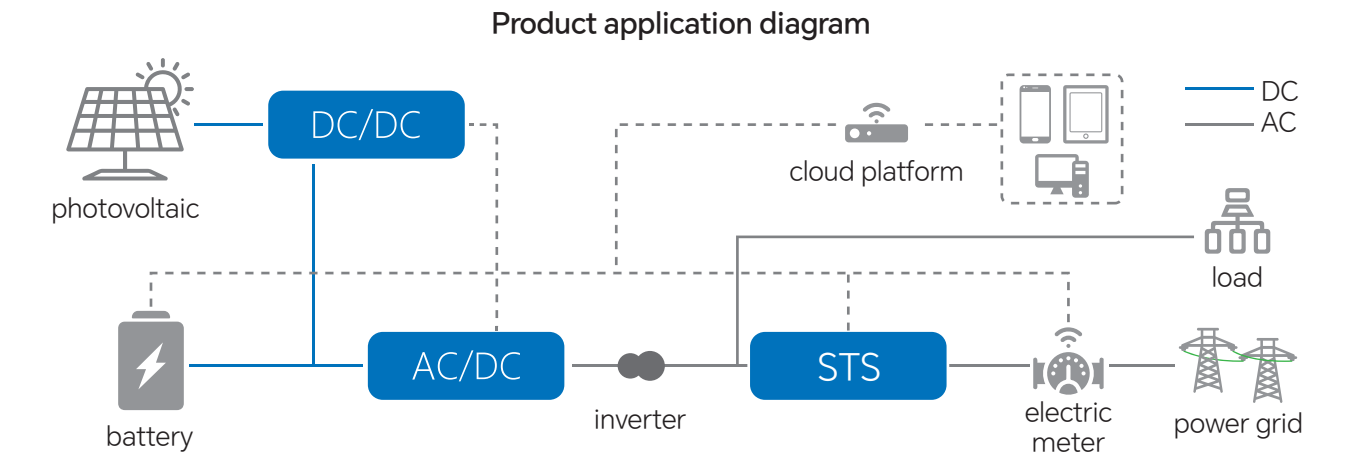
2. Rack Energy Storage System



3. Cabinet Energy Storage System

It can be used for household, finance, medical treatment, industrial equipment, power equipment, environmental monitoring, power instability, energy shortage, power and storage in areas without electricity, and energy-saving optimization of peak cutting and valley filling.

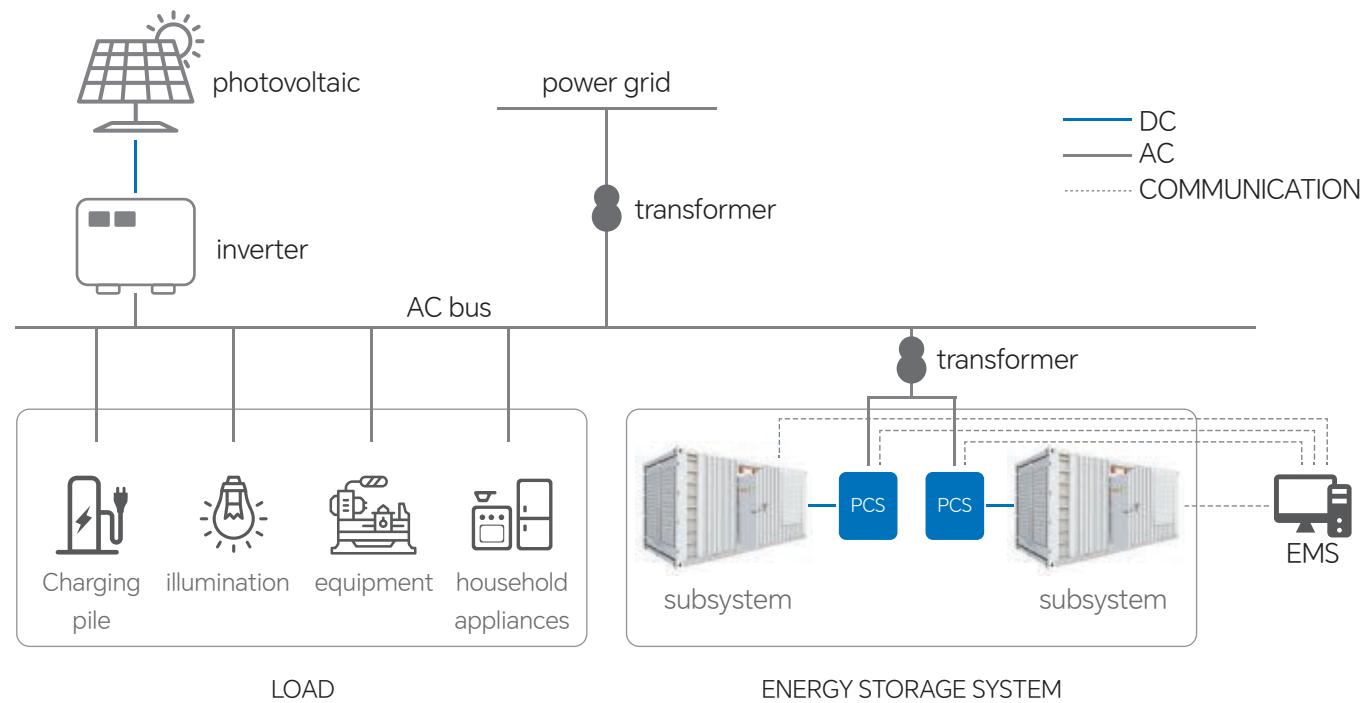
- Man-machine control interface, simple user operation;
- Adopt safe and environmentally friendly ferrous lithium phosphate battery, long cycle life, service life ≥ 10 years;
- Humanized alarm function and perfect online protection function, with high reliability;
- Modular parallel, intelligent visual management, system integration and shipment, on-site access to the load can be used;



4. Container Energy Storage System

It can be used in microgrid systems, commercial complexes, frontier sentry, financial systems, hospitals, data centers and other fields. High product integration, reliability, size customization, long service life.

- Intelligent man-machine interface, clear system information at a glance, simple user operation;
- Adopt safe and environmentally friendly ferrous lithium phosphate battery, long cycle life ≥10 years, safer use;
- Humanized alarm function and perfect online protection function, with high reliability;



parameter	product			
	1.Stacked energy storage system	2.rack energy storage system	3.Cabinet type energy storage system	4.Container energy storage system
project				
model	HQDY-5-15	HQDY-10-20	HQDY-100-215	HQDY-500-1075
Battery Type	Lithium Iron Phosphate	Lithium Iron Phosphate	Lithium Iron Phosphate	Lithium Iron Phosphate
Number of battery modules	3	4	15	5*15
Battery rated voltage (V)	51.2	51.2	768	768
Battery rated capacity (Ah)	300	400	280	1400
Battery voltage range (V)	40 ~ 58.4	40 ~ 58.4	648 ~ 864	648 ~ 864
Battery rated energy (Wh)	15360	20,480	215,040	1,075,000
Battery standard discharge current (A)	150	200	140	700
Inverter power (W)	5,000	10,000	100,000	500,000
AC output voltage (V)	220	220	400	400
AC output frequency (Hz)	50	50	50	50
PV maximum power (W)	4000	8000	100000	500000
MPPT voltage range (V)	60 ~ 130	60 ~ 130	180 ~ 800	180 ~ 800
Display	LCD	LCD	touchscreen	touchscreen
Size: L*W*H(mm)	555*495*1315	600*700*1510	2360*1600*1000	6100*2500*2900
Weight(kg)	158	276	2500	19000
Charging temperature range (°C)	0 ~ 45	0 ~ 45	0 ~ 45	0 ~ 45
Discharge temperature range (°C)	-20 ~ 60	-20 ~ 60	-20 ~ 60	-20 ~ 60
cycle life	3000次	3000次	6000次	6000次
safety certificate	CE,FCC,ROHS, RCM	CE,FCC,ROHS,RCM	CE,FCC,ROHS,RCM	CE,FCC,ROHS,RCM
shipping report	UN38.3,MSDS	UN38.3, MSDS	UN38.3, MSDS	UN38.3, MSDS

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Serve

SERVICE

Service Advantages

Global Strategy

Customers

Service Advantages

Customer is the foundation of enterprise survival. Let the user satisfaction is our eternal work direction. HQ Power customer service team is, professional, dedicated, responsible; 5A customers service grade, quality excellence, focusing on experience; HQ Power cloud factory, HQ Power cloud online intelligent control platform, customization, all that let users worldwide feel the purchase experience of “assured buying, comfortable using,” which enables customers who choose and use Huaquan generator sets to obtain full rights and interests protection.

In service guarantees, SHANDONG HUAQUAN POWER CO., LTD. Is at the leading level of our industry. Product life-cycle management has been implemented and the overseas service network has been improved and further enhanced.



Internet Plus service: the WeChat official account “Huaquan Group” allows clients to make appointments and requirements and to consult with an easy click, realizing Huaquan’s service is within easy reach.



Global Strategy

Ever since the International Department fulfilled its transition from a secondary section in the sales company to independent department under the direct administration of Huaquan Power, its organizational structure and management system were greatly improved and overseas distributors and aftersale service agents network was further optimized and international sales volume has been increasing rapidly, and market structure has reached the equilibrium.

Huaquan products have come to more than 60 countries in South East Asia, Middle East, Latin America, Africa and East Europe. The products for export are determined gradually, founding a solid base of reliable product choices.



Customers

Huaquan generating sets are advanced and well-designed. They have significant characteristics such as mature technology, stable performance, economy, and long running time. They are widely used in industrial and agricultural production, engineering construction, power communications, medical treatment and public health, commercial offices, and public service. After years of hard work, Huaquan has become a high-quality supplier of China State Construction Engineering Group, Gree Group, China State Construction Bridge Corporation, major national banks, and data centers, and has established long-term strategic partnerships with them to promote and develop together.

HUAQUAN CUSTOMER VISIT

