



益兆新能源
YIZHAO XIN NENG YUAN

天津益兆新能源科技有限公司
益兆钢铁实业(天津)有限公司

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引领低碳经济

Lead Low Carbon Economy

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精益求精 诚兆未来

励志为光伏能源产业发展奋斗!



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中国·天津

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而且成为超级狼

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ENTERPRISE PROFILE

企业简介

天津益兆新能源科技有限公司成立于 2015 年,专注于集中式、分布式、农(渔)光互补、跟踪可调试、光伏车棚、柔性支架电站等清洁能源发电的高新技术企业。公司是集研发设计生产制造为一体的综合大型企业,注册资金 1 亿元,年产能 50 万吨以上,并逐年实现稳定增长。公司占地面积 150 余亩,厂房面积 60000 余平米,现有职工 300 余人,其中高级技术中大专以上学历 50 余人,后勤保障完备。公司坐落于中国钢铁之都,天津市大邱庄开发区,地处工业枢纽,西邻京沪高速,南接京唐高速,北距天津外环 30 公里,距天津港 50 公里,优越的生产环境和地理位置,便捷的交通条件为我们生产优质的产品和服务提供的必备的条件。

公司现拥有自动先进的光伏太阳能支架、抗震支架、CZU 型钢、异型钢光伏冷弯生产机组等,其中地面电站冷弯成型机 30 余条,分布式 15 条,锌铝镁方管、圆管 3 条,BIPV 水槽设备 6 条,锌铝镁纵剪 2 条,自动数控打孔设备 50 余条,60-300T 配件冲压自动冲床 60 余台,二氧保护焊接加工设备 80 余台工位,锯床 8 台,12M*6M*3M 镀锌线 3 条,农业大棚生产线 2 条等设备。已全面实现光伏支架产品自主研发、设计、生产及销售。

Tianjin Yizhao New Energy Technology Co., Ltd. was established in 2015 and is a high-tech enterprise specializing in clean energy power generation, such as centralized, distributed, complementary agriculture (fishing), tracking and debugging, photovoltaic car sheds, flexible support power stations, etc. The company is a comprehensive large-scale enterprise that integrates research, development, design, production, and manufacturing, with a registered capital of 100 million yuan and an annual production capacity of over 500000 tons, achieving stable growth year by year. The company covers an area of over 150 acres, with a factory area of over 60000 square meters. Currently, there are more than 300 employees, including more than 50 with advanced technical education or above. The logistics support is complete. The company is located in the steel capital of China, Daqiu Zhuang Development Zone, Tianjin, and is an industrial hub. It is adjacent to the Beijing Shanghai Expressway to the west, the Beijing Tang Expressway to the south, 30 kilometers to the north of Tianjin Outer Ring Road, and 50 kilometers to Tianjin Port. The superior production environment and geographical location, as well as convenient transportation conditions, are essential conditions for us to produce high-quality products and services.

The company currently has automated and advanced photovoltaic solar brackets, seismic brackets, CZU steel, and special-shaped steel photovoltaic cold bending production units, among which there are more than 30 ground power station cold bending forming machines, 15 distributed machines, 3 zinc aluminum magnesium square and circular pipes, 6 BIPV water tank equipment, 2 zinc aluminum magnesium longitudinal shearing machines, more than 50 automatic CNC drilling equipment, more than 60 60-300T accessory stamping automatic punching machines, more than 80 oxygen protection welding processing equipment workstations, and 8 sawing machines. Three 12M * 6M * 3M galvanizing lines and two agricultural greenhouse production lines. We have fully achieved independent research and development, design, production, and sales of photovoltaic bracket products.



公司主要经营:光伏支架、抗震支架、管廊支架研发、制造、安装、销售;钢结构焊接加工生产、管材、型材、农业大棚配件等业务。

其中,光伏产品包括:山地平地固定式支架系统、单柱跟踪式支架系统、手动电动可调节支架系统、光伏车棚发电系统、农(渔)光互补发电系统、柔性支架发电系统、屋顶分布式支架系统。

公司下辖单位:益兆钢铁实业(天津)有限公司、天津市晟鑫泰进出口贸易有限公司、天津国益金属纵剪有限公司。

Company's main business: R&D, manufacturing, installation and sales of photovoltaic supports, seismic supports and pipe gallery supports; Welding steel structure processing and production, pipes, profiles, agricultural greenhouse accessories and other businesses.

Among them, photovoltaic products include: mountain flat fixed bracket system, single column tracking bracket system, manual electric adjustable bracket system, photovoltaic shed power generation system, agricultural (fishery) light complementary power generation system, flexible bracket power generation system, and roof distributed bracket system.

The company's subordinate units: Yizhao Iron and Steel Industry (Tianjin) Co., Ltd., Tianjin Shengxintai Import and Export Trade Co., Ltd., and Tianjin Guoyi Metal Slitting Co., Ltd.



2015 年

公司成立于 2015 年

The company was established in 2015.

1 亿元

注册资金 1 亿元

Registered capital of 100 million yuan.

60000+ m²

厂房占地面积 60000 余平方米

The factory covers an area of over 60000 square meters.

300+ 人

现有职工 300 余人

There are more than 300 employees.

我公司严把质量关,生产管理严格符合质量体系认证,在目前激烈的市场环境下,在过去几年中苦练内功,成功的提高了公司整体素质和市场竞争的能力,真正做到顾客第一、服务第一、质量第一、并保持在工程质量验收中合格率达到 100%,赢得了各界用户的好评,为客户提供优质的产品及服务是我公司企业文化不变的核心。

公司质量方针: 精良技术,优质服务,客户满意,力争第一

Our company strictly controls the quality, and the production management strictly conforms to the quality system certification. In the current fierce market environment, we have worked hard in the past few years, successfully improving the overall quality and market competition ability of our company, truly achieving customer first, service first, and quality first, and keeping the qualified rate of engineering quality acceptance up to 100%, which has won the praise of users from all walks of life. Providing customers with quality products and services is the core of our company's corporate culture.

Company's quality policy: excellent technology, excellent service, customer satisfaction, striving for the first place.

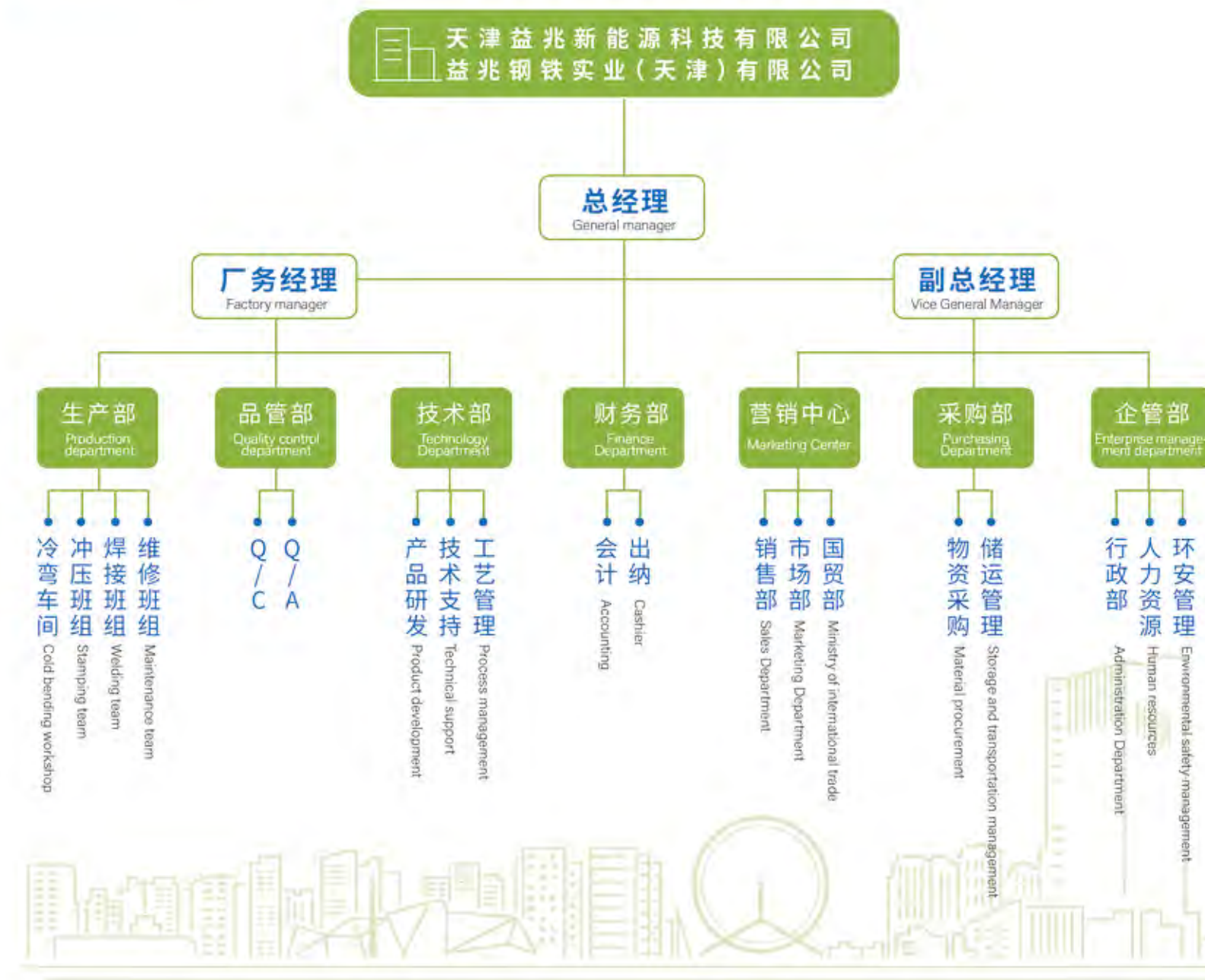
公司总经理徐斌携全体员工竭诚欢迎您莅临公司指导洽谈,期待与您的合作

Xu Bin, the general manager of the company, and all the staff sincerely welcome you to visit the company for guidance and negotiation, and look forward to cooperating with you



ORGANIZATIONAL STRUCTURE

组织架构



QUALIFICATION CERTIFICATE

资质证书



产品认证证书 Product certification





检验、评估证书 Inspection and evaluation certificate



著作权登记证书 Copyright registration certificate



专利证书 Patent certificate



WORKSHOP DISPLAY

车间展示



EQUIPMENT DISPLAY

设备展示



PROCESS INTRODUCTION

工艺介绍

型钢工艺流程 Section steel process flow

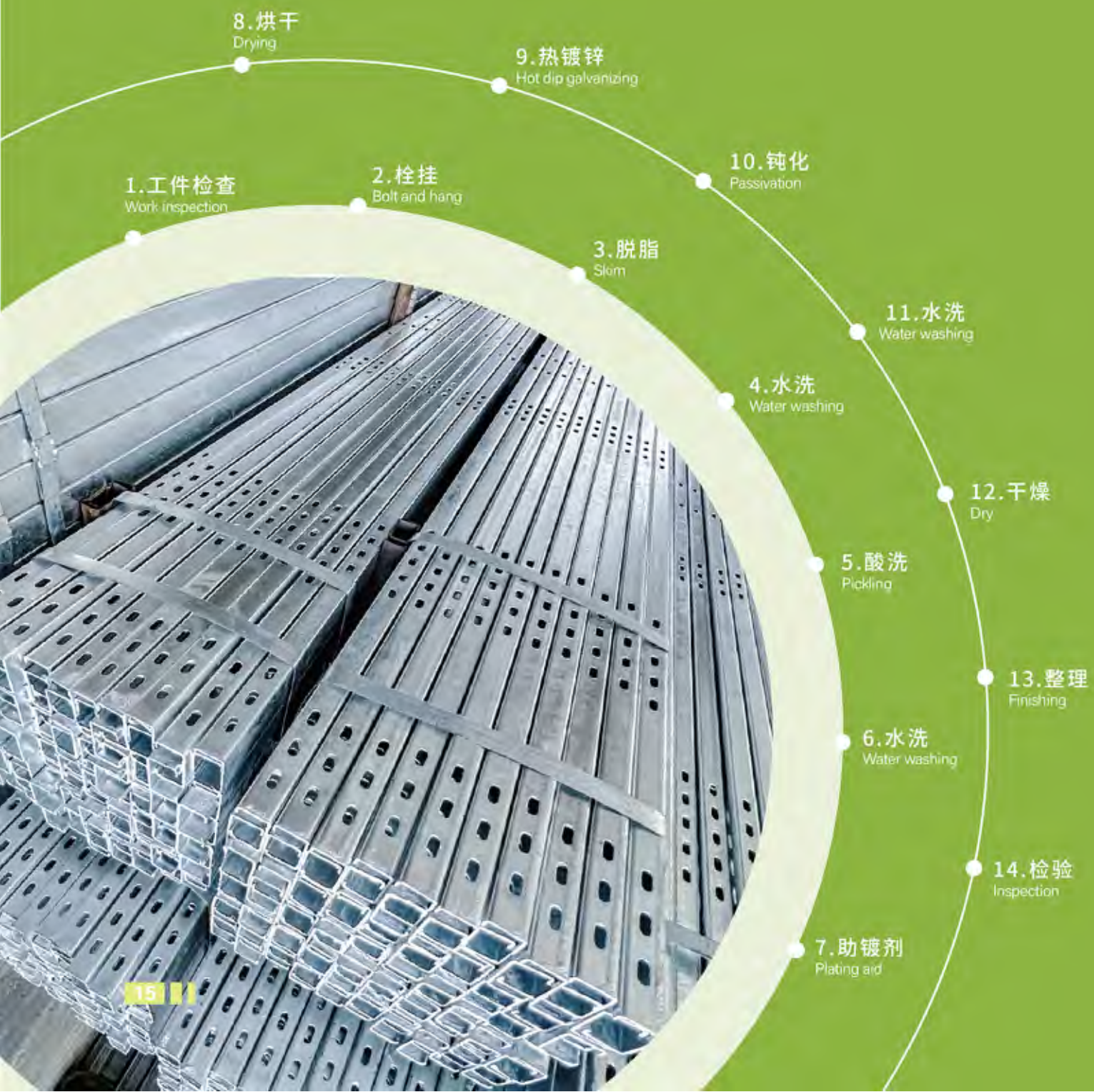
● 关于檩条、横梁、纵梁工艺流程 Process flow of sandalwood strip, cross beam and longitudinal beam

- 1. 原材料库存**
Raw material inventory
根据订单, 原材料订购
Order raw materials according to the order
- 2. 检验**
Test
原材到厂检验, 包含外观、材质、膜厚、壁厚、屈服强度、抗拉强度、盐雾试验等
Raw materials are inspected at the factory, including appearance, material, film thickness, wall thickness, yield strength, tensile strength, salt spray test, etc.
- 3. 纵剪**
Longitudinal shear
原材验收合格后, 根据所需带宽, 上线纵剪
After the raw material is accepted, it will be cut on line according to the required bandwidth
- 4. 检测**
Testing
对纵剪后原材料进行检测
Test the raw materials after longitudinal shear
- 5. 试生产**
Trial production
机组调试, 试生产
Unit commissioning and trial production
- 6. 批量生产**
Volume production
试生产合格后, 批量生产
After the trial production is qualified, mass production is carried out
- 7. 检验**
Test
检验各节点参数, 包含外观、长度、宽度、高度、厚度、内外径等
Check the parameters of each node, including appearance, length, width, height, thickness, inner and outer diameters, etc.
- 8. 冲孔**
Punching
数控机组针对型材进行定点冲孔
The numerical control unit carries out fixed-point punching on profiles
- 9. 检验**
Test
检验各节点孔径、孔距、孔规格等
Check the aperture, hole spacing and hole specifications of each node, etc.

● 冷弯工艺流程 Cold bending process



热镀锌防腐处理 Hot dip galvanizing anti-corrosion treatment



焊接流程 Welding process



PHOTOVOLTAIC PRODUCTS

光伏产品 智能跟踪系统 INTELLIGENT TRACKING SYSTEM

● 斜单轴跟踪系统 Oblique uniaxial tracking system

斜单轴跟踪系统相对传统固定安装支架可提升发电量约为20%以上。
The oblique uniaxial tracking system elevates power generation by about 20% over the conventional fixed mounting bracket.



兼容大组件
Compatible large components

高可靠性
High reliability

高发电量
High power generation

低施工成本
Low construction cost

系统特点 System characteristics

1. 安装容量大: 单个阵列最大安装量为50KWP-300KWP;
2. 多单元联动: 结构稳定, 性价比高, 适用于大型电站的投资建设;
3. 免维护设计: 采用最新的高分子材料轴承, 能有效防止沙尘、雨雪的侵蚀;
4. 智能化控制: 实现对各种天气的自动识别保护;
5. 阴影规避: 有效避免早晚时分阴影遮挡问题。

1. Large installation capacity: single array maximum installation is 50kwp-300kwp;
2. Multi unit linkage: stable structure, cost-effective, suitable for the investment and construction of large power plants;
3. Maintenance free design: with the newest macromolecular material bearings that effectively prevent the attack of dust and rain and snow;
4. Intelligent control: achieving automatic recognition protection against various weather;
5. Shadow aversion: effectively avoid the shadow occlusion problem during early and late hours.

● 平单轴跟踪系统 Flat uniaxial tracking system

平单轴跟踪系统相对传统固定安装支架可提升发电量约为15%以上。
The flat uniaxial tracking system elevates power generation by about 15% over the conventional fixed mounting bracket.



系统特点 System characteristics

1. 平单轴跟踪系统经过科学设计和精密计算, 充分保证跟不见的机械强度;
2. 高分子材料轴承, 能有效防止沙尘、雨雪侵蚀;
3. 反阴影设计, 有效避免早起分的阴影遮挡问题, 提高发电量;
4. 智能电气控制, 可保证长期运行可靠, 便于维护。

1. A flat uniaxial tracking system is scienti fi cally designed and tightly calculated to adequately guarantee an invisible mechanical strength;
2. Polymer material bearings that effectively prevent dust and rain and snow attack;
3. The anti shadow design, effectively avoiding the early onset divided shadow occlusion problem and improving the power generation;
4. Intelligent electrical control, which can guarantee long-term operation reliable and easy maintenance.

● 双轴跟踪系统 Biaxial tracking system

双轴跟踪系统相对传统固定安装支架可提升发电量约为30%以上。
Compared with the traditional fixed mounting bracket, the two axis tracking system can increase the power generation by more than 30%.



系统特点 System characteristics

1. 单体容量大: 单个方阵安装量为5-10KWP;
2. 安装灵活: 地面使应性强, 无需平整地面即可实现快速安装;
3. 智能化控制: 实现对各种天气的自动识别保护。

1. Large haplotype capacity: individual phalanxes of 5-10kwp;
2. Flexible installation: the floor makes stress strong, allowing quick installation without the need for a flat floor;
3. Intelligent control: achieving automatic identification protection against various weather.

PHOTOVOLTAIC PRODUCTS

光伏产品 地面支架系统 GROUND HOLDER SYSTEM

● 固定式支架系统 Fixed stent system



固定式双立柱支架
Mounted double column holder



固定式单立柱支架
Mounted double column holder

● 固定可调式支架系统 Fixed adjustable stent system



圆弧支撑系统
Arc strut system



屋顶支架系统 ROOF STENT SYSTEM

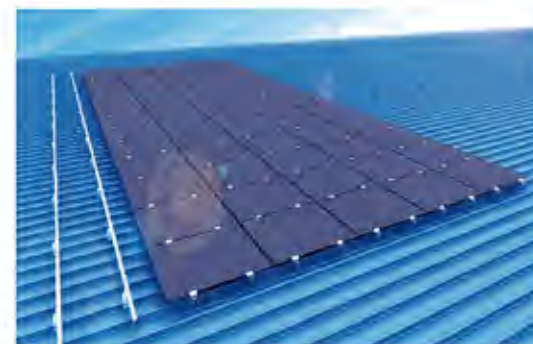
● 瓦屋顶支架系统 Fixed adjustable stent system



系统特点 System characteristics

1. 安装便捷: 特有的铝合金轨道、各型卡扣, 适用性广;
 2. 轻量化设计: 采用优质铝合金材料, 采用力学优化, 重量更轻。
1. Installation convenience: characteristic aluminum alloy tracks, various types of buckles, wide applicability;
2. Lightweight design: using high-quality aluminum alloy materials with mechanical optimization and lighter weights.

● 彩钢屋顶支架系统 Color steel roof support system



系统特点 System characteristics

1. 安装便捷: 特有的铝合金轨道、各型卡扣, 适用性广;
 2. 轻量化设计: 采用优质铝合金材料, 采用力学优化, 重量更轻。
1. Installation convenience: characteristic aluminum alloy tracks, various types of buckles, wide applicability;
2. Lightweight design: using high-quality aluminum alloy materials with mechanical optimization and lighter weights.

● 水泥屋顶支架系统 Cement roof support system



系统特点 System characteristics

1. 外观简介安装便捷;
 2. 标准化零件。
1. Appearance introduction installation is convenient;
2. Standardization of parts.

PHOTOVOLTAIC PRODUCTS

光伏产品 渔光互补支架系统 FISHAI COMPLEMENTARY SCAFFOLD SYSTEM

“渔光互补”是将渔业和光伏发电结合在了一起,通过在水面上设立电池板,建立小型发电站,水面下养殖鱼虾,达到养殖和发电有序结合的模式,从而实现了一地两用。不仅提高了水域的利用效率,也提高了单位面积水域的产值。

Fishers light complementarity "is the integration of Fisheries and photovoltaic electricity generation to achieve a dual-use purpose by setting up battery boards on water surfaces to establish small power stations and farming fish shrimps beneath water surfaces to achieve an orderly combination of aquaculture and electricity generation. Not only improves the use efficiency of the water area, but also improves the output value of the water area per unit area.



系统特点 System characteristics

1. 安装便捷:结构形式简单,操作灵活,可易安装;
 2. 兼容性强:支架系统兼容于组件的不同排列方式;
 3. 适用范围广:适用于各种土质类型;
 4. 绿色环保:无污染,且循环使用。
1. Installation convenience: simple form of structure, flexible operation, easy to install.
2. Strong compatibility: scaffold systems are compatible with different arrangement of components;
3. Wide range of applications: to a wide range of earthy types;
4. Green environmental: free from contamination, and recycled.



棚类支架系统 SHED TYPE BRACKET SYSTEM

● 光伏温室系统 PV greenhouse system

将新能源开发融合到农业经济发展中,是未来综合农业生产体系的发展方向。光伏温室系统,将光伏发电设备与传统农业温室大棚完美结合,实现智能补光、补水与调温功能,具有循环、节能、节地、节水、节时、环保的特点。

Will be integrated into the development of new energy development in the agricultural economy, the future direction of integrated agricultural production systems. Photovoltaic greenhouse systems, photovoltaic power generation equipment and the perfect combination of traditional agricultural greenhouses, intelligent fill light, water and temperature control function, with circulation, energy, land, water, when the festival, environmentally friendly features.



系统特点 System characteristics

1. 温室表面加装太阳能电池板,使温室具有了发电功能,能够更充分地利用太阳能;
 2. 同一块土地上实现了发电与种植同时进行,节约了土地资源,在很大程度上解决了光伏发电与种植业争地的矛盾;
 3. 能够防风和减少蒸发,可以将蒸发量太大或风沙过大造就的不毛之地变为保护条件下的可耕地。如沙漠地区、西北干旱地区等;
 4. 实现一室多用,在条件艰苦的地方除了能供电和进行农业生产外,还具有防风、防雨、防雪、防雹、生产淡水、收集降水等更多功能,可以拓展应用到生活、养殖等方面。
1. Solar panels are installed on the surface of the greenhouse, which makes the greenhouse have the power generation function and can make full use of solar energy;
2. Power generation and planting can be carried out simultaneously on the same land, which saves land resources and largely solves the contradiction between photovoltaic power generation and planting;
3. It can prevent wind and reduce evaporation, and can turn barren land caused by too much evaporation or too much wind and sand into arable land under protected conditions. Such as desert areas and arid areas in northwest China;
4. Realize the multi-purpose of one room. Besides power supply and agricultural production in difficult places, it also has more functions such as wind, rain, snow, hail, fresh water production, precipitation collection, etc., which can be extended to life, breeding and other aspects.

PHOTOVOLTAIC PRODUCTS

光伏产品 棚类支架系统 SHED TYPE BRACKET SYSTEM

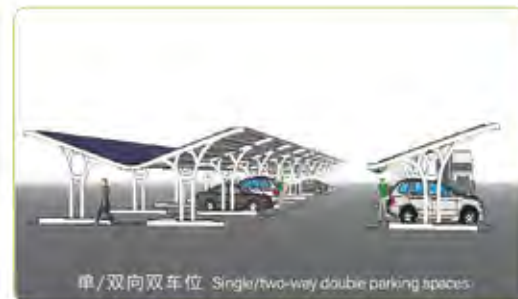
● 光伏车棚系统 Photovoltaic shed system

光伏车棚,一种光伏与建筑相结合中最为简便易行的方式。光伏车棚吸热性好,安装便捷,成本低廉,既充分利用原有场地,又能提供绿色环保的能源。在工厂园区、商业区、医院、学校等建设光伏车棚,可解决露天停车场夏日车内温度高的问题。

Photovoltaic sheds, the most facile way in which photovoltaic is combined with construction. Photovoltaic vehicle sheds are heat absorbing, easy to install, low-cost, and can both make full use of the original venue and provide green and environmentally friendly energy. Construction of PV sheds in factory parks, business areas, hospitals, schools, etc., can solve the problem of high temperature inside summer cars in open car parks.

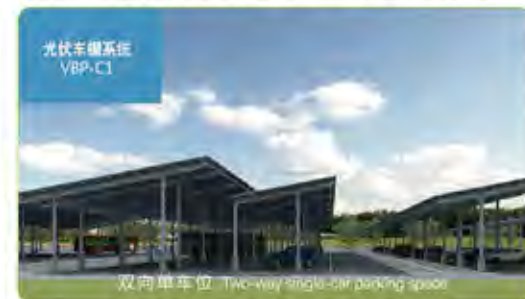
圆管弧形 Circular pipe arc

结构形式:主材均为圆管
Structure: The main materials are round pipes
组件功率:500w
Component power: 500w



圆管大客车棚 Round tube bus shed

结构形式:立柱为圆管
Structure: The upright post is a circular tube
组件功率:500w
Component power: 500w



方管双柱车棚 Square double column carport

结构形式:立柱为方管
Structure: The upright post is a square tube
组件功率:500w
Component power: 500w



方管车棚 Square tube shed

结构形式:立柱为方管
Structure: The upright post is a square tube
组件功率:500w
Component power: 500w



型材拼焊车棚 Sectional welded carport

结构形式:主材为型材
Structure: Main material is profile
组件功率:500w
Component power: 500w



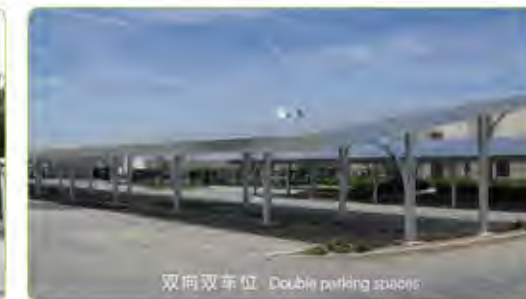
水泥柱板材拼焊弧形车棚 Welded arc carport with cement column and plate

结构形式:立柱为水泥柱
Structure: The column is a cement column
组件功率:450w
Component power: 450w



小弧形车棚 Small arc carport

结构形式:主材均为型材
Structure: The main materials are profiles
组件功率:500w
Component power: 500w



板材拼焊弧形车棚 Tailor-welded arc carport

结构形式:主材均为板材
Structure: The main materials are plates
组件功率:450w
Component power: 450w



H型钢拼焊车棚 H-beam tailor-welded carport

结构形式:主材为H型钢
Structure: The main material is H-beam
组件功率:500w
Component power: 500w



钢板拼焊车棚 Tailor-welded steel carport

结构形式:立柱为板材
Structure: Columns are plates
组件功率:500w
Component power: 500w



PHOTOVOLTAIC PRODUCTS

光伏产品 柔性太阳能支架系统 FLEXIBLE SOLAR SUPPORT SYSTEM

太阳能光伏柔性支架即为在成排的钢索上安装光伏板，钢索两端由刚性支撑连接。同时为了减少两端顶部支撑的弯矩，支撑两端多采用外部张拉斜拉索或者内部刚性斜支撑。索(钢绞线)作为一种主要承重构件，柔性大、质量轻、刚度大。预应力为其提供了足够大的刚度。

Solar flexible support is to install photovoltaic panels on rows of steel cables, and the two ends of the steel cables are connected by rigid supports. At the same time, in order to reduce the bending moment of the top supports at both ends, external tension cables or internal rigid diagonal supports are often used at both ends of the supports. As a main load-bearing component, cable (steel strand) is flexible, light in weight and stiff. Pre-stress provides enough rigidity for it.



高净空
High clearance

大跨越
Great leap

低成本
Low cost

预应力悬索柔性支架结构型式 Structural Type of Prestressed Suspension Cable Flexible Support



撑杆系统、预应力高钒索体系形成了刚性与柔性结合的桁架；
组件索无垂度，组件无方位角，可完全正南布置；
柔性构件几乎无震荡，不会造成组件隐裂；
立柱采用桩柱一体化，便于施工。

The brace system and prestressed high vanadium cable system form a truss with a combination of rigidity and flexibility;
The components have no sag, no azimuth, and can be completely due south;
The flexible component has almost no vibration, which will not cause the component to crack;
Adopt the integration of columns and columns, which is convenient for construction.

适用范围 Applicability

1. 适用山地坡度、起伏较大的地区，同时不受植被高低等因素的影响；
 2. 适用于鱼塘、滩涂等地区，突破传统支架受限于水深、区域大小等条件，通过柔性支架10~30M的大跨度方案优势，以及中间可另设支撑柱等方案，解决鱼塘、滩涂等地区传统支架无法施工及安装的难点；
 3. 适用于污水厂水池顶部，因污水厂水处理工艺的要求，大体积水池内部无法安装支架基础，柔性支架可巧妙规避这一难点，使污水厂水池建设光伏电站成为可能。
1. It is suitable for areas with steep mountain slopes and ups and downs, and is not affected by factors such as vegetation height;
 2. It is suitable for fishing ponds, tidal flats and other areas, breaking through the conditions that traditional supports are limited by water depth, regional size and so on, and solving the difficulties that traditional supports in fishing ponds, tidal flats and other areas can't be constructed and installed through the advantages of the 10-30m long-span flexible supports and the additional supporting columns in the middle;
 3. It is suitable for the top of sewage treatment plant pool. Because of the requirements of sewage treatment process, the support foundation can't be installed inside the large-volume pool, and the flexible support can skillfully avoid this difficulty, making it possible to build photovoltaic power station in sewage treatment plant pool.

PHOTOVOLTAIC PRODUCTS

光伏产品 柔性太阳能支架系统 FLEXIBLE SOLAR SUPPORT SYSTEM

系统特点 System characteristics

1. 它的应用将加大对空间的再利用, 成功解决项目横向跨度大、易腐蚀等传统光伏支架系统存在的难题;
2. 通过悬、拉、挂、撑四大安装方法, 柔性光伏支架可实现上、下、左、右各方向的自由架设, 较好地改善分布式光伏发电系统的支撑方式;
3. 与传统钢架结构方案相比, 柔性光伏支架的用量少、承重小, 造价成本低, 将大大缩短整体施工周期;
4. 柔性光伏支架对场地基础要求小, 预装性强;
5. 柔性光伏支架将更适用于普通山地、荒坡、水池鱼塘以及林地等多种大跨度应用场地, 而且不影响农作物种植及养鱼;
6. 将柔性光伏支架与最新光伏组件及智能发电设备有机配套, 电站的整体可靠性将提高, 安全性能更好, 适用环境能力将增强, 可复制能力得到提升, 更便于推广应用;
7. 抗风能力强。柔性光伏支架、组件系统及专用组件连接件等已通过中国航天空气动力技术研究院的风洞试验(抗超级台风16级)。



1. Its application will increase the reuse of space, and successfully solve the problems existing in traditional photovoltaic support systems such as large horizontal span, easy corrosion and rust;
2. Through the four installation methods of hanging, pulling, hanging and bracing, the flexible photovoltaic support can be freely erected in the upper, lower, left and right directions, which can better improve the support mode of distributed photovoltaic power generation system;
3. Compared with the traditional steel frame structure scheme, the flexible photovoltaic support has the advantages of less dosage, less bearing capacity and low cost, which will greatly shorten the overall construction period;
4. Flexible photovoltaic supports have small requirements for site foundation and strong pre-installation;
5. The flexible photovoltaic support will be more suitable for many large-span application sites such as ordinary mountains, barren slopes, ponds and woodlands, and will not affect crop planting and fish farming;
6. By organically matching the flexible photovoltaic support with the latest photovoltaic modules and intelligent power generation equipment, the overall reliability of the power station will be improved, the safety performance will be better, the environmental adaptability will be enhanced, the replicability will be improved, and it will be more convenient for popularization and application;
7. Strong wind resistance, Flexible photovoltaic supports, module systems and special module connectors have passed the wind tunnel test of China Aerospace Aerodynamics Research Institute (super typhoon resistance level 16).

柔性光伏支架典型应用场景 Typical application scenarios of flexible photovoltaic supports



柔性光伏支架与普通光伏支架对比 Comparison between flexible photovoltaic support and common photovoltaic support

Scaffold form 支架形式 地区分类 Regional classification	常规支架 Conventional bracket	可调支架 Adjustable bracket	柔性支架 Flexible support
荒漠戈壁 Gobi desert	✓	✓	✓
滩涂、鱼塘 Tidal flats and fish ponds	✓	✓	✓
污水厂 Sewage plant	✗	✗	✓
平缓地形山地 Gentle terrain mountainous area	✓	✗	✓
复杂地形山地 Complex terrain mountainous area	✗	✗	✓
混凝土屋顶 Concrete roof	✓	✗	✓
彩钢瓦屋顶 Steel tile roof	✓	✗	✗

✓ : 可用 Available

✗ : 不适用 Not applicable

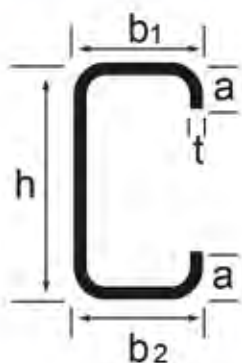
PHOTOVOLTAIC PRODUCTS

光伏产品 光伏配件 (尺寸可定制)

PHOTOVOLTAIC ACCESSORIES (SIZE CAN BE CUSTOMIZED)

型钢产品 Type steel products

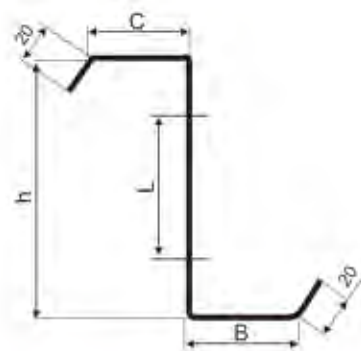
C型钢 C-steel



技术参数 Technical parameter

a: 10-30mm
b: 20-120mm
t: 2.0-3.0mm
h: 20-350mm
材质(Material): Q235B/Q355B/ZAM/S350GD/S420GD
表面处理: 热浸镀锌, 预镀锌, 锌铝镁
Surface treatment: hot dip galvanizing, pre galvanizing, zinc/aluminum/magnesium

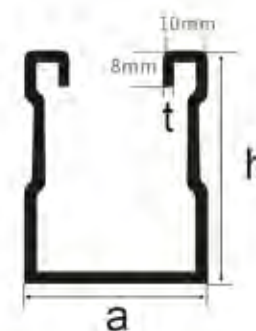
Z型钢 z-steel



技术参数 Technical parameter

h: 82-250mm
b: 40-75mm
a: 20mm
t: 1.5-3.0mm
材质(Material): Q235B/Q355B
表面处理: 热浸镀锌, 预镀锌, 锌铝镁
Surface treatment: hot dip galvanizing, pre galvanizing, zinc/aluminum/magnesium

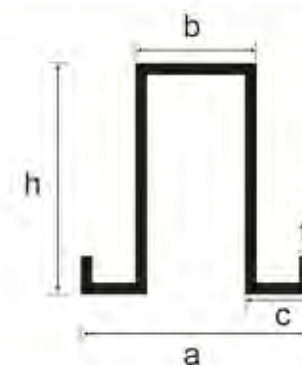
U型钢 U-steel



技术参数 Technical parameter

a: 41mm
h: 21-62mm
t: 2.0-3.0mm
材质(Material): Q235B/Q355B/ZAM/S350GD/S420GD
表面处理: 热浸镀锌, 预镀锌, 锌铝镁
Surface treatment: hot dip galvanizing, pre galvanizing, zinc/aluminum/magnesium

几型钢 JL-steel



技术参数 Technical parameter

a: 30-45mm
h: 50-70mm
t: 1.5-2mm
材质(Material): Q235B/Q355B/ZAM/S350GD/S420GD
表面处理: 热浸镀锌, 预镀锌, 锌铝镁
Surface treatment: hot dip galvanizing, pre galvanizing, zinc/aluminum/magnesium

高精度、精细化、零缺陷

High precision, refinement and zero defect



实体厂家
Entity manufacturer



精工细作
Work on it intensively and carefully



严格质检
Strict quality inspection



规格多样
Variety of specifications



支持定制
Support customization



发货快捷
Express delivery

细节
DETAIL



PHOTOVOLTAIC PRODUCTS

光伏产品 光伏配件 (尺寸可定制) PHOTOVOLTAIC ACCESSORIES (SIZE CAN BE CUSTOMIZED)

● 抱箍 Anchor ear



● 连接件 Connection



● 其他配件 Other accessories



OTHER PRODUCTS

其他产品 抗震支吊架 SEISMIC SUPPORT AND HANGER

● 抗震支吊架的基本原理 Basic principles of anti-seismic supports and hangers

通过各个金属件相互铆合使其产生固定减少吊装物的松动,抗震支架一般针对上了年限的建筑或者不达标的需从新加固。常见的有工厂、学校、商场、桥梁等建筑,针对不同的需求用到各种不一样的抗震支架。市面上常见的支架有消防管道支架、通风管道支架、桥架抗震支架、侧向抗震支架等。

The basic principle of anti-seismic supports is that all metal pieces are riveted to each other to make them fixed and reduce the looseness of lifting objects. Generally, anti-seismic supports need to be re-reinforced for buildings that have passed the age limit or those that do not meet the standards. Common buildings are factories, schools, shopping malls, bridges, etc. Different seismic supports are used for different needs. Common supports on the market include fire pipe supports, ventilation pipe supports, bridge seismic supports, lateral seismic supports, etc.



● 抗震支吊架的组成 Composition of seismic supports and hangers

抗震支撑由锚固体、加固吊杆、斜撑和抗震连接构件组成。悬吊螺杆与管线的节点距斜撑与管线的节点距离不得超过0.1M, 螺杆根据需要作加固处理。如果在同一位置设立两个反向的刚性抗震支撑,则可省去悬吊螺杆。考虑到地震力的荷载,刚性抗震支撑的悬吊螺杆和结构锚固件均需加大尺寸,螺杆和锚固件的最大承载力需大于算得的地震力。

Seismic support is composed of anchoring body, reinforcing suspenders, diagonal braces and seismic connecting members. The distance between the node between the suspension screw and the pipeline and the node between the brace and the pipeline shall not exceed 0.1m, and the screw shall be reinforced as required. If two opposite rigid seismic supports are set up at the same position, the suspension screw can be omitted. Considering the load of seismic force, the suspension screws and structural anchors of rigid seismic supports should be enlarged, and the maximum bearing capacity of screws and anchors should be greater than the calculated seismic force.

● 抗震支吊架的常规安装形式 Conventional installation forms of seismic supports and hangers

单管抗震吊架支撑 Single-tube seismic hanger support



多管抗震吊架支撑 Multi-tube seismic hanger support



综合吊架抗震支撑 Comprehensive hanger seismic support



产品优点 Product advantages

1. 组合式构件、装配式施工,整齐、美观、大方,无需焊接和钻孔;
 2. 各专业协调好,提高室内空间标高,具有良好的兼容性,各专业可共用一支吊架;
 3. 受力可靠、稳定;
 4. 安装速度快,施工工期短。
1. Combined components, prefabricated construction, neat, beautiful and generous, without welding and drilling;
2. Tournament of Champions. All specialties should coordinate well, improve indoor space elevation, and have good compatibility. All specialties can share a hanger;
3. The stress is reliable and stable;
4. Endgame. Fast installation speed and short construction period.

OTHER PRODUCTS

其他产品 温室大棚 GREENHOUSE

● 温室大棚分类 Greenhouse classification

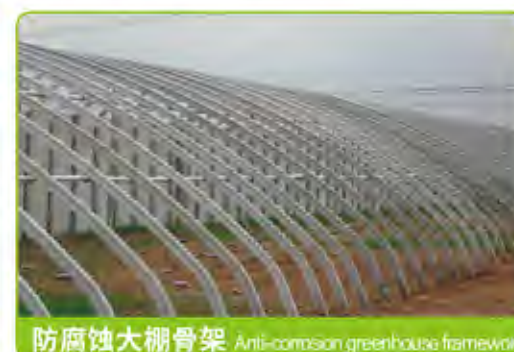
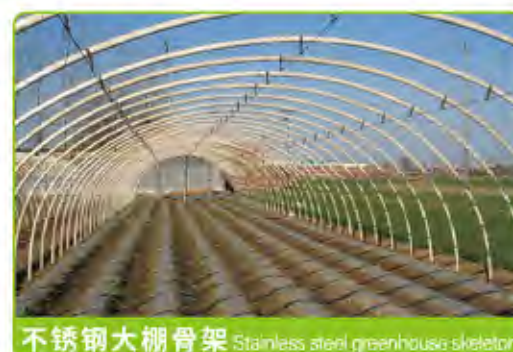
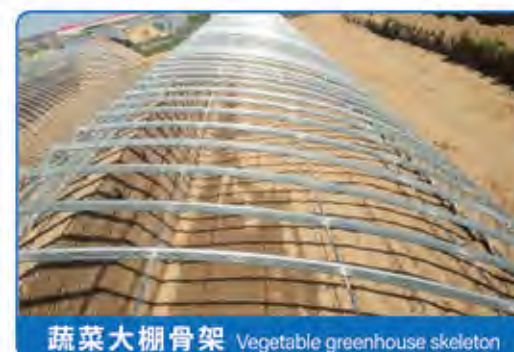
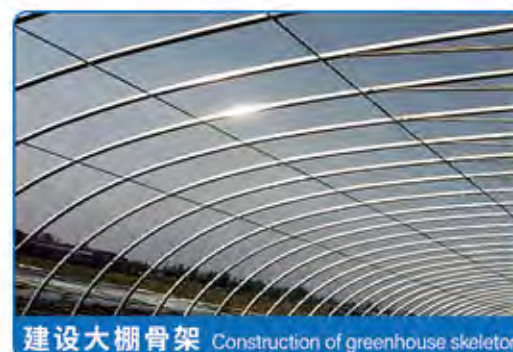
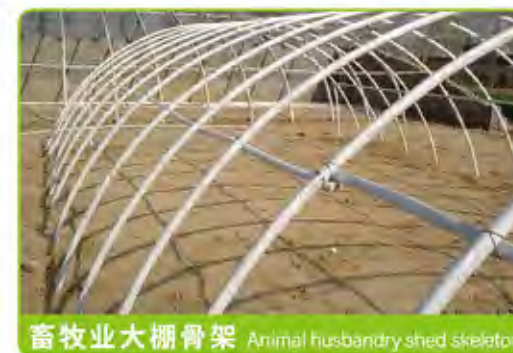


国内温室大棚发展迅速,现在形成了各式各样的风格,主要有7种不同的种类和用途,分别是日光温室、生态餐厅温室、生产温室、病虫害检疫隔离温室、商业零售温室、试验温室、观赏温室。

Greenhouse has developed rapidly in China, and now it has formed various styles, mainly including seven different types and uses, namely, sunlight greenhouse, ecological restaurant greenhouse, production greenhouse, pest quarantine greenhouse, commercial retail greenhouse, experimental greenhouse and ornamental greenhouse.

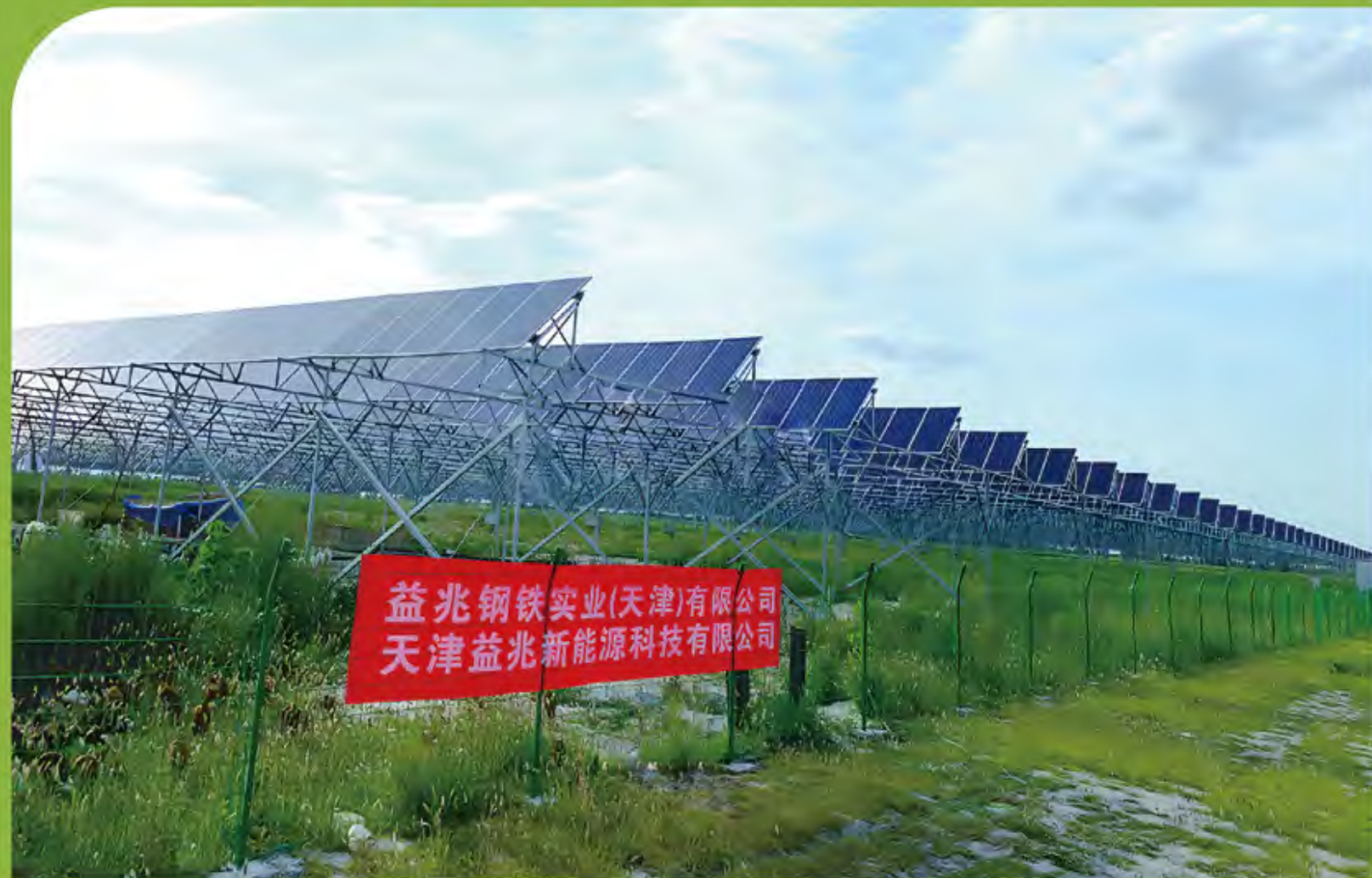


● 大棚骨架 Greenhouse skeleton



CASE SHARING

案例分享 太阳能支架系列 SOLAR BRACKET SERIES



益兆钢铁实业(天津)有限公司
天津益兆新能源科技有限公司



支持国家政策 开发绿色能源
SUPPORT NATIONAL POLICIES TO DEVELOP GREEN ENERGY



770 MW | 嘉峪关嘉西产业园 | 固定式支架项目
The fixed support system in Delingha, Qinghai Province is 100.5MW



项目地:水电四局金塔县
容量:300MW
解决方案:固定式支架系统

Project location: Jinta County, Hydroelectric Fourth Bureau
Capacity: 300MW
Solution: Fixed bracket system



项目地:贵州黔南州
容量:200MW
解决方案:固定地面电站

Project: Qiannan County, Guizhou Province
Capacity: 200MW yuan MW
Solution: Fixed ground power station

CASE SHARING

案例分享 | 太阳能支架系列 | SOLAR BRACKET SERIES



1200MW | 国能宁东 | 固定式支架系统
Guoneng Ningdong Fixed Support System 1200MW



700MW | 华能青海 | 平单轴跟踪系统
Single axis tracking system of 700MW Huaneng Qinghai Ping



项目地: 国电投沧州
容量: 280MW
解决方案: 渔光互补项目

Project location: Guodian Investment Cangzhou
Capacity: 280MW
Solution: Fishery Light Complementary Project



项目地: 隆基陕西
容量: 260MW
解决方案: 固定式支架系统

Project location: Longji Shaanxi
Capacity: 260MW
Solution: Fixed bracket system

CASE SHARING

案例分享 | 太阳能支架系列 | SOLAR BRACKET SERIES



500MW | 甘肃华能海南州 | 固定式支架系统
Fixed Support System in Huaneng Hainan Prefecture, Gansu, 500MW



640MW | 新疆克拉玛依 | 光伏基站项目
Xinjiang Karamay Photovoltaic Power Station Project 640MW



项目地:河北承德丰宁县
容量:150MW
解决方案:固定式支架系统

Project: Fengning County, Chengde, Hebei Province
Capacity: 150MW
Solution: Fixed bracket system



项目地:河北沧州南皮县
容量:140MW
解决方案:农光互补电站

Project: Nanpi County, Cangzhou, Hebei Province
Capacity: 140MW
Solution: Agricultural-photovoltaic complementary power station

CASE SHARING

案例分享 | 太阳能支架系列 SOLAR BRACKET SERIES



212MW | 新疆库车市 | 固定式支架系统
Fixed Support System 212MW in Kuche City, Xinjiang



项目地: 山东华电山亭水泉
容量: 150MW
解决方案: 农光互补电站
Project location: Shandong Huadian Shanting Shuiquan
Capacity: 150MW
Solution: Agricultural Photovoltaic Complementary Power Station



项目地: 江西赣州市于都县
容量: 132MW
解决方案: 固定式支架系统
Project location: Yudu County, Ganzhou, Jiangxi
Capacity: 132MW
Solution: Fixed bracket system

CASE SHARING

案例分享 太阳能支架系列 SOLAR BRACKET SERIES

国能宁东光伏发电项目 GUONENG NINGDONG PHOTOVOLTAIC POWER GENERATION PROJECT	1200 MW	贵州黔南电站项目 GUIZHOU DIANNAN COUNTY POWER STATION PROJECT	200 MW
嘉峪关嘉西产业园光伏发电项目 JIAYUGUAN JIAXI INDUSTRIAL PARK PHOTOVOLTAIC POWER GENERATION PROJECT	770 MW	河北承德丰宁县扶贫项目 HEBEI CHENGDE FENGNING COUNTY POVERTY ALLEVIATION PROJECT	150 MW
华能青海单轴跟踪项目 HUANENG QINGHAI SINGLE AXIS TRACKING PROJECT	700 MW	山东华电山亭水泉农光互补光伏发电项目 SHANDONG HUADIAN SHANTING SHUIQUAN AGRICULTURAL SOLAR COMPLEMENTARY PHOTOVOLTAIC POWER GENERATION PROJECT	150 MW
新疆克拉玛依光伏电站项目 XINJIANG KARAMAY PHOTOVOLTAIC POWER STATION PROJECT	640 MW	河北沧州南皮农光互补电站项目 HEBEI CANGZHOU NANPI NONG GUANG COMPLEMENTARY POWER STATION PROJECT	140 MW
甘肃华能海南州光伏项目 GANSU HUANENG HAINAN STATE PHOTOVOLTAIC PROJECT	500 MW	江西赣州于都县光伏扶贫项目 JIANGXI GANZHOU YUDU COUNTY PHOTOVOLTAIC POVERTY ALLEVIATION PROJECT	132 MW
扬州光伏电站工程固定支架项目 YANGZHOU PHOTOVOLTAIC POWER STATION PROJECT FIXED SUPPORT PROJECT	320 MW	中国能建宁夏盐池光伏固定式项目 CHINA ENERGY CONSTRUCTION NINGXIA YANCHI PHOTOVOLTAIC FIXED PROJECT	120 MW
大唐浙江象山长大滩涂光伏项目 DATANG ZHEJIANG XIANGSHAN LONG MUFLAT PHOTOVOLTAIC PROJECT	300 MW	青海德令哈领跑者项目 QINGHAI DELINGHA LEADING PROJECT	100.55 MW
山西忻州地面电站扶贫项目 SHANXI XINZHOU GROUND POWER STATION POVERTY ALLEVIATION PROJECT	300 MW	大唐青海省海南州光伏项目 DATANG QINGHAI HAINAN PREFECTURE PHOTOVOLTAIC PROJECT	100 MW
国能宁东固定支架标段 2.3.4 GUONENG NINGDONG FIXED SUPPORT SECTION 2.3.4	300 MW	中广核青海固定电站项目 CGN QINGHAI FIXED POWER STATION PROJECT	100 MW
水电四局金塔县固定支架项目 JINTA COUNTY FIXED SUPPORT PROJECT OF THE FOURTH HYDROELECTRIC BUREAU	300 MW	山西电建芮城固定电站项目 SHANXI ELECTRIC POWER CONSTRUCTION RUICHENG FIXED POWER STATION PROJECT	100 MW
国电投沧州渔光互补项目 STATE POWER INVESTMENT CANGZHOU YUGUANG COMPLEMENTARY PROJECT	280 MW	山西建投垣曲固定电站项目 SHANXI JIANTOU YUANQU FIXED POWER STATION PROJECT	100 MW
隆基陕西固定支架项目 LONGJI SHANXI FIXED SUPPORT PROJECT	260 MW	山西建投晋中榆次山地固定电站项目 SHANXI CONSTRUCTION INVESTMENT JINZHONG YUCI MOUNTAIN FIXED POWER STATION PROJECT	100 MW
新疆库车光伏发电项目 XINJIANG KUQI PHOTOVOLTAIC POWER GENERATION PROJECT	212 MW	河北张家口市康保县光伏项目 PHOTOVOLTAIC PROJECT IN KANGBAO COUNTY, ZHANGJIAKOU CITY, HEBEI PROVINCE	100 MW



江西赣州市赣县南塘镇扶贫项目 POVERTY ALLEVIATION PROJECT IN NANTANG TOWN, GANXIAN COUNTY, GANZHOU CITY, JIANGXI PROVINCE	100 MW	山东神青岛胶州光伏项目 SHANDONG SHENQINGDAO JIAOZHOU PHOTOVOLTAIC PROJECT	72 MW
国能宁东固定支架标段 1 GUONENG NINGDONG FIXED SUPPORT LOT 1	100 MW	内蒙古呼伦贝尔莫旗项目 MOQI COUNTY, HULUNBUIR, INNER MONGOLIA	70 MW
国能宁东跟踪支架标段 1.2 GUONENG NINGDONG TRACKING SUPPORT SECTION 1.2	100 MW	河南省武冈县扶贫项目 POVERTY ALLEVIATION PROJECT IN WUGANG COUNTY, HENAN PROVINCE	70 MW
十一科技鲁银固定支架项目 ELEVEN TECHNOLOGY LUYIN FIXED BRACKET PROJECT	100 MW	山西吕梁临县扶贫项目 SHANXI LIJIANG LINXIAN POVERTY ALLEVIATION PROJECT	65 MW
十一科技侯镇固定支架项目 11 TECHNOLOGY HOU TOWN FIXED SUPPORT PROJECT	100 MW	四川甘孜州乡城县扶贫项目 POVERTY ALLEVIATION PROJECT IN XIANGCHENG COUNTY, GANZI PREFECTURE, SICHUAN PROVINCE	60 MW
四川甘孜州跟踪支架项目 SICHUAN GANZI PREFECTURE TRACKING SUPPORT PROJECT	100 MW	贵州马六镇柔性示范项目 GUIZHOU MALIU TOWN FLEXIBLE DEMONSTRATION PROJECT	60 MW
山东分布式支架项目 SHANDONG DISTRIBUTED SUPPORT PROJECT	95 MW	甘肃通渭扶贫项目 GANSU TONGWEI POVERTY ALLEVIATION PROJECT	55 MW
河北张家口宣化扶贫项目 HEBEI ZHANGJIAKOU XUANHUA POVERTY ALLEVIATION PROJECT	80 MW	黑龙江 18 个村村级扶贫项目 POVERTY ALLEVIATION PROJECTS AT THE VILLAGE LEVEL IN 18 VILLAGES IN HEILONGJIANG PROVINCE	55 MW
山西建投建筑产业光伏项目 SHANXI CONSTRUCTION INVESTMENT CONSTRUCTION INDUSTRY PHOTOVOLTAIC PROJECT	80 MW	上海白龙港污水处理厂光伏柔性项目 SHANGHAI BAILONGGANG SEWAGE TREATMENT PLANT PHOTOVOLTAIC FLEXIBLE PROJECT	52 MW
河南省周口扶贫项目 HENAN ZHOUKOU POVERTY ALLEVIATION PROJECT	78 MW	河南省商丘 12 个县城 12 COUNTIES IN SHANGQIU, HENAN PROVINCE	50 MW
山东国网电力滨州单柱固定 SHANTONG STATE GRID POWER BINZHOU SINGLE COLUMN FIXATION	78 MW	甘肃海南州塔拉滩柔性支架项目 GANSU HAINAN PREFECTURE TALATAN FLEXIBLE SUPPORT PROJECT	50 MW
河南省济源市农村扶贫项目 RURAL POVERTY ALLEVIATION PROJECT IN JIUYUAN CITY, HENAN PROVINCE	75 MW		

COOPERATIVE UNIT

合作单位



MARKETING NETWORK

销售网络

产品远销美国、巴西、南非、新加坡等 23+ 个国家

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