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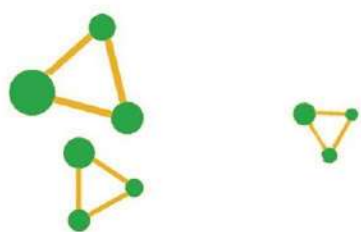
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BenefitAll Supply Chain
(Shandong) Co.,Ltd.



BenefitAll Supply Chain Greenhouse Engineering



公司简介Introduction

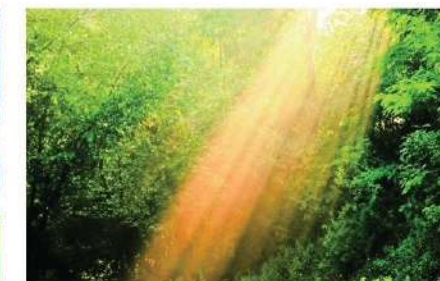
BenefitAll Supply Chain Greenhouse Engineering factory is located in Weifang City, Shandong Province, which is the most famous agricultural sunlight greenhouse production center in China. It is a professional greenhouse solution provider mainly engaged in the production, development, installation and maintenance of photovoltaic greenhouse products. As a professional greenhouse enterprise, the company pays attention to energy construction. With its continuous and high-quality service for many years, Our Company has become one of the local large-scale greenhouse manufacturers, and has established close cooperative relations with many photovoltaic giants all around the country.

合 作 优 势

BenefitAll Supply Chain Greenhouse Engineering factory is mainly engaged in the production and processing of greenhouse framework, greenhouse materials, accessories, installation and maintenance. Additionally, the company develops a series of greenhouse supporting facilities such as greenhouse, photovoltaic greenhouse, private customized ecological restaurant, and provides park planning, design, operation and management services!



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玻璃温室 Glass greenhouse

优良·品质

温室结构 Greenhouse structure

▲采用热镀锌轻钢结构，A字型屋脊，可分为一跨2尖顶、一跨3尖顶和一跨4尖顶。

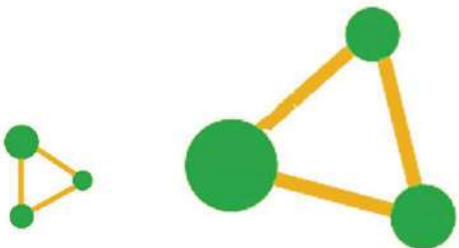
▲It adopts hot-dip galvanized light steel structure and A-shaped ridge, which can be divided into one span and two spires A span of 3 spires and a span of 4 spires.



技术参数 technical parameter

覆盖材料：顶部PC板或波浪板，四周PC板或其他覆盖
跨度：6.4m/8.0m/9.6m/10.8m/12m/12.8/16.0m
檐高：3.0m-8.0m
柱间距：4.0m/8.0m
顶窗：屋脊处交错开窗、单侧开窗、通长开窗
侧窗：齿条外翻窗、推拉窗、电动垂直推拉窗
配套设施：根据温室功能需要选用不同的配套设备

Covering material: top PC board or wave board, surrounding PC board or other covering
Span: 6.4m/8.0m/9.6m/10.8m/12m/12.8/16.0m
Eaves height: 3.0m-8.0m
Column spacing: 4.0m/8.0m
Top window: staggered window, single side window and full length window at the ridge
Side window: rack window, sliding window, electric vertical sliding window
Supporting facilities: select different supporting equipment according to the needs of greenhouse function





玻璃温室 Glass greenhouse

优良·品质

温室结构 Greenhouse structure

- ▲采用热镀锌轻钢结构，A字型屋脊。
- ▲屋顶和四周覆盖材料采用4+9+4浮法中空玻璃，玻璃可完全钢化
- ▲It adopts hot-dip galvanized light steel structure and A-shaped ridge.
- ▲The 4 + 9 + 4 float method is adopted for roof and surrounding covering materials. Insulating glass, glass can be fully toughened



温室特点 Characteristics of greenhouse

1. 房间内均匀分布的光线：大坡度的三角形屋顶（即一个跨度内只有一个三角形屋顶），背光坡度将在温室内形成一个大阴影，该区域的植物增长很差。小斜坡三角形屋顶允许光线均匀分布；
2. 耗热量低：三角形屋顶温室坡度较大，同一建筑面积，同一高度，外保护面积相同，小坡屋顶温室建筑面积小，热耗小；
3. 防滴漏功能：在寒冷的季节，室内外温差大，所以温室屋顶容易凝结。由于小三角形屋顶的倾斜度较小，冷凝水流入铝材料，在下沉点收集冷凝水而不会积聚到下部水滴，防止水下水滴凝结造成叶面病害；
4. 维护方便：由于坡度小，屋顶维护，清洁工作容易进行。
5. 温室采用热镀锌钢架，坚固耐用，抗风，抗压力强；
6. 采用玻璃作为覆盖材料，透光性好，密封性好，墙体保温，观赏性高。
7. 大跨度顶点设计，室内操作空间大，温室利用率高，显示效果好；

1. Evenly distributed light in the room: large slope triangular roof (i.e. there is only one triangle roof in a span), the backlight slope will form a large shadow in the greenhouse, and the plant growth in this area is very poor. Small sloping triangular roofs allow uniform distribution of light;
2. Low heat consumption: the triangular roof greenhouse has larger slope, the same building area, the same height, the same external protection area, and the small slope roof greenhouse has small building area and low heat consumption;
3. Anti dripping function: in the cold season, the temperature difference between indoor and outdoor is large, so the greenhouse roof is easy to condense. Because the inclination of the small triangle roof is small, the condensed water flows into the aluminum material,

- and the condensed water is collected at the sinking point without accumulating the water drops at the lower part, so as to prevent the leaf surface diseases caused by the condensation of water drops;
4. Convenient maintenance: due to small slope, roof maintenance and cleaning work are easy to carry out.
 5. The greenhouse adopts hot-dip galvanized steel frame, which is durable, wind resistant and pressure resistant;
 6. Glass is used as covering material, which has good transparency, good sealing, wall insulation and high ornamental value.
 7. Large span vertex design, large indoor operation space, high utilization rate of greenhouse and good display effect;

技术参数 technical parameter

- 覆盖材料：4+9+4中空浮法玻璃（或钢化）
跨度：6.4m/8.0m/9m/9.6m/10.8m/12m
檐高：3m/4m/4.5m/5.5m/6m等
柱间距：4m/8m
顶窗：通长或交错
侧窗：齿条外反窗、推拉窗、电动垂直推拉窗
配套设施：根据温室功能需要选用不同的配套设备

- Covering material: 4 + 9 + 4 hollow float glass (or tempered)
Span: 6.4m/8.0m/9m/9.6m/10.8m/12m
Eaves height: 3m / 4m / 4.5m/5.5m/6m, etc
Column spacing: 4m / 8M
Top window: full length or staggered
Side window: rack external window, sliding window, electric vertical sliding window
Supporting facilities: select different supporting equipment according to the needs of greenhouse function





温室结构 Greenhouse structure

▲采用热镀锌轻钢结构，A字型屋脊，可分为一跨2尖顶、一跨3尖顶和一跨4尖顶。

▲It adopts hot-dip galvanized light steel structure and A-shaped ridge, which can be divided into one span and two spires A span of 3 spires and a span of 4 spires.

技术参数 technical parameter

覆盖材料：顶部PC板或波浪板，四周PC板或其他覆盖
跨度：6.4m/8.0m/9.6m/10.8m/12m/12.8/16.0m
檐高：3.0m-8.0m
柱间距：4.0m/8.0m

顶窗：屋脊处交错开窗、单侧开窗、通长开窗

侧窗：齿条外翻窗、推拉窗、电动垂直推拉窗

配套设施：根据温室功能需要选用不同的配套设备

Covering material: top PC board or wave board, surrounding PC board or other covering

Span: 6.4m/8.0m/9.6m/10.8m/12m/12.8/16.0m

Eaves height: 3.0m-8.0m

Column spacing: 4.0m/8.0m

Top window: staggered window, single side window and full length window at the ridge

Side window: rack window, sliding window, electric vertical sliding window

Supporting facilities: select different supporting equipment according to the needs of greenhouse function



温室特点 Characteristics of greenhouse

▲一跨多尖顶，温室具有小屋顶，多天沟，大跨度等特点，内部可灵活的设置隔断：

▲采光性能好，室内光照均匀：

▲有很强的排水能力，可大面积连栋。

▲铝合金型材或专用链接密封件链接密封，外形美观漂亮；

▲具有防地滴雾功能，在开天沟下设置结露水收集槽，可以将结露水收集后导到温室端部排除，减少病虫害的发生。

▲保温节能效果比单层玻璃好，冬季可节省大量燃料，但透光性比单层玻璃相比较差。

▲内部宽敞明亮，操作空间大，温室利用率高。

▲The greenhouse has the characteristics of small roof, many gutters and large span, Internal partition can be set flexibly:

▲The lighting performance is good and the indoor illumination is uniform

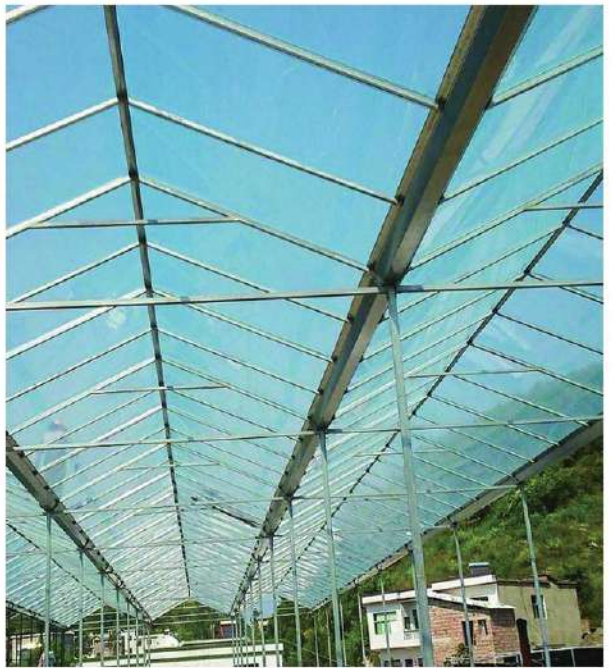
▲It has a strong drainage capacity, and can be connected in large area.

▲Aluminum alloy profile or special link seal link seal, beautiful appearance;

▲The utility model has the function of preventing ground dripping fog, and a collecting tank for fogging water is arranged under the open ditch, which canThe condensation water will be collected and led to the end of the greenhouse to eliminate, reduce the occurrence of diseases and insect pests.

▲The heat preservation and energy-saving effect is better than that of single-layer glass, and a lot of fuel can be saved in winterThe optical selectivity is worse than that of single-layer glass.

▲The interior is spacious and bright, the operation space is large, and the greenhouse utilization rate is high.





温室结构 Greenhouse structure

- ▲采用热镀锌轻钢结构，弧形顶
- ▲顶部采用聚碳酸酯中空板（PC）覆盖，四周可选用PC板或其他材料覆盖。
- ▲It adopts hot-dip galvanized light steel structure with arc roof
- ▲The top is covered with polycarbonate hollow panel (PC), optional around Cover with PC board or other materials.

温室特点 Characteristics of greenhouse

- ▲弧顶更有利于雨水和积雪的下滑，减低风阻，提高了温室的抗载能力：减少结露下滴，降低了由于湿度过大而引发病菌的发生率；
- ▲温室顶部开设天窗，顺应了热空气的流动方向，有利于空气的流动和热量的散失，有助于夏季降温和除湿；配有大流量的天沟；
- ▲大跨度，大柱间距，高大的类型可广泛作为生态餐厅，休闲观光温室和大型花卉市场使用；
- ▲顶部覆盖可采用双层碳酸酯中空板，双层天沟，有效防止接露水，且降低冬季升温能耗。



温室结构 Greenhouse structure

- ▲采用热镀锌轻钢结构
- ▲Hot dip galvanized light steel structure is adopted

- ▲The arc roof is more conducive to the decline of rain and snow, reducing the wind resistance and increasing the wind resistanceThe anti load capacity of greenhouse: reduce dew drop, reduce the humidity due to too muchAnd the incidence of pathogenic bacteria;
- ▲A skylight is set on the top of the greenhouse to comply with the flow direction of hot air It is conducive to the air flow and heat loss, which is helpful for cooling and dehumidification in summer; It is equipped with gutter with large flow rate;
- ▲Large span, large column spacing, tall type can be widely used as an ecological restaurant, Leisure and Sightseeing Greenhouse and large flower market use;
- ▲The top cover can be made of double-layer carbonate hollow plate and double-layer gutter It can effectively prevent dew and reduce the energy consumption of heating in winter.

技术参数 technical parameter

- 覆盖材料：顶部PC板、四周PC板、玻璃或其他覆盖
- 跨度：6.4m/8.0m/9.6m
- 檐高：2.5m-8.0m（可根据用户要求进行变化）
- 柱间距：4.0m
- 顶窗：通长齿轮条开窗，使用弧形齿轮、弧形齿条
- 侧窗：齿条外翻窗、推拉窗、电动垂直推拉窗配套设施：根据温室功能需要选用不同的配套设备

- Covering material: top PC board, surrounding PC board, glass or other cover
- Span: 6.4m/8.0m/9.6m
- Eaves height: 2.5m-8.0m (can be changed according to user requirements) Column spacing: 4.0m
- Top window: full length gear strip window, using arc gear, arc rack
- Side window: rack window, sliding window, electric vertical push window
- Window supporting facilities: select different supporting equipment according to the function of greenhouse





温室特点 Characteristics of greenhouse

- ▲双层膜可以形成厚厚的气层，能有效的防止热量流失和阻止冷空气的流动和热量的散失，有助于夏季降温除湿；
- ▲拱顶更有利于雨水和积雪的下滑，减低风阻，提高了温室的抗载能力；减少结露下滴，降低了由于湿度过大而引发病菌的发生率；
- ▲单层膜温室用户可根据实际需要和天气情况灵活选择顶，侧卷帘的开启数量和高度，从而较好的调节温室内的环境；
- ▲针对南方雨量加大的特点，单层膜温室采用大容量天沟，保证雨水及时排放。
- ▲薄膜温室造价低廉，适用于我国进行大面积推广。



- ▲The double-layer membrane can form a thick gas layer, which can effectively prevent heat loss and prevention of cold air flow and loss of heat contribute to summer Cooling and dehumidification;
- ▲The vault is more conducive to the decline of rain and snow, reduce the wind resistance, improve the load resistance of greenhouse, reduce the dew drop, and reduce the incidence of pathogens caused by excessive humidity;
- ▲Users of single-layer film greenhouse can flexibly select the opening number and height of the top and side rolling curtains according to the actual needs and weather conditions, so as to better adjust the environment in the greenhouse
- ▲According to the characteristics of increasing rainfall in South China, large capacity gutter is adopted in single-layer film greenhouse to ensure timely drainage of rainwater.
- ▲The cost of film greenhouse is low, which is suitable for large-scale promotion in China.

双拱双膜温室技术参数 Technical parameters of double arch double film greenhouse

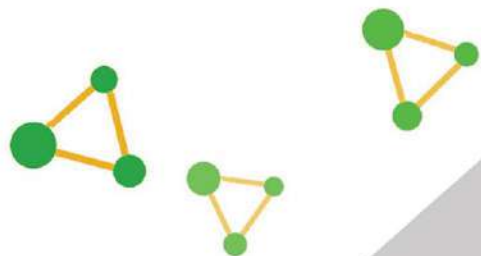
- 覆盖材料：顶部双层薄膜：四周覆盖薄膜或其他
- 跨度：6.4m/8.0m/9.6m
- 檐高：2.2m-5.0m
- 柱间距：4.0m
- 顶窗：通长齿轮条开窗通风
- 侧窗：齿条外翻窗、推拉窗、电动垂直推拉窗、卷帘
- 配套设施：根据温室功能需要选用不同的配套设备

- Covering material: Top double-layer film: covering film or other around
- Span: 6.4m/8.0m/9.6m
- Eaves height: 2.2m-5.0m
- Column spacing: 4.0m
- Top window: full length gear strip for ventilation
- Side window: rack window, sliding window, electric vertical sliding window, rolling shutter
- Supporting facilities: select different supporting equipment according to the needs of greenhouse function

单层膜温室技术参数 Technical parameters of single layer film greenhouse

- 覆盖材料：顶部单层膜；四周覆盖单层膜或其他
- 跨度：7.0m/8.0m/
- 檐高：2.2m-5.0m
- 柱间距：4.0m
- 顶窗：手动或电动卷帘
- 侧窗：手动卷帘或电动卷帘
- 配套设施：根据温室功能需要选用不同的配套设备

- Covering material: Top single-layer membrane; covering with single-layer film or other around
- Span: 7.0m/8.0m/
- Eaves height: 2.2m-5.0m
- Column spacing: 4.0m
- Top window: manual or electric roller shutter
- Side window: manual roller shutter or electric roller shutter
- Supporting facilities: select different supporting equipment according to the needs of greenhouse function





温室特点 Characteristics of greenhouse

- ▲利用三角交叉的稳固性来构建温室骨架，达到最佳的结构稳定性。
- ▲利用曲面的球体结构形成整体张力，实现局部抗性的最大化。
- ▲采用空间桁架及蜂窝状的张拉，实现温室承压与抗风能力的数倍提高，温室每连接点的平均负载达180公斤以上，是普通大棚所无法比拟的，这也是它耐雪抗压的关键技术所在。
- ▲球体的温室形状具有最大的抗风性，任何角度的风袭，都可以化解，它具有最小的迎风面，可抗十几级的强风，是当前世界上最为抗风的几何球体温室。
- ▲空间高旷，方便立体耕作，实现太阳有效辐射的最大化利用与生物转化，实现一亩顶5亩的耕作效率。

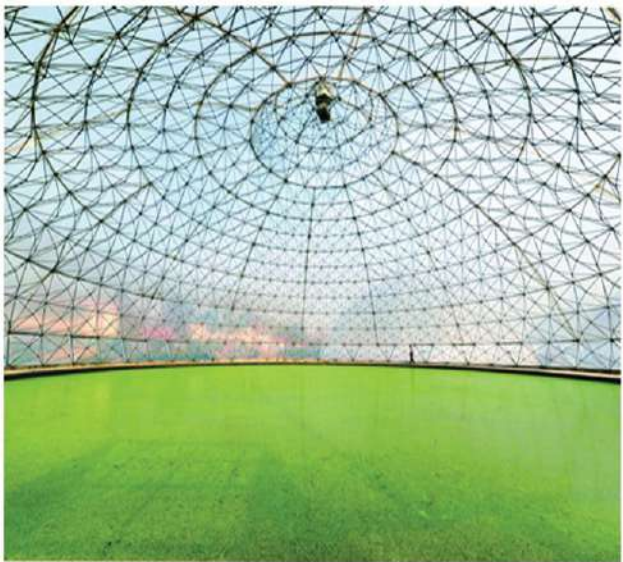


- ▲Using the stability of triangle cross to construct greenhouse framework, the best structural stability is achieved.
- ▲The global tension is formed by the spherical structure of the curved surface to maximize the local resistance.
- ▲By using space truss and honeycomb tension, the greenhouse pressure bearing and wind resistance capacity are improved several times. The average load of each connection point of greenhouse is more than 180 kg, which is incomparable to ordinary greenhouse, which is also the key technology of snow resistance and compression resistance.
- ▲The shape of the sphere greenhouse has the largest wind resistance. Any angle of wind attack can be resolved. It has the smallest windward side and can resist more than ten levels of strong wind. It is the most wind resistant geometric sphere greenhouse in the world.
- ▲The space is high and open, which is convenient for three-dimensional cultivation. It can realize the maximum utilization and biological transformation of solar effective radiation, and realize the cultivation efficiency of 5 mu on top of one mu.

产品优势 Product advantages

鸟巢温室，空间是普通温室的数倍，有利于蓄积更多的热空气，大大提高冬季温室的保温性，要比连栋温室平均高达5℃以上，大大节省冬季加温的能源消耗。空旷的大空间不仅用于蔬菜的立体栽培，还可以种植高大的经济树木，特别适合于果树的反季栽培或者避雨种植。利用空旷的空间，给人心旷神怡之感，更适用于生态餐厅或观光农业的建设设施。

The space of bird's nest greenhouse is several times of that of ordinary greenhouse, which is conducive to the accumulation of more hot air and greatly improves the thermal insulation of winter greenhouse, which is higher than that of multi span greenhouse, which greatly saves the energy consumption of heating in winter. The open space is not only used for three-dimensional cultivation of vegetables, but also for planting tall economic trees, especially suitable for off season cultivation of fruit trees or rain shelter planting. The use of the open space, give people a sense of relaxation, more suitable for the construction of ecological restaurants or sightseeing agriculture facilities.





全钢架拱棚 All steel frame arch shed

▲全钢架拱棚采用镀锌钢架组装式结构，主桁架间距在0.8-1.2m之间，高度在3.2m左右，建造安装方便，棚内由于无立柱支撑，大大提高了棚内采光效果，利于机械化操作，提高了土地的利用率。

▲此种温室一般适合南方地区及北方春夏秋季节种植。

▲The whole steel frame arch shed adopts galvanized steel frame assembly structure, the main truss spacing is between 0.8-1.2m, and the height is about 3.2m, which is convenient for construction and installation. Because there is no column support in the shed, the lighting effect in the shed is greatly improved, which is conducive to mechanized operation and improves the utilization rate of land.

▲This kind of greenhouse is generally suitable for planting in spring, summer and autumn in South China and North China.



简易连栋拱棚 Simple multi span arch shed

简易连栋拱棚是在全钢架拱棚的基础上改进而形成的一种温室，是介于拱形温室与智能温室之间的一种连栋温室。

▲该温室制造成本相对较低，属经济型温室，适用于我国大部分地区。

Simple multi span arch shed is a kind of greenhouse which is improved on the basis of all steel frame arch shed. It is a kind of multi span greenhouse between arch greenhouse and intelligent greenhouse.

▲The production cost of the greenhouse is relatively low, and it is an economic greenhouse, which is suitable for most areas of China.



技术参数 technical parameter

▲大跨度立柱式日光拱棚采用专用砼柱做支撑柱体，镀锌钢管与厚壁竹竿做棚面骨架，此种温室造价低廉，坚固耐用，土地利用面积大，一般适合春秋季节蔬菜种植及养殖棚，因此又叫：春秋棚。

▲建造跨度一般在8-23m，建设高度在3-6m。

▲在北方地区，可在棚内加设二膜或三膜，以增加夜间温度。

▲Large span column type sunlight arch shed adopts special concrete column as support column, galvanized steel pipe and thick wall bamboo pole as shed surface framework. This kind of greenhouse has low cost, strong and durable, and large land use area. It is generally suitable for vegetable planting and breeding in spring and autumn, so it is also called spring and autumn shed.

▲The construction span is generally 8-23m and the construction height is 3-6m.

▲In the northern area, two or three films can be added to the shed to increase the night temperature.





温室特点 Characteristics of greenhouse

▲大跨度无柱结构，空间宽敞，适合机械化作业；
骨架承载能力强、寿命长：

▲屋面采光角度合理，室内光照充足，保温性能好，节能效果明显：

▲计算机优化设计、采光好、用料省、造价低、土地利用率高；

▲复合式保温墙体，内墙保温外墙加热，易于形成良好的棚内小气候；

▲冬季使用保温被，草帘保温，电动卷帘机卷放：

▲适合于花卉种植、种苗繁育、蔬菜生产、观光示范园区的广泛应用；

▲Large span non column structure, spacious space, suitable for mechanized operation;
strong bearing capacity and long service life of skeleton

▲The roof lighting angle is reasonable, the indoor lighting is sufficient, the heat preservation performance is good, and the energy saving effect is obvious

▲Computer optimization design, good daylighting, low cost, high land use efficiency;

▲Compound thermal insulation wall, internal wall insulation, external wall heating, easy to form a good greenhouse microclimate;

▲In winter, use thermal insulation quilt, straw curtain for heat preservation, and electric roller shutter for rolling

▲It is suitable for flower planting, seedling breeding, vegetable production and sightseeing demonstration park;

温室技术参数

Greenhouse technical parameters

骨架材料：普通钢管焊接方式、热镀锌钢管焊接方式、热镀锌钢管装配式、“几”字型钢管装配式

骨架结构：立柱式、全钢架式

覆盖材料：双层充气膜覆盖、单层膜覆盖、玻璃、PC板

保温设施：复合保温被+复合保温体

规格：6.5m/7m/7.5m/8.5m/9m/9.5m/10m

配套设备：根据温室功能需要选用不同的配套设备

Framework materials: ordinary steel pipe welding method, hot-dip galvanized steel pipe welding type, hot-dip galvanized steel pipe assembly type, "several" shaped steel pipe assembly type, framework structure: column type, full steel frame type

Covering materials: double-layer inflatable film covering, single-layer membrane covering, glass, PC board

Insulation facilities: composite insulation quilt + composite insulation body

Specification: 6.5m/7m/7.5m/8.5m/9m/9.5m/10m

Supporting equipment: select different supporting equipment according to the needs of greenhouse function





温室特点 Characteristics of greenhouse

果树大棚抗压，抗风雪，跨度、弧度、高度、长度可按需要进行设计生产，果树大棚棚内温度不分季节均可达到您所需要的理想温度，温室内无支柱、可机械化作业、运输车辆出入方便。

The fruit tree greenhouse is pressure resistant, wind and snow resistant. The span, radian, height and length can be designed and produced according to the needs. The temperature in the fruit greenhouse can reach the ideal temperature you need regardless of season. There is no pillar in the greenhouse, which can be mechanized operation and convenient for transportation vehicles.





温室特点 Characteristics of greenhouse

▲太阳能光伏大棚温室是一种新型的温室，是在温室的部分或全部向阳面上铺设光伏太阳能发电装置的温室，它既具有发电能力，又能为一些作物或食用菌提供适宜的生长环境。

▲光伏温室项目是观光农业与设施园艺有机结合的产物，它是集光伏发电、农业观光、农业作物、农业技术、园林景观及文化发展于一体的创新型农业产业。



▲Solar photovoltaic greenhouse is a new type of greenhouse. It is a kind of greenhouse in which photovoltaic solar power generation device is laid on the sunny side of the greenhouse. It not only has power generation capacity, but also provides suitable growth environment for some crops or edible fungi.

▲Photovoltaic greenhouse project is the product of the organic combination of sightseeing agriculture and facility horticulture. It is an innovative agricultural industry integrating photovoltaic power generation, agricultural tourism, agricultural crops, agricultural technology, landscape and cultural development.





苗床特点 Characteristics of seedbed

- ▲网面平整，焊接牢固，承重性好，尺寸准确，安装施工方便，抗腐蚀耐用；
- ▲主体结构材质采用铝合金边框，热镀锌材料，防腐性能高，称重能力好，寿命长；
- ▲具有防翻限位装置，防止由于偏重引起的倾斜问题；
- ▲合金型材或专用连接密封件连接密封，外形美观漂亮；
- ▲提高面积利用率，可达到90%以上；
- ▲此外还有固定苗床等，价格相对低廉但温室利用率低。

- ▲It has smooth surface, firm welding, good bearing capacity, accurate size, convenient installation and construction, corrosion resistance and durability;
- ▲The main structure is made of aluminum alloy frame and hot-dip galvanized material, with high corrosion resistance, good weighing capacity and long service life;
- ▲Anti overturning limit device is provided to prevent the tilting problem caused by excessive weight;
- ▲Alloy profiles or special connection seals are connected and sealed, with beautiful appearance;
- ▲The area utilization rate can reach more than 90%;
- ▲In addition, there are fixed seedbeds and so on, which are relatively cheap, but the greenhouse utilization rate is low.





温室结构 Greenhouse structure

▲生态餐厅又称“绿色餐厅”，是现代都市倡导的一种新的休闲理念，是近年来人们对健康饮食的追求和对田园风光的向往而兴起的一种新型餐饮型式。与传统餐厅的功能相比，生态餐厅更加注重人与自然的和谐，人与环境的绿色平衡，是通过现代化智能温室和原生态自然景观的有机结合，营造一种舒适、绿色、健康的就餐环境；并通过温度、湿度的控制，达到室内四季如春。



▲Ecological restaurant, also known as "green restaurant", is a new concept of leisure advocated by modern cities. It is a new type of food and beverage that has emerged in recent years due to people's pursuit of healthy diet and the yearning for rural scenery. Compared with the function of the traditional restaurant, the ecological restaurant pays more attention to the harmony between human and nature, and the green balance between human and environment. It creates a comfortable, green and healthy dining environment through the organic combination of the modern intelligent greenhouse and the original ecological natural landscape, and achieves the indoor four seasons like spring through the control of temperature and humidity.

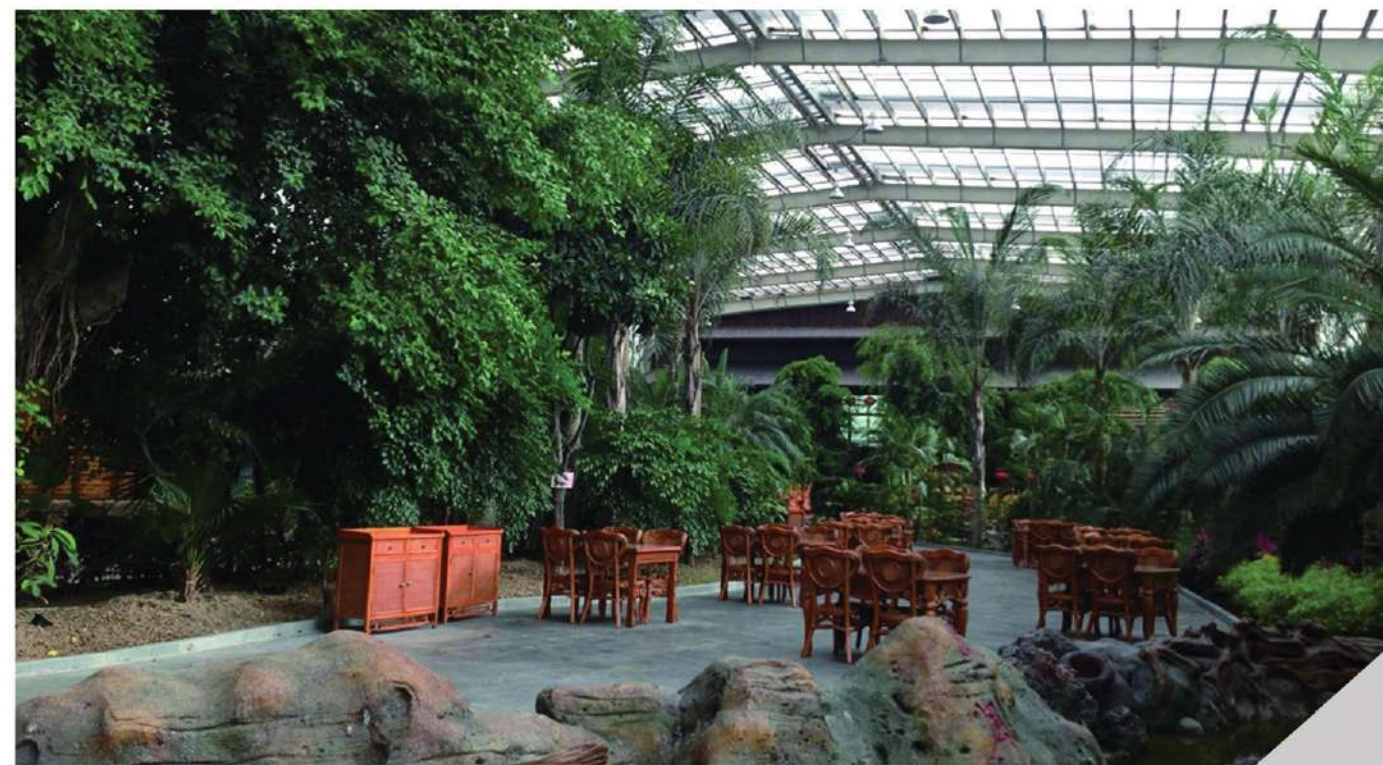


休闲会所 Recreation Club

▲休闲会所等观光型温室等主要用于展览、观赏、普及科学知识或用于大型会议中心、休闲绿屋、酒吧、咖啡厅等，主要建设在植物园、农业园区、公园、疗养基地或其他公共场所。蓝天、绿地、假山、小桥、流水等不同的景致使人们在繁华、喧嚣的都市里如回归田园，彻底放松身心，享受阳光和泥土的芬芳以及那一份独特的宁静，在观赏花卉，品味美丽景致的同时感悟人生，体现现代观光农业的魅力。



▲Leisure clubs and other sightseeing greenhouses are mainly used for exhibition, viewing, popularizing scientific knowledge, or for large conference centers, leisure green houses, bars, cafes, etc., which are mainly built in botanical gardens, agricultural parks, parks, convalescent bases or other public places. Blue sky, green space, rockery, bridge, water and other different scenery make people in the bustling, noisy city, such as returning to the countryside, completely relax, enjoy the fragrance of sunshine and soil and the unique tranquility, appreciate the flowers, taste the beautiful scenery at the same time, feel human life, and embody the charm of modern sightseeing agriculture.





外遮阳系统 External sunshade system

- ▲ 该系统主要作用是夏季的遮阳降温，使阳光漫射进入温室，保证作物免遭强光灼伤，由于阻挡了大量光线的进入，有效减少了温室内部热量的积聚。
- ▲ 抗紫外线、防冰雹，减少对温室顶部的侵害
- ▲ 根据种植作物的不同，选用不同遮阳率的幕布以满足不同作物对阳光的需求。
- ▲ 遮阳降温：夏天通过闭合幕布能有效的反射掉部分阳光，可使温室温度下降4℃-6℃。

- ▲ The main function of the system is to cool down the sun in summer and diffuse the sunlight into the greenhouse, so as to protect the crops from strong light burns. Due to blocking the entrance of a large amount of light, the heat accumulation inside the greenhouse is effectively reduced.
- ▲ Anti ultraviolet, anti hail, reduce the damage to the top of greenhouse
- ▲ According to the different crops planted, the screen with different shading rate is selected to meet the needs of different crops for sunlight.
- ▲ Sunshade and cooling: in summer, the closed curtain can effectively reflect part of the sunlight, which can reduce the greenhouse temperature by 4 °C - 6 °C.



减速机



规格及参数:

类 型	扭矩 (Nm)	转速 (R/min)	功率 (Kw)	电压 (V)
WJG40-2.6	400	2.6	0.55	3相, 380V, 50Hz
WJG40-5.2	400	5.2	0.55	3相, 380V, 50Hz
WJG80-2.6	800	2.6	0.75	3相, 380V, 50Hz
WJG80-5.2	800	5.2	0.75	3相, 380V, 50Hz

产品介绍

减速电机通过驱动轴带动A型齿轮转动，齿轮带动齿条做直线往复运动，由于齿条与推拉杆连成一体，推拉杆又与活动边型材连接，遮阳网的一端固定在驱动边型材上，因而带动遮阳网实现展开，收拢动作。遮阳网在托幕线与压幕线所构成的通道中运动，因为成为托幕式。

Product introduction

The reducer motor drives the A-type gear to rotate through the drive shaft, and the gear drives the rack to do linear reciprocating motion. Since the rack is connected with the push-pull rod, and the push-pull rod is connected with the movable side profile, one end is forgotten to be fixed on the driving side profile, thus driving the sunshade net to expand and close. The sunshade net moves in the same path formed by the supporting line and the pressing line, so it becomes the supporting screen type.





内遮阳系统 Interior shading system

▲ 防雾防滴：当闭合内遮阳系统时，温室内形成上下独立的两个空间，能有效的阻止温室内雾气的形成及滴露

▲ 节能保温：冬季和夜间能有效地阻止温室内热量通过辐射或热交换型式外溢，从而降低能耗，减少温室运行成本。

▲ 节约用水：可减少室内作物和土壤水分的蒸发，有效保持空气湿度，减少灌溉用水。

▲ 为增加室内的保湿效果，可采用双层内遮阳系统。

▲ 幕布分为透气型两种类型，根据需要选用不同类型和遮阳率的幕布。

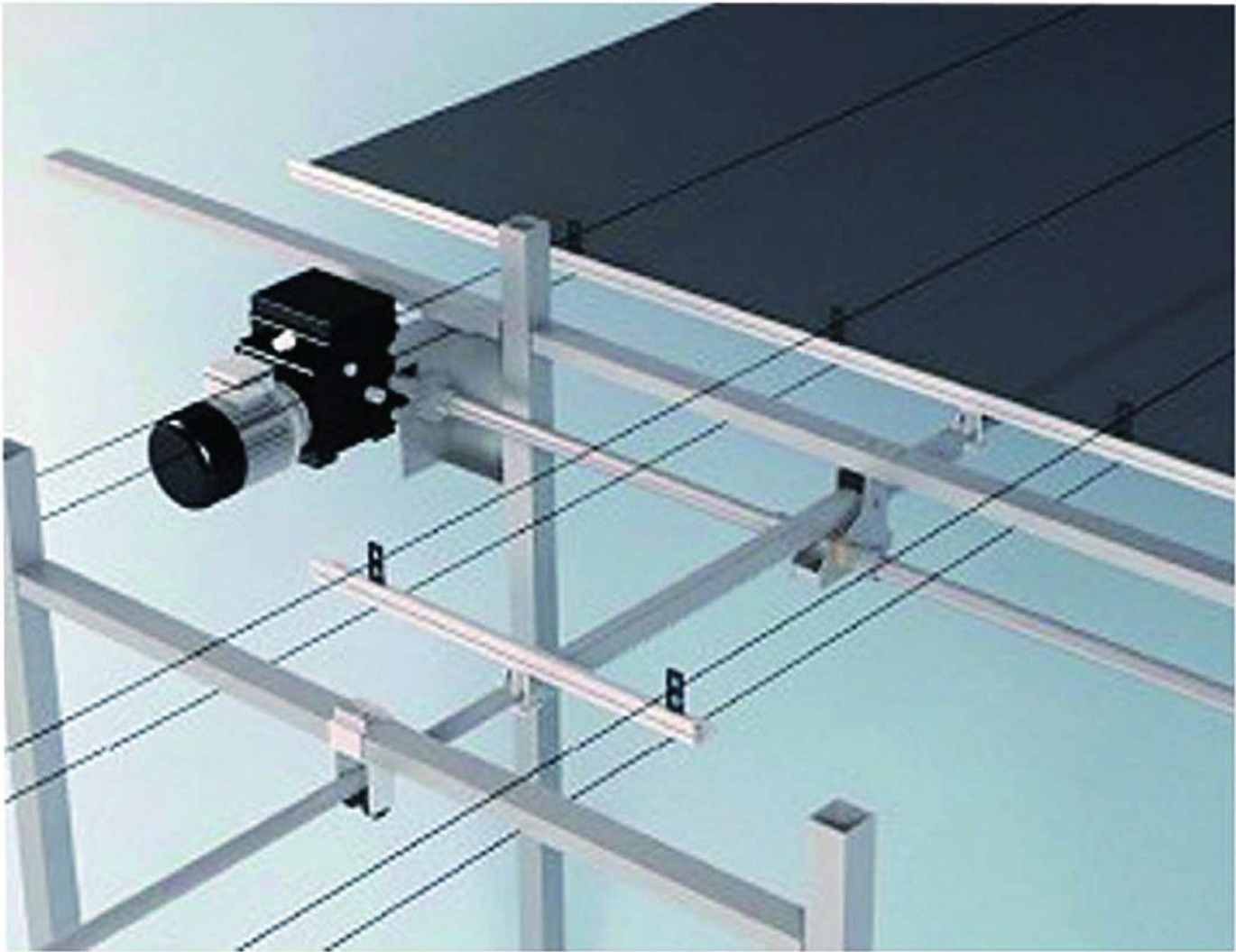
▲ Anti fog and anti dripping: when the inner sunshade system is closed, two independent spaces are formed in the greenhouse, which can effectively prevent the formation of fog and dew in the greenhouse

▲ Energy saving and heat preservation: in winter and at night, it can effectively prevent the heat inside the greenhouse from overflowing through radiation or heat exchange, so as to reduce energy consumption and operating cost of greenhouse.

▲ Water saving: it can reduce the evaporation of indoor crops and soil moisture, effectively maintain air humidity and reduce irrigation water.

▲ In order to increase the indoor moisturizing effect, double-layer inner sunshade system can be used.

▲ The curtain is divided into two types of air permeability, and different types of curtain with shading rate shall be selected according to the needs.



拉幕齿轮 (A 型)



拉幕齿轮 (B 型)



拉幕齿条





温室供暖锅炉 Greenhouse heating boiler

全面避免正压燃烧带来的炉温不均，燃烧不透，烟气四溢，局部烧损等缺陷。正压多级循环换热技术，让换热遍布每个角落，使热交换更完全，更充分。

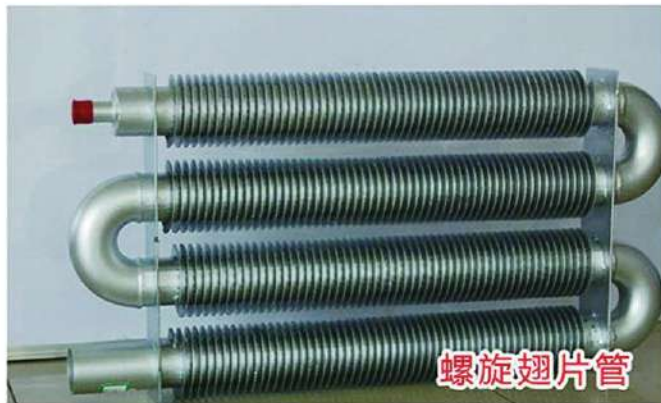
空气新鲜，温度均匀，可控：舒适温暖的养殖环境。特有双风机前瞻性的设计（节能+备用）。

我公司采用改的新型锅炉的炉膛采用耐高温特制铸钢管、无缝管制造而成，本机采用二次加温，热效率高，升温快，热风清洁，半自动控温、安装方便等特点。

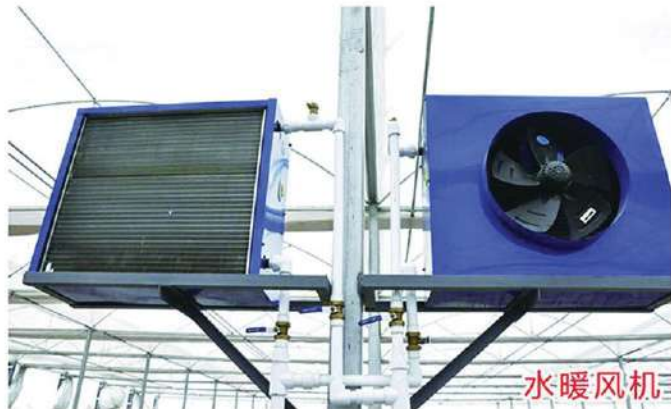
The defects of uneven furnace temperature, impervious combustion, flue gas overflowing and local burning loss caused by positive pressure combustion are avoided. The positive pressure multi-stage circulation heat exchange technology enables the heat exchange to spread all over the corner, making the heat exchange more complete and sufficient.

Fresh air, uniform temperature, controllable: comfortable and warm breeding environment. Unique dual fan prospective design (energy saving + standby).

The furnace of our new boiler is made of high temperature resistant special cast steel pipe and seamless pipe. This machine has the characteristics of high thermal efficiency, fast temperature rise, clean hot air, semi-automatic temperature control and convenient installation.



螺旋翅片管



水暖风机



水暖锅炉

园艺暖风机 Garden heater

组合机构，拆装方便、空间布置灵活，不占用花卉生产空间，升温快，供暖温度均匀，使用寿命长。

体积小，热效率高，可多组同时使用，改变了传统设备笨重、热效率低、温度不均匀的缺陷。

节能管道、管件在原有的取暖设施基础上改造无需再投资，减少了复杂的管道，避免了热能的损耗，实践证明比普通取暖设施节能40%以上，大大降低了温室大棚的生产成本。

Combined mechanism, convenient disassembly, flexible space layout, no occupation of flower production space, fast heating temperature, uniform heating temperature, long service life.

Small size, high thermal efficiency, can be used at the same time, changing the traditional equipment bulky, low thermal efficiency, uneven temperature defects.

The energy-saving pipes and pipe fittings need not to be reinvested on the basis of the original heating facilities, which reduces the complex pipes and avoids the loss of heat energy. The practice has proved that the energy saving rate is more than 40% than that of the ordinary heating facilities, and the production cost of the greenhouse is greatly reduced.



电暖风机



节煤锅炉



降温原理 Cooling principle

利用水的蒸发降温原理实现降温目的，特制的疏水湿帘能确保水均匀地淋湿整个降温湿帘墙，空气穿透湿帘介质时，与湿帘介质表面的水进行热交换，从而实现对空气的加温与降温。

The purpose of cooling is achieved by using the principle of evaporation and cooling of water. The specially designed hydrophobic wet curtain can ensure that the water can evenly wet the whole cooling wet curtain wall. When the air penetrates through the wet curtain medium, it exchanges heat with the water on the surface of the wet curtain medium, so as to realize the heating and cooling of the air.



温室湿帘 Greenhouse wet curtain

湿帘是一种特种纸质蜂窝结构材料，其工作原理是“水蒸发吸收热量”这一自然的物理现象，即水在重力的作用下，从上往下流，在湿帘波纹状的纤维表面形成水膜，当快速流动的空气穿过湿帘时，水膜中的水会吸收空气中的热量后蒸发，带走大量的潜热，使经过湿帘的空气湿度降低，从而达到降温的目的。

Wet curtain is a kind of special paper honeycomb structure material. Its working principle is the natural physical phenomenon of "water evaporation absorbing heat", that is, water flows from top to bottom under the action of gravity, forming a water film on the corrugated fiber surface of the wet curtain. When the fast flowing air passes through the wet curtain, the water in the water film will absorb the heat in the air and then evaporate, taking away a lot of latent heat. The humidity of the air passing through the wet curtain is reduced to achieve the purpose of cooling.

温室风机 Greenhouse Phoenix machine

外框采用先进的自动加工工艺，精度高。外框采用先进的自动加工工艺，精度极高。特厚镀锌层，抗腐蚀性极强。

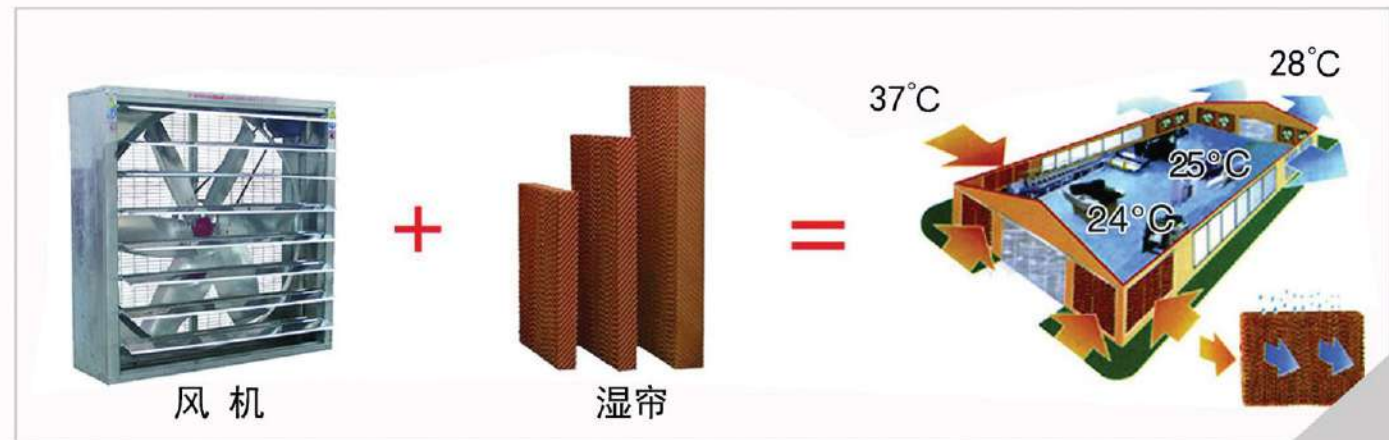
高强度的合金铸造轮毂，新型扭曲冲压成型扇叶，合理的叶型角度上确保的大量的气流产生。

严格的质量检测程序：噪音监测、震动检测、转动同心性能检测、风叶转速检测、整机效率检测。

高性能的380V三相电机。采用铁制集风器、玻璃集风器两种，后部安全网拆卸方便，CAD优化设计。



The frame adopts advanced automatic processing technology, with high precision. The frame adopts advanced automatic processing technology, with high precision. Extra thick zinc coating, strong corrosion resistance, high strength alloy casting wheel hub, new twisted stamping fan blade, reasonable blade angle to ensure a large amount of air flow. Strict quality inspection procedures: noise monitoring, vibration detection, rotating concentric performance testing, blade speed testing, and overall efficiency testing. High performance 380V three-phase motor. Two kinds of collectors, iron and glass, are adopted. The rear safety net is easy to disassemble and CAD is optimized.





骨架系统 Skeleton system

采用优质热浸镀锌型钢，所有构件加工均采用先焊接后镀锌工艺。

质量保证20年，锌附着量大于490g/平方米，厚度大于70微米。

所有构件现场组装，连接件和紧固件20年不锈蚀。



High quality hot-dip galvanized section steel is adopted, and the process of welding before galvanizing is adopted for all components.

The quality assurance period is 20 years. The zinc adhesion is more than 490g / m² and the thickness is more than 70 μ M.

All components shall be assembled on site, and the connectors and fasteners shall not be rusted for 20 years.



覆盖材料 Covering material

覆盖材料分为阳光板、单层玻璃、中空玻璃等，均采用铝合金型材与橡胶条安装密封，保证温室具有良好的气密性。铝合金型材均经过特殊的钝化处理，比一般的铝合金具有更好的耐腐蚀性。

薄膜：PO膜、PEP利得膜等，8~15丝，质量保证3~5年。

阳光板：外防紫外线，内防结露，透光性好，保温隔热性能良好，具有极好的强度、刚性、硬度、韧性和抗破裂性能，质量保证10年。

单层玻璃：外形美观，具有极好的透光性，保温隔热性能不如阳光板，质量保证10年。

中空玻璃：外形美观，透光性能好，保温隔热性能与阳光板相当，质量保证10年。



The covering materials are divided into sunlight plate, single-layer glass, insulating glass, etc., all of which are installed and sealed with aluminum alloy profiles and rubber strips to ensure good air tightness of the greenhouse. Aluminum alloy profiles have been specially passivated, which has better corrosion resistance than ordinary aluminum alloy.

Film: Po film, PEP film, 8 ~ 15 wire, quality assurance for 3 ~ 5 years.

Sunlight board: it has good light transmission, good heat preservation and heat insulation performance, excellent strength, rigidity, hardness, toughness and crack resistance, and its quality is guaranteed for 10 years.

Single layer glass: beautiful appearance, excellent light transmission, thermal insulation performance is not as good as sunlight board, quality assurance for 10 years.

Insulating glass: beautiful appearance, good light transmission performance, thermal insulation performance and sunlight board equivalent, quality assurance for 10 years.



系统功能 system function

天窗采用交错式的开窗设计，加强空气的对流效果。开启角度可达30度。可根据内外的气候差异，做不同的张开度，通风面积可占温室顶面面积的 20%以上。

侧窗采用整体机械式传动方式，与天窗配合进行降温，采用外翻式或推拉式侧窗。

独特的开窗外放防虫网设计可以避免昆虫及杂物进入温室，减少对温室作物的感染。

天窗和侧窗采用齿轮齿条传动方式，电动控制。

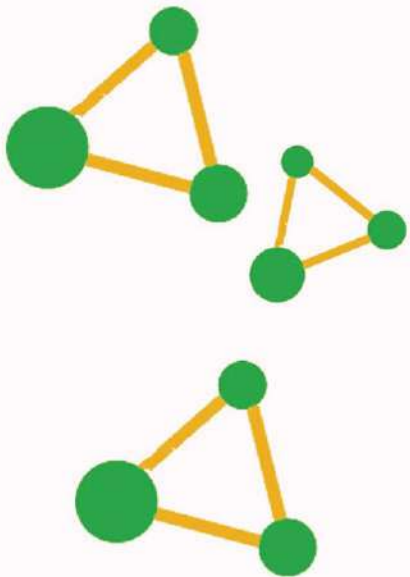


The skylight adopts staggered window design to enhance the air convection effect. The opening angle can reach 30 degrees. According to the climate difference inside and outside, different opening degrees can be made. The ventilation area can account for 20% of the top surface area of the greenhouse.

The side window adopts the integral mechanical transmission mode, which is used to cool down with the skylight. The side window adopts the inverted or push-pull type.

The unique design of anti insect net with windows can prevent insects and sundries from entering the greenhouse and reduce the infection of greenhouse crops.

The skylight and side window are driven by rack and pinion, and electrically controlled.



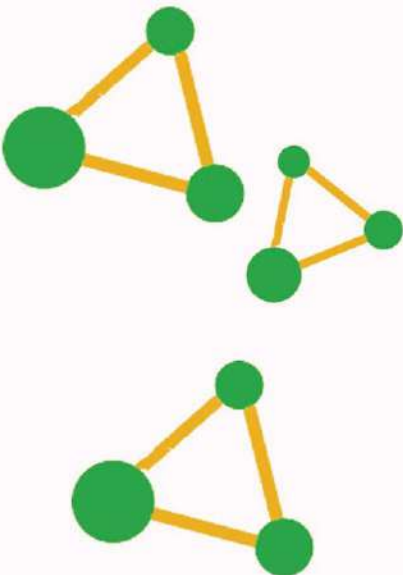


系统功能 system function

采用行走式灌溉悬臂机构，安装在温室内上方，可通过转移装置实现温室内各跨之间的转移喷灌。通过喷灌机控制柜，可对喷灌机移动速度和喷水量进行调节。喷灌机采用进口喷嘴，每个喷嘴带有3个喷头，可通过旋转喷头来调整喷灌水型和流量。



A walking irrigation cantilever mechanism is adopted, which is installed above the inside of the greenhouse, and the transfer irrigation between each span in the greenhouse can be realized through the transfer device. Through the control cabinet of sprinkler irrigation machine, the moving speed and water spraying amount of sprinkler irrigation machine can be adjusted. The sprinkler irrigation machine adopts the imported nozzle, each nozzle has three nozzles, and the sprinkler type and flow can be adjusted by rotating the nozzle.



环流风机 Circulation fan

技术参数：
型号：H-400
直径：400mm
电压：220V
功率：120W
风量：3200立方米/小时

technical parameter
Model: h-400
Diameter: 400mm
Voltage: 220 V
Power: 120W
Air volume: 3200 m³ / h





系统功能 system function

设计合理的灌溉施肥水处理系统，改善了作物对肥料的吸收功能，同时提高了作物的品质。

特别适合用于水质不加的地区及对种植水质要求较高作物的温室。

先进的处理工艺与温室的生产工艺有效结合。

The reasonable design of irrigation and fertilization water treatment system can improve the absorption function of fertilizer and improve the quality of crops.

It is especially suitable for the area where water quality is not added and the greenhouse for planting crops with high water quality requirements. Advanced treatment technology and greenhouse production technology effectively combined.



无土栽培 Cultivation without scholar

无土栽培(soilless culture)不用土壤，用其它东西培养植物的方法，包括水培、雾（气）培、基质栽培。

无土栽培中用人工配制的培养液，供给植物矿物营养的需要。无土栽培是一种不用天然土壤而采用含有植物生长发育必需元素的营养液来提供营养，使植物正常完成整个生命周期的栽培技术。在无土栽培技术中，能否为植物提供一种比例协调，浓度适量的营养液，是栽培成功的关键。

Soilless culture refers to the method of cultivating plants with other things instead of soil, including hydroponic culture, aerosol culture and substrate culture.

In soilless culture, artificial culture medium is used to meet the needs of plant mineral cultivation. Soilless culture is a kind of cultivation technology that does not use natural soil but uses nutrient solution containing essential elements for plant growth and development to provide nutrition, so that plants can normally complete the whole life cycle. In soilless culture technology, it is the key to the success of cultivation that whether the nutrient solution with proper concentration and proportion can be provided for plants.





主要特点 main features

远程监控和服务能力

可靠性和抗干扰性

人性化设计

智能温室计算机控制系统由：“气象站”+“室内环境传感器”+“温室控制软件”组成。

气象站：用于采集室外环境参数（室外温度、室外湿度、室外光照辐射、风速、风向、风雪信号）。

室内环境传感器：用于采集室内环境温度、环境湿度、室内光照辐射。

温室控制软件：用于对温室遮阳系统、降温系统、天窗系统等装置进行自动控制，同时对温室的环境数据进行采集、记录并自动生成数据报表和曲线图。

Remote monitoring and service capability

Reliability and immunity

user friendly design

The intelligent greenhouse computer control system is composed of "weather station" + "indoor environment sensor" + "greenhouse control software".

Weather station: used to collect outdoor environmental parameters (outdoor temperature, outdoor humidity, outdoor light radiation, wind speed, wind direction, wind and snow signals).

Indoor environment sensor: used to collect indoor environment temperature, humidity and indoor light radiation.

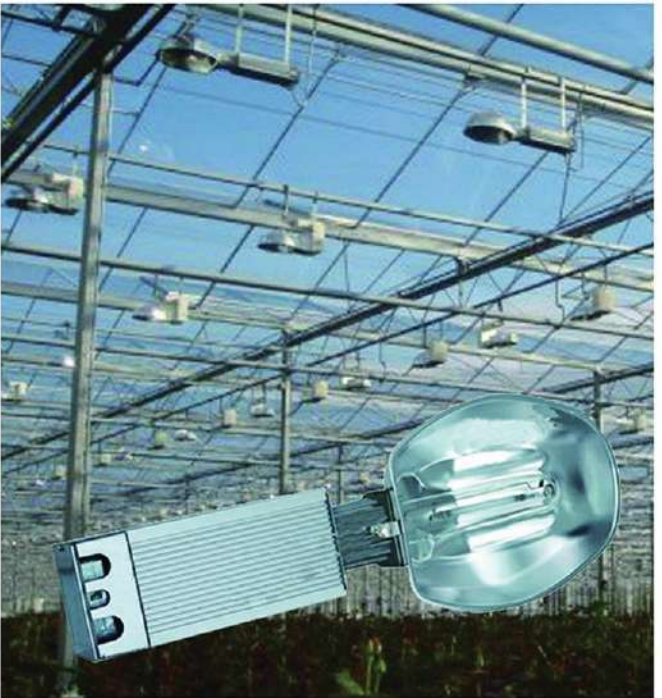
Greenhouse control software: used for automatic control of greenhouse sunshade system, cooling system, skylight system and other devices, while collecting and recording the greenhouse environmental data, and automatically generating data reports and graphs.



补光照明 Supplementary lighting

农用钠灯是一种高强度钠气灯，它可以提供理想的与植物生长要求相吻合的光谱分布。无论是光合作用、光形态还是光周期生长与普通高压钠灯相比，农用钠灯光输出量高，红、蓝光能量更趋平衡。光谱分布的改善使作物的环境更容易控制，并且使作物生长更快，质量得以提高。

Agricultural sodium lamp is a kind of high intensity sodium gas lamp, which can provide ideal spectral distribution in accordance with the requirements of plant growth. Compared with ordinary high pressure sodium lamp, agricultural sodium lamp has higher output and more balanced red and blue light energy. The improvement of spectral distribution makes the environment of crops easier to control, and makes the crops grow faster and improve the quality.

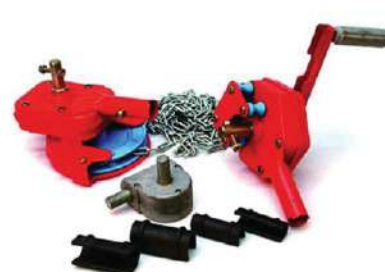




电动卷膜器



卷膜器2



手动卷膜器



抱箍



摇膜器



温室铝材



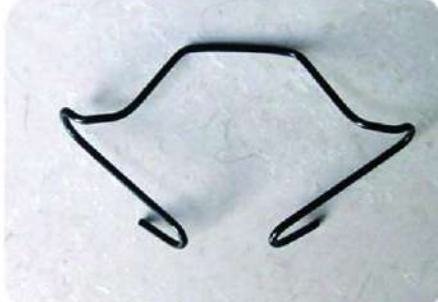
卷帘机



拉幕电机



配电箱



引线簧



屋脊连接件



大棚膜修补胶带



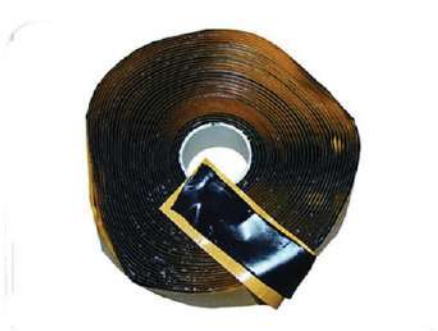
卡簧



拉幕配件



开窗齿轮



止水胶条



压膜带



双拱卡



B型齿轮



托幕线



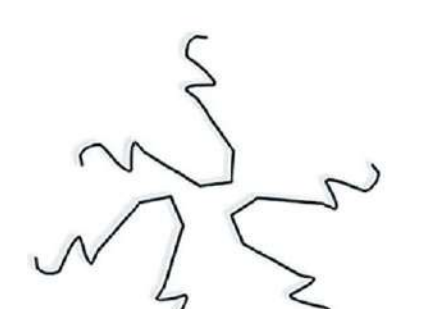
水槽



连接件



压顶簧



定位簧