申泰新能
SEINTA

智慧能源 / 绿色建筑 / 新型农业　系统集成商
SMART ENERGY / GREEN BUILDING / INNOVATIVE AGRICULTURAL　SYSTEM INTEGRATOR

*参考最终版本或实物实际参数，部分参数修改后恕不复发

Version — 2024V2

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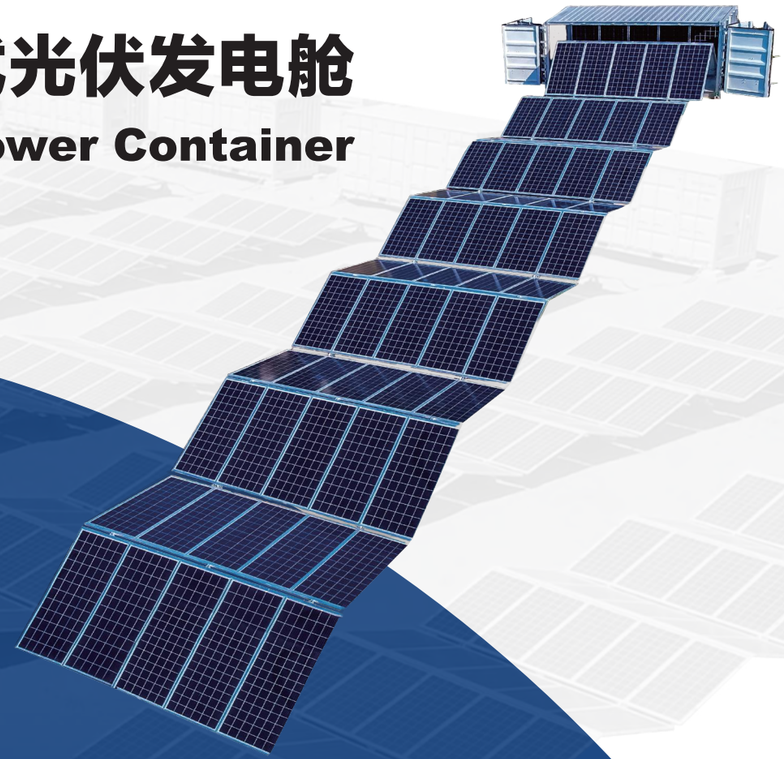
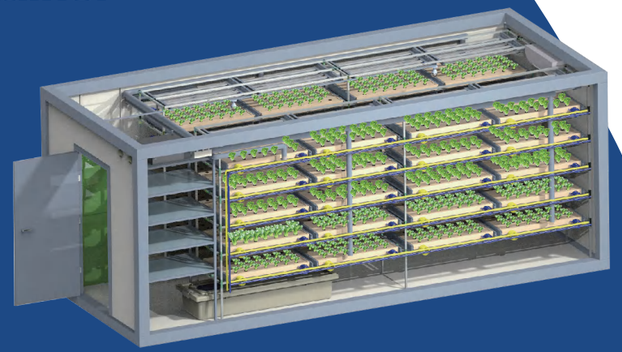
折叠式光伏发电舱
Solar Power Container



智慧农业种植舱
Solar Planting Container



公司介绍 / Company Profile

无锡申泰新能源科技有限公司成立于2016年，坐落于国内太阳能光伏产业基地江苏无锡市，是一家以新能源光伏发电及储能业务为基础，以新建筑装配式房屋、新农业分布式种植业务为战略储备，集自主研发、生产、销售及服务为一体的高新技术企业，致力于向全球用户提供全生命周期智慧能源、智能建筑、智慧种植的整体解决方案。

公司目前已申请60余件国家商标及版权，1件国际商标，40余件专利，7件国家发明专利及8件软著；拥有TUV、CE、ISO等国际认证证书；已获得"新四板企业、国家高新技术企业、创新型中小企业、雏鹰三类企业、三星上云企业、科技型中小企业、江苏省民营科技企业"等。

Senta Energy Co., Ltd. was founded in 2016， located in Wuxi, Jiangsu province, the birthplace of the PV industry in China. We focus on solar power system and energy storage business, with new building and new agricultural distributed planting business as the strategic reserve.Set independent research and development, production, sales and service as one of the high-tech enterprises, is committed to providing global users with the whole life cycle intelligent energy, intelligent building, intelligent planting overall solutions.

生产基地 / Manufacturing Base

应用场景 / Application Scenario

农业和水利

Agriculture and water conservancy

Additional solar power supply for self-consumption to support existing generators

偏远充电站

Agriculture and watermanagment

Powering temporary off-grid charging stations

工地和工业区

Construction sites and industrial areas

Additional source of power forlarge and small construction sites

救援和救灾

Emergency areas

Provision of off-grid remote areas

活动现场

Events and happenings

Venues without a grid connection or to cover large peak loads.

企业自用

Energy companies

Support weak public network in time of increased energy consumption

社区和难民区

Communities and refugee villages

Solar power supply for self consumption with excess feed-in into the local grid

采矿和军事

Mining and military application

Island power plant for grid independent solar power supply in combination with energy storage

偏远岛屿地区

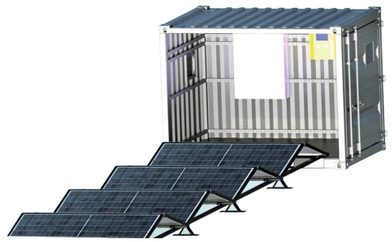
基建现场

资源开采地

灾后战后重建

折叠式光伏发电舱—轨道式 / Solar PV Container—Rail Type

参数配置 / Parameter Configurations

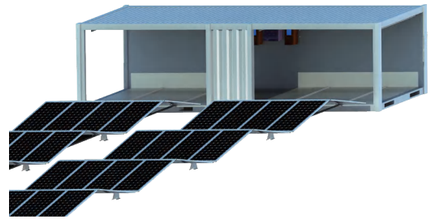


System Product Model	SC08GP-M-20K
Total Weight (Tons)	5
Type of Container	8GPF x1
Solar Array Capacity (Pmax / kWp)	20.23
Type of Solar Module (W)	595x34
String Inverter (kW)	20x1
Bracket (Number of Module per Sheet)	1x34
Total Unfolded Footprint (L*W*H/m)	46*2.3(2.4)*0.6(2.2)
Occupied Area of Whole System (m²)	112.4 (46*2.43)

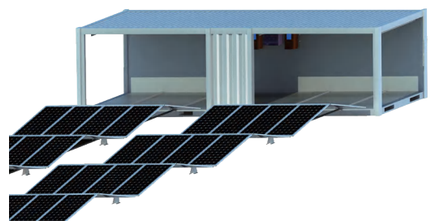
System Product Model	SC10GP-M-40K
Total Weight (Tons)	8
Type of Container	10GPx1
Solar Array Capacity (Pmax / kWp)	42.24
Type of Solar Module (W)	480x88
String Inverter (kW)	40x1
Bracket (Number of Module per Sheet)	2x44
Total Unfolded Footprint (L*W*H/m)	88*2.38(3.0)*0.8(2.6)
Occupied Area of Whole System (m²)	276.3 (92.4*2.99)

System Product Model	SC20GP-M-80K
Total Weight (Tons)	12.5
Type of Container	20GPx1
Solar Array Capacity (Pmax / kWp)	84.48
Type of Solar Module (W)	480x176
String Inverter (kW)	100x1
Bracket (Number of Module per Sheet)	4 x44
Total Unfolded Footprint (L*W*H/m)	93*4.7(6.0)*0.8(2.6)
Occupied Area of Whole System (m²)	558(93*6)

System Product Model	SC20HQ-M-100K
Total Weight (Tons)	15
Type of Container	20HQx1
Solar Array Capacity (Pmax / kWp)	104.72
Type of Solar Module (W)	595x176
String Inverter (kW)	100x1
Bracket (Number of Module per Sheet)	4x44
Total Unfolded Footprint (L*W*H/m)	104*4.71(6.0)*0.9(2.9)
Occupied Area of Whole System (m²)	650.4(108.4*6)



System Product Model	SC40GP-M-160K
Total Weight (Tons)	25
Type of Container	40HQ x1
Solar Array Capacity (Pmax / kWp)	168.96
Type of Solar Module (W)	480x352
String Inverter (kW)	80x2
Bracket (Number of Module per Sheet)	4x88
Total Unfolded Footprint (L*W*H/m)	93*10.5(12.0)*0.8(2.9)
Occupied Area of Whole System (m²)	1108 (93*12)



System Product Model	SC40HQ-M-200K
Total Weight (Tons)	30
Type of Container	40HQPx1
Solar Array Capacity (Pmax / kWp)	209.44
Type of Solar Module (W)	595x352
String Inverter (kW)	100x2
Bracket (Number of Module per Sheet)	4x88
Total Unfolded Footprint (L*W*H/m)	104*4.71(6.0)*0.9(2.9)
Occupied Area of Whole System (m²)	1300(108.4*12)

折叠式发电储能舱—轨道式 / Solar ESS Container—Rail Type

参数配置 / Parameter Configurations

System Product Model	SC08GP-M-18K20
Total Weight (Tons)	4.8
Type of Container	8GPFx1
Solar Array Capacity (Pmax / kWp)	17.85
Type of Solar Module (W)	595x30
String Inverter (kW)	12x2
Bracket (Number of Module per Sheet)	1x30
Lithium Battery Storage (kWh)	10.24x2
Diesel Generator (KVA) (Optional)	5.5x1

System Product Model	SC10GP-M-30K40
Total Weight (Tons)	7
Type of Container	10GPx1
Solar Array Capacity (Pmax / kWp)	30.72
Type of Solar Module (W)	480x64
String Inverter (kW)	12x2
Bracket (Number of Module per Sheet)	2x32
Lithium Battery Storage (kWh)	10.24x4
Diesel Generator (KVA) (Optional)	5.5x1

System Product Model	SC20GP-M-60K215
Total Weight (Tons)	13
Type of Container	20GPx1
Solar Array Capacity (Pmax / kWp)	63.36
Type of Solar Module (W)	480x132
String Inverter (kW)	50x1
Bracket (Number of Module per Sheet)	3x44
Lithium Battery Storage (kWh)	229x1
Diesel Generator (KVA) (Optional)	13.8x1

System Product Model	SC20HQ-M-75K215
Total Weight (Tons)	15
Type of Container	20HQx1
Solar Array Capacity (Pmax / kWp)	78.54
Type of Solar Module (W)	595x132
String Inverter (kW)	60/100x1
Bracket (Number of Module per Sheet)	3x44
Lithium Battery Storage (kWh)	229x1
Diesel Generator (KVA) (Optional)	13.8x1

System Product Model	SC40GP-M-140K215
Total Weight (Tons)	26
Type of Container	40HQx1
Solar Array Capacity (Pmax / kWp)	148
Type of Solar Module (W)	480 x(176+132)
String Inverter (kW)	60*2/100 x1
Bracket (Number of Module per Sheet)	(4+3)x44
Lithium Battery Storage (kWh)	229x1
Diesel Generator (KVA) (Optional)	13.8x1

System Product Model	SC40HQ-M-150K430
Total Weight (Tons)	31.5
Type of Container	40HQPx1
Solar Array Capacity (Pmax / kWp)	157.08
Type of Solar Module (W)	595x(132+132)
String Inverter (kW)	60/100x2
Bracket (Number of Module per Sheet)	(3+3)x44
Lithium Battery Storage (kWh)	229x2
Diesel Generator (KVA) (Optional)	13.8x1

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System Product Model	SC08GP-M-20K-W
Total Weight (Tons)	5
Type of Container	8GPF x1
Solar Array Capacity (Pmax / kWp)	23.94 (20~26)
Type of Solar Module (W)	630 x38 (550~650)
String Inverter (kW)	20 x1
Bracket (Number of Module per Sheet)	1 x38
Total Unfolded Footprint (L*W*H/m)	59(29.5m*2rows)*2.26(2.9)*0.5(2.2)
Occupied Area of Whole System (m²)	134 (29.5*2.26*2rows)
Complete Unfolding Time (mins)	50

System Product Model	SC10GP-M-40K-W
Total Weight (Tons)	8.5
Type of Container	10GP x1
Solar Array Capacity (Pmax / kWp)	46.08 (46~50)
Type of Solar Module (W)	480 x96 (480~520)
String Inverter (kW)	40 x1
Bracket (Number of Module per Sheet)	2 x48
Total Unfolded Footprint (L*W*H/m)	103(34m*3rows)*2.38(3.0)*0.8(2.6)
Occupied Area of Whole System (m²)	243 (34*2.38*3rows)
Complete Unfolding Time (mins)	70

System Product Model	SC20GP-M-80K-W
Total Weight (Tons)	13
Type of Container	20GP x1
Solar Array Capacity (Pmax / kWp)	92.16 (90~105)
Type of Solar Module (W)	480 x192 (480~520)
String Inverter (kW)	80 x1
Bracket (Number of Module per Sheet)	2 x96
Total Unfolded Footprint (L*W*H/m)	103(34m*6rows)*2.38(3.0)*0.8(2.6)
Occupied Area of Whole System (m²)	486 (34*2.38*6rows)
Complete Unfolding Time (mins)	110

《一种便携式光伏阵列发电机组集装箱及其使用方法》
The invention relates to a portable PV array generator set container and an application method thereof

《一种轨道滑轮止挡机构》
The utility model relates to a track pulley stop mechanism

《一种折叠件伸缩辅助机构》
The utility model relates to a folding part expansion auxiliary mechanism

《一种构件式BIPV太阳能光伏瓦》
A component type BIPV solar photovoltaic tile

特征特点 / Features and Characteristics

特色 / Feature

Mobility	流动性
Purchase,rental or leasing option	购买、租赁等多选择
Generation of clean renewable energy	清洁，可再生能源
Reduction of diesel consumption	降低柴油消耗量
Flexible usage and application possibilities	灵活使用和应用的多可能性
Rail system suitable for flexible ballasting,depending on wind loads	轨道系统适用于柔性压载，取决于风荷载
Image improvement through the use of sustainable, environmentally friendly energy	可持续和环境友好的形象

Fast assembly and disassembly of the entire solar power system	快速组装和拆卸整个太阳能发电系统
Factory pre-assembled and wired module arrays	工厂预组装和有线模块阵列
The system can be expanded as required	系统可根据需要进行扩展
Minimising energy costs	最小化能源成本
Investment to achieve high returns	投资实现高回报
Conveyor system for quickly moving in and out of the module fields	输送系统能够快速游走于各模块
High level of system security thanks to rapid retraction/extension of the module arrays in the event of weather warnings	更具天气情况，能够快速收回/扩展模块阵列，系统安全性很高

灵活便捷可移动 Flexible and easy to move

Portable mobility allows flexibility to adapt to the use of the site. It can be assembled quickly and is more convenient to transport.

模块化系统 Modular system

The use of several modules to increase the solar yield offers flexible scaling of the system,which can also be combined with battery systems and other energy storage systems.

短期或长期使用 Short or long term usage

Options for short-term or long-term use with a high level of plant safety for extreme weather conditions.

偏远地区 Remote areas

In remote areas,it can ensure a stable energy supply or support a public grid with strong power fluctuations, as well as diesel generators that are used.

案例分享 / Case Sharing

① 集 装 箱 运 输
Transportation Way

② 吊 装 就 位
Hoisting in Position

③ 开 箱 铺 设
Open & Assembly

④ 展 开 光 伏 阵 列
Unfold Solar PV Array

⑤ 电 气 接 线 安 装
Cable Installation

⑥ 运 行 工 作
Final Operation

生长周期短
Short Growth Cycle

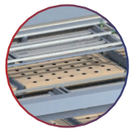
无虫害
No Pest Problems

无农药无残留
No Pesticide Residue

占地面积小
Small Footprint

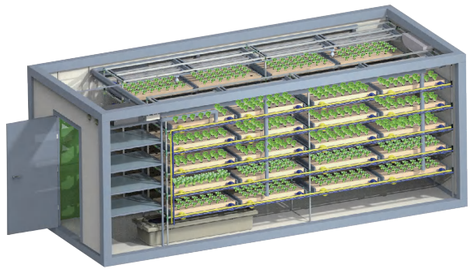
光伏发电
Solar Power System

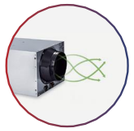
运输成本低
Low Transportation Costs



01 种植盘 —— 植物生长平台
Planting Tray - Plant Growth Platform

采用食品级PP材料制作，盖板开孔用于放置定植篮。
Made of food-grade PP material, with holes in the cover for placing planting baskets.



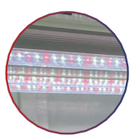


02 新风系统 —— 植物的呼吸器
Fresh Air System - The Respirator Of Plants

室内外空气交换，新风输送，保证植物呼吸。
Exchanging in-external air，Ensure plant respiration.

03 营养液供给系统 —— 植物的口粮
Nutrient Solution Supply System - Plant Rations

自动化控制营养液循环，保证植物生长所需的营养。
Automatic control of nutrient solution circulation to ensure the nutrients needed for plant growth.



04 LED全光谱生长灯 —— 模拟太阳光
Led Full Spectrum Grow Light – Simulates Sunlight

通过全光谱LED植物补光灯模拟阳光，促进植物生长。
Mimicking the sun makes plants grow better.

05 热交换恒温系统 —— 舱内精准控温
Constant Temperature System - Temperature Control

舱内温度精准调控，保证植物生长在合适温度区间内。
Automatically adjust the indoor temperature precisely, so that plants can grow better.

硬件设施
Hardware Equipment

+

智能物联网管理控制系统
Intelligent IOT Management Control System

+

运营平台
Operation Platform

种植舱采用无土栽培技术，适用于城市农业、垂直农场、太空农业等场景。它可以在有限的空间内实现高效的植物生长，满足人们对新鲜食物的需求，同时减少对传统农业土地的依赖

The planting module adopts soilless cultivation technology, which is suitable for urban agriculture, vertical farm, space agriculture and other scenarios. It enables efficient plant growth in limited Spaces, meeting people's need for fresh food while reducing reliance on traditional agricultural land

偏远项目现场和工地
Remote project site

一带一路基建
Belt and Road Infrastructure

岛屿滩涂
Island

城市+沙漠化场景
City + Desertified area

蔬 菜 生 长 流 程
Vegetable Growing Process

① 选 种 浸 种
Seeds Selection

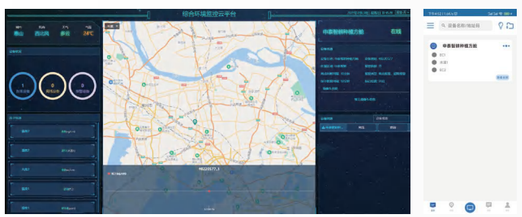
② 催 芽
Germination

③ 育 苗
Seeding

④ 定 植
Planting

⑤ 生 长 期
Cultivation

⑥ 采收清洗
Harvest



环 境 监 测 控 制 平 台

Intelligent Monitoring And Control Platform

《一种多功能集成化离岛方舱》

A multi-functional integrated outlying island shelter

《一种石墨烯太阳能PVT热电装置》

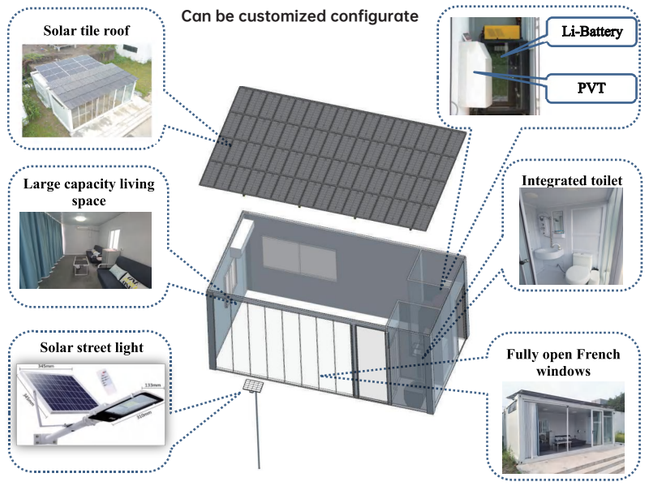
A Graphene Solar PVT Thermoelectric Device

检验检测报告—重金属/农残

Inspection and test report — Heavy metals / agricultural residues

集装箱快拼房是一种新时期环保经济适用房。它以集装箱为基础，通过模块化的设计，快速组装而成，这种快拼箱常见于临时住宿和办公，坚固耐用，拆装快捷、运输方便。

The offshore rapid assembly house, The so-called"offshore" means it does not need the input external resources and can independently provide various energy needs, including electric energy,light energy,heat energy,intelligence water,etc., so as to realize "positive energy building" in a real sense.



Quick Disassembly　　Easy To Move　　Sufficient Energy

Basic Properties

Module Type	TC63-18	TC73-21	TC64-24
Product Dimensions (L*W*H/mm)	6000×3000×2800	7000×3000×2800	6000×4000×3000
Max. Outside Area (m^2)	18	21	24
Max. Inside Area (m^2)	16.2	19.0	22.0
House Weight (Kgs)	1200	1350	1500
Description of House Materials		Same as container house	
Description of Windows & Doors		Can be customized made	
Max. Solar Panel on Roof (W)		3690	4920
Max. Solar Tile on Roof (W)	3240	3780	5320
Type of Inverter		Off grid type (with AC back-up)	
Power of Inverter (kW)		3~6 (one phase)	
Type of Battery		Lithium battery (LiFePO4)	
Capacity of Battery (kWh)		3~20	
Type of Water Heater		PVT	
Volume of Water Tank (L)		150~250	
Intelligent Housing Systems		Can be customized configurate	
Other Furniture		Can be customized configurate	
Colors Available		Standard White Grey, Customized Red, Blue, Green, Camouflage, etc.	

Mechanical Properties

Warranty (Years)	2
Life Span (Years)	≥10

Packing Configuration

Container Loading Qty (20GP)	7	0	7
Container Loading Qty (40HQ)	15	13	14

Basic Properties

Module Type	CH33-09	CH63-18	CH73-21	CH64-24
Product Dimensions (L*W*H/mm)	3000×3000×2800	6000×3000×2800	7000×3000×2800	6000×4000×3000
Max. Outside Area (m^2)	9	18	21	24
Max. Inside Area (m^2)	7.8	16.2	19.0	22.0
Max. Outside Volume (m^3)	25.2	50.4	58.8	72
Max. Inside Volume (m^3)	20.2	42.1	49.4	61.6
Weight (Kgs)	900	1200	1350	1500
Description of Doors	2035*950mm / Painting steel with Bar Lock			
Description of Windows	1100*925mm / Double Galasses POM with Security Fence			
Description of Frames	2.3mm Stoving varnish steel			
Description of Wall Panels	50/75mm Rock Wool Sanwish Panel			
Description of Floors	16-18mm Fireproofing Mgo Board			
Description of Rooftiles	0.24-0.45mm Painting Steel			
Standard Configuration-Doors	1	1		
Standard Configuration-Windows	1	2		
Colors Available	Standard White Grey, Customized Red, Blue, Green, Camouflage, etc.			

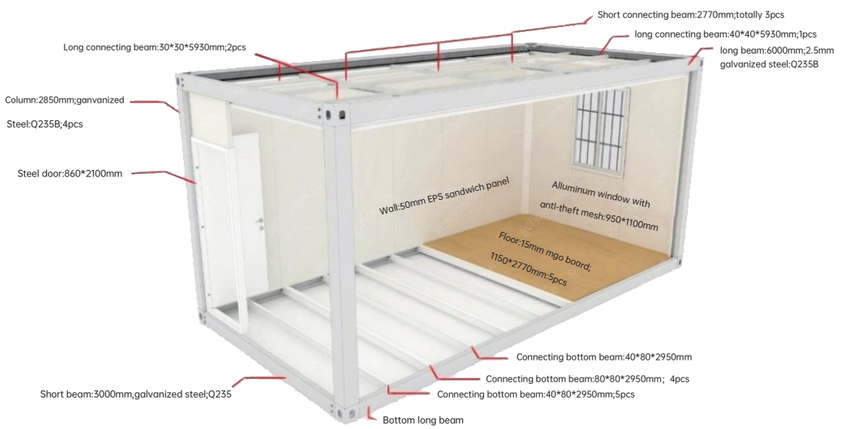
Mechanical Properties

Floor Live Load (KN/㎡)	2
Roof Live Load (KN/㎡)	1
Wind Load (KN/㎡)	0.6
Aseismatic Level	8
Fire-proofing Class	A
Warranty (Years)	2
Life Span (Years)	⩾10

Packing Configuration

Packing Way		Bulk parts without pallets		
Container Loading Qty (20GP)	12	7	0	7
Container Loading Qty (40HQ)	25	15	13	14

Schematic Diagram



① 散 件 运 输
Bulk Transport

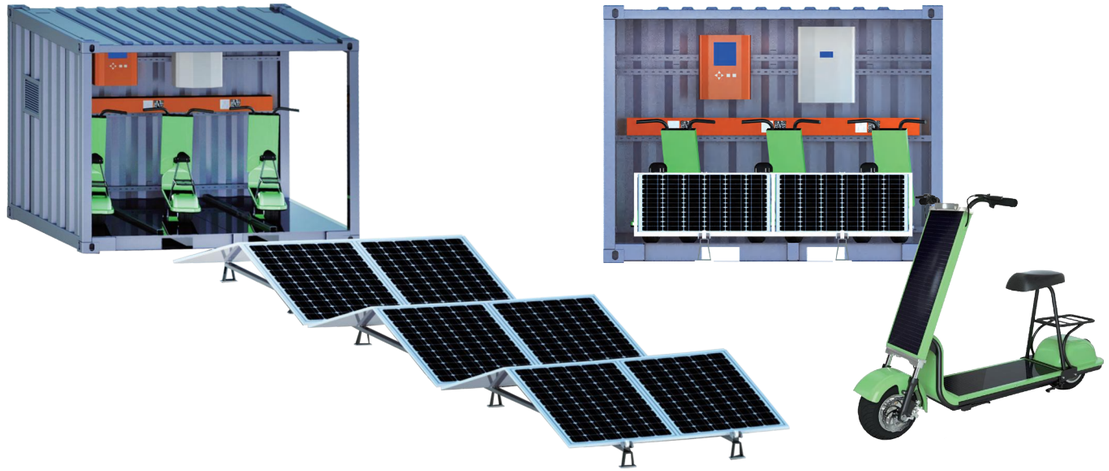
② 结 构 安 装
Structural Installation

③ 安 装 墙 板
Install Wallboard

④ 摆 放 家 具
Arrange Furniture

⑤ 安 装 门 窗
Install doors and Windows

⑥ 安 装 光 伏
Install Solar PV



Overall Configurations

SC Package	Package Products Model	SC10GP-M-5K5-EB
	Solar Array Capacity (Pmax / Kwp)	5.76
	Total Weight (Tons)	4
	Operating Temperature (℃)	-40 ~ +85
Container	Type Of Contianer	10GP
	External Dimensions (L*w*h/mm)	2991*2438*2591
	Container Weight (Tons)	1.7
Solar	Solar Panel Type	TopCon Monocrystalline
	Solar Panel Power (Pmax / Wp)	480
	Quantity Of Solar Panels (Pcs)	12
Inverter	Inverter Type	Hybrid Inverter
	String Inverter Capacity (Pmax / Kwp)	5kw
	Operating Phase	single
	Quantity Of String Inverters (Sets)	1
Battery	Module Type	LFP 5kWh/ LV
	Battery Type	LFP
	Rated Capacity	100Ah
	Rated Power	5.12kWh
E-BIKE	Mileage	35-40km
	Item	AGAO SOLAR SCOOTER
	Rated Motor Power	350W(customizable)
	Nominal Energy	468WH
	Battery	Lithium battery
	Maximum Speed	25km/h

光伏充电+储能
PV CHARGING + ENERGY STORAGE

模块齐全，绿色能源

Complete modules, Green energy.

光伏电动车
SOLAR ELECTRIC VEHICLES

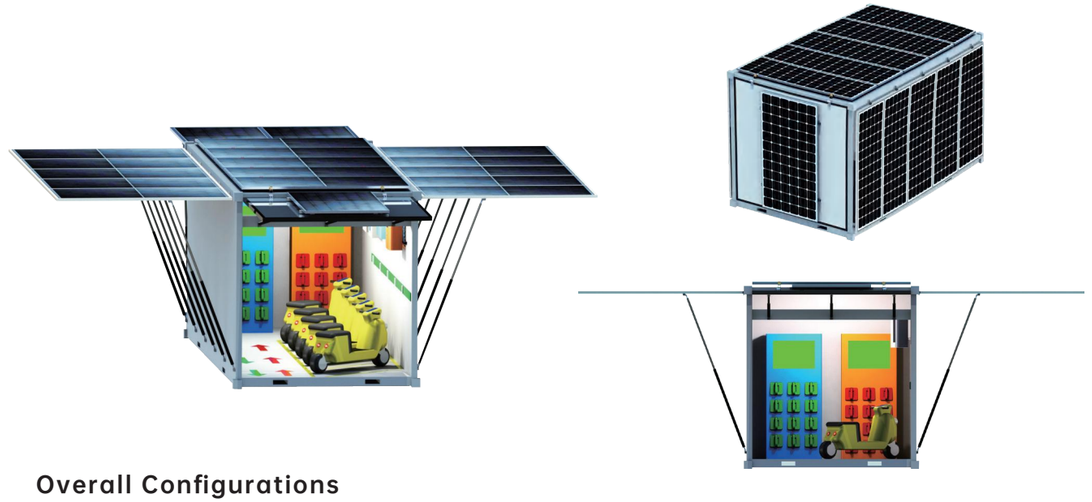
自带光伏的电动车，续航里程长，有光即充电

Electric vehicles with PV, long range, light charge.

离岛使用
OUTLYING ISLAND USE

自发自用，无需市电接入可离岛使用

Self-use,no need for mains access can be used off the island.



Overall Configurations

SC Package	Package Products Model	SC20GP-M-10K30-EB
	Solar Array Capacity (Pmax / Kwp)	9.9
	Total Weight (Tons)	5
	Operating Temperature (℃)	-40 ~ +85
Container	Type Of Contianer	20GP
	External Dimensions (L*w*h/mm)	6058*2438*2591
	Container Weight (Tons)	2.5
Solar	Solar Panel Type	Monocrystalline
	Solar Panel Power (Pmax / Wp)	550
	Quantity Of Solar Panels (Pcs)	18
Inverter	Inverter Type	Hybrid Inverter
	String Inverter Capacity (Pmax / Kwp)	6kw
	Operating Phase	single
	Quantity Of String Inverters (Sets)	1
Battery	Module Type	LFP 10kWh/ LV
	Battery Type	LFP
	Rated Capacity	200Ah
	Rated Power	10.24kWh
	Quantity Of Batterys (Sets)	3
Power Exchange Cabinet	Model	SCPEC-10P
	Maximum Power	10kW
	Charging Current	0-10A
E-BIKE	Model	N100 MAX Collector's Edition
	Battery Capacity	48V25Ah
	Battery Type	Lithium Battery
	Bms	Yes
	Endurance	Approximately 100km
	Size	1623*698*1052mm
	Unlocking Method	NFC/Bluetooth/Vocal print
	Instrument	5-inch TFT intelligent touch screen

换电柜
CHANGING CABINET

换电柜便捷更换电池

The power changer can easily replace the battery.

折叠光伏
FOLDING SOLAR PV

折叠光伏，便于移动，快速部署

Folding PV for easy movement and quick deployment.

便捷运输
CONVENIENT TRANSPORTATION

所有的模块均可以装进集装箱发货

All modules can be shipped in a container.

01/ 传统冷库问题 / Traditional Cold Storage Problem

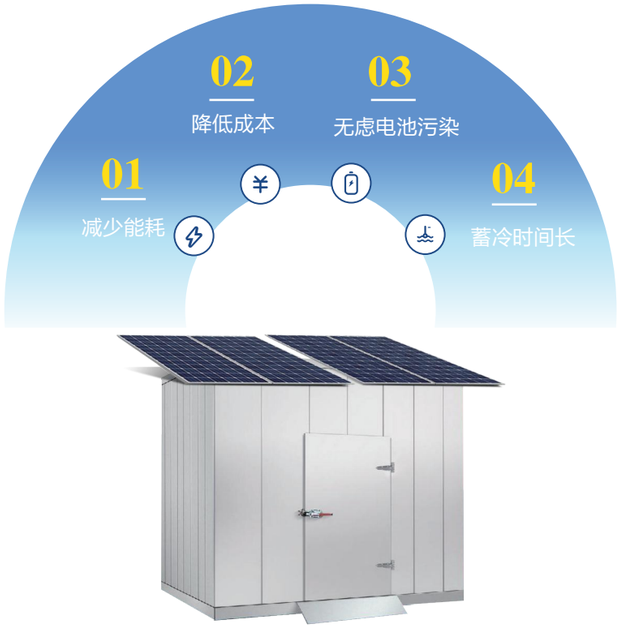
传统的冷库是典型的高耗能设施，冷库运行过程中用电负荷高，耗电量大，在全球能源短缺加剧及国家推进“双碳”战略和能耗双控的背景下，节能降耗已成为冷库建设急需解决的现实问题。

Traditional cold storage is a typical high energy consumption facilities, cold storage operation process of high power load, large power consumption, in the global energy shortage and the country to promote the "double carbon" strategy and double control of energy consumption in the background, energy saving and consumption reduction has become an urgent practical problem to be solved in the construction of cold storage.

02/ “光伏蓄冷冷库”应运而生 / Solar Cooling Container

在此情形下，利用光伏发电系统解决冷库运行过程中的高能耗问题已成为推动未来冷库绿色低碳发展的必然选择。但目前太阳能光伏发电系统的初始投资费用相对较高，在某种程度上限制了光伏冷库的使用，而在光伏系统较高的投资费用中，储能设备蓄电池占据了很大的比例。

In this case, the use of photovoltaic power generation system to solve the problem of high energy consumption during the operation of cold storage has become an inevitable choice to promote the green and low-carbon development of cold storage in the future. However, the initial investment cost of solar photovoltaic power generation system is relatively high, which limits the use of photovoltaic cold storage to some extent, and in the high investment cost of photovoltaic system, energy storage equipment batteries account for a large proportion.



光伏蓄冷冷链舱 / Solar Cooling Container 产品说明 / Product Description

03/ 核心技术 / Key Technology

江苏省农产品冷链装备创新中心针对这一难题，联合无锡申泰新能源科技有限公司组建了“光伏+蓄冷+冷库”的专家团队，集中力量开展重点技术攻关，推出了绿色节能、库温恒定的光伏蓄冷冷库建造技术方案，该技术方案以蓄冷板替代蓄电池，将光伏电能直接以冷能的形式储存起来。

In view of this problem, Jiangsu Agricultural Cold Chain Equipment Innovation Center, together with SENTA Energy Co., Ltd., has set up an expert team of "PV + storage cold + cold storage", focusing on key technological research, and launched a green energy-saving and constant temperature pv cold storage cold storage construction technical scheme. The technical scheme replaces the storage battery with the cold storage plate, and directly stores the pv energy in the form of cold energy.

04/ 显著优点 / Significant Advantage

1、减少了能量在转换过程中的损失；Reduce the loss of energy in the conversion process;

2、降低了投资成本；Reduce the investment cost;

3、无需考虑蓄电池使用寿命和污染等问题； without considering the battery life and pollution problems;

4、蓄冷时间长，更有效地减少了天气条件或夜晚对光伏发电的影响。 long cooling time, more effectively reduce the weather conditions or night on the pv power generation.