SC-SOLAR

PIONEER OF SOLAR INDUSTRY INTELLIGENT EQUIPMENT MANUFACTURER



Qinhuangdao Shengcheng Automation Equipment Co., Ltd.

SC-SOLAR

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COMPANY PROFILE



Qinhuangdao Shengcheng Automation Equipment Co., Ltd. was founded in March, 2019 with registered capital of 20 million yuan, is a subsidiary company of SC SOLAR. It is a comprehensive high-tech enterprise dedicated to R&D, manufacturing, sales and after-sales service of solar module laminator and accessories. The company has more than 200 person for production, more than 70 technique engineer for after-sales service, more than 30 person for technique R&D team. It has strong technical strength and advanced production process, with years of accumulated technical advantages enter into the high-end equipment intelligent manufacturing field.

Qinhuangdao SC SOLAR new plant has been completed and put into production in Dec. 2021 as a key project of Qinhuangdao ETDZ. With a total construction area of 29,000 ㎡ and investment of 450 million yuan, monthly laminator production capacity can reach more than 40 sets, can meet multiple orders at the same time, can provide stable and reliable supply guarantee to customer.

Since its establishment, the company has developed rapidly, and the shippment have increased year after year. At present, company has been distributed to many countries and regions all over the world, including USA, Mexico, Germany, Vietnam, Korea, Turkey, Taiwan, etc., the quality of our products is highly praised and recognized by our customers.



COMPANY QUALIFICATION

Qinhuangdao SC SOLAR R&D team has more than 30 members, owns more than 30 patents for Invention, Utility Model and Software Copyright. Fund supported by Hebei province industrial design achievement transformation project for 2 years. It has obtained the certificate of High-tech Enterprise, Hebei Province Industrial Enterprise R&D Institution certificate, etc., and was rated as Hebei province science and technology small and medium-sized enterprises. Our products have obtained CE certification, ETL certification, trademark has been registered in the world.

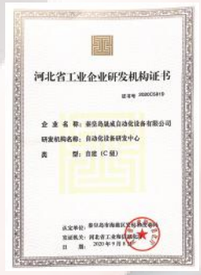




01
Mechanical Design







02
Electrical Design



03
Process Design

04
Technical Test

R&D TEAM

Own an experienced and mature technical team, specializing in the research and development of laminating machine for more than 10 years.

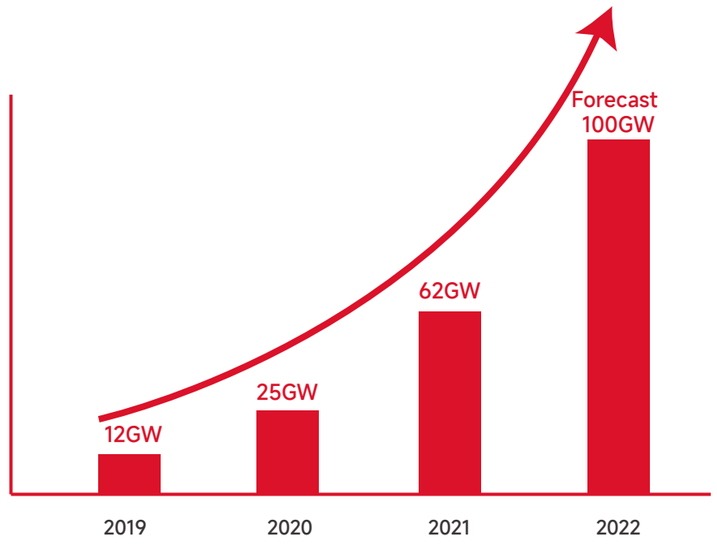






PRIMARY CUSTOMER

FOUR YEARS ANNUAL
INSTALLATION BASE



PROJECT DISTRIBUTION



Qinhuangdao SC SOLAR laminator adopts modular design, each stage is an independent unit, can be controlled independently, and can free combination according to customer requirements.



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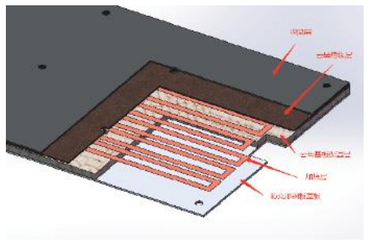
ELECTRIC HEATING LAMINATOR

- Double energy saving: heating element contact with heating plate directly, to ensure the high heat conversion efficiency; energy saving of plant facilities
- Foor area saving

The Highlights of R&D Design



Heating design

a. The basic principle of the electric heating plate: adopts install the heating element on the lower surface of the heating steel plate for heating.

- Temperature uniformity: ±2℃
- Better insulativity and more safety
- Longer lifetime

The electric heating plate adopts a composite structure. It is composed of a substrate, an insulating layer, a heating layer, an insulating layer, and a temperature equalizing layer.

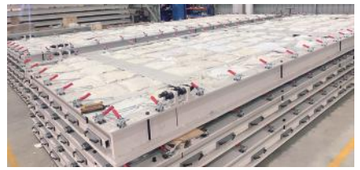
- High temperature control accuracy
- High temperature unifomity
- Excellent chemical resistance
- Maximum heating 280°
- High insulation and withstand voltage performance
- Good flame retardant effect, safe and reliable
- Anti-static induction



Thermal conductivity

Adopt homogeneous thermal conductivity film

- Thermal conductivity is 1000-1900W/m.k.
- Fast heat conduction, strong heat soaking performance
- Good elasticity and plasticity

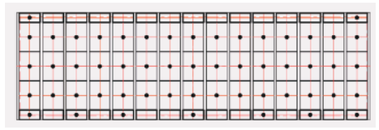




Thermal insulation design

Adopt aluminum silicate material which performance is low thermal conductivity and high mechanical strength for heat insulation.

- Thermal conductivity: 0.02-0.03W/m.k
- Heat insulation and heat resistance
- The heat insulation effect is 2-5 times better than traditional heat insulation materials



Temperature control design

- The heating plate is divided into several small areas
- Adopt PLC temperature control
- Adopt three-phase design to ensure that the whole machine is in three-phase balance state in heating and temperature control stage

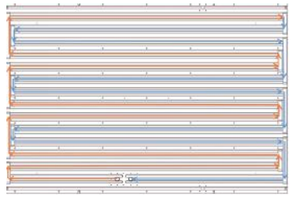
OIL HEATING LAMINATOR



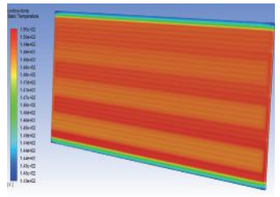
- Lower investment
- Easy maintanence

Oil heating laminator has become a mature and stable product after many years of experience in application and practice, technical improvement and precipitation.

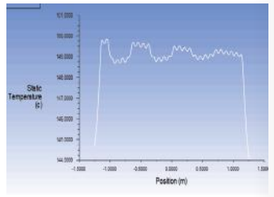
The Highlights of R&D Design



Double oil circuit design



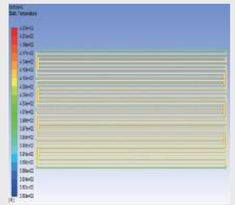
Temperature distribution of heating plate



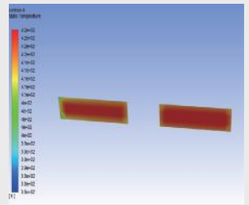
Temperature distribution curve of heating plate surface

- Heat transfer stability
- Excellent temperature uniformity
- Adopt Intelligent PID self-tuning technology, high degree of intelligence, more energy saving

- Under the condition of good insulation, the temperature difference between inlet and outlet of the tubing is small after the heating plate reaches thermal stability.



Oil pipe temperature distribution



Temperature distribution of inlet and out let of oil pipe

- Obtain the optimal flow velocity by analysizing the temperature of inlet and outlet

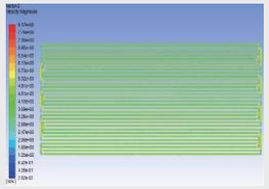
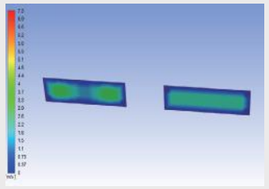


Diagram of oil flow



Oil speed in inlet and outlet

Specifications

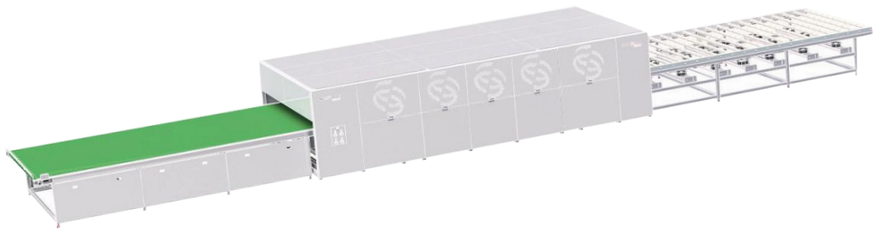
Model	2700mm*8700mm		2700mm*9400mm		2700mm*10000mm	
	OL	EL	OL	EL	OL	EL
Heating Melthod	Oil heating	Electric heating	Oil heating	Electric heating	Oil heating	Electric heating
Working Temperature	RT–180℃		RT–180℃		RT–180℃	
Temperature Uniformity	±1.5℃		±1.5℃		±1.5℃	
Temperature Accuracy	±1℃		±1℃		±1℃	
Transmission Accuracy	±3mm		±3mm		±3mm	
Yield	99.99%		99.99%		99.99%	
Noise Level	≤80dB		≤80dB		≤80dB	

SINGLE LAYER LAMINATOR SERIES

Effective laminating size L: 2200-12000mm W: 2200-2800mm. Compatible with glass-backsheet, G2G, half-cell, MBB, shingling modules, can be connected with assembly line.

Product Feature

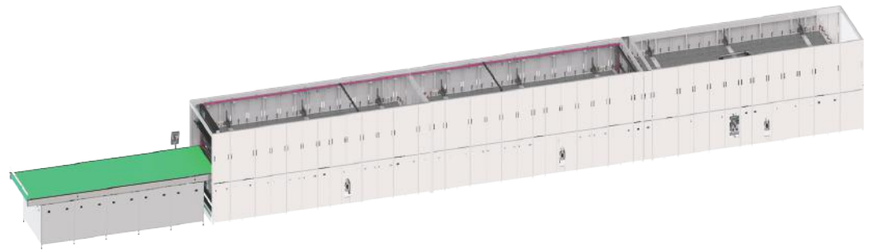
- Easy to repair and maintain
- Strong adaptability
- Large upgrade space



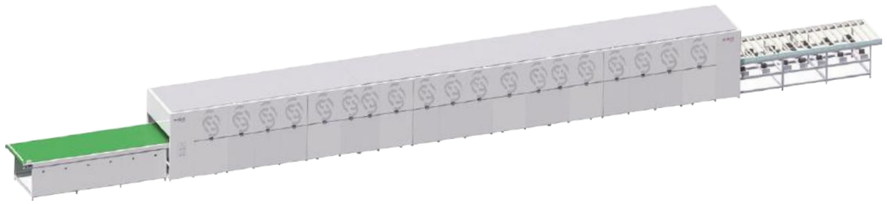
Single-layer& Single-chamber Laminator



Single-layer& Double-chamber Laminator



Single-layer& Double-chamber& Independent cooling chamber



Single-layer& Three-chamber Laminator

DOUBLE& TRIPLE LAYER LAMINATOR SERIES

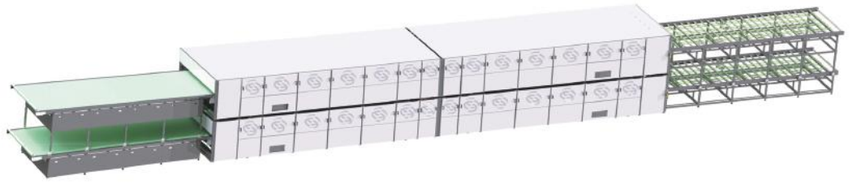
Effective laminating size L: 2200-12000mm W: 2200-2800mm. Compatible with glass-backsheet, G2G, half-cell, MBB, shingling modules, can be connected with assembly line.

Product Feature

- High compatibility
- Low labor cost
- Independent operation
- High cost performance
- Save space
- High intelligence



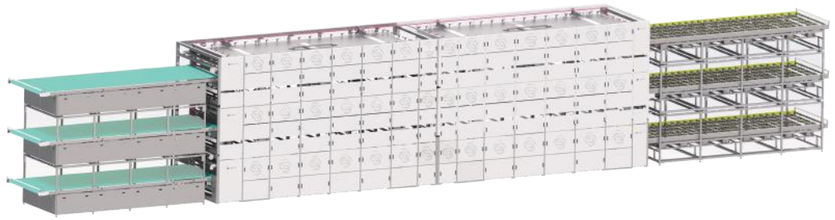
Double-layer& Single-chamber Laminator



Double-layer& Double-chamber Laminator



Double-layer& Three-chamber Laminator



Three-layer& Two-chamber Laminator

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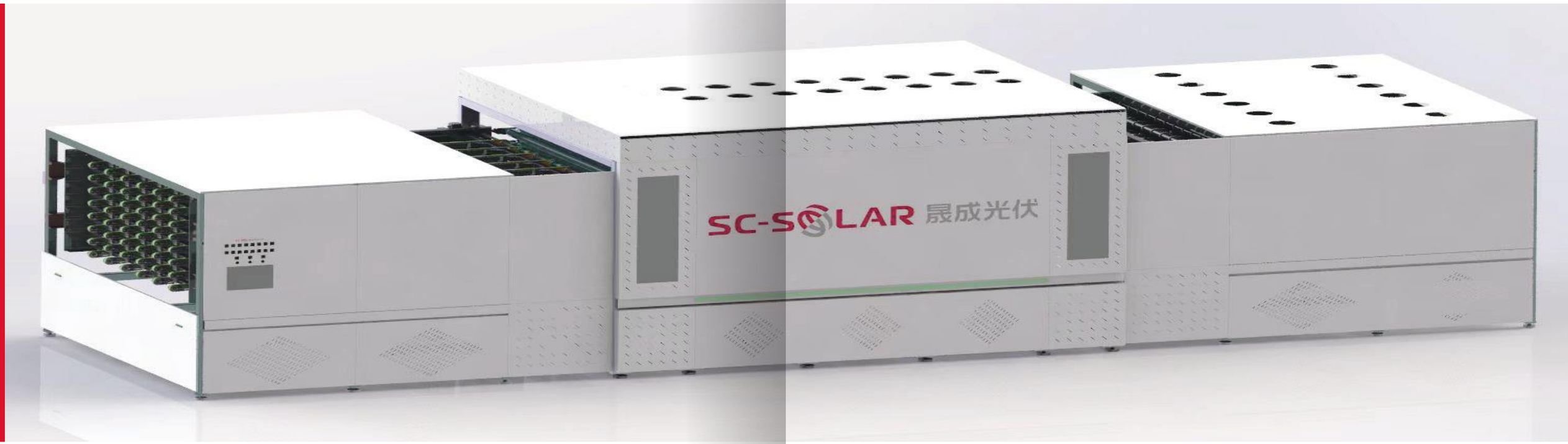


FULLY AUTO BUFFERING MULTI LAYER LAMINATOR SERIES

- Name：Electric Heating Eight-layer& Single-chamber Laminator
- Model：SCDC2733-08-1
- Compatible with single glass/double glass module 16 pieces with size range of 2600mm*1600mm, can be connected with assembly line.

Technique Parameter

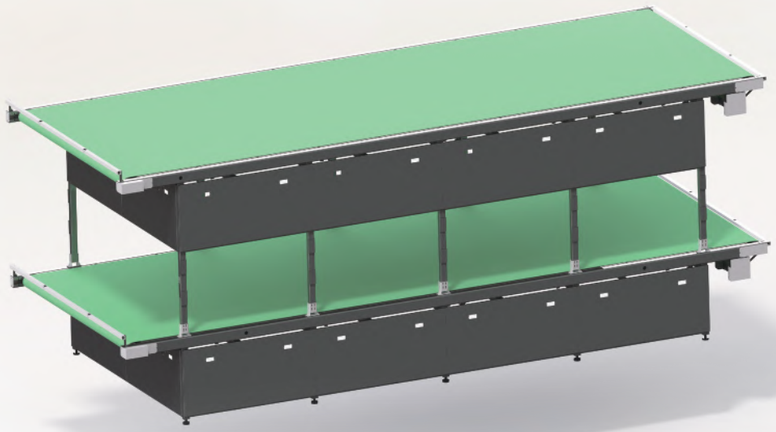
- Overall Dimension：11360mm*3660mm*2640mm
- Working Power：81KW
- Total Power：405KW
- Total Weight：45T
- Temperature Uniformity：±1.5℃

Features

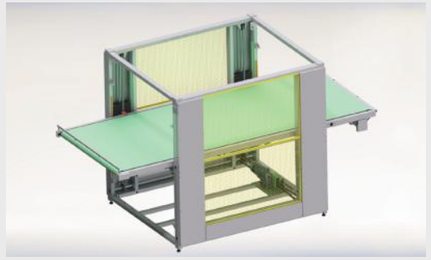
- Adopt upper and lower chamber electric heating mode, energy saving and environmental protection, save floor area;
- Adopt air bag soft lamination to ensure the component yield;
- Adopt the layered and segmented self-locking design to achieve independent control and non-interference;
- Adopt layered independent transmission positioning, buffer loading& unloading stage is retractable, easy to maintenance;
- Adopt servo motor drive to ensure more accurate positioning of module;
- Adopting hydraulic lifting, the whole system is balanced and stable;
- Adopt AI visual control system to accurately display the status of machine and module;

LOADING STAGE

The loading stage can be customized flexibly according to customer requriements and factory conditions.
The main type includes fixed type, chain lifting type, buffer type, fixed buffer type loading stages.



Fixed Loading Stage



Chain Lifting Loading Stage



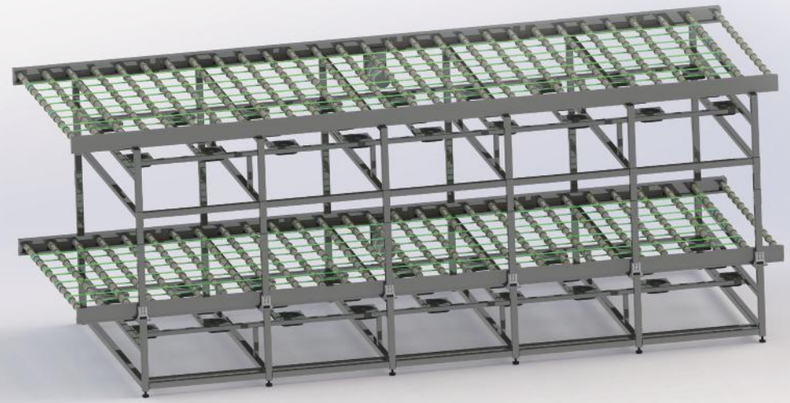
Buffer Loading Stage



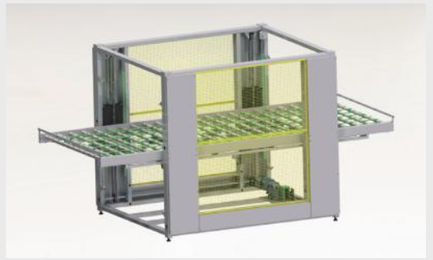
Fixed Buffer Loading Stage

UNLOADING STAGE

The unloading stage can be customized flexibly according to customer requriements and factory conditions.
The main types includes fixed type, chain lifting type, buffer type, fixed buffer type unloading stages.



Fixed Unloading Stage



Lifting Unloading Stage



Buffer Unloading Stage



Fixed Buffer Unloading Stage



HIGH–EFFICIENCY SERVICE TEAM

AFTERSALE SERVICE

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