



TALOS
A U T O M A T I O N



Solutions from Turkey

Corporate Profile



Discover
the potential



Solutions from Turkey



The development of a solar panel production line in Turkey is an important step in enhancing the country's potential in renewable energy.

Research and development efforts led by Turkish engineers have ensured that this production line is designed and built using domestic resources. This development not only allows Turkey to meet its energy needs in a more sustainable and environmentally friendly way but also contributes to economic growth and technology exports. Solar energy reduces dependence on fossil fuels, enhancing energy security and lowering the carbon footprint. The work of Turkish engineers in this field further advances the country's capacity for technology and innovation on the international stage.



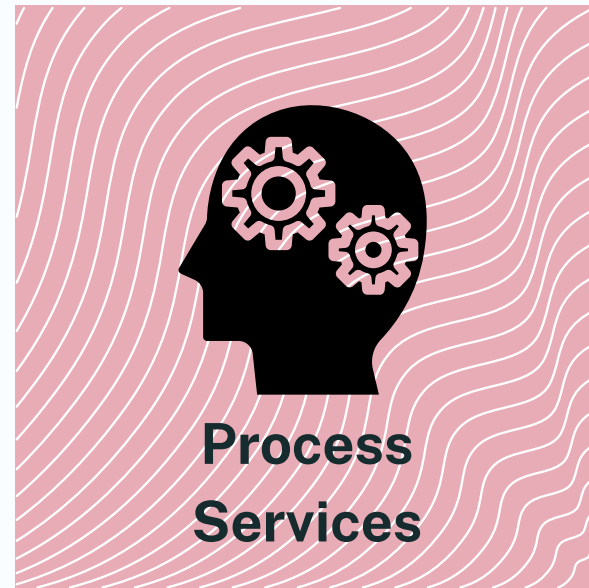
Discover
the potential



After Sales



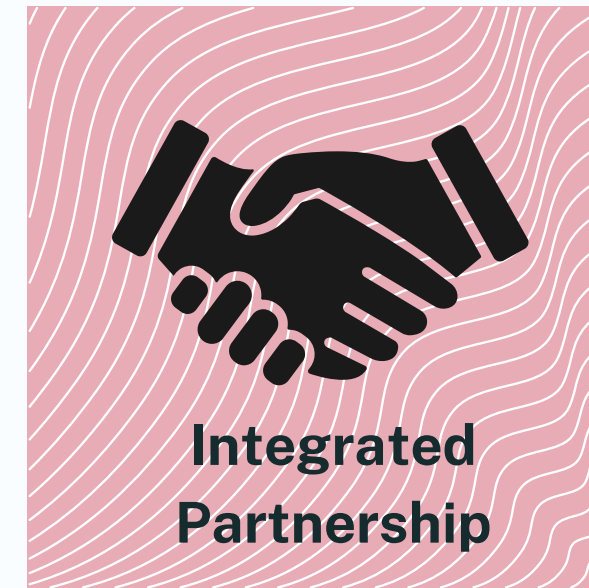
From initial installation to decommissioning and replacement, Talos offers all the services needed to optimize the efficiency of your equipment. We provide installation, commissioning, maintenance, repair, renewal, and consumables support. While our Equipment Services primarily focus on maintenance activities, we also address the needs of solar panel production through performance improvements and troubleshooting.



With our comprehensive measurement and diagnostic capabilities, audits, consulting services, and targeted training, Talos helps identify your improvement potential in solar panel production facilities and supports you in implementing effective improvement measures. We work together to optimize your production processes, enhancing panel production efficiency and performance.



Here at Talos, we leverage our comprehensive capabilities and expertise to develop tailored solutions in close collaboration with our customers. In the spirit of true partnership, our Productivity Services are value-driven solutions where we commit to delivering results that ensure operational excellence and optimal performance for your solar panel production processes.



At Talos, we take full responsibility as a functional extension of our customer's organization in areas such as materials management and maintenance. These business partnerships are structured to ensure that we and our customers share infrastructure, capacities, and risks in the most efficient way possible. Built on trust and transparency, our integrated partnerships allow customers to focus on their core business while we manage and optimize critical aspects of their solar panel production processes.



Research & Development



Talos optimizes the entire production line process, offering turnkey solutions to its customers. Our professional R&D team integrates processing, automation, logistics, and inspection equipment to provide high-performance and reliable production lines. Modular design and standardized equipment reduce maintenance challenges while enhancing the potential for system upgrades. Additionally, we offer advanced monitoring and rapid fault detection features.

Customer-Specific Capacity Requirements:

- Breakage rate $\leq 0.20\%$
- Failure rate $\leq 0.15\%$
- Operating time $\geq 98\%$
- Maximum production rate $\geq 11,000$ units/hour (half-cell)

Talos helps customers achieve these high-performance targets, improving their production efficiency.



Why Us



1

ANALYSIS

We analyze demands of our customers. We offer suitable solutions for their requirements.

2

BUSINESS PLAN

During the business plan and feasibility processes we provide all necessary information flow.

3

PREPARATION

We are always ready for installation in production facility with all departments

4

INSTALLATION

We perform facility installations in global standards as soon as possible.

5

COMMISSIONING

We take the first production output together, try alternative recipes and adjust their settings.

6

MANAGEMENT

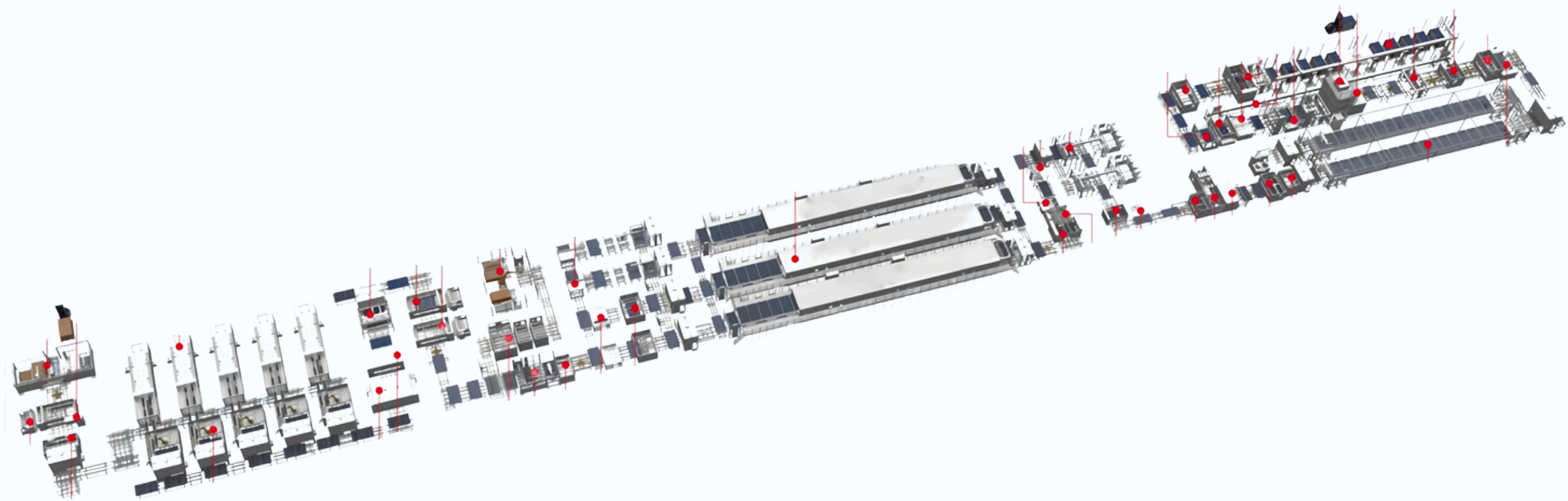
We manage together with by meeting all the needs of a module factory.



Partners




Turnkey Line



Turnkey Line




600 MW / Year



**190 Modules/
Hour**



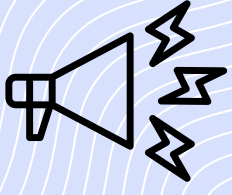
**330 Days/
Year**



**Application :
5 BB-12 BB ;
M6 - M12**



**20-30
Workers**



**Working Noise
 $\leq 70\text{dBA}$**



Turnkey Line



1
Cell cutting

2
String Soldering

3
Layup

4
Busbar Soldering

5
Taping

6
EL and Visual Testing

7
Laminating

8
Trimming

9
Framing

10
Backsheet Gluing

11
Box Connecting

12
Curing

13
Cleaning

14
Hi-Pot Testing

15
IV Testing

16
EL and Visual Testing

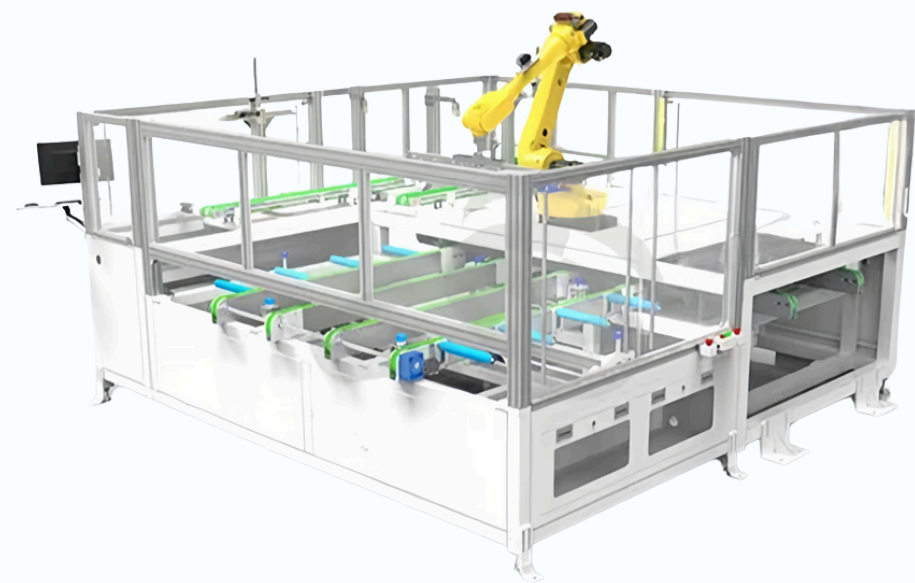
17
Labeling

18
Angle wrapping

19
Sorting



Turnkey Line



Robot String Layup Machine

An automatic layup machine uses a robot to grab cell strings and adopts the contactless CCD positioning system for positioning precision.



Automatic Bussing Machine

An automatic bussing machine adopts induction welding and can be applied to 5BB-12BB solar cells of 156-210mm.

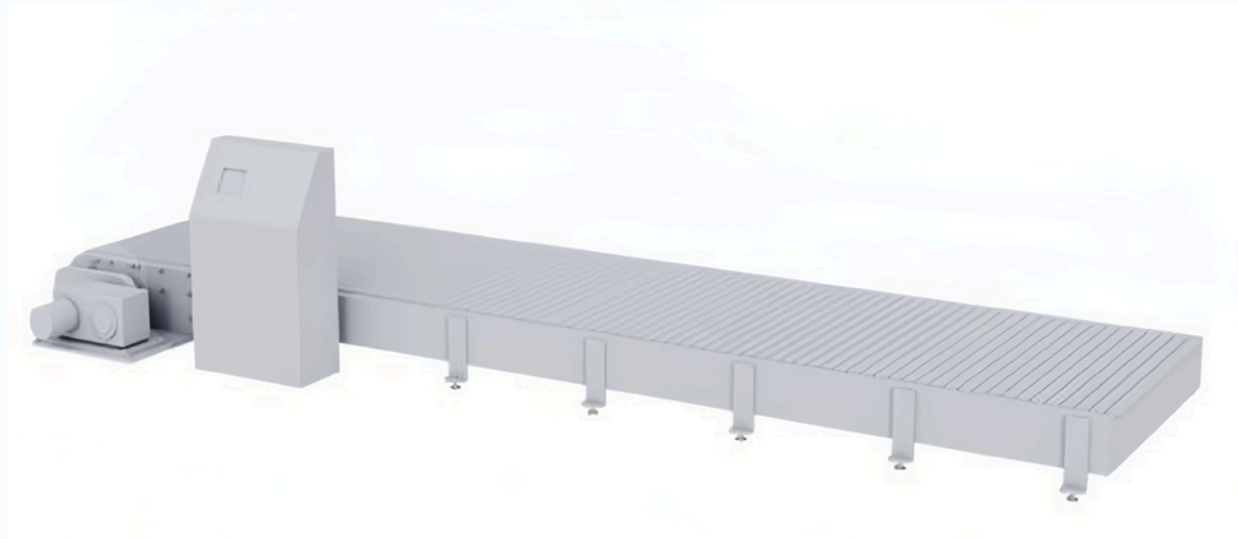


Automatic String Taping Machine

An automatic string taping machine can adjust tape width and length and features short tape replacement time and high positioning precision.

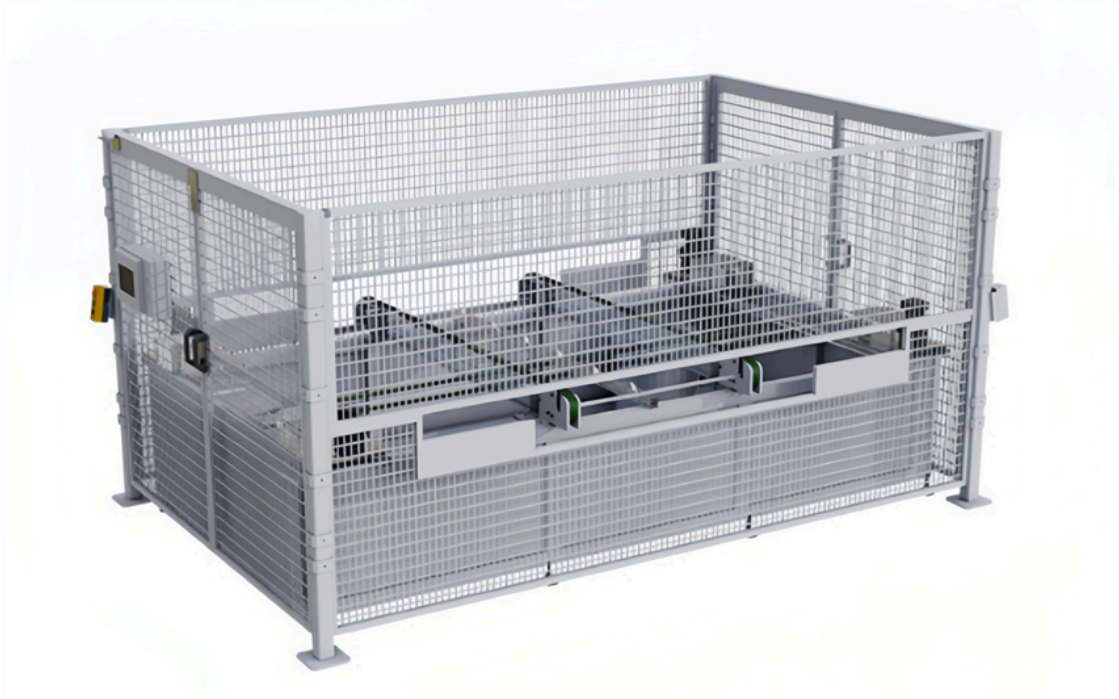


Turnkey Line



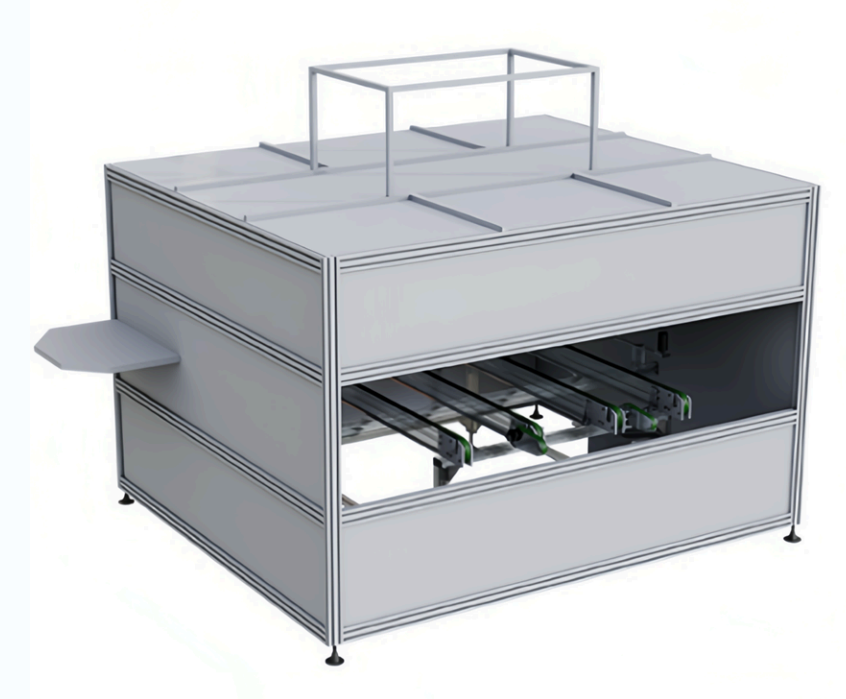
Curing Room

A curing line/curing room uses motor as drive and sprocket and chain for transmission, ensuring the materials will not be discharged before the set time. The selection between feed priority and discharge priority is made based on the needs of customer.



Automatic Corner Grinding Machine

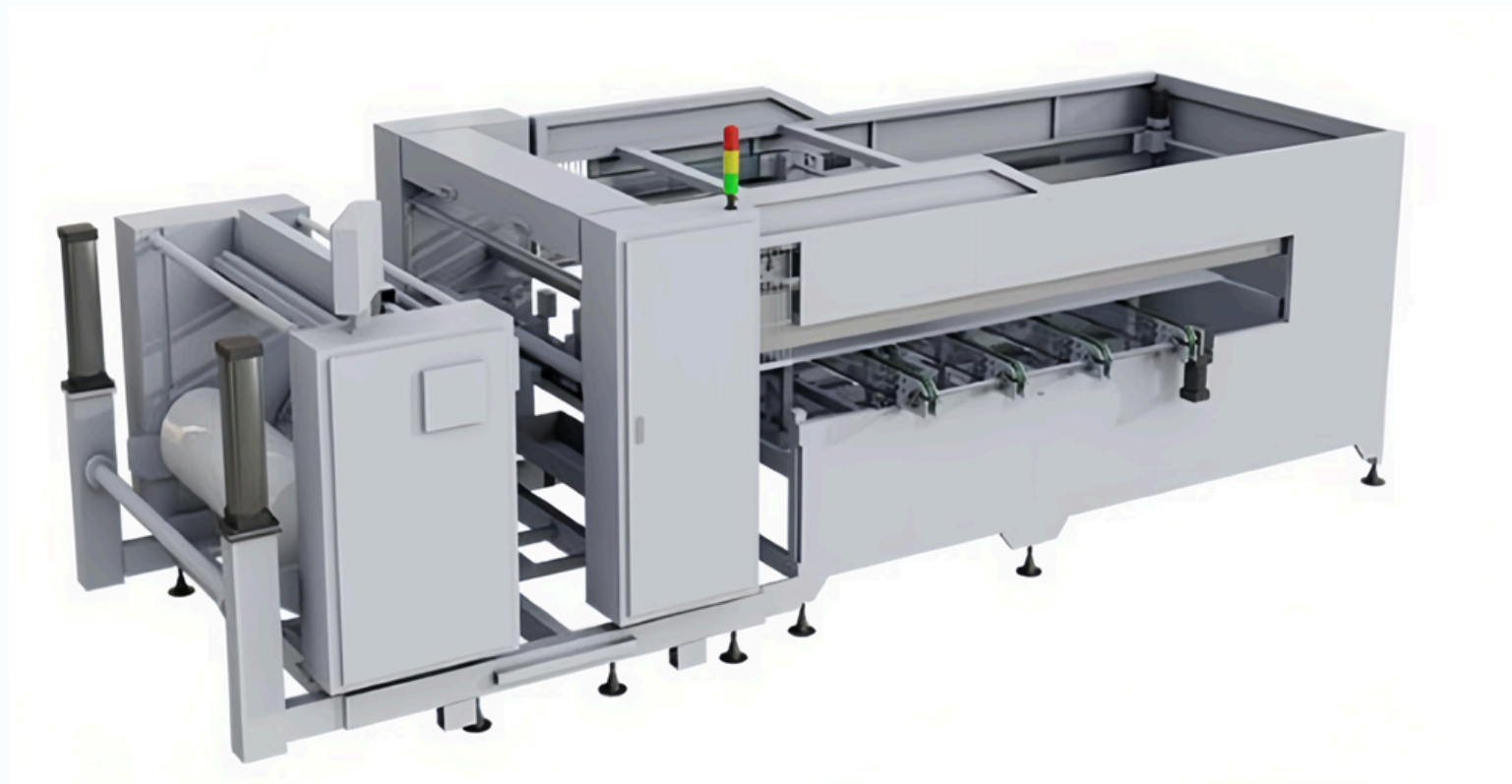
An automatic corner grinding machine is used for automatic grinding of solar panel frame corners.



Sun Simulator / IV Tester

A sun simulator provides a standard testing environment to know about the solar panel working conditions and conduct power and current tests on solar panels.

EVA Cutting and Layup Machine



An automatic glass loading machine works to supply glass rapidly by automatically load, position and transport glass. The loading machine adopts multiple innovative technologies to ensure the operation stability and continuity. The glass machinery provides an efficient, accurate and reliable production solution for customers.

Technical Parameters

S/N	Item	Parameters
1	Panel size	(1,680-2,650)*(992-1,500)mm
2	Cycle time	20s
3	Cutting accuracy	±1.5mm
4	Layup accuracy	±1.5mm
5	Overall dimensions (L*W*H)	6,000*2,320*2,000mm
6	Voltage	AC 380V, 3 phase
7	Power	5kW
8	Air pressure	0.5-0.7MPa
9	Maximum material roll diameter	≤800mm

Features

- The layup machine can directly mix tailings with new materials through standard hot melting procedures;
- Automatic correction, automatic detection of joints and automatic material throwing for higher production efficiency and stability;
- The hob cutting method prevents the material from be sticked onto the cutter to improve the cutter durability and efficiency.



MBB Cell Stringer Machine



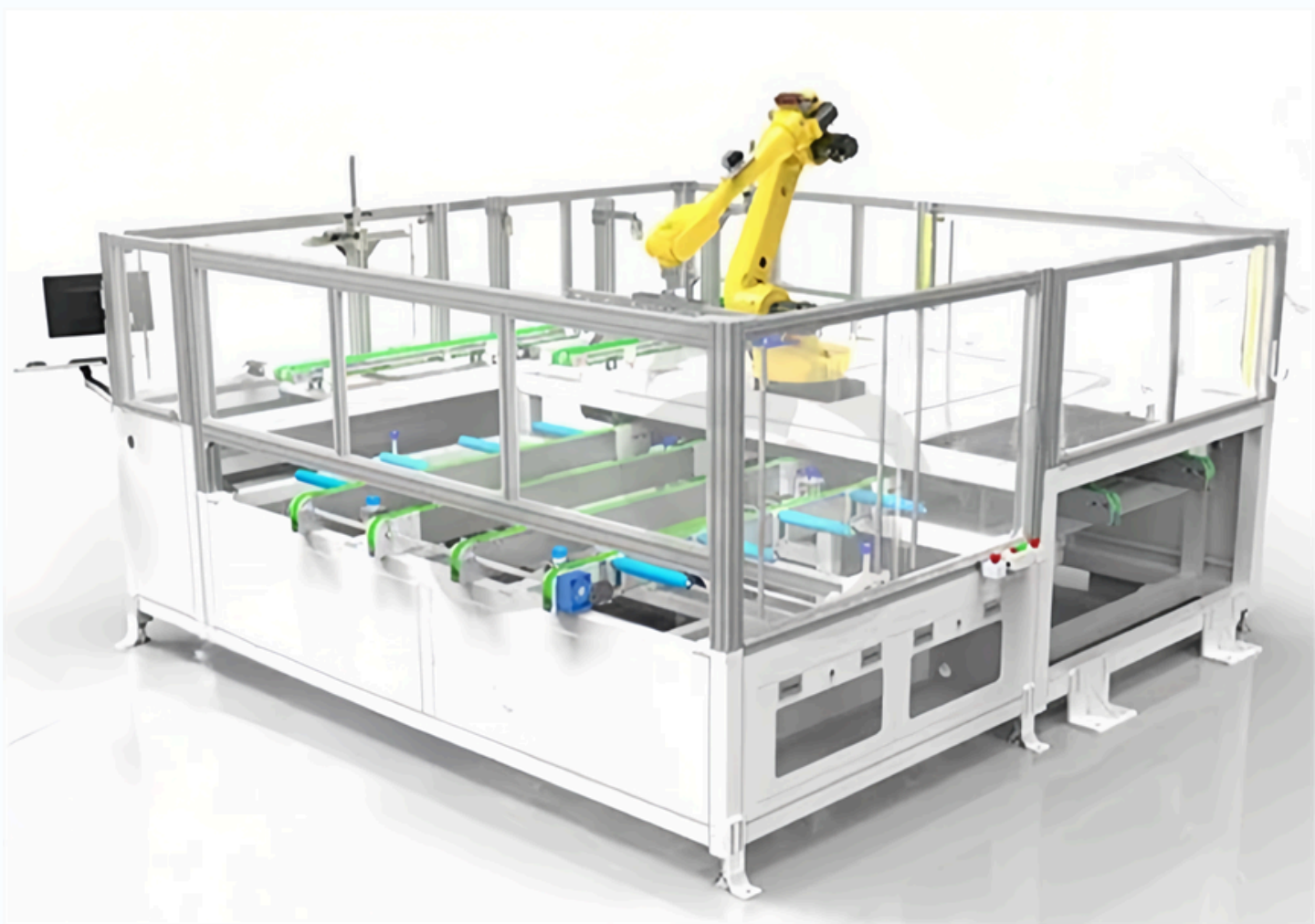
MBB cell stringer machine of AM050F is a crystalline silicon solar cell string production machine combining functions of soldering and lossless cutting. The cell stringer can be applied to 3BB-16BB cells of 161-230mm. The cutting mechanism can cut half and 1/3 cells without material loss, and the soldering mechanism can be repurposed to produce 1/3, half and full cells of 161-230mm. The stringer machine adopts advanced automation technologies in terms of PLC, servo motor, four-axis industrial robot and machine vision to realize automatic production of cell strings.

Technical Parameters

S/N	Item	Parameters	
1	Basics	Utilization rate	≥ 95%
2		Production capacity	18Xmm cell: 3BB-12BB >6,800 half cells/h 18Xmm cell: 13BB-16BB >6,400 half cells/h 230mm cell: 3BB-12BB >6,800 half cells or 1/3 cells/h 230mm cell: 13BB-16BB >6,400 half cells or 1/3 cells/h
3		Breakage rate	140-150mm monocrystalline silicon cell: ≤0.4% 151-170mm monocrystalline silicon cell: ≤0.3% 171-230mm monocrystalline silicon cell: ≤0.2%
4		Average laser power	50 W/300W
5		Laser warranty	20,000h
6		Testing	CCD
7		Deviation	Positioning ±0.05mm Angle±0.04° Cutting±0.1mm
8		Laser grooving length	< 1.5mm
9		Laser grooving depth	0-65% adjustable
10		Soldering assistance method	Soaking soldering belt
11		Soldering method	Infrared soldering
12		Temperature change	±7.5°C
13	Cell	Size	130 ~ 230mm 1/3, half and full cells
14		Busbar number	3BB-16BB
15		Gap	Busbar gap≥13mm Gap between cell side and busbar>5mm
16		Soldering pallet gap	> 5.5mm
17		Thickness	140 ~ 200±10μm



Robot String Layup Machine



A robot string layup adopts leading machine vision technology and intelligent algorithms to rapidly and accurately identify the solar panel's size and other information. The layup robot can efficiently produce accurate layup program according to different cell strings, boosting the production automation.

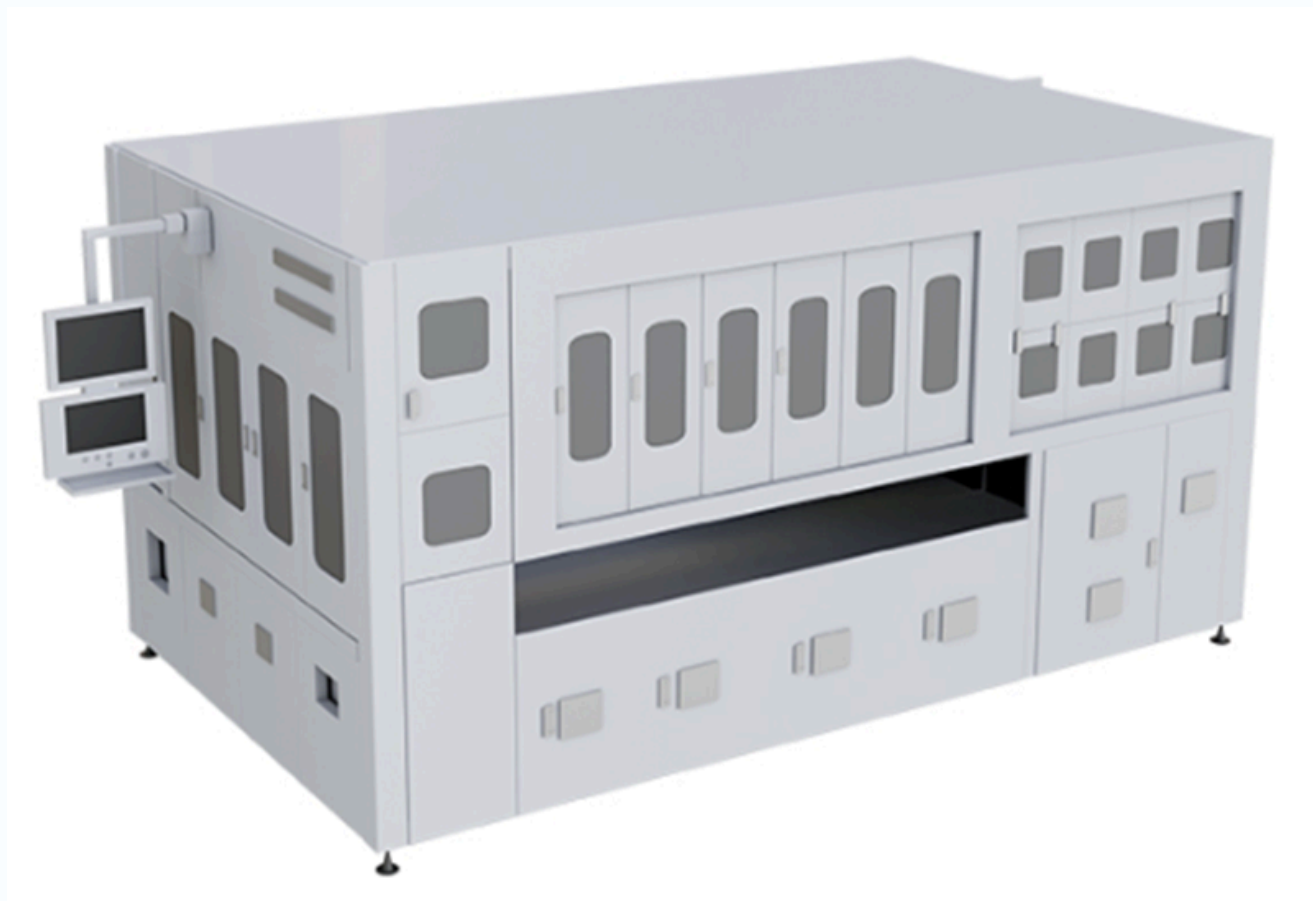
Technical Parameters

S/N	Item	Parameters
1	Cell size	156mm*156mm-210mm*210mm
2	Panel size	(1,680-2,650)*(992-1,500)mm
3	Cycle time	≤6s/string
4	String positioning accuracy	±0.2mm
5	Glass size	(1,680-2,650)*(992-1,500)mm
6	Overall dimensions (L*W*H)	4,220*2,920*2,900mm
7	Voltage	3 phase 5 wire 380V, 50Hz, AC±20%
8	Power	3kW
9	Air pressure	180L/min

Features

- The contactless CCD positioning system is adopted for positioning accuracy;
- Automatic barcode placement for production efficiency and accuracy;
- The string delivery belt is driven by the servo motor to improve the transport stability;
- Full and half cell connection patterns can be switched with a button;
- Able to be connected with the mainstream stringer to produce A/B strings;
- Aligning with the stringer's single-track 12-string production mode;
- Having the manual feed port for string repair;
- Adapting to horizontal and vertical-type panels

Automatic Bussing Machine



An automatic bussing machine adopts induction welding and can be applied to 5BB-12BB solar cells of 156-210mm. The soldering precision is high. The busbar overlap area exceeds 80%, and the deviation is $\pm 1\text{mm}$. The bussing machine features a small size and is suitable for safe and stable production of various solar strings. The soldering stringer is an indispensable machine for solar string production.

Technical Parameters

S/N	Item	Parameters
1	Cell type	156mm-210mm/5BB-12BB
2	Panel size	2,500mm*1,400mm
3	Busbar specification	Roll feeding and automatic cutting; thickness 0.18-0.45mm; Width 4mm, 5mm, 6mm, 8mm; roller weight $\leq 13\text{kg}$
4	Cycle time	20s for conventional welding; 25s for bypass welding
5	Breakage rate	$< 0.2\%$
6	Soldering method	Induction soldering
7	Lead busbar angle and deviation	90° ; deviation $\leq 2^\circ$
8	Busbar overlap area	$\geq 80\%$, and the deviation is within $\pm 1\text{mm}$
9	Overlap deviation of bypass bus belt	$\pm 1\text{mm}$
10	Secondary string layup accuracy	$\pm 0.25\text{mm}$
11	Utilization rate	$\geq 98\%$
12	Overall dimensions (L*W*H)	4,930*4,613*2,641mm
13	Voltage	3 phase 5 wire 380V, 50/60Hz
14	Power	Average 22kW; Peak 30kW
15	Air pressure	0.6-0.8MPa 2.0m ³ /min

Features

- Separating the cell string from the glass, and grabbing the cell string in the air with its head, middle and tail exposed to be soldered with busbar at a certain height;
- Bypass busbar for 5 strings of 1/3 210mm cells;
- Rolling bus belt supply and U and L-shaped lead bending for different processing needs;
- The function of bus belt drilling can be turned on or off as customer needs;
- The assembly line in front of the welding machine ensures the accurate positioning of solar panels to improve soldering quality.

Automatic String Taping Machine



An automatic string taping machine is an indispensable machine in the solar panel production line. The string taping machine has a range of advantages like adjusting tape width and length, short tape replacement time, high positioning precision and easy operation, effectively lifting production efficiency and product quality.

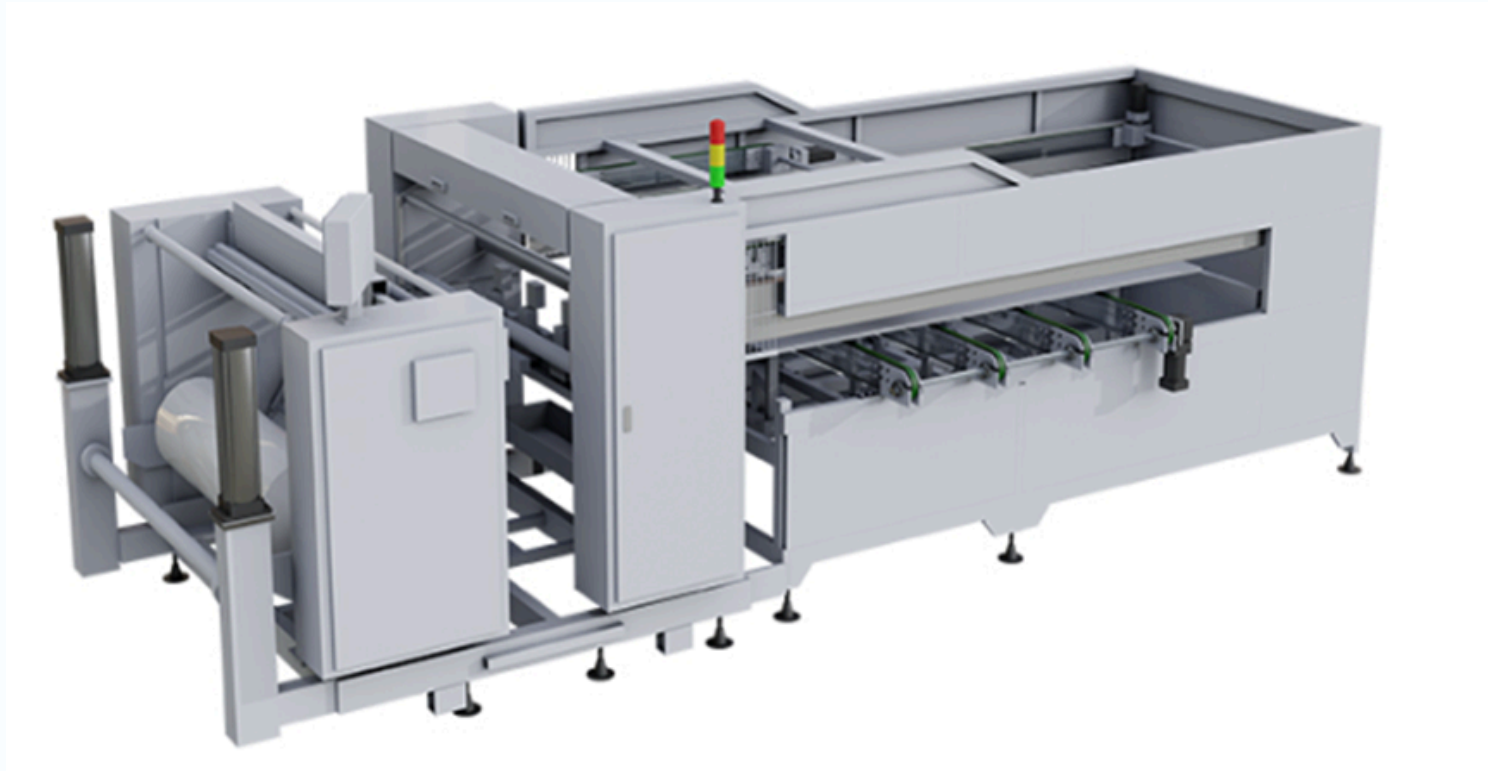
Technical Parameters

S/N	Item	Parameters
1	Cell size	156-230mm
2	Panel size	(1,640-2,650)*(985-1,500) mm
3	Cycle time	20s
4	Tape width & length	L: 15*22mm W: 5-10mm; compatible with centrifugal paper tape
5	Panel positioning accuracy	±0.5mm
6	Tape replacement time	2min
7	Tape positioning accuracy	±0.5mm
8	Switch time	5min
9	Glass specifications	(1,640-2,650)*985*1,500mm
10	Overall dimensions (L*W*H)	3,150*1,920*1,800mm
11	Voltage	380V 10A
12	Power	4kW
13	Air pressure	0.8MPa

Features

- Simple and easy to switch tapes for higher production efficiency;
- Low power of 4kW to reduce energy consumption and increase eco-friendliness;
- Four heads work independently, and the failure of a single head will not affect the other three;
- The string taping machine can apply standard tape, rigid tape, centrifugal paper tape to meet different production needs.

EVA/TPT Backsheet Cutting and Layup Machine



An EVA/TPT cutting & layup machine adopts high-precision and reliable cutting and layup technologies to provide efficient solar panel production solutions to meet customers' high requirement.

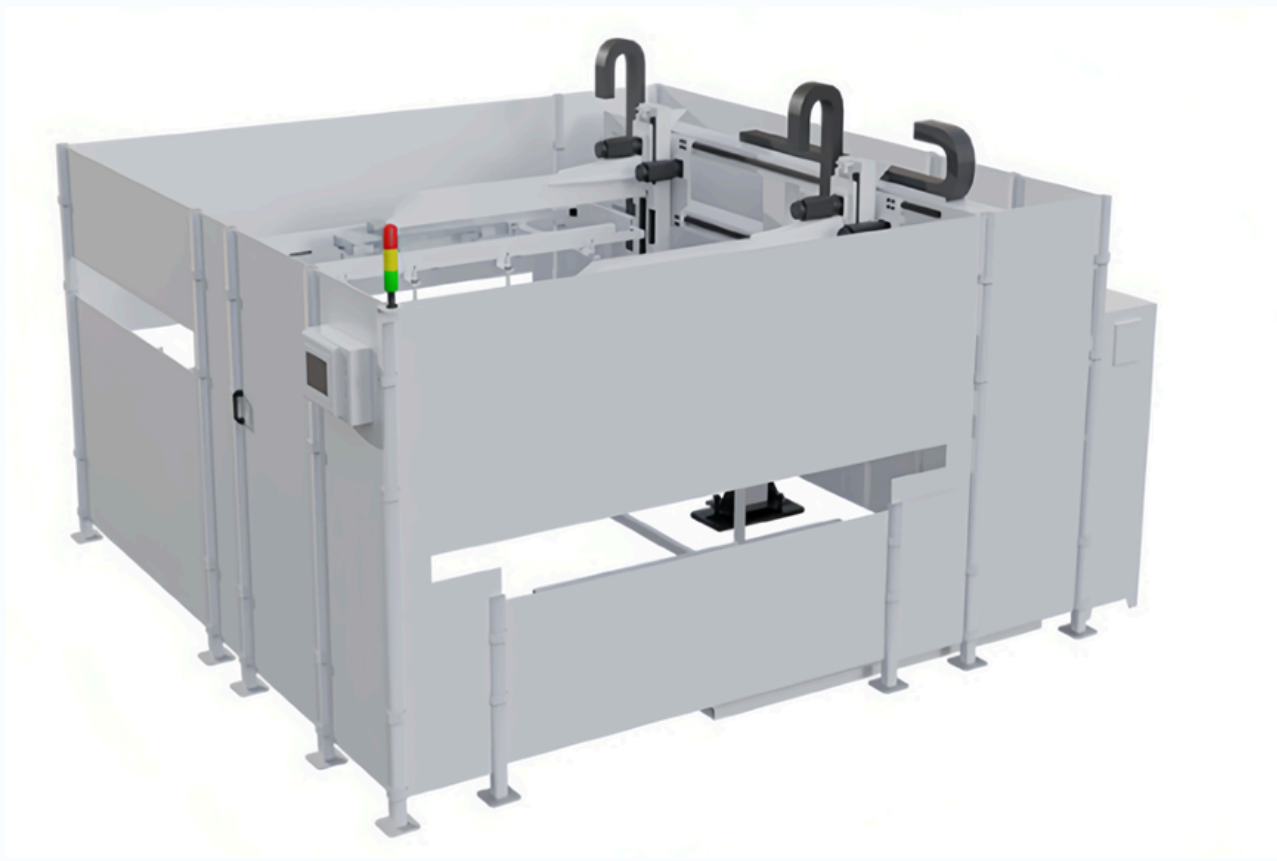
Technical Parameters

S/N	Item	Parameters
1	Panel size	(1,680-2,650)*(992-1,500)mm
2	Cycle time	20s
3	Cutting accuracy	±1.5mm
4	Laying accuracy	±1.5mm
5	Overall dimensions (L*W*H)	6,000*2,320*2,000mm
6	Voltage	AC 380V, 3 phase
7	Power	5kW
8	Air pressure	0.5-0.7MPa
9	Maximum material roll diameter	≤800mm

Features

- The standard hot melt function ensures that tailings will not fall off the machine;
- Automatic correction, automatic detection of joints, automatic throwing and hole punching;
- The hob cutting method prevents the material from be stucked onto the cutter to improve the cutter durability;
- Hole punching tools can be customized according to customer requirements, such as types of flat hole, original hole and oval hole.

Second Glass Loading & Placement Machine



A second glass loading and placement machine is a high-precision dual-glass panel making machine. The glass machinery features short cycle time, high positioning precision and a small size. The loading machine can adapt to different specifications of glass and is an essential equipment for dual-glass panel production.

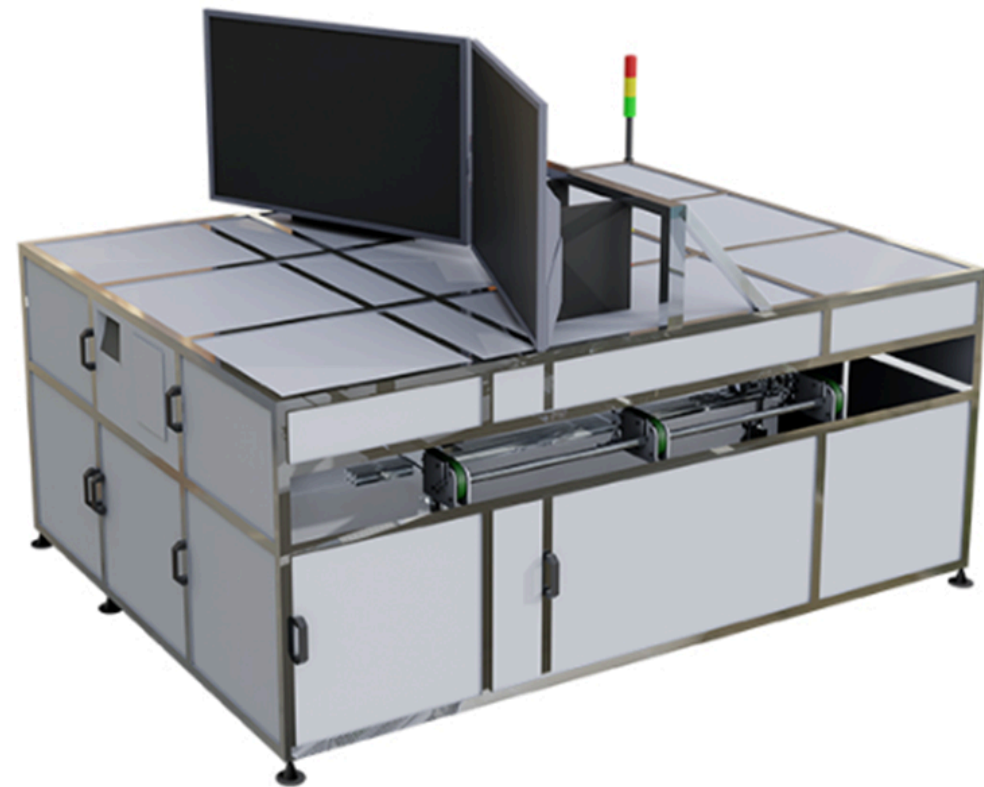
Technical Parameters

S/N	Item	Parameters
1	Panel size	(1,680-2,650)*(992-1,500)mm
2	Cycle time	≤20s
3	Positioning deviation	±1.5mm
4	Glass specifications	2-5mm
5	Panel weight	40kg
6	Overall dimensions (L*W*H)	5,940*3,900*3,140mm
7	Voltage	3 phase 5 wire 380V, 50Hz, AC±20%
8	Power	≤5kW/h
9	Air pressure	0.6-0.7MPa

Features

- Separable paper recycling function;
- Compatible with different specifications and models of glass;
- The dust removal device prevents dust from falling back to the glass surface;
- The Upper glass is stopped above the lower glass before placement, and both glasses are restored to be placed at the same time for precision and stability.

EL & VI Tester



An EL & VI tester is an electroluminescence and visual inspection system for PV modules. The tester can detect and shoot a range of defects and automatically name and save the images. Adopting Sony camera chip and the 55-inch 4K monitor, the testing equipment is an ideal machine for increasing testing efficiency and improving testing processes for solar panel manufacturers and quality assurance departments.

Technical Parameters

S/N	Item	Parameters
1	Panel size	(1,680-2,650)*(992-1,500)mm
2	Cycle time	≤20s
3	Camera chip brand	Sony
4	Monitor	55-inch 4K monitor*2
5	System resolution	EL: spatial resolution: 0.4mm/pixel/5 points; Exterior: spatial resolution: 0.2mm/pixel/5 points
6	Pixel accuracy	EL: 2.3 million pixels, number of focal points: 15; Exterior: 12 million pixels, number of focal points: 15
7	Detectable defects	Visible cracks, broken grids, black spots, etc; Exposed white, missing corners, gaps, welding strips, dislocation as well as tin slag, paper scraps and sawdust in the battery area of over 1mm ² .
8	Shooting mode	Direct shooting, three-group scanning type (equivalent to shooting with 15 cameras)
9	Dimensions	3,100mm(L)*2,679(W)*2,128mm(H)
10	Voltage	220V, 50Hz
11	Rated power	2.5kW
12	Air pressure	0.5-0.8MPa compressed clean air flowing at a speed of 1.6L/min to the bore with a diameter of 12mm
13	Image saving and transmission	1. Automatically shooting EL images; 2. Images are automatically named and saved with barcode scanning and input. Barcode gun is provided by Party B; 3. Manual/AI defect classification, automatic date folder generation, and saving; 4. Software filtering and correction; seamless splicing; EL images are displayed line by line; the defects which cannot be identified by AI are handed over to personnel for manual identification.

Features

- The overall structure is simple, stable and easy to use;
- Quickly switching different specifications of panels;
- The servo motor drives the precise transmission of panels;
- Stable belt transmission;
- Display by full screen or partial zooming in and zooming out;



Automatic Edge Taping Machine

Technical Parameters

S/N	Item	Parameters
1	Panel size	(1,644-2,650)*(985-1,500)mm
2	Cycle time	≤20s
3	Tape length	Most specifications of tapes on the market
4	Tape width	25-40mm
5	Tape roll specifications	Diameter < 300mm
6	Panel positioning accuracy	< 1mm
7	Alignment method	Cylinder blocking
8	Tape replacement time	< 2min
9	Edge taping effect	No wrinkles, wavy lines or damage
10	Panel switching time	≤30min
11	Overall dimensions (L*W*H)	4,100*22,900*1,850 mm
12	Voltage	3 phase 5 wire 380V, 50Hz, AC±20%
13	Power	6kW
14	Air pressure	0.6-0.8MPa

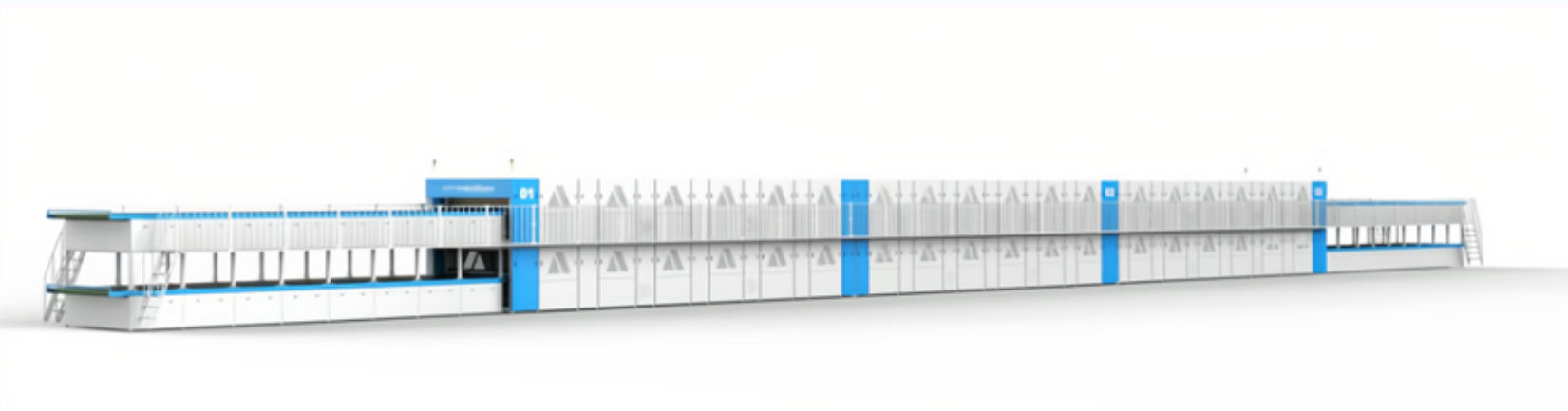
Features

- Compatible with most general-purpose tapes on the market with an outer diameter of less than 300mm;
- The panel lifting part adopts four cylinders, and the pressure wheel part can be fine-tuned for installation and debugging;
- Edge taping accuracy: ≤±1mm (starting position);
- Edge taping thickness of 4-7mm, and the edge taping machine can be customized for processing panels beyond the range;
- The edge taping length is compatible with full-sealing tape and four-corner half-sealing tape.



An automatic edge taping machine is used for automatic tape edge banding of dual-glass solar modules, adapting to different specifications of tapes. The edge bander can replace tapes quickly and easily and provides robust taping performance. Additionally, the energy-efficient taping machine is an indispensable machine in the solar panel line for mass production.

Solar Panel Laminator



Smaller footprint and higher throughput; Movable touch screen for easy operation; Adopting the double-layer and double-chamber structure. Each layer and chamber can be independently controlled;

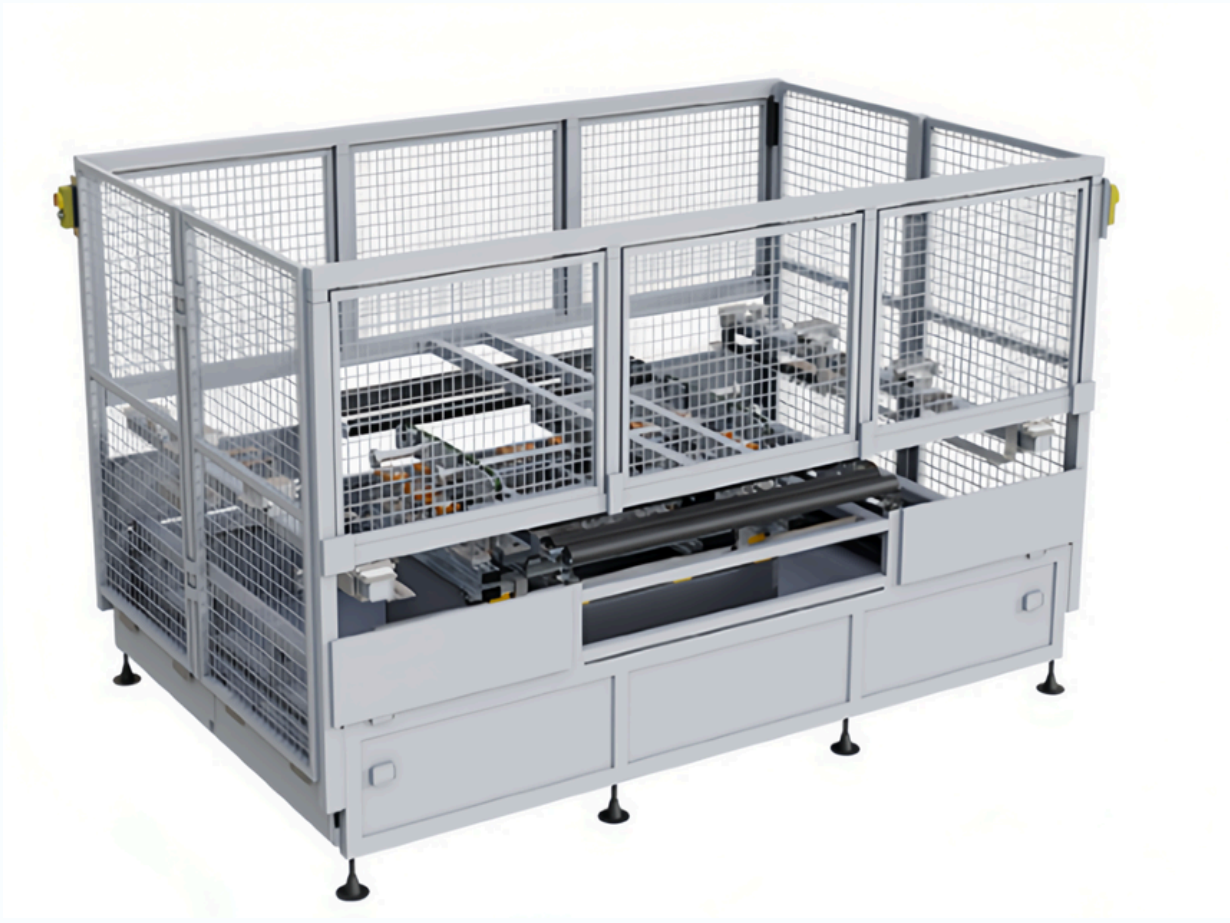
Technical Parameters

S/N	Item	Parameters
1	Effective lamination area	2,700*8,700mm
2	Capacity	250-300MW/year
3	Utilization rate	≥99.5%
4	Maximum vacuum degree	30Pa
5	Operating temperature	-180°C room temperature
6	Precision of temperature control	±1.5°C
7	Temperature accuracy	±1°C
8	Heating method	Oil/electric heating
9	Cooling method	Fan cooling
10	Panel switching time	0.6-0.8MPa
11	Compressed air pressure	38,000*3,650*3,600mm

Features

- Smaller footprint and higher throughput;
- Movable touch screen for easy operation;
- Adopting the double-layer and double-chamber structure. Each layer and chamber can be independently controlled;
- Strong compatibility of being suitable for a variety of solar module production;
- Other dimensions are also customizable as customers request.

Automatic Edge Trimming Machine



Technical Parameters

S/N	Item	Parameters
1	Panel size	(1,580-2,650)*(1,000-1,500) mm
2	Cycle time	≤20s
3	Tailing treatment	Motor rolling/cylinder clamping
4	Knife replacement time	≤180s
5	Life of knife	≥100,000 times
6	Positioning accuracy	±1mm
7	Breakage rate	≤0.001% (monthly average)
8	Blocking and aligning methods	The front cylinder for blocking, and the cylinders on both sides for aligning
9	Glass type	(1,580-2,650)*(1,000-1,500)mm
10	Overall dimensions (L*W*H)	3,450mm*2,360mm*1,550mm
11	Voltage	3 phase 5 wire 380V, 50Hz, AC±20%
12	Power	4kW
13	Air pressure	510L/min

Features

- The cutting surface of the leftover material is glossy, and there is no adhesion with the panels;
- There is storage space and a waste collection device inside the trimming machine for easier cleaning;
- Product specification can be changed on touch screen;
- The trimming machine can be automatically or manually operated and store a large quantity of data;
- The trimming equipment is driven by a servo motor and a synchronous belt and guided by a linear guide, ensuring positioning precision and operation stability.

An automatic trimming machine is used to automatically remove burrs and exceed materials from PV module edges after lamination. The trimming machine can adapt to different sizes and shapes of panels and has a series of merits like high trimming quality, precision and speed, low noise and easy operation. Using the trimming machine can boost the production efficiency and product quality.

Automatic Framing Machine



The automatic framing machine features short cycle time and high precision and can meet panel production requirements. The corner misalignment, the leaking hole dislocation and the border-corner clearance are all within 0.3mm. A shorter panel-switching time also improves production efficiency. And the HMI provides two languages of Chinese and English to meet different customer demands.

Technical Parameters

S/N	Item	Parameters
1	Panel size	(1,680-2,650)*(992-1,500)mm
2	Cycle time	≤20s
3	Panel corner misalignment	≤0.3mm
4	Leaking hole dislocation	≤0.3mm
5	Border corner clearance	≤0.3mm
6	Switch Time	≤1-2h
7	Alignment mode	Cylinder alignment, servo switching
8	HMI languages	Chinese and English
9	Overall dimensions:	3,300*2,450mm
10	Voltage	3 phase 5 wire 380V, 50Hz, AC±20%
11	Power	3.7kW
12	Air pressure	0.6-0.8MPa

Features

- Adding the frame gantry, higher than the conveying line, the frame can be placed in advance
- The force exertion is even to ensure the uniform glue application;
- 20 sets of suction cups complete the panel leveling without leaving marks on the glass;
- The framing machine is designed with profile straightening and pressure angle mechanisms to make qualified frames with accurate angles.



Sun Simulator / IV Tester



A sun simulator provides a standard testing environment to know about the solar panel working conditions and conduct power and current tests on solar panels.

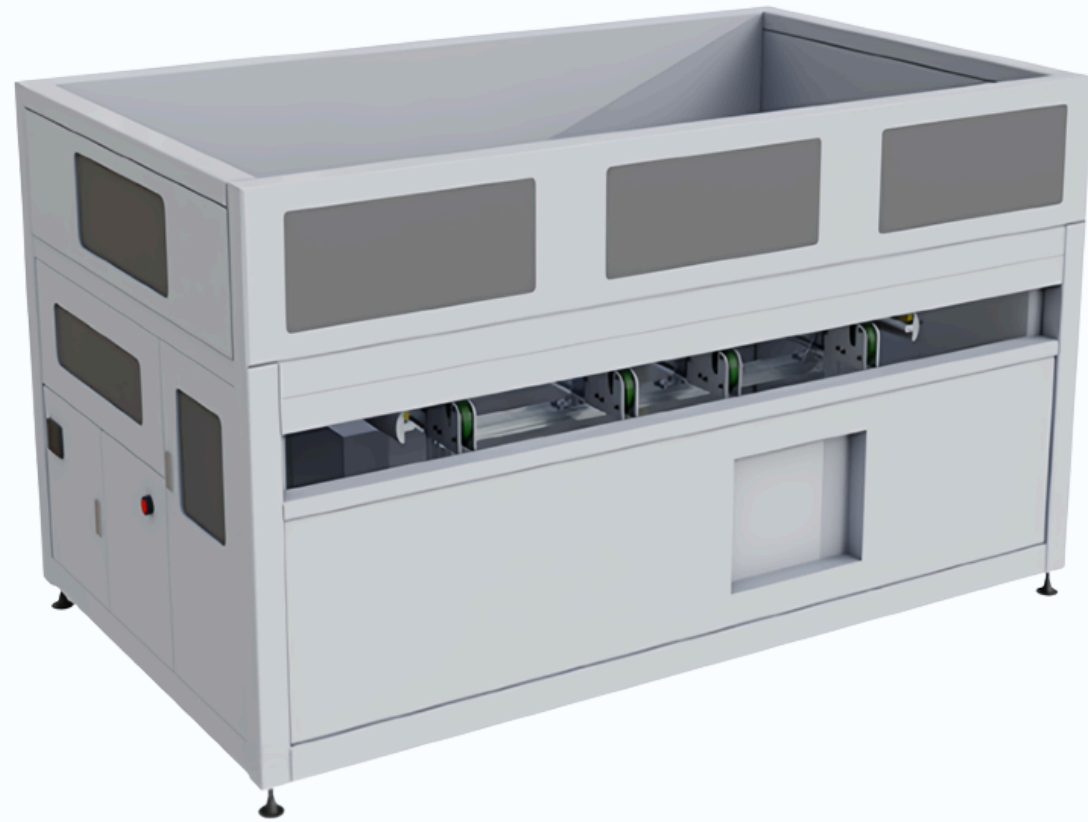
Technical Parameters

S/N	Item	Parameters
1	Panel type	Solar panels
2	Panel size	2,650mm*1,500mm
3	Cycle time	≤20s
4	Light source	Imported long arc pulse xenon lamp
5	Irradiation range	700-1,300W/m ²
6	Repeatability accuracy	The same solar panel tested continuously for 50 times: ≤0.15%
7	Test error	Voltage ≤0.2%; current ≤0.2%
8	Operation	Automatic measurement of I-V curves, P-V curves and irradiation lines with single flash
9	Voltage	220V, 20A, 50Hz
10	Power	Rated power of 3kW; peak power of 3.5kW
11	Air source	Compressed air: φ8, 0.6-1MPa; no corrosive gas
12	Working temperature	10-30°C; ideal temperature of 25±2°C
13	Working humidity	40-80% RH

Features

- Measured parameters include but are not limited to I-V curve, P-V curve, irradiation line, short circuit current, open circuit voltage and peak power;
- Solar modules adopts four-wire connection to ensure the accuracy of solar cell current measurement;
- Infrared temperature measurement ensures the accuracy of solar cell temperature correction;
- The optical feedback system ensures the stability of irradiation;
- The main spectral range is 300-1200nm and can be extended to 300-1700nm. The long-wave band still has energy output.

HiPot Tester



An HiPot tester is an efficient and reliable insulation/withstand voltage tester which can test all kinds and sizes of PV modules. The tester features strong power resistance up to 5kVAC@40mA or 6kVDC@20mA, and can detect 0.01-12.00mAac and 0.001-5.000mAdc.

Technical Parameters

S/N	Item	Parameters
1	Panel type	All kinds of solar panels
2	Panel size	(900-1,500)*(1,650-2,650)mm
3	Cycle time	14s
4	Pressure resistance	AC: 5kVAC @40mA DC: 6kVDC @20mA
5	Electrical current	0.01-12.00mAac 0.001-5.000mAdc
6	Overall dimensions (L*W*H)	3,700*1,820*1,765 (two layers); 3,020*1,820*1,400 (single layer)
7	Voltage	AC 200V or 380V, AC±10%, 50±0.5Hz
8	Power	≤1kW/h
9	Air pressure	0.8MPa

Features

- Conducting insulation performance, withstand voltage performance, and grounding performance tests on solar panels;
- Double layers and short cycle time to improve efficiency;
- High testing precision

Auto Labelling Machine



Technical Parameters

S/N	Item	Parameters
1	Panel type	Solar panels
2	Panel size	(1,680-2,650)*(992-1,500)mm
3	Cycle time	20s
4	Panel positioning accuracy	±0.5mm
5	Alignment mode	Cylinder
6	Labelling accuracy	±0.5mm
7	Breakage rate	≤0.01%
8	Utilization rate	≥99%
9	Overall dimensions (L*W*H)	3,930*2,030*1,800mm
10	Voltage	380V 10A
11	Power	3kW
12	Air pressure	0.8MPa

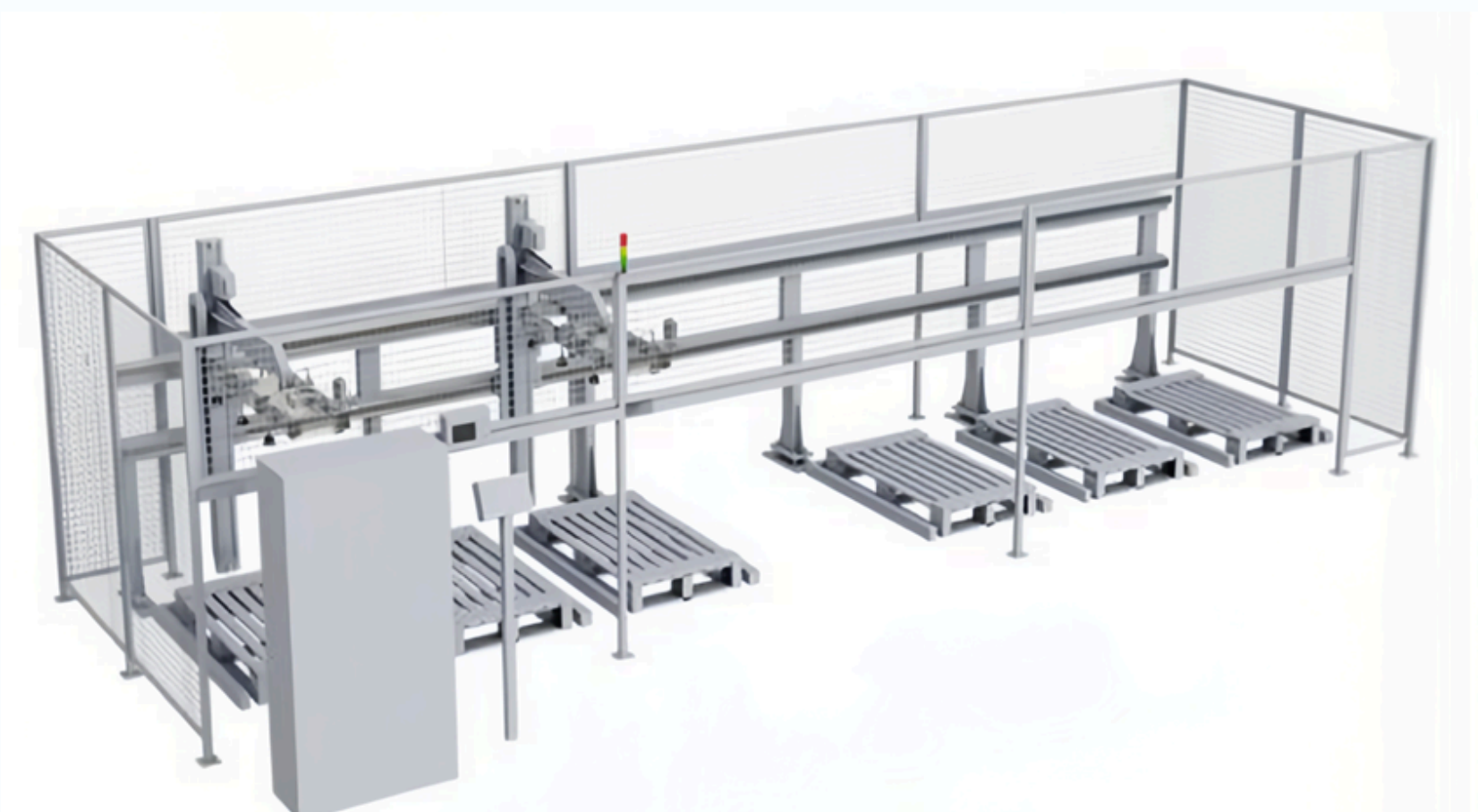


An automatic labelling machine has 2-3 working heads for accurately labeling tags, anti-counterfeiting codes and barcodes.

Features

- Equipped with 2-3 working heads for accurately labeling tags, anti-counterfeiting codes and barcodes;
- The labelling machine uses the information interaction between automatic code scanning and the MES system to drive label printing and realize the 100% successful scanning rate;
- Full stroke labeling of high speed and precision, qualified labeling≥99%.

Sorting Machine



A vertical sorting machine is an automatic module sorter for sorting and sequencing of PV modules. The sorting machine supports flat and vertical sorting according to customer needs or panel powers. The panel sorter is suitable to be applied to 60, 72 and 78 single and dual-glass half panels as well as MBB panels.

Technical Parameters

S/N	Item	Parameters
1	Panel type	Solar panels
2	Panel size	(1,680-2,650)*(992-1,680)mm
3	Cycle time	≤20s
4	Panel sorting	Driven by servo motor
5	Panel grabbing	By cylinder gripper with suction cup
6	Stack number	Customizable according to customer needs
7	Switching time	≤1h
8	Utilization rate	99%
9	Overall dimensions (L*W*H)	22,000*W*(3,500-5,000)mm (8 bins)
10	Voltage	3 phase 5 wire 380V, 50Hz, AC±20%
11	Power	≤5kW/h
12	Air pressure	0.6-0.7MPa

Features

- Capable of flat sorting and long-side and short-side vertical sorting;
- Equipped with a bin trolley;
- Supporting automatic packing or manual packing;
- Using self-developed 6-axis transplanting method to ensure the operation is simple, flexible and fully automatic without requiring personnels;
- automatically vertical turning applied to the fed materials of big size panels like 210mm;
- Adapting to framed panels and frameless panels.

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