

Company Profile

Company Overview

Wuhan Sunic Photoelectricity Equipment Manufacture CO.,LTD (“Sunic Photoelectricity”)

is located in Wuhan East Lake High-tech Development District, and recognized as the new high-tech enterprise by Wuhan

government. We have privileges in self-operated export and import. The Company is devoted to the development, production, marketing and offering services of Laser processing equipment and solar production line equipment, and to provide customers with complete practical solutions. After several decades of development, now we have 8 divisions including the development and production of Laser marking, metal cutting, solar production line equipment, Laser engraving and cutting, Laser. The company has more than 200 staffs at present.



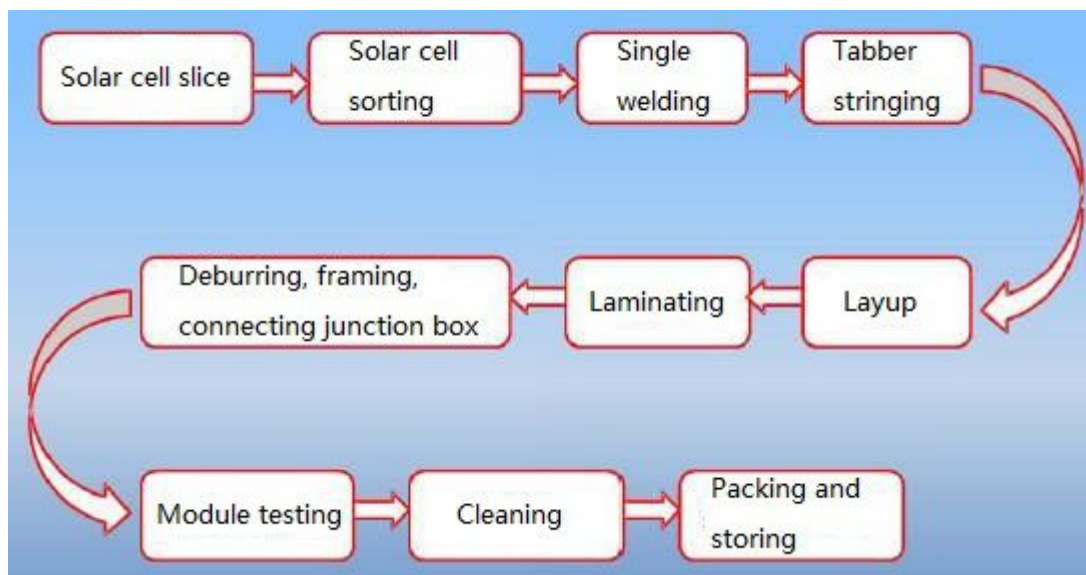
History

- Founded in 2005, and released the first product which gained recognition by CE certification in the same year.
- Recognized as new high-tech enterprise by Wuhan government in 2007, relocated to Wuhan University Science and Technology Park. It was a recipient of the National Found for Innovation of 3 million RMB in the same year.
- In 2009, the founder was among the 30 recipients of the “Most Optics Valley” Creativity award. He also received the 8th Wuhan Ten Outstanding Entrepreneur Award as well as the National Torch Program Certificate.
- In 2011, the founder was recognized as one of the top ten entrepreneurs in Wuhan. He was also the champion of Wuhan Start-Up Competition. Meanwhile, the company was recognized as National New High-Tech Enterprise.

- In 2013, Sunic won the annual PV production equipment Innovation Award and the Gazelle Enterprises certificate document.
- In 2014, the founder won the Science and Technology Innovation Start-Up Talent Award, and was accepted with the membership certificate of Information Promotion Association.

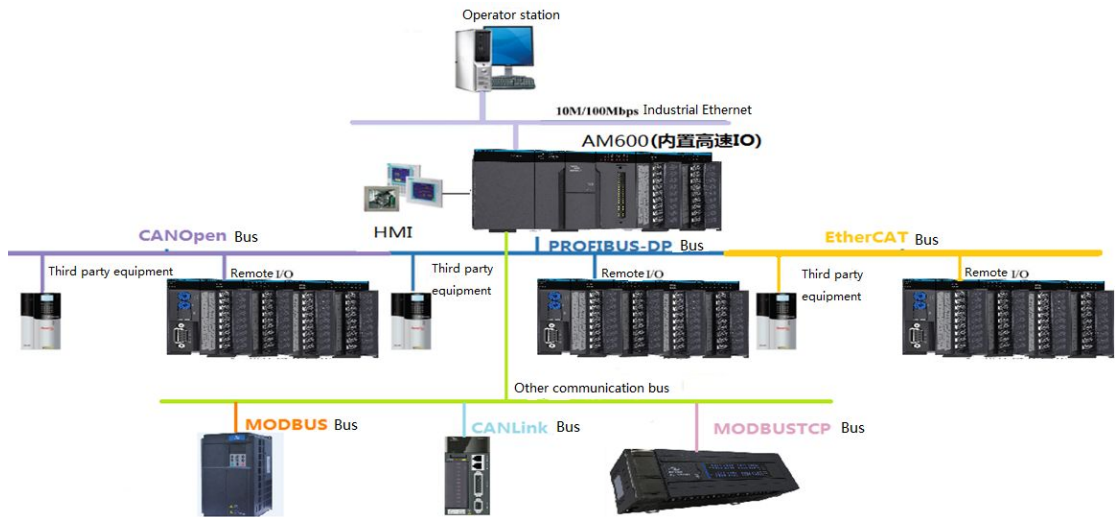
Product Line Introduction

1, Crystalline silicon packaging technology

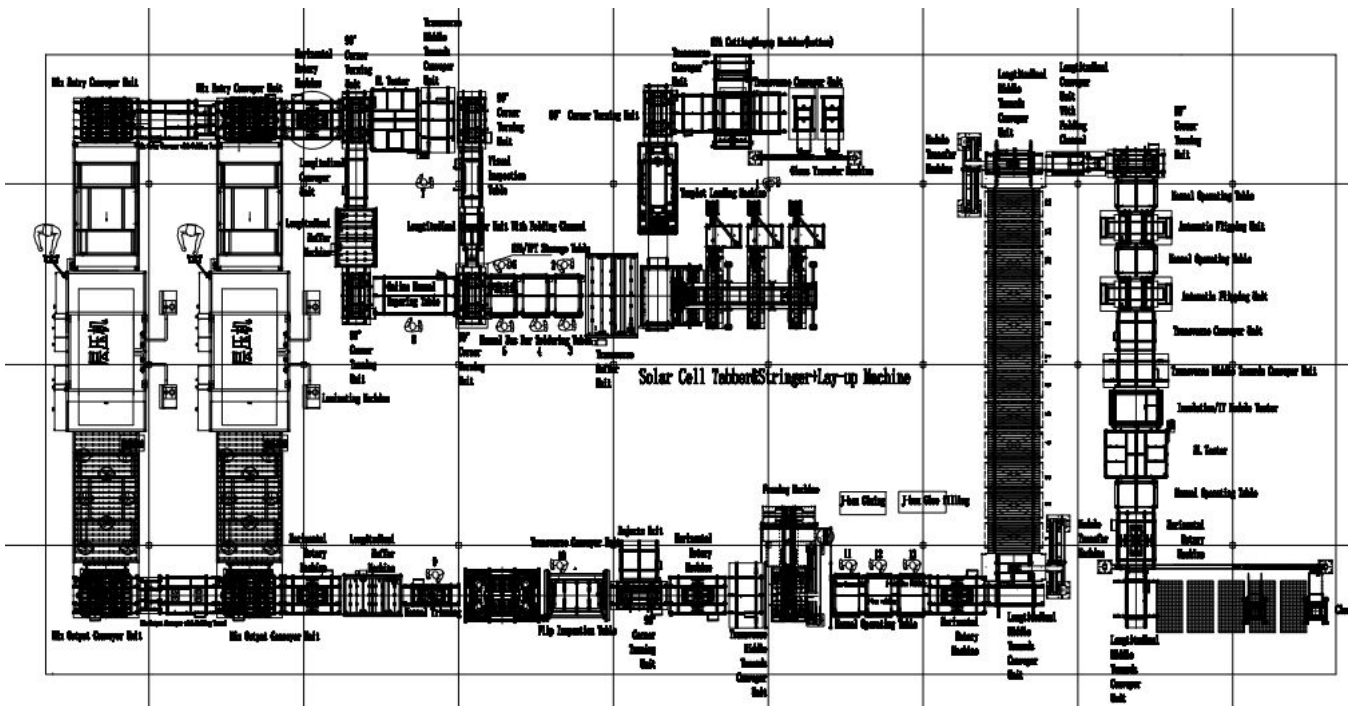


2, The entire line system solutions

The entire line system is centered with the medium model PLC of Inovance AM600. It forms an ring structure network with the major equipment via Modbus-TCP to achieve real-time data exchange. Meanwhile, it employs remote I/O modules for distributed control of the transmission equipment via EtherCAT main line . In addition it monitors and manages the entire line of data by an industrial PC.



3, 100MW automatic production line layout



Technical parameters and Features for main equipment

1, Tabber Stringing and Lay-up all-in-one machine



Tabber Stringing

1) Equipment performance and technical requirement

- 1, External dimension: 3875mm×1320mm×2100mm;
- 2, Transmission mode: All Inclusive hemp belt delivery assembly, servo motor positioning;
- 3, Productivity: 1200PCS/hour;
- 4, Flaw occurrence: <0.2%;
- 5, Solar cell dimension: 125mm×125mm, 156mm×156mm compatible with (40mm-156mm)×156mm Cutting sheet welding
6. Welding head: with compatibility for 2-5 busbar at the same time;
7. Busbars adherence strength >2N;
8. Solar cell spacing: 1.5mm-40mm Adjustable;
9. Deviation of welding zone and gate line <±0.2mm;
10. Battery string deviation from straight line <1mm;
11. Power supply: 3-phase 380V, 50Hz(requires firmly grounded);
12. Applicable air pressure: 0.6-0.8MPa;
13. Compressed air flow: 100L/min;
14. Power consumption: 6kW;

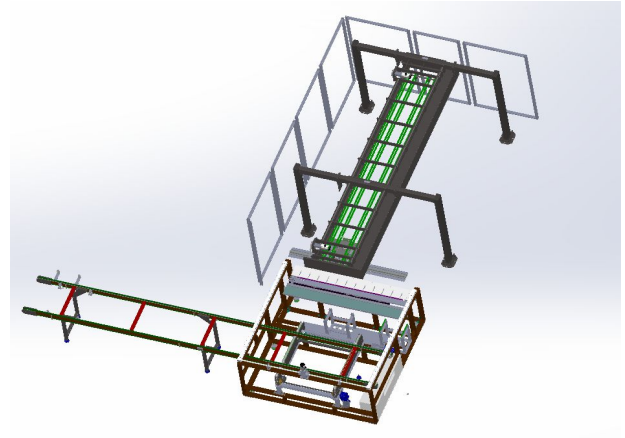
2) Basic Configuration Specification

NO.	Name	Detail	Note
1	Servo motor	R88M-G40030H-S2-Z	OMRON
2	Breathable conveyer belt	157×6080mm All Inclusive hemp belt	Made in China
3	Synchronizing wheel	HTD 20-5M-12	Ningbo BEIDI
4	Synchronizing belt	HTD 5M12 L=1200	Ningbo BEIDI
5	Pneumatic lift cylinder	SMC	Made in Japan
6	Frame	Square steel 5050	Made in China
7	Reduction drive	VRB-060-25-S3	SHIMPO
8	Adjustable stand	12-120	Made in China
8	Electric linear slider	LEFS40NZA-500	SMC
9	Sheet metal components	Q235A Sheet	Made in China
10	Bearing	6004 2RS 20-42-12	NSK
11	Contactator	LC1-D09BDC	SCHNEIDER
12	PLC Module	CJ2W	OMRON
13	HMI	G150IPC-RA	Made in China
Spare parts:			
1	Synchronizing pulley	Customized	1PCS
2	Fuse	Customized	26PCS

Automatic Lay-up machine

1) Equipment performance and technical requirement

1. External dimension:
6370mm×8170mm×2200mm;
2. Transmission mode: Synchronizing belt delivery module, servo motor positioning;
3. Period: ≤ 90 s;
4. Power supply: 3-phase 380V, 50Hz(must be grounded);
5. Applicable air pressure: 0.6-0.8MPa;
6. Power consumption: 5kW;
7. Compressed air flow: 100L/min;

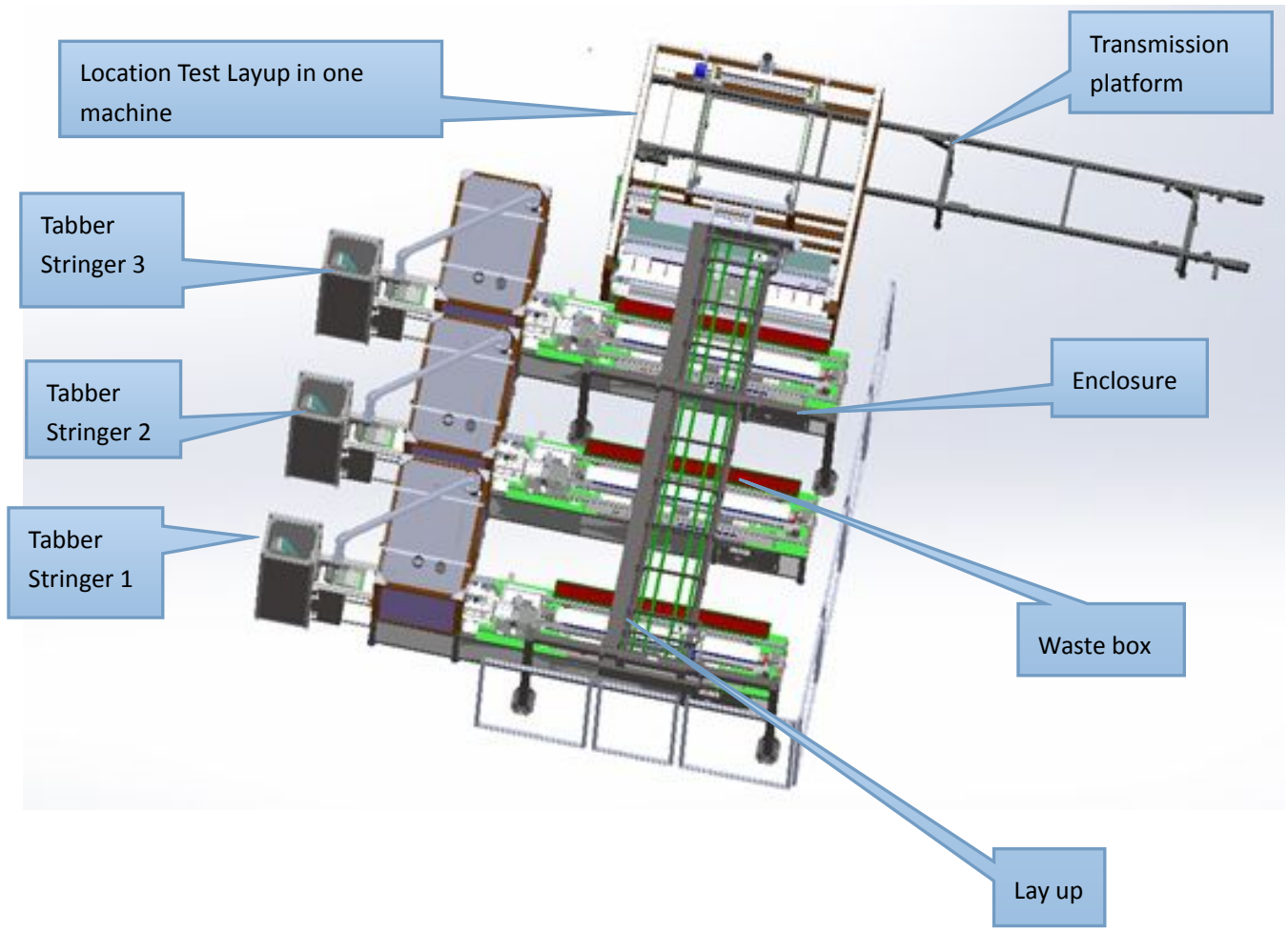


Main function: Glass moving Machine puts glass on the transfer station and locates it, draws 3 stringed solar strings stringed by tabber stringer, after tested by CCD, unqualified solar strings are put to waste box, qualified battery strings are put onto glass. When there are 6 solar strings on the glass, they are transferred and tested.

2)Basic Configuration Specification

NO.	Name	Parameters	Note
1	Servo motor	R88M-G75030H-BS2	OMRON
2	Synchronizing conveyor belt	T10-32	Special belt(PV-specific)
3	Synchronizing wheel	T10-Z40-32	Ningbo BEIDI
4	Pneumatic lift cylinder	SMC	Made in Japan
5	Frame	Square steel 80140	Made in China
6	Harmonic Reduction drive	TS140-115TB	Made in Slovakia
7	Adjustable stand	20-130	Foot-terra
8	Transmission shaft	45 steel out diameter 30	Made in China
9	Sheet metal components	Q235A sheet	Made in China
10	Axle bearing base	UCF206	Made in China
11	Contactora	LC1-D09BDC	SCHNEIDER
12	PLC module	CJ1W	OMRON
13	HMI	G150IPC-RA	Made in China
Spare parts:			
1	Synchronizing pulley	Design and Selection	1PCS
2	Fuse	Design and Selection	1PCS

Effect chart of Tabber Stringing and lay-up machine

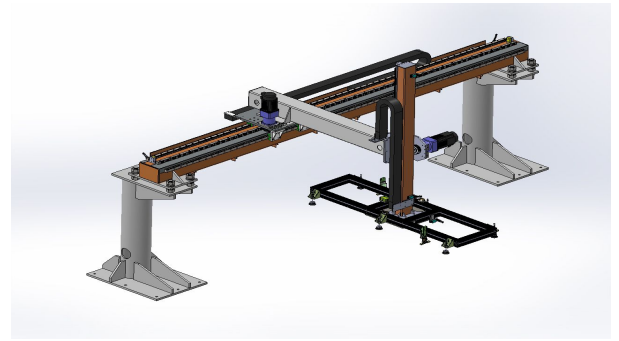


2. Automatic Glass Transfer Machine

1) Equipment performance and technical requirement

1. Glass size: 990mm×1650mm/990×1956mm;
2. Upper and lower input mode: Mechanical grasping and vacuum adhering
3. Beam travel length: 4m;
4. Lift height: 1.2m;
5. No. of glass in each pile \leq 100pcs;
6. Tray height: 120mm;
7. Glass pile to production line distance \leq 2m;
8. The equipment is driven by the servo motor, the gear rack drive, linear guide rail, with the advantages of accurate and stable operation;
9. Equipped with power and gas protection, prevent glass falling after power and gas outages;
10. Period: \leq 32s;
11. Production capacity: 100P/h;
12. Power supply: 3-phase 380V, 50Hz(firmly grounded required);
13. Applicable air pressure: 0.6-0.8MPa;
14. Power consumption: 4kW;
15. Compressed air flow: 50L/min;

Main function: The grasping mechanical structure automatically fetches the glass on the tray to the assembly line. It removes the dividing paper to the recycle bin and return to the initial position above the glass for another round.



2) Basic Configuration Specification

NO.	Name	Parameters	Note
1	Servo motor	1.8kW. Medium Inertia. Medium Capacity	Shenzhen Inovance
2	Reduction drive	Speed Ratio 1:5/1:10	Taiwan FASTON
3	Gear and strip gear	3M Skew Tooth	Taiwan KH
4	Frame	Rectangular pipe /Aluminum profile	ARGUS
5	Linear guiding rail	HGL30/35CA	HIWIN
6	Drag chain	35×75	Cangzhou Hongwei
7	Vacuum chuck	25mm Buffer Traceless Sucker	SMC
8	Vacuum generator	Power and gas protection	SMC
9	Pneumatic lift cylinder	Telescopic cylinder, finger cylinder	AirTAC
10	Sensor	Magnetic switch	AirTAC
11	Sensor	Reflex switch, origin switch	OMRON
12	Circuit breaker	Customized	CHINT
13	Contactactor	Customized	CHINT
14	Auxiliary relay	Customized	OMRON
15	PLC	64 Bits	Shenzhen Inovance
16	Button	Emergency stop. Rotate button	CHKO
Spare parts:			
1	Fuse	Customized	14PCS

3. EVA Cutting Layup

machine(bottom)

1)Equipment performance and Technical requirement

1. External dimension: 3600mm × 1700mm × 1700mm;
2. Feed, receive mode: Air operated clip;
3. Cutting method: Hobbing cutter;
4. Punching method: Guided rod pneumatic cylinder + knife tool;
5. Cutting size: 500mm---2000mm;
6. Roll size: inner diameter of 76mm, outer diameter \leq 600m, maximum bearable weight: 200kg;
7. Cutting precision: axial \pm 2mm; diagonal line \pm 3mm;
8. Punching size: horizontal bar cross bore 0---125mm;
9. Punching position precision: \pm 1mm;
10. Punching hole precision: \pm 0.5mm;
11. Cutting width: Effective width \leq 1300mm;
12. Hole open tool: Standard installation size for different hole knife, convenient switching;
13. Production rate: 6-7pcs/min, 5-6pcs/min for open feeding;
14. Power supply: AC 220V, 50Hz(firmly grounded);
15. Air pressure: 0.6-0.8MPa;
16. Power consumption: Total Power 1.5kW, Running Power 1kW;
17. Compressed air flow: 50L/min;



Main function: Auto feeding to EVA with coiled material, auto cutting and punching, and laying it on the glass on the first position.

2) Standard Configuration Specification

NO.	Name	Parameters	Note
1	Touch screen	MT6100I	VEINVIEW
2	PLC	CP1H-X40DT-D	OMRON
3	Servo motor	EPS-B1-0D40AA	DORNA
4	Pneumatic lift cylinder	Cutter cylinder	SMC
5	Pneumatic lift cylinder	Top lift, clamp cylinder	AIRTAC
6	Feeding motor	0.75kW	
7	Reduction drive	1:5	
8	Linear slide rail	Design type selection	Taiwan TBI
9	Variable-frequency drive	VFD-M	DELTA
10	Speed controller	RE-38	Angechuang
11	Proximity switch	CX-442	Panasonic

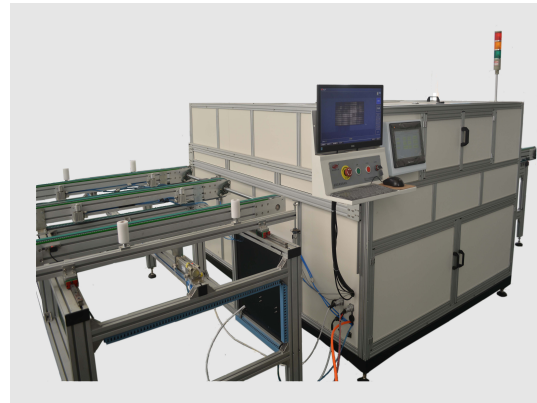
4. Online EL Tester(Before laminating)

1)Equipment performance and Technical requirement

1. External dimension: 2690mm × 1880mm × 1420mm;
2. Feeding mode: belt transmission
3. Effective testing area:

2000mm×1200mm(Customized);

4. Transmission speed: Before laminating 15m/min; period: 30s;
5. Resolution: 4928 × 3264;
6. Testing efficiency: 150pcs/hour;
7. Application scope: Before laminating/after laminating;
8. Power supply mode: Programmable Power supply;
9. Current range: 0A-13.4A continuous and adjustable;
10. Voltage range: 0V-60V continuous and adjustable;
11. Image storage: Automatically scan the bar code number, save the code number as the file name;
12. Power consumption: 2kW;
13. Power supply: 3-phase 380V, 50Hz(firmly grounded);
14. Applicable air pressure: 0.6-0.8MPa;
15. Compressed air flow: 7L/min;



2)Basic Configuration Specification

NO.	Name	Parameters	Note
1	Adjustable speed motor	200W/230V/AC/50Hz	Germany JSCC
2	Reduction drive	1:25	Germany JSCC
3	Synchronizing conveyor belt	8M-30	Ningbo BEIDI
4	Synchronizing wheel	8M	ARGUS
5	Frame	Square steel/ Aluminum profile	ARGUS
6	Adjustable stand	12-110	Made in China
7	Transmission shaft	45 steel out diameter 25	ARGUS
8	L shape base	Q235A plate	ARGUS
9	Bearing base	With bearing	Made in China
10	Sensor	PNP	OMRON
11	Circuit breaker	4P-40A	Schneider. CHINT
12	Camera	Nikon	1600W Pixel
13	Computer	DELL	Or same quality brand
14	Power supply	AE-800-60	Or same quality brand
15	Code scanner	USA Honeywell	Or same quality brand
16	PLC	64 Bits	Inovance
Spare parts:			
1	Bearing base with bearing	Design type selection	1PCS

6. Auto Laminator

1) Equipment performance and Technical requirement

1. External dimension: 16500×3200×3000mm;

2. Whole machine consisted of 4 sections: feeding section. laminating section.

solidifying section. Discharging

section;

3. Single layer effective

laminating area: 4700×2300mm,

actual heating plate area 4500×

2100mm;



4. Feeding section: Transmission location, stable reliable, high accuracy, can set any step distance; AC variable frequency motor controls system for accurate positioning and stepping positioning; Synchronizing belt with anti deviation and correcting function mechanism;

5、 Laminating section, solidifying section: The heater directly work on the electric heating mode in heating plate; lower plate temperature uniformity $\pm 2^{\circ}\text{C}$, roughness of hot plate within each square less than 200um; transmission controlled by AC variable frequency motor and rotary encoder control system, precisely positioning, and with a soft start and soft stop, re positioning precision less than 10mm;

6、 Discharging section: AC variable frequency motor control system; Photoelectric Sensor to prevent component drop; transmission stable and reliable with high precision;

7、 Upper cover travel length: 400mm;

8、 Open cover mode: Cylinder+linear guide jacking;

9、 Temperature control range: 100°C - 170°C ;

10、 Temperature control precision: $\pm 1^{\circ}\text{C}$;

11、 Laminating time: Up to different materials;

12、 Power consumption: Total rated Power 180kW, normal running Power 50kW;

13、 Power supply: 3-phase 380V, 50Hz(firmly grounded);

14、 Pressure: 0.6-0.8MPa;

15、 Compressed air flow: 100L/min;

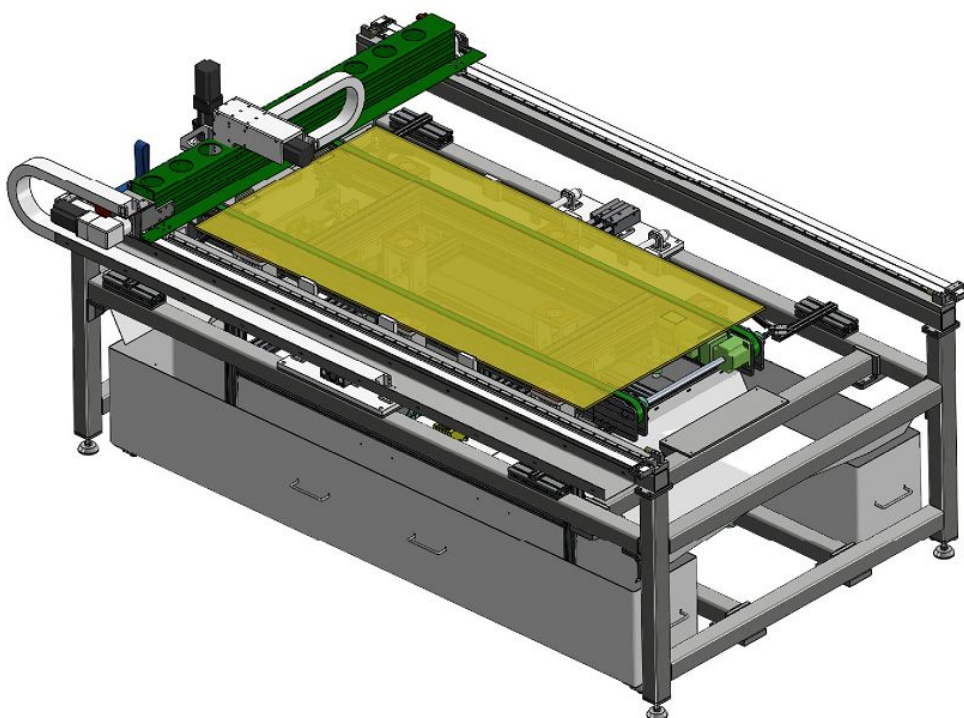
2)Standard Configuration Specification

NO.	Name	Brand parameters	Manufacturer	Quantity
1	CYDSC-4723DGM	2300×4700	Shanghai SENCO	1
2	Touch screen	Mitsubishi	Made in Japan	1
3	PLC	Mitsubishi	Made in Japan	1
4	Control box	Inside machine	Shanghai SENCO	1
5	Silica gel plate	5150×2700×4	Jiangyin Keqiang	2
6	Silica gel	¢12.7, ¢16	Shanghai Yizhou	1
7	Vacuum pump	2X-70L	Shanghai	2
8	Vacuum pneumatic butterfly valve	DN50	Shanghai Shangyu	4
9	Heater		Shanghai SENCO	2
10	Driver Reduction drive	XWD-1.1-3-47	Made in China	4
11	Feeding platform	Synchronizing belt	Shanghai SENCO	1
12	Discharging platform	Synchronous tube	Shanghai SENCO	1
13	Metal fence		Shanghai SENCO	
14	Temperature testing dot	Kt	Shanghai Metering 3 rd LC	12×2 dots
15	Vacuum pressure transmitter	AP-31	Made in Japan	3
16	hydraulic pressure station	10HP265-1F	KOMPASS	1
17	Inflation valve	DDC-JQ80	Shanghai valve 2 nd LC	1
18	Host frequency converter	FR-A740-2.2K-CHT	Mitsubishi	1
19	Feeding and discharging inverter	FR-E740-1.5K-CHT		2

7. Automatic trimming machine

1) Equipment performance and Technical requirement

1. Glass size : 990mm × 1650mm/990mm × 1956mm;
2. Automatic cutting the excess material around the laminated module;
3. Short rhythm < 20s(Transmission speed ≥ 12m/min);
4. Cutting knife and glass elastic contact, adjustable contacting pressure, easy to change the pressure;
5. Equipment contains collection box, collecting waste after cutting for clearing;
6. Equipment driven by servo motor, rack and pinion drive, linear guide, with the advantages of accurate, stable operation, etc;
7. Module fixing method: Negative pressure adherence;
8. Transmission platform height: 950mm;
9. No scrap rate of module edge ≤ 90%;
10. Production capacity: 120P/h;
11. Power supply: 3-phase 380V, 50Hz(firmly grounded);
12. Pressure: 0.6-0.8MPa;
13. Power consumption: 2.7kW;
14. Compressed air flow: 50L/min;



2)Standard Configuration Specification

NO.	Name	Parameters	Note
1	Servo motor	400W. 750W	Shenzhen Inovance
2	Reduction drive	Speed ratio 1:5/1:10	Taiwan FASTON
3	Speed control motor	90W/230V/AC/50Hz	Germany JSCC
4	Belt	3M-30/8M-30	Ningbo BEIDI
5	Belt wheel	40-8M/40-8M	ARGUS
6	Frame	Rectangular tube / aluminum profile	ARGUS
7	Metal sheet parts	Q235A Steel	ARGUS
8	Transmission shaft	45 steel out diameter 25	ARGUS
9	Linear guide	HGL15CA	HIWIN
10	Vacuum chuck	Traceless chuck	SMC
11	Vacuum generator	Power, gas protection	SMC
12	Pneumatic lift cylinder	Lift cylinder, buffer cylinder	AIRTAC
13	Electromagnetic valve	4V-230	AIRTAC
14	Sensor	Customized	AIRTAC
15	Circuit break	Customized	CHINT
16	PLC	64 dots	Shenzhen Inovance
17	Button	Customized	CHKO
18	AC contactor	Customized	CHINT
19	intermediate relay	Customized	OMRON
Spare parts:			
1	Bearing base belt	Customized	1PCS
2	Fuse	Customized	16PCS

8. Automatic Frame Gluing Machine

1) Equipment performance and technical requirement

1. External dimension: 2900mm × 1200mm × 1900 mm;

2. Glue pump size: 991mm × 610mm × 895mm;

3. Frame size: Longest frame size: 2000 mm; Shortest frame size: 500 mm;
Biggest frame width: 50 mm; Smallest frame width: 30 mm;

4. Z axis cylinder stroke: 75 mm;

5. Max Running speed: 500mm/s;

6. Glue application rate: 0-400mm/s adjustable;

7. Working efficiency: When module frame size is 1956×992mm, cycle time for each module is less than 1min, 32s for one module (2 long and 2 short total 4 aluminum frame, including the delivery time of the workpiece), 112.5 modules /hour, one shift (12 hours) 1350 modules. The glue amount for each module is about 260g.

8. Time for changing glue: ≤20mins;

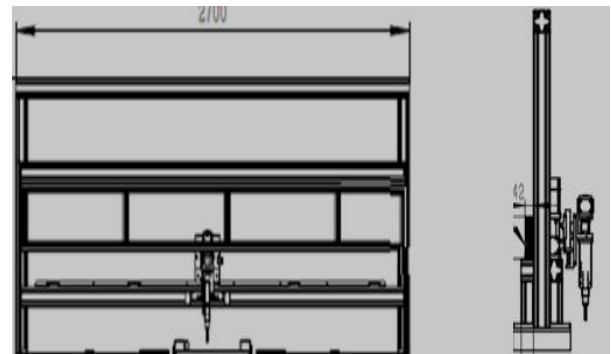
9. Power supply: single-phase 220V, 50Hz(firmly grounded);

10. Power consumption: 1.5kW;

11. Air pressure: 0.6-0.8MPa;

12. Compressed air flow: ≥4L/min;

Main function: After the module frame is put into the card slot, the glue machine automatically starts gluing, flipped after transferred to the supposed position by the belt. This is convenient for moving and assembling frame.



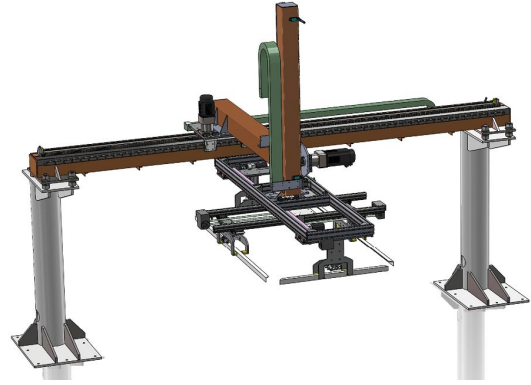
2)Standard Configuration Specification

NO.	Name	Parameters	Quantity
1	Single line module	SPZ-2100GD	1
2	HMI	SPJ-1062K	1
3	GRACO55 Gallons for gluing pump	SPJ-CM2L59-55	1
4	GRACO PCF	SPJ-PF-1400	1
5	DPG glue valve	SPJ-JF401	1
6	ARO voltage regulator	651780-C1R-B	1
7	Pressurizer	SPJ-C2500B	1
8	Rubber hose	SPJ-08JG-3M	1
9	Rubber hose	SPJ-16G25/2K2.8M	1

9. Automatic frame transfer machine

1) Equipment performance and technical requirement

1. Glass size : 990mm × 1650mm/990mm × 1956mm;
2. Equipment driven by servo motor, rack and pinion drive, linear guiding rail, with the advantages of accurate, stable operation, etc;
3. Up and down feeding mode: Mechanical grasping and adhering;
4. Beam moving length: 4m;
5. Lift movement height: 1.2m;
6. Production capacity: 100P/h;
7. Period: ≤32s;
8. Power supply: 3-phase 380V, 50Hz(firmly grounded);
9. Pressure: 0.6-0.8MPa;
10. Power consumption: 5.5kW;
11. Compressed air flow: 50L/min;



Main function: Grasping mechanism will automatically draw glued module frame onto Framing Machine, automatically turn the long frame by 90 degree, then put the fixing frame onto Framing Machine, waiting for it to assemble.

2) Basic configuration parameters

NO.	Name	Parameters	Remark
1	Servo motor	400W. 750W. 1.8kW	Shenzhen Inovance
2	Reduction drive	Speed ratio 1:5/1:10	Taiwan FASTON
3	Rack and pinion	3M skewed tooth	Taiwan KH
4	Frame	Rectangular tube / aluminum profile	ARGUS
5	Linear guide	HGL20/30/35CA	HIWIN
6	Synchronizing belt	3M-40	Ningbo BEIDI
7	Synchronizing pulley	30-3M	ARGUS
8	Pneumatic lift cylinder	Telescopic cylinder	AIRTAC
9	Sensor	PNP	OMRON
10	Circuit breaker	2P-16A	CHINT
11	PLC	64 bits	Shenzhen Inovance
12	Button	Customized	CHKO
Spare parts:			
1	Fuse	Customized	17PCS

10. Automatic framing machine

1) Equipment performance and technical requirement:

1. External dimension:

3000mm×1820mm×950mm;

2. Application range:

- Angle parts of Aluminum Alloy profile
use corner interference with Rivet type frame
- 40-50 standard Aluminum Alloy structure

3. Framing scope:

- Min size: 835mm×1650mm
- Max size: 1000mm×2000mm

4. Framing precision:

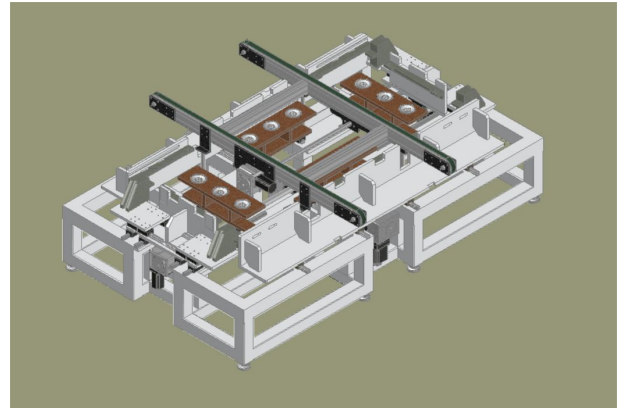
- The diagonal dimension error is less than 1mm, clearance of less than 0.2mm;
- Period: $\leq 40s$;

5. Power supply: 3-phase 380V, 50Hz(firmly grounded);

6. Pressure: 0.6-0.8MPa;

7. Power consumption: 3kW;

8. Air flow: $\geq 4L/min$;



2) Standard Configuration Specification

NO.	Name	Parameters	Note
1	Linear guide	SBG30SL	Beijing Taijing
2	Ball screw	4010	Beijing Taijing
3	Pneumatic lift cylinder	Customized	SMC
4	Low vacuum machinery	ZPX80HN-B01-B10	SMC
5	Five way valve	SY7120-5DZ-02	SMC
6	Vacuum generator	ZK2A10R5CL-06	SMC

7	Air cleaner	AW40-04BDG	SMC
8	Servo motor / driver	1.5kW	DELTA
9	Servo motor / driver	0.75kW	DELTA
10	Touch screen	10 inch	DELTA

11. Junction box gluing machine

1) Equipment performance and technical requirement

1. External dimension: 330mm × 325mm × 400mm;
2. Working mode: Make teaching programs to the glue-pouring track of the junction box. Make glue-pouring to the two junction boxes alternately, started with on button;
3. X. Y. Z Axles max. motion range: 200mm × 200mm × 100mm;
4. X. Y Axles max. speed: 500mm/s; Z Axle max. speed: 300mm/s;
5. Repeated orientation precision: ± 0.02mm;
6. Glue size: 1 - 6mm adjustable;
7. Error of Glue lace diameter: 0-0.5mm;
8. Working track storage capacity: 99;
9. Power supply: Single-phase 220V, 50Hz(firmly grounded);
10. Applicable air pressure: 0.6-0.8MPa;
11. Power consumption: 0.6-0.8kW;
12. Air flow: ≥4L/min;



2) Standard Configuration Specification

Product Name	Component Name	Model	Brand
Glue-spreading machine SPD-200	X/Y/Z three Axles micro step	57 series	Shenzhen Baishan
	three Axles free motion control system	SPD-TA	Shanghai Spucon
	Precision transmission belt	3M series	American GATES
	liner guide rail	/	Taiwan HIWIN
	switch, button, indicating light	/	Japanese Idec

	Standard fixture of junction box	SPJ-JJ200-D	Shanghai Spucon
Glue supply system	Aluminum glue tube	SPJ-JTR400	Shanghai Spucon
	Glue tube holder	SPJ-JTCJQ01	Shanghai Spucon
	stainless steel needle	SPJ-2FW3G	Shanghai Spucon
pneumatic system	solenoid valve	/	Taiwan AirTAC
	Air source treating component	F.R.L Unit	Taiwan AirTAC
	Air supply pipe	/	Taiwan
	Pressure gage	/	Taiwan

12. Junction box glue filling machine

1) Equipment performance and technical requirement

1. External dimension: 800mm×950mm×1850mm;
2. Working mode: Make teaching programs to the glue-pouring track of the junction box. Make glue-pouring to the two junction boxes alternately, started with on button;
3. Glue-pouring mode: continuous and quantitative glue-pouring; static mixing;
4. Metering device: gear pump metering system;
5. Max. motion distance of the glue gun: approximately 2m
6. Ratio adjustment range: mixing quantitative ratio is 10:1 / 2:1;
7. Ratio precision: ±2%;
8. Glue-pouring quantity: > 10CC
9. Power supply: Single-phase 220V, 50Hz(firmly grounded);
10. Applicable air pressure: 0.6-0.8MPa;
11. Power consumption: 0.6-0.8kW;
12. Air flow: 4L/min;



2) Standard Configuration Specification

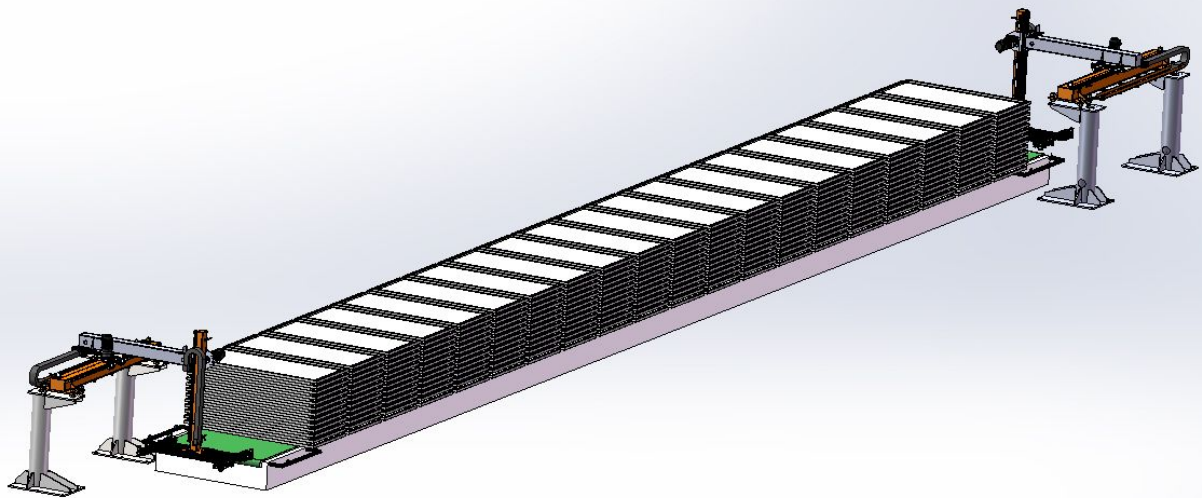
NO.	Name	Parameters	Note
1	gear pump		Germany
2	Reduction drive	Speed ratio 1:5/1:10	Taiwan FASTON
3	Gear rack	3M helical rack	Taiwan KH
4	Frame	Rectangular pipe/aluminum profile	ARGUS
5	Linear guide	HGL20/30/35CA	HIWIN
6	Synchronizing belt	3M-40	Ningbo BEIDI
7	Synchronizing	30-3M	ARGUS

	pulley		
8	Pneumatic lift cylinder	Telescopic cylinder	AirTAC
9	Sensor	PNP	OMRON
10	Circuit breaker	2P-16A	CHINT
11	PLC	64 bits	Shenzhen Invonance
12	Button	Customized	CHKO
Spare parts:			
1	Fuse	Customized	17PCS

13. Automatic curing line

Equipment performance and technical requirement

1. Curing transporting line, consisted of chain line;
2. The line adopts frequency control, the speed can be adjusted according to the actual producing requirements;
3. The auto feeding and blanking system is consisted of servo motor drive, gear-rack transmission, liner guiding rail, having a advantage of high precision performance and stable running;
4. Through auto feeding and blanking system, the components are stacked up on the curing production line, when the stack-up or pick-place reach a certain height, it will do the step transform.



Curing production line vision chart

Plate chain conveyor

1)Equipment performance and technical requirement

1. External dimension: 24000mm×1600mm×430mm;
2. The frame of the transmission line is integral welded steel structure. Steel plate bending and surface galvanizing treatment ensure the rigidity and stability of the transmission;
3. The transmission chain adopts Donghua roller chain, the width of the chain is 98mm;
4. The line adopts frequency control, the speed can be adjusted according to the actual producing requirements 0-9m/min;

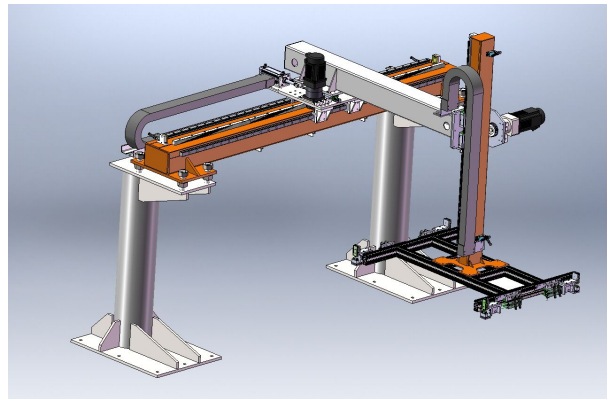
2)Standard Configuration Specification

NO.	Name	Parameters	Note
1	Motor	4kW brake motor	
2	Plate chain	P50.8mm	Donghua Chain
3	Inverter	Customized	Shenzhen Inovance
4	Frame	High quality carbon steel plate and profile steel	ARGUS
5	Chain plate	high quality carbon steel	ARGUS
6	Chain wheel	45# steel	ARGUS
7	Sheet metal and machining parts	A3/45# steel	ARGUS
8	Axle bearing	Customized	China
9	transmission shaft	high quality carbon steel	ARGUS
10	Non-contacting proximity Sensor	Customized	
11	plastic	Customized	
12	chain	High quality	ARGUS
Spare parts:			
1	Axle bearing	Customized	1PCS

Module transfer machine

1)Equipment performance and technical requirement

1. Curing component specification:
990mm × 1650mm/990mm × 1956mm;
2. The equipment is equipped with servo motor drive, gear-rack transmission, liner guiding rail, having a advantage of high precision performance and stable running.
3. Feeding and blanking mode: linkage function between feeding and blanking;
4. Beam motion range: 2.2m;
5. Up and down motion range: 1.2m;
6. Dislocation motion range: 100mm;
7. Component stack volume ≤ 25 pieces;
8. Height of transmission platform: 430mm;
9. Speed of transmission platform ≤ 25km/h;
10. Length of transmission platform: 24m;
11. Capacity: 100P/h;
12. Period ≤ 32s;
13. Power supply: three phase 380V, 50Hz(firmly grounded);
14. Applicable air pressure: 0.6-0.8Mpa;
15. Power: 4kW;
16. gas flow: 50L/min;



Main function: grasping mechanism automatically grasp the components from the flow line onto the plate chain conveyor for stack up. When stacking up, the long side direction dislocates automatically to make sure every piece of component get a max curing size.

2)Standard configuration specification

No.	Component Name	Parameters	Note
1	Servo motor	1.8kW, medium inertia, medium capacity	Shenzhen Inovance
2	Reduction drive	Speed ratio 1:5/1:10	Taiwan FASTON
3	Gear rack	3M helical gear	Taiwan KH
4	Frame	Rectangular pipe/aluminum profile	ARGUS
5	Liner rail guide	HGL30/35CA	HIWIN
6	Drag chain	35×75	Cangzhou Hongwei
7	Solenoid valve	4V-230	AirTAC
8	Pneumatic lift cylinder	Telescopic cylinder, finger cylinder	AirTAC
9	Sensor	Customized	AirTAC
10	Circuit breaker	3P-16A	CHNT
11	PLC	64 bit	Shenzhen Inovance
12	Button	Emergency stop button, manual/auto control button and etc.	Jiangyin electrical equipment
spare part:			
1	Fuse	Customized	16PCS

14. Insulation/IV Module Tester

1) Equipment performance and technical requirement

1. Main performance specifications of I-V test

- equipment dimension:
2500mm×1470mm×1330mm;

- Transmission mode:
timing belt transporting components;

- Testing size: 2000mm×1200mm;

- Testing speed: 30s/piece;

- Testing temperature range: 0-50°C (measurement precision 0.1°C)

Infrared Temperature Measurement System measures the temperature of battery slice directly

- Flash time: 0-100ms, continuous adjustable range 0-100ms, stepping with 1ms

- Irradiance and uniformity: $\pm 2\%$;

- Irradiance and stability: $\pm 2\%$;

- Testing repeat precision: $\pm 0.05\%$;

2. DC withstand voltage test

- Output voltage range: 0.100KV-6.000KV dc

- Output voltage resolution: 2V/stepping

- Output voltage precision: $\pm(1\% \text{ setting value} + 5V)$ [idling]

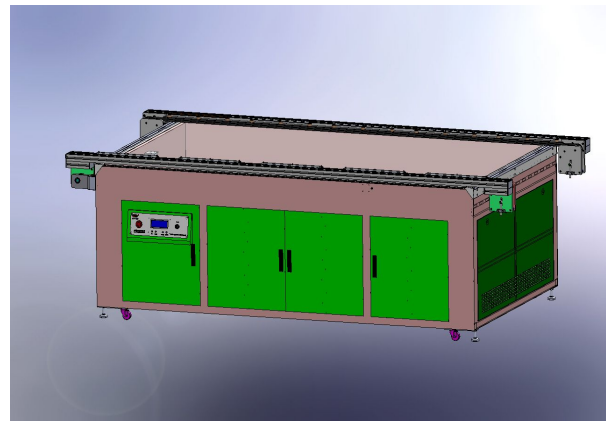
- Maximum rated load: 50W(5KV/10mA)

- Maximum rated current: 10mA($0.5KV < V \leq 6KV$)

- 2mA($0.1KV < V \leq 0.5KV$)

- Output voltage changing rate: $\pm(1\% \text{ reading value} + 5V)$ [maximum rated load - idling value]

- Voltage meter precision: $\pm(1\% \text{ reading value} + 5V)$



- Current measuring range: 0.001mA-10.0mA;
- Current resolution: 0.001mA/0.01mA/0.1mA;
- Current testing precision: $\pm(1.5\% \text{reading value} + 30 \text{ bits})$ when HI

SET<1.00mA;

- $\pm(1.5\% + 3 \text{ bits})$ when HI SET $\geq 1.00\text{mA}$;
-
- Increasing time(RAMP): 0.1-999.9s;
- Testing time(TIMER): OFF, 0.5s-999.9s;

3. Insulation Resistance Test

- Output voltage range: 50V-1000V;
- Output voltage resolution: 50V/步进
- Output voltage precision: $\pm(1\% \text{ setting value} + 5\text{V})$ [idling]
- Resistance testing range: 1M Ω -9500M Ω ;
- Testing precision between 50V-450V: $\pm(5\% \text{ reading value} + 1 \text{ bit})$

1-50M Ω ;

$\pm(10\% \text{ reading value} + 1 \text{ bit})$ 51-2000M Ω ;

- Testing precision between 500V-1000V: $\pm(5\% \text{ reading value} + 1 \text{ bit})$

1-500M Ω ;

$\pm(10\% \text{ reading value} + 1 \text{ bit})$ 501-9500M Ω ;

- Increasing time(RAMP): 0.1-999.9s;
- Testing time(TIMER): 1s-999.9s;

4. Power supply: single phrase 220V,50Hz(firmly grounded);

5. Applicable air pressure: 0.6-0.8MPa;

6. Power consumption: 2kW;

7. Compressed air flow: 4L/min;

Main function: used for insulation of components, pressure resistance and I-V performance testing

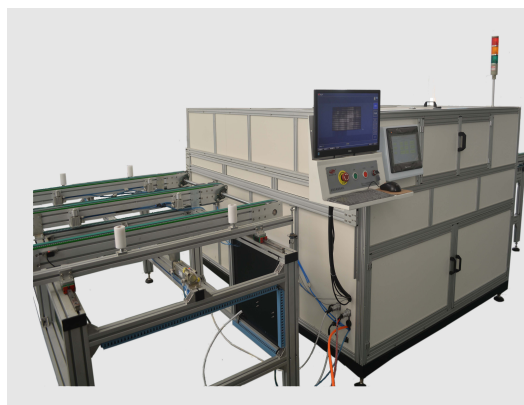
2) Standard configuration specification

No.	Name	Parameters	Note
1	Governor-controlled motor	200W/230V/AC/50Hz	Germany JSCC
2	Reduction drive	1:25	Germany JSCC
3	Synchronous belt	T10-30	Special timing belt(Photovoltaic dedicated)
4	Synchronizing wheel	AL6061 T10	ARGUS
5	Frame	Square steel	ARGUS
6	Adjusting pin	12-110	China
7	Transmission shaft	45#steel, external diameter 25	ARGUS
8	Axle bearing	With base	NSK
9	Sensor	PNP	OMRON
10	Computer	DELL	Or equal quality brand
11	Scan code device	American Honeywell	Or equal quality brand
12	Power supply	AE-800-60	COTEK
13	Regulatory Tester	GPT-9803	Taiwan Gwinstek
14	PLC	40 bits	Shenzhen Inovance
15	PLC Network module	H2U-ENET-CAB	Shenzhen Inovance
Spare parts:			
1	Xenon lamp	1500W	Heiman
2	Fuse	25A	2PCS

15. online EL testing machine(after lamination)

1) Equipment performance and technical requirement

1. External dimension: 2690mm × 1880mm × 1420mm;
2. Feeding mode: belt transmission;
3. Effective test area: 2000mm×1200mm(Customized);
4. Transporting speed: before lamination 15m/min; Period: 30S;
5. Resolution: 4928 × 3264;
6. Testing efficiency: 150 pieces/hour;
7. Application scope: before/after lamination;
8. Power supply mode: programmable Power supply;
9. Current range: 0A-13.4A, continuous and adjustable;
10. Voltage range: 0V-60V, continuous and adjustable;
11. Image storage: scan the bar code number automatically, save and name the file with the bar code number
12. Power consumption: 2kW;
13. Power supply: three phrase 380V, 50Hz(firmly grounded);
14. Applicable air pressure: 0.6-0.8MPa;
15. Compressed air flow: 7L/min;



2)Standard configuration specification

No.	Name	Parameters	Note
1	Governor-controlled motor	200W/230V/AC/50Hz	Germany JSCC
2	Reduction drive	1:25	Germany JSCC
3	Synchronous belt	8M-30	Ningbo BEIDI
4	Synchronous wheel	8M	ARGUS

5	Frame	Square steel/aluminum profile	ARGUS
6	Adjusting pin	12-110	China
7	Transmission shaft	45#steel, external diameter 25	ARGUS
8	L type base	Q235A plate	ARGUS
9	Axle bearing base	With Axle bearing	China
10	Sensor	PNP	Omron
11	Circuit breaker	4P-40A	Schneider, CHINT
12	Camera	Nikon	1600W resolution
13	Computer	DELL	Or equal quality brand
14	Power supply	AE-800-60	Or equal quality brand
15	Scan code device	American Honeywell	Or equal quality brand
16	PLC	64 bits	Shenzhen Inovance
Spare parts:			
1	Bearing base with Axle bearing	Customized	1PCS

16. Transverse conveyor unit

1) Equipment performance and technical requirement

1. External dimension: 1500mm × 1400mm × 950mm;

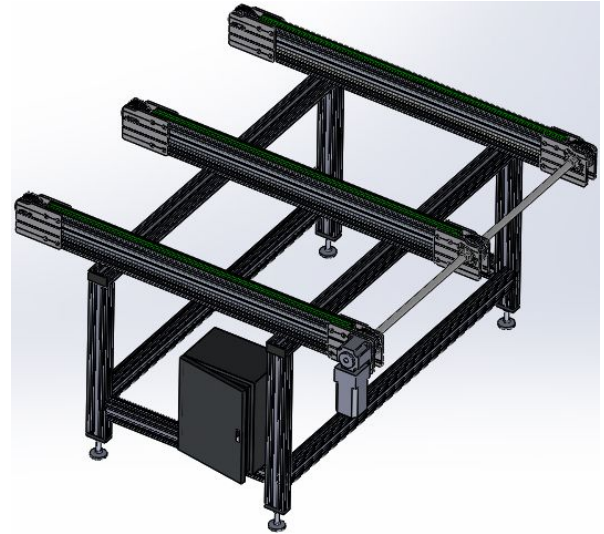
2. Transmission mode: Timing belt transporting components, located with Sensor.

3. Transporting speed: 18m/min;

4. Equipment Power supply: single phrase 220V, 50Hz(firmly grounded);

5. Power consumption: 0.11kW;

Main function: modules are transported with the long side in the front, it is equipped with tool box and Power supply socket in the positions like welding bar, EVA and etc. Fluorescent lamp and supporting frame are adjustable, meeting the maximum modules of 2100mm × 1200mm and minimum modules of 1400mm × 808mm.



1) Standard configuration specification

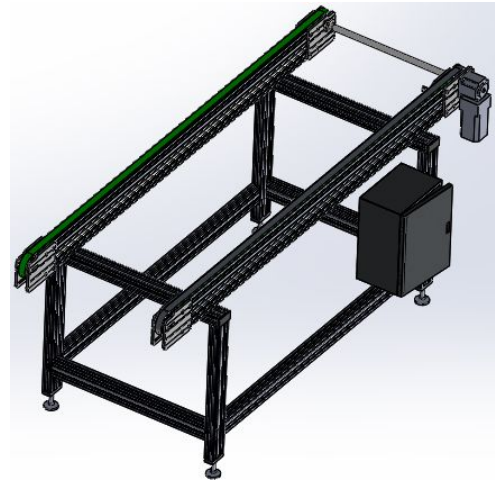
No.	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC speed ratio1:15	Xiamen JSCC
2	Speed controller	SKB200E	Xiamen JSCC
3	Sensor	PZ-G42P	
4	Frame	Section bar 4080	China
5	Axle bearing with diamond-shape base	UFL005	
6	Metal foot	M16x100-80D	Meicheng

7	Synchronous belt	3168-8M-30(thickness 8, the surface of the gear and the back of the belt attached with cloth)	
8	Synchronizing pulley	Customized	ARGUS
9	Controlling box	400x300x200	ARGUS

17. Longitudinal conveyor unit

1) Equipment performance and technical requirement

1. External dimension: 2200mm × 830mm × 950mm;
2. Transmission mode: Timing belt transporting modules, located with Sensor.
3. Transporting speed: 18m/min;
4. Equipment Power supply: single phase 220V, 50Hz(firmly grounded);
5. Power consumption: 0.11kW;



Main function: modules are transported with the long side in the front, it is equipped with tool box and Power supply socket in the positions like welding bar, EVA and etc. Fluorescent lamp and supporting frame are adjustable, meeting the maximum modules of 2100mm × 1200mm and minimum modules of 1400mm × 808mm.

2) Standard configuration specification

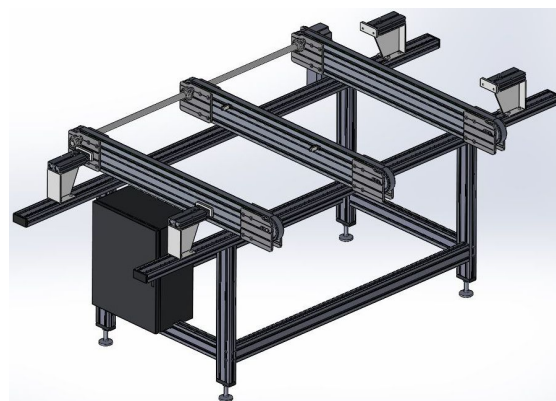
No.	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC speed ratio1:15	Xiamen JSCC
2	Speed controller	SKB200E	Xiamen JSCC
3	Sensor	PZ-G42P	
4	Frame	section bar 4080	China
5	Axle bearing with diamond-shape base	UFL005	
6	Metal foot	M16x100-80D	Meicheng
7	Synchronizing belt	8M-30-4520(thickness 8, the surface of the gear and the back of	

		the belt attached with cloth 4520L)	
8	Synchronizing pulley	Customized	ARGUS
9	Controlling box	400x300x200	ARGUS

18. Transverse middle towards conveyor unit

1) Equipment performance and technical requirement

1. External dimension: 1265mm × 1500mm × 950mm;
2. Transmission mode: Timing belt transporting modules, located with Sensor.
3. Transporting speed: 15m/min;
4. Power consumption: 0.13kW;
5. Gas consumption: 6.51L/min;
6. Working air pressure: 0.6-0.8MPa;
7. Power supply: single phrase 220V, 50Hz(firmly grounded)



Main function: locate the glass which has been put on the production line.

1) Standard configuration specification

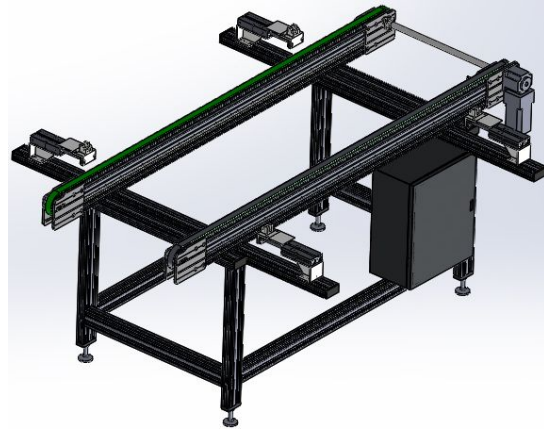
No.	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC speed ratio 1:15	Xiamen JSCC
2	Speed controller	SKB200E	Xiamen JSCC
3	Sensor	PZ-G42P	
4	Three-position and five-port solenoid valve(middle sealed)	4V230C-08 DC24V	AirTAC
5	Pneumatic lift cylinder	TN25-100S	AirTAC
6	Frame	Section bar 4080	China
7	Axle bearing with diamond-shape base	UFL005	
8	Deep groove ball bearing	GB / T276-94 6005	
9	M16 metal foot	M16x100-80D	Meicheng
10	Synchronous belt	2656-8M-30(thickness 8, the surface of the gear and the back	

		of the belt attached with cloth)	
11	Synchronizing pulley	Customized	ARGUS
12	Controlling box	400x300x200	ARGUS

19. Longitudinal middle toward conveyor unit

1) Equipment performance and technical requirement

1. External dimension: 2200mm × 1700mm × 950mm;
2. Transmission mode: Timing belt transporting modules, located with Sensor.
3. Transporting speed: before lamination 15m/min;
4. Power consumption: 0.128kW;
5. Air consumption: 4.75L/min;
6. Working air pressure: 0.6-0.8MPa;
7. Power supply: single phrase 220V, 50Hz(firmly grounded);



Main function: locate the glass which has been put on the production line.

2) Standard configuration specification

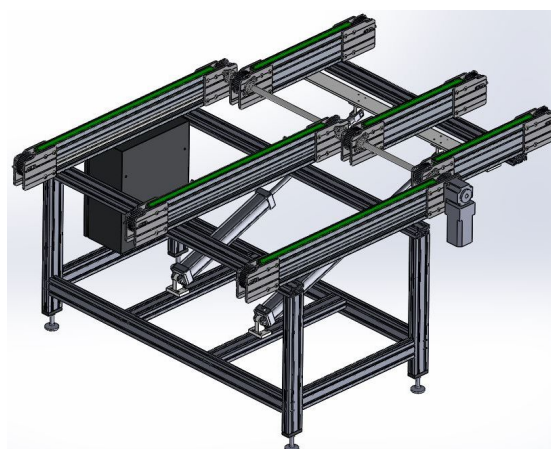
No.	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC speed ratio 1:15	Xiamen JSCC
2	Speed controller	SKB200E	Xiamen JSCC
3	Sensor	PZ-G42P	
4	Three-position and five-port solenoid valve	4V230C08B	AirTAC
5	Biaxial Pneumatic lift cylinder	TN25x100-S	AirTAC
6	Frame	section bar 4080	China
7	Axle bearing with diamond-shape base	UFL005	HIWIN
8	Deep groove ball bearing	GB / T276-94 6005	
9	Metal foot	M16x100-80D	Meicheng

10	Synchronous belt	4520-8M-30(thickness 8, the surface of the gear and the back of the belt attached with cloth)	
11	Synchronizing pulley	Customized	ARGUS
12	Controlling box	400x300x200	ARGUS

20. Transverse conveyor unit with folding channel

1) Equipment performance and technical requirement

1. External dimension: Customized
2800mm × 1500mm × 950mm;
2. Transmission mode: Timing belt transporting modules, located with Sensor.
3. Transporting speed: 18m/min;
4. Power consumption: 0.125kW;
5. Air consumption: 16.9L/min;
6. Working air pressure: 0.6-0.8MPa;
7. Power supply: single phrase 220V, 50Hz(firmly grounded);



Main function: make the modules pass through smoothly, equipped with folding channel.

2) Standard configuration specification

No.	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC speed ratio 1:15	Xiamen JSCC
2	Speed controller	SKB200E	Xiamen JSCC
3	Sensor	PZ-G42P	
4	Three-position and five-port solenoid valve	4V330C-10-B	AirTAC
5	Pneumatic lift cylinder (tie rod type)	SC63x450	AirTAC
6	Frame	Section bar 4080	China
7	Axle bearing with diamond-shape base	UFL005	HIWIN
8	Deep groove ball bearing	GB / T276-94 6005	
9	M16 metal foot	M16x100-80D	Meicheng

10	Synchronous belt	2656-8M-30(thickness 8, the surface of the gear and the back of the belt attached with cloth)	
11	Synchronous belt	1720-8M-30(thickness 8, the surface of the gear and the back of the belt attached with cloth)	
12	Synchronizing pulley	Customized	ARGUS
13	Controlling box	400x300x200	ARGUS

21. Transverse conveyor unit with folding channel

1) Equipment performance and technical requirement

1. External dimension: Customized
2950mm × 830mm × 950mm;

2. Transmission mode:

Timing belt transporting modules,
located with Sensor.

3. Transporting speed: 18m/min;

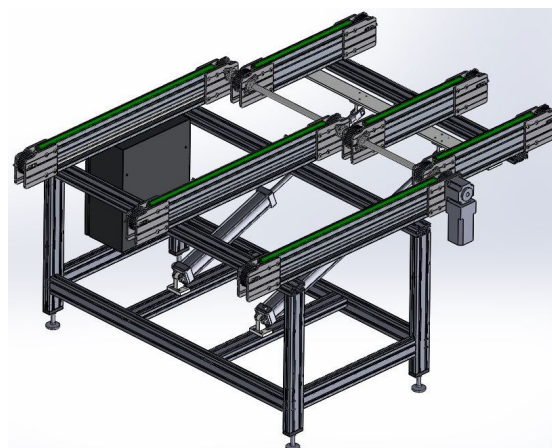
4. Power: 0.125kW;

5. Air consumption: 16.9L/min;

6. Working air pressure: 0.6-0.8MPa;

7. Power supply: single phase 220V, 50Hz (firmly grounded)

Main function: make the modules pass through smoothly, equipped with folding channel



2) Standard configuration specification

No.	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC speed ratio 1:15	Xiamen JSCC
2	Speed controller	SKB200E	Xiamen JSCC
3	Sensor	PZ-G42P	
4	three-position and five-port solenoid valve	4V330C-10-B	AirTAC
5	Pneumatic lift cylinder (tie rod type)	SC63x450	AirTAC
6	Frame	Section bar 4080	China
7	Axle bearing with diamond-shape base	UFL005	HIWIN

8	Deep groove ball bearing	GB / T276-94 6005	
9	M16 metal foot	M16x100-80D	Meicheng
10	Synchronous belt	3520-8M-30(thickness 8, the surface of the gear and the back of the belt attached with cloth)	
11	Synchronous belt	1720-8M-30(thickness 8, the surface of the gear and the back of the belt attached with cloth)	
12	Synchronizing pulley	Customized	ARGUS
13	Controlling box	400x300x200	ARGUS

22. Manual trimming machine

1) Equipment performance and technical requirement

1. External dimension: 2200mm × 830mm × 950mm;
2. Transmission mode: Timing belt transporting modules, located with Sensor.
3. Transporting speed: 15m/min;
4. Power: 0.135kW;
5. Air consumption: 0.7L/min;
6. Working air pressure: 0.6-0.8MPa;
7. Satisfied glass size: long side(1500mm-2100mm) × short side(800mm-1000mm);
8. Feeding and blanking material on vertical, edge the accessories around the modules manually through the rotating platform;
9. Power supply: single phrase 220V, 50Hz (firmly grounded)

2)Standard configuration specification

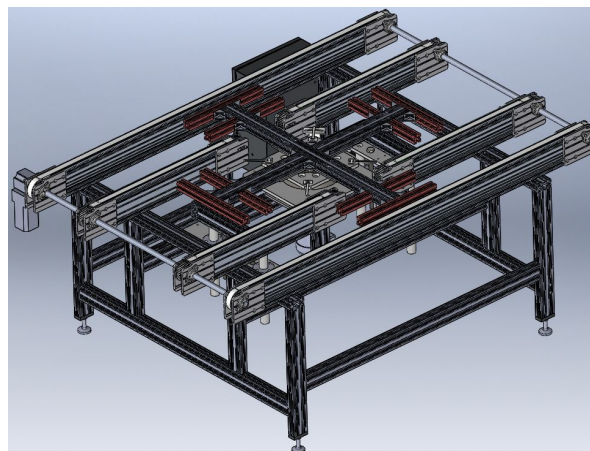
No.	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC speed ratio 1:15	Xiamen JSCC
2	Speed controller	SKB200E	Xiamen JSCC
3	Sensor	PZ-G42P	
4	Proximity switch	cylindrical PNP M12	
5	Three-position and five-port solenoid valve	4V330C-10-B	AirTAC
6	Three-position and five-port solenoid valve(middle sealed)	4V230C-08 DC24V	AirTAC
7	Standard Pneumatic	SC63x80SFA	AirTAC

	lift cylinder		
8	Biaxial Pneumatic lift cylinder	TN32X30S	AirTAC
9	Frame	Section bar 4080	China
10	Axle bearing with diamond-shape base	UFL005	HIWIN
11	Deep groove ball bearing	GB / T276-94 6005	
12	Slewing bearing	(010 20 200)	Xuzhou Xinda
13	Metal foot	M16x100-80D	Meicheng
14	Synchronous belt	8M-30-4520(thickness 8, the surface of the gear and the back of the belt attached with cloth 4520L)	
15	Synchronizing pulley	Customized	ARGUS
16	Controlling box	400x300x200	ARGUS

23. Horizontal rotary machine

1) Equipment performance and technical requirement

1. External dimension: 2200mm × 1500mm × 950mm;
2. Transmission mode: Timing belt transporting modules, located with Sensor.
3. Transporting speed: 15m/min;
4. Power: 0.37kW;
5. Air consumption: 5.83L/min;
6. Working air pressure: 0.6-0.8MPa;
7. Power supply: single phrase 220V, 50Hz (firmly grounded);



Main function: raise the modules after they are fed into the equipment, rotate the modules by 90° and transfer them.

1) Standard configuration specification

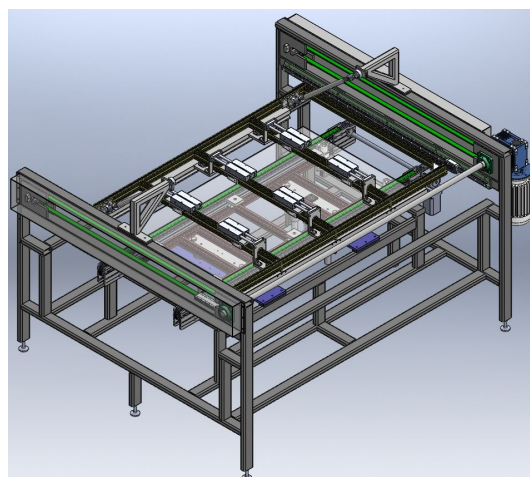
No	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC speed ratio 1:15	Xiamen JSCC
2	AC gear motor	ZV:3# 200W three phrase 220V output shaft 28(ZDMOTOR)	Zhongda Leader
3	Speed controller	SKB200E	Xiamen JSCC
4	Sensor	PZ-G42P	
5	Proximity switch	cylindrical PNP M12	
6	three-position and five-port solenoid valve	4V330C-10-B	AirTAC
7	standard Pneumatic lift cylinder	SC80 × 80S FA	AirTAC

8	Frame	Section bar 4080	China
9	Axle bearing with diamond-shape base	UFL005	HIWIN
10	Deep groove ball bearing	GB / T276-94 6005	
11	Slewing bearing	(010 20 200)	Xuzhou Xinda
12	Metal foot	M16x100-80D	Meicheng
13	Synchronous belt	8M-30-4520(thickness 8, the surface of the gear and the back of the belt attached with cloth 4520L)	
14	Synchronous belt	8M-30-2080(thickness 8, the surface of the gear and the back of the belt attached with cloth 2080L)	
15	Synchronizing pulley	Customized	ARGUS
16	Controlling box	500x400x200	ARGUS

24. Flip inspection table

1)Equipment performance and technical requirement

1. External dimension: 2510mm × 2000mm × 1980mm;
2. Transmission mode: Timing belt transporting modules, located with Sensor.
3. Transporting speed: 15m/min;
4. Power: 0.2kW;
5. Air consumption: 6.5L/min;
6. Working air pressure: 0.6-0.8MPa;
7. Working Period: ≤30s;
8. Power supply: single phrase 220V, 50Hz(firmly grounded);



Main function: Pneumatic lift cylinder raises the modules glass and flip by some angle for the operator checking whether there is any defect.

2)Standard configuration specification

No.	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC speed ratio1:15	Xiamen JSCC
2	Three-phase Induction Motor	YEJ90S-4	
3	Speed controller	SKB200E	Xiamen JSCC
4	Sensor	EE-SX671P	
5	Sensor	PZ-G42P	
6	Photoelectric switch	EE-SX671P	
7	Travel switch	RME-8108	
8	Three-position and five-port solenoid valve	4V330C-10-B	AirTAC
9	Three-position and five-port solenoid valve(middle sealed)	4V230C-08 DC24V	AirTAC

10	Standard Pneumatic lift cylinder	SC63x80S	AirTAC
11	Biaxial Pneumatic lift cylinder	TN32X100S	AirTAC
12	Pneumatic lift cylinder	ACQ25x25BLB	
13	Rack	square steel	ARGUS
14	Liner guide rail	EGW15CA1R260ZOC	
15	Axle bearing with diamond-shape base	UFL005	
16	Deep groove ball bearing	GB / T276-94 6005	
17	Deep groove ball bearing	GB 276-94 6003	
18	Metal foot	M16x100-80D	ARGUS
19	Synchronous belt	8M-30-3670(thickness 8, the surface of the gear and the back of the belt attached with cloth 3670L)	
20	Controlling box	500x400x200	ARGUS

25. Visual inspection table

1) Equipment performance and technical requirement

1. External dimension: 2200mm × 830mm × 980mm;

2. Transmission mode: Timing belt transporting modules, located with Sensor.

3. Transporting speed: 15m/min;

4. Power: 0.2kW;

5. Air consumption: 0.75L/min;

6. Working air pressure: 0.6-0.8MPa;

7. Power supply: single phrase 220V, 50Hz(firmly grounded)



Main function: Check whether there is any broken battery piece or foreign matter in the stacked modules. Adopting reflecting principle, workers can move to the side of the modules and check through the mirror.

2) Standard configuration specification

No.	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC ratio 1:15	Xiamen JSCC
2	Speed controller	SKB200E	Xiamen JSCC
3	Sensor	PZ-G42P	
4	three-position and five-port solenoid valve	4V230C-08-B	AirTAC
5	Aluminum alloy mini Pneumatic lift cylinder	MAL20x50SCA	AirTAC
6	Frame	Section bar 4080	China
7	Axle bearing with diamond-shape base	UFL005	HIWIN

8	Deep groove ball bearing	GB / T276-94 6005	
9	Metal foot	M16x100-80D	Meicheng
10	Synchronous belt	4520-8M-30(thickness 8, the surface of the gear and the back of the belt attached with cloth)	
11	Synchronizing pulley	Customized	ARGUS
12	Controlling box	400x300x200	ARGUS

26. Manual operation table

1) Equipment performance and technical requirement

1. External dimension: 1500mm × 2200mm × 950mm;

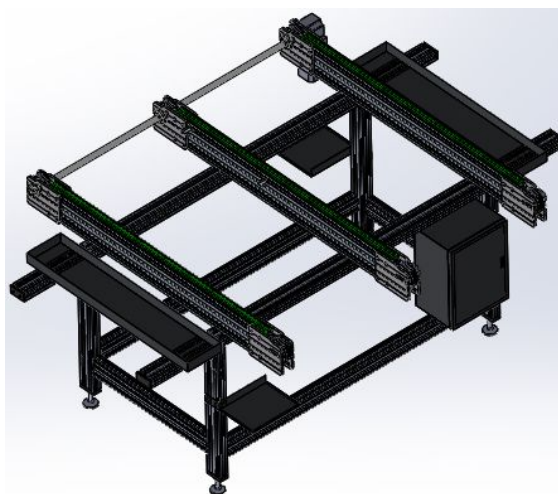
2. Transmission mode: Timing belt transporting modules, located with Sensor.

3. Transporting speed: 18m/min;

4. Power consumption: 0.11kW;

5. Power supply: single phrase 220V, 50Hz(firmly grounded)

Main function: transport the modules after welding manually.



2) Standard configuration specification

No.	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC speed ratio 1:15	Xiamen JSCC
2	Speed controller	SKB200E	Xiamen JSCC
3	Sensor	PZ-G42P	
4	Frame	section bar 4080	China
5	Axle bearing with diamond-shape base	UFL005	HIWIN
6	Deep groove ball bearing	GB / T276-94 6005	
7	Metal foot	M16x100-80D	Meicheng
8	Synchronizing belt	3168-8M-30(thickness 8, the surface of the gear and the back of the belt attached with cloth)	
9	Synchronizing pulley	Customized	ARGUS
10	Controlling box	400x300x200	ARGUS

27. 90° corner turning unit

1) Equipment performance and technical requirement

1. External dimension: 17700mm × 1080mm × 980mm;

2. Transmission mode: Timing belt transporting modules, located with Sensor.

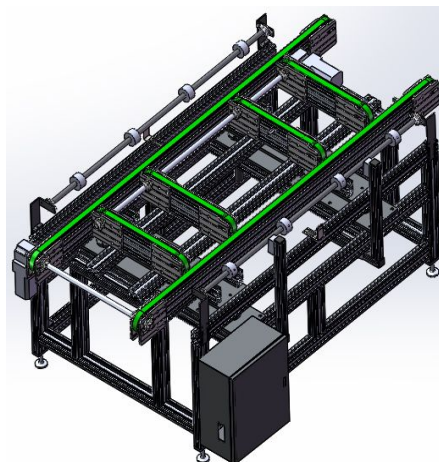
3. Transporting speed: before lamination 15m/min, after lamination 18m/min;

4. Power consumption: 0.235kW;

5. Air consumption: 5.83L/min;

6. Working air pressure: 0.6-0.8MPa;

7. Power supply: single phrase 220V, 50Hz(firmly grounded)



Raise and transport the modules to another direction after the modules are fed into the equipment.

2) Standard configuration specification

No.	Name	Parameters	Note
1	90w transmission motor with Reduction drive	90YF90GV22/90GK(F)15RC 1:15	Xiamen JSCC
2	Speed controller	SKB200E	Xiamen JSCC
3	Sensor	PZ-G42P	
4	Three-position and five-port solenoid valve	4V330C-10-B	AirTAC
5	Pneumatic lift cylinder	SC63x80S	AirTAC
6	Frame	Section bar 4080	China
7	Axle bearing with diamond-shape base	UFL005	
8	Deep groove ball bearing	GB / T276-94 6005	
9	Metal foot	M16x100-80D	Meicheng

10	Synchronizing belt	1296-8M-30(thickness 8, the surface of the gear and the back of the belt attached with cloth)	
11	Synchronizing pulley	Customized	ARGUS
12	Controlling box	500x400x200	ARGUS