

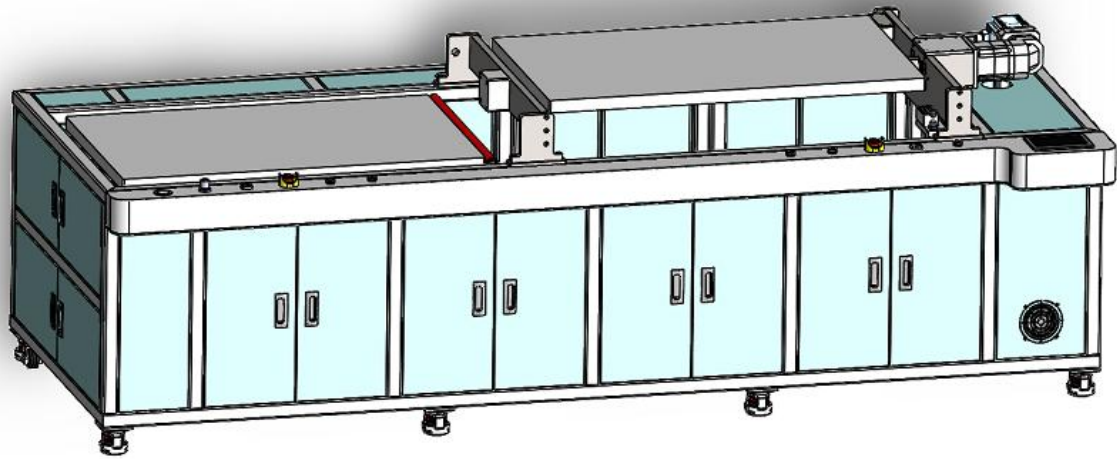
1200*700 Film Laminator

Equipment Specifications V1.0

Demander confirmation (customer)	Supplier confirmation (Jiutu)
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The data shown in the equipment specification are general model specifications/parameters. If the customer specifies requirements, the two parties will communicate and attach the "Technical Agreement" to confirm and take effect together with the specification.

1. Equipment appearance



2. Equipment Configuration List

NO	Product Name	Model	Quantity	Unit	Remarks
1	Laminating machine	9TU-M048A	1	unit	Assembly equipment
2	roller		1	piece	spare part

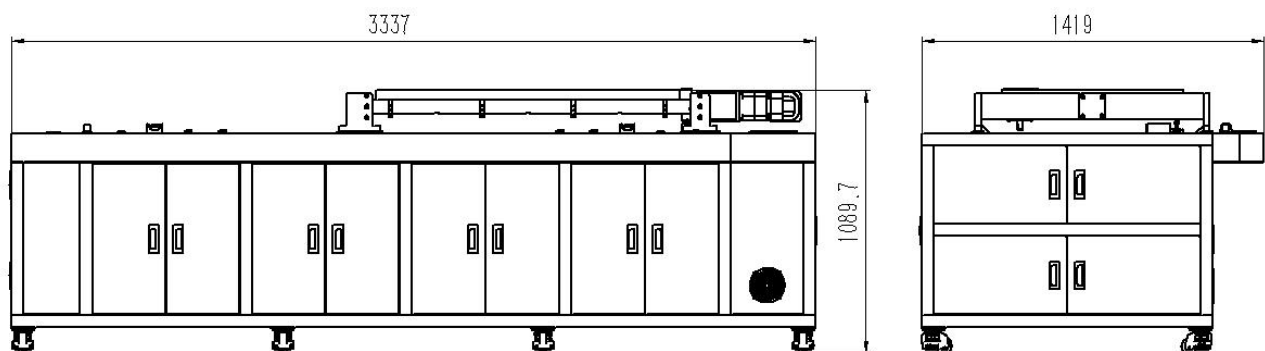
3. Equipment Introduction

The film laminating machine project is specifically designed for the lamination of soft films onto rigid boards and soft films onto soft films during the production of large-size touch screens and LCDs. Examples include the lamination of ITO films on the top and bottom of the touch screen, the lamination of the touch screen onto the rigid protective board, and the lamination of polarizers onto glass. The equipment features varying vacuum levels on the lower platform, effectively solving the problems of stretching deformation and bubble formation of the soft film during the lamination process, ensuring high efficiency and stability. It adopts PLC automatic control, resulting in high lamination yield, fast speed, and good stability.

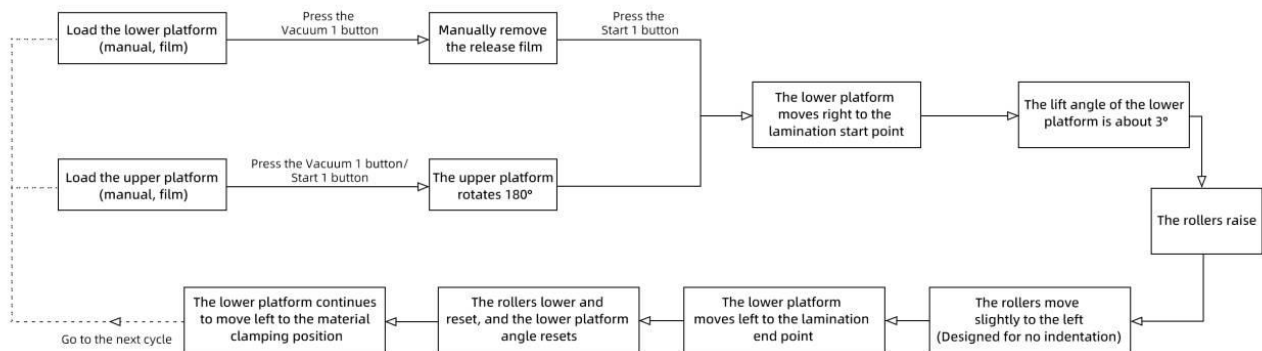
4. Equipment features

- The equipment adopts a steel structure machine base, ensuring high structural rigidity.
- The equipment components are made of high-quality materials from reputable brands, ensuring a long service life.
- The equipment's fixture platform uses high-performance, non-deformable materials, maintaining the equipment's precision.
- The equipment's movements are primarily controlled by the control axis, resulting in smooth operation and high precision.
- The equipment's pneumatic system features pressure regulation and throttling, ensuring stable control and low air consumption.
- The equipment's motion modules have high repeatability, resulting in good product consistency.
- The equipment's control system has strong anti-interference capabilities, ensuring system stability, high speed, and high production efficiency.
- The equipment's user interface is simple and easy to understand.
- The rollers have high straightness, allowing for precise adjustment of bonding pressure.
- The unique large-size vacuum plate platform design ensures high flatness precision, stress relief without deformation, and strong vacuum adsorption capacity.
- Suitable for large-size G+F and F+F bonding.

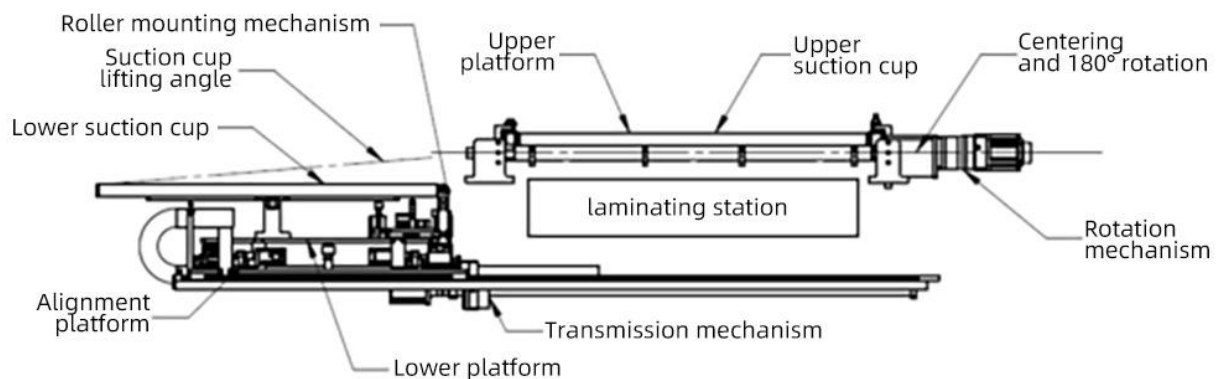
5. Equipment CAD layout drawing



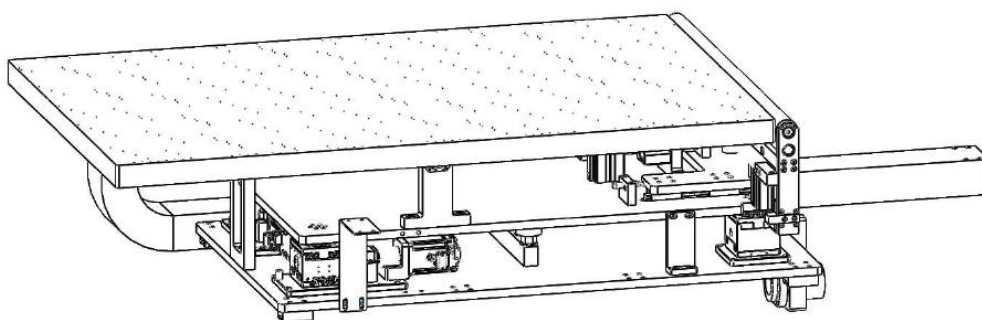
6. Equipment process flow chart



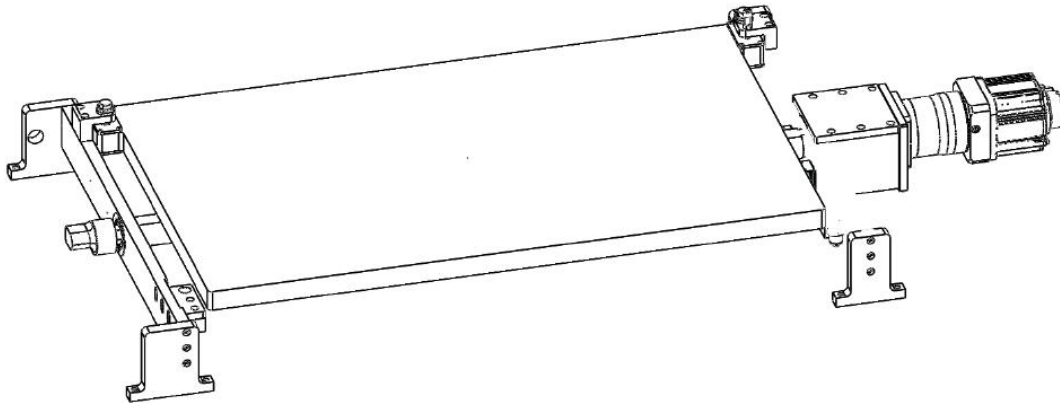
7. Equipment functional structure diagram



8. Equipment partial module (lower platform)



9. Equipment partial module (upper platform)



10. Equipment Specifications

Machine Specifications		
1	Working environment	Temperature 25± 5°C, humidity 60±5%, cleanliness level 1000
2	Equipment power supply	AC220V 50Hz
3	Equipment gas supply	5~7 kg/cm ² , pipe $\varnothing$ 12 with quick plug
4	Equipment power	7KW
5	Equipment gas consumption	1000L/min
6	Vacuum system	Machine comes with
7	Control system	PLC + touch screen
8	Working height	1070/940mm
9	Operation interface	Button operation panel + human-machine interface
10	Equipment dimensions	L3337xW1419xH1090mm
11	Equipment weight	1000kg
12	Machine color	Standard computer white

Equipment applicable product specifications

13	Applicable products	42 inches
14	Effective fitting size	L1200xW700mm
15	Upper platform size	L1260xW750mm
16	Down platform size	L1212xW750mm
17	Roller effective length	L=760mm
18	Effective fitting stroke	1200mm

Equipment accuracy

19	Control axis repeatability accuracy	$\pm 0.05\text{mm}$
20	Working platform flatness	0.20mm
21	Equipment repeatability accuracy	$\pm 0.15\text{mm}$
22	Fitting accuracy	$\pm 0.20\text{mm}$ (Excluding material error)

Equipment Specifications

23	Upper platform vacuum hole	$\varnothing 1.0$, 15x15
24	Surface treatment of the upper platform	Hard anodizing
25	Upper platform control method	Servo motor control
26	Upper platform vacuum dource	High-speed fan, digital pressure gauge vacuum detection
27	Upper platform working method	Servo-driven, 180° center rotation
28	Lower platform vacuum hole	$\varnothing 1.0$, 10x10
29	Surface treatment of the lower platform	Hard anodizing
30	Lower platform vacuum Configuration	Strong and weak vacuum switching control
31	Lower platform working method	Horizontal movement, lead screw drive, servo drive

32	Roller	Φ 38 × L786mm polyurethane, Shore A45 ~ 60 (can be specified according to product process)
33	Roller installation method	Supported by bearings at both ends, without idler/back roller support.
34	Roller lifting method	Vertical independent lifting and lowering, with X-axis displacement to eliminate pressure marks at the contact point; no small tray vacuum fixture opening and closing action.
35	Laminating force range	≤50kg
36	Laminating speed	<300mm/s
37	Laminating method	Soft against hard or soft against soft, bias-fitting bonding method (roller bonding).
38	Positioning method	Mechanical corner positioning
39	Alignment adjustment method	The X-axis coordinates are automatically set. The Y-axis and θ angles are electrically adjustable (UVW platform)
40	Alignment adjustment object	Lower platform + roller
41	Product line replacement method	For existing data products, the switching time is less than 15 minutes; for new data products, the switching time is less than 30 minutes.
42	Production cycle time	20-25S (Excluding labor time)
43	Loading and unloading method	Manual GG placement and cleaning Manual film placement and removal
Safety protection		
44	Emergency stop button	After pressing the emergency stop button, the device needs to find the origin again after manually resolving the fault
45	Electrical protection	The circuit is equipped with short-circuit protection; The control has an electrical interlocking design to prevent misoperation; The function is equipped with signal feedback such as vacuum detection
46	Safety door switch	No
47	Safety sign	Locations with AC30V or above, DC60V or above, and 240VA or above; Locations with surface temperature exceeding 50°C; Locations with mechanical movement
Anti-static device		

48	FFU	No
49	Ion fan	Optional accessories
50	Static grounding	Optional accessories

11. Main parts brands

No.	Item	Use brand	Optional brand	Remark
1	Linear guides	AOSK	HIWIN/PMI/CSK/THK or equivalent brands	
2	Ball screws	AOSK	TBI/HIWIN/THK or equivalent brands	
3	Servo motors	Panasonic	YASKAWA/Panasonic/Leisai/Yankong/Xinjie/Huichuan or equivalent brands	
4	Stepper motor	Lisan	Leisai/Yankong/Shinano or equivalent brands	
5	Pneumatic actuator	AirTAC	SMC/MAXAIR/AirTAC/Xingchen or equivalent brands	
6	High-speed fan	Ruijing	Shenghong/Shige/Hank or equivalent brands	
7	Touch screen	Mitsubishi	Kinco/WEINVIEW or equivalent brands	
8	PLC	Mitsubishi	OMRON/Panasonic/MITSUBISHI/KEYENCE or equivalent brands	
9	Sensor	Huayifeng	OMRON/Panasonic/KEYENCE/SICK/Leuze/Autonics or equivalent brands	Using different types of materials
10	Electrical control element	CHNT	SCHNEIDER/CHNT or equivalent brands	Using different types of materials
		Meanwell	Meiwei, Izumi or equivalent brands	
11	Pneumatic control elemen	AirTAC	SMC/CKD/FESTO or equivalent brands	
12	Digital pressure gauge	Panasonic	SMC/MAXAIR or equivalent brands	