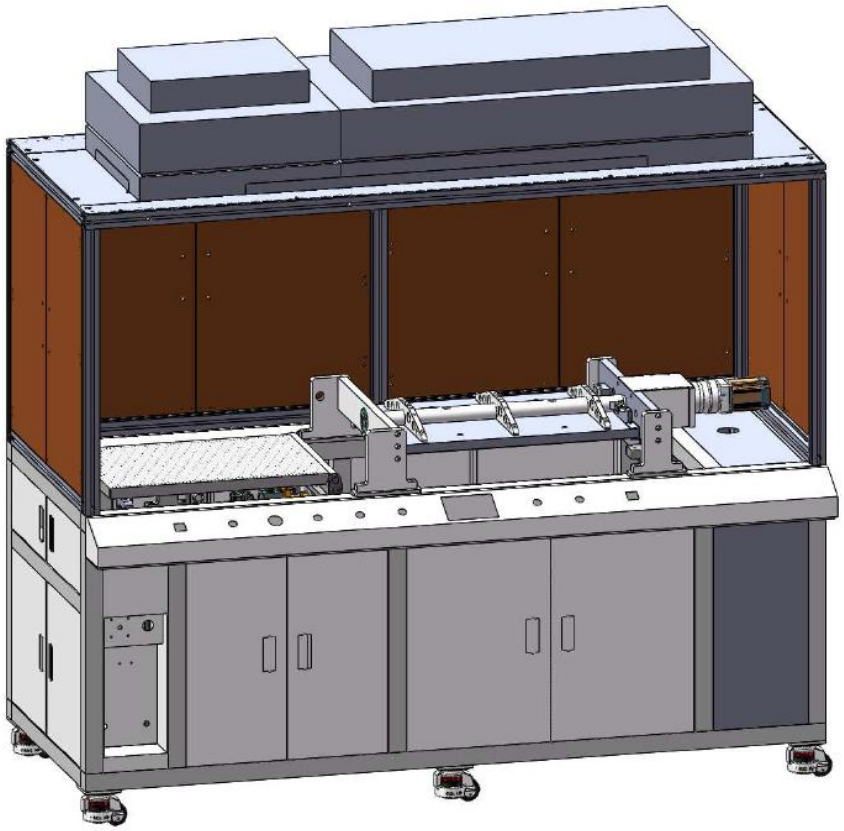
400*600 Film Laminator

Equipment Specifications V1.0

Demander confirmation (customer)	Supplier confirmation (Jiutu)	
【 】	Sales center	R&D center

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	Film Laminating Machine	400*600	1	unit	With FFU

3. Equipment Introduction

The laminating machine project is specially used for laminating soft film to hard board and soft film to soft film in the production process of medium and large-sized touch screens and LCDs, such as laminating upper and lower ITO films of touch screens, laminating touch screens to hard protective plates, and laminating polarizers to glass. The vacuum on the platform under the equipment has different strengths, which effectively solves the stretching deformation of the soft

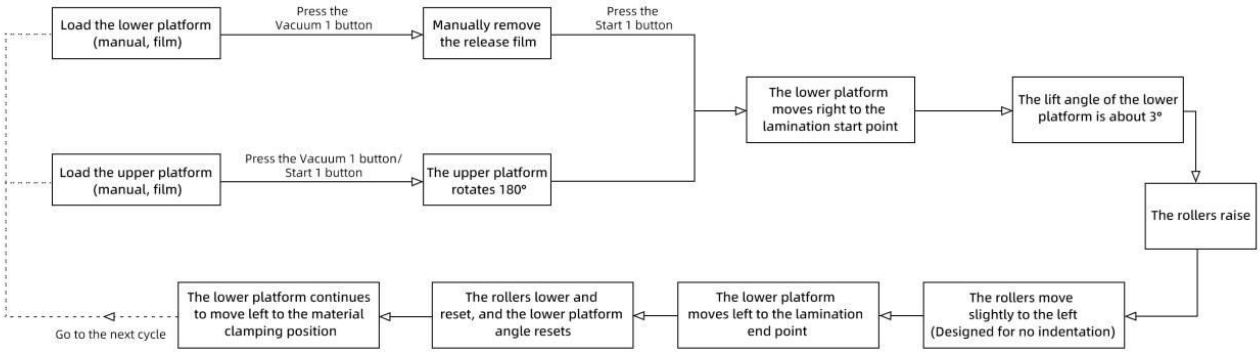
film and the generation of bubbles during the laminating process, and is efficient and stable. It adopts PLC automatic control, with high laminating yield, fast speed and good stability.

4. Equipment features

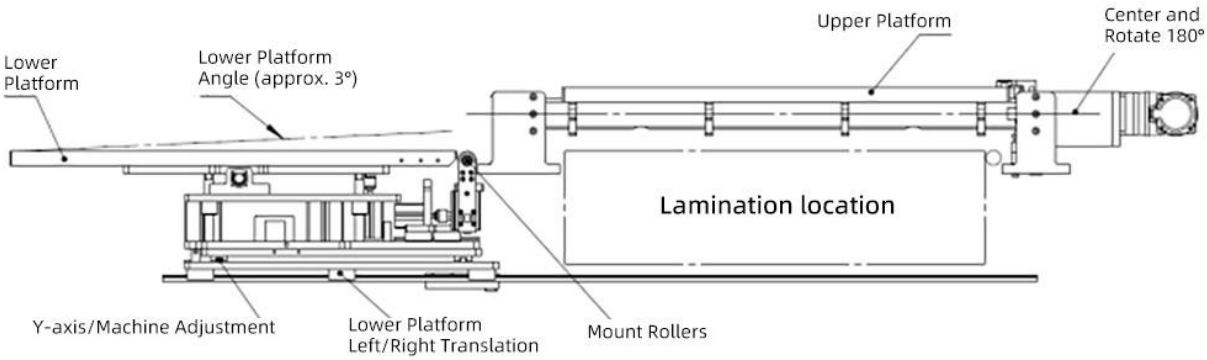
- The equipment adopts steel structure machine with good structural rigidity
- The selected materials and brands of equipment parts are excellent and have a long service life
- The materials used for the equipment fixture platform have excellent performance and no deformation, and the equipment accuracy does not decrease
- The equipment movement is mainly based on the control axis, with stable operation and high accuracy
- The pneumatic system of the equipment regulates pressure and throttles, with stable control and low gas consumption
- The equipment motion module has high repeatability positioning accuracy and good product consistency
- The equipment control system has strong anti-interference ability, the system is stable, fast and has high production efficiency
- The equipment operation interface is simple and easy to understand
- High roller straightness, precise adjustment of bonding pressure
- Unique large-size vacuum plate platform design, high flatness accuracy, stress relief without deformation, strong vacuum adsorption capacity
- Suitable for large-size G+F and F+F bonding

5. Equipment CAD layout drawing

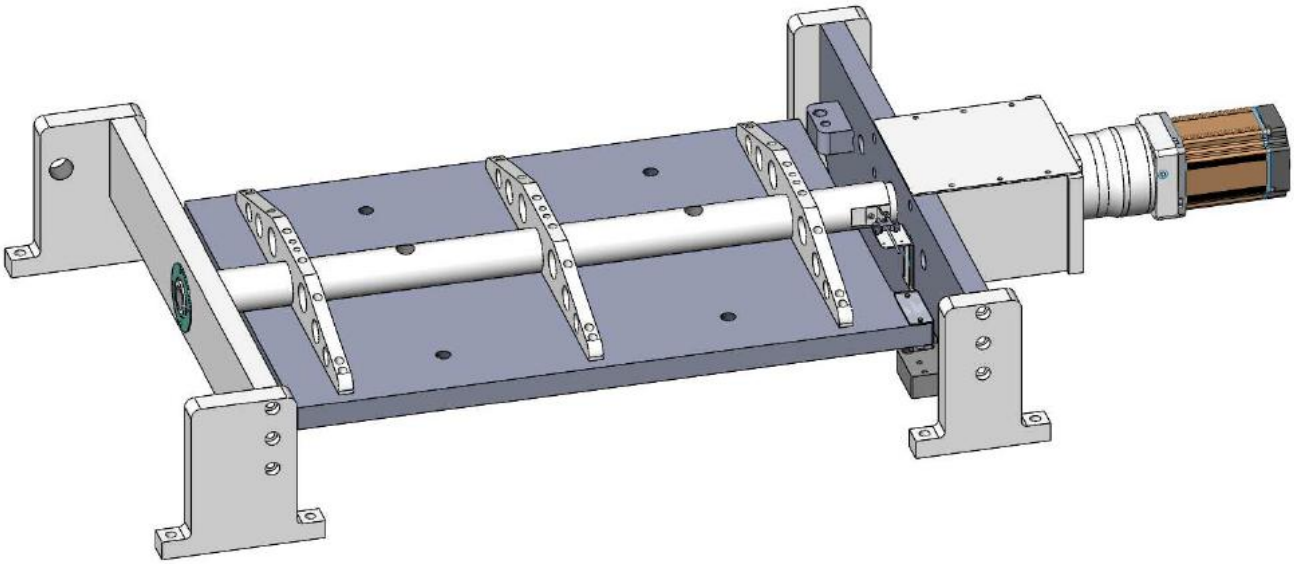
6. Equipment process flow chart



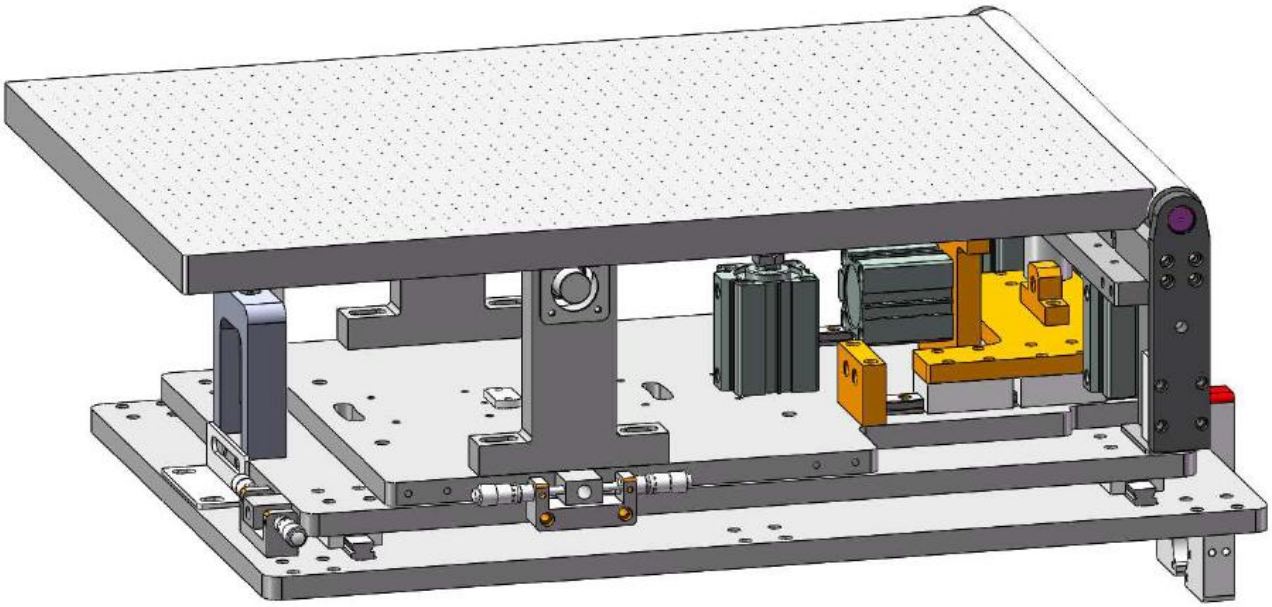
7. Equipment functional structure diagram



1. Upper platform



2. Lower platform



8. Equipment Specifications

Machine Specifications		
1	Working environment	Temperature 25± 5℃, humidity 60±5%, cleanliness level 1000
2	Equipment power supply	AC220V 50Hz
3	Equipment gas supply	5～7 kg/cm^2，pipe ⊄12 with quick plug
4	Equipment power	3KW
5	Equipment gas consumption	1000L/min
6	Vacuum system	Machine comes with
7	Control system	PLC + touch screen
8	Working height	1075/940mm
9	Operation interface	Button operation panel + human-machine interface
10	Equipment dimensions	L2100xW960xH2745mm（including FFU）
11	Equipment weight	800Kg
12	Machine color	Standard computer white
Equipment applicable product specifications		
13	Applicable products	24 inch
14	Effective fitting size	L600xW400mm
15	Upper platform size	L640xW430mm
16	Lower platform size	L625xW430mm
17	Roller effective length	L=620mm
18	Effective fitting stroke	600mm

Equipment accuracy		
19	Control axis repeatability accuracy	±0.05mm
20	Working platform flatness	0.20mm
21	Equipment repeatability accuracy	±0.15mm
22	Fitting accuracy	±0.20mm（Excluding material error）
Equipment Specifications		
23	Upper platform vacuum hole	∅0.8，10x10
24	Surface treatment of the upper platform	Hard anodizing
25	Platform control method	Servo motor control
26	Upper Platform Vacuum Source	High-speed fan, digital pressure gauge vacuum detection
27	Upper Platform Working Method	Servo-driven, 180° center rotation
28	Lower Platform Vacuum Hole	∅0.8，10x10
29	Lower Platform Surface Treatment	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	Rollers	∅ 35×L440mm polyurethane, Shore A55-60 (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	Laying Force Range	≤75Kg
36	Laying Speed	＜300mm/s
37	Laying Method	Soft against hard or soft against soft, bias-fitting bonding method (roller bonding).

38	Alignment Method	Mechanical corner positioning
39	Alignment Adjustment Method	The X-axis coordinates are automatically set; the Y-axis and θ angle are mechanically adjusted (using a micrometer)
40	Alignment Adjustment Object	Lower platform + rollers
41	Product Changeover Method	Existing specifications, changeover time less than 15 minutes; New specifications, changeover time less than 30 minutes.
42	Production Cycle Time	15 seconds (excluding manual operation time)
43	Loading and Unloading Method	Manual application of CG and cleaning Manual application of film and removal of release film
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 grating	1 set
47	Safety door switch	No conditions of use
48	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		
49	FFU	2 sets
50	Ion fan	Optional accessories，2 sets
51	Static grounding	Optional accessories
52	Dust indicator light	Optional accessories，2 sets
53	Lighting	2 sets

9. Main parts brands

No.	Item	Use brand	Optional brand	Remark
1	Linear guide rails	AOSK	HIWIN/PMI/CSK/THK or equivalent brands	
2	Ball screws	AOSK	TBI/HIWIN/THK or equivalent brands	
3	Servo motors	Xinjie	YASKAWA/Panasonic/Leisai/Yankong /Xinjie/Huichuan or equivalent brands	
5	Pneumatic actuators	Xingchen	SMC/MAXAIR/AirTAC/Xingchen or equivalent brands	
6	High-speed fans	Ruijing	Sheng Hong/Lion Song/Hank or equivalent brands	
7	Touchscreens	Xinjie	Kinco/WEINVIEW or equivalent brands	
8	PLCs	Xinjie	OMRON/Panasonic/ MITSUBISHI/KEYENCE or equivalent brands	