

Vacuum Laminator Z2P355

Vacuum laminators play a critical role in the production of flexible printed circuits based on polyimide films. The vacuum laminator Z2P355 is designed for two-side lamination of flexible PCB with polymeric photoresist under mechanical pressure and high temperature in vacuum.

Vacuum Laminator Z2P355 at Operation in USA



The laminator is a batch operation machine equipped with a mechanical booster pump.

A stainless steel vacuum chamber is a cylindrical shell with inside diameter 1400 mm. During maintenance, the chamber shell travels on the top cantilever guide. The winding device is mounted on the chamber flange and looks like a range of rollers, providing constant winding speed and tension.

The principle of the laminator operation is the following: two photoresist films and PCB material are unwound and released from interleaves; the PCB material is preliminarily heated while going through the heater; then all three materials are transported between two lamination rollers, where the laminating process takes place under mechanical pressure and high temperature. The ready-made material passes between two chilling rollers and is rewound.

Temperature of the ready-made product before rewinding is no more than 40°C.

To ensure smooth and easy operation, the Laminator is fully monitored and controlled by the control system designed on the basis of *Advantech PLC*. Monitoring includes such vital objects as winding speed, tension of materials and their edge position, preset temperatures, nip pressure.

Technical Specifications

Maximum material width, mm	355
Maximum roll diameter of laminated material, mm	350
Winding speed, m/min	0.3–3
Temperature of lamination rollers, °C	37–121
Temperature of preliminary heating of PCB, °C	up to 115
Nip force, kg	0–200
Working pressure in the vacuum chamber, torr	1±0.5
Machine overall dimensions, m	4.8 x 4.4 x 2.4