

2STAGE VACUUM LAMINATOR

Model No. : LT-062



SYSTEM DESCRIPTION

This device (LT-062) transports PCB and film(DF/DFSR) supplied by Temporary laminator using carrier film to chamber to make the inside of chamber vacuum, after conducting the perfect lamination by using silicone diaphragm and compressed air and adding heat and pressure, realize the best flatness by using consistent heat and pressure in hot press.

FEATURES

- Adopting diaphragm+compressed air pressure adding system can secure the production of high quality products and high productivity.
- The optimized design can realize the easy maintenance and the best flatness
- Reasonable maintenance cost of supplies.
- All the control is available from touch panel, it provide user's convenience UI.

SPECIFICATIONS

MATERIAL SPECIFICATIONS	
DIVISION	SPECIFICATIONS
PCB SPEC.	SIZE : MAX. ~ 550 × 550mm (OPTION : 650mm × 650mm)
	TOTAL : 0.1mm ~ 1.6mm
EQUIPMENT SPECIFICATIONS	
DIVISION	SPECIFICATIONS
CAPABILITY	TACK TIME : OVERTHAN 50 SEC.(IF VACUUM 15SEC. & PRESS 15SEC.)
UTILITY	POWER : 220VAC 3PHASE 50/60HZ 35KW
FILM UN/REWINDER	FILM EXCHANGE : AIR CHUCK SYSTEM
	MAX. OUT DIAMETER : 300mm
VACUUM LAMINATION	VACUUM METHOD : VACUUM PUMP (MAX. 5X10E-4 Torr)
	UPPER SIDE PRESS METHOD : SILICONE DIAPHRAGM BY COMPRESSED AIR
	LOWER SIDE PRESS METHOD : SILICONE
	HEATING METHOD : SILICONE PLATE HEATER(MAX. TEMPERATURE : ~110°C)
HOT PRESS	PRESSURE : MAX. 47TON
	HEATING TEMPERATURE : MAX. 150°C
	FLATNESS : WITHIN. 20μm
IONIZER	ION-GENERATION METHOD : CORONA DISCHARGE PULSE AC
WEIGHT	ABOUT 7.0TON
DIMENSIONS	ABOUT 3920mm(L) × 1900mm(W) × 1600mm(H)


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AUTO CUT SHEET WET LAMINATOR

Model No. : LT-053



SYSTEM DESCRIPTION

The equipment (LT-053) automatically aligns sheet-type materials to pass through D.I Water.

The equipment then utilizes hot roller to perform wet lamination of dry films that have been cut to fit the pre-set margins of PCBs.

FEATURES

- Precise margin control through auto cutting method applying the Servo System.
- Excellent Lamination adherence by applying D.I Water Station.
- Convenient exchange of dry film and suppliers through Main Body In-out design.
- The equipment can be entirely controlled at the Touch Panel, and provides a highly convenient UI.

SPECIFICATIONS

MATERIAL SPECIFICATIONS	
DIVISION	SPECIFICATIONS
WORK SPEC.	SIZE : 250 × 250 ~ 500 × 500mm
	TOTAL : 0.04mm ~ 1.0mm
FILM SPEC.	MATERIAL : PE, PVC, ACRYL...
	THICKNESS : 20 ~ 50μm
	OUT DIAMETER : MAX. 200mm
EQUIPMENT SPECIFICATIONS	
DIVISION	SPECIFICATIONS
CAPABILITY	LAMINATION SPEED : 1.0 ~ 2.5M/min
	LAMINATION MARGIN ACCURACY : ±1mm(LEFT & RIGHT, FRONT & REAR)
UTILITY	POWER : 220VAC 3PHASE 50/60HZ 11KW
	AIR : 6kgf/cm ² 300L/min
FILM CUTTER	CUTTER DIAMETER : 60mm(Blade)
	CUTTING ACCURACY : ±1.0mm
HOT ROLLER	SILICON COATING, DIAMETER : Ø80, TEMP. : 120°C±3°C(MAX.)
	HARDNESS : 65°±3°
	ROLLER PRESSURE : 2 ~ 5Kgf/cm ²
D.I WATER STATION	WATER SUPPLY CAPACITY : 4.5m ³ /h (75L/min)
IONIZER	ION-GENERATION METHOD : CORONA DISCHARGE PULSE AC
CLEANER(OPTION)	CLEAN ROLLER : ADHESIVE SILICONE COATING
AUTO LOADER & AUTO UN-LOADER (OPTION)	PICK UP METHOD : VACUUM PAD
	MOVING ACTUATOR : 1AXIS ROBOT
	UP/DOWN METHOD : AC GEARED MOTOR
WEIGHT	ABOUT 1.6TON
DIMENSIONS	ABOUT 2050(L) × 1550(W) × 1700(H)



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AUTO SHEET TO ROLL WET LAMINATOR

Model No. : LT-071



SYSTEM DESCRIPTION

The equipment (LT-071) inserts sheet type materials automatically at desired intervals and aligns them for cleaning prior to going through D.I Water. Then the equipment uses the hot roller to perform wet lamination of PCB and dry films for re-winding as roll-type.

FEATURES

- Outstanding adherence upon lamination thanks to utilization of D.I. Water Station.
- Highly precise centering device, with Servo System applied.
- Dry Film Chuck System allowing position adjustment during lamination
- High productivity, low maintenance cost, and easy film setting/ exchange through optimized design.
- Excellent adherence with no bending of hot rollers through utilization of a backup roller system.

SPECIFICATIONS

MATERIAL SPECIFICATIONS	
DIVISION	SPECIFICATIONS
WORK SPEC.	SIZE : 250 × 250 ~ 500 × 500mm
	TOTAL : 0.04mm ~ 0.1mm(Sheet to sheet : 0.04mm ~ 1.0mm)
FILM SPEC.	THICKNESS : 20 ~ 50μm
	MAX. DIAMETER : 200mm
EQUIPMENT SPECIFICATIONS	
DIVISION	SPECIFICATIONS
CAPABILITY	LAMINATION SPEED : ~ 2.0M/min
UTILITY	POWER : 220VAC 3PHASE 50/60HZ 11KW
	AIR : 6kgf/cm ² 250L/min
HOT ROLLER	SILICONE COATING, DIAMETER : Ø100, TEMP. : MAX. 120°C ± 3°C HARDNESS : 65° ± 3°
PANEL TO PANEL SPACE	ACCURACY : ± 1.5mm
D.I WATER STATION	WATER SUPPLY CAPACITY : 4.5m ³ /h (75L/min)
IONIZER	ION-GENERATION METHOD : CORONA DISCHARGE PULSE AC
WEIGHT	ABOUT 1.8TON
DIMENSIONS	ABOUT 2780mm(L) × 1200mm(W) × 1800mm(H)
CLEANER	ADHESIVE ROLLER 2(UPPER&LOWER) × 4SET, TAPE ROLLER 2 × 2SET(UPPER & LOWER)



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AUTO TEMPORARY LAMINATOR

Model No. : LT-046



SYSTEM DESCRIPTION

The equipment (LT-046) aligns sheet-type (PCB) products for dry film cutting. After the dry film cutting, the equipment joins the top/ bottom sheets for loading applying the vacuum laminator.

FEATURES

- As the task is performed between PCB and Dry Film without heat adherence, wrinkles. And air bubble defects can be prevented to result in production of optimal products.
- As the clean machine is attached, additional contamination during transportation is prevented.
- A high level of margin precision through application of Servo Motor System.
- Film length and un-loading location can be automatically adjusted just by entering the product size.
- Space is saved through integration of the loading part and the cleaner part.
- The equipment can be entirely controlled at the Touch Panel, and provides a highly convenient UI.

SPECIFICATIONS

MATERIAL SPECIFICATIONS	
DIVISION	SPECIFICATIONS
PCB SPEC.	SIZE : 250 × 250 ~ 500 × 500mm (CAN BE CHANGE BEFORE P.O)
	TOTAL : 0.07mm ~ 1.0mm
FILM SPEC.	THICKNESS : 20 ~ 50μm
	MAX. DIAMETER : 200mm
	FILM WIDTH : 250 OR 500mm (CAN BE CHANGE BEFORE P.O)
EQUIPMENT SPECIFICATIONS	
DIVISION	SPECIFICATIONS
CAPABILITY	TACK TIME : LESS THAN 30 SEC.(DOUBLE SIDE)
	LAMINATION MARGIN ACCURACY : ±1.0mm (LEFT & RIGHT, FRONT & REAR)
UTILITY	POWER : 220VAC 3PHASE 50/60HZ 13KW
	AIR : 6kgf/cm ² 300L/min
CLEAN MACHINE	CLEAN ROLLER : ADHESIVE SILICONE COATING
	TAPE ROLLER
IONIZER	ION-GENERATION METHOD : CORONA DISCHARGE PULSE AC
WEIGHT	ABOUT 2.3TON
DIMENSIONS	ABOUT 3600mm(L) × 1600mm(W) × 2350mm(H)



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AUTO VACUUM LAMINATOR

Model No. : LT-050



SYSTEM DESCRIPTION

The equipment (LT-050) uses PCB and Dry film supplied from Temporary Laminator to the chamber using the Carrier film. The equipment then turns the inside of the chamber into vacuum and uses the silicone diaphragm and compressed air to apply heat and pressure for thorough lamination.

FEATURES

- By applying the system involving diaphragm + compressed air, production of high productivity and high quality is enabled.
- Reasonable maintenance and supplies costs.
- Convenient maintenance and repair through optimized design.
- The equipment can be entirely controlled at the Touch Panel, and provides a highly convenient UI.

SPECIFICATIONS

MATERIAL SPECIFICATIONS	
DIVISION	SPECIFICATIONS
PCB SPEC.	SIZE : MAX. ~ 550 × 550mm (OPTION : 650mm × 650mm)
	TOTAL : 0.1mm ~ 1.6mm
EQUIPMENT SPECIFICATIONS	
DIVISION	SPECIFICATIONS
CAPABILITY	TACK TIME : OVERTHAN 50 SEC.(IF VACUUM 15SEC. & PRESS 15SEC.)
UTILITY	POWER : 220VAC 3PHASE 50/60HZ 14KW
	AIR : 6kgf/cm ² 300L/min
FILM CARRIER	CARRIER METHOD : GRIPPER WITH 1 AXIS ROBOT
FILM UN/REWINDER	FILM EXCHANGE : AIR CHUCK SYSTEM
	MAX. OUT DIAMETER : 300mm
VACUUM	VACUUM METHOD : VACUUM PUMP (MAX. 5X10 ⁻⁴ Torr)
PRESS	UPPER SIDE PRESS METHOD : SILICONE DIAPHRAGM BY COMPRESSED AIR
	LOWER SIDE PRESS METHOD : SILICONE PLATE
	HEATING METHOD : SILICONE PLATE HEATER(MAX. TEMPERATURE : ~110°C)
IONIZER	ION-GENERATION METHOD : CORONA DISCHARGE PULSE AC
WEIGHT	ABOUT 3.4TON
DIMENSIONS	ABOUT 2585mm(L) × 1720mm(W) × 1550mm(H)



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ROLL TO ROLL WET LAMINATOR

Model No. : LT-056A



SYSTEM DESCRIPTION

The equipment (LT-056A) passes through D.I. Water onto roll-type materials, and utilizes hot roller to perform wet lamination of dry films.

FEATURES

- Outstanding adherence upon lamination thanks to utilization of D.I. Water Station.
- High quality un-winding and re-winding through application of the Tension Controller and EPC System.
- High productivity, low maintenance cost, and easy film setting/ exchange through optimized design.
- Excellent adherence with no bending of hot rollers through utilization of a backup roller system.

SPECIFICATIONS

MATERIAL SPECIFICATIONS	
DIVISION	SPECIFICATIONS
FPCB SPEC.	WIDTH : MAX. 550mm
	TOYAL : ~ 0.1mm
FILM SPEC.	THICKNESS : 20 ~ 50 μ m
	MAX. DIAMETER : 200mm
EQUIPMENT SPECIFICATIONS	
DIVISION	SPECIFICATIONS
CAPABILITY	LAMINATION SPEED : MAX. 4.5M/Min
UTILITY	POWER : 220VAC 3PHASE 50/60HZ 11KW
	AIR : 6kgf/cm ² 250L/min
HOT ROLLER	SILICONE COATING, DIAMETER : \varnothing 80, TEMP. : 120°C \pm 3°C(MAX.)
	HARDNESS : 65° \pm 3°
D.I WATER STATION	WATER SUPPLY CAPACITY : 4.5m ³ /h (75L/min)
CLEAN MACHINE	CLEAN ROLLER : ADHESIVE SILICONE COATING
	TAPE ROLLER
IONIZER	ION-GENERATION METHOD : CORONA DISCHARGE PULSE AC
EPC SYSTEM	E.P.C CONTROLLER, ACCURACY \pm 0.2mm
WEIGHT	ABOUT 1.2TON
DIMENSIONS	ABOUT 2200mm(L) \times 1375mm(W) \times 1875mm(H)


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SEMI-AUTO WET LAMINATOR

Model No. : LT-051A



SYSTEM DESCRIPTION

The equipment (LT-051A) inserts sheet type materials automatically at desired intervals and aligns them to pass through D.I. Water. Then the equipment uses the hot roller to perform wet lamination of PCB and dry films.

FEATURES

- Outstanding adherence upon lamination thanks to utilization of D.I. Water Station.
- Highly precise centering device, with Servo System applied.
- Dry Film Chuck System allowing position adjustment during lamination.
- High productivity, low maintenance cost, and easy film setting/ exchange through optimized design.
- Excellent adherence with no bending of hot rollers through utilization of a backup roller system.

SPECIFICATIONS

MATERIAL SPECIFICATIONS	
DIVISION	SPECIFICATIONS
WORK SPEC.	SIZE : 250 × 250 ~ 510 × 510mm
	TOTAL : 0.04mm ~ 1.0mm
FILM SPEC.	THICKNESS : 20 ~ 50μm
	MAX. DIAMETER : 200mm
EQUIPMENT SPECIFICATIONS	
DIVISION	SPECIFICATIONS
CAPABILITY	LAMINATION SPEED : ~ 3.0M/min
UTILITY	POWER : 220VAC 3PHASE 50/60HZ 7KW
	AIR : 6kgf/cm ² 100L/min
HOT ROLLER	SILICONE COATING, DIAMETER : Ø80, TEMP. : MAX. 120°C±3°C HARDNESS : 65°±3°
D.I WATER STATION	WATER SUPPLY CAPACITY : 4.5m ³ /h (75L/min)
IONIZER	ION-GENERATION METHOD : CORONA DISCHARGE PULSE AC
WEIGHT	ABOUT 1.6TON
DIMENSIONS	ABOUT 2375mm(L) × 1360mm(W) × 1820mm(H)
CLEANER	ADHESIVE ROLLER 2(UPPER & LOWER) × 4SET, TAPE ROLLER 2 × 2SET(UPPER & LOWER)



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