newhorizon
Constant Heat ACF Laminating System

KEY FEATURES

- Compact and flexible standard systems for high quality connections
- Ideal price-performance (throughput) ratio
- Robust frame construction
- User friendly system configuration including optional plug & play modules
- Integrated Constant Heat process control based on proven technology
- Included in standard system configuration:
  - X-Y Hot Bar Planarity Adjustment
  - Electronic Temperature & System Control
  - Pneumatic Bond Head
  - Digital Bond Force Readout
- CE Approved

Amada Miyachi Europe offers ACF Laminating/Pre-Bonding as a proven technology integrated in our systems. ACF stands for Anisotropic Conductive Film. ACF Laminating/Pre-Bonding is a Hot Bar bonding technique for connecting displays to PCB using Anisotropic Conductive Adhesive (ACA) and flex foils. The ACF Laminating/Pre-Bonding process is the first step to apply the adhesive material to the part(s).

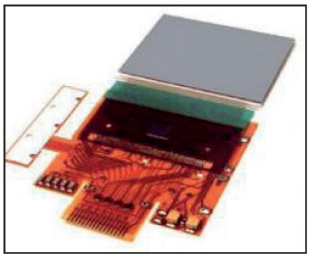
The newhorizon ACF Laminating systems are an integral part of the MIYACHI EAPRO Hot Bar series using Constant Heat technology through the integrated system temperature controller, a pneumatic Bond Head and customized thermodes.

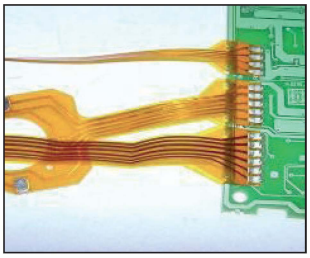
The newhorizon product range includes various models with different product handling features such as linear slides and rotary tables. The systems are designed considering ergonomic standards offering maximized production output. All process parameters are embedded into the system, ensuring consistent process quality and operator independence.

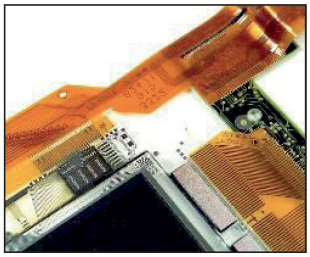
The newhorizon systems enable full automatic process control with manual (un-)loading of parts. Each system can be adapted to suit the customer's technical requirements through extension with optional plug & play modules. All modules are mounted on a robust frame construction. The system offers the best stability supporting applications down to the finest pitch.

TYPICAL APPLICATIONS


CCD Camera


Multiple Flex


Flex - PCB


LCD Display

TECHNICAL SPECIFICATIONS

Power requirements	100-240 VAC / Single Phase / 50/60 Hz (16 Amps max)
Air supply	6 – 8 bar [87 – 116 psi] , clean dry & filtered air
Fixture assembly baseplate dimensions	150 x 150 mm
Fixture weight	1.0 kg Max (per product fixture)
Constant heat Hot Bar size (length x width)	Min 3 x 1 mm / Max 75 x 5 mm
Starting operation	Two hand control
Start-up time	< 5 minutes
Operating temperature	15 – 40 °C
Operating humidity	Max 93% @ 40 °C
Certification	CE Approved
Bonding head & temperature controller technical specifications	
Force range	8 – 80 N @ 6 Bar
Bond head stroke (max)	45 mm
Bond level height	40 mm
Free z space for components	20 mm
Temperature range	50 - 150 °C Constant Heat
Temperature control accuracy	± 2% of Full Scale
Bond time period	0.5 to 99.9 seconds
ACF laminating module technical specifications	
ACF tape configuration	2-layer
ACF tape width	1 - 4 mm
ACF tape feeding indexing	Min 3 mm / Max 75 mm
ACF tape placement accuracy (*)	X-direction ± 0.5 mm / Y-direction ± 0.2 mm
Total cycle time incl. Movement (excl. Bond process time)(*)	Feeding cycle time @ 3 mm: < 4.8 sec Feeding cycle time @ 75 mm: < 8.0 sec
Laminating area (length x width)	Min 3 x 1 mm / Max 75 x 4 mm
Peeler mechanism	Pneumatic
ACF tape cutting method	Half-cut
Tape feeding	DC-motor (encoder controlled)
Tension control	Sensor controlled (closed loop)
(*) Validated at 4 mm ACF tape width, x-direction is tape feeding direction, y-direction is perpendicular	
Model specifications	
MACFL-4100 base	No movement
MACFL-4200 linear slide (manual 2-position front-rear slide)	Stroke between front and bonding position: 200 mm fixed
MACFL-4300 rotary table (manual 2-position)	Turntable diameter: 380 mm
MACFL-4400 automatic rotary table (pneumatic 2-position)	Turntable diameter: 380 mm Turntable movement time: < 2 seconds

WEIGHT & DIMENSIONS

Dimensions HxWxD (mm)	650 x 615 x 695
Weight	60 kg