Esec 2100 hSi / sD advanced

Package 2

Refining the Intelligent Die Bonders

The Esec 2100 Die Bonder family is further enhanced with the new Bond Height Measurement System to inspect Die Tilt, Bond Line Thickness and Filet Height directly at the Bond Position.

Automated Bond Head Tilt Adjusting as well as Dispense and Bond Tool Auto-optimizing bring automation to the next level.

Unmatched Process Accuracy is assured with the Device Height Sensor, High Precision Bond Head and High Resolution Vision Systems which include Up Looking Systems. And not to be missed is the Dual Dispensing Module with its unbeatable productivity.

Versatile, Accurate, Productive, Automated

- On spot Die Tilt, Bond Line and Filet Height Measurement
- Dual Dispensing Module with Dispense Volume Control
- Automated Tool Optimization to eliminate operator dependency
- Ultra precise bonding with Device Height Sensor and High Precision Bond Head
- High Resolution Vision System including Up Looking Vision and Low Contrast Kit to detect almost anything
Intelligence in Productivity
- Dual Dispensing Module with independent writing axes
- Dual 5 bar Pneumatic Dispense System Controller
- Superior and proven “light & rigid” P&P design
- High Performance P&P Y-axis with Liquid Cooling System
- High Performance 4th Generation Vision System
- High Speed Production Mode with excellent accuracy

Intelligence in Accuracy
- Device Height Sensor for extreme Z-Height Control
- High Precision Bond Head with highly accurate Theta-axis
- High accuracy closed loop P&P Z-axis
- High Resolution 4 Megapixel Vision Systems
- New High Resolution Up Looking Vision System
- High Accuracy Production Modes

Intelligence in Process Inspection and Control
- Bond Height Measurement System to measure Die Tilt, Bond Line Thickness and Filet Height directly at bond position
- Low Contrast Object detection vision capability
- Three calibrated Dual Color Light Sources per camera
- Full High Definition (FHD) Graphical User Interface with multiple camera inspection images and sensor status overview of vacuum, air pressure and temperatures

Intelligence in Automation
- Motorized Automated Bond Head Tilt Adjustment
- Auto Adjusting Pick Up Tool and Dispense Capillary offsets
- Constant Dispensing with Dispense Volume Control
- Machine Self Diagnostics
- Auto Position Adjustment of Die and Epoxy Placements
- Automatic Illumination Detection (vertical, indirect lights)

Die Placement Accuracy (DAF)
- >2 mm: 10 μm / 0.15° (3σ) (accuracy mode)
- >2 mm: 15 μm / 0.15° (3σ) (standard mode)
- >2 mm: 18 μm / 0.2° (3σ) (high speed mode)
- MTBF: >200 h

Die Placement Accuracy (Epoxy)
- >2 mm: 12 μm / 0.2° (3σ) (accuracy mode)
- >2 mm: 18 μm / 0.2° (3σ) (standard mode)
- >2 mm: 20 μm / 0.2° (3σ) (high speed mode)
- MTBF: >200 h

Esec 2100 h5i
- Bond force: 0.2 - 20 N
- Bond rotation: 0 - 360°
- Bond heating: programmable, max. 200°C*
- Wafer frame size: 6” - 12”
- Die size: 0.15 - 20 mm *
- Die thickness: > 0.075 mm
- Strip width: 23 - 100 mm
- Strip length: 90 - 300 mm
- Strip thickness: 0.1 - 2.5 mm
- Footprint: W x D x H:
  1785 x 1448 x 1400 mm
- Weight: approx: 1’600 kg / 3500 lb

Esec 2100 sD advancedi
- Bond force: 0.2 - 50 N
- Bond rotation: 0 - 360°
- Pre-bond/bond/post-bond heating: programmable, max. 200°C
- Wafer frame size: 6” - 12”
- Die size: 0.15 - 20 mm *
- Die thickness: > 0.015 mm *
- Strip width: 15 - 125 mm
- Strip length: 90 - 300 mm
- Strip thickness: 0.1 - 2.5 mm
- Footprint: W x D x H:
  1785 x 1448 x 1400 mm
- Weight: approx: 1’600 kg / 3500 lb

* Option or accessory may be required.