Esec 2100 sD advanced™

Introducing the Intelligent High End Die Bonder

The new Esec 2100 sD advanced™ with its new Device Height Sensor and High Precision Bond Head enables unmatched process capability also including High BLT applications.

Process Accuracy is further improved with the High Resolution Vision Systems, which now also includes an Up Looking System while the Dual Dispensing Module brings productivity to an unmatched level for high speed applications.

The Dispense Volume Control and the Low Contrast Kit bring Process Control to a yet unseen level.

Last but not least, the 2100 sD advanced™ introduces auto-optimizing tool offsets and dispense pressure after syringe change.

Versatility, Accuracy and Automation

- Device Height Sensor for high BLT applications
- High Precision Bond Head with automated Tilt Adjustment
- Dual Dispensing Module with independent writing axes
- Volume Controlled Dispensing with a dual 5 bar system
- High Resolution Vision System including Up Looking Vision
- Low Contrast Kit enables the vision to detect almost anything
- Automatic Tool Optimization to eliminate operator dependency
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 4Megapixel Vision Systems
- New High Resolution Up Looking Vision System
- High Accuracy Production Modes

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 Process Control
- Low Contrast Object detection vision capability
- Three Dual Color Light Sources per camera
- Full High Definition (FHD) Graphical User Interface with multiple camera inspection images and Viewers
- Sensor status overview of vacuum, air pressure and temperatures.

Intelligence in Automation
- Automated Bond Head Tilt Adjustment
- Auto Adjusting Pick Up Tool and Capillary offsets
- Auto Adjusting Dispense Pressure after syringe change
- Constant dispensing with Dispense Volume Control
- Auto Position Adjustment of Die and Epoxy Placements
- Automatic Illumination Detection (vertical, indirect lights)

Die Placement Accuracy (DAF)
- >2 mm: 15 μm / 0.15° (3σ) (high speed mode)
- >2 mm: 10 μm / 0.15° (3σ) (accuracy mode)
- >2 mm: 8 μm / 0.12° (3σ) (up looking vision)
- MTBF: >200 h

Die Placement Accuracy (Epoxy)
- >2 mm: 18 μm / 0.2° (3σ) (high speed mode)
- >2 mm: 12 μm / 0.2° (3σ) (accuracy mode)
- >2 mm: 10 μm / 0.15° (3σ) (up looking vision)
- MTBF: >200 h

Bond Process
- Bond force: 0.2 - 50 N
- Bond rotation: 360°
- Pre-bond/bond/post-bond heating: programmable, max. 200°C

Substrate Dimensions
- Width: 15 - 125 mm
- Length: 90 - 300 mm
- Thickness: 0.1 - 2.5 mm

Wafer and Die Dimensions
- Wafer size: 4” - 12”
- Frame size: 8” - 12”
- Die size: 0.5 - 20 mm
- Die thickness: > 0.075 mm

Machine Dimensions
- Footprint: W x D x H: 1785 x 1448 x 1400 mm
- Weight: approx. 1600 kg / 3500 lb

All data without guarantee