Esec 2100 hS

The Next Generation High Speed Die Bonder

The Esec 2100 hS is the first model of the 2100 Die Bonder GEN3 family featuring yet another engineering master piece.

A new Pick & Place generation using a “light & rigid” structure, which in conjunction with advanced trajectory control and optional Liquid Cooling, delivers a significantly higher performance.

In addition, a new versatile Substrate Handler Family is introduced adapting to all needs of High Speed Epoxy Die Bonding.

The Esec 2100 hS is a highly scalable High Speed Die Bonder providing the best possible Cost of Ownership (CoO).

Process Quality at Highest Speed

- Productivity up to 18500 UPH
- Standard accuracy: 20 µm @ 3σ
- High Accuracy Mode: 15 µm @ 3σ
- Versatile substrate handler concept
- Scalable performance & application range
- Highest uptime

www.besi.com
**Speed & Accuracy**
- Superior "light & rigid" P&P design
- Excellent accuracy at maximum speed
- High performance Y-axis with optional Liquid Cooling
- New voice coil driven P&P X-axis
- Enhanced P&P Z-axis and bond head interface
- Advanced real time trajectory controller

**Scalable & Configurable**
- New versatile substrate handler 2 family (SH2)
- Scalable performance & application range
- Strip handler with rail or various plate designs
- Wide range of strip loading and unloading options
- 1 Zone extended heating option for efficient heat transfer
- Ability to upgrade and expand functionalities any time

**Dual Dispensing**
- New DUCA (Dual Capillary Actuated) Option enabling even and odd row handling
- Dual 5 bar Pneumatic Dispense System 3 (PDS3)
- Unified high speed X/Y/Z writing axis
- Advanced 3D solid state hinge design
- Software assisted capillary adjustment

**GEN3 Technology**
- New hardware using Gigabit Ethernet (GinLink)
- Dedicated Real-time OS for tight process control
- Higher I/O update rate enabling advanced processes
- High performance P&P and Bond Vision Shuttle
- Enhanced Magazine Handler with new X Push-In
- Ready Technology providing easy feature upgrade

---

**Machine Dimensions**
- Footprint: W x D x H: 1785 x 1448 x 1400 mm
- Weight: approx. 1400 kg

**Supply Requirements**
- Voltage: 208 - 230 VAC (@ 47 - 63 Hz)
- Power rating: 800 - 1100 VA
- Compressed air: min. 5.2 bar
- Vacuum: min. -0.75 bar
- Nitrogen blow: 1.8 - 6 bar

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

**Leadframe Size**
- Width: 23 - 100 mm
- Length: 90 - 300 mm
- Thickness: 0.1 - 2.5 mm

**Process**
- Bond force: 0.2 - 20 N
- Bond rotation 360°
- Heating at bond for WBC & Simple WBL

**Accuracy / Productivity**
- >2 mm: 20 μm / 0.2° (3σ)
- >2 mm: 15 μm / 0.2° (3σ) (option)
- 0.5 - 2 mm: 20 μm / 0.5° (3σ)
- MTBF: > 200 h