Esec 2100 hS *iXplus*

Besi

The New Benchmark for High-Speed Die Bonding

The Esec 2100 hS *iXplus* is the latest member of the Esec Die Bonder 2100 *i* family. The new continuous epoxy pattern writing allows to write patterns at high speed and in top quality. Together with the UPH optimized vision strategy this makes the Esec 2100 hS *iXplus* the fastest Die Bonder with a single dispenser.

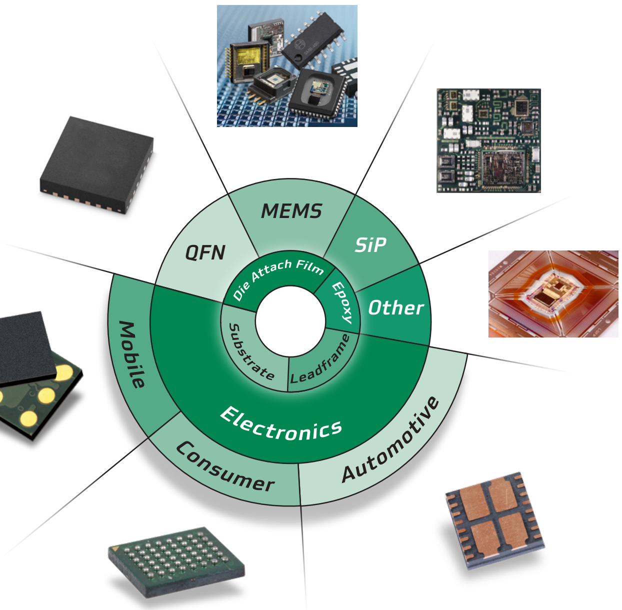
In addition, the Esec 2100 hS *iXplus* is highly scalable with the advanced options of the Esec 2100 *i* family.

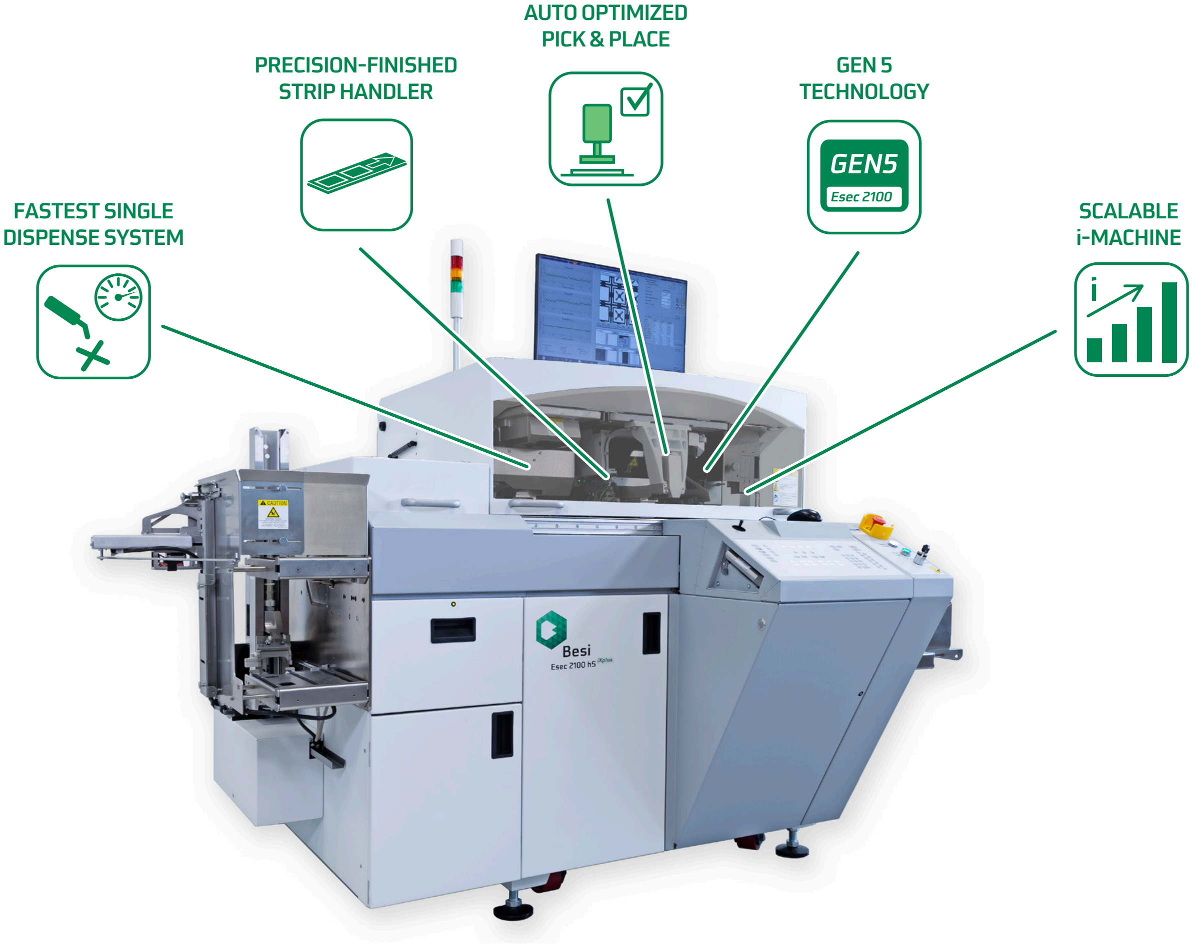
Besi is consistently offering the High-Speed Die Bonder with the best possible Cost of Ownership (CoO).

Process Quality at Even Higher Speed

- Productivity up to 20'000 UPH
- Standard accuracy: 18 µm @ 3 σ
- High-Resolution Vision System
- Scalable performance and application range
- Highest uptime

Future Proof Equipment





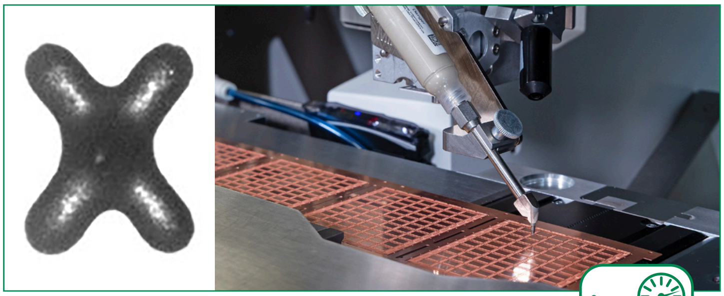
AUTO OPTIMIZED PICK & PLACE

PRECISION-FINISHED STRIP HANDLER

GEN 5 TECHNOLOGY

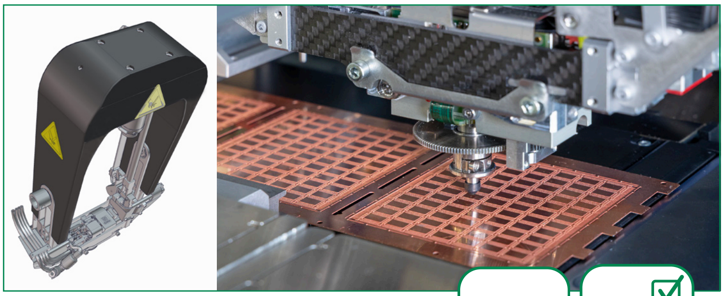
FASTEST SINGLE DISPENSE SYSTEM

SCALABLE i-MACHINE



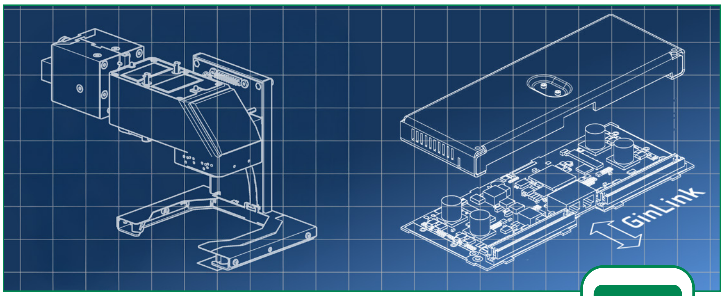
Fastest Single Dispense System

- New continuous epoxy writing allowing high quality patterns at maximum writing speed
- Fast and reliable epoxy tailing prevention integrated in pattern algorithm
- New and ultimately fast vision process strategy
- Improved writing axes design
- The only single dispenser able to catch up with all P&P speeds



Optimized Processes

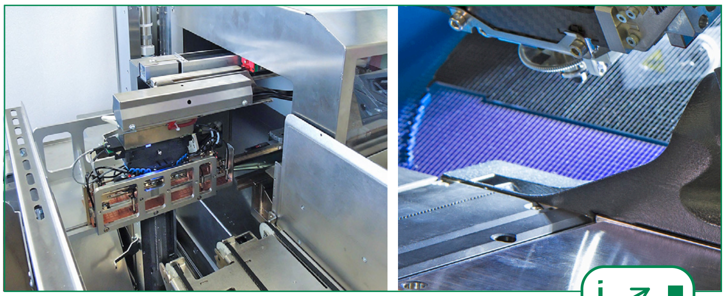
- Automatic recipe optimization to maximize Bond UPH
- Enhanced Liquid Cooling System for even higher speed
- Speed optimized Pick & Place trajectory
- Intelligent speed optimized soft pick and soft bond modes
- Proven “light & rigid” P&P design
- Precision-finished strip handler preventing any scratches even on sensitive strips
- Reliable and safe strip push-out to magazine by clamp



Generation 5 Technology

GEN5
Esec 2100

- High performance 4-Megapixel Vision System
- Up to three calibrated Dual Color Illuminations per camera
- Generation 5 hardware link (Gigabit Ethernet / GinLink)
- Latest high performance 8 core industrial PC
- State of the art User Interface including multiple camera inspection images and viewers



Scalable i-Family Machine

The 2100 hS^{iXplus} can be scaled up or upgraded with 2100 i-machine family features, including:

- AI supported low contrast epoxy pattern detection
- Up looking Vision System
- High Precision Bond Head
- Pick Strip from Box capability
- Device Height Measurement System
- Epoxy Volume Measurement and Control

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: 6” - 12”
- Die size*: 0.15 - 20 mm
- Die thickness: > 0.075 mm

Leadframe Size

- Width (standard): 23 - 102 mm
- Length: 90 - 300 mm
- Thickness: 0.1 - 2.5 mm

Process

- Bond force: 0.2 - 20 N
- Bond rotation: 360 °
- Bond heating: programmable, max. 200 °C (simple DAF only)

Die Placement Accuracy

- >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

* Option or accessory may be required.