The FINEPLACER® femto is a fully automated, sub-micron bonding platform for advanced packaging and optoelectronic applications.

This award winning system offers modular application architecture and can be flexibly equipped for a wide range of applications and processes. It is an ideal system for a production environment as well as for product and process development, accommodating the complete production workflow of inspection, characterization, packaging, final test and qualification.

FINEPLACER® femto has the best cost - performance ratio of its class in the market.

**Highlights**

- Sub- micron placement accuracy*
- Handles ultra small to very large components
- Fully- automated operation and assembly process
- Supports wafer/ substrate sizes up to 12" *
- Supports bonding forces up to 500 N*
- Highly flexible platform architecture
- Small footprint and compact design
- Long- term stability

* depending on configuration and application
### Features

- Automated pattern recognition, alignment and bonding
- Overlay vision alignment system with fixed beam splitter in combination with automatic field extension and zoom
- Integrated Process Management (IPM)
- Adaptive process library
- Live process observation camera
- Virtually unlimited range of advanced bonding technologies

### Benefits

- Fully automated, user independent process
- Outstanding placement accuracy and instant operation without adjustments
- Synchronized control of all process related parameters: force, temperature, time, power, process environment, light and vision
- Fast and easy process development
- Immediate visual feedback reduces process development time
- ROI savings - one machine for all applications

### Technologies

- Thermocompression
- Thermosonic
- Ultrasonic
- Soldering (AuSn, C4, Indium, eutectic)
- Adhesive technologies
- Curing (UV, thermal)
- Mechanical assembly

### Applications

- Laser diode, laser bar bonding
- VCSEL, photo diode assembly
- LED bonding
- Micro optics assembly
- MEMS packaging
- Sensor packaging
- 3D packaging
- Wafer level packaging (W2W, C2W)
- Chip on glass, chip on flex
- Flip chip (face down)
- Precise die bonding (face up)

### Technical Specifications

- Placement accuracy*: ± 0.5 μm
- Field of view (min)¹: 0.27 mm x 0.2 mm
- Field of view (max)¹: 3.2 mm x 2.4 mm
- Component size (min): 0.1 mm x 0.1 mm
- Component size (max): 100 mm x 100 mm
- Theta fine travel: ± 9° / 3.5 μrad
- Z- travel / resolution: 10 mm / 0.2 μm
- Y- travel / resolution: 150 mm / 0.1 μm
- X- travel / resolution: 450 mm / 0.1 μm
- Working area: 450 mm x 150 mm
- Heating temperature¹,²: 400 °C
- Bonding force range*: 0.1 N - 500 N

### Modules & Options

- Bonding Force Module
- Chip Heating Module
- Die Flip Module
- Dispenser Module
- Formic Acid Module
- Process Gas Module
- Process Video Module
- Substrate Handling Module
- Substrate Heating Module
- Ultrasonic Module
- UV Curing Module

### Notes:

* depending on configuration/application, (1) standard value, other values on request, (2) optional modules

Technical information are subject to change without prior notice.

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