



ficonTEC

BONDLINE BL1000

Workstation for fully automated chip bonding

The ficonTEC BL1000 offers a cost-effective solution for bonding of laser bars and chips to heat sinks or submounts. The system features automated pick-up of laser bars and heat sinks or submounts from GelPaks or customized trays. A goniometer with the powerful ficonTEC metrology corrects for tilt mismatch of the chip in regards to the heatsink. This guaranties long life time of the final product.

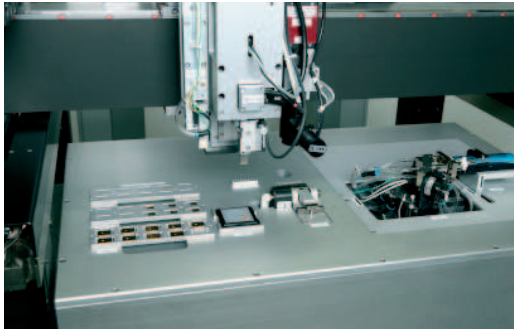


HIGHLIGHTS

- + Fully automated operation
- + 5 axis bar to heatsink alignment
- + $\pm 2 \mu\text{m}$ post bond accuracy

FEATURES

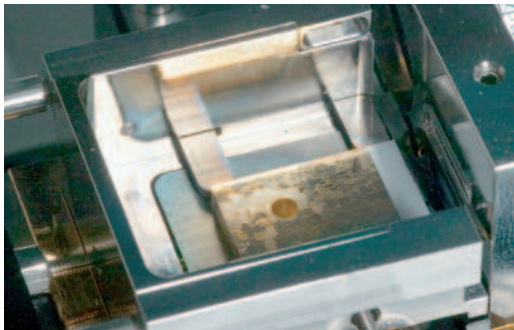
- + Heatsink and submount compatibility
- + Indium and AuSn bonding capability
- + Minimal smile due to ultra flat bond tool
- + Electronically adjustable bond force
- + Switch between products in minutes
- + Online formic acid gas generation
- + Forming Gas supply
- + Temperature profile control
- + Oven with 100 K/s heating rate
- + Online temperature monitoring
- + Optical Character Recognition (OCR) on heatsinks for serial number tracking
- + Powerful modular operating software concept
- + Operator initiated remote service
- + Data based operating parameter aquisition
- + Component traceability



Pick & place robot

PICK & PLACE

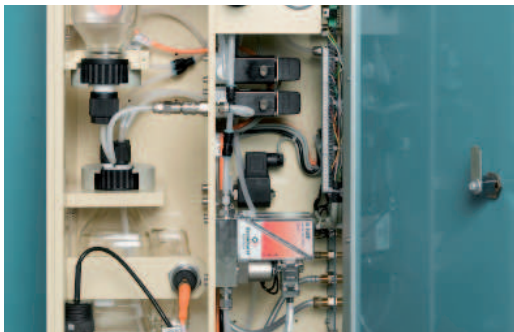
- + DC servo motor driven robot head
- + Pick & place of laser bars, chips, heatsinks or submounts
- + Easy tool exchange for different device sizes
- + Self calibration after tool exchange
- + Automated device flipping from p-side up to p-side down



Oven (old version shown)

OVEN

- + Max. temperature > 400 °C
- + 100 K/s heating rate
- + 20 K/s cooling rate
- + Max. device (heatsink) size:
35 mm x 35 mm x 10 mm
- + Min. device (submount) size:
2 mm x 1 mm x 0.15 mm
- + Inert gas atmosphere
- + Low offset temperature measurement
- + Formic Acid and Forming Gas resistant



Formic Acid Gas Unit

FORMIC ACID GAS GENERATION UNIT

- + Online gas generation from liquid acid
- + Electronically controlled gas flow
- + Electronically controlled gas saturation
- + Online visualization of gas flow rates
- + Logging of gas flow rates for each bond
- + Leak sensors, interlock and refill alarm
- + Easy bottle replacement without operator getting in contact with liquid acid

MAIN MOTION SYSTEM

	X, Y, Z Axis	Phi-Z Axis
Travel:	500, 500, 100 mm	< 90°
Speed:	1, 1, 0.2 m/s	20°/s
Accuracy:	± 10, 5, 5 µm	± 10"
Resolution:	0.5 µm	< 2"
Repeatability:	± 2 µm	± 5"

OVEN MOTION SYSTEM

	Phi-X Goniometer	Z Axis
Travel:	± 10°	12.5 mm
Resolution:	10"	< 100 nm
Repeatability:	20"	± 1 µm

Please contact us for further information