

Sintering System SIN 100 Multi Drive

Flexible, fully automated modular system for high-volume package-to-cooler sintering

The SIN 100 Multi Drive is a flexible platform for various package and heat sink layouts. It can sinter up to four heat sinks simultaneously. The system is designed for the series production of technically sophisticated components. It reliably handles heat- and pressure-sensitive mold compounds and compensates for warping and bowing of the heat sinks through precise control of force and temperature at each individual sintering joint.

The flexible tool interface enables quick tool changes. In addition to sintering packages onto heat sinks, the wide range of tools also supports applications such as die attach, clip attach, and diffusion soldering.

In the vacuum chamber, substrate and package temperature, atmospheric pressure, and gas composition are precisely controlled throughout the entire process of heating, sintering, and cooling. A residual oxygen content of <10 ppm prevents the oxidation of copper surfaces and particles. Formic acid or forming gas also enable in-situ deoxidation. Oxide-free, reactive interfaces are crucial: they improve the sinterability of silver and copper materials and ensure high surface quality.

The SIN 100 Multi Drive combines modular flexibility with precise process control – ensuring reliable sintering of complex packages while delivering high yield and high throughput.

System features

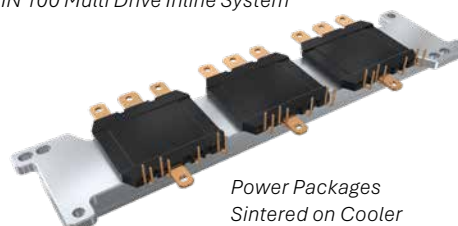
- Individually controlled, dynamically regulated, and monitored pressure ramps
- Simultaneous sintering of up to four heat sinks
- Quick-change press tools for high flexibility
- Precise atmosphere management (N₂, N₂/H₂, HCOOH)
- Suitable for Ag and Cu materials
- Pressure range: 0.1 – 1,200 mbar
- Temperature range: up to 350 °C
- Integrated booster heating technology
- Flexible pin heating system
- Dynamic temperature control of upper/lower dies to minimize thermal distortion
- Hermetically sealed process chambers
- Programmable, monitored temperature profiles
- Constant process control and traceability
- Modular, flexibly expandable design
- Internationally patented

Options

- Preheating and/or cooling modules
- Custom automation
- Alternative process area sizes available on request



SIN 100 Multi Drive Inline System



Power Packages
Sintered on Cooler