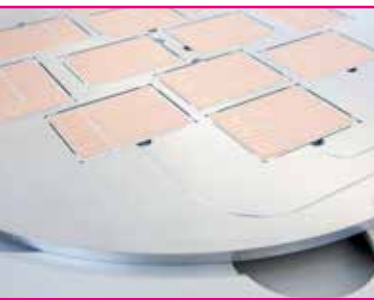


## The flexible sintering system SIN 200+

For extraordinarily reliable, highly thermally conductive bonds



*Sintering module SIN 200, operated as a batch system, with flexible connection options of further preheating and/or cooling units, acc. to customers' requirements.*



*Example of a sintering carrier for single substrates.*

The patented sintering system SIN 200+ is a highly flexible system, which is suitable for various production demands from laboratory up to series production, as the system is modular designed and can be operated as a batch system or an automated inline system with additional preheating and/or cooling modules.

The substrate temperature, the atmospheric pressure and gas composition during the entire heating, sintering and cooling procedure within the vacuum chamber/s is exactly controllable at any time. This enables the in situ reduction of the product's surfaces before and after the sintering process. In combination with the dynamic adaptability of the pressing force the system provides a wide array of novel process and production possibilities.

Thereby sintering connections can be achieved, which are characterized by reliable, resilient and highly temperature resistant bonds.

### System features

- Dynamic adaptability of the pressing force: up to 2,000 kN (200 t)
- Dynamic controlled and monitored pressure ramps

- Process area:  $\leq 280$  mm diameter
- Press tool exchangeable (e.g. for customer specific tool)
- Exact control of inherent gas atmosphere ( $N_2$ ,  $N_2/O_2$ ,  $N_2/H_2$ , HCOOH)
- Atmospheric pressure range: 1-1,200 mbar
- Temperature range: up to 350 °C
- Integrated heating technology
- Programmable, controlled and monitored temperature profiles
- Constant process control and traceability
- Easy operation by touch screen panel
- Integrated interface to MES (e.g. SECS/GEM)
- Modular design with flexible expandability
- Hermetically sealed process chambers
- Manual or automatic loading and unloading
- Patented system

### Options

- Connection of preheating and/or cooling modules
- Customer specific automation by addition of handling/transfer systems
- Workpiece heating optional from top and/or bottom side
- Other dimensions of the process area on request



*Automated inline system SIN 200+ with cooling module connected to the sintering module, transfer system with underfloor return and lifting units. Preheating takes place in the sintering module.*

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