baSiC-T
New Generation Silicon Carbide Crystal Growth Furnace
The PVA TePla physical vapor transport (pvt) system baSiC-T has been especially designed for Silicon Carbide (SiC) crystal growth by sublimation of a source powder at high temperatures. The baSiC-T system design is based on a modular concept and allows the use of substrates (seeds) up to 6” diameter.

- **Designed for Power Electronic Applications**
  - high automation level for massproduction
  - Fab Management Software Solution available
  - small footprint, compact placement

- **Available for 4” and 6”**

- **Inductive heating using field-proven coil-designs**
  - Low power consumption
    (approx. 10KW at 2,200 °C stable control)

- **Mobile loading/unloading concept for hot zone**

- **Superior Control System with**
  - intuitive operation at a high level of automation
  - process visualisation with enhanced trending features
  - offline recipe setup solution with lots of recipe options by sets of parameter
  - long term process data logging, long term data retrieval
  - control system and visualisation works independently (safety concept)
  - system control loops configurable by sets of parameter

- **Excellent Safety Concept**
  - CE conformity
  - different level of system safety components ensures safe operation
  - quality measurements and extended quality documentation

- **Close cooperation with customers, institutes and component suppliers**

- **Applications**
  - Power Electronic
  - High Frequency Electronics
  - Opto-electronic

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**Technical Data**

<table>
<thead>
<tr>
<th>Reactor tube</th>
<th>operating pressure:</th>
<th>approx. 1 - 900 mbar</th>
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<tbody>
<tr>
<td>operating temperature:</td>
<td>max. 2,600 °C</td>
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<table>
<thead>
<tr>
<th>Power supply</th>
<th>power:</th>
<th>max. 60 kW</th>
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<tbody>
<tr>
<td>frequency:</td>
<td>6 - 12 kHz</td>
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<tr>
<th>Dimensions</th>
<th>approx. (l) 2,000 x (w) 1,200 x (h) 2,800 mm</th>
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<tr>
<th>Weight</th>
<th>approx. 1,300 kg (with control cabinet: 2,000 kg)</th>
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**PVA TePla in Power Electronic industries**

PVA TePla’s equipment solutions for the Power Electronic industry include also the SiCube as another system to produce SiC-crystals (PVT and HTCVD), the Floatzone System FZ35 and various CZ-systems for growing Si-crystals with highest purity as well as a vacuum furnace for graphite cleaning and recycling of susceptors after GaN-epitaxy. Different innovative metrology technologies of PVA TePla are available for non-destructive quality inspection.