PVA TePla
Crystal Growing Systems

SiCma

Specially developed for the production of silicon carbide crystals by means of physical vapor transport

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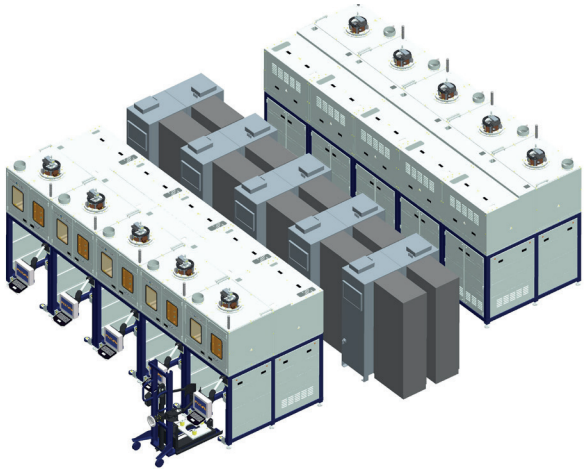
The **SiCma system** was specially designed for the production of silicon carbide (SiC) crystals by means of physical vapor transport (PVT). In this process, the powdered starting material is heated and sublimated at high temperatures and finally deposited on a specially prepared substrate. This is done by inductive heating in the kilohertz range using an induction coil. The design of this coil is optimized for low energy consumption.
The possible size of the substrate is 100 to 150 mm diameter (4“ - 6“). Due to a high degree of automation and a compact footprint, the system is optimized for mass production. A mobile system for loading and unloading the system as well as numerous options can be added on a modular basis - for example vacuum pumps and measuring devices.

Optional Accessories:

- Loading/ Unloading Cart, mecanical or electrical
- Bottom-Pyrometer, 2-colors, 850 °C - 3,000 °C
- High Vacuum Pumping Unit
- Hotzone Rotation & Lifting Unit, 0.1 mm/h - 460 mm/h stroke
- Upgrade Kit 6“
- VPN-Modem for Remote Support
- Dummy Hotzone for Calibration
- Spare Parts Package



Compact footprint of e.g. 10 systems

TECHNICAL DATA

Puller Data	Designed for Ingot diameter	6"
	Inner diameter process chamber of 4" quartz tube	286 mm
	Inner diameter process chamber of 6" quartz tube	378 mm
	Height	~ 2,600 mm
	Height incl. pyrometer, top	~ 2,800 mm
	Width	~ 1,200 mm
	Depth (incl. operating panel, 2,830 mm)	~ 2,330 m
	Total weight	~ 2,000 kg
	Frequency	6 - 10 kHz
	Working pressure	1 - 900 mbar
	Working temperature	max. 2,400 °C

PVA TePla in Power Electronics Industries

PVA TePla’s equipment solutions for the Power Electronics Industry include also 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.