

# SiC Process Equipment for High Power Electronics

**CVD**  
Equipment  
Corporation

## PVT200™ Physical Vapor Transport Systems



**CVD**  
Equipment  
Corporation

CVD Equipment Corporation  
355 South Technology Drive, Central Islip, NY 11722  
**Tel:** +1 631-981-7081 | **Fax:** +1 631-981-7095  
**E-mail:** sales@cvdequipment.com

[www.cvdequipment.com](http://www.cvdequipment.com)

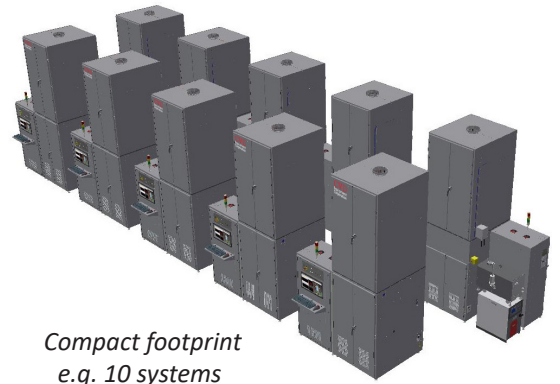
*enabling tomorrow's technologies™*

# PVT200™ - Physical Vapor Transport Systems

The PVT200™ system is designed to produce silicon carbide (SiC) crystal boules through physical vapor transport (PVT). In this process, polycrystalline silicon carbide (SiC) undergoes sublimation at high temperatures up to 2,500°C. To achieve the required temperatures, an RF Induction Heating Coil is used for inductive heating in the kilohertz range. The automated positionable coil with axial vertical travel allows for the control of thermal gradients and to optimize SiC growth. Designed to grow 200+ mm diameter SiC boules

Skillfully engineered with a high degree of automation and a compact footprint, the system is optimized for mass production. Automatic process chamber load and unload, recipe start, crucible stage rotation and motorized pyrometer alignment with ease of a remote-control box for real-time monitoring of the crucible during crystal growth are some of the many system features that drive efficiencies.

Robust process controls achieve temperature and pressure stability throughout long deposition runs help facilitate the reliable production of low defect SiC boules. Ramp up and ramp down rates are achieved by real time PID precision control. Our control system maintains the temperature within half a degree as well as the pressure within +/- 1% of set point. These are some of the numerous system features that support production needs of critical high-volume manufacturing facilities. Scrubbers and abatement system enhancements are also available.



Compact footprint  
e.g. 10 systems

## Features and Options

- Crystal Growth & Annealing
- Robust Production System with Enhanced Process Controls
  - Temperature Control +/- 0.5°C
  - Pressure Control +/- 1%
- Standard and Custom Coil Designs
- Custom Quartzware
- MES Compatible

## Technical Data

Boule diameter	200 mm
Inner quartz tube diameter	450 mm
Cabinet height	3900 mm
Cabinet width	1990 mm
Cabinet depth	1280 mm
Total weight	1600 kg
Frequency	9.5-10.5 kHz
Working pressure	0.5-700 Torr
Working temperature	max 2500°C



## High-Touch Customer Service

CVDE has a customized approach to client support. We offer onsite presence, site survey, installation coordination and field acceptance. NRTL/CE Certification is available. Initial start-up support and on-site training, warranty response and remote capability through help desk support are all available through our customized service plans. Support contracts can be customized for spares and consumables, preventative maintenance and site personnel.



**CVD Equipment Corporation**  
355 South Technology Drive, Central Islip, NY 11722  
**Tel:** +1 631-981-7081 | **Fax:** +1 631-981-7095  
**E-mail:** sales@cvdequipment.com



VISIT OUR  
WEBSITE TO  
LEARN MORE