

# Growth System | Research

Various UHV and MBE Systems for semiconductor, metal or oxide growth for research and industry












## Highlights





- High sample temperature and film thickness uniformities
- High efficient cooling shroud in the area of the effusion cells and the manipulator
- Pumping configuration adaptable for each application
- Transfer rod for transfers into the chamber
- Software package
- Cabinet including all required controllers
- Complete bake-out system
- Mounted on a stable rack
- Expandable with further UHV equipment



CreaTec designs and manufactures complete MBE Systems for the preparation of epitaxial films (semiconductors, metals, dielectrics, organics, etc.) and wafers for various scientific applications. All systems are assembled under Class 10 cleanroom conditions. Selected materials and chambers are used to guarantee high quality and reliability. CreaTec provides solutions for all kind of physical vapor deposition (PVD) applications.

TYPE	GS
CHAMBER SIZE	200 CF - 600 CF
PRESSURE	$< 5 \times 10^{-11}$
COOLING SHROUD	LN2 around manipulators and/or evaporators
SAMPLE HEATER TEMP.	up to 1200 °C 1400 °C <small>with e-beam</small>
SAMPLE HOLDER SIZE	up to 6"
EVAPORATION PORTS	up to 14 40 CF   63 CF or as specified
BAKE-OUT TEMP.	200 °C

## Equipment for Growth Systems

-  Evaporators
-  Manipulators
-  Heating Stages
-  Linear Shutter Edge
-  Transfer Rod
-  Sample Storage
-  Wobble stick
-  Bake Unit
-  Linear Transfer System

-  Gasline
-  Media Panel
-  Sample Holder
-  Monitoring
  - Pyrometer
  - RHEED system
  - Beam Flux Monitor
  - Quartz Crystal Monitor
  - Mass spectrometer
  - Pressure measurement

-  Pumping
  - Turbo pump
  - Ion pump
  - Getter pump
  - Scroll pump, membrane pump
  - Titanium sublimation pump
  - Cyro pump
-  Pressure gauge
  - Bayard-Alpert Ionization Gauge
  - Cold Cathode Pressure Gauge