



**VGF Kronos**

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The VGF Kronos is a high-end VGF (vertical Gradient Freeze) system for the mass production of low-dislocation compound semiconductors of up to 6" diameter. A working pressure range from 10<sup>-3</sup>mbar to 40 bar and the exchangeable core module offer a high flexibility of application.

### Technical Data

#### Furnance Data

Crucible Ø:	up to 4"/6"
Max. cylindrical length of crucible:	up to 450 mm
typ. Crystals length:	up to 350 mm
Chamber Ø:	800 mm
Chamber height:	975 mm
working pressure:	max. 40 bar

#### Utilities

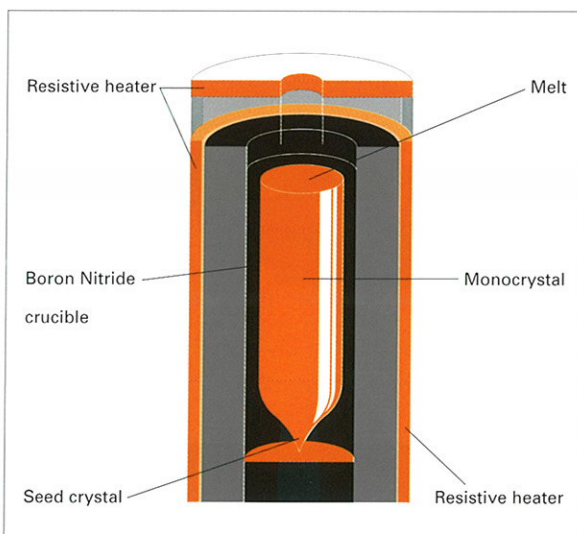
Electricity:	3AC/N/PE 400 V ± 10% 50 Hz, max. 50 kVA
Process gas:	max. 60 l/min
Compressed air:	4-6 bar
Water pressure:	max. 4 bar
Water consumption:	max. 110 l/min

#### System Control

Automatic process control by PLC/PC

#### Options

handling cart, temperature profiler, travelling magnetic field



## VGF Kronos with TMF heater-magnet module

Proven VGF Kronos for compound semiconductors equipped with the new KRIST MAG heater-magnet module for travelling magnetic fields (TMF) to control the melt flow configuration and crystallizing interface morphology.

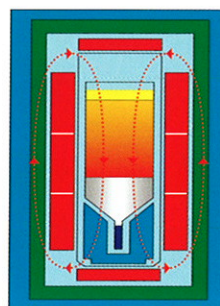
### Technical Data

#### Furnance Data

Crucible Ø:	6"
typ. Crystals length:	up to 350 mm
Chamber Ø:	800 mm
Chamber height:	975 mm
working pressure:	max. 80 bar

#### Combined heater-magnet module for Crystal growth in travelling magnetic fields

- Heater consisting of 2 or more coils according to specific application
- 2 independent frequencies adjustable from 10 up to 400 Hz
- Phase shift from 5 up to 120°
- Selectable field direction (up and down)
- Programmable magnetic field matching the process dynamics
- Growth with AC and DC components also without magnetic field applicable
- Combination of AC and DC components for optimum crystal quality by separation of crystallization process from magnetic field program



#### Dimensions (approx.)

<b>Height</b>	2,900 mm
<b>Width</b>	1,650 mm
<b>Depth</b>	1,350 mm
<b>Weight</b>	3,500 kg