

MPD

MICRO

PULLING DOWN

CRYSTAL GROWTH

FURNACE



The **Cyberstar Micro Pulling Down** system is a high temperature furnace from **ECM Lab Solutions**, adapted for direct growth of mono crystalline thin rods and fibers from the melt. With a working temperature up to 2200°C, it can be used to produce high length monocrystalline fibers (greater than 100 mm) of oxides, semiconductors, or metals. The furnace is based on a pull-down system where a fiber seed dipped into a suspended drop of melted charge is suspended from a capillary orifice at the base of the crucible. The furnace is equipped with a **Cyberstar** pulling head with high stability providing a pulling speed resolution as low as 0.01 mm/h. These characteristics of the furnace make it ideal for laboratory use, as well as, for universities, R&D centers, and production facilities.

### EFFECTIVE DIMENSIONS

Ø : 0.5 - 3mm

- Medical imagery
- LED
- Solid Lasers
- Sensors
- Telecommunications
- Defense

## AN ECM GROUP OFFER

ECM Lab Solutions helps laboratories to develop innovative products and processes by offering advanced furnace technologies under one ECM Group brand. This offer gathers all laboratory furnaces from the ECM Group. Its expertise includes the heat treatment of steels, ceramics and silicon. As well as crystal growth applications, coatings and melting processes for a wide range of research fields.



## FEATURES

### Crystals

Up to 6mm diameter

### Resistive or inductive heating

### Cyberstar precise pulling head

Translation speed from 0.01 mm/h to 100 mm/h and in Fast mode up to 100 mm/min

### Precise pressure regulation system

### Equipped with quartz window view ports

### Operating security loop system

### Chamber capabilities for primary and secondary vacuum

### Fibers

Ø : 0.5mm

### Grown at 2200°C

### Operation under vacuum, closed or open atmosphere

### Automatic control system with PC computer and control software

## OPTIONS

- Pyrometer for temperature measurement
- High magnification camera for monitoring and recording of the process

## INTEGRATION

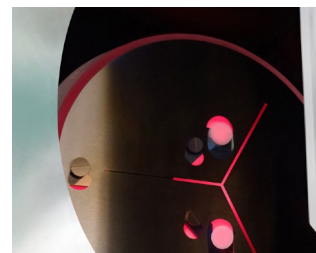
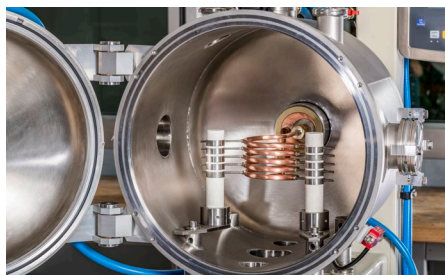
Possibility of automation

## MATERIAL

- Oxides
- Ceramics
- Semiconductors



**Cyberstar**



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