

## ERH series Sample Heater and EPS-500 series Heater Power Supply

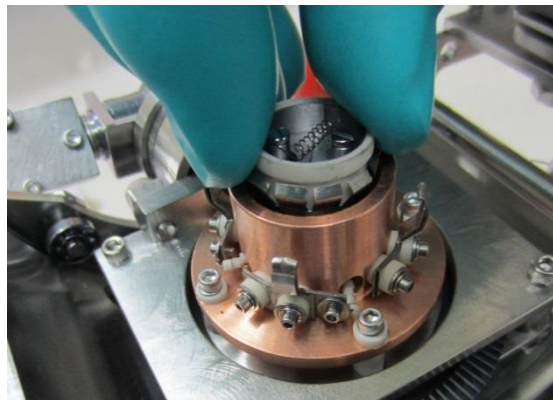
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The ERH series sample heater utilizes a combination of a resistive heating filament with electron bombardment directly to the sample or sample sub plate. When used in conjunction with a Thermionics EPS-500 sample heater power supply this system provides exceptional high temperature heating performance.

### ERH Sample Heater

#### Features

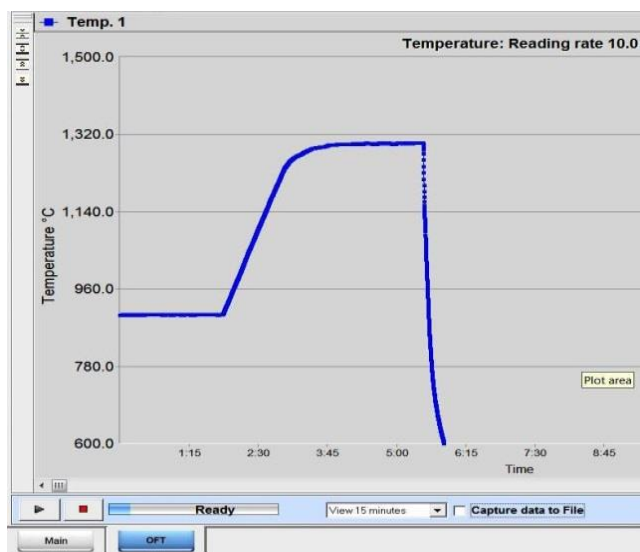
- UHV heating to >1400 C
- Temperature stability <1 degree @ 1200 C
- Exceptionally Rapid sample heating and cooling
- Plug in heater design for easy removal / exchange
- Can be used with a variety of sample platen styles
- Customization options
- O2 option for use in oxygen enriched environment up to  $1 \times 10^{-5}$  Torr.



1 cm square sample pictured at >1200 C using optical pyrometer temperature feedback. Sample is attached to a customized Omicron™ style platen with thermal isolation features and a through bore allowing the sample to be heated with direct electron bombardment. This allows controlled power directly to the sample without over stressing the heater filament and overheating heater components.

Time-Temperature plot using automatic PID control, pyrometer temperature feedback for control and simple ramp and soak program.

- Ramp temperature from 900 to 1300 at  $6^\circ$  per second (faster rates possible)
- Soak (Dwell) at set-point for 2 minutes
- Heater power off



## EPS-500 Heater Power Supply

**REMARKABLY STABLE HIGH TEMPERATURE CONTROL**  
Temperature stability of  $\pm 1$  degree @ 1200° C for 200 hours continuous operation!

### Features

- 120 and 240 volt versions
- Three modes of operation
  - ✧ MANUAL, full manual control of both filament current and High Voltage.
  - ✧ AUTO FILAMENT, full PID automatic control of filament current with manual H.V. adjust
  - ✧ AUTO H.V., full PID automatic control of H.V. with manual filament adjust
- Two temperature indicators (three with multi control input option)
  - ✧ Type K, thermocouple input for temperature indication and control
  - ✧ Type C, Optical Pyrometer, and multi input options available
- Provides up to 200 mA emission current (higher output models available)
- Filament current, Bias Voltage and emission current meters
- Ramp and Soak capability
- Multiple program storage options

