

# ELECTRICAL AND BATTERY ASSEMBLY THERMAL VACUUM TESTING SYSTEMS



**ABBESS**® INSTRUMENTS AND SYSTEMS FOR DEVELOPING  
LEADING TECHNOLOGIES, INDUSTRIAL METHODS  
& PROCESSES

Configurable systems, designed to meet your exact testing needs, Abbess TVAC Solutions offer the power and flexibility of a custom system, while providing the cost-efficiency, convenience, and quick lead times of a standard solution.





# TYPICAL FEATURES AND CAPABILITIES

integrated system solution for  
testing environments



## System Sizes:

- 18" Cube
- 24" Cube
- 36" Cube
- 48" Cube
- Larger and Custom dimensions available upon request.

## Standard Specs and Options:

- Control temperature setpoints and ramp rates from -180°C to +200°C
  - Nickel Plated Thermal Plates and Shrouds
- Vacuum levels down to 10<sup>-7</sup> torr range
- Spare ports and with multiple feedthrough options
- Calibrated vacuum gauges
- Roughing vacuum pump
- Turbo pump with optional gate valve and bypass pumping setup
- Vent and purge valves
- RGA's available to detect leaks in devices
- Vacuum Cycle Controller with:
  - Customizable recipes
  - Full integration with valves and gauges
  - Automated vacuum and temperature control
  - Data logging and remote access

- Thermal capabilities of -180°C to +200°C

- Bakeout and Degassing Functions

- Qualification of electrical and battery hardware

- Battery Testing

- Electrical Assemblies

- TQCM and RGA Integration

- ASTM Standards

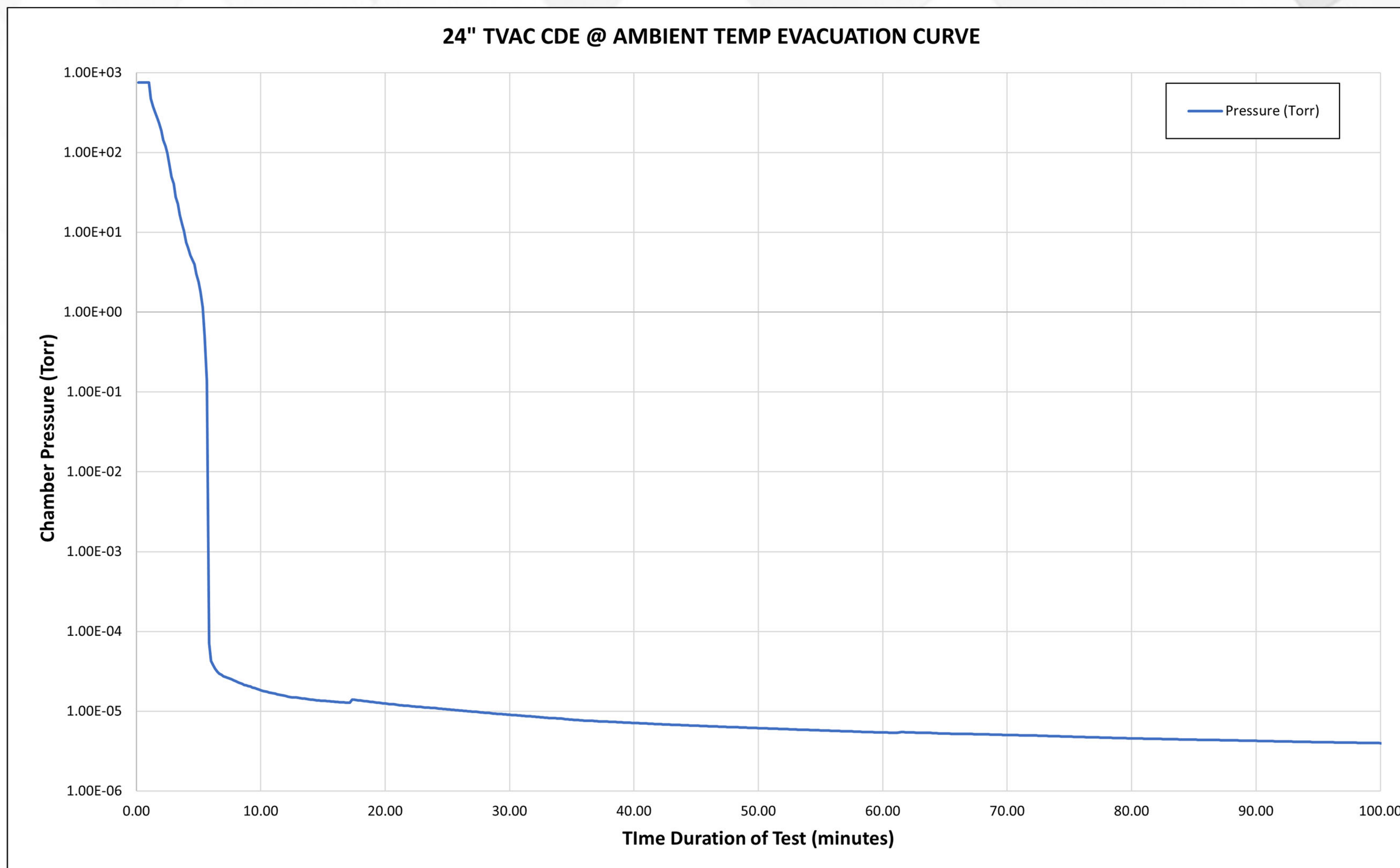
- SMC Standards

- MIL Standards





# AMBIENT VACUUM EVACUATION CURVE

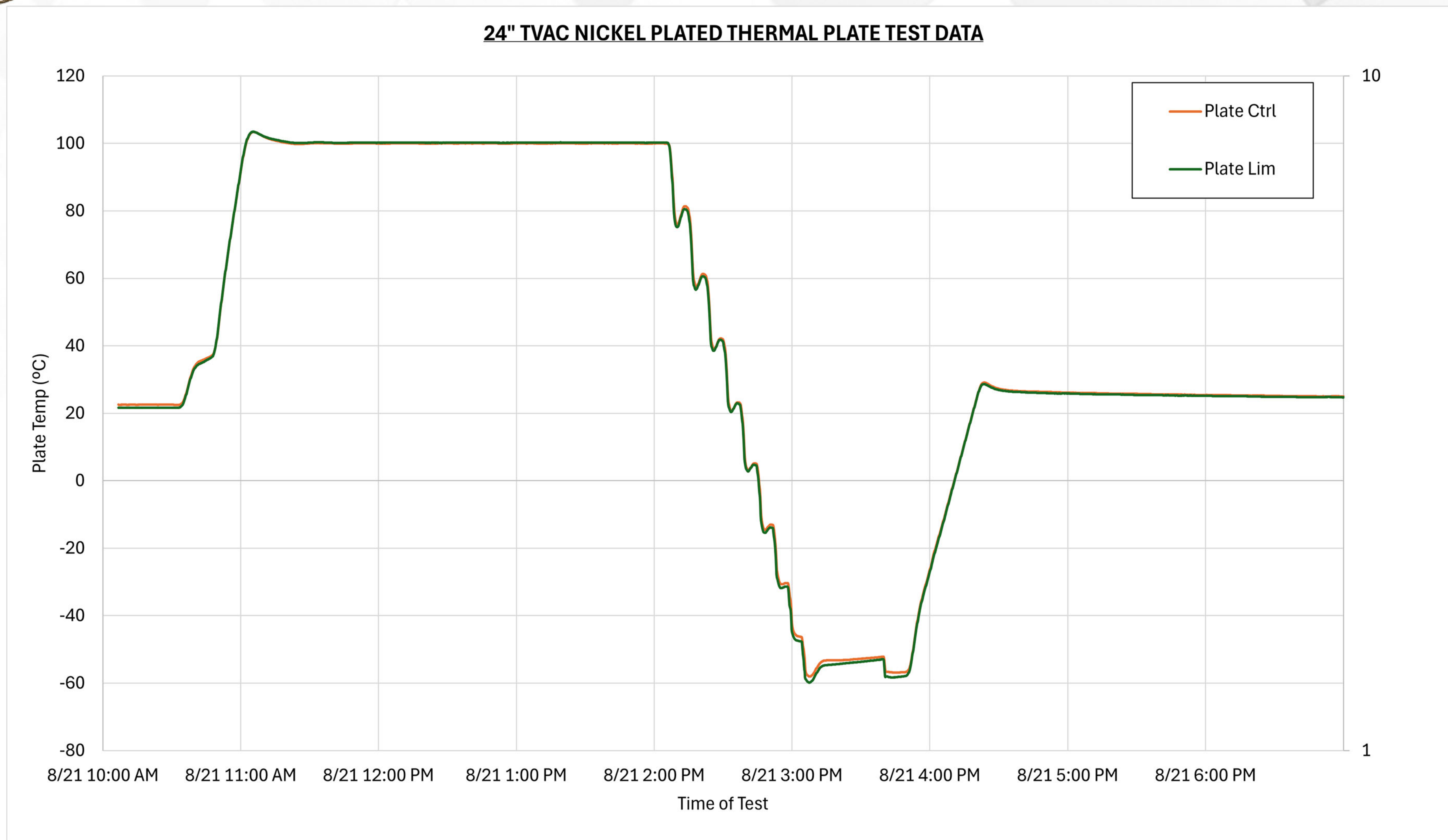


Your system will feature graphs displaying the actual performance of your specific instrument. The sample graph shown here is based on real test data from various TVAC configurations.





# THERMAL TEST DATA

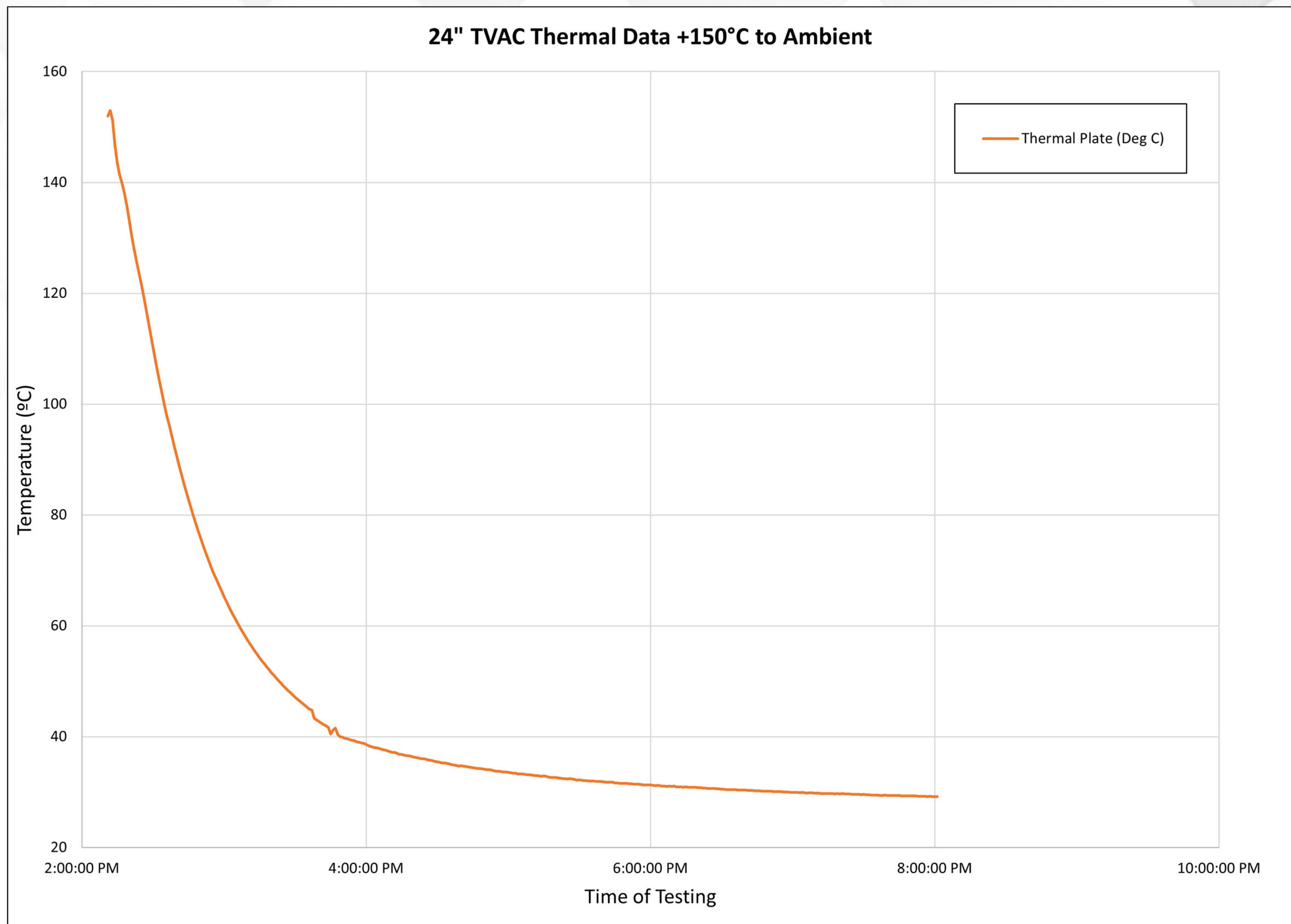


Your system will feature graphs displaying the actual performance of your specific instrument. The sample graph shown here is based on real test data from various TVAC configurations.





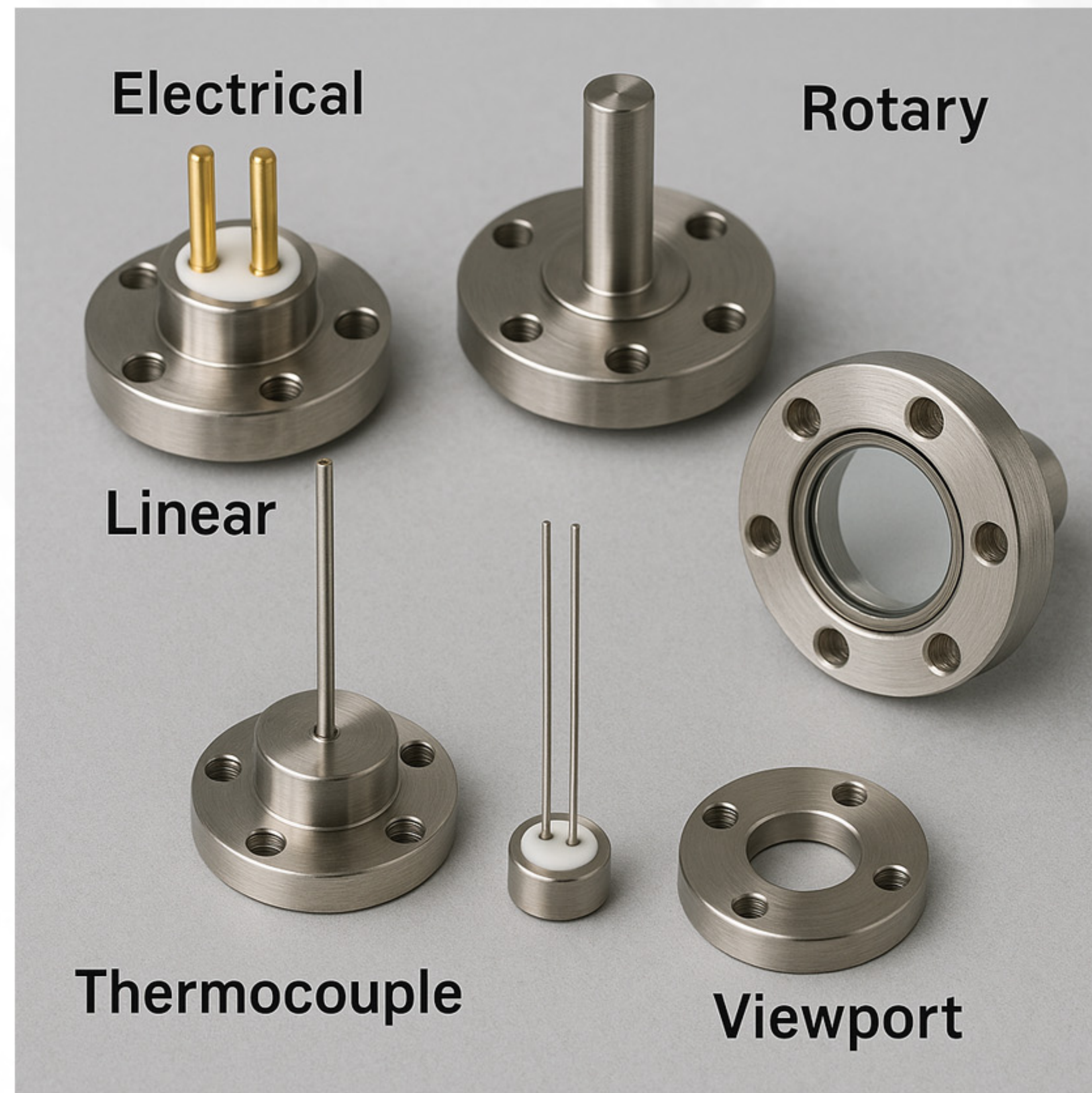
# Thermal Test Data (HOT SIDE)



Your system will feature graphs displaying the actual performance of your specific instrument. The sample graph shown here is based on real test data from various TVAC configurations.



## Vacuum Feedthroughs



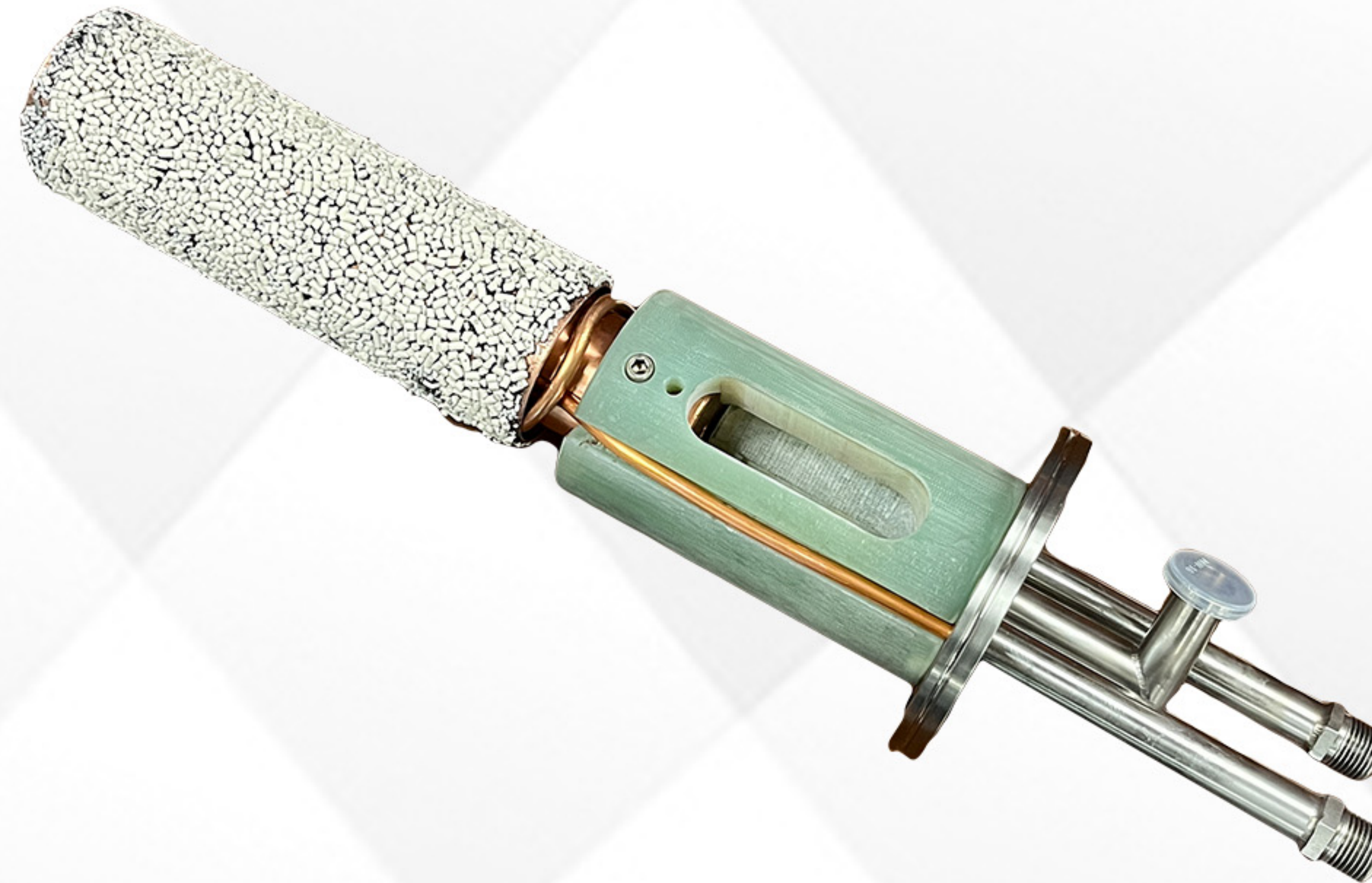
## Vacuum Compatible Lights



Available in two sizes: 30" and 17"

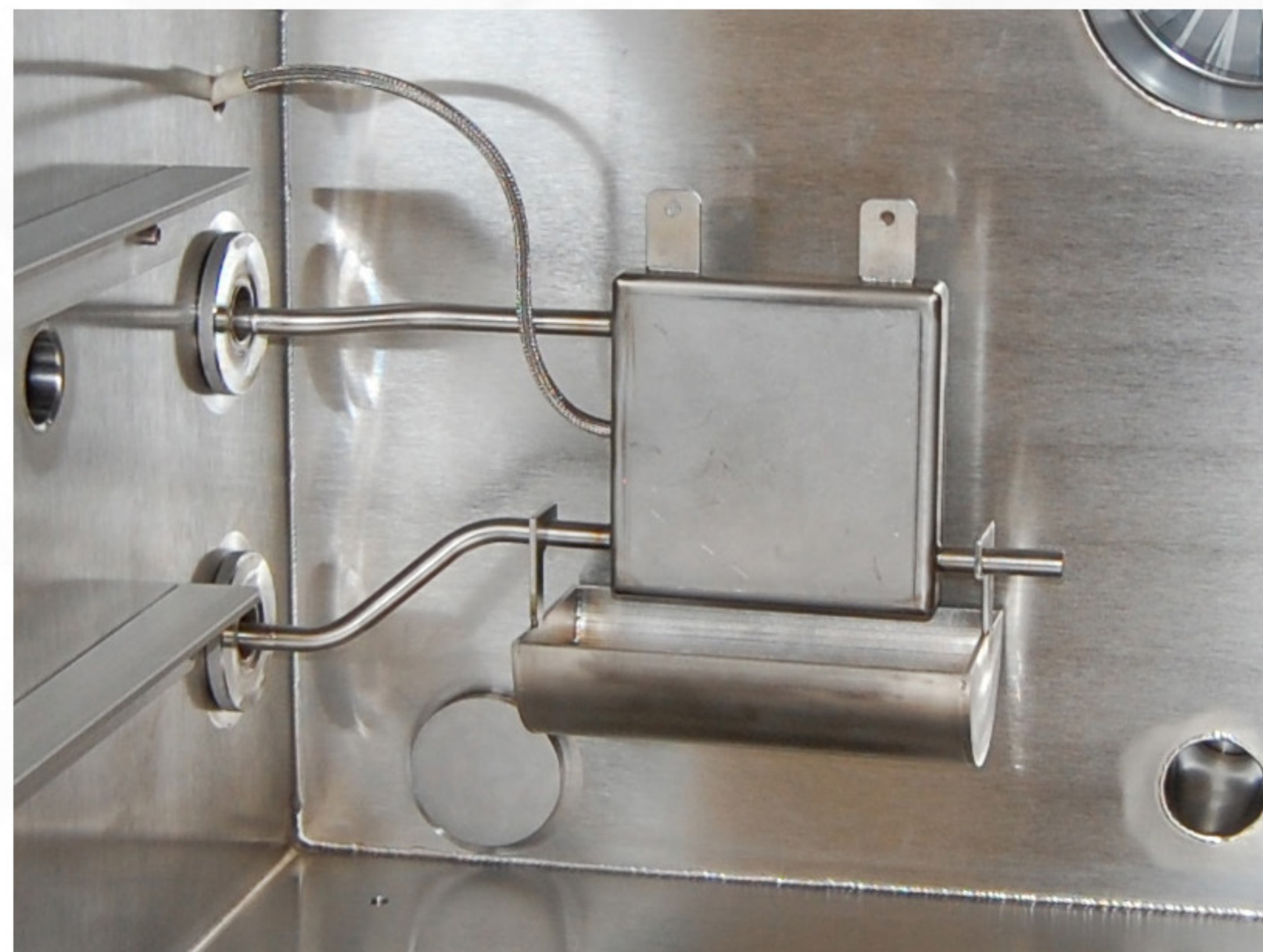
- Operating Pressure: Ambient to  $10E-7$  Torr
- Operating Temperature Range:  $-190^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$
- Max Storage Temperature Range:  $-190^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$

## Ln2 Cold Finger



- Different sleeve materials are available depending on your application.

## Ln2 Scavenger Plate



- When testing spacecraft or equipment under the vacuum and thermal conditions of space, the scavenger plate helps absorb any outgassing from materials inside the chamber.

## Standard Altitude (Vacuum) Control System



- Included with all thermal vacuum systems
- Customizable recipes
- Full system integration
- Automated vacuum & temperature control
- Data logging