Advanced Test Equipment Corp.

www.atecorp.com 800-404-ATEC (2832)

Custom systems is
our **standard**

Redline Chambers, Inc.
Who We Are

Redline Chambers has brought together leading engineering and manufacturing talent to provide the best vacuum technology and leak testing solutions to our customers. We specialize in the manufacturing of high precision, custom engineered, and skillfully fabricated vacuum chambers, vacuum systems, and turnkey solutions.

Our factory adheres to ISO 9001:2015 quality control procedures and is supported by experienced mechanical and design engineers, machinists, welders, and assembly personnel in order to produce the quality and accuracy you need.

- Low to ultra-high vacuum
- Sizes from small to x-large
- Seasoned professionals in vacuum technology

GET IN TOUCH

REDLINE CHAMBERS INC

3763 West 700 South
Salt Lake City, UT 84104

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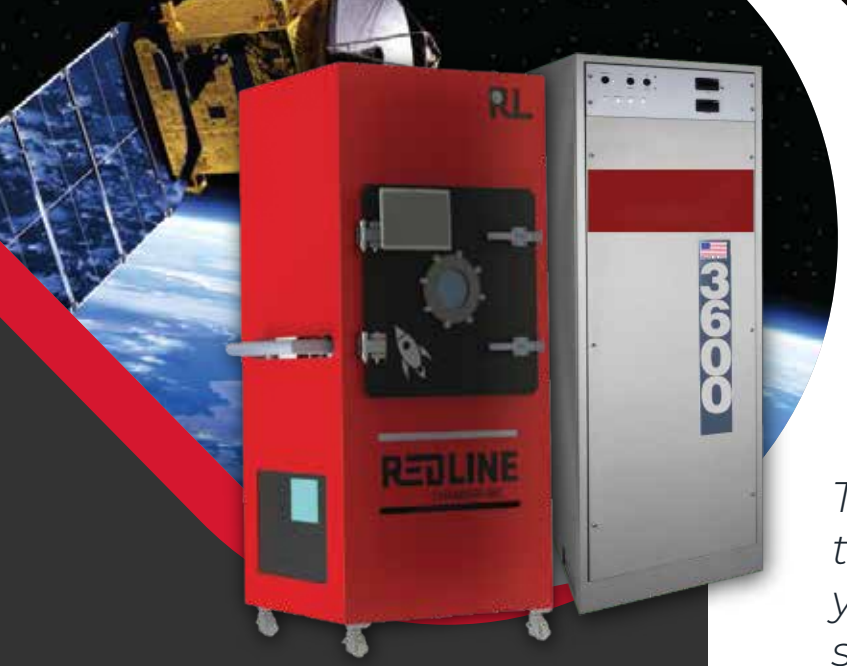
sales@redlinechambers.com

SMALL SAT THERMAL VACUUM (TVAC) SYSTEMS

DESIGNED TO MEET AND EXCEED THE RUGGED ENVIRONMENTAL CONDITIONS OF SPACE

REDLINE CHAMBERS INC



MEETING THE DEMANDING

Environmental Conditions of Space

The most common applications of a Thermal Vacuum Chamber (TVAC) are related to satellite performance tests, control of the thermal cycle, and testing of components, subsystems, and complete satellites in a fully controlled environment. The tests accurately reproduce the conditions of the space through the simultaneous control of two environmental parameters: **Pressure** and **Temperature**.

Space hardware must withstand demanding environmental conditions while traveling through space or in orbit around the planet. The combination of extremely low pressure and sudden temperature changes necessitates the highest quality and standards to be applied to such products' manufacture. Sudden temperature changes create another problem because heat dissipation is limited without the help of the surrounding air molecules.

Bake-Out: Many applications require parts that are free from absorbed materials or substances that may contaminate the system. Utilizing our technology, you can achieve successful compliance of pre-launch bake-out requirements and specifications.

TVAC Systems built to meet and exceed your requirements of a standard platform with custom capabilities

MECHANICAL SPECIFICATIONS

- **Vacuum Chamber**: 24" SS Cube with HV interior finish
- **Platen:** Cast aluminum with internal heaters and channels for LN2 or cryochiller
- **Shroud Options**:
  - Pillow plated with heaters to +110 °C
  - Cast aluminum heaters to +200 °C
- **Controls**: PLC based with wireless screen interface (tablet included)
- **Thermal Package**:
  - Cryochiller (-110 °C) | LN2 (-170 °C)
  - Electrical heating
- **Pump Packages**:
  - 9 cfm, multi-stage roots pump
  - HVP turbo package (rated to $1x10^{-6}$ Torr and below)

TEST SPECIFICATIONS

- NASA GSFC-STD-7000
- MIL-STD-154D

Redline TVAC System

Advantages

Take advantage of our ability to customize our standard TVAC system to meet the rigorous testing requirements outlined by industries standards and regulations.

- Large testing volume: Up to 6U+ configurations
- Wider temperature range capability
- No use of silicone, eliminating potential contamination
- Comprehensive shroud coverage providing better temperature controls
- Cold finger included on all systems
- Two-zone temperature control: Shrouds and platen
- Longer maintenance schedules