DATA SHEET

Electronics & Environmental
Colorado Testing Facility

ENVIRONMENTAL TESTING

Environmental Testing

The UNICOR/Federal Prison Industries Electronics and Environmental Test Laboratory has the state-of-the-art facilities, highly-trained staff and sophisticated equipment to perform the full scope of environmental testing.

Our environmental testing meets virtually all military and commercial standards, making the laboratory ideal for evaluating products for the military, OEMs and other commercial manufacturers or to perform overflow tests for other laboratories.

The laboratory can simulate any environment in the world—in a way that is precisely controlled, accurate and repeatable.

Environmental simulation is used to determine a product's ability to perform during or after exposure to a specific environment, or combination of environments. These tests are often used to prove a product's integrity, verify manufacturer claims on operating limits, determine realistic warranty terms and develop procedures for safe and proper operation.

Many components and products are used in a wide range of situations and are portable. Such items may encounter many different environments during their expected lifetimes, such as heat and cold, high and low humidity, oily and dusty conditions or intense sunlight.

Environmental Chambers

HUMIDITY CHAMBERS

Our Test Laboratory chambers have reliable, accurate and efficient full-range humidity systems for simulating conditions from 5% to 99% relative humidity.

- All are equipped with computer-based controllers so that commands can be executed quickly and accurately
- Critical input and output functions vital to chamber temperature and humidity performance are precisely and accurately controlled and recorded

TEMPERATURE CHAMBERS

Our low and high temperature chambers provide superior performance and accuracy over a wide range of applications.

- Chamber design and construction meet critical quality standards
- On-site engineering expertise ensures optimum temperature change rates
- Offer flexibility, uniformity and control accuracy required to cost-effectively test a wide range of products
- Have a number of chamber sizes—from tabletop to walk-in size—allowing us to select the exact chamber that meets your environmental test criteria

TEMPERATURE, HUMIDITY AND ALTITUDE CHAMBERS

Our temperature, humidity and altitude chambers typically are used to ensure that components and sub-assemblies meet rigorous military and commercial specifications for use in aeronautical, space engineering, automotive, computer, electronics, packaging and meteorological applications.

- Can perform temperature, humidity and altitude condition testing in one combined test chamber
- More than one condition can be simulated at the same time to satisfy many types of test requirements
- Chambers designed to simulate altitude conditions up to 100,000 feet

Salt Fog Equipment

Our salt fog chambers test equipment, components and materials for their reliability and hardiness in corrosive atmospheres, such as on shipboard or in coastal areas.

CORROSIVE ATMOSPHERIC CHAMBERS

- Test specimens suspended by Lucite rods
- Specimens subjected to deposits of salt residues or by generating a salt fog atmosphere
- Direct visual observation of test items available at all times

Our Environmental testing equipment is all NIST calibrated and traceable.

Hydrostatic Testing Equipment

Our hydrostatic testing chambers evaluate equipment and components that must perform in high-pressure atmospheres, such as that undersea, or inside of high-pressure equipment.

HYDROSTATIC PRESSURE CHAMBERS

- Generates and measures pressures up to 2000 pounds per square inch (PSIG)
- Maximum size: diameter of 4.5 inches; height of 5 feet
- Maximum temperature: 100F with a compressed nitrogen method of charge
- Pressure monitoring by Omega Engineering PX906-2KGV PSI Transducer with dial readout
- 0-3000 PSI analog gauge

Ozone and Solar Radiation Equipment for Materials Testing

Ozone and solar radiation testing is important in evaluating rubbers, plastics and other synthetic materials, and ensures that your products containing these materials will withstand exposure to the elements. Coatings, plastics and some electronic components are susceptible to ozone and ultraviolet light degradation. Items used out-of-doors or in sunlight can overheat, fade, blister and become brittle or cracked, losing their mechanical properties.

- Our ozone and solar radiation chambers accommodate many different types of testing, including ultraviolet light and silent arc discharge
- Our chambers meet both military and commercial specifications
- Most chambers can complete both Static Stretch and Dynastretch testing methods

More detailed information on the UNICOR/Federal Prison Industries Electronics and Environmental Test Laboratory is available at: http://www.unicor.gov/electronics/elecenvirtesting.cfm

For additional information, contact Steve Benedict, Test Laboratory Manager, at 303-980-2346 or sbenedic@central.unicor.gov.

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