

Thermal & Climatic Testing Services

The Importance of Thermal and Climatic Testing

- Ensure Reliability & Safety
- Optimize Performance
- Meet Regulatory Requirements
- Reduce Development Time & Costs
- Validate New Technologies
- Prove Durability in Real-World Conditions
- Reduce Warranty Costs



Visit us:
automotive
testingexpo
NORTH • AMERICA

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Booth # 10028

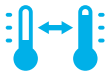
Suburban Collection
Showcase, Novi, MI



Climatic Testing: Simulating a wide range of environmental conditions (temperature, humidity, sunlight) to assess vehicle performance and durability under different climates.



Component Testing: Evaluating the thermal performance of specific components like batteries, heat exchangers, engines, and HVAC systems.



Thermal Cycling: Exposing components or vehicles to rapid repeated cycles of high and low temperatures (Thermal Shock Testing) to assess their resistance to thermal stress and potential material fatigue.



Battery Testing: Specifically focusing on the thermal performance and safety of EV batteries, including endurance testing under various temperatures, and hot/cold charging evaluations range studies.



Durability Testing: Evaluating the long-term reliability and lifespan of components, paints, self-stick emblems, etc. under thermal stress.



Engine Testing: Assessing ICE/EV engine performance and efficiency under different temperatures.

Thermal and Climatic Testing Cells for Vehicles, Powertrains and Components

A Message for Our Valued Customers

At EDP Climatic Testing, we help our innovative customers power the future of transportation and make driving safe and comfortable by simulating climatic conditions for your testing needs. These conditions assist with the development and validation of complete driving and interior systems for both internal combustion and electric vehicles. We help our customers develop their thermal management systems, covering individual components like batteries, heat exchangers, HVAC and engines to entire vehicle systems. Our affordable and modern test facility features three different size thermal and climatic test cells to match your testing requirements.

Please contact us at info@edpcompany.com or 734-260-1419 for test cell availability so we can provide you a comprehensive quotation.

Vehicle Test Chamber

- Temperature range of -40°F to 170°F
- Passenger vehicles through most heavy trucks
- 2WD & AWD Chassis Dynanometer
- 44'0" deep x 14'8" wide x 13'8" high interior; 10'0" x 10'0" door
- Cooling capacity up to 1.2 million BTUs per hour
- Heating capacity up to 200,000 BTUs per hour
- Full solar adjustable position simulation with 1400 watts / m² full spectrum light, 1000 watts/m² infrared
- Load wind simulation up to 60 mph that can be synchronized to vehicle speed
- 600 CFM refrigerated, 0% humidity make-up air
- Instrumentation panels with multiple thermocouple, coaxial, and high voltage/ current channels
- Driver's trace display
- Safety first with continuous air quality monitoring and warning systems

AWD Chassis Dynanometer

- 400-hp peak absorption AWD mode
- 400-hp peak absorption 2WD mode
- Compatible with wheelbases of 104" - 135"
- Air-cooled eddy current power absorber
- 200 mph maximum speed

Engine Test Chamber

- Temperature range of -40°F to 170°F
- Up to two engines on water brake dynanometers (32°F minimum temperature)
- 19'4" deep x 13'5" wide x 7'9" high interior
- Cooling capacity up to 310,000 BTUs per hour
- Heating capacity up to 100,000 BTUs per hour

Component Test Chamber

- Temperature range of -150°F to 650°F
- Mechanical, electrical, temperature and humidity testing
- 3'0" deep x 3'0" wide x 3'0" high interior
- Instrumentation port

