

Climatic tests



Performance of any kind of test in controlled climatic conditions on isolated components, subsystems or full vehicle. Main testing techniques are shown below:

- Temperature, humidity and radiation (IR or total spectrum) climatic tests
- Any kind of ozone, thermal shock, corrosion, light ageing or IP tests
- Function durability test in climatic conditions
- Environmental uniformity and stability studies under temperature, humidity and radiation conditions
- Instrumentation with several kinds of sensors (thermocouples, strain gauges, displacement sensors, load cells...)
- Data processing and decision-making

Main facilities

Walk-in climatic chambers

- Volume range: 6 to 200 m³
- Temperature range: -40 to 160 °C
- Humidity range: 30 to 95 %HR
- Available portable lamp systems to carry out IR radiation tests

Thermal shock chambers

- Temperature range: 220 °C to -65 °C
- Change interval < 10 seconds

Light resistance test chamber: Weather-Ometer

Salt spray climatic chambers

Ozone climatic chamber

Climatic chambers of different dimensions (0.6 to 2.6 m³)

Climatic chambers combined with shakers

Solar radiation chamber according to DIN 75 220



Instrumentation

- Accumulated expertise and availability of a complete equipment for strict long-term test monitoring with the control frequency required for each application
- Follow-up of any type of climatic test with different sensors (thermocouples, strain gauges...)



Linked areas

- Materials laboratory: Checking aspect and characteristics of materials after the test
- Metrology laboratory: Dimensional control before and after the test
- Fatigue and durability laboratory: Testing under climatic conditions
- Intercoolers and engines laboratory: Climatic tests on EGR devices

Accreditations and certifications

- ISO 17025:2005 for "Temperature and humidity cycles, thermal shock, salt spray and radiation IR tests"
- Notification reconnaissance de compétence fournisseur RENAULT to perform IR radiation tests according to standard 32-00-011/D

