

Environmental Testing and Climatic Tests

Environmental testing allows the evaluation of products' resistance to temperature variations, humidity, and other extreme climatic conditions. Leveraging extensive experience in **environmental testing**, INTEK supports companies to ensure regulatory compliance and improve the quality of their products.

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Environmental Testing and Climatic Chambers

Environmental testing, also known as climatic testing, involves examining devices within **climatic chambers**, specially designed structures to reproduce controlled environmental conditions. It is

possible to conduct **tests for resistance** to temperature, humidity, corrosion, chemical agents, and more. These tests can be performed individually or in combination, depending on the specific needs of the devices being tested and their applications.

INTEK has **climatic chambers** capable of simulating temperature variations and a thermal shock chamber, allowing the fulfillment of all electrical safety standards requirements.

How Climatic Tests are Performed

Climatic tests vary based on the type of test and the conditions being simulated. Generally, they involve exposing products to extreme conditions for a defined period or cycle. During and after the **climatic tests**, data is processed. From the analysis of the results, any damage, degradation, or performance alterations can be highlighted.



INTEK Environmental test laboratory

At the INTEK **environmental test** and trial laboratory, we ensure a customized approach to assessing the resistance of products by simulating the harshest environmental conditions they will encounter in the field. From cyclic **climatic tests** to rapid thermal shocks, thanks to our extensive experience and

state-of-the-art equipment, we can design specific tests to meet even the most demanding requirements.

Environmental Testing: Standards and Directives

Environmental tests are regulated by a series of international standards and directives, such as **ISO 16750** for the automotive industry and **IEC 60068** for the electronics industry. These standards establish the **requirements for climatic tests** to ensure product compliance and safety.



INTEK Environmental Testing Services

INTEK offers a wide range of **environmental testing services**, including compliance testing, performance evaluation, and damage analysis. The laboratory specializes in conducting **precise and reliable climatic tests** using state-of-the-art climatic chambers. With a team of qualified experts, INTEK supports customers at every stage of the process, ensuring the proper functioning of the products under test. It offers customized measurement and diagnostic solutions using advanced tools and software like LabVIEW.

Additionally, INTEK can conduct IP rating verification tests to protect electronic devices from dust and water ingress.

Case Study: Functional Testing for Automotive Sensors

In the automotive sector, it is common to need **climatic and mechanical tests** on sensors and control units, with similar requirements across various manufacturers. However, designing **customized diagnostic systems** to fully explore the functionalities of such components is a significant challenge. **INTEK stands out by offering tailored solutions**, leveraging extensive experience in LabVIEW programming and the use of modular systems like NI CompactRio. This approach ensures flexibility, scalability, and reliability to meet the sector's most complex needs.

Request information for Environmental Testing and Climatic Tests

INTEK is an independent test and measurement laboratory, an Italian excellence in test and measurement services. **Request information online about the Environmental Testing and Climatic Tests service:**

<https://www.intek.it/en/environmental-testing-and-climatic-tests/>