

ABOUT US

Resonate Testing Limited offers a state-of-the-art test facility, between Dublin and Belfast. Our primary focus lies within our three cornerstones of testing:

- **Vibration and Shock**
- **Fire and Flammability**
- **Environmental**

As part of The Nacelle Group we have a wealth of expertise in engineering test specification and component certification and validation.

COMBINED ENVIRONMENTAL TESTING

To complement our vibration and fire testing facilities, we offer a range of environmental tests based on Temperature, Humidity and Altitude. These include high and low temperatures, thermal cycling with rapid ramp rates and combined Temperature, Humidity and Altitude ranges.

If you have a component which is likely to be exposed to extreme environmental variance we can test it to determine the effects of temperature excesses, humidity and high altitude up to 100,000 ft – and combinations of these parameters.

Testing can be conducted with units functioning, and additional thermocouple and data-logging facilities can be provided.

With a background in Aviation we are particularly aware of the range of tests covered by RTCA DO160, and along with our partners will be happy manage your test program. We can also conduct testing for a range of other sectors including Space, Automotive, Energy and Medical Applications.

Please do not hesitate to contact us with your specific requirements.

ACCREDITATION

Resonate Testing holds accreditation to internationally recognised test house standard ISO17025. We are FAA listed for fire testing and have approved supplier status from a number of OEM clients. The Nacelle Group holds ISO 9001.

EQUIPMENT AND CAPABILITIES

Temperature Testing

Our Thermotron RSS-16-LN2 temperature testing chamber has 16ft³ of test space (internal dimensions of H30" x W26" x D34") and is capable of providing cooling and heating between -100°C to +200°C, with a ramp rate of up to 20°C per minute if required. The chamber, with 100% throttle, is capable of the following transitions:

+150°C to +83°C in 30 seconds

+83°C to +34°C in 60 seconds

+34°C to +4°C in 90 seconds

+4°C to -20°C in 120 seconds

-20°C to -50°C in 160 seconds

The cooling and heating capability of this chamber was commissioned in response to the most demanding aerospace and high-end engineering temperature variation requirements.



9373



Temperature & Humidity Testing

Our **Weiss SBI I Environmental Chamber**, with internal dimensions H26" x W21" x D16.5", offers a temperature range from +180C and -40C, with a ramp rate of approximately 3C per minute. It can also achieve a range of humidity levels from 10-98% Relative Humidity, depending on the temperature profile. This chamber can be used for long term static profiles or thermal cycling across the range.



Altitude Testing with combined environmental conditions

Our **Thermatron FA-35 Altitude Chamber** brings the broadest range of capabilities along with a substantial test bed area.

Altitude ranges from Ambient up to 100,000ft and it can achieve up to 70,000ft in 20 minutes.

Temperature ranges from: -73°C - +177°C, at a ramp rate of circa 5°C/min.

Humidity ranges from 20% to 95% RH.

The chamber can be programmed across a mix of all 3 parameters. Please contact us with your requirements and we will be happy to assess what can be achieved.

Thermatron FA-35 Altitude Chamber



*Available Chamber Test Area (with racks removed):
 Width - 950mm Height - 1050mm Depth - 900mm*

Our chambers can be used for a range of test programs, including facilitating icing tests and tests outlined within RTCA DO160. We work with a range of partners to conduct tests such as Sand / Dust, Salt Spray and Fluid Susceptibility and we are happy to co-ordinate a broad environmental test program on our clients behalf. We also maintain in house capability to design and fabricate suitable fixtures to ensure test articles are appropriately positioned in our chambers.