Life Safety & Security
Leatherhead

Fire Safety Testing
Centre of Excellence
Intertek is pleased to offer manufacturers and test laboratories accredited testing services within our Centre of Excellence for Fire Safety testing in Leatherhead, Surrey, UK.

In 2011, Intertek invested £1m to build this new test facility to support the Fire and Security sectors - which includes a fire test room, acoustic chamber, large SO2 chamber and smoke/heat tunnels.

The laboratory is also adjacent to our existing EMC facility in Leatherhead - which is one of the largest in the UK with 5 anechoic chambers and 7 screened rooms.

Only 30 minutes from Heathrow Airport and off junction 9 of the M25 motorway, our facility is accredited to EN 17025 to complement our extensive Notified Body services for Construction Products Directive /Construction Products Regulations.

Fire Test Room
Designed and built to perform fire testing according to EN 54-7 as well as UL and CSA requirements, this room has moveable walls to change the dimensions of the space according to the requirements of your chosen Standards.

R&D Testing for North America
For North American market approval Intertek provides the ETL Listed Mark which is accepted by Authorities Having Jurisdiction (AHJs) across America. With this in mind, our facility has been designed to allow EU manufacturers the opportunity of performing development testing to see how their products would fare against US requirements.

R&D testing for upcoming Standards
When designing the Fire Test Room we specified the inclusion of duct work, as required in provisional Standard prEN 54-27 for Duct Smoke Detectors. Although this standard is not yet harmonised manufacturers of duct smoke detectors are able to conduct testing in preparation for this upcoming standard - helping them get to market fast.

Optical Laboratory
The facility is equipped with an optical laboratory to enable the testing of Beacons to EN54-23.
Acoustic Chamber

This is a fully anechoic acoustic chamber with a 4m measurement distance. The overall internal dimensions are 9.0m x 6.5m x 5.0m high (allowing for a height of 3.0m inside the chamber).

The chamber is calibrated against EN 54-3 and EN 54-24 for Sounder and Voice Evacuation Loudspeakers respectively.

The calibration covers the frequency range 100Hz to 10kHz matching the performance to 1/r law.

The measurement system used is the fully automated Bruel & Kjaer Pulse system with automated turntable, this allows quick repeatable measurements of samples without repetitive manual interaction.

The acoustic chamber is available for any industry and has recently been used to measure Military headsets, domestic appliance and medical devices for various specifications.

SO2 Chamber

Sulphur Dioxide test chambers are not easy to find - especially to meet the modified requirements in EN 54 standards. Most test chambers are built to IEC/EN 60068-2-44 which requires a sulphur dioxide mixed environment at 75% relative humidity.

However EN 54 modifies this test method to require a 95% relative humidity during test - dangerously close to producing acid rain - and so the chamber design itself needs to be more complex.

The capability of the Weiss Gallen-Kamp VC-200 to meet this specification made it the obvious choice for our facility. It is also the largest chamber the company can supply, at 1000L.

As a product test for EN54 normally runs over 21 days in an SO2 chamber, these units are in high demand across Europe.

Smoke / Heat Tunnels

Intertek can offer full compliance tests for EN 54-5 and EN 54-7 testing in this tunnel.

A full validation of the performance against these standards has been performed and adjustments made to the tunnel to maintain a 2degree window across the measurement volume (something missed on most tunnels leading to unrepeatable results).

The tunnel is also automated - allowing directional dependence and other tests to run un-assisted.
Our Leatherhead facility is part of our global network of laboratories working with you to meet both your R & D test requirements and your wider compliance needs.

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