Center of Competence for Refrigeration and Air Conditioning

Europe’s largest independent specialised laboratory with over 40 years of experience.
Our qualified engineers support you with technical expertise and practical experience – from conceptual design to placing into service.

Your experts in refrigeration, air conditioning and technical acoustics.


Less energy consumption. Lower sound level. Higher efficiency. As the urge to preserve our environment and protect our climate grows stronger, demands made on refrigeration and air-conditioning units are becoming stricter.

TÜV SÜD offers manufacturers and users Europe’s largest independent test laboratory – the Center of Competence for Refrigeration and Air Conditioning – for function and performance testing, thermodynamic assessments and measurement of sound emissions. TÜV SÜD’s test laboratories have the capability to carry out practically all measurements in the fields of refrigeration, air conditioning and technical acoustics.

The laboratory provides a wide range of test chambers, which can be combined into dual-room chambers to allow parallel simulation of exterior and interior ambient climate conditions. ATP test rigs, a technical acoustics laboratory and test rigs for climate-friendly refrigerants, such as R744 (CO2) round off the facilities in our Center of Competence.

Did you know? You can also rent our test chambers for your individual tests.

Our outstanding know-how, first-class reputation and long-standing international experience make us your service provider of choice.
We provide proof of how well your systems work.

Stationary refrigeration, air-conditioning and ventilation systems

We offer professional and qualified evaluation of products in the refrigeration, air-conditioning and ventilation industries right from the design and planning of refrigeration, ventilation and air-conditioning units (e.g. food processing machinery, refrigerated display cabinets, heat pumps etc.). We provide assessment, testing and certification services and ensure the accuracy of data including performance, energy consumption, efficiency, flow rate and many other more.

From test services for new devices and systems to questions related to the safe and cost-effective operation of your existing systems, our air-conditioning, energy-efficiency and product-safety experts will provide quick and easy support with finding the right solutions.

Our aim is to ensure that your systems work safely, reliably and efficiently.

Mobile refrigeration and air-conditioning units

The efficiency and functionality of heating, air-conditioning and refrigeration systems play a significant role in vehicle operation.

Leave your refrigeration and air-conditioning tasks in the capable hands of a reliable partner: TÜV SÜD. As an accredited test laboratory, we test equipment for temperature-controlled transport of food and pharmaceutical products, as well as air-conditioning and heating systems in trucks and passenger cars. We answer questions on how to maintain a continuous cold chain in logistics, and take care of the calibration of temperature-monitoring systems.

As a recognised ATP-test station, our engineers carry out type tests of complete refrigerated vehicles according to the ATP Agreement.

Prototype and product testing of refrigeration systems and components

Calibration of thermometers and temperature-monitoring systems.

Testing of refrigeration systems such as refrigerated display counters and heat pumps, or components such as heat exchangers, compressors, fans.

Your specialist for transport temperature

23.5 m long; 3.5 m wide; 5 m high – our ATP-test chambers are perfectly designed for accommodating even large vehicles, including buses or construction equipment. Truck manufacturers will find that our testing laboratory offers ideal conditions for testing their innovations. Users such as logistic companies can optimise their logistics planning of temperature-sensitive shipments.
We help you to limit noise emissions.

Technical acoustics

Be it ventilation and extraction systems in buildings, fans in refrigeration units or vehicles, or motors and pumps in machinery or refrigeration systems – all equipment produces sounds which most people perceive as unpleasant. To make sure that any unwanted noise from technical components is below perceptible levels, or to test whether the sounds produced are within the required tolerances, we have established ideal conditions for technical acoustics measurement in our laboratory.

Our semi-anechoic room is equipped with ultramodern measuring systems and well-designed infrastructural units. From exact information about airborne noise emission, and thus the sound power level of a machine, or measuring impulse levels and identifying low-frequency sounds to determining the acoustic performance of machines in various configurations, our testing laboratory has the optimum capabilities for a wide range of tasks. We will also be happy to carry out technical acoustics testing directly on site at your premises.

Manufacturers and operators of refrigeration and air-conditioning systems will find ideal technical capabilities at our test laboratory.

Your benefits:

- Opt for one of the largest test laboratories for refrigeration and air-conditioning in Europe – thereby assuring that we can offer you solutions for virtually all tests in the field of refrigeration and air conditioning and the associated technical acoustics.
- Enhance the quality of your products – by identifying areas that offer opportunities for improvement, detecting possible weaknesses at an early stage and accelerating time-to-market.
- Gain certainty – our familiarity with technical directives, regulations and standards, both national and international, is practically second to none, providing certainty and speeding up your design and development process.
- Build on expertise – benefiting from our professional team’s long-standing experience and expertise.
- Benefit from the independence and impartiality of a qualified partner – whatever the challenge you face in refrigeration, air conditioning or technical acoustics, we will always come up with a qualified solution. As a third-party expert organisation, we provide independent and impartial inspection and assessment services.
- Rely on a strong brand. The outstanding international reputation of the TÜV SÜD brand ensures that our reports and certificates meet with a high level of acceptance worldwide.
Your qualified partner in all issues related to refrigeration, air conditioning and technical acoustics.
Our laboratory carries out testing on behalf of EUROVENT Certita Certification, EHPA, ASERCOM and other renowned organisations. We are accredited by the German national accreditation body (Deutsche Akkreditierungsstelle, DAkkS) as a test laboratory according to EN ISO/IEC 17025 (D-PL-14153-04-00), and as an inspection body according to EN ISO/IEC 17020 (D-IS-14153-03-00). In addition to the above, we are a recognised ATP-test station and calibration laboratory (D-K-14153-01-00) for pressure and temperature. We also offer a large number of other tests and inspections. Our continual involvement in national and international committees assures you a high level of technical expertise and our strong brand gives you the opportunity to “Add value. Inspire trust.” throughout the world.