



IT Cooling Solutions

STULZ Air-Conditioning Test Centre

Putting air-conditioning and refrigeration technology to the test



We create the right climate – for stringent performance testing

As an international leader in the field of precision air-conditioning systems, we have expanded our testing capabilities here in Hamburg. Our computer-controlled Air-Conditioning Test Centre, which went into operation in 2007, was designed to employ state of the art testing techniques from a strenuously scientific perspective. By consolidating resources and pooling expertise into a focused test centre we have created an incredibly versatile facility. This allows us to rigorously test and optimise equipment not only during design and development, but to meet specific project requirements.

Precision air-conditioning systems keep your critical communication and information technology available – around the clock. Therefore, before they start working for you it is crucial to conduct extensive test runs under various conditions, to certify the actual performance capabilities of your systems.

We continually invest in new technology and processes, so that we can offer you the best solution.



The STULZ climatic chamber: always open for a test run

STULZ customer testing – Ensuring high availability and creating transparency

Cape Town, Sao Paulo, Barcelona, Moscow, London, Shanghai, Dubai, Frankfurt – wherever you are planning your data centre, we are there for you. When you perform a witness test at our centre, we simulate your conditions live in our climatic chamber, and take account of your requirements and the influencing variables down to the last detail. Our test processes are divided into three phases (test preparation, testing and follow-up work), to ensure greater efficiency. Our test bench engineers support you through all phases of performance testing, and provide you with extremely useful performance values for our precision air-conditioning systems.



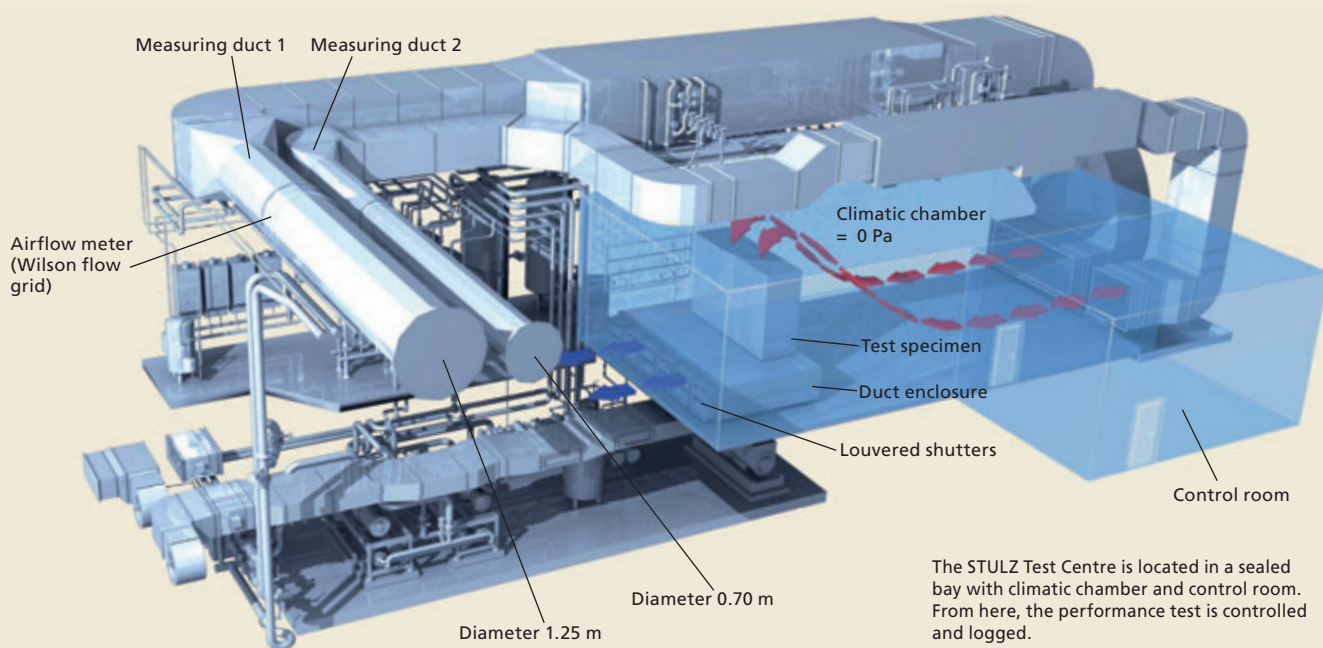
Experience the testing of your air-conditioning system live in our control room

Live at the STULZ Test Centre

STULZ is one of the first manufacturers of precision air-conditioning systems in the world to boast a test centre of this size with virtually unlimited testing capabilities. In order to create especially realistic test conditions and minimise external environmental influences, the entire technology and air conduction system is integrated in a separate bay with three levels. In the control room, monitors and viewing windows enable you to observe and evaluate the test process.

The STULZ Test Centre – facts & figures

Output range	5 – 500 kW
Floor area of Test Centre II:	400 m ²
Climatic chamber:	55 m ²
Temperatures:	-20 °C to +55 °C
Test specimen:	max. 40,000 m ³ /h air
Chiller:	80,000 m ³ /h air
Heating capacity:	320 kW



Welcome to the STULZ Test Centre! Its advantages for you

- Certified, independently calibrated test facility
- Test scenarios based on climatic and energy supply conditions in your country
- Documentation of test results
- Peace of mind when choosing your air-conditioning system
- Certainty in the calculation of running costs
- Compliance with building regulations in your country
- Water temperature adjustable from 4 °C to 60 °C to suit your requirements
- Use of glycol permits testing at minus temperatures
- Infinitely adjustable for voltages/frequencies all over the world
- Sound measurements based on intensity, as per international standards

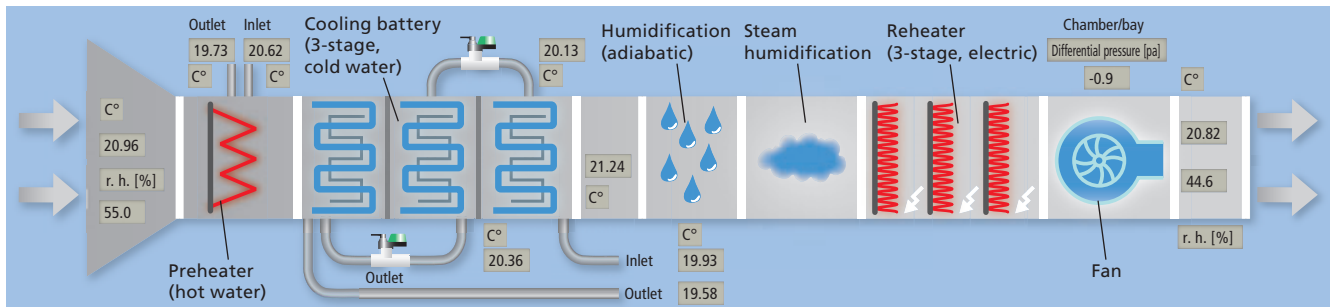


Interior dimensions of the climatic chamber: Height 4180 mm, width 9760 mm, depth 5680 mm

A detailed look at conditioning

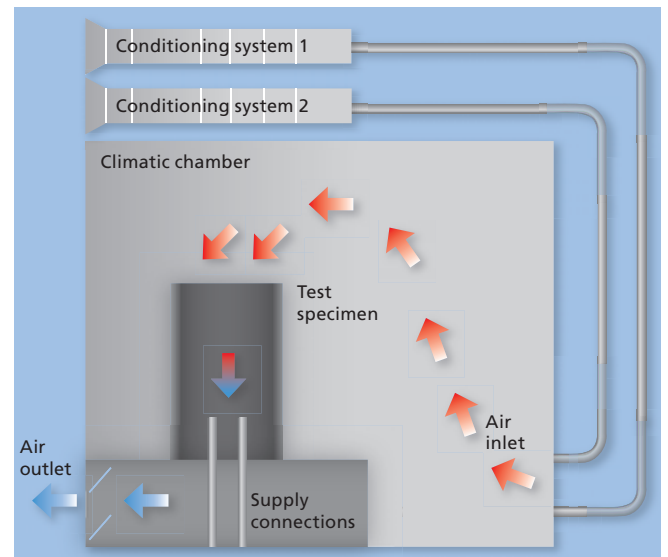
The conditioning system is situated above the climatic chamber and is set to the customer's specific environmental conditions (temperature, air humidity, volumetric air flow, etc.).

In this way, heat loads and moisture contents in rooms to be equipped with air conditioning can be simulated with pinpoint accuracy.



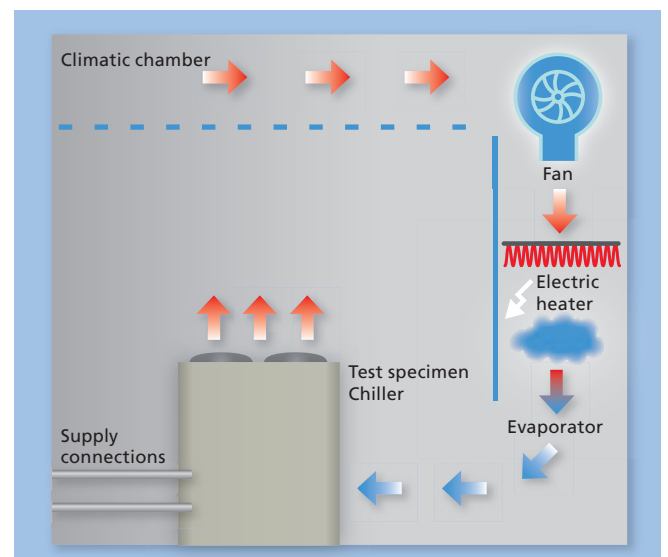
Conditioning with two systems extends the range of testing possibilities

- Precise testing of liquid and air-cooled refrigerating machines, evaporators, condensers, air coolers, heat exchangers and air conditioners
- The temperature and moisture content of the air is adapted with pinpoint accuracy
- Butterfly valves simulate external pressure
- Individual values are graphically presented on the computer



Testing chillers and air-cooled condensers – environmental simulation mode

- With air flow conditioning, temperatures from -20 °C to +55 °C are possible
- A volumetric air flow of 80,000 m³/h maximum is available



STULZ: Precise climate control anywhere in the world – You benefit from our expertise

Success is secured through experience, in-depth development and computer-aided engineering

All the relevant steps, from the rough draft to the finished precision air-conditioning system, are supported by finely tuned development tools. Development, prototyping, accompanying tests and production all take place in one location, enabling speedy intervention at any time.

What you get from us is a sophisticated system that satisfies exacting quality requirements.

If your data centre project requires an individual or adapted cooling technique we can develop and create such a system. This can be achieved in a very short time, working in partnership with your facility designers.

Tests in compliance with international standards ensure optimum acceptance

Our test equipment is calibrated annually by independent DKD calibration services/calibration institutes. Our Test Centre complies with all the necessary regulations. We promise you confidential, independent testing.

EN 14511 – Terms, test conditions, test procedures, requirements

EN 1216 – Forced circulation air-cooling and air-heating coils

ISO 9614 – Determination of sound power levels of noise sources using sound intensity



Equipment room 1



Pump stations for conditioning system



Pressure sensors for conditioning system

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IT Cooling Solutions

Close to you all over the world.

... With specialist, competent partners in our subsidiaries and exclusive sales and service partners around the world. Our five production sites are in Europe, North America and Asia.