



Maximum comfort and energy efficiency

The precision and reaction time with which sensors react to changes in ambient conditions is what makes the difference in a control appliance for building technology as well as in a temperature control chamber. For this reason, Stuhl Regelsysteme GmbH from Spalt in Bavaria are testing the functionality of their components in a Memmert climate chamber ICH 256.

The fact that comfort and **energy efficiency** are not incompatible in times of rising energy prices is above all down to temperature, ventilation and heating control, as well as **room temperature control**. These ensure an ideal living and working climate and react extremely sensitively, thus saving energy, to internal and external climates, room usage or personal preferences.

Climate testing and stress tests for building technology



Memmert climate chamber ICH for climate testing



For more than 30 years, Stuhl Regelsysteme GmbH has been manufacturing electronic **control appliances** for the sectors of heating, climate and ventilation. Since nearly all their products contribute to maximising the **energy efficiency** of building engineering systems, the exact and finely tuned interplay between sensors and electronics is the decisive quality feature of the appliances. In the **Memmert climate chamber ICH**, the quality laboratory checks the characteristics of the sensors, measures the precision of the electronic control and subjects the appliances to regular **stress tests**, under defined temperature and humidity conditions.

Detailed documentation of all test processes

In the **climate chamber**, the test specimens receive signals via a cable feed-through. The signals are recorded on external calibrated measuring equipment, along with the test parameters of temperature, humidity and test duration. In parallel, the chamber internal log of temperature and humidity is enlisted for the plausibility test of the external measurement results. At Stuhl Regelsysteme, in particular the many convenient functions that simplify and accelerate the test processes are highly appreciated, along with the very good temperature/humidity distribution in the ICH.

Simple operation via "Celsius" software

The control appliances are subject to both constant temperature/humidity combinations and climate changes, whereby the test duration lies between several hours and 14 days. Using the "Celsius" control and logging software from **Memmert**, the Stuhl development team looks after a wide range of climate profiles. The **climate chamber ICH** is connected to the company network via Ethernet and can be operated from any computer. In addition, the ICH can add the spacious interior with a large door, the cable feed-through, directional castors for transport in the laboratory, operation with single-phase alternating current, and the good price/performance ratio to its plus points.

AtmoSAFE would like to thank Stuhl Regelsysteme GmbH for the many years of loyalty to **Memmert** and their friendly



Temperature, ventilation and heating control ensure an ideal living climate

Testing of sensors in the constant climate chamber

The company S+S Regeltechnik uses two Memmert constant climate chambers for the **adjustment** of sensors for the measurement of **temperature** and **humidity** as well as for humidifying sensor elements

[more](#)

support in the writing of this article.

Overview of focus topics

- Testing sensors
- Climate chamber
- Building technology
- Temperature sensor
- Humidity sensor
- Heating controller
- Ventilation controller
- Temperature controller
- Room temperature controller
- Precision

Memmert laboratory equipment for climate testing

[Climate chamber ICH](#)

[Constant climate chamber HPP](#)

[Climatic test chamber CTC](#)

[Humidity chamber HCP](#)

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