Case Study Cosmetic

weisstechnik and the study of climate impacts on skin and beauty products

WHY	HOW	WHAT
The influences of various climates on skin and cosmetics products	Analysis by means of long-term temperature and humidity tests with humans	Weiss climate chamber, 41 m^3, simulation of natural light, addition of hygienic air

WHY – The challenge.

A leading international cosmetics company is investigating and analysing the influences of climate (temperature and relative humidity) on

- *Physiological skin changes*
  Thermal comfort, the effects of humidity regulation and the functioning of the skin barrier in dry environments are important factors here.

- *Beauty products and their use on skin*
  The durability of make-up in humid climates and the compatibility of various products (lotion, serum, cream, foundation, powder etc.) when used on skin are being investigated.

The focus is on particular climate zones, e.g. Southeast Asia.

HOW – The idea.

Country-specific climate conditions (with a focus on Asia) are recreated in the climate chamber and the temperature and relative humidity are controlled.

The simulation of natural light and a direct view into the climate chamber through a viewing window make observations under real conditions possible.

Safety is ensured and a pleasant, comfortable “living room atmosphere” is created in the case of tests on humans.

The effect on the controlled climate of the door opening when people enter is minimised during long-term tests in the chamber.

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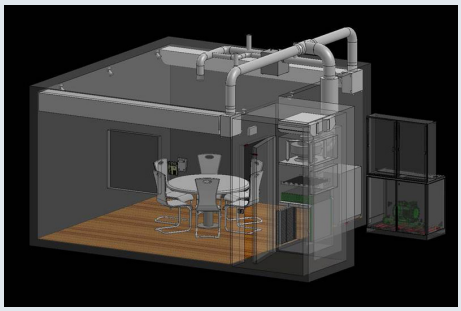
WHAT – The solution.

The walk-in climate chamber with a volume of 41 m^3 and a floor area of 16 m^2 has been created entirely in response to customer requirements. It consists of modular components with insulated walls.
The temperature and humidity are monitored by means of an insulated entrance with a sluice with the aim of minimising climate fluctuations when persons enter.

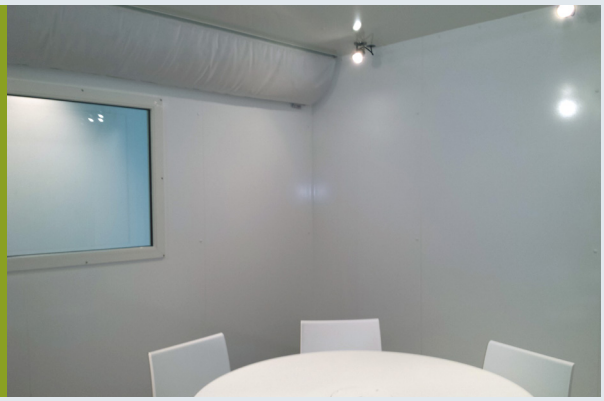


This high-performance unit can provide a temperature range of +5 °C to +42 °C and a relative humidity range of 10% to 85%. Cooling is carried out using an air condenser (air-conditioning system).
The humidity is regulated by means of a steam generator. An air dehumidifier controls the dryness. These units are located outside the climate chamber so as to minimise the loudness.

Implemented modifications

Customer-specific project/not a modification of a standard product

- Pleasant environment for persons during long-term tests thanks to tables and chairs and blowing-in of hygienic air
- Safety thanks to non-slip wooden floor, panic button in the chamber and emergency lighting



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