**Case Study Rain Simulation**

**weiss technik and rain simulation for testing the tightness of fans**

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<td>Welded climate chamber, double bottom (with grating), irrigation system, temperature control unit, water treatment</td>
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**WHY - The challenge.**

The customer has the possibility to test a wide variety of test specimens as to their tightness.

In particular, many electrical components have to be permanently watertight, as they must work reliably even under the most adverse weather conditions. Fans that are directly exposed to rain in a wide range of applications are such an example.

**HOW - The idea.**

A fan used outdoors is exposed to changing weather conditions. This is why the customer needs a test system that can simulate environmental conditions.

The test system allows for temperature cycles and irrigation phases, so that the weather affects test specimens at an accelerated pace.

A sprinkler system consisting of hoses and nozzles is used to simulate rain. An immersion pump supplies the system with water. The temperature is changed with a ceiling cooler with integrated heating rods.
**Why**
Tightness of electrical components (fans)

**HOW**
Immersion pump, rain simulation, ceiling cooler

**WHAT**
Welded climate chamber, double bottom (with grating), irrigation system, temperature control unit, water treatment

**WHAT - The solution.**

Different temperature situations and irrigation quantities are required.

**Chosen product:** **WK 53/10-60/**

Depending on the specimen size and the number of specimens, a 53-m³ fully welded insulation chamber is sufficient for most applications.

**Implemented modifications**

- Temperature range from -10 °C to +60 °C
- Simple modifications such as two 200-mm feedthroughs into the front of the chamber to the left and right of the door, a 100-mm feedthrough in the rear wall for the customer, as well as a viewing window in the left door leaf of the double wing door and a viewing window in the rear wall
- Door opening limiter
- Moisture sensor
- Stainless steel cable trays in the chamber
- Flow rate measurement (rain quantity)
- Water temperature control circuit incl. legionella protection