

# Thermal and Climatic Altitude Test Chambers SkyEvent TA/TAH



Illustration is similar, contains options

# Check whatever you like.

From aeroplanes to helicopters - where research, development and quality control are concerned, you won't want to take any chances. We'll support you in that.



## From the ground to the clouds and beyond.

Whether aeroplanes, helicopters or UAVs (unmanned aerial vehicle): modern aircraft are exposed to extreme stress during use. Our Thermal and Climatic Altitude Test Chambers SkyEvent TA/TAH allow you to simulate harsh environmental conditions and study their impact on the properties, function and lifespan of your products: Vacuum and temperature are accurately controlled down to 150 mbar - for high reproducibility and precise test results and in fast motion.

## Lots to test? No problem!

When testing your products, you must adhere to numerous test standards and carry out long-term tests. Our test chambers are designed for exactly that. The production models respond to the main aeronautical environmental test norms in both civil and military industries, fulfilling main parts of the standards RTCA DO-160G and MIL-STD-810G. For specific requirements, upgrade with many options. According to your needs.

# Perfection in performance, equipment and design.

Thermal and Climatic Altitude Test Chambers SkyEvent TA/TAH.

## Well thought out.

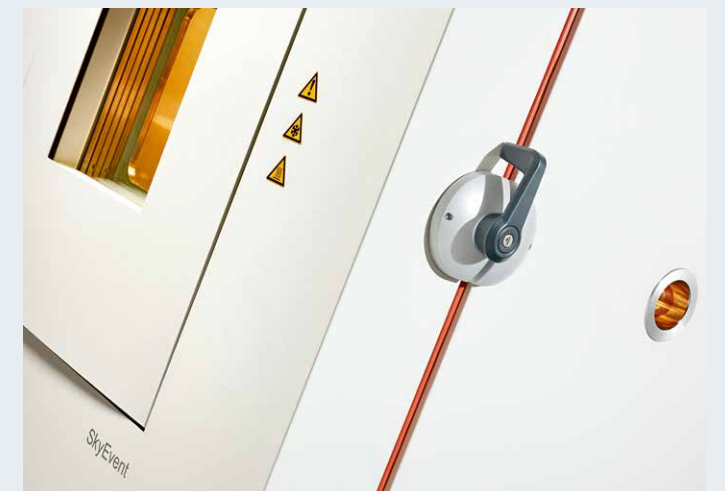
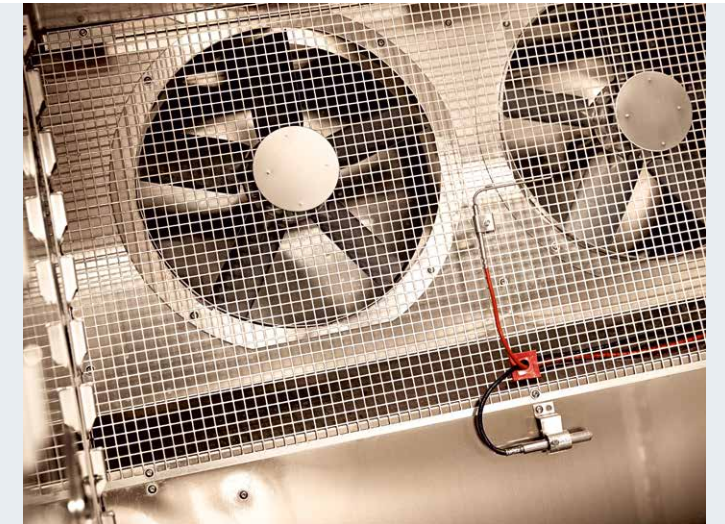
We know what matters for your tests: reliable, precise and reproducible results. That's why we design our test chambers in this unique way. Because incorrect results lead to incorrect conclusions. Considering this we eliminate any disturbances while designing the systems relying on comprehensive know-how and years of experience.

## Perfectly manufactured.

Just like your products, our chambers are made to resist the climatic conditions it produces: the outer casing is made out of corrosion resistant, galvanized steel sheets with an environmentally friendly coating, and integrates only the best and proven components.

## Absolutely low maintenance.

From smart machinery implantation to the use of smooth stainless steel surfaces and corners, we designed chambers easy to maintain, thus with an optimized availability. An automatic reminder for maintenance interventions through our SPIRALE VS software will help you schedule your test campaigns.



## Best equipment, best performance:

- Temperature controlled under high vacuum conditions (150 mbar)
- High temperature Homogeneity
- Wide humidity range (TAH model)
- Low electrical and cooling water consumption
- Best equipped standard product

# More, right from the start.

## Basic equipment which sets standards.

### Exterior



- **Safely into the future - using the new refrigerant**

The new refrigerant R449A is used in all SkyEvent Test Chambers. The GWP value of just 1397 ensures safe usage even after 2020, and the refrigerant does not have to be replaced.

### Interior



- **Go higher**

Most jetliners fly at altitudes between 30 000 ft and 45 000 ft. SkyEvent allows not only to simulate this whole altitude range, but also to accurately control the temperature down to 150 mbar, corresponding to 45 000 ft.

- **Easy to use, ready for testing**

Swivel castors and height-adjustable feet make the chamber easy to integrate in your facilities. Simply install your product on the stainless steel shelf and you are ready to go.

- **Check anytime**

Light the chamber and watch your product through the built-in window - whenever you like to.

- **Connect your product**

Thanks to two stainless steel portholes, with 50 or 100 mm diameter, instrument your products.

### Communication



- **Networking that matches**

Test and diagnostics information are sent to the PC via ethernet or can be saved on a USB stick. Monitoring is possible from any workplace computer.

### Safety



- **Protection for your tests, safety for you**

The safety of your products and operators is our priority: we use general and dedicated safety switches for each element of machinery and the low/high temperature safety is ensured by an independent sensor.



Illustration is similar, contains options

You can find further details on equipment in our technical descriptions. **Contact us.**



Our innovative Test Chambers are available as **weisstechnik** or **vötschtechnik**.



Thanks to **greenmode®**, SkyEvent is one of the most energy-efficient devices in its class.

# Tailor-made testing.

Optional equipment for individual solutions.



Illustration is similar, contains options

## Interior



- **Go further**  
Optimise your process by testing more products at once thanks to our additional shelves.
- **Be extreme**  
An extended temperature range to +180°C makes sure your products work perfectly - even under extreme conditions.

## Regulation & Control



- **More data, better control**  
Additional dedicated vacuum-tight portholes (ISO-K) and analogic recording channels (Pt100, thermocouples etc.) plus auxiliary contacts give you a better view and control on what is happening to your product while testing.

You can find further details on equipment in our technical descriptions. **Contact us.**

Impressive technology. Reliable results.

The performance data at a glance.

| Model               | Volume | Test space dimensions<br>(W x D x H) | External dimensions<br>(W x D x H) | TEMPERATURE        |                   |                                      |         |         |                       |                                      |  | VACUUM                      |                         |                    | HUMIDITY <sup>4</sup> |                 |                 |                    | CONSUMPTION                                      |                |                                  |
|---------------------|--------|--------------------------------------|------------------------------------|--------------------|-------------------|--------------------------------------|---------|---------|-----------------------|--------------------------------------|--|-----------------------------|-------------------------|--------------------|-----------------------|-----------------|-----------------|--------------------|--------------------------------------------------|----------------|----------------------------------|
|                     | l      | mm                                   | mm                                 | Controlled from AP | Temperature range | Temperature change rate <sup>1</sup> | Cooling | Heating | Temperature stability | Temperature homogeneity <sup>2</sup> |  | Pressure range <sup>3</sup> | Pumping time to 10 mbar | Pressure stability | For temperature range | Humidity range  | Dew point range | Humidity stability | Voltage <sup>5</sup>                             | Max imal power | Max . cooling water <sup>6</sup> |
|                     |        |                                      |                                    | mbar               | °C                |                                      | °C/mn   | °C/mn   | °C                    | °C                                   |  | mbar                        | mn                      | mbar               | °C                    | % RH            | °C              | % RH               |                                                  | kW             | m3/h                             |
| TA 220<br>TAH 220   | 220    | 700x350x900                          | 1250x2400x2400                     | 150 mbar           | -70 to +120       |                                      | 2       | 2       | ±0.5                  | ±2                                   |  | -<br>AP to 5                | 20                      | ±3                 | -<br>+10 to +95       | -<br>+15 to +95 | -<br>+5 to +80  | -<br>±3 to ±5      | 3/N/PE AC,<br>400 V ± 3 %<br>to ± 10 %,<br>50 Hz | 28.0           | 2.4                              |
| TA 500<br>TAH 500   | 500    | 700x800x900                          | 1250x2400x2400                     | 150 mbar           | -70 to +120       |                                      | 2       | 2       | ±0.5                  | ±2                                   |  | -<br>AP to 5                | 20                      | ±3                 | -<br>+10 to +95       | -<br>+15 to +95 | -<br>+5 to +80  | -<br>±3 to ±5      |                                                  | 28.0           | 2.4                              |
| TA 1000<br>TAH 1000 | 1000   | 1000x1000x1000                       | 1550x2600x2400                     | 150 mbar           | -70 to +120       |                                      | 2       | 2       | ±0.5                  | ±2                                   |  | -<br>AP to 5                | 20                      | ±3                 | -<br>+10 to +95       | -<br>+15 to +95 | -<br>+5 to +80  | -<br>±3 to ±5      |                                                  | 52.0           | 4.0                              |
| TA 1500<br>TAH 1500 | 1500   | 1000x1500x1000                       | 1550x3100x2400                     | 150 mbar           | -70 to +120       |                                      | 2       | 2       | ±0.5                  | ±2                                   |  | -<br>AP to 5                | 20                      | ±3                 | -<br>+10 to +95       | -<br>+15 to +95 | -<br>+5 to +80  | -<br>±3 to ±5      |                                                  | 52.0           | 4.0                              |

Performance data refer to +25°C ambient temperature.

<sup>1</sup>Change rate as per IEC 60068-3-5, measured in the supply air stream.

<sup>2</sup>Free field measurement as per DIN 45635, Part 1, accuracy class 2.

<sup>3</sup>Pressure range and pumping time in dry, clean and empty test space.

<sup>4</sup>Humidity at atmospheric pressure only. Use of demineralized or distilled water mandatory.

<sup>5</sup>Other voltages available upon request (option).

<sup>6</sup>At a cooling water temperature of +28°C and temperature difference of 5 K, water temperature +20°C to +28°C.

We reserve the right to make any technical changes without prior notice.

# Become more efficient.

You'll save time and money with our solutions.

Get the most out of your test facility.



Create your own perfect testing process with SIMPATI® and SPIRALE VS.

Process management/documentation/networking



- Powerful supervisor with user-friendly interface
- Touch screen panel
- Local and/or remote control and monitoring
- Documenting, visualising and managing process data



# Fly higher and go to the limits.

We'll back you up.

Specific requirements?

We have a solution! Contact us for further information.



- **Altitude + humidity + temperature**  
Icing test procedures? Our Temperature Altitude Humidity Test Chambers perform combined tests as per RTCA DO-160 Section 24 Cat B.



- **Protection for safety**  
Hazardous battery testing? Our Special Chambers include safety features protecting both users and equipment.



- **Rapid decompression**  
Hundreds of millibars in a few seconds? We have specific solutions for you.



We measure ourselves by our service!

Our services - plenty of good reasons:

- Global service network
- Wide selection of preventive maintenance
- Reliable spare part supply
- Special deployments available any time
- Certified proper disposal of outdated devices

You can always find one of our experts near you.

24/7 Service Helpline:  
+49 1805 666 556

# Passionately innovative.

**We work in partnership to support companies in research, development, production and quality assurance.**  
**With 21 companies in 15 countries at 40 locations.**

**weisstechnik**

**Test it. Heat it. Cool it.**



## **Environmental Simulation**

The first choice for engineers and researchers for innovative, safe environmental simulation facilities. In fast motion, our test systems can simulate all the influences in the world as well as for instance in space. In temperature, climate, corrosion, dust or combined stress tests. With a very high degree of reproducibility and precision.



## **Climate Technology, Air Dehumidification, Clean Rooms**

As the leading provider of clean rooms, climate technology and air dehumidification, we consistently ensure optimal climatic conditions for people and machines. For industrial production processes, in hospitals, mobile operation tents or in the field of information and telecommunications technology. From project planning to implementation.



## **Heating Technology**

Experienced engineers and designers develop, plan and produce high-quality, reliable heating technology systems for a broad range of applications from heating and drying cabinets and microwave systems to industrial furnaces.



## **Clean Air and Containment Systems**

With decades of experience and know-how, we guarantee the most sophisticated clean air and containment solutions. Our comprehensive and innovative range of products includes barrier systems, laminar flow systems, safety workbenches, isolators and sluice systems.

### **Weiss Technik France SAS**

Parc @robase  
73 Avenue du Gros Chêne  
95610 Eragny/France  
T +33 1 82310400  
special@weissfr.com



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WTF-SkyEvent-01.1E/PP 1.0/06 2017