

Check whatever you like.

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



From North Pole to the Tropics.

Seasonal differences, different climatic zones - your products must be able to withstand a variety of temperatures during manufacturing, transport, storage and use. The **weiss**technik Climate Test Chambers WK3 and WKS3 help you to test the influence of temperature and humidity on the properties, function and lifespan of your products. Reproducible, certified 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 have a wide range of applications and satisfy every need. For specific requirements, you can upgrade with many options. According to your needs.

Perfection in performance, equipment and design.

Climate Test Chambers WK3 and WKS3.

Well thought out.

We know what matters to you for your tests: reliable, precise and reproducible measurement results. That's why we construct our test chambers so that you can achieve this. Because incorrect results lead to incorrect conclusions. We consider this and eliminate possible disturbances during development. And build on our comprehensive know-how and years of experience.

Perfectly manufactured.

For us, quality is the order of the day. We only work with high-quality materials and process almost all of the components for our test chambers ourselves. Not only that, but we also have regular quality checks which continue throughout the entire production process.

Absolutely low maintenance.

Set up, plug in, get going. The intelligent, compatible control elements and intuitive user interface make for easy use. Good accessible maintenance elements allow for short servicing times. Diagnostics and an inspection system installed as standard also optimise maintenance and repair times.





Reliable measurement results are possible thanks to:

- Perfect, environmentally-friendly isolation
- Steam-proof design thanks to mechanically welded seams
- Processing of the test room with low content of silicone
- Optimised airflow and temperature distribution
- Adaptive control
- Performance-optimised tempering technology and patented climate system

 $\mathsf{2}$

More, right from the start.

Basic equipment which sets standards.

Interior



· No chance for dirt or corrosion

The test chamber floor is made of high-alloyed, extra corrosion-resistant stainless steel 1.4404. Thanks to special welding, smooth surfaces, rounded corners and complex stamped grid layers, the test chamber is easy to clean. Standard humidity bath flushing prevents contamination of humidification water.

Get involved

Thanks to stainless steel ports with 50 mm and 125 mm diameter, connections or additional devices included as standard for introducing management.

· Reliably tested

The humidity of the test space air is measured according to the internationally valid psychrometric measuring principle. The life time of the psychrometer wick is considerably increased due to a self-cleaning mechanism.

Communication



Networking that matches

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

Safety



• Protection for your tests, safety for you

No need to worry about loss or excess of temperature: Test-chamber and test-object protection and test-object shutdown are installed as standard. The test chamber itself is designed for operation at ambient temperatures of up to +35 °C, complying with the current VDE regulations and satisfying the EMV, low voltage and machine directives.

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



Reliable control in series:

Digital measurement and control system for using and monitoring of the test chamber.



Tailor-made testing.

Optional equipment for individual solutions.



Exterior



• Everything at a glance

A multi-isolated observation window and the optimised test-chamber lighting guarantee an optimal view.

Mobile and flexible

Two fixed and swivel castors in the mobile version allow for sufficient mobility.

Interior



• Makes heavy loads child's play

Thanks to strengthened shelf and heavy load rails for up to 500 kg surface load, you can test even heavy weights extensively.

• High or low, whatever you prefer

One or several drawers on telescopic rails can be flexibly positioned in the test chamber and offer secure support.

Regulation & Control



• Set standards in communication

With S!MPATI® software, using, documenting and archiving your test sequences are easy. All climate test chambers built from 1990 onwards can be upgraded and connected with S!MPATI®.

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

Developed exclusively for you: The unique software simulation package for the perfect test process.



 $\mathbf{6}$

Impressive technology. Reliable results.

The performance data at a glance:

| Туре | Test space dimensions, HxWxD, approx. | Minimum temperature¹ | Maximum temperature | Temperature-changing rate cooling ² | Temperature-changing rate heating ² | Temperature deviation in time ³ | Temperature homogeneity in space | Heat compensation at +20 °C | Heat compensation at-20 °C | Minimum temperature¹ | Maximum temperature | Dewpoint temperature range | Humidity range | Humidity constancy in time | Temperature homogeneity in time ³ | Temperature homogeneity in space⁴ | Maximum heat compensation ⁵ |
|--|--|----------------------|---------------------|---|--|--|-------------------------------------|--------------------------------|-------------------------------|----------------------|---------------------|--------------------------------------|----------------|-------------------------------|---|--------------------------------------|---|
| DEDECORMANICES COD | mm | °C TEMPERATUR | °C | K/min | K/min | K | K | W | W | °C | °C | °C | % RH | % RH | К | K | W |
| PERFORMANCES FOR | 750 500 450 | | i | 0.3 | 1.0 | | I | 200 | | CLIMATIC TES | | | | 1 | | | |
| WK3 180/0 | 750×580×450 | -10 | +90 | 0.3 | 1.0 | ± 0.1 to ± 0.5 | ±0.5 to ±1.0 | 200 | - | +10 | +90 | +4 to +89,5 | 10 to 98 | ±1 to ±3 | ±0.1 to ±0.3 | | - |
| WK3 340/0 | 750x580x765 | -10 | +90 | 0.3 | 1.0 | | | 200 | - | +10 | +90 | | | | | ± 0.5 to ± 1.0 | |
| WK3 600/0 | 950x800x800 | -5 | +90 | 0.3 | 0.6 | | | 200 | - | +10 | +90 | | | | | | - |
| WK3 1000/0 WK3 1500/0 | 950x1100x950 950x1100x1475 | 0 | +90 +90 | 0.2 0.2 | 0.5 0.4 | | | 200 200 | - | +10 +10 | +90 +90 | | | | | | - |
| | | U | +90 | 0.2 | 0.4 | | | 200 | - | +10 | +90 | | | | | | - |
| With temperature-changing spec WK3 180/40 | 750×580×450 | -42 | +180 | 4.0 | 4.0 | | | 2300 | | +10 | +95 | | | | | | 400 |
| WK3 180/40 WK3 180/70 | 750x580x450 750x580x450 | -42 -72 | +180 | 3.0 | 4.0 4.0 | | ± 0.5 to ± 1.5 | 1500 | - | +10 | +95 | +4 to +94 (to -3) ⁶ | | | | | 400 |
| WK3 340/40 | 750x580x430 | -72 -42 | +180 | 4.0 | 3.2 | | | 2300 | <u>-</u> - | +10 | +95 | | 10 to 98 | | | | 400 |
| WK3 340/40 | 750×580×765 | -72 | +180 | 3.0 | 3.0 | | | 1500 | | +10 | +95 | | | | | | 400 |
| WK3 600/40 | 950×800×800 | -42 | +180 | 3.0 | 4.0 | | | 2500 | _ | +10 | +95 | | | ±1 to ±3 | | | 500 |
| WK3 600/70 | 950×800×800 | -72 | +180 | 2.5 | 4.0 | | | 2500 | _ | +10 | +95 | | | | ±0.1 to ±0.3 | ± 0.5 to | 500 |
| WK3 1000/40 | 950x1100x950 | -42 | +180 | 3.0 | 4.0 | ± 0.1 to ± 0.5 | | 4500 | _ | +10 | +95 | | | | | ±0.5 to | 500 |
| WK3 1000/70 | 950x1100x950 | -72 | +180 | 2.5 | 4.0 | | | 3000 | _ | +10 | +95 | | | | | | 500 |
| WK3 1500/40 | 950x1100x1475 | -42 | +180 | 2.5 | 3.5 | | | 4200 | - | +10 | +95 | | | | | | 500 |
| WK3 1500/70 | 950x1100x1475 | -72 | +180 | 2.3 | 3.5 | | | 3000 | - | +10 | +95 | | | | | | 500 |
| WK3 2000/40 | 950x1100x2150 | -42 | +180 | 2.0 | 3.0 | | | 3500 | - | +10 | +95 | | | | | | 500 |
| WK3 2000/70 | 950x1100x2150 | -72 | +180 | 1.5 | 2.5 | | | 3000 | - | +10 | +95 | | | | | | 500 |
| With temperature-changing spee | | | | | | | | | | | | | | | | | |
| WKS3 180/40/5 | 750×580×450 | -42 | +180 | 8.0 | 8.0 | | | 4000 | 1300 | +10 | +95 | | | | | | 400 |
| WKS3 180/70/5 | 750×580×450 | -72 | +180 | 7.5 | 8.0 | | | 3000 | 3000 | +10 | +95 | | | | | | 400 |
| WKS3 340/40/5 | 750×580×765 | -42 | +180 | 6.8 | 7.0 | | | 4000 | 1300 | +10 | +95 | | | | | | 400 |
| WKS3 340/70/5 | 750x580x765 | -72 | +180 | 6.7 | 7.0 | | | 3000 | 3000 | +10 | +95 | | | | | | 400 |
| WKS3 600/40/5 | 950x800x800 | -42 | +180 | 6.5 | 6.0 | ± 0.1 to | ± 0.5 to | 5000 | 1650 | +10 | +95 | +4 to | 10 to 98 | ±1 to | ± 0.1 to | ± 0.5 to | 500 |
| WKS3 600/70/5 | 950x800x800 | -72 | +180 | 6.0 | 6.0 | ± 0.5 | ± 2.0 | 5000 | 5000 | +10 | +95 | +94 (to-3)⁵ | | ±3 | ± 0.3 | ±1.0 | 500 |
| WKS3 1000/40/5 | 950x1100x950 | -42 | +180 | 6.7 | 8.0 | | | 5000 | 1650 | +10 | +95 | | | | | | 500 |
| WKS3 1000/70/5 | 950x1100x950 | -72 | +180 | 6.0 | 8.0 | | | 5000 | 5000 | +10 | +95 | | | | | | 500 |
| WKS3 1500/40/5 | 950×1100×1475 | -42 | +180 | 6.3 | 7.0 | | | 5000 | 1650 | +10 | +95 | | | | | | 500 |
| WKS3 1500/70/5 | 950x1100x1475 | -72 | +180 | 5.0 | 7.0 | | | 5000 | 5000 | +10 | +95 | | | | | | 500 |

Impressive technology. Reliable results.

The performance data at a glance:

| Туре | Test space dimensions, HxWxD, approx. | Minimum temperature¹ | Maximum temperature | Temperature-changing rate cooling² | Temperature-changing rate heating² | Temperature deviation in time³ | Temperature homogeneity in space⁴ | Heat compensation at +20 °C | Heat compensation at-20°C | Minimum temperature¹ | Maximum temperature | Dewpoint temperature range | Humidity range | Humidity constancy in time | Temperature homogeneity in time³ | Temperature homogeneity in space | Maximum heat compensation ^s | | |
|--|--|----------------------|---------------------|---------------------------------------|------------------------------------|-----------------------------------|--------------------------------------|--------------------------------|------------------------------|----------------------|---------------------|--------------------------------------|----------------|-------------------------------|-------------------------------------|-------------------------------------|---|--|--|
| PERFORMANCES FOR | mm | °C TEMPERATUR | °C | K/min | K/min | К | К | W | W | °C | °C | °C | % RH | % RH | K | K | W | | |
| | ad of 10 V/min | TEMPERATUR | C 16313 | | | | | | | CLIMATIC TESTS | | | | | | | | | |
| With temperature-changing spec WKS3 270/40/10 | 750×580×615 | -42 | +180 | 12.5 | 10.0 | | | 6000 | 2000 | +10 | +95 | | | | | | 400 | | |
| WKS3 270/40/10 | 750x580x615 | -42 -72 | +180 | 14.5 | 10.0 | | | 6000 | 6000 | +10 | +95 | | 10 to 98 | ±1 to ±3 | | | 400 | | |
| WKS3 480/40/10 | 950×800×650 | -72 -42 | +180 | 12.5 | 12.0 | ± 0.3 to ± 0.5 | ±0.5 to ±2.0 | 8000 | 3000 | +10 | +95 | +4 to +94 (to -3) ⁶ | | | | | 500 | | |
| WKS3 480/70/10 | 950x800x650 | -72 | +180 | 11.0 | 12.0 | | | 8000 | 8000 | +10 | +95 | | | | ± 0.2 to | ± 0.5 to | 500 | | |
| WKS3 800/40/10 | 925×1100×800 | -42 | +180 | 12.0 | 12.0 | | | 8000 | 3000 | +10 | +95 | | | | ± 0.2 to | ±0.5 to ±1.0 | 500 | | |
| WKS3 800/70/10 | 925×1100×800 | -72 | +180 | 12.0 | 12.0 | | | 8000 | 8000 | +10 | +95 | | | | | | 500 | | |
| WKS3 1300/40/10 | 925×1100×1325 | -42 | +180 | 11.5 | 11.0 | | | 8000 | 3000 | +10 | +95 | | | | | | 500 | | |
| WKS3 1300/70/10 | 925×1100×1325 | -72 | +180 | 10.5 | 11.0 | | | 8000 | 8000 | +10 | +95 | | | | | | 500 | | |
| With temperature-changing spec | | | | | | | | | | | | | | | | | | | |
| WKS3 270/40/15 | 750x580x615 | -42 | +180 | 16.0 | 15.0 | | | 8000 | 3000 | +10 | +95 | | | | | | 400 | | |
| WKS3 270/70/15 | 750×580×615 | -72 | +180 | 18.0 | 15.0 | | | 8000 | 8000 | +10 | +95 | +4 to +94 (to -3) ⁶ | 10 to 98 | ±1 to ±3 | ±0.2 to ±0.5 | | 400 | | |
| WKS3 480/40/15 | 950x800x650 | -42 | +180 | 18.0 | 17.0 | | | 8000 | 3000 | +10 | +95 | | | | | | 500 | | |
| WKS3 480/70/15 | 950x800x650 | -72 | +180 | 15.0 | 17.0 | ± 0.3 to | ± 0.5 to | 8000 | 8000 | +10 | +95 | | | | | ± 0.5 to | 500 | | |
| WKS3 800/40/15 | 925×1100×800 | -42 | +180 | 18.0 | 16.0 | ± 0.5 | ± 2.0 | 8000 | 3000 | +10 | +95 | | | | | ±1.0 | 500 | | |
| WKS3 800/70/15 | 925x1100x800 | -72 | +180 | 15.5 | 16.0 | | | 8000 | 8000 | +10 | +95 | (, , , | | | | | 500 | | |
| WKS3 1300/40/15 | 925 x 1100 x 1325 | -42 | +180 | 17.0 | 16.0 | | | 8000 | 3000 | +10 | +95 | | | | | | 500 | | |
| WKS3 1300/70/15 | 925 x 1100 x 1325 | -72 | +180 | 14.5 | 16.0 | | | 8000 | 8000 | +10 | +95 | 1 | | | | | 500 | | |
| With temperature-changing spec | ed of 20 K/min | | | | | | | | | | | | | | | | | | |
| WKS3 270/40/20 | 750x580x615 | -42 | +180 | 20.0 | 20.0 | | | 8000 | 3000 | +10 | +95 | | | | | | 400 | | |
| WKS3 270/70/20 | 750x580x615 | -72 | +180 | 20.0 | 20.0 | | | 8000 | 8000 | +10 | +95 | +4 to +94 (to -3) ⁶ | 10 to 98 | | | | 400 | | |
| WKS3 480/40/20 | 950x800x650 | -42 | +180 | 20.0 | 20.0 | | | 8000 | 3000 | +10 | +95 | | | | | | 500 | | |
| WKS3 480/70/20 | 950x800x650 | -72 | +180 | 20.0 | 20.0 | ±0.1 to ±0.5 | ± 0.5 to | 8000 | 8000 | +10 | +95 | | | ±1 to | ± 0.1 to | ± 0.5 to | 500 | | |
| WKS3 800/40/20 | 925×1100×800 | -42 | +180 | 20.0 | 20.0 | | ± 2.0 | 8000 | 3000 | +10 | +95 | | | ±3 | ± 0.3 | ±1.0 | 500 | | |
| WKS3 800/70/20 | 925×1100×800 | -72 | +180 | 20.0 | 20.0 | | | 8000 | 8000 | +10 | +95 | | | | | | 500 | | |
| WKS3 1300/40/20 | 925 x 1100 x 1325 | -42 | +180 | 20.0 | 20.0 | | | 8000 | 3000 | +10 | +95 | | | | | | 500 | | |
| WKS3 1300/70/20 | 925 x 1100 x 1325 | -72 | +180 | 20.0 | 20.0 | | | 8000 | 8000 | +10 | +95 | | | | | | 500 | | |

Impressive technology. Reliable results.

The performance data at a glance:

| Туре | Test space dimensions, HxWxD, approx. | Minimum temperature¹ | Maximum temperature | Temperature-changing rate cooling² | Temperature-changing rate heating² | Temperature deviation in time³ | Temperature homogeneity in space' | Heat compensation at +20 °C | Heat compensation at-20 °C | Minimum temperature¹ | Maximum temperature | Dewpoint temperature range | Humidity range | Humidity constancy in time | Temperature homogeneity in time³ | Temperature homogeneity in space' | Maximum heat compensation ^s |
|---|--|----------------------|---------------------|---------------------------------------|---------------------------------------|-----------------------------------|--------------------------------------|--------------------------------|-------------------------------|----------------------|---------------------|--------------------------------------|----------------|-------------------------------|-------------------------------------|--------------------------------------|---|
| | mm | °C | °C | K/min | K/min | K | K | W | W | °C | °C | °C | % RH | % RH | K | K | W |
| PERFORMANCES FOR | TEMPERATURE TESTS CLIMATIC TESTS | | | | | | | | | | | | | | | | |
| With temperature-changing spec | ed of 25 K/min | | | | | | | | | | | | | | | | |
| WKS3 270/40/25 | 750x580x615 | -42 | +180 | 25.0 | 25.0 | | ± 0.5 to | 8000 | 3000 | +10 | +95 | +4 to +94 (to -3) ⁵ | 10 to 98 | ±1 to ±3 | ± 0.1 to | | 400 |
| WKS3 270/70/25 | 750x580x615 | -72 | +180 | 25.0 | 25.0 | | | 8000 | 8000 | +10 | +95 | | | | | | 400 |
| WKS3 480/40/25 | 950x800x650 | -42 | +180 | 25.0 | 25.0 | | | 8000 | 3000 | +10 | +95 | | | | | ± 0.5 to | 500 |
| WKS3 480/70/25 | 950x800x650 | -72 | +180 | 25.0 | 25.0 | ± 0.1 to | | 8000 | 8000 | +10 | +95 | | | | | | 500 |
| WKS3 800/40/25 | 925×1100×800 | -42 | +180 | 25.0 | 25.0 | ± 0.5 | ± 2.0 | 8000 | 3000 | +10 | +95 | | | | ± 0.3 | ±1.0 | 500 |
| WKS3 800/70/25 | 925×1100×800 | -72 | +180 | 25.0 | 25.0 | | | 8000 | 8000 | +10 | +95 | | | | | | 500 |
| WKS3 1300/40/25 | 925×1100×1325 | -42 | +180 | 25.0 | 25.0 | | | 8000 | 3000 | +10 | +95 | | | | | | 500 |
| WKS3 1300/70/25 | 925×1100×1325 | -72 | +180 | 25.0 | 25.0 | | | 8000 | 8000 | +10 | +95 | | | | | | 500 |
| Calibration values (factory calibration): | +4 °C and +90 °C for WK3 180/0 to WK3 1500/0 +25 °C/60 % RH and +40 °C/75 % RH for WK3 180/0 to WK3 1500/0 +23 °C/50 % RH and +90 °C/50 % RH for WK3 180/40 to WKS3 1300/70/25 | | | | | | | | | | | | | | | | |

¹Discontinuously.

²According to IEC 60068-3-5; measured on average, in the temperature range.

³In steady state, depending on the temperature.

⁴Depending on the adjusted set point value; in the temperature range of minimum temperature to +90 °C and >20% RH for WK3 180/0 to WK3 1500/0 resp. +150 °C and >20% RH for WK3 180/40 to WKS3 1300/70/25.

 $^{5}Between$ +25 $^{\circ}C$ and +90 $^{\circ}C$ and humidities to approx. 90 % RH.

The performance data refer to +25 °C ambient temperature, and an altitude of ≥ 1000 m over mid sea level, cooling water temperature +18 °C, 400 V nominal voltage, without specimen, optional equipment and heat compensation.

The product needs fluorinated gases for functioning.

Depending on the type, it contains refrigerants R404A and R23.

We reserve the right to make any technical alterations.

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 the S!MPATI® software simulation package.

Process management/documentation/networking

- Up to 99 systems can be networked
- Programmes for automatic processes
- Documenting, visualising and managing process data
- Traceability of process data for seamless quality control



With Green Mode®, you can reduce your operating costs and save up to 40% of electrical energy and many tons of CO₂. We achieve the savings by additional hardware and software and application-oriented system planning.



We measure ourselves by our service!

Our services - plenty of good arguments:

- Children to make a de
- Wide selection of preventive maintenance
- Reliable spare part supply
- Special deployments available any time
- Training programmes for our customers
- Certified proper disposal of outdated devices

You can always find a **weiss**technik expert near you.

For WK3 180/70 to 2000/70 and WKS3 180/70/5 to 1500/70/5 Green Mode® is part of the basic equipment.

Quicker, longer, harder.

Climate Test Chambers for special requirements.

Is there explosion hazard originating from your product? Do you want to carry out a weathering test on your product including temperature change and UV rays? No problem! On request, we will equip your Climate Test Chamber with explosion protection or an irradiation unit. Integration of further parameters is also possible - contact us!

14 15

24/7 Service Helpline: +49 1805 666 556

weisstechnik

Test it. Heat it. Cool it.

Our solutions are deployed around the world in research, development, production and quality assurance of numerous products. Our experts from 21 companies are available in 14 countries, ready to provide support services to ensure high operational reliability of your systems.

Weiss Umwelttechnik is one of the most innovative and pre-eminent manufacturers of environmental simulation systems. With these testing systems, we can simulate all climate conditions around the globe, and beyond in time lapse. Whether temperature, climate, corrosion, dust or combined shock testing: We have the proper solution. We supply systems in all sizes, from standard versions up to customised, process-integrated facilities – for high reproducibility and precise test results.

Vötsch Industrietechnik, a subsidiary of Weiss Umwelttechnik, offers a wide product portfolio in the field of heat technology. With an experienced team of engineers and designers, we develop, plan and produce high-quality and reliable heat technology systems for virtually any field of application. Products include heating/drying ovens, clean-room drying ovens, hot-air sterilisers, microwave systems and oven systems. The programme reaches from technologically sophisticated standard versions to customised solutions for individual production operations.

A further Weiss Technik company, Weiss Klimatechnik, also offers reliable climate solutions wherever people and machinery are challenged: in industrial production processes, hospitals, mobile operating tents or in the area of IT and telecommunications technology. As one of the leading providers of professional clean-room and climate solutions, we deliver effective and energy-saving solutions and expertly guide you through your entire project, from planning to implementation.

Weiss Pharmatechnik, another Weiss Technik company, is a competent provider of sophisticated clean-room and containment solutions. The product range includes barrier systems, laminar flow facilities, security work benches, isolators and double door systems. The company emerged from Weiss GWE and BDK Luft- und Reinraumtechnik and has decade-long experience in clean-room technology.



eizer Straße 41-49

Because environment and climate are more to us than just a part of our name.





Weiss Umwelttechnik GmbH

Greizer Straße 41-49 35447 Reiskirchen/Germany Phone +49 6408 84-0 info@wut.com www.weiss-technik.info



