DIPARTIMENTO DI
**ARCHITETTURA,
INGEGNERIA DELLE COSTRUZIONI E
AMBIENTE COSTRUITO**

SISTEMA LABORATORI
ABCLab

ATTREZZATURA

Camera climatica **VÖTSCH – VC3 7018**

DESCRIZIONE

La camera climatica è utilizzata per creare condizioni ambientali controllate, come temperatura e umidità, per diversi scopi: pre-condizionare tessuti prima di test di trazione, generare rugiada su membrane, favorire o bloccare la crescita di miceli su pannelli, o simulare l'invecchiamento accelerato dei materiali.

CONTATTI

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SEDE

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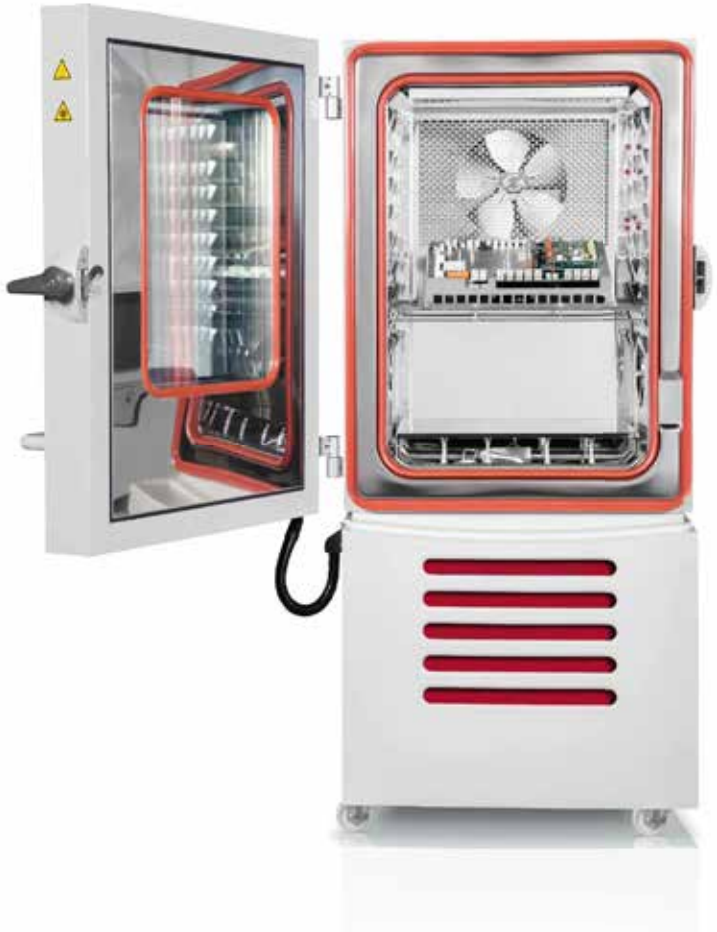
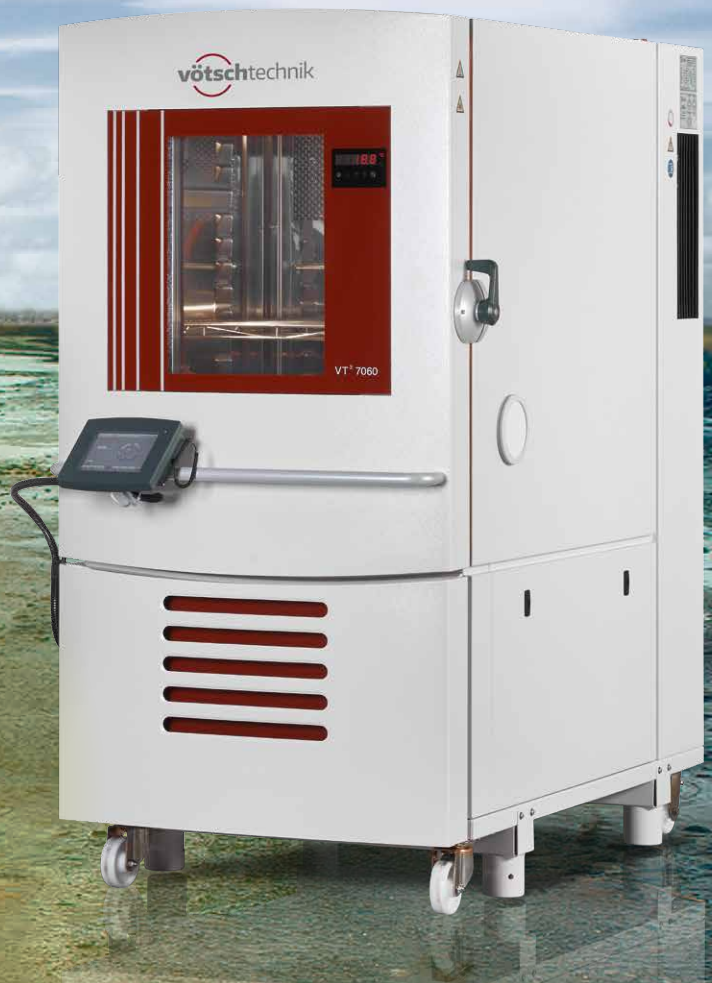


vötschtechnik®
a schunk company

Climate Test Chambers
VC³
VCS³



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 **vötsch**technik Climate Test Chambers VC³ and VCS³ 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 VC³ and VCS³.

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

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.**

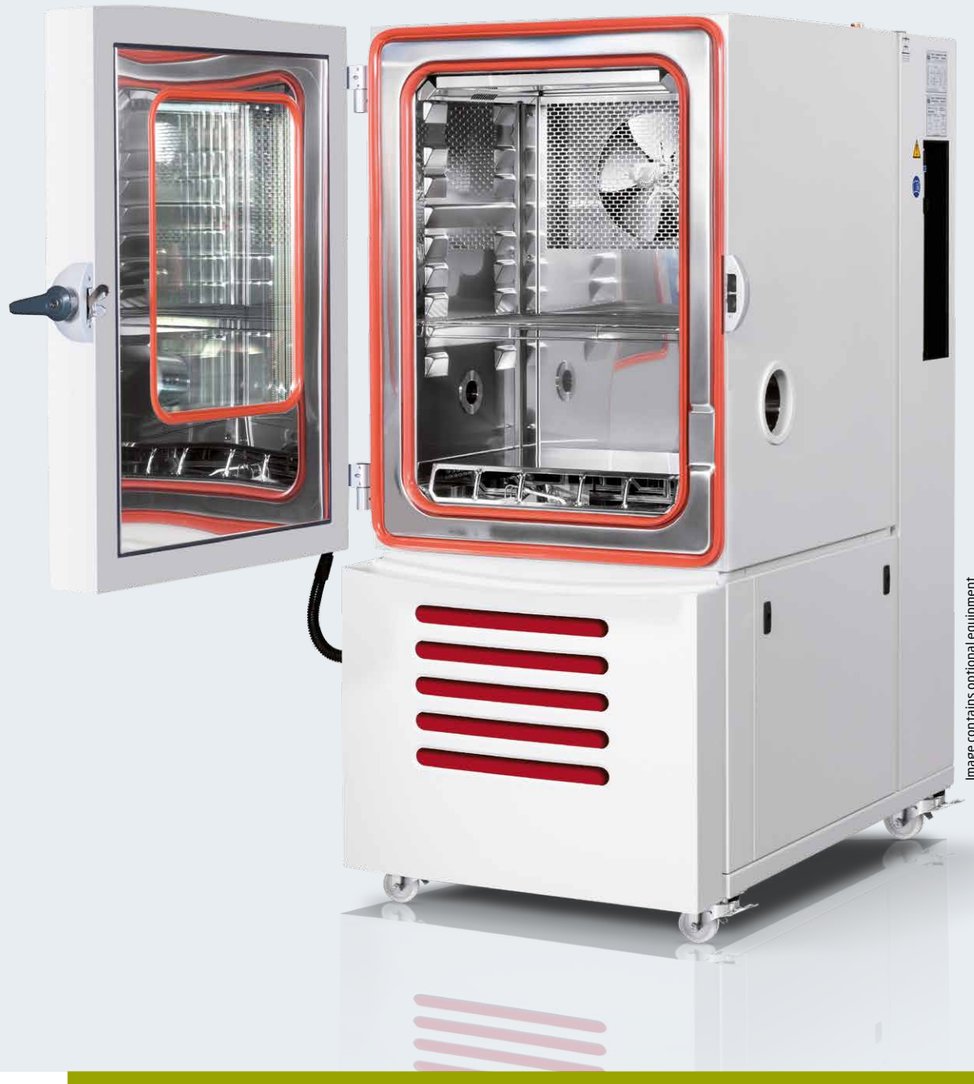


Image contains optional equipment

Reliable control in series:
Digital measurement and control system for using and monitoring of the test chamber.

SIMPAC® controlled 1.1

Tailor-made testing.

Optional equipment for individual solutions.

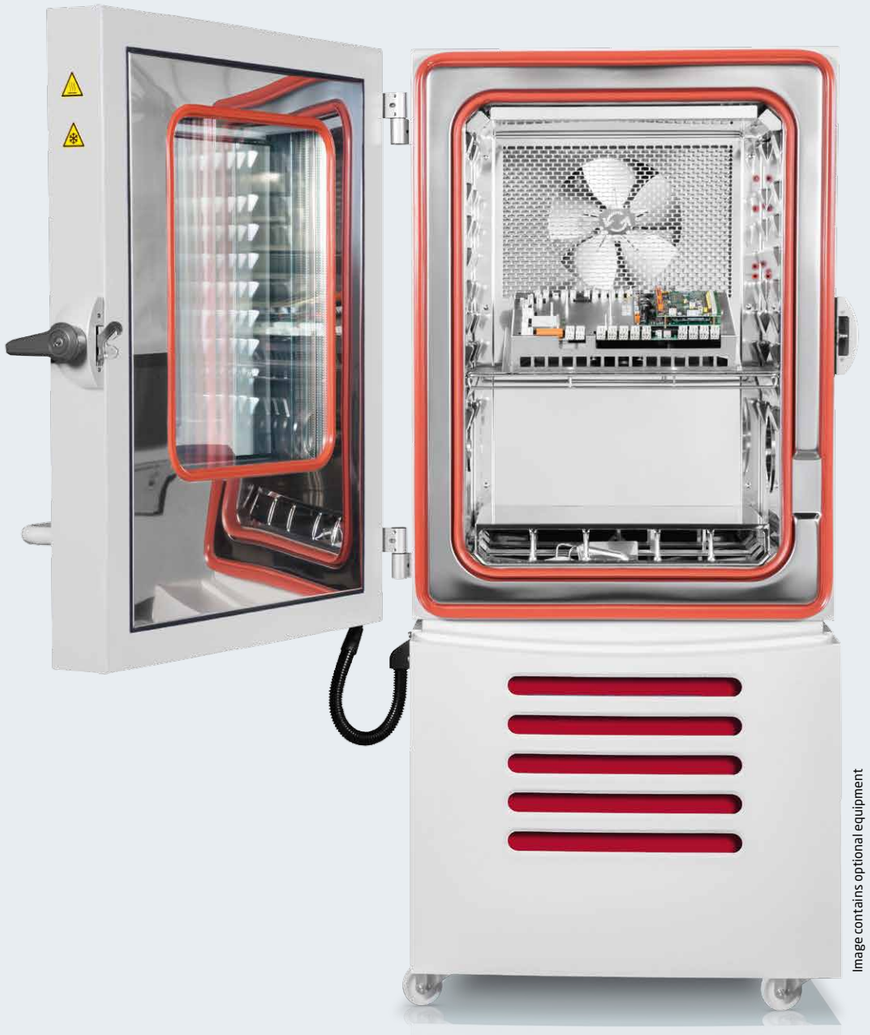


Image contains optional equipment

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 temperature 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.

S!MPATI®

Impressive technology. Reliable results.

The performance data at a glance:

Type	Test space dimensions, H x W x D, approx.	Minimum temperature[1]	Maximum temperature	Temperature-changing rate cooling[2]	Temperature-changing rate heating[2]	Temperature deviation in time[3]	Temperature homogeneity in space[4]	Heat compensation at +20 °C	Heat compensation at -20 °C	Minimum temperature[1]	Maximum temperature	Dewpoint temperature range	Humidity range	Humidity constancy in time	Temperature homogeneity in time[3]	Temperature homogeneity in space[4]	Maximum heat compensation[5]
	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**							
VC³ 0018	750 x 580 x 450	-10	+90	0,3	1,0			200	–	+10	+90						–
VC³ 0034	750 x 580 x 765	-10	+90	0,3	1,0			200	–	+10	+90						–
VC³ 0060	950 x 800 x 800	-5	+90	0,3	0,6	± 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	± 0,5 to ± 1,0	–
VC³ 0100	950 x 1100 x 950	0	+90	0,2	0,5			350	–	+10	+90						–
VC³ 0150	950 x 1100 x 1475	0	+90	0,2	0,4			350	–	+10	+90						–
With temperature-changing speed of 3 K/min																	
VC³ 4018	750 x 580 x 450	-42	+180	4,0	4,0			2300	–	+10	+95						400
VC³ 7018	750 x 580 x 450	-72	+180	3,0	4,0			1500	–	+10	+95						400
VC³ 4034	750 x 580 x 765	-42	+180	4,0	3,2			2300	–	+10	+95						400
VC³ 7034	750 x 580 x 765	-72	+180	3,0	3,0			1500	–	+10	+95						400
VC³ 4060	950 x 800 x 800	-42	+180	3,0	4,0			2500	–	+10	+95						500
VC³ 7060	950 x 800 x 800	-72	+180	2,5	4,0	± 0,1 to ± 0,5	± 0,5 to ± 1,5	2500	–	+10	+95	+4 to +94 (bis -3)[6]	10 to 98	± 1 to ± 3	± 0,1 to ± 0,3	± 0,5 to ± 1,0	500
VC³ 4100	950 x 1100 x 950	-42	+180	3,0	4,0			4500	–	+10	+95						500
VC³ 7100	950 x 1100 x 950	-72	+180	2,5	4,0			3000	–	+10	+95						500
VC³ 4150	950 x 1100 x 1475	-42	+180	2,5	3,5			4200	–	+10	+95						500
VC³ 7150	950 x 1100 x 1475	-72	+180	2,3	3,5			3000	–	+10	+95						500
VC³ 4200	950 x 1100 x 2150	-42	+180	2,0	3,0			3500	–	+10	+95						500
VC³ 7200	950 x 1100 x 2150	-72	+180	1,5	2,5			3500	–	+10	+95						500
With temperature-changing speed of 5 K/min																	
VCS³ 4018-5	750 x 580 x 450	-42	+180	8,0	8,0			4000	1300	+10	+95						400
VCS³ 7018-5	750 x 580 x 450	-72	+180	7,5	8,0			3000	3000	+10	+95						400
VCS³ 4034-5	750 x 580 x 765	-42	+180	6,8	7,0			4000	1300	+10	+95						400
VCS³ 7034-5	750 x 580 x 765	-72	+180	6,7	7,0			3000	3000	+10	+95						400
VCS³ 4060-5	950 x 800 x 800	-42	+180	6,5	6,0			5000	1650	+10	+95						500
VCS³ 7060-5	950 x 800 x 800	-72	+180	6,0	6,0	± 0,1 to ± 0,5	± 0,5 to ± 2,0	5000	1650	+10	+95	+4 to +94 (bis -3)[6]	10 to 98	± 1 to ± 3	± 0,1 to ± 0,3	± 0,5 to ± 1,0	500
VCS³ 4100-5	950 x 1100 x 950	-42	+180	6,7	8,0			5000	5000	+10	+95						500
VCS³ 7100-5	950 x 1100 x 950	-72	+180	6,0	8,0			5000	5000	+10	+95						500
VCS³ 4150-5	950 x 1100 x 1475	-42	+180	6,3	7,0			5000	1650	+10	+95						500
VCS³ 7150-5	950 x 1100 x 1475	-72	+180	5,0	7,0			5000	5000	+10	+95						500

Impressive technology. Reliable results.

The performance data at a glance:

Type	Test space dimensions, H x W x D, approx.	Minimum temperature[1]	Maximum temperature	Temperature-changing rate cooling[2]	Temperature-changing rate heating[2]	Temperature deviation in time[3]	Temperature homogeneity in space[4]	Heat compensation at +20 °C	Heat compensation at -20 °C	Minimum temperature[1]	Maximum temperature	Dewpoint temperature range	Humidity range	Humidity constancy in time	Temperature homogeneity in time[3]	Temperature homogeneity in space[4]	Maximum heat compensation[5]
	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 speed of 10 K/min																	
VCS³ 4027-10	750 x 580 x 615	-42	+180	12,5	10,0	± 0,3 to ± 0,5	± 0,5 to ± 2,0	6000	2000	+10	+95	+4 to +94 (bis -3)[6]	10 bis 98	± 1 to ± 3	± 0,2 to ± 0,3	± 0,5 to ± 1,0	400
VCS³ 7027-10	750 x 580 x 615	-72	+180	14,5	10,0			6000	6000	+10	+95						400
VCS³ 4048-10	950 x 800 x 650	-42	+180	12,5	12,0			8000	3000	+10	+95						500
VCS³ 7048-10	950 x 800 x 650	-72	+180	11,0	12,0			8000	8000	+10	+95						500
VCS³ 4080-10	925 x 1100 x 800	-42	+180	12,0	12,0			8000	3000	+10	+95						500
VCS³ 7080-10	925 x 1100 x 800	-72	+180	12,0	12,0			8000	8000	+10	+95						500
VCS³ 4130-10	925 x 1100 x 1325	-42	+180	11,5	11,0			8000	3000	+10	+95						500
VCS³ 7130-10	925 x 1100 x 1325	-72	+180	10,5	11,0			8000	8000	+10	+95						500
With temperature-changing speed of 15 K/min																	
VCS³ 4027-15	750 x 580 x 615	-42	+180	16,0	15,0	± 0,3 to ± 0,5	± 0,5 to ± 2,0	8000	3000	+10	+95	+4 to +94 (bis -3)[6]	10 to 98	± 1 to ± 3	± 0,2 to ± 0,3	± 0,5 to ± 1,0	400
VCS³ 7027-15	750 x 580 x 615	-72	+180	18,0	15,0			8000	8000	+10	+95						400
VCS³ 4048-15	950 x 800 x 650	-42	+180	18,0	17,0			8000	3000	+10	+95						500
VCS³ 7048-15	950 x 800 x 650	-72	+180	15,0	17,0			8000	8000	+10	+95						500
VCS³ 4080-15	925 x 1100 x 800	-42	+180	18,0	16,0			8000	3000	+10	+95						500
VCS³ 7080-15	925 x 1100 x 800	-72	+180	15,5	16,0			8000	8000	+10	+95						500
VCS³ 4130-15	925 x 1100 x 1325	-42	+180	17,0	16,0			8000	3000	+10	+95						500
VCS³ 7130-15	925 x 1100 x 1325	-72	+180	14,5	16,0			8000	8000	+10	+95						500
With temperature-changing speed of 20 K/min																	
VCS³ 4027-20	750 x 580 x 516	-42	+180	20,0	20,0	± 0,1 to ± 0,5	± 0,5 to ± 2,0	8000	3000	+10	+95	+4 to +94 (bis -3)[6]	10 to 98	± 1 to ± 3	± 0,1 to ± 0,3	± 0,5 to ± 1,0	400
VCS³ 7027-20	750 x 580 x 516	-72	+180	20,0	20,0			8000	8000	+10	+95						400
VCS³ 4048-20	950 x 800 x 650	-42	+180	20,0	20,0			8000	3000	+10	+95						500
VCS³ 7048-20	950 x 800 x 650	-72	+180	20,0	20,0			8000	8000	+10	+95						500
VCS³ 4080-20	925 x 1100 x 800	-42	+180	20,0	20,0			8000	3000	+10	+95						500
VCS³ 7080-20	925 x 1100 x 800	-72	+180	20,0	20,0			8000	8000	+10	+95						500
VCS³ 4130-20	925 x 1100 x 1325	-42	+180	20,0	20,0			8000	3000	+10	+95						500
VCS³ 7130-20	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:

Type	Test space dimensions, H x W x D, approx.	Minimum temperature[1]	Maximum temperature	Temperature-changing rate cooling[2]	Temperature-changing rate heating[2]	Temperature deviation in time[3]	Temperature homogeneity in space[4]	Heat compensation at +20 °C	Heat compensation at -20 °C	Minimum temperature[1]	Maximum temperature	Dewpoint temperature range	Humidity range	Humidity constancy in time	Temperature homogeneity in time[3]	Temperature homogeneity in space[4]	Maximum heat compensation[5]
	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 speed of 25 K/min																	
VCS³ 4027-25	750x580x615	-42	+180	25,0	25,0			8000	3000	+10	+95						400
VCS³ 7027-25	750x580x615	-72	+180	25,0	25,0			8000	8000	+10	+95						400
VCS³ 4048-25	950x800x650	-42	+180	25,0	25,0			8000	3000	+10	+95						500
VCS³ 7048-25	950x800x650	-72	+180	25,0	25,0	± 0,1 to ± 0,5	± 0,5 to ± 2,0	8000	8000	+10	+95	+4 to +94 (bis -3)[6]	10 to 98	± 1 to ± 3	± 0,1 to ± 0,3	± 0,5 to ± 1,0	500
VCS³ 4080-25	925x1100x800	-42	+180	25,0	25,0			8000	3000	+10	+95						500
VCS³ 7080-25	925x1100x800	-72	+180	25,0	25,0			8000	8000	+10	+95						500
VCS³ 4130-25	925x1100x1325	-42	+180	25,0	25,0			8000	3000	+10	+95						500
VCS³ 7130-25	925x1100x1325	-72	+180	25,0	25,0			8000	8000	+10	+95						500
Calibration values (factory calibration):		+4 °C and +90 °C for VC³ 0018 to VC³ 0150 +23 °C and +80 °C for VC³ 4018 to VCS³ 7130-25								+25 °C/60 % RH and +40 °C/75 % RH for VC³ 0018 to VC³ 0150 +23 °C/50 % RH and +90 °C/50 % RH for VC³ 4018 to VCS³ 7130-25							

[1]Discontinuously.
[2]According to IEC 60068-3-5; measured on average, in the temperature range.
[3]In steady state, depending on the temperature.
[4]Depending on the adjusted set point value; in the temperature range of minimum temperature to +90 °C and >20 % for RH VC³ 0018 to VC³ 0150 resp. +150 °C and >20 % RH for VC³ 4018 to VCS³ 7130-25.
[5]Between +25 °C and +90 °C and humidities to approx. 90 % RH.
[6]Intermittent operation.

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

Green Mode®

With Green Mode®, you can reduce your operating costs and save up to 40 % of electrical energy and many tons of CO_2. We achieve the savings by additional hardware and software and application-oriented system planning.*

We measure ourselves by our service!

24/7 Service Helpline: +49 1805 666 556

Our services – plenty of good arguments:

- Global service network
- 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 VC³ 7018 to VC³ 7200 and VCS³ 7018-5 to VCS³ 7150-5 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!

vötschtechnik®
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 at your service in 14 countries, ready to provide support to ensure high operational reliability of your systems.

Vötsch Industrietechnik, a subsidiary of Weiss Umwelttechnik,is one of the most innovative and significant manufacturers of environmental simulation systems. With these testing systems, we can simulate all climatic conditions around the globe and beyond, under accelerated conditions. 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 also offers a wide product portfolio in the field of heating technology. With an experienced team of engineers and designers, we develop, plan and produce high-quality and reliable heating technology systems for virtually any field of application. Products include heating/drying ovens, clean room drying ovens, hot-air sterilisers, microwave systems and industrial ovens. The portfolio 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. Our experts will guide you from the planning to the implementation of your projects.

Weiss Pharmatechnik, a subsidiary of Weiss Klimatechnik, is a competent provider of sophisticated clean room and containment solutions. The product range includes barrier systems, laminar flow facilities, security workbenches, 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.

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