

Perspectives ...

**Vötsch**  
Industrietechnik



... with an innovative and highly competitive standard in test technology!

The actual generation of VT & VC temperature and climatic test systems

# Safety with reliable test results ...

## No risk with product quality ...

Characteristics, function and service life of systems or components are influenced by varying thermal and climatic conditions during transport, storage or use.

Tests in temperature and climatic test cabinets are the method of optimising and securing the quality of your products.



... by trend-setting technology

The temperature and climatic test chambers with remarkable performance ...



# A product line with system behind it ...

With modular elements for varying the size ...

Where perfection in precision of temperature and climatic tests, we have the solution!

The impressive, intelligent technological simplicity of the VT/VC series has led to convincing results. Additional features are an integral part of the overall solution to the problem.

- Colour touchpanel for intuitive, simple operation "Touch and go"
- Highly efficient 32 bit control and monitoring system
- Extremely low noise level
- Safety device for test specimens with independent temperature measurement
- Continuously wetted, self-cleaning humidity sensor
- Maintenance-friendly designs
- Large window
- Optimum air flow

Together with user-oriented options, the well thought out features of our high-tech systems constitute user-specific test systems of superb quality.

Manufacture, handling and operation benefit from the economical principle, on which the modular construction of the new series is based.

Your system, a one-time assembly of optimized, tested basic modules, adapted to your specific test problem, yet with the advantages of precisely dimensioned series components.



## Safe and reliable!

Based on the experience of a market leader, we have uncompromisingly implemented our TQM concept.

The test space of all test cabinets of the new series is easily accessible at laboratory table height and can be clearly observed through the optional large observation window. Optimum air flow and hermetically sealed refrigeration units provide excellent sound insulation.



Environmental aspects in the production set standards

- Solvent-free powder coating
- Asbestos-free, CFC-free mineral fibre insulation
- Chloride-free refrigerant
- Guaranteed recycling system



## Technology in detail

Direct temperature conditioning and climatic systems, with their high effectiveness, make sure that energy is transformed into power and not released.

The high-gloss polished stainless steel test space is welded vapour tight, has rounded edges and moulded shelf supports. It remains impervious to corrosion and is easy to clean.

The temperature conditioning systems provide rapid temperature changing rates in the range of  $-70^{\circ}\text{C}$  to  $+180^{\circ}\text{C}$ . High circulating air rates ensure even distribution of temperature and humidity in the test space. It goes without saying, that it complies with the most common temperature and climatic test standards. An essential element of the climatic system of the chambers is the humidification bath. This technology guarantees economical consumption of water, quick reaction times and long-term tests.

The measuring system required for the humidity has been considerably improved by the use of an continuously wetted humidity sensor. This type of wetting effects the self-cleaning procedure of the sensor and vastly increases the service life of the psychrometric measuring principle.

Other humidity measuring systems as options.



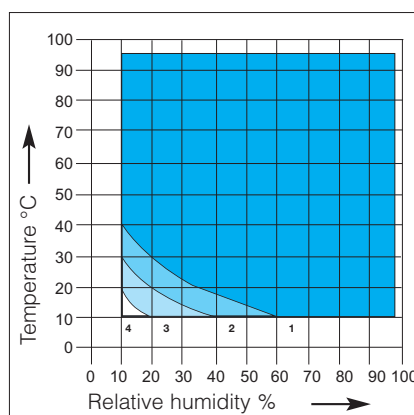
## Easy handling ...

A pivoted control satellite (colour touchpanel) co-ordinates and monitors the tasks of the individual components. The terminal is in user-friendly position to the right of the test chamber and at an easily accessible height.

The test space can easily be opened with one hand.

The communication link to the system comprises the basic functions on/off, test specimen protection (min./max.), serial and parallel interface, analog and digital port for input and output signals.

Supply connections are easily accessible and the separate electrical compartment is located in a maintenance-friendly place. Feet, with height adjustment facilitate installation.



## Humidity graphs

- 1 Standard range
- 2 Dewpoint range  $+4^{\circ}\text{C}$  to  $-3^{\circ}\text{C}$  discontinuously
- 3 Dewpoint extension from  $-3^{\circ}\text{C}$  to  $-12^{\circ}\text{C}$  controlled (Option compressed air dryer)
- 4 Dewpoint extension to  $-20^{\circ}\text{C}$  controlled (Option compressed air dryer and capacitive system)

# Touching is not forbidden ...

## Colour touchpanel for convenient operation

The control and communication system provides the highest possible operating convenience thanks to user interfaces with graphic symbols. Basis is a high-performance 32 bit control system for monitoring and controlling the test systems.

The "touch" terminal which we have selected is simply brilliant:

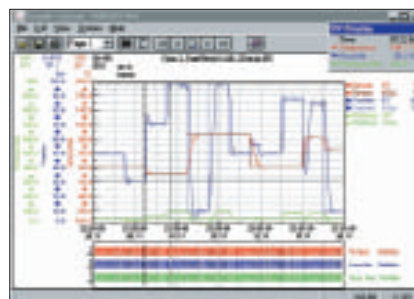
### **Touch and go,**

a touch is sufficient and the desired functions are activated.

Process cycles, system states and other process diagrams can be represented as graphs thanks to self-explanatory pictograms and can be operated very easy.

Extensive test programs can be easily and reliably created, safeguarded and reactivated.

Climatic test programs complying with customary test standards are included in our software and external selection is possible.



## SIMPATI\*

What would a so highly developed, high-performance system be without a clearly defined, easy-to-operate software to keep the flood of data under control.

The software is called SIMPATI\*. It determines the optional operating parameters for system and test specimens.

In addition to the well-known windows standards, the software can also be integrated in networks.

The operation of the test systems is simple and time-saving. Integrated monitoring routines render the operation of the system more reliable.

Evaluation and documentation of test cycles and the integration of special measuring data guarantee an improved standard.



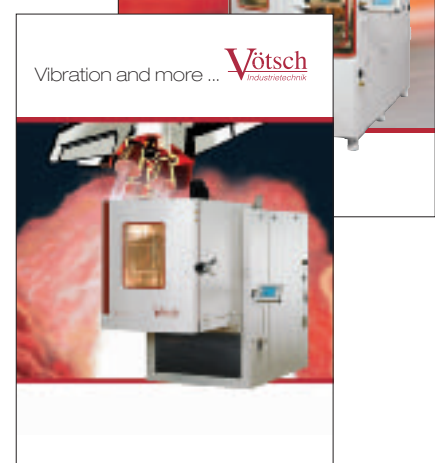
# Equipment and options ...

## Standard

	VT	VC
Colour touchpanel for comfortable input	●	●
Digital I/O board – 4 inputs / 4 outputs	●	●
Potential-free contact for fault reports	●	●
RS 232 interface	●	●
Adjustable software temperature limiter min./max.	●	●
Independent adjustable temperature limiter $t_{min}/t_{max}$	●	●
Dehumidification during heating cycle	●	●
Psychrometer, continuously wetted and self-cleaning	--	●
Entry ports 1 x 50 NW, 1 x 125 NW	●	●
1 Stainless steel shelf	●	●
Air-cooled refrigeration unit	●	●
WKD Calibration of 2 temperature and/or 2 climatic values (only VC)	●	●

## Special designs ...

We plan and manufacture tailor-made solutions to meet all requirements.  
For all requirements in environmental test technology we are your partner.



## The most important options

	VT	VC
Software SIMPATI* / further licences	●	●
Analog transducer card I/O (for 4 Pt100 -Sensors)	●	●
Interface converter RS 232/485 or RS 232/IEEE488	●	●
Interface RS 485/422 (for networking)	●	●
Temperature measuring on test specimen	●	●
Independent sensors for temperature and humidity measuring	--	●
Humidity control via capacitive humidity measuring system	--	●
Centronics printer interface	●	●
Adjustable circulating air quantity (adjustable fan speed)	●	●
Door with window and light	●	●
Door with window and 2 handholes	●	●
Mobile design	●	●
Additional entry ports ( 50 NW, 80 NW, 125 NW)	●	●
Additional stainless steel shelves	●	●
Lead-through pad	●	●
Water-cooled refrigeration unit	●	●
Various printers	●	●
Deep dehumidification for negative dew points	--	●
Demineralization unit	--	●
Special voltages	●	●
Spatial WKD or DKD calibration	●	●

**We reserve the right of changes in construction resulting from technical progress. Some of the illustrated systems contain optional extras.**

# Vötsch

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