



**NEW**  
Digital measuring and  
control system SIMPAC

## High Performances – Compact Design

Temperature Test Chambers WT  
– perfect for application in factories and laboratories



# From Cold to Hot...

## No compromises regarding temperature tests

The test chambers of the WT series are both highly effective and economical. They are equipped with everything which is required to perform cold-heat tests in extreme ranges complying with the relevant standards.

Due to their compact dimensions these chambers are perfectly suitable where space is limited in factories and laboratories.

## The main advantages...

- compact design
- easy operation
- low noise level
- beneficial price / performance ratio
- plug-in design, connection to shock-proof socket
- low connected load
- 3.5" TFT-colour touch panel with simple, menu-guided user interfaces as a convenient interface with the operator (no programming knowledge necessary)
- USB and Ethernet interface
- high-precision temperature conditions
- networking with other test systems possible
- remote control and remote monitoring possible via intranet or internet
- integrated service information system
- low energy consumption

## Application...

The test chambers allow reproducible temperature tests to be performed in all areas of research, development, production and quality control.

Regardless of the form and composition of the test specimen, efficient, even temperature control and climatisation in the test space guarantee high temperature constancy, which in turn ensures accurate test results.

## Functional principle...

An airstream conditioned to precisely the required set value is passed constantly through the test space. Components for processing the air are located in the circulating air duct installed in the rear wall of the test chamber. The symmetrical air circulation system guarantees optimum circulation.

The circulating air is returned above and below the test space and flows through a heat exchanger in which it may be cooled if necessary. An electric heater warms the circulating air. An axial fan with external motor, mounted centrally in the rear test chamber wall, blows conditioned air back into the test space, providing intensive air circulation.

Every electrical functional circuit is equipped with its own safety facility which shuts down the functional circuit affected or the entire test chamber in case of a malfunction.

The electrical system complies with the approved state of the art in the field, the safety regulation "Electrical Systems and Facilities" (BGV A3) as well as with the relevant VDE regulations. All test chambers fulfil the EMC, low-voltage and machinery directive.

The hermetic refrigeration circuits operate with environmentally friendly refrigerants free from chlorine without any ozone-depleting potential (CFC-free).

The 32-bit control and monitoring system of SIMPAC\* ensures controlling of temperature.

## Networking...

The units are compatible with the SIMPATI\* software package and can be integrated into their networking environment. (data logging operation in SIMPATI\*).



# ... The Complete Temperature Spectrum

## Design features

The test chambers are designed in a modular system and are ready to be plugged in. The stainless steel test space is welded vapour-tight and easy to clean.

Its environmentally friendly insulation free of asbestos and CFC guarantees the best possible insulation values and, hence, the lowest possible operating costs.

Moreover, the test chambers are equipped with an adjustable safety cut-out against high temperatures (test specimen protection). Any alarm is issued visually. In addition, a potential-free contact is available.

All unit sizes have one access port made of low thermal conductivity material. It is positioned in the right hand side of the chamber, and may be used for inserting measuring and control cables, other supply connections or supplementary equipment.

## Standard design...

- digital measuring and control system SIMPAC\*
- 3,5" TFT-colour touch panel for convenient entering of fixed values and programs with graphic representation of the target and actual values, runtime, etc.
- SIMPATI\* Program Tool
- refrigeration unit, air-cooled
- port 50 mm Ø in the right side panel
- safety cut-out against high temperatures (protection of test specimen)
- Ethernet and USB interface
- potential-free contact for specimen disconnection
- calibration of 2 temperature values



## Options...

- observation window with test space illumination
- software SIMPATI\*
- temperature measurement on specimen
- compressed air drier
- additional access ports
- rack with shelf
- additional shelves
- laboratory trolley for WT 64, 120 and 240



## Technical data...

Series WT			WT 64/75	WT 120/70	WT 240/70	WT 450/70
Test space volume	litres	approx.	64	120	240	450
Dimensions of housing	Height mm	approx.	400	400	800	800
	Width mm	approx.	500	500	500	800
	Depth mm	approx.	330	600	600	700
Overall dimensions	Height mm	approx.	1,200	1,200	1,615	1,950
	Width mm	approx.	890	890	890	1,190
	Depth mm	approx.	940	1,210	1,210	1,310
Design			← table-top units →			← free-standing units →
Temperature range	°C		-75 ... +180	-70 ... +180	-70 ... +180	-70 ... +180
Temperature constancy, in time	K		← ±0.2 ... ±0.7 →			
Temperature homogeneity, in space	K		← ±0.5 ... ±2.0 →			
Cooling-down rate <sup>2)</sup>	K/min	approx.	2.5	2.0	1.5	0.7
Heating-up rate <sup>2)</sup>	K/min	approx.	2.8	2.0	1.4	0.7
Power supply			← 1/N/PE AC 230 V ±10 %, 50 Hz, 16 A →			
Connected load			← 1.5 kW →			
Condenser			← air-cooled →			
Weight	kg	approx.	180	210	260	310

The performance data refer to an ambient temperature of +25 °C, 230 V nominal voltage, without specimen

<sup>1)</sup> Referring to the adjusted setpoint value in the temperature range of a minimum temperature to +150 °C

<sup>2)</sup> according to IEC 600 68-3-5

Subject to technical modifications. The units are partially shown with optional accessories.