



Hegewald & Peschke

Meß- und Prüftechnik GmbH

Product information

Temperature chambers



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Field of application:

The temperature chambers are used for material and component testing in a wide temperature range.

The different standard dimensions of the temperature chambers ensure compatibility with our universal testing machines of the series inspekt, inspekt table, inspekt duo and inspekt blue and offer a suitable solution for different testing methods and materials.

For the mounting of the chamber two systems are available.

With the rail guide system, the chamber is fixed to the testing machine and can be driven into or out of the test room of the testing machine. Alternatively, we offer roller carriages, where the temperature chamber is completely independent from the testing machine. Together with grips and test tools suitable for temperature chambers, Hegewald & Peschke offers customer-specific complete solutions for material testing under defined environmental conditions.



Technical data:

Temperature range RT 23 °C	-80 °C up to 260 °C
Max. heat & cooling speed	10 K/min & 8 K/min (for empty test room)
Resolution temperature measuring	0.1 °C
Temperature consistency testing room	+/- 0.5 °C to 2 °C timed
Heating	heating bars
Cooling	LN ₂ (liquid nitrogen) direct injection Connection 3/8" inner thread (0.9 to max. 1.5 bar) Exhaust air at the top (ensure sufficient ventilation of the room)
Connection	3NPE AC 50 Hz 400 V, 2.5 to 11.5 kVA, plug CEE16 or CEE32 with 5 m cable

Models:

Item no.		16-100-00X	16-100-01X	16-100-02X	16-100-10X	16-100-11X	16-100-20X	16-100-21X
Inner dimensions [mm]	W	264	264	264	324	424	554	554
	H	250	530	680	800	650	810	975
	D	416	416	416	510	500	750	750
Outer dimensions [mm]	W	400	400	400	490	590	730	730
	H	386	708	858	966	816	986	1151
	D	1032	1032	1032	1150	1150	1390	1390
Weight		80 kg	120 kg	120 kg	160 kg	160 kg	260 kg	300 kg
Window		no	yes	yes	yes	yes	yes	yes



- Lateral entry (ø50 mm) for clip-on extensometer or similar equipment.



- **Direct status display** in the door via LED-illuminated symbols



Integrated controls

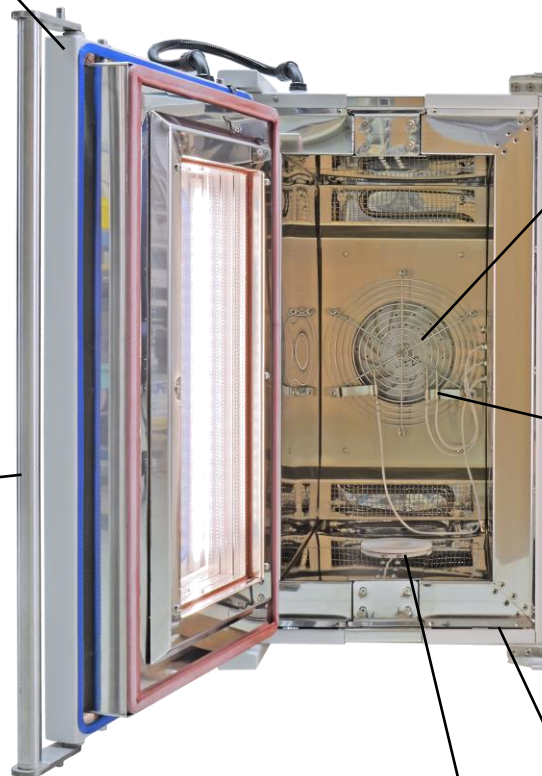
- Electronic digital controller (type Eurotherm) with simultaneous display of target and measurement temperature

- **Viewing window** with heated/cooled 5-fold glazing made of anti-reflective glass including indirect LED lighting
- Optimal viewing conditions for optical strain determination

- Ergonomic **swivel lever handle** over the entire chamber height

Convenient control via LabMaster testing software - everything at a glance

- Temperature regulation on/off
- Switching between control of air or specimen temperature
- Test room illumination
- Display of the temperature in the test software
- Synchronization of mechanical and thermal stress (block program)
- Temperature programs (ramps, etc.)
- Up-to-date LAN/Ethernet connection



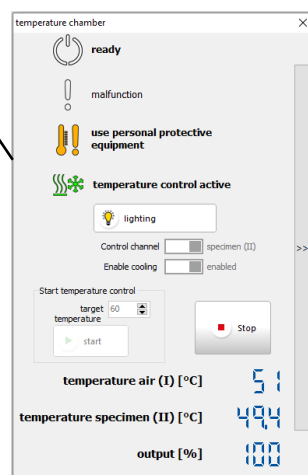
- **Uniform temperature distribution** throughout the entire heating chamber
- In standard: **direct cooling** by LN2
- Dust-protected radial fan

3 Thermocouples

- 1 Air temperature sensor
- 1 Movable specimen temperature sensor
- Permanent display of both
- Temperature control switchable between specimen and air temperature
- 1 Sensor for overtemperature protection

Frame with jacket cooling

- Improved safety by avoidance of high surface temperatures on the outside of the temperature chamber



Slide in inserts and compensating rings

- Moving the temperature chamber into and out of the test area without removing the fixtures/adapters
- Considerable reduction of the set-up times
- Compensating rings for thermal sealing at the feed-throughs of the load introduction rods into the temperature chamber



Scope of delivery:

- Temperature chamber with slide in inserts
- 3 PT 100 (flexible for specimen, environment, temperature protection)
- 1 pair adapter rings for extension pullrod for feed through
- 1 pair protective gloves, size M
- Software integration Eurotherm-LabMaster incl. hardware and software control module

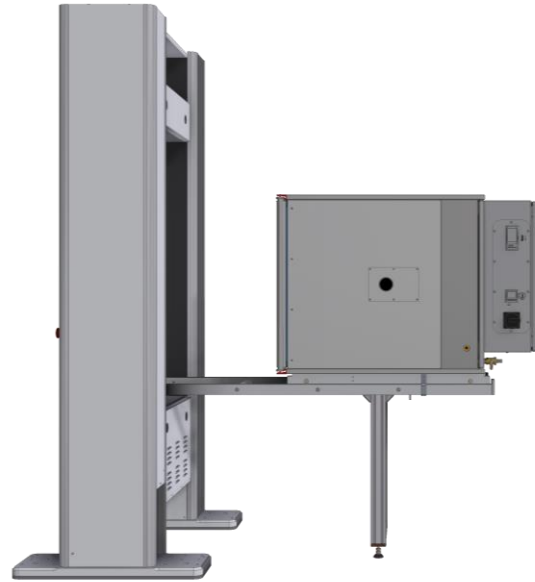
Options:

- **Cascade control** for precise and gentle temperature control of the specimen
 - Mode of operation: The primary controller is the air temperature sensor. This is corrected by the secondary controller (measuring sensor on the specimen) in order to achieve the desired specimen temperature more precisely.
 - The advantage compared to direct control via the specimen temperature sensor is a gentler temperature control of the specimen. Since the transfer of heat between ambient and specimen temperature via the air is inert, overheating of the specimen surface can otherwise occur with sensitive specimens.
- **Indirect cooling** via heat exchanger/refrigerant for moisture-sensitive specimens without need of liquid nitrogen
- Holder for **specimen pretempering**
- **Second specimen temperature sensor** (e.g. for tensile tests according to DIN EN ISO 6892-2 with specimen lengths >50 mm)
- **Lateral slot** for tactile strain measurement with long-distance extensometers



Necessary accessories (not included):

- Fixture with rail guide or roller carriage



Temperature chamber holder with rail guide



Roller carriage with transportable guide system

- Extension pull rod incl. tool adaption 16-028..
- Testing software LabMaster
- PC with free Ethernet slot (LAN)
- For (cooling) operation: provision of LN2 (customer-side)