

Technical Description LabEvent T/110/50/4



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Notes

The performance data refers to +25 °C ambient temperature, at given nominal voltage, without test specimen, without optional accessories and without heat compensation. These are average values of the basic equipment.

The test chamber is designed for installation inside dry and ventilated spaces with max. degree of contamination "2" according to EN 50178:1997. The permissible ambient temperature during operation is between +10 °C and +35 °C.

The max. permissible humidity must not exceed 75% RH and the max. dew point must not exceed +20 °C.

Protect the system from sunlight and avoid proximity to heat sources.

Highlights at a glance

→ Natural refrigerant with GWP 1

The test chamber contains CO₂ as a refrigerant. It does not fall under the F-Gas regulation. Test more environmentally friendly than ever before and help your company achieve its environmental goals.

→ Compact Design

Our LabEvent chambers ensure the minimum external footprint for your test needs.

→ Integrated web panel

Operating/programming and monitoring unit with 18 cm (7") web panel, attached to the door with **WEBSeason®** remote control software.

→ Advanced connectivity

With our SimServ interface, you can access the chamber's test data and control the chamber via Ethernet. Alternatively, advanced architectures such as OPC-UA are available as an option.



Highlights

Into the age of connectivity – with WEBSeason®

You can use the innovative user interface **WEBSeason** to program, control and monitor your tests at any time and anywhere, even from your tablet or smartphone. Settings, language and units can be set and saved to suit the individual user. **WEBSeason** provides a new dimension of flexibility and efficiency.

The ideal solution for your testing processes - S!MPATI®

With a new design, practical menu navigation and high-performance evaluation, **weisstechnik** presents the new version of its proven control software. The new **S!MPATI®** not only offers operating efficiency and performance, but also enables reliable operation of your systems thanks to integrated monitoring routines.

Advantages of S!MPATI® at a glance:

- Maintain test chambers
- Record data and analyze it with a powerful evaluation tool
- Full compatibility with Windows 11 and Windows Server 2022
- Suitable for all current **weisstechnik** devices
- Downwards compatible with almost all models up to 1987
- Integration of third-party systems possible
- Support of the OPC-UA communication standard for Industry 4.0 applications

Test the new version of our **S!MPATI®** software free of charge for 6 months with up to 5 systems.

Performance data

Temperature tests

Maximum temperature	180 °C
Minimum temperature ¹	-50 °C
Rate of temperature change ^{2, 3} cooling	4 K/min
Rate of temperature change ^{2, 3} heating	3.5 K/min
Temperature deviation ⁴ , in time	±0.2 K to ±0.5 K
Temperature homogeneity ⁵ , in space	±0.5 K to ±1.5 K
Heat compensation ⁶ , max.	1450 W
Factory calibration values ⁷	-25 °C and 80 °C

¹ Temperatures >+5 °C are permitted in continuous operation; temperatures <+5 °C are permitted discontinuously or with the additional equipment “compressed air dryer”.

² According to IEC 60068-3-5; average, measured in the supply air.

³ Simulated value; real value may deviate ±1 K/min.

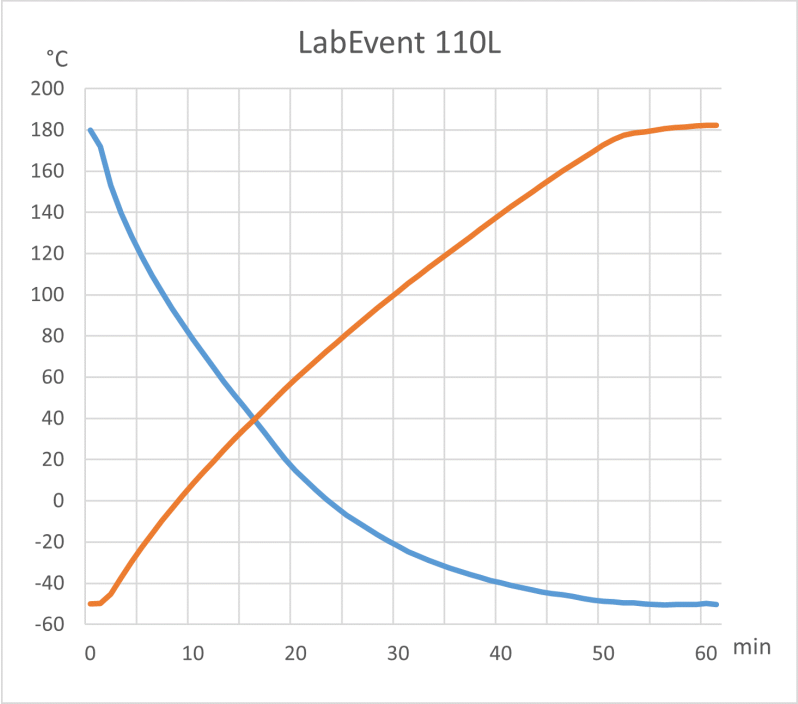
⁴ In the middle of the test space when it is empty and at steady state, without specimen, without heat radiation and without additional equipment, depending on temperature.

⁵ Relative to the selected set point in the temperature range from the minimum temperature up to +150 °C (without measuring tolerance).

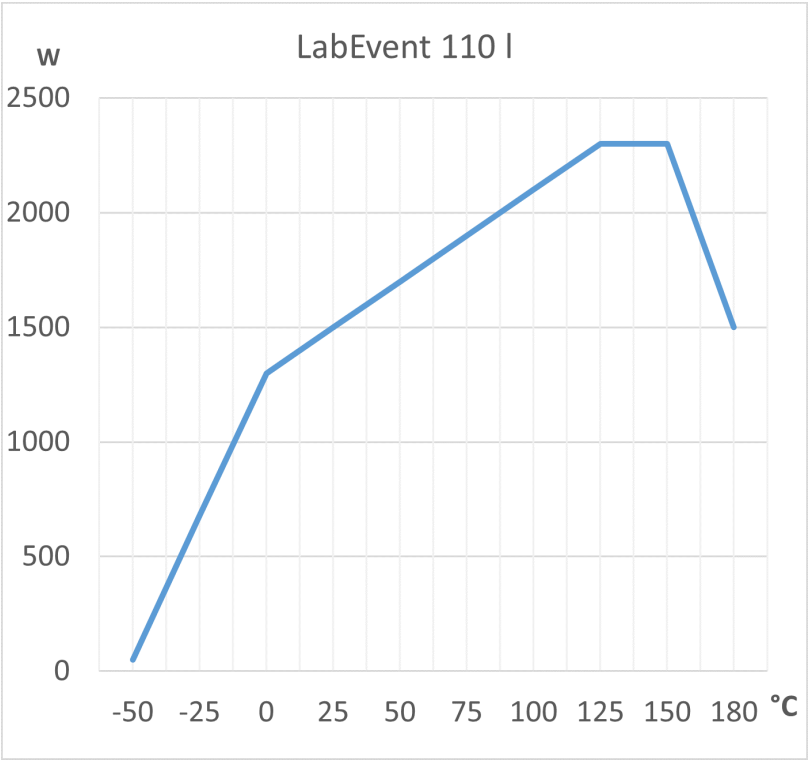
⁶ At +20 °C for temperature tests.

⁷ The factory calibration of the temperature and humidity values is carried out with DAkkS-calibrated measuring equipment in the middle of the test space and documented with a certificate. A DAkkS calibration, as well as a spatial factory or a spatial DAkkS calibration, can be provided on request.

Rate of temperature change for cooling and heating⁸



Heat compensation⁹



⁸ Without test specimen, without heat radiation, measured at the control sensor in the supply air.

⁹ Temperature measured at the control sensor in the supply air at steady state.

Technical data

Dimensions

Test space volume	110 l
Test space dimensions (H x W x D)	630 mm x 560 mm x 350 mm
Useable width	530 mm
Exterior housing dimensions (H x W x D)	1640 mm x 875 mm x 1080 mm
Minimum exterior housing dimensions (H x W x D) ¹⁰	1532 mm x 780 mm x 930 mm
Loading, max.	110 kg
Load of the test space floor ¹¹	30 kg
Load per insertion shelf ¹¹	20 kg
Load per insertion shelf support, max.	80 kg
Total weight ¹²	290 kg

Electrical data

Voltage rating ^{13, 14}	1/N/PE AC 230 V ±10 % 50/60 Hz
Power rating, max.	1.8 kW
Current rating ¹⁵	12 A
Power supply	CEE plug 16 A 3p 6h 230 V blue CT 316/6H



Power supply cable	4.5 m
Fuse protection ¹⁶	16 A gG
Protection class of switchgear cabinet and control unit ¹⁷	IP 54
Sound pressure level ¹⁸	56 dB(A)

¹⁰ For transport and move-in. Parts can be removed at additional expenses.

¹¹ Max. load as surface load.

¹² Without loading and additional equipment.

¹³ The chamber can also be operated with 1/N/PE AC 220 V ±10 % 50/60 Hz. In this case the heating rate will be reduced by approx. 10 %.

¹⁴ If you wish to connect a Residual Current Device (RCD), please note the following: The test chamber may exceed the tripping limit on an RCD with 30 mA. We recommend using an RCD with 300 mA. (type A, according to IEC 60755).

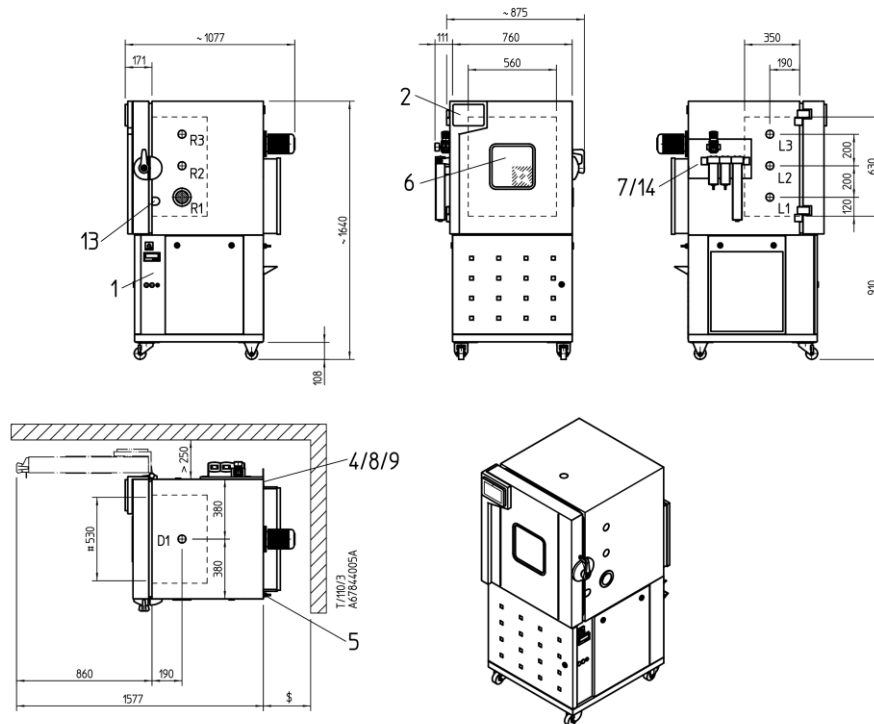
¹⁵ Neutral conductor under load.

¹⁶ Provided by the customer.

¹⁷ EMC tests and information about emitted interference according to EN 61000-6-3 / EN 61000-6-4. Interference immunity is in accordance with EN 61000-6-2.

¹⁸ Measured at a distance of 1 m from the front of the test chamber and a height of 1.6 m in free-field measurement according to EN ISO 11201.

Installation drawing



Access ports

- R1 Installation position right Ø 80 mm
- R2-R3 Additional installation positions right (optional)
- L1-L3 Additional installation positions left (optional)
- D1 Installation position ceiling (optional)

Equipment

- 1 Main switch
- 2 Webpanel
- 4 Overflow/condensate drain backpressure-free, G 3/4" male thread resp. hose connection Ø 12 mm
- 5 Electrical connection
- 6 Test space door (with optional window)
- 7 Compressed air dryer (optional)

Additional information

- ~ Transport dimensions
- # Useable width
- \$ Escape route¹⁹
- 13 Notch port or flat notch port (optional)
- 14 Compressed air connection/GN₂ (optional)

¹⁹ According to IEC 60364-7-729 (VDE 100 part 729), min. 200 mm, a wall clearance of at least 700 mm is required for service work.

Refrigeration unit

Standard design	air-cooled				
Refrigerant ²⁰	Stage	Refrigerant	GWP	Fill quantity	CO ₂ -equivalent
	Main cooling	R744	1	0.65 kg	0.0 t

Air-cooled design

Heat dissipation to the installation room, max. ²¹	4.3 kW
Heat dissipation to air-cooled condenser, max.	-

²⁰ In accordance with DIN EN 378-4, stationary refrigeration and air-conditioning units with a filling capacity of between 3 and 30 kg must be checked for leaks at least once a year; there is no obligation to check systems with a filling quantity of less than 3 kg, but we recommend checking them as a part of maintenance.

²¹ Based on calculated values; may deviate from actual requirements.

Our basic equipment

Exterior housing

Material	Galvanized steel sheet
Finish	RAL 9002, grey-white, solvent free, powder coated
Door	One-hand operation, lockable, hinged on the left side
Base	Movable on 2 guide rollers and 2 fixed rollers

Test space²²

Material floor	Stainless steel 1.4301, surface III D polished
Material wall	Stainless steel 1.4301, surface III D polished ²³
Insertion shelf	1 pc., stainless steel, max. number of insertion shelves possible: 9
Equipment access port right side ²⁴	1 pc., approx. 80 mm Ø stainless steel, incl. closed silicone plug and slotted foam silicone plug
Air circulation conditioning	at rear wall with axial flow fan

Measurement sensor

Temperature	Pt 100 platinum temperature sensor
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Regulation and control

SIMPAC® 2.0	Digital measuring and control system with I/O unit and WEBSeason®-Software, remote controllable through integration into network. Operating/programming and monitoring unit with 17.8 cm (7 ") webpanel, integrated in the door. This test chamber is equipped with our new, future-oriented SIMPAC® 2.0 control system. To meet the future IT security requirements of our customers, a new Linux-based controller is installed. To be able to connect this to SIMPATI®, SIMPATI® version 4.80.2 or higher must be used. Please contact us for an update. Please also note that port 62542 must be released by your IT department for SIMPATI® 4.80.2. In the past, port 2049 was used for networking via ASCII I and II. With SIMPAC® 2.0, the following changes were necessary from a technical point of view: ASCII I new: 2050/tcp ASCII II new: 2051/tcp There are no changes for users of our SimServ protocol. This continues to work via port 2049. Please note these changes prior to delivery of the systems. You can find our FAQ on the new control system at
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<https://www.weiss-technik.com/environmental-simulation/de/detailpages/software/simpac-2.0>

²² The use of tempered silicone parts means that the test space produces only low emissions. If the test space has to be emissions-free, this requires technical clarification; please contact us to request an offer.

²³ For test setups a wall distance of at least 20 mm must be maintained.

²⁴ Production-related tolerances of up to ±3 mm are possible.

Communication

Network	1 Ethernet interface (100/1000 megabits) for integration in a network
USB	1 USB interface for recording of measuring data on a flash drive ²⁵
Customer protocols	SimServ text protocol for data recording and control of the test chamber via Ethernet interface using external applications OPC-UA, Profi Bus, Profi NET or EtherCAT on request.

Safety

Test specimen protection	Independent adjustable temperature limiter $t_{\min}/t_{\max}$, separate sensor installed in the test space. Software temperature limiter $t_{\min}/t_{\max}$, individually adjustable fixed value
Test chamber protection	Temperature limiter for protection against overtemperature in the test chamber
Specimen switch-off	Potential-free contact specifically for test specimens that emit heat, on female connector, max. load 24 V, 0.5 A

²⁵ Flash drive is not included in the scope of delivery.

Additional options