weisstechnik®
a schunk company

S!M PAC® controlled 2.0

Technical Description
LabEvent T/20/30/5

CO_2 inside
Consistently reliable testing

Illustration similar (contains additional options)

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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 CO_2 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 17.8 cm (7“) web panel, attached to the door with **WEB**Season® 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.

Illustration is similar (contains additional equipment)

Highlights

Into the age of connectivity – with WEBSeason®

You can use the innovative user interface **WEB**Season 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. **WEB**Season 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, **weiss**technik presents the new version of its proven control software. The new **S!M**PATI® 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 **weiss**technik 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!M**PATI® software free of charge for 6 months with up to 5 systems.

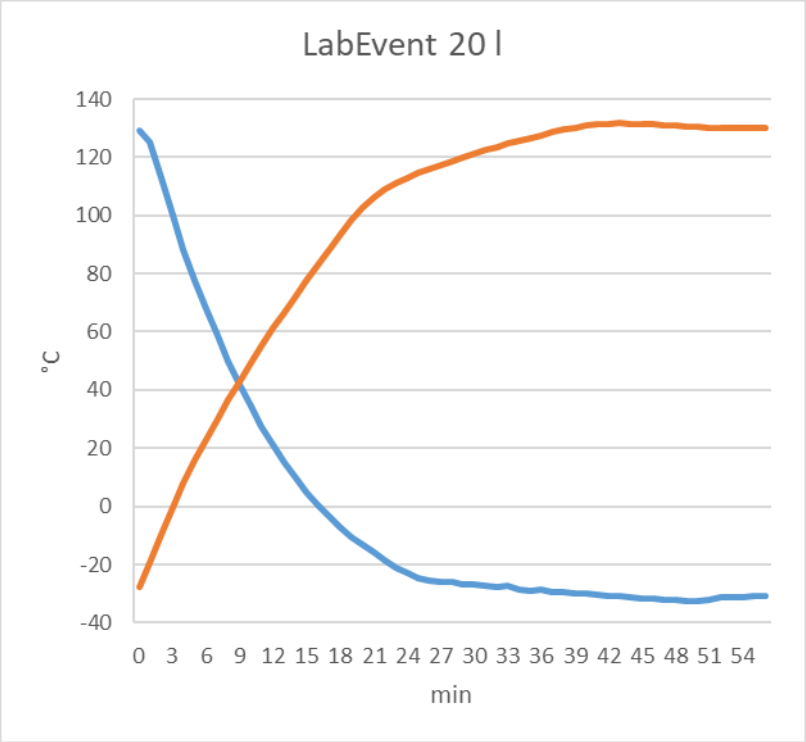
Performance data

Temperature tests

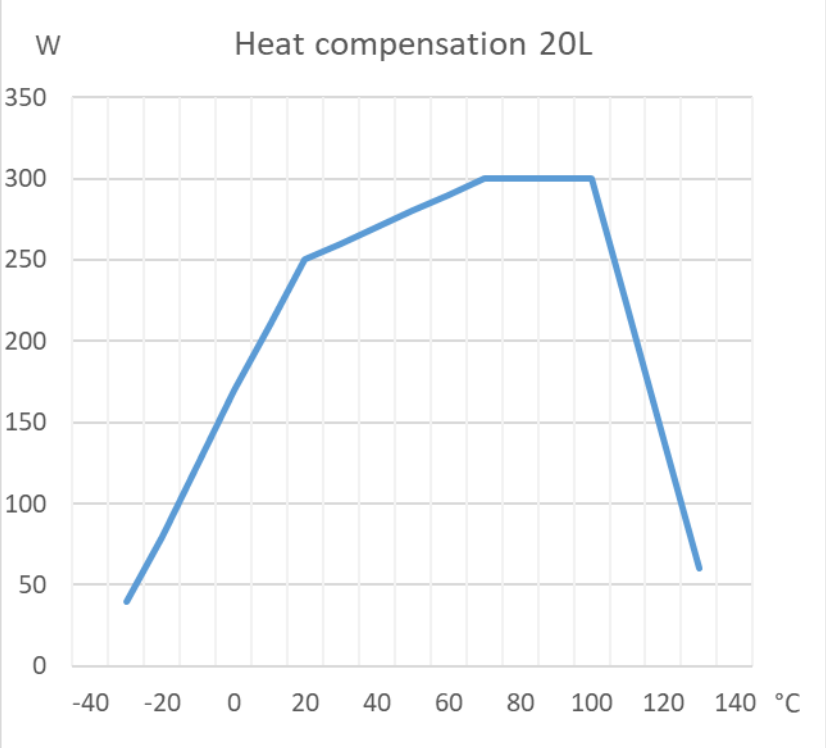
Maximum temperature	130 °C
Minimum temperature[1]	-30 °C
Rate of temperature change[2] cooling	6 K/min
Rate of temperature change[2] heating	5 K/min
Temperature deviation[3], in time	±0.3 K to ±1 K
Temperature homogeneity[4], in space	±0.5 K to ±2 K
Heat compensation[5], max.	300 W
Factory calibration values[6]	-25 °C and +80 °C

[1] Temperatures >+5 °C are permitted in continuous operation; temperatures <+5 °C are permitted discontinuously.
[2] According to IEC 60068-3-5; average, measured in the supply air.
[3] 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.
[4] Relative to the selected set point in the temperature range from the -30 °C to +100 °C (without measuring tolerance).
[5] At +20 °C for temperature tests.
[6] 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.

Rate of temperature change for cooling and heating[7]



Heat compensation[8]



[7] Without test specimen, without heat radiation, measured at the control sensor in the supply air.
[8] Temperature measured at the control sensor in the supply air at steady state.

Technical data

Dimensions

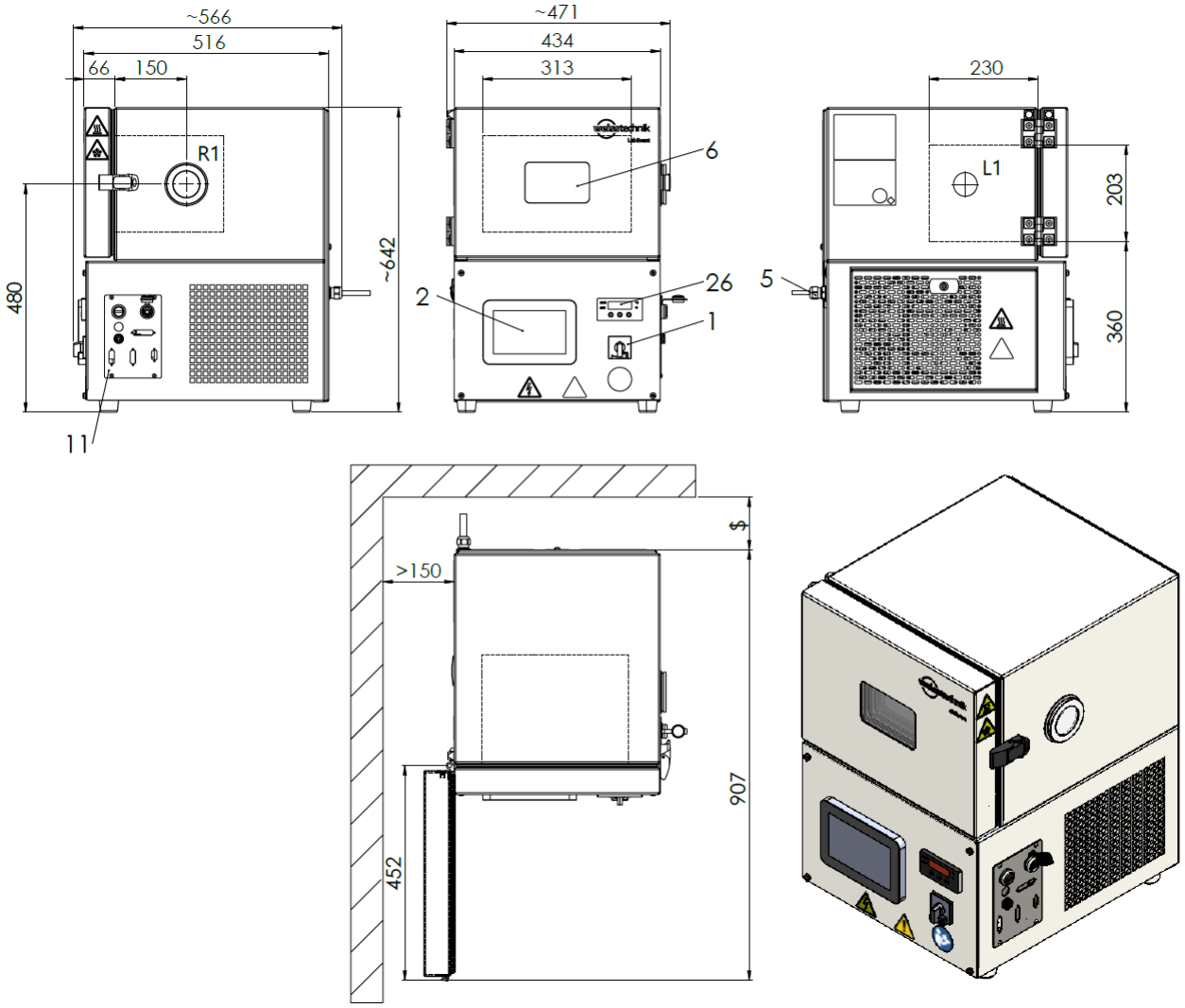
Test space volume	15 l
Test space dimensions (H x W x D)	205 mm x 310 mm x 230 mm
Exterior housing dimensions (H x W x D)	640 mm x 470 mm x 570 mm
Loading, max.	10 kg
Load of the test space floor[9]	10 kg
Total weight[10]	60 kg

Electrical data

Voltage rating[11, 12]	1/N/PE AC 230 V ±10 % 50/60 Hz
Power rating, max.	0.7 kW
Current rating[13]	4 A
Expected leakage and fault current	8 to 14mA
Power supply	CEE plug 16 A 3p 6h 230 V blue CT 316/6H
Power supply cable	3.5 m
Fuse protection[14]	16 A gG
Protection class of switchgear cabinet and control unit[15]	IP 54
Sound pressure level[16]	52 dB(A)

[9] Max. load as surface load.
[10] Without loading and additional equipment.
[11] The test chamber can also be operated at 1/N/PE AC 220 V ±10 % 50/60 Hz. In this case, the heating rate then is reduced by approximately 10 %.
[12] 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).
[13] Neutral conductor under load.
[14] Provided by the customer.
[15] 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.
[16] 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 50 mm
L1	Additional installation position left (optional)

Additional information

~	Transport dimensions
$	Escape route[17]

Equipment

1	Main switch
2	Webpanel
5	Electrical connection
6	Test space door with window
11	Connector field
26	Independent, adjustable temperature limiter

[17] 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[18]	Stage	Refrigerant	GWP	Fill quantity	CO_2-equivalent
	Main cooling	R744	1	0.4 kg	0.0 t

Air-cooled design

Heat dissipation to the installation room, max.[19]	1.5 kW

[18] 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.
[19] Based on calculated values; may deviate from actual value.

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	Fixed Feet

Test space[20]

Material floor	Stainless steel 1.4301, surface III D polished
Material wall	Stainless steel 1.4301, surface III D polished[21]
Equipment access port right side[22]	1 pc., 50 mm Ø stainless steel, incl. plug
Air circulation conditioning	at rear wall with axial flow fan

Measurement sensor

Temperature	Pt 100 platinum temperature sensor

[20] 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.
[21] For test setups a wall distance of at least 20 mm must be maintained.
[22] Production-related tolerances of up to ±3 mm are possible.

Regulation and control

S!MPAC® 2.0	Digital measuring and control system with I/O unit and **WEB**Season®-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 **S!M**PAC® 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 **S!M**PATI®, **S!M**PATI® 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 **S!M**PATI® 4.80.2. In the past, port 2049 was used for networking via ASCII I and II. With **S!M**PAC® 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 https://www.weiss-technik.com/environmental-simulation/de/detailpages/software/simpac-2.0

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[23]
Customer protocols	SimServ text protocol for data recording and control of the test chamber via Ethernet interface using external applications

Safety

Test specimen protection	Independent adjustable temperature limiter t_{min}/t_{max}, individually adjustable fixed value Software temperature limiter t_{min}/t_{max}, individually adjustable fixed value
Test chamber protection	Safety 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

[23] Flash drive is not included in the scope of delivery.

Additional options