

Sterilizer

TS 9053

table model, stackable



(Ill. similar)

Outside dimensions: W = 580 mm
D = 575 mm
H = 550 mm

Inside dimensions: W = 440 mm
D = 345 mm
H = 350 mm

Capacity: 53 l

Temperature range: 5°C (above environ. temp.) to 250°C

Housing

Galvanised steel sheet, epoxy-resin-coated, RAL. 7035.

Interior space

Made of high-grade **stainless steel**. Cleaning friendly by rounded corners, slippery surface in the interior, meets highest hygiene requirements

FAN

Fan speed adjustable in 10 steps. The fan stops about 30 seconds after opening the door. The speed of the fan will reduce, or even stopped if operating at a temperature close to the ambient temperature.

Door

Double-walled insulation door, hinged on the right-hand side. (left-hinged version possible). Magnetic, all-round sealing strip, resistant to laboratory cleaning agents.

Interior fittings

Standard: 2 pcs. chrome-nickel steel wire shelves (max. 8 pcs.)

Max. load per shelf: 20 kg in case of constant distribution – total load: 50 kg

Shelf dimension: W = 434 mm, D = 325 mm

*Optional: stainless steel grating type shelves
perforated stainless steel shelves*

Control and instrument panel

In the door arranged with all control units, temperature controller with digital display

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Temperature working range: 5°C above ambient temperature up to 250°C
 Temperature accuracy: time: +/-1°C, spatial: +/- 1,5°C



Microprocessor-controller

Input of nominal value via keyboard, digital LCD-indication, readable. Realization of actual value, digital LED permanently indicated. Keyboard is password protected, in order to refuse unauthorized persons access.

Alarms

The following abnormal operating conditions are indicated optically and acoustically in the temperature controller:

- Over-temperature alarm
- Low temperature alarm
- Sensor error
- Real-time clock setting
- Data error
- power failure

Alarm output

One potential free contact for external use is available

- The output switches with 1 min delay.
- Turns immediately after a power failure
- Immediate return to normal when the alarm condition is no longer present.

Temperature storage in the temperature controller

For checking the temperature control. Recording starts 30 minutes after the setpoint is reached.

Recording interval every minute. Readout of the temperature (min./max./average) possible at the controller.

Standby mode

Preferred way to shut down the chamber. Keeps the real time clock running. Heating, fan and display are switched off.

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Timer

There are two different programs available for timings.

1. Standard timer

Adjustable up to 99 hours and 59 min. The timer starts when the setpoint temperature is reached. In case of power failure of more than 5 min. the time period begins again.

2. Real-time program

Provides the ability to work with two different temperatures. Start and end time selectable between weeks / days for the temperature. The real-time clock for approximately 10 minutes after a power failure, battery-supported. Necessary battery replacement is indicated

Safety thermostat

Automatic safety system that operates independently of the microprocessor controller. Switches the heating off, to prevent overheating. Automatically adjusts to the adjusted set values. Generates an alarm message. Once the temperature falls 0.5°C below the temperature limit, the sterilizer automatically switches on again.

USB connection

For firmware updates

Electrical Data

Power supply	230 V/50 Hz a.A. 60 Hz / 1phasig
Nominal power	1430 W
Heating up time to 250°C	50 min.
Heat transfer	460 W at 250°C
Power cable	1,5 m with Schuko plug

Packing (palletized)

Dimensions:	approx. 60x60x60 cm
Net weight:	approx. 35 kg
Gross weight:	approx. 40 kg
Country of origin:	European Union
Customs clearance code:	8419 2000

Special Equipment and Accessories:



Cable port with cover

Approx. 30 mm Ø. For example to create access for operator measurement lines, etc.

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Qualifications



DQ (Design Qualification)

Definition: Documented proof that the quality-related, GMP-related requirements has been adequately addressed in the design of equipment, including buildings, premises and auxiliary equipment

The user-requirement profiles (specifications) are documented and confirmed by us. On request, a specification can be created by us.

IQ (Installation Qualification)

Definition: Documented proof that critical equipment and systems have been delivered and installed in accordance with the set requirements and government regulations.

The IQ documentation is worked out by us especially for the delivered machine and is made available to you. The IQ documentation has to be carried out by the customer itself.

OQ (Operational Qualification)

Definition: Documented proof that critical equipment and systems in accordance with the set requirements in the whole operating range are working as intended in accordance with predetermined limits.

The OQ documentation is worked out by us especially for the delivered machine and is made available to you. The OQ documentation has to be carried out by the customer itself.

CQ (Calibration Qualification)

Definition: Documented proof that critical measuring equipment in the intended range in accordance with predetermined tolerances operate reliably under current operating conditions

Checking the temperature in the unloaded incubator (after reaching steady state)

1 temperature on 2 measuring levels with 4 measuring points each and one measuring point in the centre of the unit. (Measurement with calibrated PT 1000 sensors). Test time 4 hours, then open door for 30 seconds.

During this time, the stated tolerances must not be exceeded.

The temperature measurements are carried out on our premises. The measurement evaluation, including graphical graphical representation, is provided in written form. (Other measuring methods possible on request)

PQ (Performance-Qualification)

Definition: Documented proof that critical equipment and systems in accordance with the set requirements in the whole workspace under current working conditions (with product) provide the requested services

The calibration described above is carried out under real conditions on site. Optionally, the measurement can be carried out in a loaded or unloaded state. The measurement evaluation, including graphical representation, is carried out in written form. During this time, the stated tolerances must not be exceeded.

(Other measuring methods possible on request)