

# ***Laboklav***

**Dampfsterilisatoren  
Steam sterilizers**



Type 25 Liter

Technical specifications

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## I. Technical Specifications of Steam sterilizer Laboklav 25

### Laboklav 25

Overall dimension (free standing unit)(W x H x D).....	435 x 560 x 680 mm
Footprint (Bench top unit)(W x D).....	500 x 570 mm
Weight (netto).....	ca. 65 kg
Volume Feed water tank.....	ca. 3 l
Volume Condensate tank.....	ca. 3 l
Maximum Load:	
- Instruments .....	5 kg
- Textiles .....	2 kg
- Liquids .....	5 Liter Total volume
Sterilizer chamber:	
Total volume ....	ca. 25 l
Chamber dimension ( $\phi$ x D) .....	$\phi$ 265 x 450 mm
usable Volume .....	ca. 25 l
usable chamber dimension.....	ca. 200 x 200 x 430 mm
Maximum allowable pressure (PS) .....	2.8 bar
Maximum allowable temperature (TS) .....	138°C
Working pressure safety valve .....	2.8 bar
Power supply:	
Voltage .....	230V~ ( $\pm 10\%$ ), 50 Hz, 16A
Working power.....	2,5 kW
Averaged power consumption per cycle .....	0,75 kWh
Protection class .....	I
Water supply:	
Destilled or demineralized Water (acc. to annex C EN 13060:2004)	
Averaged feed water consumption per cycle.....	ca. 0,7 l
Storing conditions:	
Temperature .....	5 ÷ 40°C
Humidity .....	max. 85%

### Computer interface:

- serial interface RS 485

### Printer (optional)

### Programs:

5 predefined programs not code protected:

- P1: Instruments 134°C, 15 min, Drying - in Version V and MV
- P2: Instruments 121°C, 20 min, Drying - in Version V and MV
- P3: Waste 134°C, 20 min
- P4: Liquids 121°C, 20 min, active cooling – in Version M and MV
- P5: Liquids 121°C, 20 min, passive cooling

4 further programs (P6 – P9) predefined like P1, code protected,.

3 testprograms (Durham, P10, Bowie & Dick-Test, P11, Vacuumtest, P12) - in Version V and MV

**II. Product features Laboklav 25**

<b>Product features</b>	<b>Special features</b>
Chamber volume / size	25 l usable, Ø265 x 465mm Chamber lighting (LED white) switchable
Dimesions (WxHxD) Space requirement on work surface	440 x 540 x 660mm 440 x 550mm + 110mm door overhang
Loading	5 x 1 l laboratory bottle, up to 5kg instruments
Kammerwerkstoff	Edelstahl; Lid made of safety glas
Weight	65 kg
Max. allowed pressure (PS)	2,8 bar
Max. allowed temperature(TS)	138°C
Covering	Powder-coated, red Front cover made of safety glass with window Operating lights (LED) in blue, red, green
Lid seal	T- profile seal, silicone
Steam generation	Integrated steam generator with dry heating coils
Reference sensor for liquids	Probe PT100 with flexible measuring lead, standard in all types
Heating capacity of the steam generator	2kW
Electrical connection	230V~ 50Hz, 16A
Lid closure	Motor-operated quick-release with norm-compliant forced gap for steam release when opening
Sterilization temperature	98 - 135°C
Feed water supply	Integrated storage tank manually fillable
Steam exhaust	Standard, drain in integrated condensate tank, drain via hose with quick coupling
Thermal barrier IEC 61010-2-43 (TRB402)	Standard with flexible reference sensor, Removable temperature adjustable
Control	Microprocessor with LCD display, Code-protected access to program parameters, serial interface RS 485 Archiving at least 100 cycles in the controller Subsequent expression or view possible

Number of programs	12 programs, occupancy depending on the level of completion, all programs can be customized, Special programs on request
Timer function	serial
Quick re-cooling, optional	Air cooling by means of fan mounted to the chamber
Vacuum equipment, optional	Diaphragm vacuum pump, simple and fractionated pre-vacuum possible, Drying vacuum including heating in vacuum to improve the drying performance
Regulations	Made in Germany according to valid standards and regulations, Series approval by the TÜV, CE marking in accordance with the Pressure Equipment Directive, Commissioning possible by factory customer service
Accessories	Integrated dot-matrix printer, documentation software Segosoft, insert rack with 4 trays

### III. Environmental conditions Laboklav 25

<b>Operation:</b> Ambient temperature Air pressure Humidity	+10°C to +40°C 700 hPa to 1060 hPa Max. 70 % rel. humidity
<b>Storage: (device is completely empty)</b> Temperature Air pressure Humidity	+1°C to +60°C 500 hPa to 1060 hPa Max 95 % rel. humidity

### IV. Consumption data Laboklav 25 (depending on the load)

Feedwater consumption per batch	0,7 to 5 Liter
Energy consumption per batch	1,5 to 5 kWh
Heat emission in the room	0,5 to 1,9 kWh
Power saving function	Heat recovery eith cooling function

## V. Equipment supply and disposal Laboklav 25

Electrical power supply	230 V ~, Schuko socket 16 A, 50 Hz Length of mains connection cable 2.5m
Feedwater for steam generation	Demineralised water
Disposal	Free drain with odor trap or condensate collector (accessory)

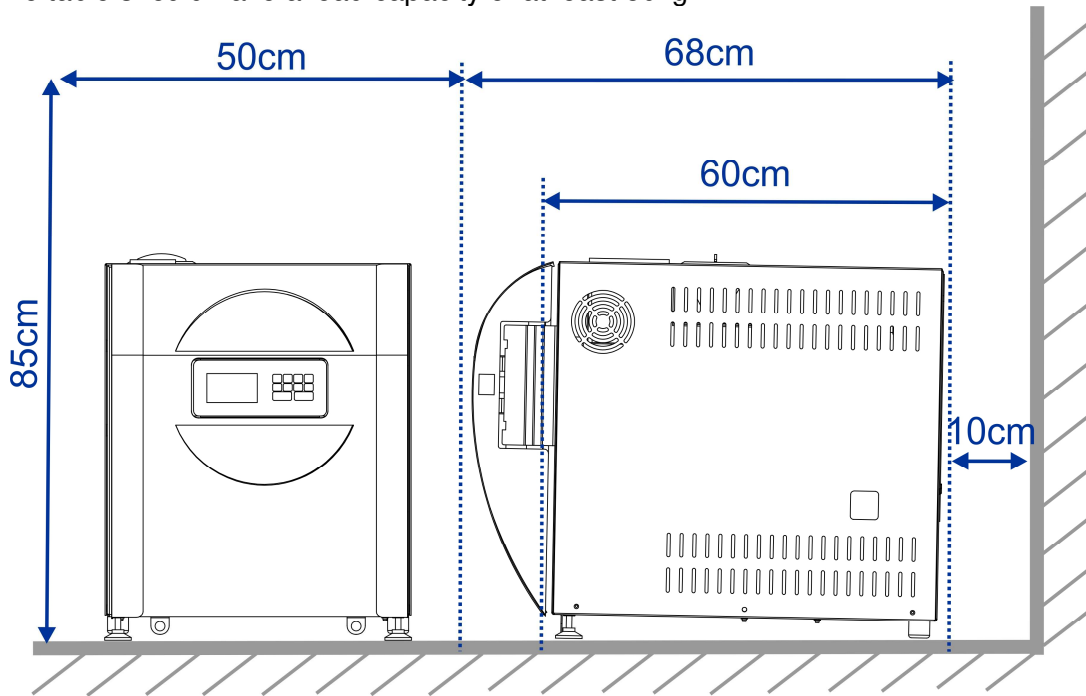
## VI. Definition of feed water quality Laboklav 25 (gem. EN285, Appendix B)

Acc. to **EN 285** - "Steam sterilizers", app. B / EN 13060 - small size steam sterilizers App. C

	Feed water	Condensate
Residual dry matter	≤ 10 mg/l	≤ 1.0 mg/kg
Silica oxide, SiO <sub>2</sub>	≤ 1 mg/l	≤ 0.1 mg/kg
Iron	≤ 0.2 mg/l	≤ 0.1 mg/kg
Cadmium	≤ 0.005 mg/l	≤ 0.005 mg/kg
Lead	≤ 0.05 mg/l	≤ 0.05 mg/kg
Other heavy metals, except for iron, cadmium, lead	≤ 0.1 mg/l	≤ 0.1 mg/kg
Chlorines	≤ 2 mg/l	≤ 0.1 mg/kg
Phosphates	≤ 0.5 mg/l	≤ 0.1 mg/kg
Conductivity (at 20°C)	≤ 15 µS/cm	≤ 3 µS/cm
pH	5 bis 7	5 bis 7
Colour	Colourless, clean, no deposit	Colourless, clean, no deposit
Hardness	≤ 0.02 mmol/l	≤ 0.02 mmol/l
<p>NOTE 1: Using water of contamination greater than specified above steam generation, can considerably reduce the sterilizer life and void the manufacturer's warranty.</p> <p>NOTE 2: The condensate should be derived out of the steam collected during sterilizing cycle with the chamber empty.</p> <p>Tests for performance are performed with commonly used analytic methods.</p>		

## VII. Installation dimensions

- The sterilizer should be placed on a straight, horizontal surface (e.g. a stable table)
- Required area: Width= 50cm, Depth=60cm, Height=85cm
- Leave 10cm space between the back of the device and the wall for heat dissipation to the environment
- The table should have a load capacity of at least 80kg



All dimensions are minimum dimensions and should not be exceeded, so as not to hinder the dissipation of the released heat.