

Benchtop devices - small dimensions and large volume-lab space is expensive

Universal basic versions for the microbiological standard laboratory for

- Liquids, culture media
- Solids such as instruments, glassware and devices
- Waste

Safe and future-proof

- Modules available for **fast cooling, prevacuum and drying** and for **exhaust-air filtration** with condensate sterilization
- Direct and independent batch documentation
- Newly developed fitting blocks without dead spaces ensure sterilization quality and eliminate problem zones when sterilizing waste
- Abundant supply of accessories

One sterilizer with many advantages

- No cheap compromises: Processes, measurements, fittings, stainless steel finishing and batch documentation compliant with DIN and industry standards
- Fingertip Quick Lock with space-saving swing door

VARIOKLAV STEAM STERILIZERS 25 T AND 65 T

The VARIOKLAV 25 T and 65 T steam sterilizers with their ultra-flat steam generators in their double wall combine the advantages of a double-walled device

- **low energy consumption, permanently ready for use, effective deaeration and drying by built-in jacket heater** - with those of a single-wall device - **fast cooling**.

The chamber is free of furnishings, after sterilization free of feed water and therefore easy to clean.

The basic version features four sterilizing programs, two for liquids and one each for solids and for waste. Up to 16 programs can be stored by the control unit, depending on the modules and options installed.

Up to eight pressure changes combined with effective steam flushing drive out the residual air from solids and waste, allowing faster heating by pulsating steam.

And after your purchase?

Benefit from fast batch processing, low operating cost thanks to efficient steam management and our close-knit service and consulting network.



Benchtop units with 25 and 65 litres

Safe and easy operation

- Direct selection of your three most important programs
- Large loading capacity thanks to cube-shaped chamber \cong 1 SU (65 T)
- **Convenient loading and unloading**
- Impressive loading depth of 490 and 630 mm
- Four height-adjustable loading levels, suitable for flasks of different sizes
- Feed water reservoir for up to eight fillings
- No heating elements in the chamber, no burning of agar
- Wide drip ledge under door collects condensate, can be removed for cleaning

Advantages

- Space-saving swing doors instead of slide doors
- Innovative thermolock pursuant to TRB 402 for liquids
- **Versatile control unit**, simple for operators and flexible for lab management

Control unit: Sterilizing parameter ranges

Sterilizing temperature:	98 - 134 °C (target value)
Sterilizing time:	1 - 999 minutes
Removal temperature:	40 - 95 °C (thermolock)
Key-operated switch:	For program configurations
Timer:	Start of sterilizing cycle by date and time
Removal pressure:	105 - 120 kPa

Customized settings can be configured by manufacturer's customer service:
 Temp. increase beyond target: Up to +8 K in steam gener. during heating phase
 Pressure changes: 0 - 8, adjustable
 For more information see Technical Specifications datasheet



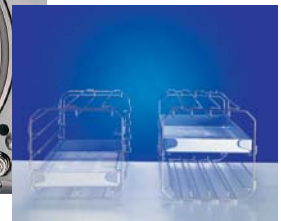
Fingertip quick lock: START / STOP key on the control panel opens and closes the door

Unique Fingertip Quick Lock

Never before has opening and closing a swing door been so simple and convenient. When a button is pressed, safety bolts lock the door. The bolts slide into the door frame and place themselves immovably inside the lock. A **movable seal** closes the sterilizer chamber, making it pressure and vacuum-tight.



Adjustable loading levels for flexible applications



Safety

- The steam pressure on the lid is transferred to four positions on the lock - not just to two positions as with clip locks
- Two pressure sensors check for complete pressure release before the lid can be opened
- Silicone seal movable by pressurized air:
 - uniform closing pressure, reliable seal
 - wedge-shaped profiles automatically retract the seal when the pressure is gone
 - **long life**

Option

Media temperature controlled timing

Product temperature is attained more quickly through controlled temperature increments. No overheating of medial, timer-controlled sterilizing times, includes flexible liquid sensor.



SMALL DIMENSIONS - LARGE VOLUME



Double wall as steam generator

This **ultra-flat steam generator** rapidly generates steam - a new milestone in steam sterilizer technology. This gives the sterilizers an unusually compact design.

Advantages

- Steam generation and chamber are separated - stores heat and feed water, preheats the sterilizing chamber, collects and separates condensate and permits the drying of solids
- Eccentric 9 kW steam generator below the chamber maximizes the steam entry surface (65 T)
- No contamination of feed waters by drop condensates, waste, or culture media, leaving the sterile supplies free of deposits by impure steam
- **Minimum water volumes** in the steam generator make economic use of heating energy and reduce the amount of water used for fast cooling
- Water level control by exploiting the differences in heat conductivity between water and steam - no maintenance

Universal feed water connector

- Optionally suction from non-pressurized reservoir or feeding via demineralized water feed
- Integrated pump equalizes all **pressure variations** in external supply lines
- Automatic level control (65 T) in steam generator before, during and after the process ensures that the system is permanently ready for use

Options

Separate steam generator control

A comprehensive program package for chamber and steam generation that controls both pressure chambers **separately** offers extra versatility.

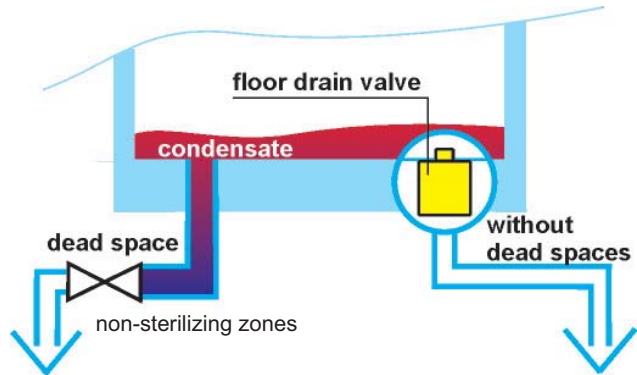
Advantages

- Preheating: Steam generator permanently under pressure
- More efficient air removal by faster pressure changes and shorter intervals, which is a great advantage especially when sterilizing waste in waste bags
- Following sterilization, the chamber is free of condensate, which further reduces the amount of steam that escapes when the lid is opened and additionally helps avoid unpleasant odours when sterilizing waste
- Shortens batch processing times by up to 30 %

Aquastop at sterilizer water intake avoids water damage and turns water supply lines off even in standby mode.

Fitting blocks: e.g. Floor Drain Valve*

- Drain valve in the chamber floor eliminates dead spaces and thereby non-sterilizing zones, ensures a **sterile condensate** and prevents the spread of pathogens



Floor drain valve (only 65 T): Sterile condensate

- The valve seat closes directly inside the sterilizer and can be steam-sterilized from all sides
- A chamber sensor for the condensate temperature is integrated in the valve (flow sensor) and measures the temperature in the coldest spot - in the disposal line
- Drain valve is heated by double wall - preventing agar deposits

*Patent pending

Loading capacity		25 T	65 T
Round laboratory flasks	(500 ml)	5 - 6	24
Round laboratory flasks	(1.000 ml)	4	18
Round laboratory flasks	(2.000 ml)	-	8
Square laboratory flasks	(250 ml)	14	90
Square laboratory flasks	(500 ml)	12	24
Square laboratory flasks	(1.000 ml)	5	18
Erlenmeyer flasks	(1.000 ml)	3	8 - 10
Solids		≤ 8 kg	≤ 30 kg
Waste		≤ 5 kg	≤ 30 kg

Stainless steel reservoir with large glass lid

This reservoir offers hygienic feed water and supplies the steam generator with largely **degassed demineralized water** - especially when demands on sterilizing quality are high.



Advantages

- Space-saving design, control unit and reservoir above chamber
- The tank is either free of furnishings or has a fold-back cooling coil (only 25 T) that is easy to clean
- Lid: unbreakable boron silicate glass

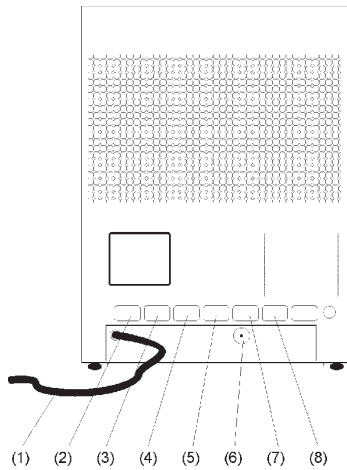
SMALL DIMENSIONS - LARGE VOLUME



Connectors

All connectors are easy to find and to access. Spent steam, condensate, vacuum and cooling are combined in a joint connection depending on the configuration of the respective device. By mixing tap water with spent steam and condensate, spent steam condensation* can be performed inside the joint connection.

* not for 25 T



- (1) Power input
- (2) Compressed air
- (3) Spent steam / output*
- (4) Feed water / input
- (5) Condensate / Spent steam / output
- (6) Venting
- (7) Cooling water / output*
- (8) Cooling water / input*

Options

- * Vacuum, exhaust-air filtration, fast liquid cooling

Back view: Connectors on benchtop unit

VARIOKLAV Steam Sterilizers		Order No.
Media temperature controlled timing*		24415
Separate steam generator control (preheating)		20029
Batch documentation, direct or independent		20061 or 20062
Modules*		
Fast liquid cooling	(RM) 20034 (RO) 20041, or (RG) 20042	
Prevacuum, single or fractionated		20026 or 20027
Drying, in vacuum or in sterile air stream		20028, 20029 or 20040
Exhaust-air filtration with condensate sterilization		20068
Operation supply and spent steam removal		
Sterile steam, spent steam condenser, aquastop, e.g.		on request
Additional options		
e.g. cooling with coiled tubing or air, stainless-steel cover, sterile venting, higher sterilizing temperatures, chamber extension/volume enlargement, prion programs, additional sterilizing programs		
		on request
Accessories		
Sterilization baskets, loading trolley, bases, consumables		on request
*25 T: different Order No. - on request		

These innovative VARIOKLAV steam sterilizers represent the current state of the art and guarantee rapid, safe and reproducible sterilization processes. This ensures long-term problem-free routine operations.

- 1-year warranty against material and manufacturing defects, except for consumables**
- 3-years warranty on electric heating elements**
- 5-years warranty for stainless-steel pressure vessel**

Electrolytically polished chamber - long-term assurance of high infection control standards and corrosion protection

Composition of batch times*								
Program steps		Deaeration / Heating Prevacuum	Sterilization 121 / 134 °C	Steam release	Cooling ST 90 °C	Fast cooling module		
						RM	RO	RG
Liquids	(min)	15 - 45	20 / 10	-	30 - 110	15 - 60	10 - 45	10 - 50
Solids	(min)	15 - 30	20 / 10	2 - 4	-	-	-	-
Waste	(min)	15 - 30	- / 15	4 - 8	-	-	-	-

* Load: empty and fully loaded Captions: ST= forced cooling RM = jacket cooling RO/RG = with fan

TECHNICAL DATA

		25 T	65 T
External dimensions (WxDxH)	(mm)	385 x 680 x 525	530 x 850 x 700
Internal dimensions	(mm)	(ØxD) 250 x 490	(WxDxH) 330 x 630 x 330 ± 1 SU
Loading height above table top	(mm)	85	125
Usable volume	(Litres)	25	65
Reservoir	(Litres)	7	18
Steam generator (water vol./ total vol.)	(Litres)	1,5 / 3,0	5,0 / 16,0
Power requirement / Heat output	(kW)	3,2 / 3,0	9,3 / 9,0
Power / supply frequency	(V/Hz)	230 / 50	3N ~ 400 / 50
Quick lock		bolt quick lock	bolt quick lock
Weight	(kg)	75	140
Material for pressure vessel		1.4571 DIN 17440	1.4571 DIN 17440
Standards		DIN 58951-2	DIN 58951-2
Max. operating temperature	(°C)	138	138
Max. operating pressure / Vacuum	(bar)	3,0 / -1	3,0 / -1
Mark of conformity / Notified body		CE	CE / 0036
European Pressure Equipment Directive	(category)	I	I
Order No.		24425	24325

Status 0802 We reserve the right to make technical alterations. We do not assume liability for errors in printing, typing or transmission. wlv/004