



Tabletop Line

Pre & Post Vacuum Tabletop Autoclaves

Tuttnauer

Your Sterilization & Infection Control Partner

Company Profile

For over 80 years, Tuttnauer's sterilization and infection control products have been trusted by hospitals, universities, research institutes, clinics and laboratories throughout the world. Supplying a range of top-quality products to over 100 countries, Tuttnauer has earned global recognition as a leader in sterilization and infection control.

Our Flexibility is Your Advantage

Beyond our unmatched range of products, we also manage complete turnkey solutions, including planning, design and installation of equipment, as well as consultation and feasibility studies for projects of all sizes.

Global Partnership

At Tuttnauer we feel that business means people dealing with people. We pride ourselves on our reputation for building solid long-term relationships with our customers based on commitment and trust, spanning decades and distances. **Backed by industry experience and a track record of success, Tuttnauer continues to help medical and research institutes all over the world to plan and execute their sterilization and infection control policies.**



Full Steam Ahead

Tuttnauer's Pre and Post Vacuum Tabletop Sterilizers

Until recently, the most advanced sterilization technology was found only in large hospital sterilizers. Today there is a growing demand for more sophisticated sterilization technologies. Any private or dental clinic can enjoy the benefit of this technology right in their office. Outpatient clinics, which have increased significantly in recent years, perform highly skilled invasive surgery on their own premises. They rely on advanced sterilization technology. In addition, the increasing tendency towards modular space design in the clinic makes our pre & post vacuum tabletop autoclaves the perfect solution.

Tuttnauer's pre & post vacuum tabletop sterilizers are designed to perform class B cycles that meet the strictest EN 13060 European standards.

The European EN 13060 standard defines the requirements for small steam sterilizers according to classes. Class B and Class S are defined according to the type of instruments and products that need to be sterilized.

Class B The sterilization of wrapped or unwrapped, solids, hollow and porous loads.

Class S The sterilization of instruments as specified by the manufacturer and at least one of the class B items.

Fractioned Pre Vacuum Air Removal

The Challenge:

Hollow, porous and packed load types as well as fabrics have one thing in common: **Air is trapped** inside these instruments and fabrics, resulting in air pockets that prevent the full penetration of steam. It is known that spores and bacteria can survive at 134°C (273°F) in air pockets.

The solution:

Fractioned pre vacuum air removal eliminates air pockets from all load types and maximizes steam penetration to instrument components.

How does it work?

A pre vacuum pump removes the air from the chamber. Then a pulse of steam is admitted. This process is repeated 1 to 4 times (as selected). With each cycle of vacuum and steam-pulse the air fraction decreases. This allows for complete air removal and for faster and more efficient steam penetration throughout the entire load. **Tuttnauer class B sterilizers pass helix tests every time! Helix tests ensure 100% air removal from the load.**

Post Vacuum Drying

The Challenge:

When hot steam comes in contact with the cooler instruments, condensation can form. Condensation becomes even more serious with packaged loads, when moisture can remain after the cycle ends. A moist load does not provide sufficient SAL (Sterility Assurance Level).

The Solution:

Post vacuum drying provides complete drying of porous loads and hollow instruments at the end of the sterilization process.

How does it Work?

Based on the combined operation of heat and vacuum air-removal the left-over moisture will quickly evaporate from the chamber. The low pressure in the chamber caused by the vacuum reduces the boiling temperature and the moisture evaporates faster. The hot vapor is sucked out of the chamber and thus the materials will dry. Finally, dry air is passed into the chamber through a bacteria-free air filter for final drying and breaking of vacuum.

We believe that proper education, advanced technology and ease of use contribute to improved sterilization results.



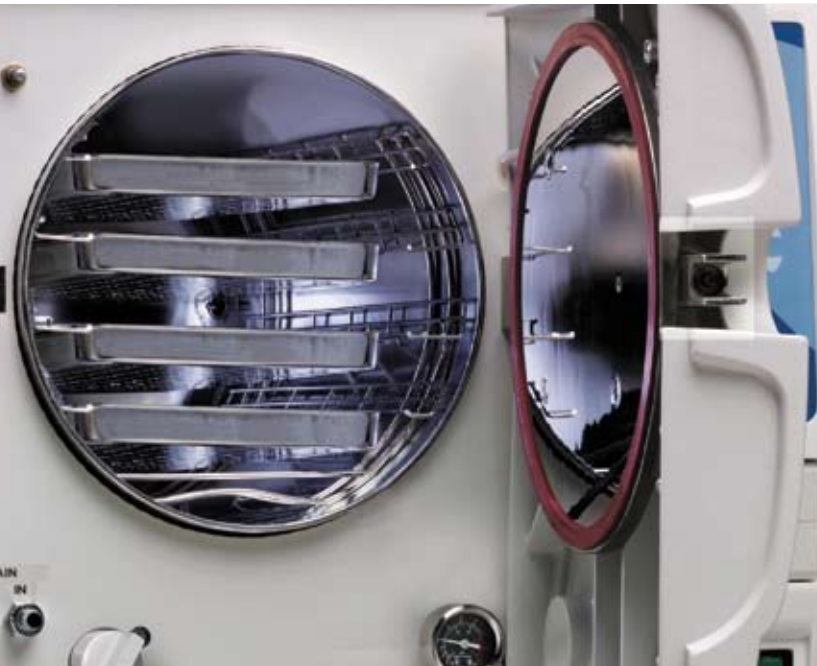
Nova

Our star performer

The Nova is a pre & post vacuum sterilizer that uses the most advanced tabletop technology available. The 23 Liter chamber has compact outer dimensions making it a perfect fit for today's contemporary clinic. The Nova is designed to sterilize class B cycles. A common application is in the medical OR (Operating Room) as an independent sterilization unit or in dental and private clinics that need to sterilize narrow and hollow instruments and wrapped packs.

Benefits:

- Designed to sterilize class B cycles - packaged, porous and hollow A loads
- Compact design with small footprint for the contemporary clinic
- Does not require any external supplies, except power
- Preheated chamber keeps the chamber warm and ready to use
- Improved monitoring for consistent documentation of sterilization results
- Easy-to-use, single touch control system helps productivity
- Dual Compartment Water Reservoir
- Each cycle uses clean unused water and provides higher sterilization results



Features



Built-in Printer
Conveniently located, does not require additional connections or external devices



Stainless Steel Trays
Durable, long lasting



PC Connection Port for Direct PC access
Enables direct software updates and remote maintenance



Independent Pressure Gauge
Reads the chamber pressure independently of the control system for improved monitoring



Independent Steam Generator
Provides readily available steam for faster cycles



Safety and Convenience features:

- Seamlessly integrated into your work environment with compact design and heat insulation
- Durable 316L type stainless steel chamber and door with electro-polish finish
- Double locking safety device prevents door from opening while chamber is pressurized
- Control lock-out switch prevents starting a cycle if door is not properly locked
- Door protection device prevents door from opening at high pressure and temperature
- Automatic safety shutoff prevents overheating of chamber



Complies with the strictest international directives and standards:

Technical Directives: Medical Device Directive 42/EEC • Pressure Equipment Directive 97/23/EEC. **Technical Standards:** EN 13060:2004 and AAMI/ANSI ST8 - Small Steam Sterilizers • ASME Code, Section VIII for Pressure Vessels • EN61010-1:96

Safety of electrical equipment • EN 61010-2-041:96 - Particular Requirements for steam autoclaves
• EN 50081-1 - (EMC) Emission compatibility • EN 50082-1 - (EMC) Immunity compatibility
Quality standards: EN ISO 9001:2000-Quality System • ISO 13485:2003 - Quality systems - Medical devices. UL listed, FDA declared



Monitoring and Control

Monitoring is essential for correct infection control in any clinic or private practice. The Nova features a user-friendly, microprocessor control system which offers enhanced monitoring and provides the control and flexibility you need. The RS232 communications port offers direct PC access. This allows for user-friendly calibration, sterilization cycle program display, remote maintenance and software upgrades.

Features:

- High precision control system for perfect sterilization results
- User friendly display
- Ability to customize cycle parameters for user needs
- Password protection provides secure access
- Displays continuous information about cycle progress

Alert Messages and Alarms

- Insufficient water detector and alert with automatic shutoff
- "Stop fill" water alert
- "Empty Reservoir" alert when used-water reservoir is full
- Independent temperature and pressure monitoring
- Cycle information recovery in the case of power failure or cycle interruption

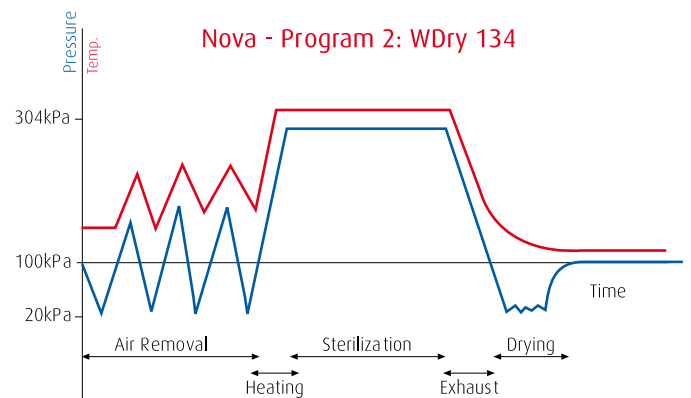


The Nova offers a total of 8 preset programs: 6 sterilization programs and 2 test programs: the Bowie and Dick/Helix test and the vacuum test

Program Name	Instruments and Materials	Sterilization Temp	Ave. Cycle Time Solid Load	Ave. Cycle Time Textiles
Fast	Unwrapped Instruments	134°C	15 min.	N/A
WDry 134	Porous, Wrapped and Hollow A loads	134°C	35 min.	42 min.
P 134	Porous, Wrapped and Hollow A loads with sterilization time recommended to sterilize prions	134°C	46 min.	55 min.
NoDry 121	Unwrapped delicate instruments	121°C	35 min.	42 min.
WDry 121	Porous, Wrapped and Hollow A loads and delicate instruments	121°C	55 min.	62 min.
Slow 121	Delicate and unwrapped instruments with slow exhaust	121°C	37 min. (Max time)	N/A

Cycle times include air removal, heating, sterilization exposure, exhaust and drying. Tested with Solid load/Textile 2 kg. Programs WDry 134 and P 134 include a 15 minute drying time and Program WDry 121 includes a 20 minute drying time. All cycle times may vary with instrument load and voltage.

Specifications	NOVA
Chamber Dimensions ϕ x L (mm)	254x475
Chamber Volume (Liter)	23L
No. of Trays	4
Tray Dimensions WxHxD (mm)	168 x 20 x 414
Voltage(V) Freq.(Hz)	230V 50Hz
Current(A) Power(W)	14.5A 3000W
Overall Dimensions WxHxD (mm)	512 x 424 x 578
Autoclave Weight (Kg.)	57



EHS

Significantly Reduced Cycle Time

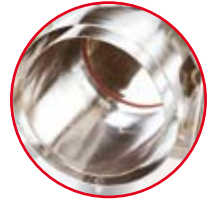
Our expertise with large, industrial sterilization technology was packaged into the EHS, the fastest pre & post vacuum tabletop sterilizer. It is a hospital grade sterilizer ideal for outpatient or private clinics that wish to be independent of a CSSD (Central Sterilization Supply Department) for instrument processing, but do not want to compromise on results. It is also commonly used for Flash cycles in OR (operating room).

Features

- Robust high-volume water-ring vacuum-pump for fast and efficient air-removal
- Dual-compartment water reservoirs with automatic filling and discharge
- Connection to water draining and to external mineral-free water supply for automatic draining and filling of water
- Stand-by heating mode keeps the autoclave warm and ready to use
- Double locking safety device prevents door from opening while chamber is pressurized
- 316L type stainless steel chamber and door with electro-polish finish
- Control lock-out switch prevents starting a cycle if door is not properly locked
- Door protection device prevents door from opening at high pressure and high temperature
- Automatic safety shutoff prevents overheating of chamber

Double wall

Surrounding the chamber is a second wall, known as the jacket. The internal steam generator fills the jacket with steam when the sterilizer is first started. The jacket then acts as a steam generator and reservoir.



Benefits:

- Minimizes the time it takes for each individual cycle to come up to temperature and pressure
- Built to run continuously for 24 hours
- Improved temperature distribution in the chamber
- Reduces condensation and improves drying
- Improves chamber insulation and increases efficiency

Speed

The EHS is our fastest tabletop autoclave. This is achieved with a jacketed double walled chamber, which acts as an instant supply of steam and keeps the autoclave warm and ready for use. The powerful water-ring vacuum-pump provides for fast pre and post vacuum air removal. In addition, it is built to run continuously without the need to pause between cycles.

Capacity

We understand that every clinic has different needs. The EHS is available in 23 Liters and 85 Liters chamber size. The 85 Liter model is designed for clinics that need a higher rate of instrument turnover. When used at full capacity this model significantly decreases the cost of instrument processing.



Monitoring and Control

The EHS features a user-friendly, microprocessor control system which offers enhanced monitoring and provides the control and flexibility you need.

- High precision control system for perfect sterilization results
- Ability to customize cycle parameters and maximize flexibility
- Password protection provides secure access

Alert Messages and Alarms

- Independent temperature and pressure monitoring
- Cycle information recovery in the case of power failure or cycle interruption
- Fail Alert – Indicates cycle failure or interruption
- Door Alert – Indicates the door is unlocked

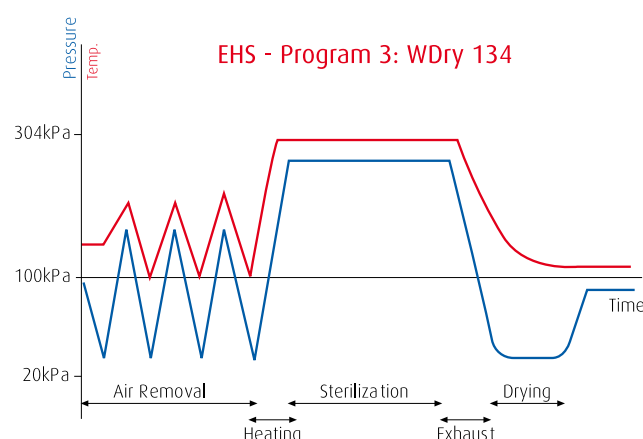


The EHS offers 5 pre-programmed sterilization cycles, 2 test cycles

Program Name	Description of load and sterilization temp	2540 EHS Ave. Cycle Time		3870 EHS Ave. Cycle Time	
		Solid load	Textile	Solid load	Textile
1-Fast 134	Unwrapped Instruments for immediate use 134°C	12 min.	N/A	22 min.	N/A
2-Fast 121	Unwrapped instruments for immediate use 121° C	19 min.	N/A	27 min.	N/A
3-W.dry	Wrapped instruments and porous loads 134° C	40 min.	46 min.	43 min.	71 min.
4-W.dry 121	Wrapped instruments and porous loads 121° C	44 min.	52 min.	52 min.	75 min.
5-W.dry 134	Wrapped instruments and porous loads 134° C	57 min.	63 min.	64 min.	84 min.

-Cycle times include air removal, heating,sterilization exposure,exhaust and drying. Model 2540 tested with Solid load/Textile 2 kg. Model 3870 tested with Solid load/Textile 6 kg.Programs 3 and 4 include a 20 minute drying time and Program 5 includes a 30 minute drying time. All cycle times may vary with instrument load and voltage.

Specifications	2540EHS	3870EHS
Chamber Dimensions øx L (mm)	254x476	384x758
Chamber Volume (Liter)	23L	85L
No. of Trays	4	2
Tray Dimensions WxHxD (mm)	168x20x414	675x25x286 675x25x350
Voltage(V) Freq.(Hz)	230V	208V/380V
Current(A) Power(W)	13A 3200W	16/8.7A 6200W
Overall Dimensions WxHxD(mm)	508x422x710	660x524x875
Autoclave Weight (Kg.)	77	114



Complies with the strictest international directives and standards:

Technical Directives: Medical Device Directive 42/EEC • Pressure Equipment Directive 97/23/EEC. **Technical Standards:** EN 13060:2004 and AAMI/ANSI S18 – Small Steam Sterilizers • ASME Code, Section VIII for Pressure Vessels • EN61010-1:96

Safety of electrical equipment • EN 61010-2-041:96 – Particular Requirements for steam autoclaves
 • EN 50081-1 – (EMC) Emission compatibility • EN 50082-1 – (EMC) Immunity compatibility
Quality standards: EN ISO 9001:2000–Quality System • ISO 13485:2003 – Quality systems – Medical devices. UL listed, FDA declared

EVB EVS

The Classical Class B/Class S Sterilizers

The EVB and EVS are pre & post vacuum sterilizers built for private clinics that wish to upgrade to a sterilizer that uses vacuum air-removal. The EVB and EVS are the classic and reliable choice, offering advanced technology at an affordable price.

The EVB is designed to provide Class B cycles while the EVS is designed to provide Class S cycles in accordance with EN13060.

Both models have the following features:

- A pre vacuum air removal stage
- A post-sterilization drying phase, based on the combined operation of heat and vacuum with air inlet pulses

The EVS is an affordable solution that is designed to process wrapped and unwrapped, hollow B instruments. If, however, you need to sterilize hollow A devices, which have extremely long

lumens, you should consider one of our class B sterilizers. The EVB is programmed to perform up to 4 pre-vacuum air removal pulses that result in 99.5% removal of air. The EVS, on the other hand, uses a single air removal vacuum pulse to remove most of the air.

Features:

- Stand-by heating mode keeps the EVB warm and ready to use
- 316L type stainless steel chamber and door with electro-polish finish
- Control lock-out switch prevents starting a cycle if door is not properly locked
- Double locking safety device prevents door from opening while chamber is pressurized
- Door protection device prevents door from opening at high pressure and temperature
- Automatic safety shutoff prevents overheating of chamber



Monitoring and Control

Monitoring is essential for correct infection control in any clinic or private practice.

The EVB and EVS feature a user-friendly, microprocessor control system which offers enhanced monitoring and provides the control and flexibility you need.

- High precision control system for perfect sterilization results
- User-friendly, intuitive display
- Pre-programmed sterilization cycles and 2 test cycles
- Ability to customize cycle parameters and maximize flexibility
- Password protection provides secure access.
- Displays continuous information about cycle progress
- Integrated Printer provides detailed documentation of each performed cycle (Optional for EVS)
- RS232 Communications Port – remote control with ADMC software

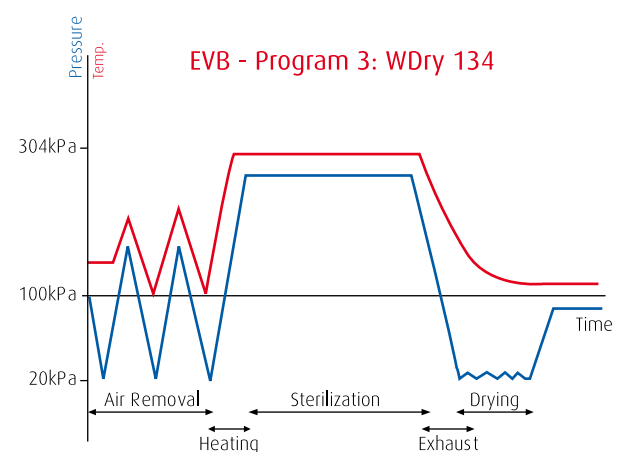
Alert Messages and Alarms

- Insufficient water detector and alert with automatic shutoff
- Independent temperature and pressure monitoring
- Cycle information recovery in the case of power failure or cycle interruption

The EVB offers 6 pre-programmed sterilization cycles, 2 test cycles. The EVS offers 5 pre-programmed sterilization cycles, 2 test cycles.



Specifications	2540EVB	2540EVS
Chamber Dimensions ϕ x L (mm)	254x476	254x476
Chamber Volume (Liter)	23L	23L
No. of Trays	4	4
Tray Dimensions WxHxD (mm)	168x20x414	168x20x414
Voltage(V) Freq.(Hz)	230V 50/60Hz	230V 50/60Hz
Current(A) Power(W)	9.6A 2200W	9.6A 2300W
Overall Dimensions WxHxD (mm)	508x362x650	508x362x550
Autoclave Weight (Kg.)	48	48



Complies with the strictest international directives and standards:

Technical Directives: Medical Device Directive 42/EEC • Pressure Equipment Directive 97/23/EEC. **Technical Standards:** EN 13060:2004 and AAMI/ANSI ST8 – Small Steam Sterilizers • ASME Code, Section VIII for Pressure Vessels • EN61010-1:96

Safety of electrical equipment • EN 61010-2-041:96 – Particular Requirements for steam autoclaves • EN 50081-1 – (EMC) Emission compatibility • EN 50082-1 – (EMC) Immunity compatibility
Quality standards: EN ISO 9001:2000–Quality System • ISO 13485:2003 – Quality systems – Medical devices. UL listed, FDA declared

More from Tuttnauer:

Featuring Tuttnauer's range of cleaning, disinfection and sterilization solutions



Large sterilizers for various industries and market needs



Washers/disinfectors for hospitals and laboratories



Laboratory autoclaves ranging in size and application

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