



## Hospital Sterilizers

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Sterilization is a complex process. Like any complex process, many things can go wrong. A Hospital depends on its CSSD: Central Sterile Services Department. It cannot afford downtime. The functioning of the hospital depends on it. Lives depend on it.



## Hospital Sterilizers

Tuttnauer's first priority is that our hospital sterilizers are reliable 365 days a year efficiently meeting high volume demand. **Our objectives are the same as our customer's objectives, instruments that guarantee sterility with repeatable performance, quick turnaround and minimal product impact.** To do this we incorporate three central values into our products: Quality, Safety and Flexibility.



### Quality

#### Engineered with People in Mind

We work to keep our sterilizers state of the art. The components we use are of highest quality. Our hospital sterilizers comply with the strictest international standards. A Tuttnauer autoclave is built to last and to perform consistently. Our sterilizers are engineered with careful attention to every detail and with people in mind.

### Safety

#### Safety is Our Top Priority

When it comes to the design of our horizontal sterilizers, protecting staff and patients is our first concern. Multi-level safety features prevent accidents and keep the autoclave running without downtime. A Tuttnauer sterilizer is a safe sterilizer.

### Flexibility

#### Innovative Solutions that Suit Your Needs

The wide range of models and options we offer, take our hospital sterilizers a step ahead. In addition, Tuttnauer sterilizers can be customized to meet your hospital's unique needs.

With an ideal combination of Quality, Safety and Flexibility Tuttnauer's hospital sterilizers are advanced, reliable and easy to use.

# Quality

## Engineered with People in Mind

Our quality features enable the convenience and durability needed to operate a sterilizer with complete peace of mind. The chamber is constructed of long lasting 316L grade stainless steel with superior corrosion resistance. The chamber is fully jacketed for uniform heat distribution. In addition, the generator and piping are constructed of stainless steel. The pneumatic valves are air pressure operated, significantly reducing maintenance. To save energy, the sterilizers automatically switch to a standby mode.

### Advanced Control

#### Classic Control System

The T-Max is equipped with an advanced control system and CAT2007 panel, and provides the following features:

- High precision control system for perfect and repeatable sterilization results
- Continuously displays the pressure in chamber, jacket, steam generator, and door gasket
- Ability to customize cycle parameters to maximize flexibility
- Password protection provides secure access
- Convenient data backup for cycle information recovery in case of power failure or cycle interruption
- Fail Alert – Indicates cycle failure or interruption
- Door Alert – Indicates unlocked door



#### Advanced Touch Screen Control System

An optional touch screen panel with a sophisticated user-friendly PLC control system based on the advanced Allen-Bradley (AB) platform provides the following additional features:

- A 5.6" touch screen for easy access to controls and information via the panel
- Multilingual - 23 languages
- Built-in view and back-up of historical cycle data and alarm/events stored on external flash memory
- Technician menus: Sensor Calibration, Change Parameters, In/Out test and PID tuning
- Graphical display of Temperature and Pressure trend graphs
- Up to 16 different Barcodes - optional



### Complies with the Strictest International Directives and Standards

#### Technical Standards and Directives

- MDD 93/42 EEC; PED 97/23 EEC; EN 13445; WEE & RoHS Directives – 2002/95, 96, EMC Directive 89/336
- EN 61010-1:2001; IPX 4, EN 61010-2-040:2005- Safety of Autoclaves
- EN 61326 EMC; EN 285:2006 - Large Autoclaves
- EN 50082-1:97 – (EMC) Immunity Compatibility
- ISO 17665-1 - Validation and routine control.

#### Quality Standards

Tuttnauer manufacturing plant meets the following quality standards:

- ISO 9001:2000 – Quality Systems
- ISO 13485:2003 – Quality Systems for Medical Devices
- 21 CFR 820





## Safety

### Safety is Our Top Priority

#### Door Safety

The doors are designed with independent mechanical and digital safety features that guarantee the safe working of the sterilizer.

- A safety device prevents the operator from opening the door when the chamber is pressurized
- Steam is not allowed into the chamber when the door is open
- A cycle will not start if the door is open or not properly closed
- The door cannot open until chamber pressure reaches room pressure
- Sliding Door Safety - The sliding door will automatically stop moving if an obstruction is detected
- Double Door Safety – interlocks prevent both doors from being opened simultaneously

#### General Safety Features:

- **Double Independent Monitoring of Temperature and Pressure:** The combined digital and mechanical monitoring provides a cross reference and guarantees accurate results. The operator has two independent means to monitor temperature and pressure.
- **Safety Valves:** Both the chamber and the jacket are equipped with safety valves – if the pressure exceeds the allowed limit the safety valves will discharge.
- **Built-in Steam Generator Safety:** A water level monitoring system maintains a constant water level and ensures safe operation of the heaters.
- **Emergency Shut-Off:** Easily accessible emergency switches for immediate and safe shut down of the sterilizer.

# A Flexible Range of Models and Sizes

The T-Max line of sterilizers is designed to comply with the European EN285 standard. The chamber sizes are standardized to accommodate StU (Sterilization Unit) volumes. We offer a full range of models that are available in the Narrow and the Large Capacity series.

There are several considerations when selecting a sterilizer: the size of the hospital, instrument turnover rate, application, number of beds, number of operations performed and space requirements. Tuttnauer will be happy to assist you in selecting the right model.

### Tuttnauer offers 2 series of T-Max sterilizers:

- The T-Max Narrow Series: holds between 2 to 10 StU units
- The T-Max Large Capacity Series: holds between 9 to 15 StU units

Each line varies in chamber size, door dimensions and door type:

Line	Door Type
T-Max Narrow	Vertical Sliding
T-Max Large Capacity	Horizontal Sliding

In addition to the standard models, Tuttnauer will design customized autoclaves including non-standard chamber sizes. All models are available with either a single or double door.





## The T-Max Narrow Series

**Tuttnauer Hospital Autoclaves with chamber volumes ranging in size from 175 Liters to 700 Liters accommodating 2 to 10 StU.**

The T-Max Narrow Series is available with a fully automatic vertical sliding door.

Tuttnauer offers 5 different models:

Model	Chamber Volume (Liter)	StU Capacity	Chamber Dimensions (WxHxD) mm
T-Max 2	175 Liter	2	360 x 710 x 705
T-Max 4	310 Liter	4	660 x 660 x 710
T-Max 6	430 Liter	6	660 x 660 x 990
T-Max 8	570 Liter	8	660 x 660 x 1300
T-Max 10	700 Liter	10	660 x 660 x 1620

MODEL	EXTERNAL DIMENSIONS (mm)			
	Width		Height	
	1 & 2 Doors	1 & 2 Doors	1 Door	2 Doors
T-Max 2	1190	2040	1180	1010
T-Max 4	999	1980	1030	1050
T-Max 6	999	1980	1400	1310
T-Max 8	999	1980	1690	1610
T-Max 10	999	1980	2100	1950



Vertical Sliding Door

## The T-Max Large Capacity Series

Tuttnauer Hospital Autoclaves with chamber volumes ranging in size from 800 Liters to 1300 Liters, accommodating 9-15 StU.

The T-Max Large Capacity Series is available with a fully automatic horizontal sliding door.

Tuttnauer offers 3 different models:

Model	Chamber Dimensions (WxHxD) mm	Stu Capacity	Chamber Volume (Liter)
T-Max 9	660 x 1220 x 990	9	800 Liter
T-Max 12	660 x 1220 x 1295	12	1040 Liter
T-Max 15	660 x 1220 x 1620	15	1300 Liter



■ Horizontal Sliding Door



## Additional Options

### Loading Equipment

Our loading equipment assists the loading and unloading process. It is made of high quality, durable stainless steel. We offer two options:

- **Pull Out Trays.** Stainless steel trays equipped with rails for easy loading and unloading. The rails are designed to prevent the trays from rolling over.
- **Loading Carts and Transfer Carriages.** The adjustable loading cart rolls from the transfer carriage onto the interior chamber tracks for easy handling of heavy loads. The trolley is equipped with revolving wheels, maximizing mobility in limited space. The wheel breaks prevent the trolleys from rolling and the carriage is equipped with a lock that prevents it from sliding.
- **Automatic Loader.** Designed for loading/unloading baskets. The control of the loader is integrated with the control of the autoclave.



### High Precision Documentation

Process documentation is crucial within the CSSD. The modularity and flexibility of our system gives you targeted and customized solutions to track and document the sterilization process.

- **Optional 10" Touch Screen**

The touch screen displays cycle data in both a textual or graphical format and provides a continuous visual guide. Moreover, it provides a visual display of all piping for monitoring purposes.

- **SCADA Software**

SCADA software allows for control and monitoring of up to eight sterilizers on an external PC. The software retrieves data, creates graphs, tables and printouts.



- **Independent Chart Recorder**

The Chart Recorder is an independent temperature and pressure measuring system. It gives clear analog/mechanical trend records and print-outs in color. It is simple to operate and has an easy-view display.

- **Backup of Cycle History Data**

A record of cycle history data is critical for hospitals that need reliable documentation. The cycle history backup system stores thousands of hours of cycle data, displayed either graphically or numerically.

- **Barcode Reader**

The barcode reader allows material identification. The data is transferred to the SCADA software and linked to the sterilization cycle parameters for streamlined instrument handling.

### Additional Solutions

Tuttner offers multiple solutions that answer unique requirements, enhance hospital sterilization procedures, and ensure a safe and worry free work environment.

**Advanced sterilization cycles** for special needs such as a low temperature streaming steam cycle, a disinfection program, an F<sub>0</sub> factor or advanced liquid sterilization programs.

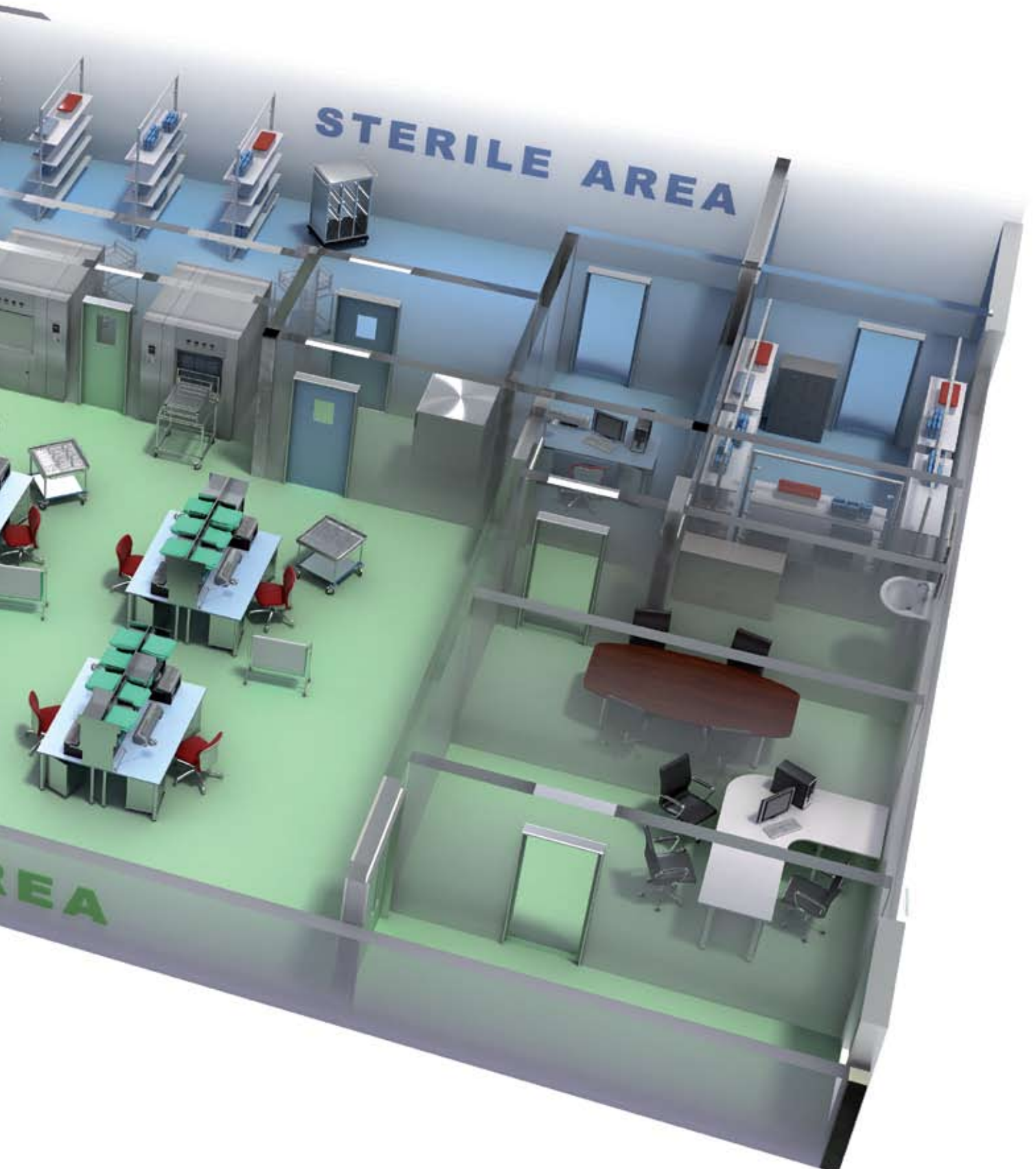
**Advanced operation features** include a multipurpose valve that can function as a backup in case of power failure, or an automatic shutdown or restart feature that economizes on power.

**Clean steam options** include: clean steam generator, stainless steel piping, components and fittings, and high grade stainless steel chamber.



## CSSD Design

Tuttnauer assists in planning, design and installation of equipment for the CSSD. Together with our engineering department, the Tuttnauer team will come up with innovative solutions and space saving ideas that are tailored for the needs of your hospital.



# Your Sterilization & Infection Control Partners

## Company Profile

For over 80 years, Tuttinauer'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, Tuttinauer has earned global recognition as a leader in sterilization and infection control.

## Global Partnerships

At Tuttinauer we feel that business means people dealing with people. We pride ourselves on our reputation for having long-lasting relationships with our customers, spanning over decades and distances and for building solid, long-term relationships based on commitment and trust.

## 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.

## More from Tuttinauer:

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



Horizontal Line of Large Sterilizers



Washer disinfectors for hospitals and laboratories



Laboratory autoclaves ranging in size and application



Pre & post vacuum tabletop sterilizers designed to perform class B cycles



## Hospital Sterilizers

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