Tuttnauer Lab

Sterilization & Life Science Solutions

T-Lab Eco Line

Affordable Performance and Trusted Reliability
for your laboratory sterilization needs.

Featuring the only IoT software designed for the smart laboratory, connecting sterilization devices and communicating on-site or remotely.

Laboratory

The Economic Laboratory Autoclave From The World's Premium Manufacturer

Vertical Autoclave

💲 Economic Line	👍 Reliable Performance	🌿 Minimal Laboratory Resource Consumption	📶 Cloud based paperless software

T-Lab Eco was developed especially for educational institutions and research facilities. Designed with simplicity and economy in mind.

This vertical floor-standing autoclave covers the fundamental needs for general lab sterilization with the aim of increasing the **productivity** of your laboratory.

Offering the best universal capacity, together with the **optimization** of resources such as water, power and operating time results.

All T-Lab Eco devices feature the exclusive and technolgically advanced **T-Connect**, a cloud based IoT solution for your sterilization center.

Sterilization Application

Intended for the sterilization of a wide range of liquids and solids such as glassware, metal utensils and other laboratory items.

This reliable workhorse is ideal for the general laboratory in need of easy operation, safety and cycle features for day-to-day needs.

LABORATORY APPLICATIONS

SOLID, GLASSWARE LOADS

Making Your Process Easier, Accurate and Affordable

Intuitive, user friendly technology, including colour touchscreen and multiple programmes for sterilization.

Feature Advantages Include:

Reliable Performance

This basic product will do what you need and expect

- Solid and glassware loads
- Liquid loads
- Efficient sterilization time including cooling
- Two PT100 sensors as standard

Affordable

Less in More

- Built to last without paying for the features and parts you do not need

Greater Value at Lower Cost

Less water wasted, less electricity consumed, less time spent on maintenance and repair.

Connectivity

Real-time data intellgence

- Wi-Fi connection & T-Connect software
- Monitor devices remotely and download device data
- Remotely monitor cycle history, notifications and alerts.
- Technicians and service centers can remotely analyze autoclaves, diagnose and resolve problems
- Paperless documentation

Plug & Play

This autoclave's plug and play mode does not require dedicated installation connections, simply a power source

- Multicolour user-friendly touch screen
- Connectivity to R.PC.R
- Stores the last 1000 cycles in built-in memory
- Portable - comes standard with lockable wheels

Versatile

Adaptable for All Your Basic Needs

- Sterilizes liquids, solids, sealed and unsealed bottles
- Performance and quality within a small space
- Cylindrical autoclaves – easier to operate, less expensive to maintain, and more reliable over a longer working life
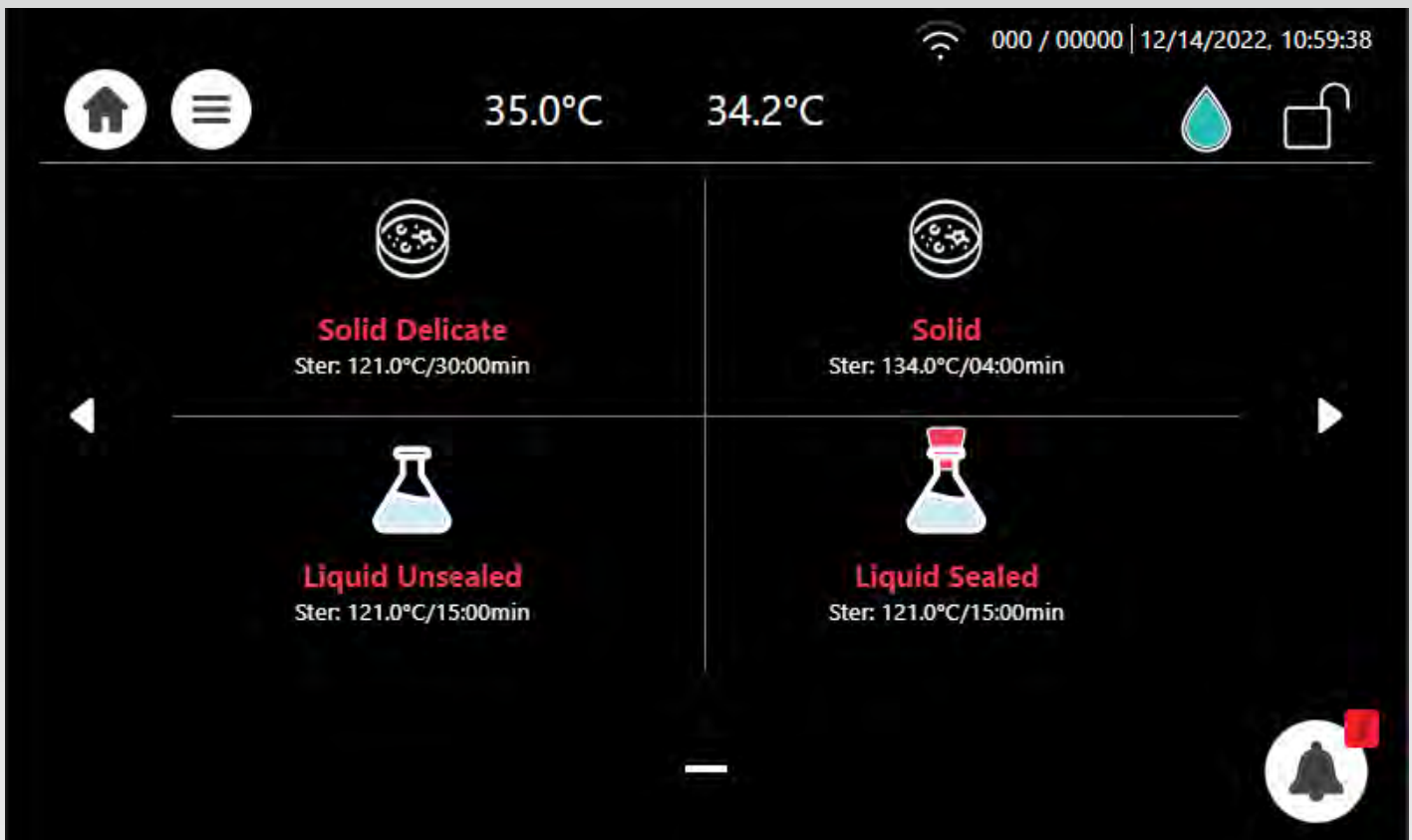
Safety

Meets International Regulations

- International standards + PED certified

EQUIPPED WITH UNPARALLELED FEATURES, UNIQUE TO T-LAB ECO

COMES AS **STANDARD**

- Two PT100 sensors
- Built-in cooling fan
- High-resolution touchscreen
- Built-in memory: 1000 cycles

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Sterilization Programmes

Cycle icon	Cycle name	Temperature	Sterilization time (minutes) V60	Sterilization time (minutes) V85	Load Type	Type of Use
	Liquid Sealed	121°C	15	15	Container with Liquid	For storage
	Liquid Unsealed	121°C	15	15	Container with Liquid	Immediate use only
	Solid	134°C	4	4	Solid Load	Immediate use only
	Solid Delicate	121°C	30	30	Solid Load	Immediate use only

Regulations

Product Standards

Pressure Vessel – PED 2014/68/EU
IEC 61010-1 Safety requirements for electrical equipment for measurement, control, and laboratory use –
Part 1: General requirements
IEC 61010-2-040: Safety requirements for electrical equipment for measurement, control, and laboratory use –
Part 2-040: Particular requirements for sterilizers and washer-disinfectors used to treat medical materials
EN 61326-1: Electrical equipment for measurement, control, and laboratory use – EMC requirements –
Part 1: General requirements

Company Standards and Legislation

EMC Directive 2014/30/EU
ISO 9001 Quality Management System
2006/42/EC Machinery Directive
2014/35/EU, Low Voltage Directive (LVD)
2012/19/EU WEEE and EU 2017/2102 Restriction of the use of certain hazardous substances (RoHS Directive)

Loading Capacities

ERLENMEYER FLASKS Size	V60 Total Units : #Unit × #Basket	V85 Total Units: #Unit × #Basket	BOTTLES / Schott Duran Size	V60 Total Units : #Unit × #Basket	V85 Total Units: #Unit × #Basket
250 ml Ø 85 ×145 mm	13 × 2	13 × 3	**250 ml** Ø 70 ×143 mm	19 × 2	19 × 3
500 ml Ø 105 × 180 mm	8 × 2	8 × 3	**500 ml** Ø 86 × 181 mm	12 × 2	12 × 3
1000 ml Ø 131 × 220 mm	5 × 1	5 × 2	**1000 ml** Ø 101 × 230 mm	8 × 1	8 × 2
2000 ml Ø 166 × 280 mm	3 × 1	3 × 2	**2000 ml** Ø 136 × 265 mm	4 × 1	4 × 2

* Loading capacities in this tables are non-binding guidance.
* Total units per basket have been calculated using International Standard Erlenmeyer's Flasks and Schott Duran.
* The autoclave includes two standard baskets. Additional/Alternative baskets can be ordered to reach maximum flasks capacity.

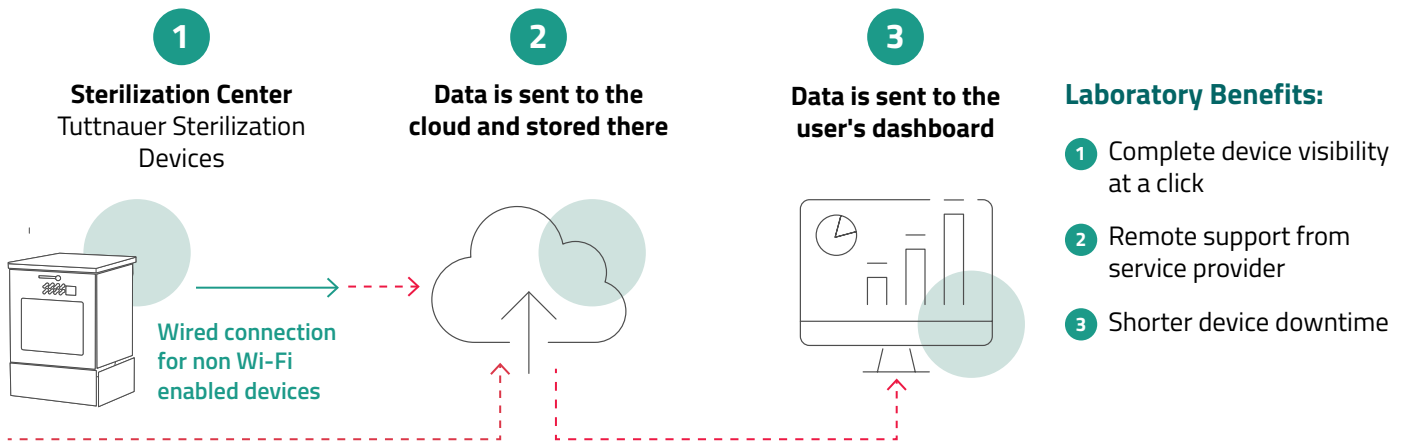# Redefining Your Sterilization Center And Smart Laboratory

T-Connect is a cloud based IoT solution solution designed for your sterilization devices. Connecting to the device Wi-Fi feature, the software provides laboratories with data intelligence in real time, accessible from anywhere, any time, in a secure way.

The T-Connect software is the most advanced software for smart laboratories that are leveraging advanced technology to improve workflow efficiency and results. The T-Connect features paperless documentation, device diagnostics, and troubleshooting. Knowing where and what the technical glitches are, allows you to have accelerated service, minimizing your device downtime.

What Will T-Connect Do?

The ability to connect devices in your sterilization center and communicate on-site or remotely. Using the T-Connect gateway solution, it will connect to any device that is not Wi-Fi enabled.

1 **Sterilization Center**
Tuttnauer Sterilization Devices

Wired connection for non Wi-Fi enabled devices

2 **Data is sent to the cloud and stored there**

3 **Data is sent to the user's dashboard**

Laboratory Benefits:

1 Complete device visibility at a click

2 Remote support from service provider

3 Shorter device downtime

Connect To The Future Of Sterilization With T-Connect

✦ Monitor the devices remotely and download device data
✦ Connectivity by PC, tablet and smartphone
✦ Remotely monitor cycle history, notifications, alerts, can be downloaded remotely or saved in the cloud
✦ Technicians and service centers can remotely analyze autoclaves, diagnose and resolve problems
✦ Suggestions on how to resolve the problem (video/instructions)
✦ Automatic replenishment of consumables, remote diagnostics
✦ Data is safe
✦ Easy to use

Stainless Steel Wire Baskets

2 Stainless Steel wire baskets included	Stainless steel basket - Optional	Leakage tray - Optional

Baskets dimensions

Specifications	V60	V85
Basket Ø × H (mm)	362 x 190	362 x 280
Pail Ø × H (mm)	350 x 320	350 x 450
Tray Ø × H (mm)	345 x 40	345 x 40

Optional Thermal Printer

T-LAB Printer – Desktop Direct Thermal Bar Code Printer

- High quality double-walled clamshell design
- 127 mm (5") OD media capacity
- Up to 127 mm (5") per second print speed
- Easy media loading
- Head open sensor
- RS232 connection

Technical Features	
Resolution	8 dots/mm (203 DPI)
Max. print speed	127 mm (5")/second
Max. print width	54 mm (2.13")
Max. print length	2,286 mm (90")
Overall Dimensions W × H × D (mm) W × H × D (Inch)	109 × 171 × 209 4.29" × 6.73" × 8.23"
Weight	1.2 kg (2.65 lbs)
Label roll capacity	127 mm (5") OD
Memory	4 MB Flash memory	8 MB SDRAM	microSD card for flash memory expansion, up to 4 GB
Interface	RS-232	USB 2.0	Bluetooth (user option)
Accessories	Windows labelling software CD disk	External universal switching power supply

TECHNICAL SPECIFICATIONS

Specifications	V60	V85
Chamber Volume (Litres)	60	85
Weight (kg)	111	120
Chamber Dimensions Ø × D (mm)	390 x 505	390 × 700
External Dimensions W × H × D (mm)	645 x 985 x 810	645 x 985 x 810
Shipping Dimensions W × H × D (mm)	820 x 1250 x 900	820 x 1250 x 900
Ratings	Voltage: 220-240 VAC Single Phase Power: 3000 W Amperage: 13.1 A	Voltage: 220-240 VAC Single Phase Power: 5400 W Amperage: 22.3 A
Wastewater tank	3 Litres	3 Litres
Cooling water tank	6 Litres	6 Litres
Maximum Allowable Working Pressure	2.8 bar	2.8 bar

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since
1925

140
countries

Laboratory

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