

STEAM STERILIZERS SINCE 1888

*Lautenschläger*

STEAM STERILIZERS

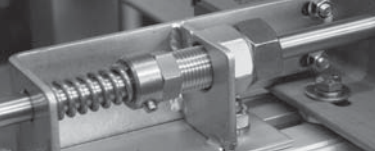
# TEST STERILIZERS + RESISTOMETERS

... state-of-the-art testing technology for academic  
and industrial research



INNOVATIVE STERILIZATION TECHNOLOGIES  
FOR RESEARCH & DEVELOPMENT

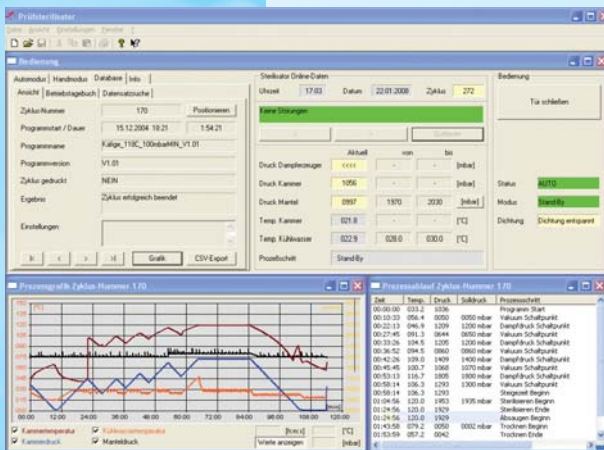




# TEST STERILIZERS

## *Lautenschläger* TEST STERILIZERS

Freely programmable high pressure steam sterilizers according to EN ISO 11140-3/4. Intelligent accessories, high-performance measuring technology and a powerful and multifunctional control system allow the highly accurate reproduction of nearly any steam sterilization cycle and the intentional simulation of malfunctions and sources of defect of steam sterilization processes.



### Graphical user interface "Lautenschläger-STERIL"

If you use standard sterilization cycles or if you prefer configuring your individual programs – "Lautenschläger-STERIL" offers highest operator convenience and intuitive PC functionality.

All modes of operation of the sterilizer can be turned on or switched off in each process step within their safety-related limits. Individually configured programs or process steps may be saved to make further use of them in other processes.

Intelligent process automation features support processing complex test plans and test series. A program with variable  $F_0$ -value specification is available.

Optimum data protection by encoded data storage.

### Make your choice of innovative features ...

The modular design of the Lautenschläger test sterilizer concept gives you the opportunity to individually adapt your sterilizer design to the foreseen testing tasks.

- large-scale chamber window with integrated electrical window heating for online process observation and – with additional chamber lighting – for photo and movie shots
- high-accuracy reproduction of various steam sterilization cycles with freely adjustable control algorithms (two-step control, PID control, shape control)
- emulation of the operational behaviour of different steam sterilization processes and sterilizer types with the chamber and chamber door heating to be activated as required, user-defined combinations of steam and vacuum valve types and individual features for special processes as air steam mixture or vented cycles as well as for the treatment of liquids
- high-precision measuring system integrated in the device control with process cycle data base – in combination with additional gauge connections for external measuring equipment





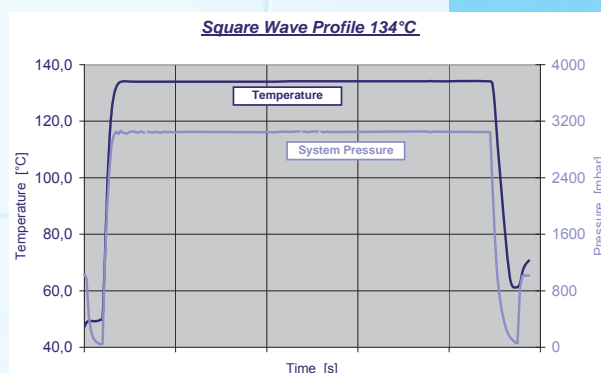
# BIER / CIER VESSELS



## SQUARE-WAVE-RESISTOMETER (BIER / CIER\* vessel)

**Specially designed test equipment according to EN ISO 18472 to expose micro-organisms or biological and chemical indicators to defined steam sterilization reference conditions in a range from 60 to 150°C.**

These test sterilizers produce a square wave profile for pressure and temperature under steam sterilization conditions. Due to their extremely high accuracy they are particularly suitable for the determination of deactivation kinetics, the resistance of micro-organisms, chemical reaction kinetics and material behaviour – an essential tool for the product development, quality control and process optimization in the field of steam sterilization technologies.



### Maximum measuring and control accuracy for ambitious test results

- extremely short come-up and cool-down time due to the intelligent steam supply and vacuum system design
- high control accuracy over the complete cycle without any noticeable stabilization period
- the Square-Wave process clearly exceeds the requirements of EN ISO 18472 for steam resistometers

### Easiest handling for a wide field of application

- free choice of the holding period in steps of 1 s
- working temperature adjustable in the range from 60 to 150°C
- freely programmable cycles with a maximum of operator convenience with the PC-based user interface "Lautenschläger STERIL"

### A modular design for highest flexibility

- high-capacity chamber (10,2 l)
- chamber door window and gauge connections available
- independent electrical pure steam generators of different capacities for the production of saturated steam

\* **BIER / CIER** = **B**iological **I**ndicator **E**valuator **R**esistometer/  
**C**hemical **I**ndicator **E**valuator **R**esistometer





## Our Know-How for Your Success



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