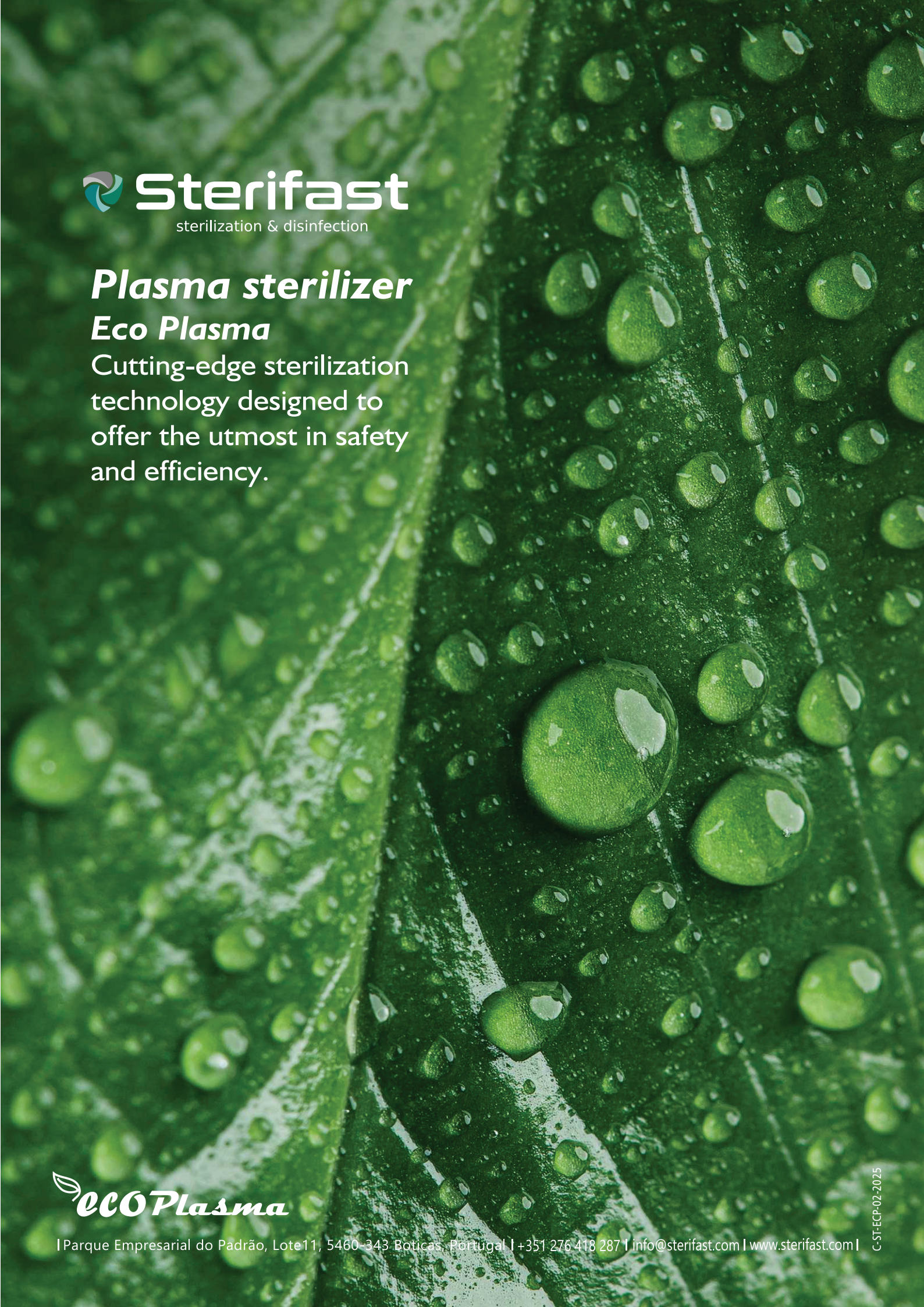

Sterifast
sterilization & disinfection
Plasma sterilizer
Eco Plasma
Cutting-edge sterilization technology designed to offer the utmost in safety and efficiency.
ecoPlasma
| Parque Empresarial do Padrão, Lote11, 5460-343 Boticas, Portugal | +351 276 418 287 | info@sterifast.com | www.sterifast.com |
C-ST-ECP-02-2025

ecoPlasma

MINIMAL UTILITY REQUIREMENT

LOW TEMPERATURE

ENERGY SAVING

FAST & RELIABLE

GREEN TECHNOLOGY

NON-TOXIC

LOW WATER CONSUMPTION

Advanced Plasma Sterilizer – Next-Generation Sterilization Technology

Introducing our advanced Plasma Sterilizer, engineered to deliver high-performance, low-temperature sterilization with maximum safety and reliability for modern healthcare environments.

Designed to accommodate a wide range of sterilization needs, the system offers chamber capacities from 50 to 160 liters, with customized configurations available upon request. The sterilization chamber is manufactured from high-quality non-corrosive aluminum, ensuring long-term durability and resistance to wear.
Its user-friendly design includes an easily removable internal cover and a dual-shelf loading system for improved workflow efficiency.

The device is equipped with a robust mechanical clamp system and high-grade stainless steel components, including tubes, unions, and connectors, ensuring secure and stable operation throughout all cycles.

For enhanced usability, the sterilizer features fully automatic single or double-door configurations. The doors are constructed from durable aluminum and integrated with an advanced interlock safety system, ensuring controlled access and preventing unauthorized opening during operation. Automatic position detection and real-time display notifications further enhance operational safety.

To ensure maximum operator protection, multiple safety mechanisms are implemented, including anti-pinch door protection and a pedal-activated sliding door system for hands-free convenience. An intelligent Sliding Door Control System prevents door operation during active, failed, or interrupted cycles, while energy-saving logic controls door behavior during idle states. Acoustic alerts and countdown timers keep users continuously informed.

The sterilizer housing is built from reinforced stainless steel panels, offering excellent durability and hygiene compliance. Smooth, service-friendly access panels simplify maintenance procedures, while the compact footprint and integrated mobility system (wheels and support feet) allow easy installation in any clinical setting.

An automated sterilizing agent refilling system eliminates direct operator contact with chemicals, improving both safety and convenience. The system supports RFID-based bottle recognition for accurate identification, automatic bottle perforation, and efficient transfer of solution into the main tank via a sealed drawer mechanism.

Experience a new standard in sterilization technology—where innovation, safety, and operational efficiency come together in one powerful solution.

Our plasma sterilizer is renowned for providing a high level of sterilization.
This exceptional performance extends to its use with endoscopes and various semicritical instruments, making it a valuable addition to any healthcare setting.

CYCLES INFORMATION

Advanced	Normal	Endoscope	Free
Hollow loads	Non hollow loads	Flexible and rigid endoscopes	Custom made

TEST CYCLES

Test I	Test II	Test III
Penetration test	Leakage test	Leakage and penetration test

EFFICIENCY

- Efficient penetration in long lumens, including:
  - 10-meter extension with 1-mm diameter (both ends open).
  - 3-meter extension with 1-mm diameter (one end open).
- Efficient sterilization of endoscopes.

ROUTINE CONTROL

- Process monitored with H_2O_2 Biological and Chemical Indicators.

LUMEN KIT (PROCESS CHALLENGE DEVICE)

- The system is compatible with biological and chemical indicator testing.

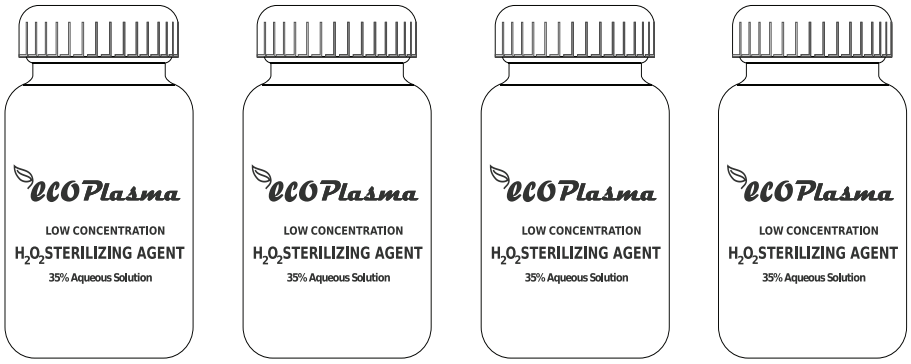
STERILIZING AGENT REFILLING SYSTEM

- Automatic refilling system.
- The operator never comes into direct contact with the chemical product.
- Supplying System located under the waistline.
- Sterilizing agent tank.
- The sterilizing agent in the tank keeps all its properties.
- Drawer with a holder for the sterilizing agent bottle.
- Automatic perforation of the recharge bottle.
- All liquid of the recharge bottle is sucked into the tank.
- Recognition of recharge bottles by RFID.

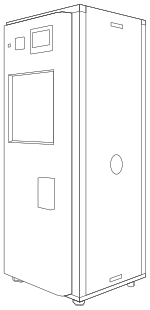
The sterilizing agent can be shipped by air due to the low concentration of H_2O_2.
As a Known Consignor of Air Cargo (No. PT/KC/01-00006), Sterifast is able to supply products faster than competitors by avoiding time-consuming security checks on the products before loading.

BOTTLE AND PACKAGING SYSTEM

- ✔ Recharge bottles are supplied in a sealed plastic bag, allowing the operator to verify any possible leakage prior to handling.
- ✔ The bottles have a shelf life of 18 months.
- ✔ Supplied in boxes containing 4 bottles.



Patent No. PCT/PT2013/000025 - WO 2014/178740A1



ECO PLASMA

The specifications may be subject to changes due to technical advancements or consistency updates.

MAIN SPECIFICATIONS

- Refilling data, validity, and lot are printed out after each refill.
- Information about the number of diffusions performed during the previous recharge is available.
- Cycle data printout includes phases, phase time, total time, pressure, temperature, and H_2O_2 concentration.
- The screen shows the remaining time until the end of the cycle.
- Indication of "Plasma OK" is provided during the exhaust phase and on the cycle printout.
- Real-time graphs are displayed on the screen.
- Messages indicating cycle phases are shown.
- The sterilizing agent level is indicated on the screen.
- Cycle archive is available in the HMI with search by date.
- USB connection is available.
- Data can be transferred to the CSSD traceability system via network.
- Data transfer to a USB flash drive, transferring files with an STV extension.
- PC software (Sterifast Viewer) is available for data reading and printing.
- A data printer is located on the front panel.
- Low corrosion of materials during exposure (%35 concentration of H_2O_2).
- Display and printout text are available in selectable languages (EN, PT, ES, DE, FR, IT, IND, PL) and can be translated into local languages.
- Differentiated acoustic signals indicate the end of the cycle (intermittent sound indicates a correct cycle, continuous sound indicates a failed cycle).
- While waiting for the required conditions, the system performs automatic preheating of the load.
- Automatic chamber heating with energy-saving features.

7" touch screen HMI (Human-Machine Interface), which allows interaction between users and equipment.

INTEGRATED QUALITY USER INTERFACE

- **One or two 7" touch screen HMI with Windows operating system.**
- **Ethernet Communication.**
- **Phoenix Automation.**
- **Electronic management control and solid state relay for temperature control.**
- **Phoenix control board component.**

Supervision Software - for technicians, including the possibility of using it as remote software (available for distributors under agreement).

Sterifast VIEWER - PC software for the sterilizer operator enables the operator to link the graphic cycles to a specific load, providing information about the load type, department, and operator. This software allows the user to save the file in PDF format and send it to any computer within the institution.
Furthermore, it provides the operator with the ability to monitor temperature and pressure values at any point on the graphic, and it offers the option to customize the desktop image as well as extend or shorten the graphs.

ROBUST TECHNOLOGY AND COMPONENTS

Sterifast High Vacuum solution

Sterifast double-stage High Vacuum Pump with oil condenser and separator.

- ✔ Automatic pre- heating.
- ✔ High-efficiency condenser with automatic control.
- ✔ Large Capacity Molecular Sieve.
- ✔ High-efficiency oil separator.

High Voltage Plasma Generator

Plasma generator is located outside the sterilization chamber.

- ✔ Materials are not damaged by any radiation.
- ✔ Plasma generator is equipped with temperature sensor.

Innovation

The Vaporization System as well as the entire process is patented WO 008755/2009 A1(Patent No. PCT/PT000029/2007)

VALIDATION
Under request, it is possible to validate the process according to ISO 14937.

SAFETY CHARACTERISTICS

We adhere to the highest safety standards in the industry, providing peace of mind while using our products. Safety is our commitment.

- Safety system for cycle start - the cycle starts only when the necessary conditions inside the chamber are met (indication on the screen).
- Overheating safety system, indicating temperature probe failure to the operator.
- Maximum temperature safety system of the chamber.
- Maximum temperature safety system of the vaporizer.
- Maximum temperature safety system of each door.
- Probe missing safety system.
- Independent temperature control system for each element with probe.
- HEPA filter 0.2µm.
- No electromagnetic radiation: the system does not interfere with other electric equipment.
- Safe automatic supplying system: the operator has no contact with the chemical product.
- Safe environment: the residues' level around the sterilizer is less than 1 ppm.

I_SD_C SYSTEM

Intelligent Sliding Door Control System

- If the unclean side door is open, the system prevents the clean side door from opening.
- The screen displays a 10-minute countdown to close the door.
- Acoustic warning signal 5 seconds before the door starts closing. If the door is open and the pedal is pressed, the countdown will restart.
- During upward movement, if something touches the door sensor, the movement is reversed and the door reopens.
- Equipped with an energy-saving system.

CONSTRUCTION FEATURES

STERILIZATION CHAMBER

- ✔ Made of non-corrosive aluminium.
- ✔ Removable internal chamber cover for easy cleaning, with holder for two loading shelves.
- ✔ Ergonomic loading and unloading position.
- ✔ All mechanical connections via clamp system.
- ✔ All tubes, unions, and clamps made of stainless steel.

DOORS

- ✔ Automatic (single or double), made of non-corrosive aluminium.
- ✔ Equipped with interlock system.
- ✔ Automatic verification of door position.
- ✔ Timing and notifications of automatic door closing displayed on screen.
- ✔ Safety system to prevent pinching during door closing.
- ✔ Sliding door opening system activated by pedal.
- ✔ Controlled automatic door heating with energy-saving system.

HOUSING

- ✔ Structure and panels made of stainless steel.
- ✔ Panels with knobs for easy service access.
- ✔ External parts and surfaces finished with rounded (non-sharp) edges.
- ✔ Wheels with supporting feet on all four corners of the machine.

What is truly complex is simplifying things:
All you need to do is effortlessly connect the machine to the network.
No hassle, no complex prerequisites required.

EASY INSTALLATION

- No water required.
- No compressed air needed.
- No drain required.
- No special ventilation needed.
- Just an electrical connection.
- Can be installed anywhere — with its four wheels, it is very easy to move.

DEVICES THAT CAN BE STERILIZED IN THE ECO PLASMA SYSTEM

Surgical instruments, flexible endoscopes, laparoscopy boxes, ophthalmology devices, cardiology devices, MIS devices, neurosurgery devices, otolaryngology devices, electric scalpels, electric cables, optical fibers, and all thermo-sensitive materials that have been washed and disinfected using thermo-chemical or chemical disinfection at low temperatures (maximum 60°C).
It can also sterilize materials that are normally sterilized at 121°C.
Packaging materials that can be used:
Polypropylene or polyethylene sterilization pouches, reels, and sheets.

Among all the models presented, we take great pleasure in offering our customers top-of-the-line quality.

ECOPlasma MODELS		**E50 1SD**	**E50 2SD**	**E110 1SD**	**E110 2SD**	**E160 2SD**
Automatic Sliding Doors		1	2	1	2	2
Useful Volume		44 liters		107 liters		158 liters
Total volume		47 liters		109 liters		162 liters
Chamber Dimensions (mm)	W	420		420		420
	H	180		420		420
	D	620		620		920
Sterilizer External Dimensions (mm)	W	700	700	700	700	700
	H	1700	1700	1800	1800	1800
	D	790	840	790	840	1140
Weight (Kg)		200	210	260	270	310
Power Supply	Voltage	230V / 380V + N + Earth	230V / 380V + N + Earth	230V / 380V + N + Earth	230V / 380V + N + Earth	230V / 380V + N + Earth
	Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
	Power	2,9 kW	2,9 kW	3,3 kW	3,3 kW	3,7 kW

For inquiries regarding availability, please contact the manufacturer.
Some models may only be provided upon request.
For more details, visit the Sterifast page at https://sterifast.com

QUALITY SYSTEM CERTIFICATION DNV·GL ISO 13485 CE 2460