VS L Series

Steam sterilizers for laboratory and biomedical research



Steelco

Miele Group Member

Global Manufacturer and Supplier for Cleaning and Sterilization Solutions

Born from Steelco and Belimed, SteelcoBelimed pioneers sterile workflow solutions with innovation, reliability, and customer focus. “Innovate with confidence” defines our commitment to high-quality products and services, setting new industry standards in Infection Control and Life Science.

Customer Centricity

Our commitment to fully understand customers’ needs and satisfaction is prioritized.

Our products and services are designed to meet those specific needs, ensuring every decision we make benefits our customers for the best results.

Innovation

Our dedication to progress drives us to constantly seek out and embrace new ideas, technologies and methods.

This commitment ensures our products and services continually evolve and improve.

Efficiency

We strive for peak productivity by optimizing our processes, resources, and operations.

Our goal is to deliver solutions and services swiftly and effectively, without compromise, minimizing waste and maximizing value.

Reliability

We stand by our word, delivering solid and trustworthy solutions every time.

Our aim is to forge long lasting relationships built on trust and mutual respect by consistently meeting our commitments.

SteelcoBelimed

Miele Group Member

VS L Series

A comprehensive range of steam sterilizers for any size of facility

Whether replacing a single machine or requiring assistance in designing and equipping your scientific or research laboratory, SteelcoBelimed dealers are here to help you make the best possible decision that works for you and then support you every step of the way, from selection to installation and service.

High performance, reliability and versatility define the sterilization solutions, which are suitable for facilities of any size thanks to a comprehensive and scalable range.





VS LD

Vertical-loading sterilizers

Chamber volume from 85 to 125 litres

VS L - Small, medium, and bulk capacity

Frontal-loading sterilizers

Chamber volume from 110 to 9,070 litres



Laboratory Applications
Small and medium capacity sterilizers

Small and medium capacity sterilizers, including VS LD vertical-loading sterilizers, are designed to meet the needs of laboratories and research facilities of all types. Mainly used to sterilize heat-resistant and moisture-stable materials (e.g. glassware, metal parts, liquids in sealed or vented containers, porous loads, etc.) autoclaves can also reprocess biohazardous material. In their double door version, steam sterilizers play a key role as part of the building containment system in biosafety level laboratory applications (BSL-3 and BSL-4).

Typical loads

- Glassware and solid materials
- Porous materials
- Liquid in open or sealed containers
- Biohazardous materials

Related washing system
Laboratory glassware washers

Our complete range of glassware washers and dryers, carefully designed to effectively treat daily use materials in scientific laboratories, provides optimum cleaning / drying and maximum safety, ensuring unrivaled levels of efficiency. Tailor-made custom options, combined with a wide selection of trolleys and accessories, meet the most diverse treatment needs.





Biomedical Research Applications
Bulk capacity sterilizers

Pass-through autoclaves provide a controlled barrier between animal care areas and the external environment. They enable the safe transfer of sterile materials into controlled zones and the secure removal of potentially infectious or genetically modified waste. High-capacity bulk autoclaves support vivarium throughput by sterilizing cages, bedding, feed, waste and animal carcasses.

Typical loads

- Animal cages
- Bedding and feeding
- Feeding bottles & Liquids
- Waste and carcasses

Related washing system
Cage and bottle washers

Carefully designed to wash and sanitize all types of animal care equipment of your vivarium or laboratory – cages, feeding bottles, and fish tanks – our range of cabinet washers not only offers the highest flexibility of installation while minimizing operating costs, but also the highest levels of cleaning efficacy.



VS LD Series
Compact, vertical-loading sterilizer

Compact and space-efficient, these free-standing units maximize available space and reduce operating costs while delivering high performance. Available with 85 L and 125 L chambers, they offer an excellent capacity-to-footprint ratio. AISI 316L stainless steel chambers and doors ensure durability and easy cleaning. The units feature 121°C and 134°C cycles, together with dedicated service programs. An optional water-ring vacuum pump ensures efficient air removal, while chamber jacket heating helps reduce cycle times and optimize drying. PLC control and an intuitive touchscreen HMI ensure simple, user-friendly operation.



Models and Dimensions

	Capacity (l)	Chamber Dimensions (mm)		Overall Dimensions (mm)			
		Ø	H	W	D	H	H+*
VS 9 LD	~ 85 L	420	636	720	723	1000	1467
VS 13 LD	~ 125 L	420	896	720	723	1235	1702

Notes
(*) Height with open door

Key Features

- Chamber made of AISI 316L stainless steel
- Pressure vessel according to PED requirements
- Piping and valves in copper-brass
- Vertical loading hinged door with sliding cover
- Chamber jacket heating and cooling
- Air over Pressure available
- On-board electrically heated steam generator
- Chamber and load control probe
- Effluent cooling system
- 7” HMI color touch screen with industrial PLC
- On-board thermal printer
- 400V/3~/50Hz standard electrical connection; alternative connections available





Advanced control system

VS LD series is equipped with a PLC digital microprocessor and a user-friendly 7” touch screen panel HMI. Up to 20 programming options.



Full traceability

An optional cycle traceability software is provided with 1 USB dongle for the connection of up to 15 Steelco-branded devices to one single PC.



Independent pressure probe

A pressure reference transducer allows to record pressure during the cycle. An alarm is activated if the value on the control probe differs from the reference probe more than the defined tolerance.



Loading accessories

Lifting device with electronic control and swivel arm for fully assisted loading/unloading with the easy handling of all load types. Several types and dimensions of loading baskets are available to optimize loading capacity.

VS L Series
Small, medium, and bulk capacity

A comprehensive range of small, medium, and high-capacity autoclaves delivering outstanding performance, reliability, and versatility. Available in up to 23 standard chamber sizes, with capacities from 110 to 9,070 litres (4 to 320 cu ft), VS L sterilizers are designed to minimize energy and water consumption, ensuring low operating costs per load. Advanced Eco Options can reduce water consumption to nearly zero, depending on the selected model and configuration.



Chamber Volume

from 110 litres / 4 cu ft
to 9070 litres / 320 cu ft

Note: Custom dimensions available upon request.
Feature and option availability may vary depending on the machine model and configuration.

Configurations

- Single or double door
- Sliding or hinged door
- Layout according to site
- Floor or pit mounted
- Air Differential Seal or Bioseal
- Integrated or remoted electrical cabinet

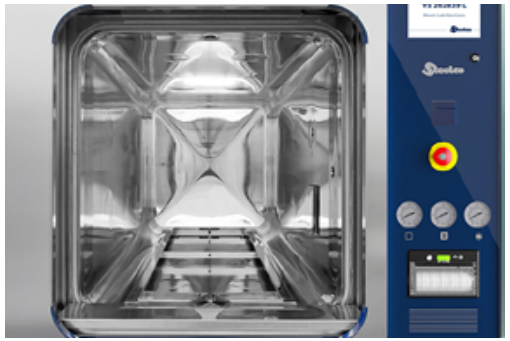
Key Features

- Chamber made of AISI 316L stainless steel
- Pressure vessel according to PED or ASME
- Chamber jacket heating and cooling
- Piping and valves in copper-brass, AISI 316L stainless steel available as option
- Pneumatic or solenoid valves
- Vacuum Pump or Water Ejector
- CD Cool Down system
- 7” HMI color touch screen with industrial PLC
- On board thermal printer
- Direct clean steam supply from the building
- Onboard steam generators available
- Load Control Probe
- EN 285 (applicable requirements)



Flexible configuration

Available with single or double pass-through doors, hinged or space-saving sliding. Electrical cabinets may be integrated or remoted, with right, left or shared technical areas for inline installations. Options vary by model.



High quality material

AISI 316L stainless steel chamber with high-efficiency heat-transfer full jacket system for even heat distribution. Doors internally made of AISI 316L stainless steel with no welding. Heat insulation with durable reusable cover for fast service maintenance at a lower cost.



Temperature probes

Temperature probes installed in chamber and jacket and one product probe to monitor temperatures of the load throughout the entire cycle. This ensures precise control, repeatable sterilization results and compliance with validation requirements.



Jacket cooling & Air over pressure

Air overpressure prevents liquid boil-over by maintaining pressure during cooling. Jacket cooling with softened water from building accelerates load cooldown and drying. Available with or without recirculation, depending on facility utilities.

Biocontainment solutions
for BSL laboratories

Biocontainment laboratories handle biological pathogenic agents that require controlled environments to protect personnel, the environment and research integrity. From BSL-2 research laboratories to BSL-3 and BSL-4 high-containment facilities, operations depend on validated decontamination processes, secure separation of areas and controlled material transfer.

SteelcoBelimed provides sterilization and decontamination solutions designed to integrate into containment workflows across academic research, public health reference laboratories as well as biotech R&D and veterinary drug development and manufacturing.

Pass-through biocontainment sterilizers support material and waste decontamination out of the contained zone while acting as a physical barrier at the facility perimeter. They help maintain controlled operation and segregation of areas across BSL-2 through BSL-4 environments.

Configurations can include bioseal, effluent and exhaust decontamination and containment-oriented safeguards designed to preserve integrity in the event of utility loss, cycle interruption or system failure.







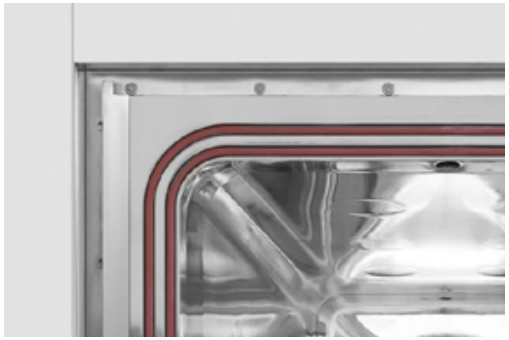
Air differential seal

This solution provides a solid AISI 304 stainless-steel flange bolted to the sterilizer body, and stainless-steel panels inserted between the flange and the building structure such as ceiling, floor and walls. All panels are tightly fitted to their adjoining surfaces with seams filled with silicone.



Bioseal

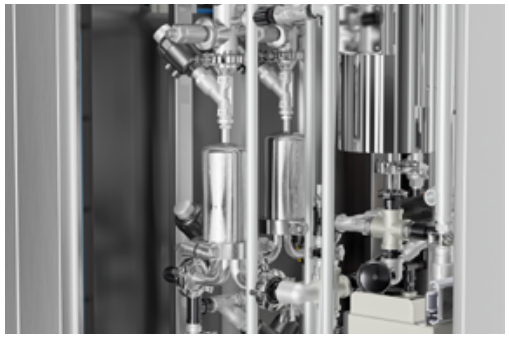
This solution includes two stainless-steel 304 flanges – one fixed or welded to the chamber and a second one fixed to the building structure. Flanges are connected via long-life flexible gasket to ensure the complete airtightness..



Door gasket safety

The door gasket is a critical containment element. Loss of pressure or leakage can compromise barrier integrity. Mitigation measures include:

- double door gasket
- backup compressed air supply with buffer tank
- non-return valves and pressure monitoring
- design features that reduce condensate accumulation in gasket areas.



Effluent and exhaust decontamination

Sterilization cycles generate contaminated condensate and exhaust air that must be treated before discharge. Condensate is sterilized with steam prior to release to the drain, while exhaust air passes through a sterilizing filter. For higher safety, options include separate drain lines to a kill tank or incinerator and redundant exhaust filtration with integrity testing.

Cycle configuration
to match your process needs

Standard and test cycles



Gravity

For the sterilization of heat- and moisturestable goods and the decontamination of bagged non-biohazardous laboratory waste.



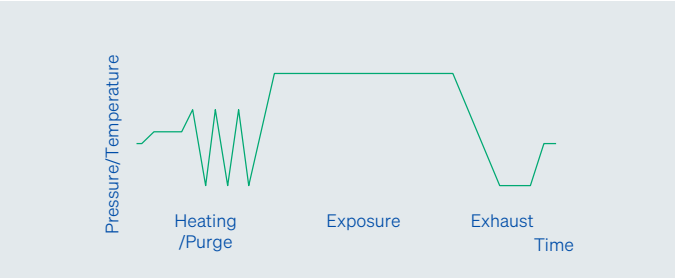
Liquid

For the sterilization of liquids and media in vented borosilicate glass or metal containers. Temperature 121°C/249.8°F.



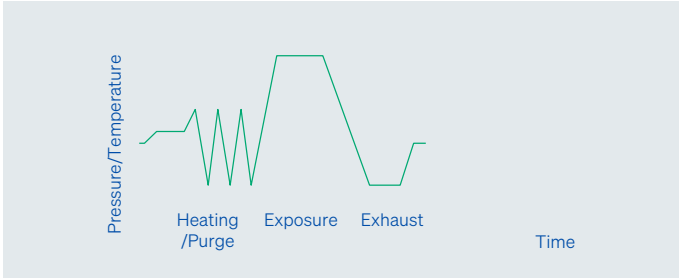
Leak Test

This cycle is used to verify the vacuum integrity of the sterilizer. While running this cycle, the sterilizer chamber must be empty.



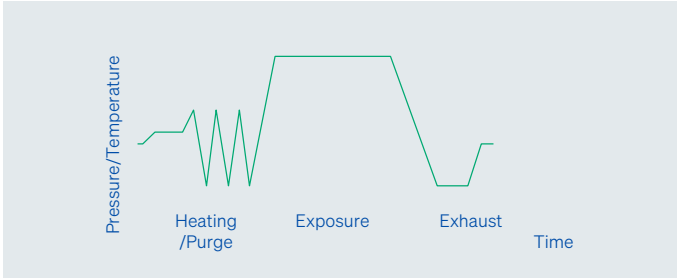
Pre & Post vacuum 121°C/249.8°F

For efficient, high-volume sterilization of heat-sensitive materials (plastic, rubber products and macrolon cages).



Pre & Post vacuum 134°C/273.2°F

For efficient, high-volume sterilization of porous, heat- and moisture-stable materials (utensils, glassware, textiles).



Bowie-Dick (D.A.R.T.)

This cycle is used to verify the effectiveness of both steam penetration and air removal in sterilizers provided with a vacuum pump.

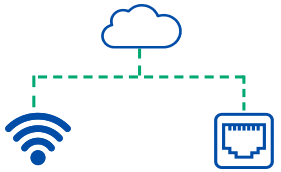
Optional cycles

Other cycles can be provided to meet customer needs:

- Jacket cooling with direct injection of cold water
- Jacket cooling with water recirculation system
- Air over pressure with jacket cooling cycle
- Low temperature cycle
- F_0 function
- Custom cycles available upon request



Advanced control system
to monitor the entire process



User-Friendly Touch-Screen HMI

The industrial PLC features a 7” colour touch-screen with multi-level user access, Wi-Fi and Ethernet connectivity.

Different HMI brands are available, including Allen-Bradley, Saia Hakko and optional Siemens for 21 CFR Part 11 compliance.



Full Traceability and Remote Support

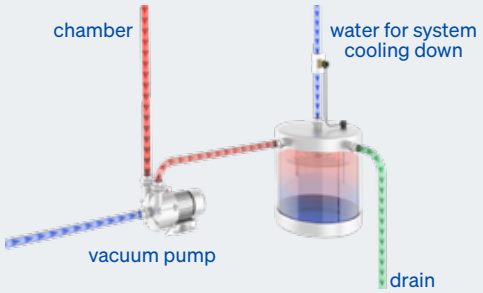
An integrated thermal printer and dedicated software ensure process documentation, cycle recording and complete data traceability.

Dedicated software enables real-time and historical monitoring of equipment performance. Remote connectivity allows factory-based diagnostics and troubleshooting, while tablet access is available via the client’s network and Wi-Fi.

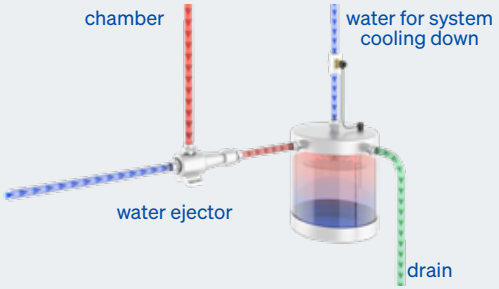
Efficiency & Sustainability
Up to 90% water saving

When equipped with advanced ECO technology, our sterilizers achieve exceptional efficiency, significantly reducing water and energy consumption. This results in the lowest operating cost per load while supporting sustainability targets without compromising sterilization performance.

Vacuum pump system



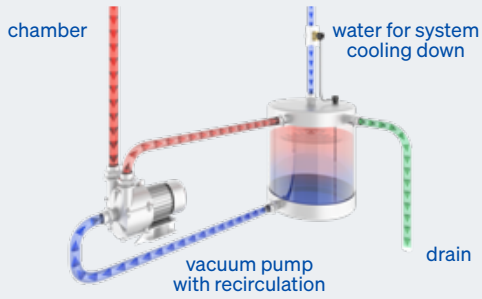
Water ejector system



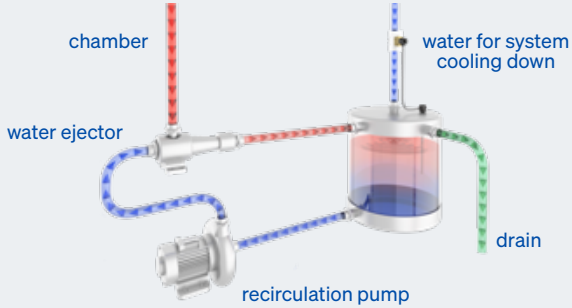
ECO CD - Cool down system
Included as standard

This system consists of a tank that collecting both chamber and condensate drains. Temperature within the tank is controlled by a thermostatic valve and drain temperature is kept below 60°C (140°F) prior to discharge by adding cold water from building.Configuration and installation type may vary according to model and options chosen.

Vacuum pump system



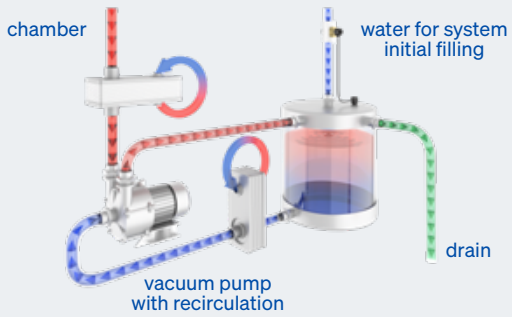
Water ejector system



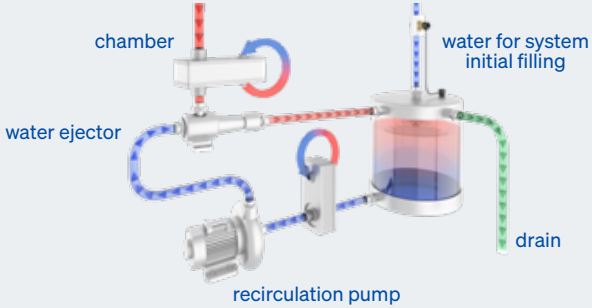
ECO EVO
Available as option

The system consists of a tank that collects both chamber and condensate drains. Collected water is re-circulated to feed vacuum systems. Water temperature within the tank is controlled by a thermostatic valve by adding cold water from building. Added water is triggered according to vacuum systems need and drain temperature is kept below 60°C (140°F) prior to discharge.

Vacuum pump system



Water ejector system



ECO EVO PLUS
Available as option

The system consists of a water tank that collects both chamber and condensate drains. Collected water is re-circulated to feed vacuum systems. Water temperature within the tank is controlled by a thermostatic valve and the system exchanges heat with a chilled water loop from building. Water is added mainly for system start-up, thus reducing water consumption to nearly zero (-90%). Drain temperature is kept below 60°C (140°F) prior to discharge.

Ergonomics & Logistics
Multiple loading options

Designed for seamless integration with SteelcoBelimed laboratory autoclaves, loading equipment enhances ergonomics, safety, and operational efficiency. A comprehensive range of loading carts, transfer trolleys, and accessories enables easy load handling, optimized workflow, and reliable transport of sterilization goods throughout the process.







Loading car and carriage

Loading cars are manufactured from AISI 316 stainless steel and feature adjustable shelf supports to accommodate different load heights. The fixed-height loading carriage, made of AISI 304 stainless steel, includes a safety locking system to prevent accidental disengagement of the car. The same locking mechanism secures the carriage to the sterilizer during operation.

Sliding shelves in lieu of car and carriage

As an alternative to the car and carriage system, a sliding shelf configuration is available. Fixed racks with perforated shelf supports are mounted on both sides of the chamber walls, with two or three shelves depending on the model. Sliding shelf supports are made of AISI 316 stainless steel and allow adjustable load heights. This option is not available for VS 264175 L Medium-range model and the Bulk range.

Floor loading trolleys for pit-mounted devices

For pit-mounted bulk autoclaves, a range of floor loading trolleys is available, manufactured from AISI 316 stainless steel and equipped with fully autoclavable wheels. Depending on the model and chamber depth, trolleys can be supplied as a single unit or split into two separate sections to simplify handling.

VS L Small and Medium capacity
Usable chamber and overall dimensions



Model	Door Opening	HMI position	Capacity (l)	Chamber dimensions (mm)			Overall dimensions (mm)					
				Width	Height	Depth	Width	Sliding door Height	Depth	Width	Hinged door Height	Depth
VS 161626 L	Hinged or Vertical Sliding	On top	110	406	406	660	635	1842	965	870	1842	965
VS 202038 L	Hinged or Vertical Sliding	On top	250	508	508	965	737	1842	1270	972	1842	1270
VS 262639 L	Hinged or Vertical Sliding	On top	432	660	660	991	889	1994	1295	1125	1995	1296
VS 262839 L	Vertical Sliding	On Side	462	670	700	986	1100	1900	1292		Not available	
VS 262649 L	Hinged or Vertical Sliding	On top	542	660	660	1245	889	1994	1549	1125	1994	1549
VS 262851 L	Vertical Sliding	On Side	603	670	700	1286	1100	1900	1592		Not available	
VS 262661 L	Hinged or Vertical Sliding	On top	676	660	660	1549	889	1994	1854	1125	1994	1854
VS 262861 L	Vertical Sliding	On Side	745	670	700	1586	1100	1900	1892		Not available	
VS 263639 L	Hinged or Sliding door	On Side	600	660	914	991	1860	1765	1275	1426	1709	1354
VS 263649 L	Hinged or Sliding door	On Side	750	660	914	1245	1860	1765	1530	1426	1709	1608
VS 263660 L	Hinged or Sliding door	On Side	920	660	914	1524	1860	1765	1810	1426	1709	1888
VS 264151 L	Horizontal Sliding	On Side	905-922*	670	1050	1286-1310*	1860	1900	1592		Not available	
VS 264175 L	Horizontal Sliding	On Side	1330-1344*	670	1050	1886-1910*	1860	1900	2192		Not available	

* Volume and size for double door version.

VS L Bulk capacity

Usable chamber and overall dimensions



Model	Door Opening	HMI position	Capacity (l)	Chamber dimensions (mm)			Overall dimensions (mm)		
				Width	Height	Depth	Width	Height	Depth
VS 354971 L	Horizontal Sliding	On Side	2025	900	1250	1800	2600	2058	2270
VS 364872 L	Hinged	On Side	2037	914	1219	1829	1795	2012	2192
VS 355764 L	Horizontal Sliding	On Side	2130	900	1450	1630	2585	1946	2088
VS 415798 L	Horizontal Sliding	On Side	3800	1050	1450	2500	2910	1950	2964
VS 398787 L	Horizontal Sliding	On Side	4840	1000	2200	2200	2693	2712	2664
VS 3583106 L	Horizontal Sliding	On Side	5100	900	2100	2700	2543	2600	3164
VS 498686 L	Horizontal Sliding	On Side	5940	1245	2184	2184	3213	2768	2664
VS 4987103 L	Horizontal Sliding	On Side	7170	1250	2200	2607	3243	2700	3073
VS 4383130 L	Horizontal Sliding	On Side	7625	1100	2100	3300	2943	2600	3764
VS 5186126 L	Horizontal Sliding	On Side	9070	1300	2180	3200	3363	2930	3700

Ethics & Sustainability

Committed to improve workers' wellbeing and protect the environment

The future is our most important resource. Acknowledging it implies working strategies and choices to respect our environment. At SteelcoBelimed, this is a daily commitment that aims to improve well-being and protect the environment and its resources in every area of our work: from processes to products and for people who come into daily contact with our company.









Sustainability of business

We aim to reduce the environmental impact of all our activities by promoting more effective and sustainable measures and processes following a code of conduct that supports a circular economy. A constant commitment to research and active collaboration with major university centers to develop sustainability projects. Thanks to a local supply chain with factories and suppliers within a limited geographical area, we can minimize transport requirements-dialogue with stakeholders to share best practices and ensure that the supply chain meets the same environmental standards.

Product sustainability

We have constantly developed innovative solutions and technologies to improve efficiency and reduce consumption to benefit users and the environment. There are technical ways to reduce consumption for every system, whether it's a simple solution such as using thicker and more efficient insulation materials or a high-tech energy recovery solution that allows multiple systems to share energy with each other. The more a system is in operation, the greater the savings, not only in CO2 but also in costs. Discover all the options to reduce resource consumption in our Sustainability Book.

With a focus on people

«Organizations that aspire to be successful in the long term need to establish and maintain a compliance culture, which considers the needs and expectations of interested parties» (UNI ISO 37301:2021).
Based on this, the SteelcoBelimed Group embeds a culture of regulatory compliance within its organization, serving as the foundation for a business vision rooted in reliability, solidity, social responsibility, and sustainability. Safety and employee well-being are primary goals, with a continuous commitment to personal development in a healthy, dynamic, and inclusive environment.

Our certifications

ISO 14001 Certification:
We adopt environmental management and consumption monitoring systems, planning and implementing increasingly effective green policies.

ISO 45001 Certification:
We guarantee our employees the highest health and safety standards, thanks to the application of certified management systems and constant improvement through the analysis of risk factors.

ISO 14064-1 Certification:
Our organization adopts principles and requirements for the quantification and reporting of greenhouse gas (GHG) emissions and removals.

Maximized performance
with SteelcoBelimed's experts

Global service support

With a global network of certified service technicians and trusted partners, SteelcoBelimed delivers fast, reliable, and locally available technical support to ensure uninterrupted performance of your critical equipment. Whether it's routine maintenance, emergency service, or performance optimization, we respond with precision and speed.

Certified technical training

Our certified technical training held in our Academies worldwide combines classroom and hands-on learning to equip your team with the skills to operate, maintain, and troubleshoot equipment. Small class sizes ensure personalized instruction, and participants receive a certificate upon completion - boosting capabilities and minimizing downtime.

The VS L Series of steam sterilizers meet the following standard requirements: 2006/42/CE (Machinery Directive); 2014/30/EU (EMC Directive); 2014/68/UE (PED)

Additional technical norms and standards (according to country of destination and customer requirements): IEC 61010-2-040; EN ISO 12100; EN 61326; EN 13445; EN ISO 9712; EN ISO 9606-1; EN ISO 15614-1; ASME code Sec.VIII div. 1 & div. 2; UL compliant; EN 285 (available upon request).

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Innovate with confidence

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Products offered for sale may differ from those described or illustrated in this brochure due to later production changes or/and optional configurations.
The products and technical specifications are subjected to change without prior notice. Please consult your Steelco dealer for the latest information.

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