

Sterilization today and in future: Space-saving, efficient and ergonomic



MST-V

Steam sterilizer with vertical sliding door for dependable and qualified sterilization of medical devices



The focus is on the human being – greater safety thanks to qualified reprocessing

Central Sterile Supplies Departments (CSSD) are an integral department in most clinic and hospital operations. The demands placed on instrument processing within these units have never been more stringent than now.

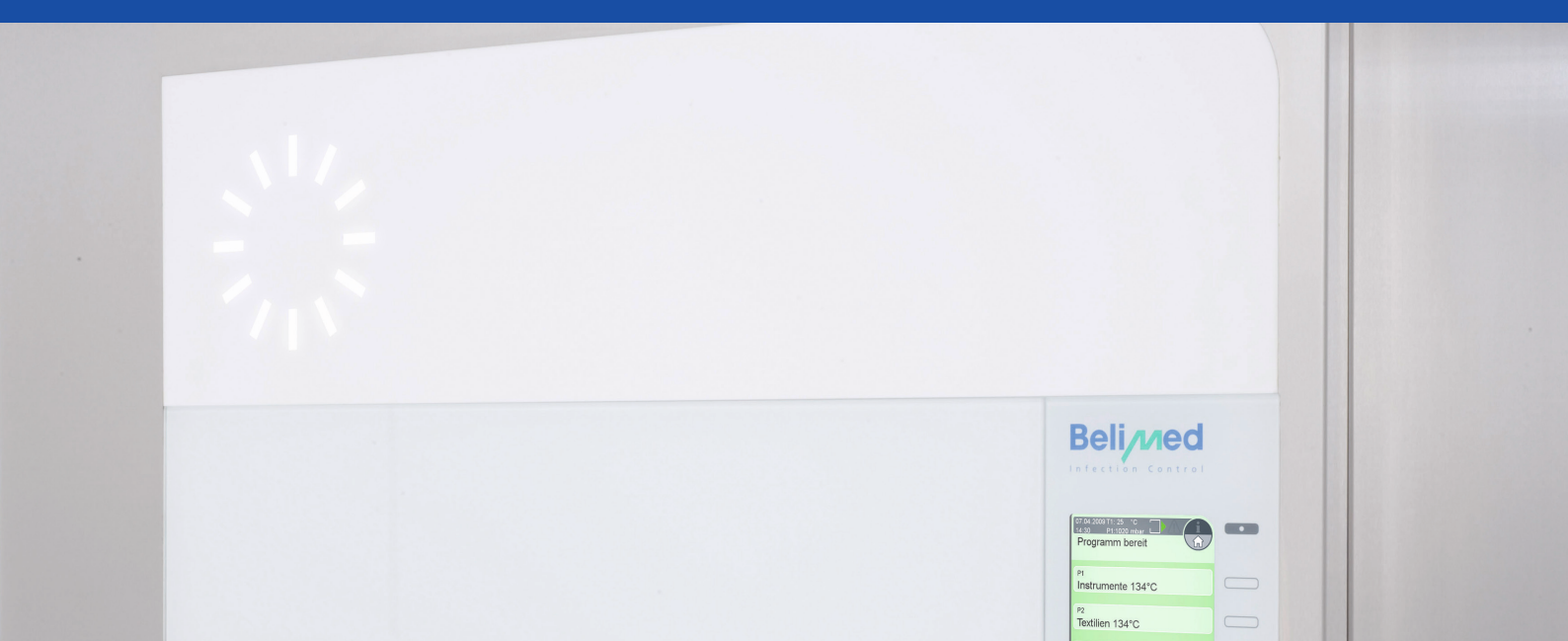
It is essential to combine a high level of working efficiency with optimum reprocessing of medical devices. This is a complex task for which there are often too few staff available, especially at peak times.

Innovation and experience

As a leading supplier of decontamination systems and solutions in the area of infection control, Belimed has over 40 years of experience developing and manufacturing innovative cleaning, disinfection and sterilization systems for the medical, pharmaceutical and laboratory sectors. The focus is on safety of patients and staff.

Numerous requirements – one contact

In addition to being high-quality decontamination systems provider Belimed also supplies a broad range of additional solutions. These include in-house services, extending from planning and project management through after-sales support with validation and maintenance. Belimed works together with their clients to develop solutions to offer a system providing them efficient workflow and maximum productivity.



The most compact sterilizer in its class – the new MST-V

The MST-V is ideal for ensuring reliable and qualified sterilization of medical devices in the CSSD. The sterilizer is efficient, compact, economical and reliable, setting standards in terms of innovation, versatility and minimal space requirements.



The chamber of the MST-V Steamer
Sterilizer is developed and
manufactured in Switzerland.



Improved work quality – the result of Belimed's new product design

The new MST-V sterilizer was developed in accordance with the latest standards. The look and function are entirely based on the requirements of the operating staff. For example, in addition to an attractive design and clear, easy-to-use interface it provides maximum user convenience and reliable operator control.

Ergonomics at the workplace

The MST-V sterilizer combines excellent ergonomics with attractive design and easy operation. The loading height of 78 cm is the lowest in this class. Additionally, the touch-sensitive control panel is located at an ergonomically ideal height.

Accurate, real-time information

Clear, easy-to-see information is imperative for a high degree of user convenience and maximum reliability in operator safety. That is why our systems display important process data such as the time remaining, loading or removal readiness and error messages via the process status display. The employee can easily see the relevant information at a glance, from across the room.



Space-saving and ergonomic – the MST-V steam sterilizer boasts a vertically sliding door, an external width of only 99 cm and a loading height of only 78 cm.



Owing to the unique process status display the time remaining, ready-to-load signal, ready-to-unload signal and error messages are clearly visible from up close or at a distance.

Standardized operator control

All new Belimed systems, whether sterilizers or washer-disinfectors, offer a consistent operating interface, thus reducing training requirements and keeping error sources to a minimum. Audible feedback with each key touch provides confirmation to the user. Clear menu navigation and the illuminated color display ensure even greater user convenience. The display is clearly legible even when viewed from the side at an extreme angle.

Optimum hygiene thanks to easy cleaning

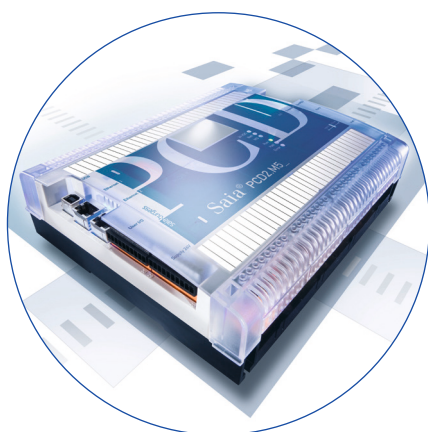
The seamless surface made of solid stainless steel in conjunction with glass and top-quality HI-MACS® material meets the highest standards in terms of hygiene. Even the control panel is located behind a glass plate so it is completely protected from soiling, making it quick and easy to clean.



Control panel on side 1
(loading side)



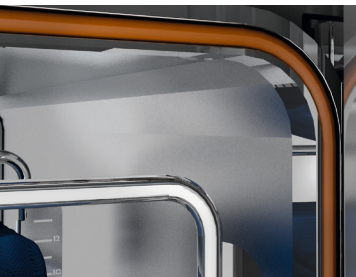
Control panel on side 2
of two-door systems



A state-of-the-art PLC facilitates
access to sterilizer data

Innovative function, efficient operation

During the development of the MST-V sterilizer, the focus was on protecting patients and staff while maximizing cost efficiency. The new generation of machines is extremely economical in terms of utilization of resources, such as water. Optimized standard programs reduce process times by up to 10% compared to systems of comparable capacity. The chamber of the Belimed Sterilizers are exclusively manufactured in Switzerland.



The precision sealing frame made of solid stainless steel ensures maximum operating reliability for the door system.

Greatly reduced water consumption compared to conventional systems

Thanks to inventive engineering design, the new MST-V sterilizer achieves maximum economy in terms of resource consumption. Our innovative technology reduces water consumption and allows for a higher inlet temperature of the cooling water, resulting in energy savings. Additional reduction of consumption is achieved by the water-saving system used by the integrated, extremely quiet liquid ring vacuum pump.

Integrated Bowie-Dick Test

Belimed now offers the option of a Bowie-Dick Test that is:

- Integrated in the sterilizer
 - no additional effort or materials required
- Electronic
 - no consumables, thus saving costs
- Automated
 - can be programmed to preheat the chamber and run the test before the start of the CSSD work shift.

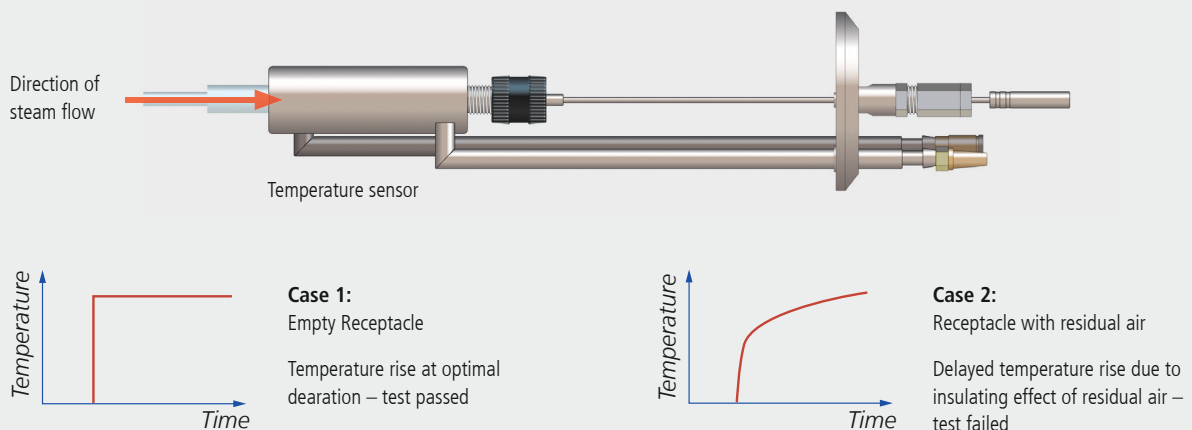
Maximum performance in an extremely small space

High productivity is combined with minimal space requirement, taking full advantage of the typically limited space available in the CSSD. Owing to its capacity of 4 to 12 sterilization units (StU), its light weight and a width of only 99 cm, the MST-V sterilizer is the most efficient and most compact sterilizer in its class. Delivery and installation of the machines is easy and uncomplicated.

Six times longer service life of door seal

The solid silicone door seal, with its milled solid stainless steel frame made of grade 1.4404 chrome-nickel steel, has a much longer service life than those of comparable machines. Maintenance is fast and easy – the seal can be quickly and easily pushed out of the frame at the touch of a button and is then drawn back into the sealing frame by the vacuum system with a second push of a button.

How the integrated Bowie-Dick Test works



Automated processes

Thanks to a wide range of versatile accessories, the degree of automation of the MST-V sterilizer can be adjusted to your individual needs, thus enabling optimal process flows.

Greater efficiency through automation

Loading and unloading modules as well as queue lines enable continuous utilization of the sterilizers. In addition, you can make use of flexible extension options such as return locks and return gates.

Ergonomically designed transport system

The Belimed transport system is easy and safe to handle. It is made throughout of high-quality stainless steel. This makes it sturdy, robust and especially durable.

An extract from our extensive range of accessories:

- Automatic loading and unloading systems
- Holding/queuing sections
- Return locks
- Return gates
- Transport logistics to suit the customer's requirements

Quick and easy maintenance

The large front access to the technical equipment ensures quick maintenance of the system.

The MST-V sterilizer offers easy, free access to the technical equipment. The front paneling components can be opened over the entire surface. The electric switch cabinet can be folded to the side, thus allowing servicing and maintenance work to be performed quickly and efficiently. No access from the side is required. This helps you save time, space and costs.

Remote diagnostics

Thanks to the integrated web server, our service personnel can access the controller of the device directly via the internet and is thus able to provide fast technical support.



Certified quality

Our sterilizers are all engineered in Switzerland. They are subjected to a strict quality inspection and meet all the current standards and medical devices directives. That way we ensure maximum safety and quality.

Highest standards of materials and workmanship

Our customers' requirements and the valid medical devices directives are our benchmark when it comes to safety and quality. Materials and components used from leading manufacturers, in conjunction with state-of-the-art production technologies, meet the highest quality standards and ensure that the systems have a long, reliable service life.

Safe, reliable and durable

The MST-V sterilizers are designed to handle heavy workloads. For example, sophisticated chamber design in conjunction with a sturdy door system ensures a consistently high level of reliability and a long service

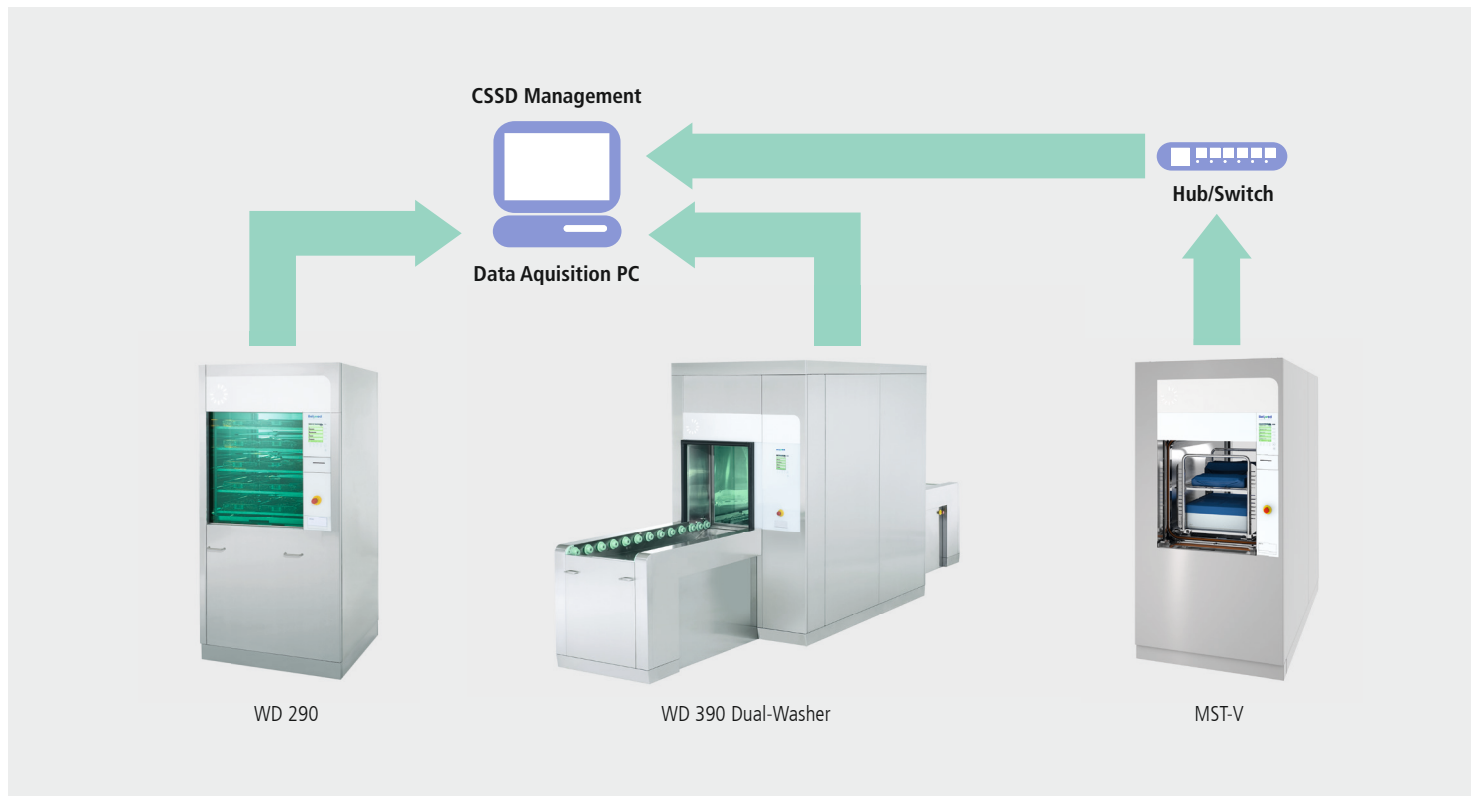
life for the systems. Top-quality stainless steel piping ensures additional safety because it prevents the steam from becoming contaminated, as can happen with conventional piping.

Quality guarantees conformity with standards

Our sterilizers conform to all the applicable national and international medical devices directives. EN ISO 17665-1, EN 285, EN ISO 9001, EN ISO 13485, TÜV, ASME and FDA are just a few of the internationally approved certificates and standards. Production of the systems is monitored and controlled by our seamless quality management system. Production of the systems is monitored and controlled by our seamless quality management system.



Illustration of the ICS 8535 cycle documentation system



Cycle data – transparent and fully traceable

As part of their quality management system more and more hospitals want to generate and store detailed, seamless data and information about the reprocessing performed on their medical devices by equipment such as sterilizers. With the Belimed ICS 8535 cycle documentation system, which is an available option, we offer an IT-based solution for ensuring seamless traceability of medical devices between reprocessing and use in the operating room.

Fast and easy – cycle documentation with integrated printer

A standard, integrated printer records and prints key cycle data on a paper strip. The basic requirements for mandatory documentation can be met without the need for any additional software.

Detailed cycle reports for seamless documentation

All the necessary process data and information is recorded by the optional Belimed ICS 8535 cycle documentation system and saved on an external data storage device. The data can be retrieved at any time to print out detailed cycle reports. The cost involved in documentation and data management is thus considerably reduced.

Seamless data traceability

The Belimed ICS 8535 cycle documentation system can be easily expanded, at any time. Additional Belimed equipment can be integrated into the system and networked with existing equipment, even at a later date. Integration into existing IT systems, such as instrument management or tracking software, is also possible. Via a defined, open interface the process data needed for further processing can be sent directly to all current software systems on the market. In this way the individual process steps are documented automatically. Belimed has extensive experience in implementing such projects.



Integrated printer in front panel

Applications and standard programs

Optimized and type-tested standard programs allow the sterilization of instruments, textiles and porous items. We attach particular importance to safe handling, short cycle times and optimum drying with minimum energy and resources consumption.

The MST-V sterilizer offers a selection of different programs. The required test programs, such as the Bowie-Dick Test and the vacuum test, are available for routine checking of sterilizer functions. The programs can be started automatically, at the start of the day,

so that the sterilizers are ready to be used immediately at the start of work. Program parameters (number of fractions, sterilization times, sterilization temperatures, drying times, etc.) can be customized.

An extract from our standard programs

Program/temperature	Application	Sterilization time (min)	Drying time (min)
FRVV-VMT/134°C	Solid items to be sterilized: • Packaged instruments • Empty glass containers • Empty metal containers	3 – 5	20
FRVV-VMT/134°C	Items difficult to extract air from • Textiles	3 – 5	6
FRVV-VMT/121°C	Porous items to be sterilized	20	6
FRVV-VMT/134°C	134°C special	3 – 60	6
Test programs			
VOVV-VMT/134°C	Heating program	3 – 5	3
Vacuum test		–	–
Bowie-Dick Test		3.5	3

FRVV-VMT = Fractionated pre-vacuum process – vacuum with drying

Dimensions

Chamber volume StU ¹	Model		Chamber dimensions H x W x D (mm)	Machine dimensions H x W x D (mm)	Loading height (mm)
	Single-door	Two-door			
4	6-6-6 VS1	6-6-6 VS2	660 × 660 × 700	1970 × 990 × 1120 (1095) ²	785
6	6-6-9 VS1	6-6-9 VS2	660 × 660 × 1000	1970 × 990 × 1420 (1395) ²	785
8	6-6-12 VS1	6-6-12 VS2	660 × 660 × 1350	1970 × 990 × 1775 (1750) ²	785
12	6-6-18 VS1	6-6-18 VS2	660 × 660 × 2000	1970 × 990 × 2420 (2395) ²	785

¹ 1 StU = sterilization units = 300 × 300 × 600 mm

² Dimensions of the single-door version



Short response times, personal, skilled support in the field – service and maintenance are key elements of Belimed Quality Management.

Comprehensive range of services – for a consistently high level of reliability

After the delivery of our products we continue to support you with a comprehensive selection of maintenance and service packages. Consequently, you benefit from our experience and expertise at all times.

Professional services

We rely on long-term partnerships in order to boost the productivity of our customers on a continuing basis. We achieve this goal with an integral maintenance and service package. Our comprehensive range of services includes knowledgeable consulting, customized training, installation and commissioning, regular validation procedures, maintenance and support.

Personal and close at hand

The global presence of Belimed, with its own branch offices, authorized partners and a close-knit service network, makes communication fast. Our customers benefit from fast response times, immediate availability of spare parts and personal, skilled support in the field. The primary aim of our services is to provide maximum productivity and system availability for our customers.

