

## Sterilization today: safe, space-saving 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 and the well-being 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.



**+ Swiss Made**

*Compact, ergonomic and user-friendly –  
the new MST-V steam sterilizer, 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.



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



Control panel on side 1 (loading side)



Control panel on side 2 of two-door systems

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



## Innovative function, economic operation

During 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 with the use of resources, such as water. Optimized standard programs reduce process times by up to 10% compared to systems of comparable capacity.

### **Much less water consumption than in conventional systems**

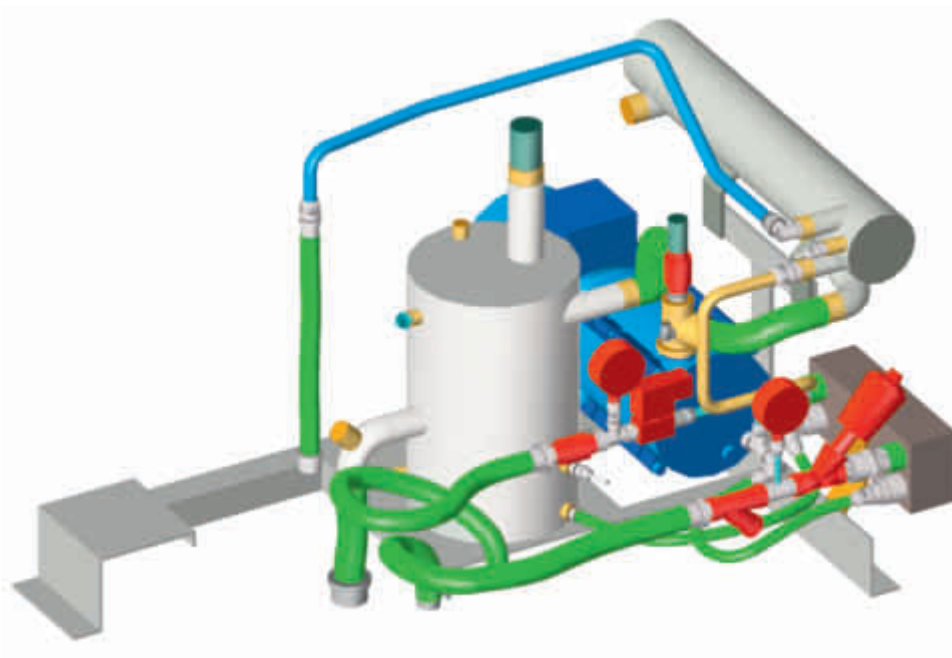
The new MST-V sterilizer achieves maximum resource use economy through inventive engineering design. Our innovative technology reduces water consumption and allows a higher inlet temperature for the cooling water resulting in energy savings. Additional reduction of consumption is achieved by the water-saving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

### **Maximum performance within a very small space**

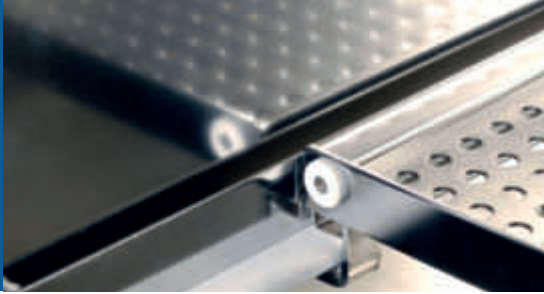
High productivity is combined with minimal space requirement, taking full advantage of the typically limited space available in the CSSD. Owing to its capacity of 4 to 12 sterile units (SU), its light weight and a width of only 99 cm the MST-V sterilizer is the most efficient and most compact sterilizer in its class. Delivery and installation of the machines are 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 that 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 then is drawn back into the sealing frame, with a second push of a button, by the vacuum system.



*Quiet, water-saving vacuum system*



*Best quality:  
accessories made of high-grade stainless steel*

## Automated processes, fast and easy maintenance

With a wide range of different accessories the level of automation of the MST-V sterilizer can be adapted to suit your specific requirements and thus ensure optimized process cycles. The large front access to the internal parts and components also ensures fast system maintenance.

### **Greater efficiency due to automation**

Loading and unloading modules, along with queuing sections, allow continuous operation of the sterilizers. In addition, you can take advantage of flexible extension options, such as return locks and return gates.

### **Ergonomically designed transfer trolleys**

Belimed transfer trolleys are simple and reliable to use. With the adjustable-height model the working height is easily selectable and can be set to the ideal ergonomic level of the user. The trolleys are completely manufactured from top-quality stainless steel which makes them sturdy, damage resistant and very durable.

### **Fast and easy maintenance**

The MST-V sterilizer provides easy, direct access to the components and parts through front panels which open completely. The electrical control cabinet, behind the front panel, can then be swung to the side for complete access. Servicing and maintenance work can thus be performed quickly and efficiently. No side access is required. That saves you time, space and money.

### **Remote diagnostics**

Our service staff have direct access to the machine control system over the Internet and can thus provide fast technical support due to the integrated Web server in each machine.

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



*MST-V equipment compartment – clearly  
arranged and maintenance-friendly*

# Certified quality

Our sterilizers are all manufactured 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

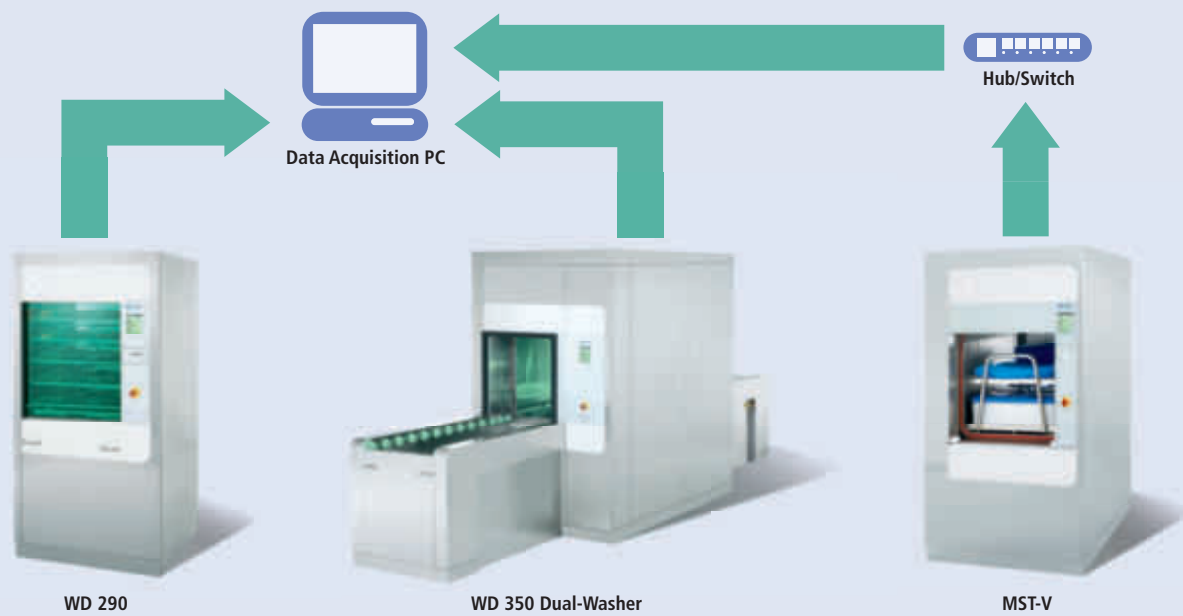
The MST-V sterilizers are designed to handle heavy workloads. For example, sophisticated chamber design in conjunction with a sturdy door system ensures a consistently high level of reliability and a long service life for the systems. Top-quality stainless steel piping ensures additional safety because 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. ISO 17665, EN 285, ISO 9001, EN 46001, 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.







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: <ul style="list-style-type: none"> <li>• Packaged instruments</li> <li>• Empty glass containers</li> <li>• Empty metal containers</li> </ul>	3-5	20
FRVV-VMT/134° C	Items difficult to extract air from <ul style="list-style-type: none"> <li>• Textiles</li> </ul>	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 and utilities			
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 StE <sup>1</sup>	Model		Chamber dimensions (H × W × D) (mm)	Machine dimensions (H × W × D) (mm)	Loading height (mm)
	Single-door	Two-door			
4	6-6-6 VS1	6-6-6 VS2	660 × 660 × 700	1970 × 990 × 1095 (1120) <sup>2</sup>	785
6	6-6-9 VS1	6-6-9 VS2	660 × 660 × 1000	1970 × 990 × 1395 (1420) <sup>2</sup>	785
8	6-6-12 VS1	6-6-12 VS2	660 × 660 × 1350	1970 × 990 × 1750 (1775) <sup>2</sup>	785
12	6-6-18 VS1	6-6-18 VS2	660 × 660 × 2000	1970 × 990 × 2395 (2420) <sup>2</sup>	785

<sup>1</sup> 1 StE = 300 × 300 × 600 mm

<sup>2</sup> Dimensions of the two-door version



*Our services extend from initial consultancy to IQ (Installation Qualification), OQ (Operating Qualification) and PQ (Performance Qualification).*

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

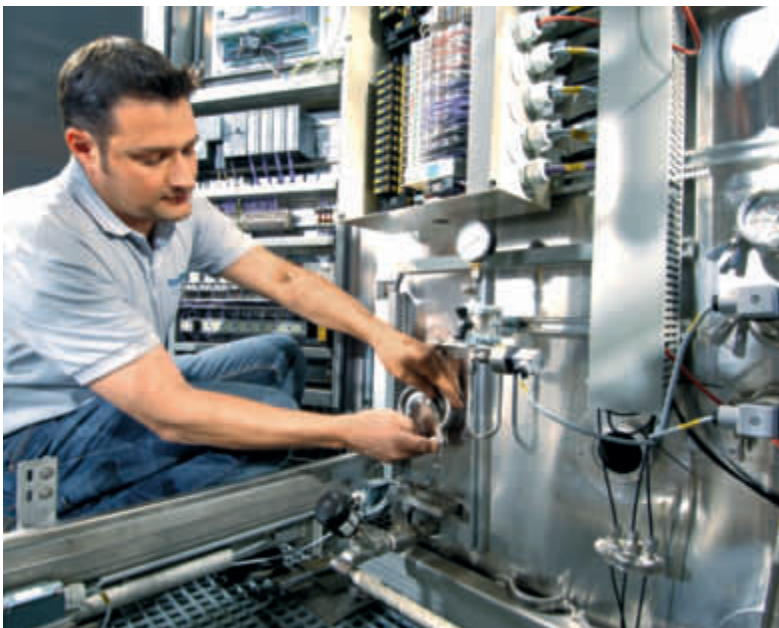
After the delivery of our products we continue to support you with a comprehensive selection of maintenance and service packages. Consequently, you benefit from our experience and expertise at all times.

### **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.



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

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