# WD 390

## Multi-chamber cleaning, disinfecting and drying system for CSSDs

Belimed
Infection Control

# A compact and compatible design

Extensive practical experience and close cooperation with customers and planners have shown us that less and less space is available for central sterile services departments (CSSDs).

Accordingly, we have designed the WD 390 with space-saving, shorter cleaning, disinfection and drying chambers and shorter inlet and outlet distances.

Accessibility for maintenance and service is only carried out on one long side, as all units are placed in a correspondingly service-friendly manner. The maintenance space can be selected either on the right or left.

| Washing goods | Capacities/batch | Capacities/hour depending on the number of chambers |
|---|---|---|
| Surgical instruments | 9–15 sieves | 3–90 sieves |
| MIS instruments | 3 sets | 6–12 sets |
| AN material | 7 sets | 14–35 sets |
| Sterile goods container 3 x 1.5 x 6 including cover | 3–5 units | 20–40 units |
| Surgical shoes | 30 pairs | 60–120 pairs |
| Bottles | 126 units | 252–504 units |

# Safety and reliability without compromise

More than 40 years of experience in the manufacture of cycle systems together with continuous development and research at maximum levels have made the WD 390 a premium technological product. By using high-quality components, we provide you with systems featuring high availability and long-lasting technologies. EN ISO 15883-1 and -2 have been consistently implemented in the Belimed WD 390. The reprocessor has been type-tested and certified by an accredited testing laboratory in accordance with the standards.

# Standards consistently applied

To meet the requirements of EN ISO 15883-1 and -2, extensive detail solutions have been developed that ensure consistent application of the standards.

### Design

Some examples:

- Inclined surfaces on the roof and floor of the chambers and receiver tanks to achieve complete drainage of water.
- Media piping installed with a slope to carry residual liquids to the discharge point.
- Gap-free welded chamber design to prevent cross-contamination.
- Tight, distortion-free sliding glass doors at the entrance and exit of each individual chamber.
- Validation ports on each chamber and receiver tank for the introduction of external measuring sensors.
- PT-100 class A temperature sensors control and monitor the entire process flow.

### Cleaning chamber

The cleaning chamber is equipped with a tank system consisting of a circulation tank and receiver tank to enable the preparation of process steps.

This fast and flexible mode of operation is very economical and reduces water, detergent and energy consumption. Placement of the auxiliary tanks above the chamber enables a fast filling time of the circulation tank.

Depending on the rack, the delivery rate of the washing pump is automatically controlled to supply the optimum amount of water in each case. In addition, the washing pump has a soft start for gentle reprocessing of the goods to be cleaned. For exact volume dosing, the inflowing water quantity is measured via a flowmeter. Each dosing pump is equipped with a separate flowmeter for precise metering of the detergent.

### Disinfection chamber

The design of the disinfection chamber is identical to that of a cleaning chamber. This also enables fast, flexible and economical reprocessing.

The auxiliary tank in the disinfection chamber allows the used disinfection water to be reused in the next batch for the intermediate rinsing steps.

### Drying chamber

The drying chamber is equipped with two separate powerful drying units (fresh air drying and circulating air drying).

The heated fresh air is blown into the chamber via two central inlet nozzles and into the rack via the docking coupler. The circulation system brings the reheated, hot air into the chamber via four air shafts located on the sides.

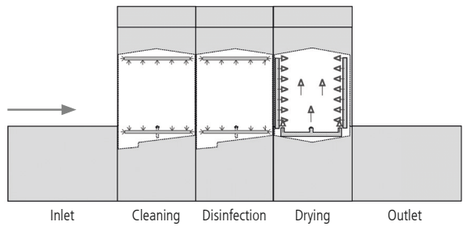
The combination of both systems ensures optimum drying results with minimum energy input.

For medical utensils that are difficult to dry, an option with two drying chambers is also available.

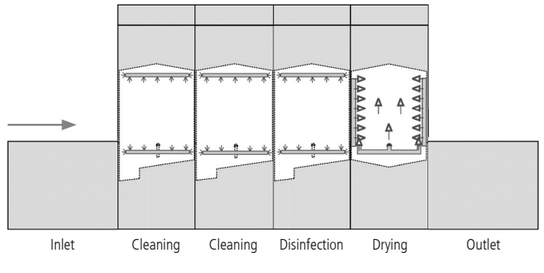


# Solutions according to customer needs

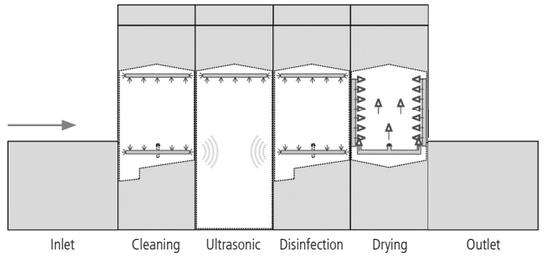
**WD 390-3**




**WD 390-4**




**WD 390-4U**




### Options

The sophisticated modular design enables a wide range of customer-specific solutions. The capacity required determines whether three or four cleaning chambers, a separate disinfection chamber or even an ultrasonic chamber are used.

The automatic inlet and outlet sections are available in different lengths to round off the optimal solution.

# Reduction of manual activities – optimization of the material flow

### Transport system

The automatic transport system of the WD 390, including basket return conveyor, offers an excellent overall concept for reducing manual activities and for continuous material flow.

As standard, the inlet and outlet section is possible with up to three automatically driven positions.

The design of the inlet section combined with automatic tray rinsing ensures a hygienically clean area.

The driven stub rollers also provide easy access for cleaning purposes.

The transverse sliding device enables the user to push the optional rack easily onto the basket return conveyor. The return of the racks from the clean side to the unclean side takes place via the basket return conveyor.

The separation from the clean to the unclean side is implemented by an automatic transfer element or 2-door lock.

The loading area is optimally designed for easy handling of the racks and cleaning goods.

# Reliability starts with the details

### Transport system in the reprocessor

The racks are transported in the WD 390 by push-rod conveyors.

The push-rod conveyors ensure positive-locking transport and exact positioning of the individual racks in the WD 390.

The WD 390 features a door system that ensures compliance with standards. The lock constructions located downstream of the disinfection chamber ensure process-reliable separation of the unclean and clean sides.



# Intelligent program management – even more efficient with transponder technology

### Control system

The reprocessor is equipped with a latest-generation PLC control. 12 validatable programs can be stored as standard. Automatic program selection via transponder technology enables extremely simple operation with maximum process reliability.

Profibus technology allows modular expansion.

### Operation

The system is equipped with a CP-Top operating panel which supports the user in operator guidance and provides information during operation about essential program data such as program step, time duration, temperature, remaining running time and other parameters in plain text display.

### Process status visible from a distance

Important information such as remaining running time, readiness for loading or removal, or fault messages are displayed via the patented process status display.

### Load protection

EN ISO 15883-1 and -2 require a system for protection of the goods to be cleaned. A separate monitoring system, independent of the control system, constantly receives information from the control as to whether the chamber contains heat-resistant or thermolabile items. If the control fails, the load protection automatically switches off the heating, pump and drying system.

### $A_0$ value controller

The WD 390 from Belimed is equipped with an $A_0$ value controller as standard. The $A_0$ value is automatically calculated by the control system and documented in the batch report.

### Independent recording of process data

EN ISO 15883-1 and -2 specify a second monitoring system independent of the control. To ensure traceability of the data, process-relevant parameters such as pump pressure, water temperature, air temperature and conductivity of the final rinse must be recorded and archived.

### Batch documentation

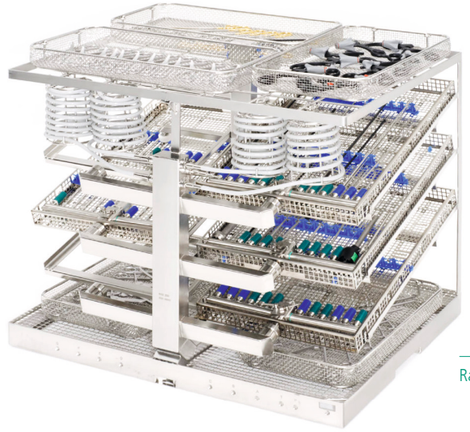
For data acquisition, the WD 390 can be connected to SmartHub. This software solution from Belimed allows batch data to be seamlessly documented and archived in the form of a detailed report. SmartHub is also available as a web application, enabling all relevant appliance data to be called up anytime from anywhere.


Overview of all relevant data with SmartHub

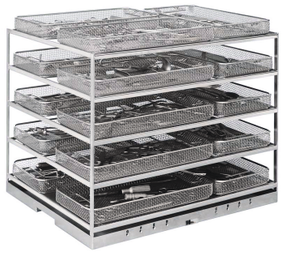
# WD 390 – racks and auxiliaries

Belimed offers a wide range of auxiliaries for all reprocessing needs in CSSDs, whether for surgical instruments, MIS instruments, anesthesia material, surgical shoes, containers, baby bottles, laboratory material or other wash goods.

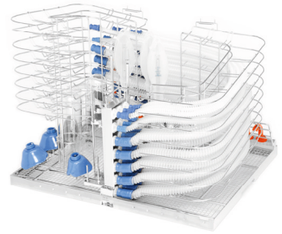
Please contact your local distributor for a complete overview of all our appliance auxiliaries.



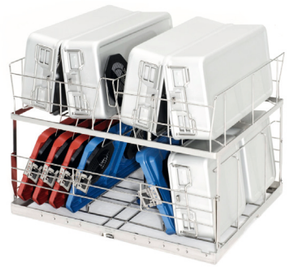
Rack for reprocessing MIS instruments



Multi-level racks for reprocessing of surgical instruments in up to 18 DIN sieve trays



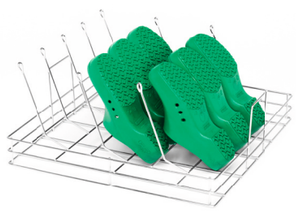
AN racks for anesthesia material such as resuscitation tubes, masks, breathing bags etc.



Racks for reprocessing of up to 6 DIN containers with covers

Rack for reprocessing Da Vinci instruments

Transport trolleys for racks



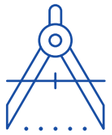
Use for the reprocessing of surgical shoes

Multi-level racks for reprocessing of surgical instruments with flexibly removable levels

Mixed rack with multifunctional inserts for various applications such as MIS-, ophthalmology- and dental instruments

# Belimed supplies systematic solutions

The WD 390 multi-chamber washer-disinfector is the equipment for efficient reprocessing in your CSSD. As Engineers of Confidence, we at Belimed think even further than that. We offer a perfectly tailored approach in the areas of planning, technology and service.



Belimed Blueprint
The planning and design team develops tailor-made solutions for various needs, goals and space requirements – from analysis to installation.

Belimed Protect™
Our detergents guarantee optimal cleaning and disinfection performance and outstanding material compatibility.

Belimed Connect
Our digitalization portfolio allow us to guarantee complete networking and perfect documentation of automatic cleaning, disinfection and sterilization.

Belimed Prevent™
With our service packages, we offer preventive maintenance and provide you with comprehensive support. Our focus is on ensuring your success.

Belimed Academy
The training we provide enables us to pass on the knowledge needed by our customers and partners to get the most out of their CSSD.

Matching auxiliaries
Matching racks, adapters and auxiliaries provide you with even greater flexibility.

Automation systems
Our automation systems ensure optimal utilization of your machines and ease the burden on your staff thanks to automatic loading and unloading.





# The WD 390 at a glance

The WD 390 multi-chamber washer-disinfector features high throughput, reliability and full automation to increase the capacity of all CSSDs.

## Compact and efficient

- Low space requirement due to service access on one side and divisible service compartment
- Low media consumption due to intelligent tank solutions
- Optionally integrated ultrasonic bath for low downtimes of the material

## Powerful and flexible

- Up to 75 DIN sieves per hour
- Completely integrated automation for flawless material flow
- Identical racks to the WD 290 / WD 290 IQ for flexible use

## Quality and durability

- Highest quality standards in terms of design and service
- Durable components for trouble-free operation even with heavy use
- Proven robustness due to many years of development experience

Visit us at **belimed.com**


**Headquarters**
Belimed AG
Grienbachstrasse 11
6300 Zug
+41 41 449 78 88
info@belimed.com



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