

# Safe and efficient cleaning of medical and non-medical devices



## **WD 750**

WD 750: Large-scale cleaning, disinfection and drying system  
in accordance with EN ISO 15883

# Based on innovation and experience

As one of the leading companies operating in the area of infection control, Belimed has been developing, producing and marketing innovative cleaning, disinfection and sterilisation systems in the sectors of healthcare, pharmaceutical industry and laboratories for over 40 years now.

By an ongoing process in developing their products and the further development on the basis of customer needs, in line with the most recent guidelines and directives, Belimed has ensured that their products meet current and future market requirements, thus meeting the ever-more stringent demands applicable to the cleaning and disinfection efficacy processes.

### An assured-quality cycle

As a systems supplier, Belimed understands the complex processes in the Central Sterile Material Supply Department and offers complete solutions for an assured-quality, hygienic cycle from the decontamination zone through the packaging and sterilisation area to the sterile materials store. Either tailor-made, stand-alone solutions or standardised products feature high economy and efficiency.

### New standards in hospitals and clinics

Belimed cleaning, disinfection and drying systems are designed with particular focus given towards efficiency, safety and ease of use, especially in the workplace. The easy-to-service design ensures high productivity thanks to short downtimes. The WD 750 also sets new standards regarding the safety, quality and economic efficiency in hospitals and clinics.

Moreover, our company's own, regionally organised servicing network offers all services to ensure high system availability, such as inspection and servicing, conversion, spare parts and validation.



The hygienic chamber design, ensures that cross-contamination carryover between each cycle stage is eliminated.



A maintenance-friendly concept: integrated equipment and service compartment with machinery units, utility connections and supply of cleaning containers.

# A new safety, quality and economic efficiency standard

## Maximum safety

The system concept is based on the requirements of the most recent EN ISO 15883 Directive on Cleaning and Disinfection Devices and on Belimed's many years of research and experience in the sector of automatic conditioning. The system's outstanding features are high quality, economy of design and performance, along with the integration of a number of innovative features and customer benefits. The particularly high operational reliability is ensured by the use of standard components. The high-quality materials and components of a high-quality, industrial standard from renowned manufacturers meet the most stringent demands in respect of quality, long service life and spare parts availability.

## Broad field of application

Thanks to the large washing chamber, connection coupling for an internal cleaning system and numerous options, the WD 750 meets a wide variety of differing requirements in respect of cleaning and disinfection. For instance, it is able to run both validated processes in accordance with EN ISO 15883-1/2 for medical devices of class IIa (e.g. sterile containers) and short-time programs for non-medical devices (e.g. trolleys and operating theater shoes) in accordance with EN ISO 15883-6. Consequently, use of operating media and energy is reduced to a minimum, depending on field of operation and selected program.

## Loading

The Belimed WD 750 has been designed with a loading height that is level with the floor. This in turn safeguards that any type of carrier can be loaded into the wash chamber without any difficult maneuver.

## Top-class cleaning result

The optimum cleaning result achieved is based on an electro-mechanically driven, oscillating spray system. This allows the cleaning and rinsing fluid to reach the items to be cleaned on all sides. The perfect seal provided by the patented connection coupling, featuring

patented, pneumatic sealing mechanism, also ensures constant-pressure, no-leakage supply of the load carrier's direct-injection system (internal cleaning), consequently enhancing the cleaning action and providing shorter cleaning times.

## Visual inspection of the washing process

Horizontal sliding glass doors with inflatable seals allow visual inspection of the washing process and ensure optimum leak-proofness. Observation of the cleaning operation is assisted by glare-free chamber lighting, consequently ensuring excellent viewing conditions. The non-soiling, maintenance-free, electrical friction-wheel drive system of the doors allows Belimed to set new standards in respect of work safety and ease of servicing.

## Fast drying

The fast drying facility, with a performance rating of 1,800 m<sup>3</sup>/h, and the perfect-seal connection coupling also used for internal drying ensure an optimum drying result. The optional tilting floor of the WD 750 prevents water buildup on flat surfaces ensuring a fast drying time.

## Easy-to-service

The WD 750 cleaning system was designed for easy servicing and maintenance right from the very start. All units and the control system are accommodated for easy access in a separate service compartment – an important precondition for shorter servicing and maintenance times.

## Economic efficiency

The integrated exhaust-air heat-recovery feature allows energy-saving, time-saving preheating of the clean rinse water and reduces cooling water consumption. A storage tank can optionally be used for additional reduction of the energy and water consumption. The cleaning, disinfection, decontamination or second rinse water is stored in the tank and can be re-used for the next cycle.

# Groundbreaking design, function and quality

The WD 750 large-scale cleaning system is based on individual customer requirements and consistent implementation of the most recent guidelines and directives.



The patented connection coupling with special sealing mechanism ensures constant-pressure, leakage-free supply to the cleaning system and consequently a better cleaning result with higher washing nozzle pressure.

## Cleaning and disinfection system

The electronically driven, oscillating spray system (external cleaning) and the perfect-seal connection coupling with patented sealing mechanism (constant-pressure, leakage-free supply to the load carrier's direct-injection system) ensure excellent cleaning performance.

## Design

- EN ISO 15883 compliant: complete, automatic drainage of piping, pump, tank, valves and fittings; all surfaces coming into contact with the product are inclined (chamber roof and chamber floor)
- Twin-door push-through model for separating contaminated/clean
- The easy-to-service, integrated equipment and service compartment also offers space for accommodating all media connections and for stocking cleaning containers to be supplied, besides the equipment itself.
- Machine cladding comprising very smooth, oil-ground stainless-steel sheets
- Horizontal sliding glass doors
- Stainless-steel circulation pump: 4 kW, 1,000 l/min

- Steam-heated, integrated washing chamber tank
- Pneumatically actuated diaphragm valves and disk valves
- High-performance drying: 1,800 m<sup>3</sup>/h
- Separation of control circuitry and power circuitry
- Validation connector for connection of external measuring transducers

## Design options

- 3 chamber sizes
- Service compartment on right or left side
- Racks specific to items to be washed
- Option for gas-tight installation for separation of classified cleanrooms
- Exhaust-air heat recovery for DI water preheating
- Electrically heated version
- Cycle time shortening by simultaneous running of rinsing and heating steps in a 3-tank system
- Reusable tank, preheating tank for DI water
- Systems with customized dimensions on request
- Acceleration of the drying time due to tilting floor
- Single-door version



All Belimed systems offer a uniform operating interface, thus reducing training requirements and keeping error sources to a minimum. Clear menu navigation and the illuminated color display of the CP-TOP operating panel ensure even better user comfort.

# Reliable process control

Operating safety and reliability play an important role in the development of the WD 750. Every detail demonstrates the needs and process requirements within the Central Sterile Material Supply Department. The high level of safety is ensured by extremely simple operation, automatic protection of the items to be washed and independent recording and documentation of the process data.

## Operation

The new CP-TOP operating panel ensures simple and clear operation of the system. During operation, the operator is informed of all essential program data such as program step, duration, temperature, remaining runtime etc. In addition to this, the remaining cycle time, loading or removal readiness and error messages are displayed via our patented status display and therefore visible from afar. The installed PLC allows programming of a total of 12 validated standard programs. Disinfection can be controlled either on the basis of a time-saving and energy-saving  $A_0$ -value concept or conventionally on the basis of temperature/time control. Read-in of the batch content by barcode scanner also offers further simplification of the operating procedure.

## Process monitoring/safety

If the corresponding cleaning program is selected, the temperature of washing tank heater and drying are monitored continually by a monitoring system that is independent of the system control in order to protect thermolabile materials to be washed. In the event of control failure and imminent overheating, this load protection feature automatically switches off the heater, the pump and the drying system.

## Independent process data recording

EN ISO 15883 demands a second monitoring system independent of the control. Process-related parameters such as pump pressure, water temperature, air temperature and conductivity of the final rinse must be recorded and archived for the purposes of traceability. This primarily serves the purpose of allowing the user to easily compare data after completion of the program

in order to ensure that all conditioning steps have run precisely in accordance with the targets and if any deviations have occurred.

## Cycle documentation/IT systems

A cycle log with all process data detected by sensors and the cycle data content detected using a barcode scanner can be printed out on a printer or transferred to an external PC or an existing network via interface.

## Validation

Belimed's technical documentation includes a comprehensive set of documents that can be used directly for validation:

- Documentation
- Type test certificate
- Works inspection certificate
- Checklist for IQ (Installation Qualification), OQ (Operating Qualification) and PQ (Performance Qualification)
- Test/inspection report





Our very extensive worldwide sales and after-sales network allows us to guarantee our customers short response times, immediate availability of spare parts and personal, competent support on site.

### Diverse fields of application

The new WD 750 large-scale cleaning system allows optimum utilisation of available capacity and optimum economic efficiency thanks to its diverse fields of application and the major variability it offers in relation to loading and capacities.

### Servicing, maintenance and support

Belimed also offers a tailor-made servicing and after-sales service package, designed to meet your needs, offering the same breadth of diversity as your cleaning and disinfection solutions. Our know-how built up over 40 years and our very extensive worldwide sales network allow us to guarantee our customers short response times and personal, competent support on site. This is because our supreme aim is to achieve maximum availability of your systems and spare parts.

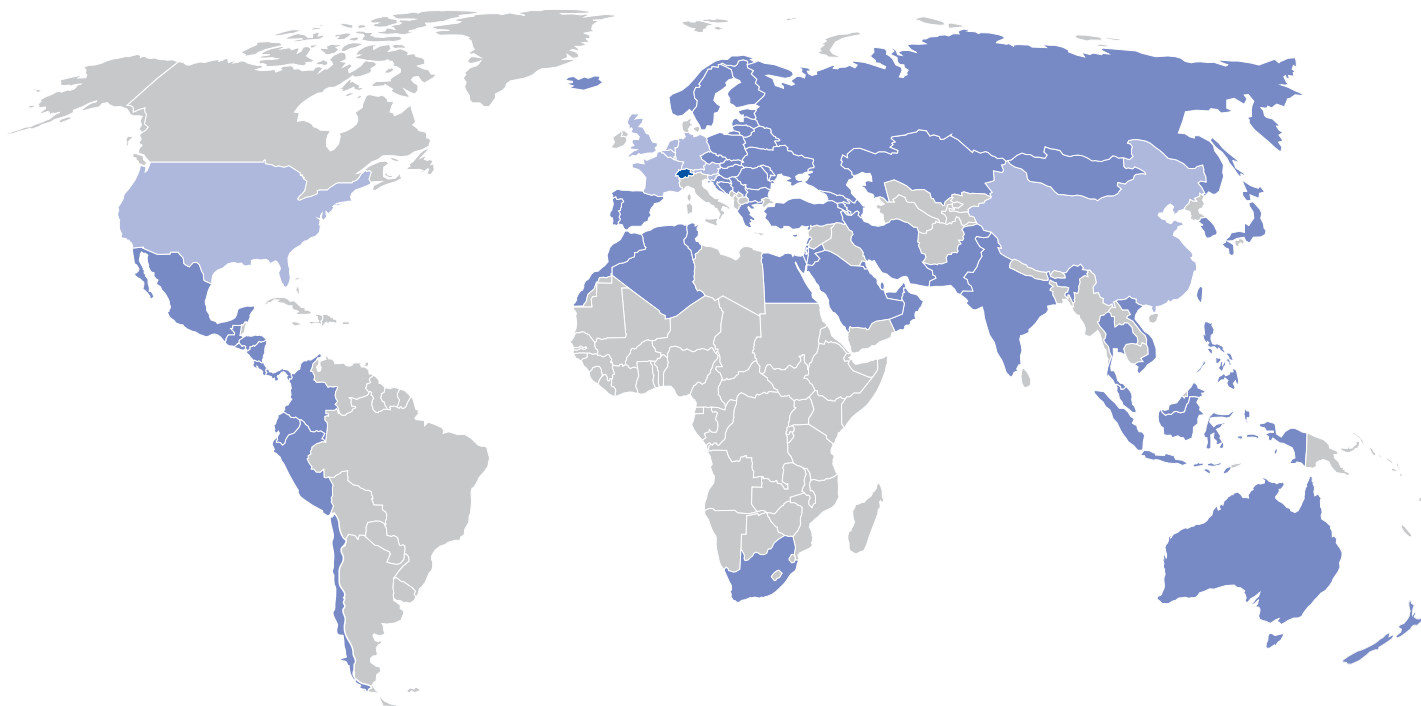


Racks for various items to be cleaned and disinfected; sterile goods containers, and lids. Sterile material cages, instrument trays, operating theater shoes, baskets for kidney dishes etc.

# Technische Daten

Capacities	WD 750S	WD 750M	WD 750L
Sterile containers with lid (300 x 600 x 300 mm)	20	27	40
Sterile cages for utensils (340 x 570 x 185 mm)	16	16	32
Surgical instruments (DIN trays)	28	44	56
OR dishes Ø 320 mm	28	44	56
OR shoes up to size 42	180	270	360
size 43-46	108	162	216
Carts	1	2	2
OR tables	0	1	1

Dimensions	WD 750S	WD 750M	WD 750L
Installation external dimensions H x W x D (mm)	2,450 x 2,300 x 2,000	2,450 x 2,300 x 2,860	2,450 x 2,300 x 3,600
Usable chamber dimensions H x W x D (mm)	2,000 x 820 x 1,350	2,000 x 820 x 2,300	2,000 x 820 x 2,950
Pit depth/ramp height (mm)	150	150	150
Chamber volume (litres)	2,214	3,772	4,838
Loading height (mm)	level with the floor	level with the floor	level with the floor
Door design	sliding glass door	sliding glass door	sliding glass door
Door opening	horizontal	horizontal	horizontal
Number of doors	1-2	1-2	1-2
Minimum required room height (mm)	2,500	2,500	2,500
Water connections			
Cold water	1" (DN25), 2-3.5 bar	1" (DN25), 2-3.5 bar	1" (DN25), 2-3.5 bar
DI water (AP)	1" (DN25), 2-3.5 bar	1" (DN25), 2-3.5 bar	1" (DN25), 2-3.5 bar
Machine outlet	DA 103 mm (DN100)	DA 103 mm (DN100)	DA 103 mm (DN100)
Pan outlet	DA 73 mm (DN70)	DA 73 mm (DN70)	DA 73 mm (DN70)
Electrical connection	3N AC 400 V/50 Hz, 8 kW, 18 A (25 A)	3N AC 400 V/50 Hz, 20 kW, 35 A	3N AC 400 V/50 Hz, 20 kW, 35 A
Exhaust-air connection	DI 202 (DN200)	DI 202 (DN200)	DI 202 (DN200)
Steam connection (saturated steam)	2" (DN50), 2-3.5 bar	2" (DN50), 2-3.5 bar	2" (DN50), 2-3.5 bar
Condensate connection	1" (DN25)	1" (DN25)	1" (DN25)



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