Washer / Disinfector for Automatic Reprocessing of Instruments;

Product Description: WD 150

Description

The washer/disinfector WD 150 was developed for the purpose of offering a small high-performance device for use in hospitals, practices and laboratories that is equipped with a high-performance drying system and diverse inserts and is suitable for a wide variety of applications.
The WD 150 is available both as an under counter unit and as a free-standing machine.

The well-engineered, sophisticated stainless steel chamber (with rounded corners for enhanced hygiene) and unique high-volume / low-pressure water circulation system allows for reconditioning of up to 8 DIN trays. Disinfection cycles can be run (with A0 = 60 / 600 / 3000), in accordance with EN ISO 15883.

Fields of application

The WD 150 is intended for use in healthcare facilities, for example in substerilization departments or other hospital departments such as OTs, milk kitchens, nursing departments etc. The device is eminently suitable for reconditioning of reusable instruments, OT shoes and other items as well as for rigid endoscopes and accessories.

Dimensions

(□ => standard, o => optional)

Washing chamber:	H x W x D:	635x 580x 550mm
Capacity of washing chamber:		163 litres
Washing chamber volume (gross):		203 litres
External dimensions:		
□ Under counter model without cover:	H x W x D:	860x 900x 700mm
o Under counter model with cover:	H x W x D:	910x 900x 700mm
o Model with base and cover:	H x W x D:	1450x 900x 700mm

Technical outfit, standards & options

Power supply
□ Currency 400VAC 60/50Hz □ Currency 200-220VAC 50/60Hz

Doors
□ 1 hinged door

Standards

□ Washer Disinfector with drying
□ Currency 400V 3N 50Hz
□ ECU Controller
□ patented process status display
□ Dynamic Filling
□ Chamber made of AISI 316L
□ Drain system (valve and pump)
□ 1x Flow sensors
□ 1x pot. free contact
□ compliant to EN ISO 15883
□ Manual glass door
□ Panel with “New Design”
□ Built in printer
□ Exhaust air condenser
□ Chamber illumination
□ 1x Dosing pump
□ 1x Empty level control
□ Storage room for chemistry

Options (built in on factory)

o stainless steel subbase assembled with top and side cover
o IPD
o program recognition
o Conductivity control
o DI-water preheating

Options (built in on site)

o stainless steel subbase
o Floor pan with leakage sensor
o Side cabinet for chemistry
o 2x additional flow sensors
o ICS 8535 connection
o Ethernet Com-Server
o top cover
o 2x additional dosing pumps
o 2x additional empty level c.
o Barcode Scanner

Accessories

o 1-level rack
o 3-level rack
o MIS rack
o AN (anaesthesia) rack
o 2-level rack
o 4-level rack
o MIS with pressure box
o OR-Shoes rack

Standards

Safety:	EN 61010-1 EN 61010-2-040	IEC 61010-1 IEC 61010-2-040
EMC:	EN 61326-1 EN 61000-4-x	IEC 61326-1
Tap water protection:		EN 1717

Type testing: EN ISO 15883-1 & -2, certified by HygCen

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Functions

Construction / design

Door construction – The door is a manually operated full glass door with chamber illumination. It is designed also to serve as loading table for washing utensil carriers when open.

Washing chamber – The washing chamber is made of high-quality stainless steel, type 1.4404 (AISI 316L). The corners are manufactured as rounded corners for reasons of hygiene.

Washing chamber seal – The circumferential silicone seal is made to be very robust. It is very easy to service.

Outer material – Stainless steel, type 1.4301 (AISI 304)

Storage of chemistry – The machine has space for the storage of detergents of 2 x 5L canister that are accessible from the front.

Servicing access – The servicing access is located on the front side and is designed to allow quick access to the controller and electronic components. The side walls can be disassembled from the front, even when the WD 150 is installed as an under counter machine. Also the height adjustment can be done completely from the front side

Heating system – The heating system is optimised in design and is electrically powered.

Drying system – One powerful turbine is used for high-volume drying. The air is passed through a HEPA filter system, making it practically sterile.

Exhaust air condenser – In the exhaust air condenser, the hot air is cooled so that it can then be fed into the building exhaust air system. In the exhaust air condenser, the hot and wet air is cooled so that a building exhaust air system is not needed. The condensate is drained off via the drainage system.

Intelligent controller – The microprocessor-based controller allows for implementation of complex processes to meet highest customer requirements.

Easy to operate – Clear information is displayed in the plain text display at every process step.

Available programmes – The device leaves the factory with 6 pre-programmed, validated standard programmes which cover the usual requirements. Additional programmes can be compiled as desired by the customer.

Process status display – The process status display shows the current machine status, such as remaining run time, readiness for loading or unloading or error messages.

“Dynamic filling“ water intake – The machine adjusts the water required to the actual quantity of items to be washed, enabling substantial savings in resources per batch.

Drainage system – The drainage system is designed to prevent any return flow. It comprises a drain valve and a drainage pump.

Fully self-draining drainage pump – In order to prevent residual water remaining in the pump casing, the pump fully empties itself every time between cycles, thus reducing the risk of bacterial residues and preventing cross contamination.

Dosing pumps – 1 pump for cleaning agent dosing are integrated as standard, and 2 additional pump can be ordered. Control of flow can be ensured by an optional flow meter.

Rotating wash arms – One is located at the top and another at the bottom of the washing chamber. Additional wash arms are fitted on each tier of the wash load carriers. These are equipped with extra large spray openings for maximum wetting, resulting in a high flow-through of water and thus highly effective cleaning.

Foam control – If excessive foam formation is detected via a signal message during pre-rinsing, the pre-rinsing step is repeated automatically without preceding display message.

Process security – Process security is ensured by means of a detergent flow monitoring system that is integrated as standard, along with two temperature sensors and a pump pressure monitoring system.

Process validation - The aim of process validation is to achieve a high level of safety in the reconditioning of medical devices in order to afford the operators and patients the greatest possible protection.

Independent process data management (IPD) (optional) – All relevant process data are continuously monitored by independent sensors. Discrepancies between the actual and target values lead to an error message and/or immediate discontinuation of the programme.

Interfaces – The following interfaces are available:
2x RS232 and 1x RS485. These can be used for connecting up an external printer or the ICS 8535 documentation system.

Potential-free contact – One potential-free contact is available as standard.

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Reconditioning procedure - description

Pre-rinse – Cold water is used for the pre-rinsing process. Water is let in and the pump starts running until a pre-defined minimum level is reached. This is followed by the start of pre-rinsing. At the end of the phase, the water goes into the drain.

Washing – A mixture of warm and cold water is let in, depending on the type of process selected. The cleaning agent is dosed precisely according to the manufacturer's specifications. The heating process then starts in accordance with the programmed temperature profile, and the washing utensils are washed gently. At the end of the phase, the water is passed into the drain.

Neutralising (as needed) – After alkaline cleaning, the much-feared caustic carry-over is prevented by neutralising with a weakly acidic neutraliser.

Rinsing – In the rinsing procedure, warm water is used to remove cleaning agent residues. Two phases can be run in this procedure, depending on the cleaning agent. At the end of the phase, the water goes into the drain.

Thermal disinfection – DI water is let in, circulated and at the same time heated up to 93°C. The disinfection effect is achieved by means of a programmed holding time at 93°C. For disinfection according to A0 = 3000, the energy input is summed up from 65°C upwards. At the end of the phase, the water is emptied completely into the drain.

Drying – Fresh air is fed in via a system equipped with HEPA filters.

Self-disinfection of the machine – If the device is out of operation for a defined period of time, a self-disinfection process (according to A0-values) is automatically started or suggested. This is to ensure that the whole system has been disinfected before being taken into operation again and before instrument reconditioning is performed.

Ergonomics

The WD 150 can be additionally fitted with a base so that it has an ergonomically optimised loading height for perfect loading and unloading of washing utensils and for user-friendly operation.

Cleaning and disinfecting agents

Belimed has an extensive range of detergents for automatic instrument reconditioning in its portfolio.
These include enzymatic cleaning agents, neutralising agents, disinfectants, drying accelerators, instrument milk, etc. Belimed also has the highly effective two-component cleaning system on offer.

Easy installation

The WD 150 is easy to install. Apart from water, DI water, waste water and electrical power supply connections, no further connections are required.

Preventive maintenance

Belimed recommends regular preventive maintenance in order to ensure proper function of the device. Belimed has a comprehensive network of trained service technicians who carry out these maintenance tasks on-site.