Cleaning and disinfection systems for the CSSD

- Uniclean® PL II: 15-tray WD
- Uniclean® ML: Large chamber WD

MMM. Protecting human health.
Efficient preparation of medical products is of crucial importance for smooth and cost-effective processes in healthcare facilities. It is necessary to take into account requirements for hygiene as well as economic considerations and quality.

Reliable preparation of sterile goods, as a decisive factor for the economic success of operating facilities, is to be understood as a complex overall concept that is more than the sum of its individual processes.

MMM has been a successful partner for safe and cost-effective provisioning of sterile medical products for over 60 years. We are the experts when it comes to planning, setup and technical management of all devices, processes and procedures in central sterilization facilities. We understand this task to encompass planning of the required device capacities according to need, provisioning of all required machines, validation of all processes in the CSSD, a process documentation system coordinated with all machines and comprehensive customer service.

In personal consultations, we develop solutions in which every detail is the perfect response to the particular needs of our customers. We make our contribution to ensuring that your CSSD meets the highest quality standards.

In this way, we create value. The consistent MMM concept supports you in maintaining your facility through careful treatment of the valuable instruments and medical products. Ergonomics and protection of personnel and patients are an expression of respectful treatment of the people involved. An optimised workflow and aesthetically appealing machines make work more enjoyable.

Sustainable by design: durable and resource-efficient.

MMM products are distinguished by their relevance throughout the complete product life cycle. The combination of industrial production and solid workmanship with a high level of production depth “Made in Germany”, as well as sophisticated control systems, ensures that the highest requirements are met.

Top quality materials are used at MMM on state-of-the-art machinery. Qualified staff and process-oriented quality assurance guarantee consistently high standards. Continuous product development and upgrade packages for older machines ensure that MMM devices always meet the latest requirements. A real investment in the future.

It is a matter of course that all MMM WDs fulfil all quality-relevant requirements and correspond to the newest standards (such as the standards series DIN EN ISO 15883) and guidelines that authorise, among other things, use of the CE symbol.

The MMM sustainability concept protects the environment even in everyday business operations. To conserve the precious resource of water, MMM devices can be equipped with energy and media recovery systems which reduce the consumption of cold and deionised water considerably.
Wet zone

Manual cleaning

Successful sterilization requires correct cleaning and disinfection. To fulfill the high quality requirements in the CSSD, validated automatic processes are the most suitable solution. They are the only way to ensure and verify a consistently high level of sterile goods supply.

Increasingly, however, surgical instruments with complex geometries are being used in the operating room. Many instrument manufacturers thus stipulate manual pre-cleaning. This is the only method that reliably removes contaminated soiling from all places on jointed instruments and hollow parts. At the same time, careful manual handling of valuable tools better maintains their value.

MMM’s overall concept corresponds to the latest guidelines. It offers ergonomic cleaning table counters for a seamless workflow when performing manual pre-cleaning in the unclean area.

In combination with the integrated ultrasonic cleaning sink, MMM Ultramatic, even stubborn soiling on surgical and microsurgical instruments can be removed and hard-to-access locations can be reached.

<table>
<thead>
<tr>
<th>Well-designed cleaning table counters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hygienic workflow</strong></td>
</tr>
<tr>
<td>• Various pre-cleaning sinks, ultrasonic sinks, sinks for final rinsing and corresponding fixtures ensure clean processes during manual pre-cleaning.</td>
</tr>
<tr>
<td>• Intelligent concepts protect staff from contamination.</td>
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<tr>
<td>• Ergonomic considerations determine the design and layout.</td>
</tr>
<tr>
<td><strong>Fixtures in accordance with requirements</strong></td>
</tr>
<tr>
<td>• Mixing batteries with pull-out manual or spring pipe sprayers.</td>
</tr>
<tr>
<td>• Spray pistols with various attachment pieces.</td>
</tr>
<tr>
<td>• Deionised water and compressed air pistol.</td>
</tr>
<tr>
<td>• Stop valves.</td>
</tr>
<tr>
<td><strong>MMM Ultramatic ultrasound equipment</strong></td>
</tr>
<tr>
<td>• Even dried-on substances are gently and reliably removed.</td>
</tr>
<tr>
<td>• Suitable as an independent cleaning method or as preparation for automatic cleaning.</td>
</tr>
<tr>
<td>• Gentle ultrasonic cleaning shortens exposure times and contributes to value maintenance of sensitive microsurgical instruments.</td>
</tr>
<tr>
<td>• Available in various sink sizes.</td>
</tr>
<tr>
<td><strong>Supplementary components for modularity and individuality</strong></td>
</tr>
<tr>
<td>• Convenient base cabinets are available for the flexible and individual design of the wet zone.</td>
</tr>
<tr>
<td>• Extraction via customer-provided exhaust air.</td>
</tr>
<tr>
<td>• Spray protection on a hinged wall mount or positionable over all sinks.</td>
</tr>
<tr>
<td>• Splash-protected additional lighting.</td>
</tr>
</tbody>
</table>
Automatic cleaning and disinfection

In a well-functioning central sterilization facility, cleaning and disinfection is the pivotal element for timely provisioning and delivery of a sufficient supply of sterile instruments to the operating rooms. In a very short period of time, large quantities of medical products must be reliably cleaned, disinfected and moved to the clean side of the CSSD in order to then be prepared for sterilization. Only a standardised, i.e. automated and validated process, can provide verifiable documentation about these processes.

Successful cleaning and disinfection processes consist of the complex interplay of intelligent process control, cleaning mechanisms in the chamber, coordinated use of the cleaning chemicals and loading in accordance with the specifications.

Sophisticated design concepts

All components of the MMM cleaning and disinfection devices are manufactured from high quality materials and with solid workmanship.

- The compact design is ideal for tight spaces.
- Depending on the application of **Uniclean® ML**, available in a one- or two-door version.
- Very high flexibility regarding the transport of goods into the facility.

Complete ergonomics

- A loading height convenient for everyone.
- The EasyMove system allows racks and trolleys to be moved with little effort.
- CoolTouch silicon grips make it easier to unload hot racks.

Chamber and piping

- The chamber is manufactured from high-quality, polished stainless steel.
- The SANicirc piping is free of dead space and is routed in a hygienically flawless and self-draining manner.
- A central water distributor inside the **Uniclean® PL II** optimally distributes the volume flow between the machine rotary arms and the loading rack.
The controller

The controller controls the process sequence. The sensors continuously provide the controller with information about the actual state of the device (temperatures, pressures, dosing of the process chemicals, water level, etc.). The controller, in turn, controls the actuators such as valves, pumps and contactors in accordance with the target values set during commissioning. All control components are located in one control cabinet (protection class IP 54).

The software – a clever solution

- The MMM software is validated as per DIN EN 62304 "Medical device software - Software life cycle processes".
- The sophisticated parameter structure enables a high degree of flexibility in the configuration of the machine.
- Up to 25 programs can be configured at the same time.
- If the system is not used for a longer period of time, an energy-saving idle mode is activated.
- Access to the parameter menu is password-protected.

Precise process control

- The program sequence is controlled on a fully automatic basis. The drive elements are precisely controlled, and all measured values are monitored continuously.
- A0 value calculation as per DIN EN ISO 15883.
- The disinfection process can be time or temperature controlled, with additional documentation of the A0 value.

Double the safety through process parameter verification (PPV)

- The PPV system verifies and documents the most important process parameters with control-independent sensors.
- If the limit values are exceeded or undershot, an alarm is triggered and the system is stopped. It is then impossible to remove items on the clean side.

Making work easier: MMM Smart HMI

The human-machine interface is only one component of the MMM concept for making the work of the operating personnel easier. The MMM visualization of the navigation using the colour touch display is designed in friendly colours and unambiguous symbols and text. All process-relevant information, such as device status, process step, values and graphs, is available at a glance on the display. The remaining time of the program is displayed on both sides of the machine in numbers that can be viewed from a distance, allowing the workflow to be optimised without waiting times.

- The clearly structured menu navigation on the colour touch display with unambiguous symbols provides for high operational reliability.
- Impeccably hygienic: The 5.7" display is seamlessly integrated in the glass panel and easy to clean.
- The large remaining time display enables optimal time management.

Barcode scanner: Automatic, reliable, documented

- Barcode reading system with program pre-selection: Automatic barcode detection ensures that the right program is selected for the items to be cleaned.
- In conjunction with a documentation system such as EcoSoft, all process steps are automatically documented in accordance with the items being cleaned.

The three-colour LED chamber lighting indicates the current machine status, visible from afar.
**Resource management**

The MMM sustainability concept protects the environment even in everyday business operations. All MMM devices are designed for low energy and water consumption and can be equipped with energy recovery systems.

### Intelligent water management
- Low water consumption, controlled via the Uniclean® PL II controller – adapted to the goods being treated and the process phase. Thus, for example, water consumption when cleaning containers with a simple surface is less than for an anaesthesia set with many connections.

### Reduced deionised water consumption
- In the Uniclean® PL II with the optional deionised water recovery tank, the deionised disinfection water of the last rinse bath is stored and used for intermediate rinsing in the next program sequence. This saves time and energy as well as up to 20% of the deionised water compared to a device without a recovery tank.

### Short batch times
- Thanks to the low water volume, the rinse bath heats up rapidly and the chamber can be filled and drained more quickly. At the same time, the consumption of cleaning chemicals is reduced. The deionised water pre-heating tank reduces batch times considerably.

### Heat is energy
- The combination of fresh air and recirculating air drying ensures maximum heat usage in the cleaning chamber and utilizes the stored heat energy for optimal and fast drying.

### Environment and material
- MMM products are environmentally friendly and recyclable: All components can be returned to the material cycle in recycled form.

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**Straightforward process documentation**

To verify successful cleaning and disinfection, the batch data is initially saved locally in the WD. The process data are transferred simultaneously to a process documentation system such as MMM EcoSoft, if in use. The process documentation contains all the relevant information required for standards-compliant reports: Program names, batch number, process temperature, pump pressure, start and end of the process, etc. In addition, pressure and temperature are displayed as coloured curves. For long-term archiving, the batch data can be transferred to an external server via the in-house network. Nothing will be lost in the process. In the event of a power failure, files are automatically transferred as soon as the network is up and running again.

- Process log with plain text and colour graph display
- The batch log can be printed out using the integrated printer or an external DIN A4 colour printer.
- Zero-voltage-resistant data storage in the controller
- Approx. 10,000 batches can be saved on the plug-in compact flash memory card.
- Optional: Network storage for back-up data archives.

We have developed a special software package to further process your batch data: SimServ is used to save the batch data on an external computer as a file. The data is then available to the ChargenViewer for various management tasks.

- Long-term archiving of batch data as files.
- Can be reprinted at any time.
- Can be viewed and analysed at a later time.
- Export to Excel.
- Can be saved as a PDF file if desired.

EcoSoft is a particularly easy-to-operate and intuitive documentation software that will help you structure the workflows of the entire preparation cycle in the CSSD.

- Documentation of the entire sterile goods cycle in the CSSD.
- Set collation and management.
- Automated process documentation of all connected devices.
- Instrument management (sets or individual instruments).
- Quality assurance.
- Sterile goods management.

EcoSoft – needs-oriented process documentation and sterile goods management.

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Full data integrity.

*Available at all times*

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Perfect cleaning and drying performance

4D cleaning system
- The 4D cleaning system developed by MMM creates a full-coverage spray pattern effective from above and below. The pump pressure, which is optimally matched to the water volume and process chemicals, distributes the water evenly to all four consumers (two rotary arms in the chamber, two JANUS rack connections).
- The elaborate cleaning geometry and the interplay between the machine and rack allows all external and internal surfaces of the goods being treated to be optimally reached and wetted.

H-Flow drying system
- The two-level high-performance drying system consists of two heating elements, a fresh air fan with a HEPA filter and a fan installed on the side of the chamber. Due to the horizontally whirling air current, the hot air reaches all rack levels directly.
- The high degree of hot-air circulation in the chamber allows the existing heat to be stored and greatly accelerates the drying process.
- Impeccably hygienic: The integrated air turbine and the heating elements are also cleaned and disinfected during each process.

Short batch times
- The self-cleaning H-Flow drying system operates as a combined system consisting of (A) fresh air supply via a HEPA filter and (B) recirculating air via the horizontally arranged air turbine and heating elements in the chamber. This highly efficient arrangement promotes heat storage and heat recovery, which results in shorter drying times.

Uniclean® PL II
One-chamber cleaning and disinfection device

The Uniclean® PL II is MMM’s most powerful cleaning and disinfection system and was developed for thorough preparation of large quantities of medical products, such as general surgical and MIS instruments, anaesthesia materials, ophthalmological instruments, containers, receptacles, bowls, basins, OT shoes and other utensils.

The innovative one-chamber machine can accommodate 15 DIN trays and has a compact design of only 1000 mm.
Making daily work easier
- The rotary arms must be cleaned on a regular basis. For this reason, they are readily accessible and easily removed.
- For daily cleaning, the chamber’s fine filter can be removed without tools.

Dosing of the process chemicals
- The process chemicals can be dosed at several levels depending on the temperature.
- Up to four dosing pumps with flowmeters are available for dosing and monitoring.
- The dosing system, including the optional cleaning agent canisters and storage tanks of a central dosing unit, is securely stored in an integrated pull-out compartment.

Great serviceability
- The service-friendliness of the system was already addressed at the design phase. All important components are clearly arranged and accessible from the front.
- Plug connections make it easier to replace the measuring probes.
- Heavy components such as pumps and fans are mounted on sliding systems that do not cause back strain.

Roller conveyors and rack storage systems
When designing an ergonomic and workflow-optimised CSSD, the handling of WD racks is a core consideration. The degree of automation is important in daily work routines. The semi-automatic or fully automatic roller conveyors from MMM, used to load and unload the WD or a return station, have considerable storage capacity and can perfect the workflows. In addition, racks that are not directly involved in a process can be temporarily stored on space-saving storage tables.

Loading and unloading roller conveyor
- Multiple WD can be loaded and unloaded simultaneously.
- Electrically operated roller conveyors with easy-to-clean elements and surfaces.

Rack return
- Double-doored, automatic rack hatches in combination with roller conveyors.
- Single-doored sliding windows in combination with automatic or manual roller conveyors.
- High storage capacity for racks.

Rack storage table
- Two-storey storage tables.
- Integrated “easy glide” rollers for comfortably sliding the racks from the transport trolley onto the table.
- High capacity.
- Modular, expandable design.
Modular, versatile and practical:
The loading racks

The cleaning effectiveness of a WD largely depends on the rack design and on proper loading. For this reason, we developed racks that take into account the special features of the items being treated. The loading racks can be neatly equipped with a variety of inserts for various utensils. The modular concept does not just reduce procurement costs for as many different racks and individual situations as possible; it also provides for space and orderliness in the wet zone.

For seamless documentation, each rack can be equipped with its own ID number encrypted as a barcode. This number is read by a barcode reader device as the rack enters the chamber and is documented in the batch log.

Perfect handling

- To make handling as pleasant and safe as possible, the loading racks are open all around and can be conveniently loaded from all sides.
- The practical design of the loading racks ensures correct and safe loading.
- Fully loaded racks can quickly reach a weight of over 100 kg. As a result, our racks are particularly sturdy and torsion-resistant. Thanks to the groove-guided Easy-Move rollers, the racks can be pushed into the chamber and precisely positioned with little force.
- The rubberised CoolTouch grips can be attached in different ways and enable operators to safely unload hot racks.

JANUS system

- The mirror-image arrangement of the rack connections enables uniform pressure and water distribution to all of the rack’s consumers.
- The JANUS system also features excellent loading flexibility, because the racks can also be inserted into the chamber turned by 180°.
- The various attachments and connections ensure perfect spray coverage both inside (hollow parts) and outside.
Preparation of robotic instruments
An effective solution for complex shapes

Modern surgery with robotic systems and their complex instruments places high demands on preparation in the CSSD. The MMM Group in cooperation with Intuitive Surgical has developed a procedure for cleaning and disinfecting da Vinci® instruments. The procedure consists of two phases. These phases are inseparable, both contributing to creating a safe and validated process.

Phase 1: Manual cleaning
Manual cleaning is a mandatory prerequisite for successful machine cleaning. It must be executed in accordance with the instructions from Intuitive Surgical.

Phase 2: Machine preparation
The overall MMM concept for the safe and validated machine preparation of robotic instruments consists of three components: Robotic instruments rack, robotic instruments program and process chemicals.

An interlinked system
The powerful Uniclean® PL II is uncompromising in its high design quality. Together with its special racks, a process developed specifically for robotic instruments and the associated process chemicals, Uniclean® PL II teams up to create a powerful cleaning solution.

Robotic instrument rack
This rack was specifically designed for da Vinci® EndoWrist instruments and consists of the basic rack and two insert modules. Four da Vinci® EndoWrist instruments can be connected to each module.

The modular design is uncomplicated and ergonomic in use. The modules can simply be placed on a table to load them.

Each insert module has a removable fine filter that prevents small particles from being deposited in the instrument. An additional pressure check immediately in front of the instrument is enabled by Luer Lock connections on the supply lines to the instrument.

The accessories of the da Vinci® EndoWrist OP set are placed on the lower level of the same rack.

Robotic instruments program
The individual phases and pressure conditions of the Uniclean® PL II cleaning and disinfection program are optimally configured to the requirements of complex robotic instruments.

Process chemicals
The Uniclean® PL II robotic instruments program was developed for use with neodisher® MediClean forte from Dr. Weigert. The program routine and the process chemicals act in a perfect symbiosis. Other chemicals are available on request.

Manual cleaning
Robotic instruments program
Process chemicals neodisher® MediClean forte from Dr. Weigert

Rinsing holders for joint and tip
Holder for Xi starter instruments with a separate filter

Secure positioning of the instruments and connections
Optimal mechanical cleaning performance
High efficiency and safety
Easy and ergonomic handling

The MMM preparation system for robotic instruments has been approved by Intuitive Surgical for da Vinci® instruments of the IS2000/3000 8 mm, IS3000 Single Site, IS4000 and IS 4000 Stapler 45 series.
**Uniclean® PL II**

High cleaning power with a small footprint

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**Technology**

- Modern and robust design ensures high availability, excellent results and adherence to the highest safety standards
- Hygienic, easy-to-clean design of the outside surfaces and the chamber
- Maximum width only 1000 mm
- Capacity for 15 DIN trays (effective chamber volume 384 litres)
- PLC industrial controller from B&R in IP 54 control cabinet
- Smart HMI with 5.7” colour screen
- No lateral service access needed, access is from the front
- H-Flow: highly efficient drying system
- 4D cleaning system
- JANUS connection for cleaning racks
- Intelligent water management system
- Sliding unit for control cabinet with glass front panel and integrated touchscreen
- Sliding unit for cleaning agents and dosing system
- HEPA filter H13
- Chamber material AISI 316L
- Glass doors open vertically downward
- Electrical or steam heating of the device, as required
- Drainage pump
- 2 dosing pumps
- Large number of preconfigured standard programs
- 3-colour LED chamber lighting
- A0 value control or temperature holding time control, as required

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**Important options and accessories**

- A4 batch report printer
- Barcode scanner with automatic program selection
- Hand-held barcode scanner
- ISA – Intelligent Service Advisor
- PPV system for process parameter verification
- Conductance measurement
- Energy manager
- Remote maintenance
- Additional dosing pumps
- Semi-automatic transport into and out of the device
- Automatic loading and unloading
- Cleaning system for da Vinci robotic instruments
- Deionised water pre-heating tank (speed cycle)
- Deionised water recovery tank
- Economizer exhaust air system for heat recovery
- Floating contacts
- Machine base
- Device tub with drain and baseboard
- Large assortment of loading racks, transport trolleys, manual and automatic roller conveyors, sliding windows, rack hatches and rack storage tables

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**Uniclean® PL II highlights**

- Narrow device dimensions (1000 mm wide)
- H-Flow high-performance drying system
- 4D cleaning system with water management
- Very service-friendly design (two sliding units for controller and cleaning agent containers, lateral service access not needed)

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**Table: Uniclean® PL II specifications**

<table>
<thead>
<tr>
<th>DIN tray capacity</th>
<th>1-door</th>
<th>2-door</th>
<th>Effective chamber dimensions in mm (W x H x D)</th>
<th>Effective chamber volume in litres</th>
<th>External device dimensions in mm (W x H x D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>✖</td>
<td>✖</td>
<td>670 x 695 x 830</td>
<td>384</td>
<td>1000 x 1950 x 950</td>
</tr>
</tbody>
</table>

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Uniclean® ML

Large chamber cleaning and disinfection system

Uniclean® ML stands for state-of-the-art technology, the best possible cleaning results and excellent user convenience when it comes to cleaning and disinfecting large-volume items in hospitals. The system’s many loading options are a demonstration of its versatility: Transport trolleys, instrument containers, OT shoes, plastic containers, bowls, kidney basins. In addition, the Uniclean® ML can be prepared for the connection of one or two instrument trolleys for cleaning and disinfecting instruments. The machine operates in conformance with DIN EN ISO 15883 and DIN 58955.

Our motive: Sustainable machine design

The best cleaning results

- Thorough wetting of the items being washed.
- A high degree of mechanical cleaning effectiveness is achieved even in hard-to-reach places.
- The generously dimensioned circulation pump ensures consistently high pressure and volume flow.

Hygienically designed

- SANIcirc: Self-draining pipe routing in the area with product contact. No residue and microbial contamination.
- No rubber: All connections are designed as rigid pipes.
- Full drainage of the nozzle system and chamber after every program step. No carryover of dirty water.
- Slanted chamber floor to enable remaining water to flow off easily.
- Easy-to-clean control panel seamlessly integrated in glass front.

Fast drying

- The SECOspeed drying system consists of a powerful medium-pressure fan for air circulation, a perfectly dimensioned air heating register for fast heating of the air and a HEPA filter for filtering fresh air.
- Outstanding drying results in a very brief period of time due to the effective combination of fresh air and recirculating air.
- Energy-saving recirculating air process for heating the drying air.
- No filtering of recirculated air since the drying unit is completely executed in stainless steel and food-grade materials.

Space- and process-optimised tank system for shorter batch times

- The optional tanks have two functions: pre-heating and pre-dosing of the process water, and storage of the returned process water.
- Reuse of the process water saves water, energy and process chemicals.
- Hygienic stainless steel design, rapid filling of the chamber thanks to large lines between the tanks and the chamber, individual adaptation of the returned water volume to the customer-specific situation.

Flexibility for everyday use

- Suitable for instrument preparation with a capacity of up to 60 DIN trays per batch.
- Suitable for chemo-thermal processes.
Easy serviceability

- Large filter surface: Even in the presence of excessive lint formation, the Uniclean® ML can still operate longer between fine filter cleanings.
- Simple cleaning of the fine filter: The filter is found in the chamber and can be removed and cleaned without tools by any trained operator.
- Most components can be accessed on the side of the chamber via the maintenance hatch. A few components are arranged above the chamber and are easily accessed by folding up the device cover.
- The modular machine components and the measurement probes with plug-in connectors are easy to exchange.
- All electrical components are conveniently located in one control cabinet (protection class IP 54).

Customised loading

The loading trolley

A suitable loading trolley for every application: the loading trolleys of the Uniclean® ML are provided with all of the equipment needed to make it easier to correctly load containers, OT shoes and other utensils. This is important because optimal cleaning results can only be achieved if the goods to be cleaned are placed on the trolley correctly.

Perfect handling

- Modular loading trolley concept

The Uniclean® ML is available in different sizes with a length of 1500 mm or 1100 mm for individual capacity requirements.

- Hinged chamber floor
- Powerful circulation pump
- Hinged panels with gas pressure spring and maintenance hatch
- Trolley for instruments
- Trolley for containers with lids
- Trolleys for OT shoes

We reserve the right to implement technical changes.
Uniclean® ML
High performance for large goods

Technology

- With left and right arrangement of the chamber for a flexible and efficient use of space (e.g., when using two units)
- Modern and robust design ensures high availability and adherence to the highest safety standards
- Hygienic, easy-to-clean design of outside surfaces and the chamber
- Automatic sliding glass doors with a toothed belt drive
- PLC industrial controller from B&R in IP 54 control cabinet
- Smart HMI with 5.7" colour screen
- Hinged front panels with gas pressure springs for easy service access
- Highly efficient SECOSpeed drying system
- SANFor cleaning system without flexible tubes
- With glass front panel and integrated touchscreen
- HEPA filter H13
- All materials in contact with the media are made of stainless steel
- Electrical or steam heating of the device, as required
- Low machine height; all important components are positioned on the sides
- 2 dosing pumps
- Large number of preconfigured standard programs
- 3-colour LED chamber lighting
- Pneumatically operated (fail-safe) valves only
- A, value control or temperature holding time control, as required

Important options and accessories

- Two pre-heating tanks for cleaning and disinfection
- Recovery tank system
- Automatic tank cleaning
- Conductance measurement with 2 probes
- Differential pressure measurement, HEPA filter
- Waste water cooling
- Remote maintenance
- Instrument program
- Coupling for one or two instrument trolleys
- Exhaust air fan
- Additional dosing pumps
- Loading and unloading ramps
- A4 batch report printer
- ISA – Intelligent Service Advisor
- PPV system for process parameter verification
- Energy manager
- Large assortment of loading trolleys for OT shoes, plastic crates, sterile containers and instruments

Uniclean® ML highlights

✔ Powerful cleaning and drying
✔ Low space requirements (width 2300 mm/height 2500 mm)
✔ Very user- and service-friendly
✔ High quality machine design

<table>
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<tr>
<th>Type</th>
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<tr>
<td>2220</td>
<td>•</td>
<td>•</td>
<td>900 x 2000 x 2230</td>
<td>4460</td>
<td>2300 x 2500 x 2630</td>
</tr>
<tr>
<td>3120</td>
<td>•</td>
<td>•</td>
<td>900 x 2000 x 3100</td>
<td>6200</td>
<td>2300 x 2500 x 3500</td>
</tr>
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CSSD management
Using the right information to increase efficiency

To a great extent, it is the cycle time of the machine programs that determine the total operating performance of the CSSD. The Intelligent Service Advisor (ISA) helps you to utilize your CSSD equipment and your available time more effectively and efficiently. With ISA, CSSD personnel gain more liberty and flexibility in managing the workflow because they are always connected online with the preparation machines (MMM cleaning devices and sterilizers).

ISA is a software program for MMM preparation machines in CSSDs that facilitates communication between humans and machinery. The human – who could be the operator, CSSD manager, facility manager or MMM customer service specialist – receives a text message or e-mail from the machine with useful information about the machine status that can make working in CSSD more efficient and smooth.

Every minute counts in CSSD.

Optimised workflow management

At the end of the program, the operator receives a text message or e-mail, and then independently decides when to respond and unload and load the machine. The time in between, while the machine is running the program, can be fully spent on other activities.

Unscheduled service interventions can be a nuisance. Thanks to the integrated maintenance counter, the controller signals the next regular maintenance in good time. An automatic e-mail to CSSD management or MMM customer service allows you to accurately plan this activity and, in doing so, reduce inconvenient machine downtime.

No time loss when unloading the machines

E-mail to facility management / MMM service

High data security
Europe’s market leader in process validation.

MMM is your partner when you need to verify that your systems and processes are always consistent with the required specifications.

We offer a variety of packages for validation and preparatory measures such as calibration, adjustment and optimisation of the processes and devices. Process validation by MMM is always in line with the current guidelines of DGKH, DGSV and AKI as well as in accordance with DIN EN ISO 15883 Part 1 and 2, if required. It’s not for nothing that we are Europe’s market leader, with over 1000 process validations. In Germany, more than 40 validation technicians with corresponding premium measurement equipment are available to you daily.

Validation from a single source

- Cleaning and disinfection processes.
- Steam sterilization processes.
- Steam-formaldehyde sterilization processes.
- Gas plasma sterilization processes.
- Hot-sealing processes.

Experience counts

As your partner, we will be right there by your side for the entire service life of your MMM devices.

Expert customer service

- Over 60 years of experience builds expertise and know-how.

This is the best guarantor for the expert execution of maintenance tasks and for technically sound advice, such as regarding the routine checks needed to maintain process effectiveness.

- Obtaining everything from a single source has definite cost advantages, including: no redundant or unnecessary trips, fewer error sources due to too many interfaces, optimal coordination.

Our knowledgeable service organisation is available to you around the clock, ensuring long-lasting, trouble-free operation of the installed systems. Thanks to our branches and representative offices optimally distributed throughout Europe, we are always nearby and can very quickly be on site in an emergency.

The sophisticated and innovative design of our systems and devices makes it possible in many cases to quickly rectify functional impairments with a remote diagnosis by qualified personnel. On the basis of professional maintenance planning, we guarantee you the highest degree of availability of your systems.

It is our goal, however, to ensure that problems do not arise in the first place. We do not hand over the systems to you until everything is running flawlessly; all programs have been validated and accepted in accordance with your individual goods to be cleaned, and the operating personnel have been trained in the use of our systems.

In addition to performing maintenance and repair, we also make sure that the installed systems are up-to-date. Tailored solutions for adaptation to changed situations, for optimisation of consumable materials and for continuous adjustment to individual needs and legal requirements increase the service life and cost-effectiveness of the systems and secure your investment.

Maintenance planning
Inspection and service
Repair
24-hour hotline
Spare parts logistics – 24-hour service
Upgrade service
Process validation
Training and continued education

The MMM complete service for
- All in-house products.
- WDs of various manufacturers.
- Gas plasma sterilizers (service partner of ASP).
MMM Group

MMM has been operating worldwide as one of the leading system providers in the service of health since 1954. With a complete range of products and services relating to all aspects of cleaning, disinfection and sterilization systems for the areas of Healthcare and Life Science, MMM has positioned itself as a crucial quality and innovation driver in the German and international market. Our products are individually adapted to the requirements of our customers all over the world. The high vertical range of manufacturing in our production plants ensures that we fulfill the strictest demands of quality in the medical technology sector. More than 1100 employees apply their expertise and dedication to the mission of the MMM Group: Protecting human health.