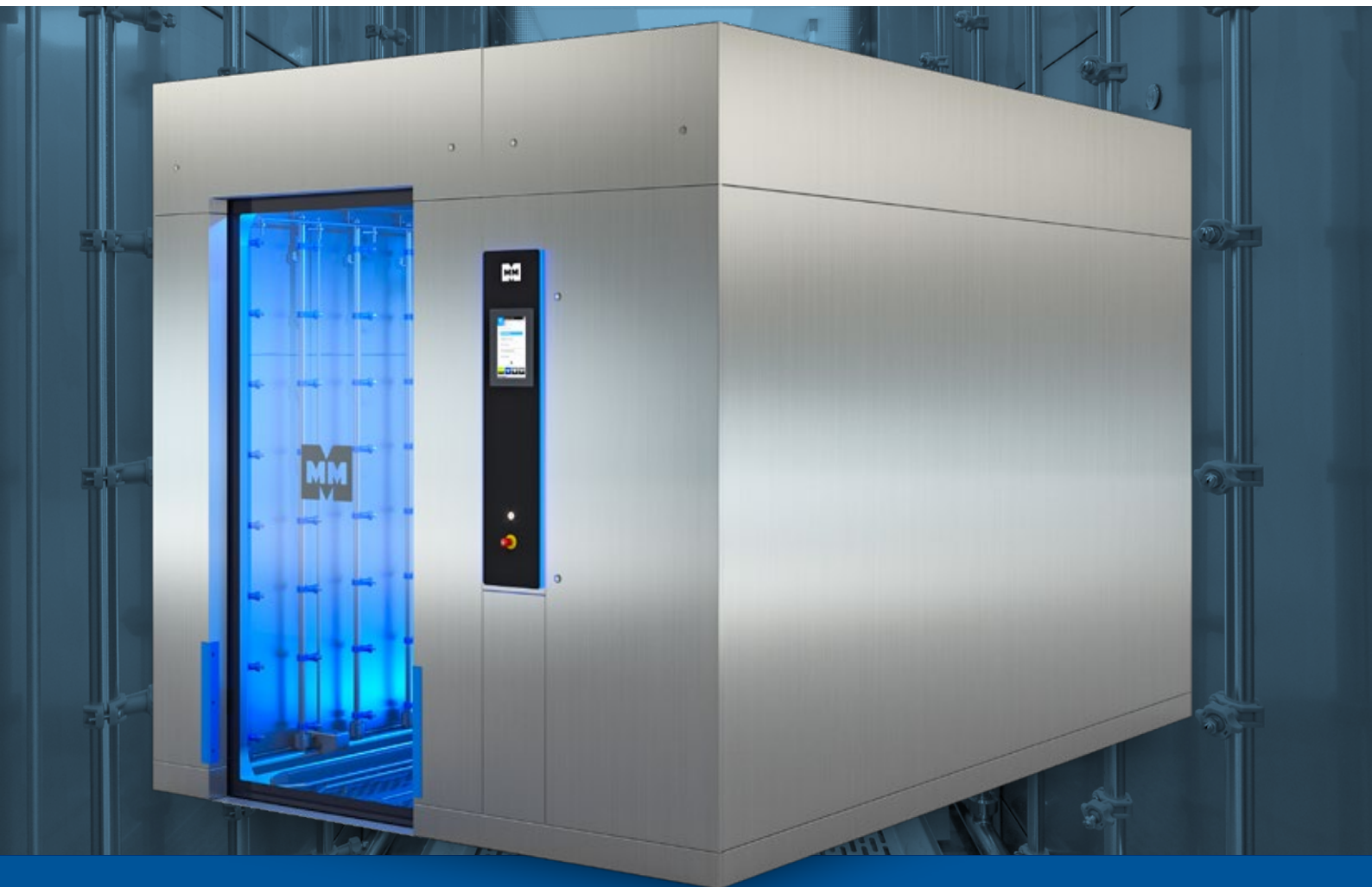




MMM Group



Uniclean[®] ML

Versatile large chamber cleaning and disinfection system.

MMM. Protecting human health.

MMM complete solutions for instrument reprocessing in the RUMED

MMM has been a successful complete solutions provider for safe and cost-effective reprocessing of sterile medical devices for 70 years. We are the experts when it comes to planning, setup and technical management of all machines, processes and procedures in the RUMED. By this we mean the demand-based planning of the required equipment incl. features, and the validation of all processes. Another integral component of our service offerings is a process documentation system tailored to all the machines, and a comprehensive customer service.

Uniclean® Multi Line

Powerful cleaning and drying

Uniclean® ML stands for state-of-the-art technology, best possible cleaning results, and excellent user-friendliness. It is ideally suited for cleaning and disinfecting large-volume items in hospitals. The system's many loading options attest to its versatility.

The modular and sophisticated machine design and the practical loading trolley concept enable individual customer requirements to be optimally met.

Three chamber sizes, an effective cleaning system, a flexible loading trolley concept, program sequences that are resource-saving and tailored to the specific items, as well as smart equipment options, for example automatic tank cleaning, make the Uniclean® ML a reliable and flexible partner in any reprocessing unit.



The Uniclean® ML series fulfills all quality-related requirements and meets the latest standards (such as the standards series DIN EN ISO 15883 Parts 1 and 2) and guidelines that authorize, among other things, use of the CE mark.

Uniclean® ML

The versatile solution for large items

Large-chamber washer-disinfectors for reprocessing medical devices and for high-volume items such as transport trolleys, sterilization containers, OR shoes, plastic containers, OR tables, receptacles and kidney bowls.

Highlights

- | Powerful cleaning and drying
- | Low space requirements (width 2,300 mm/ height 2,500 mm)
- | Very user- and service-friendly
- | "Halo" LED panel with status colors
- | Vertically arranged 7" display with MMM Smart HMI
- | High quality machine design
- | Flexible loading trolley system

Standard features

- | Hygienic design, easy-to-clean external surfaces and chamber
- | Left and right arrangement of the chamber allows 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
- | Automatic sliding glass doors with a toothed belt drive
- | Industrial PLC in an IP 55 control cabinet
- | PPV system for process parameter verification
- | Hinged front panels with gas pressure springs for easy service access
- | Highly efficient SECOspeed drying system
- | SANIcirc cleaning system with no hoses
- | HEPA H14 filter
- | All materials in contact with the media are made of stainless steel
- | Choice of electrical or steam heating of the machine
- | Low machine height; all important components are positioned on the sides
- | 1 dosing pump

- | Large number of pre-configured standard programs
- | 3-color LED chamber lighting
- | Pneumatically operated (fail-safe) valves only
- | Choice of A_0 value control or temperature holding time control



Options

- | 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 (max. 3)
- | Loading and unloading ramps
- | DIN A4 cycle report printer
- | ISA – Intelligent Service Advisor
- | Energy manager
- | Second display on the unloading side

Accessories

- | Large assortment of loading trolleys for OR shoes, plastic crates, sterilization containers and instruments
- | RUMED360® software products

Technical data

Type	Effective chamber dimensions in mm (H x W* x D)	Effective chamber capacity	External machine dimensions in mm (H x W* x D)
1620	2,000 x 1,060 x 1,650	3,500 liters	2,500 x 2,410 x 2,050
2220	2,000 x 1,060 x 2,230	4,730 liters	2,500 x 2,300 x 2,630
3120	2,000 x 1,060 x 3,100	6,570 liters	2,500 x 2,300 x 3,500

* 900 mm door opening width.

** For electrically heated machines, the width will be between 2,500 and 3,100 mm depending on the installation situation and the machine type.



“Halo” LED panel

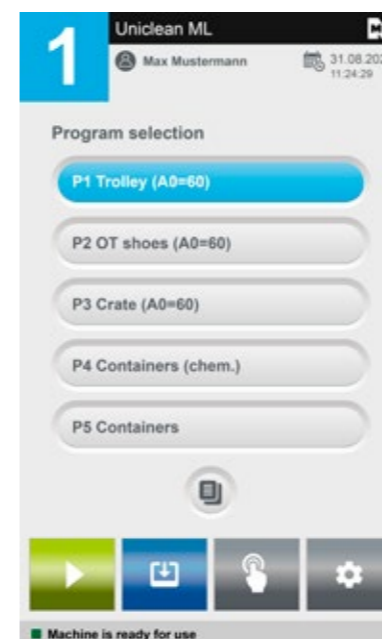
with 7" MMM Smart HMI

Light and light effects not only have a proven beneficial effect on humans but also increase the quality and pleasantness of the workplace. The “Halo” LED control panel developed by MMM provides a perfect interplay of ambience and function.

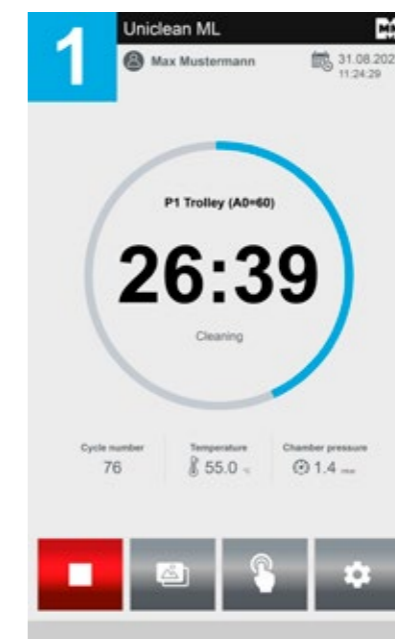
The “Halo” light effect in various status colors reflects off the stainless steel surface and gives the MMM washer-disinfector a stylish appearance. The vertically arranged operating panel with the MMM Smart HMI promises intuitive and reliable operator guidance.

MMM Smart HMI

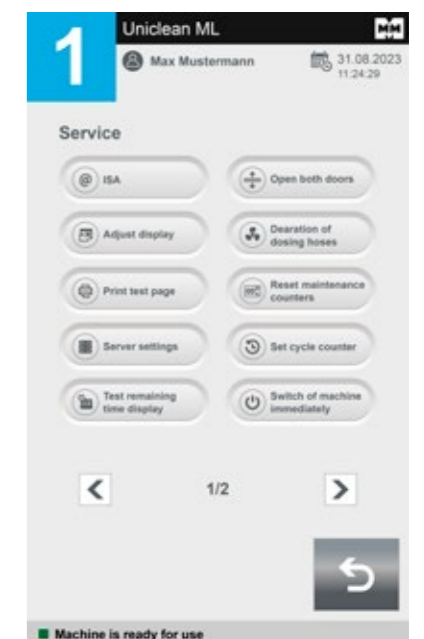
- | Industrial PLC with 7" touchscreen, vertically arranged.
- | The clearly structured menu navigation ensures a high operational reliability.
- | The large remaining time display enables optimal time management.
- | The software is validated as per DIN EN 62304 "Medical device software - Software life cycle processes".
- | The sophisticated parameter structure enables highly flexible machine configuration. 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.



Program selection



Program sequence



Service menu

RUMED360®

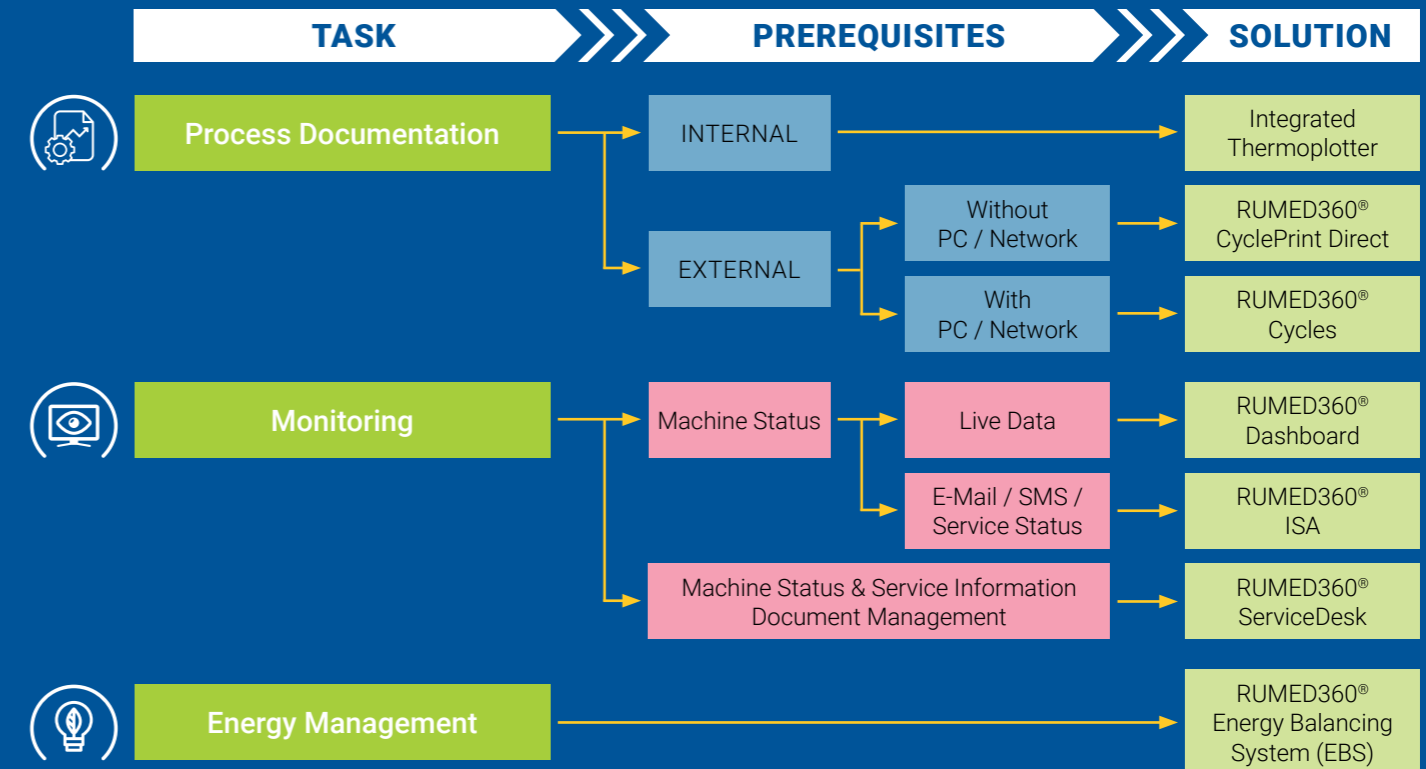
Software applications

Digitalization has established itself as an integral and indispensable part of healthcare for some time now.

In the modern working environment of a RUMED, process monitoring and digital documentation are important and essential components of an almost paperless working life. The resultant process and workflow optimization brings with it greater profitability, efficiency and safety.

The RUMED360® software applications developed by MMM combine all these attributes and make a significant contribution towards ensuring a user-optimized and efficient implementation of the work processes in a RUMED. The Energy Management application, for example, helps keep the investment costs for the central energy supply at a minimum, while still optimally covering the peak loads and ensuring high productivity.

To help you find the right applications for your specific requirements, we have divided the RUMED360® software portfolio into three categories:



RUMED360® Dashboard

The status of all machines at a glance.



Sustainable machine design

Uniclean® ML stands for state-of-the-art technology, best possible cleaning results, and excellent user-friendliness when it comes to cleaning and disinfecting large-volume items in hospitals.

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

- | **SANlrcirc**: Self-draining pipe routing in the area with product contact. No residue and microbial contamination.
- | The entire piping is made from stainless steel.
- | Full drainage of the nozzle system and chamber after every program step. No carryover of dirty water.
- | Slanted chamber floor to allow residual water to flow off easily.

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.

Space- and process-optimized tank system

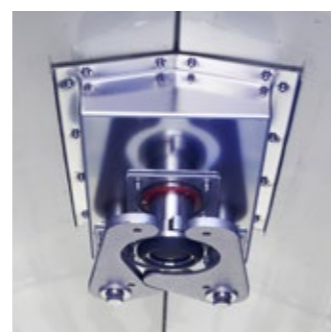
- | The optional tanks have two functions: pre-heating and pre-dosing of the process water, and storage of the returned process water.
- | The reuse of the process water saves water, energy and process chemicals.
- | Shorter cycle times

Flexibility for everyday use

- | Suitable for instrument reprocessing with a capacity of up to 60 DIN trays per cycle.
- | Suitable for chemical processes.

Coupling for instrument trolleys

To be able to efficiently and reliably reprocess surgical instruments in a large chamber system, it is essential to be able to precisely and securely couple the water supply nozzle with the loading trolley.



Sophisticated design concepts

High quality thanks to a combination of industrial manufacturing and solid "Made in Germany" craftsmanship.

- | The compact design is also ideally suited for tight spaces.
- | Very high flexibility for transport of goods into the facility.
- | The chamber is manufactured from high-quality stainless steel.
- | The SANIcirc piping ensures a hygienically flawless and self-draining pipe routing.

Loading trolley

Modular, versatile and practical

The Uniclean® ML is a multi-talented system. Its versatility is evident in the wide variety of loading options: Transport trolleys, sterilization containers, OR shoes, plastic containers, bowls, kidney basins.

The right solution for every requirement

The loading trolleys for the Uniclean® ML are provided with all of the equipment needed to make it easier to correctly load containers, OR shoes and other utensils. This is important because optimal results can only be achieved if the goods to be treated are placed on the trolley correctly.

The MMM loading trolley and accessories range was developed in close co-operation with medical device manufacturers and users in hospitals. This practicality is readily apparent. The result is a flexible range of loading trolleys (BW) with appropriate insert modules for cleaning surgical instruments right through to large-volume medical devices.



The loading trolleys from MMM will impress with their:



- | Modular solutions for ergonomic and safe handling of loads for various applications
- | Stable tubular-frame construction
- | Open design for perfect cleaning and drying
- | Easy and secure adjustment of the loading levels
- | Large CoolTouch handles
- | Self-draining layout of the water supply pipe of the instrument loading trolley
- | Versatile accessories to suit a wide variety of loaded items, including mixed items
- | 2 different trolley lengths are available: 1,100 mm and 1,500 mm - according to the chamber size



Mixed load of sterile goods containers with bowls and kidney basins



Load of wire mesh baskets



OR shoe inserts with levels for 40 pairs



Load of 30 instrument trays



Mixed load of containers with lids, kidney dishes, bowls, instrument trays



Mixed load of instrument trays, containers and lids

You can find our complete range in the "Loading Trolleys & Accessories" brochure.

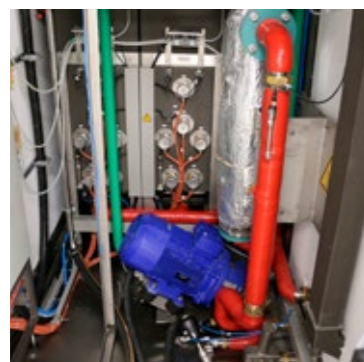


User-centered design

High serviceability

To guarantee a trouble-free process, the systems need to remain operational at all times. MMM already gave consideration to the service-friendliness of the system in the design phase. Users and service technicals have fast and uncomplicated access to all components of the system at all time.

- | All important components are clearly arranged and easily accessible. This guarantees fast and efficient response times in case of malfunctions.
- | Large filter surface: Even in the presence of excessive lint formation, the Uniclean® ML can operate longer before cleaning the fine filter.
- | 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 via the maintenance hatch on the side of the chamber. A few components are arranged above the chamber and are easily accessed by folding up the device cover.
- | The modular machine components and the measuring probes with plug connectors are easy to replace.
- | All electrical components are located in a single control cabinet (protection class IP 55).



Spacious maintenance area



Hinged chamber floor



Powerful circulation pump

Resources management

Certified environmental management system

The MMM sustainability concept protects the environment even in everyday business operations. All MMM machines have been optimized for low energy and water consumption and can be equipped with energy recovery systems.

MMM has a certified environmental management system as per DIN EN ISO 14001 that not only covers our products but also encompasses the operative processes.



Intelligent water management

Low water consumption, controlled via the Uniclean® ML controller – adapted to the items being treated and the process phase.



Reduced deionized (DI) water consumption

In the Uniclean® ML with the optional deionized water recovery tank, the deionized disinfection water of the last rinse bath is stored and used for intermediate rinsing in the next program sequence. This saves you more deionized water, time and energy compared to a device without a recovery tank.



Short cycle times

Thanks to the optional preheating and recovery tank system, the rinse water can be heated up more quickly and the chamber filled more quickly. The tank system thereby significantly reduces the cycle time. At the same time, the consumption of cleaning chemicals is reduced.



Heat is energy

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



Environment and energy

MMM as a manufacturer is certified to DIN EN ISO 14001 and DIN EN ISO 50001. It therefore meets the international standards for environmental and energy management systems.



The reliable partner at your side

MMM Customer Service

With us, you receive more than just repairs. From commissioning and validation right through to maintenance and ongoing support – you can rely on us!

We offer a comprehensive portfolio of services in the proven MMM quality, and solutions perfectly tailored to your needs.



Inspection



Maintenance



Repair



Validation, requalification and testing



Extensions and updates/upgrades



Energy optimization



Spare parts



Training



Software

MMM. Our global branches.



MMM Group

MMM has been operating worldwide as one of the leading system providers in 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 fields of Healthcare and Life Sciences, MMM has positioned itself as a major driver of quality and innovation in both the German and international markets. Our products are

individually adapted to the requirements of our customers all over the world. The high vertical integration of the manufacturing in our plants ensures that we fulfill the most stringent demands for quality in the medical technology industry. More than 1200 employees apply their expertise and dedication to the mission of the MMM Group:

MMM. Protecting human health.



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