

UniSonic®

Ultrasonic cleaning system



Modular and flexibly configurable:

- For instrument trays
- For MIS instruments
- For robotic instruments da Vinci Xi and Si
in combination with the MMM Uniclean® PL II

Ultrasonic cleaning is far more effective than manual cleaning

The processing of surgical instruments places the highest of demands on the pre-cleaning and cleaning process technology. Due to the increasingly complex geometries of the instruments, it is often necessary and even prescribed by the manufacturer to clean them manually in order to remove all contaminated soiling from e.g. articulated instruments and cavities.

The **UniSonic®** cleaning system can be used to replace the manual pre-cleaning process with a mechanical pre-cleaning process, which saves valuable resources in the CSSD while achieving reproducible, consistently reliable, high quality cleaning results. In order to be able to respond in a flexible manner to the requirements and available space in the CSSD, the **UniSonic®** can be integrated in a worktop cleaning device as either left-handed or right-handed version.

Great range of configuration possibilities

The ultrasound cavitation makes it possible to reach parts of the sensitive instruments that are difficult to reach and mechanically cleans them, reliably, without damaging the surfaces. Depending on the application, the MMM **UniSonic®** is available in three basic configurations:



Standard instruments
Insertable rack and rack carrier



MIS instruments
8 connections for
cavity instruments



Robotic instruments
4 connections for Xi or Si
instruments da Vinci

The **UniSonic®** system can be easily and flexibly refitted or retrofitted with various instrument holders for a new application.

The control unit

The swivel-mounted control unit of the **UniSonic®** has an integrated filter, two multi-couplers for connecting various inserts, a touch-screen and interfaces for exporting process data. The proprietary channel selector is responsible for checking the individual channels of the connected instruments during the exposure to sonic waves. If it has not been possible to rinse out any instruments, e.g. due to them being blocked, they are identified and indicated by the software.

The control unit can be mounted/installed on either the right-hand or the left-hand side of the ultrasonic tub. The data from the evaluation of the pre-cleaning process can be transferred via an interface to the Uniclean® PL II washer-disinfector and displayed in the batch record.



The ultrasonic tub

The dimensions of the ultrasonic vibration tub are designed specifically for the very long robotic instruments; it can effectively treat up to four instruments with ultrasound. Thanks to the powerful ultrasound vibration systems optimally distributed along the floor and the sides, ultrasound is used to optimally clean drive adapters, instrument shafts and the tips of work tools and prevent disruptive acoustic shadows.



The generator

The ultrasound generator produces the power for the ultrasound vibration systems and is fitted with an automatic frequency adjuster that minimizes standing waves and ensures an almost homogeneous distribution of ultrasound intensity within the tub.



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Ultrasonic cleaning system

for robotic instruments da Vinci Xi and Si



Highlights

- ✓ minimization of manual pre-cleaning
- ✓ flow rate control of the individual instruments
- ✓ efficient inversed and pressure flushing
- ✓ modular configuration possibilities for each application
- ✓ combined processing with Uniclean® PL II series



MMM UniSonic® ultrasonic cleaning system - for the efficient, validated and safe preparation of complex robotic instruments that also saves time and money.



UniSonic®
integrated in a worktop set-up

Technology

- Complex instruments with parts that are difficult to access, such as joints, drilled holes and cable pulls, are cleaned with care and without mechanical damage
- Optimal arrangement of the instruments over the ultrasound generators for an even better ultrasonic effect
- Flushing and inspection of the individual channel for each connected instrument
- Self-explanatory operating unit (CPU) with touchscreen
- Ergonomic and convenient swivel-arm operation
- Available as a left-handed or right-handed version
- 3 applications - 1 device:
 - Standard instruments
 - MIS instruments
 - Robotic instruments Xi and Si
- Data transfer to the MMM WD Uniclean® PL II and documentation in the batch record
- Improved cleaning thanks to a combination of ultrasound, flushing and movement for robotic instruments
- Designed for robotic instruments
- Safety ensured by individual flushing and inspection of instruments
- Instruments easy to connect
- Temperature monitoring with alarm function

Accessories

- MIS rack
- standard rack
- rack support
- foil test frame
- hose set
- filter inserts
- adapter sealing
- adapter
- adapter test strip
- tub cover

Swivel-arm positions of the UniSonic® smart lift



Load with instruments



Connect the flush tubes



Cleaning position

Preparation of robotic instruments

An interlinked system

Phase 1: Pre-cleaning

Manual precleaning with the automatic UniSonic® ultrasound system is an important prerequisite for successful mechanical preparation.



Phase 2: Machine processing

Validated mechanical processing in the Uniclean® PL II 15 by a customized unit comprising the robotic instruments rack, the robotic instruments program and the process chemicals.



The overall MMM concept for the safe and validated machine processing of robotic instruments



MMM customer service

Efficient and reliable

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 worldwide, 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.

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 optimization of consumable materials and for continuous adjustment to individual needs and legal requirements increase the service life and costeffectiveness 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 & further training

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 optimization of the processes and devices. Process validation by MMM is always in line with the current guidelines of DGKH, DGSV and AKI and also in accordance with DIN EN ISO 15883 Part 1 and 2, if required. There is good reason why we are Europe's market leader, with approx. 2500 process validations per year.

Validation from a single source

- Cleaning and disinfection processes including endoscopic reprocessing
- Steam sterilization processes
- Steam-formaldehyde sterilization processes
- Gas plasma sterilization processes
- Hot-sealing processes



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 fulfil 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.**



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