SONOMIC®

SAFETY

FOR THE REPROCESSING OF
RINSEABLE MIS INSTRUMENTS

Individual examination of instruments

Suction rinsing principle

Universal adapter

3 patents in one device

BANDELIN

60 years of experience in ultrasound

Reduced disinfection time and increased cleaning effectiveness with

Ultrasound

By the application of ultrasound during the suction rinsing processes, the disinfection and cleaning effectiveness is lastingly reinforced while the time required is reduced. Contamination at the distal end and in the difficult to access lumen of MIS instruments is thoroughly cleaned by gentle ultrasound cavitation, without damaging the instruments.

With SONOMIC® you ensure maximum hygiene for your minimally invasive surgical instruments by:

1. Individual rinsing and examination of instruments
2. Unique suction rinsing principle
3. Patented universal adapter for instrument connection without changing seals
4. Temperature and filling level monitoring
5. Automatic program sequence with user prompting
6. Versatile use (also for other instruments)
7. Documentation with protocol printout

Safety for the reprocessing of rinseable MIS instruments

1 Display of non-permeable MIS instruments by individual examination

Status message of the individual examination

In comparable devices from other manufacturers, all MIS instruments are simultaneously rinsed from the distal end with pressure. The simultaneous rinsing of all instruments via one pressure pump connection makes it impossible to identify non-permeable instruments.

It is therefore not possible to control the safe rinsing of each individual instrument.

In the SONOMIC®, this problem is solved with a patented channel selector[1] that always only releases one instrument for rinsing. Thus only one of the maximum of 12 instruments is connected with the suction pump and checked for fluid permeability during the rinsing processes.

The determination, allocation and clear display of the successful rinsing capability of each individual instrument provides the user with more security for each reprocessing.

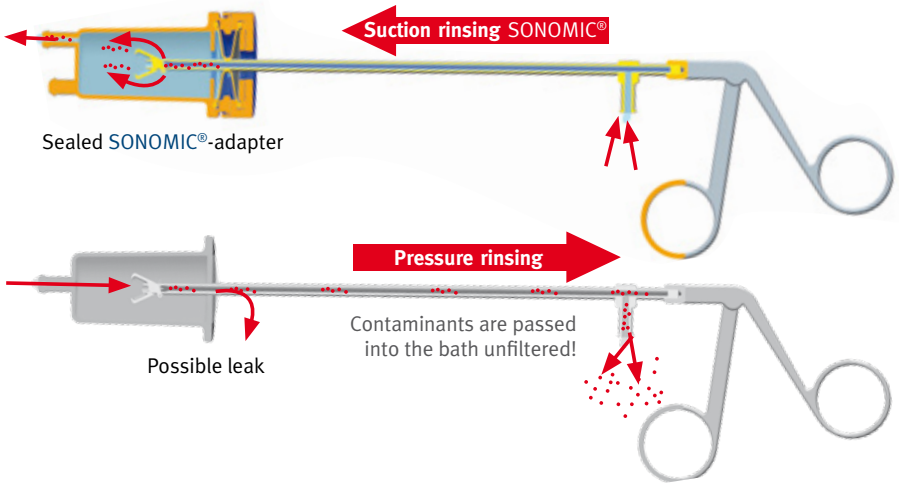
[1] Patent EP 1920797

2 Multiple, thorough suction rinsing vs. pressure rinsing

The SONOMIC® is the only patented ultrasonic device with a suction rinsing function[2] for the cleaning and disinfection of rinseable MIS instruments. As a rule, the greatest amount of contamination is usually found at the distal end of the MIS instrument.

With repeated suction rinsing at the distal end of the instrument and the support of ultrasound, all contamination is removed against the direction of penetration and is followed by a flow of fresh disinfectant and cleaning solution. The detached contaminants pass directly through the adapter into an exchangeable filter, and thus do not pass back into the bath liquid. Unnecessary contamination of the rear part of the lumen is avoided.

In the principle of pressure rinsing, all contaminants are moved from the distal end through the entire lumen of the instrument. This represents an increased risk of undesired deposits or even blockages, especially at the joints, narrow points and near the handles of the instruments.



[2] Patent DE 202006020523

3 Connecting instruments without changing the seals

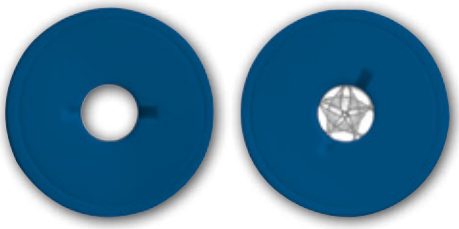
Up to 12 rinseable MIS instruments with outside diameters of 1 to 10 mm can be connected to the innovative adapter system in the SONOMIC®. In comparison to other manufacturers, a change of the adapter seal for MIS instruments of different diameters is not necessary, thus saving the user valuable time.

The patented torsion seal[3] guarantees a secure and complete sealing at the outer shaft of the instrument.

This is essential for problem-free suction rinsing with the disinfectant and cleaning solution through the instrument. The highly elastic seal material is ultrasound tested and resistant to the disinfection and cleaning agent STAMMOPUR DR 8. A seal change is only necessary after approx. 500 load cycles and can be done very easily without tools.

[3] EP 1920727

Adapter with patented torsion seal[3]



open *closed*

Adapter with instrument

4 Temperature and filling level monitoring

The temperature and the filling level of the bath liquid play an important role in instrument reprocessing with ultrasound. This is why the SONOMIC® contains sensors for monitoring these parameters. The temperature sensor checks before each load cycle whether the bath temperature is within the permitted range. If it is too low, reprocessing takes longer. If 40 °C is exceeded (protein coagulation > 40 °C), this is displayed as a warning message on the touchscreen.

The correct bath filling level is monitored in the SONOMIC® with the integrated filling level sensor. In the event of a deviation, a corresponding error message also appears on the touchscreen.

Working with the SONOMIC® is easy and safe.

5 Security by automatic program sequence with user prompting

Touchscreen for user prompting and control (built-in device)

Individual work steps and residence times have been matched to one another with the SONOMIC® in order to ensure effective instrument reprocessing. The user receives clear instructions on the touchscreen, leading him/her through the individual work steps in the operating program. This includes an adapter check prior to each load cycle, which is mandatory for a safe identification of non-permeable instruments. Informative help texts can also be called up in the program using the touchscreen.

6 Versatility due to multiple use

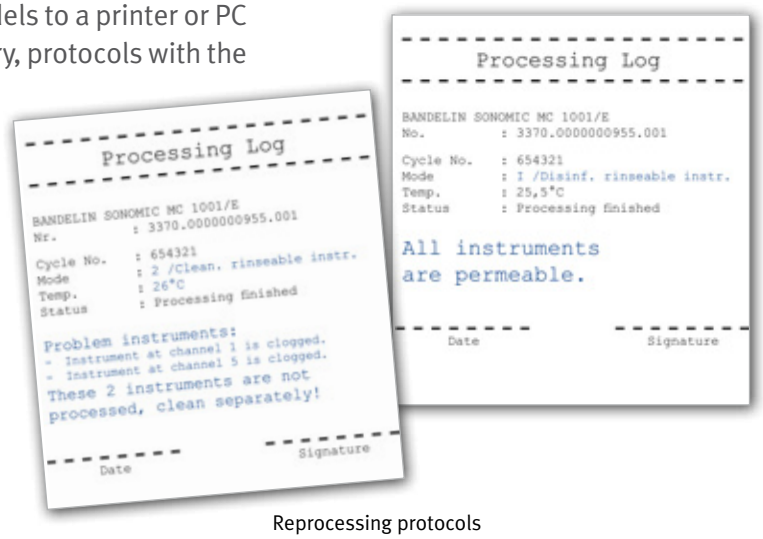
The SONOMIC® was specially developed for the simultaneous disinfection and cleaning of rinseable MIS instruments. Even rinseable parts of other instruments can be connected to the adapters when the exterior diameter lies between 1 mm and 10 mm. The disinfection and cleaning of lumen of rinseable instruments or rinseable parts of other instruments ensures their usability. Contamination is reliably removed with support by ultrasound and can thus prevent sluggishness or even blockages of instruments.

In addition, simple instruments such as scissors, clamps and forceps can of course be placed loosely in the basket and as well be disinfected and cleaned in the SONOMIC®.

7 Documentation with protocol printout

It is possible to connect both SONOMIC® models to a printer or PC in order to document quality. Where necessary, protocols with the following data can be printed:

- cycle number
- processing mode
- temperature of the bath liquid
- status
- evaluation of permeability
- line for date and signature



Reprocessing protocols

Compact device SONOMIC® MC 1001

Features

- oscillating tank of rustproof, titanium-stabilised stainless steel; with round corners and inclined bottom toward the drain
- robust stainless steel housing – easy to care for and drip water-proof
- inside, welded-in drain G¾ with ball valve; outside, threaded connection G¾, front right
- program-controlled heating
- user-friendly touchscreen with user prompting and process display
- parallel and series interface for the connection of a printer or PC
- stainless steel basket with handles for drip-drying above the oscillation tank
- adapters for connection of instruments with diameters of 1 mm to 10 mm
- filling level mark
- additional accessories: plastic lid or hinged lid, silicone knob matt

SONOMIC® MC 1001

SONOMIC® built-in device MC 1001 E

Features

- oscillating tank of rustproof, titanium-stabilised stainless steel; with round corners and inclined bottom toward the drain
- 1½" drain fitting with twist handle and stainless steel plugs
- HF generator with rinsing module for mounting next to the oscillating tank
- program-controlled heating
- user-friendly touchscreen with user prompting and process display as separate, swivel-mounted operating panel
- parallel and series interface for the connection of a printer or PC
- stainless steel basket with handles for drip-drying above the oscillation tank
- adapters for connection of instruments with diameters of 1 mm to 10 mm
- filling level mark
- additional accessories: plastic lid or hinged lid, silicone knob matt

SONOMIC® MC 1001 E

Advantages of the built-in device

- free work area due to space-saving installation in the working plate
- separate, swivel-mounted operating panel (touchscreen)
- simple mounting under a bench
- easy mounting by screw fastening

Model overview of SONOMIC®

	SONOMIC® compact device MC 1001	SONOMIC® built-in device MC 1001 E
Oscillating tank, interior (with inclined tank bottom)	650 × 400 × 160/170* mm (l × w × d)	650 × 410 × 160/170* mm (l × w × d)
Material	made of stainless steel 1.4571, 2 mm	made of stainless steel 1.4571, 2 mm
Content	42,5 litres	43,5 litres
Working filling level	27,0 litres	27,5 litres
Safety arrangements	filling level monitoring, temperature monitoring	filling level monitoring, temperature monitoring
PZT large area transducers (bottom)	12	12
Ultrasonic peak output**	2400 W	2400 W
Ultrasonic frequency	40 kHz	40 kHz
HF power	600 W	600 W
Heating, program-controlled	400 W	400 W
Current consumption	2,7 A	2,7 A
Outer dimensions of housing	housing 860 × 490 × 325 mm (l × w × h)	–
Outer dimensions of oscillating tank	–	housing 860 × 475 × 250 mm (l × w × h)
Drain	ball valve ¾ ", threaded feed pipe G ¾, front right	G 1½ fitting, with twist handle and stainless steel plugs
Outer dimensions of HF generator with rinsing module	–	455 × 155 × 360 mm (l × w × h)
Interface	parallel and series for connection to printer or PC	parallel and series for connection to printer or PC
Operation: Touchscreen 96 × 61 mm	installed	in the operating panel
Installation in work surface	–	from below
Weight	45 kg	40 kg
CE according to MDD	yes	yes
Code No.	3315	3345

Advice and technical information at ☎ +49-30-768 80-212

* Tank with inclined bottom
** To achieve an improved efficiency, the ultrasound is modulated whereby in combination with SweepTec® a four times higher value of HF-output is obtained as ultrasonic peak output

Accessories for SONOMIC®

Basket K 1001 MC

Stainless steel basket with handles for compact and built-in device,
sieve 520 × 340 × 50 mm (l × w × h),
mesh size 5 × 5 mm
Code No. 3324

Lid D 1000 MC

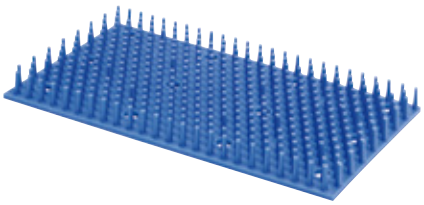
Plastic lid made of PETG, transparent for protection against contamination from the outside
Code No. 3312

Hinged lid D 1001 G und D 1001 GE

Stainless steel hinged lid with gas spring and EPDM profile seal

Type D 1001 G for compact device MC 1001
Code No. 3310

Type D 1001 GE for built-in device MC 1001 E
Code No. 3326



Silicone knob mat 1000 MC

For gentle storage of the instruments in the basket
2 pieces, each 245 × 172 mm
Code No. 3313

Consumables for SONOMIC®

Filter cartridges EF 1001

Package of 30 pieces: Code No. 3365
Package of 100 pieces: Code No. 3366

Adapter seals AD 1000

Package of 12 pieces: Code No. 3353
Package of 24 pieces: Code No. 3354
Package of 36 pieces: Code No. 3355

Adapter with seal and hose ADS 1000

Package of 1 piece: Code No. 3350
Package of 12 pieces: Code No. 3351

Disinfection and cleaning concentrates for ultrasonic reprocessing

To achieve the optimum ultrasonic efficiency, it is necessary to use special disinfection and cleaning solutions. They must have cavitation-improving and material-protecting features for the ultrasonic application. The protection of the objects and the oscillating tank must be guaranteed, even during intensive usage. Many customary disinfection and cleaning agents may contain substances that can attack the oscillating stainless steel tank.

STAMMOPUR concentrates have been especially developed for ultrasonic application and are marked CE according to the Medical Devices Directive (MDD). All solutions are environmental friendly, biodegradable and easy to dispose.

VAH-CERTIFIED

STAMMOPUR DR 8 – limited virucidal

Instrument disinfection and intensive cleaning

Recommended by well-known manufacturers of endoscopes. Simultaneous disinfection and intensive cleaning of instruments after dry deposit.

High blood dissolution for instruments heavily contaminated with incrustations of blood and secretions. Due to short irradiation time especially recommended for the disinfection and cleaning of very sensitive and valuable microsurgical, MIS instruments and endoscopy accessories. Solution applicable under strain for 3 days.

Very high material compatibility, suitable for all materials. Non-odiferous. Anticorrosive. Without aldehydes, chlorines and phenols. Bactericidal (incl. Tb.- B., helicobacter pylori), fungicidal, limited virucidal (Vaccinia, BVDV, Papova, Adeno, HBV, HCV, HIV, H5N1), mildly-alkaline pH 9.4 at 1 %.

Cleaning times depending on the concentration

Application with ultrasound	
Disinfection time	**Concentration**
5 minutes	**2 %**
Papova with high protein burden:	
10 minutes	**2 %**
Adeno with high protein burden:	
15 minutes	**3 %**

Application without ultrasound	
Disinfection time	**Concentration**
15 minutes	**3 %**
30 minutes	**2 %**
60 minutes	**1 %**

Delivery form:	Code No.
2 litres bottle	**972**
5 litres jerrycan	**974**
25 litres jerrycan	**936**

Active agents in 100 g: 9.9 g bis(3-aminopropyl)dodecylamine, 8.4 g didecylmethylpoly(oxyethyl)ammoniumpropionate; 5-10 % non-ionic tensides, 30-50 % solvents, complexing agents, pH-regulators, adjusting agents.

Expertises: Bacteria, fungi according DGHM: Dr. F.-A.Pitten, Gießen 11/05; Prof. Dr. Schubert, Frankfurt 6/99; Prof. Dr. Werner, Schwerin, 10/08; HBV/HIV: Prof. Dr. Frösner, München 8/99; Vaccinia, Papova, BVDV, H5N1: Prof. Dr. L. Döhner, Dr. D. Becher, Greifswald 8/06 and 9/06; Adeno with ultrasound: Dr. D. Becher, Dr. M. Büttner, Greifswald 11/08; Helicobacter pylori: Prof. Dr. Werner, Schwerin 8/00; Time durability: Prof. Dr. Werner, Schwerin 10/99, Time reduction by ultrasound: Dr. W. U. Färber, Gießen 8/02 Hazard identification: C, corrosive.

Ultrasound technology in medicine and the laboratory

SONOREX SUPER®

Sturdy, high performance ultrasonic baths – easy to operate and universally usable, as compact and built-in device

SONOREX DIGITEC®

Digital, high performance ultrasonic baths with rapid degasification, as compact and built-in device

ultraPuls® therapy device

Low frequency ultrasound for the treatment of pain and wounds

SONOCOOL®

Ultrasonic device with cooling for use in pathology and analysis laboratories

BactoSonic®

Ultrasonic device for the gentle separation of bio films from implants

SONOSHAKE®

The new generation in ultrasonic baths:
SONOREX DIGITEC® DT 1028 F in combination with shaker attachment SA 1028

SONOPULS®

Ultrasonic homogenizers

BANDELIN
60 years of experience in ultrasound

BANDELIN electronic is specialized in the development, manufacture and sale of ultrasonic devices.

Quality management according to EN ISO 9001 / 12.2000 and EN ISO 13485:2003 + AC:2007 ensures the efficient planning of all business processes.

Our strengths – Your advantages:
- quick and comprehensive specialist advice
- delivery from the warehouse from continuous series production

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