SONOMIC®

Controlled disinfection and cleaning of rinseable keyhole surgery instruments

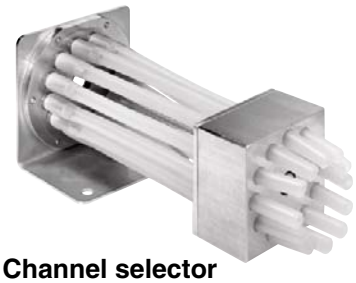
BANDELIN

55 Years of Experience in
Ultrasound Technology

SONOMIC® ultrasonic unit for disinfection and cleaning of maximal 12 rinseable keyhole surgery instruments

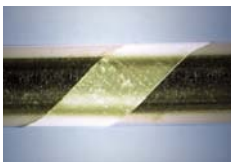
Touch-screen
User-guiding menu, clear instructions and information about the current status.

Adapter
Leak-proof connection for suction rinsing of instruments with diameters from 1 mm up to 10 mm, without exchange of sealings for disinfection and cleaning of instrument lumens. EU patent pending.

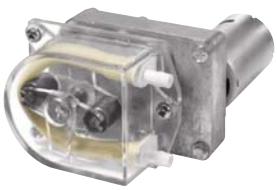


Channel selector
Selection of only one instrument for suction rinsing and check of liquid flow. EU patent pending.

Gentle ultrasound
Foil-tests according IEC/TR 60886 (1987-03) from the inner adapter section and from the inside of a rinseable keyhole surgery instrument show the gentle impact of the ultrasound.



Round tank corners
at the bottom and the sides facilitate cleaning of the tank. Caking of residues is avoided.



Suction pump
Generation of required vacuum for suction rinsing and check of liquid flow of the selected instrument.

Filter
Filtering of detached soiling from the rinsing liquid. Easy manual exchange of the filter, no tools required.

Flow rate sensor
Measurement of flow rate of the selected instrument to determine successful disinfection and cleaning.

High-power ultrasonic transducers
Creation of a uniform ultrasonic field in the oscillating tank through uniformly mounted ultrasonic transducers under the tank bottom.

SONOMIC® ultrasonic unit - advantages

Thoroughness through repeated suction rinsing

When using a keyhole surgery instrument, contaminations enter the lumen of the instrument from the distal end. Not the entire lumen will be contaminated. Through repeated suction rinsing, supported by ultrasound at the distal end of the instrument, the contamination will be removed against the direction of penetration. At the same time, fresh disinfection and cleaning solution flows in. Contamination cannot accumulate on the constrictions in the area of the handle.

Connection of instruments without exchange of seals

12 rinseable keyhole surgery instruments with diameters from 1 mm to 10 mm can each be connected to one of the identical adapters without having to exchange the adapter seal for this. The innovative rotating principle of the seal guarantees a complete sealing at the external shaft of the instrument. This is essential for a perfect suction rinsing with the disinfection and cleaning solution through the instrument. The highly elastic sealing material has been tested in ultrasound and is resistant against the disinfectant. An exchange of seal is only necessary after approx. 500 load cycles. It can be carried out very easily without tools thanks to the structure of the adapter.

Individual examination of instruments instead of overall check

If several instruments are being connected simultaneously to a sucking or pressure pump, the rinsing result cannot be controlled. By means of the channel selector in SONOMIC, always only one instrument out of maximal 12 connected instruments will be linked to the sucking pump at a time. A flow rate sensor determines the flow rate for the selected instrument. The minimum value for continuous instruments is a flow rate of 2 ml/sec. Instruments which are not continuous are thus safely identified and indicated on the touch-screen. Their withdrawal for separate decontamination has to be confirmed individually.

Increased disinfecting and cleaning efficiency through ultrasound

Efficiency of disinfection and cleaning is strongly increased during suction rinsing and during external disinfection through switching on the ultrasound. Existing contamination at the distal end and in the lumens of the instruments are thoroughly removed by means of gentle ultrasonic cavitation without damaging the instruments.

Safety through strict program sequence

Coordinated steps of operation and defined times of impact are necessary for degassing the liquid, for exhaust and repeated internal rinsing of the instruments as well as for complete external disinfection. The user is being provided with clear instructions leading him through the single steps of the operational program where he cannot interfere: among these for example the adapter check per charge which is mandatory for a safe identification of non-continuous instruments allowing to sort out such instruments. Finally, an external disinfection and cleaning even in the sealing areas of the instruments is being effected. The operational program also contains self checks and gives leads which are shown on the touch-screen. This way, a high availability of SONOMIC is assured. Detached contamination from the instruments is retained in an easily accessible filter which has to be replaced upon request.

With SONOMIC, a controlled disinfection and cleaning of instruments which can be reproduced at any time is feasible. EU patent pending.

Versatility through multiple use

SONOMIC has been especially developed for simultaneous disinfection and cleaning of rinseable keyhole surgery instruments.
But even rinseable parts of other instruments can be connected to the adapters, provided that the external diameter is between 1 mm and 10 mm. Disinfection and cleaning of lumens of rinseable instruments or of rinseable parts of other instruments assure their functional capability. Contamination is reliably removed, rough-running or jam of instruments is prevented. Even those instruments which had been sorted out before may be used after disinfection and cleaning in SONOMIC because older contaminations are removed.
Additionally, other medical instruments such as scissors and forceps can also be placed loosely into the basket and can be disinfected and cleaned as well.

SONOMIC®

Set consisting of:

SONOMIC MC 1000, basket K 1000 MC, lid D 1000 MC

Code No: 2300

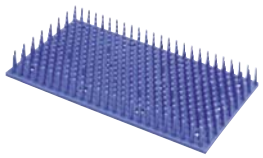
Technical data

Inner tank dimensions (l × w × d):	650 × 400 × 210/230* mm (*tank with oblique bottom)
Material:	Stainless steel AISI 304, 2 mm thick
Filling volume for cleaning:	35,0 litres
Outlet:	with turning handle
Transducers:	12 PZT large area transducers
Ultrasonic frequency:	40 kHz
Ultrasonic peak output:	2400 W
HF power:	600 W_{eff}
Preservation heating, program-controlled:	400 W
Current consumption:	2,9 A
Exterior dimensions (l × w × h):	860 × 490 × 415 mm
Weight with basket and lid:	40,0 kg

Accessories

Basket K 1000 MC with handles, stainless steel,
with holders for dripping over the oscillating tank
sieve tray 520 × 340 × 50 mm (l × w × d)
Code No: 3311

Lid D 1000 MC, plastic, transparent
protection against contamination
Code No: 3312



Silicone knob mat SM 1000 MC
for gentle storage of instruments in the basket
245 × 172 mm for K 1000 MC, 2 pcs
Code No: 3313

Consumables

Filter FI 1000

Packet	30 pcs	Code No: 3356
Packet	100 pcs	Code No: 3357

Adapter seals AD 1000

Packet	12 pcs	Code No: 3353
Packet	24 pcs	Code No: 3354
Packet	36 pcs	Code No: 3355

Adapter with seal and hose ADS 1000

Packet	1 pcs	Code No: 3350
Packet	12 pcs	Code No: 3351

Disinfection and cleaning concentrate

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 instruments and the oscillating tank must be guaranteed, even during intensive usage.

Many cleaning and disinfection agents can contain substances that attack stainless steel amid ultrasonic impact.

STAMMOPUR DR 8 concentrate has been especially developed for ultrasonic application and is marked CE according to the Medical Devices Directive (MDD).

It is environment-friendly and biodegradable.

Instrument disinfection and intensive cleaning

STAMMOPUR DR 8 - VAH/DGHM*-Certified

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 micro-surgical and MIS-instruments and endoscopic accessories.
Recommended by a known manufacturer of endoscopes.
Solution applicable under strain for 3 days.
Very high material compatibility, suitable for all materials. Non-odiferous.
Anticorrosive. Without aldehydes, chlorine, phenols. Bactericidal (incl. Tb.-B., helicobacter pylori), fungicidal, virucidal (Vaccinia, BVDV, HBV, HCV, HIV und Influenza A-Virus)
mildly alkaline pH 9.4 at 1 %.

Active agents in 100 g: 9.9 g bis(3-aminopropyl)dodecylamin, 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, 12/98; **HBV/HIV:** Prof. Dr. Frösner, München 8/99; **Vaccinia, BVDV, H5N1:** Prof. Dr. L. Döhner, Dr. D. Becher, Greifswald 8/06 und 9/06; **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.

Application with Ultrasound in the SONOMIC unit
5 min - 2 %**

Application without Ultrasound
acc. to VAH/DGHM
60 min - 1 %
30 min - 2 %**
15 min - 3 %

Volumes	**Code No.**
2-litres-bottle	972
5-litres-jerrycan	974
25-litres-jerrycan	936

* VAH Verbund für Angewandte Hygiene (Association for Applied Hygiene) DGHM Deutsche Gesellschaft für Hygiene und Mikrobiologie (German Society for Hygiene and Microbiology)

**Also inactivates Vaccinia, BVDV, HBV, HCV, HIV and Influenza A-Virus within the stated application time.

Use disinfectants safely. Always read the label and product information before use!

BANDELIN *electronic*
being specialised in manufacturing
ultrasonic units for disinfection
and cleaning.
Certified according to
EN ISO 9001 and EN ISO 13485
for medical devices.

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55 Years of Experience in Ultrasound Technology

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