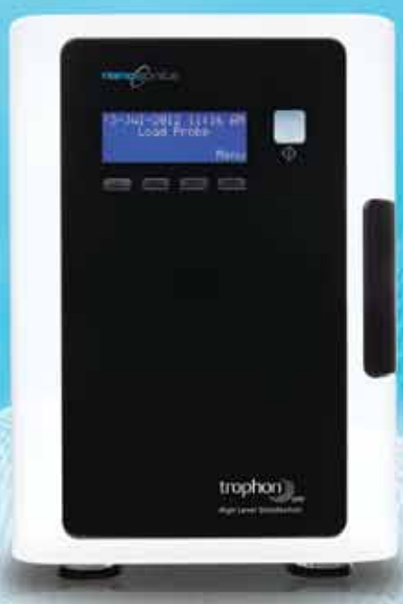


The next generation in ultrasound probe disinfection

trophon® EPR

nanosonics

trophon® EPR

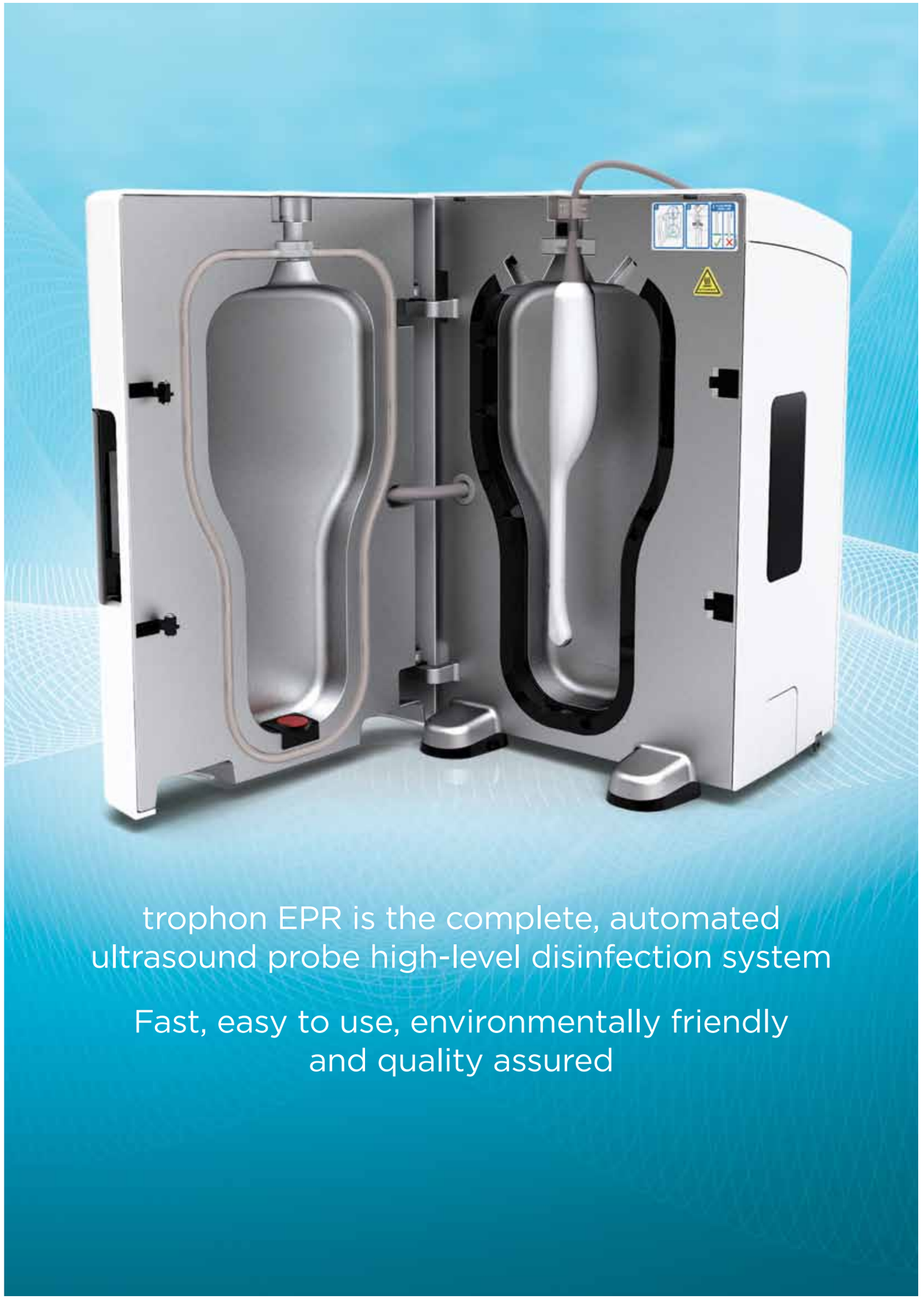
Automated disinfection for enhanced patient safety

The Robert-Koch-Institutes' processing guidelines stipulate the use of a protective cover in combination with a preferably automated disinfection process for ultrasound probes in contact with mucous membranes. Furthermore, disinfection agents used must be aldehyde-free and ensure bactericidal, fungicidal and virucidal efficacy.[1,2]

However, in a practical setting these recommendations may be difficult to implement. Traditional methods may also lack the ability to ensure a safe, consistent, reproducible and validated process.

As recent studies have demonstrated, a potential risk of cross-contamination by transvaginal probes exists[3,4,5], and therefore a safe and consistent disinfection process before each patient's examination must become a critical aspect for infection prevention.

trophon® EPR is an automated and validated system, which has been proven by accredited expert reports[6] to meet the processing guidelines of the Robert-Koch-Institute – for enhanced patient safety and improved infection prevention.



trophon EPR is the complete, automated ultrasound probe high-level disinfection system

Fast, easy to use, environmentally friendly and quality assured

trophon EPR – proven hydrogen peroxide based microbiological efficacy[6]

Test	Contaminant /Organism	Log reduction	Test Method	Test Laboratory
Bactericidal	S. aureus	6 log	Standardized test method validated in accordance with EN 14561	Institute of Medical Microbiology and Hygiene, Uni. Hospital Tuebingen, Germany, Prof. Dr. Peter Heeg
	E. hirae	6 log		
	P. aeruginosa	6 log		
Mycobactericidal	M. terrae	5 log	Standardized test method validated in accordance with EN 14563	Institute of Medical Microbiology and Hygiene, Uni. Hospital Tuebingen, Germany, Prof. Dr. Peter Heeg
	M. avium	5 log		
Fungicidal	C. albicans	5 log	Modified test method on the basis of EN 14562	AMS Laboratories, Australia
	A. niger	5 log		Biotech Germande, France; AMS Laboratories, Australia
Virucidal	Poliovirus	4 log	Modified test method on the basis of ASTM- E-1053	Biotech Germande, France; AMS Laboratories, Australia
	Herpes Simplex	4 log		AMS Laboratories, Australia
Virucidal (NanoNebulant)	Poliovirus	4 log	Test method according to RKI/DVV and EN 14476	MikroLab GmbH, Bremen, Germany, Dr. Jochen Steinmann
	Vaccinia Virus	4 log		
	Adenovirus	4 log		
	Polyomavirus	4 log		
Sporicidal	Geobacillus stearothermophilus	5 log	Modified test method on the basis of EN 14561	AMS Laboratories, Australia

RKI-guideline compliant, high-level disinfection
Nanosonics' unique patented disinfection technology generates a hydrogen peroxide mist ensuring consistent microbiological efficacy.

Fast, automated, workflow-friendly process
trophon EPR achieves high-level disinfection of the probe – including the shaft and handle – in just seven minutes, maximising your productivity. Simply place the pre-cleaned probe and a trophon Chemical Indicator disk in the chamber, close the system and press the start button.

Quality-assured consistency
Unique sensor technology validates each disinfection cycle is completed as specified. The in-process trophon Chemical Indicator provides further assurance of high-level disinfection.

Environmentally friendly by-products: water and oxygen
Small quantities of water and oxygen are generated as primary by-products. There are no toxic waste or residues.

No exposure to harmful chemicals
The disinfection cycle takes place in a fully automated, closed system, so you and your patients are never exposed to toxic, harmful chemicals.

Quick and easy cartridge replacement
Open the side door, remove the empty NanoNebulant cartridge and insert a new cartridge. The recyclable cartridges can be disposed with standard waste.

Convenient point-of-care solution
A compact trophon EPR system located near each ultrasound system provides on-the-spot probe disinfection.

Exceptional transducer material compatibility
The trophon EPR system and process are compatible with most ultrasound probe sizes, shapes, and materials.


High-level disinfection technology

Fast, seven-minute process


Quality-assured consistency of process


Environmentally friendly by-products: water and oxygen


No exposure to harmful chemicals


Cartridge replacement is a clean and easy process

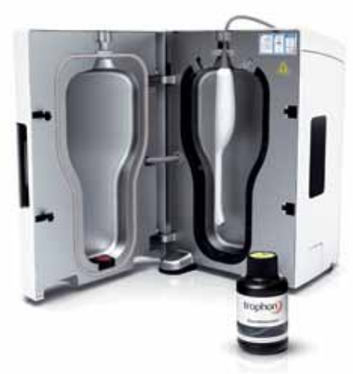

Convenient point-of-care solution


Exceptional probe material compatibility

Easy operation

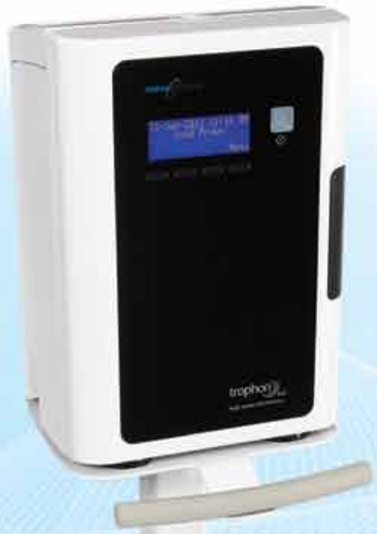
trophon EPR achieves high-level disinfection in just a few steps:

1. Place the pre-cleaned and dried probe into the disinfection chamber, insert a trophon Chemical Indicator disk and close the door.
2. Press the start button.
3. At the end of the cycle, open the trophon EPR door and remove the probe.
4. Wipe the probe with a lint free cloth.
5. Confirm successful high-level disinfection by comparing the trophon Chemical Indicator disk to the colour assessment chart.
6. Print a disinfection label using the trophon Printer.



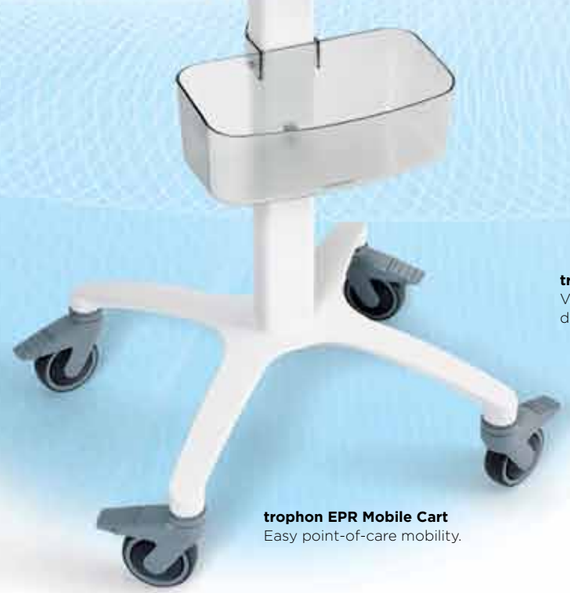
trophon EPR automated disinfection and traceability solution

trophon Printer
A completely integrated traceability solution.



trophon EPR NanoNebulant Cartridge
Quick and easy to replace.

trophon EPR Wall Mount
Ideal for clinics with space constraints.



trophon EPR Mobile Cart
Easy point-of-care mobility.

trophon Chemical Indicator
Validate successful high-level disinfection.

trophon EPR system specifications

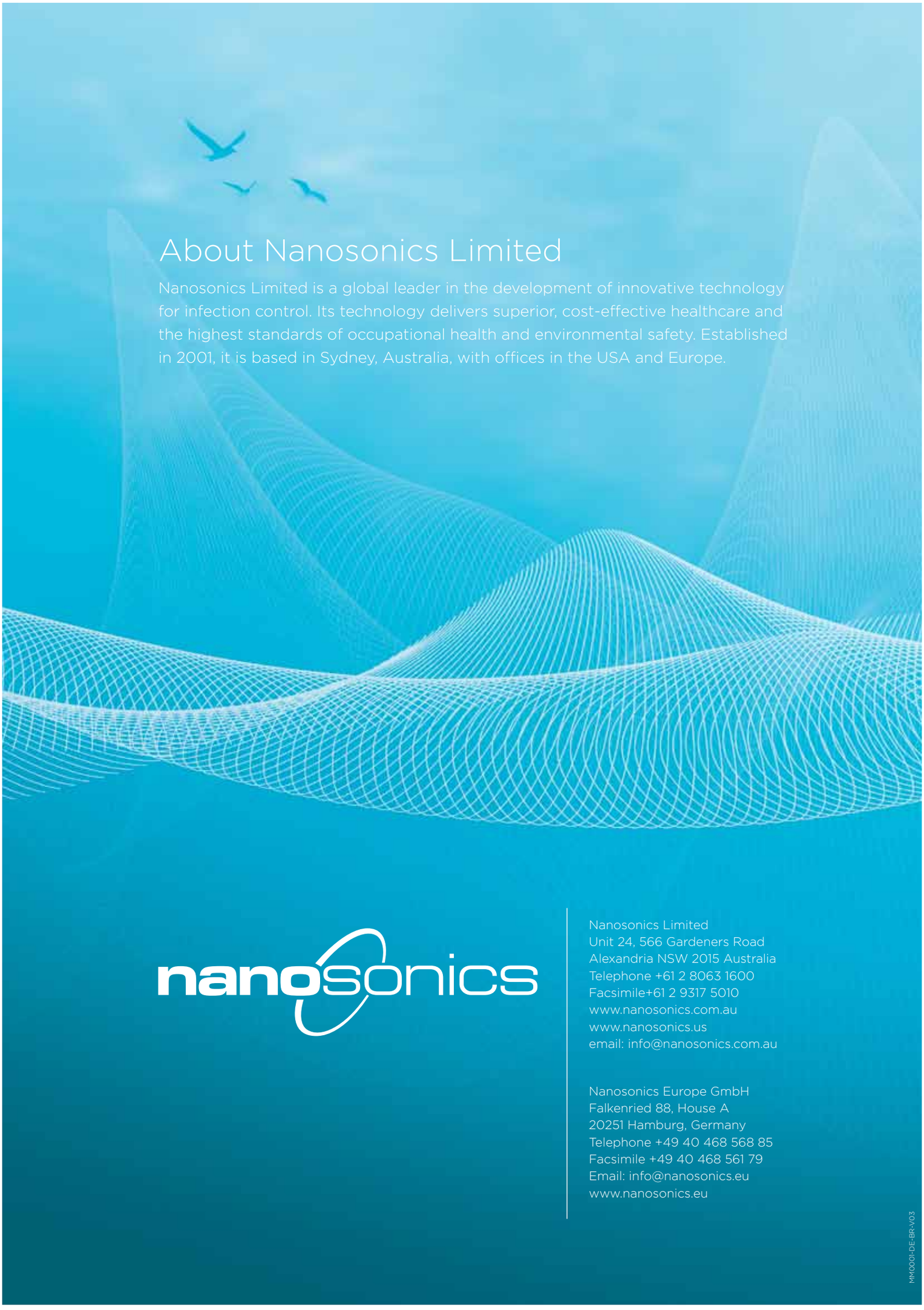
System Specification	
Cycle Time	7 minutes
Cycle Verification	Via User Screen, trophon Chemical Indicator and Electronic Log.
NanoNebulant	Concentration 35% Volume – 80 ml Shelf Life – 2 years
trophon Chemical Indicator	The trophon Chemical Indicator is used exclusively for monitoring the high-level disinfection process when placed within the trophon EPR chamber. The colour of the indicator changes from red to yellow when exposed to hydrogen peroxide.
Probe Compatibility	A validated probe list is available at www.nanosonics.eu. For any probe not listed, please check with your probe manufacturer regarding compatibility with the trophon EPR.
Electrical Specifications	
Electrical Requirements	Input Voltage: 110V/240V – (50-60 Hz) Input Current: 5 Amp
EMC Compliance	This device has been tested and found to comply with the limits for emission requirements (Electro-Magnetic Interference) pursuant to EN61000-4-2; 2005 & EN 61000-4-3: 2006. CISPR 11 Group 1 Class A equipment to CISPR 16-1 & CISPR 16-2, EN61000-4–2: 2005 & EN 61000-4-3: 2006
Mechanical Specifications	
trophon EPR	490mm x 345mm x 345mm / 17 kg

Product Codes	
trophon EPR	
trophon EPR	N00020-EU5
trophon EPR Wall Mount (1 per box)	N00017-EU1
trophon EPR Cart (1 per box)	N00041
Consumables	
NanoNebulant (12 x 80 mL bottles)	N00040
trophon Chemical Indicator (300 disks per box)	N00044
trophon Printer	
trophon Printer	N00048-EU5 (including power cable and printer cable)
trophon Printer Label Roll	N00049

Warranty: 12 months

For service and warranty, please contact your local distributor or sales representative.

1. Anforderungen an die Hygiene bei der Aufbereitung von Medizinprodukten, KRINKO Empfehlung, Bundesgesundheitsbl 2012, 55:1244-1310.
2. Arbeitskreis Viruzidie (2004) Prüfung und Deklaration der Wirksamkeit von Desinfektionsmitteln gegen Viren. Stellungnahme des Arbeitskreises Viruzidie beim Robert Koch-Institut (RKI) sowie des Fachausschusses "Virusdesinfektion" der Deutschen Vereinigung zur Bekaempfung der Viruskrankheiten (DVV) und der Desinfektionsmittelkommission der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM). Bundesgesundheitsbl 2004, 47:62-66.
3. Ma et al.: Transvaginal ultrasound probe contamination by the human papillomavirus in the emergency department, Emerg Med J, 2012.
4. Leroy S.: Infectious risk of endovaginal and transrectal ultrasonography: systematic review and meta-analysis, J Hosp infect, 2012.
5. Casalegno et al.: High Risk HPV Contamination of Endocavity Vaginal Ultrasound Probes: An underestimated Route of Nosocomial Infection?, PLoS ONE, Oct 2012, Volume 7, Issue 10.
6. Please refer to reports as mentioned in the microbiological efficacy table on page 4. Expert reports can be provided upon request.



About Nanosonics Limited

Nanosonics Limited is a global leader in the development of innovative technology for infection control. Its technology delivers superior, cost-effective healthcare and the highest standards of occupational health and environmental safety. Established in 2001, it is based in Sydney, Australia, with offices in the USA and Europe.

nanosonics

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