

PREVENTING THE RISK

of viruses, spores, fungi
and bacteria



Steam as
a sanitiser.



► Healthcare

Hospitals, dentists,
nursing homes, etc.



► Transport

Trains, ships, airplanes,
buses, etc.

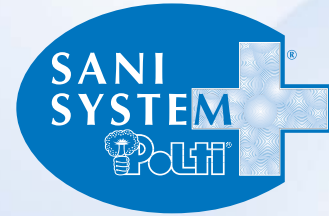


► Public places

Schools, restaurants,
hotels, airports, etc.



SANITISING HEALTHCARE ENVIRONMENTS



The presence of high numbers of people in close proximity to one another encourages the proliferation of micro organisms that are potentially harmful to humans, such as bacteria, viruses, spores and fungi. These air-borne organisms spread, attach themselves, multiply and contaminate environments, giving rise to an increased risk of infections. Healthcare environments are, of course, those most exposed to the risk of cross-infections due to

conditions that promote the build-up of pathogenic micro-organisms. Public places, dental surgeries and transport systems, also present a risk of transmission of infections from person to person. In some environments subject to compliance with specific hygienic and sanitary rules (e.g. food-processing companies) it is also essential to keep the level of microbial contamination below any legal limits.

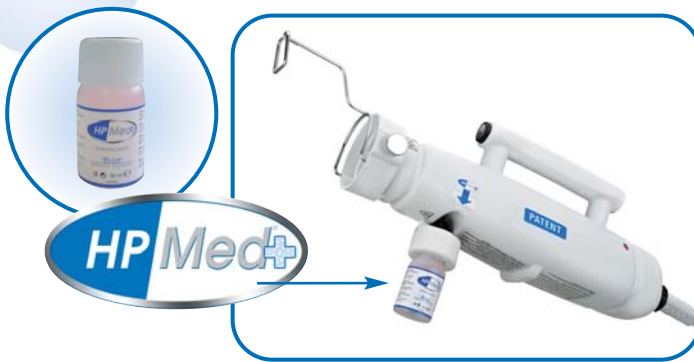
The Sani System sanitising method should be used whenever and wherever microbiological contamination has to be kept under control and reduced to the lowest possible levels.

Polti Sani System, **patented world-wide** by Polti S.p.A., was developed on the basis of studies conducted in cooperation with the Faculty of Medicine and Surgery of Pavia University and is

an electro-medical device for sanitising surfaces with a risk of biological contamination (**it is a class 2A medical device intended for professional use**).

OPERATING PRINCIPLE

Sani System delivers **super-heated, saturated atomized steam** at high-temperature (180°C) **in combination with HPMed sanitising agent**. Polti Sani System lowers the bacterial, fungal and viral load on surfaces and fabrics to which it is applied, in a few seconds. This enables the risk of cross-infections to be reduced rapidly. Its unique feature produces steam at a higher temperature in an expansion chamber (world-wide patent) in order to atomize it. Effectively, steam quickly evaporates from the treated surfaces without leaving any residual moisture behind. The mixture of steam and HPMed **can be released in the presence of people**. It does not require the operator to come into contact with the surfaces to be sanitised. This eliminates any risk of contamination by or towards the operator.

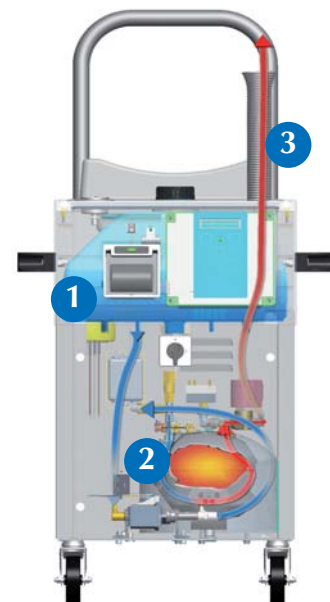


Lastly, it does not cause any damage to nor does it alter the surfaces or fabrics treated. The steam covers the whole surface, even the least accessible areas that would be difficult to reach using traditional methods, guaranteeing total sanitisation of the contaminated area.

OPERATING PATTERN

Polti Sani System has an automatic system of transferring water from the tank (1) into the pressurised boiler (2), where it reaches a pressure of **4 to 6 bars**. This can be easily monitored thanks to a pressure indicator. Inside the boiler the water is transformed into steam.

The steam then passes through a monotube (3) and reaches the delivery nozzle. The nozzle has a patented system consisting of a controlled-expansion heat-exchanging device that heats the steam further, bringing it to a maximum temperature of 180°C.



WORLD-WIDE POLTI PATENT

**180°C
OVER-HEATED
SATURATED STEAM**

The single-dose bottle of HPMed sanitising solution can be connected to the bottom part of the delivery nozzle. Mixed with the steam, HPMed acts as an adjuvant to the sanitising action of steam.

CLINICAL TESTS

Polti Sani System has been subjected to numerous laboratory tests and clinical studies, both in Italy and abroad.

The reduction of bacterial, fungal and viral contamination due to the use of Sani System has been certified on the basis of in vitro tests or in standard operating conditions in several types of environment and on many different surfaces.

Following are some of the laboratory tests and clinical studies confirming the safe use and effectiveness of Sani System. Results have shown that **it is possible to obtain better results with this innovative sanitising method than with traditional methods.**

Sanitising in dentists' surgeries

Department of Morphological, Eidological and Clinical Sciences Pavia University, Italy

The steam generated by Polti Sani System, combined with HPMed, **eliminated the Staphylococcus and Streptococcus bacterial loads** present **on the dental units** treated.

Sanitising in a hospital and comparison with conventional disinfection methods

Orthopaedics and Traumatology Unit and Microbiology Unit, San Carlo Borromeo Hospital, Milan, Italy

Sani System proved to have an activity in respect of several gram-positive and gram-negative bacteria and various types of fungi. Its antimicrobial activity has been found on equipment, in rooms and on inert materials such as plastic, metal and glass.

In standard operating conditions, sanitization carried out with Sani System lead to a **reduction of the total microbial load by 91.6%**, compared to 88.8% using conventional methods (sodium hypochlorite solution for all surfaces with the exception of metal surfaces, on which an 0.5 % polyphenol solution was used).

Evaluation of the reduction of the microbial load in a microbiology laboratory

Istituto Cantonale di Microbiologia, Bellinzona, Switzerland

Sanitization with Sani System was found to be **effective to reduce the bacterial load** on a work surface previously contaminated with the following micro-organisms: **Escherichia coli, coagulase-negative Staphylococcus, Klebsiella pneumoniae** and **Proteus mirabilis**.

Evaluation of activity on MRSA

Istituto Cantonale di Microbiologia, Bellinzona, Switzerland

The **bactericidal activity** of Sani System **in respect of two strains of Methycillin-resistant Staphylococcus Aureus (MRSA)** has been analyzed on different kinds of surfaces. The use of Sani System for 30 seconds has proved to be effective in sanitising different materials such as stainless steel and melamine table tops, with a **reduction of the bacterial load by 4 logarithms**, while on ceramic surfaces, a bacterial residue was found for the most resistant strain of MRSA.

Evaluation of acute inhalation toxicity

Chemservice Laboratory, Milan, Italy

The results obtained by means of in vivo laboratory tests of acute inhalation toxicity on rats have shown that the sanitising solution **HPMed does not result as classified** according to the GHS (Globally Harmonised System) classification and labelling system at the highest concentration that can be reached ("Unclassified, because no effects were observed at the maximum achievable concentration").

Dermatological evaluation study

Chelab Laboratory, Treviso, Italy

The results obtained with patch tests used for examining the skin compatibility in healthy volunteers showed that the sanitising solution **HPMed**, applied in non-occlusive conditions to the healthy skin of 20 volunteers caused an average irritation index of nil and did not therefore result as classified according to the GHS (Globally Harmonised System).

Effectiveness of Polti Sani System in reducing microbial load on inanimate surfaces

Swinburne University of Technology, Australia

A **30 seconds nebulising** of Polti Sani System was **effective in reducing the microbial load by 100%** for representative Gram positive bacteria, Gram negative bacteria, filamentous fungi and yeasts. A **30 seconds nebulising reduced** the load of bacterial **endospores by 97%**.

Evaluation of the virucidal effectiveness (H1N1) of the Polti Sani System

Biolab Laboratory Biolab, Vimodrone (province of Milan), Italy

The virucidal effectiveness of the Polti Sani System was evaluated in accordance with European standard EN 14476. The test, carried out by the Biolab Laboratory in Vimodrone (province of Milan) showed that the Sani System was even more effective than required by European standards in lowering the viral load of the H1n1 virus. Polti Sani System was able to **lower the viral load by over 99.99 %** in only 15 seconds, thus obtaining a reduction in excess of 4 logarithmic orders.

PRODUCT RANGE

The Sani System product range currently consists of two machines and a sanitising solution (HPMed). The difference between the two products is that in addition to all the features of Polti Sani System in the standard version, Sani System Check has an electronic system for controlling functions and certifying the sanitising operations.

Sani System Check is the ideal system for sanitising facilities which require a high level of sanitization and accurate control of these operations. This appliance has a sophisticated electronic system, allowing operators to programme and control the functioning of Sani System and to confirm by print out that the sanitising activity has been completed.

With the special RFID (Radio Frequency Identification) technology and with the keypad the operator can choose one of the pre-defined programmes, depending on the size of the area to be sanitised. Once the sanitization is completed, a confirmation is printed out including : Serial number of the machine, User ID, Date, Program used, Area, Start time, end time and length of operation in minutes, a check that the program has been completed and that the machine has been correctly used.



SUPPLIED WITH BOTH MODELS



Adapter.



Spacer.



12 HPMed 50 ml single-use bottles (HPMed is an hydro-alcohol solution containing sodium metasilicate and sodium carbonate).

THE ADVANTAGES OF USING SANI SYSTEM

Effective: It lowers the bacterial, fungal and viral load on any type of surface.

Rapid: Spraying for 30 seconds per square meter is sufficient to eliminate the microbiological contamination from surfaces.
The dry atomized steam evaporates within 30 to 45 seconds without leaving any residual behind. There is no need to use conventional chemical disinfectants.

Safe: The mixture of steam and HPMed can be released in the presence of people. In addition, it does not require any contact with the surfaces to be sanitised, and therefore eliminates any risk of cross contamination. HPMed has been subjected to skin tests.

Total action: It reaches all surfaces, even the most inaccessible corners that are difficult to reach with conventional methods, guaranteeing total sanitising of all contaminated areas.

Inexpensive: It reduces the costs of chemical surface disinfectants and reduces the costs of infection related consequences.

TECHNICAL DATA

SANI SYSTEM



MAIN FEATURES

- ▶ Steam nozzle with worldwide Polti patented controlled expansion chamber to achieve a high temperature steam outflow.
- ▶ 180° super heated dry steam outflow.
- ▶ Auto refill feature for unlimited operating time.
- ▶ Continuous steam quantity adjustment from 0 to 100 g/min.
- ▶ HPMed minimum guaranteed consumption: 0,4 ml/min.
- ▶ Max pressure: 6 bar.
- ▶ Pressure gauge.
- ▶ Boiler with auto-filling system for unlimited operating time.
- ▶ Reinforced Aisi 316 Stainless steel boiler.
- ▶ Connection for HPMed single-use bottle placed under the steam nozzle.
- ▶ Manual cable winder on the back of the machine.
- ▶ Flex hose length: 2.5 m.
- ▶ Electrical cable length 5 m.
- ▶ Stainless steel handle for easy transport.
- ▶ 4 anti-trace revolving wheels (1 antistatic) with brakes.
- ▶ Total power: 2500 Watt max.
- ▶ Dimensions (LxWxH): 47x45x90,5 cm.
- ▶ Net weight: 27,5 Kg.

SANI SYSTEM CHECK



MAIN FEATURES

- ▶ Electronic system for all functions' management and control.
- ▶ 4 preset sanitization programmes.
- ▶ User identification system through RFID cards.
- ▶ Built-in thermal printer.
- ▶ Numeric interface with back-lit LCD display.
- ▶ Steam nozzle with worldwide Polti patented controlled expansion chamber to achieve a high temperature steam outflow.
- ▶ 180° overheated dry steam outflow.
- ▶ Auto refill feature for unlimited operating time.
- ▶ Continuous steam quantity adjustment from 0 to 100 g/min.
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- ▶ Flex hose length: 2.5 m.
- ▶ Electrical cable length 5 m.
- ▶ Stainless steel handle for easy transport.
- ▶ 4 anti-trace revolving wheels (1 antistatic) with brakes.
- ▶ Total power: 2250 Watt max.
- ▶ Dimensions: (LxWxH) 47x45x107 cm.
- ▶ Net weight: 29 Kg.

www.sanisystempolti.com

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