



Vaporised Hydrogen Peroxide  
Room Sterilisators  
**PEROXMIN**



**CLEANROOM • HVAC • SPECIAL PRODUCTS**

**TEKNO ELEKTROMEKANİK MÜHENDİSLİK SAN. VE TİC. A.Ş.**

## Description of the HTL-PEROXMIN Hydrogen Peroxide Gas Generator

The HTL-PEROXMIN Hydrogen Peroxide Gas Generator has been designed for the disinfection and sterilisation of smaller cubicles like Laminar Airflow Cabinets, Isolators and Disinfection Locks, but can be used also for smaller rooms up to 100m<sup>3</sup> volume. It has quick connectors for an easy attachment of the gas circulation lines. The apparatus is mounted on wheels for easy movement.



### Explanation on how the HTL-PEROXMIN works:

The HTL-PEROXMIN has an integrated air dryer based on a silica gel cartridge with an integrated regeneration heater. The cartridge is always freshened as the first step within the disinfection cycle, an operation which takes about 15 minutes. This ensures that the consecutive air drying step is most efficient and very quick. Minimal humidity is the prerequisite for achieving high H<sub>2</sub>O<sub>2</sub> gas concentrations within the room and optimum disinfection efficiency.

After the drying step, the evaporation of H<sub>2</sub>O<sub>2</sub> is started. This is carried out by a temperature controlled evaporator unit fitted to an external heater for warranting failure-free operation and easy maintenance. The evaporation rate can be set up to 12 grams of 35% H<sub>2</sub>O<sub>2</sub> per minute (technical grade) at the maximum fan speed (appr. 60m<sup>3</sup>/hour) thus allowing the disinfection of little disinfection locks as well as rooms of a volume of up to appr. 100m<sup>3</sup>. For the larger rooms additional gas distribution devices are necessary (fans). The air circulation can also be set to elevated temperatures by an internal heater, thus allowing a higher H<sub>2</sub>O<sub>2</sub> concentration within the gas stream and, consequently, the shortening of the disinfection time.



A unique feature of the HTL-PEROXMIN is the integrated overpressure valve and catalyser combination. This device releases the additional gas volume which results from the evaporation of the liquid  $H_2O_2$  and the gas expansion by warming. Thus the development of overpressure within a closed chamber and probable leaking during the disinfection period is prevented. The excess  $H_2O_2$  gas is degraded by the integrated catalyser to Water and Oxygen and released to the ambient.

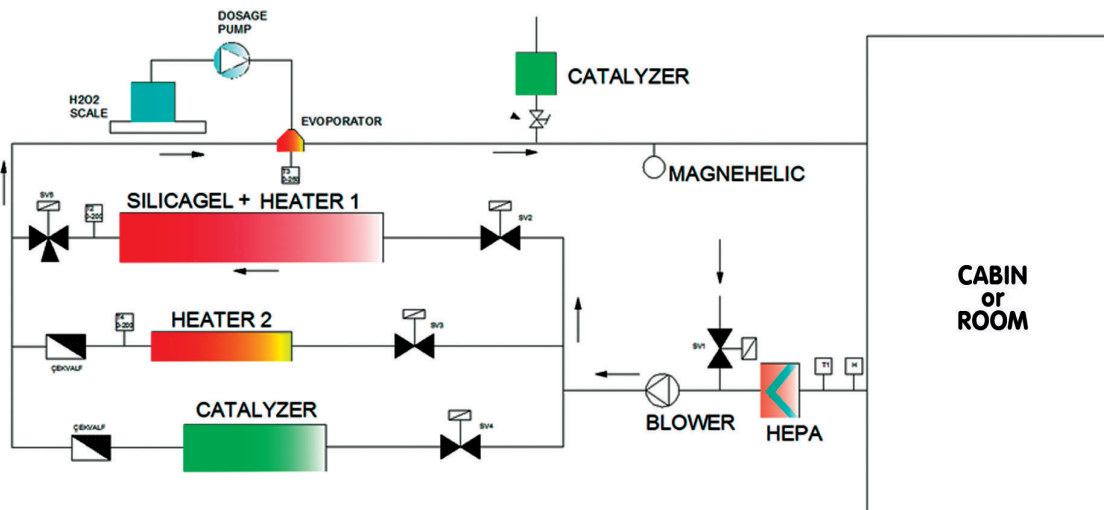
After the disinfection step, the circulating gas is directed over an efficient catalyser unit which cracks all  $H_2O_2$  gas into its safe degradation products Water and Oxygen. Therefore, no gas outlet to the exterior is necessary.

The complete cycle is computer controlled by a high-quality programmable logic controller (PLC) which is manipulated by a multi-colour touch screen panel by means of an easy-to-use interactive block diagram. The current operation and its value can be seen on the screen. Additionally, an alarm is generated for malfunction and out of range conditions.



All operation parameters of the cycle can thus easily be set and are protocolled by a GMP compliant printer output function.

Different cycles can be stored and modified only by persons having the respective authorisation. This is accomplished by three access levels protected by passwords.



*Customer-focused, contemporary, economical and fast solutions ...*

## Technical data of HTL - PEROXMIN

Properties	Value/Explanation
<i>Dimension w x d x h (mm)</i>	<i>730 x 920 x 790</i>
<i>Weight</i>	<i>87 kg</i>
<i>Size for shipment</i>	<i>1 std. Euro-pallet</i>
<i>Electrical connection</i>	<i>230 V/50 Hz , 16 A</i>
<i>Power consumption max. kW</i>	<i>2.8 kW</i>
<i>Quick connectors for the gas circuit</i>	<i>Kamlock coupling 1" male and female</i>
<i>Quick connectors position</i>	<i>On the rear side, other positions on request</i>
<i>Control system</i>	<i>PLC+Touchmatic multicolour panel</i>
<i>Check balance</i>	<i>KERN FOB6K2LM (6000g /2g), with verification</i>
<i>Output</i>	<i>3" thermal printer</i>
<i>Sterile filter</i>	<i>Vokes Hepatex H13 ( Optionally H14)</i>
<i>Blower</i>	<i>EBM-PAPST 60 m3/h</i>
<i>Valves</i>	<i>Electrically driven</i>
<i>Humidity sensor</i>	<i>Quick responding Driesen&amp;Kern SK470</i>
<i>Disinfection agent</i>	<i>Hydrogen peroxide 35% (395 g/l) standard grade</i>
<i>Dosing</i>	<i>PLC controlled peristaltic pump Range : 0,1-12 g/min</i>
<i>H2O2 holding container</i>	<i>Standard chemical can 1-5 liters (Suction tubing and aeration opening recommended; will be supplied together with a 2 liter can)</i>

## Options

**In-line measurement** of H<sub>2</sub>O<sub>2</sub> concentration by a Dräger Polytron 7000, integrated into the gas return piping.

**OEM-version for the integration into isolators, locks, etc. on specific request.**

### Representation for Europe:

Scheirer Consulting, Ing.Winfried Scheirer Herzogbergstrasse 105, 2380 Perchtoldsdorf, Austria.

www.htl-tekno.com e-mail: team@htl-tekno.com

Phone: +43 664 73 54 00 43 Fax: +43 1 86 925 87