



hdrOzone

Hydronium Heavy Molecule Sterilization Device HRF 3000 3S125

Datasheet

DEFINITION

HdrOzone, using dual sterilant technique, is a Hydronium Heavy Molecule Sterilization Device that performs material sterilization with hydronium, heavy molecules, radicals, hydroxyls, ions and plasma technique along with H₂O₂ and O₃ application, (such as HO₃, HO₄, H₂O₃, H₂O₄, HO₅, OOH, H₃O etc).

INTENDED USE OF hdrOzone HYDRONIUM STERILIZATION DEVICE

Used safely to sterilize all kinds of heat and moisture sensitive medical instruments, plastic, lumen materials, electromechanical instruments, surgical instruments, complex and long lumen materials such as single and multi-channel flexible endoscopes. Used safely for the sterilization of long, complex endoscopes and also multi-channel flexible lumen endoscopes with 4 channels and 4.5 m length. Has a sterilization effect up to diameter Ø2 mm and length 15 meters.

CLASS- TYPE	
TYPE (BLOCK)	Block Type Hydronium Heavy Molecule & Hydrogen Peroxide Low-Temp. Sterilizer
CLASS	Hydronium Heavy Molecule & Hydrogen Peroxide Low-Temp. Sterilizer Class (Class IIb)
STERILIZATION SPECIFICATION	Effective on Whole Microorganisms (All Bacteria Forms, Viruses, Fungi Forms) and All Prions.
MODELS	3S125
OPERATING MODE	Full Automatic/ Automatic Ventilation After Sterilization
HdrOzone HRF 3000 3S125 DEVICE DIMENSIONS	
STERILIZATION CHAMBER INNER DIMENSIONS	440x500x700 mm
DEVICE EXTERNAL DIMENSIONS	730x955x1980 mm
CHAMBER VOLUME (LITERS)	154 L / Available 131 L
PHYSICAL AND TECHNICAL SPECIFICATIONS	
CHAMBER MATERIAL	Stainless Steel 316
DOOR MATERIAL	5083 Al / 316 L
WEIGHT (KG)	430 / With Package 460
NUMBER OF TRAYS	3 Units
NUMBER OF TRAY AND SPECIFICATION	3 Units Stainless Steel 600x390x80 mm Shelf / 30 Kg Carrying Capacity
DOOR SPECIFICATION	Vertical Opening Sliding Door
DOOR OPENING AND OPERATING	Automatic and Optional Footswitch / Manual Lateral Closing
DOOR SEAL SYSTEM	Silicone Gasket
DOOR SAFETY	Sensor Protection/ Pneumatic Piston
EXHAUST FILTER	Oil Mist Traps
FRESH AIR FILTER	HEPA- There Is Also an Ag HEPA Filter At the Output of The Device.
CONDITIONING AND AERATION SPECIFICATION	Included
DEHUMIDIFICATION FEATURE	It Dehumidifies from the Loaded Material to Be Sterilized. The Device Also Has a High-tech Dehumidification and Drying System. Moist Materials are Dried In The Device and Sterilized Without Losing Time. The Device Can Sterilize moist, Long; Lumen Materials. The Sterilization Process Continues Uninterrupted.
OZONE GENERATOR	TEKNO MAR 0,6 kW Ozone Gas Generator
PLASMA GENERATOR	HRF COLD PLASMA (High Voltage RF Generator)
H₂O₂ SEPARATOR	TEKNO MAR 0,8 kW H ₂ O ₂ Steam Gas Generator
PLASMA ELECTRODE	Included / Condensative Featured Prism
PLASMA FEATURE & TYPE	Chamber Interior HRF (High Voltage + RF) Cold Plasma Technology
PLASMA POWER	Plasma Power 750 W
PRE PLASMA SPECIFICATION	Included / For drying purpose
PLASMA VACUUM SPECIFICATION	500-100 m Torr
OPERATING TEMPERATURE	It Can Be Adjusted Between 37-55 °C. The Fixed Program is 41 °C.
TEMPERATURE SENSORS SPECIFICATION	PT100
VACUUM SENSOR SPECIFICATION	10 ⁻³ Torr (1-3 Pcs)
HEATING TYPE	Homogeneous Plate Heaters
VACUUM PUMP	Automatic One Way, Two-Stage Lubricated Rotary Pump
VACUUM PUMP SUCTION LEVEL	10 ⁻³ Torr

CONNECTION / PIPE LINE FEATURES	QF Stainless Steel / PVC Connector
PROGRAM SPECIFICATIONS	
SOFTWARE	PLC / HMI
CONTROL PANEL SPECIFICATIONS	7" LCD / Touch Screen
MENU LANGUAGE	Turkish- English-Romanian- Danish-Russian and Others
STERILIZATION PROCESS	Vacuum, Injection, Diffusion, Ozone, Hydronium, Adsorption, Dilution, Plasma and Aeration Can Be Monitored.
PROGRAM MENU	Sterilization Run Programs, Date, Time, Temperature, Pressure, Program and Phases, Alarm, Service, Maintenance and Repair Options Can Be Followed and a Controlled Menu Is Available.
SAFETY	The Device Has a Security and Warning System. A Visual and Audible Warning is Given to The User.
FAULT CONDITION	In Case of Any Problem During Sterilization, The Cycle Is Cancelled Automatically. Then The Device Gives an Audible and Light Alarm. Through The Front Panel Display and The Printer, Given Information About the Cause of The Malfunction, What the Problem Is, The Error Codes and How to Solve It.
WARNINGS	H ₂ O ₂ Level, Humidity, Temperature, Vacuum Leakage, Maintenance Period
VALIDATION AND CALIBRATION PROGRAM	Validation and Calibration Setting Program Features are Available. Validation and Calibration Is Done Separately for Each Device by The Manufacturer.
PRINTER SPECIFICATION	Thermal Printer, 56 x 16 mm 15 m Standard Thermal Printer Paper. Gives Information About the Problems That Occur in All Stages of the Sterilization Process from The Printer Paper, What the Problem Is, How The Error Codes are Determined and Solved.
PASSWORD PROTECTION	There is a User Password Protection System. The Second Password Protection System is also Available for Service Purposes.
ABILITY TO INTEGRATE BARCODE READER	Included
RFID CARTRIDGE IDENTIFICATION (OPTIONAL)	There is an RFID Reader on The Device. It Checks Cartridge Compliance and Expiration Date from Each Sterilization Cartridge Label. / 13.56 Mhz
USB PORT / DATA TRANSFER	Included (Reporting and Data Transfer Can Be Taken.)
CONNECTION TO NETWORK SYSTEM OF HOSPITAL	Included
REMOTE ACCESS	Included
ABILITY TO STERILIZE ENDOSCOPE	Included
CATHETER STERILE SPECIFICATION	Included (∅1 mm x L1350 mm) (Dual End Open)) / by Standards
HdrOzone STERILIZATION DEVICE OPERATING PROGRAMS	
HDROZONE DEVICE OPERATING PROGRAMS	There are 2 Programs in HdrOzone Heavy Molecule Sterilization Spec. There are 3 Programs in the Hydrogen Peroxide Plasma Sterilization Spec.
HYDROGEN PEROXIDE PLASMA STERILIZATION SHORT OPERATING PROGRAM SPECIFICATION	Operates With H ₂ O ₂ . The Operating Time Is 27 Minutes. Used For Single Material Sterilization in Emergency Situations. The Lumen Length Limit Is Around 135 cm. Operates with a Single Cycle. The Safety of Sterility Should Be Checked.
HYDROGEN PEROXIDE PLASMA STERILIZATION LONG OPERATING PROGRAM SPECIFICATION	Operates With H ₂ O ₂ . The Operating Time Is 45 Minutes. Used At Full Load For Separated Similar Group Materials. Sterilization In Lumen Material and Mixed Load Is Not Preferred in This Program. Operates With Double Cycle.
HYDROGEN PEROXIDE PLASMA STERILIZATION LUMEN OPERATING PROGRAM	Operates With H ₂ O ₂ . The Operating Time Is 60 Minutes. Used For Lumen Materials Such as Rigid and Flexible Endoscopes. Mixed Load Is Not Preferred In This Program. Operates With Double Cycle.

HDROZONE HYDRONIUM STERILIZATION LOAD PROGRAM	Operates With Hydronium+H ₂ O ₂ +O ₃ . The Operating Time is 70 Minutes. Used For Rigid and Flexible Endoscopes in Case of Long Lumen Materials at Full Load and Mixed Load. Used Safely for Sterilization of All Products Like; Rigid Channel Instruments and Single / Multi-Channel Endoscopes (Inner Diameter ≥Ø1 mm Length ≤ 2500 mm / Inner Diameter ≥Ø2 mm Length ≤ 4500 mm ((Dual end open))).
HDROZONE HYDRONIUM STERILIZATION LONG LUMEN PROGRAM	Works with Hydronium+H ₂ O ₂ +O ₃ . The Operating Time is 95 Minutes. Mixed Loading is Done in all Sizes, Diameters and Lengths. No Need for Product Classification and Sizing. Used for Rigid and Flexible Endoscopes in Case of Very Long Lumen Materials at Full Load and Mixed Load. Used Safely for Sterilization of All Products Like; Long Single / Multi-Channel Flexible Endoscopes, Tubing Lumens (Inner Diameter ≥Ø 0.1 mm Length ≤ 2500 mm /Inner Diameter ≥Ø2 mm Length ≤ 15000 mm ((Dual end open)) Inner Diameter≥ Ø 0,7 mm Length 500 mm Steel Material).
STERILE AGENT SPECIFICATION – DUAL STERILANT	
EXTERNAL OXYGEN CONNECTION	Hospital Type Medical Oxygen ≤90%
H₂O₂ CARTRIDGE SPECIFICATION	40-60% H ₂ O ₂ / min. 90% Medical Oxygen. 150 cc – 250 cc / Safety Valve Cover
SHELVE LIFE OF CARTRIDGE	6 Months Under Storage of 15-25C° Temperature.
H₂O₂ WASTE DRAINAGE SPEC	Included (1Lt Disposable)
O₂ (OXYGEN)	Between %85 - %99
DOCUMENTS & TESTS	
CE CERTIFICATE	MDD 93/42/EEC- 2007/47/EC
QMS SYSTEM	EN ISO 13485:2016, EN ISO 9001:2015
LVD / EMC TEST REPORTS	EN 60601-1/En 60601-1-2
VALIDATION TEST	EN ISO 14937 Certificates- HygCen Austria GmbH
DOMESTIC GOODS CERTIFICATE	Included
TECHNOLOGICAL PRODUCT EXPERIENCE CERTIFICATE	Included
CERTIFICATE OF FREE SALE	Included
TEYDEB PROJECT SUCCESS CERTIFICATE	Included
LUMEN MATERIAL STERILIZATION TEST	Included - HygCen Austria GmbH
RESIDUE TEST	FTIR TEST
CORROSION TEST	SEM TEST
PRION TEST	ELISA TEST
DEVICE TYPE TEST	Included - HygCen Austria GmbH
INSTALLATION REQUIREMENT	
ELECTRIC INFORMATION	220-230V AC 50-60 Hz
PROTECTION CLASS	IP20
POWER CONSUMPTION	Rated Burden 6,7kW/ Per Cycle 2,7kW
MAXIMUM POWER CONSUMPTION	3200 W
EXHAUST	1" External Atmosphere Connection
MAINTENANCE	
VACUUM PUMP AND MAINTENANCE PERIODS	6 Months (300 Cycle) and 1 Year (600 Cycle) for Vacuum Pump Along With Periodical Maintenance.