VERTISA

PROMED P500
PRE-SHREDDING MEDICAL WASTE STERILIZATION SYSTEM

VERTISA
MEDICAL WASTE STERILIZATION SYSTEMS

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PROMED P500 MEDICAL WASTE STERILIZATION SYSTEM

Sharp Waste

Hypodermic, intravenous, other needles, syringes, infusion sets, scalpels, pipettes, knives, blades, and broken glass.

Chemical Waste

Waste containing chemical substances from laboratories (not chemically neutralized).

Pathological Waste

Human tissues, organs, or body fluids; unused blood products.

Infectious Waste

Waste contaminated with blood, other body fluids, laboratory cultures, microbiological stocks, waste that has human excreta, and other materials.

Pharmaceutical Waste

Pharmaceuticals that are expired or no longer needed; items contaminated or containing pharmaceuticals will be sterilized (not chemically neutralized).

WHY USE PROMED MEDICAL WASTE SYSTEMS ?

- Steam sterilization technology is the perfect alternative to incineration.
- All our sterilizers are eco-friendly with zero impact on the environment and the ecosystem.
- PROMED medical waste sterilizers only require water and electricity for operation.
- Condensed steam is the only liquid by-product; zero wastewater is produced.
- VERTISA guarantees ten years supply of spare parts and consumables.
- Our engineers provide on-site installation and training for the local staff.
- Two years warranty is standard with all our systems (can be elongated optionally).
- Accredited by HYGCEN Austria independent laboratory.
- Proven to be the most cost-efficient technology for treating infectious waste.
- Easy to operate even for non-skilled operators.
- Long-lasting and sustainable operation procedures.
- All our customers are assisted with technical and environmental performance records.

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Technical Features	Value
Size (L x W x H) (mm)	2250 x 2250 x 4200
Weight (Kg)	2500
Air Pressure (Bar max)	8
Electrical connection required (Kw)	19
Working Characteristics	**Value**
Sterilizing Capacity (Kg/ Hour)	150-175
Process Volume Capacity (Lt.)	750
Average Waste Density (Kg/m3)	100-150
Average Cycle Time (Min.)	35-45
Maximum Steam Flow (Kg/Hour)	320
Sterilization Efficiency (SAL)	8Log10
Consumption / Cycle	**Value**
Steam (Kg)	15
Electricity (Kw)	5**
Water (Lt)	None**
Special Consumables	None

** Electrical consumption of the sterilizer only
*** Water consumption of integrated steam boiler: 7 – 12 Lt./ Cycle

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PROMED P500 TECHNICAL SPECIFICATIONS

PROMED MEDICAL WASTE STERILIZATION GENERAL FEATURES

- Pressure container built of high-quality Stainless Steel
- Produced according to EU Directives PED 2014/68/EU, 2006/42/EC, 2014/30/EU&EU Norms EN285
- Simultaneous Shredding and Sterilization process for higher capacity output
- Automatic loading and unloading ramp for the autoclave carts
- Sophisticated automation control system with advanced reporting and monitoring software
- Online access via the internet for supervision and troubleshooting
- Automatic elevator system for easy loading
- No water consumption
- Low fuel and electrical consumption for integrated steam boilers equipped with state of the art steam regeneration system
- Turnkey solutions by providing Steam Boilers, Container Washers, Compactor Systems designed and manufactured in
- house for a complete solution

- Electrical Supply 380-400 V, 50-60 Hz

1 – PROMED P500 MEDICAL WASTE AUTOCLAVE TECHNICAL SPECIFICATIONS

Materials

The materials used for the tank and lids are all stainless steel type 321 quality (Astn USA Standart). The shredder is made of high-strength heat-treated quality steel, which has a high resistance to fatigue and attrition.

Quality control

The quality control is done according to the manufacturer's standard quality control.

General description

Nomination

PROMED P500 is sterilizing equipment for infected dangerous waste originating from public health activity

Field of utilization

PROMED P500 equipment is used for sterilization and decreasing the volume of waste originating from public health.

After shredding the hospital waste to an acceptable size, the sterilization is done by treating the waste and all inner components of the system with 138 °C steam for 10-15 Minutes. After the sterilization process, the waste is cooled down for safe handling. (Sterilization heat programable up to 145°C, also sterilization time and cooling temperature can be programmed upon request).

The discarded waste can be accepted as steril communal waste. (Minimum Sterilisation efficiency: 8 Log 10).

After sterilizing the waste with heat treatment, the PROMED P500 system decreases the volume significantly. Compared to the traditional processes, not only decreases the cost of dumping and the cost of transportation.

The process destroys the following micro-organisms:

-bacteria flores, microbacterias, fungus spores

-the neutralization of viruses

The equipment is suitable for the treatment of general medical waste.

Description of units of equipment

The units of the equipment are illustrated with the help of the following diagrams:

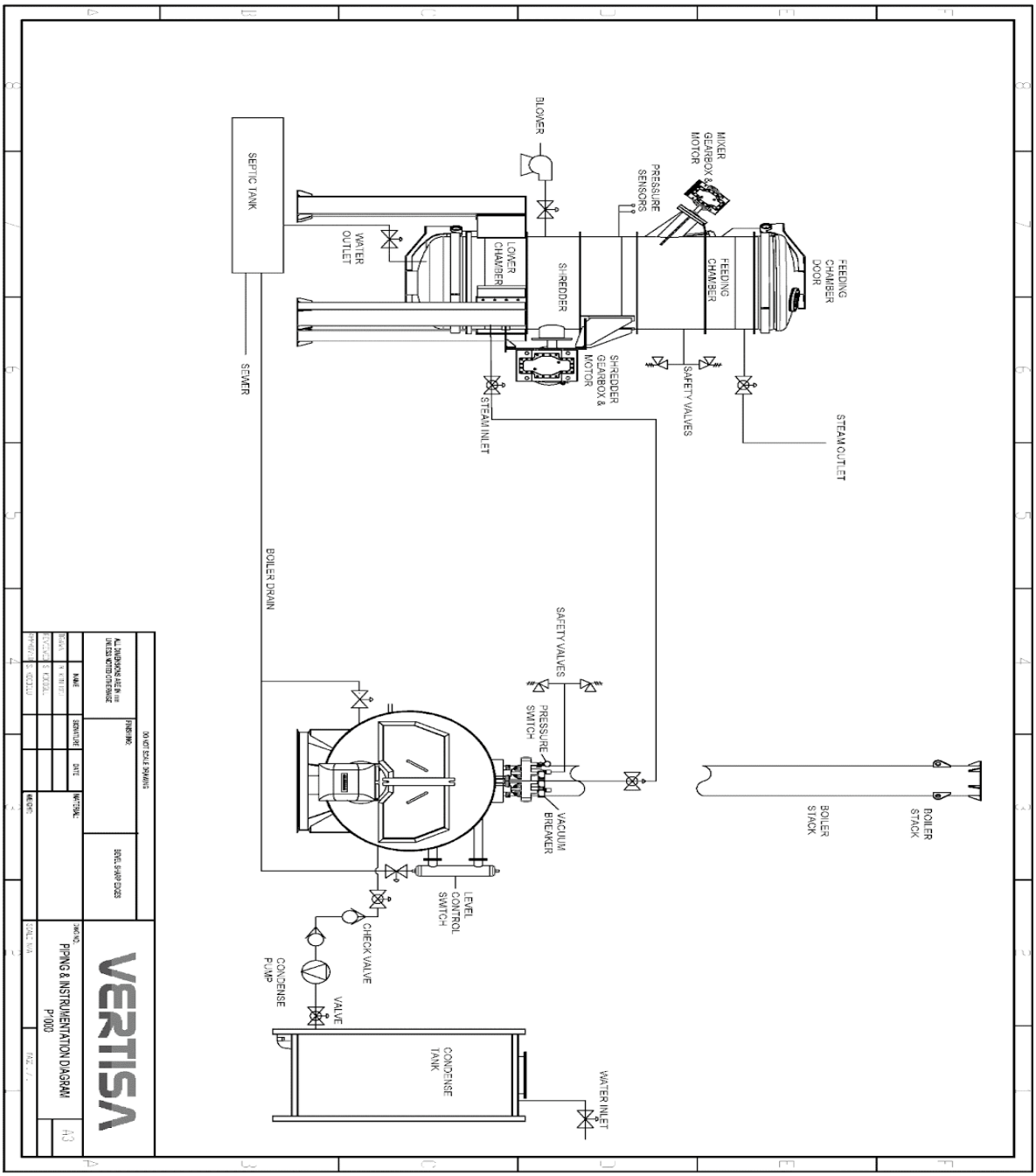


Diagram: a sketch of the machine with main nominations

*Air cooling system to be applied. Water cooling components will be supplied if a water-cooling system is requested by the customer.

OPERATING DESCRIPTION

The operating cycle of PROMED P500 equipment

After the execution of the previous cycle, the machine is in a sterilized and closed position.

With the pushing of the control button, the Control device permits the feeding. The machine eliminates the pressure of the sealing of the feeding lid, opens the safety ring and lock of the feeding lid and the Operator with the pressing of the permission button opens the feeding lid and stays steady for feeding.

Feeding is done with the help of the container elevator. The waste must be placed in the upper chamber.

While feeding, the shredder is switched off throughout the feeding process, for safety precautions.

After closing the upper chamber air-tight, the PLC unit starts the sterilizing program, which automatically operates till discharging (Except shredding start activation by button).

First,t the feeding lid ring and bolt close and the seal is put under pressure.

The machine checks the air-tight closing.
The first phase of the sterilizing program is the shredding, the shredder starts automatically, and with an optimum program cuts the waste into the required size. In the meantime, the waste arranging machine (mixer) moves the cartons and waste bags so that they continuously enter into the shredder.

The average shredding time depends on the composition of the waste. The end of the shredding is observed by pushing a control button by the operator.

If shredding is observed automatically for safety reasons the shredding continues for a couple of minutes, so that the waste may completely empty the knives and grate. But as this waste has been sterilized with the rest of the waste also, it does not matter if some waste remains in the shredder as this will be discharged with the next feeding.

After this stage, the temperature rises until the temperature in the center of the waste reaches 134 °C.

The temperature of the waste should at least remain at not lower than 134 C. degrees for 10 minutes.

The 134 C degree and the time limit of 10 minutes provide the guarantee of the sterilizing of waste.

Please note, that with the temperature the pressure also increases to proportional to temperature. The optimum sterilization and steam consumption are controlled by taking into consideration the quantity of steam, temperature, and pressure data.

After the sterilizing has been completed, begins the cooling process of the chamber by blowing pressurized air into the pressure vessel.
After reaching the cooling time, the following steps are made automatically:
draining of condensed water into the sewage
Pressure-equalizing
opening of safety ring and lock of discharging lid
blinking of the green lamp to allow Operator to open discharging lid

The opening of the discharge lid is done by the Operator by pushing the operating permission button.
When releasing the button the opening process while be interrupted for safety reasons, therefore the Operator must constantly push the button till the opening process is finished.

After this stage, the waste-collecting container must be positioned below the swing lid. The swing lid opens by constantly pushing the operating permission button.

After the opening of the swing lid, pushing the button again will start the shredder, so that the remaining sterilized and shredded waste should fall out – as much as possible. The shredder will stop by pushing the button again, and the closing process of the swing lid will begin by constantly pushing the button.

The Operator pulls out the container and by constantly pushing the operating button, closes the discharging lid.
When the lid is closed, the control device automatically closes the lid's safety ring and lock, and the sealing is put under pressure

With the completion of this process, the sterilizing cycle ends.

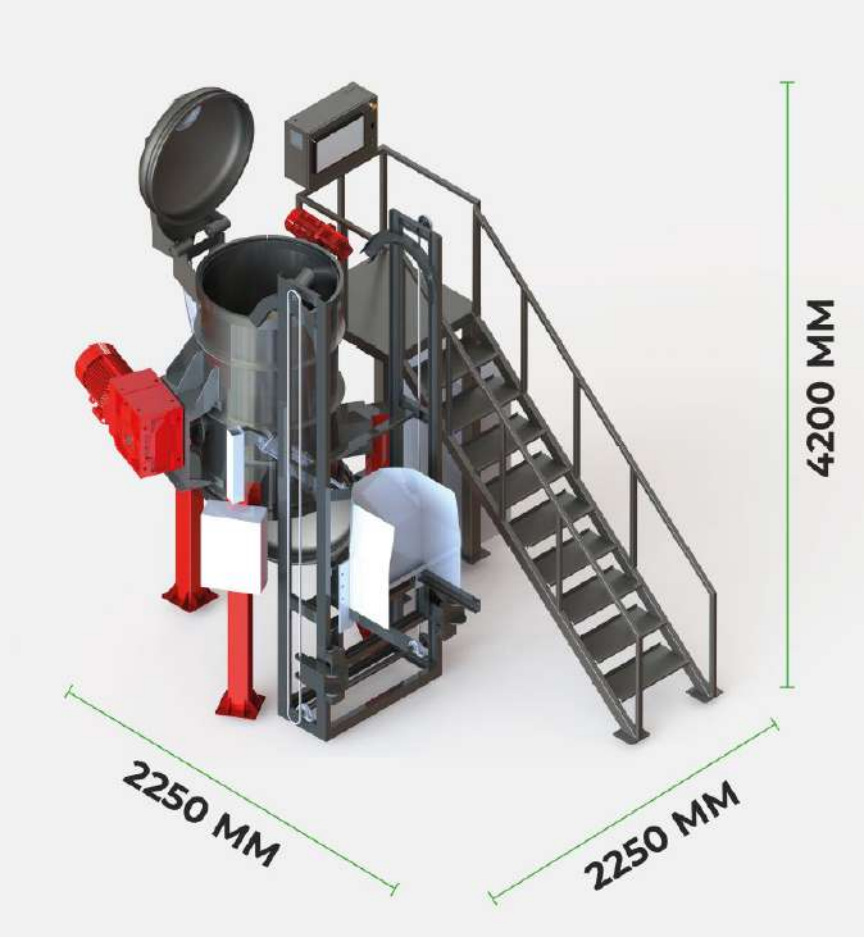
The whole cycle is controlled by the Control PLC, which not only controls the system but by the end of the program records, temperature, pressure, time, the sterilization value, etc.. of each phase.

Through the monitor of the PLC, the condition of the equipment can always be followed by the operator.

Energy balance

Average steam consumption for one cycle is 15 - 40 kg (depending on waste and environmental temperature)

The pressure vessel is insulated. The aim of heat insulation is to decrease temperature loss and to improve the average efficiency.



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2012 Aleppo / Syria

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2018 Marosvasarhely / Romania

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2018 Karaman / Turkey

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2018 Nicosia / Cyprus

•D.W. INDUSTRIES
2019 Mississippi / USA

•SAIF FOR GENRARL CONTRACTING
2019 Ramadi / Iraq

•DIV. ECO TECH SRL
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2019 Riyadh / K.Saudi Arabia

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2015 Muş / Turkey

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2015 Bingöl / Turkey

•ENVITEK LTD.ŞTİ.
2019 Iskenderun / Turkey

•VITALTEK PERU
2019 Cotahuasi / Peru

•MAYA COMERCIAL
2019 Guatemala City / Guatemala

•GENCLER
2019 Basra / Iraq (Comp. Sterilizer)

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2018 Kumasi / Ghana

•ANTIPOLLUTION SYS. ANSY
2018 Tripolis / Greece

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•EUROGET DE INVEST S.A
2018 Military Hospital / Ghana

•EUROGET DE INVEST S.A
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2017 Jinotepe / Nicaragua

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2017 Lima / Peru

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•VERTISA NICARAGUA
2017 Managua / Nicaragua

•ENVIROEQUIP S.A.
2017 Lima / Peru X 2 Unit

•EUROGET DE INVEST S.A
2018 Tepa / Ghana

•ENVIROEQUIP S.A.
2017 Cajabamba / Peru

•VERTISA NICARAGUA
2017 Leon / Nicaragua

•EUROGET DE INVEST S.A
2018 Twifo / Ghana

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QUALITY STANDARDS

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