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WHO WE ARE?

Vertisa has been founded in 2007 with having Central Office and Manufacturing facilities in Ankara, Turkey and in TG. Mures Romania. Vertisa USA central office responsible for representation and after sales services is located in Orlando, FL. USA.

Vertisa established modern Medical Waste Sterilization Facilities in more than **60 locations** and more than **20 countries** around the world.

We are the most experienced group in Turkey in both waste collection and the management of the sterilization facilities. **We collect monthly average 600 Ton of medical waste from all the health care facilities in ORDU, BALIKESİR, HATAY, ERZURUM, MUŞ and BİNGÖL provinces and dispose them in our medical waste sterilization facilities.**

Within our organization, we have doctors, engineers and trained personnel who are inquisitive and environmentally-conscious.

STERILIZATION AND TREATMENT FACILITY

ENVIRONMENTALLY FRIENDLY

- No hazardous emission
- No chemicals involved in the processes
- No radiation involvement or exposure
- Clean and environmentally friendly technology
- Low energy consumption

SAFE & MODERN

- Using the latest technology
- All safe equipments
- There is no waste contact between operations.

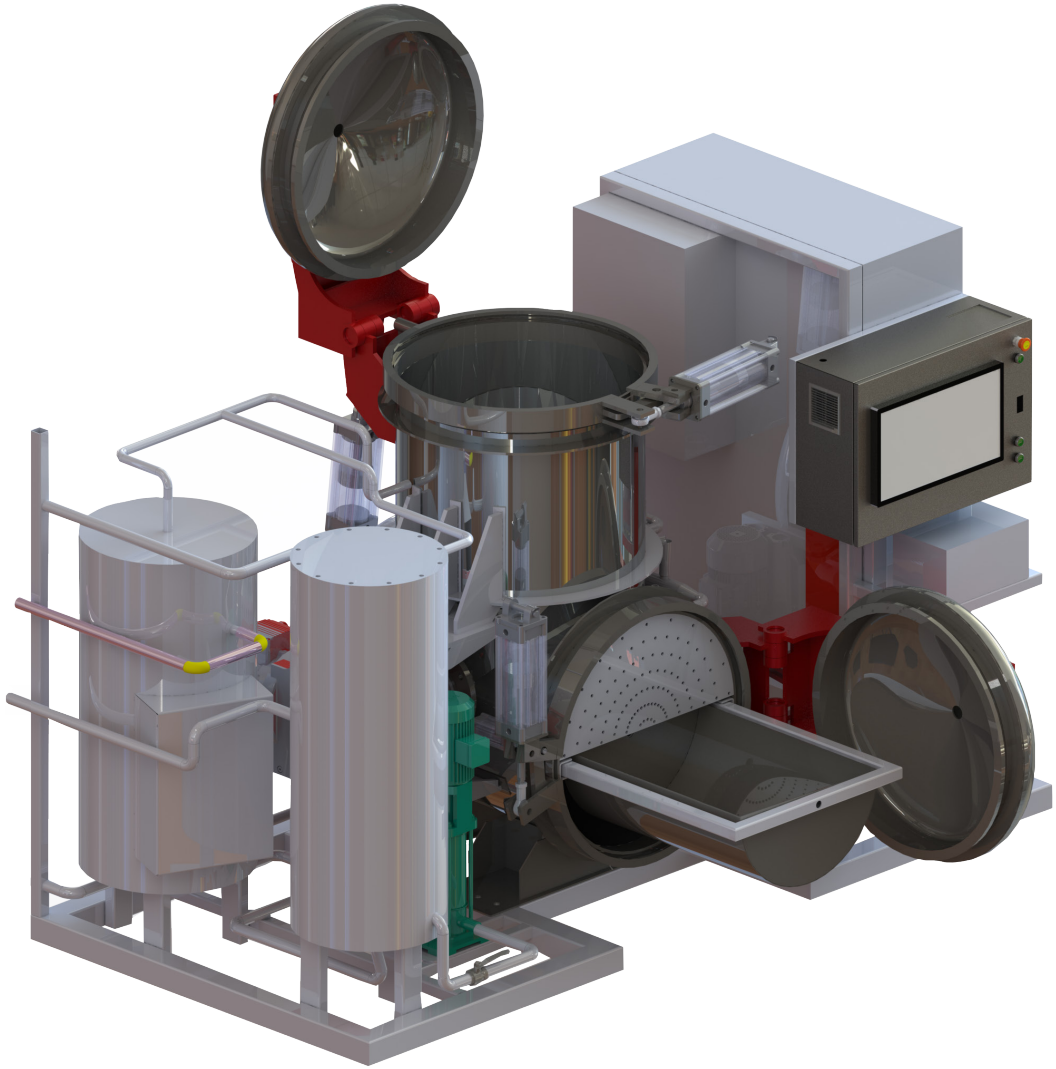
EASY TO USE

- Operators can be trained quickly
- Computer aided application
- Fully automatic operations
- Instant data transfer via internet

MANUFACTURING FACILITIES WORKS UNDER RIGUROUS STANDARDS:

- ISO 9001:2008
- ISO 14001: 2004
- OHSAS 18001:20017
- STAATT4 (USA)
- EN285 (EU)
- Machinery Directives 2006/42/EC
- Low Voltage Directive 73/23/EEC
- Directive of Pressurized Equipments (2014/68/EU).
- Electromagnetic Compatibility 2004/108/EC
- DIN 58951 Esterilizers designed for laboratories (Germany)

PROMED COMPACT SYSTEMS



STERILIZATION AND TREATMENT FACILITY

ADVANTAGES

- Compact design
- Fully Automated
- User friendly interface
- Hospital usage intended
- Electrical Steam Generator
- Minimal sound
- Odor minimized
- No vibration
- Minimal water usage
- No waste water produced
- Easily transported

PROMED VERTICAL

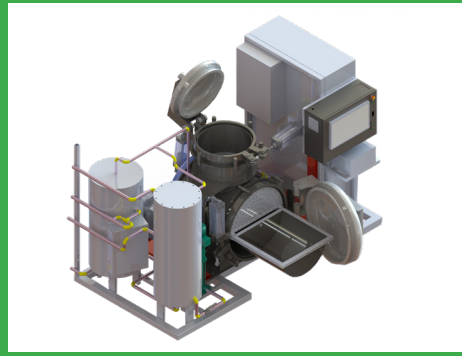
COMPACT MODEL

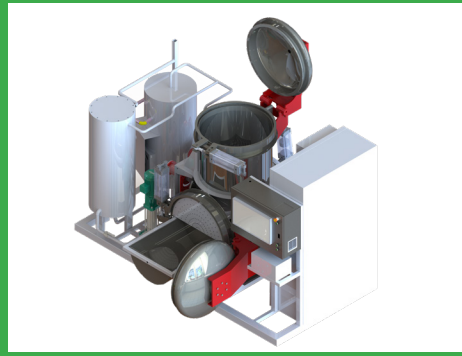
P-50	P-100	P-150
(20 Kg/h)	(35 Kg/h)	(55 Kg/h)

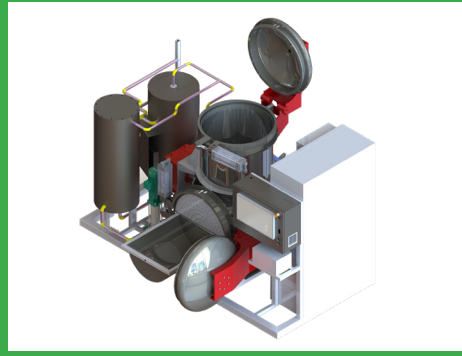
GENERAL FEATURES

TECHNICAL FEATURES	P-50	P-100	P-150
Size (L x W x H) (mm)	2700 x 1500 x 1500	2700 x 1600 x 1600	2700 x 1700 x 1700
Weight (Kg)	2100	2680	2930
Air Pressure (Bar max)	8	8	8
Electrical connection required (Kw)	30*	30*	35*
WORKING CHARACTERISTICS	**P-50**	**P-100**	**P-150**
Sterilizing Capacity (Kg/ Hour)	15-20	25-35	45-55
Process Volume Capacity (Lt.)	75	150	225
Average Waste Density (Kg/m3)	100 - 150	100-150	100-150
Average Cycle Time (Min.)	30	30	30
Maximum Steam Flow (Kg/Hour)	100	140	170
Sterilization Efficiency (SAL)	8 Log10	8 Log10	8 Log10
CONSUMPTION / CYCLE	**P-50**	**P-100**	**P-150**
Steam (Kg)	6	7	8
Electricity (Kw)	1.2**	1.5**	1.7**
Water (Lt)	None***	None***	None***
Special Consumables	None	None	None

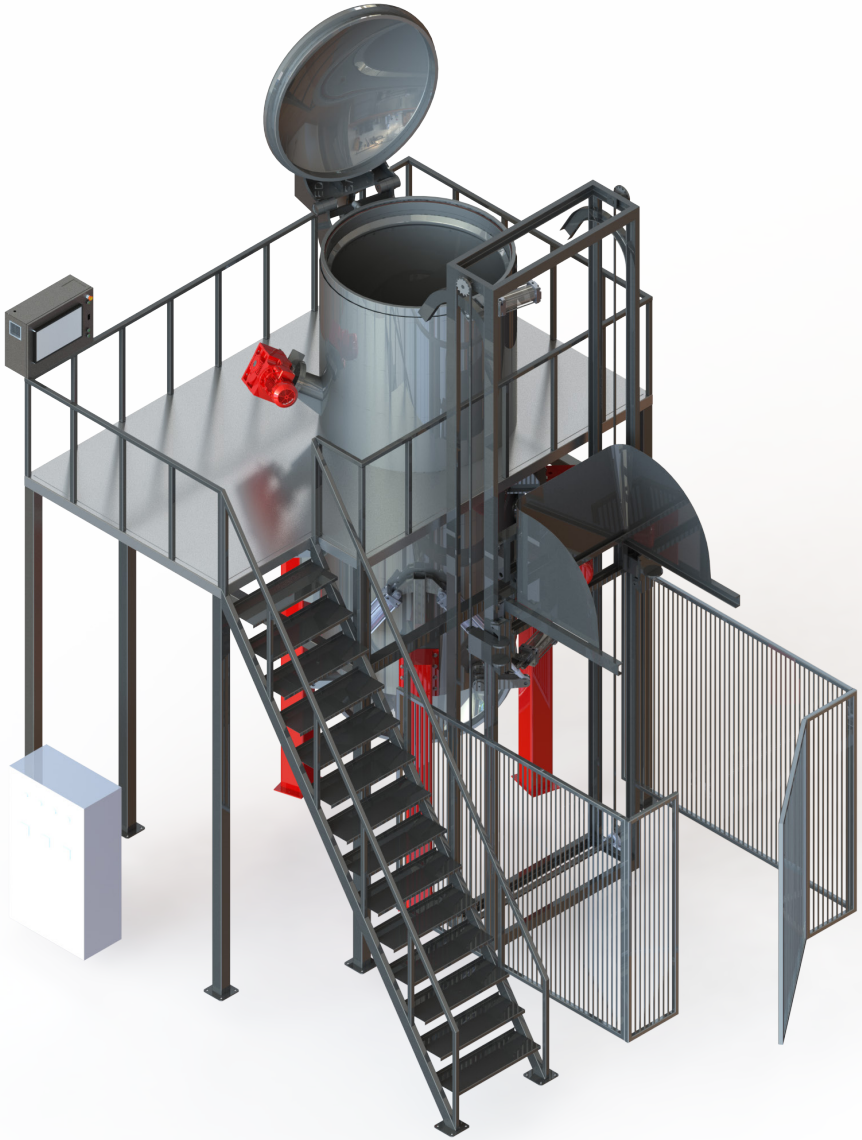
* P50 – P100 – P150 includes built in electrical steam boiler
** Electrical consumption of the sterilizer only
*** Water consumption of integrated steam boiler: 7 – 12 Lt./ Cycle
Note: Odor Central System. Vacuum Pump Available and Optional.
All Systems can be customized to customer specification







AUTOCLAVE STERILIZATION
PRE-SHREDDING



STERILIZATION AND TREATMENT FACILITY

ADVANTAGES

- Industrial design
- Integrated shredder
- Fully automated
- User friendly interface
- Minimal maintenance
- 8 LOG10 Sterilization
- Large capacities
- Odor minimized
- No water usage
- Automatic waste elavator
- Anti - Jam shredder
- Long shredder lifetime

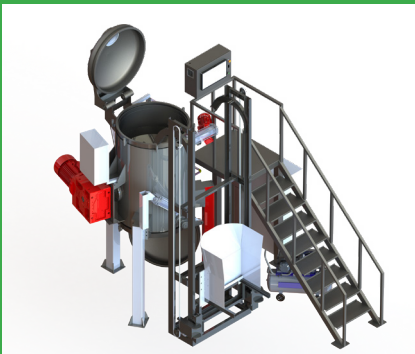
PROMED VERTICAL

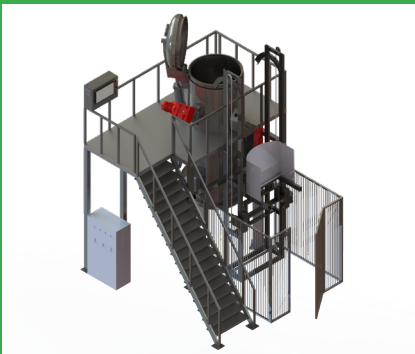
P-300 (100 Kg/h)	**P-500** (150 Kg/h)
P-1000 (250 Kg/h)	**P-2000** (450 Kg/h)

GENERAL FEATURES

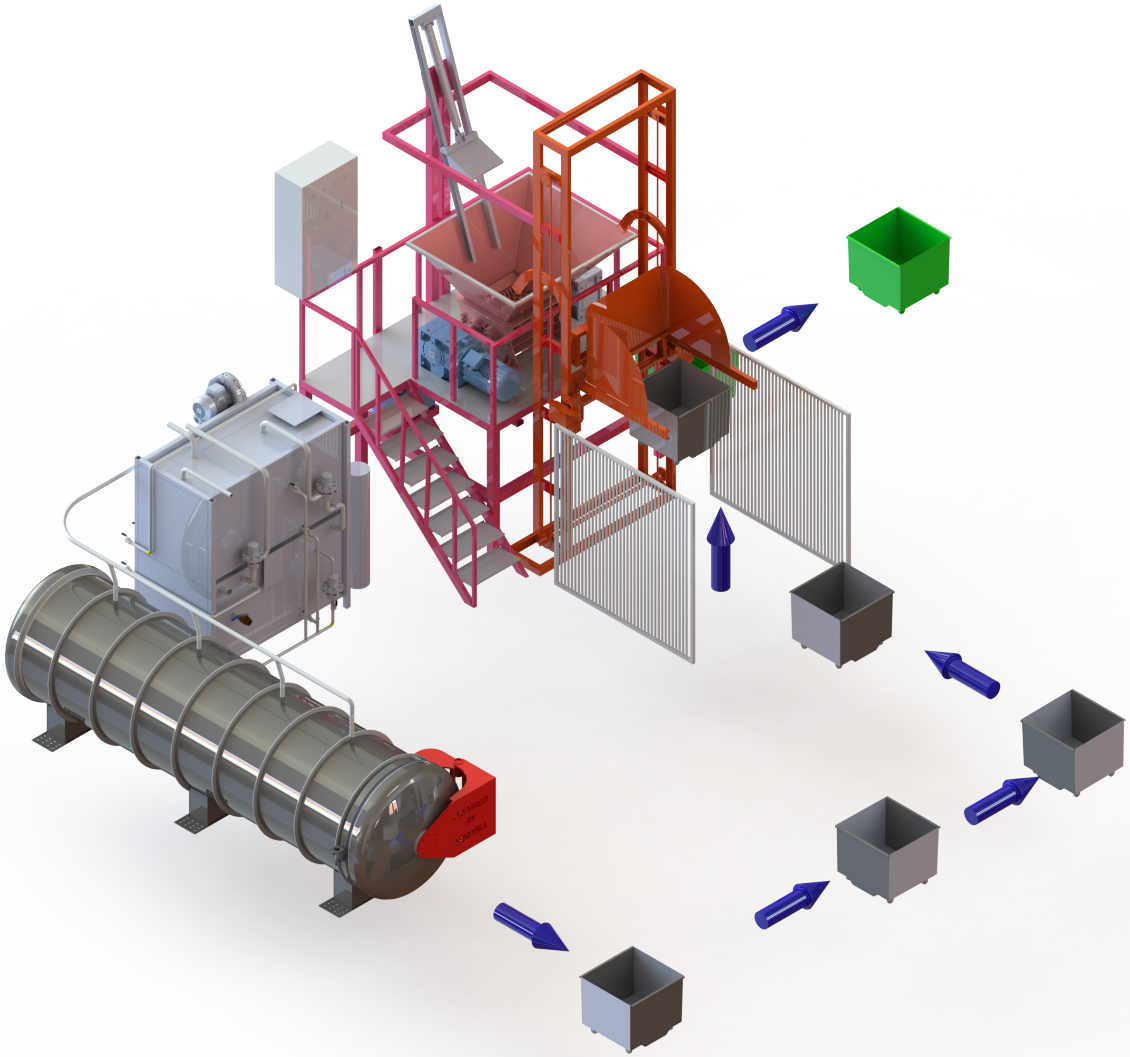
TECHNICAL FEATURES	P-300	P-500	P-1000	P-2000
Size (L x W x H) (mm)	2000 x 2000 x 3600	2250 x 2250 x 4200	2500 x 2500 x 5500	3000 x 3000 x 6400
Weight (Kg)	2200	2500	2900	4600
Air Pressure (Bar max)	8	8	8	8
Electrical connection required (Kw)	15	19	20	35
WORKING CHARACTERISTICS	**P-300**	**P-500**	**P-1000**	**P-2000**
Sterilizing Capacity (Kg/ Hour)	80-100	150-175	200-250	350-450
Process Volume Capacity (Lt.)	400	750	1400	2800
Average Waste Density (Kg/m3)	100 - 150	100-150	100-150	100-150
Average Cycle Time (Min.)	30	35-45	35-45	45-60
Maximum Steam Flow (Kg/Hour)	270	320	470	700
Sterilization Efficiency (SAL)	8 Log10	8 Log10	8 Log10	8 Log10
CONSUMPTION / CYCLE	**P-300**	**P-500**	**P-1000**	**P-2000**
Steam (Kg)	11	15	20	40
Electricity (Kw)	4	5	9	15
Water (Lt)	None	None	None	None
Special Consumables	None	None	None	None

* P50 – P100 – P150 includes built in electrical steam boiler
** Electrical consumption of the sterilizer only
*** Water consumption of integrated steam boiler: 7 – 12 Lt./ Cycle





AUTOCLAVE POST-SHREDDING STERILIZERS



STERILIZATION AND TREATMENT FACILITY

ADVANTAGES

- Industrial design
- Separate shredder
- Fully automated
- User friendly interface
- Minimal maintenance
- Vaccuum sterilization
- Extra Large capacities
- Odor minimized
- No water usage
- Auto waste elavator
- Anti - Jam shredder
- Long shredder lifetime

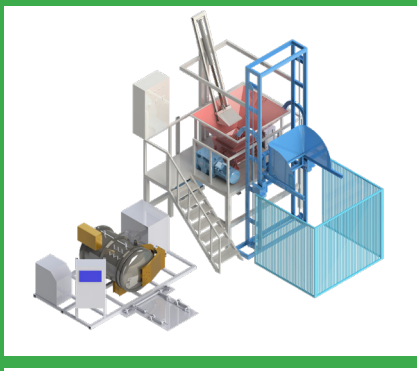
PROMED HORIZONTAL

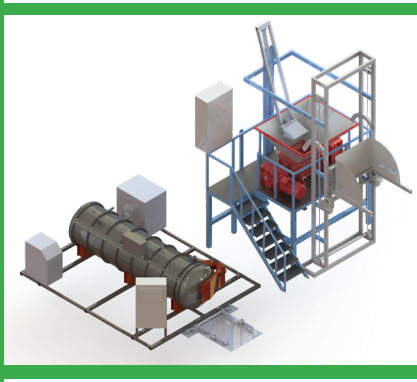
P-A75 (75 Kg/h)	**P-A150** (150 Kg/h)	
P-A300 (300Kg/h)	**P-A500** (500 Kg/h)	**P-A1000** (1000 Kg/h)

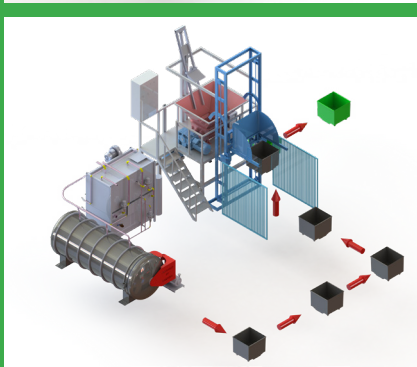
GENERAL FEATURES

TECHNICAL FEATURES	P-A75	P-A150	P-A300	P-A500	P-A1000
Size (L x W x H) (mm)	1500 x 1500 x 1500	2200 x 1500 x 1500	3000 x 2000 x 2000	3500 x 2250 x 2250	6000 x 2500 x 2500
Weight (Kg)	1450	1850	2800	4600	2680
Air Pressure (Bar max)	8	8	8	8	8
Electrical connection required (Kw)	17*	17*	19*	35*	35*
WORKING CHARACTERISTICS	**P-A75**	**P-A150**	**P-A300**	**P-A500**	**P-A1000**
Sterilizing Capacity (Kg/ Hour)	75	150	300	500	1000
Process Volume Capacity (Lt.)	400**	870**	2000**	3500**	7500**
Average Waste Density (Kg/m3)	100 - 150	100-150	100-150	100-150	100-150
Average Cycle Time (Min.)	30	30	40	45	45
Maximum Steam Flow (Kg/Hour)	250	290	380	670	950
Sterilization Efficiency (SAL)	8 Log10	8 Log10	8 Log10	8 Log10	8 Log10
CONSUMPTION / CYCLE	**P-A75**	**P-A150**	**P-A300**	**P-A500**	**P-A1000**
Steam (Kg)	11	13	32	45	70
Electricity (Kw)	3**	4**	7**	11**	16**
Water (Lt)	None***	None***	None***	None***	None***
Special Consumables	None	None	None	None	None

* P50 – P100 – P150 includes built in electrical steam boiler
** Electrical consumption of the sterilizer only
*** Water consumption of integrated steam boiler: 7 – 12 Lt./ Cycle







GENERAL PROPERTIES

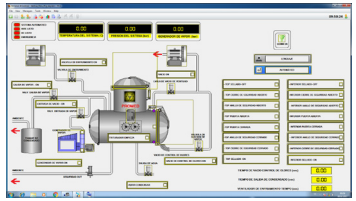
- Small Space Needed.
- Volume Reduction
- Minimal Impact
- No Water Use
- Completely Automated
- User Friendly Interfase

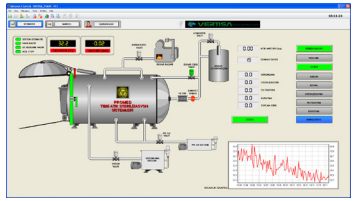
GENERAL ADVANTAGES

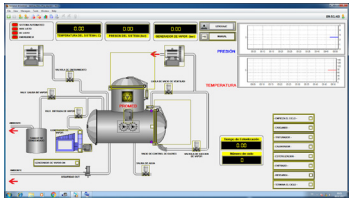
- Autoclave made of stainless steel 321 rust resistant.
- Odor control and reduction (Deodorant).
- Safety systems controlled by PLC INDUSTRIAL
- 60 – 80 % Volume Reduction.
- Air cooling system (Patent Pending).
- Touchscreen for easy operation of each step during the process.

PROMED SYSTEM:
CONTROL PANEL

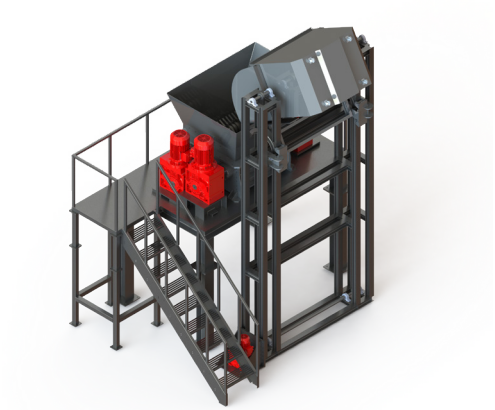
Touch screen control panel with intuitive operation, allows the visualization of process variables such as time, waste temperature, chamber pressure, phases, etc.





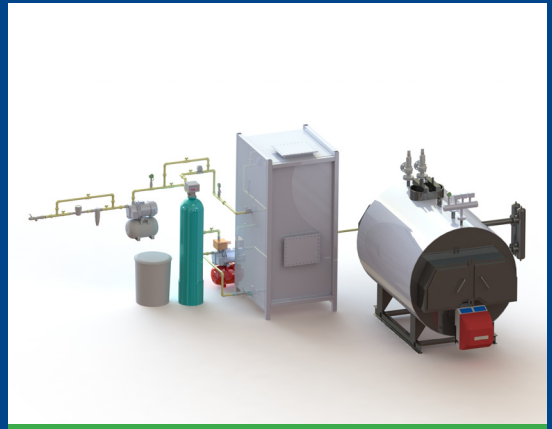


SHREDDER & STEAM BOILER



INTERNAL / EXTRENAL SHREDDER

The main part of the system is the shredder unit. Our special solution consists of a double shaft mechanism of grinding claws, which has a PLC controlled motion, that changes rotating direction in case the shaft meets a certain amount of resistance. The parts of the grinding machine are made of the hardest metal presently known.



STEAM BOILERS

Our **STATE OF THE ART** highly efficient, fully cylindrical 3 PASS Scotch-type boilers have large water volumes in order to meet sudden steam injections. Vertisa's steam boilers are highly preferred in the steam production industry due to their ease of maintenance and high effiency.

ADVANTAGES

- Specially designed for PROMED sterilizers
- 3 Pass Scotch type
- 97% Efficiency
- Wet Back efficient design
- PLC Controlled
- LPG/LNG/NG/Diesel/Fuel Oil
- Dual Stage Burners
- Special insulation
- Stainless steel cover
- Fully Automated functioning
- Insulated chimney
- High security

MICROBIAL INACTIVATION ≥ 8LOG10

9 Conclusion

According to the results of the testings performed it can be confirmed, that the Medical waste sterilization system container, PD020 manufactured by Vertisa Çevre Teknolojileri İnşaat Reklam Dan. İth. İhr. San. Ve Tic. Ltd. Şti. passed all microbiological and thermo-electrical tests with biological indicators (10^8) and is in conformity to the German standard DIN 58949-3 as well as the requirements of German RKI Guideline for Waste and also of STAATT Level IV (Inactivation of vegetative bacteria, fungi and lipophilic/hydrophilic viruses, parasites, mycobacteria and of *B. stearothermophilus* spores at 6 $\log_{10}$ reduction or greater).

Archiving: A copy of this report is kept together with the raw data in the archive of HygCen GmbH.

Reference: The test results refer exclusively to the mentioned test piece. Extractions of this report only with a written permission of the HygCen GmbH.

Prof. Dr. med. H.-P. Werner
Head of Scientific-Technical Affairs

Monika Feltgen
Division Manager

InterLabs
INTERNATIONAL LABORATORIES S.A.C.

REGISTROS TÉCNICOS DEL CERTIFICADO DE INACTIVACION MICROBIANA DEL PROCESO DE ESTERILIZACION Nº 170904-001

Equipo verificado	:	Autoclave VERTISA - ENVIROEQUIP N° de serie PD038 para el tratamiento de los residuos biocontaminados del Nuevo HOSPITAL GENERAL DE CAJABAMBA "NUESTRA SEÑORA DEL ROSARIO"
Descripción e Identificación del equipo	:	Autoclave de 350 L. de capacidad de tratamiento N° de serie PD038.
Uso previsto	:	Residuos sólidos biocontaminados embolsados.
Parámetros de funcionamiento	:	Temperatura promedio: 142.2°C. Presión: 3.5 bar. Tiempo de esterilización: 10 min 00 seg.
Producto utilizado (Bioindicador)	:	Bioindicador desarrollado en el laboratorio de microbiología de INTERLABS – Bacillus subtilis a concentración de 10^8 UFC.
Observaciones	:	Durante la operación del equipo no se registraron paradas operativas del equipo ni ajustes al mismo.

Figs. N°1. Equipo Autoclave VERTISA - ENVIROEQUIP N° de serie PD038.

OPTIONAL EQUIPMENTS

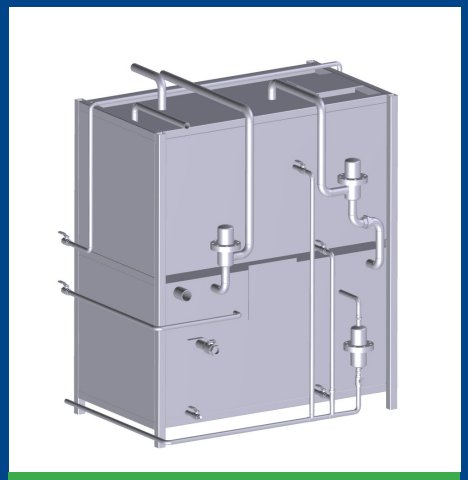
MOBILE STERILIZERS

INSIDE MOBILE STERILIZERS

MEDICAL WASTE TRUCK

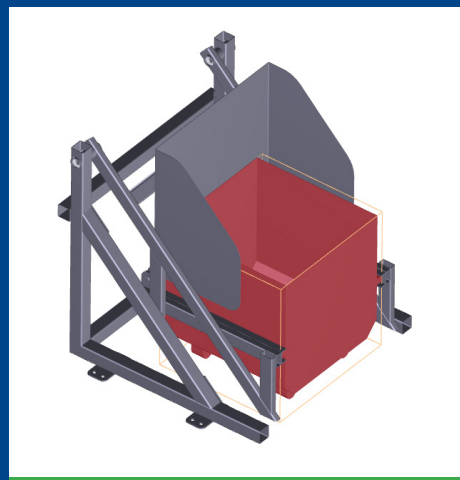
BIN WASHER

WASTE COMPACTORS



STEAM/WATER RECYCLING

ELEC. STEAM BOILERS



CONT. LOADERS/SKIPPERS

INSTALLATIONS

PROMED P150

PROMED P300

PROMED P1000

PROMED P2000

PROMED A150

PROMED A500

PROMED A1000

PROMED CONTROL PANEL

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