

TECHNICAL SPECIFICATIONS

Autoclave with Integrated Shredder for Medical Waste under the Interreg NEXT Romania–Republic of Moldova Project (ROMD00318)

Equipment Description

Autoclave designed for the treatment of medical waste (solid and liquid), converting it into municipal waste through saturated steam sterilization, equipped with an integrated shredder for volume reduction.

Sterilization Functional Requirements

- Continuous operation capacity: 24/7
- Capability to perform two shredding loads prior to a single sterilization cycle
- Equipped with a metallic platform for operation and maintenance

Minimum mandatory requirements

Technological Process

Pre-vacuum, followed by saturated steam exposure, and post-vacuum.

Minimum mandatory requirements

Programs

- Solid medical waste
- Liquid medical waste
- Solid medical waste with prion inactivation

Minimum mandatory requirements

Sterilization Efficiency

To be confirmed by test reports (microbiological testing) issued by an accredited laboratory, demonstrating:

- Solid waste: (SAL) $\geq 10^{-18}$
- Liquid waste: (SAL) $\geq 10^{-6}$
- For solid waste with prion inactivation: (SAL) $\geq 10^{-6}$

Minimum mandatory requirements

Evaluation criterion: higher capacities will be scored

Exposure Time

≤ 20 minutes

Minimum mandatory requirements

Discharge of Sterilized Waste

Automated discharge through a door separate from the loading door, using a dedicated mechanism.

Minimum mandatory requirements

Technical Parameters

Sterilization chamber:

- Volume: 200–250 L
- Horizontal configuration
- Material: Stainless steel 304

Minimum mandatory requirements

Loading/Shredding chamber:

- Volume: 300–350 L
- Vertical configuration
- Material: Stainless steel 304

Minimum mandatory requirements

Waste volume per sterilization cycle:

≥ 600 L

Minimum mandatory requirements

Evaluation criterion: higher capacities will be scored

Sterilization temperature for solid waste (program): >134°C

Minimum mandatory requirements

Standard full cycle time: ≤ 60 minutes

Minimum mandatory requirements

Evaluation criterion: higher capacities will be scored

Waste volume reduction: ≥ 95%

Minimum mandatory requirements

Evaluation criterion: higher capacities will be scored

Noise level: ≤ 65 dB

Minimum mandatory requirements

Evaluation criterion: higher capacities will be scored

Dimensions

Maximum dimensions (L × H × W): 3000 × 3000 × 2000 mm

Maximum height with loading door open: 3500 mm

Liquid program: Yes

Prion sterilization program: Yes

All are minimum mandatory requirements

Construction and Main Components

- Integrated shredder:
 - Wear-resistant steel
 - Minimum two shafts
 - Reversible mechanism

- Sterilized with steam during each cycle
 - Sterilized waste discharge mechanism: Yes
 - Continuous mixing mechanism during sterilization: Yes
 - Steam generator: Integrated
 - Vacuum pump: Integrated, oil-free, exhaust air filtered through HEPA 0.2 μm
 - Air compressor: Oil-free
 - Water treatment unit: Integrated, with automatic softener
 - Centralized lubrication system: Automatic (bearings, chains, shredder mechanism)
- All are minimum mandatory requirements***

Safety and Operator Protection

- Emergency program ensuring sterilization before lid opening in case of error
 - Automatic leak test before each cycle, preventing operation if leakage is detected
 - Electronic log and integrated printer for monitoring: temperature, pressure, time, cycle number (recorded every minute)
 - Data storage via USB/SD and online transmission capability
 - Platform/ladder for loading and servicing
 - Power failure recovery: program resumes automatically from interruption point
- All are minimum mandatory requirements***

Installation, Warranty, Service and Training

- Minimum warranty: 24 months, including maintenance

Minimum mandatory requirements

Evaluation criterion: higher capacities will be scored

- Preventive maintenance schedule must be provided Installation and connection to hospital utilities ensured by the supplier

Minimum mandatory requirements

- Service response time: ≤ 48 hours

Minimum mandatory requirements

Evaluation criterion: Faster capabilities will be awarded points

- Mandatory phone response: ≤ 1 hour

- Training of operators and technicians (on-site), after installation and upon request

Minimum mandatory requirements

Compliance Note

The supplier shall assume full responsibility for compliance of the equipment with applicable EU and national legislation, including obtaining all required approvals/authorizations.

Technical parameters must be demonstrated through official documentation.

Parameters exceeding minimum requirements will be scored in accordance with the evaluation criteria set out in the procurement documentation (Contract Notice and Evaluation Methodology).

Failure to meet any minimum requirement will result in the rejection of the tender as non-compliant.