

MACS XLP

Conquering the challenges of hazardous waste.

MACS autoclaves provide an outstanding economic solution by efficiently neutralizing germs, viruses, and bacteria on-site, significantly reducing hazardous waste transport costs and related CO₂ emissions. The system also effectively prevents cross-contamination and enables the efficient treatment of liquids and food. These benefits support a circular economy and promote sustainable resource utilization.

MEETS ROBERT KOCH INSTITUTE REQUIREMENTS

Volume filling hopper: 125 liters

Process capacity per cycle*: 250 liters / 25-75 kg (density 0.1-0.3 kg/l)

Height/ width/ depth: 2.090 / 2.120 / 1.570 mm

Power consumption: Unit-average 17,5 kW 3 phase, 400 V, 50 Hz-60 Hz



Effectiveness

Achieves up to 97 % waste volume reduction. The best sterilisation to energy consumption ratio in its class.



Usability

Ergonomic and safe, standard utility connections, remote support capabilities.



Sustainability

Through its chemicalfree operation, energy efficiency, volume reduction, emission-free performance.



MACS

((.........))

Reliability

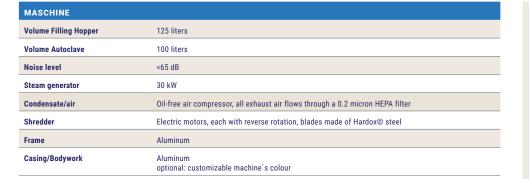
Consistent operation, security during power outages, independent from external services.



Financial benefits

Rapid installation and setup, reduction of hazardous waste handling fees, low lifetime operating costs.

MACS XLP KEY DATA



| PROCESS | |
|---|--|
| Process capacity per cycle | 250 l / 25-75 kg (density 0,1-0,3 kg/l) |
| Process | Pre-vacuum plus plateau phase 10 alternatively 20 mins., temp. 136°C, pressure up to 4,5 bar |
| Process capacity/24 h (18 cycles, as theoretical maximum) | 4.500 l / 1.350 kg |
| Processtime/Cycle | Standard 60 min |
| Shredding time | 6-10 minutes depending on the waste composition |
| Biological inactivation | SAL=10 ⁻²⁴ standard program, SAL=10 ⁻⁴⁸ (20 minutes program) |
| Waste reduction | Up to 97% on volume, depending on type of waste and waste density |
| | |

| LIFE CYCLE ASSESSMENT | |
|---|----------|
| Volume reduction potential/year* | 65.700 l |
| CO ₂ reduction potential/600km | 2.759 t |
| CO ₂ Emissions/Year | Zero |

| DIMENSIONS" | |
|----------------------------|-----------------------|
| Height/ width/ depth (mm): | 2.090 / 2.120 / 1.570 |
| Height machine opened: | 2.590 mm |
| Weight net: | 2.000 kg |

| CONNECTIONS | |
|------------------------------|--|
| Water inlet | 3/4 |
| Water outlet | 2" |
| Water quality/water pressure | Potable water, min 4.5 bar (booster pump optional) |
| Power | 3 phase, 400 V, 50 Hz-60 Hz |
| LAN/WLAN | Connection to local network possible |

| CONSUMPTION | | |
|-------------------|------------------------|--|
| Water consumption | Up to 110 liters/cycle | |
| Power consumption | 17,5 kW | |
| | | |

DOCUMENTATION (INTEGRATED ON BOARD PRINTER)

Pressure in bar, temperature, time, cycle number, every minute during plateau phase

USB Data pass, step documentation on SD Card, connection to local network possible (LAN/WLAN)

| LOCATION | |
|-----------------------------|--|
| Space requirement | Approx. 23 m². Minimum distance to the wall: 0.5 m - door side - min. 1.20 m |
| Ventilation | 6 air changes per hour recomended |
| Equipment load on the floor | Approx. 621 kg/m2 |
| | |

* Calculated on the MACS Liquid Program.

** May change due to design changes or customer requirements.

MACS Machine Autoclave Cutting Sterilization

SAFETY- AND EMERGENCY FEA-TURES

- > Automatic leak test before a cycle starts, will not start if leak is discovered
- > Fast stop and emergency program in case of process is interrupted during the cycle period
- Sterilization with hot steam is guaranteed every time before the lid is opened
- Gaseous discharges are filtered with a 0,2 µ microbiological filtering system integrated water softener and steam generator
- Shredder and its parts are sterilized with saturated steam every cycle
- > Programmable daily cleaning cycles
- > Liquids are only released into the sewer after sterilization and confirmation that the cycle performed correctly. Cycle continues where it stopped
- > Technicians don't need an education background

PROCESSABLE TYPES OF WASTE

> sharps (WHO-sharps)

- > metallic packing, but no pressure containers VOC's
- blood bags and blood preserves (WHO-pathological waste)
- > VOC's Volatile and semi-volatile organic compounds, chemotherapeutic wastes and radiological wastes should not be treated in a MACS
- > wastes whose collection and disposal are subject to special requirements in order to prevent infection (i.e. dressings, plaster casts, linen, disposable clothing, diapers (WHO non-risk or "general" health-care waste)

MACS®

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