



WASTE DISPOSAL AT THE CUTTING EDGE

**BioUnit MID - Disposal system
for the mobile wastewater disposal
from bioreactor toilets**

VOGELSANG – LEADING IN TECHNOLOGY

BioUnit MID

Disposal system for the mobile wastewater disposal from bioreactor toilets

Cleaning and maintenance system for bioreactors from AKW A+V Protec Rail GmbH. Basic version for semi-automatic mechanical cleaning. Modular design for fully automatic operation and decalcification. Neutralization can be carried out with external NeutraUnit.

Pressurized wastewater disposal via rotary lobe pump into sewer or external tank. Service water and power supply required on site.

Advantages

- Compact system including suction pump
- Flexible in use
- Space-saving and easy to maneuver
- Simple and easy to operate
- Semi-automatic or fully automatic cleaning mode

Plus WDR basic version semi-automatic

- Mechanical cleaning of the solids tank
 - Suction and rinsing also with high-pressure water

Basic functions

- Semi-automatic cleaning programs (time & volume controlled)
- Individually controllable cleaning steps
- Simplified program creation via characteristic diagram
- Volume-controlled filling
- Blockage detection at solids tank connection
- Frost detection
- Rotary field and fault voltage detection
- Access restriction via user management
- Bioreactor library with equipment and volumes
- Plain text fault diagnosis

Basic components

- Stainless steel housing
- High pressure pump 200 bar
- Rotary lobe pump without frequency converter
- Electric ball valves, end position controlled
- Flow and pressure sensors according to high-pressure pump
- Piping with maintenance-friendly quick couplings
- Control cabinet with 10" color touch panel, Codesys programming
- Sampling points
- 200 mm swivel and fixed castors

| MID-Interfaces | |
|--|---|
| Interfaces to bioreactor | 3 m 2" hose with 3" Kamlock female part - coupling |
| | 3 m 1.5" hose with 1" Kamlock female part - coupling |
| | 5 m DN 8 high-pressure water hose with M21*1.5 mm coupling |
| | 7 m signal cable, coupling according to option |
| Supply interfaces | CEE plug 32A - 6h 3P+N+PE, 11 kW, 3~400 V, 50 Hz |
| | Service water connection with 1" Kamlock male part - plug 3 bar, 60 l/min |
| | Wastewater disposal via pressure connection 2" Kamlock male connector external tank or drain required |
| | Adapter hose from 2" Kamlock female connector to 3" Kamlock male connector male part - plug |
| Electrical power requirement / pre-fuse | 11 kW |
| Dimensions LxBxH approx. | 1,500 mm x 800 mm x 1,500 mm |
| Weight approx. | 350 kg |
| Ambient temperatures | -20 to +40 °C |
| Ambient conditions | Moderate according to C3 (according to DIN EN ISO 12944) |

Pro WDR Upgrade to automatic

Auto function

- Fully automatic cleaning programs (sensor-controlled)
- Combination of programs for individual maintenance intervals
- Operator guidance with maintenance checklist for bioreactor
- Cleaning/maintenance log; also on USB stick
- Data exchange or valve control of the bioreactor via 7-pin signal cable, heating test of hygienization possible
- Tank empty detection via flow detectors
- Extended blockage detection at fixed and liquid tank connection

Plus/Pro WDRC upgrade for chemicals (descaling)

Chemical functions

- Chemical cleaning of solid tank and liquid reactor:
 - Fill, circulate, siphon acid with optional external tanks

Components of the chemical equipment

- Extended piping, low-drip connection coupling
- Media wetted components resistant to chemicals
- Stainless steel rotary lobe pump with frequency converter

OPTIONS

High-pressure water nozzle

- Significantly more efficient cleaning than the standard nozzle in the bioreactor

Signal cable to the bioreactor

- Possible without signal cable; included from the Pro version upwards
- 4-pin, in the Plus version
 - Fill level
- 7-pin, in the Pro version
 - Fill level
 - Data exchange
 - Valve control

Chassis option

- Electrically powered hand pallet truck
- Further options on request

Frost protection

- Heating with frost monitor in an insulated housing

Signaling device

- Acoustic/optical operating states (operation/malfunction)

BioSample adapter

- Simplified automated sampling from bioreactor

Wastewater tank

- with suction lances and overflow protection

Acid tank & neutralization tank

- with suction lances and overflow protection

Remote maintenance options

What we offer

We provide solutions in the following sectors:
AGRICULTURAL TECHNOLOGY, BIOGAS,
INDUSTRY, TRANSPORTATION, WASTEWATER



Our broad range of products and services

- Consulting and service
- Data management and control technology
- Disintegration technology
- Individually tailored solutions for special applications
- Pumps and pump systems
- Solid matter feeders
- Solids reduction, separators and mixers
- Spreading technology
- Supply, disposal and cleaning

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