



# WASTE DISPOSAL AT THE CUTTING EDGE

**BioUnit SMA - Disposal system  
for mobile wastewater disposal  
of bioreactor toilets**

**VOGELSANG – LEADING IN TECHNOLOGY**

# BioUnit SMA

## Disposal system for mobile wastewater disposal of 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.

Vacuum wastewater disposal via external vacuum e.g. through existing infrastructure. Service water and power supply required on site.

### Advantages

- Supplement to existing disposal systems, to clean bioreactors
- Flexible in use
- Space-saving and easy to maneuver
- Simple and easy to operate
- Semi-automatic or fully automatic cleaning operation

### 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
- Electric ball valves, end position controlled
- Flow and pressure sensors according to high-pressure pump
- Pipework with maintenance-friendly quick couplings
- Control cabinet with 7" color touch panel, Codesys programming
- 200 mm swivel and fixed castors

SMA-Interfaces	
<b>Interfaces to bioreactor</b>	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
<b>Supply interfaces</b>	CEE plug 32A - 6h 3P+N+PE, 7 kW, 3~400 V, 50 Hz
	Service water connection with 1" Kamlock male part - plug 3 bar, 60 l/min
	Wastewater disposal via vacuum connection 2" - Kamlock male part - plug - External, constant vacuum - 0.5 bar, 5m³/h required
	Adapter hose from 2" - Kamlock female part coupling to 3" - Kamlock male part - plug
<b>Electrical power requirement   pre-fuse</b>	7 kW
<b>Dimensions L x W x H approx.</b>	1,400 mm x 680 mm x 1,500 mm
<b>Weight approx.</b>	250 kg
<b>Ambient temperatures</b>	-20 to +40 °C
<b>Ambient conditions</b>	Moderate according to C3 (according to DIN EN ISO 12944)

## **Pro WDR Upgrade to automatic**

### **Auto functions**

- 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 the hygienization possible
- Tank empty detection via flow detectors
- Extended blockage detection at fixed and liquid tank connection

### **Auto components**

- Control cabinet with 10" color touch panel
- Flow detectors and pressure sensors

## **Plus / Pro WDRC upgrade for chemicals (descaling)**

### **Chemical functions**

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

### **Components of the chemical equipment**

- Acid pump with piping, low-drip connection coupling
- Media wetted components resistant to chemicals
- Control cabinet with 10" color touch panel

## **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

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- Solids reduction, separators and mixers
- Spreading technology
- Supply, disposal and cleaning

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