



WASTE DISPOSAL AT THE CUTTING EDGE

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

VOGELSANG – LEADING IN TECHNOLOGY

BioUnit BIG

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, decalcification and neutralization. Intermediate storage of the wastewater in built-in 2000 l wastewater tank.

Service water and power supply required on site.

Advantage

- Compact system including suction pump and tank

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 frame
- High pressure pump 200 bar
- Rotary lobe pump without frequency converter
- Electric ball valves, end position controlled
- Pipework with maintenance-friendly quick couplings
- Control cabinet with 10" color touch panel, Codesys programming
- Sampling points
- GRP wastewater tank 2000 l with fill level monitoring

BIG-Interfaces	
Interfaces to bioreactor	5.5 m 2" hose with 3" Kamlock female part - coupling
	5.5 m 1.5" hose with 1" Kamlock female part - coupling
	10 m DN 8 high-pressure water hose with M21*1.5 mm coupling
	10 m signal cable, coupling according to option
Supply interfaces	20 m 5*6 mm ² with CEE plug 32A - 6h 3P+N+PE, 13 kW, 3~400 V, 50 Hz
	20 m supply hose ¾" with Geka coupling KA40, 3 bar, 60 l/min
	Access to sewer required for wastewater disposal
Electrical power requirement / pre-fuse	13 kW
Dimensions LxWxH approx.	3,360 mm x 1,450 mm x 2,300 mm (as illustrated)
Weight approx.	2,000 kg (as illustrated)
Ambient temperatures	-20 to +40 °C
Ambient conditions	Ambient conditions 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

- Flow detectors and pressure sensors

Plus WDRC upgrade for chemicals (descaling)

Chemistry Plus functions

- Chemical cleaning of solid tank and liquid reactor:
 - Fill, circulate, siphon acid from internal acid tank
 - Reuse of acid possible
 - Automatic mixing of the 3 % water-acid mixture
 - Manual neutralization and pH measurement
 - Neutralization in bioreactor or acid tank possible

Chemical Plus components

- Dosing piping without pH measurement
- Media wetted components resistant to chemicals
- Stainless steel rotary lobe pump with frequency converter
- Chemical canister storage frost-proof heated for acid and alkali
- Division of the 2000 l tank into acid and wastewater tank

Pro WDRC upgrade for chemicals (descaling)

- Automatic neutralization and pH measurement
- Chemical canister empty detection and flow measurement

Chemicals Pro components

- Dosing piping with pH measurement, pressure-monitored

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-pole, in the Plus version
 - Fill level
- 7-pin, in the Pro version
 - Fill level
 - Data exchange
 - Valve control

Chassis option

- Without chassis, e.g. for installation on electric platform truck, trailer
- With electric platform trailer (hand-guided or self-propelled)
- Chassis for towing operation e.g. for electric tractors or forklift truck
- Further options on request

Frost protection

- Heater with frost monitor in an insulated housing

P - Tester

- For automated passage test
- Including compressor

Tank capacity

- 2,350 l

Tank divided into acid tank and wastewater tank

- After clarification

Signaling device

- Acoustic/optical operating states (operation/malfunction)

Adapter BioSample

- Simplified automated sampling from bioreactor

Cable reel

- For power cable

Hose reel

- For water supply hose

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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