

25 YEARS  
ATB

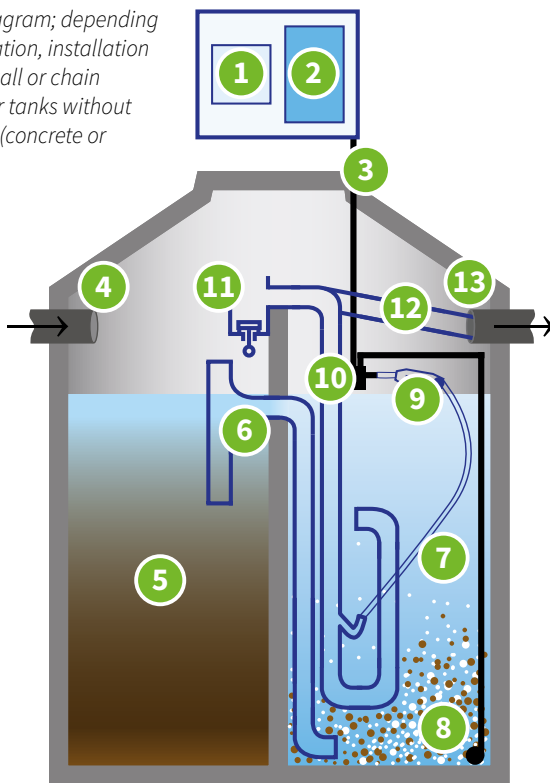


## **PUROO<sup>®</sup>/PUROO<sup>®</sup> Complete**

ATB Wastewater treatment plants  
New installations | retrofitting 1–16 PE

# How our PUROO® plants work

Schematic diagram; depending on the application, installation on partition wall or chain suspension for tanks without partition wall (concrete or plastic tanks).



- 1 **Automatic control**
- 2 **Membrane compressor**
- 3 **Air hose**
- 4 **Inflow**  
Untreated wastewater flows into the plant.
- 5 **Pre-treatment**  
Here the wastewater is mechanically pre-treated and particles settle down.
- 6 **Overflow baffle**
- 7 **SBR treatment chamber**  
Here the biological treatment process takes place using activated sludge.
- 8 **Pipe diffuser**
- 9 **Mechanical float valve**
- 10 **Air lift pump**
- 11 **Buffer tank with sampling**
- 12 **Clear water pipe**
- 13 **Outlet**  
Purified wastewater flows out of the system.

## PUROO® – the power saving sewage treatment plant

The PUROO® small wastewater treatment plant does not pump the wastewater as frequently as other small wastewater treatment plants. The treatment process is significantly simplified here. As a result, PUROO®, especially with the ever-increasing cost of electricity save up to € 1,440 in 10 years!

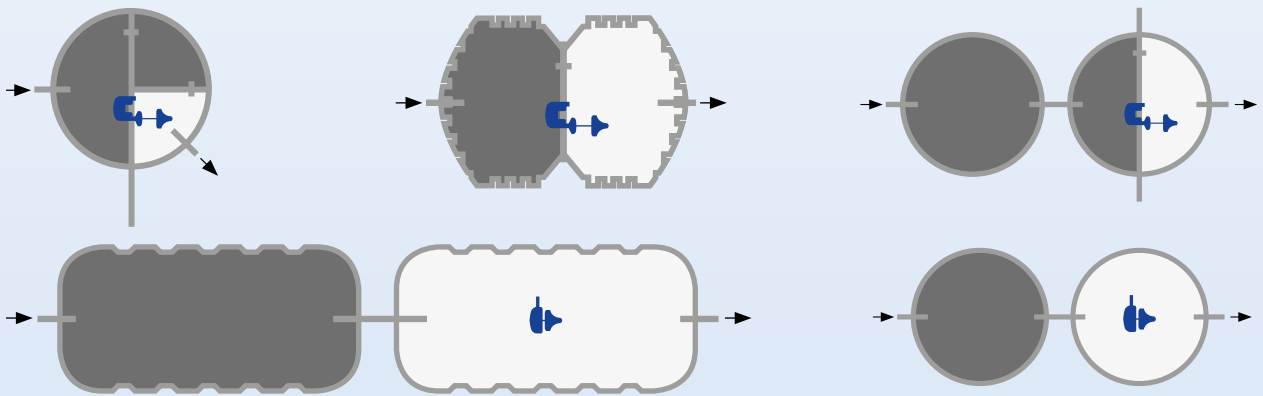
Example calculation: With an electricity price of € 0.30/kWh, a fixed bed or moving bed system for 4 PE consumes a total of 150 kWh per inhabitant & year and therefore causes costs of € 180 per year. If you operate a PUROO® plant instead you save € 144,- per year, i.e. € 1.440,- in 10 years. PUROO® is even more easy on your budget: as the system does not require any other cost-intensive components apart from the blower, you also save on maintenance costs.



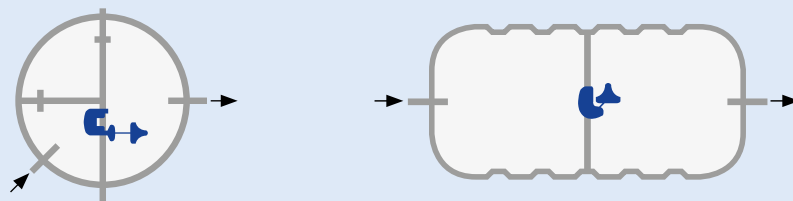
## New installations and retrofitting made easy! – Application examples

Simple assembly. In no time at all to a fully biological small sewage treatment plant.

### PUROO®



### PUROO® Complete



### New installation

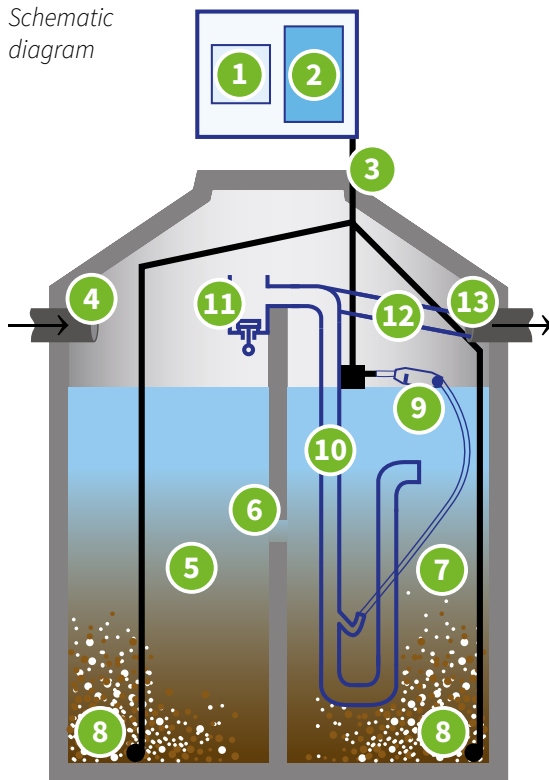
The technology can be used as a complete system with stable, durable concrete or as a particularly lightweight system with high-quality plastic tanks.

### Retrofitting

The technology is suitable for retrofitting in an old multi-chamber pit as well as in plastic containers.

# How our PUROO® Complete systems work

Schematic diagram



1 **Automatic control**

2 **Membrane compressor**

3 **Air hose**

4 **Inflow**

Untreated wastewater flows into the plant.

5 **First treatment chamber**

Biological treatment process of the wastewater takes place already here using activated sludge.

6 **Partition wall with flow opening**

Inflowing wastewater and solids are initially retained in the first chamber. Through the opening there is a constant exchange of the activated sludge between the chambers. During the clear

water discharge, purified wastewater passes through into the second chamber.

7 **Second treatment chamber**

Here the further biological purification takes place. After a settling phase, the clear water is pumped out of this chamber.

8 **Pipe diffuser**

9 **Mechanical float valve**

10 **Air lift pump**

11 **Buffer tank with sampling**

12 **Clear water pipe**

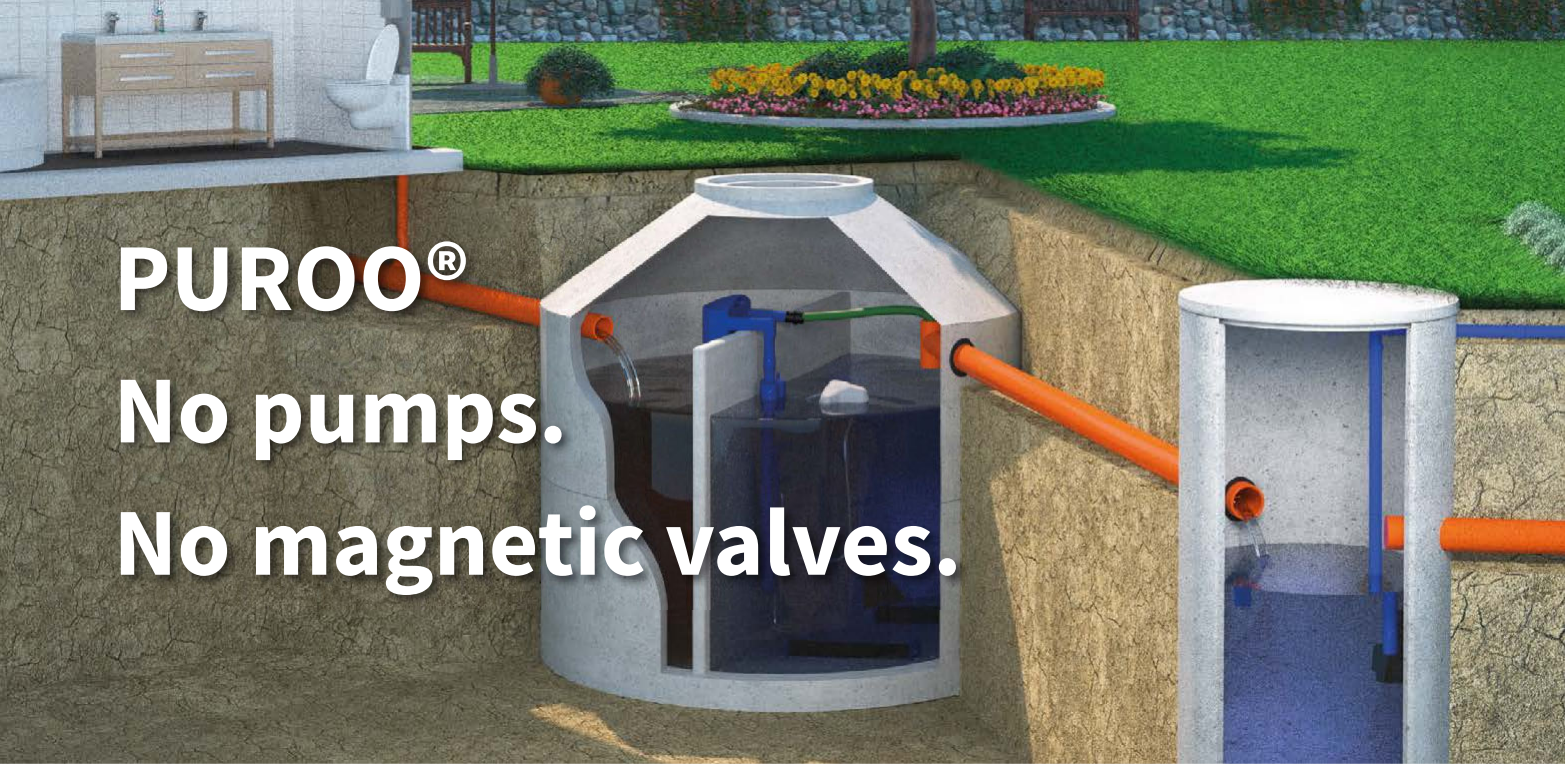
13 **Outlet**

Purified wastewater flows out of the system

## PUROO® Complete – Sludge stabilisation included!

With the PUROO® Complete system for up to 16 PE, aeration takes place not only in the aeration tank but also in the primary clarifier – this offers additional advantages:

- ♻ Less sludge removal – The added oxygen mineralizes the sewage sludge by breaking down carbon compounds. The sludge volume is reduced and sludge removal is only necessary later than in plants without aerated pre-treatment.
- ♻ Nearly no odor nuisance and concrete corrosion – the formation of fouling gases and acids is prevented by the oxygen supplied.
- ♻ The system is suitable for new builds and retrofitting (without complicated conversions in the tank).



# PUROO®

## No pumps.

## No magnetic valves.

**PUROO®**  
1-16

**PUROO® Complete**  
1-16

WITH  
PRESSURE  
AERATION!



**PUROO® Z**  
1-16

**PUROO® Z Complete**  
1-16

WITH  
PRESSURE  
AERATION!



## PUROO®: The new generation of small wastewater treatment plants up to 16 PE – proven a thousand times!

### ♣ Easy handling

Both installation and operation are very simple and easy.

### ♣ Low electricity costs

Due to process optimization only approx. 30 kWh per connected resident and year.

### ♣ Very high cleaning performance

Self-adjusting system in cases of underload or high inlet peaks

### ♣ According to EN 12566

### ♣ No magnetic valve

A robust ball float, specially developed by ATB, controls the air flow directly, without electrical energy – purely physical.

### ♣ Low maintenance and repair costs

Few individual and wearing parts; therefore manageable costs.

### ♣ Award

Greentec Award 2014

More than  
**115.000**  
plants in  
operation  
worldwide!



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