



1-16 PT



ATB Wastewater treatment plants

New installations & retrofitting

PUROO® / PUROO® Complete

PUROO®

No pumps! No magnetic valves!



PUROO®
1-16



PUROO® Z
1-16



PUROO® Complete
1-16

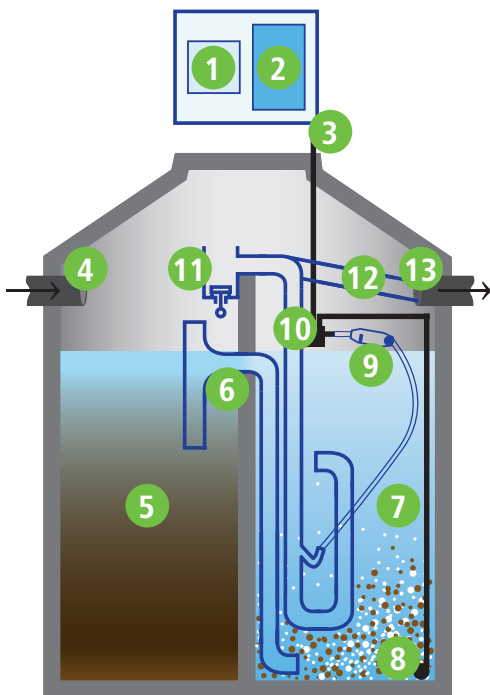


PUROO®: The new generation of small sewage treatment plants up to 16 PT – proven a thousand times!

- **Easy handling** – Both installation and operation are very simple and easy to understand
- **Low electricity costs** – Due to process optimization only approx. 30 kWh per connected inhabitant and year
- **Very high cleaning performance** – Self-adjusting system in cases of underload or high inlet peaks
- **No magnetic valve** – A robust unique ball float developed by ATB controls the air flow without electric energy – purely mechanical
- **Low maintenance and repair costs** – Few individual and wear parts; therefore manageable costs
- **Awarded technology** – Greentec Award 2014
- **According to EN 12566**



How our PUROO® plants work



Schematic diagram; depending on the plant and installation variant, mounted on partition wall or 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. **Preliminary treatment stage**
Here the wastewater is pretreated mechanically and coarse matter settles.
6. **Overflow baffle**
7. **SBR treatment baffle**
Here the biological treatment process takes place using activated sludge.
8. **Pipe aerator**
9. **Membrane tube aerator**
10. **Air lift pump**
11. **Buffer tank with sampling device**
12. **Clear water pipe**
13. **Outlet**
Clean water effluent out of the plant.

PUROO® – the power saving sewage treatment plant

The PUROO®-small wastewater treatment plant does not pump the wastewater as often as it is usual in other small wastewater treatment plants. The clarification process is considerably simplified. Thus PUROO® saves money, especially with the ever increasing electricity costs. Save up to €1.440,- in 10 years!

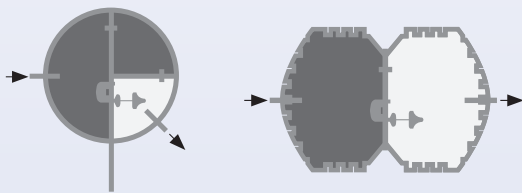
Sample calculation: At an electricity price of € 0.30/kWh, a fixed-bed or fluidized-bed plant for 4 PT consumes a total of 150 kWh per inhabitant & year and thus causes costs of € 180,- per year. If you operate a PUROO® small wastewater treatment plant instead, you will save € 144,- per year, i.e. in 10 years € 1.440,-. But PUROO® saves your wallet even more: Since the plant does not need any other cost-intensive components besides the replacement parts of the blower, you also save maintenance costs.



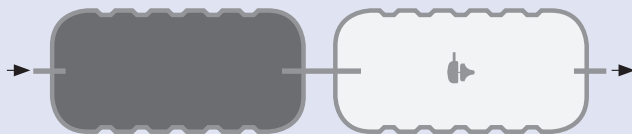
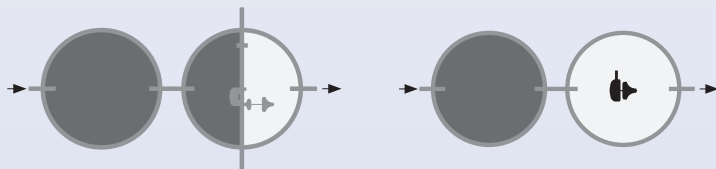
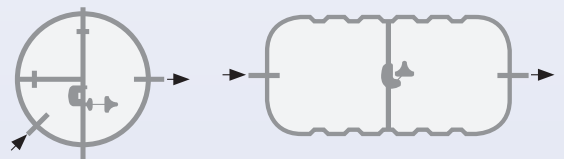
New installations and retrofitting made easy! – Application examples

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.

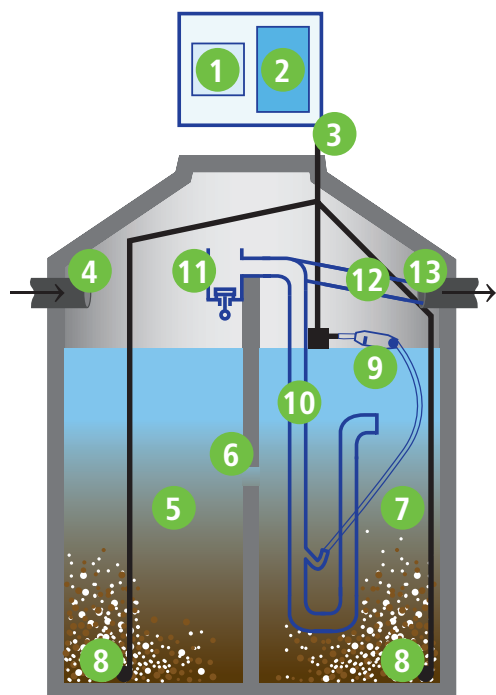
Retrofitting

The technology is just as suitable for retrofitting in an old multi-chamber pit as it is for retrofitting in plastic tanks.





How our PUROO® Complete plants work



Principle sketch

- 1. Automatic control**
- 2. Membrane compressor**
- 3. Air hose**
- 4. Inflow**
Untreated wastewater flows into the plant.
- 5. First treatment chamber**
Already here the biological treatment process of the wastewater takes place using activated sludge.
- 6. Partition wall with passage opening**
Inflowing wastewater and coarse materials are initially retained in the first chamber. The activated sludge is constantly exchanged between the chambers through the opening. 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 drawn off from this chamber.
- 8. Pipe aerator**
Water is discharged from this.
- 9. Mechanical float valve**
- 10. Air lift pump**
- 11. Buffer tank with sampling device**
- 12. Clear water pipe**
- 13. Outlet**
Clean water effluent out of the plant.

PUROO® Complete – Sludge stabilisation included!

With the PUROO® Complete plant up to 16 PT, the aeration does not only take place in the aeration tank, but also in the primary treatment – this offers additional advantages:

- Rare sludge removal – The oxygen supplied causes the sludge to mineralise by breaking down carbon compounds. The sludge volume is reduced, sludge removal is only necessary later than in plants without aerated primary clarification
- Nearly no unpleasant smells and concrete corrosion – The formation of fermentation gases and acids is prevented by the oxygen supplied
- The system is suitable for new construction and retrofitting (without complicated conversions in the tank)

More than
90.000
plants in operation
worldwide!



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