

Oxynaut – let nature work for you



Fully biological system

Input of ultra-fine
oxygen bubbles

Ready-to-connect

Z-55.3-61

80
YEARS
QUALITY

Where pressure drainage ends, small-scale clarification technology begins.

JUNG PUMPEN is the specialist for sewage and wastewater disposal with more than 80 years of experience. A reliable partner for municipal clients as well as private households. With innovative systems for house and property drainage to pressure drainage, JUNG PUMPEN sees you through – from the beginning, for life.

Fully biological: SBR technology with JUNG PUMPEN



The ideal addition to your existing small-scale clarification plant

Small-scale clarification plants are used where pressure drainage is not economical because the distances to sewers are too great.

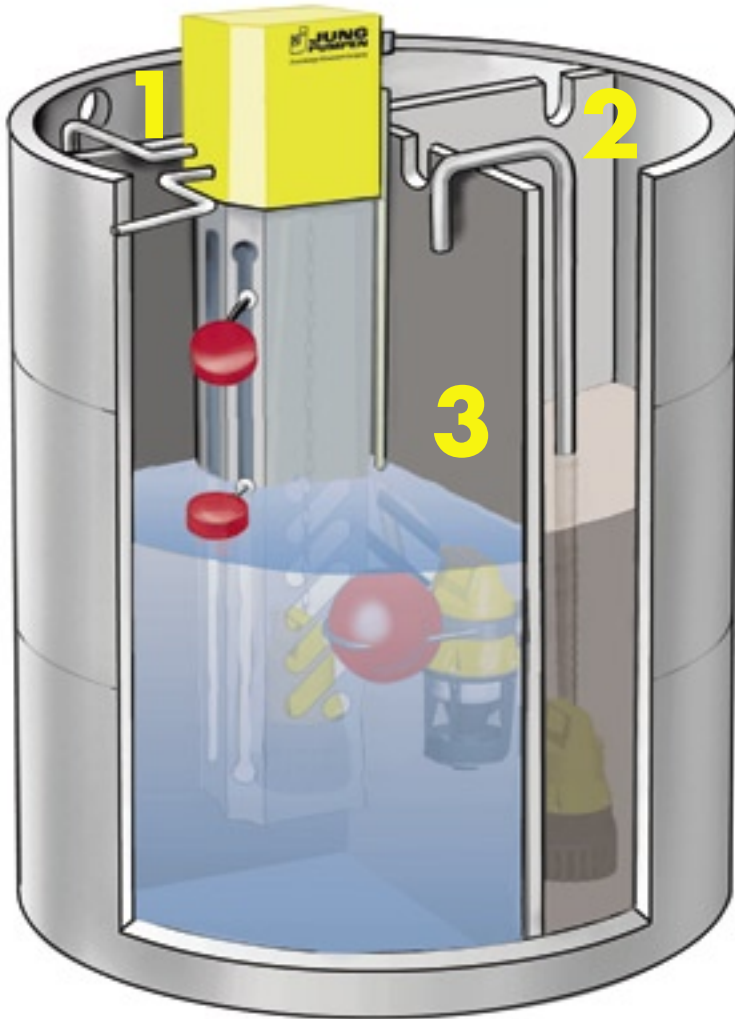
JUNG PUMPEN's Oxynaut is the ideal addition for your existing three-chamber sump or new small-scale clarification plant. With the Oxynaut, your system operates - fully biologically - using so-called SBR technology.

SBR stands for Sequencing Batch Reactor and means that wastewater clarification is performed in several biological reaction phases. The heart of this technique is the activation of the bacteria inside the small-scale clarification plant by optimal aeration with oxygen. With its supply of ultra-fine oxygen bubbles, the Oxynaut achieves biological clarification performance of up to 99 percent.

The Oxynaut is an investment for the future. The flexible control unit allows you to adapt clarification performance for the requirements of tomorrow. With the power failure detector, the operating safety of your small-scale clarification plant is increased and annual expenses are reduced due to longer maintenance intervals

The Oxynaut in a small-scale wastewater clarification plant – biological clarification efficiency of up to 99%

It doesn't matter if your small-scale clarification plant consists of one or two tanks: the Oxynaut is the ideal addition. Because wastewater clarification is performed in three chambers and in the usual sequence:



Chamber 1: Pre-treatment tank

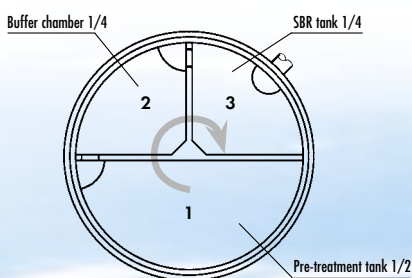
This is the largest chamber (500 litres per resident according to the DIN 4261 standard), which holds domestic wastewater. Here, the first stage of solids removal is carried out; the solids deposit at the bottom of the tank.

Chamber 2: Buffer chamber

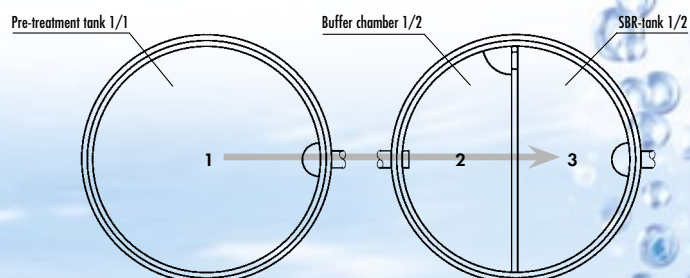
Here the pre-treated wastewater is collected and then fed in a controlled manner by the Oxynaut dosing pump into the third chamber. Fluctuations in the water influx, e. g. as a result of extra washing or family celebrations, do not influence the biological clarification phase.

Chamber 3: SBR tank

In this chamber, the biological clarification of the wastewater takes place in fixed cycles that are repeated several times per day. The Oxynaut, which controls the process and supports the biological clarification, is the heart of the treatment tank.



One-chamber system



Two-chamber system



Exact timing during wastewater clarification – with the automatic 5 phase cycle

With the Oxynaut, biological reactions occur exactly on schedule. Each clarification cycle consists of 5 phases:



Aeration phase



Sedimentation phase

1. Filling phase

The SBR tank is filled to the maximum volume with pre-treated wastewater from the buffer chamber (level limit switch).

2. Aeration phase

In this phase, the wastewater is mixed with biologically active flakes, the so-called activated sludge. The Oxynaut ensures an even distribution throughout the entire SBR chamber. The submersible aerator enriches the water with ultra-fine oxygen bubbles which create optimal conditions for microorganisms. The biological clarification can begin.

3. Sedimentation phase

The Oxynaut stops the aeration, the activated sludge settles to the bottom leaving clarified water behind: excess sludge is fed back into the primary sedimentation basin.

4. Pumping off phase

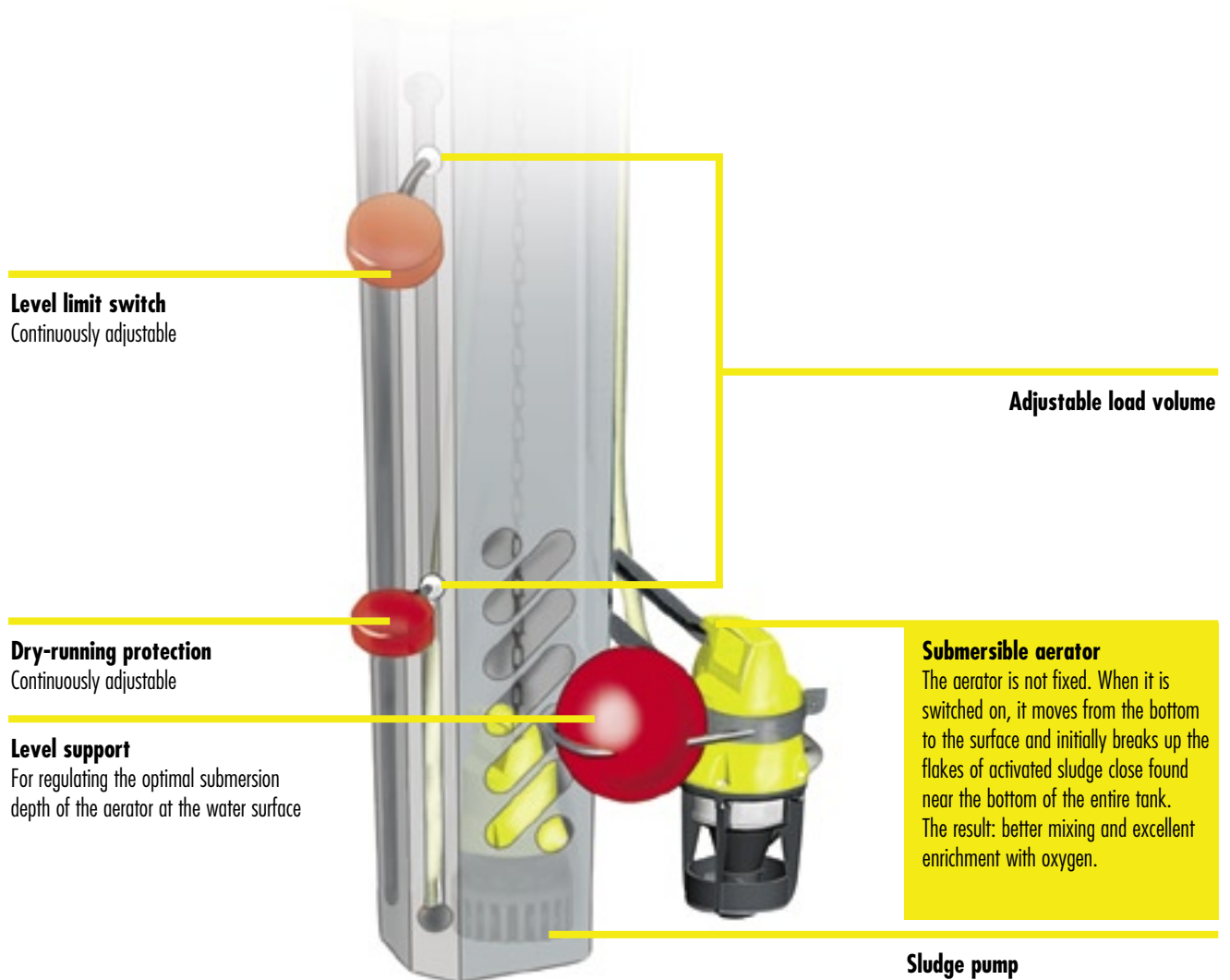
The fully biologically clarified water is now pumped off and can be discharged into a creek or sewer.

5. Waiting phase

As long as the treatment tank is not completely filled (as determined by the level limit switch), the activated sludge present is only occasionally aerated. When the inflow is low, the control unit automatically switches to energy saving mode (holiday setting).

The details make the difference: The Oxynaut components at a glance

JUNG PUMPEN's Oxynaut can be used for existing or new fully biological, small-scale clarification plants for 4 to 12 people. The unit is completely pre-assembled and ready-to-connect, can be installed in the tank in just a few easy steps and be customised to your individual situation. A user-friendly control unit controls the entire cycle, monitors itself and the components. All components have been specifically developed for particularly economical operation.



Propeller with oxygen bubbles

The insertion of ultra-fine oxygen bubbles provides excellent aeration for the biologically active microorganisms – and results in improved clarification performance. Smooth and gentle: the propeller swirls the flakes of activated sludge evenly without destroying them.

Convincing arguments

The Oxynaut is a high-quality JUNG PUMPEN product with many benefits:

Your contact:

Optimal clarification performance

By supplying particularly fine oxygen bubbles, the Oxynaut's biological clarification performance reaches levels of up to 99 percent.

Optimal stirring

The Oxynaut achieves optimal stirring thanks to the flexible construction of the submersible aerator.

Versatile in application, individually adjustable

The Oxynaut is suited for existing or new small-scale clarification plants for 4 to 12 inhabitants.

Ready-to-connect

The pre-assembled modules can be installed in just a few steps – the Oxynaut is immediately ready for use.

Quiet

The Oxynaut needs no external units – all processes take place inside of the clarification chamber.

Economical

The Oxynaut is very economical in terms of power consumption. A holiday setting recognises low influxes and switches to energy saving mode. In addition, discharge intervals are extended due to large-scale pre-treatment.

Tested system

The Oxynaut has been approved by the German Institute for Structural Engineering (DIBt Z-55.3-61), Berlin.

Easy to maintain

With the battery-operated power failure monitor, the pre-described intervals between maintenance cycles are lengthened.

Reliable / safe

The control unit monitors itself and all of JUNG PUMPEN's well-tried components.

Any questions?

Oxynaut Hotline

+49 (0) 18 05-18 88 83

