

# AN OASIS IN YOUR GARDEN

ACT<sup>®</sup> Bio-treatment plant



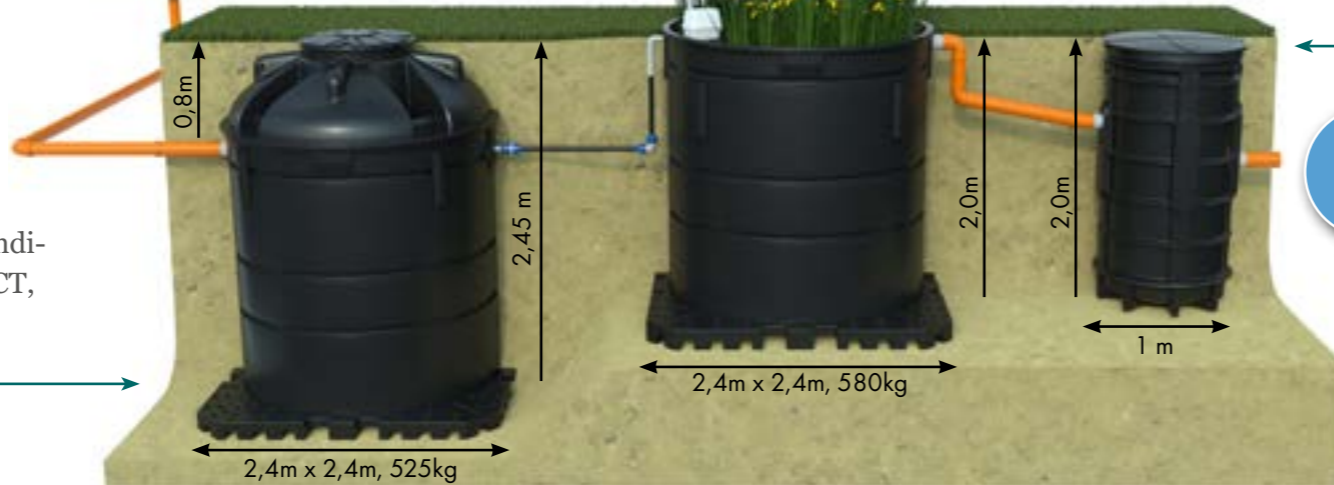
# SUSTAINABLE & LONG-LASTING

## ProACT® Sludge Degradator

Gravity leads the waste-water from the house to ProACT, where sludge degrades in an anaerobic environment. Half of the tank is filled with bio-blocks for the microorganisms to grow on. This results in a process that degrades the sludge.

This decreases the need for regular sludge removal. From ProACT, water is pumped to the main purification stage, InterACT.

If you have a septic tank in good condition, it can be used instead of ProACT, but then you will still need annual sludge removal.



## InterACT® Main Treatment

In InterACT, the same processes occur as in a natural wetland. The tank is largely filled with bio-blocks. The surfaces of the bio-blocks (over 400 m<sup>2</sup>) form a biofilm of microorganisms that remove unwanted substances from the wastewater. Aquatic plants are planted in the structures, with root systems that provide additional surface area and a favorable environment for microorganisms. The water in InterACT is aerated with an air pump to optimize degradation and keep the water in circulation.



> Microorganisms build biofilm on the large surface area of the bio-blocks.

## ReACT® Phosphorus Trap

At some locations the municipalities set demands on a high level of protection. A high protection level requires 90% reduction of phosphorus. To achieve this, we use a well with a lime material called Polonite. Phosphorus is adsorbed on the surfaces of the lime material, and the high pH also sanitizes the water from bacteria. After a few years, when the material is spent, it should be spread on arable land to complete the important phosphorus cycle. A simple pH measurement checks the status of the lime material.



At a normal protection level, we recommend directing the outlet water into the ground with a mini-infiltration.

## A wetland with large margins

The Alnarp Cleanwater bio-treatment plant mimics the natural processes of a wetland. Thanks to its large wet volume and extensive bioactive surfaces, it offers ample margins for reliable purification, whether you have many guests or just a few household members.

No adjustments are needed; the system automatically adapts to changes in load. Despite its generous capacity, the main purification stage only occupies three square meters of your garden.

## Easy to maintain & low operating cost

Because the purification process is natural and chemical-free, the bio-treatment plant is very easy to maintain. No service contract is required! With the ProACT sludge degrader, you avoid the need for annual sludge removal typical of other treatment plants. For a household of five, emptying is needed approximately once every 10 years, provided that only biodegradable material is flushed down the drain.

The plants need to be trimmed in the spring, which you can easily do yourself.

## Safe and reliable – now and in the future

The ACT® Bio-treatment plant has been tested in Sweden by RISE – the Research Institutes of Sweden, over the course of a year with good results. According to a study by IVL, the Swedish Environmental Research Institute, pharmaceutical residues are more effectively removed in our Bio-treatment plant than in municipal treatment plants. No detectable levels of hormones were found after treatment.

For safe and secure operation, the bio-treatment plant is monitored by a control unit with alarm

functions. The system can handle the load from up to two households, making it possible to connect a neighbor or an extra house on your property. If the purification requirements on the property change, it is easy to upgrade the system from normal to high protection levels.

With climate change, extreme floods are becoming more common. To protect drinking water, the purification process is entirely separated from groundwater (unlike infiltration systems).



## CONTACT

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We offer help  
with the environ-  
mental permit  
application

