

### Fully biological compact wastewater treatment plant in a PE container

The **Delphin XXS** compact wastewater treatment plant is a fully pre-assembled biological system for the purification of domestic wastewater for up to 10 inhabitant equivalents (IE). Biological purification is based on the fixed-bed process. The containers of the compact wastewater treatment plant are manufactured entirely out of weather- and wastewater-resistant PE plastic and, therefore, boasts a significantly higher durability than concrete container. The ribbed structure of the containers ensures a particularly high stability against soil- and water pressure.

A small wastewater treatment plant must be able to perform better than a large municipal system, as load- and supply variations are particularly distinctive in small plants. The fixed-bed process is the purification system which reacts most flexibly to such variations. This has been proven in many scientific investigations and has long-standing application in the field of small wastewater treatment plants.



### Purification efficiency

The **Delphin XXS** compact wastewater treatment plant is designed for up to 10 IE in accordance with DIN 4261 T2 and EN 12566-3. When connecting only 7 IE, the system also offers nitrification and denitrification. The legally stipulated discharge values are met.

The plant **Delphin XXS** provides a bigger sludge storage volume compared to the plant **Delphin XXS-F**. That way sludge removal intervals will be prolonged. For retrofitting the biologic part of the plant (2<sup>nd</sup> container) is installed behind an existing three chamber pit or septic tank. The existing tank must be intact and it must contain a sufficient volume. This saves the preliminary settlement container and provides a long-term and more save solution than a retrofitting into an old concrete tank.

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### Your benefit: a superior technology

#### ■ Ideal for low and strongly varying supply quantities

With small connection sizes, load variations may be absorbed without any problems via the fixed-bed process.

#### ■ Installing, connecting → ready!

The plant is fully pre-assembled and serviceable immediately after the completion of earth works.

#### ■ Take good care of your garden!

Compact dimensions and a lightweight structure enable earth works with light construction equipment.

- Weight: preliminary clarification: 250 kg, biology / secondary treatment: 350 kg
- Low installation depth: particularly suitable for high groundwater levels!

#### ■ Save operating costs!

- Low maintenance requirements (twice a year)
- Low power demands: approx. 64 l kWh/a (for 10 IE in Region I)
- Low installation costs

#### ■ 20 year warranty on the stability and tightness of the containers

The containers are made in one casting ⇒ no cast seams.

In contrast to concrete, the container material is not affected by wastewater.

#### ■ Quiet technology

No disturbing noises at or in the house will appear because the compressor is placed in the dome of the treatment plant.

#### ■ No risk of backflow

During a power outage, the wastewater travels in a free incline through the entire system.



# Delphin **XXS**

**up to 10 IE**

## Purification efficiency

### Standard

$BOD_5 \leq 40 \text{ mg/l}$

$COD \leq 150 \text{ mg/l}$

filtered substances  $\leq 75 \text{ mg/l}$

### Nitrogen removal

$BOD_5 \leq 20 \text{ mg/l}$

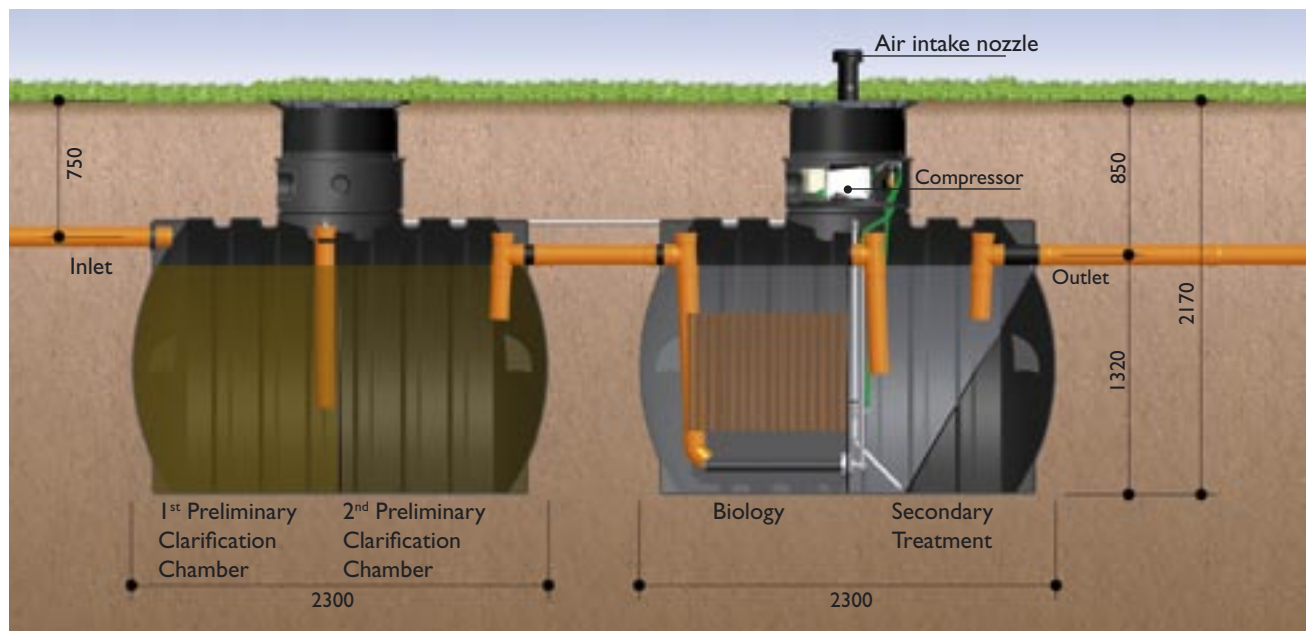
$COD \leq 90 \text{ mg/l}$

$NH_4\text{-N} \leq 10 \text{ mg/l}^*$

filtered substances  $\leq 50 \text{ mg/l}$

The operating values of the Delphin compact wastewater treatment plant clearly lie below the required limit values. The mean efficiency of the Delphin fixed-bed process, for example, is found to be 95.6% for  $BOD_5$  and 95.3% for  $NH_4\text{-N}^*$ .

\*: Measuring results obtained on a state-accredited test field



	IE	DIN 4261 T2 EN 12566-3 Carbon Degradation	DIN 4261 T2 EN 12566-3 Nitrification+Denitrification	Volume Preliminary Clarification 1st + 2nd Chamber	Volume Biology	Volume Secondary Treatment
Region 1	10	x		3.52 m <sup>3</sup>	1.76 m <sup>3</sup>	1.16 m <sup>3</sup>
	7	x	x			
Region 2	6	x				
	4	x	x			

Region 1: Regions with waste water temperatures all-the-year  $> 10^\circ\text{C}$   
 Region 2: Regions where waste water temperatures can fall below  $10^\circ\text{C}$



Subject to technical  
changes without prior notice

Your specialist dealer