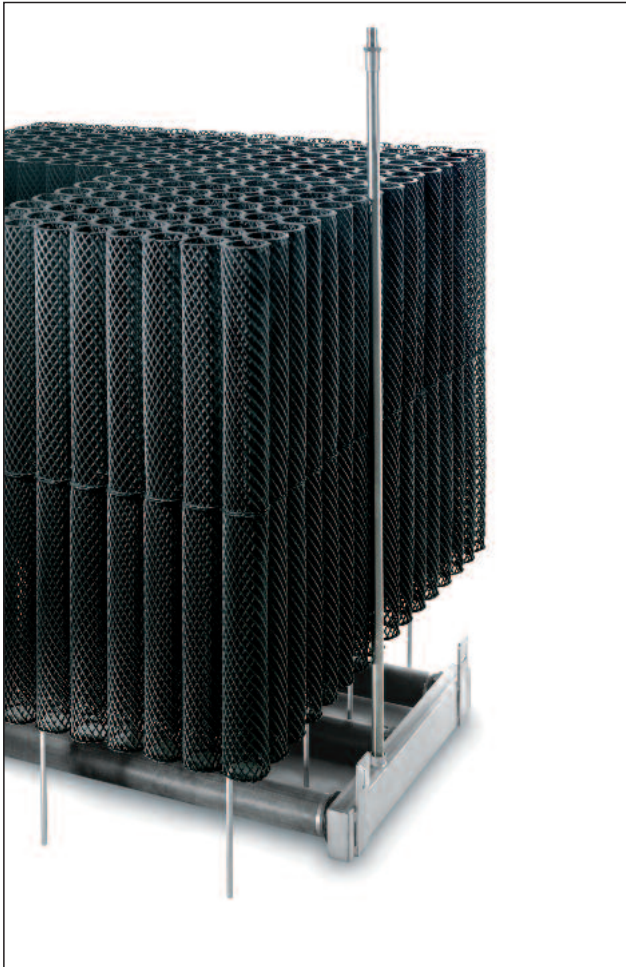


HUBER DeWaTec 3K PLUS®



Long time experience is better than a copy



Works without electrical parts or cables in the sewage pit: systems engineering with membrane aerator.

►► Product Information

Since 1991 the 3K PLUS® small sewage treatment plants have been operating in Germany. The aerated fixed-bed plants by Huber DeWaTec initially purify domestic wastewater by eliminating carbon biologically. Even the oldest small sewage treatment plants of this type **go far beyond all obligatory legal limits.**

These very reliable small sewage treatment plants operate with an underwater fixed bed that is installed in the second chamber of a three-compartment or dual and 4 tank-systems tank and is good for refitting and new building. The fixed bed consists of plastic pipes with a special grid structure and **provides a perfect microbial environment:** the microorganisms that exist in wastewater can settle down as a “biological layer” on the wide surface of the fixed bed. This biological layer reliably decomposes all existing carbons in the wastewater. The result is documented by the **DIBT approval mark Z-55.6-2.**

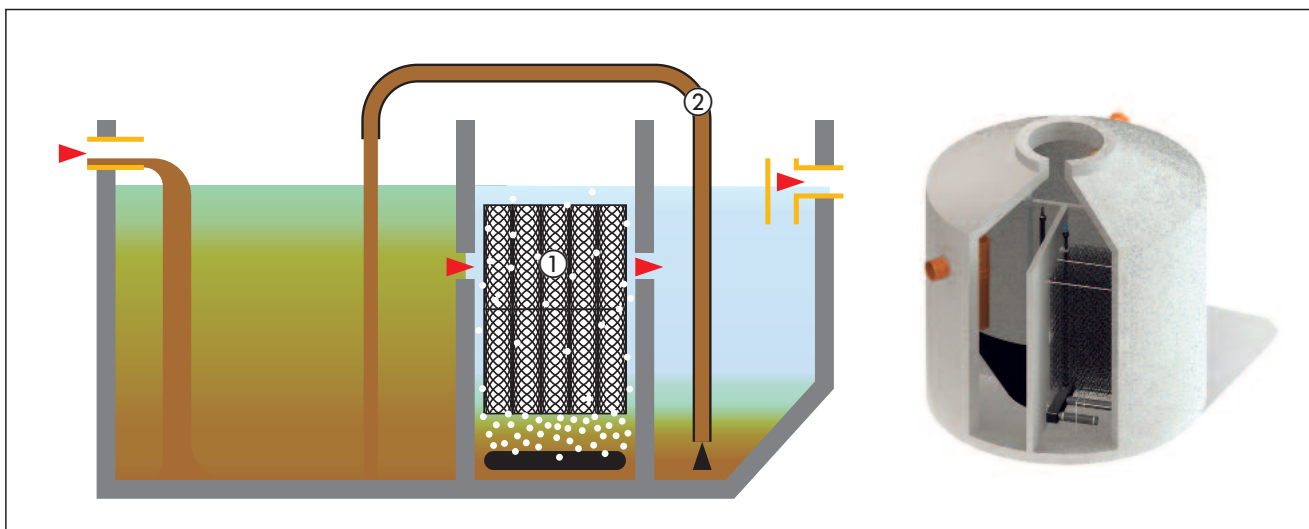
►► Technical overview:

Users	Number of tanks	Inside diameter in metres ¹	Depth in metres ¹	installed engine output [kW]	aeration Ø [h/d]
4	1	2,00	1,40	0,130	12,0
6	1	2,50	1,30	0,130	16,0
8	1	2,50	1,30	0,130	16,0
10	1	2,50	1,50	0,280 ²	10,5
12	1	2,50	2,00	0,280 ²	10,5
16	1	2,50	2,50	0,280 ²	10,5
25	2	2,50	2,00	0,550 ²	10,5
50	4	2,50	2,00	1,500 ²	10,5

>50 individual design according to DWA worksheet A 122

¹ operative examples; variations can be provided.

² According to operative situations, the engine output of this type of compressor may not comply with the listed performance.



Presentation of the working sequence of an aerated fixed-bed unit 3K PLUS®.

►► The reliable purification of domestic wastewater through the HUBER DeWaTec 3K PLUS®:

The first of the three chambers carries out the mechanical primary treatment. Afterwards the wastewater is piped into the second chamber for biological treatment. At the bottom of this compartment aerators are installed that mix the wastewater with precisely determined amounts of air at regular intervals. Above the aerators the underwater fixed bed is installed 1. On the fixed bed the microorganisms living in wastewater settle down as a "biological layer" over a wide surface. In this combination, and with an exact administration of oxygen, they provide an excellent purification performance. Superfluous microorganisms become detached from the

fixed bed again and again by the rising air and are rinsed in the third chamber by the biologically purified water for sedimentation. There they settle down at the bottom as so-called surplus activated sludge before being transported back into the first chamber by a compressed air lifter 2 for primary treatment before the purified water leaves the plant.



►► The benefits provided by the HUBER DeWaTec 3K PLUS®:

Each small sewage treatment plant 3K PLUS® is **converted** according to the individual wastewater amount **on the site of production**. For the customer, that means getting the perfect plant for his or her individual needs; enhanced reliability; and all the security that is necessary. Furthermore, it is **good for the environment**.

3K PLUS®, the aerated fixed-bed plant by HUBER DeWaTec operates perfectly effectively, year after year. It still provides excellent wastewater data with load variations, reduced load and also at low temperatures. Through the installation of a lifter that operates with compressed air and with absolutely no wear and tear –

instead of cheaper electric pumps that rotate in the wastewater – the durability of operation is ensured.

Existing multichamber pits – if they are free of defects in buildings and structures – **can be refitted within a few hours**, so that they fulfil all legal requirements (EN 12566 and DIN 4261).

3K PLUS®, the aerated fixed-bed plant stores all components that are subject to prescriptive maintenance – including the electronic control unit – easily accessible in a solid separate control cabinet (CE certified).



Control and compressor of the Huber 3K PLUS® small sewage treatment plant shielded in an external, solid control cabinet, that is also available for outdoor installation.

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