DATASHEET

ClearFox® be clever

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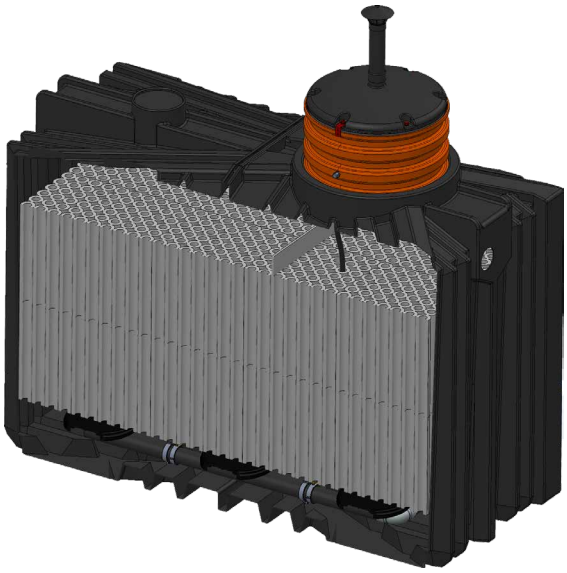
FBBR-Module

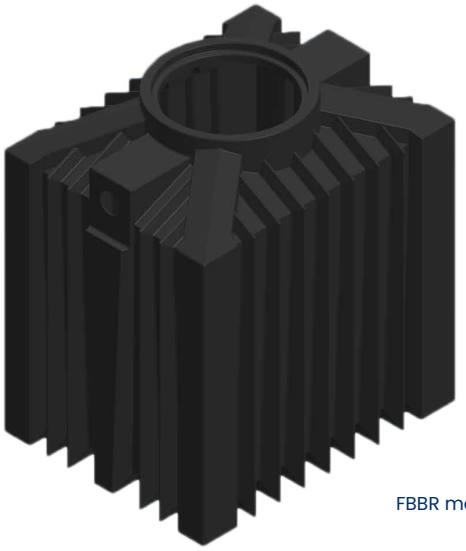
The advantages of ClearFox® FBBR modules

- Fast commissioning, cost savings during installation, small footprint
- Modular design offers optimum adaptability for every application
- Both industrial and municipal wastewater
- High performance with high quality, Made in Germany



The ClearFox® fixed-bed modules are fully equipped bioreactors in a high-quality PE mold. All equipment parts, such as aerator plates, distribution systems and the fixed bed material in a cubic tank are part of the pre-installed standard equipment of the high-performance bioreactors. The typical application is the reduction of carbon and/or nitrogen concentration from any type of pre-treated (solids removed) wastewater of industrial or municipal nature.

The shape of the tank and most of the equipment is manufactured from a single piece of highly resistant polyethylene using the seamless rotational molding process. The modules are designed for installation in the customer's tank (concrete chambers, steel frame systems), HC sea containers. Customer interfaces are designed for quick and easy installation on site.



FBBR module in an AP tank

PPU® water systems

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Basic values: (The fixed-bed reactor modules can work optimally under these wastewater parameters)

- Temperature: max 35°C
- Conductivity: < 10mS/cm
- pH value: 7-8
- C:N:P ratio: 100:5:1
- COD / BOD ratio: 2:1
- Acid capacity: 1.5 mmol/l (verification according to biology)
- Solids content: < 0.2 g/l
- Toxic substances (biocides): Must not be contained

Technical data: (With an operating time of 20 hours per day)

Modules for below-ground and above-ground installation

	FBBR 2250	FBBR 3500
Dimensions: (l, w, h) in cm (incl. frame for free-standing installation)	154/122/171 (170/138/171)	243/122/171 (259/138/171)
Required area:	2,25 m³	3,5 m³
Transport weight:	200 kg	250 kg
Operating weight	2300 kg	3550 kg
Inlet/Outlet	DN 100	DN 100
Electrical power	250 W	350 W
Carbon reduction		
Max. Flow rate [m3/h]	11,1	18,3
Population equivalents	74	122
Carbon reduction (COD) [kg/d]	7,4	12,2
Carbon reduction and nitrification		
Max. Flow rate [m3/h]	4,6	7,6
Population equivalents	31	51
Carbon reduction (COD) [kg/d]	3,1	5,1
Nitrification (NH4-N) [kg/d]	0,31	0,51

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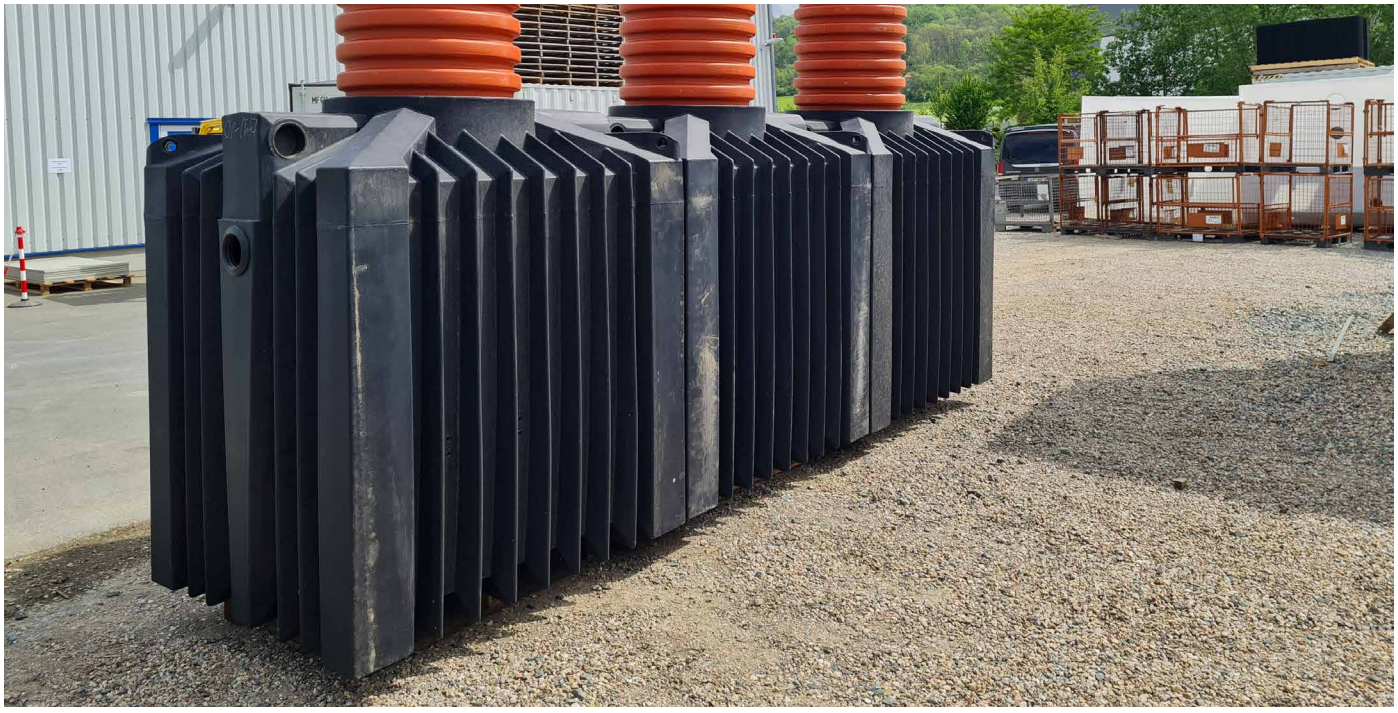
Modules for installation in containers

The modules can be flexibly arranged in a 20-foot and a 40-foot container, whereby the maximum number of FBR 13000 tanks is limited to two for 20-foot containers and four for 40-foot containers.

	FBBR 7000	FBBR 13000
Dimensions (l, b, h) in cm	135x210x257	274x210x257
Required area in container	33% eines 20ft. Container	50% eines 20ft. Container
Required area	2,8 m2	5,75 m2
Transport weight	350kg	650kg
Operating weight	7.800kg	15.000kg
INlet: DN/Height	DN 100 / 245 cm	
Outlet: DN/Height	DN 100 / 240cm	
Electrical power	~1.100 W	~ 1.400 W
Max. Flow rate [m3/h]	1	2
Carbon reduction (COD): [kg/d]	20	40
Nitrification (NH4-N) [kg/d]:	4	8



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