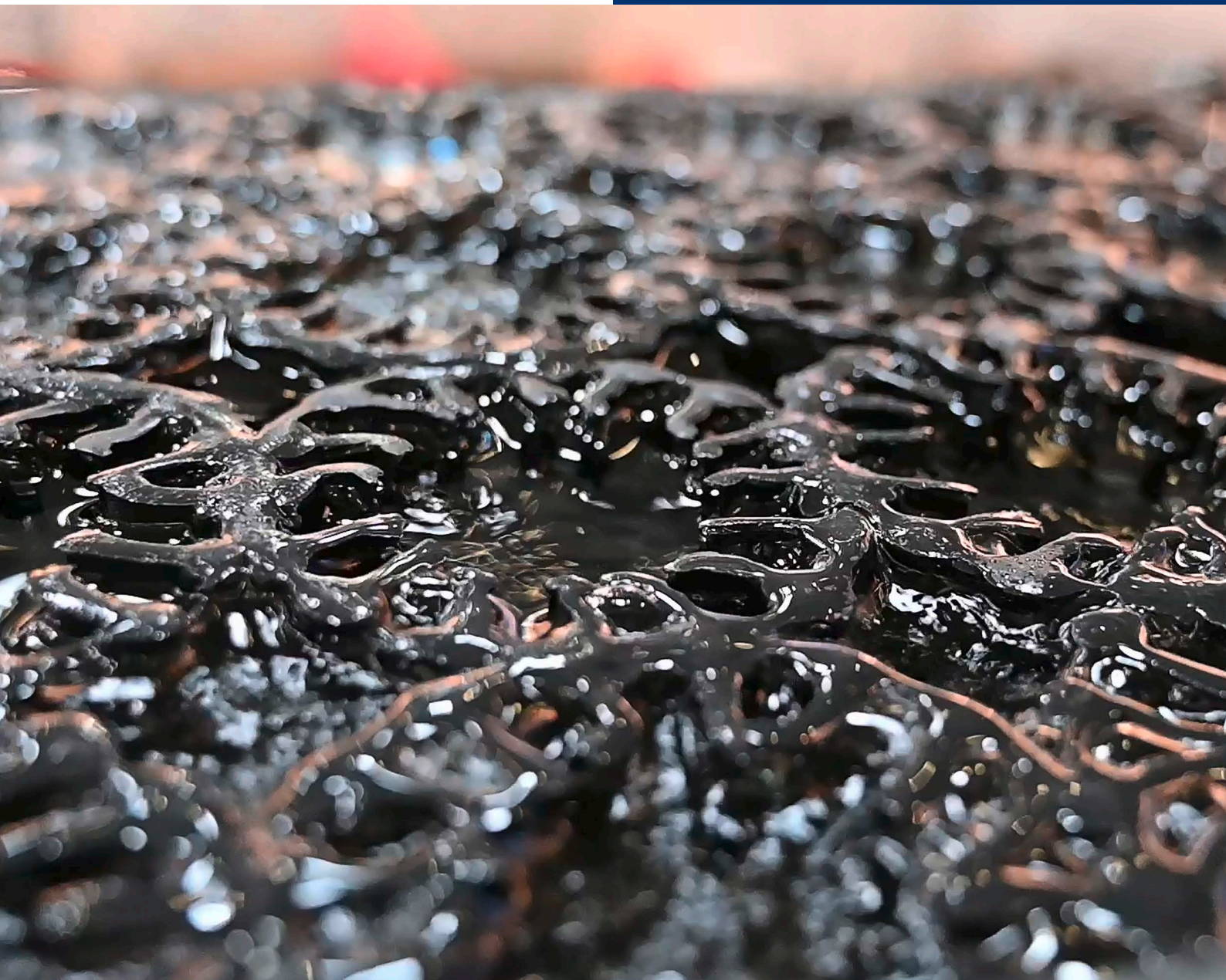


ClearFox[®] FBRR

Fixed Bed Biological Reactor

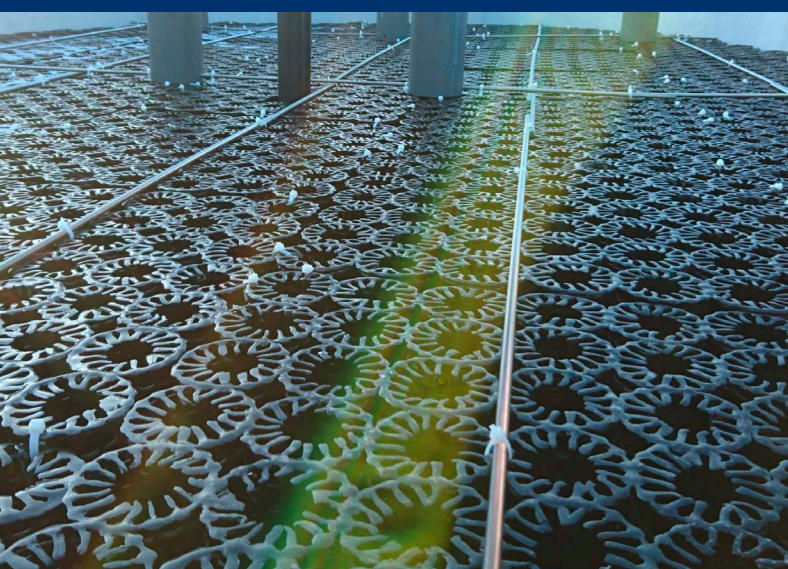
Highly efficient, biological
treatment for industrial and
municipal wastewater.

clearfox.com



ClearFox® FBBR is a high performance biological process for wastewater treatment. The fixed-bed modules are suitable for the efficient, biological treatment of industrial and municipal wastewater.

Biological treatment of wastewater with stable purification performance and a compact footprint.



99%

Cleaning Efficiency. The ability to biologically treat pollutants to achieve cleaning efficiencies of up to 99%.

ClearFox® FBBR

The ideal solution for every application.

The Applications

ClearFox® FBBR utilises the submerged fixed bed process to biodegrade the pollutants in the wastewater. The modules are flexible in design so that large volumes of wastewater and fluctuating pollution loads are no challenge.

Industrial Wastewater Treatment

- Permanent or temporary wastewater treatment
- Equalisation of seasonal flow variations
- Upgrade or expansion of existing wastewater treatment plants
- Temporary installation during large wastewater treatment plant maintenance shutdowns
- BOD, COD, TSS, NH₄N and P removal

Municipal Wastewater Treatment

- Permanent or temporary wastewater treatment
- Upgrade or expansion of existing wastewater treatment plants
- New, stand-alone wastewater treatment
- Temporary installation during large wastewater treatment plant maintenance shutdowns
- BOD, COD, TSS, NH₄N and P removal

Decentralized Wastewater Treatment

- Complete modular solutions
- Towns and villages
- Worker camps
- Residential and commercial applications
- Emergency military and humanitarian applications

The Advantages

Low investment costs

Plug & Play-solutions

Suitable for fluctuating wastewater flows

Lower operating costs than with other process technologies

Easily expandable

Simple operation

For industrial and municipal wastewater

Compact design

Fast installation and commissioning

High efficiency in pollutant removal

Mobile and easy to move

All modules are corrosion-resistant

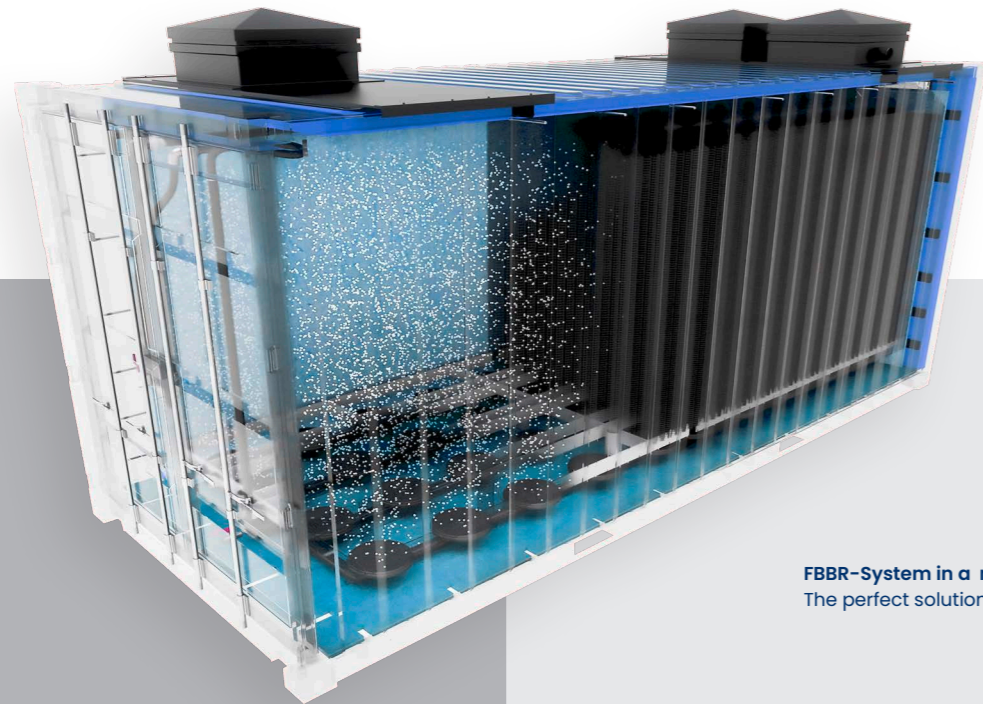
No addition of chemicals required

No odour development

Independently tested by PIA GmbH

ClearFox® FBBR

Compact and flexible. Just clever.



FBBR-System in a mobile Container.
The perfect solution for all applications.

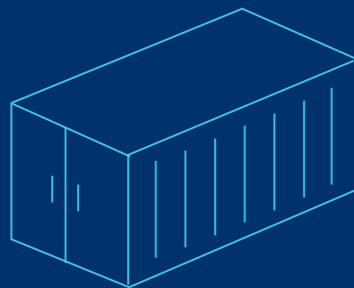
Containerized

The mobile solution for all applications

Plug & play solutions in containerized modules for above-ground installation.

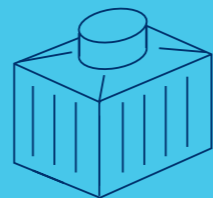
The ClearFox® containerized wastewater treatment plants are available in 20' or 40' versions.

Depending on the requirements, they can be placed in a row, parallel or on top of each other.



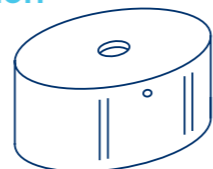
In plastic tanks

The small solution



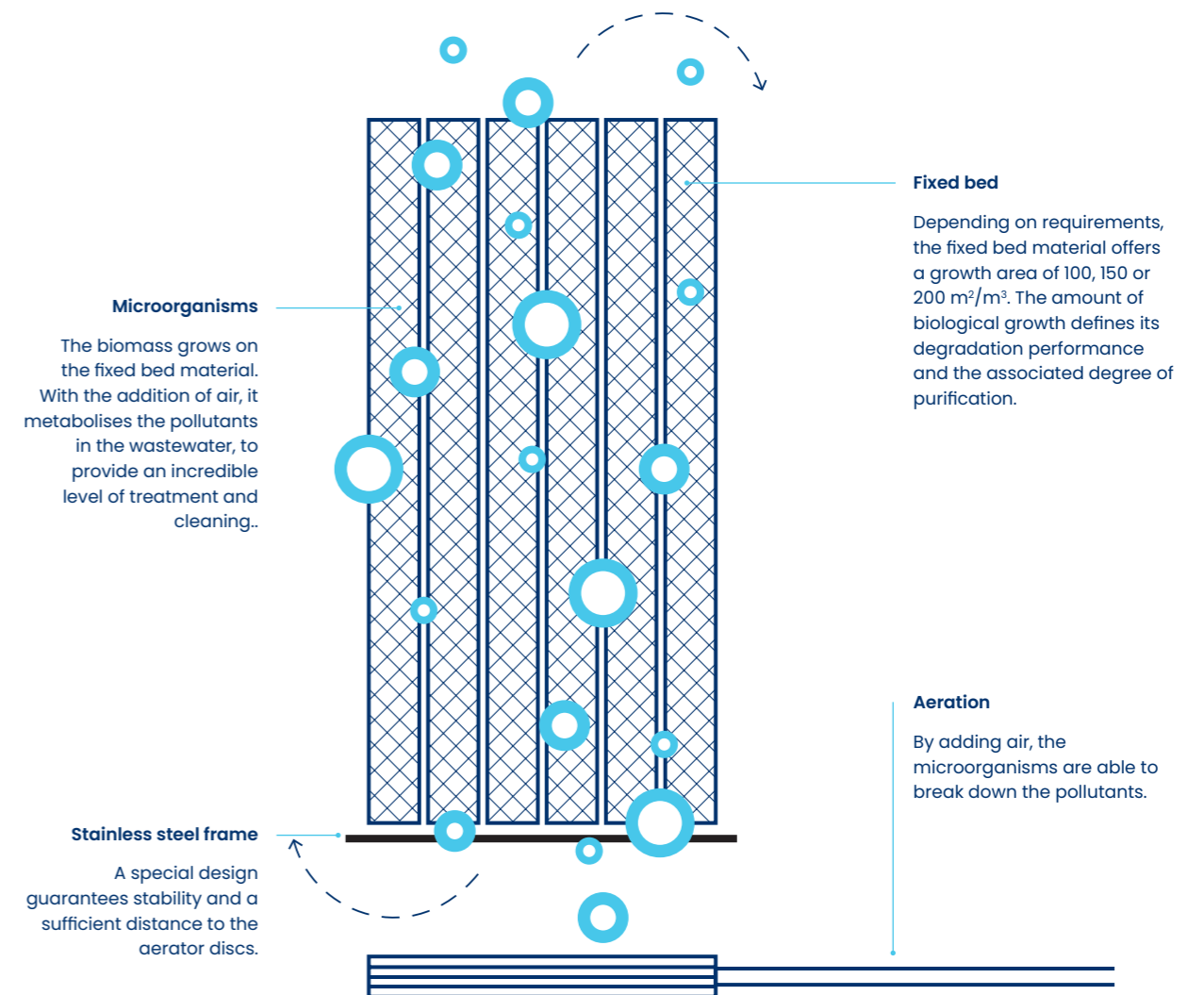
In concrete tanks

The underground solution



ClearFox® FBBR

The most efficient solution for biological wastewater treatment.



The ClearFox® FBBR is the **most efficient and robust process for biological wastewater treatment on the international market**. It is a modification of the well-known fixed-bed process used worldwide. By utilising special cascades and aeration sequences, the ClearFox® fixed bed biological reactor treats municipal and industrial wastewater. This method is far more stable than typical activated sludge processes and produces **less sludge than conventional biological wastewater treatment methods**.



Leasing? Of course!

All containerised wastewater treatment plants are available for leasing and lease-to-buy. The leasing period can be between a few months and several years.

Ideal for municipal wastewater treatment plant upgrades, temporary wastewater treatment during maintenance operations, short term solutions for worker camps and construction sites – the applications for containerised systems are endless!

A purchasing option is available at the end of the leasing period.

We are happy to advise you!

Purchase? No Problem!

When you purchase a ClearFox® FBBR wastewater treatment system, you get guaranteed process reliability for the treatment of your wastewater.

PPU Umwelttechnik GmbH tests all systems extensively before they leave the production facility.

A comprehensive customer service is available with the purchase, which supports the smooth operation of the wastewater treatment system.

We are happy to advise you!

Our container modules at a glance

Module	20ft FBBR HC Module	40ft FBBR HC Module
BOD removal rate	40kg / day	80kg / day
COD removal rate	100kg / day	200kg / day
NH ₄ N removal rate	8kg / day	20kg / day
Flow rate	5 m ³ /hr	10 m ³ /hr
Measures (l/w/h) in m	6,1 / 2,5 / 2,8	12,2 / 2,5 / 2,8
Control unit	Inside	Inside
Weight (transport/operation)	7,5 / 35 to	12 / 58 to
Power consumption	3,1 kWh	5,6 kWh



**Do you have any questions?
We are happy to advise you!**
+49 (0) 921 1511 020-0
info@clearfox.com



Further information
about our ClearFox[®]
FBBR can be found here



Innovation made in Germany

PPU Umwelttechnik GmbH provides wastewater treatment to the private, municipal, industrial and decentralised sectors. Under the brand name ClearFox[®], the company sells wastewater treatment plants produced in Bayreuth all over the world. The focus is on biological, chemical-physical and oxidising processes for wastewater treatment. PPU Umwelttechnik GmbH offers selected processes in ISO sea containers. This makes them compact, mobile, modular and available anywhere in the world within a very short time. Each containerised wastewater treatment plant is tailored to individual requirements, making each project unique.

As a general contractor, PPU takes on the planning, production and commissioning of each individual wastewater treatment plant. Every customer can count on reliable co-operation with PPU Umwelttechnik GmbH.

PPU Umwelttechnik GmbH

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