

OXYFLEX[®] MF2.0

High efficiency

Extremely variable

Cost-savings

**IT PAYS
OFF**

Supratec

Gesellschaft für Umwelt-
und Verfahrenstechnik mbH



QUALITY PREVAILS



ECONOMICAL

Optimal use of available area

With 2.0 m² membrane surface as standard, each OXYFLEX® MF2.0 plate diffuser consists of ten single OXYFLEX® MF1100 elements. This can very easily be adopted to requirements of any plant.



RESILIENT

High temperatures resistant

The OXYFLEX® TPU membranes can be used at a material temperature of up to 60°C. The EPDM membranes even work excellently at a material temperature of up to 120°C.



RESISTANT

Top quality material

The special OXYFLEX® membranes are produced to the highest level of quality and size accuracy in an injection moulding process. Optimal mechanical and thermal properties are achieved due to the wall thickness of 2.4 mm (**up to 4 times thicker than the membranes of competitors**).



SAFE

Beneficial structural shape

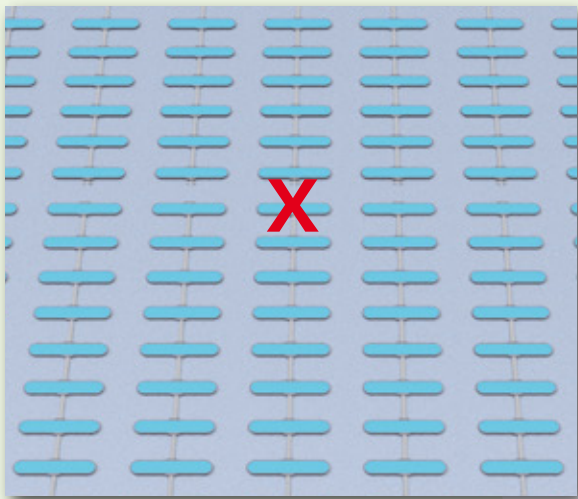
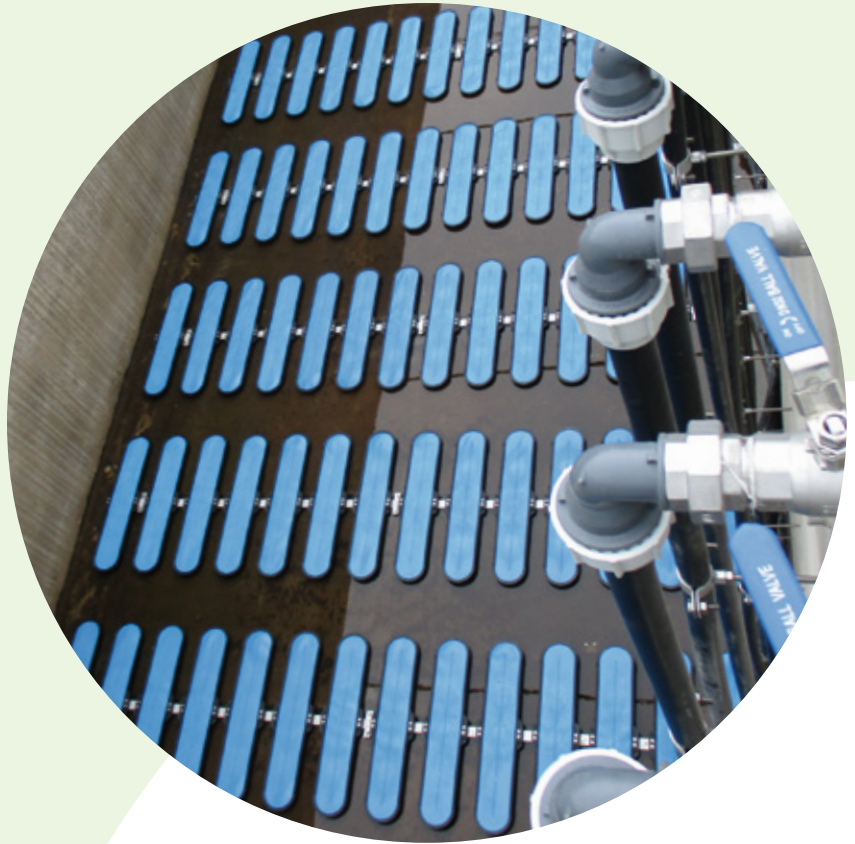
Even at high diffuser densities, the diffusers are arranged in such a way that enough sedimentation space is available. The risk of breakdown is lower compared to other systems.

RELIABILITY IS PRIORITY

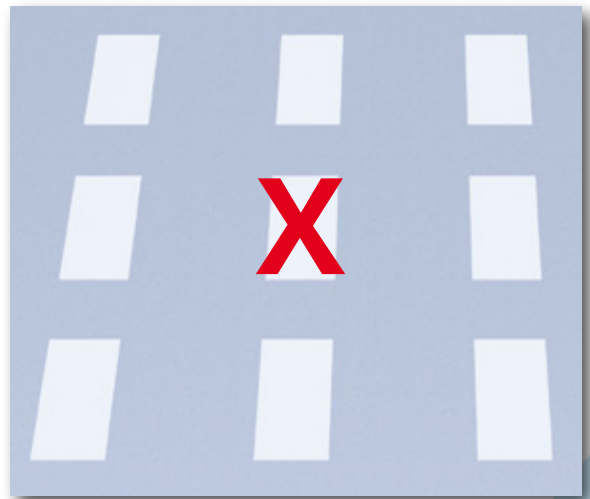
Every OXYFLEX® MF2.0 plate diffuser can be individually shut off and can, if required, be easily closed by using a ball valve.

If an individual membrane is damaged, it will be possible to remove or replace only this diffuser element of 0,2 m².

1,8 m² of the diffuser surface can still be used!



Loss of 0,2 m²



Loss of 2 m²

You avoid the expense for replacing the entire diffuser – as would be the case with rival products.



PERFORMANCE IS DECISIVE

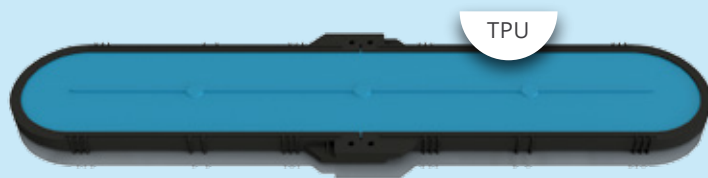
The lower
the pressure loss,
the higher the energy savings.

With their project-specific perforations, the OXYFLEX® membranes offer the best possible efficiency, perfectly optimised for the highest oxygen transfer with lowest pressure loss at the same time.

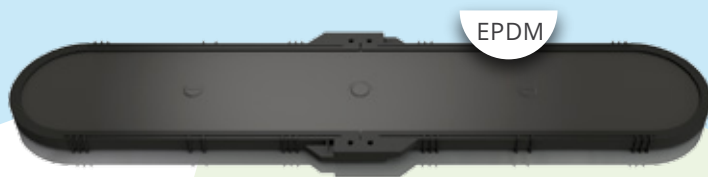
With OXYFLEX® MF2.0, the energy costs are decreased while the quality of waste water treatment is increased.

Due to the optimal perforation, the OXYFLEX® MF2.0 works excellently even with a very low counter-pressure. A homogeneous bubble pattern is already realized at a low-pressure range between 20-30 hPa.

TPU and EPDM membranes are available and both can be used for these diffusers. This enables an optimized customization to specific project requirements resp. to individual wastewater properties.



TPU



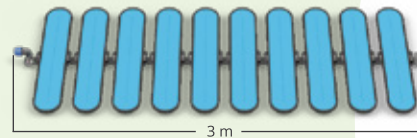
EPDM

VARIABILITY RESULTS IN OPTIMIZATION

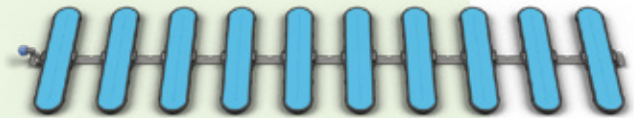
OXYFLEX® MF2.0 plate diffusers allow an optimized distribution within a basin.

These can be adjusted on a project-by-project basis, both in terms of length and in terms of the membrane area.

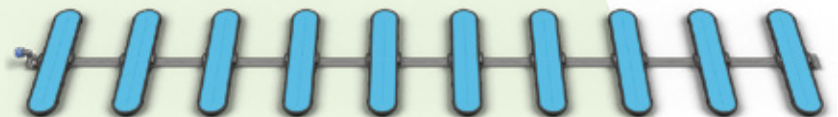
Compared with other large-size plate diffusers (e.g. 2 m x 1 m), the active membrane surface is more evenly distributed across the entire area thanks to the variability of the OXYFLEX® MF2.0X.



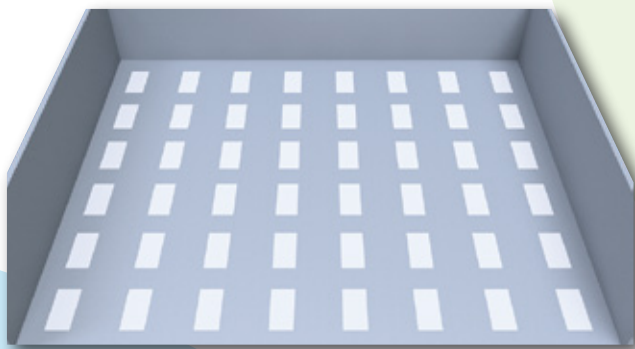
OXYFLEX® MF2.0



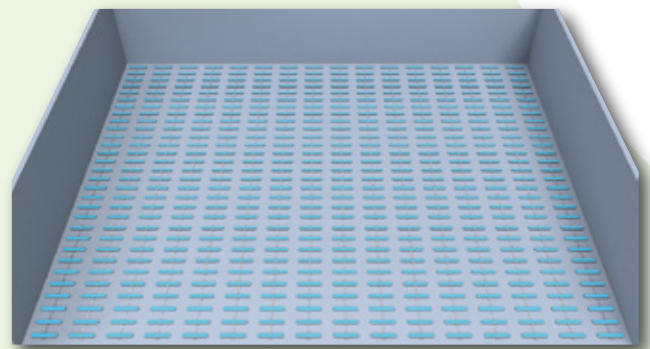
OXYFLEX® MF2.0X



OXYFLEX® MF2.0X



Competitor



SUPRATEC
with the same membrane area

Gaps are filled in.

Efficiency increases due to the more evenly distributed active membrane area and the lower pressure loss.

Important info for planners and decision-makers:

These properties are fully compliant with the recommendations of the DWA (M 229-1).

Extract from DWA M 229-1:

“The objective here must also be to allow as little distance as possible between the diffuser fields to minimise the formation of any negative water rolls associated with backflow. It is also helpful to avoid larger distances between the diffuser and the basin walls to suppress the formation of a transverse edge roll.”

FLEXIBILITY BRINGS SAFETY

With the OXYFLEX® MF2.0 plate diffusers, the mounting distance between diffusers and tank floor can freely be chosen.



A ground-level installation height of around just 5 cm above the bottom of the basin is just as possible as an installation height of up to 50 cm!

Purely ground-level installations, like those of our competitors, often result in unwanted sludge deposits on the diffuser and an associated reduction in performance. This risk is significantly reduced by a larger distance to the bottom of the basin.



Important info for planners and decision-makers:

These properties are fully compliant with the recommendations of the DWA (M 229-1).

Extract from DWA M 229-1:

“When mounting the diffuser to the bottom of the basin, it is recommended to have approx. 10 cm distance to enable an easier cleaning and to compensate a possible slight slope of the bottom of the basin.”

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More than 50 % energy reduction is possible during the first year already.

EFFICIENCY SAVES ENERGY

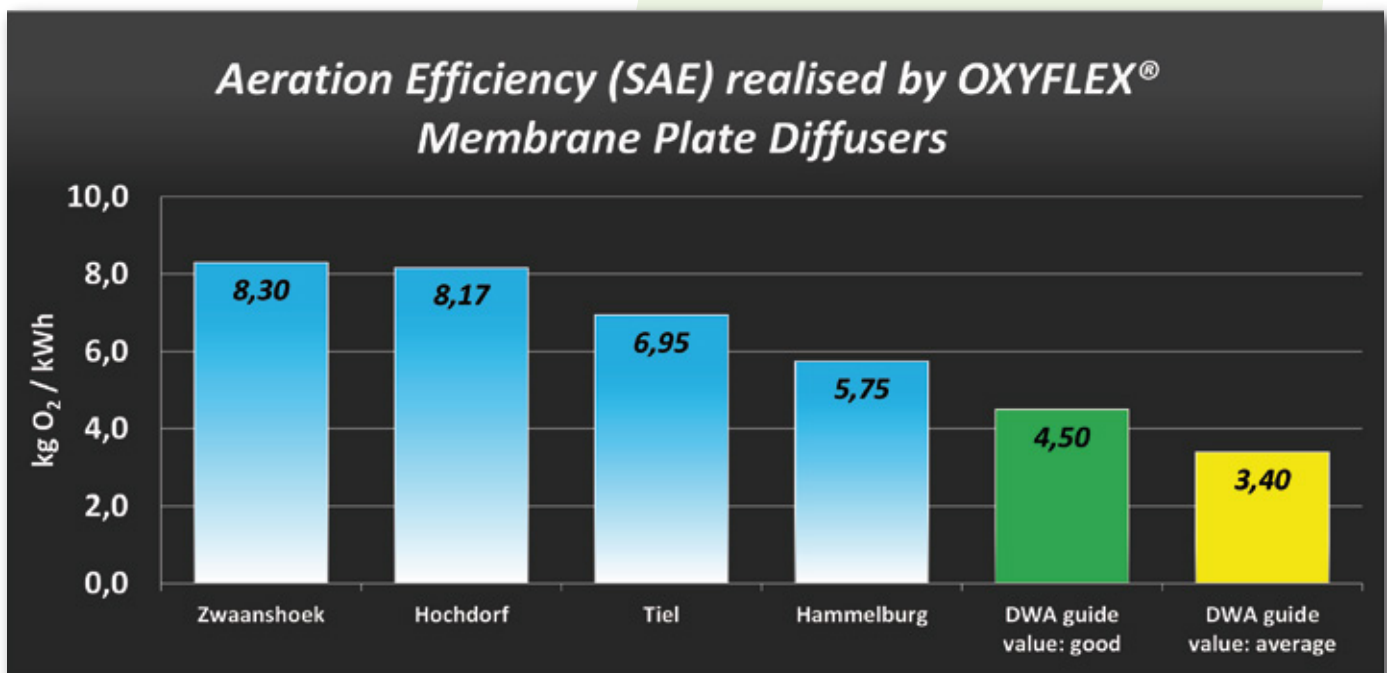
At around **70 %**, the **main energy consumer** at any treatment plant is aeration of **waste water**. No municipality should have to stand back as its money literally vanishes into thin air:

Energy costs are reduced by using OXYFLEX® MF2.0 from Supratec. At the treatment plant in Cologne, there was a saving of **EUR 800.000 on energy costs in the first year only.**

The investment for new aeration system can be paid off within less than two years, with a possible warranty period of five years.

The OXYFLEX® MF2.0 membrane plate diffuser outperforms other plate diffusers in terms of effectiveness and quality!

Testing the realized oxygen transfer in treatment plants, aeration efficiencies were measured up to $8,3 \text{ kgO}_2/\text{kWh}$ (SSOTR = $35,8 \text{ gO}_2/\text{m}_\text{N}^3/\text{m}$ with a water depth of 5 m).



OXYFLEX[®] MF2.0

The highly efficient,
flexible plate diffuser

OXYFLEX[®] MF2.0 plate diffusers save you money on energy costs and operating costs right from the very start. We provide assistance at every project planning phase.

- Highest aeration efficiencies
- Optimal distribution
- Low pressure loss
- Resistant to high temperatures
- Highest operational safety
- Flexible height adjustment
- Can be individually shut off
- Long service life

Subject to technical modifications.
Potential new features can be found
on our website: www.oxyflex.de

More than 40 years' experience in aeration technology

Supratec

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