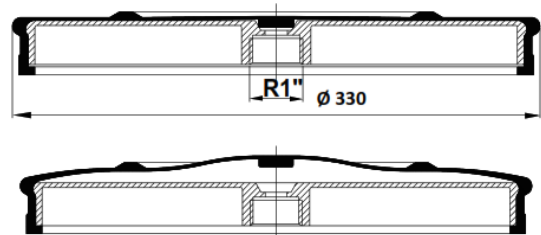


Envicon EMS 12" Membrane Disc Diffusers



The external diameter is 330 mm (12"). The support disc and fixing ring are made of highly chemically and thermally resistant glass-fibre reinforced polyamide and can be reused. The central air duct under the membrane on disc diffusers ensures the pressure loss is particularly low.

The pull ring reinforcement integrated into the membrane keeps the membrane flat and therefore contributes to an even bubble pattern over the entire perforated area. The membrane also has a sealing plug that acts as a non-return valve due to the water pressure when not in use.



Contents

Introduction

Available Membrane Materials

- EPDM AeroTop
- Special EPDM AeroBest
- Silicone AeroSil

Available Membrane Fixings

- Stainless Steel Clamp (EMS1)
- Plastic Fixing Ring (EMS2)

Pipework Connections

- ENVICON single adapters EBA1
- Other connection variants

Introduction

ENVICON membrane disc diffusers are quality products from Germany. Sophisticated membrane mixtures, a modern production process as well as optimised fine-bubble perforation guarantee a high-quality product throughout its service life and durable, cost-effective operation of aeration systems.

Available Membrane Materials

The selection of the membrane is essentially defined by the wastewater components and the treatment process. If you have questions or doubts please do not hesitate to contact us. The specific oxygenation capacity depends much on the specific installation conditions and the operation mode.



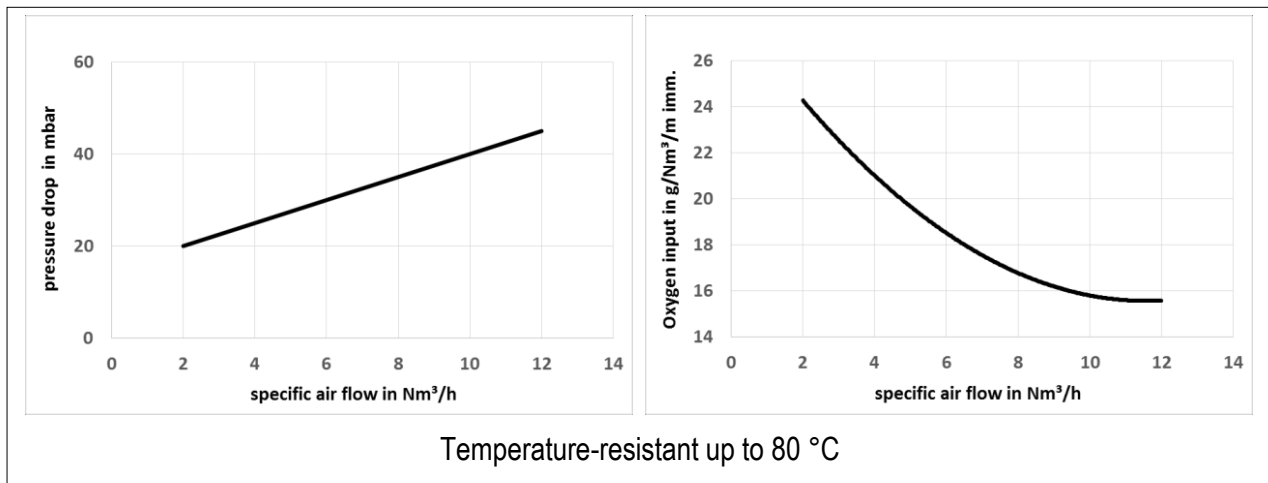
Envicon EMS 12" Membrane Disc Diffusers EPDM AeroTop (sulphur crosslinked, low plasticiser content)

A proven, strong membrane made of sulphur crosslinked EPDM. Durable, efficient product with low plasticiser content for high demands and municipal wastewater according to DWAM 115 with up to 10% industrial and commercial content. Made and perforated in Germany. The optimised, fine-bubble aeration ensures excellent oxygenation.

Operating Range (Nm ³ /h x diffuser):		
Minimum (recommendation)	2	Permanent
Standard	4-8	Permanent
Maximum (specification)	12	Permanent
Maximum (specification)	15	Brief e.g. for flushing cycles
Frequent load changes are recommended to prevent deposits and to keep the membrane supple.		

Technical Data

Technical data of EMS EPDM AeroTop, measured according to worksheet ATV M209 under standard conditions (pure water, water depth = 4.0 m, averaged over a density of 0.8 - 1.2m diff./m²):



Item Numbers EMS AeroTop	Membrane fixation with	Connection	Maximum Depth of Operation	Mantec Part Number
EMS1 12"	Stainless steel clamp	1" female	7.0 m	FGEMS12SSAT
EMS2 12"	Plastic fixation ring	1" female	7.0 m	FGEMS12PLAT

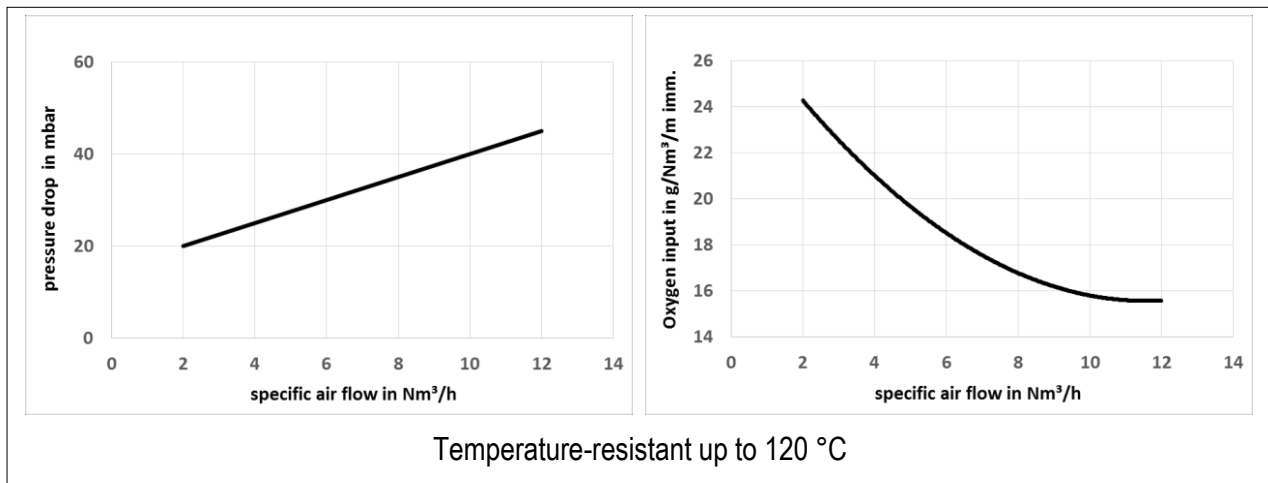
Envicon EMS 12" Membrane Disc Diffusers EPDM AeroBest (peroxide crosslinked, low plasticiser content)

A peroxide crosslinked high-performance EPDM, suitable for supply air temperatures of up to 120 °C and for higher proportions of industrial and commercial wastewater. This proven and especially tough product, made and perforated in Germany, is particularly efficient in combination with optimised fine-bubble aeration.

Operating Range (Nm ³ /h x diffuser):		
Minimum (recommendation)	2	Permanent
Standard	4-6	Permanent
Maximum (specification)	12	Permanent
Maximum (specification)	15	Brief e.g. for flushing cycles
Frequent load changes are recommended to prevent deposits and to keep the membrane supple.		

Technical Data

Technical data of EMS EPDM AeroBest, measured according to worksheet ATV M209 under standard conditions (pure water, water depth = 4.0 m, averaged over a density of 0.8 - 1.2m diff./m²):



Item Numbers EMS AeroBest	Membrane fixation with	Connection	Maximum Depth of Operation	Mantec Part Number
EMS1 12"	Stainless steel clamp	1" female	10.0 m	FGEMS12SSAB
EMS2 12"	Plastic fixing ring	1" female	10.0 m	FGEMS12PLAB

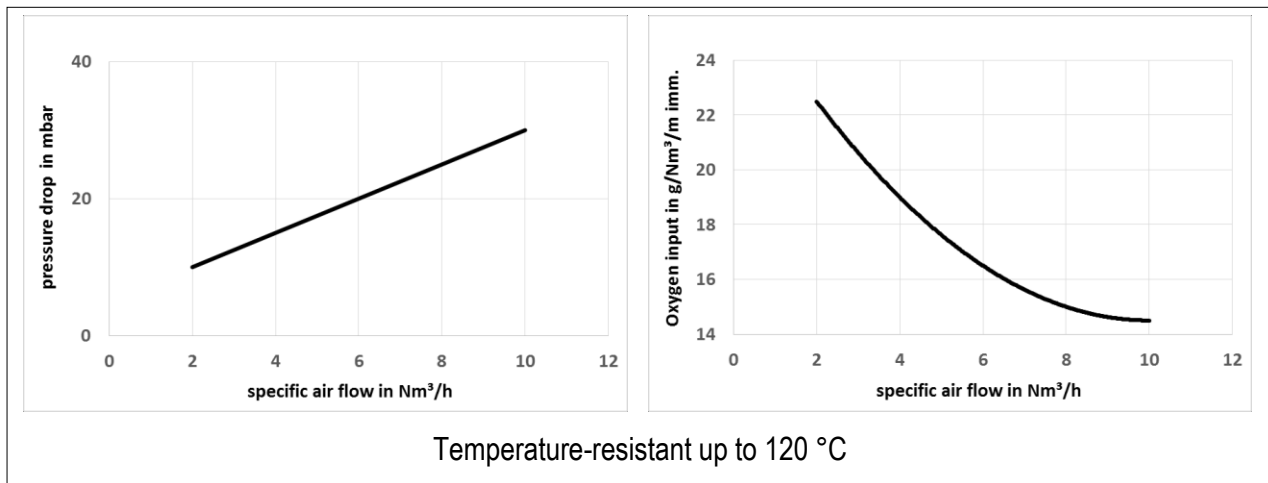
Envicon EMS 12" Membrane Disc Diffusers Silicone AeroSil (plasticiser-free)

This outstanding, plasticiser-free silicone product and is exceptionally resistant to tear propagation. It is also resistant to many oils and greases and can be used at high wastewater and air temperatures. It is made and perforated in Germany. Its highly smooth surface makes it resistant to micro-biological growth and its metabolic products. The optimised, fine-bubble aeration ensures excellent oxygenation.

Operating Range (Nm ³ /h x diffuser):		
Minimum (recommendation)	2	Permanent
Standard	4-6	Permanent
Maximum (specification)	10	Permanent
Maximum (specification)	12	Brief e.g. for flushing cycles
Frequent load changes are recommended to prevent deposits and to keep the membrane supple.		

Technical Data

Technical data of EMS AeroSil, measured according to worksheet ATV M209 under standard conditions (pure water, water depth = 4.0 m, averaged over a density of 0.8 - 1.2m diff./m²):



Item Numbers EMS AeroSil	Membrane fixation with	Connection	Maximum Depth of Operation	Mantec Part Number
EMS1 12"	Stainless steel clamp	1" female	7.0 m	FGEMS12SSAS
EMS2 12"	Plastic fixing ring	1" female	7.0 m	FGEMS12PLAS

Envicon EMS 12" Membrane Disc Diffusers

Membrane fixed with Stainless Steel Clamp (EMS1)

The disc diffuser EMS1 with stainless steel clamp is, with or without ENVICON adapter EBA1, of universal application. It is available with a standard EPDM membrane, with a special EPDM membrane and a silicone membrane. The standard connection is a 1" female thread. Other connections are available (see also further down). Please contact us.



Small quantities of clamps can be fitted using a hand-tool you can also order from us. For larger quantities we recommend the usage of a pneumatic tool such that all the clamps can be fitted with the same application pressure without the need for muscle power.



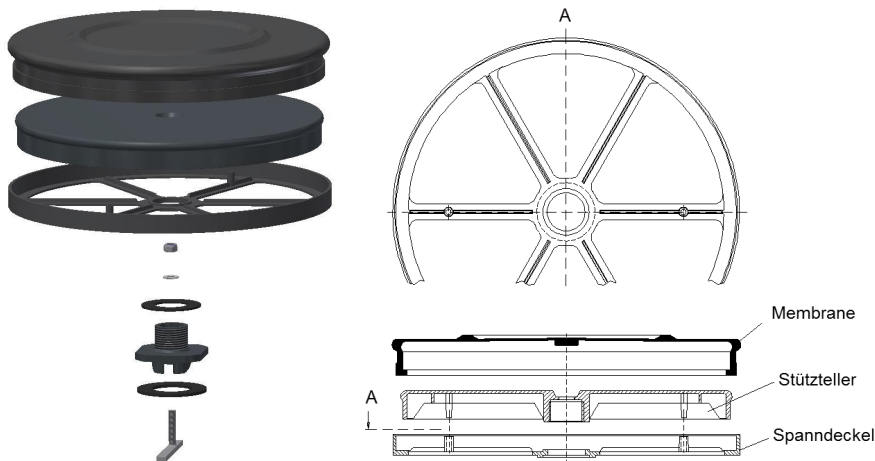
Envicon EMS 12" Membrane Disc Diffusers

Membrane fixed with Plastic Ring (EMS2)

The star-shaped fixation ring used to fasten the membrane can be reused several times and makes it possible to replace the membrane particularly quickly without tools. Here no additional spare parts are necessary on replacing the membrane, unlike for the stainless steel clamp.



The usage of the fixation ring requires the ENVICON adapter EBA1 (see bottom left) that supports the fixation ring from below. If you want to fit the EMS2 to a welded nipple, please contact us – we would be pleased to suggest the best solution.



Envicon EMS 12" Membrane Disc Diffusers Membrane Single Adaptors EBA1

Fastening is preferably by screwing onto an ENVICON fastening adapter of type EBA1 with 1" male thread:



ENVICON EBA1 single adaptors are available for the following tubes:

Square tube:
From 80 x 40 mm

Round tube:
DN50, DN65, DN80, DN100, DN150,

oD63, oD75, oD84, oD90, oD103, oD110, oD154

For other existing tubes, please contact us – we would be pleased to provide a quotation based on the quantities required.

Envicon EMS 12" Membrane Disc Diffusers Alternative Connections



1/2" Male Thread



1" Male Thread



1 1/2" Male Thread



1/2" Female Thread



1" Female Thread



1 1/2" Female Thread



Two-Piece Clamp with 2 screws



Two-Piece Clamp with 4 to 6 screws

Other options available on request.