

Supratec OXYFLEX® MF650 MEMBRANE PLATE DIFFUSER

For Fine Bubble Aeration of Liquids

General

Information

Supratec Gesellschaft für Umwelt- und Verfahrenstechnik mbH produces modern high efficient aeration systems, which are mainly used for oxygen transfer into biological waste water treatment. These products can also be used for any kind of transfer of gases into liquids.

OXYFLEX® is the brand of membrane diffusers (plates, tubes and discs) with PP body. Supratec is the market leader of fine bubble diffuser not only in Germany, but also in China.

Design

The OXYFLEX®- MF650 membrane plate diffusers are available in one sizes (length x width): 650x150mm, consists of a flat, heavily ribbed and fiberglass-reinforced polypropylene base plate. The diffuser membrane is secured to the base plate with a two-part frame made of fiberglass-reinforced polypropylene.

Membrane

The membrane of OXYFLEX®- MF650 membrane plate diffusers is made of special EPDM. Membranes made of EPDM or Silicone is available.

The membrane is given a specially designed slot arrangement. The size and arrangement of the slots are such that the perfect oxygen transfer or minimum pressure loss is achieved for high specific loads depending on the application.

Characteristics

OXYFLEX®- MF membrane plate diffusers are highly resistant against soiling.

OXYFLEX®- MF membrane plate diffusers produce fine bubbles of a medium diameter of 0,8mm – 1,9mm.

Since, in contrast to the tube diffusers, the entire diffuser surface is on the same hydraulic level, the gas through put is even across the entire membrane surface and control range. As a result, both the service life and performance are optimized.

The special design of the OXYFLEX®- MF Membrane Plate Diffuser ensures that there is only a small pressure loss, which increases very slightly over the service life of the equipment. As a result, apart from the service life, the efficiency is also significantly increased compared to other diffuser types.

- ✓ highly efficient oxygen transfer
- ✓ low and stable pressure loss
- ✓ special diffuser design that is adaptable to all conditions
- ✓ easy cleaning of the membranes resulting in
- ✓ low-maintenance operation

Performance

The OXYFLEX®- MF650 Membrane Plate Diffuser is able to cover a very broad operating range of up to 12 Nm³/h for each diffuser (120 Nm³/h per m² of membrane surface).

OXYFLEX®- MF650 membrane plate diffusers can reach specific oxygen transfer of more than 25 gO₂/Nm³·m_{ET}, if coverage and water depth is favorable.

Over the range of specific air flow the efficiency is good.

Applications

OXYFLEX®- MF membrane plate diffusers are well established and are working to the clients' satisfaction in many municipal and industrial installation world-wide.

OXYFLEX®- MF membrane plate diffusers can be used for all geometric forms of tanks, but they are extraordinary good for small tanks and grit chambers or first high loaded stages.

OXYFLEX®- MF membrane plate diffusers can be operated intermittently.

Modified OXYFLEX®- MF membrane plate diffusers are also available for drinking water purposes.

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Product Data Sheet For OXYFLEX®- MF650

Features



Membrane surface: 0,1 m²

“AS” TPYE INSTALLATION ON ROUND PIPES

The OXYFLEX® - MF650 Plate Diffuser is fixed to round pipes using a clamp saddle that is welded in the factory. The integrated installation aid and non-twist angle of the clamp saddle allow an easy installation. The clamp saddle is closed by a joint lock and hexagonal head screw.

Available sizes:

for stainless steel pipes: DN 50/60,3 mm,
DN 65/76,1 mm, DN 80/88,9 mm, DN 100/108mm
for plastic pipes (outside Ø): 63 mm, 75 mm,
90 mm, 110 mm

(Further sizes are available on request.)



Materials

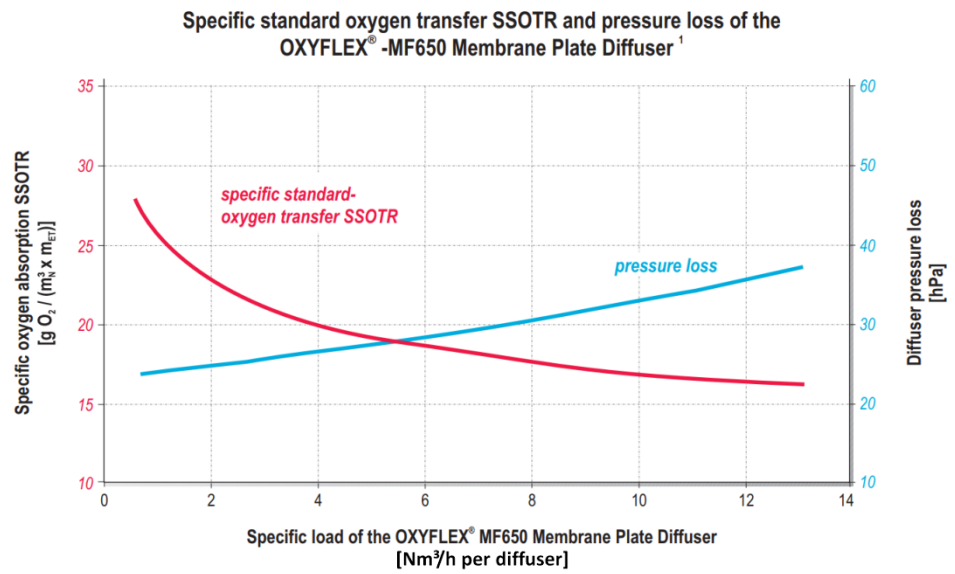
Membrane: EPDM (ethylene propylene diene rubber)
TPU (thermoplastic polyurethane)
Silicon
Base plate: Polypropylene (PP-GF)
Frame: Polypropylene (PP-GF)
Seals: EPDM

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Graphs Of Oxygen Pressure

The following diagram shows the example of a result of an oxygen transfer test. The values were measured in a rectangular tank with a water depth of 4.0 m, a diffuser blow-in depth of 3.8 m and a coverage of 12%.



The values cannot be transferred to other plants. The results that are shown here depend on several influencing factors, such as the tank shape, blow-in depth, coverage or a separate recirculation due to additional mixers.

For more information, call the Supratec Diffuser Branches:

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