



**DAYUSIL**





DAYSİL branded membrane diffusers, are developed within the context of R&D project no 7120669 that is conducted within the scope of TUBITAK (The Scientific and Technological Research Council of Turkey) SME R & D Support Program.

In the project that is conducted, primarily; different silicone and EPDM material samples have been created and tested, and then the strongest material formulations have been ascertained.

In many scientific studies examined, the hole geometry which is presented as one of the most important factors in membrane diffuser production has been overemphasized, trial productions have been made with the different structures of perforation patterns that are prepared.

In the laboratory that is prepared to develop and test DAYSİL products, the performance of perforation samples have been tested with the state of the art technology testing devices and studies have been carried out to reach the most ideal hole geometry.

Identified as one of the most important outcomes of our project, topic of energy efficiency has been a priority target in all phases of the project. Targeted energy efficiency values have been achieved with the experiments that were carried out in prototype development and trial production processes.

In DAYSİL's R&D works that were carried out with the philosophy of continuous improvement, it has been aimed to develop values that have already been achieved.

Thanks to TUBITAK officials that helped us in planning, carrying out and accomplishing our project, academicians who relayed their scientific knowledge to us and waste water treatment industry professionals who shared their operational experiences with us.

## 7" Disc Diffuser

### Specifications:

- Diameter :237 mm (effective: 180 mm)
- Perforated area :0,025 m<sup>2</sup>
- Weight :515 gr
- Net height :33 mm
- Connection :¾ male PT
- Orifice :8,5 mm
- Operating range :2-10 m<sup>3</sup>/h (peak output 3-4 m<sup>3</sup>/h)
- Maximum flow rate :15 m<sup>3</sup>/h
- Bubble size :1-3 mm
- EPDM structure :Sulphur crosslinked
- VMQ structure :Peroxide crosslinked



### Advantages:

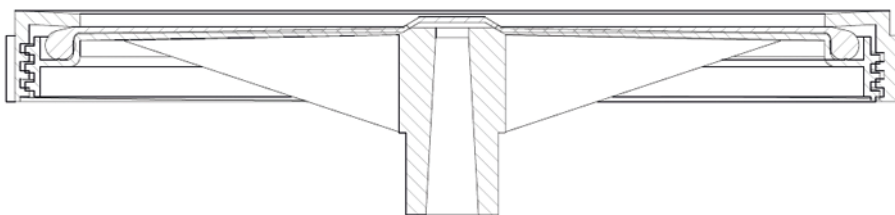
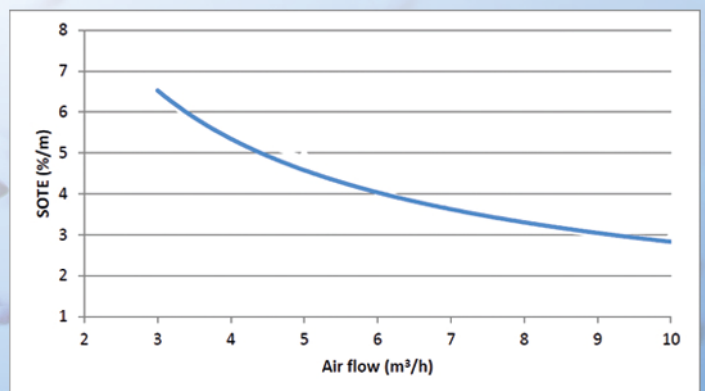
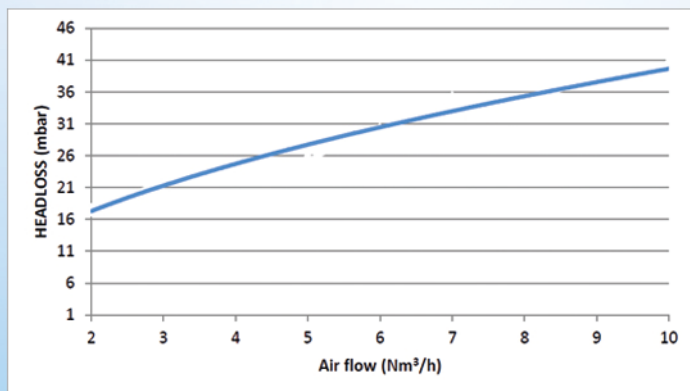
- Tested high oxygen transfer efficiency
- Low head loss value.
- Slit geometry is developed via R&D activities
- Smooth membrane surface preventing the formation of bacterial plaque
- Surface structure enabling the bubbles to easily leave the membrane surface
- Small and intensive slit structure, maximising oxygen transfer efficiency
- Specially developed, long-lasting membrane elastomer formulation.

### Applications:

- Municipal and industrial wastewater treatment
- Water treatment
- Renaturation of lakes and rivers
- Fish farming

### Performance:

Performance of DAYCIL diffusers is measured according to the Advisory Leaflet ATV-M 209E (Measurement of the Oxygen Transfer in Activated Sludge Aeration Tanks with Clean Water and in Mixed Liquor) of DWA – German Association for Water,





## 9" Disc Diffuser

### Specifications:

- Diameter :276 mm (effective: 220 mm)
- Perforated area :0,038 m<sup>2</sup>
- Weight :670 gr
- Net height :33 mm
- Connection :¾ male PT
- Orifice :8,5 mm
- Operating range :2-10 m<sup>3</sup>/h (peak output 3-4 m<sup>3</sup>/h)
- Maximum flow rate :15 m<sup>3</sup>/h
- Bubble size :1-3 mm
- EPDM structure :Sulphur crosslinked
- VMQ structure :Peroxide crosslinked



### Advantages:

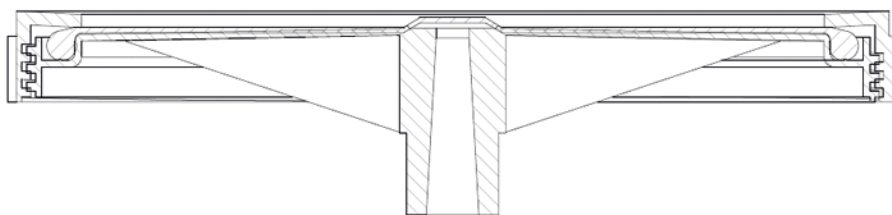
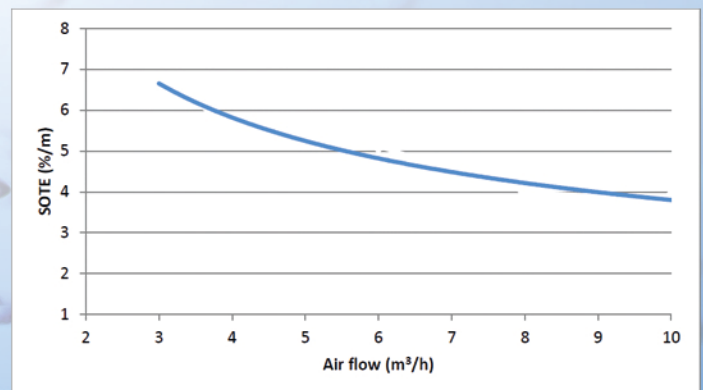
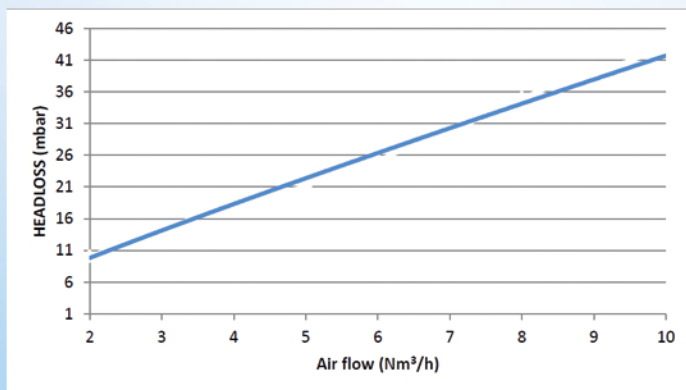
- Tested high oxygen transfer efficiency
- Low head loss value.
- Slit geometry is developed via R&D activities
- Smooth membrane surface preventing the formation of bacterial plaque
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## 12" Disc Diffuser

### Specifications:

- Diameter :355 mm (effective: 290 mm)
- Perforated area :0,066 m<sup>2</sup>
- Weight :1025 gr
- Net height :35 mm
- Connection :¾ male PT
- Orifice :10 mm
- Operating range :2-10 m<sup>3</sup>/h (peak output 3-4 m<sup>3</sup>/h)
- Maximum flow rate :15 m<sup>3</sup>/h
- Bubble size :1-3 mm
- EPDM structure :Sulphur crosslinked
- VMQ structure :Peroxide crosslinked



### Advantages:

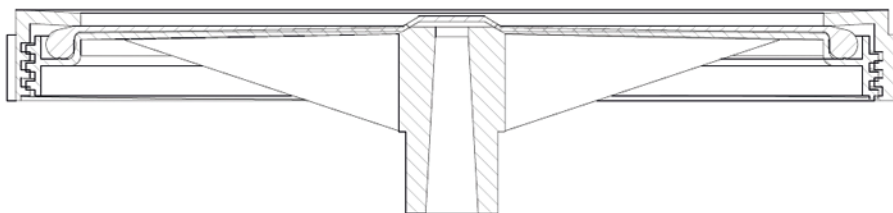
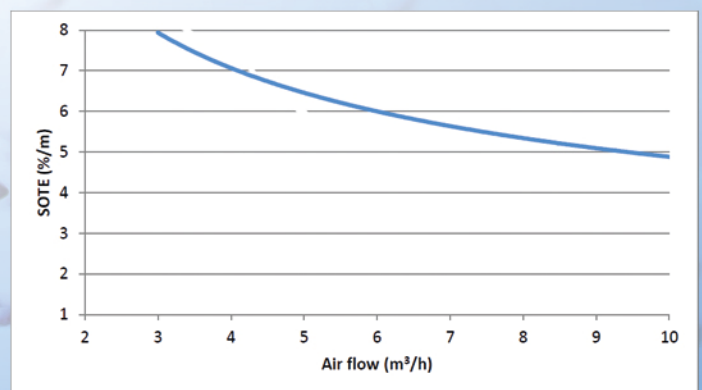
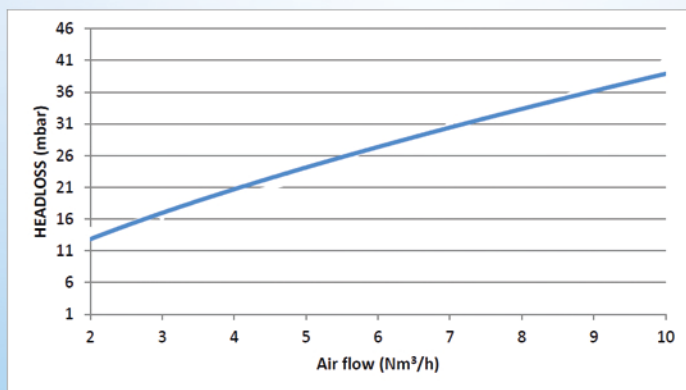
- Tested high oxygen transfer efficiency
- Low head loss value.
- Slit geometry is developed via R&D activities
- Smooth membrane surface preventing the formation of bacterial plaque
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- Small and intensive slit structure, maximising oxygen transfer efficiency
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# DAYSIŁ

Cumhuriyet Mah. 9081 Sok. No:55 Ulucak - Kemalpařa İzmir / TURKEY  
T: (+90232) 436 6005 F: (+90232) 436 6009  
murat.odaci@daysil.com | www.daysildiffusers.com