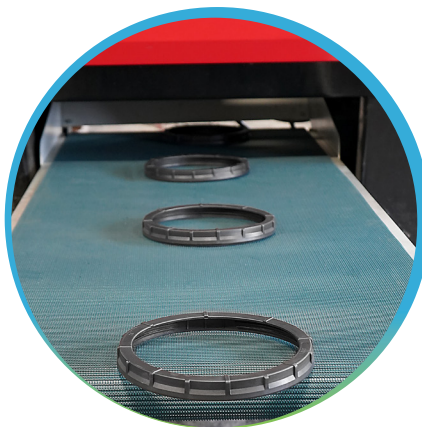


# airox



Su ve Havanın DAHİCE Uyumu  
*SMART Harmony of Air & Water*





## Hakkımızda

### About us

**AIROX**, 2010 yılında Bursa'da kurulan **GİF PLASTİK SAN. TİC. VE LTD. ŞTİ.** firmasının markası olarak 2015 yılında faaliyete geçmiştir. Atık su arıtma sektöründe faaliyet göstermek üzere kurulan şirket, bu alanda ki tecrübeli ekibi ile kısa zamanda kalitesini duyurmaya başlamıştır.

**AIROX**, dünyanın birçok ülkesindeki ihtiyaca cevap verebilecek potansiyele sahip, dinamik bir markadır. Üretimden, satış sonrasına varana dek, **MÜŞTERİ MEMNUNİYETİNİ** öncelik edinen firmanın en büyük ilkesi; **GÜVENİLİR** bir marka olmaktadır.

Bu ilke ile, kalıcı ilişkiler kurmayı başaran firmanın, teknolojik altyapı yatırımı da her geçen gün daha da artmaktadır.

**AIROX** is active till 2015 as a brand of **GİF PLASTİK SAN TIC. VE LTD. STI.** which was ground in 2010 in BURSA-TÜRKİYE. The companies main business is Waste Water Treatment Equipments producing and is growing up in a short time because of their Team of Experts.

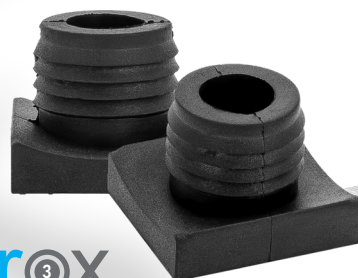
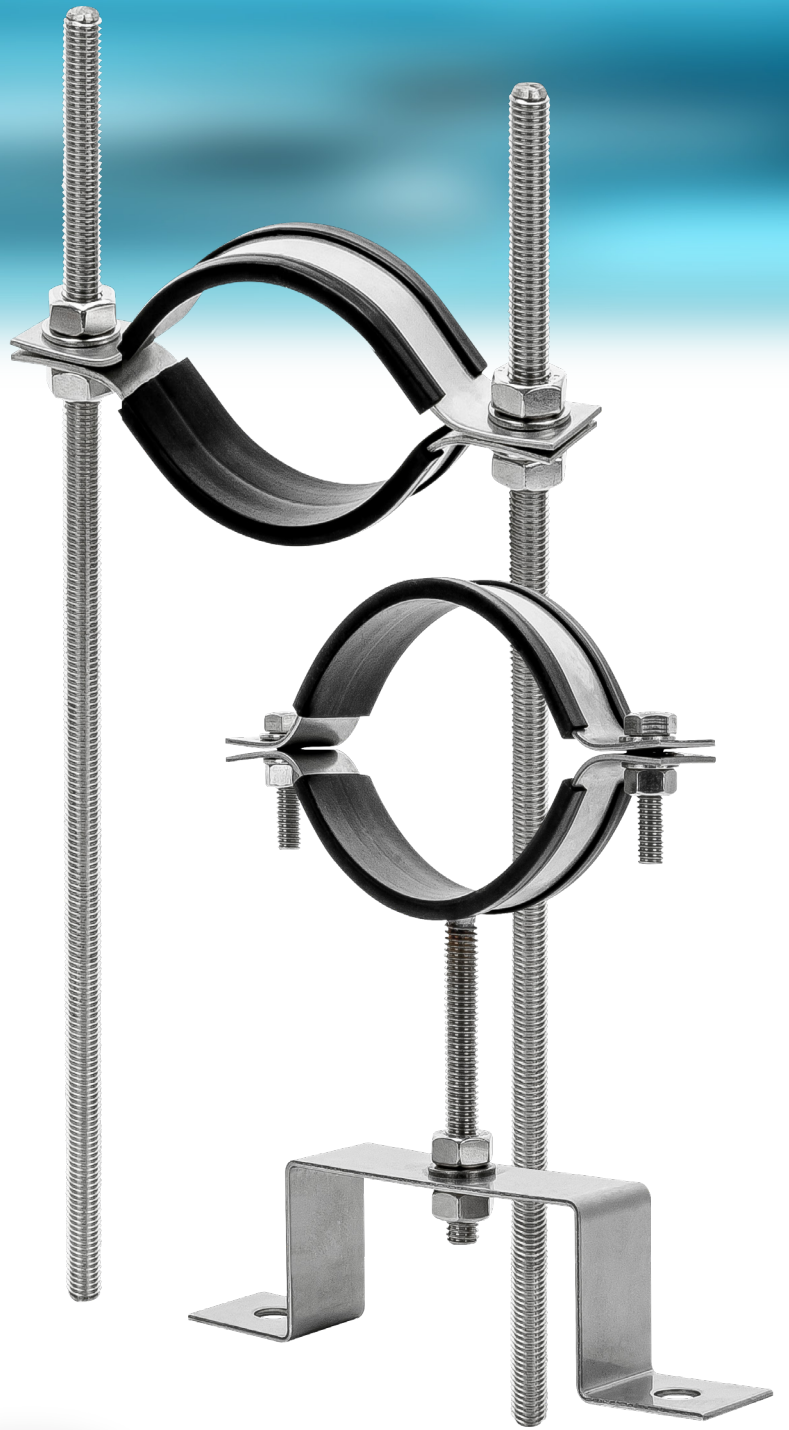
**AIROX** is in a potential and dinamycs to serve many countries all over the World. From production to after-sales process is the highest priority of **AIROX** to build up their customers portfolio with **CUSTOMER SATISFACTION** and be a **TRUSTWORTHY** brand in the market.

With this policy, the company managed to establish long-lasting relationships, technology infrastructure investment is increasing with each passing day.





air<sup>2</sup>X



air<sup>3</sup>X

# Disk Difüzörler

## Disc Diffuser

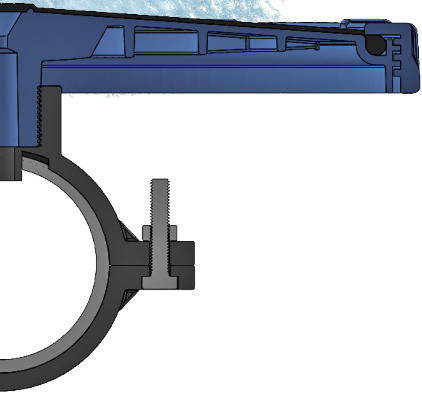
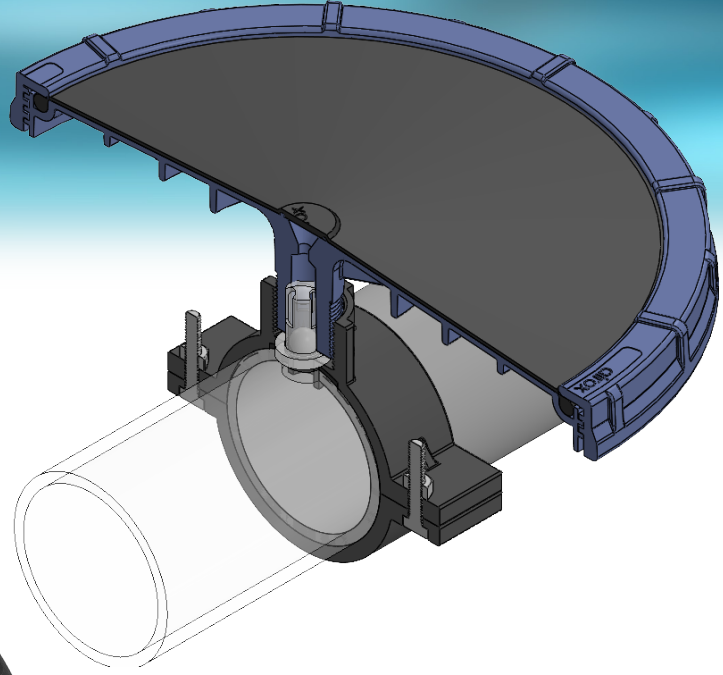
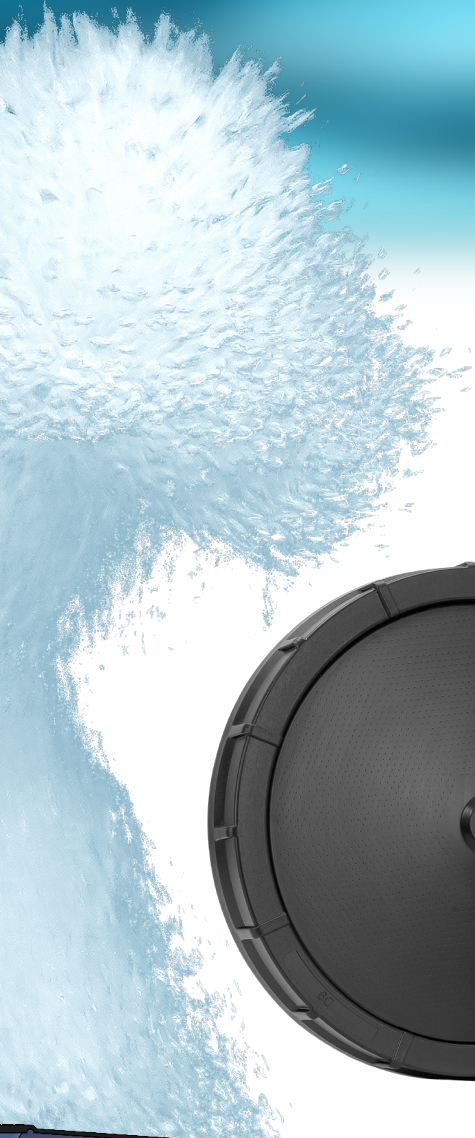
Yüksek Oksijenlendirme Verimi  
High Oxygenation Efficiency



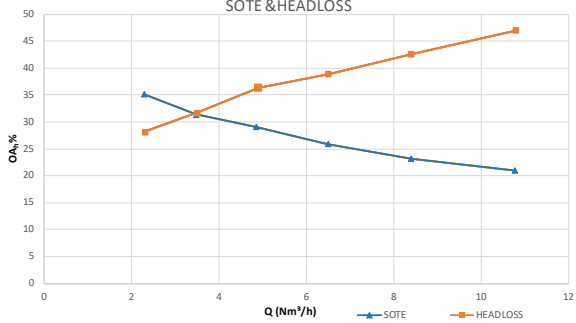
### ÜRÜN ÖZELLİKLERİ / Product Features

Ürün Kodu Product Code	Ürün Tanımı Generic Identification	Materyal Material	Çıkış NPT Erkek Outlet NPT Male	Efektif-Toplam Uzunluk Effective-Total Length	Etkin Alan Effective Area	Kapasite Capacity	Ürün Ağırlığı Product Weight
AX9E	9" Disk Difüzör / Disc Diffuser	EPDM	3/4" - 1"	230-270 mm	0,04 m <sup>2</sup>	2-10 Nm <sup>3</sup> /h	0,65 kg
AX9S	9" Disk Difüzör / Disc Diffuser	Silikon / Silicone	3/4" - 1"	230-270 mm	0,04 m <sup>2</sup>	2-7 Nm <sup>3</sup> /h	0,65 kg
AX9T	9" Disk Difüzör / Disc Diffuser	TPU	3/4" - 1"	230-270 mm	0,04 m <sup>2</sup>	2-7 Nm <sup>3</sup> /h	0,65 kg
AX12E	12" Disk Difüzör / Disc Diffuser	EPDM	3/4" - 1"	300-345 mm	0,07 m <sup>2</sup>	2-12 Nm <sup>3</sup> /h	1,05 kg
AX12S	12" Disk Difüzör / Disc Diffuser	Silikon / Silicone	3/4" - 1"	300-345 mm	0,07 m <sup>2</sup>	2-9 Nm <sup>3</sup> /h	1,05 kg
AX12T	12" Disk Difüzör / Disc Diffuser	TPU	3/4" - 1"	300-345 mm	0,07 m <sup>2</sup>	2-9 Nm <sup>3</sup> /h	1,05 kg

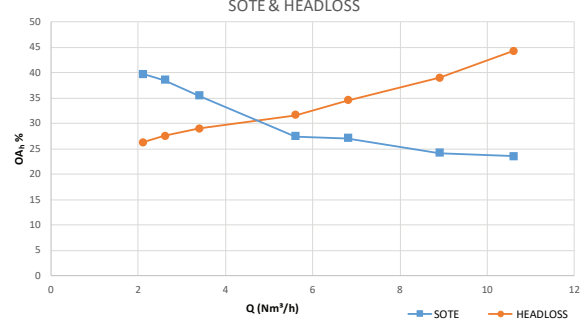
air<sup>4</sup>OX



9° DİSK DİFÜZÖR OKSİJEN TRANSFER VERİMLİLİĞİ - - FARK BASINÇ / SOTE & HEADLOSS  
SOTE & HEADLOSS



12° DİSK DİFÜZÖR OKSİJEN TRANSFER VERİMLİLİĞİ - - FARK BASINÇ / SOTE & HEADLOSS  
SOTE & HEADLOSS



# Tüp Difüzörler

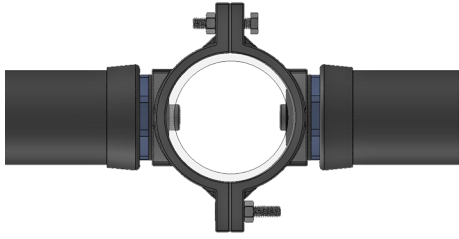
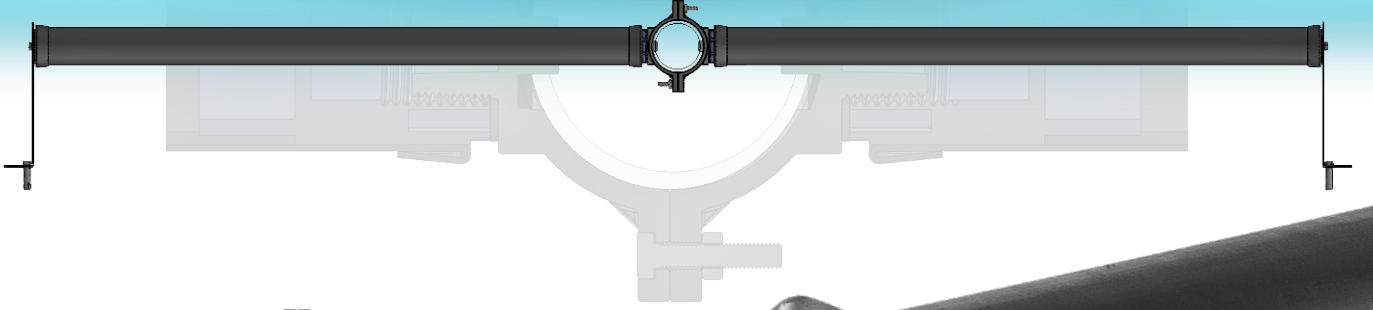
## Tube Diffuser

Yüksek Oksijenlendirme Verimi  
High Oxygenation Efficiency



### ÜRÜN ÖZELLİKLERİ / Product Features

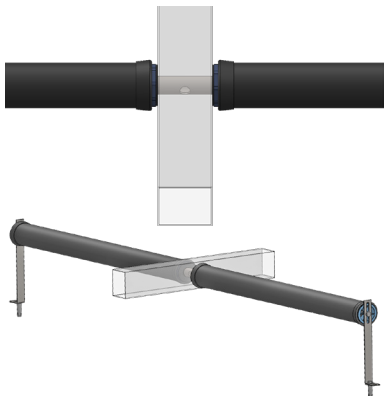
Ürün Kodu Product Code	Ürün Tanımı Generic Identification	Materyal Material	Çıkış NPT Erkek Outlet NPT Male	Efektif-Toplam Uzunluk Effective-Total Length	Etkin Alan Effective Area	Kapasite Capacity	Ürün Ağırlığı Product Weight
AX63-300E	63-300mm Tüp Difüzör / Tube Diffuser	EPDM	3/4" - 1"	300-360 mm	0,06 m <sup>2</sup>	2-4 Nm <sup>3</sup> /h	0,60 kg
AX63-300S	63-300mm Tüp Difüzör / Tube Diffuser	Silikon / Silicone	3/4" - 1"	300-360 mm	0,06 m <sup>2</sup>	2-3 Nm <sup>3</sup> /h	0,60 kg
AX63-300T	63-300mm Tüp Difüzör / Tube Diffuser	TPU	3/4" - 1"	300-360 mm	0,06 m <sup>2</sup>	2-3 Nm <sup>3</sup> /h	0,60 kg
AX63-500E	63-500mm Tüp Difüzör / Tube Diffuser	EPDM	3/4" - 1"	500-560 mm	0,10 m <sup>2</sup>	2-6 Nm <sup>3</sup> /h	0,85 kg
AX63-500S	63-500mm Tüp Difüzör / Tube Diffuser	Silikon / Silicone	3/4" - 1"	500-560mm	0,10 m <sup>2</sup>	2-5 Nm <sup>3</sup> /h	0,85 kg
AX63-500T	63-500mm Tüp Difüzör / Tube Diffuser	TPU	3/4" - 1"	500-560 mm	0,10 m <sup>2</sup>	2-5 Nm <sup>3</sup> /h	0,85 kg
AX63-750E	63-750mm Tüp Difüzör / Tube Diffuser	EPDM	3/4" - 1"	750-810 mm	0,15 m <sup>2</sup>	2-9 Nm <sup>3</sup> /h	1,20 kg
AX63-750S	63-750mm Tüp Difüzör / Tube Diffuser	Silikon / Silicone	3/4" - 1"	750-810 mm	0,15 m <sup>2</sup>	2-7,5 Nm <sup>3</sup> /h	1,20 kg
AX63-750T	63-750mm Tüp Difüzör / Tube Diffuser	TPU	3/4" - 1"	750-810 mm	0,15 m <sup>2</sup>	2-7,5 Nm <sup>3</sup> /h	1,20 kg
AX63-1000E	63-1000mm Tüp Difüzör / Tube Diffuser	EPDM	3/4" - 1"	1000-1060 mm	0,20 m <sup>2</sup>	2-12 Nm <sup>3</sup> /h	1,55 kg
AX63-1000S	63-1000mm Tüp Difüzör / Tube Diffuser	Silikon / Silicone	3/4" - 1"	1000-1060 mm	0,20 m <sup>2</sup>	2-10 Nm <sup>3</sup> /h	1,55 kg
AX63-1000T	63-1000mm Tüp Difüzör / Tube Diffuser	TPU	3/4" - 1"	1000-1060 mm	0,20 m <sup>2</sup>	2-10 Nm <sup>3</sup> /h	1,55 kg



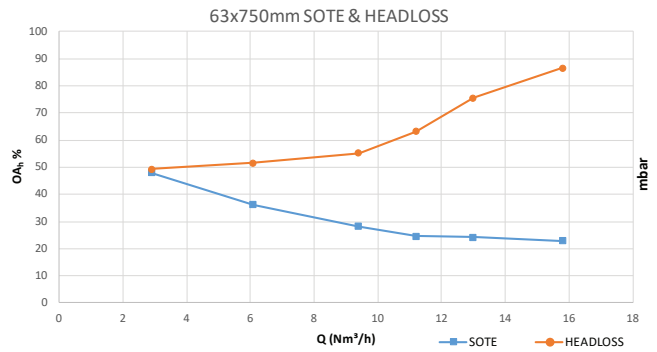
#### Tüp Difüzör Boru Montaj Tube Diffuser Pipe Mounting



#### Tüp Difüzör Profil Montaj Tube Diffuser Profile Mounting



#### 63X750 TÜP DİFÜZÖR OKSİJEN TRANSFER VERİMLİLİĞİ - FARK BASINÇ / SOTE & HEADLOSS



# PleytDifüzörler

## PlateDiffuser

Yüksek Oksijenlendirme Verimi  
High Oxygenation Efficiency



Plate Difüzör Boru Montaj  
Plate Diffuser Pipe Mounting

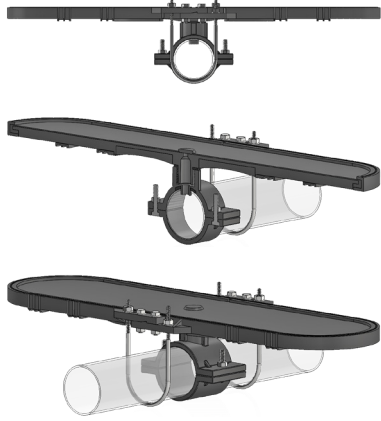
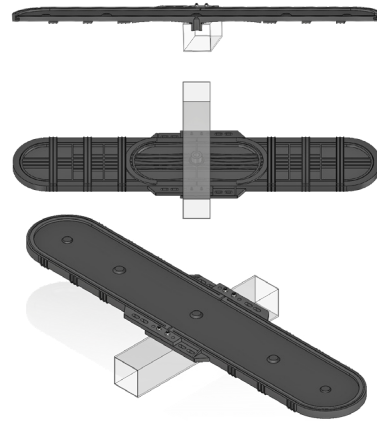
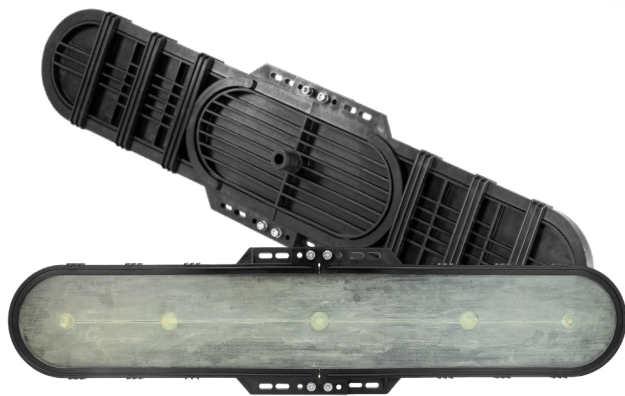


Plate Difüzör Profil Montaj  
Plate Diffuser Profile Mounting

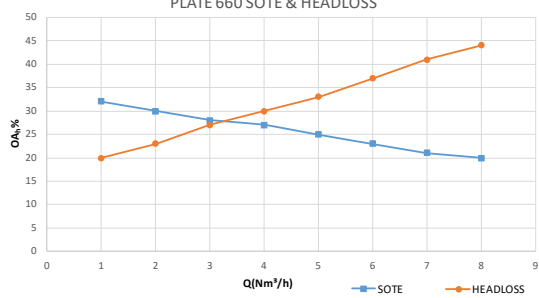


### ÜRÜN ÖZELLİKLERİ / Product Features

Ürün Kodu Product Code	Ürün Tanımı Generic Identification	Materyal Material	Çıkış NPT Erkek Outlet NPT Male	Efektif-Toplam Uzunluk Effective-Total Length	Etkin Alan Effective Area	Kapasite Capacity	Ürün Ağırlığı Product Weight
AXPD660E	660 mm Pleyt Difüzör / Plate Diffuser	EPDM	3/4" - 1"	655-685 mm	0,10 m <sup>2</sup>	2-16 Nm <sup>3</sup> /h	1,8 kg
AXPD660S	660 mm Pleyt Difüzör / Plate Diffuser	Silikon / Silicone	3/4" - 1"	655-685 mm	0,10 m <sup>2</sup>	2-9 Nm <sup>3</sup> /h	1,8 kg
AXPD660T	660 mm Pleyt Difüzör / Plate Diffuser	TPU	3/4" - 1"	655-685 mm	0,10 m <sup>2</sup>	2-9 Nm <sup>3</sup> /h	1,8 kg
AXPD1100E	1100 mm Pleyt Difüzör / Plate Diffuser	EPDM	3/4" - 1"	1085-1125 mm	0,16 m <sup>2</sup>	2-32 Nm <sup>3</sup> /h	3,9 kg
AXPD1100S	1100 mm Pleyt Difüzör / Plate Diffuser	Silikon / Silicone	3/4" - 1"	1085-1125 mm	0,16 m <sup>2</sup>	2-18 Nm <sup>3</sup> /h	3,9 kg
AXPD1100T	1100 mm Pleyt Difüzör / Plate Diffuser	TPU	3/4" - 1"	1085-1125 mm	0,16 m <sup>2</sup>	2-18 Nm <sup>3</sup> /h	3,9 kg



660mm PLATE DİFÜZÖR OKSİJEN TRANSFER VERİMLİLİĞİ - FARK BASINÇ / SOTE & HEADLOSS  
PLATE 660 SOTE & HEADLOSS



1100mm PLATE DİFÜZÖR OKSİJEN TRANSFER VERİMLİLİĞİ - FARK BASINÇ / SOTE & HEADLOSS  
PLATE 1100 SOTE & HEADLOSS



# MBBR (Biomedya)

## MBBR (Biomedya)



Hareketli Yatak Biyofilm Reaktörleri (MBBR), "taşıyıcı" olarak adlandırılan yüksek yüzey alanlı gözenekli katılara tutunup büyüyen mikroorganizmaların gerçekleştirdiği biyokimyasal tepkimelerle atıksuyu arar. Taşıyıcılar reaktör hacminde askıdadırlar ve sıvı akımlarınca serbestçe hareket ederler. Bu mikroorganizmalar ve salgıladıkları biyo-maddeler karmaşık bir yapı oluşturur; biyofilm.

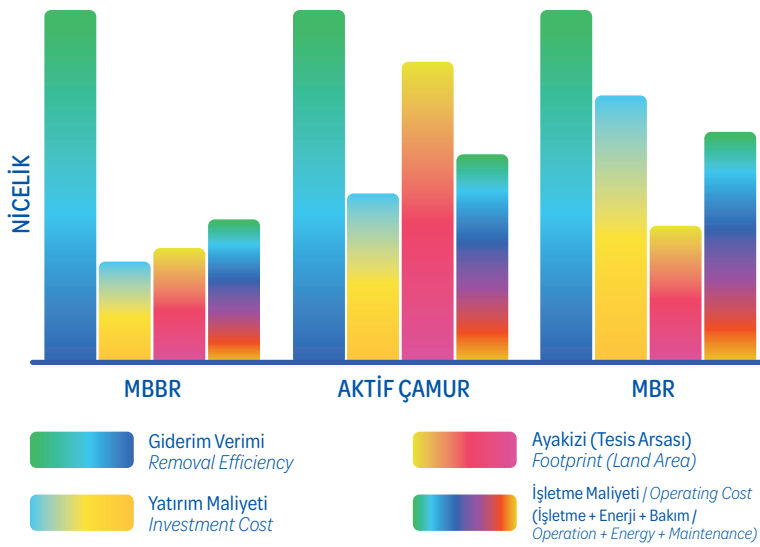
MBBR sürekli-akışlı, saf bir biyofilm reaktörüdür, yani çıkış akışı ayırma reaktöründen MBBR'ye biyokütlenin geri dönüşümü yoktur. Biyofilm (veya bağlı biyokütle) içeren taşıyıcılar, hava kabarcıkları (aerobik reaktörlerde) veya mekanik karıştırma (anoksik ve anaerobik reaktörlerde) ile atıksu ortamında yüzer ve dolaşır. Bu hareket, suya yakın yoğunluğa sahip taşıyıcı malzemeler seçilerek desteklenir.

*Moving Bed Biofilm Reactors (MBBR) treat wastewater via biochemical reactions by the microorganisms that attach and grow on the high surface area porous solids called "carriers" that are suspended in the reactor and moving freely around with the currents. The microorganisms and the bio-matter secreted by them constitute a complex structure; biofilm.*

*MBBR is a flow-through, pure biofilm reactor i.e. there is no recycle of biomass from the downstream separation reactor back to the MBBR. The carriers with the biofilm (or attached biomass) float and circulate in the wastewater medium by aeration bubbles (in aerobic reactors) or mechanical mixing (in anoxic and anaerobic reactors). This movement is enhanced by selecting carrier materials having density near water.*

## Neden MBBR? / Why MBBR?

Optimal Atıksu Arıtma Teknolojisi  
Optimal wastewater treatment technology

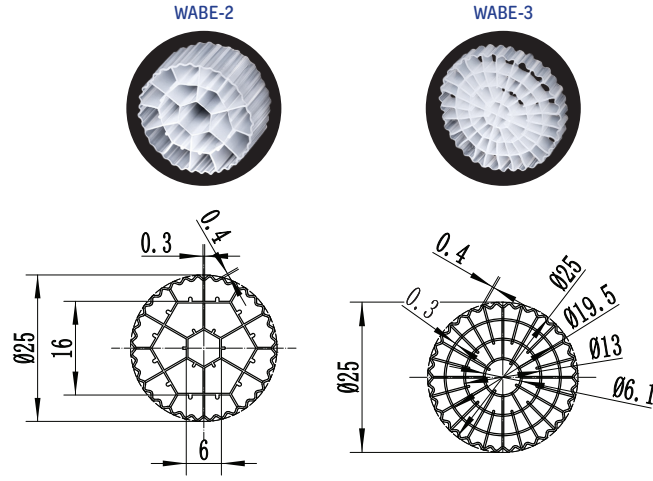


\*MBR: Membran Biyoreaktör / \*MBR: Membrane bioreactor



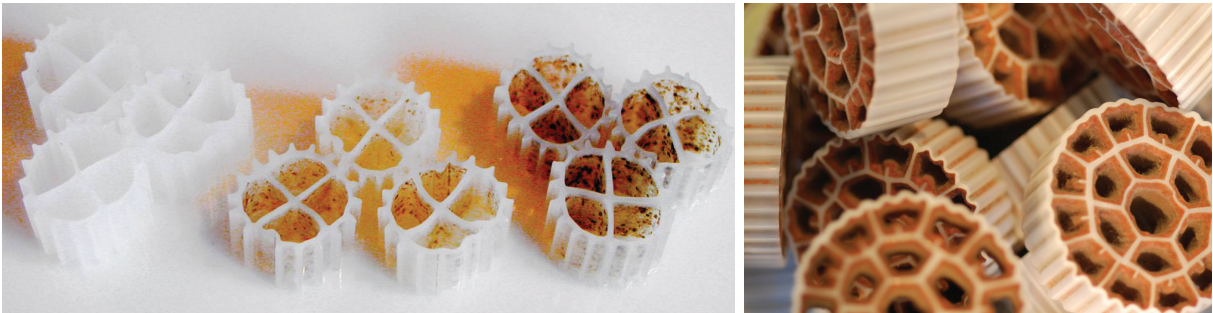
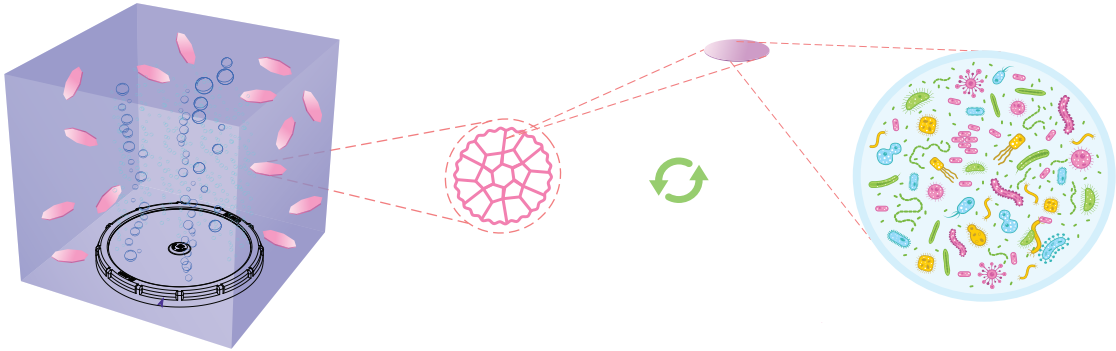
## WABE Biyofilm Taşıyıcılarının Boyutları

Dimensions of WABE Biofilm Carriers



### airox MBBR Medya / Biofilm Carrier

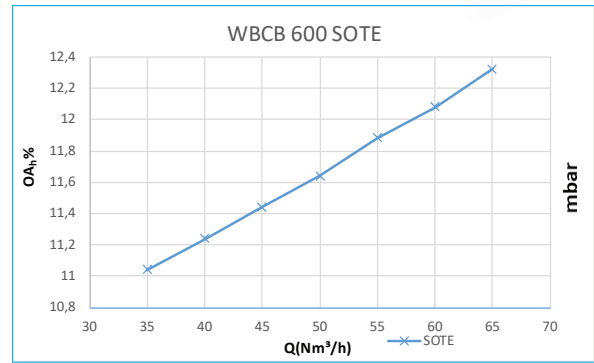
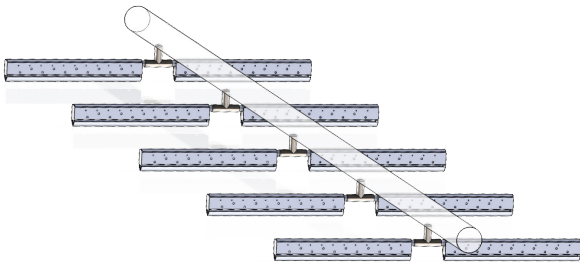
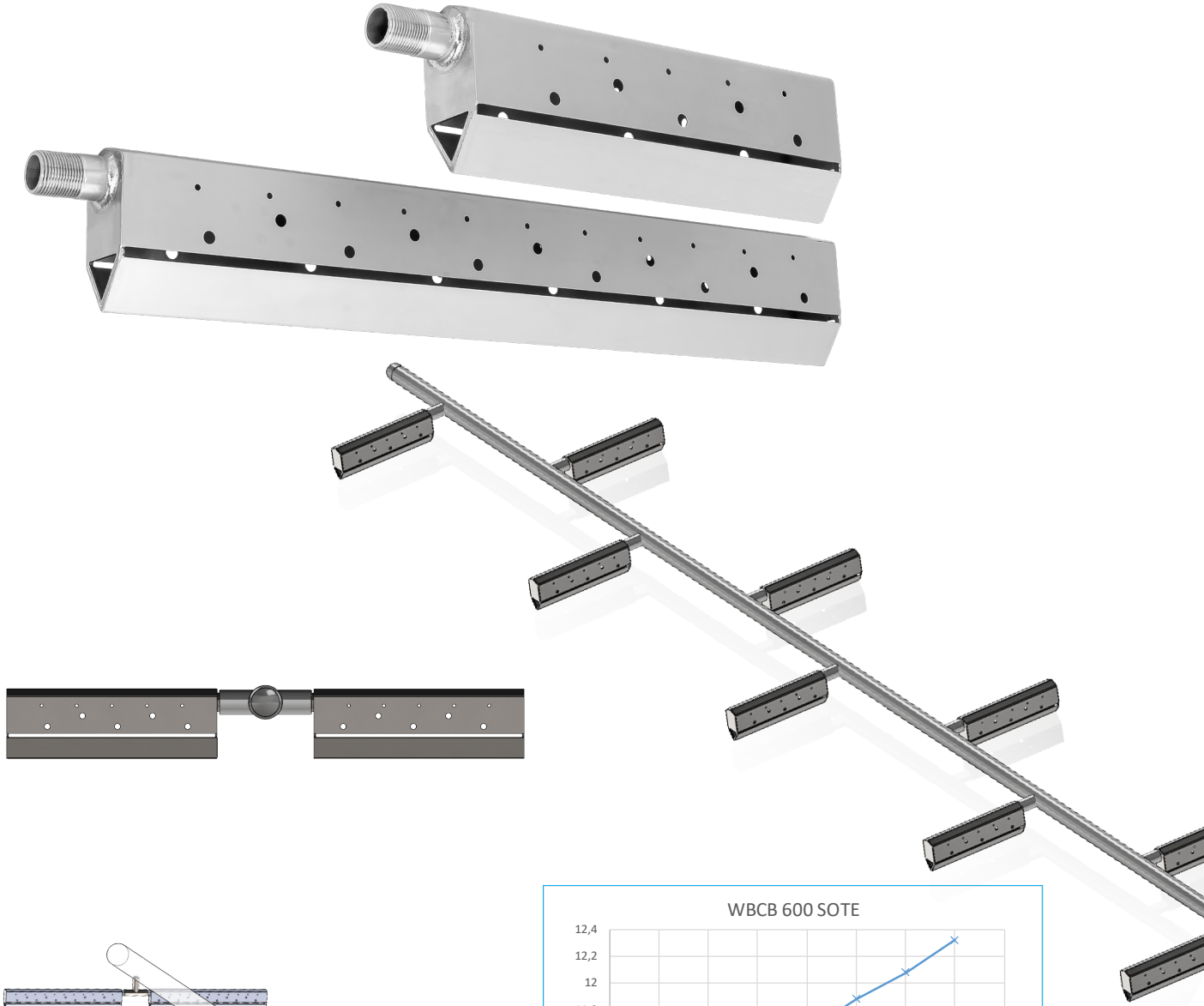
Özellikler Features	WABE-2	WABE-3
Çap x Yükseklik (mm) Diameter Height	25x10	25x4
Özgül Yüzey Alanı (m <sup>2</sup> /m <sup>3</sup> ) Specific Surface Area	>500	>1200
Özgül Ağırlık (gr/cm <sup>3</sup> ) Specific Weight	0,96	0,96
Paket Ağırlığı (kg/m <sup>3</sup> ) Specific Weight	105	120
Hizmet Ömrü (yıl) Service Life (years)	10	10
Malzeme Material	HDPE (Ham/İşlenmemiş) (Virgin/Unprocessed)	HDPE (Ham/İşlenmemiş) (Virgin/Unprocessed)



Taşıyıcılarda biyofilmin kademeli gelişimi. / Gradual development of biofilm on carriers.

# Kaba Kabarcık Difüzör / Coarse Bubble Diffuser

Tıkanmaya Karşı Dirençli / Clog-Free



Ölçüler / Dimensions		
H1 (mm)	50	50
H2 (mm)	100	100
Toplam Uzunluk / Total Length	300	600
Dişli Bağlantı / Treaded Connection	3/4" - 1" Dişli/Erkek - Male/Female	

Talep üzerine diğer bağlantı tipleri mevcuttur.  
Other connection types are available on request.

Malzeme / Materials	WBCB-300	WBCB-600
AISI 304/316	0,76 kg	1,29 kg.

Performans / Performance		
Performans Verileri/ Performance Data	WBCB-300	WBCB-600
Minimum Debi/Minimum Airflow Rate (Nm³/h)	3,5	7
Maksimum Debi/Max. Airflow Rate (Nm³/h)	40	80
Tasarım Debisi/Design Airflow Rate (Nm³/h)	10-20	20-40
Yük Kaybı/Head Loss (mbar)	5	9,3

SOTE değerleri test tankı, difüzör yoğunluğu ve su yüksekliğine bağlı olarak değişir.

SOTE values depend on the test tank, diffuser density and water height.

4 metre su yüksekliği için SOTE değeri (2,76\*4) = 11,04 for 35 Nm³/h

SOTE value for 4 meters water height is (2,76\*4) = 11,04 for 35 Nm³/h

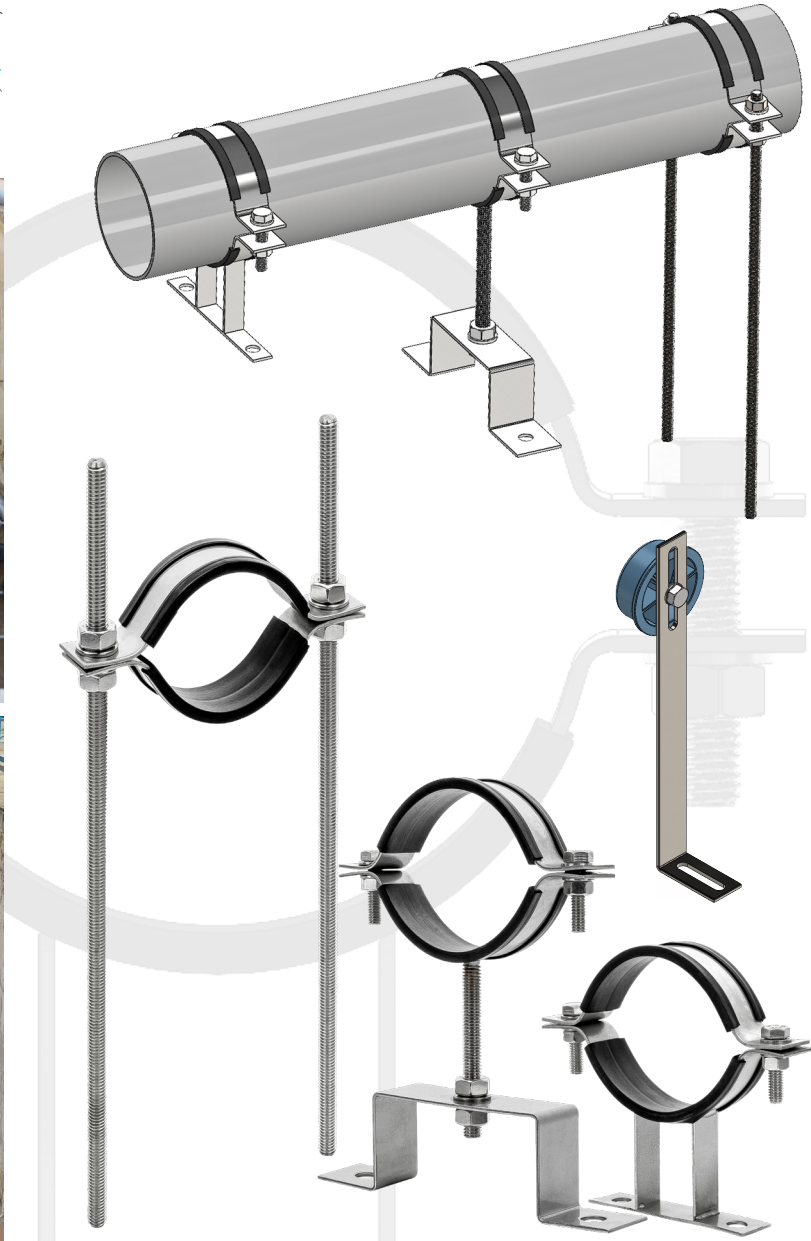
## Bağlantı Parçaları / Connection Equipments

Gromet-Priz Kolye ve Nipel / Grommet-PP Saddles and Nipple



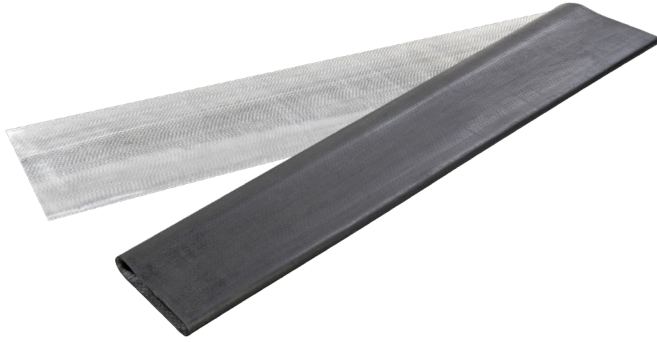
# Destek Ayaklar

Pipe Supports



# Yedek Parçalar

*Spare Parts*



# Kalite Kontrol

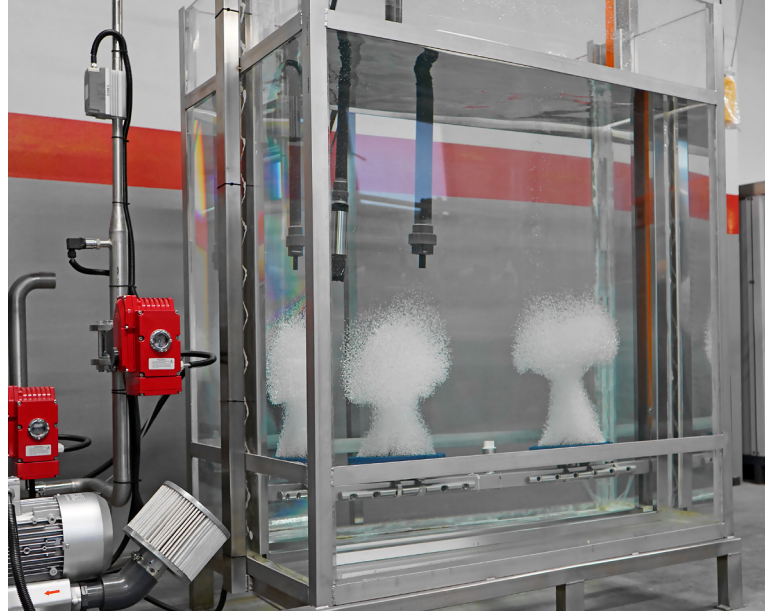
Quality Control



## Airox Difüzör Test Sistemi

Diffuser Test System

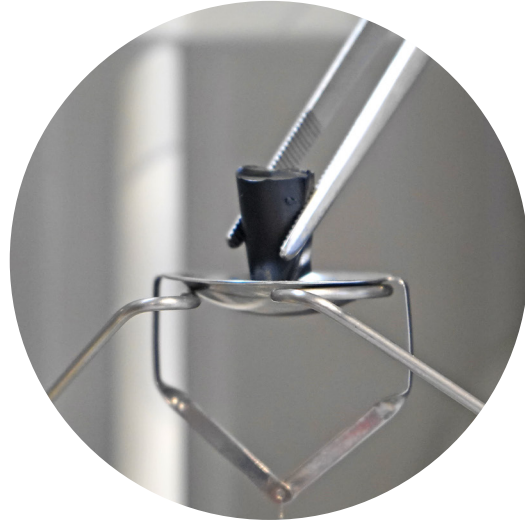
Oksijen Transfer Verimi / SOTE  
Basmaç Kaybı / Pressure Loss  
Basmaç Dayanımı / Pressure Resistance  
Sıcaklık Dayanımı / Temperature Resistance  
Yaşlandırma Tesi / Aging Test  
Delik Desen Tesi / Slit Pattern Test



## Membran Testleri

Membrane Tests

Sertlik / Hardness  
Yoğunluk / Density  
Kalınlık / Thickness  
Kopma Mukavemet / Tensile strength  
Uzama Mukavemet / Elongation at break  
Yırtılma Mukavemet / Tear strength





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