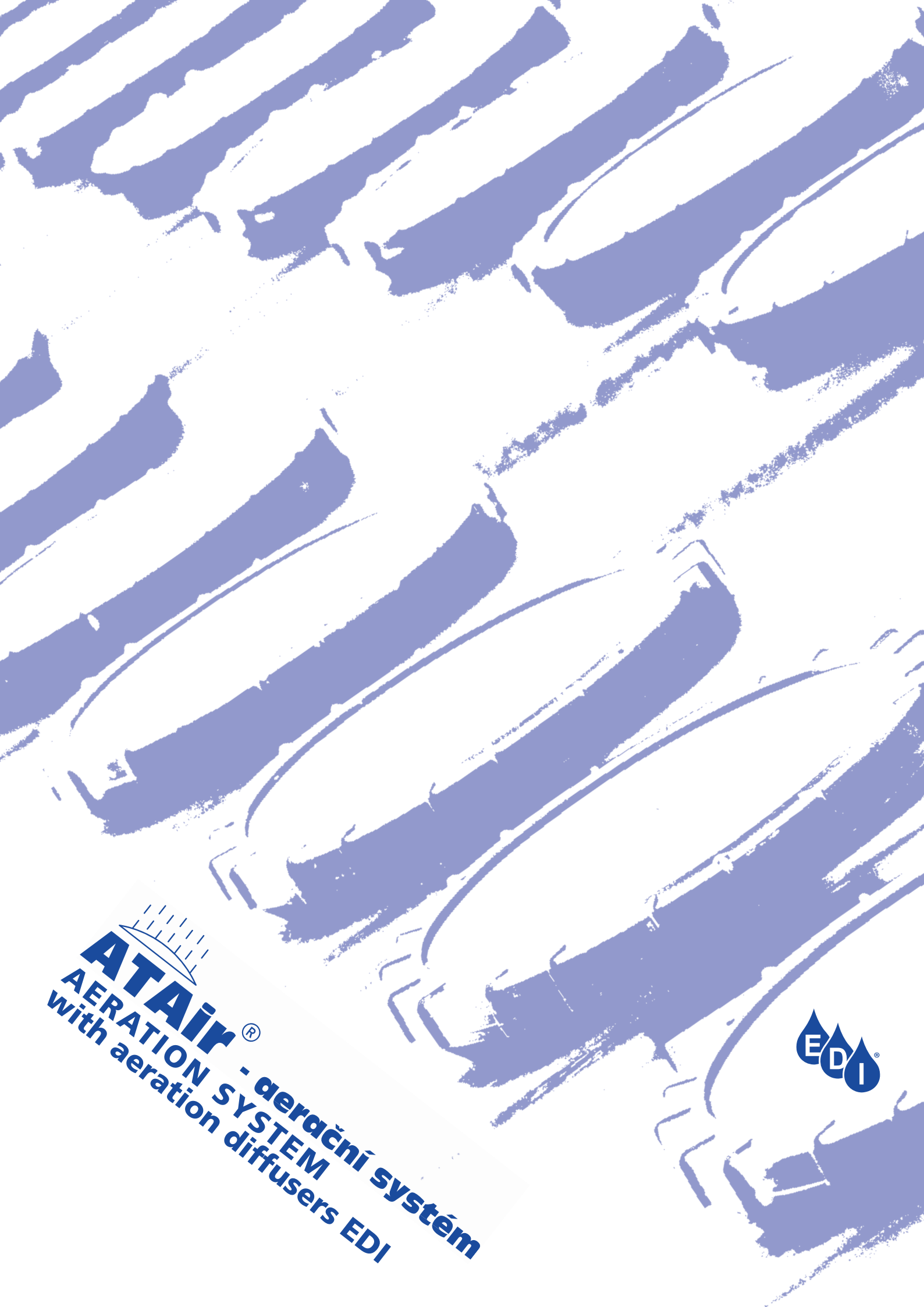
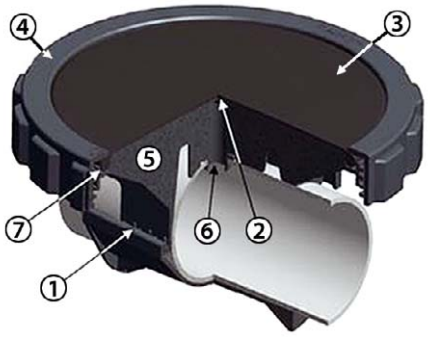

ATAir®
- aerační systém
AERATION SYSTEM
with aeration diffusers EDI
EDI®

EDI FlexAir® ISM Disc

With Integral Saddle Mount

The FlexAir® disc diffuser provils unmatched mechanical strength, operating flexibility and oxygen transfer efficiency. The innovative Integral Saddle Mount provils maximum mechanical integrity – up to 1.5 times the strength of conventional solvent welded mounting systems.
The FlexAir disc diffuser is provided with premium quality membrane materials that are engineered by the EDI Membrane Technologies division. EDI's propriety membrane materials are engineered for superior product life. Multiple membrane perforations are available to optimizme the performance of the diffuser for maximum operating efficiency, air handling capacity, or operating pressure. An integral triple Cheb valve feature prevents the backflow of liquid into the diffuser and piping.
The FlexAir disc diffuser is idealy suited for on/off applications and requires minimal maintenance for long-term performance.

The diffuser assembly and Integral Saddle Mount is available in glass-fiber reinforced polypropylene for maximum performance. This material option offers greater mechanical and temperature capabilities than conventional PVC or CPVC products. The Integral Saddle Mount is compatible with any pipe material and is available in 3 inch, 4 inch, 90 mm and 100 mm diameter sizes. This flexibility allows the air conveyance systém to be sized to match project objectives with minimum pressure loss. The Integral Saddle Mount features an air inlet port that inserts into the pipe and the KlicLoc™ retainer positively locks the assembly to the lateral piping. Once installed, the assembly can withstand an external perimeter load inexcess of 200 lb (90.7 kg) without failure.



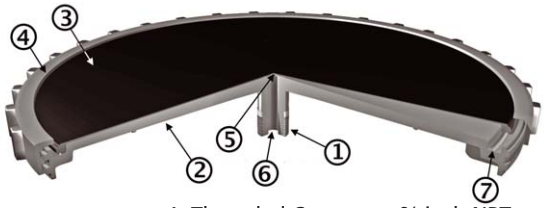
1. KlicLoc™ Retainer
2. Primary Check Valve Feature
3. Flexible Membrane Media
4. Membrane Retainer Ring
5. Diffuser Body
6. Air Inlet Orifice
7. EZSeal™

EDI FlexAir® Threaded Disc

Fine Pore Flexible Membrane Technology

EDI FlexAir® disc diffusers are fine pore, flexible membrane diffusers that provide operational flexibility with maximum oxygen transfer efficiency.
The FlexAir disc diffuser is provided with premium quality membrane materials that are engineered by the EDI Membrane Technologies division. EDI's propriety membrane materials are engineered for superior product life. Multiple membrane perforations are available to optimize the performance of the diffuser for maximum operating efficiency, air handling capacity, or operating pressure. An integral triple check valve feature prevents the backflow of liquid into the diffuser and piping.

The diffuser assembly is constructed of glassfiber reinforced polypropylene formaximum performance. This material option offers greater mechanical and temperature capabilities than conventional PVC or CPVC products.
FlexAirdisc diffusers may be mountedwith the EDI Universal Diffuser Mount (UDM) ¾ inch FPT (female) connection

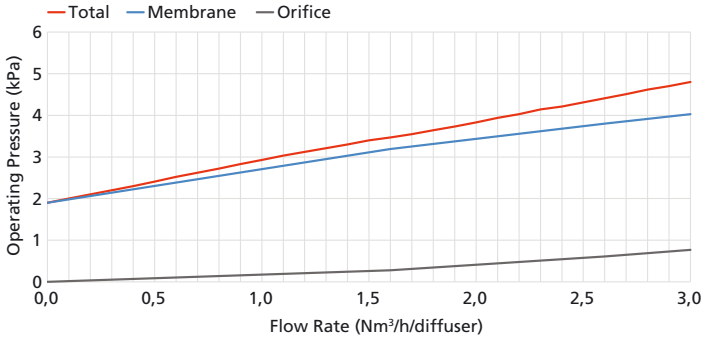


1. Threaded Connector ¾ inch NPT (male) Inlet
2. Diffuser Body
3. Flexible Membrane Media
4. Membrane Retainer Ring
5. Primary Check Valve Featur
6. Air Inlet Orifice
7. EZSeal™

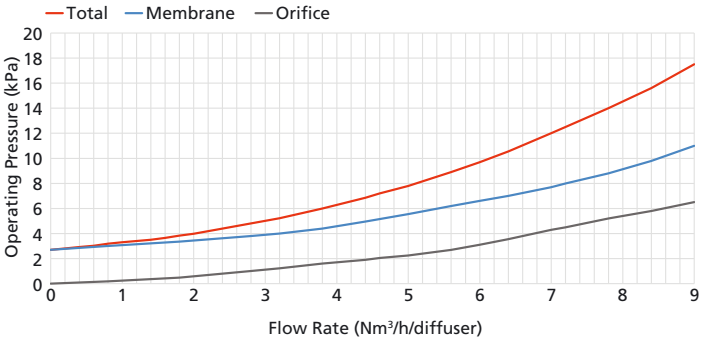
Diffuser Type	Design Airflow [Nm³/h]	Overall Diameter [mm]	Active Surface Area [m²]	Dry Weight [kg]	Net Operating Buoyancy [kg]
7" MicroPore™	0 – 5	229	0,024	0,5	0,5 (↑)
7" HighCap	0 – 12	229	0,024	0,5	0,5 (↑)
9" NanoPore™	0 – 4	277	0,038	0,7	0,6 (↑)
9" MicroPore™	0 – 10	277	0,038	0,7	0,6 (↑)
9" HighCap	0 – 16	277	0,038	0,7	0,6 (↑)
12" NanoPore™	0 – 8	351	0,059	1,1	1,0 (↑)
12" MicroPore™	0 – 16	351	0,059	1,1	1,0 (↑)
12" HighCap	0 – 29	351	0,059	1,1	1,0 (↑)

- Optimum oxygen transfer efficiency is achieved hen operating in the middle to low end of the airflow range. The approximate operating pressure of the diffuser at the mid-range is 3.0-4.0 kPa.
- Operating the unit at the high end of the range will reset in reduced performance and increased operating pressure. Use the maximum airflow value for short term operations such as peak loads or system maintenance.

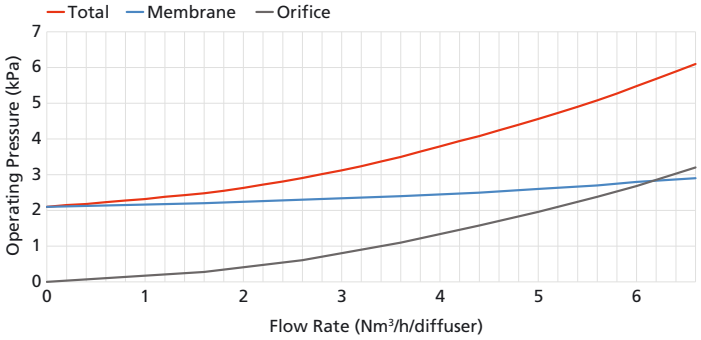
EDI FlexAir® 9" Disc Diffuser MicroPore



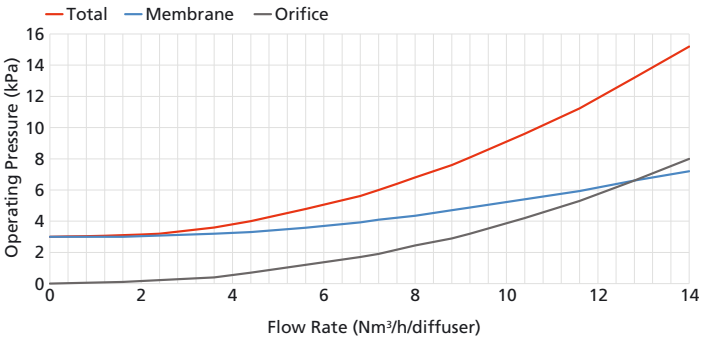
EDI FlexAir® 12" Disc Diffuser MicroPore



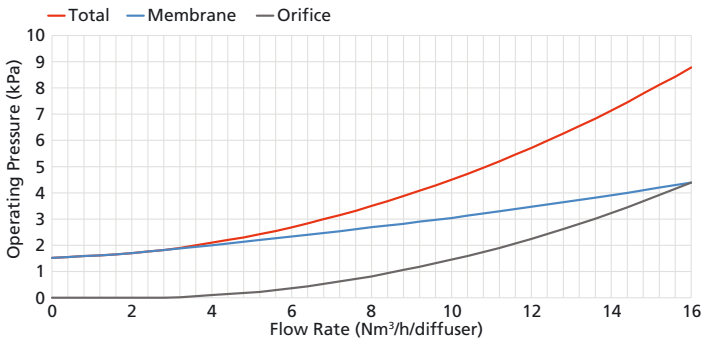
EDI FlexAir® 9" Disc Diffuser NanoPore



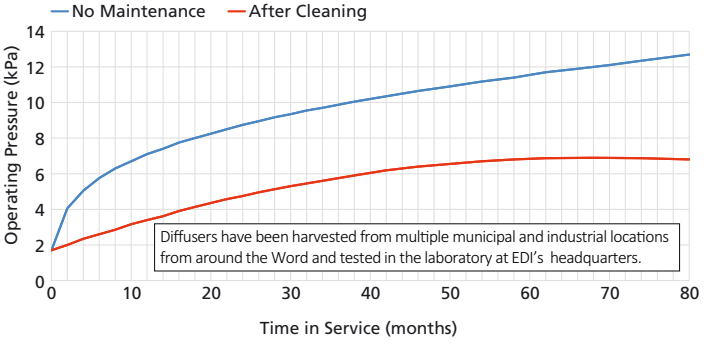
EDI FlexAir® 12" Disc Diffuser NanoPore



EDI FlexAir® 9" Disc Diffuser HighCap



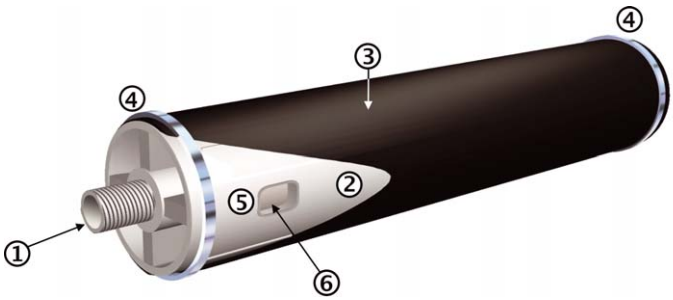
EDI FLEXAIR® DISC DIFFUSER Membrane Pressure Change Over Time



EDI FlexAir® T-Series Tube Diffuser

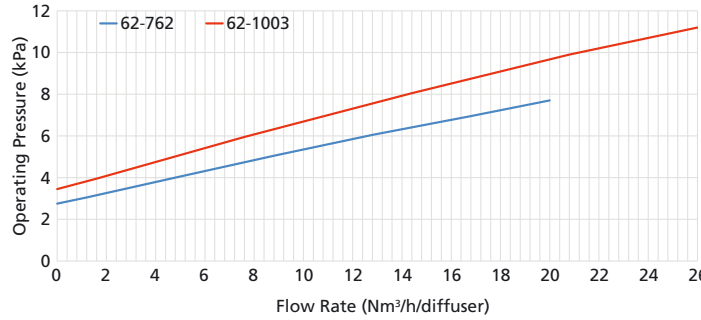
Fine Pore Flexible Membrane Technology

EDI FlexAir® T-Series diffuser unit is a fine pore, flexible membrane diffuser capaje of providing a high level of oxygen transfer efficiency with maximum operating flexibility.
FlexAir T-Series units are configured with a premium quality EPDM ruber membrane sleeve specifically perforated for high volumetric air handling capacity and headloss efficiency. For industrial and non-standard domestic applications alternace membrane materials including urethane, silicone, and other speciality polymers are available. Alternate perforation patterns are available for energy sensitive applications or where maximum oxygen transfer efficiency is desired.
Membranes used on the FlexAir T-Series units are engineered by the EDI Membrane Technologies division.
The FlexAir T-Series diffuser unit may be operand over a wide range of airflows and requires minimum maintenance for longterm performance. The external triple check valve system minimizes the intrusion of water and solids into the diffuser unit and air supply piping under normal operation conditions.
Standard FlexAir T-Series diffusers with ¾ inch NPT (male), stainless steel nipples are faktory assembled and ready for installation.

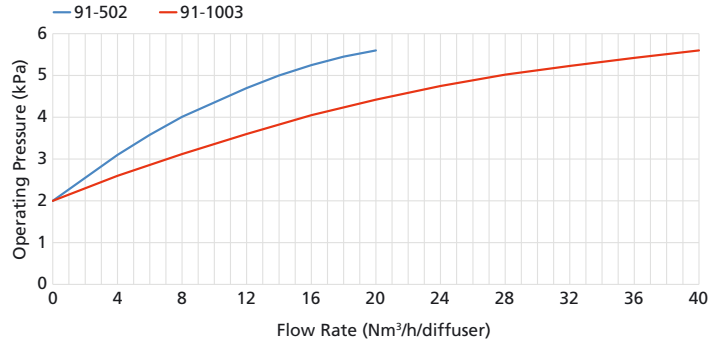


1.Threaded ¾ inch
2. Diffuser Body
3. Flexible Membrane Media
4. Membrane Retainer Clamp
5. Check Valve Feature NPT (male) Inlet
6. Air Inlet Orifice

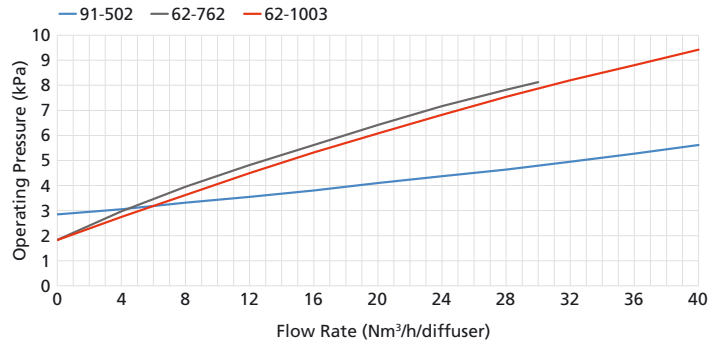
EDI FlexAir® 62 Tube Diffuser
MicroPore - EPDM Membrane



EDI FlexAir® 91 Tube Diffuser
MicroPore - EPDM Membrane



EDI FlexAir® 62; 91 Tube Diffuser
HighCap - EPDM Membrane



Diffuser Type		Design Airflow [Nm³/h]	Overall Diameter [mm]	Active Surface Area [m²]	Dry Weight [kg]	Net Operating Buoyancy [kg]
91-1003	MicroPore™	0 – 32	1003	0,245	2,4	0,76 (↑)
	HighCap	0 – 55	1003	0,245	2,4	0,76 (↑)
91-762	MicroPore™	0 – 24	762	0,183	2,0	0,55 (↑)
	HighCap	0 – 41	762	0,183	2,0	0,55 (↑)
91-502	MicroPore™	0 – 15	502	0,116	1,4	0,33 (↑)
	HighCap	0 – 26	502	0,116	1,4	0,33 (↑)
62-1003	MicroPore™	0 – 21	1003	0,159	1,8	0,85 (↑)
	HighCap	0 – 36	1003	0,159	1,8	0,85 (↑)
62-762	MicroPore™	0 – 15	762	0,118	1,5	0,50 (↑)
	HighCap	0 – 27	762	0,118	1,5	0,50 (↑)
62-650	MicroPore™	0 – 13	650	0,099	1,4	0,35 (↑)
	HighCap	0 – 22	650	0,099	1,4	0,35 (↑)
62-610	MicroPore™	0 – 12	610	0,093	1,4	0,29 (↑)
	HighCap	0 – 21	610	0,093	1,4	0,29 (↑)

- Optimum oxygen transfer efficiency is achieved when operating in the middle to low end of the airflow range. The approximate operating pressure of the diffuser at the mid-range is 4.5-6.2 kPa.
- Operating the unit at the high end of the range will reset in reduced performance and increased operating pressure. Use the maximum airflow value for short term operations such as peak loads or system maintenance.

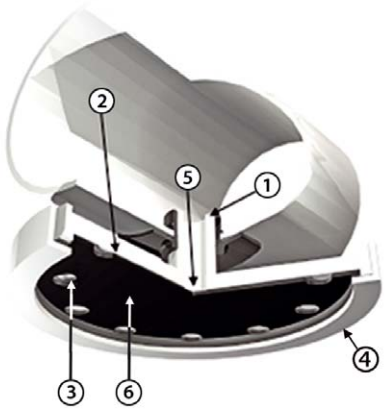
EEDI FlexAir® PermaCap™

Coarse Bubble Diffuser Unit

EDI PermaCap™ diffusers are ideal for aeration applications where intermittent coarse bubble operation is desired. PermaCap units are available with either 3/8 inch or 3/4 inch NPT threaded (male) inlet to allow quick and simple installation into threaded pipe applications. Optional UDM (Universal Diffuser Mount) is available for non-threaded applications. Units particularly well suited for single drop pipe installations in package treatment plants and channel aeration.

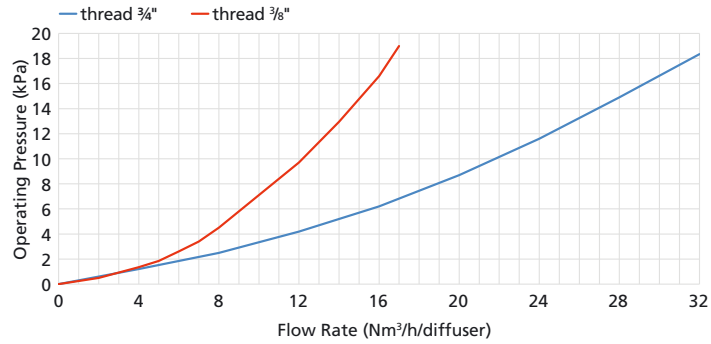
The diffuser assembly features a flexible membrane element that is configured to exclude solids during idle operations providing long-term trouble free operation. The flexible membrane features a non-perforated area that is directly aligned with the air outlet port. During idle operation the membrane retracts and seals the air exit port reducing back flow into the unit. The membrane element is mechanically engaged with the diffuser assembly preventing the membrane from disengaging from the diffuser assembly.

The PermaCap is suitable for installation on bottom (preferred) of diffuser piping. PermaCap coarse bubble units offer great value as a low cost aeration/mixing solution.

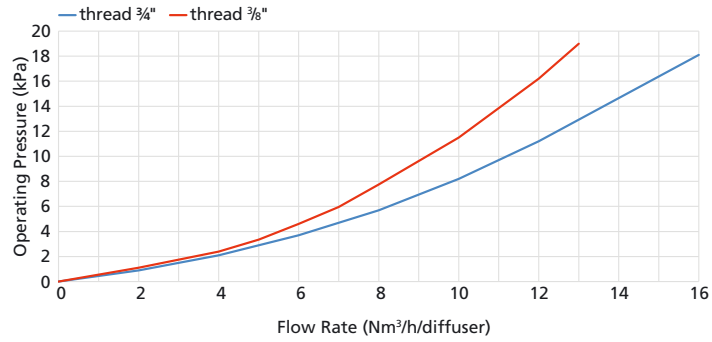


1. Threaded connector ¾ inch NPT (male) Inlet
2. ABS Diffuser Body
3. Inlet Orifice
4. ABS Retainer Ring - 5" Diameter
5. Check Valve
6. Premium Quality EPDM Membran

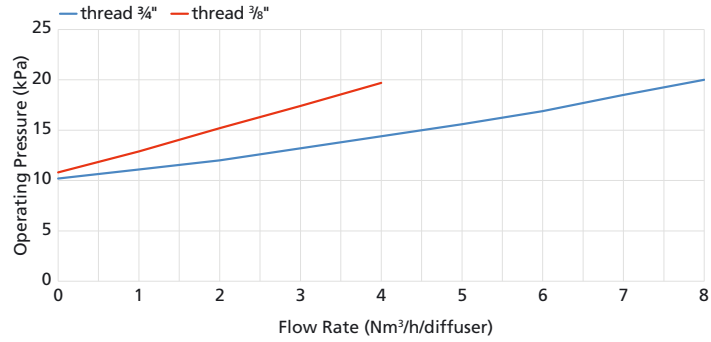
EDI PermaCap™ Disc Diffuser
Coarse - EPDM Membrane



EDI PermaCap™ Disc Diffuser
Medium - EPDM Membrane



EDI PermaCap™ Disc Diffuser
Fine - EPDM Membrane



Diffuser Type		Design Airflow [Nm³/h]	Overall Diameter [mm]	Active Surface Area [m²]	Dry Weight [kg]	Net Operating Buoyancy [kg]
PermaCap™ (coars)	3/8" oriface	2 – 32	127	0,012	0,087	0,018
	3/4" oriface	2 – 32	127	0,012	0,091	0,022
PermaCap™ (medium)	3/8" oriface	1 – 13	127	0,012	0,087	0,018
	3/4" oriface	1 – 13	127	0,012	0,091	0,022
PermaCap™ (fine)	3/8" oriface	0,5 – 3,2	127	0,012	0,087	0,018
	3/4" oriface	0,5 – 3,2	127	0,012	0,091	0,022

- Optimum oxygen transfer efficiency is achieved when operating in the middle to low end of the airflow range. The approximate operating pressure of the diffuser at the mid-range is 1.2-2.5 kPa.

ATAir® aeration and mixing systems with diffusers EDI (Environmental Dynamics International 1975) are some of the most advanced systems, have been developed by our company in cooperation with international experts and experts on sewage water field. When designing, we focus primarily on the optimal operational reliability, excellent efficiency and minimize operating costs over the lifetime (20-40 years).

Use
ATAir® aeration and mixing systems are applied with coarse bubble, medium bubble, fine bubble and nano bubble aeration diffusers EDI.
They are intended primarily for aerating and mixing the liquids in tanks with continuous and intermittent operation.
Thanks to the diversity of the supplied aeration diffusers and variability of aeration grids, offer versatile use for municipal and industrial wastewater treatment (activation, denitrification, sludge tanks and selectors) as well as other technologies using gas diffusion in to the liquids. They are also suitable for the flotation of hydrophilic particles, aeration of fish breeding facilities, fishponds or other tanks.

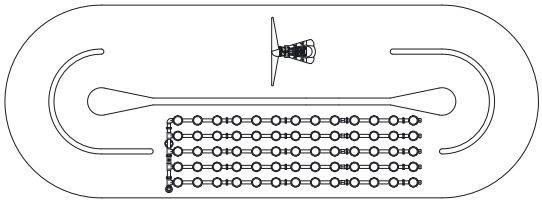
Benefits
- individual approach to each installation
- installation into any tank shape, simple installation, minimizing the number of pipe connections
- high efficient of oxygen transfer from the air, very low pressure loss, saving energy
- possibilities of discontinuous operation, perfect purge system for water condensate drain
- minimum requirements for operation maintenance
- implementation of removable or floating aeration systems
- long life operating reliability, system monitoring during the lifetime
- easy and quick exchange of the membrane after the end of operating period

Accessories
- flange connections including fasteners, optional stainless steel coupling clamp
- adaptive height adjustable supports, reinforced supports in critical zones
- automatic and manual purge system for water condensate drain
- control input for monitoring, optionally continuous condition monitoring

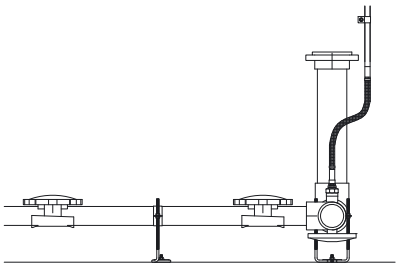
Material execution
All materials used for production as well as their technical characteristics are dealt individually.
The main materials used for parts of the system are:
- UPVC, PVC and AISI 304 for central and branch distribution pipelines
- AISI 304, AISI 316, PP fiberglass, and ABS for supports
- PVC; EPDM and 304 for dewatering system
- EPDM, PTFE, polyurethane, silicone and fiberglass PP for aeration diffusers

Service
- complete technical and technological support
- 2D and 3D design support in all phases of the project
- professional installation by trained personnel
- monitoring and operation optimization over the lifetime, evaluation of energy performance
- professional warranty and customer service

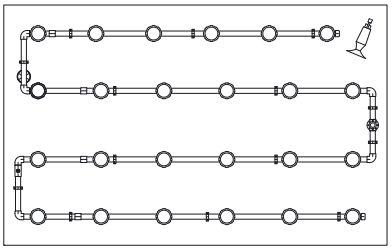
Examples of installation **ATAir®** aeration system in individual tanks with installations from tens to thousands pieces of diffusers.



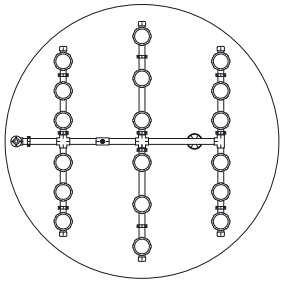
65 diffusers



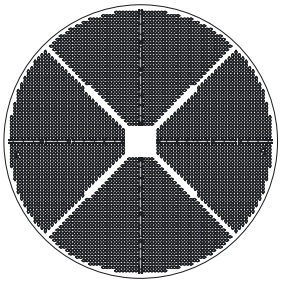
Side view of installation



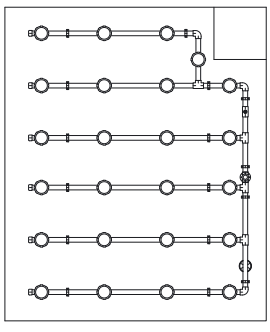
24 diffusers



18 diffusers



4372 diffusers



24 diffusers

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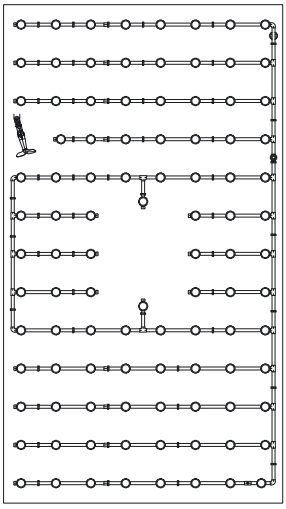

99 diffusers