

DDI SuperFlex

Diffusers & Aeration Systems



 **DORIAN DRAKE**
INTERNATIONAL Inc.

www.DDIdiffusers.com

DDI SuperFlex

Diffusers & Aeration Systems

Dear Valued Customer:

Dorian Drake International is pleased to present its DDI SuperFlex line of aeration diffusers, membrane diffusers, specialty diffusers, and blower packages for new and existing municipal and industrial aeration applications.

Our goal is to supply quality products and service at competitive pricing. Our diffusers service all major brands.

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DDI SuperFlex Fine Bubble Systems

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DDI SuperFlex Threaded Disc Diffuser

Threaded Flexible Membrane Fine Bubble Disc Diffuser



- Base and ring are constructed of glass-filled polypropylene.
- Base unit connection is 3/4-inch male NPT.
- Standard diffuser membranes are EPDM.

SuperFlex disc diffuser units are available with premium quality EPDM membranes. The diffusers incorporate an external triple-check valve design to prevent intrusion of liquid or solids into the diffuser or air piping under normal on/off operating conditions.

Technical Data for Threaded Disc

| Model | Diffuser Type | Peak AirFlow | | Design AirFlow | | Diffuser Dia. | | Active Surface Area | |
|-------|-------------------|--------------|-------|----------------|----------|---------------|-----|---------------------|-------|
| | | Scfm | M3N/h | Scfm | M3N/h | In | mm | ft2 | m2 |
| 01798 | 9" Standard | 6.0 | 9.5 | 0.5 -4 | .9-6.8 | 10.9 | 277 | 0.41 | 0.038 |
| 01799 | 9" High Capacity | 10.0 | 15.8 | 1-8 | 1.7-13.6 | 10.9 | 277 | 0.41 | 0.038 |
| 06078 | 12" Standard | 10.0 | 15.8 | 1-8 | 1.7-13.6 | 12.9 | 328 | 0.64 | 0.059 |
| 06080 | 12" High Capacity | 18.0 | 28.4 | 2-13 | 3.4-22.1 | 12.9 | 328 | 0.64 | 0.059 |

The 9-inch and 12-inch diameter diffusers employ a 3/4-inch diameter NPT (male) threaded connection for ease of installation/maintenance and universal application.

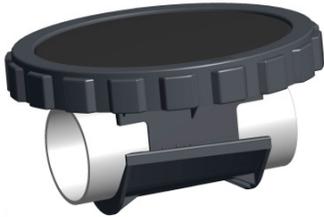
Units can be mounted using the universal diffuser mount and are also available with saddle mount configuration (as shown on next page), which provides unmatched mechanical strength.

Replacement parts are available for the fine bubble disc and tube diffusers.



DDI SuperFlex Diffuser Mounts

DDI SuperFlex Saddle Mount



| Model | Mount Size |
|-------|--------------------|
| S009 | 9" Saddle Mounted |
| S0012 | 12" Saddle Mounted |

Key Features and Benefits

- Constructed of glass-filled UV resistant polypropylene suitable for deep tank (high-temperature) applications and robust performance in cold weather service
- Available for pipe size diameters of 3-inch (91 mm), 4-inch diameter (110 mm) for the 9-inch disc unit only. The 12-inch disc is only available in 3-inch diameter pipe size (90 mm)
- Advanced technology premium-quality membrane materials available in EPDM and other special polymer blends
- Triple-check valve design, ideal for on/off applications, restricts entry of liquid/solids into piping
- Resistant to fouling and plugging for low maintenance
- Integral saddle mount provides ease of installation and maintenance
- High-capacity membrane option available for maximum airflow and low operating pressure
- Three times stronger than conventional mounting or push-on systems
- Pre-assembled and leak tested in our facilities

DDI SuperFlex Universal Mount



| Model | Mount Size |
|----------|-----------------------|
| 00308-9 | 9" Universal Mounted |
| 00308-12 | 12" Universal Mounted |

The Universal Diffuser Mount (UDM) for fine bubble or coarse bubble disc diffusers is designed to accept a 3/4-inch NPT diffuser connection. The UDM is engineered for use with 2.4-inch through 8.6-inch O.D. plastic (PVC) or metal pipe. UDM is available in both vinyl & rubber materials of construction. Vinyl UDM (illustrated in the picture) allows for gluing to either PVC or ABS piping. Rubber cannot be glued. The UDM is to be used for mounting diffusers on the top or bottom of the lateral and is not recommended for sidewall mount of diffuser units.

Special installation instructions are included with each order. It will cover special considerations and recommendations for various types of piping materials and wall thicknesses.

DDI SuperFlex T-Series Tube Diffuser

DDI Superflex T-Series



The tube diffuser unit is a fine pore, flexible membrane diffuser capable of providing a high level of oxygen transfer efficiency with maximum mixing capability.

Standard configuration includes 3/4-inch stainless steel nipple installed. Nipple can also be shipped loose, or a thru-mount connection can be provided for mounting units on square tubing.

T-Series threaded units are also available in saddle mount style configuration for special design applications.

Standard diffuser membranes are EPDM and PU, with silicone and PTFE membranes available.

Multiple lengths and diameters are available. Membranes held in place with 304 SS clamps and 316 SS clamps are available. For special applications, nonmetallic clamps are also available.

| Model | Diffuser Type | Diffuser Type | | Overall Length | | Active Surface Area | |
|---------|---------------|---------------|-------|----------------|------|---------------------|-------|
| | | Scfm | M3N/h | In | mm | ft2 | m2 |
| 91-1003 | High Cap | 0-35 | 0-55 | 39.5 | 1003 | 2.64 | 0.245 |
| 91-762 | High Cap | 0-26 | 0-41 | 30.0 | 762 | 1.97 | 0.183 |
| 91-502 | High Cap | 0-17 | 0-26 | 19.8 | 502 | 1.25 | 0.116 |
| 62-1003 | High Cap | 0-23 | 0-36 | 39.5 | 1003 | 1.71 | 0.159 |
| 62-762 | High Cap | 0-17 | 0-27 | 30.0 | 762 | 1.27 | 0.118 |
| 62-650 | High Cap | 0-14 | 0-22 | 25.6 | 650 | 1.07 | 0.099 |
| 62-610 | High Cap | 0-13 | 0-21 | 24.0 | 610 | 1.00 | 0.093 |

For industrial and non-standard domestic applications, alternate membrane materials are available including polyurethane, silicone, and other specialty polymers. These units may be operated over a wide range of airflows. The external triple-check valve system eliminates solids and minimizes entry of liquid into the diffuser unit and air supply piping under normal operating conditions. Standard tube diffusers with 3/4-inch NPT (male) stainless steel nipples are factory assembled and ready for installation.

Aeration Systems

Full Range of Flows & Blower Technologies to Suit a Particular Process Application

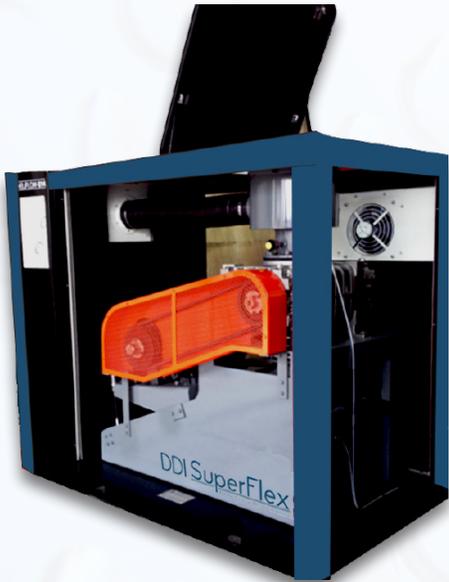
In addition to the core requirements and supply of the SuperFlex Diffusers, Dorian Drake International also has the capability of providing a part or all of the other aeration system components as well (e.g. Diffusers, Air Delivery Blowers, Aeration Basin piping, Electrical Control Panels, & D.O. monitoring equipment).

Dorian Drake also has the engineering capability of matching your aeration system requirements to the following list of typical Industries & Applications:

| INDUSTRY | APPLICATION |
|---|--|
| Municipal Domestic Wastewater Treatment | Biological Aeration & Backwash |
| Industrial Wastewater Treatment | Aeration, Separation & Flotation |
| Lagoon Domestic Waste Treatment | Aeration |
| Lake Treatment | Circulation & Oxygen Restoration |
| Tank Aeration & Mixing | Aerobic Digester, Equalization Basin & Industrial Wastewater Tanks |
| Aquaculture | Aeration for Aquatic Life Farming |
| Dairy Products | Wastewater Dairy Lagoon Aeration |
| Pulp and Paper | Lagoon Aeration & Mixing |
| Food Processing | Lagoon Aeration & Mixing |
| Oil Refinery Wastewater Treatment | Removal of dissolved gases and oxidation of dissolved metals |

Blower Packages

Small to Medium Aeration Systems



POSITIVE DISPLACEMENT
BLOWER WITH ENCLOSURE

Flows up to 4,300 CFM

Pressure up to 15 PSIG



POSITIVE DISPLACEMENT
BLOWER WITHOUT ENCLOSURE



Flows up to 13,500 CFM

Pressure up to 19 PSIG

HIGH SPEED TURBO BLOWER PACKAGE WITH MAGNETIC
BEARING PROTECTION AND CONTROL TECHNOLOGY

Blower Packages

Medium to Large Aeration Systems



MULTISTAGE CAST IRON
CENTRIFUGAL BLOWER

Flows up to 30,000 CFM

Pressure up to 25 PSIG

INTEGRALLY GEARED SINGLE
STAGE TURBO BLOWER

Flows up to 50,000 CFM

Pressure up to 30 PSIG



Electrical Control Panels & Dissolved Oxygen Systems

Variations: Our packages include analog and digital controllers. Blower protection, Dissolved Oxygen monitoring and control, inlet valve and VFD control systems.



ANALOG PROTECTION CONTROL PANELS



WE HAVE THE CAPABILITY OF PROVIDING ANY CONTROL SYSTEM BASED ON YOUR PARTICULAR SPECIFICATIONS

PLC CONTROL PANEL WITH OPTIONAL DISSOLVED OXYGEN MONITORING AND CONTROL CAPABILITIES



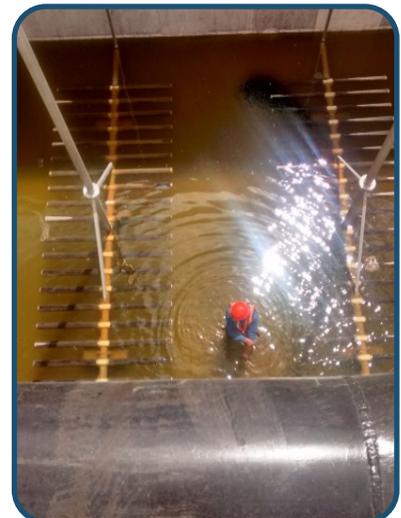
Retrievable Aeration Systems

The DDI retrievable aeration grid system is designed with the diffusers mounted on structural frames which can be lifted out of the basin for waste inspection and maintenance without having to disrupt the wastewater treatment process.

The **removable grid system** is a cost-efficient alternative to constructing a parallel treatment train plus many wastewater treatment plants cannot meet their effluent regulation requirements with a tank temporarily out of service.

Our systems can be designed for either crane or winch liftable and are suited for either Disc or Tube diffusers.

TYPICAL INSTALLATION



Technical design and application support covering biological diffused aeration systems for Municipal and Industrial plant applications are available for your specific project, if needed.

Interested in our DDI SuperFlex Diffusers & Aeration Systems?

A sales manager in one of our global sales offices is available to help.

Headquarters:

2 Westchester Park Drive
White Plains, New York, 10604, USA

Contact Us:

Phone: +1 (914) 697-9800
Email: DDIexports@doriandrake.com

Regional Sales Offices:

Dubai, UAE
Beijing, China
Weston, FL, USA



Send us a direct email to connect with a Dorian Drake
International sales manager:

DDIexports@doriandrake.com

About Dorian Drake International

Dorian Drake International is an innovative leader in the field of export management, providing manufacturers with a full-service alternative to staffing and managing their own export department. The firm's mission is to build world-class distribution for leading manufacturers in select industries.

Dorian Drake's multi-lingual sales and marketing professionals dock their tablets at the firm's New York headquarters and regional offices in more than a dozen locations in Asia, the Middle East, Europe, Latin America and the Caribbean.



DDI SuperFlex

Diffusers & Aeration Systems



Premium compounds provided by EDI (Environmental Dynamics Inc.)

Long Standing Membrane Quality & Performance.

DDI SuperFlex

Diffusers & Aeration Systems



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