Micro Bubble Tube Diffuser
Product Introduction

Tube diffuser is an aeration device fixed at the bottom of the tank. It has the advantages of simple structure, high oxygen utilization rate, reliable performance, difficult blockage of air holes, no backflow of sewage, uniform circumferential stress, long service life and convenient installation and maintenance.

During aeration, pressurized air enters the air guide groove of the air guide pipe through the air distribution branch pipe and the air supply pipe, and an annular air chamber is formed between the aeration membrane pipe and the support body, so that the aeration membrane pipe bulges, and the air aerates the water body through stretchable micropores on the membrane pipe. When the gas supply is stopped, the membrane tube elastically shrinks and hugs on the support body, and the micropores also close with rebound shrinkage to prevent water from flowing back into the gas tank.
Material

Tube diffuser consists of lining pipe, diaphragm, clamp, etc. Aeration diaphragm is made of composite, EPDM and silicone rubber, the lining pipe is made of UPVC and ABS, and the clamp is made of 304 stainless steel.

**MOC:EPDM**
Manufactured by compression molding with a standard cure, low plasticizer content, and 1mm or 2mm perforations. Compression molding with modern equipment utilizing individual thermocouples and vacuum technology ensures a repeatable very high quality product.

**MOC:Silicon**
Silicon membranes offer high temperature resistance, and chemical resistance that differs from other products. Silicon is an inorganic, and therefore offers excellent resistance to many organic wastes. Our formulation is designed to resist tearing and creep, while producing fine bubbles at a modest headloss.
Product Pictures
Advantages and characteristics

1. The composite diaphragm has a long service life of 5-8 years, high oxygenation efficiency and remarkable energy-saving effect.

2. High power efficiency and low energy consumption, saving about 30% of the operating cost compared with ordinary aerators.

3. Unique air distribution structure, uniform air distribution, tight air bubbles and difficult air leakage at the interface.

4. The aeration supporting body with open design reduces the influence of buoyancy on the aeration main body and obviously improves the service life of the aerator.
<table>
<thead>
<tr>
<th>Model</th>
<th>φ63</th>
<th>φ93</th>
<th>φ113</th>
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</thead>
<tbody>
<tr>
<td>MOC</td>
<td>EPDM/Silicon membrane ABS tube</td>
<td>EPDM/Silicon membrane ABS /PP carrier plate</td>
<td>EPDM/Silicon membrane ABS /PP carrier plate</td>
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<tr>
<td>Length</td>
<td>500/750/1000mm</td>
<td>500/750/1000mm</td>
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<tr>
<td>Flow range</td>
<td>2-14m³/h</td>
<td>5-20m³/h</td>
<td>6-28m³/h</td>
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<tr>
<td>Bubble Size</td>
<td>1-2mm</td>
<td>1-2mm</td>
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<tr>
<td>Service Area</td>
<td>0.75-2.5m²</td>
<td>1.0-3.0m²</td>
<td>1.5-3.5m²</td>
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<tr>
<td>Service Life</td>
<td>&gt;8 year</td>
<td>&gt;8 year</td>
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Scope of Application

- Preservation aeration of waste water
- Aeration of fish ponds and lakes
- CO admission for neutralization
- Oxygenation of activation basins
- Oxygenation to stabilize sludge
Project Site Photos
Installation Programs

1) Tube diffusers are generally uniformly arranged at the bottom of the water treatment tank. The aerators are 100-250 mm away from the bottom of the tank, and the longitudinal spacing is generally about 500mm.

2) Cutting and blanking the aeration main pipe according to the drawing, drawing a line on the pipe, and determining the position of each sleeve aerator.

3) Install the diaphragm. When installing the diaphragm, pay attention to the vertical installation of some non-porous diaphragms to the ground, and tighten the clamps at both ends of the diaphragm.

4) Install the main pipe adjustable bracket and level each aeration main pipe on the same horizontal plane.

5) After the diaphragm is installed, install the entire tubular aerator at the position where the hole has been previously opened. (Note that the opening positions should be on the same horizontal plane).

6) After all pipelines are installed, install aeration riser and pipe aerator.
Installation precautions

1. The diaphragm mounting clamp should be tightened

2. All pipes shall be level on the same plane.

3. Install the center connector with O-rings

4. After the aeration main pipe is perforated, it must be thoroughly purged before installing the tubular aerator.

5. During installation and after installation, open flame operations such as explosive connection are strictly prohibited on site. If it is really necessary to operate, the aerator shall be covered with fireproof materials to avoid scalding the equipment.

6. Aerator in handling and installation, can't throw, drag, so as not to wear tube wall.

7. After installation, check whether each connector meets the requirements.
**Common Faults and Solutions**

01

**Fault:**
Non-uniform local aeration
Aerator clogging

**Solutions:**
1) Cleaning with pickling equipment;
2) Remove the aerator and clean it.

02

**Fault:**
Big bubbles appear at both ends of the diaphragm.

**Solutions:**
1) Tighten the clamp or replace the clamp.

03

**Fault:**
There are large bubbles in the aeration tank or Diaphragm tear

**Solutions:**
1) Replace the aeration membrane.
Thank you!

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