


# Micro Bubble Tube Diffuser



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# Product Introduction

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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

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## Advantages and characteristics

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

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



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

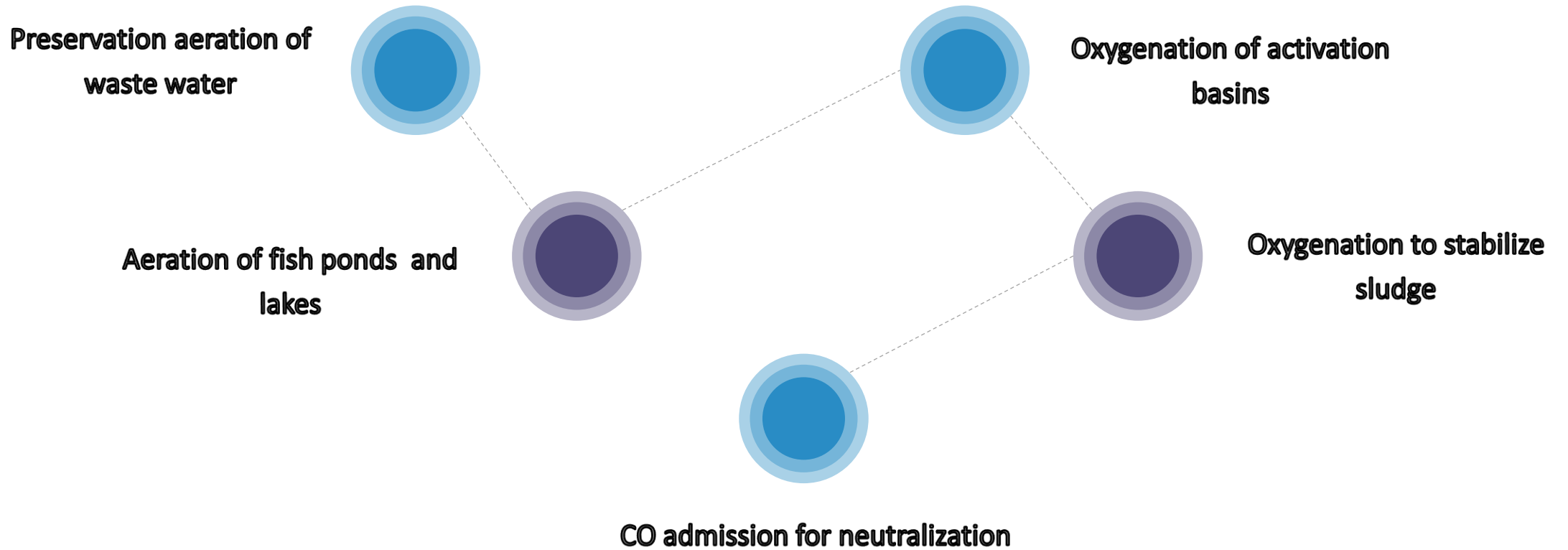
4. The aeration supporting body with open design reduces the influence of buoyancy on the aeration main body and obviously improves the service life of the aerator



# Performance Parameter

Model	φ63	φ93	φ113
MOC	EPDM/Silicon membrane ABS tube	EPDM/Silicon membrane ABS /PP carrier plate	EPDM/Silicon membrane ABS /PP carrier plate
Length	500/750/1000mm	500/750/1000mm	500/750/1000mm
Connector	3/4 NPT	3/4 NPT	3/4 NPT
Flow range	2-14m <sup>3</sup> /h	5-20m <sup>3</sup> /h	6-28m <sup>3</sup> /h
Bubble Size	1-2mm	1-2mm	1-2mm
Service Area	0.75-2.5m <sup>2</sup>	1.0-3.0m <sup>2</sup>	1.5-3.5m <sup>2</sup>
Service Life	>8 year	>8 year	>8year

# Scope of Application



# 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 !

Contact :

Miss Linda [sales&marketing ]

Whatsapp/Cell : 0086 15014788350

Email : sales@manvac.cn

QQ:375114267

<http://www.manvac.cn>