

High oxygen Aerator Membrane Fine bubble Disc Diffuser

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APPLICATION

manvac[™]



DESCRIPTION

01

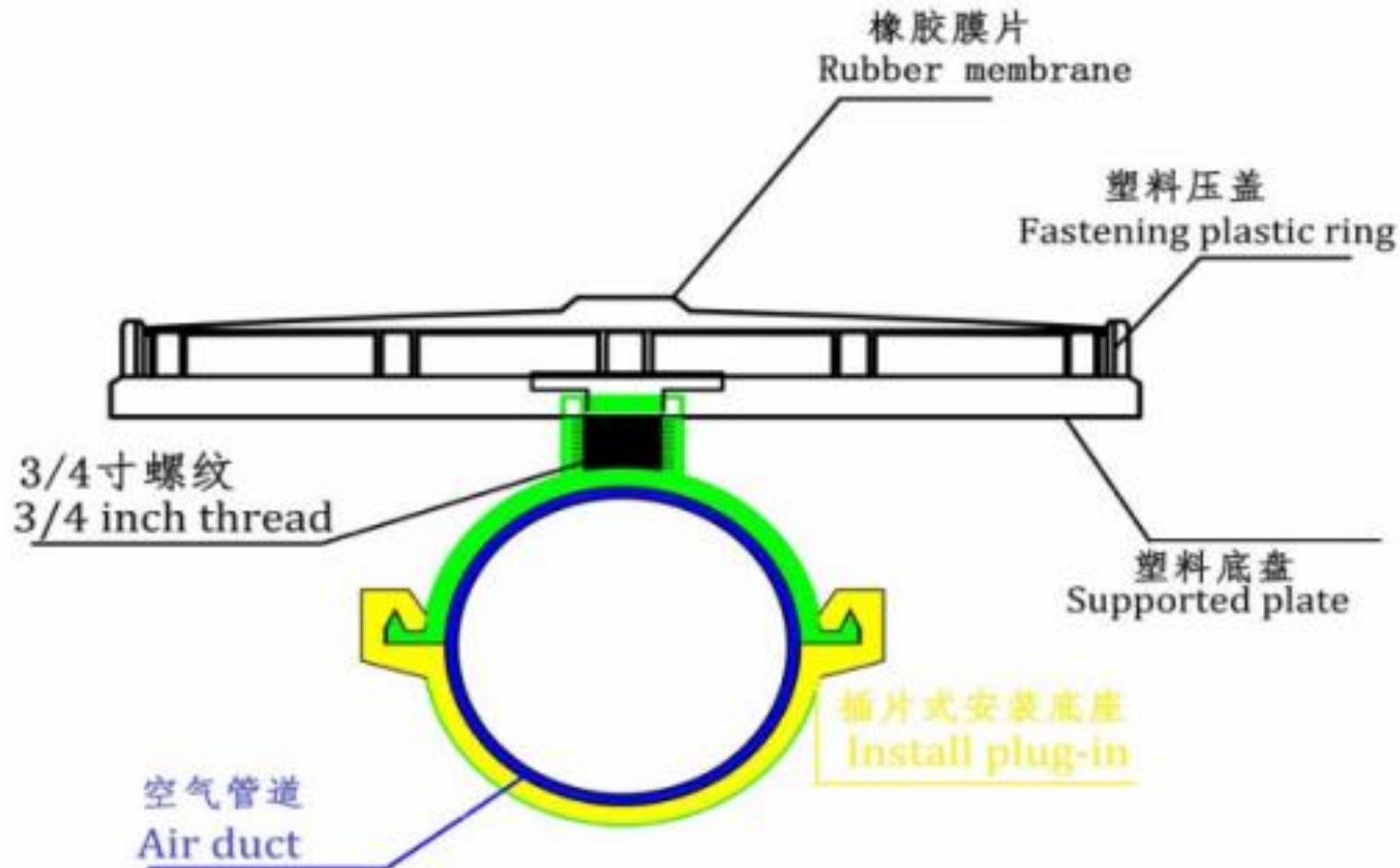
ManVACTM

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High oxygen Aerator Membrane Fine bubble Disc Diffuser features a unique split pattern and slit shapes, which can disperse air bubbles in an extremely fine and uniform pattern for high oxygen transfer efficiency.

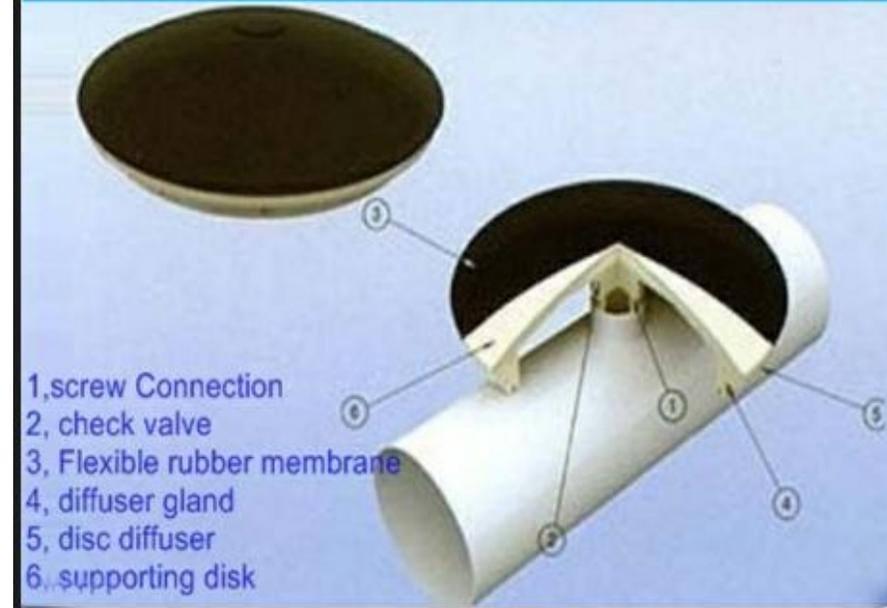
A much highly effective and integrated check valve enables the aeration zones to be easily shut down for air-on/air-off applications.





盘式曝气器结构示意图
Schematic diagram of aeration installation

Disc Bubble Diffuser



ManVac[™]

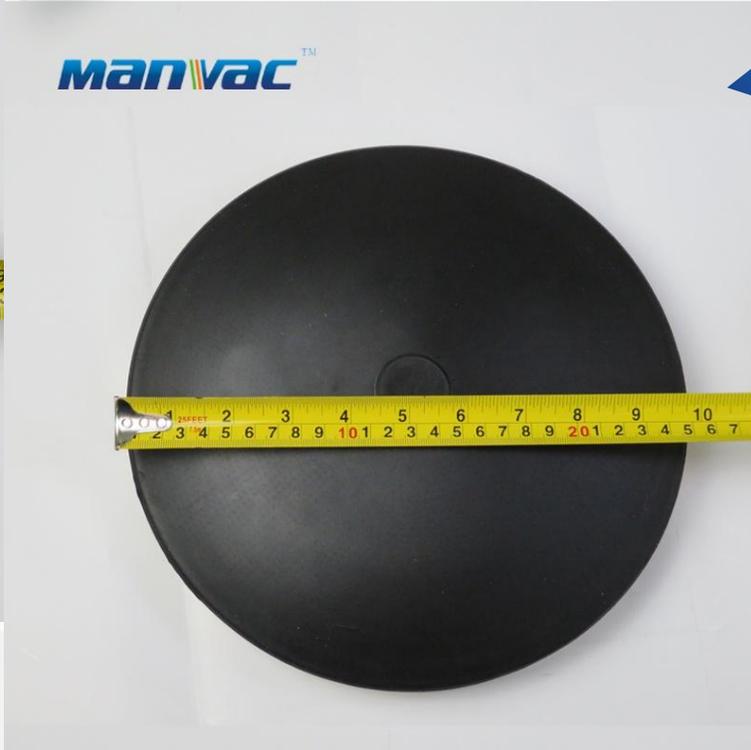


SPECIFICATIONS

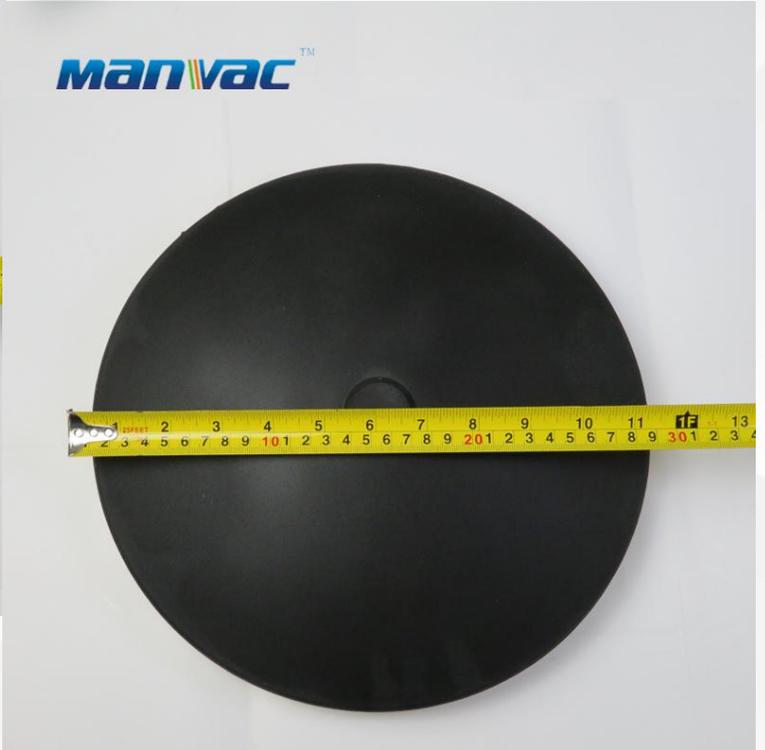
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215mm



260mm



300mm

Model	215mm	260mm	300mm
Size	8 inch	9 inch	11.8 inch
Bubble Type	Fine bubble	Fine bubble	Fine bubble
MOC	EPDM/Silicon /PTFE membrane	EPDM/Silicon /PTFE membrane	EPDM/Silicon /PTFE membrane
	Strengthened PP+GF(glass fiber) carrier plate	Strengthened PP+GF(glass fiber) carrier plate	Strengthened PP+GF(glass fiber) carrier plate
Connector	3/4 NPT	3/4 NPT	3/4 NPT
Bubble Size	1-2mm	1-2mm	1-2mm
Flow Range	1-6m ³ /h	1-8m ³ /h	1-10m ³ /h
Slit Quantity	5000	8900	10000
Service Area	0.2-0.64m ²	0.25-1.0m ²	0.3-1.2m ²
Service Life	>5 year	>5 year	>5 year



WORKING PRINCIPLE



WORKING PRINCIPLE

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Aeration is a method of making air and water come into severe contact. The purpose is to dissolve the oxygen in the air in the water, or to remove the unnecessary gas in the water. The body and volatile substances are exiled into the air.

According to the double membrane theory, there are gas and liquid films at the "gas-water" interface, and air and liquid flow outside the gas and liquid films, which is a turbulent state; the laminar state between the gas and liquid films, There is no convection, and pressure gradient and concentration gradient will appear under certain conditions.



There are two types of aeration: one is blast aeration, and the other is mechanical aeration. Blast aeration is an aeration method that uses an aeration blower, an aerator, and a diffuser plate or a diffuser to introduce air bubbles into the water.

Generally, this method is used for wastewater treatment in ethylene plants. Mechanical aeration refers to the aeration method of introducing bubbles using instruments such as impellers.



All aeration equipment should meet the following three functions:

- ① generate and maintain effective gas-water contact, and maintain a certain dissolved oxygen concentration in the water under the condition that biological oxidation continuously consumes oxygen;
- ② in the aeration zone Generate sufficient mixing and circulating flow of water;
- ③ Maintain sufficient speed of the liquid so that the biological solids in water are in suspension.



CONNECTOR



CONNECTOR SIZE



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DN 40

DN 50

DN 80

USD

USD

USD



04

PRODUCTION PROCESS

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02



04

01



03

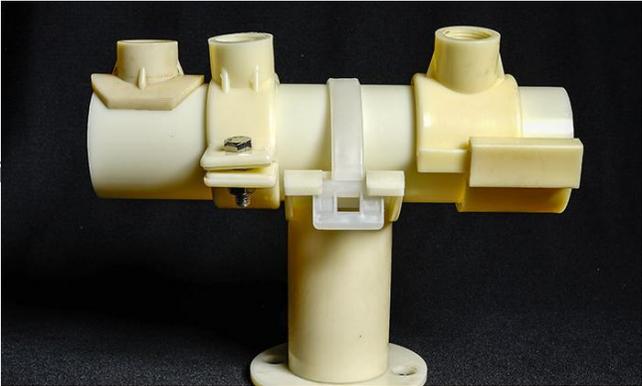


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Installation Steps



Manvac Side Channel Blower



Connector is glued to the air collecting pipe.
PS:Glue Recommendation:
UPVC Glue.



Install fine bubble diffuser

Install air collecting pipe



Drill holes in connector and pipe connections

Done





APPLICATION



WASTE WATER TREATMENT/SEWAGE TREATMENT



- ◆ Sewage treatment mainly equip side channel blower to increase oxygen in the aeration tank, accelerate the growth of aerobic microorganisms, thereby purify the waste water . Side channel blower is crucial for sewage treatment, it will directly determine energy consumption and the function.



Water treatment mainly contains of

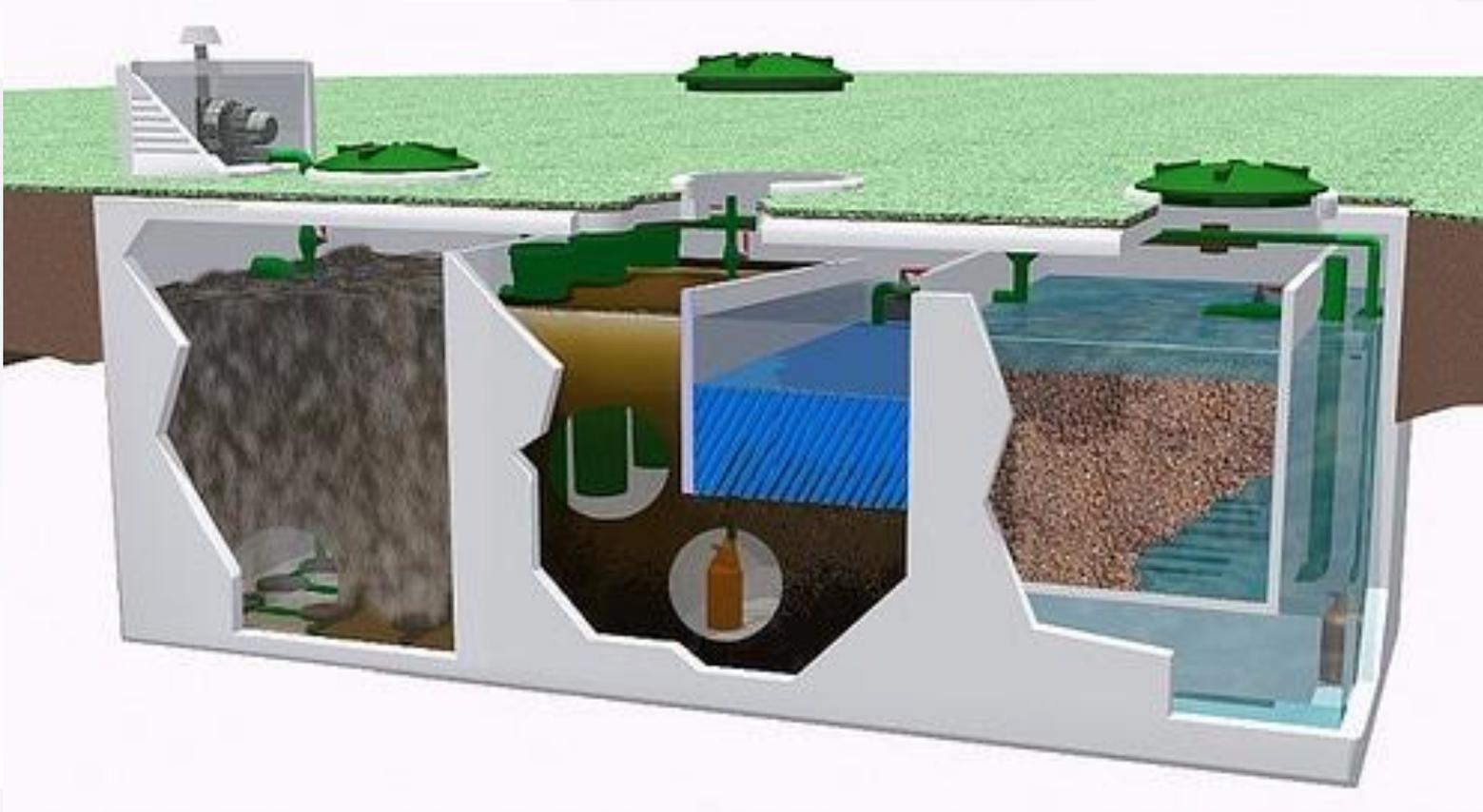
- Industrial waste water treatment
- Sanitary sewage treatment
- Underground/Buried wastewater treatment



2MV series :

- 2MV 320 H36 ,1.3KW
- 2MV 420 H36, 1.6kw
- 2MV 420 H46, 2.2kw
- 2MV 520 H46, 3.0kw
- 2MV 710 H37, 4.0kw
- 2MV 830 H17, 5.5kw
- 2MV 720 H37, 4.3kw
- 2MV 720 H47, 5.5KW
- 2MV 720 H57 ,7.5kw
- 2MV 820 H37, 11kw
- 2MV 820 H47, 15kw

Sanitary wastewater treatment plant



4MV series:

- 4MV 220 H26, 0.81kw
- 4MV 410 H16, 1.1kw
- 4MV 220 H56, 1.5kw
- 4MV 520 H26, 2.2kw
- 4MV 420 H56, 3.3kw



Industrial waste water treatment plant

MANVAC blower 2MV 710 H37 4KW,
with matching Air filter & Pressure
Relief Valve



2MV 820 H47, 15kw



2MV 420 H46, 2.2KW



Mobile Wastewater Treatment Plants
2MV 520 H46 ,3KW



2 unit Manvac blowers 2MV 940 H37,
20KW
under installation

How to select the correct blower model for waste water /sewage treatment ?

Pre-sales Basic conditions we should to know :

1. Sewage Type :

- ◆ industrial sewage
- ◆ sanitary sewage
- ◆ Buried sewage
- ◆ chemical sewage

2. Aeration Methods :

- ◆ aeration disk
- ◆ micro aeration pipe
- ◆ PVC perforated □ aerator □ others

3. Area of the sewage Treatment Tank : (L*W*H)

4. The depth from the aeration to the surface of the water ;

5. The Proportion of the Sewage ; The numbers of the blasting aeration pool;

6. The capacity of the sewage Treatment system ;

7. Diameter of the aeration disk (mm) ; Qty of the aeration disk;

8. The Length of the aeration pipe ;

PACKING SIZE

260 mm

Carton Size:

67*47*31cm

About 26 pcs each carton

G.W.: 15 kgs

Please note: This carton for
diameter 300mm can pack
19 pcs each carton



300mm

Carton Size:

70*61*33cm

About 25 pcs each carton

G.W.: 20 kgs

Connector

Carton Size:

60*40*30cm

About 200 pcs each bag

G.w.: 13 kgs

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The background features a light gray geometric pattern of overlapping polygons. In the top right corner, there are four circles: one large blue circle, one medium blue circle, and two smaller blue circles. On the left side, there are three white circles of varying sizes.

Thank you !

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