

Hangzhou Juntai Plastic Products Co.,Ltd.



# JUNTAI SMART DIFFUSER SYSTEMS

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- The Highest Quality SMART Diffuser in China
- JUNTAI Four Guarantee For Quality Control



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More information, please visited [www.juntaiplastic.com](http://www.juntaiplastic.com)  
or contact our Engineer.

## Juntai Company Introduction

Hangzhou Juntai Plastic Products Co. Ltd. , was founded in 2013 and we aim to offer the high quality plastic parts for water treatment .We established Anhui Juntai Technology Co., Ltd in Anhui in 2016. As a supplier and manufacturer for Disc diffuser,Tube diffuser, MBBR Bio Filter Media,PVC profiles and others plastic products for the water treatment, we won the **National high-tech enterprise** in 2019 and has **35 patents**.

We have a **21000** square meter factory in Yuexi Anhui; 105 fully automatic MBBR production lines,**7 lines** of Tube settlers, and **15 lines** of injection for **Disc and Tube diffusers** . The annual export of MBBR and tube settlers is 100 000 cubic meters; the annual export of diffuser and PVC profiles is 5000tons. We have passed some certifications, as **ISO9001-2015, SGS, ROHS,FDA** standard Goods. Most of the production is vented to Canada, Mexico, Guatemala, Argentina, France, The Netherlands, Sweden, Italy, Taiwan China, etc. The annual sale is \$15 million.

We are committed to becoming a large-scale comprehensive enterprise, involved in MBBR filler production, sales, and water treatment design consulting. The Earator diffuser and MBBR technology widely used in Industrial and municipal wastewater treatment; recirculation aquaculture system(RAS), etc.other water treatment filed. We have professional environmental engineers of 20 years experience, cooperated with many domestic universities to ensure high quality while ensuring better service. We have been recognized and trusted by our customers, we insist on establishing a career with precision, winning with high quality, and treating each other with sincerity. We look forward to cooperating with you!



**Juntai Tube Settlers Highest Quality In China and Juntai offer Four Guarantees for the Quality**

## Juntai Factory Buildings

Juntai Smart Disc Diffuser



Juntai Diffusers High Quality and Guranatee



### Juntai Smart Diffuser Solutions

Customized design, pursuit of perfection and innovation

#### 1. Free Cost-Estimates & Designs

Juntai offer free cost estimates and evaluations without obligations to make sure that Juntai Disc diffuser is a perfect fit for every project.

#### 2. High Quality Aeration Diffuser Products

Juntai aeration systems are well known in the industry for their outstanding performance and quality, with a wide range of models available to meet your specific treatment requirements in a flexible manner.

#### 3. Quality and Innovation

Juntai has a tradition of providing superior quality products and lasting innovation. Everything from our diaphragms to our fittings and air distribution lines are subjected to rigorous quality testing. The R&D and design team will continue to innovate and develop more advanced aeration products according to market demand.

#### 4. Installation and Commissioning

A professional project management team ensures that each project is completed on time and with the highest quality. The installation and commissioning of each project is guided by an experienced engineer.

#### 5. After-sales support

Juntai's sales and technical teams are at your disposal when you need them and will continue to help you even after the project is completed.



## Juntai High Quality Diffuser membrane

1. Special **Manufacturing methods of EPDM membrane**, Juntai EPDM membrane was manufactured by EPDM mold with modern equipment utilizing individual thermocouples and vacuum technology ensures a repeated very high quality membrane.
2. Special **EPDM Formula** which make **lower plasticizer content**, and Juntai Diffuser membrane was made by EPDM Mold with a modern equipment utilizing individual thermocouples and vacuum technology ensures a repeated very high quality membrane. This kind of technology is very few used in China, just only used in a few USA high quality diffuser supplier. We are the first one company who use this technology for our EPDM membrane.
3. **Precision mechanical drilling tooling mold** make the Holes of the membrane uniform
4. **EPDM 8600n from EXXONMOBIL USA**



- **Membrane and the tooling**

- **Precision mechanical drilling tooling mold**

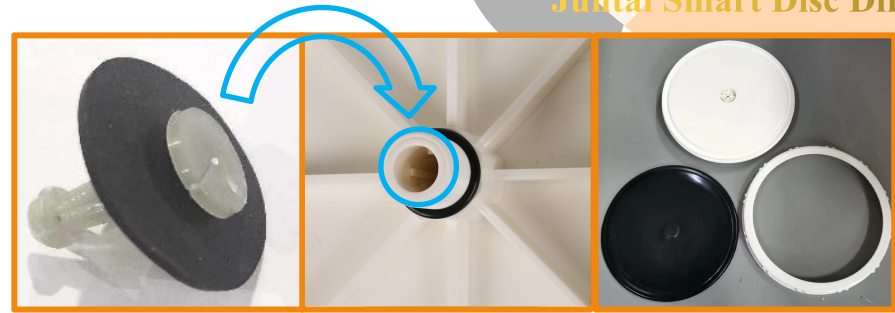


- **Holes of the membrane**

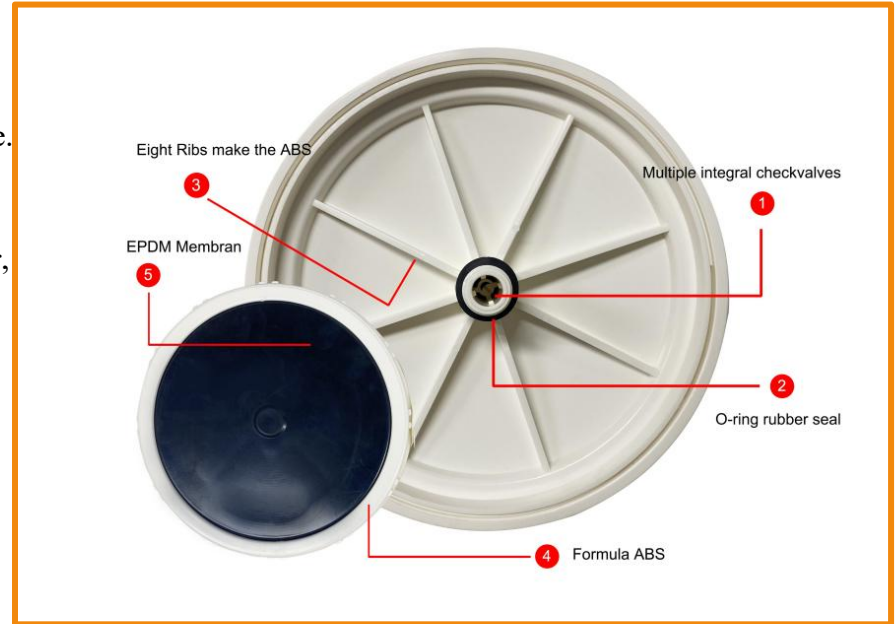
- **EPDM 8600n From EXXONMOBIL USA**

## Juntai Smart Disc Diffuser Structure

1. **Multiple integral check valves** keep your aeration piping system clean.( Membrane check **Valve A** and Structure check **valve B** together)
2. **High quality Juntai EPDM Membrane** can gurantee longer service life.
3. **Durable O-ring rubber seal**, high quality accessories, durable.
4. **Formula ABS Disc Support** which made by ABS with strength formula and UV protector. when install or recharge water, there are some sunlight throught water make the ABS plastic shorter life, Juntai Formula ABS can be volid such problem, and orange color is more durable that that of white. Juntai Disc support can be used for more than 15 years. If need, if the membrane is not good enough, we can just change the membrane is OK.
5. Eight Ribs make the ABS Support Sthrength enough for long service life of 5 to 10 years

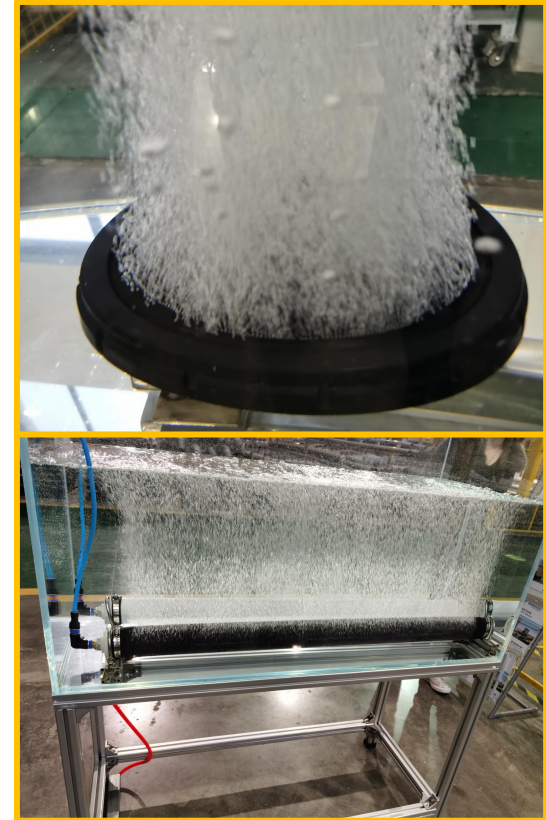


**Multiple Check Valves**



## Working Principle

- ① The membrane bulges and slits open during aeration by the pressure of compressed air. The support plate distributes the air evenly over the entire surface of the membrane. Air is spread into small bubbles, when released through the membrane.
- ② When the air flow is turned off, the pressure of the water above presses the membrane disc tightly to the support plate closing the small slits on the membrane. The non-return valve closes and makes sure that no water enters the pipeline.



## Juntai Smart Diffuser Specifications

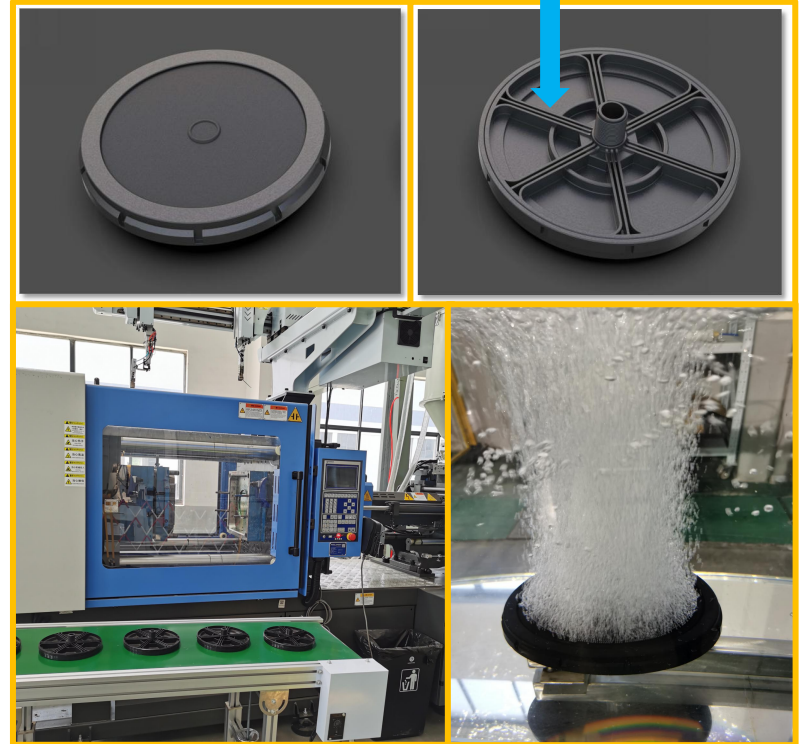
Item number	DD215	DD270	DD350
Disc diffuser Diameter(mm)	215	270	350
Membrane Material	EPDM 8600n from EXXONMOBIL USA		
Carrier Plate	Formula Strengthen ABS Material		
Connector	3/4" NPT Male thread		
Bubble size(mm)	1.0-2.0	1.0-2.0	1.0-2.0
Design Flow(m3/h)	1.5-2.5	3.0-4.0	5.0-6.0
Flow Range(m3/h)	1.0-5	1.5-8.0	2-12
Standard Oxygen Transfer Efficiency(6m submerged)	≥38%	≥38%	≥38%
Service Area(m2)	0.2-0.64	0.25-1.0	0.4-1.5
Service Life(years)	3 to 7	3 to 7	3 to 7
Number of perforations(Pcs)	4400	6600	11440
Thickness of membrane(mm)	2±0.1	2±0.1	2±0.1
Use of Temperature(°C)	0-80	0-80	0-80



## Juntai PLUS Diffuser Specifications

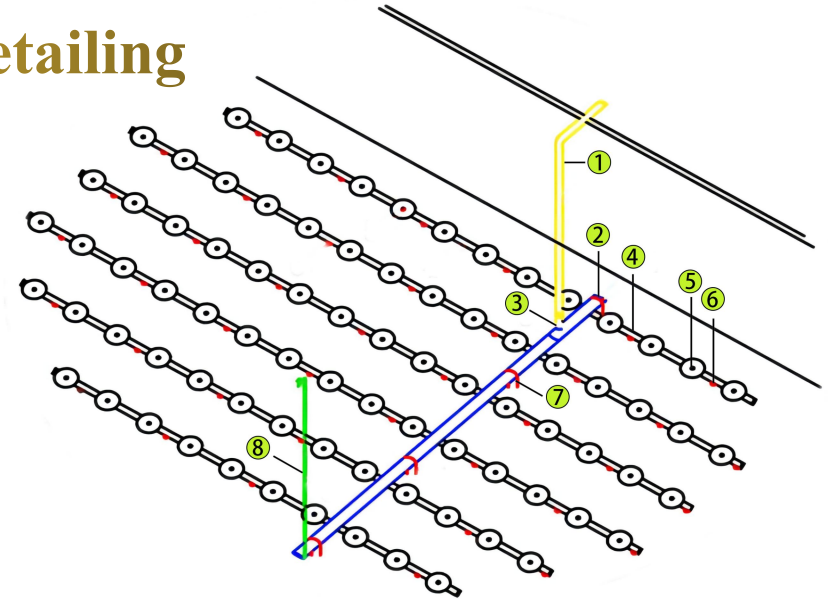
Item number	PDD215	PDD270	PDD350
Disc Diameter(mm)	215	270	350
Membrane Material	EPDM 8600n from EXXONMOBIL USA		
Carrier Plate	Formula Strengthen PP +fiberglass		
Connector	3/4" NPT Male thread		
Bubble size(mm)	1.0-2.0	1.0-2.0	1.0-2.0
Design Flow(m3/h)	1.5-4	1.5-7	5.0-6.0
Flow Range(m3/h)	1.0-5	1.5-8.0	2-12
Standard Oxygen Transfer Efficiency(6m submerged)	≥38%	≥38%	≥38%
Service Area(m2)	0.2-0.64	0.25-1.1	0.4-1.5
Service Life(years)	5 to 10	5 to 10	5 to 10
Number of perforations(Pcs)	4400	6600	11440
Thickness of membrane(mm)	2±0.1	2±0.1	2±0.1
Use of Temperature(°C)	0-80	0-80	0-80

Unique anti-vibration design



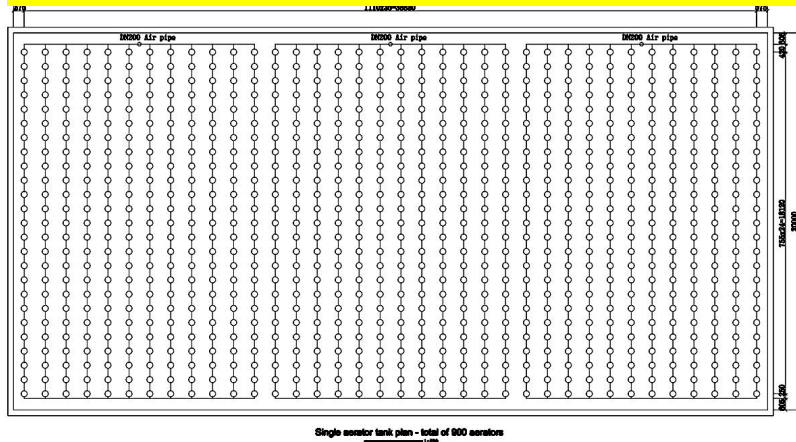
# Juntai Smart Disc Diffuser install Detailing

- ① Air riser for inlet
- ② Level supervisor to make the system stable
- ③ Junti pipe tee can connect lines.
- ④ Branch pipe for system
- ⑤ Aeration disc diffusers
- ⑥ Pipe support (ABS)
- ⑦ Pipe support (SS304)
- ⑧ Drain pipe for the tank



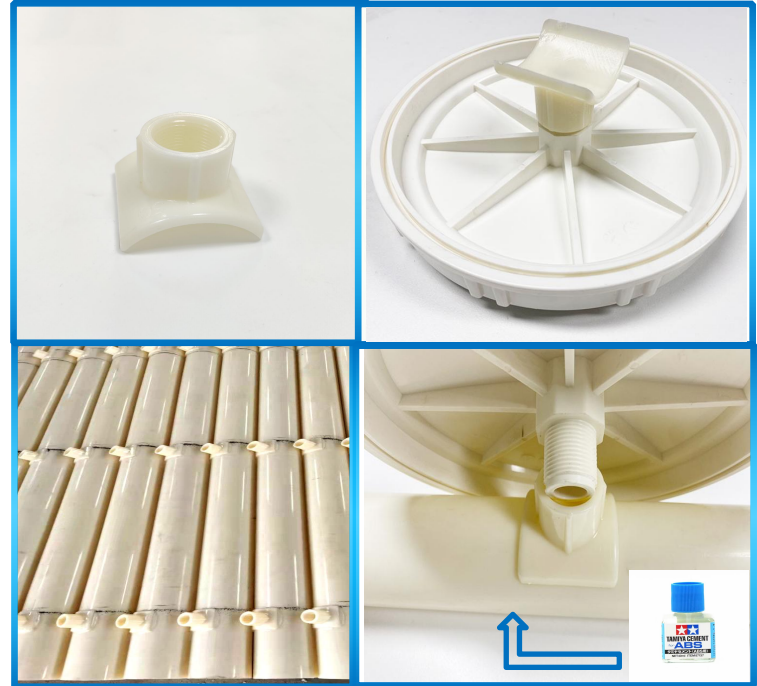
## Aerator Tank install design

- ① Juntai can offer the **design of the disc diffusers installation** if need and the quantity of disc diffusers that your projects need
- ② Juntai also offer **cost estimates and evaluations**
- ③ **Juntai can offer all the parts of the diffuser system**



## No. 1 Install Grommets Detailing

- ① Grommets are fixed by **Glue**.
- ② IF ABS Grommets match ABS pipes, must use **ABS glue**, if PVC Grommets match PVC pipes, must use **PVC glue**.
- ③ After Gules, the pipe and Grommets need stay for dry about **4 hours**.
- ④ Make holes about **6mm holes** on the pipe with through the Grommets **after the Grommets fixed**.
- ⑤ Multiple sizes are available on pipe wthickness for the Saddles.

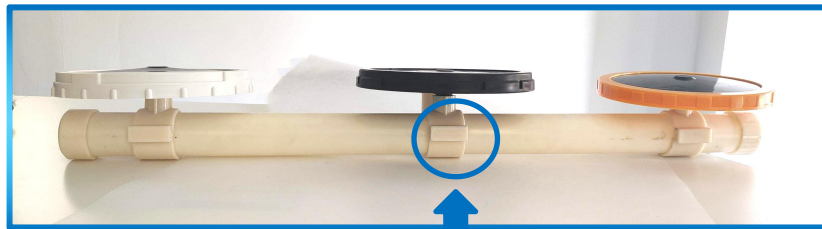


Glue

## No.2 Juntai Install Saddles

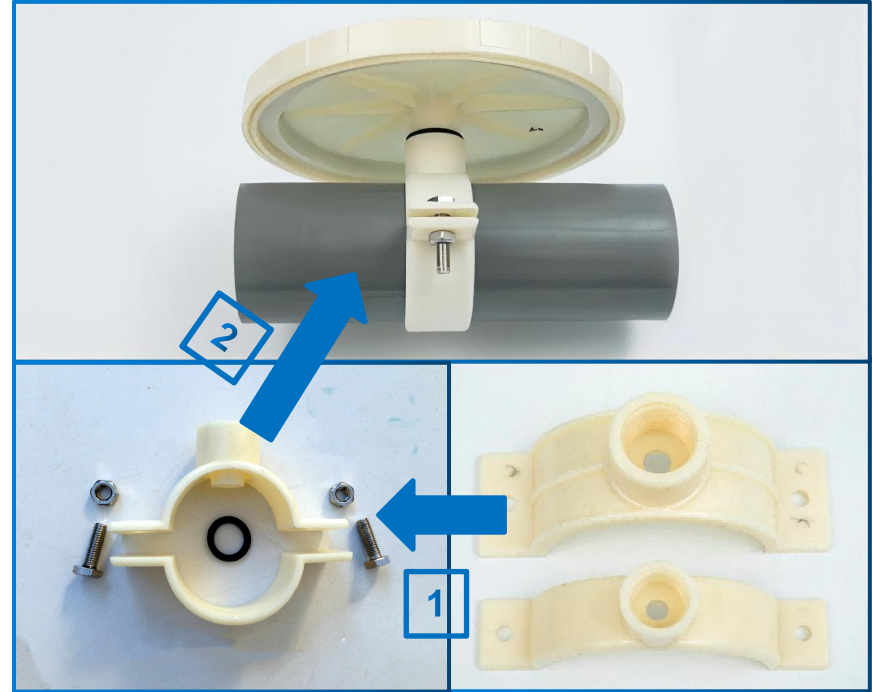
- ① Installation method: In actual operation, both sides are used for adjustment, no need to close, just fixed
- ② Must be screw fixed first, Than make pipe holes
- ③ The Nails size is :M6\*30
- ④ Multiple sizes are available on pipe wthickness for the Saddles.

**DN40,DN50,DN65,DN80 DN100**



## No.2 Install Conect SADDLES Detailing

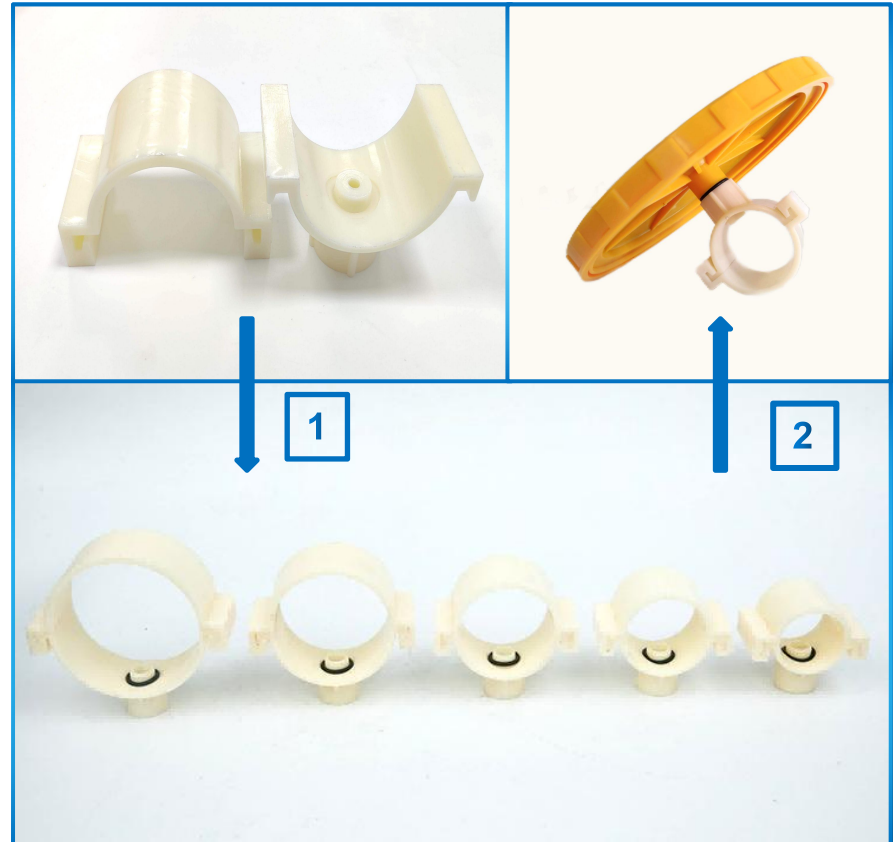
- ① Connect Saddles Mounth with **Nails** on both size, also **Rubble seal** ring in the start of the pipe make the system no leak at all.
- ② Saddles are made by **Formula Strengthen ABS**, and smart design and Thicker wall thickness of the mounth,make it fixed well
- ③ Install **into 6 mm** holes.
- ④ We just offer the plastic Connect Saddles without Nails, If you need nailes together, please inform us.



## No.3 Quick Connect SADDLES

- ① **Quick Connect** Saddles Mount on both sides
- ② Double Rubble seal ring in the start of the pipe make the system no leak at all.
- ③ Quick Connect Saddles are made by **Formula Strengthen ABS**, and install into 25.4mm holes.
- ④ This way install no need nails, no need glue, it can be used any kinds of Pipes.
- ⑤ Multiple sizes are available on pipe wthickness for the Saddles.
- ⑥ It can be used for the pipe size:

**DN40,DN50,DN65,DN80 DN100**

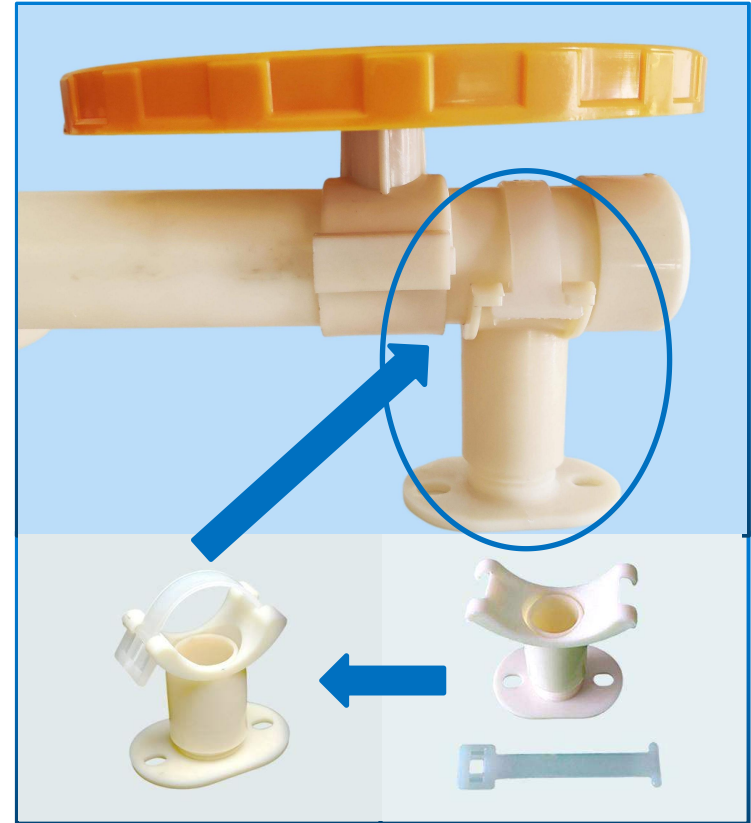


# Juntai ABS Support Stands

- ① Supports Stands are made by **Strengthen ABS Plastic** , In Juntai Aeration Piping systems, Support stands fullfill the dural role of Anchoring pipes to the floor and Controlling thermal Expansion and Contraction.
- ② **ABS Support stands** are primarily used with Disc diffsuers and plastic pipes, where a low capital costs is the primary abjective.
- ③ Parts Needed Quantity rate:  
**Disc Diffuser: connection: Support Stands= 1: 1: 0.6**
- ④ Multiple sizes are available on pipe wthickness for the Support Stand.

It can be used for the pipe size:

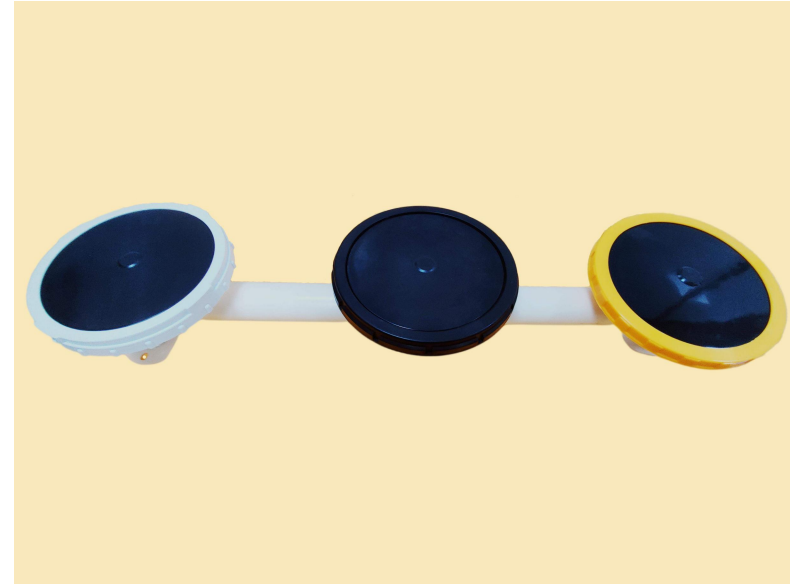
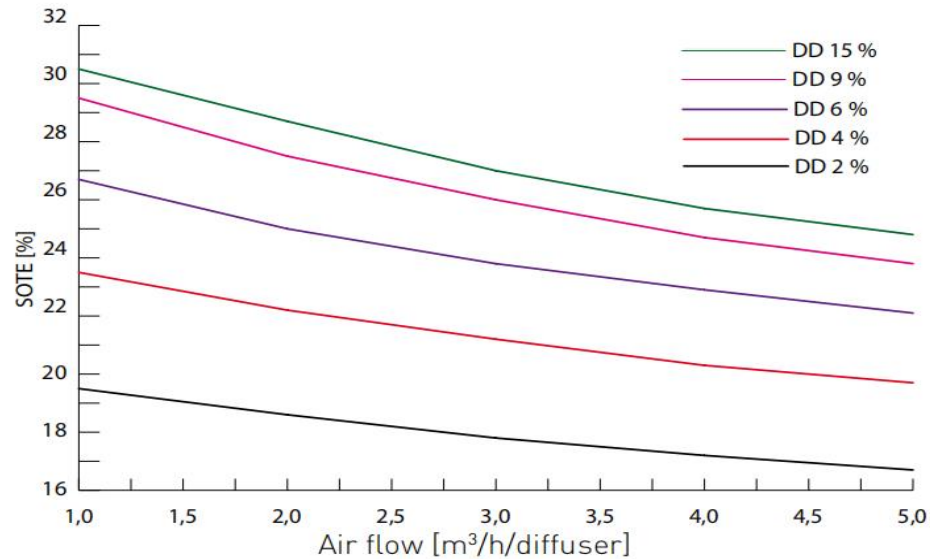
**DN40, DN50,DN65,DN80 DN100**



# Juntai DD270

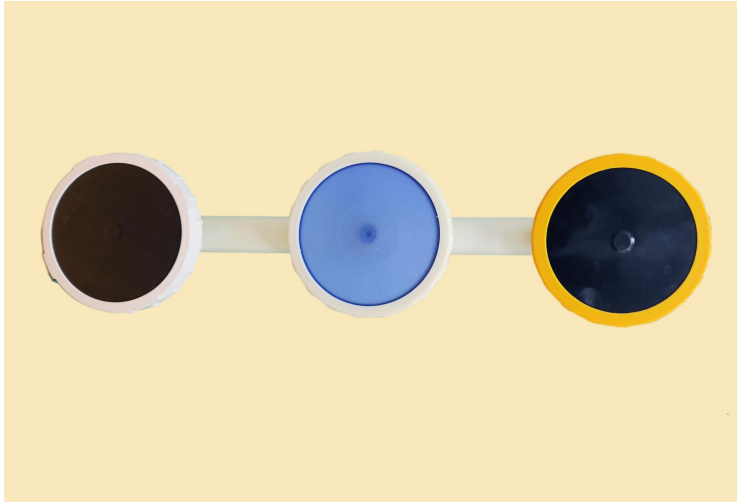
## Standard oxygen transfer Efficiency SOTE

Standard oxygen transfer efficiency, SOTE

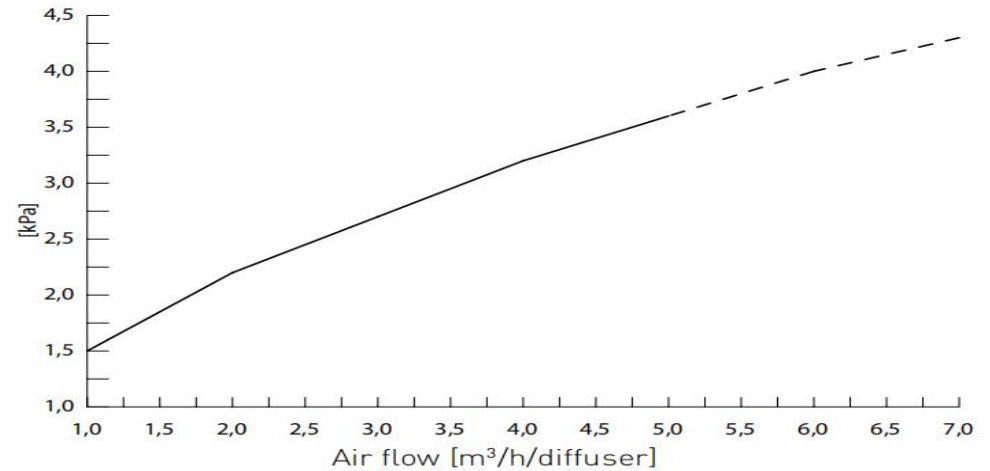


# Juntai DD270 Smart Disc Diffuser

## Wet Pressure Loss



Wet pressure loss



# Juntai Packaging

Juntai Package **Guarantee** you get each smart Disc membrane at **perfect performamce**

1 PC per Foam Pack

30PCS per Carton

18 cartons per Pallets  
(total 540 pcs /Pallet)



# Juntai Smart Disc Diffuser Application

- ① Aeration for SBR reaction basin, contact oxidation pond, and activated sludge aeration basin in sewage disposal plant;
- ② Aeration for denitrification / dephosphorization aerobic processes;
- ③ Aeration for excreta and animal wastewater treatment plant;
- ④ Aeration of deep aeration basin;
- ⑤ Aeration for high concentration wastewater aeration basin, and aeration for regulating pond of wastewater treatment plant;
- ⑥ Aeration of fishpond and other applications.

## Application Field



Sewage treatment



Printing and dyeing industry



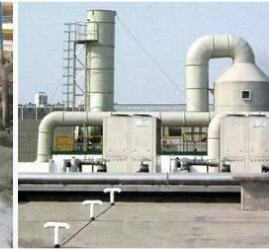
Food processing



Spray towers



Industrial effluent



Purification towers

# Juntai Smart Disc Diffuser Maintenance

Juntai recommends that the pressure loss of the aerators to be monitored and documented in plant records on a regular basis once the aeration system is put into operation so that an appropriate cleaning cycle can be established. The pressure loss should always be measured at a constant airfflow rate as it is directly proportional to airfflow rate. It is advisable to clean the aerators regularly and whenever the increase in pressure loss reaches 30 mbar. The pressure gauge can be a permanent or temporary installation but it has to be able to measure pressure between 0.1 - 0.8 bar to an accuracy of 1 mbar (for wastewater depth up to 6 m). Depending on the design of the aeration system, the aerators can be accessed by draining the aeration tank or lifting the aeration grid out of the aeration tank. If draining of the aeration tank takes more than one day, the minimum air flow to the system should be maintained during the draining of the aeration tank.



The following items may be helpful in servicing the aerators during maintenance:

- ① High-pressure hosing equipment.
- ② Ladder to access the aeration tank.
- ③ Protective gloves and clothing.
- ④ Long-handle bristle brush for cleaning aerators.
- ⑤ Special REHAU pliers and single-ear clamps (for pipe aerators).
- ⑥ Spare membranes.

# JUNTAI MBBR BIO MEDIA



MBBR37

Patent NO.:ZL2020  
30141332.8



MBBR19

Patent NO.:ZL2020  
30141332.8



MBBR61



MBBR64



MBBR08



MBBR05



MBBR06



MBBR04



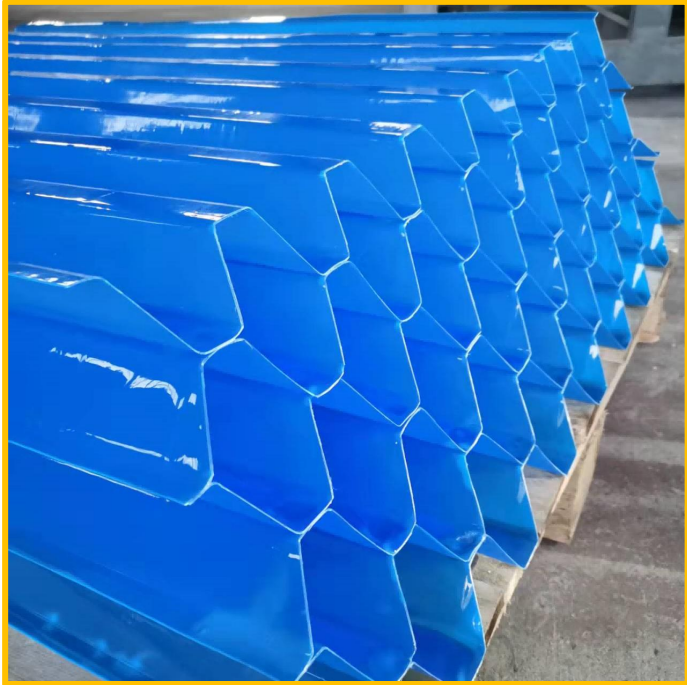
MBBR40



MBBR19-2

Juntai try to be the first and biggest supplier of MBBR media in China in two years with high speed production

## Juntai UV Tube Settlers



- ① High quality **UV protector**
- ② **100% virgin PP material**
- ③ Can arrived **FDA** and **NSF** standard
- ④ Serve for **5 to 10 years**
- ⑤ Installed by **welded ,no glue**
- ⑥ Simple install on site, save **transporting cost**
- ⑦ Health Material can for **Drink water**

## Juntai Main Water Treatment Plastic Parts

1. MBBR Media

2. Disc Diffuser

3. Tube Diffuser

4. Bio Block

5. Tube Settler

6. Air Blower

7. Aeration Tube

8. Dosing System

9. Sludge Dewatering Machine



MBBR



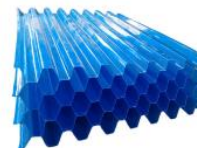
Disc Diffuser



Tube Diffuser



Bio Block



Tube Settler



Air Blower



Aeration Tube



Dosing System



Sludge Dewatering Machine

# Sludge Dewatering Machine





## Hangzhou Juntai Plastic Products Co.,Ltd

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