

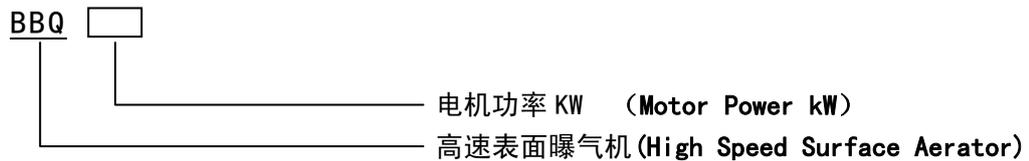
BBQ 型系列高速表面曝气机

BBQ Series High Speed Surface Aerator

一、概述 Summary

BBQ 系列高速表面曝气机是我公司在参照国外同类产品的基础上，自行研制开发的系列产品，经几代样机的试验，建立起先进的水力模型，并在污水处理厂投入使用，效果良好。高速表面曝气机主要用于工业废水及生活污水的生化法处理曝气池中，通过对污水进行充氧、搅拌，使水中好氧菌与氧气充分接触，从而达到快速、高效处理污水的目的。本产品也可以用于水产养殖等池中的充氧。

Our BBQ Series High Speed Surface Aerator is based on similar foreign equipment and developed within our own R&D facility. After several generations of improvement and optimization, we've developed our own advanced hydraulic model. The aerator has proved its quality and effectiveness in many wastewater treatment plants. It is best suited in the biochemical treatment of industrial wastewater. It can effectively mix and oxygenate the water, providing sufficient oxygen to aerobic bacteria. This product can also be used to oxygenate the water in aquaculture.



二、工作原理 Operating Principle

根据水力机械的设计原理进行设计，叶轮与电机直联，以获取高速旋转，将液体吸起后高抛，形成水幕。液体在飞行过程中与空气接触而溶氧，同时，被抛液体落下时撞击液面形成波浪，使水中含氧增加。叶轮在池内形成足够强的速度场以防止活性污泥的沉淀，兼备了搅拌功能。

The aerator is design based on hydraulic machinery. To achieve high RPM, the impeller is connected directly to the motor. Water is drawn in from the bottom and sprayed outwards, creating a curtain. During flight, water is oxygenated because of the large surface area. As the water drops down, splashes are created, providing further oxygenation. The impeller also creates enough movement of the water to prevent the sedimentation of active sludge.

三、结构及特点 Construction and Characteristics

BBQ 系列表面曝气机由电机、甩水盘、叶轮、浮筒、导流圆筒等主要部分组成(见图 1)，有如下特点：

The BBQ series surface aerator mainly consists of the motor, water swing plate, impeller, buoy and flow guide tube. It has the following characteristics.

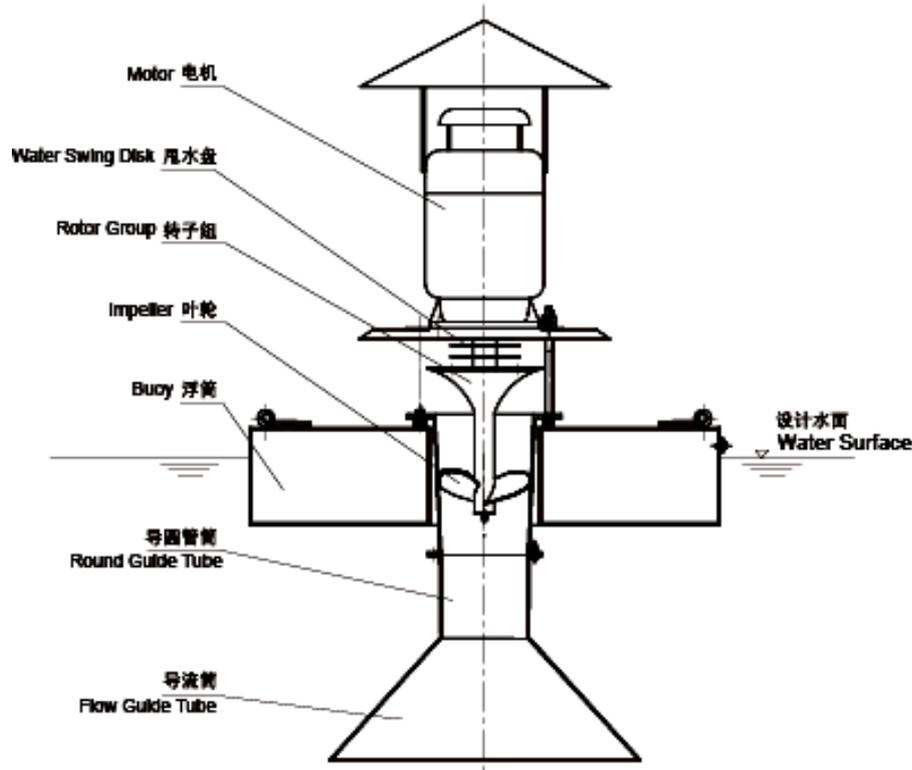


图1 BBQ型高速表面曝气机外形简图

Figure 1 BBQ Series High Speed Surface Aerator Outline Diagram

- 1、 先进的水力模型设计，使叶轮与介质间的比表面压力较低，有效地提高了动力效率。
- 2、 叶轮与电机直联，使叶轮保持高速旋转，从而获取足够的提升流量。液体在强大的动能作用下，抛撒距离远，形成水幕范围广，充氧量大。同时，液体在一定范围内呈现紊流场，兼备了搅拌功能。
- 3、 增加了多道甩水环、密封环等其它零件，阻止污水渗入电机，延长电机使用寿命。
- 4、 除电机外，本曝气机所有零部件均选用不锈钢，抗腐蚀性能强，能适应不同污水水质的处理要求。
- 5、 由于采用了漂浮式结构，曝气机与水面相对位置无需调节，无需安装基础，只用四根缆绳与岸边锚桩固定即可，适应各种曝气池型。
- 6、 与其他曝气机相比，本产品具有结构简单、重量轻、安装维修方便等特点。

1. Advanced hydraulic model is used to make the surface pressure ratio between the impeller and medium low, so effectively increasing the efficiency.

2. Impeller is directly connected to the motor. The high speed rotation ensures sufficient lifting power, creating a large water curtain. At the same time, the turbulence created provides the mixing function.

3. A number of water swing rings and seals were added to prevent water damage to the motor.

4. Except the motor, all components of the aerator are made of stainless steel. Therefore it is highly resistant to corrosion and can be used in the treatment of all kinds of wastewater.

5. Because of the use of the floating construction, there is no need to adjust the distance between the aerator and the water surface and no need for installation foundation, only four cables are required to secure the aerator. It can be used in aeration tank of all kinds of shapes.

6. Compared to other types of aerator, this one has the advantages of simple construction, light weight and easy maintenance.

四、规格及技术参数 Specifications and Technical Parameters

表1 BBQ 系列高速表面曝气机技术参数

Table 1 BBQ Series High Speed Surface Aerator Technical Parameters

型号 Model	叶轮直径 Impeller Diameter	电机功率 Motor Power	充氧量 Oxygenation Rate	流量 Flow Rate	最大混合深度 Maximum Mixing Depth	整机质量 Mass
	mm	kW	kgO ₂ /h	m ³ /h	m(max)	kg
BBQ6	φ 183	5.5	7.5	450	3.0	230
BBQ8	φ 200	7.5	10	600	3.5	290
BBQ15	φ 213	15	20	930	4.0	365
BBQ22	φ 300	22	29	1300	4.5	550

表2 曝气池尺寸(供参考用)

Table 2 Aeration Tank Dimensions

型号 Model	容积 Volume(m ³)	宽度 Width A (m)	最大深度 Maximum Depth H (m)
BBQ6	220—270	8—8.8	3.5
BBQ8	290—400	8.5—10	4.0
BBQ15	550—650	11—12	4.5
BBQ22	850—1100	13—15	5.0

说明:方形曝气池内不设柱子、池壁平整光滑为佳;长方形池子长宽应比小于 1.5。如设计圆形池,直径与方池宽度相同。

Note: There should not be any poles or other obstructions in square aeration tanks. The sidewalls are best flat and smooth; the length to width ratio for rectangular aeration tanks should be less than 1.5. If the tank is circular, then the diameter should be the same as square tanks.

五、安装及用户须知 Installation Guide

- 1、根据系统的需氧量选配本产品,并根据曝气池大小安装于适当的位置。
- 2、订货时用户应提供曝气池大小及安装位置,以便确定固定设备之用的缆绳长度和电缆长度。
- 3、如用于水产养殖池增氧,务必清理设备 3 米直径范围内的水草杂物,同时增设网拦,防止

养殖物受到伤害。

4、供货时本公司提供更为详细的安装、调试和维护说明及完善的技术服务。

1. The model should be determined based on the oxygenation requirement of the system. The installation location depends on the size of the tank.

2. When placing the order, the tank size and place of intended installation should be specified so the length of the fastening cable and electric cable can be determined.

3. If the aerator is used in aquaculture, weeds and other debris within a 1.5 meter radius must be cleared. Nets should also be set up to prevent the water product from getting caught in the aerator.

4. Upon delivery of the product, we will provide detailed information on installation, adjustment and maintenance as well as technical support.

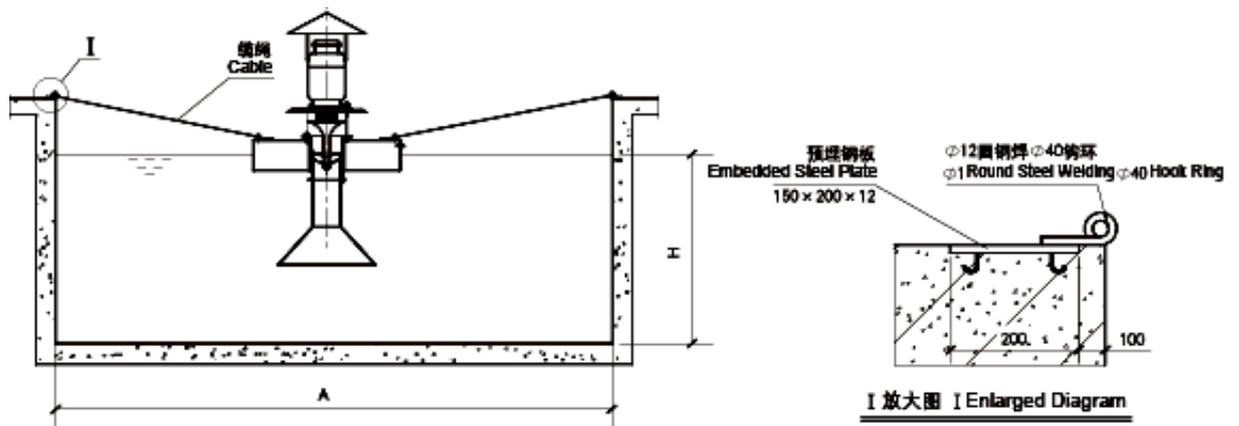


图2 BBQ型高速表面曝气机安装简图

Figure 2 BBQ Type High Speed Surface Aerator Installation Diagram