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# INTRODCTION

## 企业简介

南京艾德森水务有限公司，坐落于美丽的茉莉花故乡南京六合，这里区位优势、交通便捷，自然环境与人文底蕴相得益彰，为公司的发展提供了得天独厚的条件。

南京艾德森水务有限公司是蓝深集团控股企业，同时也是高新技术企业、科技型中小企业以及创新型中小企业。依托蓝深集团先进的管理模式、前沿技术及精良工艺装备，南京艾德森水务有限公司得以在发展中不断创新突破，迅速成长。

公司业务广泛，涵盖水资源专用机械设备、环境保护专用设备、泵及真空设备等的制造与销售，在市政公用工程、环保工程、水利工程施工领域也有着丰富经验，能够承接各类工程项目，为客户提供全方位的水务解决方案。同时，公司还提供环保技术咨询、水利相关咨询等专业服务，助力客户解决各类水务难题。

南京艾德森水务有限公司始终将技术创新作为发展的核心驱动力，公司目前已拥有多项专利及条软件著作权，这些成果见证了公司在技术研发上的不懈努力与卓越成就。公司连

续入选南京市瞪羚企业，在创新发展的道路上一路高歌猛进；公司荣获南京市知识产权示范企业和江苏省知识产权管理贯标绩效评价合格单位，进一步彰显了公司在知识产权管理和创新能力方面的突出表现。

公司产品多元化，潜水排污泵、潜水搅拌机、潜水轴流泵、污水处理设备，一体化预制泵站等产品凭借可靠的质量和稳定的性能，在市场上赢得了良好口碑，广泛应用于污水处理、水利工程、工业制造等多个行业领域，为保障水资源合理利用和生态环境改善发挥了重要作用。

秉持“以质量求生存，以诚信求发展，以服务创效益”的经营理念，南京艾德森水务有限公司将客户需求放在首位，注重产品质量与服务细节，致力于为客户提供优质、高效、专业的水务产品和服务。未来，南京艾德森水务有限公司将继续扎根水务领域，不断开拓创新，努力为推动行业发展和生态环境保护贡献更大的力量。

Nanjing Adison Water Co., Ltd. is located in Liuhe, Nanjing, the beautiful hometown of the folk song "Jasmine". With its superior location, convenient transportation, and the harmonious integration of natural environment and cultural heritage, it enjoys unique advantages for development.

Nanjing Adison Water Co., Ltd. is a holding company of Lanshen Group. It is also a high - tech enterprise, a technology - based small and medium - sized enterprise, and an innovative small and medium - sized enterprise. Relying on Lanshen Group's advanced management mode, cutting - edge technology, and sophisticated process equipment, Nanjing Adison Water Co., Ltd. has been able to innovate and break through continuously in its development and grow rapidly.

The company has a wide range of businesses, covering the manufacturing and sales of special machinery and equipment for water resources, special equipment for environmental protection, pumps and vacuum equipment, etc. It also has rich experience in the construction of municipal public works, environmental protection projects, and water conservancy projects. It can undertake various engineering projects and provide customers with comprehensive water - related solutions. At the same time, the company provides professional services such as environmental protection technical consultation and water - conservancy - related consultation to help customers solve various water - related problems.

Nanjing Adison Water Co., Ltd. always regards technological innovation as the core driving force for development. The company currently owns a number of patents and software copyrights, which are a testament to its unremitting efforts and outstanding achievements in technology research and development. The company has been continuously selected as a Gazelle Enterprise in Nanjing, making great progress on the path of innovative development. It has won the title of Nanjing Intellectual Property Demonstration Enterprise and has passed the performance evaluation of the Intellectual Property Management Standardization in Jiangsu Province, further demonstrating its outstanding performance in intellectual property management and innovation capabilities.

The company's products are diversified. Products such as submersible sewage pumps, submersible agitators , submersible axial - flow pumps, sewage treatment equipment, and integrated prefabricated pumping stations have won a good reputation in the market for their reliable quality and stable performance. They are widely used in many industries such as sewage treatment, water conservancy projects, and industrial manufacturing, playing an important role in ensuring the rational use of water resources and the improvement of the ecological environment.

Upholding the business philosophy of "Survive by Quality, Develop by Integrity, and Create Benefits through Service", Nanjing Adison Water Co., Ltd. puts customer needs first, pays attention to product quality and service details, and is committed to providing customers with high - quality, efficient, and professional water - related products and services. In the future, Nanjing Adison Water Co., Ltd. will continue to be rooted in the water - related field, keep exploring and innovating, and strive to make greater contributions to promoting the development of the industry and ecological environmental protection.

## Profile of Aidesen pumps





目 录
contents

QJB型潜水搅拌机 1-21
QJB Submersible Mixer

SQJB双曲面搅拌机 22-35
SQJB Hyperboloid Mixer

QJB-W 型回流泵 36-42
TYPE QJB-W circumfluence pump

搅拌机，水下推进器电控 43
Blender and submersible propeller electric control

JBJ型浆式搅拌机 44-45
JBJ Paddle type agitor

JBK型框式搅拌机 46-47
JBK type gate agitor

JBT型推进式搅拌机 48-49
JBT Propulsion type agitator

JBX旋流式搅拌机 50-51
JBX vortex type blender

F/HLJ型立式环流搅拌机 52-54
F/HLJ vertical circulating mixer

产品概述
Products overview

艾德森作为国内潜水搅拌器的领跑者，始终专注于潜水技术的研究与开发，发展至今已成为国内潜水行业的佼佼者。艾德森通过不断引进先进技术，大力推行科技创新。现已形成了混合搅拌和低速推流两大系列产品。在型式、结构、试验方法和产品标准上的创新，叶轮通过CFD优化设计，使得总体性能超过国外同类产品同期先进水平。潜水电机采用长江三峡用潜水排污泵的密封技术，大大提高了潜水搅拌机的可靠性。

作为该系列设备行业标准的起草和制定单位，艾德森持续投入开发和改造潜水搅拌机，精益求精。在国家863计划研究课题——城市污水处理成套设备研究中，艾德森承担了潜水搅拌机这一研究课题。现在开发生产的QJB型多功能旋流式潜水搅拌机，是我公司采用先进的计算机辅助设计，在原有潜水搅拌机业已成熟的技术基础上，结合数万例实际工程的运行业绩和成果反馈，从优化潜水搅拌机的搅拌效果考虑，就潜水搅拌机的叶片设计、性能设计、可靠性设计、移动式安装等关键核心技术进行的有序组合。采用全新的设计理念，从水力部件的工作效率和工作方法考虑，以实现搅拌机对搅拌介质的全方位、多角度、旋流往复式搅拌，完成搅拌介质的活性流动，使得搅拌效果更均匀、彻底和开放。完全打破原有潜水搅拌机的思维模式，提升了产品竞争力。

As the leader of the domestic diving agitator, Aidesen has always focused on the research and development of diving technology, and has become a leader in the domestic diving industry. Adelson vigorously promotes scientific and technological innovation by continuously introducing advanced technologies. Now, two series of products have been formed, namely mixing and stirring and low speed push flow. The innovation in type, structure, test method and product standard, and the optimized design of impeller by CFD, make the overall performance exceed the advanced level of similar foreign products in the same period. The submersible motor adopts the sealing technology of the submersible sewage pump used in the Three Gorges of the Yangtze River, which greatly improves the reliability of the submersible mixer.

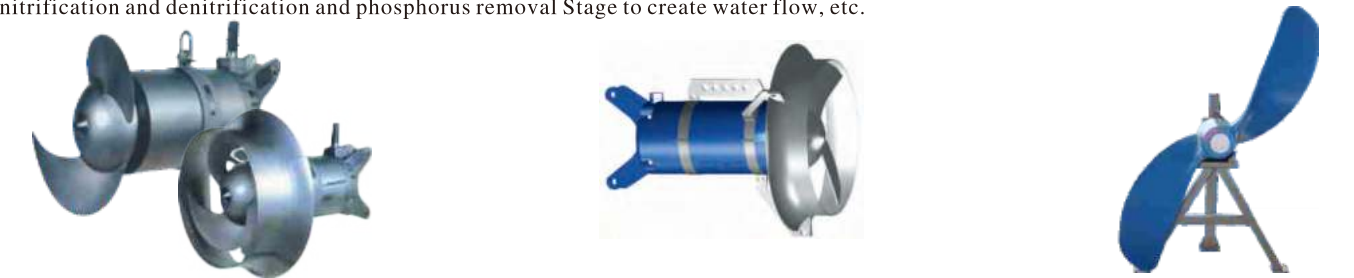
As the drafting and formulation unit of the industry standard for this series of equipment, Adelson has continued to invest in the development and transformation of submersible mixers and keep improving. In the research project of the National 863 Program – the research of complete sets of urban sewage treatment equipment, Adelson undertook the research project of submersible mixer. The QJB multi-function swirling submersible mixer developed and produced by our company is based on the mature technology of the original submersible mixer, combined with the operation performance and result feedback of tens of thousands of actual projects, and considering the optimization of the mixing effect of the submersible mixer, the blade design, performance design, reliability design The orderly combination of key core technologies such as mobile installation. Adopt a new design concept, considering the working efficiency and working method of hydraulic components, to realize the all-round, multi-angle, swirling and reciprocating mixing of the mixing medium by the mixer, complete the active flow of the mixing medium, and make the mixing effect more uniform, thorough and open. Completely break the original thinking mode of submersible mixer and improve the product competitiveness.

用途
use

高速混合系列QJB型多功能旋流式潜水搅拌机适用于污水处理厂平衡池、硝化/反硝化池、污泥处理和储存池，以及工业流程中搅拌含有悬浮物、固杂物的液体，防止沉淀。
低速推流系列QJB型多功能旋流式潜水搅拌机适用于工业和城市污水处理厂曝气池和厌氧池、大型硝化及反硝化池、圆盘式活性污泥处理池、消毒池及工业搅拌。其产生低切向开放式的强力水流，可轻易实现在大容积流体中产生水循环及硝化、脱氮和除磷阶段创建水流等。

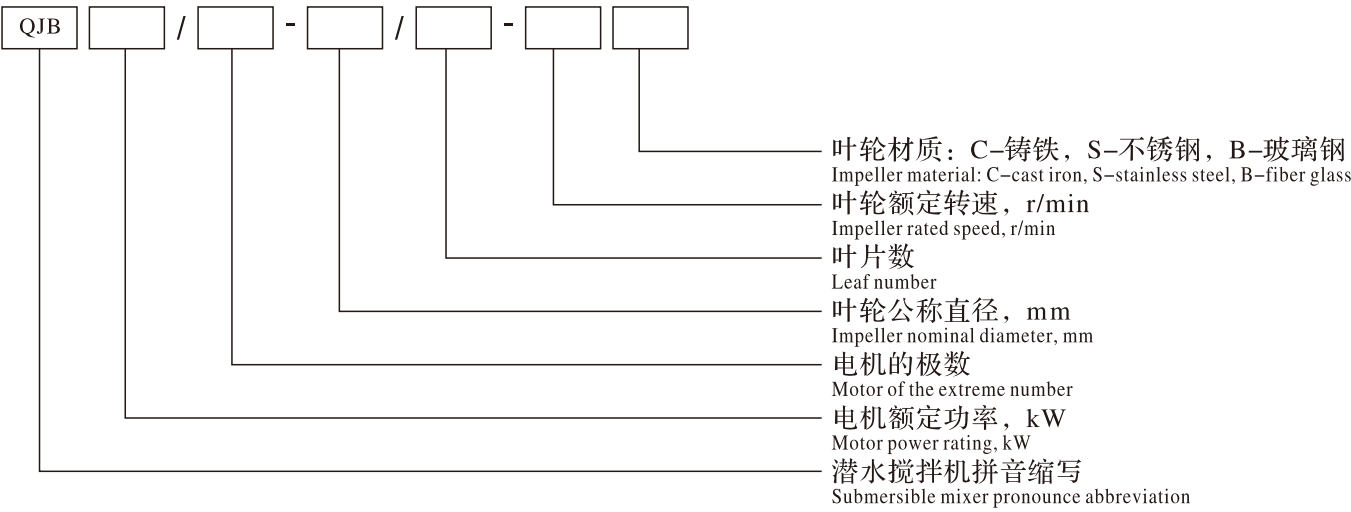
- QJB型多功能旋流式潜水搅拌机主要适用范围：
- 污水、废水、污泥水的混合、均匀
  - 稠化过程
  - 污泥脱水过程
  - 传热优化
  - 污水池清洁
  - 防止颗粒在池壁和池底的凝结和沉淀
  - 去除悬浮物
  - 防止结冰
  - 创建水流
  - 循环水等
- QJB type multi-functional swirling submersible mixer mainly suitable for:
- sewage and waste water and sludge water mixed and evenly
  - thick process
  - sludge dewatering process
  - heat transfer optimization
  - sewage pool clean
  - prevent particles in the wall and the bottom of the condensation and precipitation
  - Remove suspended
  - remove suspended solids
  - create water flow, etc
  - circulating water, etc

High-speed mixing series QJB type multi-functional spin streaming submersible mixer is applicable to the sewage treatment plant balance pool, nitrification/denitrification pool, sludge treatment and storage tank, and industrial processes Mixing contains suspended solids, solid sundry liquid, prevent precipitation.
Low-speed flow QJB type multi-functional series tyre spin streaming submersible mixer used in industrial and urban sewage treatment plants aeration pool and YanYangChi, large nitrification and denitrification pool, the disc type live Sex ChuLiChi sludge, disinfection and industrial mixing pool. Its produce low cut open water to strong, can be easily realized in a large volume of water cycle and fluid produced nitrification and denitrification and phosphorus removal Stage to create water flow, etc.





型号表示方法
Model said method



使用条件
Use conditions

- QJB型多功能旋流式潜水搅拌机在下列条件下可正常连续运行：
- 1、最高介质温度不超过40℃；
  - 2、介质的PH值在5~9之间；
  - 3、介质密度不超过1150kg/m³；
  - 4、长期潜水运行，潜水深度一般不超过20m。

- QJB type multi-functional swirling submersible mixer in the following conditions can be normal run continuously:
- 1.the highest temperature of the medium no more than 40 ℃;
  - 2.medium PH value in between five to nine;
  - 3.medium density of not more than 1150 kg/m³;
  - 4.the long-term diving operation, diving depth in general not more than 20 m.

特点
characteristics

- 1、QJB型多功能旋流式潜水搅拌机结构紧凑，体积小，重量轻，操作维护简单、安装检修方便、使用寿命长。
  - 2、叶轮具有最佳的水利设计结构、工作效率高，后掠式叶片具有自洁功能可防杂物缠绕、堵塞。
  - 3、与曝气系统配合使用可使能耗大幅度降低，充氧量明显提高，有效防止沉淀。
  - 4、独特的电缆密封设计，排除了电缆漏水的隐患。
  - 5、电机绕组为F级绝缘，防护等级为IP68，选用一次润滑免维护优质轴承，具有油室泄漏检测和电机绕组过热保护功能，使电机的工作更加安全可靠。
  - 6、两道独立的机械密封，机械密封的磨擦付材质为耐腐蚀的碳化钨，所有紧固件均为不锈钢材质。
  - 7、标准部件采用电解分离技术，可以有效防止腐蚀。
- 1.QJB type multi-functional spin streaming submersible mixer compact structure, small volume, light weight, easy operation and Maintenance, easy installation and maintenance and long service life.
- 2.Impeller water conservancy has the best design structure, high efficiency, sweptback blade with consecrated the mselves function can prevent sundry winding, jam.
- 3.and aeration system can be used together to reduce energy consumption, oxygen filling improved obviously, effectively prevent Precipitation.
- 4.unique cable seal design, ruled out cable slack hidden trouble.
- 5.motor winding for class F insulation, protection grade for IP68, choose a lubrication free maintenance high quality bearing, has the Oil leak detection room and motor winding overheating protection function, make electricity Machine work more safety and reliable.
- 6.Two way independent mechanical seal, mechanical seal of the friction material for corrosion resistance of pay and tungsten carbide All fasteners for stainless steel material.
- 7.Standard components are electrolytic separation technology, which can help to prevent corrosion.

结构简介
Structure introduction

QJB型多功能旋流式潜水搅拌机主要由设备主机、安装系统及电控设备组成。

QJB型多功能旋流式潜水搅拌机按其作用形式可分为混合型潜水搅拌机和低速推流型潜水搅拌机。混合型潜水搅拌机为直联冲压式潜水搅拌机。低速推流型潜水搅拌机属于非直联式潜水搅拌机。

混合系列QJB型多功能旋流式潜水搅拌机按其叶片成形方式又分为铸件搅拌机和冲压搅拌机。铸件搅拌机叶片（叶轮）为铸造成形，机体外壳材料为铸铁。冲压搅拌机叶片为冲压成形，机体外壳材料为不锈钢。

直联冲压式结构的潜水搅拌机采用多极电机，水力部件经冲压成型，精度好、效率高，叶轮有不同的叶片角度。采用水力平衡的无堵塞的拽后设计，结构紧凑，体积小、重量轻，操作维护简单、安装方便快捷，使用寿命长。壳体全部采用不锈钢制造，外形美观流畅。经国家环保局认定，是国内外潜水搅拌机中的首选产品。

混合型潜水搅拌机一般配制导流罩以增加轴向流动并减少径向流动，减少叶轮振动，增加运转的平稳性。而低速推流型潜水搅拌机不配制导流罩。

如图1所示，直联式潜水搅拌机主要由叶轮、潜水电机两大部分组成，叶轮直接装在电机轴上。

QJB type multi-functional swirling submersible mixer mainly by the equipment installation and the electric control system, the host of equipment.

QJB type multi-functional swirling submersible mixer according to their function forms can be divided into mixed submersible mixer and low speed push flow pattern submersible mixer. Mixed according to the structure characteristics of submersible mixer and points For straight league stamping type and the submersible mixer straight association-like submersible mixer. Low speed push flow pattern is a submersible mixer straight association-like submersible mixer.

Mix series QJB type multi-functional swirling submersible mixer blade way according to the forming and divided into casting mixer and stamping mixer. Casting mixer blade (impeller) for casting process, machine Body shell material generally for cast iron. Stamping mixer blade for stamping,The body shell material for stainless steel.

Straight league stamping type structure of the submersible mixer multipole motor, the hydraulic parts stamping forming, good accuracy, high efficiency, impeller blades have different Angle. The hydraulic balance No blocked after pulling design, compact structure, small volume, light weight, easy operation and maintenance, installation is convenient and fast, long service life. Cases all adopt the stainless steel manufacturing, appearance beautiful View fluent. Approved by the national environmental protection bureau that, at home and abroad in the submersible mixer is first selection product.

Mixed submersible mixer made to increase the general diversion cover axial flow and reduce the radial flow, reduce vibration, increase operationof the impeller smoothness. And low speed push flow pattern submersible mixer not preparation Diversion hood.

As shown in figure 1 shows, the straight association-like submersible mixer mainly by the impeller, submersible motors two main components, directly into the motor shaft impeller.

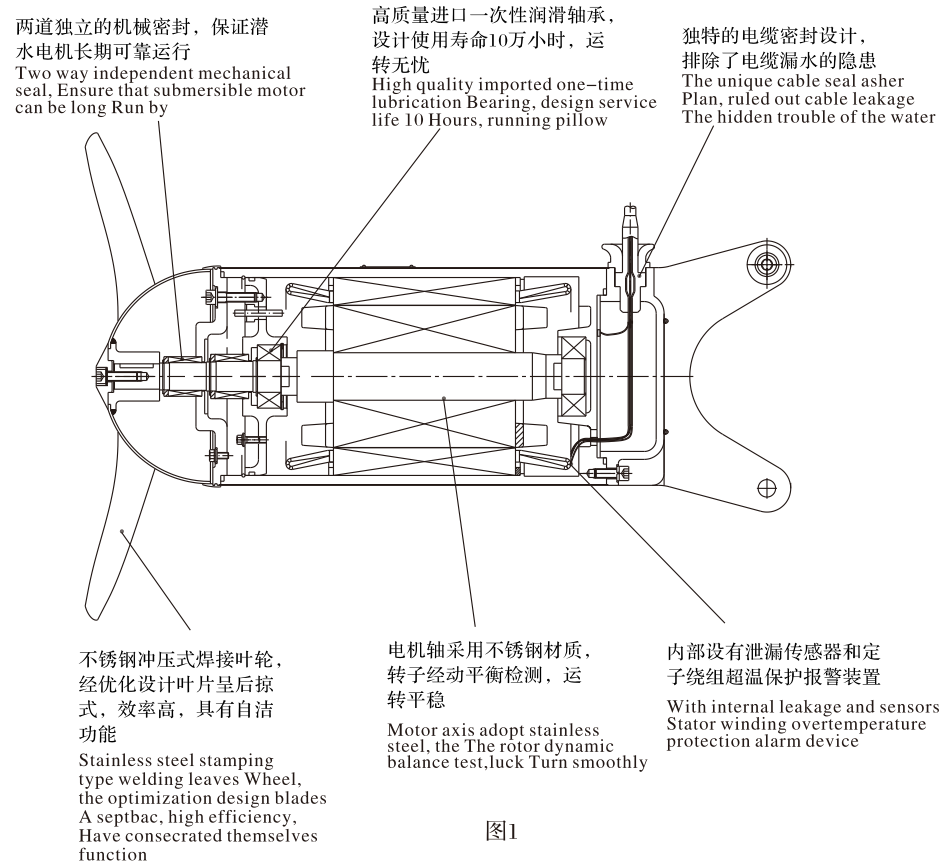


图1



通过不断的改革创新,艾德森水务生产的低速推流系列QJB型多功能旋流式潜水搅拌机在一次次升级改造中进行的优化组合,现在已形成由斜齿轮减速器的减速结构,和新一代玻璃钢整体叶轮相配合的广泛使用,其便捷的安装、稳定的运行、卓越的效能受到了用户的普遍好评和青睐,销量不断攀升。该减速结构具有齿轮采用优质合金钢渗碳、淬火、磨齿等精加工而成,速比准确、精度高、接触性好;输出扭矩及承载能力大、效率高、使用寿命长;便于安装、故障率低、运行稳定、维修方便;结构紧凑、体积小、重量轻;可靠性高、运行平稳、噪音低等特点。另外,采用的新一代整体式增强玻璃钢或聚氨酯叶轮均通过CFD软件优化设计,水力性能好,叶片宽而薄,重量轻、能耗低、效率高、推力大,能减小减速机的使用负荷,运行平稳,延长设备的使用寿命。可快速安装、拆卸,平衡性、匀质性好,可产生大体积流场,服务范围更广。其采用无堵塞设计,表面光滑呈后掠式。叶片具有自洁功能和“柔性”并能够吸收发生改变的水力负载,从而有利于创建出柔和的水流。由于叶片采用高强度的玻璃钢或聚氨酯材料,在污水介质中性能稳定,耐腐蚀,耐磨性好。而且耐酸、耐碱,抗氧化性好,韧性好、强度高、防水性能好,可以适应在各种类型的污水介质中使用。QJB型潜水推流器的问世一举打破了低速推流型潜水搅拌机应用领域由国外产品一统市场的局面。

如图2所示,采用分体式叶桨的QJB型潜水推流器根据叶桨数量的配置可分为二叶型和三叶型。在保障主机可靠性的前提下,选配高效率的减速装置。增加机型配置,提高输出功率,并使运行更加平稳;安装时采用法兰式叶桨定位,更加精确可靠。其中改型后的三叶型潜水推流器,在同等转速及叶桨直径条件下,推流能力提高30%以上,同时具备可靠性高、稳定性强的特点,为工程应用提供了更加丰富的选择。

QJBM型填料流化推流器是采用特殊的三叶不锈钢叶轮与优化的转速和功率配置,能满足表面附着生物膜的填料在水体中保持良好的流化悬浮状态,并防止填料受叶片的刚性撞击而造成的破损。流线型的筒形整体式不锈钢外壳,可使填料对机壳的磨损最小,水力效率达到最优化。在流线型机体内整合了新一代节能电机以及整装式高扭矩的高效齿轮减速机,整体动力方案节能、高效、长寿命。针对生物膜反应工艺专门设计的倾角(15°、23°、30°)可调式的安装动作机构,可满足现场推流器对生物反应池整体优良的流化运动效果,有效提高反应效率。

Through constant innovation, Aidesen Water production of low speed push flow QJB multi-function screw type series streaming submersible mixer in a meeting in upgrading the optimized combination, now In has formed by inclined gear reducer of the deceleration structure, and a new generation of glass fiber reinforced plastic integrated impeller the widespread use of combination, the convenient installation, stable operation, excellent performance by The user's universal praise and favour, increasing sales. The slowdown has gear adopts the high quality alloy steel structure carburizing, quenching and gear grinding and finishing and into, accurate, precision ratio High, contact the gender is good; The output torque and carrying capacity, high efficiency, long service life; Easy installation, low failure rate, stable operation, convenient maintenance; Compact structure, small volume, Light weight; High reliability, smooth operation, low noise characteristics. In addition, a new generation of integral of the glass steel or polyurethane impeller through the CFD software optimization design, hydraulic performance, leaf width and thin, light weight, low energy consumption, high efficiency, large thrust, load, speed reducer can reduce smooth operation, prolong the service life of equipment. The utility model has the advantages of quick installation and disassembly, good balance and good homogeneity, and can generate large volume flow field with wide service range. The use of non blocking design, smooth surface is swept. The blade has self-cleaning function and flexibility, and can absorb the change of hydraulic load, which is conducive to the creation of soft water. Due to the high strength of the glass fiber reinforced plastics or polyurethane materials, in the sewage medium stable performance, corrosion resistance, good wear resistance. Acid and alkali resistance, good oxidation resistance, good toughness, high strength, good waterproof performance, can be used in various types of wastewater medium. QJB type submersible propeller was breaking the low-speed plug flow diving mixer applications by foreign products dominate the market situation.

As shown in Figure 2, the split type paddle type QJB Submersible Propeller can be divided into two types and three types according to the number of blades. In the premise of ensuring the reliability of the host, the selection of highSpeed reducer. Increase the configuration of the machine, improve the output power, and make the operation more stable; the installation of the use of flange blade positioning, more accurate and reliable. The modified cloverUnder the condition of the same rotating speed and the diameter of the blade propeller, the push current capability is improved by more than 30%, and the utility model has the advantages of high reliability and strong stabilityRich choice.

The QJBM type packing fluidization pusher is a special stainless steel impeller with optimized speed and power configuration, which can meet the requirements of surface attached biofilm in the waterAnd the damage caused by the steel impact of the blade is prevented. Streamlined cylindrical integral stainless steel casing, can make the packing of the smallest wear, hydraulic effectRate optimization. The body in a streamlined integration of a new generation of energy-saving motor and self-contained, high torque gear reducer, the overall power scheme of energy saving and high efficiency, long life. In the light ofThe adjustable operating mechanism (15 degrees, 23 degrees, and 30 degrees), which is specially designed for the biofilm reaction process, can meet the effect of the flow field on the whole of the bioreactor,Effectively improve the reaction efficiency.

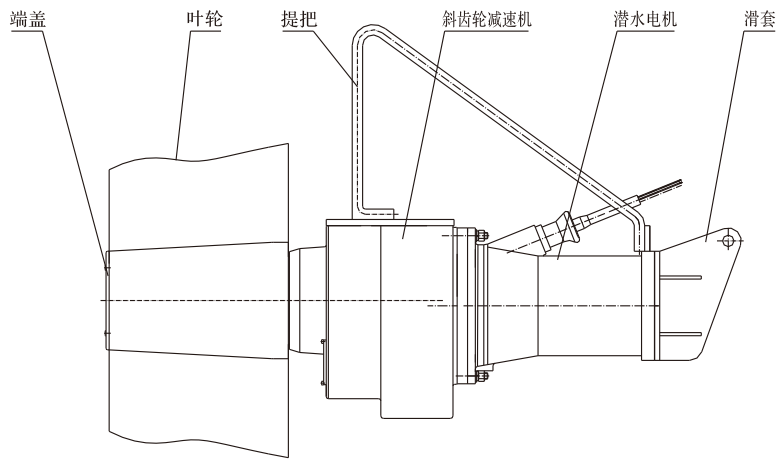


图2

## 选型注意事项

### Lectotype attention items

为保证取得最佳效果,请使用方提供以下资料:

- 1、运用目的;
- 2、池形;
- 3、池尺寸,包括水深;
- 4、介质特性:包括粘度、密度、温度、固体含量等。

搅拌机所需要的配套功率是根据容积大小、池型尺寸、搅拌液体的密度、粘度而确定的,根据具体情况采用一台或多台搅拌机。

**\*由于技术不断进步,艾德森水务保留修改设计的权利,选型时,请与艾德森水务技术工程部保持联系。**

**⚠ QJB型多功能旋流式潜水搅拌机必须完全潜入水中工作,不能在易燃易爆的环境下或有强腐蚀性液体的环境中工作!若用户有特殊使用要求,可与我公司技术工程部保持联系,为其提供最佳解决方案。**

To ensure that achieve the best effect, please use the party provide the following information:

- 1.use purpose;
- 2.pool form;
- 3.pool size, including water depth;
- 4.Media properties: including viscosity, density, temperature, solid content, etc.

Mixer need supporting power is based on volume size, pool size, mixing liquid type the density, viscosity and certain, according to the specific circumstances using one or multiple mixer.

**\* As technology advances, Aideshen group reserves the right to change design, selection, please and Aideshen group technology engineering keep in touch.**

**⚠ QJB type multi-functional swirling submersible mixer must be completely submerged, can't work in inflammable and explosive environment or have strong corrosive liquid environment, work!If you have special request, it can be used with my company technical engineering keep in touch, provide the best solution.**



## 性能参数

### Performance parameters

(电压: 380伏, 频率: 50赫兹):

表1 混合型多功能旋流式潜水搅拌机主要性能参数Table 1 the main performance parameters of the hybrid multi function Hydrocyclone

序号 N0.	型号 Model	电机功率 (kW) Motor power	额定电流 (A) Rated current	叶片转速 (r/min) Blade rotation speed	叶片直径 (mm) Blade diameter	轴向推力 (N) Axial thrust	重量 (kg) weight
1	QJB0.37/6-220/3-980 C/S	0.37	1.4	980	220	115	20
2	QJB0.55/6-220/3-980 C/S	0.55	1.7	980	220	140	20
3	QJB0.75/8-260/3-740 C/S	0.85	3.2	740	260	228	35
4	QJB1.5/6-260/3-980 C/S	1.5	3.9	980	260	406	35
5	QJB2.2/8-320/3-740 C/S*	2.2	5.9	740	320	815	110
6	QJB4/6-320/3-980 C/S*	4.0	9.6	980	320	853	115



性能参数

Performance parameters

（电压：380伏，频率：50赫兹）：  
表1 混合型多功能旋流式潜水搅拌机主要性能参数Table 1 the main performance parameters of the hybrid multi function Hydrocyclone

序号 N0.	型号 Model	电机功率 ( kW ) Motor power	额定电流 (A) Rated current	叶片转速 (r/min) Blade rotation speed	叶片直径 (mm) Blade diameter	轴向推力 (N) Axial thrust	重量 (kg) weight
7	QJB1.5/8-400/3-740/S	1.5	4.5	740	400	1176	70
8	QJB2.5/8-400/3-740/S	2.5	7.3	740	400	1120	70
9	QJB3/8-400/3-740/S	3.0	8.0	740	400	1190	70
10	QJB4/6-400/3-980/S	4.0	9.3	980	400	1540	73
11	QJB4/12-620/3-480/S	4.0	14.5	480	620	1680	184
12	QJB5/12-620/3-480/S	5.0	18.0	480	620	2520	184
13	QJB7.5/12-620/3-480/S	7.5	26.7	480	620	3640	229
14	QJB10/12-620/3-480/S	10.0	29.3	480	620	4060	229
15	QJB12/12-700/3-480/S	12.0	32.0	480	620	4340	250
16	QJB15/12-620/3-480/S	15.0	42.8	480	620	5880	305
17	QJB18.5/12-620/3-480/S	18.5	55.0	480	620	7420	315
18	QJB22/12-620/3-480/S	22.0	65.0	480	620	8540	335

注：型号后加\*号的为铸件搅拌机，其余为冲压搅拌机

（电压：380伏，频率：50赫兹）：  
表2 QJB二叶型推流型多功能旋流式潜水搅拌机主要性能参数Table 2 the main performance parameters of the QJB two vane type multi flow Hydrocyclone

序号 N0.	型号 Model	电机功率 ( kW ) Motor power	额定电流 (A) Rated currat	叶片数量 (set) Leaf number	叶片转速 (r/min) Blade rotation speed	叶片直径 (mm) Blade diameter	轴向推力 (N) Axial thrust	重量 (kg) weight
1	QJB1.5/4-1100/2-60	1.5	3.65	2	60	1100	950	150
2	QJB2.2/4-1100/2-80	2.2	5.05	2	80	1100	1220	160
3	QJB3/4-1100/2-100	3.0	6.64	2	100	1100	1650	160
4	QJB4/4-1100/2-130	4.0	8.62	2	130	1100	2010	165
5	QJB1.5/4-1400/2-43	1.5	3.65	2	43	1400	1300	150
6	QJB2.2/4-1400/2-50	2.2	5.05	2	50	1400	1580	160
7	QJB3/4-1400/2-65	3.0	6.64	2	65	1400	2100	160
8	QJB4/4-1400/2-75	4.0	8.62	2	75	1400	2380	172
9	QJB1.5/4-1600/2-39	1.5	3.65	2	39	1600	1510	155
10	QJB2.2/4-1600/2-43	2.2	5.05	2	43	1600	1670	165
11	QJB3/4-1600/2-51	3.0	6.64	2	51	1600	2230	165
12	QJB4/4-1600/2-62	4.0	8.62	2	62	1600	2540	170
13	QJB1.5/4-1800/2-34	1.5	3.65	2	34	1800	1620	190
14	QJB2.2/4-1800/2-39	2.2	5.05	2	39	1800	1850	200
15	QJB3/4-1800/2-44	3.0	6.64	2	44	1800	2310	200
16	QJB4/4-1800/2-52	4.0	8.62	2	52	1800	2760	280
17	QJB5.5/4-1800/2-62	5.5	11.7	2	62	1800	2920	280

性能参数

Performance parameters

（电压：380伏，频率：50赫兹）：  
表2 QJB二叶型推流型多功能旋流式潜水搅拌机主要性能参数Table 2 the main performance parameters of the QJB two vane type multi flow Hydrocyclone

18	QJB7.5/4-1800/2-7	7.5	15.9	2	70	1800	3010	280
19	QJB2.2/4-2200/2-30	2.2	5.05	2	30	2200	2050	210
20	QJB3/4-2200/2-34	3.0	6.64	2	34	2200	2534	210
21	QJB4/4-2200/2-38	4.0	8.62	2	38	2200	3250	280
22	QJB5.5/4-2200/2-43	5.5	11.7	2	43	2200	3840	290
23	QJB7.5/4-2200/2-52	7.5	15.9	2	52	2200	4010	295
24	QJB3/4-2500/2-29	3.0	6.64	2	29	2500	2680	220
25	QJB4/4-2500/2-33	4.0	8.62	2	33	2500	3670	290
26	QJB5.5/4-2500/2-39	5.5	11.7	2	39	2500	4080	290
27	QJB7.5/4-2500/2-43		15.9	2	43	2500	4520	300

（电压：380伏，频率：50赫兹）：  
表3 QJB三叶型推流型多功能旋流式潜水搅拌机主要性能参数Table 3 the main performance parameters of the QJB three - phase flow - type multi - function Hydrocyclone

序号 N0.	型号 Model	电机功率 ( kW ) Motor power	额定电流 (A) Rated currnt	叶片数量 (set) Leaf number	叶片转速 (r/min) Blade rotation speed	叶片直径 (mm) Blade diameter	轴向推力 (N) Axial thrust	重量 (kg) weight
1	QJB3/4-1100/3-52	3.0	6.64	3	52	1100	1585	205
2	QJB4/4-1100/3-62	4.0	8.62	3	62	1100	2240	210
3	QJB5.5/4-1100/3-80	5.5	11.7	3	80	1100	2640	220
4	QJB3/4-1400/3-43	3.0	6.64	3	43	1400	1930	210
5	QJB4/4-1400/3-52	4.0	8.62	3	52	1400	2390	215
6	QJB5.5/4-1400/3-62	5.5	11.7	3	62	1400	2850	225
7	QJB3/4-1600/3-38	3.0	6.64	3	38	1600	2180	215
8	QJB4/4-1600/3-43	4.0	8.62	3	43	1600	2690	220
9	QJB5.5/4-1600/3-52	5.5	11.7	3	52	1600	3080	230
10	QJB3/4-1800/3-34	3.0	6.64	3	34	1800	2360	220
11	QJB4/4-1800/3-38	4.0	8.62	3	38	1800	2670	225
12	QJB5.5/4-1800/3-43	5.5	11.7	3	43	1800	3360	235
13	QJB7.5/4-1800/3-52	7.5	15.9	3	52	1800	4050	240
14	QJB4/4-2200/3-33	4.0	8.62	3	33	2200	3440	320
15	QJB5.5/4-2200/3-38	5.5	11.7	3	38	2200	4350	330
16	QJB7.5/4-2200/3-43	7.5	15.9	3	43	2200	4860	350
17	QJB5.5/4-2500/3-33	5.5	11.7	3	33	2500	5400	350
18	QJB7.5/4-2500/3-38	7.5	15.9	3	38	2500	6200	360



性能参数
Performance parameters

( 电压：380伏，频率：50赫兹 )：

表4 QJBM型填料流化推流器主要性能参数Table 4 the main performance parameters of the QJBM type packing flow pusher

序号 NO.	型号 Model	电机功率 ( kW ) Motor power	额定电流 ( A ) Rated currøt	叶片数量 (set) Leaf number	叶片转速 (r/min) Blade rotation speed	叶片直径 (mm) Blade diameter	轴向推力 (N) Axial thrust	重量 (kg) weight
1	QJBM3/6-1080/3-100	3.0	7.8	3	100	1080	2240	190
2	QJBM4/6-1080/3-100	4.0	10	3	100	1080	2870	200
3	QJBM5.5/6-1080/3-122	5.5	13.3	3	122	1080	3690	215
4	QJBM7.5/6-1080/3-122	7.5	17.7	3	122	1080	4850	220

安装系统说明
Installation system that

安装潜水搅拌机可采用的安装技术多种多样。下面提供了其中最常用、最方便、最快捷的安装方式，该专用安装系统可在无需排出池中污水的情况下，能快速安装和拆卸潜水搅拌机。并且使用安全可靠。我们还可以提供其它安装方法的指导。

潜水搅拌机的潜水深度可以根据需要进行垂直方向的调节。吊架座、支撑架和下托架与池的联结均采用与预埋件焊接固定。客户订货时，请提供池深H，以便我公司加工时确定导杆尺寸及支撑架的数量。安装系统的材质采用不锈钢（或碳钢）制造。起吊装置除吊架座外，数台搅拌机可共用一套。为方便搅拌机安装及起吊，应在起吊位置的护栏上开活动门。

一般地每个规格搅拌机对应一种型式安装系统（见表5、表6），如用户有特殊需要，可另配其它型式安装系统。各型式安装系统其结构有所不同。

Installation submersible mixer can use the installation technology of DuoZhong varied. Provide one of the most commonly used below, the most convenient and the most convenient installation way, this special installation system can be in no The pool of sewage discharge to the case, can quickly install and remove the submersiblemixer. And use safe and reliable. We can also provide other method of installation guide.

The submersible mixer diving depth may, according to needs to adjust the vertical direction. Pylon seat, supporting frame and bracket and of the connection poolunder all use and embedment parts welding fixed. guest When ordering households, please provide pool H, so that I company deep processing sure guide bar size andthe number of supporting frame. Install the stainless steel material system (or carbon steel) manufacturing. Lifting up Except for a hanger outside, several machines mixer can use a set of. For the convenience of mixer installation and hoisting lift, should be in the open position on the fence door activities.

Generally each specification corresponds to a blender types installation system (see table 5, table 6), such as user with special needs, can match the other other typesinstallation system. Each type of installation All the different structure.

安装注意事项
Installation note

- 1、导杆应与水平面垂直，可采用铅垂校正；

2、起吊潜水搅拌机时，叶轮端较水平面应上仰2~5° ；

3、起吊中心和潜水搅拌机的起吊重心处于同一垂直线上；

4、导杆与支撑架应与池底预埋件焊接牢固。
1. guide bar should be vertical, horizontal and vertical adjustment can be used lead;

2. hoisting submersible mixer, a plane on the impeller should lift up2~5° ；

3. hoisting center and submersible mixer hoisting up focus on the same vertical line;

4.guide bar and supporting frame should be and bottom embedment parts welding firmly.

安装系统及尺寸
Installation system and size

安装系统根据搅拌机主机结构特点及设备安装运行需要分为安装系统Ⅰ、Ⅱ、Ⅲ、Ⅳ共四种型式。而安装系统Ⅰ又分为Ⅰ-2和Ⅰ-3两种型式。一般地每个规格搅拌机对应一种形式的安装系统，如用户有特殊需要，可另配其它型式安装系统。

The installation system is divided into installation system I and I according to the structural characteristics of the mixer host and the needs of equipment installation and operation There are four types of III and IV. The installation system I is divided into I-2 and I-3. Generally, each specification of mixer corresponds to one type of installation system. If the user has special needs, other types of installation system can be equipped.

安装系统Ⅰ
Installation system I

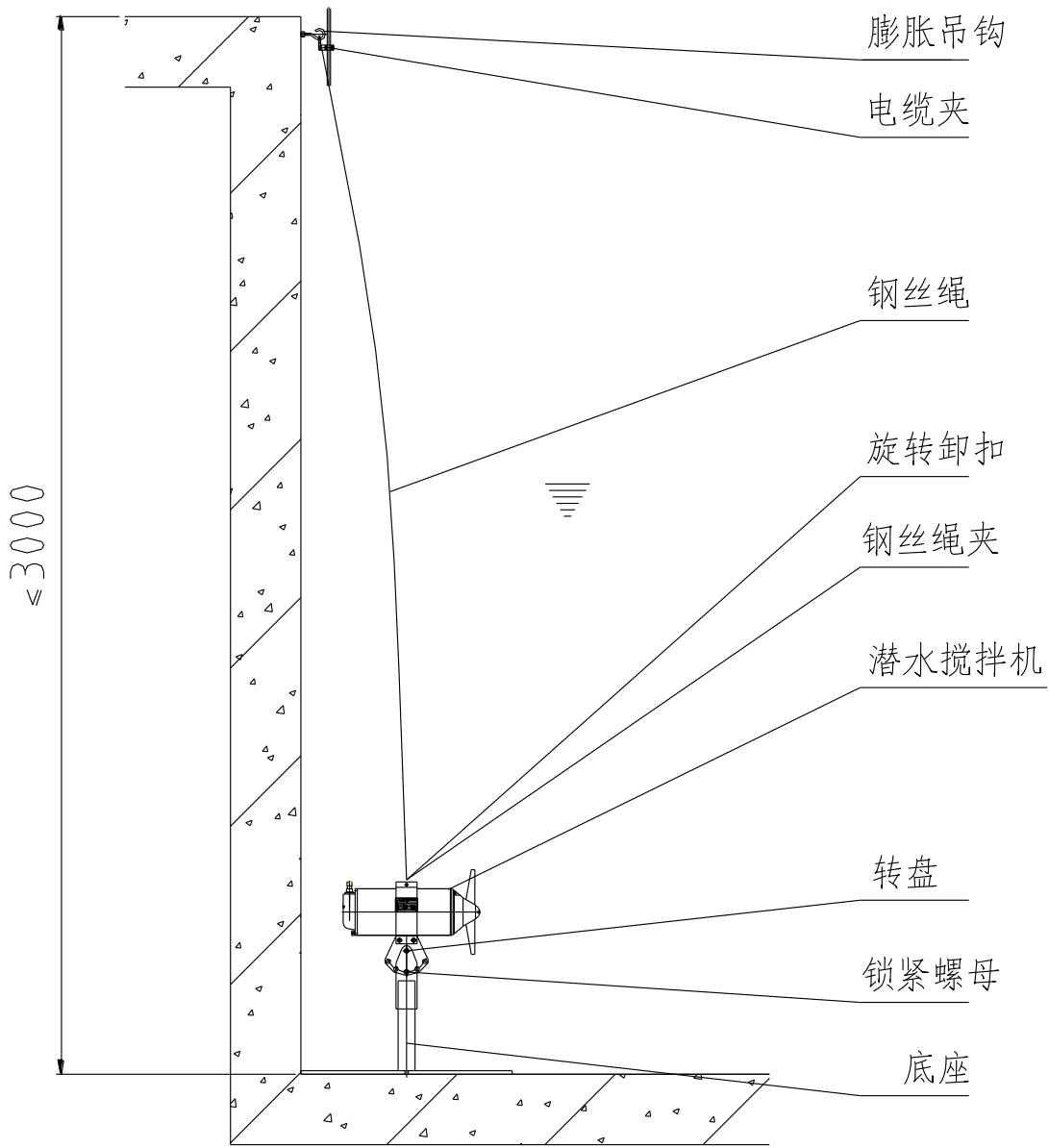


图4 Ⅰ-2型安装系统示意图
Figure 4 Ⅰ-type 2 installation system schemes

安装系统Ⅰ-2（本系统适用于QJB0.37/6-220/3-980、QJB0.55/6-220/3-980、QJB0.75/8-260/3-740、QJB1.5/6-260/3-980型潜水搅拌机）

如图4所示，安装系统Ⅰ-2，属移动式安装，主要由主机、转盘、底座等组成。底座与池底接触较好并紧靠池壁，可以在平面方向调整角度

Installation system I-2 (this system applies to QJB0.37/6-220/3-980, QJB0.55/6-220/3-980, QJB0.75/8-260/3-740, QJB1.5/6-260/3-980 type submersible mixer)

As shown in Figure 4, the installation system I-2, is a mobile installation, mainly by the host, turntable, base, etc.. The base has a good contact with the bottom of the tank and is close to the wall of the tank

安装系统 I  
Installation system I

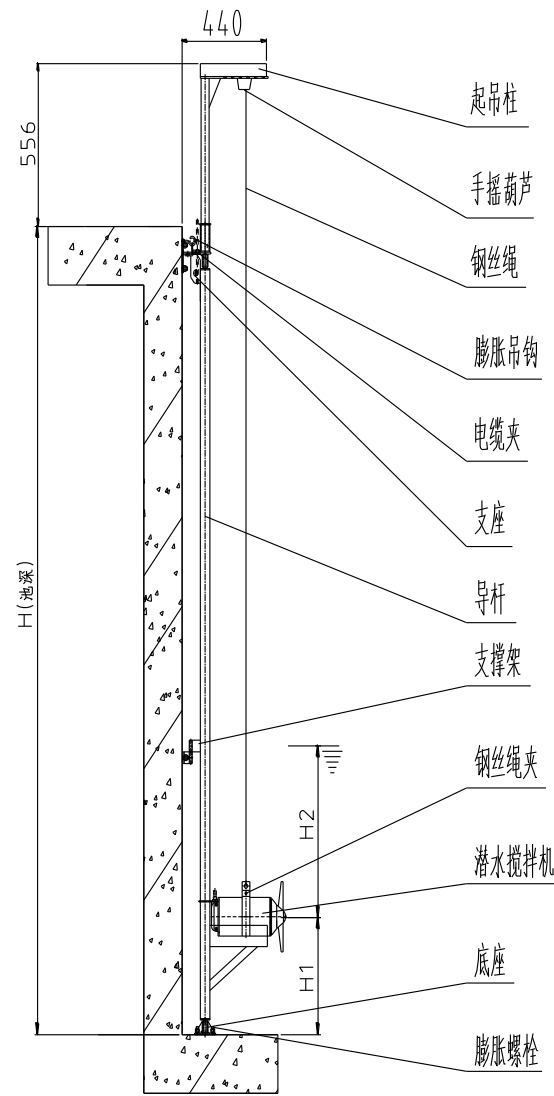


图5 I-3型安装系统示意图  
Figure 5 Schematic diagram of the I-3 mounting system

如图5所示，安装系统I-3主要由手摇葫芦、起吊架、起吊环链、吊钩、旋转卸扣、支座、导杆、中间支撑架（池深≤5米时无）、底座等组成。导杆通过焊接在本体上的铰轴定位于支座、中间支撑架、底座同心轴线上，并可在水平面内转动±60°，以适应不同方向搅拌或推流，消除水池中的死区，使水流处于最佳运行状态。潜水搅拌机通过导轮沿导杆上下移动；起吊架可安装在支座上并可绕其定位轴线旋转360°，以方便安装及维护。为增加潜水搅拌机运行时的可靠性，减缓潜水搅拌机运行中的振动，一般直接焊在导杆上。限位架焊接在导杆上可在出厂前焊接，也可在现场安装时焊接。如用户无特殊要求，一般在出厂前焊接

As shown in Figure 5, the I-3 system is mainly composed of the middle mounted hoist, lifting frame, a lifting chain, hook, shackle, rotary bearing, a guide rod, supporting frame (no less than 5 meters deep pool) and the base. The guide rod by welding a hinge shaft positioned on the body to support, a middle support frame, a concentric axis, and can rotate in the horizontal plane plus or minus 60 degrees, in order to adapt to the different direction of stirring or pushing flow, eliminates the dead zone, the flow of water in the best running state. The submersible mixer moves through the wheel up and down along the guide rod; the lifting frame can be installed on the pedestal and can rotate 360 DEG around its axis positioning, with convenient installation and maintenance. In order to increase the reliability of the operation of the submersible mixer and slow down the vibration in the running of the submersible mixer, the utility model is directly welded on the guide rod. The limiting frame is welded on the guide rod and can be welded before the factory, and can also be welded on site. If the user does not have special requirements, generally before the welding

安装系统 II  
Installation system II

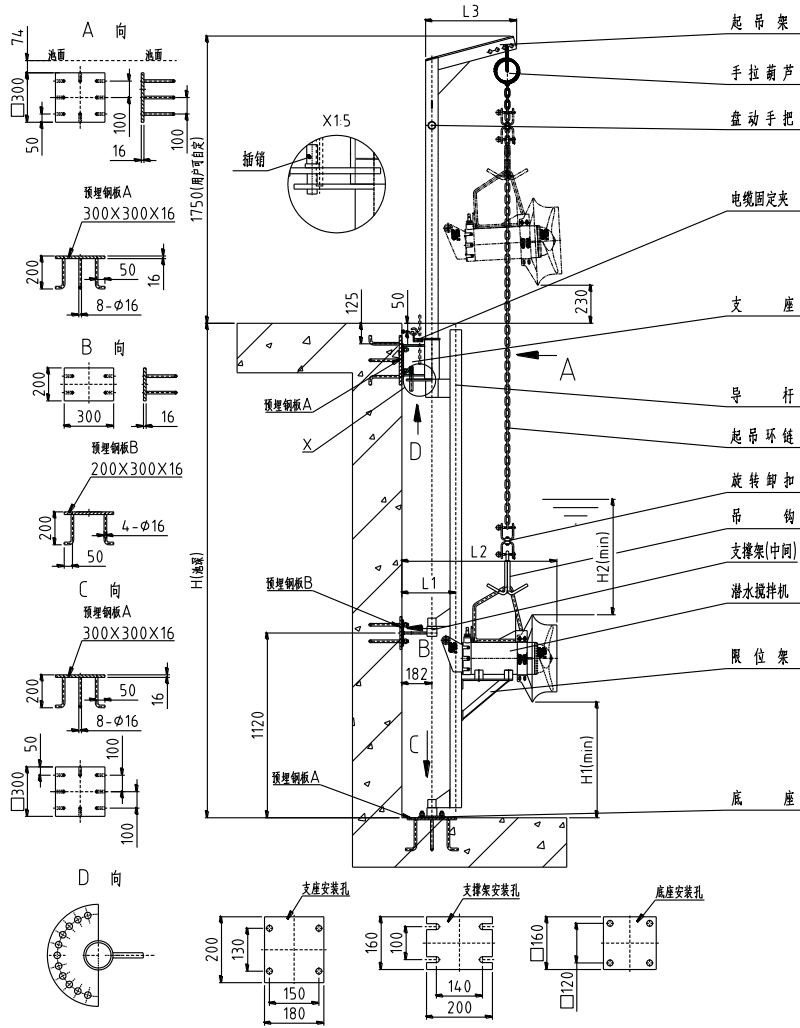


图6 II型安装系统示意图  
Fig. 6 schematic diagram of type

如图6所示，安装系统II主要由手拉葫芦、起吊架、起吊环链、吊钩、旋转卸扣、支座、导杆、中间支撑架（池深≤4.5米时无）、限位架、底座等组成。导杆通过焊接在本体上的铰轴定位于支座、中间支撑架、底座同心轴线上，并可在水平面内转动±60°，以适应不同方向搅拌或推流，消除水池中的死区，使水流处于最佳运行状态。潜水搅拌机通过导轮沿导杆上下移动；起吊架可安装在支座上并可绕其定位轴线旋转360°，以方便安装及维护。为增加潜水搅拌机运行时的可靠性，减缓潜水搅拌机运行中的振动，一般限位架直接焊在导杆上，并在潜水搅拌机与限位架间加设减震块。限位架焊接在导杆上可在出厂前焊接，也可在现场安装时焊接。如用户无特殊要求，一般在出厂前焊接。

该型安装系统常规安装为膨胀螺栓固定即可，也可采用预埋件安装形式，预埋件尺寸及位置按图布置

As shown in Figure 6, the installation system II mainly by hand chain hoist, lifting frame, lifting chain, hook, shackle, rotary bearing, a guide rod, a middle support frame (no less than or equal to 4.5 meters deep pool), limiting frame and the base. The guide rod by welding a hinge shaft positioned on the body to support, a middle support frame, a concentric axis, and can rotate in the horizontal plane plus or minus 60 degrees, in order to adapt to the different direction of stirring or pushing flow, eliminates the dead zone, the flow of water in the best running state. The submersible mixer moves through the wheel up and down along the guide rod; the lifting frame can be installed on the pedestal and can rotate 360 DEG around its axis positioning, with convenient installation and maintenance. In order to increase the reliability of the running of the submersible mixer and slow down the vibration in the running of the submersible mixer, the general limit frame is directly welded on the guide rod, and a damping block is arranged between the diving mixer and the limiting frame. The limiting frame is welded on the guide rod and can be welded before the factory, and can also be welded on site. If the user does not have special requirements, generally before the welding.

The conventional type mounting system for installation of the expansion bolts, also can use the installation form size and position according to the embedded embedded parts layout



安装系统Ⅲ  
Installation system Ⅲ

如图7所示，安装系统Ⅲ主要由手拉葫芦、起吊架、吊架座、起吊环链、吊钩、旋转卸扣、上支撑架、导杆、中间支撑架（池深 $\leq 4.5$ 米时无）、限位架、底座等组成。导杆通过焊接在本体上的铰轴定位于上支撑架、中间支撑架、底座同心轴线上，并可在水平面内转动 $\pm 60^\circ$ ，以适应不同方向搅拌或推流，消除水池中的死区，使水流处于最佳运行状态。潜水搅拌机通过导轮沿导杆上下移动；起吊架安装在吊架座上并可绕其定位轴线旋转 $360^\circ$ ，以方便安装及维护。为增加潜水搅拌机运行时的可靠性，减缓潜水搅拌机运行中的振动，一般限位架直接焊在导杆上，并在潜水搅拌机与限位架间加设减震块。限位架焊接在导杆上可在出厂前焊接，也可在现场安装时焊接。如用户无特殊要求，一般在出厂前焊接。

该型安装系统常规为与基础采用预埋钢板焊固的联接方式，预埋件尺寸及位置按图布置。

As shown in figure 7 shows, Ⅲ installation system mainly by the hand, and lifted the column, hanger seat, the rings chain, hooks, guide bar, brackets etc. Submersible mixer guide through the guide bar, move up and down within hanger Installation of the suspension seat around its axis positioning and can rotate for  $360^\circ$ , with convenient installation and maintenance. To increase the reliability of operation submersible mixer, slow down the operation of the submersible mixer, "vibration Frame side directly welded solid in guide stem, welding must ensure that bracket center line and guide bar center line, and in the same vertical plane within, submersible mixer and bracket adding damping piece of between. The installation All systems use with embedded parts welding way, do not use a fixed expansion bolt way.

安装系统Ⅳ  
Installation system Ⅳ

安装系统Ⅳ主要由手拉葫芦、起吊柱、吊架座、起吊环链、吊钩、旋转卸扣、导杆、托架等组成。潜水搅拌机通过导轮沿导杆上下移动，起吊架安装在吊架座上并可绕其定位轴线旋转 $360^\circ$ ，以方便安装及维护。为增加潜水搅拌机运行时的可靠性，减缓潜水搅拌机运行中的振动，托架侧面直接焊固在导杆上，焊接时必须保证托架中心线与导杆中心线垂直，并在同一平面内，潜水搅拌机与托架之间加设减震块。该安装系统全部采用与预埋件焊接方式固定，不采用膨胀螺栓固定方式。

根据池型结构的不同，该安装系统分为附壁式和桥架式两种安装方式。其安装图及预埋件布置分别如图8、图9、图10所示。

Ⅳ installation system mainly by the hand, and lifted the column, hanger seat, the rings chain, hooks, guide bar, brackets etc. Submersible mixer guide through the guide bar, move up and down within hanger Installation of the suspension seat around its axis positioning and can rotate for  $360^\circ$ , with convenient installation and maintenance. To increase the reliability of operation submersible mixer, slow down the operation of the submersible mixer, "vibration Frame side directly welded solid in guide stem, welding must ensure that bracket center line and guide bar center line, and in the same vertical plane within, submersible mixer and bracket adding damping piece of between. The installation All systems use with embedded parts welding way, do not use a fixed expansion bolt way.

According to the pool of the different structure type, the installation system is divided into general attached and bridge posture two installation. The installation drawing layout and embedment parts respectively, as shown in figure 8 figure 9, shown in figure 10.

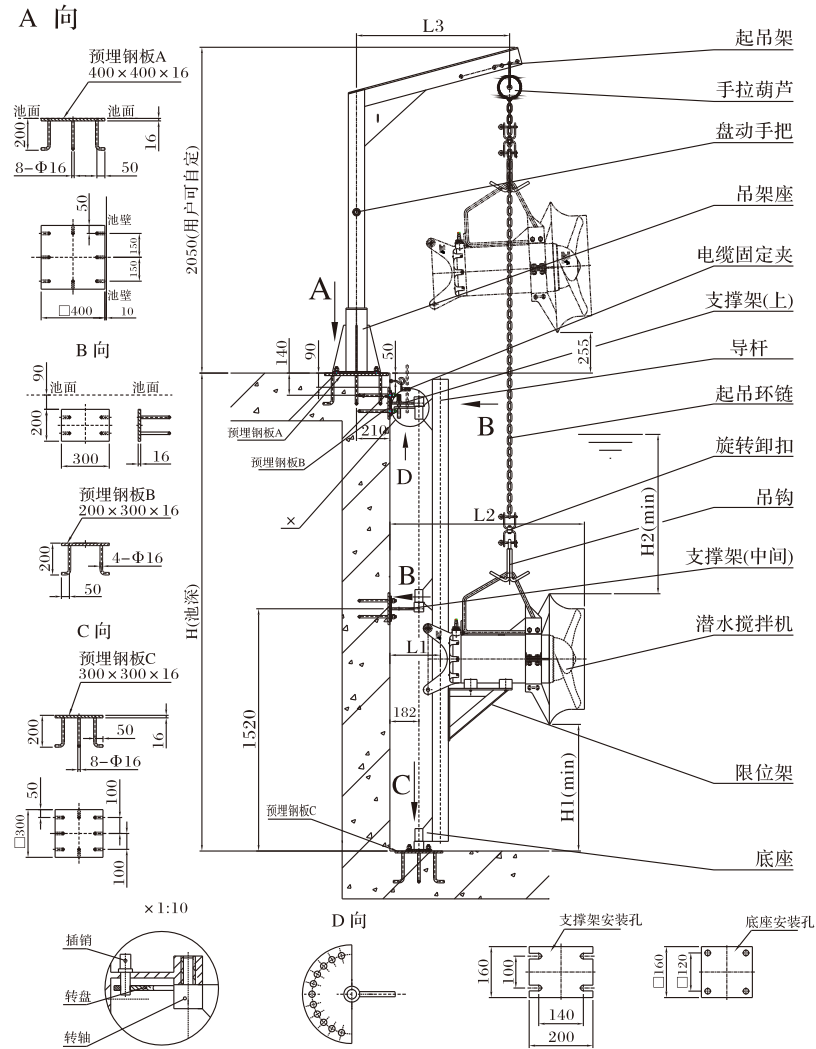


图7 Ⅲ型安装系统示意图  
Figure 7 Ⅲ type installation system schemes

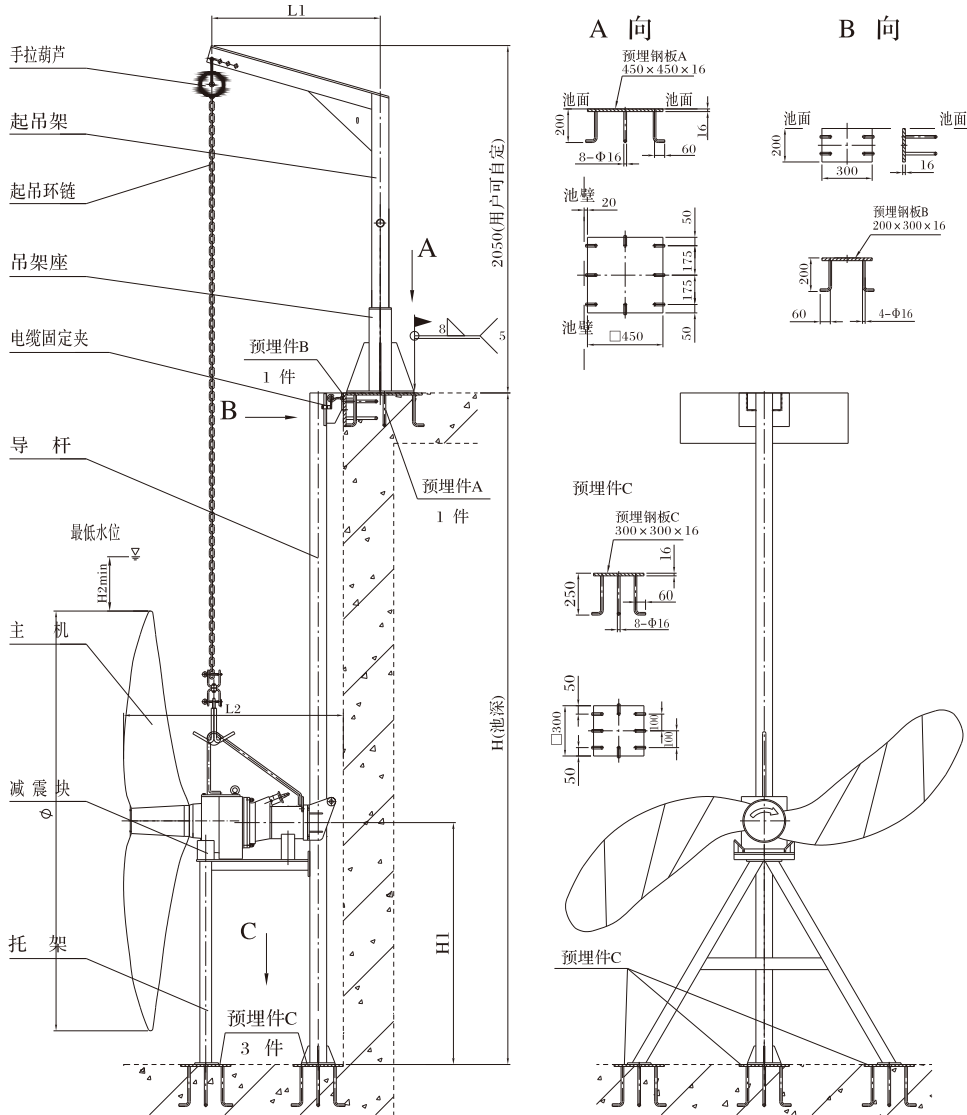


图8 附壁式安装示意图  
Figure 8 with wall installation schemes

## 安装系统Ⅳ

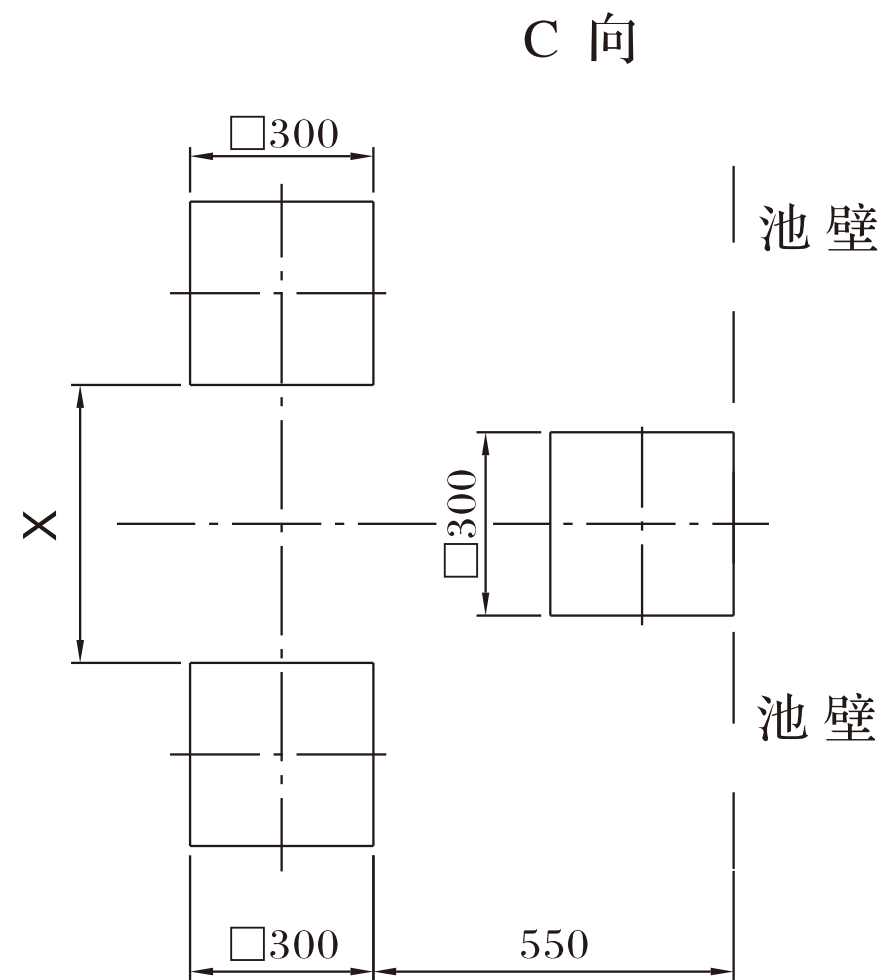


图9 附壁式安装预埋件布置图  
Figure 9 with wall installation embedded parts arrangement

## 安装系统Ⅳ

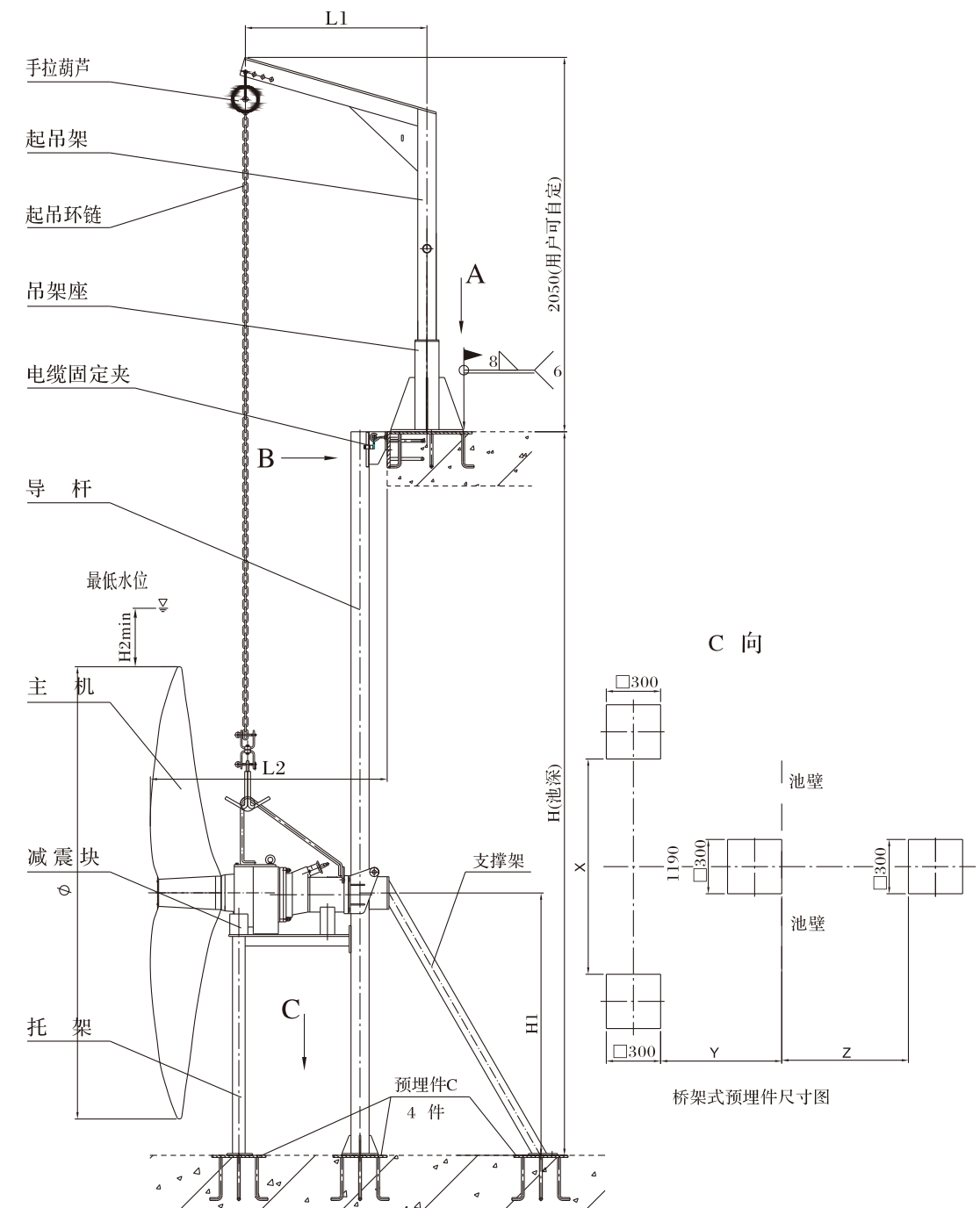


图10桥架式安装预埋件布置图  
Figure 10 bridge posture installation embedded parts arrangement



主要安装尺寸
Main installation size

表5 混合型多功能旋流式潜水搅拌机主要安装尺寸Table 5 the main installation dimensions of the hybrid multi – function Hydrocyclone

序号 N0.	型号 Model	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	配套安装系统 Supporting installation system
1	QJB0.37/6-220/3-980	280	400	/	/	/	I -3
2	QJB0.55/6-220/3-980	280	400	/	/	/	I -3
3	QJB0.75/8-260/3-740	480	500	/	/	/	I -3
4	QJB1.5/6-260/3-980	480	500	/	/	/	I -3
5	QJB2.2/8-320/3-740	700	600	317	900	550	II
6	QJB4/6-320/3-980	700	600	317	900	550	II
7	QJB1.5/8-400/3-740	700	700	317	940	550	II
8	QJB2.5/8-400/3-740	700	700	317	940	550	II
9	QJB3/8-400/3-740	700	700	317	940	550	II
10	QJB4/6-400/3-980	700	700	317	940	550	II
11	QJB4/12-620/3-480	800	1000	317	1175	1050	III -1
12	QJB5/12-620/3-480	800	1000	317	1175	1050	III -1
13	QJB7.5/12-620/3-480	800	1200	317	1250	1050	III -2
14	QJB10/12-620/3-480	800	1200	317	1250	1050	III -2
15	QJB12/12-700/3-480	800	1200	317	1250	1050	III -2
16	QJB15/12-620/3-480	800	1500	317	1650	1350	III -3
17	QJB18.5/12-620/3-480	800	1500	317	1650	1350	III -3
18	QJB22/12-620/3-480	800	1500	317	1650	1350	III -3

表6推流型多功能旋流式潜水搅拌机主要安装尺寸Table 6 the main installation dimensions of the multi flow Hydrocyclone

序号 N0.	型号 Model	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	配套安装系统 Supporting installation system
1	QJB1.5 ~ 4/4-1100/2 ~ 3	750	1000	840	1130	IV -1
2	QJB1.5 ~ 4/4-1400/2 ~ 3	900	900	940	1130	IV -2
3	QJB1.5 ~ 4/4-1600/2 ~ 3	1100	850	940	1130	IV -2
4	QJB1.5 ~ 5.5/4-1800/2-34	1100	850	940	1350	IV -3
5	QJB2.2 ~ 7.5/4-2200/2 ~ 3	1450	800	940	1350	IV -4
6	QJB3 ~ 7.5/4-2500/2 ~ 3	1450	800	940	1350	IV -4

表7推流型多功能旋流式潜水搅拌机IV型安装系统预埋件布置位置尺寸
Table 7 push flow multifunctional swirl type submersible mixer type installation of embedded parts location system size

序号 N0.	型号 Model	X (mm)	Y (mm)	Z (mm)桥架式
1	QJB1.5/4-1100/2 ~ 3	440	500	—
2	QJB2.2 ~ 4/4-1100/2 ~ 3	440	530	—
3	QJB1.5/4-1400/2 ~ 3	640	500	—
4	QJB2.2 ~ 4/4-1400/2 ~ 3	640	530	—
5	QJB1.5/4-1600/2 ~ 3	640	500	—
6	QJB2.2 ~ 4/4-1600/2 ~ 3	640	530	—
7	QJB1.5/4-1800/2 ~ 3	840	500	500
8	QJB2.2 ~ 5.5/4-1800/2 ~ 3	840	530	500
9	QJB2.2 ~ 7.5/4-2200/2 ~ 3	1190	670	700
10	QJB3 ~ 7.5/4-2500/2 ~ 3	1190	670	700

选型
selection

多功能旋流式潜水搅拌机的选型是非常重要的，选型方案的正确与否直接影响到设备的运行效果以及未来的运营成本。不同的池（罐）体或容器以及不同操作目的的搅拌过程需要什么样的流动场，需要提供给多大的能量以及不同规格的搅拌机能提供什么样的流动场、供给多大的能量。这些需要用户给予配合，为了选择恰当型号的潜水搅拌机，以达到最佳的效果，请用户提供如下资料，以便为您正确选型：

- 1、使用场合及目的； 2、池型； 3、池子尺寸：平面尺寸、池深、水深； 4、介质参数：密度、粘度、含固率、温度、PH值等； 5、是否配导流罩 6、其它要求。

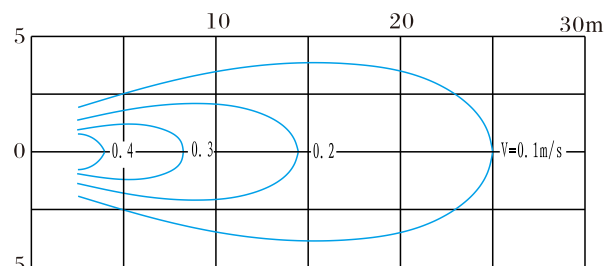
为了满足在不同环境下都能达到最佳的搅拌效果，我公司提供了两个系列近四十种不同型号的多功能旋流式潜水搅拌机，并对各个规格的潜水搅拌机进行了推力和流场测定。我公司可为用户提供选型，用户也可自行参考我公司出具的流场图进行选型。

Multi-functional swirling submersible mixer selection is very important, and the selection plan of correct or not directly affects the operation of equipment effect and operation cost of the future. different Pool (pot) body or containers as well as different operation purpose of the mixing process need what kind of flow field, the need to provide to DuoDa energy, and various specifications of mixer can provide what kind Flow field, the energy supply DuoDa. The need to cooperate with customers, in order to choose appropriate type of submersible mixer, in order to achieve the best effect, please provide the following information, user For you to correct selection:

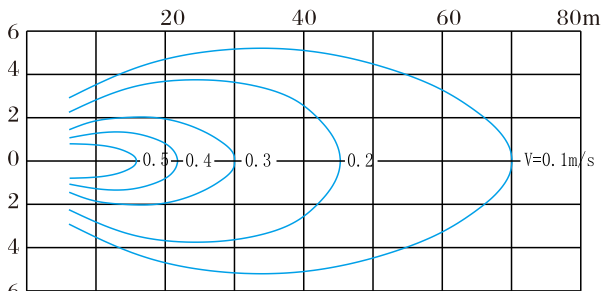
- 1.the usage situation and purpose; 2.pool type; 3.pool size: plane size, deep pool, water depth; 4.medium parameters: the density, viscosity, including solid rate, temperature, PH value, etc.; 5.deserve to diversion hood 6.and other requirements.

In order to meet in different environment can achieve optimal mixing effect, my company provides a series of two nearly 40 different types of multi-function screw streaming submersible mixer, and right Various specifications of submersible mixer thrust and the flow field measurement. Our company can provide users with selection, users can also be issued by the company to reference I flow chart for selection.

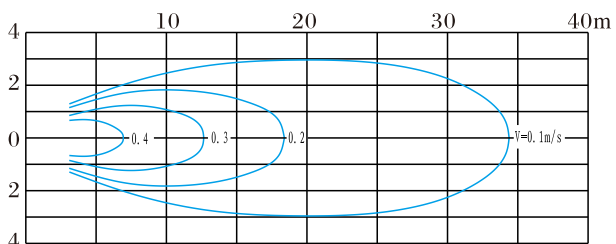
潜水搅拌机流场图
Submersible mixer flow field figure



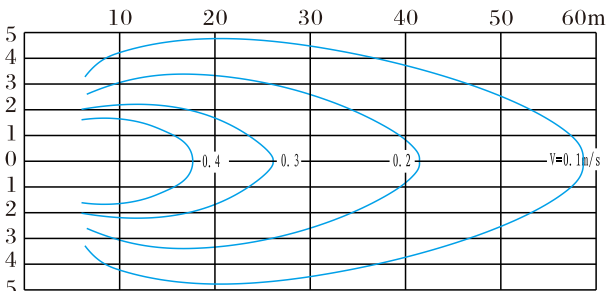
QJB0.85/8-260/3-740、QJB1.5/6-260/3-980、QJB1.5/8-400/3-740



QJB4/12-620/3-480、QJB5/12-620/3-480

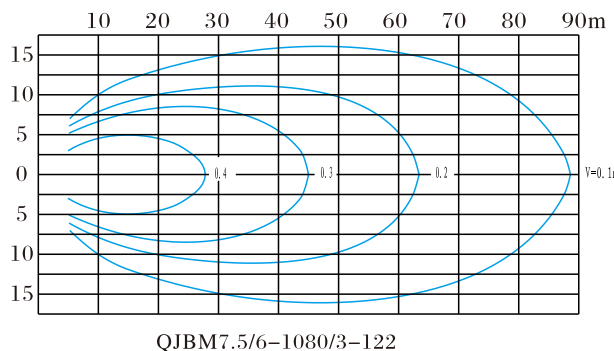
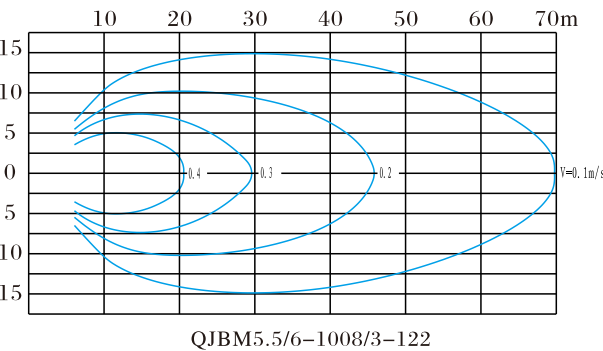
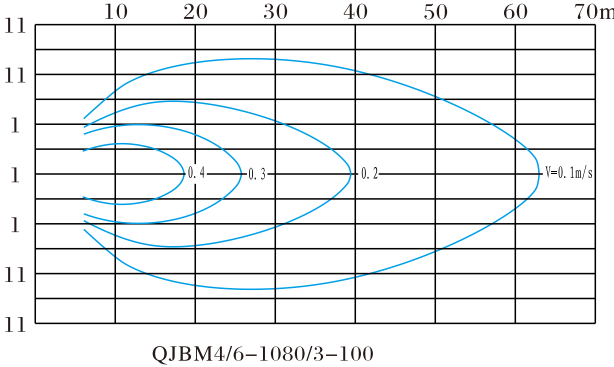
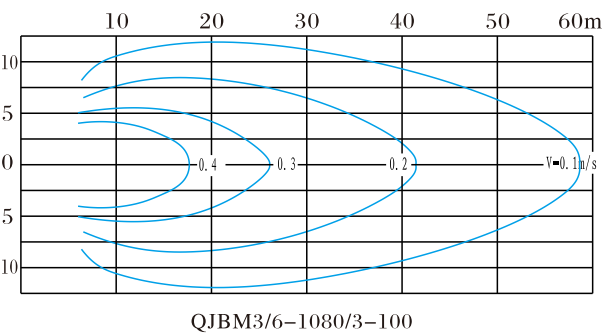
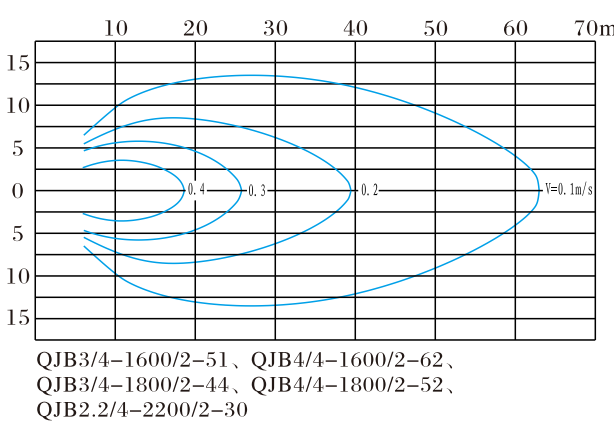
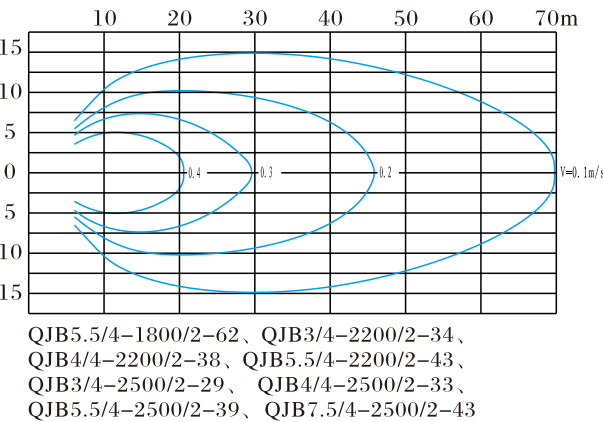
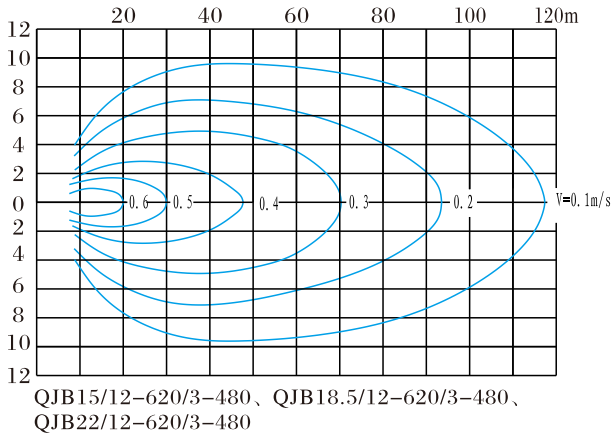
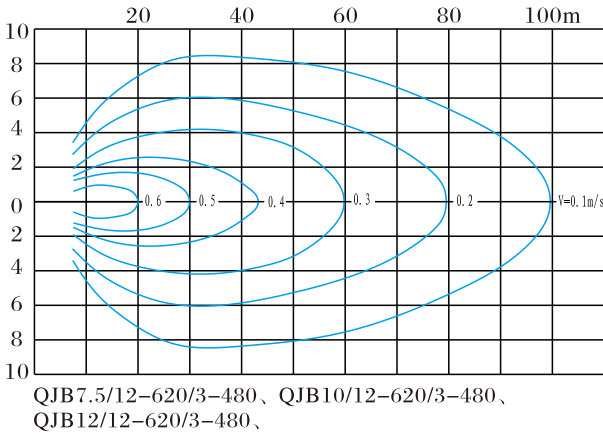


QJB2.2/8-320/3-740、QJB4/6-320/3-980、QJB2.5/8-400/3-740、QJB3/8-400/3-740、QJB4/6-400/3-980

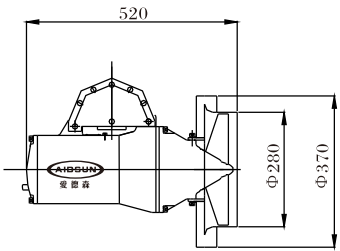


QJB1.5/4-1100/2-60、QJB2.2/4-1100/2-80、QJB3/4-1100/2-100、QJB4/4-1100/2-130、QJB1.5/4-1400/2-43、QJB2.2/4-1400/2-50、QJB3/4-1400/2-65、QJB4/4-1400/2-75、QJB1.5/4-1600/2-39、QJB2.2/4-1600/2-43、QJB1.5/4-1800/2-34、QJB2.2/4-1800/2-39

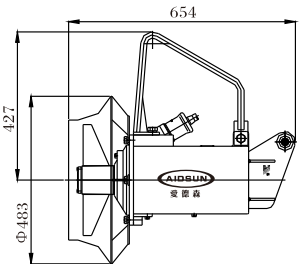
潜水搅拌机流场图  
Submersible mixer flow field figure



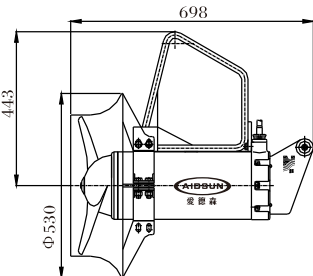
潜水搅拌机外形尺寸图  
Submersible mixer shape dimension drawing



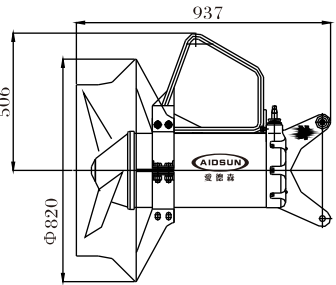
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QJB1.5/6-260/3-980



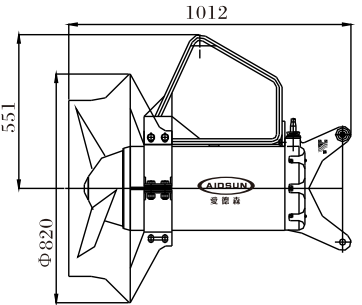
QJB2.2/8-320/3-740  
QJB4/6-320/3-980



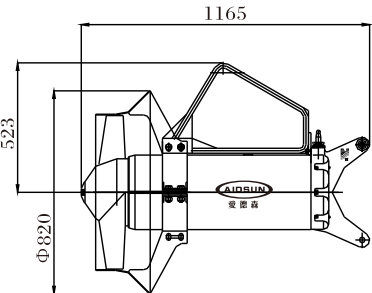
QJB1.5/8-400/3-740 QJB2.5/8-400/3-740  
QJB3/8-400/3-740 QJB4/6-400/3-980



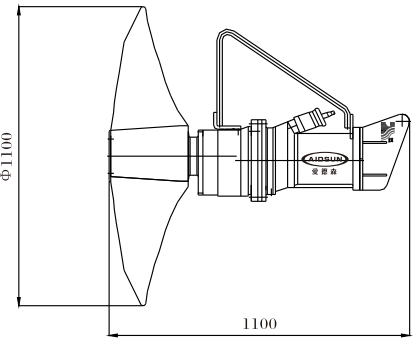
QJB4/12-620/3-480 QJB5/12-620/3-480



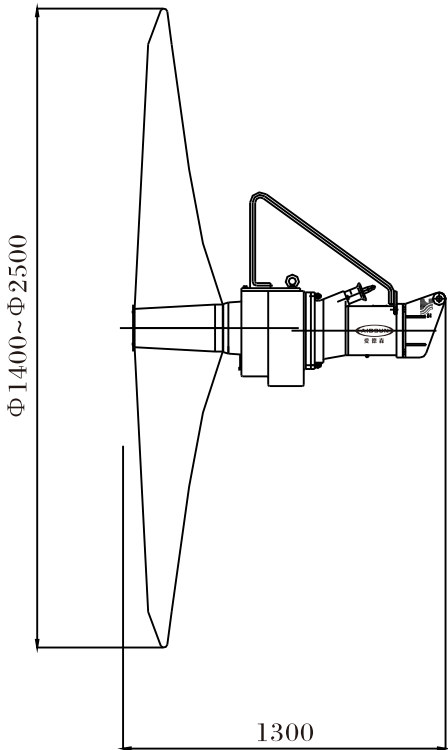
QJB7.5/12-620/3-480 QJB10/12-620/3-480  
QJB12/12-700/3-480



QJB15/12-620/3-480  
QJB18.5/12-620/3-480  
QJB22/12-620/3-480



1100潜水推进器外形图



1400、1600、1800、2200、  
2500潜水推进器外形图



应用实例  
Example of application

和传统长轴搅拌相比，QJB型潜水搅拌机的优点在于可产生不同的流向。由搅拌机的不同安装位置，可得到不同效果的多种流动模式。从而在池中创造更好的流动模式，消除搅拌死角。搅拌机所需的配套功率是按池容积大小，介质的密度、粘度和池型尺寸等确定，根据具体情况，应选用一台或多台搅拌机。

为保证搅拌机在不同池型中的运行达到高效节能的效果，可参考下列的典型安装形式

When comparing with traditional long-shaft agitator, QJB type submersible agitator has advantage of producing different directions of flowing water. Different mounting position of agitator can have different flowing modes. So that it produces better flowing modes in pool, eliminating agitating dead zone. The match power of agitator is determined according to size of pool volume, density of medium, viscosity, pool type and size, please select one or more agitators according to specific cases.

In order to get high efficient energy saving purpose of agitator in pools of different shapes, please refer to the following typical mounting forms.

混合搅拌系列  
Mixed agitating series

□ 圆形池 Round pool



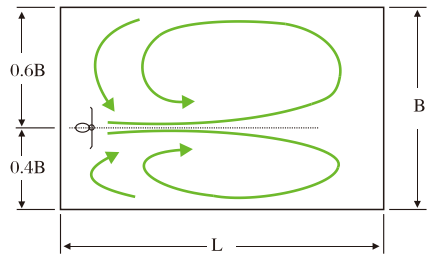
该旋转流动模式是最简单的一种，在相对较短的运行时间内就可创造高的流速，在非溶性固体物含量高的介质中，这是一种高效的搅拌方式。然而必须注意，较重的物质可能沉积在池底中央。

This rotating flowing mode is the simplest one, it is able to create high flow velocity in a shorter time, it is a high efficient agitating method in medium that has high non-dissolving solid content. Notice, the heavier matter may deposit in center of pool.

□ 方形池 Square pool

如按下图方式安装搅拌机可在方形池形成高效的搅拌效果，当使用一台搅拌机时，池长宽比大于5，否则应安装多台搅拌机。若长宽比不大于2.5可得到最佳运行效果。

Install the agitator in square pool according to the following diagram, it is able to obtain high efficient agitating effect. When using only one agitator, aspect ratio of pool should be more than 5, otherwise, please use more agitators. If the aspect ratio not exceeds 2.5, it is able to get optimum running effect.

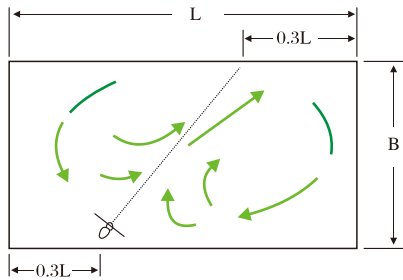


在池宽小于5~8倍的叶轮的情况下，可按上图安装方式

When the pool width is smaller than 5~8 times of impeller, the installation method as shown in above diagram can be adopted

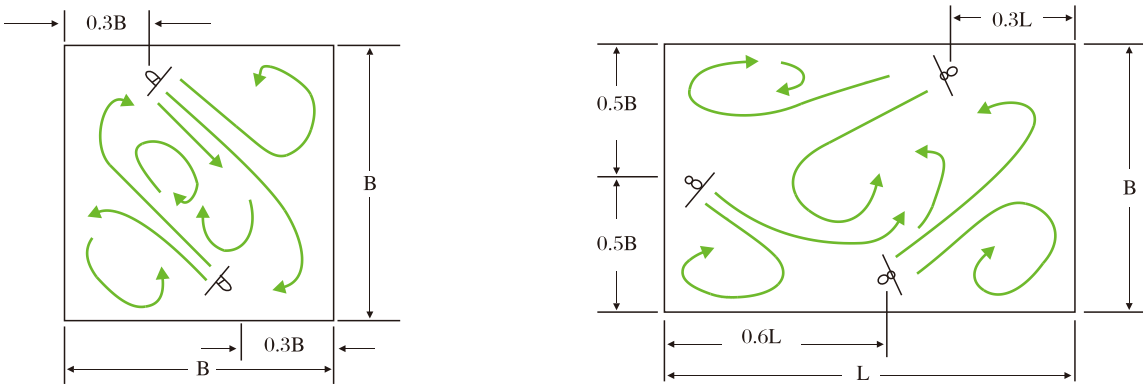
如果搅拌机轴线与池中中线7~10° 安装，可形成全池搅拌而不会产生旋转。池中液体的深度应在池的直径的0.3~1倍之间。

When the agitator is installed with 7~10° between axis and pool center line, it is able to form a full-pool agitation without producing rotation. The liquid depth in the pool should be 0.3~1 times of pool diameter.



在较大池中，搅拌要可按上图安装

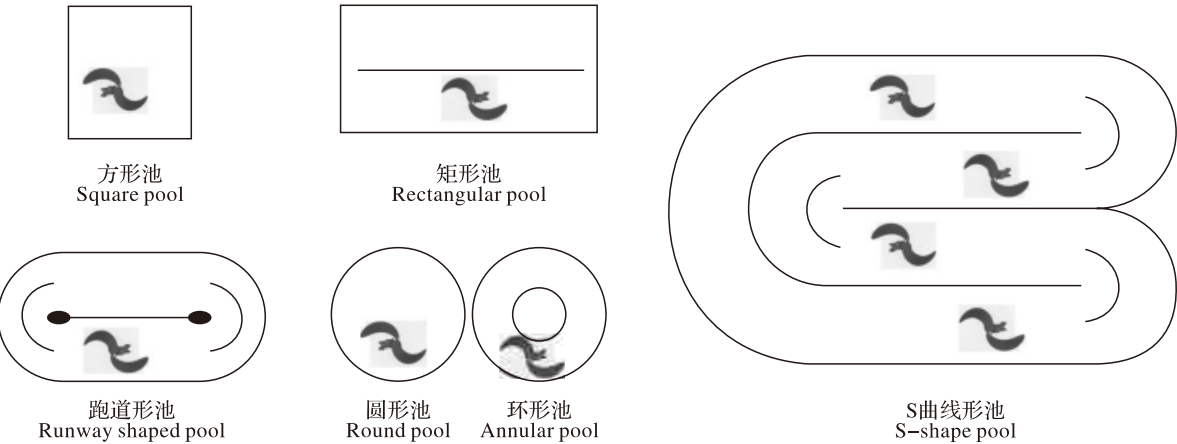
In larger pool, agitator can be installed according to the above diagram



当使用多个搅拌机时，推荐用上图的安装方式  
When using many agitators, the installation method as shown in above diagram is recommended

低速推流系列  
Low-velocity plug-flow series

□ 池形 pool form

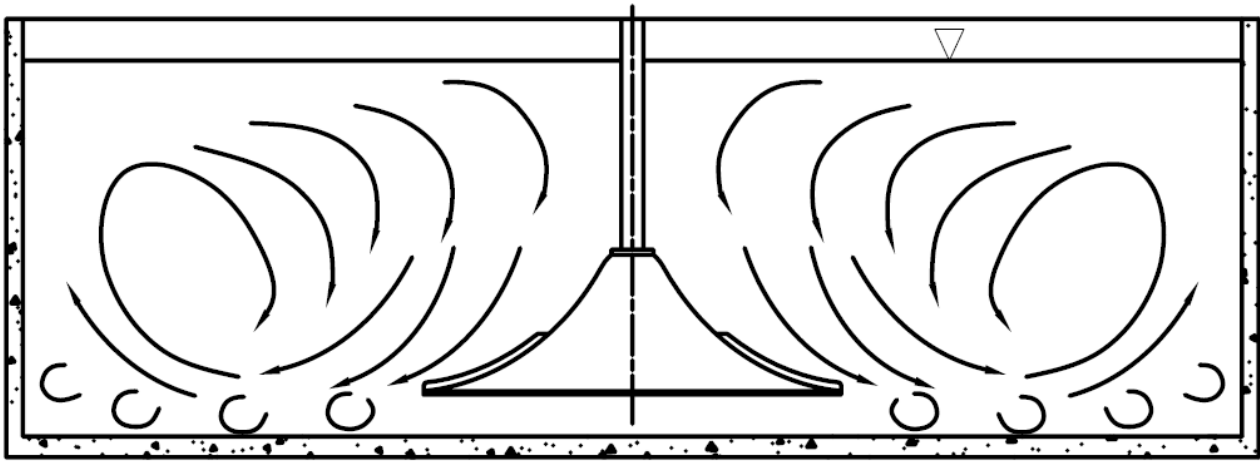


SQJB双曲面搅拌机  
SQJB HYPERBOLOID MIXER

设备简介  
Equipment Introduction

SQJB型双曲面搅拌机是我公司技术中心自主研发的新一代的高科技产品，在总体结构和水力设计上大胆创新，是运用CFD流场分析技术、有限元分析法等先进设计理念和方法对传统混合搅拌设备的一次创新。

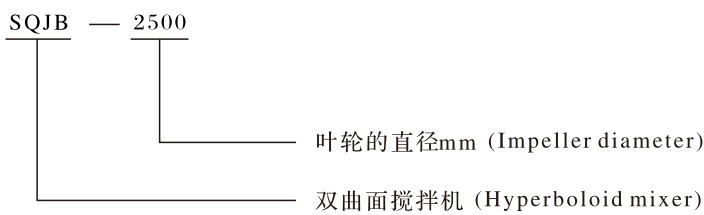
SQJB double surface mixer is my own company's technology research and development center of a new generation of high-tech products, the overall structure and the hydraulic design of bold innovation, is to use CFD flow analysis, finite element analysis and other advanced design concepts and methods in a traditional mixer innovation.



SQJB型双曲面搅拌机的叶轮采用先进的一次成型工艺，表面光滑，线型及流态完美，具有强度高、耐腐蚀的特性，同时阻力小，效率高。采用干式安装，配套的电机及减速机置于液体的上方，不接触液体，水下无易损件，具有较长的使用寿命，是各种液体搅拌的理想设备。

SQJB dual impeller mixer surface in a molding process using advanced, the surface smooth, linear and perfect flow, high strength, corrosion resistance properties, and resistance, and high efficiency. By dry-mounted, matching the motor and reducer placed above the liquid does not contact with liquid, water no wearing parts, with a long service life, is ideal for a variety of liquid mixing equipment.

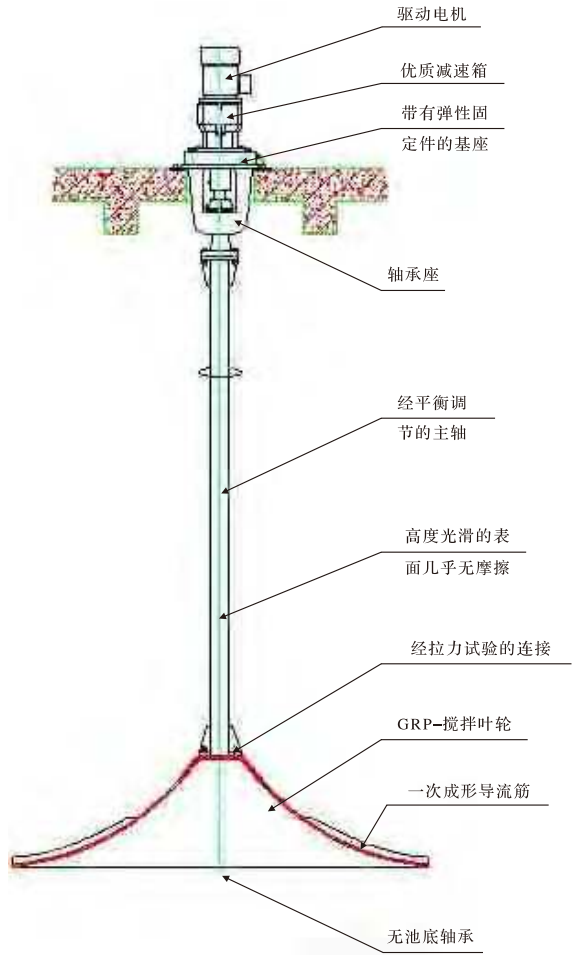
型号表示方法  
Type and its indication



设备构造及工作过程  
Device structure and working process

SQJB型双曲面搅拌机结构简单，安装方便，如下图所示由驱动部件、基座、主轴、叶轮和电控等组成。设备安装在水池上方的固定基座上，通过碳钢或不锈钢的传动轴，联接水下的搅拌叶轮。搅拌叶轮近地布置，通过改变传动轴的长度，适应不同深度的水池。

SQJB double surface mixer simple structure, easy installation, as shown by the drive components, base, shaft, impeller and electric control etc.. Equipment installed in the pool at the top of the fixed base, through carbon steel or stainless steel shaft, connecting underwater mixing impeller. Mixing near the impeller arrangement, by changing the length of shaft, To adapt to different depths of the pool.



※ 驱动部件  
Drive components

驱动部件由电机和优质减速机以及传动轴组成，驱动形式采用斜齿轮减速机。其能耗低，性能优越，震动小、噪音低。斜齿轮采用锻钢材料，表面经过渗碳硬化处理；经过精密加工，确保轴平行度和定位的精度，使用寿命长。传动轴承为优质产品，确保平稳长久运行。电机为IEC标准电机，户外型，防护等级IP55，绝缘等级F级。

Drive motor and high-quality parts from the gear box and shaft component, driven by the form of helical gear reducer. Its low energy consumption, superior performance, small vibration and low noise. Helical gears are forged steel material, the surface after carburizing hardening; through precision machining, to ensure the axis parallel to the degree and positioning accuracy, long service life. Transmission shaft for the quality products, to ensure a smooth long run. Motor for the IEC standard motor, outdoor type, protection class IP55, insulation class F class.



※ 基 座  
Base

驱动部件固定在一个带有减震装置的基座上，用来消除设备运转时产生的震动，并能纠正由于水流产生的轴向力。  
Drive components are fixed with a shock absorber on the base, to eliminate the vibration generated when the equipment operation, and to correct the axial force generated as water.

※ 主 轴  
Spindle

主轴是驱动部件与叶轮之间的连接件，经过校直和一次成形加工，保证其极好的直线度，根据用户需要，可采用碳钢重防腐、碳钢包玻璃钢和不锈钢材质等高强度耐腐蚀材料，以满足刚性和强度。  
Impeller shaft is driven between the components and connectors, through the alignment and a forming process, to ensure its excellent linearity, according to user needs, can use heavy duty steel, glass, steel and stainless steel package high-strength corrosion-resistant material materials to meet the stiffness and strength.

※ 叶 轮  
Impeller

SQJB型双曲面搅拌机独特的叶轮结构设计，最大限度地将流体特性与机械运动完美地结合。双曲面叶轮表面的流线完全为切线组合，整个表面为绕传动轴中心旋转而成的双曲面体；为了迎合水体流动，设计从叶轮的中心进水，这一方面减少了进水紊流，另一方面保证了液体对叶轮表面的压力均匀，有利于水的流动，减轻了整机运转中的振动，保证整机在运动状态下的平衡。在渐开双弧面上均布有导流叶片，借助液体自重压力作补充进水获得的势能与叶轮旋转时产生的离心力形成动能，液体在重力加速度的条件下沿叶轮圆周方向作切线运动，在池壁的反射作用下，形成自下而上地循环水流。正是由于双曲面搅拌机叶轮的结构特性和接近池底安装的特点，决定了它在工作中可获得理想的搅拌效果，形成均匀的全向推流，能有效地消除搅拌死角，达到理想的混合和搅拌效果。

SQJB unique dual impeller mixer surface structure design, to maximize the fluid properties and mechanical movement combines. Hyperboloid impeller surface flow line completely tangent portfolio, the entire surface of the center of rotation around the drive shaft made of double-curved surface; order to meet the water flow, the design center of water from the impeller, reducing water turbulence in this regard, On the other hand ensure that the liquid pressure on the impeller surface uniformity, favorable water flows, reducing the vibration machine in operation to ensure the machine in motion state of balance. Involute arc in both double cloth with guide vanes, the pressure to add weight with liquid water potential energy obtained with the impeller rotating centrifugal force generated by the formation of kinetic energy when the liquid under the conditions in the acceleration of gravity along the circumferential direction as the impeller tangential movement reflection in the pool wall under the action of the formation of circulating water flow from the bottom up. It is precisely because the structure of double-curved impeller mixer features and close to the bottom of the pool install, is determined by its work, get good stirring effect to form a uniform omni plug flow, can effectively eliminate Jiaoban dead, the desired Hunhe and mixing effects.

设备特点  
Features

双曲面搅拌机改变了常规搅拌机在搅拌池内的流速不均匀、存在搅拌死角、容积利用率较低的缺点，在池中产生均匀

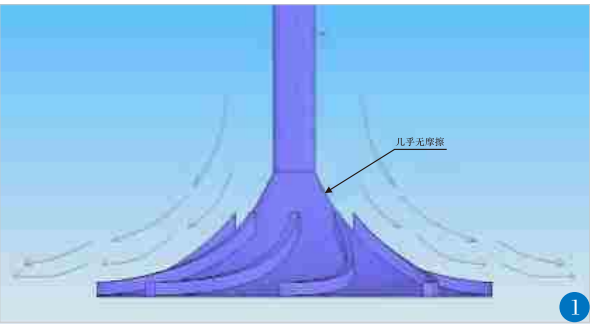
的底部全向推流，无死角、无沉淀，且水面平静，无空气进入水中；搅拌叶轮外形完美，双曲面设计，采用非叶片结构，不会产生在搅拌机上挂带任何杂物，也不会产生纤维缠绕，故平时运行时不需进行任何的维护。

叶轮低转速、低磨损，抗腐蚀性好，故性能可靠，使用寿命长。与常规搅拌机相比，该大容量全向推流的双曲面搅拌机，能耗较低，搅拌1立方米污水一般只需要3~4瓦，节能达30%~50%。

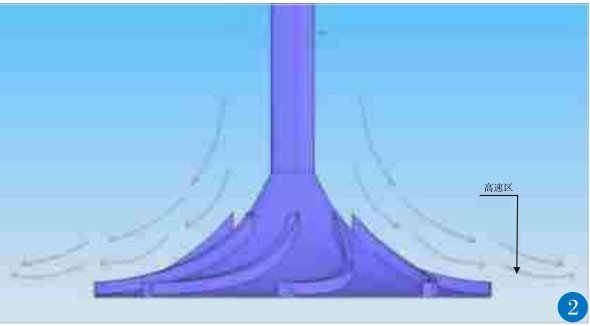
Hyperboloid mixer to change mixer in the mixing tanks of conventional uniform velocity, there is mixing dead, the volume utilization is low, even in the bottom of the pool all to generate plug flow, no dead ends, no precipitation, and the water calm, no air into the water; mixing impeller perfect shape, double-surface design, use of non-leaf structure, does not produce any debris in the mixer to hang with, can not produce filament-wound, it usually runs without any maintenance.

Low impeller speed, low wear, good corrosion resistance, so reliable, long service life. Compared with the conventional mixer, all to promote the flow of high-capacity dual-surface mixer, low energy consumption, mixing 1 cubic meter of sewage usually require only 3 to 4 watts, saving 30% to 50%.

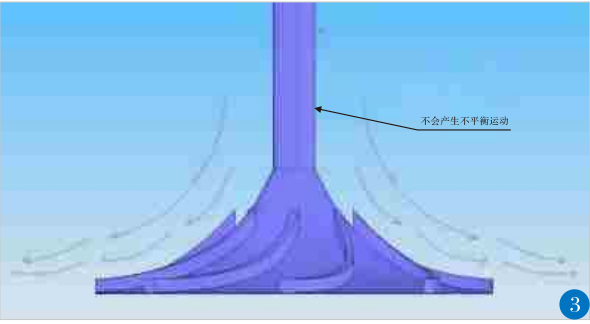
双曲面搅拌机与其它搅拌设备相比的不同之处在于：  
Hyperboloid mixer and mixing equipment other than the difference is:



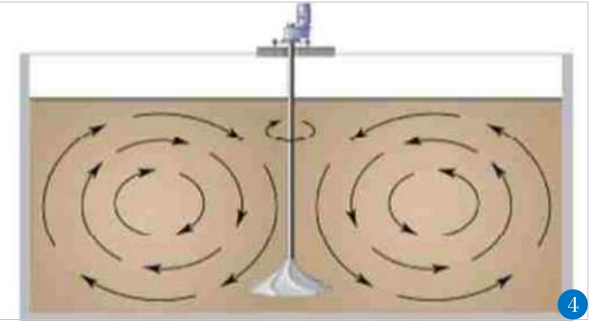
1. 由于流体条件趋于理想，所以能耗较低。  
1. As conditions become ideal fluid, so the lower energy consumption.



2. 由于整个池内水流流速高，所以污泥不会有污泥沉淀。  
2. As the entire pool of high flow velocity, so there will be no sludge settling sludge.



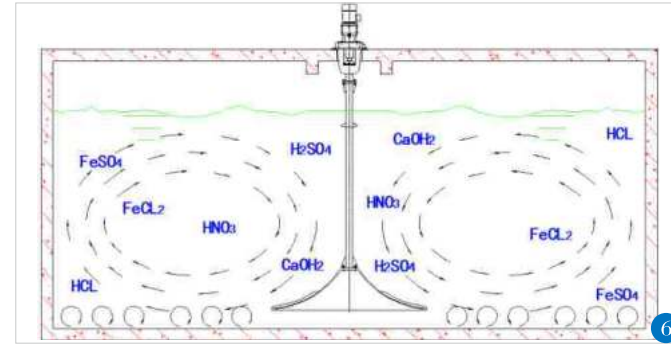
3. 搅拌器运行时能自我纠位，可以确保向下力垂直，从而防止不平衡运动。  
3. Stirrer run self-correcting bits, you can ensure that the downward vertical force, to prevent uneven movement.



4. 全向推流，池内各区都能被均匀搅拌，不会产生死角。  
4. All the plug-flow, the pool can be evenly mixed district will not result in dead ends.



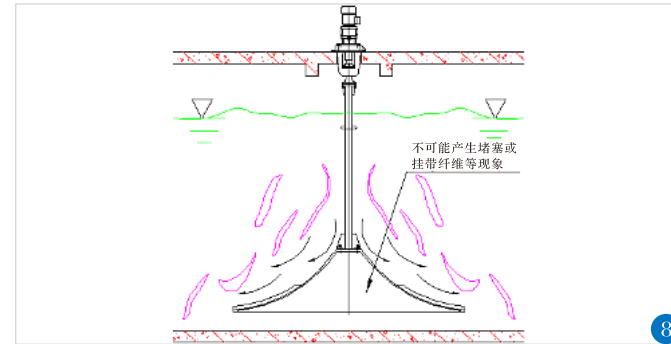
5. 水下无易损耗件，可简单方便地到达减速电机进行维护。
5. Underwater without perishable items can be simple and easy access to the gear motor for maintenance.



6. 不使用易锈蚀的材料，搅拌圆盘及搅拌轴均使用高级耐防腐材料。
6. Do not use an e-corrosion materials, mixing and stirring shaft disc are using advanced anti-corrosion material.



7. 整体精致完美。不断地改进确保了极其长久的使用寿命和坚固耐用的质量。
7. Overall exquisite perfection. Continuous improvement to ensure an extremely long life and rugged quality.



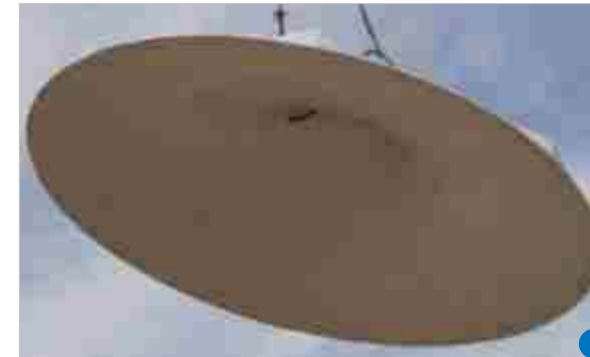
8. 不会堵塞。与水平推流式搅拌器不同，不会在搅拌主体上挂带任何物质。
8. Will not be blocked. And horizontal plug-flow mixers, would not hang in the main mixing with any substance.

## 设备用途 Equipment use

SQJB型双曲面搅拌机适用于环保、化工、能源、轻工等行业需要对液体与液体、液体与固体、液体与气体的搅拌、混合的场合，尤其特别适用于污水处理工程、净水工程中的搅拌，具体如下：

SQJB double surface mixer suitable for environmental protection, chemicals, energy, light industry needs to liquid and liquid, liquid and solid, liquid and gas mixing, a mixture of occasions, particularly suitable for sewage treatment projects, water project mixing, as follows:

1. 调节池搅拌：用于污水处理工程中调节峰量和峰载的调节池，目的在于均质搅拌，典型应用于工业项目中，如酿酒厂、印染厂、造纸厂等。
1. Adjustment pool mixing: adjustment for sewage treatment project in peak capacity and peak out in regulation pool, intended to homogeneous mixing, typically used in industrial projects, such as breweries, dye houses, paper mills and so on.



2. 混合及混凝搅拌：用于水处理中药剂的溶药搅拌及药剂与水的混凝搅拌；即：若运行工艺需要额外的化学处理的场合，如投加石灰或其它污水处理药剂。
2. Mixing and flocculation stirring: for water soluble drugs in pharmaceutical agents and water mixing and flocculation stirring; that is: if the running process requires additional chemical treatment of the occasion, such as adding lime or other water treatment agents.



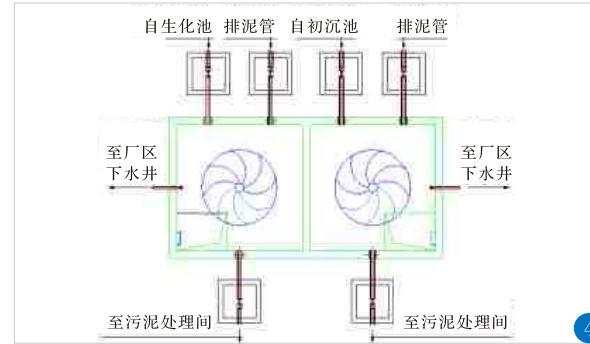
3. 消毒搅拌：用于水处理中液氯及其它消毒药剂与水的接触搅拌；作用是提高液氯与污水的混合程度。
3. Disinfection mixing: liquid chlorine for water treatment and other chemical treatments and water contact mixing; role is to improve the level of chlorine mixed with sewage.





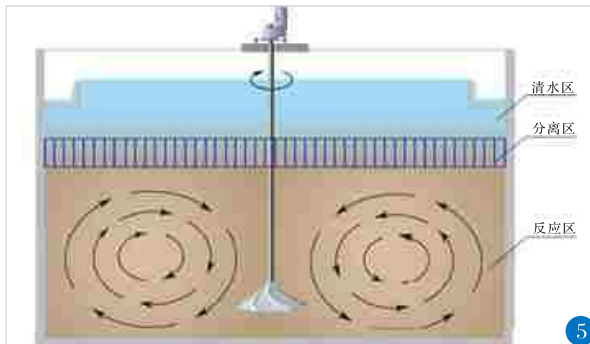
4. 污泥搅拌：用于污泥的厌氧消化搅拌及污泥均质池中的搅拌，典型的应用为污泥浓缩池，污泥厌氧消化池和污泥储存池等。

4. Sludge mixing: Mixing used for sludge digestion and sludge pool of homogeneous mixing, the typical application of the sludge thickener, sludge digestion tank and sludge storage pools.



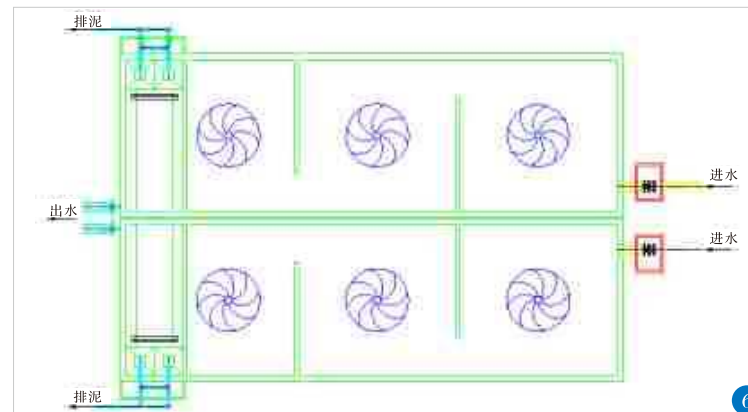
5. 厌氧搅拌：污水厌氧处理中的搅拌，用于厌氧池，池内需要良好地均质搅拌以确保良好的工艺效果。

5. Anaerobic mixing: mixing in anaerobic treatment of sewage for the anaerobic pond, pool needs a good stir to homogeneous process to ensure good results.



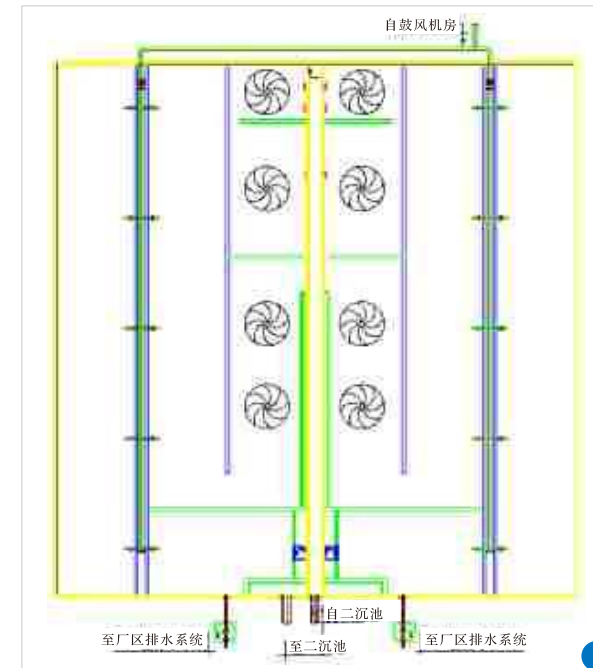
6. 反硝化搅拌：污水脱氮处理时的反硝化时的搅拌；用于反硝化池，当需要除氮时，生物处理工艺中不可缺少的一部分以达到理想的脱硝效果。

6. Denitrification Mixing: nitrogen treatment of sewage denitrification when the mixing time; for denitrification tank, when required nitrogen removal, the biological treatment process, an integral part of the denitrification to achieve the desired effect.



7. A<sup>2</sup>/O池的搅拌：用于污水及A<sup>2</sup>/O工艺中厌氧除磷及缺氧脱氮部分的搅拌。

7. A<sup>2</sup>/O pool of mixing: for sewage and A<sup>2</sup>/O process in the anaerobic and anoxic phosphorus removal part of the mix.



8. 污泥热处理需要将污泥充分温和地搅拌，从而获得适宜的消化污泥。

8. Sludge treatment needs to be fully gently stirring the sludge, digested sludge to be appropriate.



9. SBR池的搅拌：用于SBR池处理工艺中脱氮时的反硝化搅拌，即交替生物反应池，由硝化工艺和反硝化工艺交替循环。

9. SBR tank mixing: pool treatment process for nitrogen removal SBR denitrification when mixing, or alternating bioreactor, the nitrification process and denitrification alternating cycle.

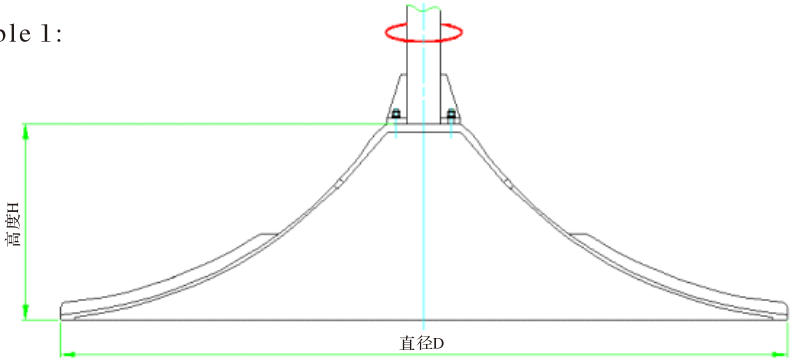


设备型号参数  
Device Model Parameters

双曲面基本参数见表1：  
Hyperbolic basic parameters shown in Table 1:

表 1

尺寸/直径D(mm) Size / Diameter D (mm)	高度H(mm) Height H (mm)
500	200
1000	400
1500	515
2000	630
2500	670
2800	700
3000	720



设备选型  
Equipment Selection

为保证取得最佳效果，选型所需提供的基本条件如下：  
To ensure the best results, the basic conditions required for selection are as follows:

1. 池形（尺寸和形状）
2. 搅拌目的（标准或参数要求）
3. 污水性质和污泥（絮凝物，砂土，纤维等）浓度
4. 池内障碍物（立柱、管道、曝气系统等）

5. 介质特性：包括粘度、密度和固体含量等

1. Pool shape (size and shape)
2. Mixing purpose (standard or parameters required)
3. The nature and sewage sludge (floc, sand, fiber, etc.) concentration
4. Pool obstacles (columns, pipes, aeration systems, etc.)
5. Medium features: including viscosity, density and solid content

搅拌机所需要的配套功率是按搅拌的介质体积大小、池形尺寸、搅拌介质的密度、粘度而确定的。根据应用情况，可采用一台或多台搅拌机。具体使用可根据以下选型步骤进行：

Mixer power is needed to complete the volume by mixing the medium size, pool-shaped sizes, mixing medium density, viscosity and determined. According to the application, can use one or more mixer. Selection of the specific use of the following steps:

步骤1：怎样计算搅拌器数量  
Step 1: How to calculate the number of stirrer

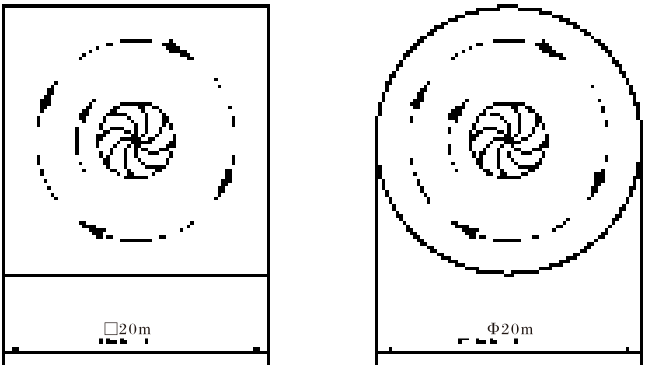
一个搅拌单元的最大宽度/直径大约为20m。

A mixing unit of the maximum width / diameter of about 20m.

1. 单边长度不超过20m且长宽比不大于2的方形池，可采用单台搅拌机。如长宽比大于2，或池单边长度超过20m，根据长宽比不大于2.0的原则，应将长方形池体分为2个或2个以上相等的搅拌单元。

1. Unilateral aspect ratio of the length of not more than 20m and not more than 2 square pool, can use a single mixer. Such as aspect ratio greater than 2, or pool unilateral longer than 20m, according to the principles of aspect ratio less than 2.0 should be divided into two rectangular cell body or more than 2 equal mixing unit.

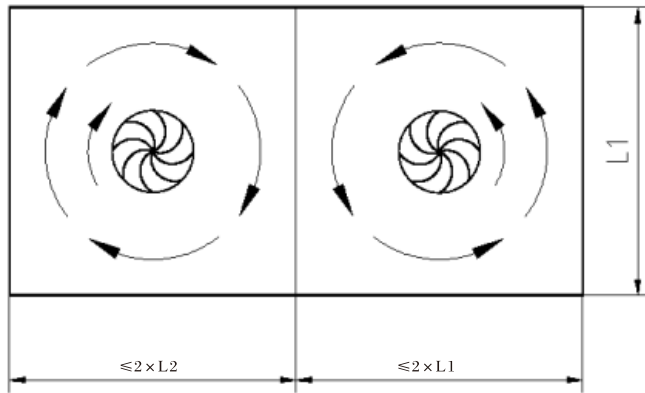
最大搅拌单元  
Maximum mixing unit



2. 直径不超过20m的圆形池，可按上述性能参数表采用单台双曲面搅拌机。对于直径超过20m的圆形池，需根据搅拌要求设置多台搅拌机，搅拌机数量的确定请详询蓝深集团技术部。

2. Not more than 20m diameter circular pool table according to the performance parameters using a single hyperboloid mixer. The circular pool 20m in diameter than is necessary, stir more than required to set mixer, mixer with detailed exercise to determine the number of LANSHEN and Technology Group.

搅拌单元的安排  
Arrangements for mixing unit



步骤2：确定双曲面搅拌机的直径  
Step 2: Determine the diameter of the hyperboloid mixer

可按参数表进行选择。

对于大多数工程案例来说，可选的型号不一定是一种，而是多种，可由以下几点来做最终决定：

1. 搅拌器型号越小，价格越便宜。
2. 搅拌器型号越大，效率越高。投资成本高，但运行成本低。

Parameter table can be selected.

For most engineering cases, the alternative model is not necessarily one but many, by the following points to make the final decision:

1. Stirrer model smaller, cheaper prices.
2. Stirrer larger models, the higher the efficiency. Investment costs are high, but low operating cost.



步骤3: 确定搅拌机功率
Step 3: Determine the mixer power

搅拌机功率的选用与池形及液体含固率有关。
如果是圆形池或正方形池，液体一般为水，则搅拌机的功率选用如表2所示。
Mixer power selection and tank shape and rate of the liquid with solid.
If it is round or square pool pool, the liquid is usually water, the mixer's power use shown in Table 2.

搅拌机功率选型图表
Power Mixer Selection Chart

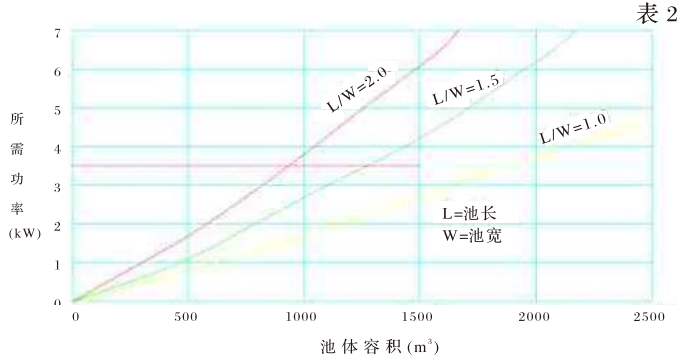


表 2

艾德森双曲面搅拌器应用于特殊条件时（0.8%干质），所需的电机功率n2就必须根据表3增加。
AIDESHEN hyperboloid stirrer used in special conditions (0.8% dry matter), the required electrical power n2 must be increased according to Table 3.

表 3

Table with 8 columns: Sludge concentration (%), 0.8%~0.9%, 1.0%~1.5%, 1.6%~2.0%, 2.1%~3.0%, 3.1%~4.0%, 4.1%~5.0%, 5.1%~6.5%. Row 2: Additional electrical power, x1.0, x1.5, x2.0, x3.0, x5.0, x7.0, x10.0.

提示：由艾德森确认最终方案。
Tip: Deep Aideshen recognized by the final plan.

步骤4: 怎样计算搅拌器的速度
Step 4: How to calculate the speed of agitator

艾德森双曲面搅拌机应用于标准条件时，转速可以根据表4来确定，表中显示了转速和标准rpm的范围。
AIDESHEN hyperboloid mixer used in the standard conditions, speed can be determined according to Table 4, the table shows the standard speed and rpm range.

标准速度和艾德森搅拌机的速度范围
Standard mixer speed and speed range of AIDESHEN

表 4

Table with 6 columns: Model (Φ), 500, 1000, 1500, 2000, 2500. Row 2: Range (rpm), 60~120, 30~70, 22~40, 18~38, 16~36. Row 3: Standard (rpm), 90, 50, 36, 28, 26.

步骤5: 怎样选择容积流量
Step 5: How to Select volume flow

另外，有时池体的容积流量也相当重要。根据表5可以选定不同流速时的参数。
可以明显看出艾德森搅拌机的容积流量非常高，适用于很多需要快速搅拌和剧烈搅拌的工艺。
In addition, sometimes the volume of flow cell body is also important. Table 5 can be selected according to different parameters when the flow rate.
It is clear AIDESHEN very high traffic volume mixer for mixing a lot of need for rapid and intense mixing process.

搅拌机的标准流速
Standard flow mixer

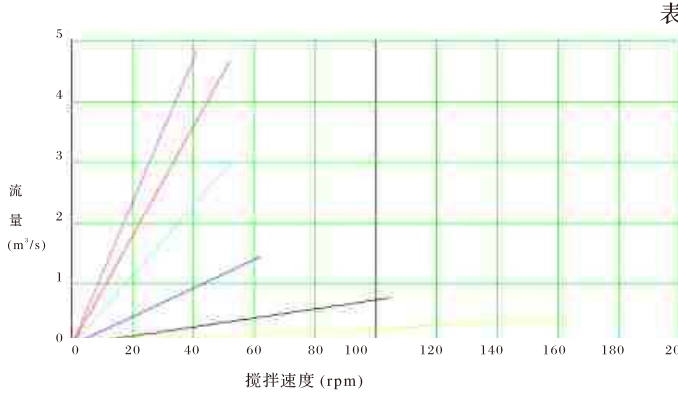


表 5

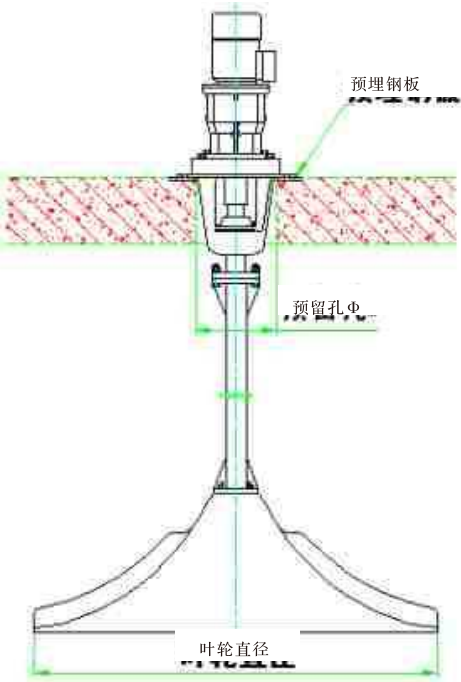
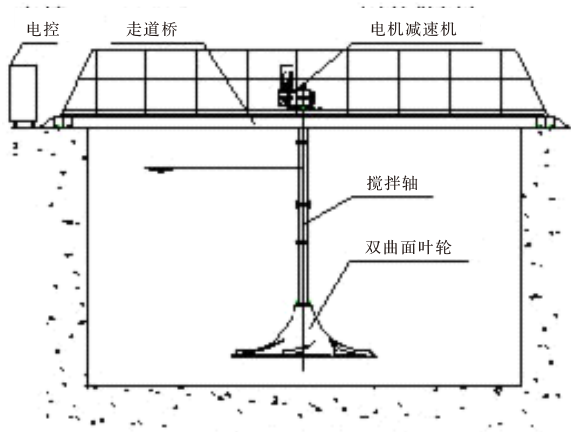
安装方式
Installation

双曲面搅拌机安装简便，对于有预制钢混平台的工作场合，可进行预埋钢板连接或采用膨胀螺栓固定。具体预留孔和预埋件尺寸见下图和表6。
Hyperboloid mixer ease of installation, mixed for a prefabricated steel platform in the workplace, can be embedded steel connection or use of expansion bolts. Specific reserve size holes and embedded items shown below and Table 6.

表 6

Table with 3 columns: Model, Reserve hole Φ (mm), Embedded steel plate (mm). Rows for SQJB500~1500 and SQJB2000~2500.

对于无预制钢混平台的工作场合，可制作走道工作桥或钢支架操作平台，吊装安放在池内即可。
No prefabricated steel for mixed platform in the workplace, the work of the bridge or walkway can be made of steel stent platform, lifting can be placed in the pool.



预埋件布置图
Embedded parts layout

电气控制  
Electrical control

常规为普通就地按钮控制，带过载保护装置。

可根据用户需要设定设备的启、停及运行时间，可带PLC接口。

Orders for the common-place button control with overload protection device.

Users need to set equipment according to Kai, stop and run time for the interfaces with a PLC.

技术经济分析  
Technical and economic analysis

投资分析  
Investment Analysis

1. SQJB型双曲面搅拌机一般搅动1m³污水只需3W,一台SQJB-3kW的搅拌机，可搅污水容积为3÷0.003=1000m³
2. 普通搅拌机若搅动1m³污水需要6W,一台3kW普通的搅拌机，可搅污水容积为3÷0.006=500m³
3. 一台SQJB-3kW的双曲面搅拌相等于1000÷500=2台3kW的普通搅拌机

1. SQJB double surface water mixer generally stirred 1m³ only 3W, a SQJB-3kW of the mixer, can mix water volume of 3 ÷ 0.003 = 1000m³
2. Ordinary mixer stir 1m³ water if necessary 6W, a 3kW ordinary mixer, can mix water volume of 3 ÷ 0.006 = 500m³
3. A SQJB-3kW dual-surface mixing equal to 1000 ÷ 500 = 2 units of ordinary mixer 3kW

能耗分析  
Energy analysis

1. 一般污水处理厂，每处理1吨污水耗电量约为0.4kWh
2. 其中搅拌机所占功率按8%测算
3. 处理每吨污水耗电为0.4×8%=0.032kWh
4. 艾德森SQJB型双曲面搅拌机的耗电为普通搅拌机的1/2，即0.016kWh
5. 按市场价每kWh电量0.8元计算，处理每吨污水可节约运行电费为0.016×0.8=0.0128元
6. 则对于50000吨/天的污水处理厂，若采用SQJB型双曲面搅拌机，每年可节约运行费用23万

1. General sewage treatment plant, water consumption for each treatment is about 1 ton 0.4kWh
2. Which share power mixer measured by 8%
3. Processing power per ton of sewage was 0.4 × 8% = 0.032kWh
4. SQJB double AIDESHEN surface of the power consumption for the general mixer mixer 1 / 2, which is 0.016kWh
5. According to market price 0.8 yuan per kWh charge calculated per ton of sewage treatment can save electricity to run the 0.016 × 0.8 = 0.0128 元
6. Is for 50,000 tons / day sewage treatment plant, the use of a dual surface SQJB mixer, annual savings of operating costs 230 000

注意事项  
Notes

1. 安装前要有一名合格电工检查电机、电器并按设备箭头方向确定转向，叶轮离池底的最下工作距离不小于300mm，且池底应平整、结实，池内无杂物；

2. 如果长时间不运行，重新启动时要防止污泥淤积而造成设备损坏；必要时需进行清理；
3. 在封闭池内安装要考虑到搅拌机叶轮的进出口安装尺寸。

1. To have a qualified electrician before installation, check the motor and electrical equipment in accordance with established direction of the arrow turn the impeller to work from the bottom of most distance not less than 300 mm, and the bottom should be flat, solid, debris-free pool;
2. If time is not running, restart to prevent equipment damage caused by sludge deposition; necessary, in need of cleaning;
3. In a closed pool installation to take into account the import and export install mixer impeller size.

订货说明  
Ordering Help

1. 订货时应注明材质，未注明时：传动轴材质为碳钢重防腐，叶轮为强化玻璃钢，紧固件均为不锈钢。
2. 订货时应说明设备运行的目的，且提供池型及池尺寸、水深，及液体的粘度、密度和固体含量等相关使用参数。
3. 不注明所配的电控箱为普通就地控制，如有特殊要求应另行注明。

1. Ordering please indicate the material, when not specified: shaft is made of heavy duty steel, the impeller for the tempered glass steel, fasteners are stainless steel.
2. Order should be the purpose of the equipment running, and the provision of pool-type and pool size, water depth, and liquid viscosity, density and solid content and other related parameters.
3. Does not indicate the distribution of the electronic control box for the ordinary local control, if there are special requirements should be specified.

提 示  
Prompt

液体搅拌与其它化工或污水处理工艺相比，似乎是一项简单的工作。但是，上千例工程的经验显示出只有良好的设计才能避免搅拌不够，能耗太大和搅拌设备使用寿命短等缺陷。

该样本提供了艾德森双曲面搅拌机的选型大纲，介绍了艾德森搅拌机的应用和设计，可作为用户或工程人员在作工程初步设计时的选型辅助资料。

为了确保给各项具体工程提供最好的设计，请与艾德森技术部联系并确认方案。

Liquid mixing with other chemicals or sewage treatment process than appears to be a simple task. However, the experience of thousands of cases of engineering design that only good enough to avoid mixing, power consumption and much shorter service life of mixing equipment defects.

The sample provides a AIDESHEN selection outline hyperboloid mixer, mixer, introduced the application of AIDESHEN and design, as users or engineers in the preliminary engineering design for the Selection of auxiliary data.

To ensure that the specific projects to provide the best design, please contact AIDESHEN Group Technology and recognition programs.





# QJB-W 型回流泵

TYPE QJB-W CIRCUMFLUENCE PUMP

AIDENSEN WATER

## QJB-W型回流泵 QJB-W TYPE REFLUX PUMP

### 设备简介

#### Equipment introduction

QJB-W型回流泵是在引用德国潜水电机生产技术上自行研发的产品，该泵是二级污水处理厂混合液回流、反硝化脱氮的专用设备。亦可用于地面排水、灌溉和废水处理过程中再循环等需要微扬程、大流量场所。

QJB-W type backflow pump is cited German submersible motor based on production technology to develop products, this pump is the secondary sewage treatment plant, the mixture backflow denitrification denitrification special equipment. It can also be used in places requiring micro head and large flow in the process of surface drainage, irrigation and wastewater treatment.

### 设备使用条件

#### Equipment conditions of use

- 1.连续运行时,介质温度不高于40℃
- 2.介质PH值为6-9
- 3.最大潜没深度10m

1. Run continuously, medium temperature is not higher than 40 ℃
2. Medium PH value of 6-9
3. The biggest potential no depth 10 m

### 设备特点

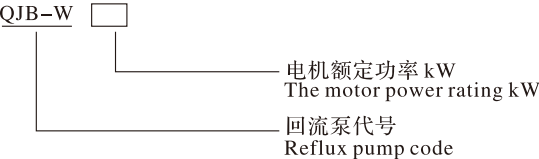
#### Characteristics of the equipment

- 1.按微扬程大流量专门设计，效率高
- 2.按抗堵塞、抗缠绕专门设计，使用可靠
- 3.采用最新的密封材料，可以使泵安全连续运行10000小时以上
- 4.结构紧凑，安装、维护方便
- 5.主机采用冲压成型结构，体积小、精度高、耐腐蚀、无噪音
- 6.产品设置漏电、漏水及电机过载等保护及报警装置，确保产品的安全性与可靠性

1. According to the head big flow special design, high efficiency
2. According to anti-clogging, fight winding special design, use reliable
3. The latest sealing material, can make the pump security service above 10000 hours continuously
4. The structure is compact, installation, maintenance is convenient
5. The main machine USES stamping forming structure, small volume, high precision, corrosion resistance, no noise
6. Product set leakage, water and motor overloaded, protection and alarm device, ensure the security and reliability of products

### 型号表示方式

#### Model representation



### 设备技术性能表

#### Technical equipment performance table

型 号	电机功率(kW)	额定电流(A)	叶轮直径(mm)	防护等级	绝缘等级	公称直径(mm)
QJB-W1.5	1.5	4.5	400	IP68	F	400
QJB-W2.5	2.5	7.3	400	IP68	F	400
QJB-W3	3.0	8.0	400	IP68	F	400
QJB-W4/6	4.0	9.6	400	IP68	F	400
QJB-W4	4.0	14.5	620	IP68	F	600
QJB-W5	5.0	18	620	IP68	F	600
QJB-W7.5	7.5	26.7	620	IP68	F	600
QJB-W10	10.0	29.3	620	IP68	F	600
QJB-W15	15.0	42.8	620	IP68	F	600
QJB-W18.5	18.5	55	620	IP68	F	600
QJB-W22	22	65	620	IP68	F	600

### 设备结构

#### Equipment structure

回流泵采用导杆自动结合就位固定方式，滑行导杆支架作为水泵整体的部件之一，水泵的全部重量以及泵送时产生的推力全部作用在对接的出口管路法兰上。水泵、附件和电缆在正常水深的工况下，能长期连续工作而无渗漏现象。

回流泵可上下方便地进行升降移动，检查或维修人员无需进入池底。

该回流泵为卧式单级结构，根据安装方式不同可分为垂直单、双导轨，自耦式安装。叶轮的设计采用无堵塞、防缠绕结构型式，通过固体颗粒直径可达100mm，电机与泵体为同轴直连。

回流泵能自动稳固地与穿墙管联接，并且能在导杆的引导下从池顶部滑动至穿墙管处就位。

该回流泵为整体设计，采用封闭式联接和潜水泵型，水泵的所有组件包括电机可在水下连续运转。

1)叶轮

叶轮应采用不锈钢制造，且作动平衡试验。叶轮与轴之间装有锁定装置，用于防止运转时松动，叶片设计为三片式，具有自清、免振功能，为水力平衡的无堵塞、不缠绕的拽后设计。

2)导流筒

为维持水力效率和减少能量消耗，在回流泵叶轮外周设置导流筒体，并控制叶轮外周与导流筒的间隙。

3)轴与轴承

回流泵和电机的轴是连续无间断的轴。轴能承受叶轮旋转时产生的所有轴向和径向载荷。叶轮的轴完全与泵送的介质隔离。

回流泵电机轴在永久润滑的两个轴承上转动，内轴承为单列深沟球滚珠轴承，主轴承为一个球面滚珠轴承。其中内轴承滚珠轴承用于承担径向力，用于承担所有轴向力的轴承由主轴承组成。

4)泵轴的密封

每台回流泵有一个用于轴密封系统的油室，并配备有排油装置和检查螺孔。排油和检查螺孔便于从外部进入，使换油工作更加简便、易行。

每台回流泵至少配有二道密封以便将水泵的各部分隔开。

叶轮轮毂与轴承之间设置二道密封，隔砂隔污以延长内圈机械密封的寿命并起到保护作用。

叶轮轴端的密封为插入式的静/动环双重机械密封。密封在一个通过水力作用对重叠密封面以恒定速度进行润滑的油室中运行。内外机械密封均为最新产品，以防止外界液体进入油室。内外机械密封都是各自独立运行的。

该泵用于轴密封系统的油室从设计上防止过满和留有油膨胀的空间，带有防漏密封的注油孔和检查孔是很容易从外部检查和维修的。

5)冷却系统

回流泵电机能被周围介质充分冷却，较大电机装有外部冷却套，利用泵送液体的背压用作电机循环冷却。

6)提升支架系统

回流泵配有提升用吊架座和起吊柱。起吊葫芦内配置制动装置。

安装提升支架系统包括每台一套的方导轨等，并有专用臂式起吊柱、手拉葫芦。

导杆的刚性支承在两端。提升链条包括一个联接到水泵的旋转卸扣或吊钩。

7)自耦系统

回流泵出水法兰面与穿墙管出水法兰为重力自动耦合，泵的效率考核包括出水穿墙管在内，耦合面之间密封可靠，具有自清洗功能。自耦系统为出口硬封式，并有可靠的设计保障提升、下降时不会受到刮、擦破坏。

Reflux pump adopts the guide bar to be automatic combination in place fixed way, slide guide bar the scaffold for water pump whole one of the components, the full weight of the pump and pumping generated when thrust all function The export pipeline in docking flange. Water pump, accessories and cable in normal water depth of conditions, and can work for a long time continuously and no leakage phenomenon.

Reflux pump can fluctuate up and down and convenient to move, inspection or maintenance personnel need not into the bottom of the pool.

The reflux pump is a Horizontal single-stage structure, which can be divided into vertical single and double guide rails and self coupling installation according to different installation methods. The impeller is designed with non clogging and anti winding structureThe diameter of solid particles can reach 100mm, and the motor and pump body are coaxial and directly connected.

The reflux pump can be automatically and stably connected with the through wall pipe, and can slide from the top of the pool to the through wall pipe under the guidance of the guide rod.

The reflux pump for the overall design, the close connection type and scuba diving, water pump of all components including motor can be in underwater continuous operation.

1) impeller

Impeller should adopt the stainless steel, and dynamic balance test. Impeller and between shaft with locking devices, used to prevent running loose leaf design for three chip, with the clear, avoid Vibration features for hydraulic balance of have no jams, winding after pulling design.

2) diversion tube

In order to maintain the hydraulic efficiency and reduce energy consumption, in reflux pump impeller peripheral set diversion cylinder, and control the impeller and the clearance between the cylinder week diversion.

3) axis and bearing

Backflow of the pump and motor shaft is continuous uninterrupted axes. Axis can withstand the paddle type produce when rotating impeller all the axial and radial load. The shaft of the impeller completely with pumping of medium isolation.

Reflux pump motor shaft in permanent lubrication two bearing on rotation, inside the bearing is a single deep groove ball ball bearing, the main bearing is a spherical ball bearing. In ball bearings of bearing with In bear radial force, used to bear all the axial bearing is composed of the main bearing is composed.

4) of pump shaft seal

Each machine reflux pump have one for shaft seal system of oil chamber, and equipped with soot device and check the screw holes. Soot and check for screw holes from the outside in, make oil work is simple, convenient, more Easy to use.

Each machine reflux pump with at least two seals, so that all the parts of the pump separate.

Impeller wheel and set up two sealing between bearings, the sand every unclean in order to prolong the life span of the inner circle of mechanical seal and protect.

The wheel and axle leaves for the static sealing of insert/move double mechanical seal ring. Sealed in a through hydraulic effects on the overlap with constant speed sealing surface lubrication oil chamber operation. Inside and outside Mechanical seal are the latest products, in order to prevent external liquid into the oil chamber. Internal and external mechanical seal is operated independently.

This pump used for shaft seal system of oil from design to prevent the room filled with oil and the expansion of the space, with the note oil leak sealing holes and check the hole is very easy from external examination and maintenance.

5) cooling system

Reflux pump motor can be the surrounding media sufficient cooling, the bigger motor cooling jacket with external, use pumping the liquid of back pressure used as a motor cycle cooling.

6) improve support system

Reflux pump with a hanger with ascension and hoisting column. It is equipped with the brake.

Installation supporting system including MeiJi ascension a slide of the party, and to have special arm type column, it hand gourd.

Guide bar in the rigid supporting both ends. Ascension chain includes a link to pump the ascension of the ring.

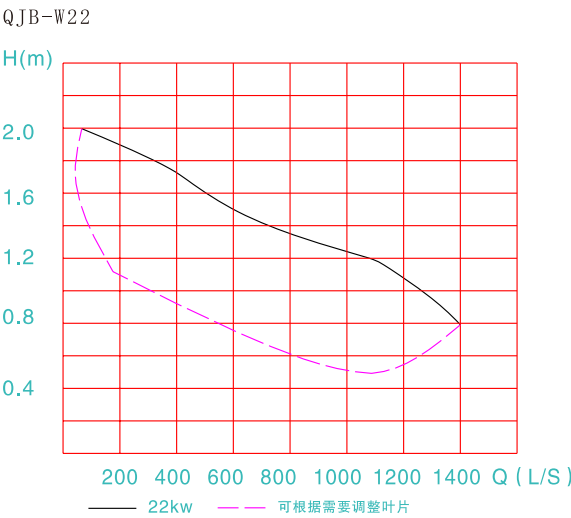
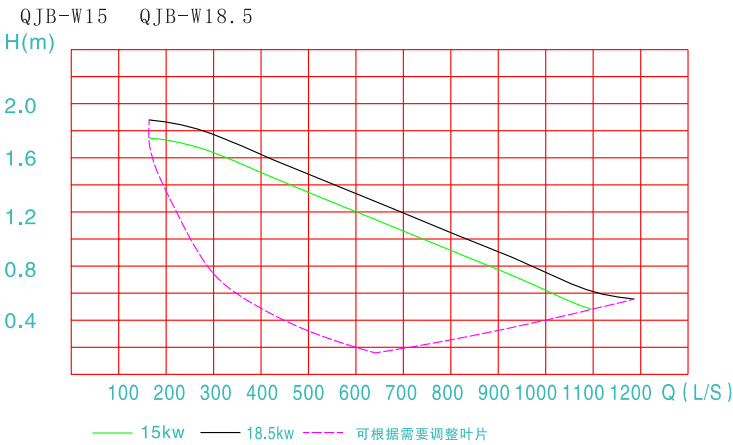
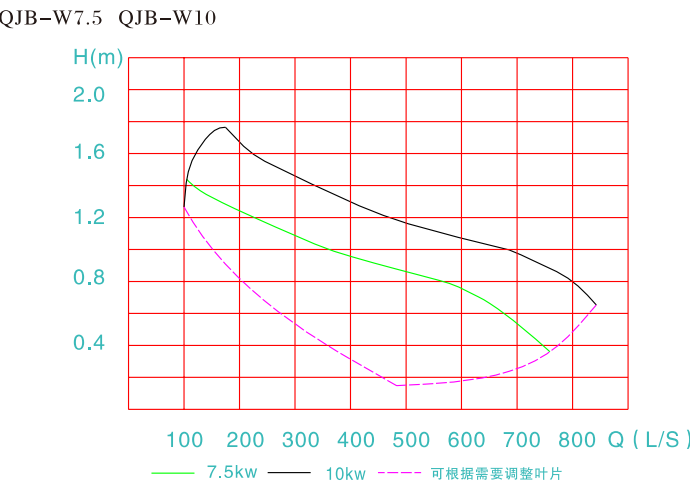
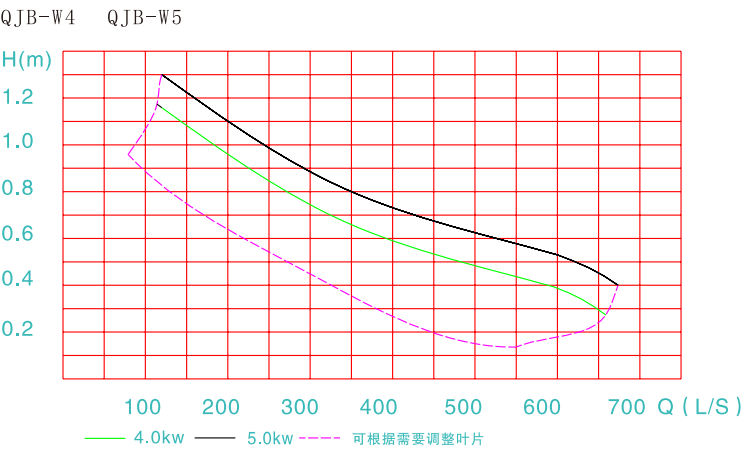
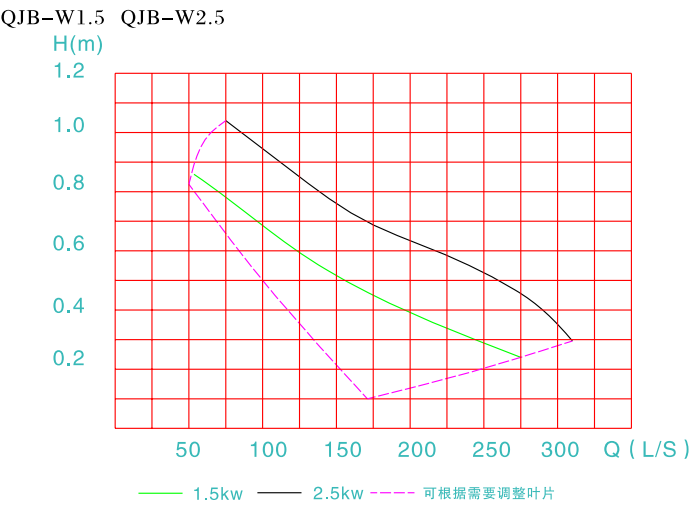
7) self coupling system

Reflux pump outlet flange surface and wear wall tube outlet flange for gravity to be automatic coupling, the pump efficiency assessment including water wall tube, wear, coupling between surfaces seal, and reliable, since the cleaning work Can. Self coupling system for export hard sealing type, and have reliable design security ascension, fall will not be blow, wipe damage.



设备性能曲线  
Equipment performance curve

此曲线为回流泵的特性曲线,不包括扩散管和进出口的损失。  
The curve of the reflux pump characteristic curve, not including the import and export of pipe and the diffusion loss.



设备安装  
Equipment installation

正确安装及使用是该泵长久、正常运转的基本保证，特别提醒用户不可大意。

回流泵采用自动耦合安装系统，不用任何机械拆卸便可迅速提升泵进行检查，方便快捷，该装置已申请国家专利。

本设备除穿墙管需预埋外，导杆、起吊杆打膨胀螺栓与墙体连接，不需预埋件。

The correct installation and use this pump is long, the normal operation of the basic guarantee, special remind users do not careless.

Reflux pump adopts the automatic coupling installation system, without any mechanical remove will rapidly promote pump to check, convenient and quick, this device has been applied for the national patent.

This equipment except wear wall pipe should be embedded outside, guide bar, up the dozen expand bolt and wall body connection, do not need embedment parts.

**安装系统 I**  
Installation system I

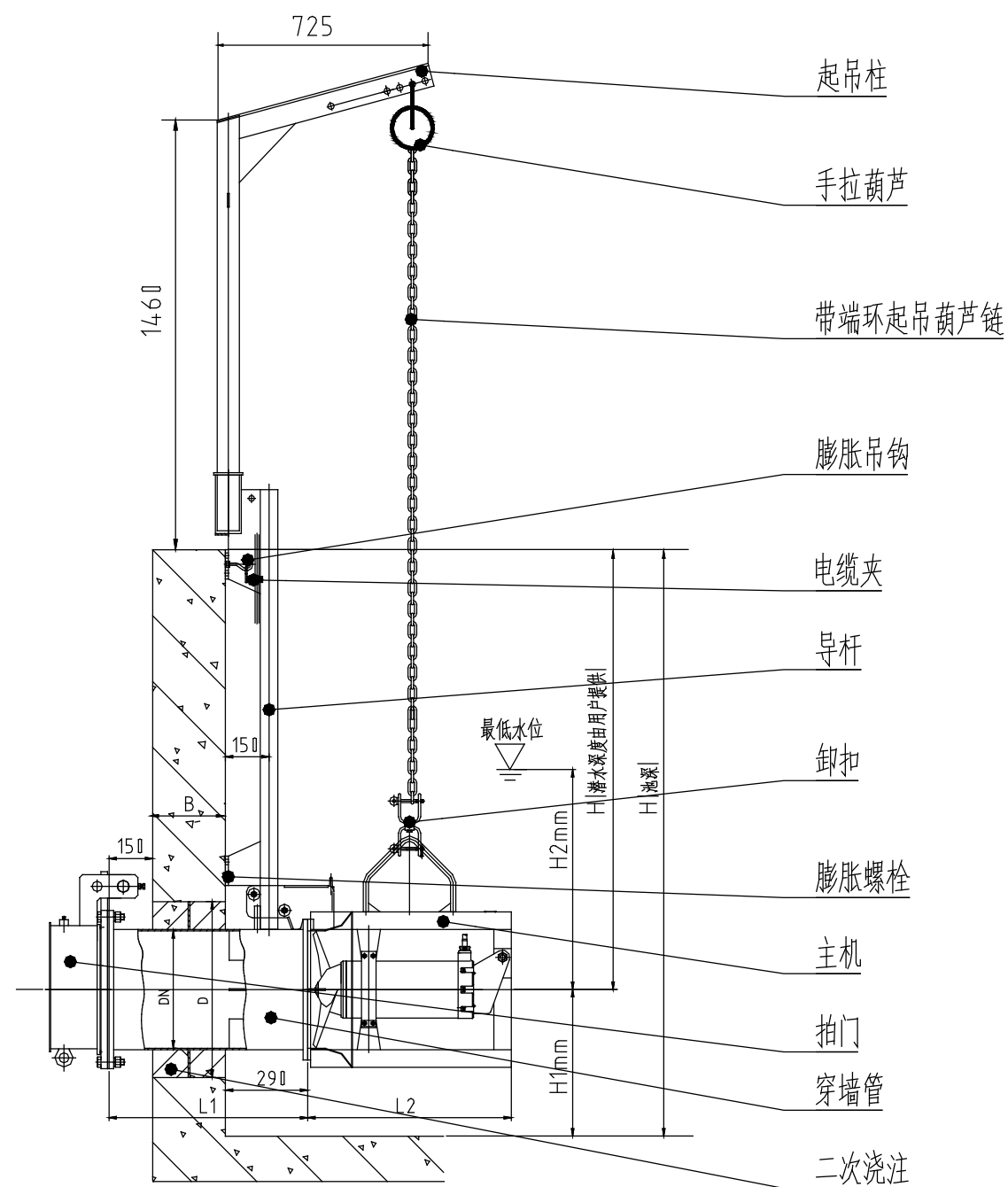


图1 W-I 型安装系统示意图  
Figure 1 I type installation system schemes

**安装系统 II**  
Installation system II

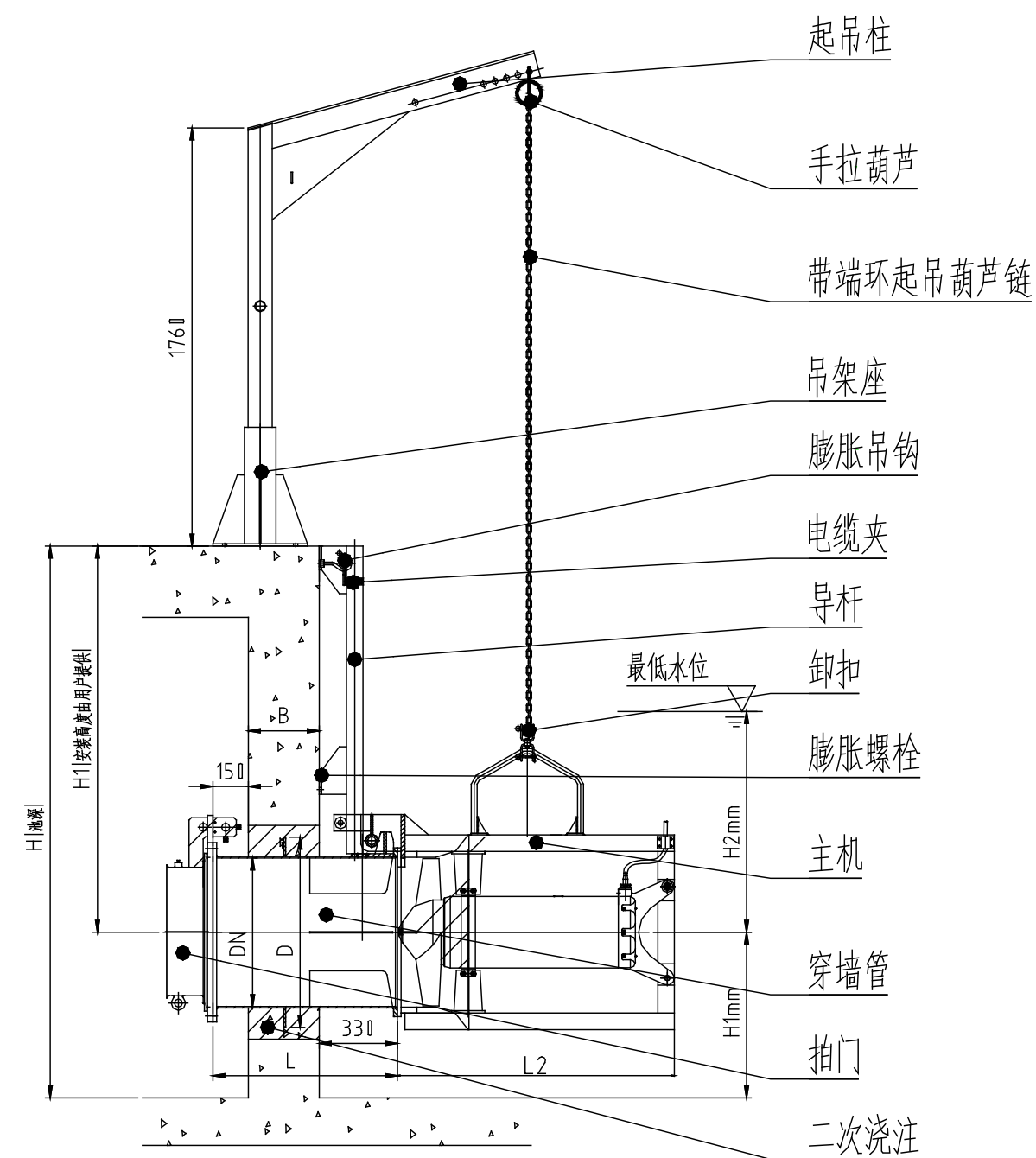


图2 W-II 型安装系统示意图  
Figure 2 II type installation system schemes

设备主要安装尺寸  
The main equipment installation dimensions

序号	型号	DN	D	H1	H2	L1	L2	安装尺寸图	B
1	QJB-W1.5	400	600	450	750	由 工 艺 确 定	700	W-I	≥300
2	QJB-W2.5	400	600	450	750		700	W-I	
3	QJB-W3	400	600	450	750		700	W-I	
4	QJB-W4/6	400	600	450	750		700	W-I	
5	QJB-W4	600	800	600	1200		940	W-II	≥400
6	QJB-W5	600	800	600	1200		940	W-II	
7	QJB-W7.5	600	800	600	1200		1022	W-II	
8	QJB-W10	600	800	600	1200		1022	W-II	
9	QJB-W15	600	800	800	1500		1172	W-II	≥500
10	QJB-W18.5	600	800	800	1500		1172	W-II	
11	QJB-W22	600	800	800	1500		1172	W-II	

电气控制  
Electrical control

均引出控制保护信号线，采用专用控制柜进行控制保护，具有对设备进行过载、缺相、短路、泄漏、超温等保护功能和提供相应的信号指示，可确保机组可靠运行。

回流泵的操作分为就地手动控制和自动控制两种方式，常规为普通就地按钮控制。

可根据用户需要设定设备的启、停及运行时间，并向中控制室PLC系统传输状态显示信号并接受PLC系统输出信号的接口。

The control and protection signal lines are drawn, using special control cabinet for control and protection, has for equipment overload, phase lack, short circuit, leakage, overtemperature protection function and provide corresponding Signal indication, ensure the reliable operation.

The operation of the reflux pump into local manual control and automatic control two ways and conventional for ordinary local button control.

According to user need to set the equipment and the operating time, stop and, and to the control room in PLC system status display signal transmission and accept PLC system output signal of the interface.

注意事项：  
Note:

- 1、安装前要有一名合格电工检查电机、电器并按设备箭头方向确定转向，且池底应平整、结实，池内无杂物；
- 2、如果长时间不运行，重新启动时要防止污泥淤积而造成设备损坏；必要时需进行清理；
- 3、在封闭池内安装要考虑到回流泵整机的进出口安装尺寸。

- 1.before installation should have a qualified electrician check motor, electric appliance and press equipment to determine the direction of arrow,and bottom should level off, strong, in the pool without sundry;
- 2.if long time don't run, restarts to prevent sludge deposition and cause damage to the equipment; When necessary to clean up;
- 3.in closed in the pool installation should consider the import and export of the reflux pump installation dimensions.

搅拌机，水下推进器电控

Blender and submersible propeller electric control

产品特色  
Product features

搅拌机，水下推进器控制柜是公司长期实验与实践结合的成熟产品，已成为公司搅拌器和水下推进器的必备配套产品，她具有以下特色：

- 1.根据客户选型产品，配套设计，确保搅拌机或水下推进器安全可靠使用。
- 2.控制柜不但具有常规的电保护功能：短路、缺相、断相、过载，还具有公司专用保护功能：漏水保护和电机绕组过热保护。
- 3.具有自动，手动功能，特殊需求可定制。

The blender and submersible propeller control cabinet is a mature product developed by our company through combining experiences and practices. It has become a necessary auxiliary product of blenders and submersible propellers, provided with the following features:

- 1.The product model can be selected with auxiliary designs according to customer requirements so that the blender or submersible propeller can be used safely and reliably.
- 2.In addition to regular electric protection functions for short circuit, phase failure, phase loss and overloading, the control cabinet is also provided with special protection functions: water leakage protection and motor winding overheating protection.
- 3.Provided with automatic and manual functiomns. Products can be customized according to special requirements.

使用条件  
Service conditions

- 1.周围空气温度-5~40℃
- 2.空气相对湿度不大于90%（在25℃以下）
- 3.无剧烈震动和颠簸冲击及垂直倾斜度不超过5℃的场所
- 4.无爆炸危险且介质中无腐蚀金属和破坏结绝缘的气体及导电尘埃的场所
- 5.无雨雪及水蒸气侵袭的场所
- 1.Ambient air temperature -5~40℃
- 2.Relative humidity not exceed 90%(< 25℃)
- 3.Places free of severe vibration or impact, the orthogonal rake not exceed 5℃
- 4.Places free of explosion hazard, surrounding medium should be free of conductive dust or gas that would erode metal or destroy junction isolation.
- 5.Places free of invasion of snow, rainfall or vapor.

产品选型  
Product model selection

ADSK-1-[A] - [B] / [C]

代号意义：  
Code meaning:

- ★ADSK-1-----艾德森品牌-设计序号1  
Aidesen brand - design No.1
- ★A-----起动方式。（见表1）  
Starting mode (see table 1)
- ★B-----搅拌机电机功率（KW）  
Blender motor power (KW)
- ★C-----系统控制的搅拌机台数  
Blender quantity controlled by the system

注：特殊控制方式和元器件请在订货时注明。  
Note: Please indicate the special control modes and components when ordering goods.

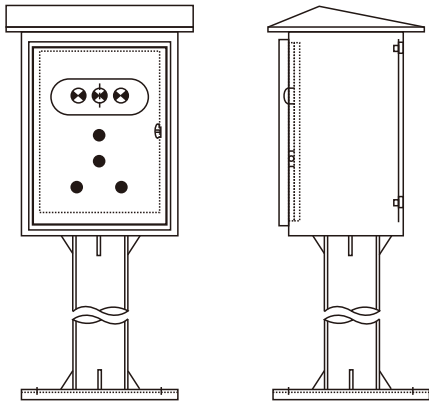


表1： 起动方式特征字含义    Table 1: Meanin of feature&words for starting mode

起动方式特征字 Featured words for starting mode	特征字含义 Meaning of featured words	备 注 Remark
Z	直接起动 Direct starting	
R	软起动 Soft starting	
B	变频起动 Starting through frequency conversion	
TQ	特殊起动方式 Special starting mode	订货时注明 Give indications when

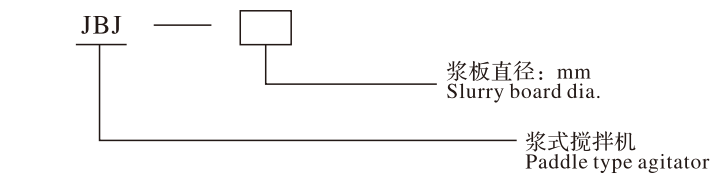


JBJ型浆式搅拌机  
JBJ Paddle type agitor

用途  
Application

JBJ型浆式搅拌机适用于各种药剂的稀释、溶解搅拌、以及给水排水处理的混凝过程中的混合搅拌。  
JBJ paddle type agitor is suitable for mixing agitation for diluting, dissolving, stirring or various reagent as well as mixture stirring in coagulation process of water supply and drainage treatment.

型号表示方式  
Model description



特点  
Features

- 1、构造简单、运行可靠、无堵塞现象，维护简便。
  - 2、可以在要求的混合时间达到一定搅拌强度，满足混合速度、均匀、充分等要求，而且水头损失小，并可适应水量的变化，适用于各种水量的水厂。
1. Simple structure, reliable operation, block free, convenient maintenance.
  2. It is able to reach a certain amount of agitation within required mixing time, satisfying equal and full mixing requirements and certain mixing speed, with low head loss, it also is able to adapt to the water change, applicable for water works who have different specific water yield.

构造及工作过程  
Construction and working process

JBJ型浆式搅拌机如图所示，由搅拌轴、搅拌浆叶、机座和驱动装置组成。  
当原水与混凝剂或助凝剂液体流经混合池时在搅拌机的排液作用下产生流动循环，使混凝药剂与水快速充分混合，以达到混凝工艺的要求。  
JBJ paddle type agitor as shown in the diagram is composed of agitator shaft, agitator paddle, base and driving device.  
When the raw water and coagulant or coagulant aid liquid flow through mixing pool, and make flowing circulation under the liquid drainage effect of agitator, coagulate reagent and water are mixed quickly and thoroughly, meeting up to the requirements of coagulation technology.

电器控制  
Electrical control

按手动或自动控制配置控制箱，可带PLC接口，亦可按用户要求配置。  
It can be equipped with PLC interface according to manual configuration control box, also can be configured according to user's requirements.

订货说明  
Notification for order

1. 应注明水深及池形尺寸。
  2. 应注明主体材质（碳钢或不锈钢）。
  3. 本机不含工作桥，需要时应注明。
  4. 订货时必须提供相关的工艺、土建资料及详细技术要求等。
1. Give clear indication of water depth and pool shape and dimension.
  2. Give clear indication of material of main body (carbon steel or stainless steel).
  3. This machine does not contain the operating bridge, please give clear indication if requires.
  4. When placing an order, please provide relevant technical and civil work information as well as detailed technical requirements.

主要技术参数及安装尺寸  
Main technical parameters and installation dimensions

浆式搅拌机主要技术数据  
Main technical date of paddle type agitor

参数尺寸 Size	型号 Model	JBJ-350	JBJ-500	JBJ-600	JBJ-700	JBJ-800	JBJ-1000	JBJ-1200	JBJ-1800
转速r/min		111	111	88	88	65	65	52	35
电机功率kw		0.75	1.5	1.5	2.2	3	3	4	4
H(mm)		~1300	~1500	~1800	~1900	~2000	~2200	~2200	~2400
H1(mm)		~1020	~1100	~1100	~1100	~1200	~1200	~1200	~1400
D(mm)		350	500	600	700	800	1000	1200	1800
D1(mm)		200	200	200	200	250	250	250	250
D2(mm)		450	450	450	450	550	550	550	550
适用容积(m³)		~10	~10	~40	~40	~40	~60	~60	~90

注：上表数据为折浆式搅拌机参数，如选用平浆式搅拌机另索。  
Note: The above table lists the parameters of folded paddle type agitor, and data of flat paddle type agitor is available at request.

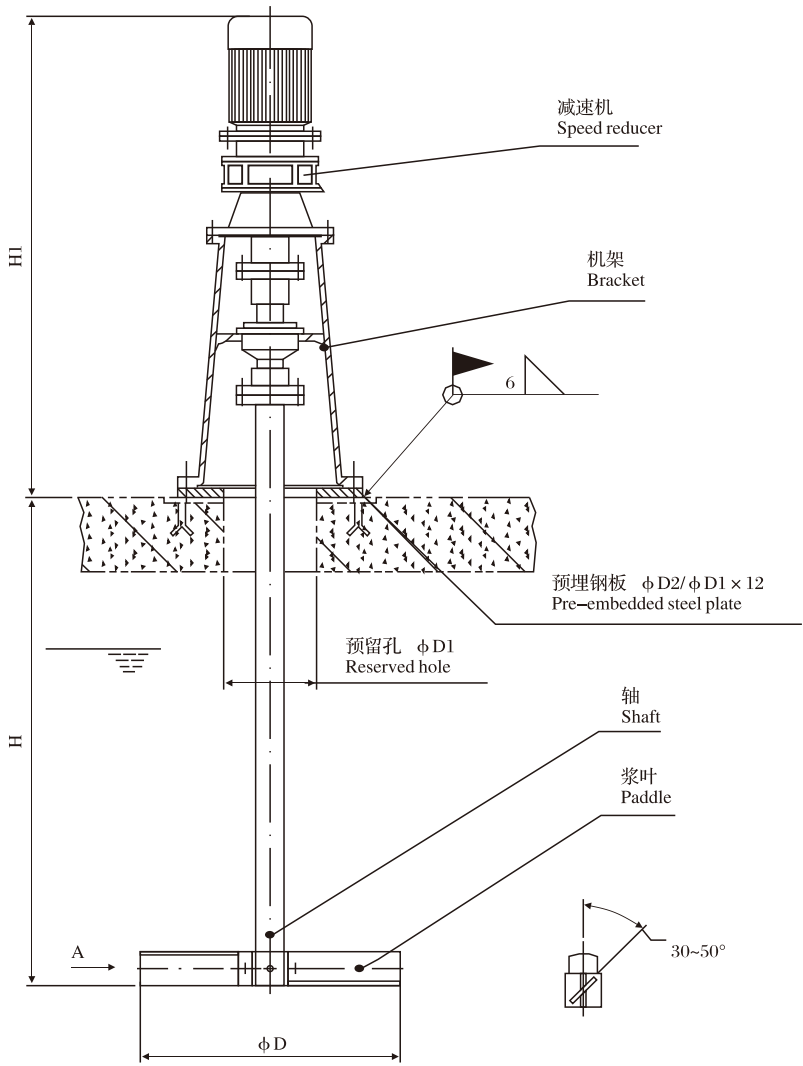


图2：JBJ1型浆式搅拌机外形安装图  
Fig.2: Outline and installation diagram of JBJ1 paddle type agitor

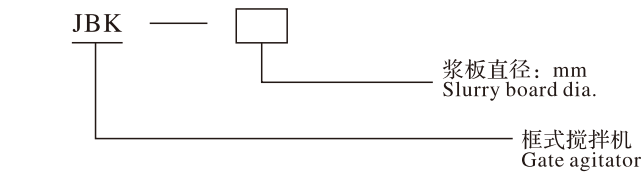


JBK型框式搅拌机  
JBK type Box type mixer

用途  
Application

JBK 型框式搅拌机适用于给水排水处理的混凝过程中的絮凝搅拌。  
JBK type gate agitator is suitable for flocculation stirring in coagulation process of water supply and drainage treatment.

型号表示方式  
Model description



特点  
Features

- 1、构造简单、运行可靠、无堵塞现象，维护简便。
  - 2、可满足絮凝规律的要求，使絮凝过程各段具有不同的搅拌强度，可以适应水量和水温的变化，水头损失小，池体结构简单。
  - 3、设置无级调速后可随水量、原水浊度和投药量的变化而调整搅拌强度，达到满意的絮凝效果，节约药剂的用量。
1. Simple structure, reliable operation, block free, convenient maintenance.
  2. It is able to satisfy the requirements of flocculation rules, enables each stage of flocculation process to have different amount of agitation, adapting to water change and water temperature change, with low head loss and simple pool structure.
  3. When it is set with stepless speed regulation, it is able to regulate the amount of agitation along with change of water quantity, turbidity of raw water and dose, reaching optimum flocculation efficiency and saving reagent.

构造及工作过程  
Construction and working process

JBK型框式搅拌机如图所示，由搅拌轴、框式搅拌桨叶、轴承装置、机座和驱动装置组成。  
当原水与混凝剂或助凝剂混合液体流经沉淀池时在搅拌机的排液作用下产生流动循环，使水中的胶体颗粒发生碰撞，吸附并逐渐结成一定大小的矾花，使绝大部分矾花截留在沉淀池内。

JBK type gate agitator as shown in diagram is composed of agitator shaft, gate agitator paddle, bearing unit, base and driving device.  
When the raw water and coagulant or coagulant aid mixed liquid flow through sedimentation tank, and make flowing circulation under the liquid rainage effect of agitator, colloidal particles in water collide each other, adsorb and form into alum blossoms of certain size, and most of the alum blossoms are held back in the sedimentation tank.

电器控制  
Electrical control

按手动或自动控制配置控制箱，可带PLC接口，亦可按用户要求配置。  
It can be equipped with PLC interface according to manual configuration control box, also can be configured according to user's requirements.

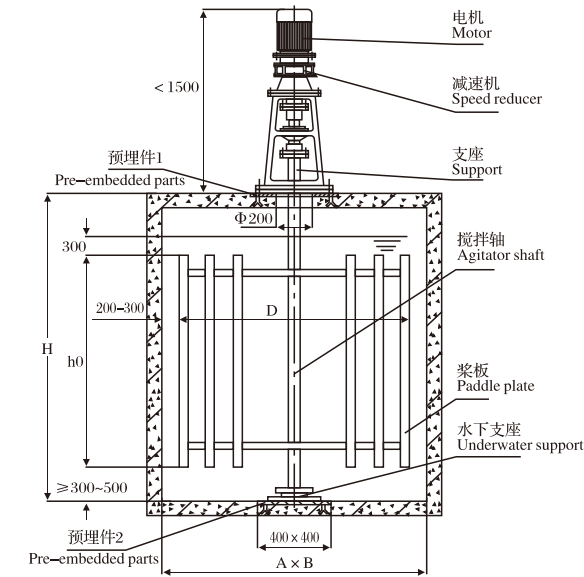
订货说明  
Notification for order

1. 应注明水深及池形尺寸。
  2. 应注明主体材质（碳钢或不锈钢）。
  3. 本机不含工作桥，需要时应注明。
  4. 订货时必须提供相关的工艺、土建资料及详细技术要求等。
1. Give clear indication of water depth and pool shape and dimension.
  2. Give clear indication of material of main body (carbon steel or stainless steel).
  3. This machine does not contain the operating bridge, please give clear indication if requires.
  4. When placing an order, please provide relevant technical and civil work information as well as detailed technical requirements.

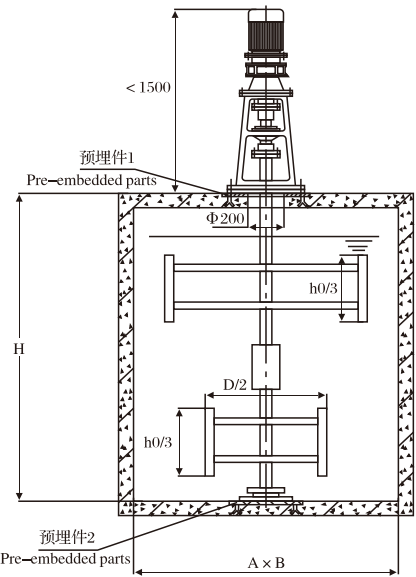
主要技术参数及安装尺寸  
Main technical parameters and installation dimensions

框式搅拌机主要技术数据  
Main technical date of gate type agitator

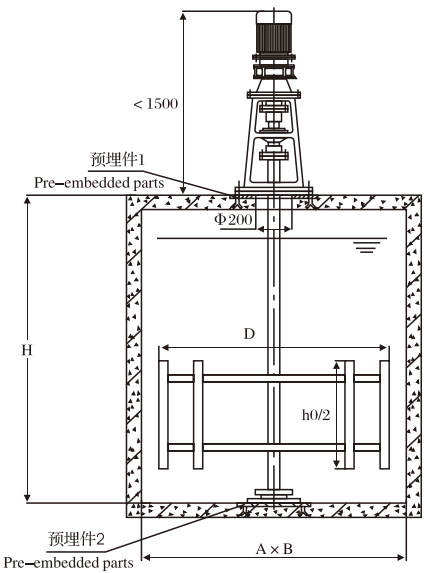
型号 Model	参数尺寸 Size	池子尺寸 m Pool dimension		搅拌机尺寸 mm Agitator dimension		电动机功率 kw Motor power			转速r/min Speed		
		A × B	H	D	h0	I	Ⅱ	Ⅲ	I	Ⅱ	Ⅲ
JBK-1700	2.2 × 2.2	3.4	1700	~2300	0.75	0.37	0.37	8	5.2	3.9	3.0
JBK-2800	3.25 × 3.25	4	2800	~2900					5.2	3.9	
JBK-3000	3.5 × 3.5	3.5	3000	~2400	0.55	0.37	0.25	3.9	2.5	1.8	1.5
JBK-3500	4.3 × 4.3	4	3500	~2900	1.1	0.75	0.55	3.9		1.5	
JBK-4000	4.7 × 4.7	5	4000	~3900	1.5	1.1	0.75	3.9	3.0	2.5	



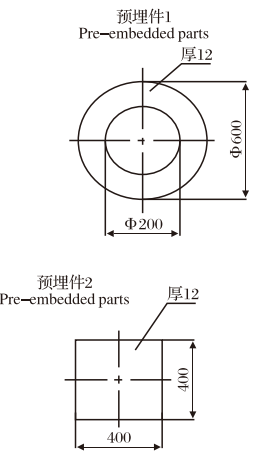
I 单层全高桨板  
Single-layer full-height paddle plate



II 双层半高桨板  
Double-layer half-height paddle plate



III 单层半高桨板  
Single-layer half-height paddle plate



JBK型框式搅拌机外形安装图  
Outline and installation diagram of JBK type gate agitator

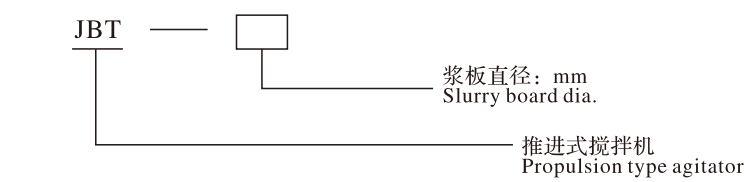


JBT型推进式搅拌机  
JBT Propulsion type agitor

用途  
Application

主要用于大、中型水厂或污水处理厂中混凝剂等药剂的溶解，以及在池内或容器内不同比重的有机或无机液体的液相搅拌混合。  
It is mainly applied to large and middle-scale water works or sewage-treatment plant, used for reagent dissolving such as coagulant, as well as for agitating and mixing organic or inorganic liquid in the pool or container that has different specific gravities.

型号表示方式  
Model description



特点  
Features

耗用功率小，构造简单、运行可靠、无堵塞现象，维护简便。  
Low power drain, simple structure, reliable operation, block free, convenient maintenance.

构造及工作过程  
Construction and working process

JBT型推进式搅拌机如图所示，由搅拌轴、搅拌叶轮、轴承装置、机座和驱动装置组成。  
当原水与混凝剂或助凝剂液体流经混合池时在搅拌机的排液作用下产生流动循环，使混凝药剂与水快速充分混合，以达到混凝工艺的要求。  
JBT propulsion type agitator as shown in the diagram is composed of agitator shaft, agitator impeller, bearing unit, base and driving device.  
When the raw water and coagulant or coagulant aid liquid flow through mixing pool, and make flowing circulation under the liquid drainage effect of agitator, coagulate reagent and water are mixed quickly and thoroughly, meeting up to the requirements of coagulation technology.

电器控制  
Electrical control

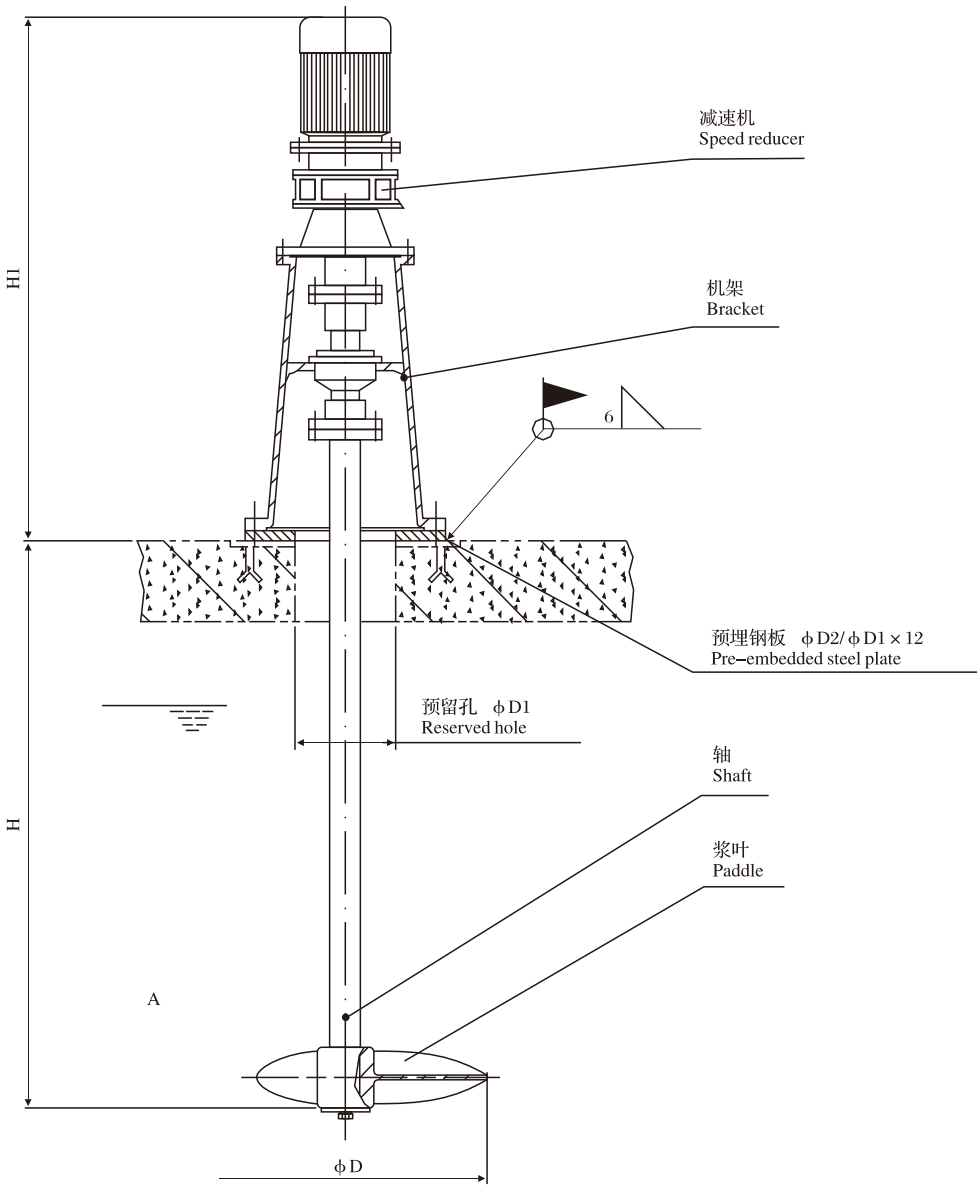
按手动或自动控制配置控制箱，可带PLC接口，亦可按用户要求配置。  
It can be equipped with PLC interface according to manual configuration control box, also can be configured according to user's requirements.

订货说明  
Notification for order

- 应注明水深及池形尺寸。
  - 应注明主体材质（碳钢或不锈钢）。
  - 本机不含工作桥，需要时应注明。
  - 订货时必须提供相关的工艺、土建资料及详细技术要求等。
- Give clear indication of water depth and pool shape and dimension.
  - Give clear indication of material of main body (carbon steel or stainless steel).
  - This machine does not contain the operating bridge, please give clear indication if requires.
  - When placing an order, please provide relevant technical and civil work information as well as detailed technical requirements.

主要技术参数及安装尺寸  
Main technical parameters and installation dimensions

参数尺寸 Size	型号 Model	JBT-300	JBT-350	JBT-400	JBT-500	JBT-700
转速r/min		295	295	295	136	111
电机功率kw		1.5	2.2	3	3	5.5
H(mm)		~1400	~1400	~1800	~2000	~3000
H1(mm)		< 1100	< 1100	< 1100	< 1220	< 1400
D(mm)		300	350	400	500	700
D1(mm)			200		250	
D2(mm)			400		550	



JBT型推进式搅拌机外形安装图  
Outline and installation diagram of JBT propulsion type agitator

JBX旋流式搅拌机  
JBX vortex type blender

用途  
Application

JBX旋流式搅拌机适用于水处理过程中的污泥消化搅拌，该设备具有不同的搅拌速度，以适应水量水温的变化。  
The JBX vortex type blender is suitable for blending sludge during the process of water treatment. The equipment has different blending speed to meet changes of water volume and water temperature.

型号表示方式  
Model description



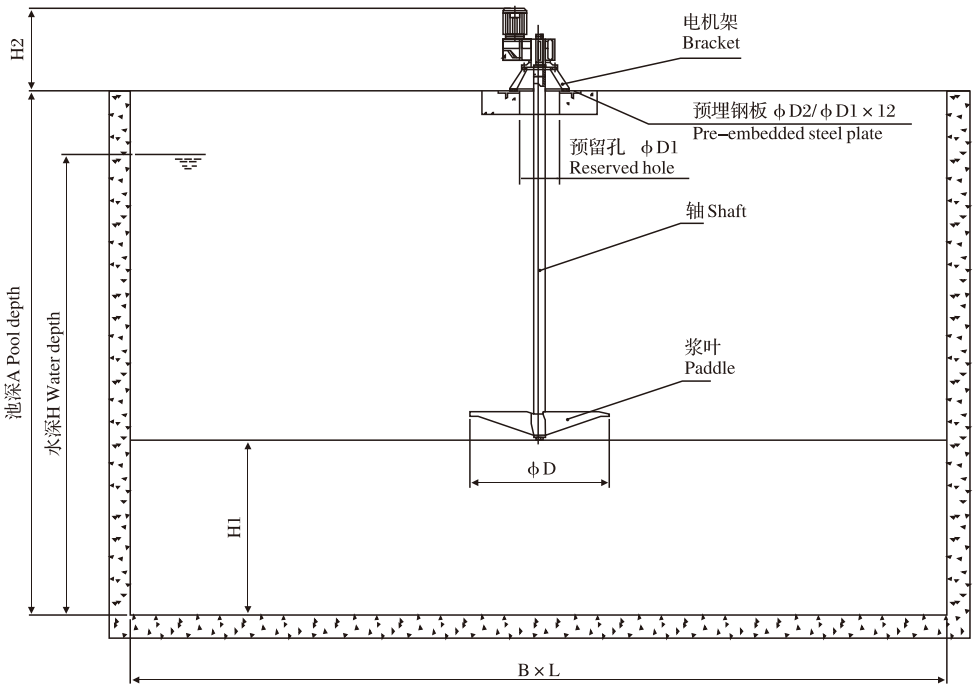
特点  
Features

- 1、构造简单、运行可靠、无堵塞现象，维护简便。
  - 2、可以在要求的混合时间达到一定搅拌强度，满足混合速度、均匀、充分等要求，而且水头损失小，并可适应水量的变化，适用于各种水量的水厂。
1. Simple structure, reliable operation, block free, convenient maintenance.
  2. It is able to reach a certain amount of agitation within required mixing time, satisfying equal and full mixing requirements and certain mixing speed, with low head loss, it also is able to adapt to the water change, applicable for water works who have different specific water yield.

构造及工作过程  
Construction and working process

JBX型旋流搅拌机如图所示，由电动机、立式减速机、机架、联轴器、主轴、浆叶等组成。当电动机接通电源后经过减速机减速，由联轴器把扭矩传递给搅拌机主轴带动浆板转动，从而搅拌液体。

The JBX model vortex blender as shown in the figure is composed of motor, vertical speed reducer, machine frame, coupler, spindle, blade and etc. After the motor is switched on and subjected to speed reduction by the speed reducer, the coupler will transfer the torque to the blender spindle to drive the blade board to rotate, and thus blending the liquid.



JBX型旋流搅拌器外形安装图  
Outline and installation diagram of JBX model vortex blender

主要技术参数及安装尺寸  
Main technical parameters and installation dimensions

参数尺寸 Size	型号 Model	JBX-2500	JBX-2300	JBX-2000	JBX-1800	JBX-1600	JBX-1400	JBX-1100	JBX-800
转速r/min		27	36	36	42	42	51	51	63
电机功率kw		3	22	22	22	15	15	15	0.75
H(mm)		1500	1500	1500	1200	1200	1200	1000	1000
叶片直径D(mm)		2500	2300	2000	1800	1600	1400	1100	800
预留孔D1(mm)		350	350	300	300	300	300	250	250
D2(mm)		700	700	600	600	600	600	500	500
适用容积(m³)		~180	~150	~120	~100	~90	~80	~60	~40

注：图中尺寸L、B、A、H由用户提供，转速与功率可根据需要调整。  
Note: In A size L, B, by users, H, speed and power can be adjusted according to need.

电器控制  
Electrical control

按手动或自动控制配置控制箱，可带PLC接口，亦可按用户要求配置。  
It can be equipped with PLC interface according to manual configuration control box, also can be configured according to user's requirements.

订货说明  
Notification for order

1. 应注明水深及池形尺寸。
  2. 应注明主体材质（碳钢或不锈钢）。
  3. 本机不含工作桥，需要时应注明。
  4. 订货时必须提供相关的工艺、土建资料及详细技术要求等。
1. Give clear indication of water depth and pool shape and dimension.
  2. Give clear indication of material of main body (carbon steel or stainless steel).
  3. This machine does not contain the operating bridge, please give clear indication if requires.
  4. When placing an order, please provide relevant technical and civil work information as well as detailed technical requirements.



## F/HLJ型立式环流搅拌机

### 产品概述

#### Products overview

F/HLJ型立式环流搅拌机,又叫浮筒式潜水搅拌机，是针对要求搅拌温和、均匀，不会对活性污泥的絮状结构和菌胶团产生破坏作用的池深较深的圆形或方形池，进行搅拌而设计的新一代搅拌设备。在总结国内外现有污水搅拌设备的基础上，对产品结构和性能进行了创新，特别是在推进式搅拌机的基础上，创造性地将卧式结构改为立式环流结构，使其在整体结构技术性能、搅拌效率、服务面积、适用性等方面更具有显著特点。具有使用寿命长、噪声低、安装维护方便、投资省、运行费用低等优点。

F/HLJ type vertical circulation mixer, also called float type diving mixer, mixing is according to the requirement of moderate and uniform, round or square pool and zoogloea floc structure not on activated sludge produced damaging effects the deep pool, a new generation of mixing and mixing equipment design. Based on summarizing the existing sewage mixing equipment, the structure and performance of the product innovation, especially in the base of promoting the mixer, creatively horizontal structure is changed into a structure of vertical circulation, which has more remarkable characteristics in the overall structure of technical performance, mixing efficiency, service area, applicability etc.. The utility model has the advantages of long service life, low noise, convenient installation and maintenance, low investment, low running cost, etc.

### 工作机理

#### Working mechanism

F/HLJ型立式环流搅拌机，采用大排量、螺旋桨式的推进叶轮、叶桨作为主要水力部件，运行时潜水电机带动推进式叶轮、叶桨工作，使流体产生一对流速和流场，向水池底部和四周形成环状主流带，从而实现大面积立体环流搅动，使池中污泥始终处于翻动和悬浮状态，达到了均匀、温和搅动的目的，提高了处理效果。

F/HLJ型浮筒式环流搅拌机，根据使用场合不同，分为高、中、低三种搅拌系列：

中高速搅拌机系列转速相对较高，服务范围相对较小，但搅拌较为温和。可适用于污水处理的厌氧或兼氧处理。

低速推搅拌系列转速低、服务范围大，水力效率高，搅拌均匀，可适用于各类污水处理工程的调节池中使用，也可用于厌氧或兼氧处理。

F/HLJ type vertical circulation mixer, with large displacement, propeller type impeller, the impeller as the main hydraulic components, running submersible electric motor drives the impeller, the impeller and to promote the work, to produce a pair of fluid velocity and flow to the bottom of the pool and formed around the ring with the mainstream, and realize the large area three-dimensional circulation to stir the sludge is always turning and suspended state, to achieve even mild agitation, to improve the treatment effect.

F/HLJ type float type circulation mixer, according to the use of different occasions.

Divided into high, medium and low three mixer series:

High speed mixer series speed is relatively high, the scope of service is relatively small, but relatively mild agitation. Anaerobic or facultative treatment suitable for sewage treatment.

The utility model has the advantages of low speed, low rotating speed, large service range, high hydraulic efficiency and uniform mixing, and can be used in the regulating pool of various sewage treatment works, and can also be used for anaerobic or facultative treatment.

### 特点

#### Features

- 1、紊流面积大，作用区域广，搅拌温和、均匀，不会对活性污泥的絮状结构和菌胶团产生破坏作用。
- 2、水流采用垂直大循环的流动方案，适用于较深的圆型或方型水池，搅拌污泥充分，辐射面积可达100~800平方米。
- 3、搅拌机的动力为潜水电机，应用时潜水入液下工作，不仅冷却条件好，适用深度范围广，而且不会产生噪声等二次污染。
- 4、潜水电机的主密封为两道独立机械密封，摩擦付材质为耐腐蚀、耐磨损的合金与碳化硅，所有紧固件均为不锈钢材质。
- 5、电机绕组为F级绝缘，防护等级为IP68，配置泄漏检测、绕组过热等保护功能，使产品使用更加安全可靠。
- 6、可采取多种安装形势。采用浮动式安装时，可随时移动工作位置，方便灵活；可进行集中自动控制，也可以单机运行，管理方便。

- 1, turbulent area, region wide, moderate and uniform mixing, floc structure and zoogloea not have damaging effects on activated sludge.
- 2, the flow of large vertical circulation of the flow program, suitable for deep round or square pool, full mixing sludge, radiation area of 100~800 square meters.
- 3, the power of the mixer for submersible motor, diving into the liquid when applied, not only good cooling conditions, suitable for a wide range of depth, and will not produce noise and other pollution two.

4, submersible motor main seal for two independent mechanical seal, friction material for corrosion resistance, wear resistant alloy and silicon carbide, all fasteners are stainless steel material.

5, the motor winding for F class insulation, protection level is IP68, configuration leakage detection, winding overheating protection function, make the product use more safe and reliable.

6, can take a variety of installation situation. When the utility model is installed in a floating type, the working position can be moved at any time, and the utility model is convenient and flexible.

### 使用范围和使用条件

#### Scope of use and conditions of use

可广泛用于石油、化工、印染、制革、医药、食品、造纸、农药等行业废水和城市生活污水的处理。

介质温度~0~40℃

介质PH值~5~9

介质密度不超过1150Kg/m3；

设备通过纤维物有限，应避免塑料编织物、金属线、柴棒等杂物进入池中。

潜水电机必须完全潜入水中工作，不能在易燃易爆和强腐蚀的环境中工作。

Can be widely used in petroleum, chemical industry, printing and dyeing, leather, medicine, food, paper making, pesticide and other industries and municipal wastewater treatment.

Medium temperature ~0~40℃

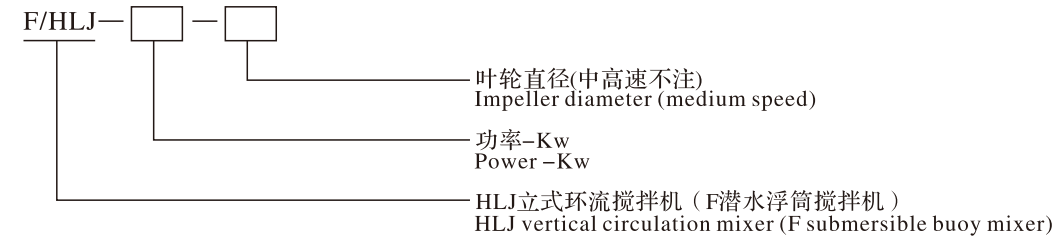
Medium pH value ~5~9

Medium density not exceeding 1150Kg/m3;

Equipment through the fiber is limited, should avoid plastic woven fabrics, metal wire, firewood and other debris into the

### 型号表示方式

#### Model description



### 结构简介

#### Structure introduction

本厂自行开发的潜水型浮筒搅拌机，结构紧凑体积小。中高度搅拌机由浮筒、潜水电机、叶轮、钢丝绳和导杆组成；低速浮筒搅拌机由叶桨、减速机、潜水电机、钢丝绳、主轴和浮筒组成。

Diving type buoy mixer factory developed, compact structure and small size. In the height of mixer from buoys, submersible motor, impeller, wire rope and the guide rod; the low-speed mixer buoy by Ye Jiang, submersible motor, reducer, wire rope, spindle and buoy composition.

### 产品规格和技术参数

#### Product specifications and technical parameters

在额定电压380V、频率为50Hz时的技术参数表Technical parameters of 380V at rated voltage and frequency of 50Hz

型号 Model		电机功率 ( kW ) Motor power	额定电流 (A) Rated current	服务范围 m Maximum	最大水深 m Max water depth	最小水深 m Minimum water depth	重量 (kg) weight
中 高 速 搅 拌 机	F/HLJ-1.5	1.5	4.5	2~4	8	4	138
	F/HLJ-2.5	2.5	7.3	2~4.5	8	5	142
	F/HLJ-3	3	8	3~5	9	5	150
	F/HLJ-4	4	9.6	4~6	10	5	250
	F/HLJ-5	5	18	4~8	10	5	255

F/HLJ型立式环流搅拌机  
F/HLJ vertical circulation mixer

产品规格和技术参数  
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中 高 速 搅 拌 机	F/HLJ-7.5	7.5	26.7	5~8	15	6	360
	F/HLJ-10	10	29.3	5~10	15	6	374
	F/HLJ-15	15	42.8	6~10	15	6	410
低 速 搅 拌 机	F/HLJ-1100	1.5~3	3.7~6.7	6~8	10	4.5	285
	F/HLJ-1200	1.5~3	3.7~6.7	8~10	10	4.5	295
	F/HLJ-1400	1.5~3	3.7~6.7	8~10	10	4.5	298
	F/HLJ-1600	1.5~3	3.7~6.7	8~10	10	4.5	300
	F/HLJ -1800	2.2~4	5.1~8.8	8~12	15	5	310
	F/HLJ -2000	2.2~4	5.1~8.8	8~15	15	5	320
	F/HLJ -2200	4~5	8.8~12	8~15	15	5	330
	F/HLJ -2500	4~7.5	8.8~16	10~20	20	6	350

安装调试  
Installation debugging

- 中高速搅拌机的安装
- 1、将四只浮筒抱箍分别紧固在浮箱四边的中间位置，然后将固定用钢丝绳的一端用鞋扣连接在包箍上的耳环上。安装时应根据现场情况，准备四根足够长且牢固的绳索，分别拴牢钢丝绳的另一端。
- 2、潜水搅拌机电缆线应固定在一根钢丝绳上，顺延到岸边接入电控柜。
- 3、检查电机的旋转方向。在潜水搅拌机初次安装启动前，或每次重新安装后，都应检测旋转方向。检查方法是：瞬间启动潜水搅拌机，观察叶轮旋转方向与标牌指示的方向一致。弱国旋转方向不一致，只需搅拌三相中任意两相的位置即可。如果是多台潜水搅拌机连在同一台控制箱或端子上，多台潜水搅拌机必须单独进行检查。
- 4、用吊具控牢浮筒注意平衡，不能直接掉在包箍耳环。用起吊设备将整机徐徐吊起，慢慢放入池水中，解开吊具，用绳索将其轻轻的拉到池中位置，浮筒以四角对四池边的菱形位置摆放。然后把钢丝绳微微拉紧，目测对边的两根钢丝绳在一条直线上，四根钢丝绳所形成的两条直线交叉垂直且浮筒四边成垂直状，沿着钢丝绳的方向，在池壁顶端坚固位置钻孔，用膨胀螺栓将地桩固定好，调整四边钢丝绳长度，注意考虑水位可能下降的幅度，放出足够的余量，夹好夹头，用鞋扣固定在地桩上。在整吊装过程中，始终要注意保护电缆，决不允许用潜水搅拌机电缆起吊、悬挂搅拌机。
- 低速搅拌机安装
- 安装叶桨时，安装轮毂和叶桨的吻合面安装，叶桨的最尖角一定是超出主机轮毂。其余安装步骤与中高速搅拌机的安装步骤一致。
- 注意!叶轮不能在水下反转，否则会给主机和叶片造成严重损坏!

- Installation of high speed mixer
- 1, four float hoop are respectively fastened at the middle position of the floating box edges, and then fixed with one end of the wire rope is connected with the buckle steel hoop earrings. The installation should be according to the site, for four long enough and strong rope, tied the other end of the wire rope respectively.
- 2, submersible agitator cable should be fixed on a rope, extended to the shore access control cabinet.
- 3, check the motor rotation direction. The rotation direction should be detected before or after the initial installation of the submersible mixer. Check the method is: immediately start the diving mixer, observe the direction of rotation of the impeller and the direction of the signs are consistent. Weak rotation in different direction and position can be simply mixing in any two-phase three-phase. If more than one diving mixer is connected to the same control box or terminal, many diving mixers must be checked separately.
- 4, using fast float balance hanger can not directly fall on the package, hoop earrings. With the lifting equipment of the machine slowly lifted slowly into the water, to use a rope to the sling, gently pull to the pool, float in a diamond position four angle on the display four. Then the rope is slightly taut, visual on the edges of two steel ropes in a straight line, formed by four steel rope two lines cross vertical and vertical float quadrilateral shape, along the direction of the wire rope, strong position to drill a hole in the top of the tank walls, with expansion bolts fixed pile, adjustment with the length of the wire rope, pay attention to consider the water level may decline, release sufficient margin, good clamping chuck, with buckle fixed on piles. In the lifting process, always pay attention to the protection of the cable, and never allow for cable suspension lifting, diving mixer mixer.
- Low speed mixer installation
- Install the impeller hub and the impeller installation, with surface mounted paddle, the angle is more than the host hub. The remaining installation steps are consistent with the installation steps of the medium and high speed mixer.
- Note that the impeller can not be reversed under water, otherwise it will cause serious damage to the host and blade!

