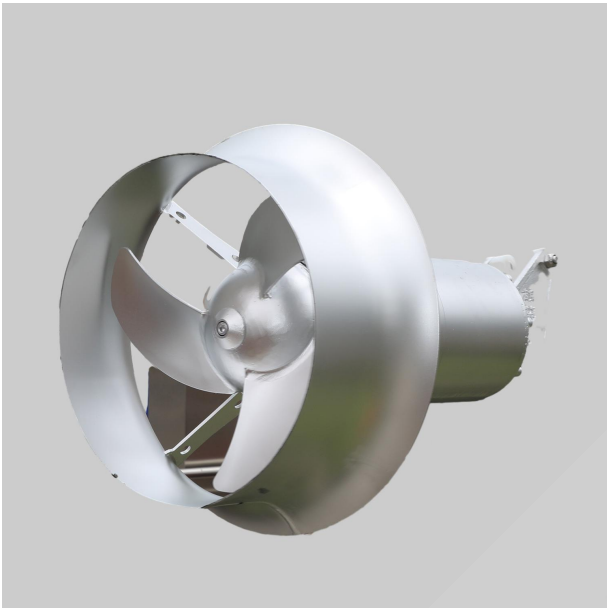


QJB型潜水搅拌机

QJB type submersible mixer



用途 /USE TO

- QJB型潜水搅拌机可分为混合搅拌和低速推流两大系列。**
- 混合系列搅拌机适用于污水处理厂和工业流程中搅拌含有悬浮物的液体；
 - 低速推流系列搅拌机适用于工业和城市污水处理厂曝气池，其产生低切向流的强力水流，可用于循环及硝化、脱氮和除磷阶段创建水流等。

- The QJB submersible mixer can be divided into two series: mixing and low-speed push flow.**
- The mixing series mixer is suitable for mixing liquids containing suspended solids in sewage treatment plants and industrial processes;
 - The low-speed push flow series mixer is suitable for aeration tanks in industrial and urban sewage treatment plants. It produces strong water flow with low tangential flow, which can be used for circulation, nitrification, denitrification, and phosphorus removal stages to create water flow.

适用范围 /SCOPE OF APPLICATION

搅拌机在下列条件下应能正常连续运行
The mixer should be able to operate continuously and normally under the following conditions

01	最高介质温度不超过 The maximum medium temperature shall not exceed	40°C
02	介质的PH值 PH value of the medium	5~9之间 Between 5 and 9
03	液体密度不超过 Liquid density not exceeding	1150Kg/m³
04	长期潜水运行，潜水深度一般不超过 Long term diving operation, with a diving depth generally not exceeding	20m

性能特点 / PERFORMANCE CHARACTERISTICS

1. 结构紧凑、操作维修简单、安装检修方便、使用寿命长;
 2. 叶轮具有最佳的水力设计结构, 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. 与曝气系统混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. 电机绕组绝缘等级F级, 防护等级为IP68, 使用优质轴承和电机装置, 使电机的工作更安全;
 5. 两道机械密封。
1. Compact structure, easy operation and maintenance, convenient installation and maintenance, long service life;
 2. The impeller has the best hydraulic design structure, high working efficiency, and the swept back blades have self-cleaning function, which can prevent debris from entangling and blocking;
 3. Mixing with the aeration system can significantly reduce energy consumption, increase oxygen filling capacity, and effectively prevent sedimentation;
 4. The insulation level of the motor winding is F, and the protection level is iP68. High quality bearings and motor devices are used to make the operation of the motor safer;
 5. Two mechanical seals.

型号表示方法 / MODEL REPRESENTATION METHOD

QJB 4 / 6 — 400 / 3 — 960 C/S/P

材质 C: 铸铁 S: 不锈钢
Material C: Cast Iron S: Stainless Steel

叶轮转速 r/min	Impeller speed r/min
叶片数量	Number of leaves
叶轮直径mm	Impeller diameter mm
电机极数	Number of motor poles
电机功率KW	Motor power KW
潜水搅拌机	Submersible mixer



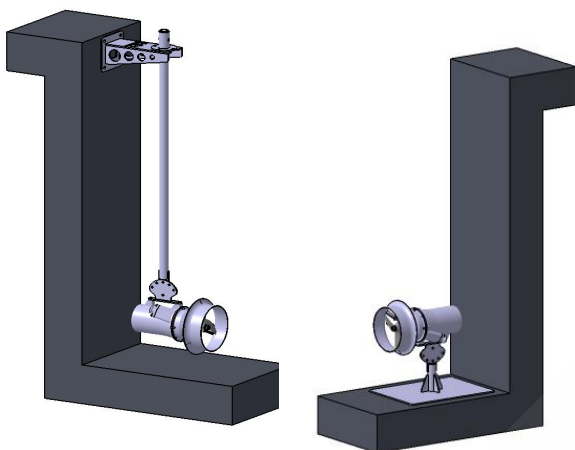
!!!搅拌机必需完全潜入水中工作, 不能再易燃易爆环境下或有强腐蚀性液体的环境中工作!!!
!!! The mixer must be completely submerged in water for operation and should not be used in flammable or explosive environments or environments with highly corrosive liquids!!!



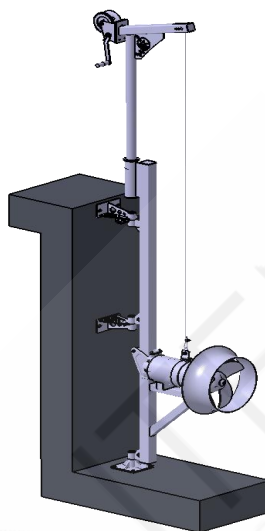
!!!钢膨胀螺栓必须按要求固定, 搅拌机安装完毕后, 必须将电缆拉紧后牢牢固定好!!!
!!! The steel expansion bolt must be fixed as required. After the mixer is installed, the cable must be tightened and firmly fixed!!!

安装系统 /INSTALL THE SYSTEM

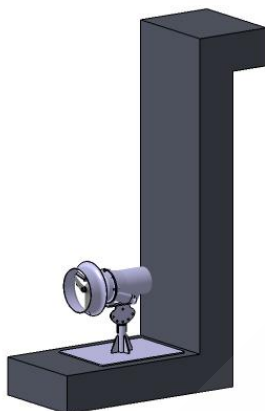
安装系统 I -1(推荐使用)
Install System I-1 (recommended)



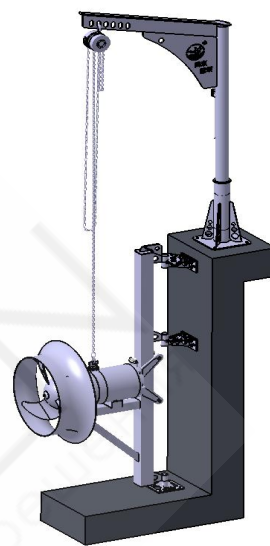
安装系统 II
Installation System II



安装系统 I -2(移动式)
Installation System I-2 (Mobile)



安装系统 III
Installation System III



选型参考 /SELECTION REFERENCE

潜水搅拌机的选型是一项比较复杂的工作，选型的正确与否直接影响设备的正常使用，作为选型的原则就是要让搅拌机在适合的容积里发挥充分的搅拌功能，一般可用流速来确定。根据污水处理厂不同的工艺要求，搅拌机最佳流速应保证在0.15~0.3m/s之间，如果低于0.15m/s的流速则达不到推流搅拌效果，超过0.3m/s的流速则会影响工艺效果且造成浪费。所以在选型前首先确定潜水搅拌机运用的场所，如：污水池、污泥池、生化池；其次是介质的参数，如：悬浮物含量、粘度、温度、PH值；还有水池的形状、水深等。

The selection of a submersible mixer is a complex task, and the correctness of the selection directly affects the normal use of the equipment. As a principle of selection, it is necessary to ensure that the mixer can fully perform its mixing function in the appropriate volume, which can generally be determined by the flow rate. According to the different process requirements of sewage treatment plants, the optimal flow rate of the mixer should be ensured between 0.15~0.3m/s. If the flow rate is lower than 0.15m/s, the push flow mixing effect cannot be achieved. If the flow rate exceeds 0.3m/s, it will affect the process effect and cause waste. So before selecting, first determine the location where the submersible mixer will be used, such as sewage tanks, sludge tanks, and biochemical tanks; Next are the parameters of the medium, such as suspended solids content, viscosity, temperature, and pH value; Also, the shape and depth of the pool.

搅拌机所需的配套功率是按容积大小、搅拌液体的密度和搅拌深度而确定的，根据具体情况采用一台或多台搅拌机。为了满足不同环境下都能达到最佳的搅拌效果，我们为用户提供了多种型号的潜水搅拌机，同时可提供选型服务。可参考下面的潜水搅拌机流场图。

The required matching power of the mixer is determined by the volume, density of the mixed liquid, and mixing depth, and one or more mixers are used according to the specific situation. In order to achieve the best mixing effect in different environments, we provide users with multiple models of submersible mixers and offer selection services. You can refer to the flow field diagram of the submersible mixer below.

性能参数 / PERFORMANCE PARAMETERS

搅拌机在额定电压380V,频率为50Hz, 绕阻绝缘等级F级, 防护等级IP68,工作制式 I 条件下。

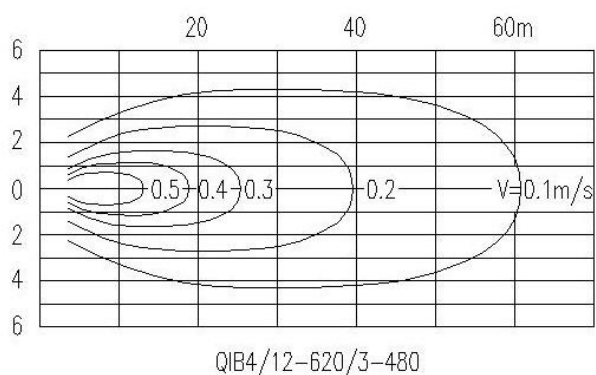
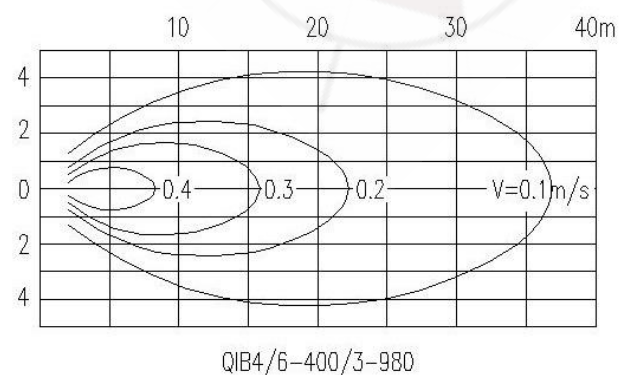
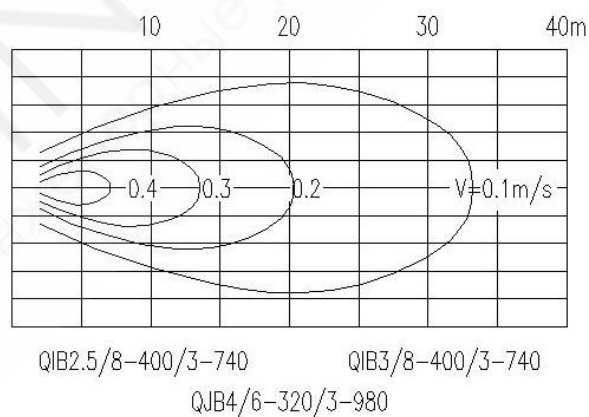
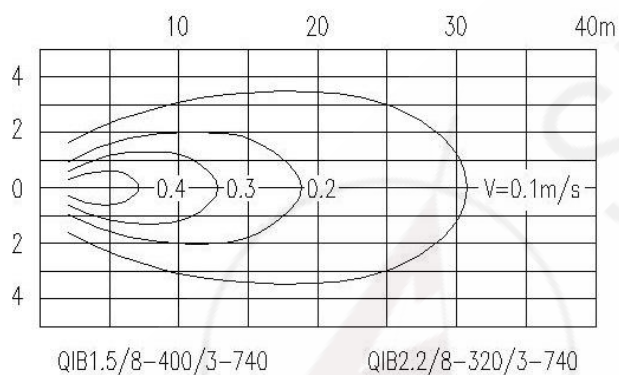
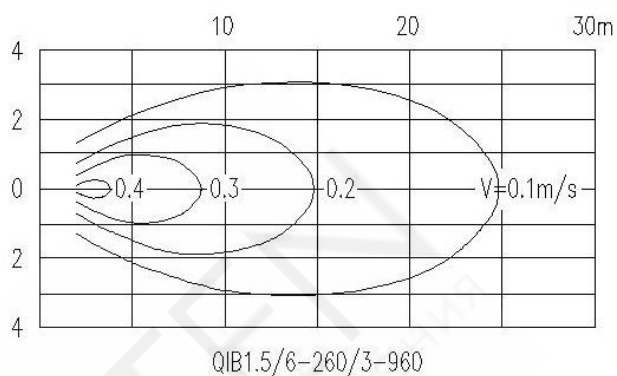
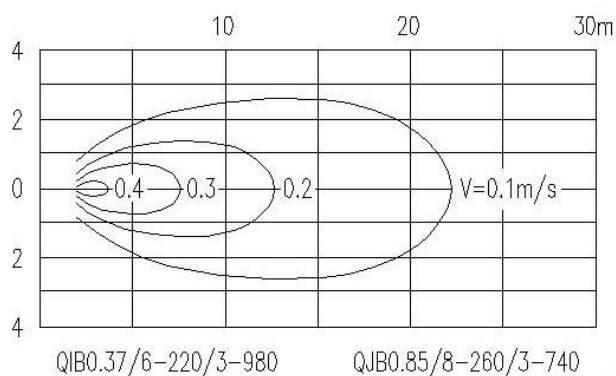
The mixer operates under rated voltage of 380V, frequency of 50Hz, winding insulation level of F, protection level of IP68, and working mode I.

搅拌机型号 Blender model		功率 power	电流 electric current	叶轮直径 Impeller diameter	叶轮转速 Impeller speed	推力 thrust	重量 weight	安装系统 Install the system
		Kw	A	mm	r/min	N	Kg	
铸件式 Casting style	QJB0.85/8-260/3-740	0.85	3.2	260	740	165	65	I/II
	QJB1.5/6-260/3-980	1.5	4	260	980	300	65	I/II
	QJB2.2/8-320/3-740	2.2	5.9	320	740	320	93	II
	QJB4/6-320/3-980	4	10.3	320	980	610	93	II
冲压式 Stamping type	QJB0.25/6-180/3-980	0.25	0.9	180	980	120	45	I/II
	QJB0.37/6-220/3-980	0.37	1.3	220	980	138	50	I/II
	QJB0.85/8-260/3-740	0.85	3.2	260	740	165	55	I/II
	QJB1.5/6-260/3-980	1.5	4	260	980	300	55	I/II
	QJB1.5/8-400/3-740	1.5	5.2	400	740	600	75	II
	QJB2.5/8-400/3-740	2.5	7	400	740	800	78	II
	QJB3/8-400/3-740	3	8.6	400	740	920	80	II
	QJB4/6-400/3-980	4	10.3	400	980	1200	82	II
	QJB4/12-620/3-480	4	14	620	480	1400	200	III
	QJB5/12-620/3-480	5	18.2	620	480	1800	200	III
	QJB7.5/12-620/3-480	7.5	28	620	480	2600	248	III
	QJB10/12-620/3-480	10	32	620	480	3300	256	III
	QJB15/12-750/3-480	15	45	750	480	3900	278	III
节能型 energy saving	GQJB3/4-400/2-420	3	6.6	400	420	1400	75	IV
	GQJB4/4-550/2-420	4	8.6	550	420	1800	85	IV
	GQJB5.5/4-550/2-420	5.5	11.8	550	420	2100	90	IV
	GQJB7.5/4-620/2-420	7.5	15.5	620	420	2600	100	IV
	GQJB11/4-750/2-420	11	22	750	420	3100	120	IV
	GQJB15/4-800/2-420	15	31	800	420	3500	150	IV

潜水搅拌机流场图 /FLOW FIELD DIAGRAM OF SUBMERSIBLE MIXER

该流速场是在清水中边界流速 $V=0.1\text{m/s}$

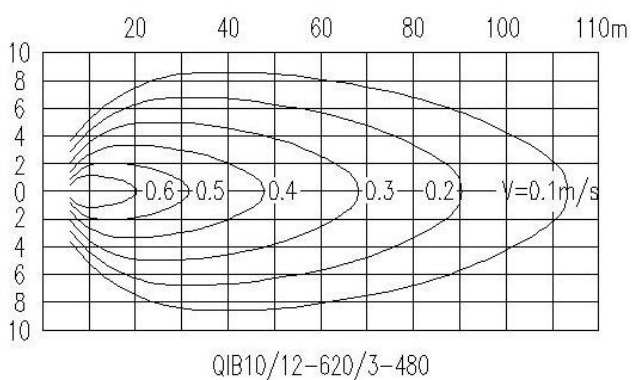
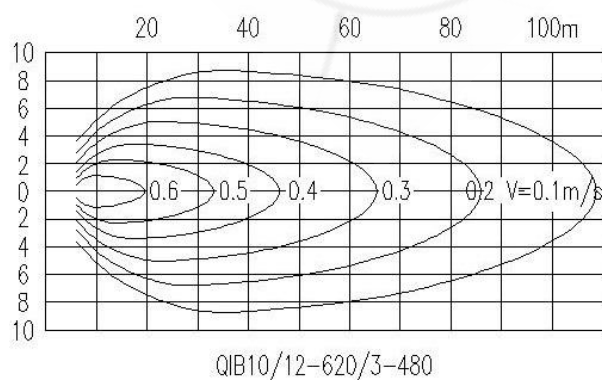
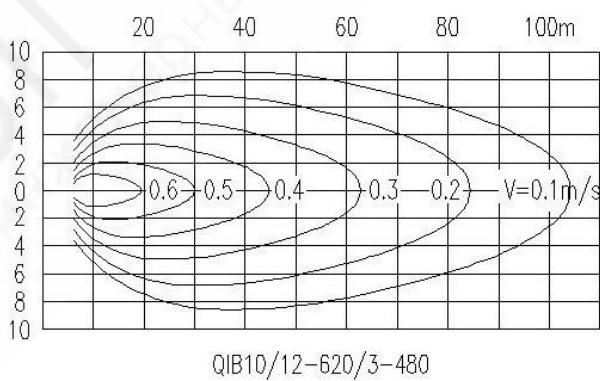
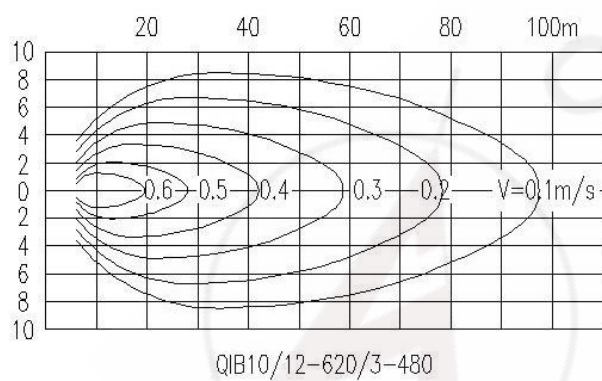
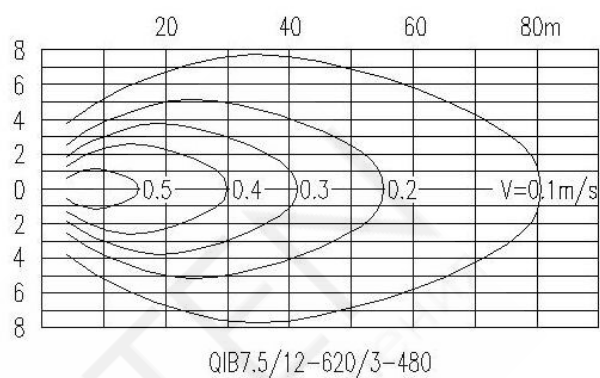
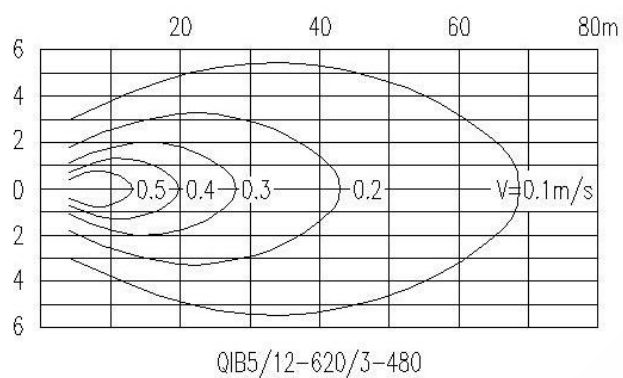
The velocity field is a boundary velocity $V=0.1\text{m/s}$ in clear water



潜水搅拌机流场图 /FLOW FIELD DIAGRAM OF SUBMERSIBLE MIXER

该流速场是在清水中边界流速 $V=0.1\text{m/s}$

The velocity field is a boundary velocity $V=0.1\text{m/s}$ in clear water

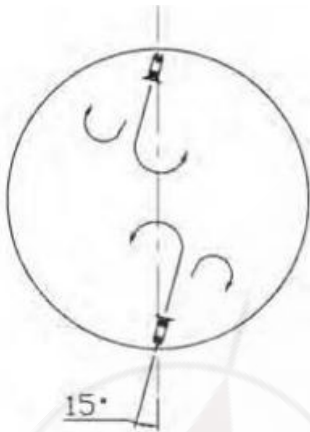


潜水搅拌机运行模式 / OPERATION MODE OF SUBMERSIBLE MIXER

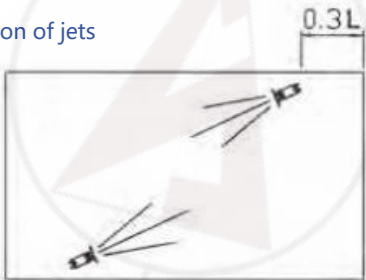
潜水搅拌机的安装定位对其搅拌效果有很大的影响，为了达到预期的运行效果，我们建议用户按照专业设计人员的要求去做，要充分考虑到水池的形状，进出水的位置以及搅拌机的水流反射到构筑物后引起的涡流等情况。尽量减少短路循环和死角的存在，避免与池壁的正面撞击而降低流速。参照下面的运行模式图，可帮助您合理选择叫搅拌机和安装形式。

The installation positioning of the submersible mixer has a significant impact on its mixing effect. In order to achieve the expected operating effect, we recommend that users follow the requirements of professional designers, fully considering the shape of the water pool, the position of the inlet and outlet water, and the vortex caused by the water flow reflected by the mixer on the structure. Try to minimize the occurrence of short circuit cycles and dead corners, and avoid reducing flow velocity by colliding with the pool wall. Referring to the operating mode diagram below can help you choose the appropriate mixer and installation form.

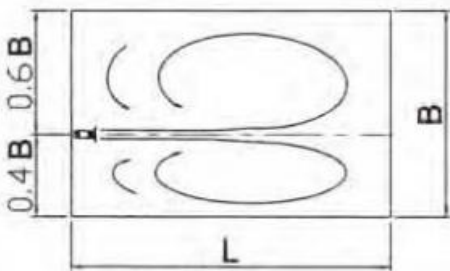
避免短路循环
Avoid short circuit cycles



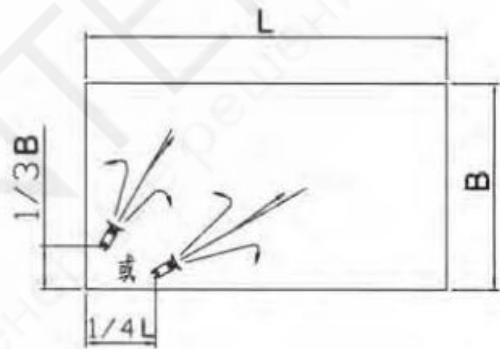
射流的交叉
The intersection of jets



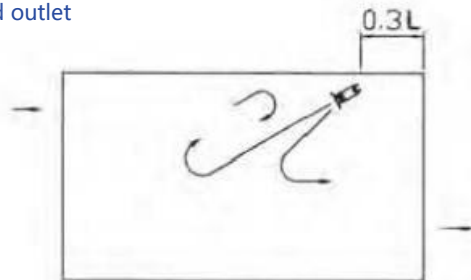
池宽小于5倍的叶轮直径
Impeller diameter with pool width less than 5 times



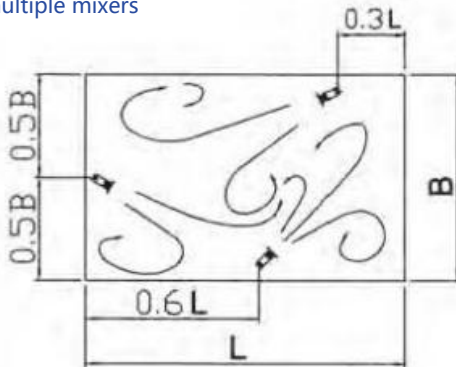
利用池壁反射
Utilize pool wall reflection



进出水口
Inlet and outlet



使用多个搅拌机
Use multiple mixers



选用新型高效4级潜水电机，前端加持自行研发的新型减速机构。较以往同型号产品，整机重量减少约50%，安装便捷，输出扭矩更大，效率提高约25%，降低能耗，运行平稳，使用寿命延长。

Select a new high-efficiency 4-stage submersible motor and equip it with a self-developed new reduction mechanism at the front end. Compared to previous products of the same model, the overall weight of the machine has been reduced by about 50%, installation is convenient, output torque is greater, efficiency is increased by about 25%, energy consumption is reduced, operation is smooth, and service life is extended.

轴向推力效率高
电机、机械部件和螺旋桨的外型设计能够实现高轴向推力，同事满足低能耗的需求。
High axial thrust efficiency
The exterior design of motors, mechanical components, and propellers can achieve high axial thrust and meet the demand for low energy consumption.

齿轮变速机
能效低、齿轮寿命长、输出扭矩大
Gear transmission
Low energy efficiency, long gear life, and high output torque

独特密封设计
独特的机械设计，防止异物进入机封室。
Unique sealing design
Unique mechanical design prevents foreign objects from entering the sealed chamber.

电机双重传感器
过热、泄露双重保护，从而能够保证电机的正常使用寿命。
Dual sensors for motors
Dual protection against overheating and leakage ensures the normal service life of the motor.

双重密封系统
密封系统由双层硬质合金机械密封组成，安全可靠。
Double sealing system
The sealing system is composed of double-layer hard alloy mechanical seals, which are safe and reliable.

双翼推力螺旋桨
由不锈钢制成，具有自洁功能；其大直径与特殊的推力边缘的特点保证了高效性。
Biplane thrust propeller
Made of stainless steel with self-cleaning function; The characteristics of its large diameter and special thrust edge ensure high efficiency.



型号 model	电机功率 Motor power (Kw)	额定电流 Rated current (A)	叶轮转速 Impeller speed (r/min)	叶片数量 Number of leaves (set)	叶轮直径 Impeller diameter (mm)	推力 thrust (N)	重量 weight (Kg)
GQJB3/4-400/2-420/S	3	6.6	420	2	400	1400	75
GQJB4/4-550/2-420/S	4	8.6	420	2	550	1800	85
GQJB5.5/4-550/2-420/S	5.5	11.8	420	2	550	2100	90
GQJB7.5/4-620/2-420/S	7.5	15.5	420	2	620	2600	100
GQJB11/4-750/2-420/S	11	24	420	2	750	3100	120
GQJB15/4-800/2-420/S	15	33	420	2	800	3500	150

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