



上海宇豪环境工程有限公司

SHANGHAI YUHAO ENVIRONMENTAL ENGINEERING CO.,LTD



污水处理成套设备

Complete set of sewage treatment equipment

中国·上海
SHANGHAI, CHINA

企业简介COMPANY PROFILE

上海宇豪环境工程有限公司初创于2010年，旗下拥有苏州宇豪环保科技有限公司、南京宇豪，上海企科设备工程有限公司坚持实体制造15余年，国家高新技术企业。公司生产基地坐落于国家级新区南京江北新区，企业拥有技术研发中心、生产制造中心、检测中心、省级众创空间及环保孵化器。

公司生产潜水搅拌机、节能潜水搅拌机、永磁潜水搅拌机、潜水推流机、不锈钢潜水搅拌机、MBBR填料流化推流机、潜水回流泵、轴流泵、深水搅拌曝气机、搅拌推流曝气机、离心曝气机、射流曝气机、桨式搅拌机、框式搅拌机、双曲面搅拌机，侧入式搅拌机、格栅除污机、无轴螺旋输送机、刮泥机、砂水分离器等非标设备。

“秉承工匠精神，坚持科技研发”是宇豪企业之魂，了解宇豪、支持宇豪、信任宇豪是我们的期盼，宇豪人在服务社会的同时，定砥砺前行，不断创新，为建设环保、和谐、美丽地球村奉献绵薄之力。

Shanghai Yuhao Environmental Engineering Co., Ltd. was founded in 2010. It owns Suzhou Yuhao Environmental Technology Co., Ltd., Nanjing Yuhao, and Shanghai Qike Equipment Engineering Co., Ltd. It has been committed to physical manufacturing for more than 15 years and is a national high-tech enterprise. The company's production base is located in the national new district Nanjing Jiangbei New District. The company has a technology research and development center, a production and manufacturing center, a testing center, a provincial maker space and an environmental incubator.

The company produces non-standard equipment such as submersible mixers, energy-saving submersible mixers, permanent magnet submersible mixers, submersible extruders, stainless steel submersible mixers, MBBR fluidized bed extruders, submersible reflux pumps, axial flow pumps, deep water mixing aerators, mixing and pushing aerators, centrifugal aerators, jet aerators, paddle mixers, frame mixers, hyperbolic mixers, side entry mixers, grid cleaning machines, shaftless screw conveyors, mud scrapers, sand water separators, etc.

Adhering to the spirit of craftsmanship and persisting in technological research and development is the soul of Yuhao enterprises. Understanding, supporting, and trusting Yuhao workers is our expectation. While serving society, Yuhao workers are determined to forge ahead, constantly innovate, and contribute their modest efforts to building an environmentally friendly, harmonious, and beautiful global village.



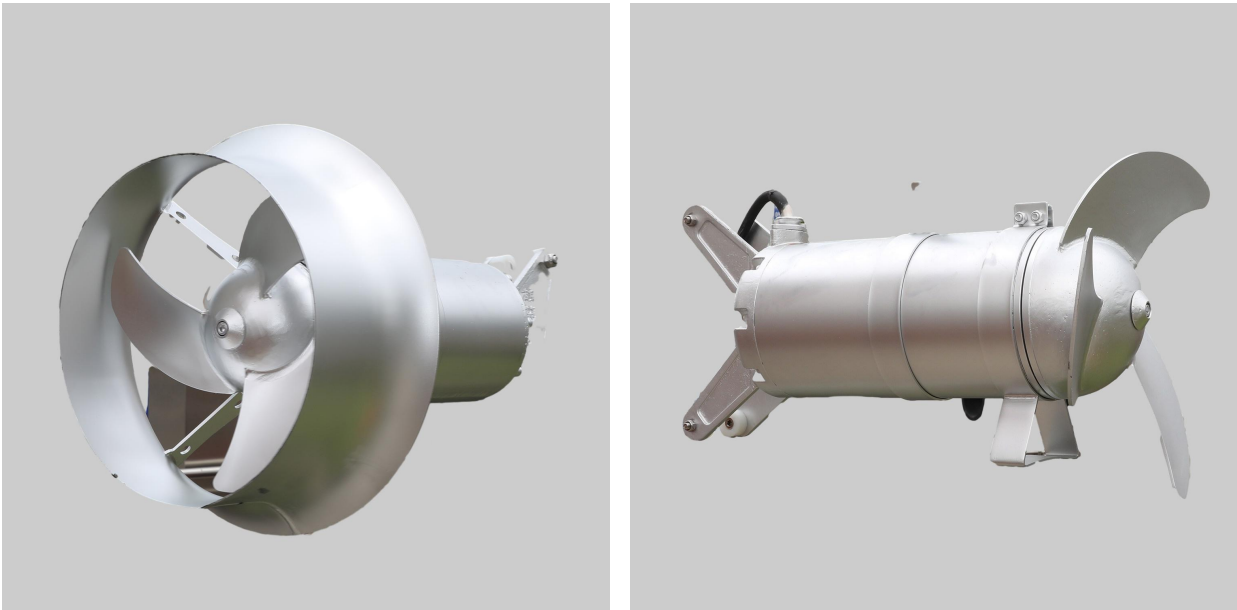


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QJB型潜水搅拌机

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℃
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/m ³
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



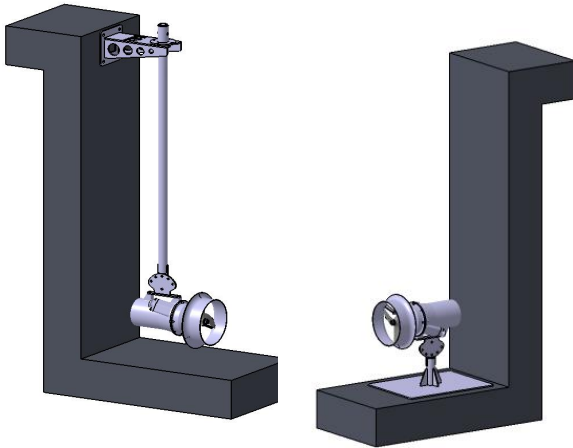
!!!搅拌机必需完全潜入水中工作，不能再易燃易爆环境下或有强腐蚀性液体的环境中工作!!!
!!! The mixer must be completely submerged in water for operation and should not be used in flammable or explosive environments or environments with highly corrosive liquids!!!



!!!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!!!

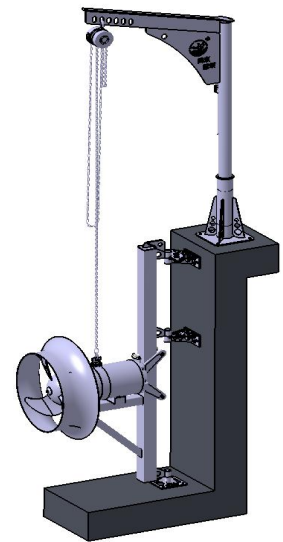
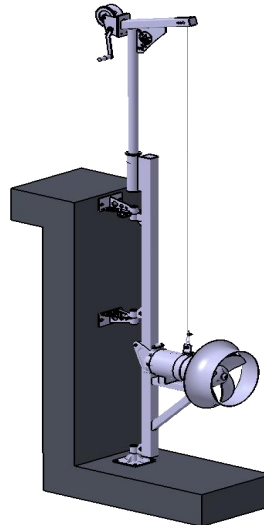
安装系统 /INSTALL THE SYSTEM

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



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

安装系统 II
Installation System II



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。

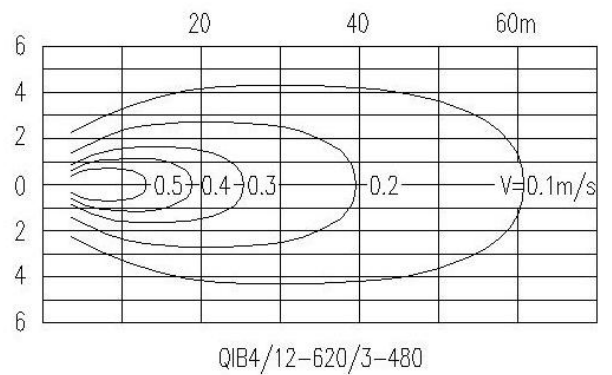
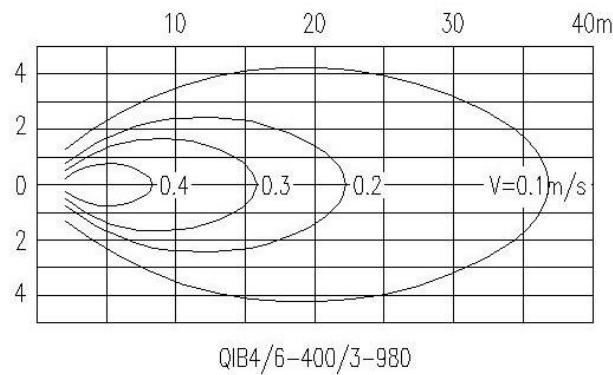
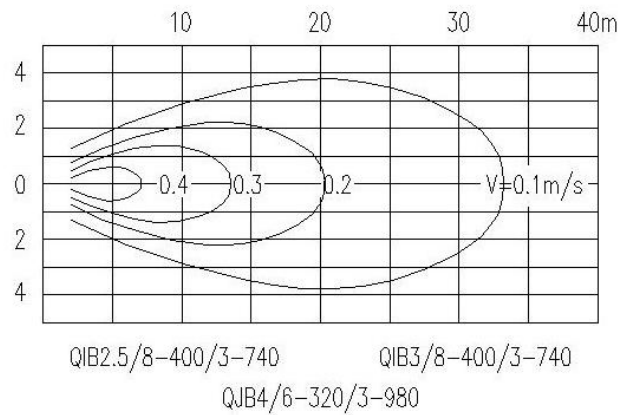
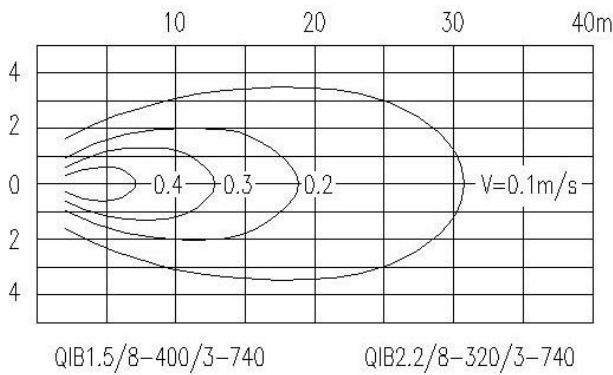
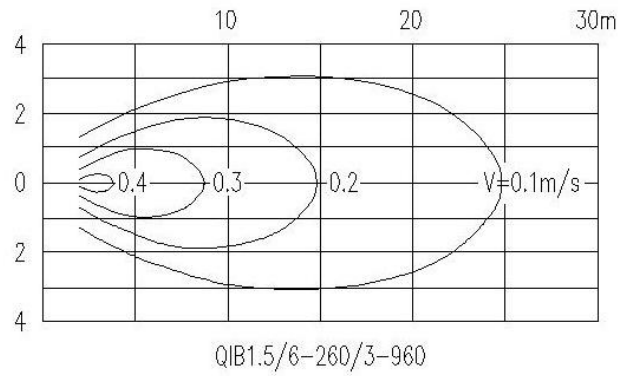
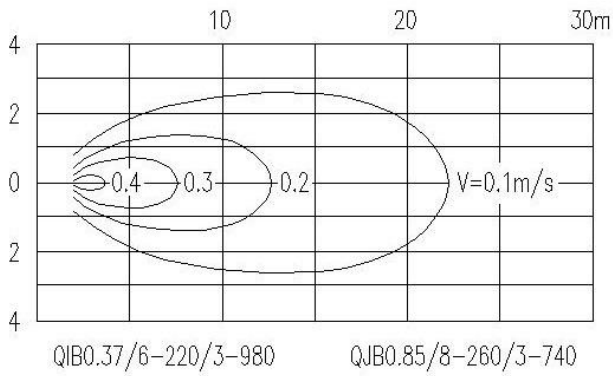
The mixer operates under rated voltage of 380V, frequency of 50Hz, winding insulation level of F, protection level of IP68, and working mode I.

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 $V=0.1\text{m/s}$

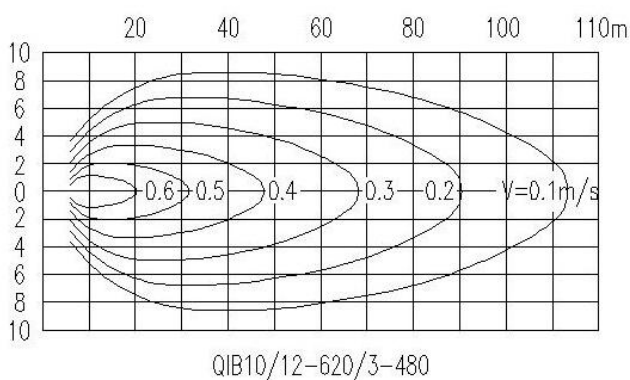
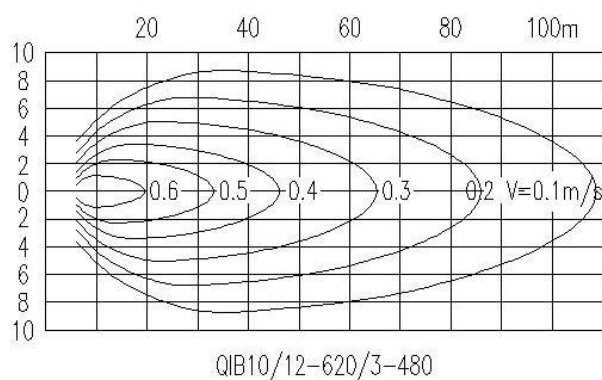
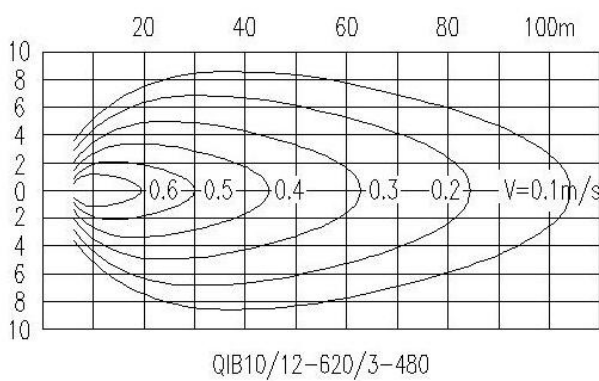
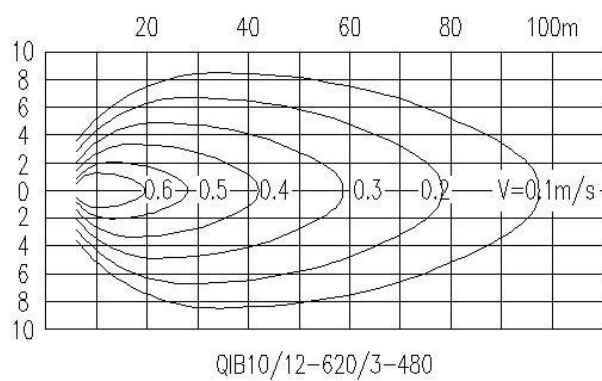
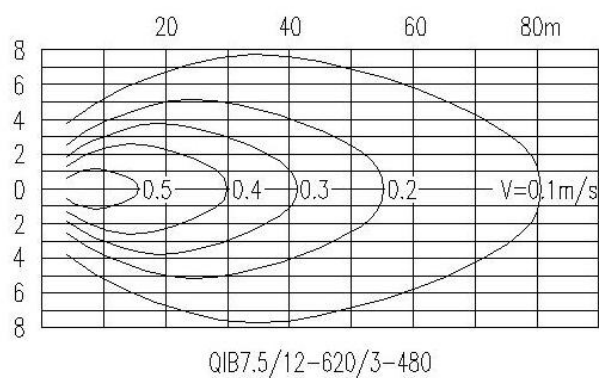
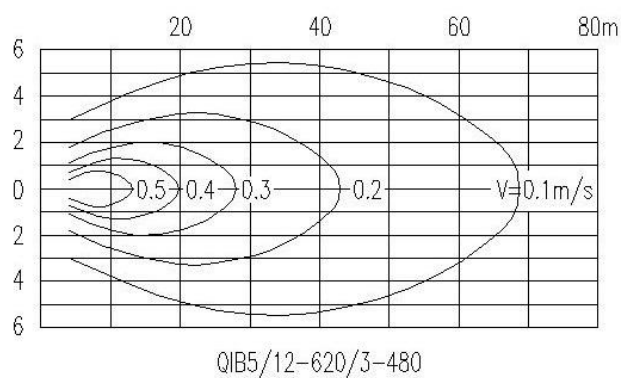
The velocity field is a boundary velocity $V=0.1\text{m/s}$ in clear water



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

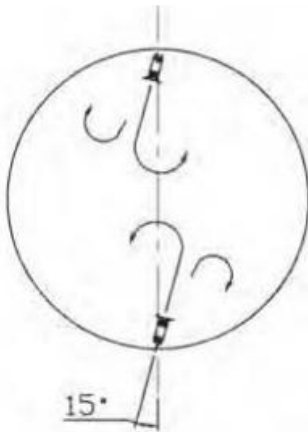


潜水搅拌机运行模式 / OPERATION MODE OF SUBMERSIBLE MIXER

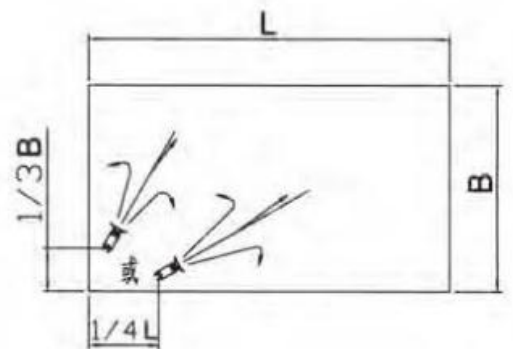
潜水搅拌机的安装定位对其搅拌效果有很大的影响，为了达到预期的运行效果，我们建议用户按照专业设计人员的要求去做，要充分考虑到水池的形状，进出水的位置以及搅拌机的水流反射到构筑物后引起的涡流等情况。尽量减少短路循环和死角的存在，避免与池壁的正面撞击而降低流速。参照下面的运行模式图，可帮助您合理选择叫搅拌机和安装形式。

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.

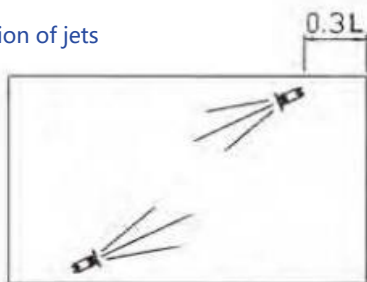
避免短路循环
Avoid short circuit cycles



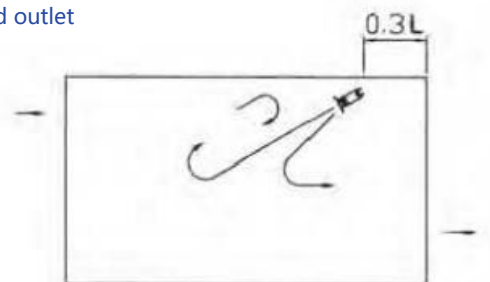
利用池壁反射
Utilize pool wall reflection



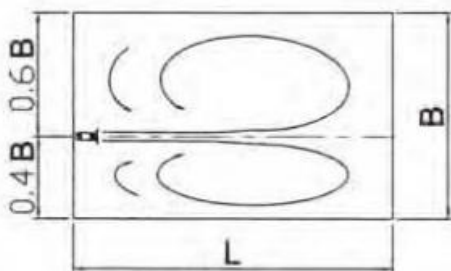
射流的交叉
The intersection of jets



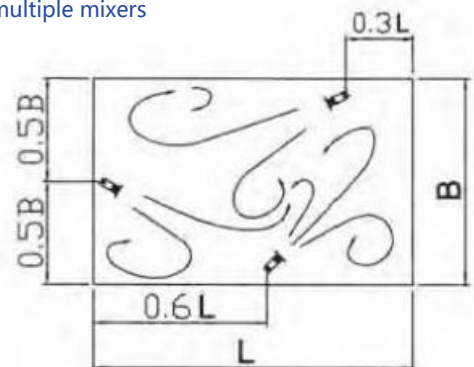
进出水口
Inlet and outlet



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



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

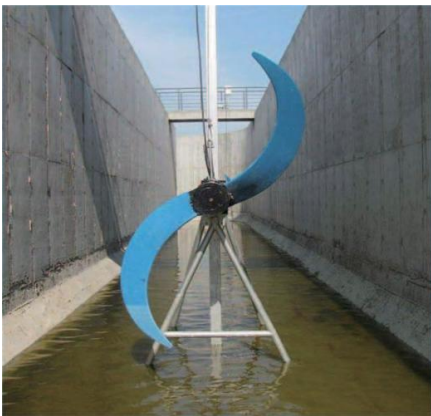
QDT型潜水推流器 QDT type submersible thruster

QDT型潜水推流器，在水处理工艺流程中，广泛应用于氧化沟推流，各类生化池的搅拌，同时也可用于河流防冻，景观水循环等。低速推进器由潜水电机、减速装置、叶桨和安装系统等组成，其特点是配套功率小（1.5—7.5KW），转速低（34—85r/min），叶桨直径大（1100—3000mm），产生大体积流场，服务范围广泛。后掠香蕉型叶桨设计，具有自洁功能，采用聚氨酯或增强玻璃钢成型，具有重量轻、强度高、耐腐蚀等优点，其优异的水力性能，可保证在低速的运动状态下与液体产生良好的阻尼效果，从而创建出柔和的水流。该系列产品除了具有推流和创建水流的作用外还具有搅拌功能。



QDT type submersible thruster is widely used in water treatment processes, including oxidation ditch thruster, mixing of various biochemical tanks, as well as river antifreeze and landscape water circulation. The low-speed thruster consists of a submersible motor, a reduction device, blades, and an installation system. Its characteristics include low matching power (1.5-7.5KW), low speed (34-85r/min), large blade diameter (1100-3000mm), large volume flow field, and wide service range. The swept back banana shaped blade design has self-cleaning function and is made of polyurethane or reinforced fiberglass. It has the advantages of light weight, high strength, and corrosion resistance. Its excellent hydraulic performance can ensure good damping effect with liquids at low speeds, thus creating a soft water flow. This series of products not only has the functions of pushing and creating water flow, but also has the function of stirring.

选型参考/SELECTION REFERENCE



潜水推流机的选型是一项比较复杂的工作，选型方案的正确与否直接影响到设备的正常使用，作为选型的原则就是要让推流机在适合的容积里发挥充分的推流功能，这个标准一般可用流速来确定。根据污水处理厂的不同工艺要求，搅拌机选型的最佳流速应保证在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的效果，如果超过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，首先要确定潜水推流机运用在什么场所，如：污水池、污泥池还是生化池；其次是介质参数，如：悬浮物含量、温度、PH值等；还有水池的形状，水深甚至安装方式等都对选型产生影响，同时还应考虑到节能因素，因为这将会影响到用户今后的运行成本。

The selection of submersible thrusters is a complex task, and the correctness of the selection plan directly affects the normal use of the equipment. As a principle of selection, it is necessary to ensure that the thrusters can fully exert their thrusting function in the appropriate volume, and this standard can generally be determined by the flow rate. According to the different process requirements of sewage treatment plants, the optimal flow rate for selecting the mixer should be between 0.15~0.3m/s. If the flow rate is lower than 0.15m/s, the effect of push flow mixing cannot be achieved. If the flow rate exceeds 0.3m/s, it will affect the process effect and cause waste. So before selecting, the first thing to determine is where the submersible thruster will be used, such as in a sewage tank, sludge tank, or biochemical tank; Next are medium parameters, such as suspended solids content, temperature, pH value, etc; The shape, depth, and installation method of the pool also have an impact on the selection, and energy-saving factors should also be considered, as this will affect the user's future operating costs.

为了满足在不同环境下都能达到最佳的推流效果，我们为用户提供了多种型号的潜水推流机，同时可提供选型服务，可参考下面的潜水推流机流场图。

In order to achieve the best thrust effect in different environments, we provide users with multiple models of submersible thrusters and offer selection services. Please refer to the flow field diagram of the submersible thruster below.

应有范围/SHOULD HAVE SCOPE

潜水推流器主要运用在市政和工业污水处理过程中的混合、搅拌和环流，也可用作景观水循环的推流设备，通过搅拌达到创建水流作用，有效阻止悬浮物沉降。

Submersible thrusters are mainly used for mixing, stirring, and circulating in municipal and industrial wastewater treatment processes. They can also be used as flow devices for scenic water circulation, creating water flow through stirring and effectively preventing suspended solids from settling.



使用条件 /CONDITIONS OF USE

为了保证潜水推流器的正常工作，请正确选择工作环境和运行模式。

To ensure the normal operation of the submersible thruster, please choose the correct working environment and operating mode.

01	最高介质温度不超过 The maximum medium temperature shall not exceed	40℃
02	介质的PH值范围 介质的PH值范围	5~9之间 Between 5 and 9
03	液体密度不超过 Liquid density not exceeding	1150Kg/m ³
04	潜水深度不超过 Diving depth not exceeding	20m



特别提示：潜水推流器必须完全潜入水中工作，不能再易燃易爆和强腐蚀性及高温的环境中工作。针对特殊环境下的要求，我公司可为用户提供特殊设计。

Special reminder: Submersible thrusters must operate completely submerged in water and cannot work in environments that are flammable, explosive, highly corrosive, or high-temperature. Our company can provide special designs for users to meet the requirements of special environments.

型号表示方法 /MODEL REPRESENTATION METHOD

QDT□□□□□□□□□□

材质（P—叶桨为聚氨酯；G—叶桨为玻璃钢）
texture of material(P-blade is made of polyurethane; G-blade is made of fiberglass)

额定转速（r/min）

Rated speed (r/min)

叶片数量

Number of leaves

叶轮（桨）直径

Impeller (paddle) diameter

电机额定功率（Kw）

Rated power of motor (Kw)

潜水推流器英文代号，A为改进型，M为填料流化型

The English code for submersible thrusters, A is an improved type, and M is a fluidized bed filling type

性能参数 / PERFORMANCE PARAMETERS

推流器型号 Model of thruster		功率 power	电流 electric current	桨叶直径 Blade diameter	转速 speed	推力 thrust	重量 weight	安装系统 Install the system
		Kw	A	mm	r/min	N	Kg	
低速推流 Low-speed thrust flow	QDT1.5/4-1100/2-43	1.5	3.7	1100	43	860	170	IV
	QDT2.2/4-1100/2-52	1.5	4.9	1100	52	1100	178	IV
	QDT2.2/4-1400/2-36	2.2	4.9	1400	36	1400	172	IV
	QDT3/4-1100/2-63	3	6.6	1100	63	1500	175	IV
	QDT3/4-1400/3-43	3	6.6	1400	43	1800	210	IV
	QDT3/4-1800/3-36	3	6.6	1800	36	200	210	IV
	QDT4/4-1100/2-85	4	8.6	1100	85	1800	177	IV
	QDT4/4-1400/2-52	4	8.6	1400	52	2150	185	IV
	QDT4/4-1800/2-43	4	8.6	1800	43	2700	212	IV
	QDT4/4-2100/2-43	4	8.6	2100	43	2850	220	IV
	QDT5.5/4-1400/2-63	5.5	11.3	1400	63	2740	189	IV
	QDT5.5/4-1800/2-47	5.5	11.3	1800	47	3300	291	IV
	QDT5.5/4-2100/2-47	5.5	11.3	2100	47	3350	300	IV
	QDT5.5/4-2500/2-47	5.5	11.3	2500	47	3850	310	IV
	QDT7.5/4-2100/2-52	7.5	15.5	2100	52	3900	305	IV
	QDT7.5/4-2500/2-52	7.5	15.5	2500	52	4250	315	IV
节能 MBBR Energy saving MBBR	GQDTM3/4-900/3-106	3	6.6	750	106	1680	110	IV
	GQDTM4/4-900/3-106	4	8.6	950	106	2160	115	IV
	GQDTM5.5/4-1080/3-16	5.5	11.8	950	106	2660	120	IV
	GQDTM7.5/4-1080/3-106	7.5	15.5	1080	106	3420	125	IV
	GQDTM11/4-1080/3-106	11	23	1080	106	4280	190	IV
	GQDTM15/4-1080/3-106	15	31	1080	106	4750	220	IV

注:

Note:

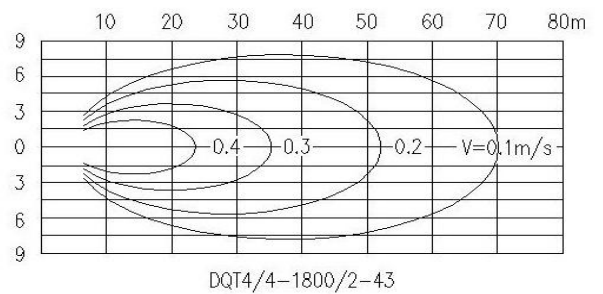
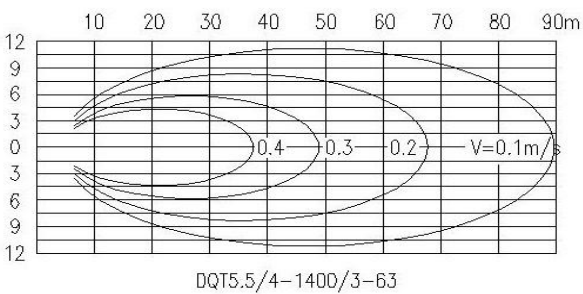
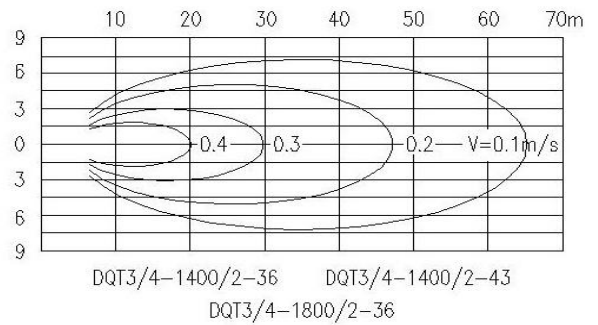
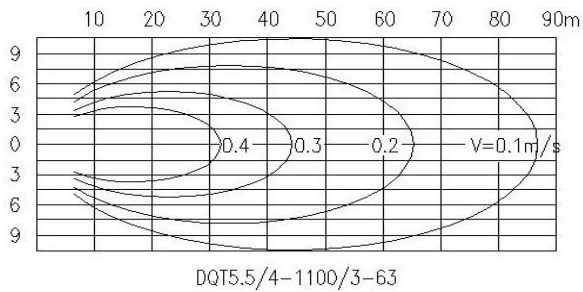
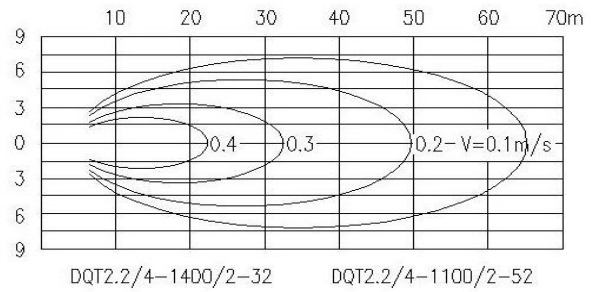
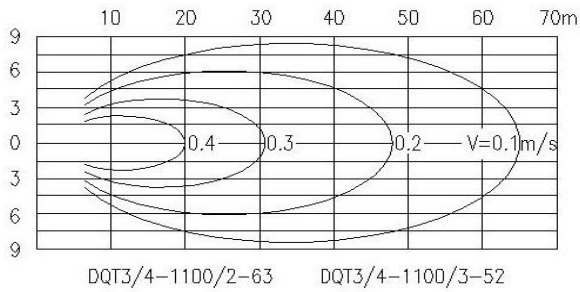
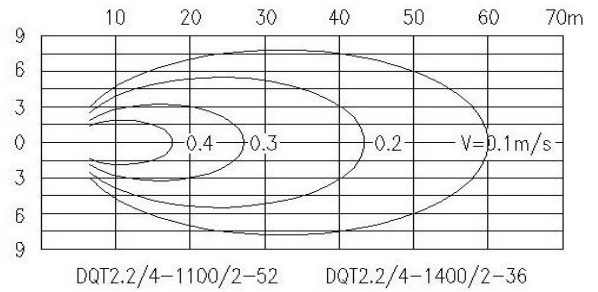
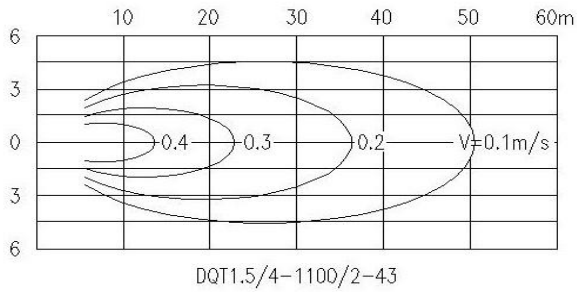
1. 电机绕组绝缘等级: F级, 防护等级: IP68, 电机工作制: 24小时连续工作。
2. 可提供H级绝缘电机。

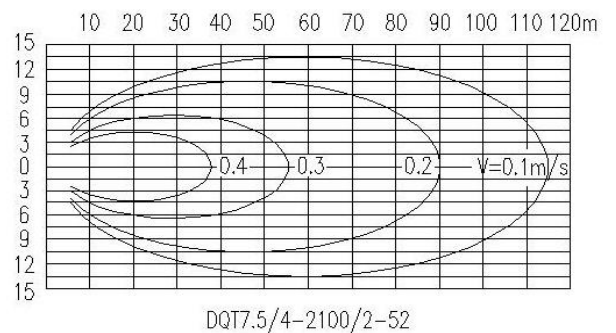
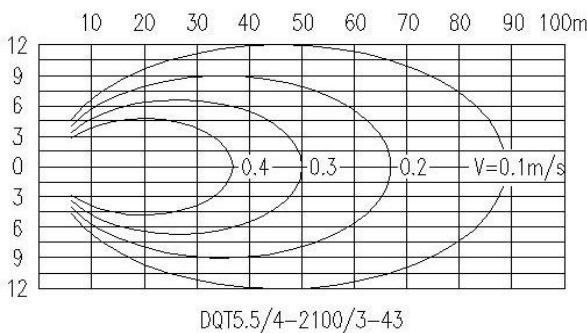
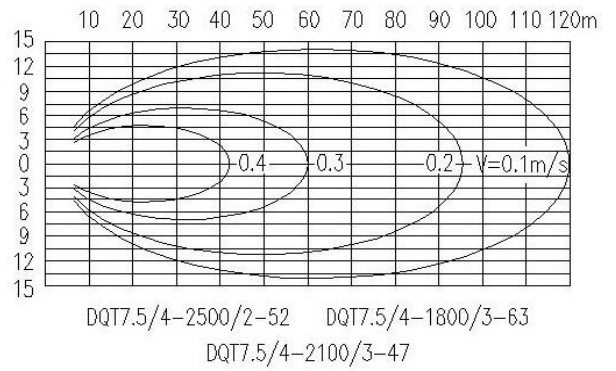
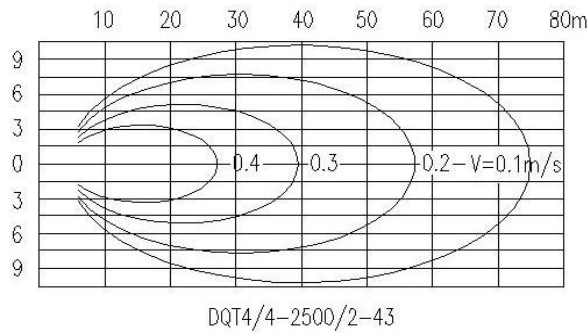
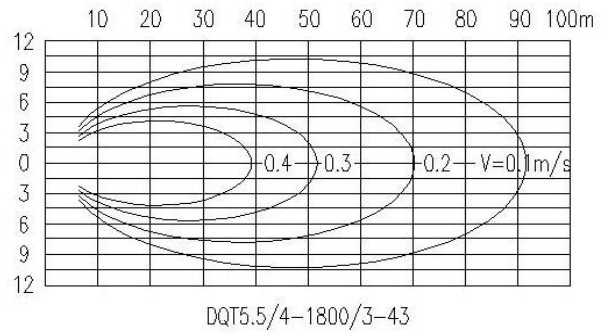
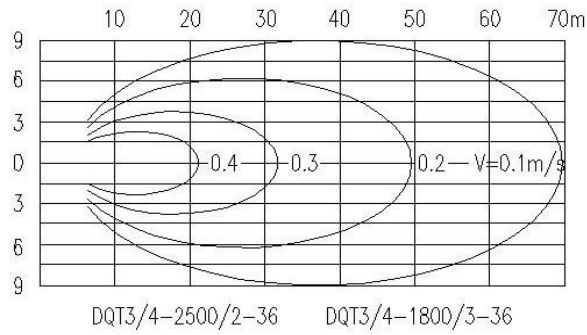
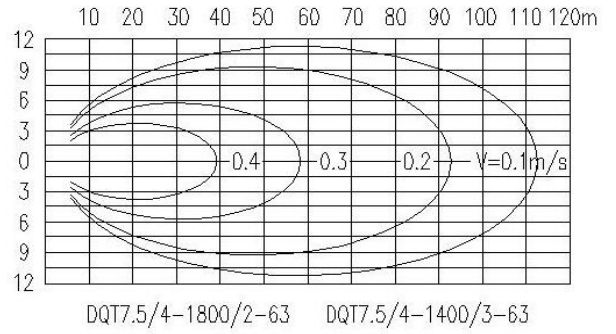
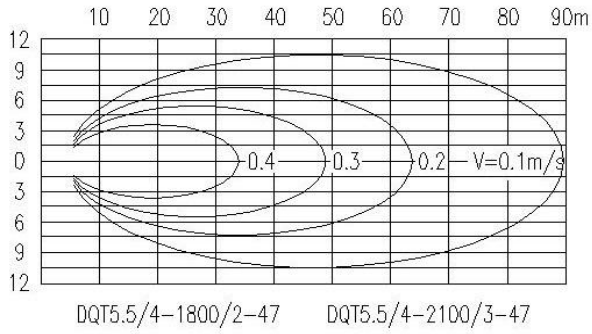
1. Insulation level of motor winding: F level, protection level: IP68, motor working mode: 24-hour continuous operation.
2. We can provide H-class insulated motors.

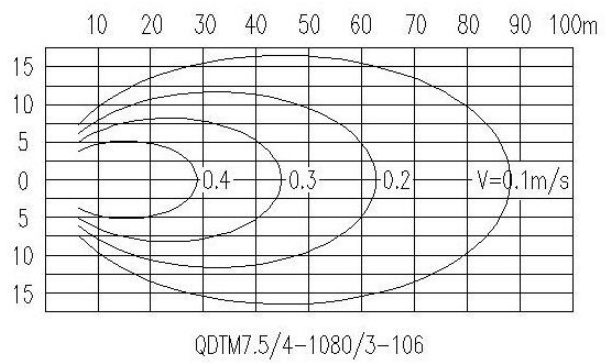
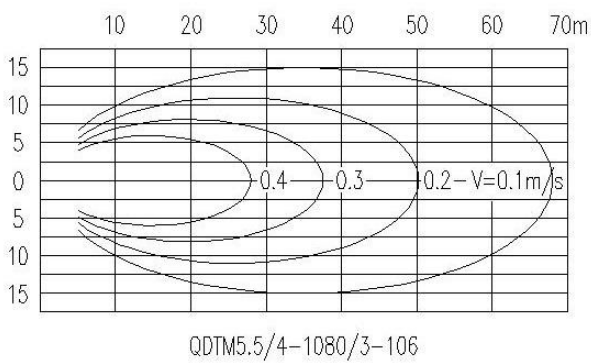
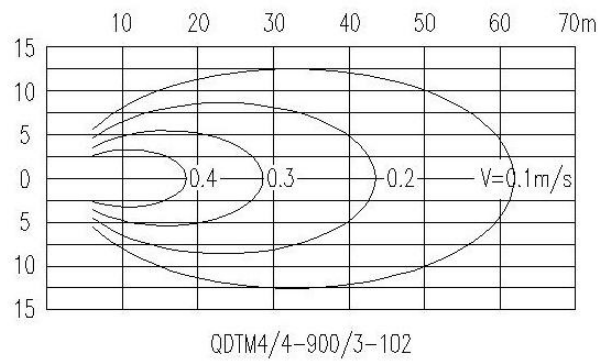
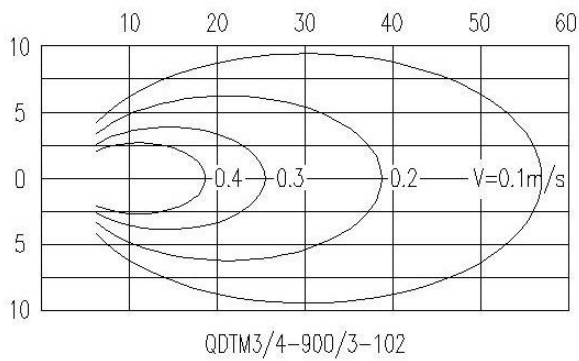
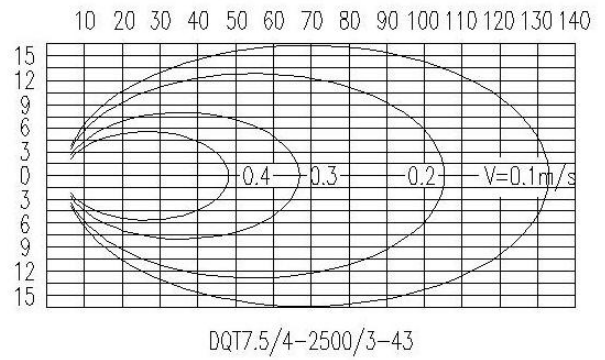
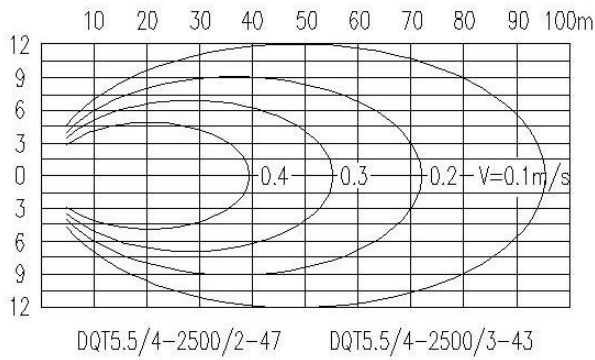
潜水推流器流场图 /FLOW FIELD DIAGRAM OF SUBMERSIBLE THRUSTER

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





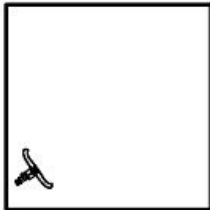


潜水推流器运行模式 / OPERATION MODE OF SUBMERSIBLE THRUSTER

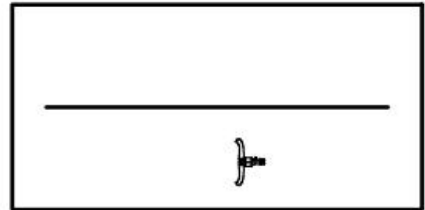
潜水推流器的安装定位对其搅拌效果有很大的影响，为了达到预期的运行效果，我们建议用户按照专业设计人员的要求去做，要充分考虑到水池的形状，进出水的位置以及搅拌机的水流反射到构筑物后引起涡流等情况，尽量减少短路循环和死角的产生，避免与池壁的正面撞击而降低流速。参照下面的运行模式图，可帮助您合理选择搅拌机和安装形式。

The installation and positioning of the submersible thruster have 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 pool, the position of the inlet and outlet water, and the vortex caused by the reflection of the water flow from the agitator to the structure. We aim to minimize the occurrence of short circuit circulation and dead corners, and avoid direct impact with the pool wall to reduce the flow rate. Referring to the operating mode diagram below can help you choose the mixer and installation form reasonably.

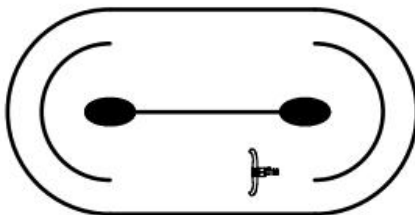
方形池
Square pool



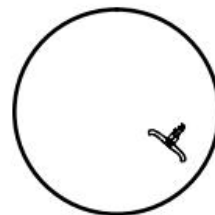
矩形池
Rectangular pool



路道形池
Roadway shaped pool



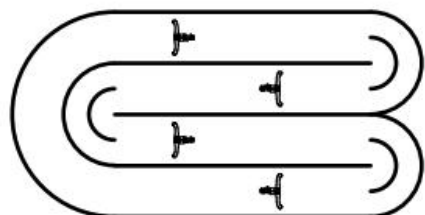
圆形池
Circular pool



环形池
annular pool

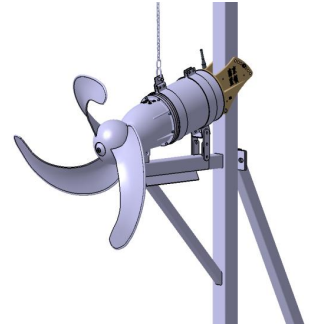


S曲线形池
S-shaped pool



GQDTM型MBBR填料流化器是我公司自主研发生产的一种适用于水处理流化床生物膜反应工艺，完成含悬浮填料生化反应池内对水体推流、并使用生物膜填料流化悬浮的新型推流器。

The GQDTM MBBR packing fluidized bed reactor is a new type of fluidized bed biofilm reactor developed and produced independently by our company, which is suitable for water treatment fluidized bed biofilm reaction process. It completes the pushing of water in the biochemical reaction tank containing suspended packing and uses biofilm packing for fluidized suspension.

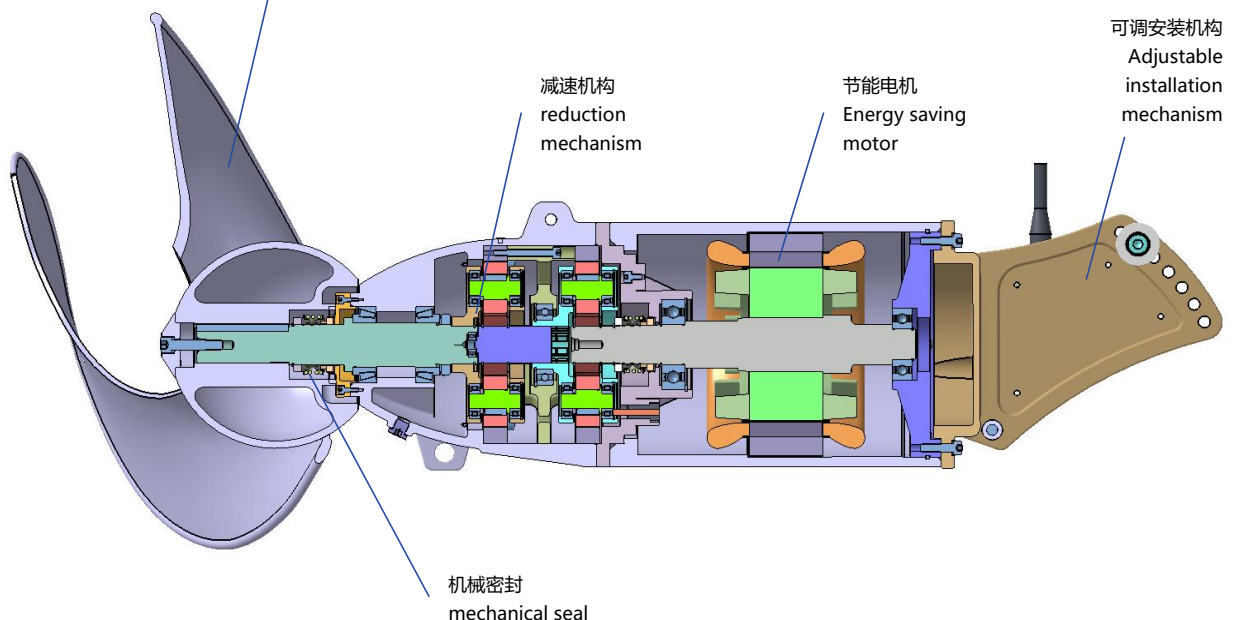


该型推流器的特点在于，特殊设计的三叶不锈钢叶轮与优化的转速和功率配置，能满足表面附着生物膜的填料在水体中保持良好的流化悬浮状态，并防止填料受叶片的刚性撞击而造成的破损。流线型的筒形整体式不锈钢外壳，可使填料对机壳的磨损最小，水力效率达到最优化。在流线型机体内整合了新一代节能电机以及整装式高扭矩的高效齿轮减速机，整体动力方案节能、高效、长寿命。针对生物膜反应工艺专门设计的倾角（15°、22°、30°）可调式的安装动作机构，可满足现场推流器对生物反应池整体优良流化运动效果、有效提高反应效率。

The characteristic of this type of thruster is the specially designed three blade stainless steel impeller and optimized speed and power configuration, which can meet the requirement of maintaining a good fluidized suspension state of the packing with attached biofilm on the surface in the water body, and prevent damage to the packing caused by the rigid impact of the blades. The streamlined cylindrical integral stainless steel shell minimizes the wear of the packing on the casing, achieving optimal hydraulic efficiency. The streamlined body integrates a new generation of energy-saving motors and a fully assembled high torque high-efficiency gear reducer, providing an energy-saving, efficient, and long-lasting overall power solution. The installation mechanism with adjustable inclination angles (15°, 22°, 30°) specially designed for biofilm reaction process can meet the excellent fluidization motion effect of the on-site flow pusher on the overall biological reaction tank and effectively improve reaction efficiency.

不锈钢叶轮能承受变化的负荷，推力被平均分配到混合物上，具最佳水平设计。

Stainless steel impellers can withstand changing loads, and the thrust is evenly distributed to the mixture, with optimal horizontal design.



XQDT悬挂式潜水推流器

XQDT suspended submersible thruster

主要用途/MAIN PURPOSE

低速系列推流（搅拌）器用于城镇和工业污水处理厂曝气池和厌氧池，其产生低切向的强水流，可用于池中水循环及消化、脱氮和除磷及创段建水流等。

The low-speed series pusher (agitator) is used in aeration tanks and anaerobic tanks of urban and industrial wastewater treatment plants. It generates low tangential strong water flow, which can be used for water circulation, digestion, denitrification, phosphorus removal, and section construction water flow in the tank.

特点/CHARACTERISTIC

- 可不排水安装，维修简单。
- 电机、减速机在水之上，无侵水损毁之忧。
- It can be installed without water, and maintenance is simple.
- The motor and reducer are above water, so there is no worry of damage caused by water invasion.



适用范围 /SCOPE OF APPLICATION

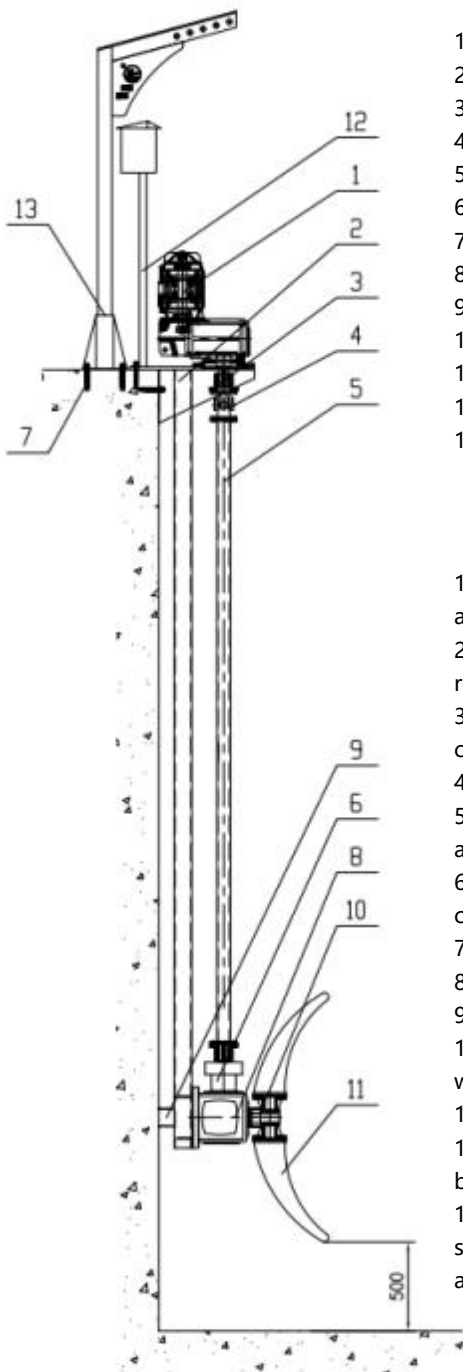
潜水推流（搅拌）机可在下列条件下正常连续运行：

The submersible mixer can operate continuously under the following conditions:

01	最高介质温度不超过 The maximum medium temperature shall not exceed	50℃
02	介质的PH值 PH value of the medium	5~9之间 Between 5 and 9
03	介质密度不超过 The medium density does not exceed	1150Kg/m ³
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	10m

1、靠墙式安装设备结构示意图

1、SCHEMATIC DIAGRAM OF WALL MOUNTED EQUIPMENT STRUCTURE

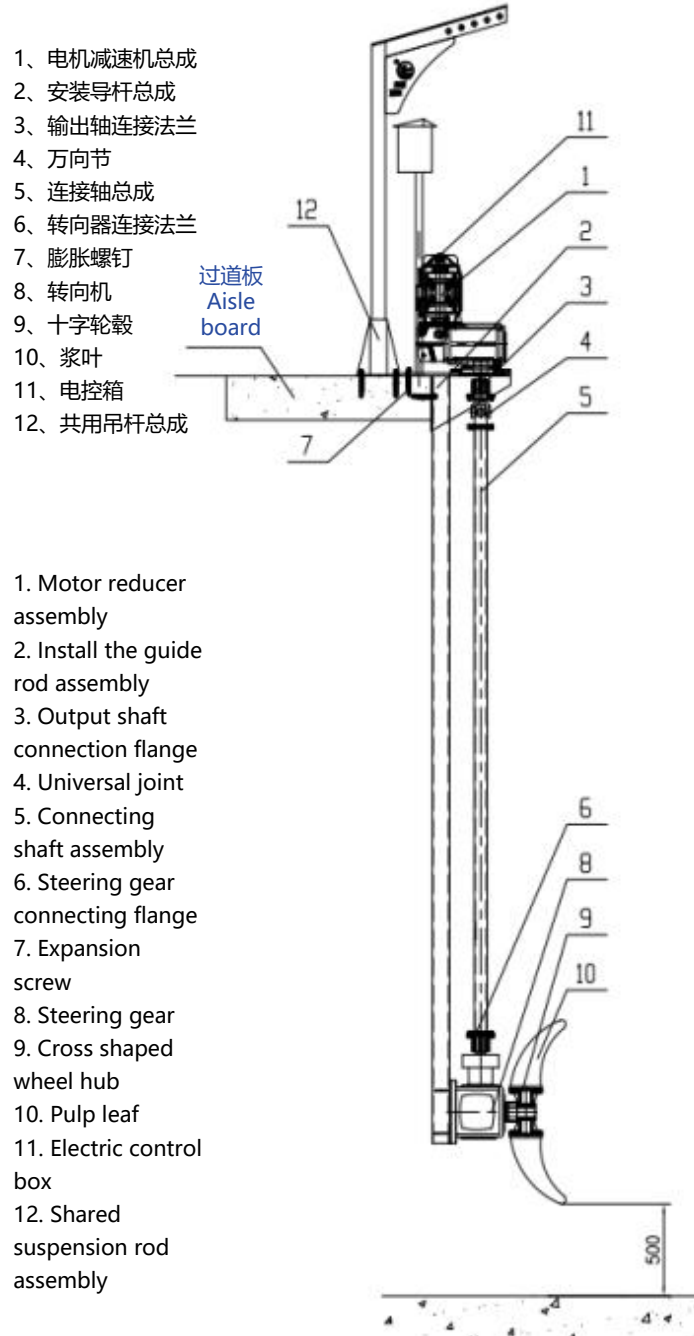


- 1、电机减速机总成
- 2、安装导杆总成
- 3、输出轴连接法兰
- 4、万向节
- 5、连接轴总成
- 6、转向器连接法兰
- 7、膨胀螺钉
- 8、转向机
- 9、横向顶杆
- 10、十字轮毂
- 11、浆叶
- 12、电控箱
- 13、共用吊杆总成

1. Motor reducer assembly
2. Install the guide rod assembly
3. Output shaft connection flange
4. Universal joint
5. Connecting shaft assembly
6. Steering gear connecting flange
7. Expansion screw
8. Steering gear
9. Horizontal pole
10. Cross shaped wheel hub
11. Pulp leaf
12. Electric control box
13. Shared suspension rod assembly

2、过道式安装设备结构示意图

2、Schematic diagram of aisle installation equipment structure



- 1、电机减速机总成
- 2、安装导杆总成
- 3、输出轴连接法兰
- 4、万向节
- 5、连接轴总成
- 6、转向器连接法兰
- 7、膨胀螺钉
- 8、转向机
- 9、十字轮毂
- 10、浆叶
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1. Motor reducer assembly
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9. Cross shaped wheel hub
10. Pulp leaf
11. Electric control box
12. Shared suspension rod assembly

GSJ/QSJ型双曲面搅拌机 GSJ/QSJ hyperbolic mixer

型号表示 /MODEL REPRESENTATION

G/Q SJ -1000/GRP/S

GRP—玻璃钢, S—不锈钢材质
GRP - fiberglass, S - stainless steel material

叶轮的公称直径
双曲面搅拌机的字母代号
潜水式安装
干式安装

The nominal diameter of the impeller
Letter code for hyperbolic mixer
Submersible installation
Dry installation

应用范围 /APPLICATION SCOPE

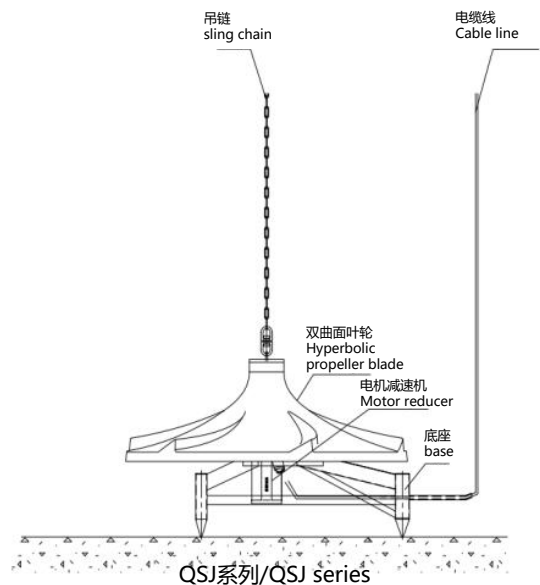
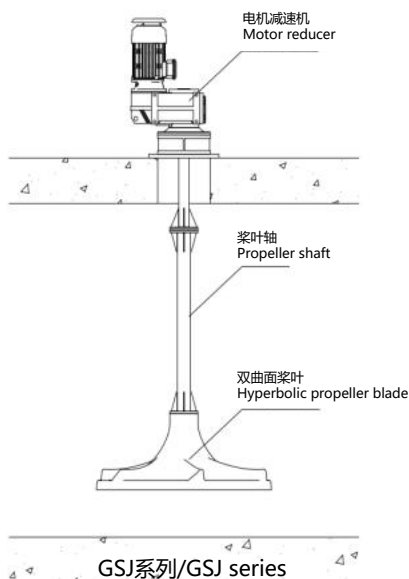
QSJ/GSJ型系列双曲搅拌机广泛运用在环保、化工、能源、轻工等行业需要对液体进行固、液、气搅拌混合的场合, 尤其适用在污水处理工艺中的混凝池、调节池、厌氧池、硝化和反硝化池。

The QSJ/GSJ series hyperbolic mixer is widely used in industries such as environmental protection, chemical engineering, energy, and light industry where solid, liquid, and gas mixing of liquids is required. It is particularly suitable for use in coagulation tanks, regulating tanks, anaerobic tanks, nitrification and denitrification tanks in sewage treatment processes.

结构简介/STRUCTURE INTRODUCTION

双曲面搅拌机由传动部件、叶轮、底座、吊装系统及电控组成。见图：

The hvperbolic mixer consists of transmission components, impeller, base, lifting system, and electrical control.
See



工作特征 /JOB CHARACTERISTICS

这是一台可以创建大容积流量的搅拌装置，并能以较小的动力获得大面积循环、柔和的水流。

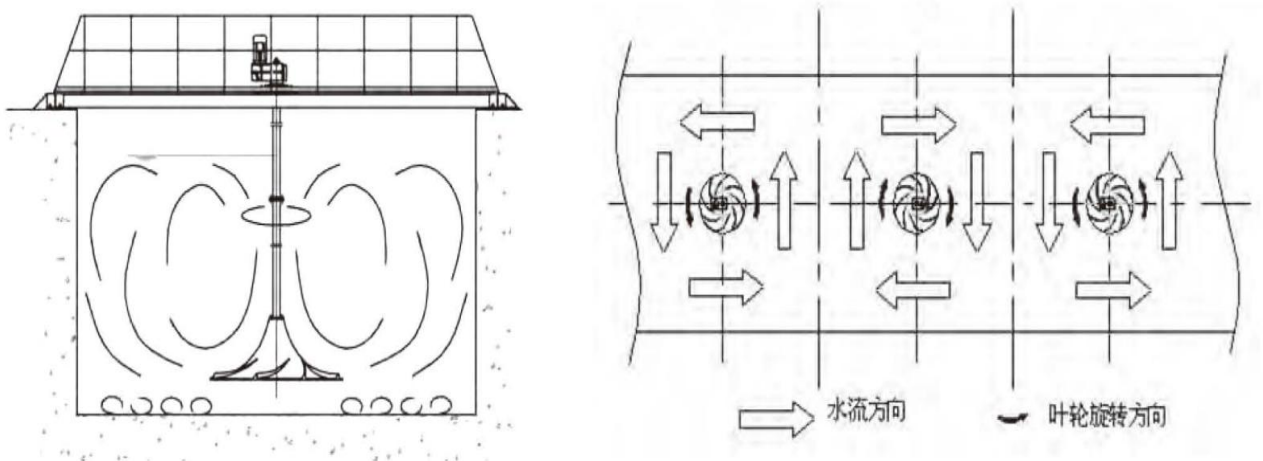
独特的叶轮结构设计，最大限度地将流体特性与机械运动完美地结合。双曲面叶轮的曲面是方程为 $xy=b$ 曲线沿 y 轴旋转而构成的曲面体；为了迎合水体流动，设计从叶轮的中心进水，这一方面减少了进水紊流，另一方面保证了液体对叶轮表面的压力均匀，从而保证整机在运动状态下的平衡。

在渐开双弧面上均布有八条导流叶片，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，故可获得在轴向（ y ）和径向（ x ）的交叉水流。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，能有效地清除搅拌死角。见如下流场分析图

This is a stirring device that can create large volume flow and obtain large area circulation and gentle water flow with small power.

The unique impeller structure design maximizes the perfect combination of fluid characteristics and mechanical motion. The surface of a hyperbolic impeller is a curved body formed by the rotation of the $xy=b$ curve along the y -axis; In order to cater to the flow of water, the water is designed to enter from the center of the impeller, which reduces the turbulent flow of the water and ensures uniform pressure of the liquid on the surface of the impeller, thereby ensuring the balance of the whole machine in motion.

There are eight guide vanes evenly distributed on the gradually opening double curved surface. The potential energy obtained by supplementing the inflow with the self weight pressure of the liquid and the centrifugal force generated by the rotation of the impeller form kinetic energy. The liquid moves tangentially along the circumferential direction of the impeller under the condition of gravitational acceleration, and forms a bottom-up circulating water flow under the reflection of the pool wall. Therefore, cross flow in the axial (y) and radial (x) directions can be obtained. It is precisely due to the structural characteristics of the hyperbolic mixer impeller and its proximity to the bottom of the pool that it can achieve ideal mixing effects during operation, effectively removing mixing dead corners. See the flow field analysis diagram below



流态图/Flow diagram

性能参数 / PERFORMANCE PARAMETER

型号 model	功率 power (Kw)	叶轮直径 impeller diameter (mm)	转速 speed (r/min)	服务范围 Service scope (m)	重量 weight (Kg)
GSJ/QSJ	0.75-1.5	500	40-200	1-3	300/320
	1.1-2.2	1000	50-70	2-5	480/710
	1.5-3	1500	30-50	3-6	510/850
	2.2-4	2000	20-36	6-14	560/1050
	3-5.5	2500	20-32	10-18	640/1150
	4-7.5	2800	20-28	12-22	860/1180

- 注:

Note:
1. 叶轮材质: 玻璃钢—GRP 不锈钢—S 搅拌轴材质: 不锈钢—S, 玻璃钢—GRP

2. 以上参数适用于常规市政污水条件

1. Impeller Material: Fiberglass GRP Stainless Steel S Mixing Shaft Material: Stainless Steel S, Fiberglass GRP

2. The above parameters are applicable to conventional municipal sewage conditions

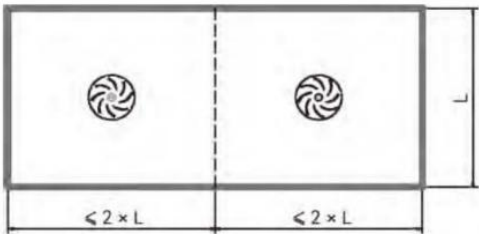
应用选型 / APPLICATION SIZING

QSJ与GSJ的选型完全一致，两者仅是安装方式不同。和所有搅拌机械的选型一样，双曲面搅拌机的选型与现场的池型、容积、液体浓度、介质温度和PH等有关。

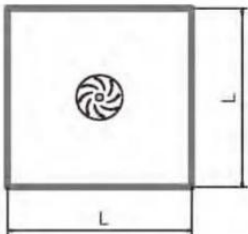
The selection of QSJ and GSJ is completely consistent, with only the installation method being different. As with the selection of all mixing machinery, the selection of a hyperbolic mixer is related to the on-site pool type, volume, liquid concentration, medium temperature, and pH.

双曲面搅拌机的选型是依据每台双曲面搅拌机的有效服务面积来确定，并按照池长宽比不超过二倍的原则，将长方形池划分为相等的工作单元，以此确定搅拌机的数量，如下图。

The selection of hyperbolic mixers is determined based on the effective service area of each hyperbolic mixer, and the rectangular pool is divided into equal working units according to the principle that the pool length to width ratio does not exceed twice, in order to determine the number of mixers, as shown in the following figure.

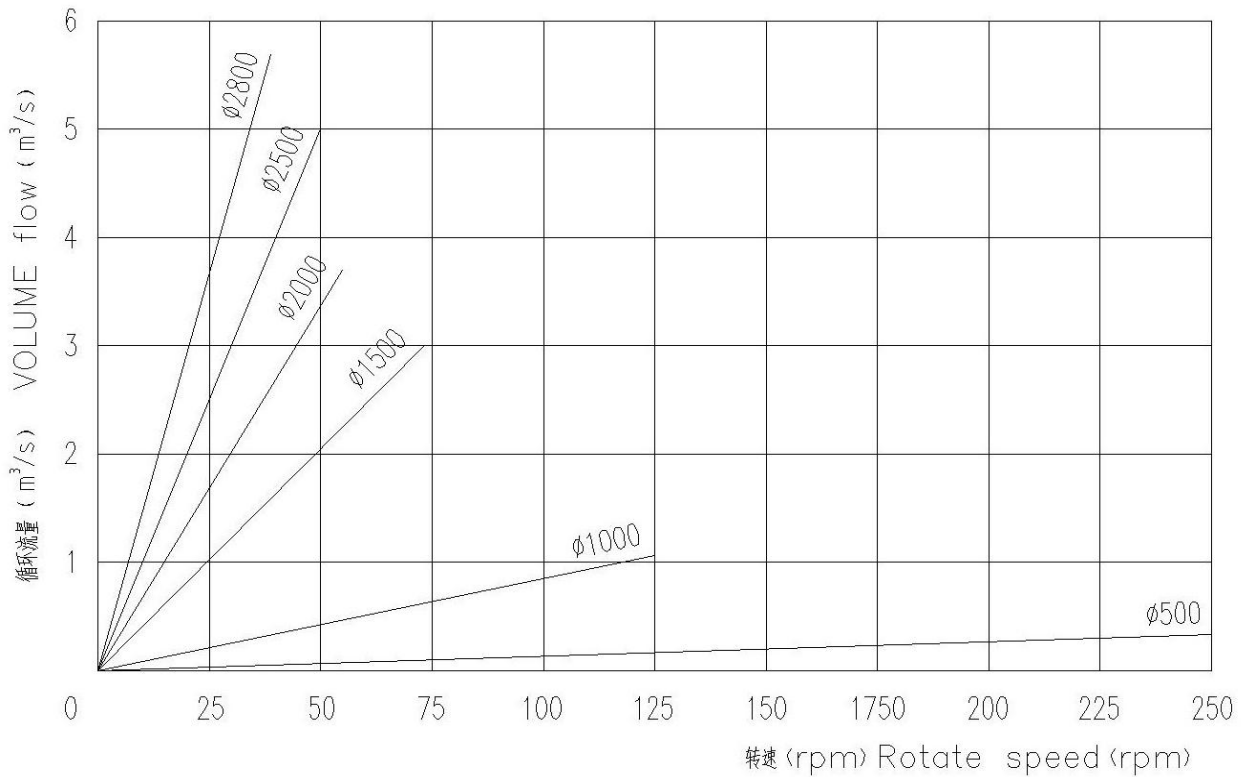


矩形单元/Rectangular element



方形单元/Square unit

转速与循环流量曲线 / SPEED AND CIRCULATION FLOW CURVE



此外对于水深超过8米或液体浓度超过规定的，在选型时应考虑加大功率或提高搅拌机的工作转速，以确保在大容量和高浓度液体中的搅拌效果；一般在常规工况条件下可选用QSJ系列，在高温、高腐蚀、磨蚀性的恶劣环境下可选用GSJ系列。我公司可协助用户在特殊环境下的选型。

In addition, for water depths exceeding 8 meters or liquid concentrations exceeding regulations, when selecting, consideration should be given to increasing power or increasing the working speed of the mixer to ensure the mixing effect in large capacity and high concentration liquids; Under normal operating conditions, QSJ series can be selected, while GSJ series can be used in harsh environments with high temperature, high corrosion, and abrasion. Our company can assist users in selecting models in special environments.

产品特点 / PRODUCT FEATURES

- 1、立体螺旋式水流，无搅拌死角—高效
- 2、大比表面积叶轮，配备功率小—节能
- 3、安装灵活，维护方便—便捷

1. Three dimensional spiral water flow, no mixing dead corners - efficient
2. Large specific surface area impeller, equipped with low power - energy-saving
3. Flexible installation, easy maintenance - convenient



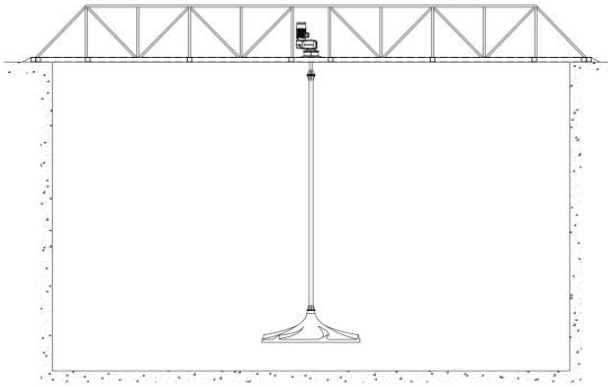
安装方式/INSTALLATION METHOD

1、GSJ安装方式:

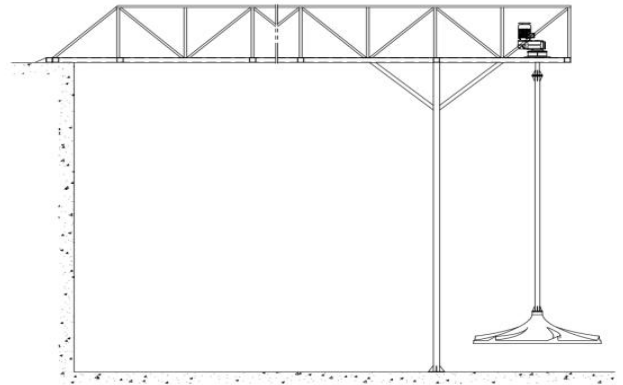
利用桥架（全桥或半桥）定位，采用干式电机减速机作为动力，叶轮具有自动纠偏功能，运行平稳，维护方便。

1. GSJ installation method:

Using bridge frame (full bridge or half bridge) positioning, a dry motor reducer is used as the power source, and the impeller has automatic correction function, ensuring smooth operation and easy maintenance.



GSJ全桥安装方式
GSJ full bridge installation method



GSJ半桥安装方式
Installation method of GSJ half bridge

2、QSJ型安装方式:

图一是通过长臂汽车吊直接将搅拌机吊入指定位置。

图二是通过池边设定的走道桥利用手动卷扬吊装。

2. QSJ installation method:

Figure 1 shows the mixer being directly lifted into the designated position using a long arm truck crane.

Figure 2 shows the use of manual winch lifting through the walkway bridge set by the pool.

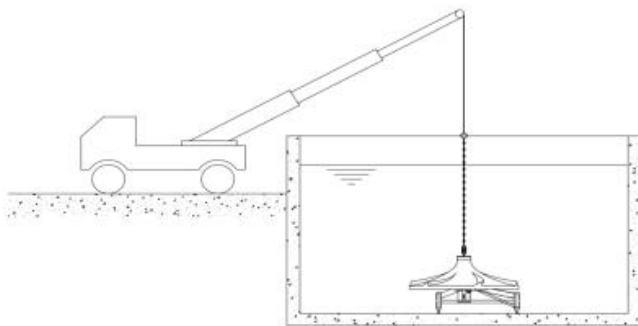


图1
Figure 1

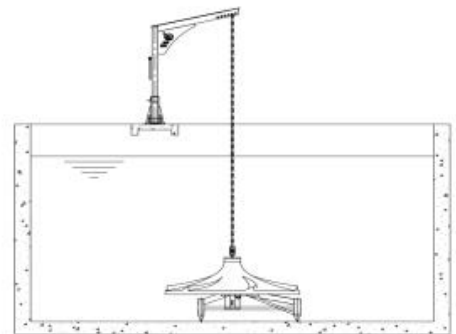


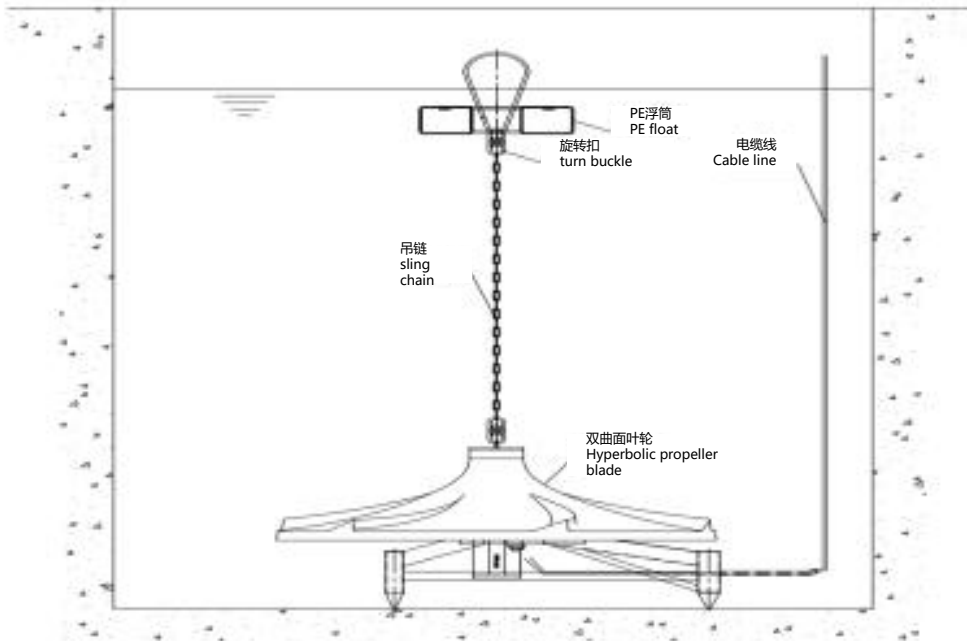
图2
Figure 2

3、浮筒型安装方式:

双曲面搅拌机也可采用浮筒方式安装，主要适用于一些无坚固、平整池底，同时也不便设置桥架的场所。

3. Floating type installation method:

The hyperbolic mixer can also be installed using a float, mainly suitable for places where there is no sturdy or flat pool bottom, and it is also inconvenient to set up a bridge.



浮筒安装方式

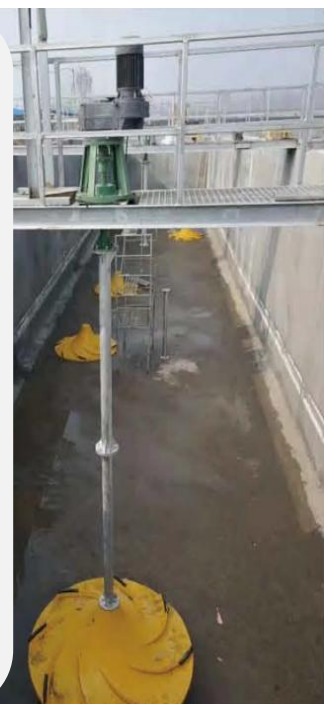
Float installation method

注意事项:

Note:

- 安装前要有一名合格电工检查电机。电器并确定转向，叶轮离池底的最小工作距离 $\leq 300\text{mm}$ ，且池底平整、结实，池内无建筑垃圾。
- 如果长时间不运行，重新启动时要防止淤积造成叶轮堵塞而烧毁马达。
- 在封闭池中要考虑叶轮进出口安装尺寸。
- 注意水下电缆要固定，防止磨损。
- 使用前请详细阅读产品安装、保养和维修说明书

- Before installation, a qualified electrician should inspect the motor. Electrical appliances should be turned and the minimum working distance between the impeller and the bottom of the pool should be $\leq 300\text{mm}$. The bottom of the pool should be flat and sturdy, and there should be no construction waste in the pool.
- If it does not run for a long time, it is necessary to prevent clogging of the impeller and burning of the motor when restarting.
- In a closed pool, the installation dimensions of the impeller inlet and outlet should be considered.
- Pay attention to fixing underwater cables to prevent wear and tear.
- Please read the product installation, maintenance, and repair manual carefully before use



QHB型潜水回流泵

QHB type submersible reflux pump

产品使用范围 /PRODUCT USAGE SCOPE

QHB型系列潜水回流泵是在潜水搅拌机生产技术基础上开发出的产品，该泵为污水处理厂二级混合液回流、反硝化脱氮除氮的专用设备，并可用于地面给排水工程中需要微扬程、大流量场所。

The QHB series submersible reflux pump is a product developed based on the production technology of submersible mixers. This pump is a specialized equipment for secondary mixed liquid reflux, denitrification and nitrogen removal in sewage treatment plants, and can be used in ground water supply and drainage engineering where micro head and high flow are required.

产品型号说明 /PRODUCT MODEL DESCRIPTION

QHB

A

10

电机额定功率KW


A为节能型

潜水回流泵

Rated power of motor KW

A is energy-saving type

Submersible reflux pump



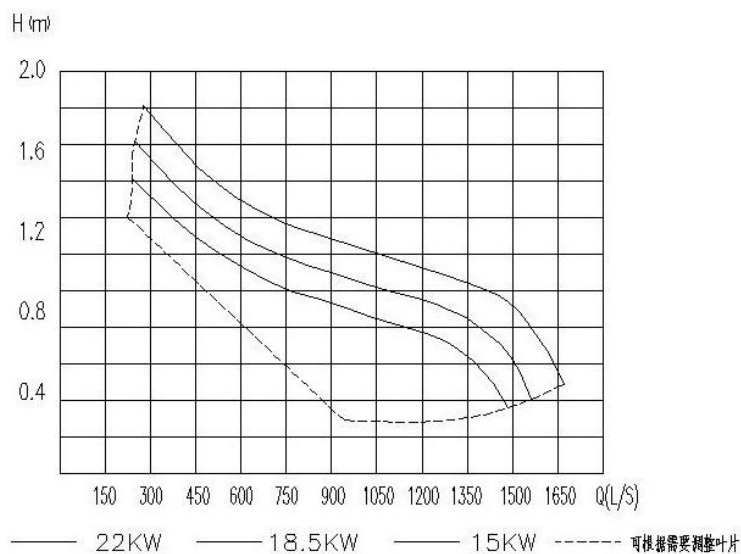
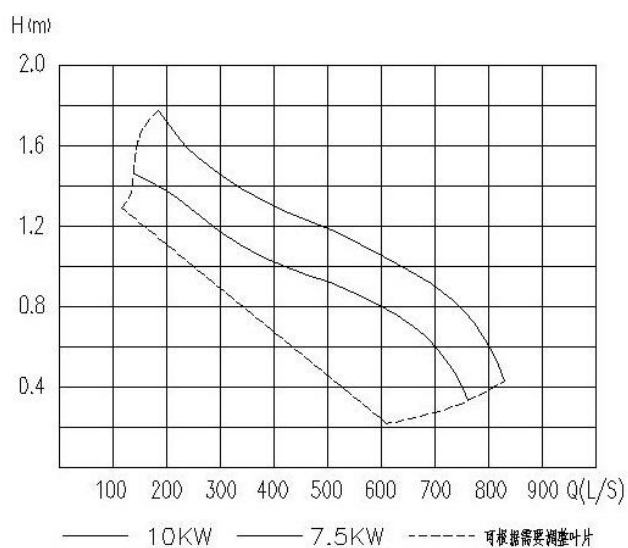
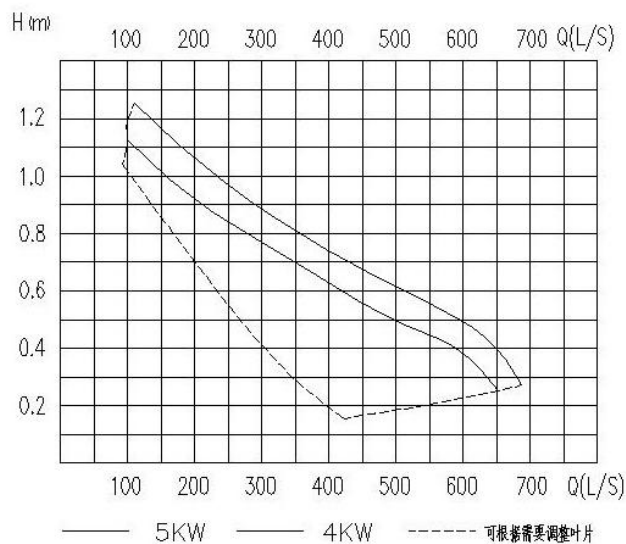
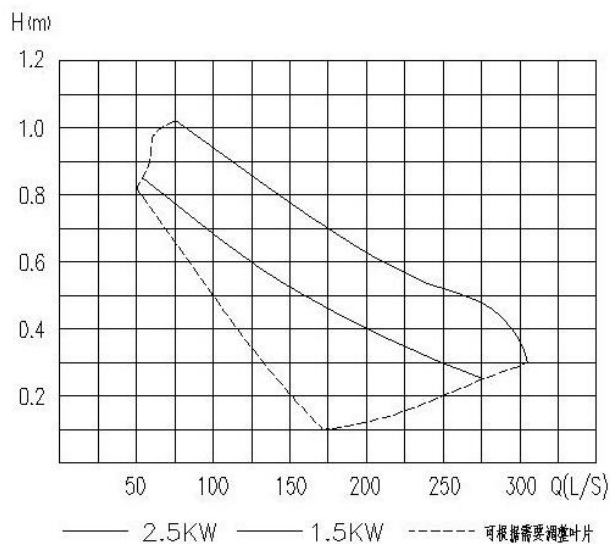
产品技术性能表/PRODUCT TECHNICAL PERFORMANCE TABLE

型号 model	电机功率 power (Kw)	额定电流 Rated current (A)		叶轮直径 impeller diameter (mm)	防护等级 protection grade	绝缘等级 Insulation level	公称直径 Nominal diameter (mm)
		QHB	QHBA				
QHB1.5	1.5	5.2	3.7	400	IP68	F	400
QHB2.5	2.5	7	5.6	400	IP68	F	400
QHB4	4	14	8.6	620	IP68	F	600
QHB5	5	19	11	620	IP68	F	600
QHB7.5	7.5	28	15	620	IP68	F	600
QHB10	10	32	22	620	IP68	F	600
QHB15	15	30	30	760	IP68	F	740
QHB18.5	18.5	41	36	760	IP68	F	740
QHB22	22	44.7	42	760	IP68	F	740

性能曲线/PERFORMANCE CURVE

此曲线为泵的特性曲线，不包括扩散管和进出口的损失。

This curve is the characteristic curve of the pump, excluding the losses of the diffuser and inlet and outlet.



产品安装/PRODUCT INSTALLATION



特别提醒用户：正确安装使用是该泵长久、正常运转的基本保证。潜水回流泵采用自动耦合安装系统，在无需排水的情况下，不用任何机械拆卸便可迅速提升，安装方便快捷。本设备除穿墙管需预埋外，导杆、起吊杆均用膨胀螺栓与池体连接，不需预埋件。预埋件和拍门由用户自行购买安装，回流泵有水平安装和垂直安装两种方式供用户选择。

Special reminder to users: Proper installation and use are the basic guarantees for the long-term and normal operation of this pump. The submersible reflux pump adopts an automatic coupling installation system, which can be quickly lifted without any mechanical disassembly without the need for drainage, making installation convenient and fast. This equipment requires pre embedded wall pipes and guide rods. The lifting rods are connected to the pool body with expansion bolts and do not require embedded parts. The embedded parts and doors are purchased and installed by the user themselves, and the reflux pump can be installed horizontally or vertically for the user to choose from.

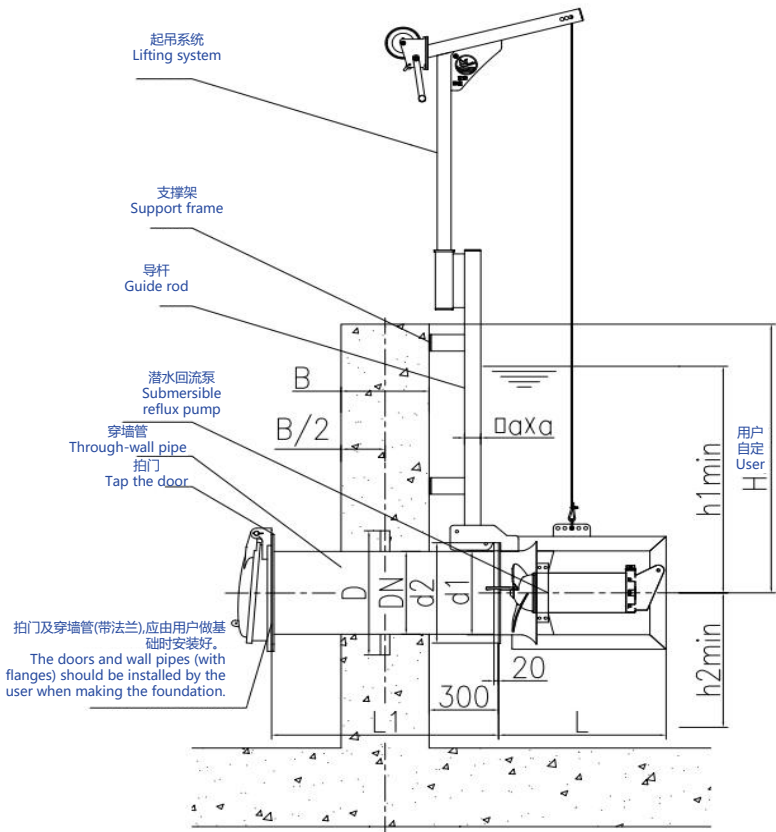
安装尺寸/INSTALLATION SIZE

型号T model T 参数P parameter P	d1	d2	D	DN	L	h1	h2	a	B	L1
QHB1.5	406	480	600	400	620	750	350	70	≥380	由用户 确定 Deter- mined by the user
QHB2.5	406	480	600	400	620	750	350	70		
QHB4	632	710	800	600	840	1200	550	100	≥450	
QHB5	632	710	800	600	840	1200	550	100		
QHB7.5	632	710	800	600	920	1200	550	100		
QHB10	632	710	800	600	920	1200	550	100		
QHB15	832	890	980	800	1080	1300	600	100	≥480	
QHB18.5	832	890	980	800	1260	1300	600	100		
QHB22	832	890	980	800	1380	1300	600	100		

产品特点/PRODUCT FEATURES

- 1. 按照微扬程、大流量的工作模式特别设计
- 2. 主机采用冲压成型结构，水力性能好效率高
- 3. 一体化吊装设计。可实现在水下快速安装
- 4. 采用双重机械密封和多重电机保护功能，提高运行可靠性。

- 1. Specially designed according to the working mode of micro head and high flow rate
- 2. The host adopts a stamped structure with good hydraulic performance and high efficiency
- 3. Integrated lifting design. Can achieve rapid installation underwater
- 4. Adopting dual mechanical seals and multiple motor protection functions to improve operational reliability.



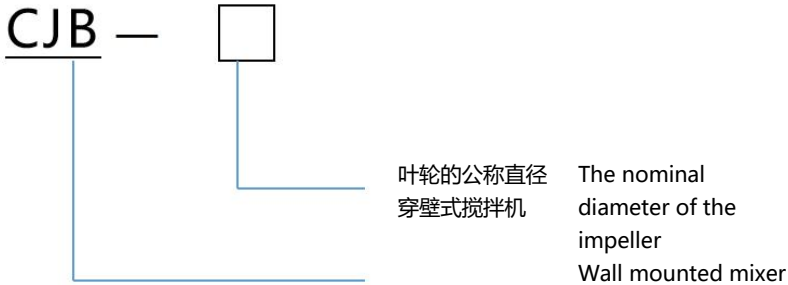
产品使用条件/PRODUCT USAGE CONDITIONS

01	连续运行时，介质温度不高于 During continuous operation, the temperature of the medium should not exceed	40℃
02	介质的PH值 PH value of the medium	5~9
03	最大潜没深度 Maximum submergence depth	10m



CJB型穿壁式搅拌机 CJB type wall mounted mixer

型号表示/MODEL REPRESENTATION



应用范围/APPLICATION SCOPE

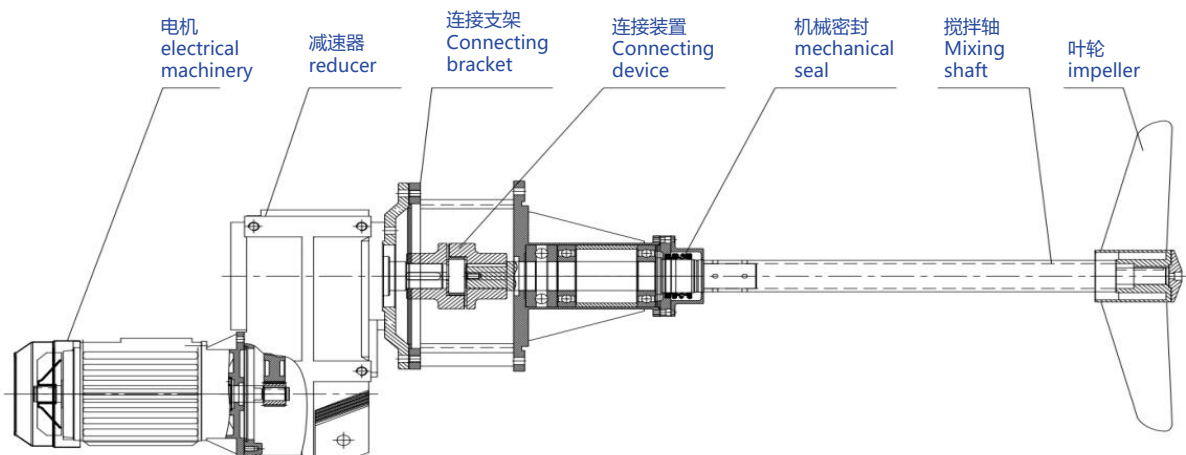
穿壁式搅拌机是我公司利用潜水密封技术自主研发的一种新型搅拌装置。它主要应用在大型罐体、反应釜等需要混合搅拌的容器里。

The wall mounted mixer is a new type of mixing device independently developed by our company using submersible sealing technology. It is mainly used in large tanks, reaction vessels, and other containers that require mixing and stirring.

结构简介/STRUCTURE INTRODUCTION

穿壁式搅拌机由传动部件、叶轮、密封仓等组成。见下图：

The wall mounted mixer consists of transmission components, impellers, sealed compartments, etc. See the following figure:



工作特性/WORKING CHARACTERISTICS

其工作特点是利用外置的动力装置，通过传动轴带动封闭容器内的叶轮的转动，从而进行固、液、气体的混合搅拌，以防止固体物的沉淀。

Its working characteristic is to use an external power device to drive the rotation of the impeller inside the closed container through a transmission shaft, thereby mixing and stirring solid, liquid, and gas to prevent the precipitation of solid matter.

产品特点/PRODUCT FEATURES

该设备采用减速机、齿轮转动，整机运行平稳，不会对搅拌容器的构筑物产生影响。采用多道密封，设有堵漏装置，可在不排水情况下更换密封，运行更可靠安全，维修更便捷。

The equipment adopts a reducer and gear rotation, and the whole machine runs smoothly without affecting the structure of the mixing container. Adopting multiple seals and equipped with leak sealing devices, the seals can be replaced without draining, making operation more reliable and safe, and maintenance more convenient.

性能参数/PERFORMANCE PARAMETER

型号 model	叶轮直径 impeller diameter (mm)	转速 speed (rpm)	功率 power (Kw)	重量 weight (Kg)
CJB	320-850	35-385	3-10	< 350

该设备选型可根据用户的工艺要求选择搅拌机的叶轮形式和直径及转速。

The selection of this equipment can be based on the user's process requirements to choose the impeller form, diameter, and speed of the mixer.

安装方式/INSTALLATION METHOD

安装位置灵活，可沿罐的周边任一位置定位。

由于该设备的动力部分和密封件均设计在外部，便于在罐体不需要排空情况下设备的维护保养，特别适合在高温、高腐蚀和高浓度液体的环境下工作。

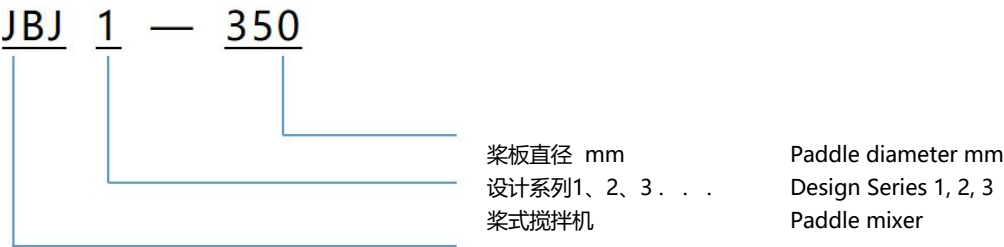
The installation position is flexible and can be located at any position along the circumference of the tank.

Due to the fact that the power part and sealing components of the equipment are designed externally, it is convenient for maintenance and upkeep of the equipment without the need to empty the tank, making it particularly suitable for working in environments with high temperature, high corrosion, and high concentration liquids.



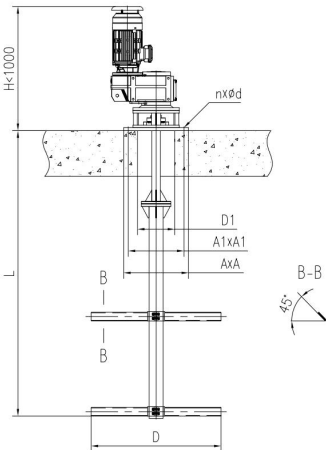
JBJ型桨式搅拌机
JBJ type paddle mixer

型号表示/MODEL REPRESENTATION



主要技术参数及安装尺寸
MAIN TECHNICAL PARAMETERS AND INSTALLATION DIMENSIONS

主要参数 Parameters	JBJ1— 350	JBJ1— 450	JBJ1— 600	JBJ1— 400	JBJ1— 600	JBJ1— 800	JBJ1— 550	JBJ1— 700	JBJ1— 900
转速 speed r/min	88	52	35	88	52	35	88	52	35
电机功率 power Kw	0.37				0.55		0.75	1.1	
L mm	1500								
D mm	350	450	600	400	600	800	550	700	900
D1 mm	200								
A X A mm	300X 300								
A1 X A1 mm	350X 350								
n X d mm	4 X Φ21								



JBK型框式搅拌机

JBK type frame mixer

用途/USE TO

主要用于给水厂、污水处理厂投加药剂的溶解搅拌。

Mainly used for dissolving and stirring chemicals in water supply plants and sewage treatment plants.

型号表示/MODEL REPRESENTATION

JBK 1 — 3000

桨板直径 mm

设计系列1、2、3 . . .

框式搅拌机

Paddle diameter mm

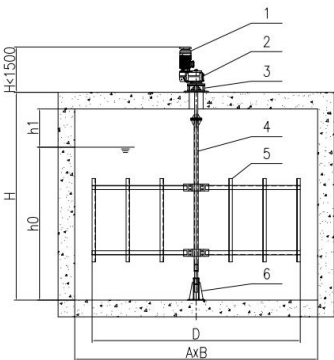
Design Series 1, 2, 3

Frame mixer

主要技术参数及安装尺寸

MAIN TECHNICAL PARAMETERS AND INSTALLATION DIMENSIONS

型号 model	池子尺寸 Pool size m		搅拌机尺寸 Blender size mm			电动机功率 Motor Power Kw			转速 speed r/min		
	A X B	H	D	h0	h1	I	Ⅱ	Ⅲ	I	Ⅱ	Ⅲ
JBK1—1700	2.2x2.2	3.4	1700	2600	400	0.75	0.37	0.37	8	5.2	3.9
JBK1—2875	3.25X3.25	4	2850	3500	350				5.2	3.9	3.2
JBK1—3000	3.5X3.5	3.55	3000	2200	550	0.37	0.25	0.18	3.9	2.5	1.8
JBK1—3850	4.3X4.3	4	3850	1200		1.1	0.75	0.55			3.2
	4.7X4.7	3.4		1400							



I 单层全高桨板

Single layer full height paddle board

1. 电机

2. 减速机

3. 支座

4. 搅拌轴

5. 桨板

6. 水下支座
1. electric machinery

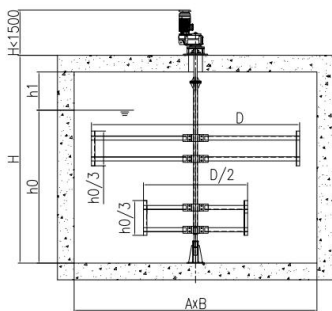
2. Reducer

3. Support bracket

4. Mixing shaft

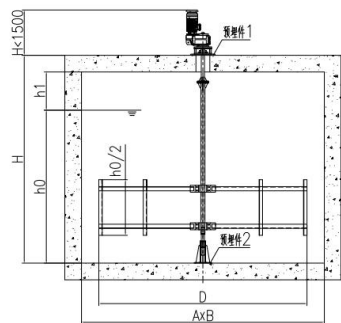
5. paddle board

6. Underwater support



II 双层全高浆板

II double-layer full height slurry board



III 单层半高浆板

III single-layer semi high slurry board

- 预埋件1
Pre embedded
part 1

预埋件2
Pre embedded
part 2
-

JBT型推进式搅拌机 JBT type push mixer

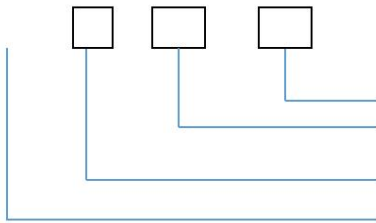
用途/USE TO

JBT型推进式搅拌机适用于污水处理过程中污泥消化搅拌。

JBT type push mixer is suitable for sludge digestion and mixing in sewage treatment processes.

型号表示/MODEL REPRESENTATION

JBK



桨板直径 mm
固定式，不标注；移动式—Y
设计系列1、2、3 . . .
框式搅拌机

Paddle diameter mm
Fixed, not labeled; Mobile - Y
Design Series 1, 2, 3
Frame mixer

特点/CHARACTERISTIC

耗用功率小，构造简单、运行可靠、无堵塞现象，维护简便。

Low power consumption, simple structure, reliable operation, no blockage, and easy 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。

The JBT type push mixer is shown in the figure, consisting of a mixing shaft and a mixing impeller. Bearing device. Composed of a machine base and a driving device.

电气控制/ELECTRICAL CONTROL

按手动配置控制箱，亦可按用户要求配置，可带PLC接口。

The control box can be manually configured or configured according to user requirements, and can be equipped with a PLC interface.

订货说明/ORDERING INSTRUCTIONS

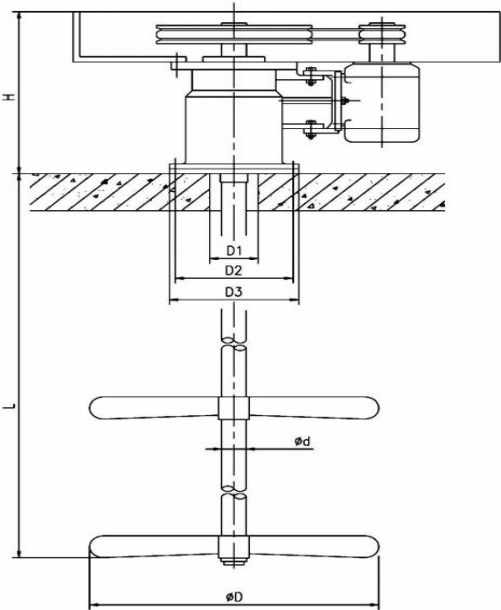
1. 可根据用户的尺寸制造；
 2. 注明主体材质，碳钢或不锈钢；
 3. 订货时必须提供相关工艺、土建资料及合同技术附件等
1. Can be manufactured according to the user's size;
 2. Indicate the main material, carbon steel or stainless steel;
 3. When placing an order, relevant processes, civil engineering materials, and technical attachments to the contract must be provided

技术特性表/TECHNICAL FEATURES

表3a推进式搅拌机主要技术数据（固定式）

Table 3a Main Technical Data of Propelled Blender (Fixed Type)

型 号 model	JBT— 200	JBT— 250	JBT— 300	JBT— 350	JBT— 400
转速 speed r/min	295				
电机功率 power Kw	0.37	0.55	1.1	2.2	3
L mm	1000	1200	1400	1600	1800
D mm	200	250	300	350	400
D1 mm	100			200	
D2 mm	175			290	
D3 mm	210			330	

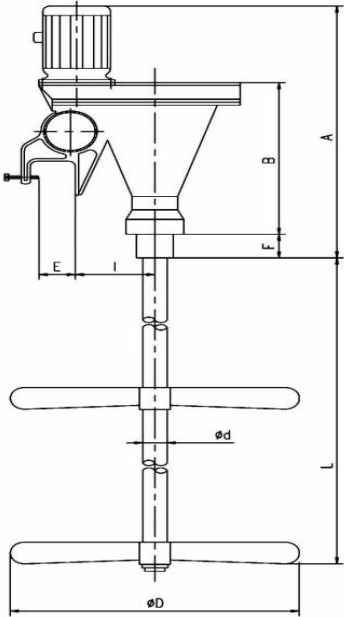


3a JBT型推进式搅拌机外形安装图
Installation drawing of 3a JBT type push type mixer

表3b推进式搅拌机主要技术数据（移动式）

Table 3b Main Technical Data of Propelled Blender (Mobile)

型号	JBTY—160	JBTY—200	JBTY—250	JBTY—300
转速 speed r/min	295			
电机功率 power Kw	0.18	0.25	0.55	1.1
D mm	160	200	250	300
A mm	499		570	650
B mm	189		260	265
C mm	140		150	180
I mm	80			
E mm	60			
F mm	50		60	100
参考质量 Reference quality Kg	25	30	45	80



3b JBT型推进式搅拌机外形安装图（移动式）
Installation diagram of 3b JBT type push type mixer
(mobile)

QSB型深水自吸式潜水射流曝气机

QSB type deepwater self-priming submersible jet aerator

原理及用途/PRINCIPLES AND APPLICATIONS

通过潜水泵产生的水流经过喷嘴形成高速水流，在喷嘴周围形成负压吸入空气，经混合室与水流混合，在喇叭形的扩散管内产生水气混合流，高速喷射而出，夹带许多气泡的水流在较大面积和深度的水域内涡旋搅拌，完成曝气，并且其轴功率不随潜没深度的变化而变化，进气量可以调节。正因为如此，射流式曝气机可以在水位变化较大的池中应用。

The water flow generated by the submersible pump passes through the nozzle to form a high-speed water flow, and negative pressure is formed around the nozzle to suck in air. It mixes with the water flow in the mixing chamber and generates a water gas mixture flow in the horn shaped diffusion tube, which is sprayed out at high speed. The water flow carrying many bubbles vortices and stirs in a large area and depth of water to complete aeration, and its shaft power does not change with the depth of submergence. The intake air volume can be adjusted. Because of this, jet aerators can be applied in pools with significant changes in water level.

特点/CHARACTERISTIC

该曝气机由潜水电泵与喷射泵组成，从而使水体搅动与充氧同时进行，既可获得较高的氧气吸收率，又具有叶轮无堵塞优点。强有力的单向液流，造成有效的对流循环，且电机负荷随水位的变化很小，安装简单。

This aerator consists of a submersible electric pump and a jet pump, which enables simultaneous agitation and oxygenation of the water body, resulting in a high oxygen absorption rate and the advantage of unobstructed impeller.

Strong unidirectional liquid flow creates effective convective circulation, and the motor load changes very little with the water level, making installation simple.

适用工况/APPLICABLE WORKING CONDITIONS

QSB型深水自吸式潜水射流曝气机可在下列条件下正常连续运行：

- 1 最高介质温度不超过40℃；
- 2 介质的PH值在5~9；
- 3 介质密度不超过1150Kg/m³。

The QSB type deepwater self-priming submersible jet aerator can operate continuously under the following conditions:

- The maximum medium temperature shall not exceed 40 °C;
- The pH value of the two media is between 5 and 9;
- The density of the medium should not exceed 1150Kg/m³.

型号表示/MODEL REPRESENTATION

QSB — 0.75



电机功率 Kw
潜水射流式曝气机

Motor power Kw
Submersible jet aerator

技术特性表/TECHNICAL FEATURES

型号 model	QSB0.75	QSB1.5	QSB2.2	QSB3	QSB4	QSB5.5	QSB7.5
功率 power Kw	0.75	1.5	2.2	3	4	5.5	7.5
电流 A current A	2.9	3.7	5	6.4	8.2	12.4	16.3
电压 V Voltage V	380						
转速 speed r/min	2900	2900	2900	2900	2900	1470	1450
频率 Frequency Hz	50						
绝缘等级 Insulation level	F级/Grade F						
最大潜入深度 Maximum penetration depth m	1.5	2	3.5	4	4.5	5	5.5
进气量 air inflow m³/h	10	22	35	50	75	85	100
进气管口 Inlet pipe openingmm	32	32	50	50	50	50	50

注: 表中进气量及增氧能力是在标准试验条件下（20℃水温，气压101.325KPa），曝气机潜水深度3M，
Note: 试验介质为清水。在中度污水中，增气能力可按系数0.85作为设计依据。

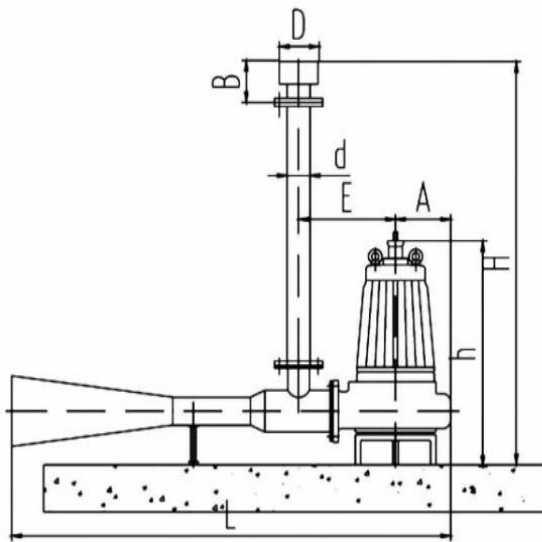
选型与安装/SELECTION AND INSTALLATION

需本公司协助选型时，用户应提供池型、介质特性、所需进气量、潜水深度等相关数据，以便本公司设计和提供优质设备，更好地满足用户的需求。QSB型深水自吸式潜水射流曝气机的安装形式有自耦式和移动式两种。自耦式安装是将曝气装置和专用的底座固定在水池底部，在池顶安装好配套的支撑块，用导轨使两者相连，潜水电泵与特定支架连接好后沿导轨下滑到底座出口位置，通过泵自重，自动耦合并密封。自耦式安装无需安装或维修人员进入水坑即可提升和安装电泵。移动式安装方式是将深水自吸式潜水射流曝气机安装于池底部，依靠自重定位，具有安装位置可变动、灵活、低成本等特点。

选型与安装/SELECTION AND INSTALLATION

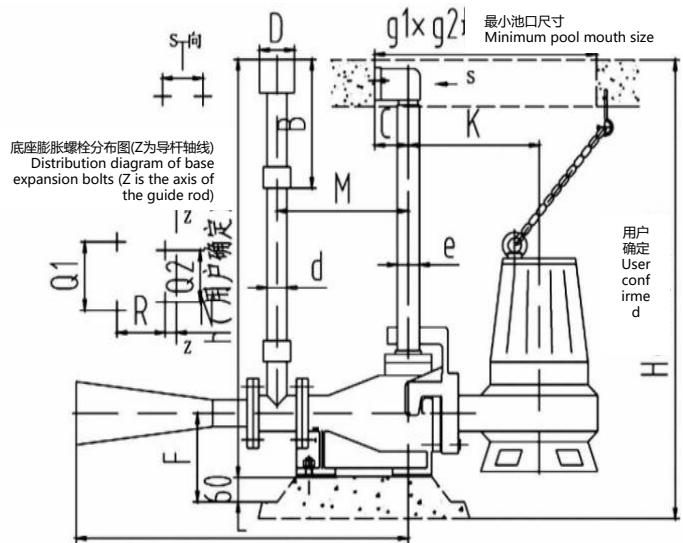
需本公司协助选型时，用户应提供池型、介质特性、所需进气量、潜水深度等相关数据，以便本公司设计和提供优质设备，更好地满足用户的需求。QSB型深水自吸式潜水射流曝气机的安装形式有自耦式和移动式两种。自耦式安装是将曝气装置和专用的底座固定在水池底部，在池顶安装好配套的支撑块，用导轨使两者相连，潜水电泵与特定支架连接好后沿导轨下滑到底座出口位置，通过泵自重，自动耦合并密封。自耦式安装无需安装或维修人员进入水坑即可提升和安装电泵。移动式安装方式是将深水自吸式潜水射流曝气机安装于池底部，依靠自重定位，具有安装位置可变动、灵活、低成本等特点。

When our company is required to assist in selection, users should provide relevant data such as pool type, medium characteristics, required air intake, and diving depth, so that our company can design and provide high-quality equipment to better meet the needs of users. The installation forms of QSB type deepwater self-priming submersible jet aerator include two types: self coupling and mobile. Self coupling installation is to fix the aeration device and a dedicated base at the bottom of the water tank, install supporting blocks on the top of the tank, and connect the two with guide rails. After the submersible pump is connected to a specific bracket, it slides down along the guide rail to the outlet position of the base. Through the self weight of the pump, it automatically couples and seals. Self coupling installation can lift and install electric pumps without the need for installation or maintenance personnel to enter the water pit. The mobile installation method is to install the deep water self-priming submersible jet aerator at the bottom of the pool, relying on self weight positioning, and has the characteristics of adjustable installation position, flexibility, and low cost.



深水自吸式潜水射流曝气机移动式安装示意图

Schematic diagram of mobile installation of deep water self-priming submersible jet aerator



深水自吸式潜水射流曝气机自耦式安装示意图

Schematic diagram of self coupling installation of deep water self-priming submersible jet aerator

深水自吸式潜水射流曝气机移动式安装尺寸

DIMENSIONS FOR MOBILE INSTALLATION OF DEEP WATER SELF-PRIMING SUBMERSIBLE JET AERATOR

型号 model	H	h	L	D	F	d	B	E	A
QSB0.75	用户根据 实际工况 条件确定 Users determin e based on actual working condition s	438	1136	Φ100	85	DN32	260	494	109
QSB		438	1136	Φ100	85	DN32	260	494	109
QSB		435	1249	Φ104	141	DN50	280	369	126
QSB		435	1325	Φ104	141	DN50	280	369	126
QSB		580	1502	Φ104	149	DN50	280	4141	203
QSB		915	1958	Φ104	137	DN50	280	689	252
QSB		915	2069	Φ104	137	DN50	280	689	252

深水自吸式潜水射流曝气机自耦式安装尺寸

DEEP WATER SELF-PRIMING SUBMERSIBLE JET AERATOR WITH SELF COUPLING INSTALLATION DIMENSIONS:

型号	A	B	C	D	d	e	F	g1xg2	H	h	K	L	M	N	Q1	Q2	R	T
QSB 7.5	107	260	85	Φ100	DN32	Φ48	172	800x600	根据实际 工况条件 确定 Determin e based on actual working condition s		180	535	271	19	220	180	136	160
QSB 1.5	107	260	85	Φ100	DN32	Φ48	172	800x600			180	535	271	19	220	180	136	160
QSB 2.2	126	280	85	Φ104	DN50	Φ48	172	800x600			191	754	280	19	220	180	136	210
QSB 3	126	280	82	Φ104	DN50	Φ48	170	800x600			191	830	280	19	220	180	136	210
QSB 4	203	280	105	Φ104	DN50	Φ60	175	900x600			359	885	411	26	300	220	255	210
QSB 5.5	252	280	105	Φ104	DN50	Φ60	175	1100x800			433	1017	490	13	300	220	250	210
QSB 7.5	252	280	105	Φ104	DN50	Φ60	175	1100x800			433	1128	490	13	300	220	250	210

新型QXB型潜水曝气机 New QXB submersible aerator

用途/USE TO

新的QXB型号潜水曝气机主要适用于给水预处理和污水生化处理工艺中的专业曝气设备，用于曝气沉沙池、预曝气池、曝气池气浮池等曝气和搅拌，特别是：生物氧化污泥硝化碱性废水的中和，油、脂的分离。也可用于养殖塘的增氧和景观水的养护。

The new QXB model submersible aerator is mainly suitable for professional aeration equipment in water pretreatment and sewage biochemical treatment processes. It is used for aeration and stirring in aeration sedimentation tanks, pre aeration tanks, aeration tanks, air flotation tanks, etc., especially for the neutralization of biological oxidation sludge nitrification alkaline wastewater and oil. Separation of lipids. It can also be used for oxygenation of aquaculture ponds and maintenance of landscape water.

原理/PRINCIPLE

新的QXB潜水曝气机采用独特的水力部件设计，优化叶轮与导叶之间的间隙（小于1mm），较之老型号曝气机叶轮与导叶之间的间隙（大于5mm）要小许多，加上独有的星形叶轮设计，放射式水、气混合通道，在高速旋转电机的驱动下，叶轮在水中产生离心力，在离心力作用下使叶轮周围形成一个负压区，空气通过进气管被吸入，空气和水在混合室内被高速旋转叶轮撕碎，气液湍流混合并高速经扩散通道出来，形成气泡，将空气中的氧气溶入水中。由于水流强力喷射，且星形叶轮把空气泡切割的更细、更小、更密，使得空气泡与待处理液体接触面就更大，空气被剪切成大量微小气泡，极大地提高了传质面积。并形成螺旋状有效水流循环。大量的氧被溶于水，且具有极高的利用率。

The new QXB submersible aerator adopts a unique hydraulic component design, optimizing the gap between the impeller and the guide vane (less than 1mm), which is much smaller than the gap between the impeller and the guide vane of the old model aerator (greater than 5mm). In addition, the unique star shaped impeller design and radial water air mixing channel, driven by a high-speed rotating motor, generate centrifugal force in the water. Under the action of centrifugal force, a negative pressure zone is formed around the impeller. Air is sucked in through the intake pipe, and the air and water are torn apart by the high-speed rotating impeller in the mixing chamber. The gas-liquid turbulence mixes and quickly exits through the diffusion channel, forming bubbles that dissolve oxygen in the air into the water. Due to the strong jet of water and the star shaped impeller cutting the air bubbles finer, smaller, and denser, the contact surface between the air bubbles and the liquid to be treated becomes larger, and the air is sheared into a large number of tiny bubbles, greatly improving the mass transfer area. And form a spiral shaped effective water circulation. A large amount of oxygen is dissolved in water and has extremely high utilization efficiency.

特点/CHARACTERISTIC

1. 氧利用率高;
 2. 服务面积大;
 3. 结构简单、紧凑，永久润滑轴承，高品质机封;机组寿命长，长期运行无故障;
 4. 节省工程投资，无需提供气源，省去鼓风机，安装方便，噪音小。
1. High oxygen utilization efficiency;
 2. Large service area;
 3. Simple and compact structure, permanently lubricated bearings, high-quality machine seals; The unit has a long service life and operates without faults for a long time;
 4. Save engineering investment, no need to provide gas source, eliminate blower, easy installation, and low noise.

材料/MATERIAL

电机部分：铸铁轴:不锈钢420

螺栓：不锈钢304

水力部件：碳钢(可按用户要求，提供不锈钢304或316)

Motor part: Cast iron shaft: Stainless steel 420

Bolt: Stainless steel 304

Hydraulic components: Carbon steel (stainless steel 304 or 316 can be provided according to user requirements)

优点/ADVANTAGE

潜水曝气机对那些需额外进行空气补给的污水处理工艺，是最经济、最有效的选择。由于采用潜水式电机的设计，无需进行机房的投资。新的QXB潜水曝气机气泡细密，溶氧率高、维修、安装方便、运用灵活，对水池无形状要求；运行平稳，安静，噪音小。如将底部的混合室改用不锈钢钝化材料，将会延长使用寿命。

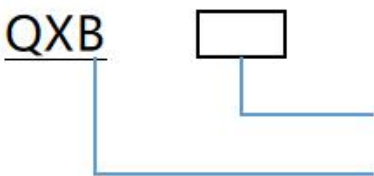
Submersible aerators are the most economical and effective choice for wastewater treatment processes that require additional air supply. Due to the use of submersible motor design, there is no need to invest in the machine room. The new QXB submersible aerator has fine bubbles, high dissolved oxygen rate, easy maintenance and installation, flexible operation, and no shape requirements for the water tank; Smooth operation, quiet, and low noise. If the mixing chamber at the bottom is replaced with stainless steel passivation material, it will extend its service life.

安装/INSTALL

易于安装，起吊，无需特别的底部基础，曝气机可以靠自身重量，稳定的安放在水池的底部，无需固定，或其它装置，池子底部的混凝土也无需特别的加强。

Easy to install and lift, without the need for a special bottom foundation. The aerator can be stably placed at the bottom of the pool by its own weight, without the need for fixing or other devices. The concrete at the bottom of the pool also does not require special reinforcement.

型号表示方法/MODEL REPRESENTATION METHOD



新旧曝气机的对比/COMPARISON OF OLD AND NEW AERATORS

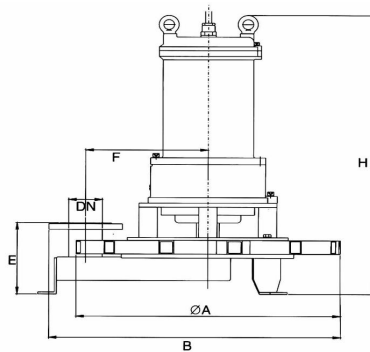
序号 Serial Number	项目 project	旧型号 old model	新型号 new model
1	曝气效果 Aeration effect	传导的叶轮和导叶之间的间隙（大于5mm），气泡大、稀疏。氧利用率不高。 The gap between the conducting impeller and guide vanes (greater than 5mm) has large and sparse bubbles. The oxygen utilization rate is not high.	星形叶轮与导叶之间的间隙（小于1mm），叶轮把空气泡切割的更细、更小、更密。提高增氧能力。 The gap between the star shaped impeller and the guide vanes (less than 1mm) allows the impeller to cut the air bubbles finer, smaller, and denser. Improve oxygenation capacity.
2	潜没深度 Depth of submergence	采用下进水的设计方式，采用高支架以便保证进水流态，就降低了潜没深度。 By adopting a downward inlet design and using high supports to ensure the inflow flow state, the submergence depth is reduced.	采用独特的上进水的设计方式，提高潜没深度。 Adopting a unique upward water inlet design to increase the submergence depth.
		同功率叶轮外径小，潜水深度不深。 The outer diameter of the impeller with the same power is small, and the diving depth is not deep.	同功率叶轮外径大，提高潜水深度。 The same power impeller has a larger outer diameter, which increases the diving depth.
		叶轮与盖板之间形成一个空腔，叶轮是开式结构，难以提高潜水深度 A cavity is formed between the impeller and the cover plate, and the impeller has an open structure, making it difficult to increase the diving depth	减小叶轮与盖板间的间隙（0.3~0.5）或采用扣环设计已达到更好的水力效率，提高其形成更高的真空度，来增加其潜没深度。 Reducing the gap between the impeller and the cover plate (0.3~0.5) or adopting a buckle design has achieved better hydraulic efficiency, improved the formation of a higher vacuum degree, and increased its submergence depth.
3	单机服务面积 Single machine service area	采用下进水的设计方式 Adopting the design method of downward inflow	采用独特的水力部件设计（上进水的方式），增强对上层水位循环流动、吸引，因而其服务面积亦随之扩大。 By adopting a unique hydraulic component design (inlet water method), it enhances the circulation and attraction of the upper water level, thus expanding its service area.
4	体积、重量 Volume and weight	铸件式混气盘，体积大而笨重，不利包装与运输。 The cast type mixing disc is large and bulky, which is not conducive to packaging and transportation.	采用独特的水力部件设计，省却了笨重的高支架，优化了混气盘的设计。 Adopting a unique hydraulic component design, it eliminates the need for bulky high supports and optimizes the design of the mixing disc.

性能参数/PERFORMANCE PARAMETER

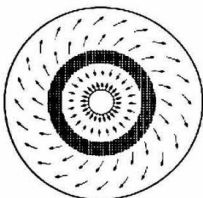
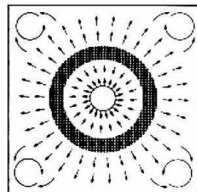
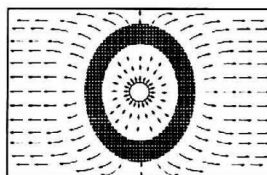
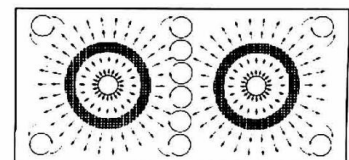
型号 model	QXB0.7 5	QXB1.5	QXB2.2	QXB3	QXB4	QXB5.5	QXB7.5	QXB11	QXB15	QXB18. 5	QXB22
功率 Power Kw	0.75	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22
电流 A current A	2.2	4	6	7.8	8.8	13	17	24	32	39	45
电压 V Voltage V	380										
转速 speed r/min	1470										
频率 Frequency Hz	50										
绝缘等级 Insulation level	F										
最大潜入深度 Maximum penetration depth m	2	3	3.5	3.5	5	4	4.5	5	7	5.5	6
进气量 air inflow m³/h	15	22	35	50	75	85	100	160	200	260	320
服务面积 service area (m²)	6	15	20	27	38	45	63	80	100	120	145

外形尺寸/EXTERNAL DIMENSIONS

曝气机型号 Aeration machine model	A	DN	B	E	F	H
QXB0.75	390	DN40	405	65	165	485
QXB1.5	420	DN50	535	200	240	550
QXB2.2	420	DN50	535	200	240	615
QXB3	500	DN50	635	205	300	615
QXB4	500	DN50	635	205	300	740
QXB5.5	690	DN80	765	210	320	815
QXB7.5	690	DN80	765	210	320	815
QXB11	720	DN100	870	240	400	1045
QXB15	720	DN100	870	240	400	1045
QXB18.5	840	DN125	1050	240	500	1100
QXB22	840	DN125	1050	240	500	1100



推荐布置/RECOMMENDED LAYOUT

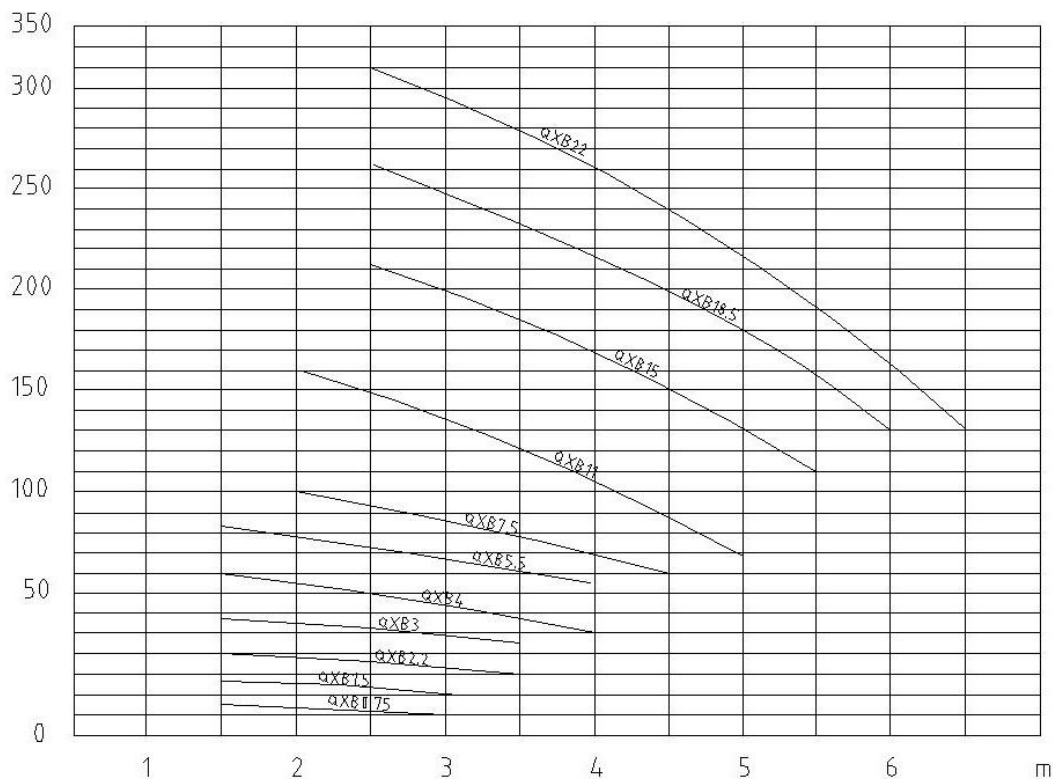
圆形池
Circular pool方形池
Square pool长方形池(长:宽=1.5:1)
Rectangular pool
(length: width=1.5:1)长方形池(长:宽=2:1)
Rectangular pool (length:
width=2:1)

推荐布置/RECOMMENDED LAYOUT

1. 服务面积及充氧量
2. 池形大小尺寸及水深
3. 曝气池进出口水质状况

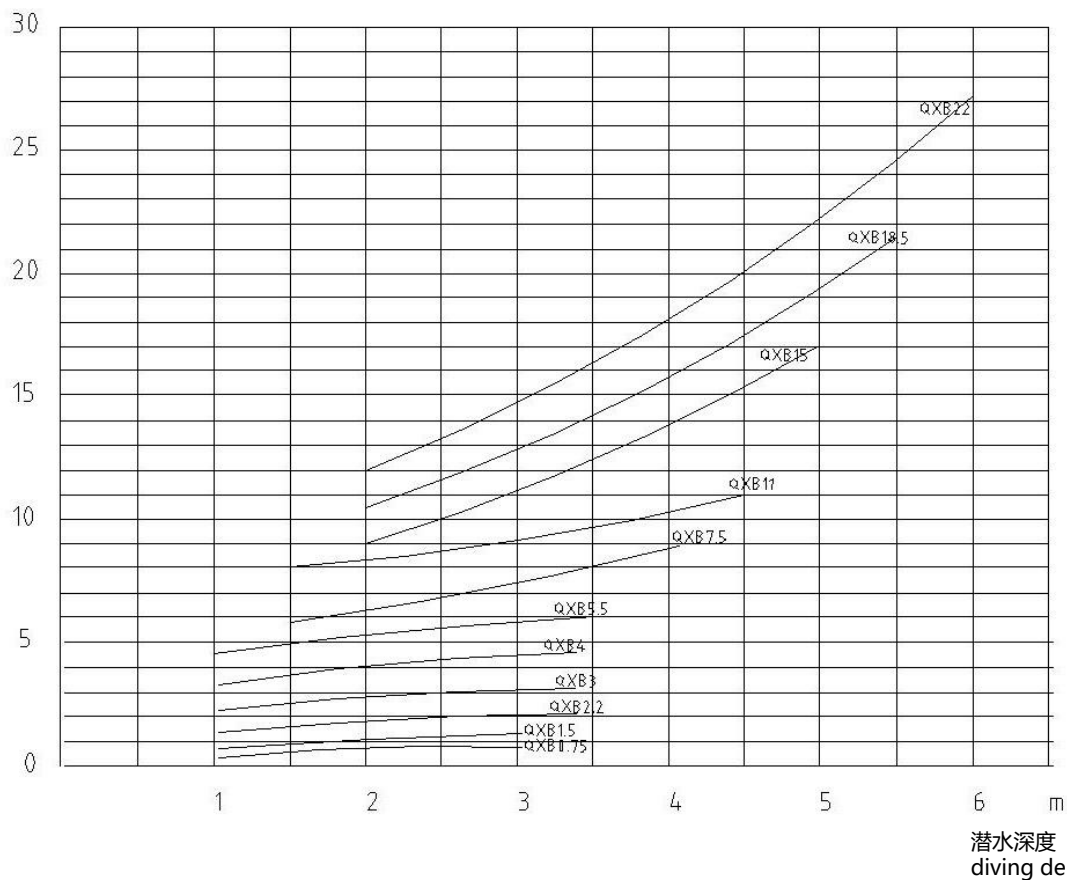
1. Service area and oxygen filling capacity
2. Pool size, dimensions, and water depth
3. Water quality status of inlet and outlet of aeration tank

进气量 m^3/h
air inflow m^3/h



增氧能力(kgO_2/h)
Oxygenation capacity (kgO_2/h)

潜水深度
diving depth



TBJ型推流式搅拌机曝气机

TBJ type push flow mixer aerator

概述/OVERVIEW

TBJ型推流式搅拌机曝气机可广泛应用于印染、化工、石油、制革、医药、食品、造纸、纺织等行业中的废水处理和城市生活污水处理中。

The TBJ type push flow agitation aerator can be widely used in wastewater treatment and urban domestic sewage treatment in industries such as printing and dyeing, chemical, petroleum, leather, medicine, food, paper, textile, etc.

工作原理/WORKING PRINCIPLE

设备运行时。旋转的叶轮在它的周围形成了一个较强的负压区，从而将空气吸入，吸入的空气被高成旋转的液体强烈剪切、粉碎、乳化，气泡直径迅速减小。促使氧分子从气相迅速、充分地扩散到液相中去，实现最佳水气合成，同时水、气在动力推动下向前推进，使水、气进一步溶解，达到曝气和推流的目的。

When the device is running. The rotating impeller forms a strong negative pressure zone around it, which sucks in air. The sucked in air is strongly sheared, crushed, and emulsified by the highly rotating liquid, and the diameter of the bubbles rapidly decreases. Promote the rapid and sufficient diffusion of oxygen molecules from the gas phase to the liquid phase, achieving optimal water gas synthesis. At the same time, water and gas are propelled forward by power, further dissolving and achieving the purpose of aeration and flow.

产品规格及主要技术参数

PRODUCT SPECIFICATIONS AND MAIN TECHNICAL PARAMETERS

产品的工作条件决定产品的使用性能和使用寿命，本产品适用水温为0℃~45℃，适用液体PH值为4.5~9.0。性能参数如下表所示：

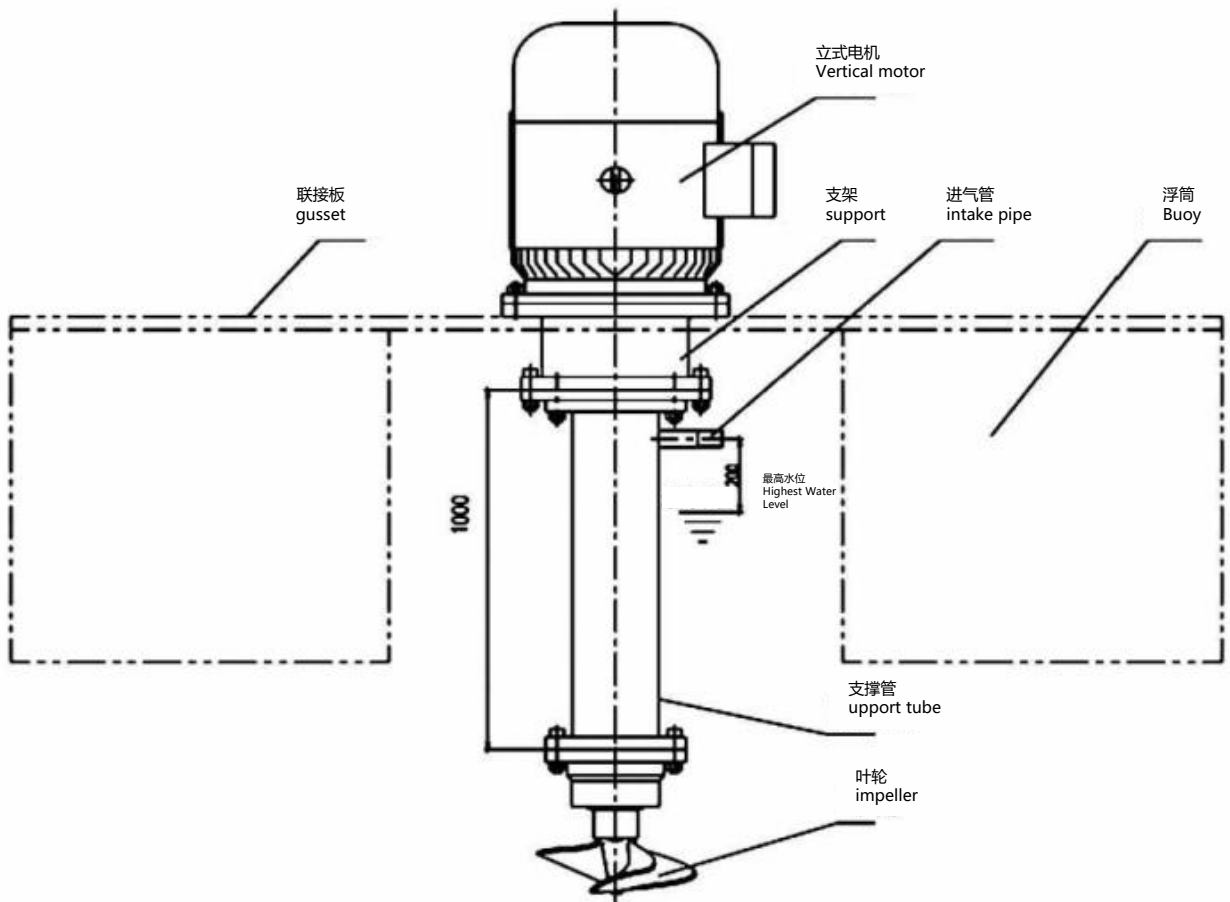
The working conditions of the product determine its performance and service life. This product is suitable for water temperatures ranging from 0 °C to 45 °C and liquid pH values ranging from 4.5 to 9.0. The performance parameters are shown in the following table:

型号 model	电机功率 power (Kw)	服务面积 service area (m²)	清水充氧量 Oxygen content in clear water (KgO ₂ /h)	适用水深 Applicable water depth (m)
TBJ—4	4.0	700	~4.6	1~3
TBJ—5.5	5.5	900	~6.3	
TBJ—7.5	7.5	1100	~9.0	
TBJ—11	11	1300	~13.0	
TBJ—15	15	1500	~17.5	

产品结构简介/PRODUCT STRUCTURE INTRODUCTION

该设备主要由立式电机、支架、支撑管、叶轮及浮筒组成。如图所示：

The equipment mainly consists of a vertical motor, a bracket, a support tube, an impeller, and a float. As shown in the figure:



SBJ型深水曝气搅拌两用机

SBJ type deepwater aeration and mixing dual-use machine

概述/OVERVIEW

SBJ 型深水曝气搅拌机是机电技术和生化技术的集成产品，它专为解决高浓度有机废水，在生化处理过程中实现高效率充氧的专用设备；主机采用双速电机设计，具有高速曝气低速搅拌双重功效，加之潜水深度可达20m的卓越工作性能，是传统曝气设备无可替代的产品。

SBJ型深水曝气机主要应用在硝化/反硝池、SBR反应池、污泥池、氧化塘以及需要进行深水曝气搅拌和要求氧转移率高的场所。

The SBJ deep water aeration mixer is an integrated product of electromechanical technology and biochemical technology. It is a specialized equipment designed to solve the problem of high concentration organic wastewater and achieve high-efficiency oxygenation in the biochemical treatment process; The host adopts a dual speed motor design, which has dual functions of high-speed aeration and low-speed stirring. In addition, it has excellent working performance with a diving depth of up to 20m, making it an irreplaceable product for traditional aeration equipment.

The SBJ type deep water aerator is mainly used in nitrification/denitrification tanks, SBR reaction tanks, sludge tanks, oxidation ponds, and places that require deep water aeration mixing and high oxygen transfer rates.

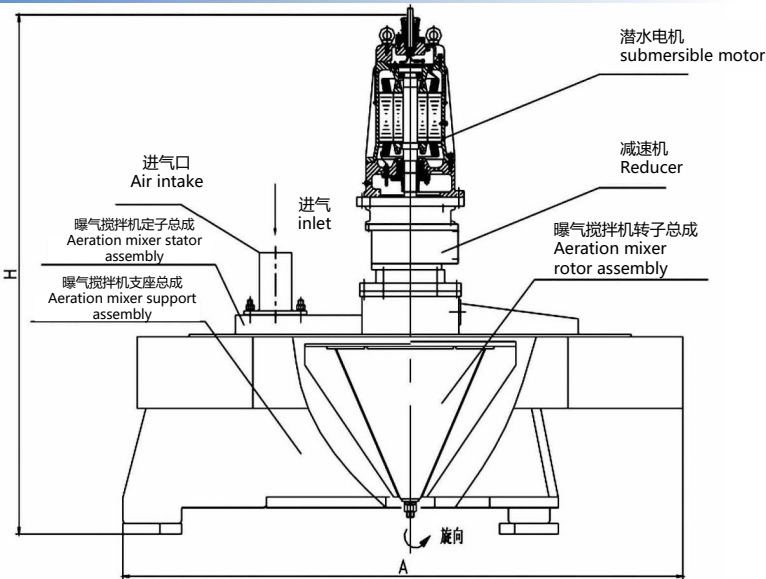
型号说明/MODEL DESCRIPTION

SBJ	*/*	—D	—S/C	
				S:不锈钢；C:碳钢
				D:双速
				/: 潜水电机功率KW
				深水曝气搅拌两用机
				S: Stainless steel; C: Carbon steel
				D: Dual speed
				*/*Submersible motor power KW
				Deep water aeration and mixing dual-use machine

结构特点/STRUCTURAL CHARACTERISTICS

SBJ产品由潜水电机、减速装置、叶轮、混合室、底座、输气管、起吊链组成。如图

SBJ products consist of submersible motors, reduction devices, impellers, mixing chambers, bases, gas pipelines, and lifting chains. As shown in the picture



1.深水：由于采用深水电机密封技术，使曝气池在垂直方向布置，池深可达20m,这样可节约占地面积，减少空气污染：由于水深，空气在水中停留时间长，加入水下温度均衡，故氧转移率高。

1. Deep water: Due to the use of deep water motor sealing technology, the aeration tank is arranged vertically, with a depth of up to 20m, which can save floor space and reduce air pollution. Due to the water depth, the air stays in the water for a long time, and the temperature is balanced when added underwater, resulting in a high oxygen transfer rate.

2.曝气：SBJ产品由供气系统和高速搅拌机组成的曝气，实际充氧能力是通过进气与水的混合机能完成的，因此，只要控制好水气混合比和工作时间，就可达到所需的最佳连续稳定的曝气性能；这使生化处理工艺的自动控制系统变得简单、可靠。实验证明，在SBJ工作的水面可见气泡密实均匀。由于叶轮在高速运动状态下形成的负压还增加了该机的自吸功能，从而提高了整机的功率。

2. Aeration: SBJ products consist of an air supply system and a high-speed mixer for aeration. The actual oxygenation capacity is achieved through the mixing function of intake air and water. Therefore, as long as the water gas mixing ratio and working time are controlled well, the required optimal continuous and stable aeration performance can be achieved; This makes the automatic control system of biochemical treatment process simple and reliable. Experimental results have shown that bubbles are dense and uniform on the water surface where SBJ works. Due to the negative pressure formed by the impeller in high-speed motion, the self-priming function of the machine is also increased, thereby improving the dynamic power of the entire machine.

3.搅拌：SBJ产品作为池底曝气搅拌设备，它利用开放式的叶轮结构设计，无堵塞之忧，在完成高速曝气后可自动切换到低速状态作为搅拌混合设备，沿圆周出口处可保持3—5m/s的流速，通过池壁的反射在水下形成环流能有效地防止悬浮物的沉降

3. Mixing: SBJ products are used as bottom aeration mixing equipment in the pool. They utilize an open impeller structure design, which eliminates the worry of blockage. After completing high-speed aeration, they can automatically switch to a low-speed state as mixing equipment. The outlet along the circumference can maintain a flow velocity of 3-5 m/s, and the reflection of the pool wall forms a circulation underwater, effectively preventing the settling of suspended solids

4.安装：SBJ产品依靠自重定位，一体化的吊装设计无需任何辅助配件，布置灵活。在无需排水和不中断工艺运行的情况下可实现快速吊装。

4. Installation: SBJ products rely on self weight positioning, integrated lifting design without any auxiliary accessories, and flexible layout. Fast lifting can be achieved without the need for drainage and uninterrupted process operation.

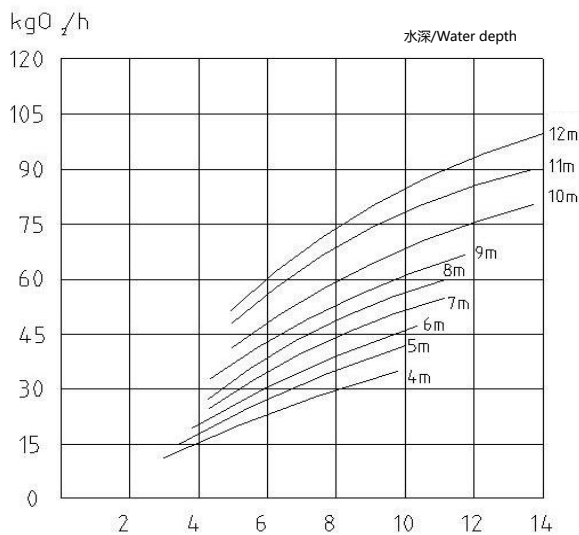
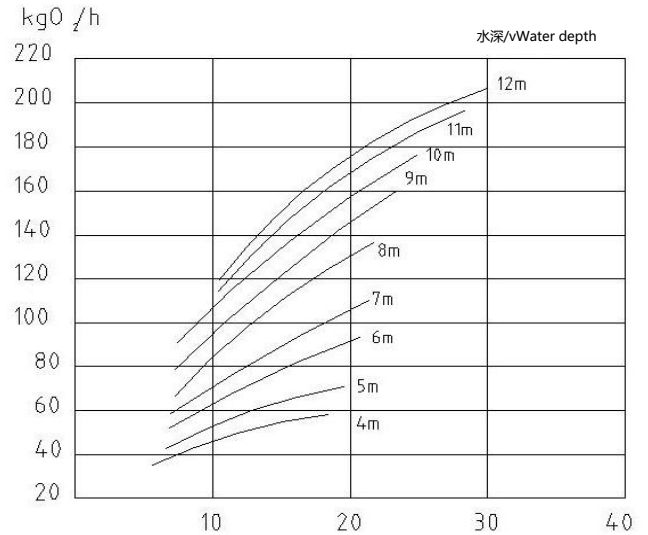
除了以上四大特点外，它还具有土建投资少，操作简单、运行维护费用低等优点；采用双重机械密封设计和多项电气保护功能，使用更安全、可靠。

In addition to the above four characteristics, it also has the advantages of low civil engineering investment, simple operation, and low operation and maintenance costs; Adopting a dual mechanical seal design and multiple electrical protection functions, it is safer and more reliable to use.

主要技术参数及部分特性曲线

MAIN TECHNICAL PARAMETERS AND SOME CHARACTERISTIC CURVES

型 号 model	电机额定功率 Motor rated power (Kw)	自重 dead-weight (Kg)	设备总高 Total height of equipment (H)	直径 diameter (ϕ A)	可安装水深 Installation depth (m)
SBJ3/5.5—D	3/5.5	550	1600	1430	4~20
SBJ4/7.5—D	4/7.5	800	1800	1830	4~20
SBJ5.5/11—D	5.5/11	850	1800	1830	4~20
SBJ7.5/15—D	7.5/15	1650	2100	2300	4~20
SBJ10/20—D	10/20	1650	1800	2300	4~20

SBJ3/5.5溶氧性能曲线
SBJ3/5.5 Dissolved Oxygen Performance CurveSBJ10/20溶氧性能曲线
SBJ10/20 Dissolved Oxygen Performance Curve

GSHZ型回转式格栅除污机

GSHZ type rotary grille cleaning machine

用途/USE TO

GSHZ型回转式格栅除污机（又称“固液分离器”），广泛应用于城市污水处理厂、自来水厂、泵站、电厂进水口，自动拦截并清除水中的漂浮物，保证下道工序的正常运行；也可用作纺织、印染、屠宰、制革、造纸、制糖、酿酒、食品加工中的固液分离。

The GSHZ rotary grid cleaning machine (also known as the "solid-liquid separator") is widely used in urban sewage treatment plants, waterworks, pump stations, and power plant inlets to automatically intercept and remove floating debris in the water, ensuring the normal operation of the next process; It can also be used for solid-liquid separation in textile, printing and dyeing, slaughtering, leather making, papermaking, sugar production, brewing, and food processing.

型号表示方法/MODEL REPRESENTATION METHOD

CSHZ — 1200 X 3500—10



栅隙 mm

渠深 mm

格栅宽度 mm

回转式格栅除污机

Gap mm

Canal depth mm

Grille width mm

Rotary grille cleaning machine

主要特点/MAIN FEATURES

结构紧凑、电气控制简单。便于实现自动化；耐蚀性优、能耗小、噪音低；除污动作连续、排污干净、分离效率高。

Compact structure and simple electrical control. Easy to achieve automation; Excellent corrosion resistance, low energy consumption, and low noise; The decontamination action is continuous, the discharge is clean, and the separation efficiency is high.

工作原理/WORKING PRINCIPLE

该设备是由ABS工程塑料、尼龙或不锈钢制成的特殊形耙齿，按一定的排列次序装在耙齿轴上形成封闭式耙齿链，其下部装在进水中。当传动系统带动链轮作匀速定向旋转时，整个耙齿链便自上而下的运动，并携带固体杂物从液体中分离出来，流体通过耙齿间隙流出去，整个工作状态连续进行。

This device is made of special shaped rake teeth made of ABS engineering plastic, nylon or stainless steel, which are arranged in a certain order on the rake shaft to form a closed rake tooth chain, and its lower part is installed in the inlet canal water. When the transmission system drives the sprocket to rotate uniformly and directionally, the entire rake chain moves from top to bottom, carrying solid debris and separating it from the liquid. The fluid flows out through the clearance between the rake teeth, and the entire working state continues.

由于耙齿的特殊结构形状，使耙齿链携带杂物到达上端反向运动时，前后耙间产生相对自清运动，促使杂物依靠重力脱落，设备后面可设置旋转的清污刷，进一步除净，如需要定货时需注明。

Due to the special structural shape of the rake teeth, when the rake tooth chain carries debris to the upper end and moves in reverse, a relative self-cleaning motion occurs between the front and rear rakes, causing the debris to fall off by gravity. A rotating cleaning brush can be installed at the back of the equipment to further remove the debris. If you need to place an order, please specify.

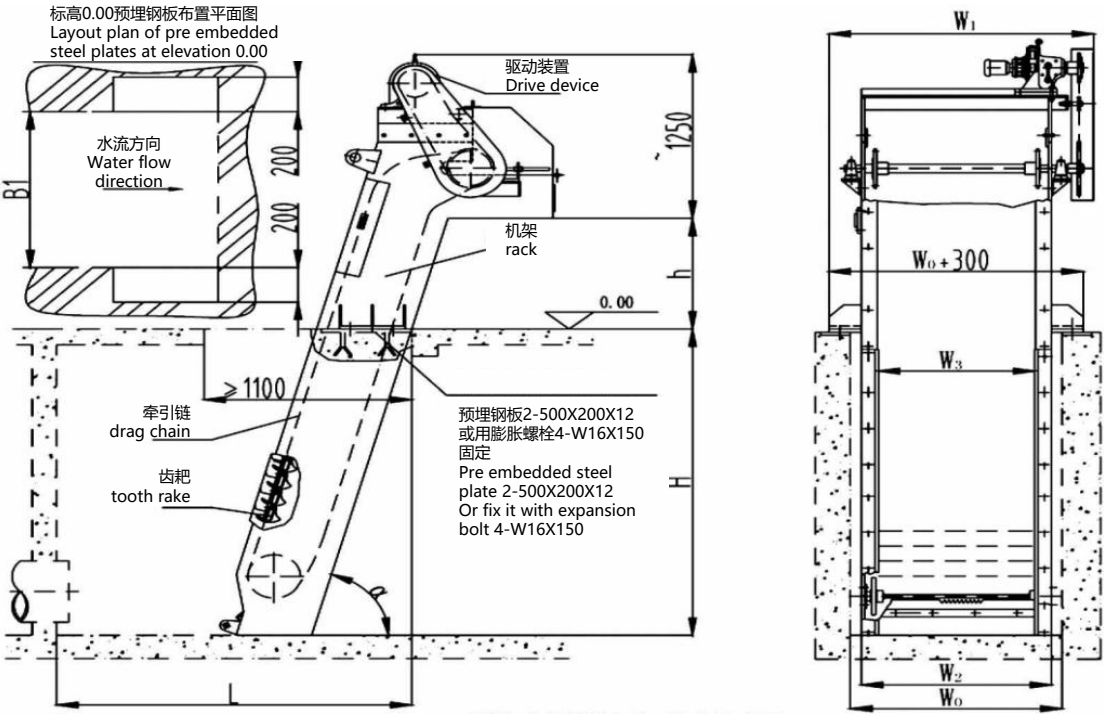
技术参数/TECHNICAL PARAMETER

按设备宽W0格栅机分：单联机GSHZ300—1500型、并联机GSHZ1400—3000型。选型由过水量、提升高度而定，同时根据所分杂物的大小选配不同格栅。

According to the width of the W0 grid machine, it can be divided into single connected GSHZ300-1500 type and parallel connected GSHZ1400-3000 type. The selection is determined by the water flow rate and lifting height, and different grilles are selected according to the size of the sorted debris.

技术 参数 Tech nical Para meter	设备型号 Equipment model GSHZ	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
	设备宽度 Device Width W ₀	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
	有效栅宽 Effective gate width W ₂	W ₂ =W ₀ -160												
	设备总宽 Total width of equipment W ₁	W ₁ =W ₀ +350												
	有效栅隙 Effective gate gap	1、3、5、10、20、30、40、50												
	耙链速度 Rake chain speed	≈2m/min												
	电机功率 powerKw	0.37~0.75		0.55~1.1			0.75~1.5		1.1~2.2			1.5~3		
安装 尺寸 Install ation size	安装角度 installation angle a	60°、65°、70°、75°、80°												
	渠宽 Canal width W ₃	W ₃ ≥W ₀ +70												
	渠深 Depth of channel H	800~10000												
	排渣高度 Slag discharge height h	100~1200 (常规按600) 100~1200 (usually 600)												

GSHZ型回转式格栅除污机结构简图
STRUCTURAL DIAGRAM OF GSHZ ROTARY GRILLE CLEANING MACHINE



回转式格栅除污机外形尺寸图
Outline dimension drawing of rotary grille cleaning machine

过水流量表/WATER FLOW METER

格栅型号: GSHZ Grille model: GSHZ		300	400	500	600	700	800	900	1000	1100	1200	1300	1400
栅前水位 m Front water level m		1											
流体流速 m/s Fluid velocity m/s		0.5~1.0											
把 齿 间 隙 M m Rak e t e e t h c l e a r a n c e M m	1	1850— 3700	2080— 4160	2900— 5800	3700— 7400	4500— 9000	5300— 10600	6000— 12000	7000— 14000	7800— 15600	8600— 17200	9000— 18000	11000— 22000
	3	3700— 7400	4100— 8200	5700— 14400	7500— 15000	9000— 18000	10600— 21200	12300— 24600	14000— 28000	15500— 31000	17200— 34400	18000— 36000	22000— 44000
	5	4500— 9000	5200— 10400	7100— 14200	9200— 18400	11200— 22400	13000— 26000	15000— 30000	17400— 34800	19400— 38800	21000— 42000	22500— 45000	24000— 48000
	10	5300— 10600	6200— 12300	8800— 17600	11000— 22000	13500— 27000	16000— 32000	17400— 34800	21100— 42200	24000— 48000	25000— 50000	26000— 52000	27000— 54000
	20	5500— 11000	6650— 13300	9000— 18000	11500— 23000	14000— 28000	17000— 34000	19000— 38000	22000— 44000	25000— 50000	27000— 54000	28000— 56000	29000— 58000
	30	7100— 14200	8600— 17200	11700— 23400	14900— 29800	18200— 36400	22100— 44200	24700— 49400	28600— 57200	32500— 65000	35100— 70200	36400— 72800	37700— 75400
	40	7800— 15500	10200— 20500	14500— 29000	18800— 37500	23000— 46000	27000— 54000	31500— 63000	36000— 72000	40000— 80000	44000— 88000	46000— 92000	57000— 115000
	50	10200— 20400	13250— 26500	18850— 37700	24450— 48900	29900— 59800	35100— 70200	40950— 81900	46800— 93600	52000— 104000	57200— 114400	59800— 119600	47100— 94200

GSHP型回转耙式格栅除污机

GSHP type rotary rake grille cleaning machine

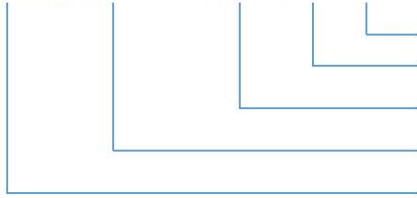
用途/USE TO

GSHP型回转耙式格栅除污机用于城市污水处理厂、自来水厂、雨水泵站等进水渠（井），自动拦截并清除水中的漂浮物，保证下道工序的正常运行。

The GSHP rotary rake grille cleaning machine is used in urban sewage treatment plants, waterworks, rainwater pump stations and other inlet channels (wells) to automatically intercept and remove floating objects in the water, ensuring the normal operation of the next process.

型号表示方法/MODEL REPRESENTATION METHOD

GSHP 2000 X 4000 — 30 X 8 — 75°



安装角度
栅条厚度 mm
栅条净距 mm
栅渠宽度X渠深 mm
回转耙式格栅除污机

Installation angle
Barrier thickness mm
Net distance between bars mm
Fence channel width X channel depth mm
Rotary rake grille cleaning machine

主要特点/MAIN FEATURES

1. 由于回转耙式格栅除污机的栅条置于耙齿牵引链的中间位置（其它机械格栅置于牵引链之下），改变了耙齿在清捞过程中的运动方向（与其它格栅相反），避免把硬物带入底部将耙齿及牵引链卡死；
 2. 在减速机输出轴端的链轮盘上安装了过载保护装置，以避免因意外原因过载而损坏设备；
 3. 由于格栅机回转链配带多个除污耙齿，使得除污效率高，清污彻底；
 4. 结构紧凑。电气控制简单，便于现实自动化。
1. Due to the fact that the grid bar of the rotary rake type grid cleaning machine is placed in the middle position of the rake tooth traction chain (other mechanical grids are placed below the traction chain), the movement direction of the rake teeth during the cleaning process is changed (opposite to other grids), avoiding bringing hard objects into the bottom and causing the rake teeth and traction chain to get stuck;
 2. An overload protection device is installed on the sprocket plate at the output shaft end of the reducer to prevent damage to the equipment due to accidental overloading;
 3. Due to the grid machine's rotating chain equipped with multiple cleaning rake teeth, the cleaning efficiency is high and the cleaning is thorough;
 4. Compact structure. The electrical control is simple and convenient for practical automation.

构造及工作原理/CONSTRUCTION AND WORKING PRINCIPLE

GSHP型回转耙式格栅除污机主要由驱动装置、机架、主轴、栅条、托渣板、耙齿及牵引链组成。

在电机的驱动下，通过减速机减速后，带动链轮与链条运动，固定在回转链条上除污耙齿链条在栅后运动到底部，经过导轮后翻转到栅前迎水面的位置，继续运动插入固定栅条的间隙中上行，把栅前拦截的污物提升带出水面，并随着链条的运动到出渣口处自动翻转，污物自卸到格栅后的输送机或渣桶中，完成除污过程，液体则通过栅条的栅隙流过，整个工作状态联系循环进行。

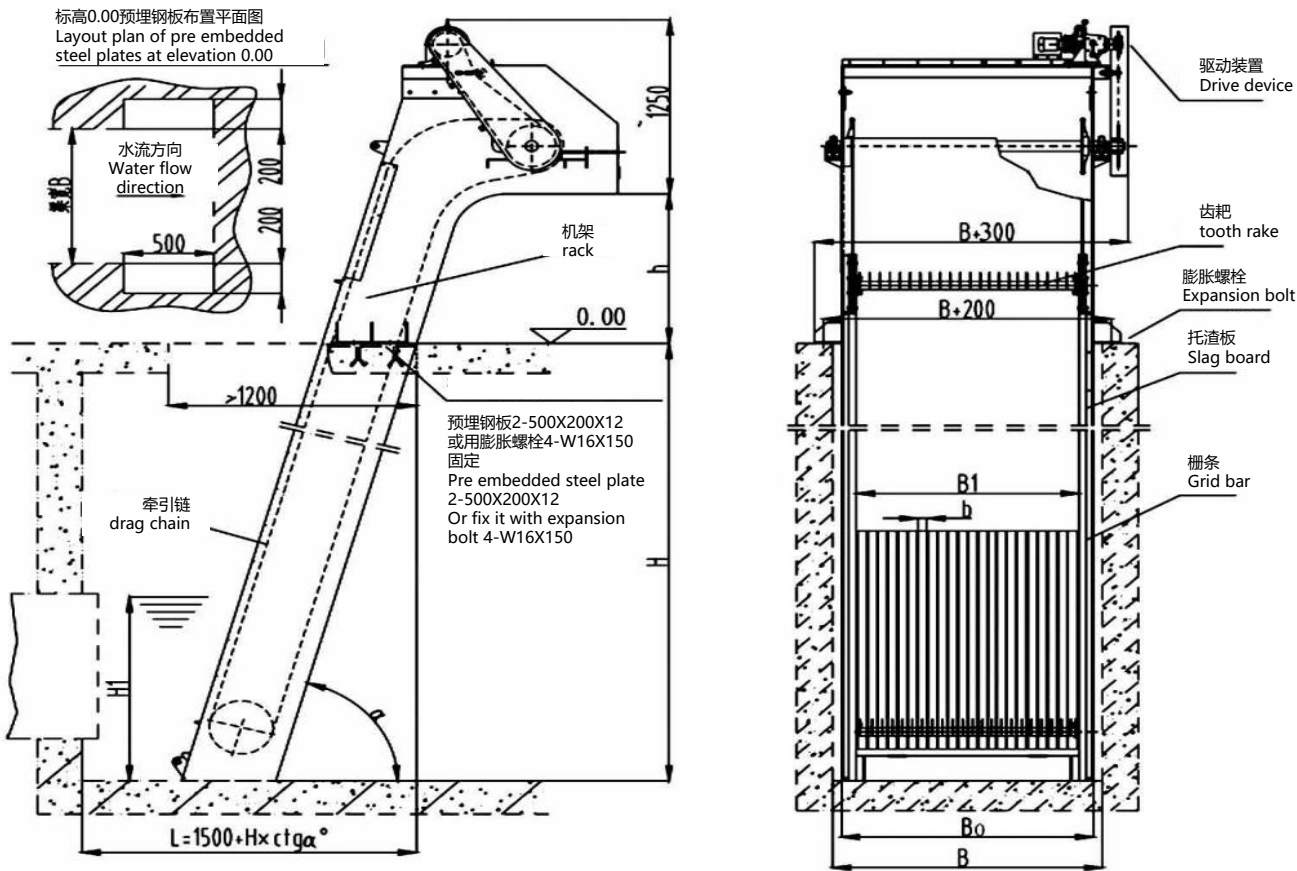
The GSHP rotary rake grille cleaning machine is mainly driven by a driving device. Composed of frame, spindle, grating, slag plate, rake teeth, and traction chain.

Under the drive of the motor, the sprocket and chain are driven by the reducer to move, and the cleaning rake chain fixed on the rotating chain moves to the bottom behind the grid. After passing through the guide wheel, it flips to the position of the water facing surface in front of the grid, continues to move and insert into the gap of the fixed grid bar, lifts the intercepted dirt in front of the grid out of the water surface, and automatically flips along with the movement of the chain to the slag outlet. The dirt is self discharged into the conveyor or slag bucket behind the grid, completing the cleaning process. The liquid flows through the gap of the grid bar, and the entire working state is connected and circulated.

主要技术参数及安装尺寸 MAIN TECHNICAL PARAMETERS AND INSTALLATION DIMENSIONS

主要参数及主要尺寸 Main parameters and dimensions	设备型号GSHP Equipment model GSHP											
	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
栅渠宽度B mm Fence channel width B mm	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
渠下设备宽度B1 mm The width of the equipment under the canal is B1 mm	700	900	1100	1300	1500	1700	1900	2100	2300	2500	2700	2900
设备总宽度B2 mm Equipment total width B2 mm	1080	1280	1480	1680	1880	2080	2280	2480	260	2880	3080	3280
栅渠深度H mm Fence channel depth H mm	3000~10000 (用户自定) 3000~10000 (user-defined)											
渠上设备高度H1 mm Equipment height on the canal H1 mm	h+1350											
卸料口高度h mm Discharge port height h mm	400~1200(用户自定, 常规按800) 400~1200 (customized by the user, with a standard of 800)											
安装角度 α Installation angle α	60°、65°、70°、75°、80° (推荐75°) 60°, 65°, 70°, 75°, 80° (recommended 75°)											
栅条净距b mm Net distance between bars b mm	10、15、20、30、40、50、60、80、100											
电机功率KW Motor power meter KW	0.75~1.1				1.1~2.2					2.2~3		

回转耙式格栅除污机外形图
OUTLINE DRAWING OF ROTARY RAKE GRILLE CLEANING MACHINE



过水流量表/WATER FLOW METER

格栅型号: GSHP Grille model: GSHP		800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
栅前水位 m Front water level m		1											
流体流速 m/s Fluid velocity m/s		1											
栅条净距 mm Net distance between bars mm	10	2.5	3.38	4.26	5.74	6.02	6.9	7.78	8.65	9.53	10.41	11.29	12.17
	15	3.01	4.05	5.54	6.44	7.19	8.23	9.28	11.59	12.71	13.88	15.06	16.22
	20	3.34	4.51	6.57	6.85	8.03	9.19	10.37	11.55	12.71	13.88	15.06	16.22
	30	3.75	5.07	6.39	7.71	9.03	10.36	11.67	13	14.32	15.63	16.95	18.27
	40	4	5.41	6.82	8.22	9.63	11.01	12.44	13.85	15.26	16.66	18.07	19.48
	50	4.17	5.63	7.12	8.57	10.02	11.47	12.96	14.5	15.86	17.4	18.18	20.26
	60	4.27	5.8	7.3	8.8	10.32	11.81	13.34	14.82	16.4	17.82	19.41	20.88
	80	4.43	6.02	7.59	9.14	10.68	12.23	13.85	15.4	16.94	18.49	20.11	21.66
	100	4.57	6.15	7.75	9.35	10.94	12.57	14.15	15.73	17.73	18.9	20.57	22.15
过水流量 t/d Water flow rate t/d													

说明/ILLUSTRATE

电器控制常规为手动控制。电控可带PLC接口；可与其它设备联动；可进行时间控制；可进行液位控制，在停机时段如格栅意外堵塞，使栅前水位达设定的事故高水位时，除污机可立即开动而不受周期的限制；可进行液位差控制，在停机时段如格栅意外堵塞。使栅前后水位差达设定的事故高水位时，除污机可立即开动。用户需要时应在订货时注明。

The conventional electrical control is manual control. Electric control can be equipped with PLC interface; Can be linked with other devices; Can be time controlled; Liquid level control can be performed, and during shutdown periods, if the grille is accidentally blocked, causing the water level in front of the grille to reach the set accident high water level, the cleaning machine can immediately start without being limited by the cycle; It can control the liquid level difference and prevent accidental blockage of the grille during downtime. When the water level difference before and after the grid reaches the set accident high water level, the decontamination machine can be immediately started. Users should indicate their needs when placing an order.

GSP型爬式格栅除污机

GSP type climbing grid cleaning machine

用途/USE TO

本机型适用于深池，但水深不易超过1.6米的泵房进水池（井），拦截水中的漂浮物，保证水泵正常运行，是先进拦污设备。

This model is suitable for pump room inlet channels (wells) in deep pools, but the water depth is not likely to exceed 1.6 meters. It intercepts floating objects in the water and ensures the normal operation of the water pump. It is an advanced interception equipment.

型号表示方法/MODEL REPRESENTATION METHOD



特点/CHARACTERISTICS

1. 结构简单，运行可靠；
 2. 既有马达驱动也有耙的自重，清污能力强；
 3. 除格栅部件、耙齿在栅条部件除污时外，其它部位均在正常最高水位以上，不易腐蚀，便于维护；
 4. 具有过载保护装置，确保除污机动作安全可靠。
1. Simple structure and reliable operation;
 2. Equipped with both motor drive and the self weight of the rake, it has strong cleaning ability;
 3. Except for the grille components and rake teeth during the cleaning of the grille bar components, all other parts are above the normal maximum water level, which is not easily corroded and easy to maintain;
 4. Equipped with overload protection device to ensure the safe and reliable operation of the cleaning machine.

结构及工作过程/STRUCTURE AND WORKING PROCESS

爬式格栅除污机该机主要由驱动装置、机架、除污耙、撇渣装置、栅条、导渣板等组成。

该机两侧导轨架内各有一段固定链条。一直导轨。一围绕固定链条的环形导轨。除污耙架固定有两轴。一轴为导向轴，两端装有滚轮，分别插入两侧直导轨中；另一轴为驱动轴，轴两端装有链轮，链轮与固定链条啮合，链轮头部带凸台插入环形导轨槽中，驱动轴中间装有轴装式减速机。当减速机运转后，除污耙在；链轮的带动下，并通过环形导轨和直导轨的约束，做张耙下行、闭耙取渣、上行输渣、卸渣行动，而完成一工作循环。

The climbing grid cleaning machine is mainly composed of a driving device, a frame, a cleaning rake, a skimming device, a grid bar, a slag guide plate, etc.

There is a fixed chain inside each guide rail bracket on both sides of the machine. Always guide the rail. A circular guide rail that surrounds a fixed chain. The cleaning rake frame is fixed with two shafts. One axis is the guiding axis, with rollers installed at both ends, inserted into the straight guide rails on both sides respectively; The other shaft is the driving shaft, which is equipped with sprockets at both ends. The sprockets mesh with the fixed chain, and the sprocket head is inserted into the annular guide groove with a convex platform. A shaft mounted reducer is installed in the middle of the driving shaft. After the gearbox is running, the cleaning rake is in place; Under the drive of the sprocket and constrained by the circular guide rail and straight guide rail, a work cycle is completed by performing actions such as pulling down the rake, closing the rake to collect slag, transporting slag up, and unloading slag.

电气控制/ELECTRICAL CONTROL

常规为手动控制。

电控可带PLC接口；可与其它设备联动；可进行时间控制；可进行液位差控制，在停机时段如格栅意外堵塞，使栅前水位达设定的事故高水位时，除污机可立即开动而不受周期限制；用户需要时须在订货时注明。

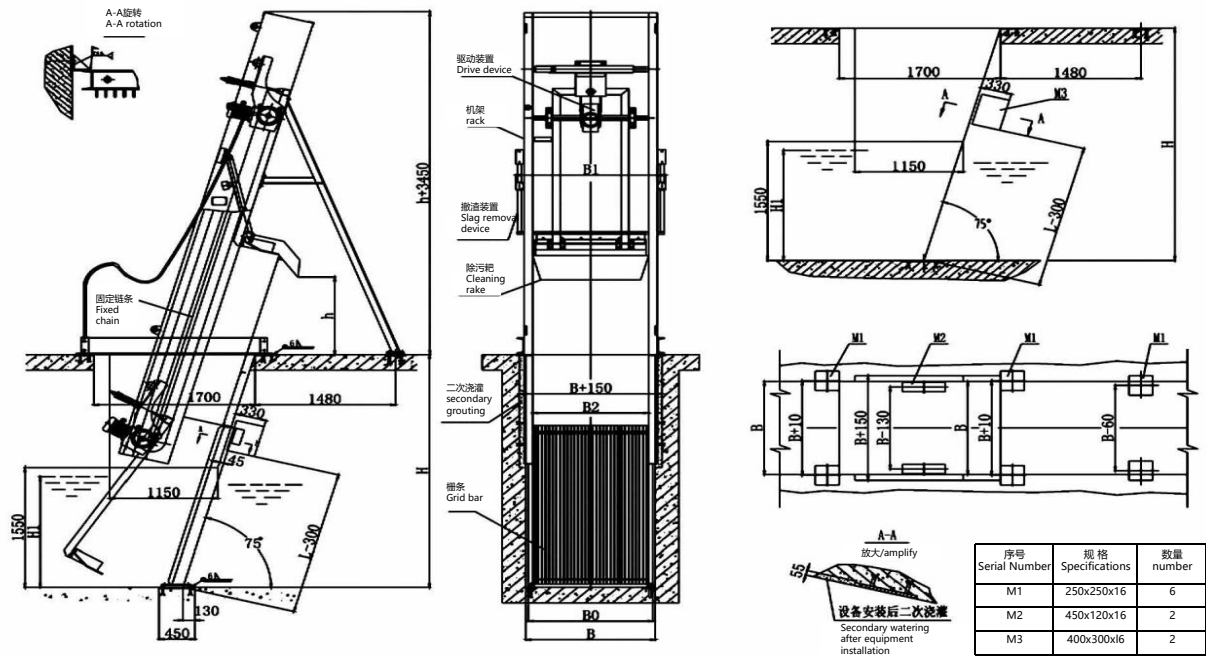
The conventional method is manual control.

Electric control can be equipped with PLC interface; Can be linked with other devices; Can be time controlled; It can control the liquid level difference. During the shutdown period, if the grille is accidentally blocked and the water level in front of the grille reaches the set accident high water level, the cleaning machine can immediately start without being limited by the cycle; Users must specify when placing an order if needed.

主要技术参数/MAIN TECHNICAL PARAMETERS

型号及参数 Model and parameters	GSP1000	GSP1200	GSP1400	GSP1500	GSP1600	GSP1800	GSP2000
渠宽B (mm) Canal width B (mm)	1000	1200	1400	1500	1600	1800	2000
渠深H (mm) Canal depth H (mm)	≤6000						
最大水深H1 (mm) Maximum water depth H1 (mm)	1800						
格栅宽度B (mm) Grille width B (mm)	940	1140	1340	1440	1540	1740	1940
机架最大宽度B1(mm) Maximum width of rack B1 (mm)	1250	1450	1650	1750	1850	2050	2250
格栅有效宽度B2(mm) Effective width of grille B2 (mm)	830	1030	1230	1330	1430	1630	1830
出渣口高度h(mm) Slag outlet height h (mm)	400~1200(常规按800) 400~1200 (usually 800)						
栅条净距b(mm) Net distance between bars b (mm)	15、20、30、40						
安装角度α (度) Installation angle α (degrees)	70、75、80						
耙齿行走速度 (m/min) Rake tooth walking speed (m/min)	≈7						
电机功率 (Kw) Motor power (Kw)	1.1		1.5			2.2	

GSP爬式格栅除污机外形图
OUTLINE DRAWING OF GSP CLIMBING GRID CLEANING MACHINE



注：
Note:

- 如有其它特殊要求应注明；
 - 注明设备的主体材质（全碳钢或全不锈钢或部分不锈钢）；
 - 不注明所配电控箱为常规控制，如有特殊要求应另行注明。
 - 订货时提供工艺、土建资料及合同技术附件等。
- If there are other special requirements, they should be specified;
 - Indicate the main material of the equipment (all carbon steel or all stainless steel or partially stainless steel);
 - It is not specified that the distribution control box is a conventional control. If there are special requirements, they should be noted separately.
 - Provide process, civil engineering information, and technical attachments to the contract when placing an order.

P型破碎机 P-type crusher

用途/USE TO

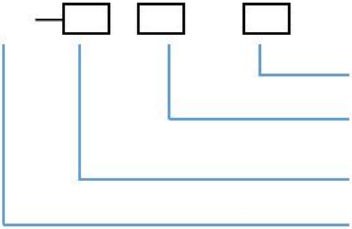
p型破碎机是为处理混在下水道中的固体物质而开发的装置。该机能将混在下水道的布片、木片、空瓶罐等固体物粉碎，以防下水道水处理设备的堵塞，保证下水道水处理设备正常运行。本机主要适用范围：

The p-type crusher is a device developed for processing solid substances mixed in sewers. This function can crush solid objects such as cloth, wood chips, and empty bottles mixed in the sewer to prevent blockage of the sewer water treatment equipment and ensure its normal operation. The main scope of application of this machine is:

- 1) 安装于下水道水泵前，对固体物的破碎；
- 2) 安装于拦污栅后，对从水中捞上的漂浮物的破碎；
- 3) 安装于焚烧炉前，对回收的污水处理垃圾破碎至便于运输的尺寸；
- 4) 安装在污水处理管道中，对混入污泥中固体物的破碎；
- 5) 对回收的空罐、电池，塑料品等的破碎。

- 1) Installed in front of the sewage pump to crush solid objects;
- 2) After installation on the trash rack, it can break up floating objects caught from the water;
- 3) Installed in front of the incinerator, crush the recycled sewage treatment waste to a size that is convenient for transportation;
- 4) Installed in sewage treatment pipelines to crush solid substances mixed into sludge;
- 5) Crushing of recycled empty cans, batteries, plastic products, etc.

型号表示方法/MODEL REPRESENTATION METHOD

P		规格	Specifications
		结构安装形式：L—立式， W—卧式，G—管式 机型：按刀刃规格和电机 功率分M、A、B、C四种 破碎机	Structural installation form: L - vertical, W - horizontal, G - tubular Model: Divided into four types based on blade specifications and motor power: M, A, B, and C Crusher

特点/CHARACTERISTICS

1. 在水中进行破碎处理，既能保护水处理设备，又可避免臭气外泄，保护环境。
2. 破碎性能优良，具有过载保护功能，运行安全可靠，可自动控制。
3. 具有自动清洗功能。
4. 安装及维护保养简单。
1. Crushing treatment in water can not only protect water treatment equipment, but also prevent odor leakage and protect the environment.
2. Excellent crushing performance, overload protection function, safe and reliable operation, and automatic control.
3. It has an automatic cleaning function.
4. Easy installation and maintenance.

结构/STRUCTURE

如图1所示，本机主要由驱动部件，主动轴，从动轴，铣刀，机械密封，壳体等构成。

驱动部件带动主动轴转动，同时主动轴通过精密齿轮带动从动轴转动，使固定于两轴上的铣刀呈逆向旋转，而将固体物咬挤破碎。

As shown in Figure 1, this machine is mainly composed of driving components, driving shaft, driven shaft, milling cutter, mechanical seal, housing, etc.

The driving component drives the driving shaft to rotate, and at the same time, the driving shaft drives the driven shaft to rotate through precision gears, causing the milling cutter fixed on both shafts to rotate in the opposite direction and bite and crush solid objects.

主要技术参数及外形尺寸/Main technical parameters and external dimensions

表1水路立式(L)破碎机主要技术参数
Table 1 Main Technical Parameters of Waterway Vertical (L) Crusher

型号 model	PAL							PBL						
	-30	-45	-60	-75	-100	-125	-150	-30	-45	-60	-75	-100	-125	-150
处理量 Processing capacity (m³/min)	0.8	1.4	2.2	2.9	4.5	6.5	8.4	1.2	2.7	4.1	5.5	8.0	10.5	12.9
电机功率 power (Kw)	1.5	2.2		3.7				5.5						

- 注:
- Note:
1. 污水中的渣滓浓度为30ppm;

2. 处理量为流入水位在破碎机开口上限，流出水位在破碎机开口下限时处理量。
1. The concentration of sediment in sewage is 30ppm;

2. The processing capacity refers to the processing capacity when the inflow water level is at the upper limit of the crusher opening and the outflow water level is at the lower limit of the crusher opening.

表2 水路管式 (G) 破碎机主要技术参数
Table 2 Main Technical Parameters of Waterway Pipe (G) Crusher

型号 model	PAG			PBG			
处理量 Processing capacity (m³/min)	-20	-30	-45	-20	-30	-45	-60
电机功率 power (Kw)	1.7	3.3	4.6	2.2	4.2	6.0	8.0
型号 model	4.0			7.5			

- 注:
- Note:
- 管式安装的处理量为水头差为1000mmAq,污泥浓度为3%时的处理量

The processing capacity of tubular installation is the capacity when the head difference is 1000mmAq and the sludge concentration is 3%

表3 陆路卧式 (W) 破碎机主要技术参数

Table 3 Main Technical Parameters of Land Horizontal (W) Crusher

型号 model	PBW								PCW						
处理量 Processing capacity (m ³ /min)	-20	-30	-45	-60	-75	100	125	150	-30	-45	-60	-75	100	125	150
电机功率 power (Kw)	0.4	0.6	1.0	1.3	1.5	2.0	2.5	3.0	1.4	2.0	2.5	3.1	4.0	4.9	5.8
型号 model	7.5								15						

注:

处理量为破碎机开口处渣滓平均投入式的处理量

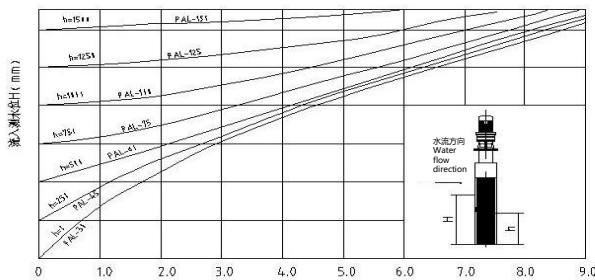
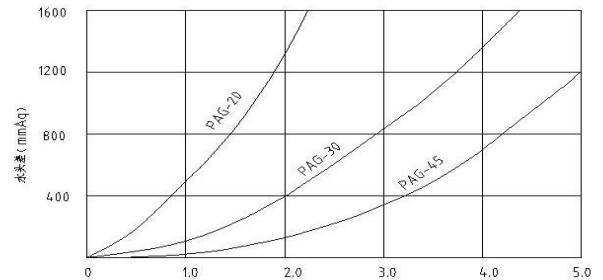
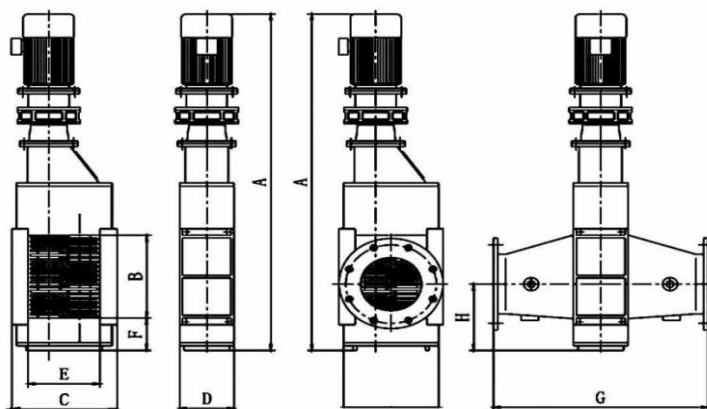
Note:

The processing capacity is the average input type processing capacity of the slag at the opening of the crusher

主要技术参数及外形尺寸/Main technical parameters and external dimensions

表1水路立式(L)破碎机主要技术参数

Table 1 Main Technical Parameters of Waterway Vertical (L) Crusher

处理量(m³/min)(a)水路立式特征曲线图
Processing capacity (m³/min)(a) Vertical characteristic curve
diagram of waterway处理量(m³/min)(b)管式特征曲线图
Processing capacity (m³/min) (b) Pipe characteristic curve
graph(a)立式安装
(a) Vertical installation(b)管式安装
(b) Pipe installation(c)卧式安装
(c) Horizontal installation

主要外形尺寸/Main overall dimensions

序号 Serial Number	型号 model	A	B	C	D	E	F	G	H			
									DN100	DN150	DN200	DN300
1	PAG—20	1120	208	340	180	234	125	—	190	220	—	—
2	PAL—30 PAG30	1250	312	340	180	234	125	—	—	230	250	—
3	PAL—45 PAG45	1370	456	340	180	234	125	—	—	—	260	310
4	PAL—60	1530	616	340	180	234	125	—	—	—	—	—
5	PAL—75	1670	760	340	180	234	125	—	—	—	—	—
6	PAL—100	1920	1016	340	180	234	125	—	—	—	—	—
7	PAL—125	2170	1256	340	180	234	125	—	—	—	—	—
8	PAL—150	2420	1512	354	180	234	125	—	—	—	—	—
9	PBW—20	1420	218	450	220	288	156	—	—	—	—	—
10	PBL—30 PBG—30 PBW—30	1520	308	447	220	288	156	—	—	—	—	—
11	PBL—45 PBG—45 PBW—45	1670	458	447	220	288	156	—	—	—	—	—
12	PBL—60 PBG—60 PBW—60	1820	608	447	220	288	156	—	—	—	—	—
13	PBL—75 PBW—75	1970	758	447	220	288	156	—	—	—	—	—
14	PBL—100 PBL—100	2240	1028	447	220	288	156	—	—	—	—	—
15	PBL—125 PBW—125	2480	1508	447	220	288	156	—	—	—	—	—
16	PBL—150 PBW—150	2720	1268	447	220	288	156	—	—	—	—	—
17	PCW—30	2050	300	600	400	450	228	—	—	—	—	—
18	PCW—45	2200	450	600	400	450	228	—	—	—	—	—
19	PCW—60	2350	600	600	400	450	228	—	—	—	—	—
20	PCW—75	2500	750	600	400	450	228	—	—	—	—	—
21	PCW—100	2780	1020	600	400	450	228	—	—	—	—	—
22	PCW—125	3010	1260	600	400	450	228	—	—	—	—	—

注:
Note:

1. 管式破碎机法兰盘尺寸均按JB/T81—94，PN0.25Mpa标准制造
 2. 常规为手动控制；可带PLC接口；可全自动控制。
 3. 订货时请用户提供使用环境。过水流量、工作水位高度；
 4. 不注明所配电控箱为常规控制，如有特殊要求应另行注明；
 5. 用户如需不锈钢铣刀，应另行注明；
 6. 破碎机如在深水场所工作时，为防电动机浸水时需加长轴，用户应另行注明。
1. The flange size of the tube crusher is manufactured according to JB/T81-94 and PN0.25Mpa standards
 2. Conventional is manual control; Can be equipped with PLC interface; Fully automatic control is possible.
 3. Please provide the user with the usage environment when placing an order. Flow rate and working water level height;
 4. It is not specified that the distribution control box is a conventional control. If there are special requirements, they should be noted separately;
 5. If users need stainless steel milling cutters, they should specify separately;
 6. When the crusher works in deep water, a long shaft needs to be added to prevent the motor from being submerged in water, and the user should specify it separately.

PS型破碎格栅机 PS type crushing grid machine

用途/USE TO

PS型带格栅破碎机是为处理混在下水道中的固体物质而开发的新型污水处理设备。该机能将混在下水道中的布片、木片、空瓶罐等固体物由格栅截留送到破碎机中粉碎，而水从格栅中流过，以防止下水道水处理设备的堵塞，保证下水道水处理设备正常运行。本机主要适用于污水处理厂和中转泵站。

PS type grid crusher is a new type of sewage treatment equipment developed for treating solid substances mixed in sewers. This function intercepts solid objects such as cloth, wood chips, empty bottles and cans mixed in the sewer through the grille and sends them to the crusher for crushing. Water flows through the grille to prevent blockage of the sewer water treatment equipment and ensure its normal operation. This machine is mainly suitable for sewage treatment plants and transfer pump stations.

本机所能破碎的物品有：破布、玻璃、纸制品、木制品、生理用品、空罐、渣滓、橡胶制品、绳类、软管、皮制品、塑料制品等。

The items that this machine can crush include: rags, glass, paper products, wooden products, physiological products, empty cans, waste, rubber products, ropes, hoses, leather products, plastic products, etc.

型号表示方法/MODEL REPRESENTATION METHOD



特点/CHARACTERISTICS

1. 在水中进行破碎处理，既能保护水处理设备，又可避免臭气外泄，保护环境。
 2. 破碎性能优良，具有过载保护功能，运行安全可靠，可自动控制。
 3. 背耙式捞污方式，避免栅缝被堵塞。
 4. 安装及维修保养简单。
1. Crushing treatment in water can not only protect water treatment equipment, but also prevent odor leakage and protect the environment.
 2. Excellent crushing performance, overload protection function, safe and reliable operation, and automatic control.
 3. Backrake style cleaning method to avoid clogging of the grid gap.
 4. Installation and maintenance are simple.

结构/STRUCTURE

如图1所示，本机主要由圆形格栅，历史破碎机、电控箱等构成。

在驱动部件带动下，圆形格栅的耙齿做圆周运动，将被圆形栅条截留的水中杂物，送至破碎机，而水葱格栅中流过。破碎机驱动部件带动主动轴转动，同时主动轴通过精密齿轮带动从动轴转动，使固定于两轴上的铣刀呈逆向旋转，而将固体物咬挤破碎。

As shown in Figure 1, this machine is mainly composed of a circular grille, a historical crusher, an electrical control box, etc.

Driven by the driving components, the rake teeth of the circular grille move in a circular motion, sending the water debris intercepted by the circular grille bars to the crusher, while the water onion grille flows through. The driving components of the crusher drive the main shaft to rotate, and at the same time, the main shaft drives the driven shaft to rotate through precision gears, causing the milling cutter fixed on both shafts to rotate in reverse and crush solid objects.

主要技术参数及外形尺寸/Main technical parameters and external dimensions

表1 带格栅破碎机主要技术参数

Table 1 Main Technical Parameters of Grid Crusher

型号 model	PS—45	PS—60	PS—75	PS—100	PS—125	PS—150
处理量 Processing capacity (m³/min)	5.0	8.0	12.0	16.0	20.0	24.0
电机功率 power (Kw)	2.2+0.55			4+0.55		

注：
Note:

1. 污水中的渣滓浓度为30 ppm；

2. 处理量为流入水位在破碎机开口上限且流入和流出水位差为100mm时的处理量；

3. 0.55KW为格栅驱动功率。
1. The concentration of sediment in sewage is 30 ppm;

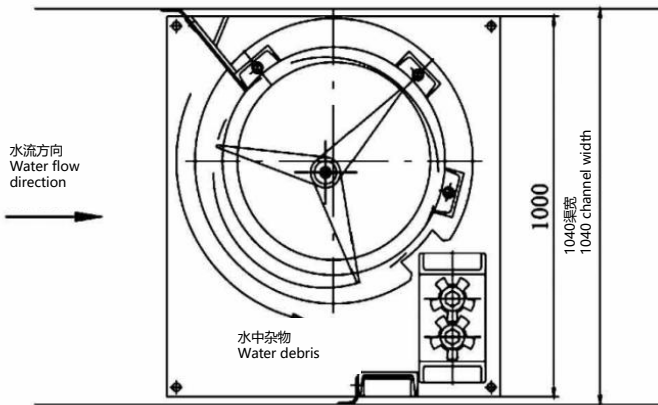
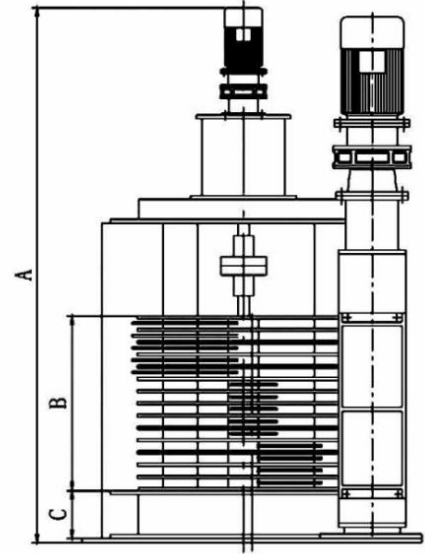
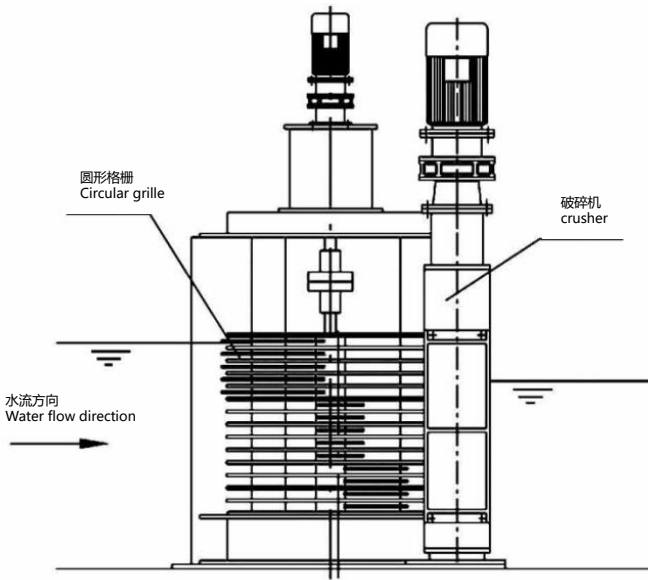
2. The processing capacity refers to the processing capacity when the inflow water level is at the upper limit of the crusher opening and the difference between the inflow and outflow water levels is 100mm;

3. 0.55KW is the driving power for the grille.

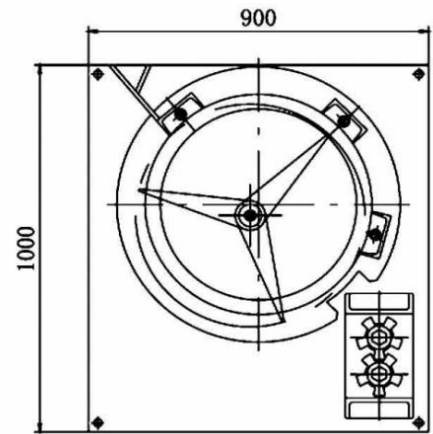
表2 主要外形尺寸

Table 2 Main external dimensions

型号 model	PS—45	PS—60	PS—75	PS—100	PS—125	PS—150
A (mm)	1510	1650	1800	2050	2300	2550
B (mm)	450	600	750	1000	1250	1500
C (mm)	140					



带格栅破碎机布置图
Layout of grid crusher



带格栅破碎机主要外形尺寸图
Main Outline Dimensional
Drawing of Grid Crusher

电气控制/ELECTRICAL CONTROL

常规为手动控制；可带PLC接口；可全自动控制。

Conventional is manual control; Can be equipped with PLC interface; Fully automatic control is possible.

订货说明/ORDERING INSTRUCTIONS

1. 订货时请用户提供使用环境、过水流量、工作水位高度；
 2. 圆形格栅中机架、栅条耙齿。轴等用户如需不锈钢材质，应另行注明；
 3. 不注明所配电控箱为常规控制，如有特殊要求应另行注明；
 4. 用户如需不锈钢铣刀，应另行注明；
 5. 破碎机如在深水场所工作时，以防电动机浸水时需加长轴，用户应另行注明。
-
1. Please provide the user with the usage environment, water flow rate, and working water level height when placing an order;
 2. Circular grille frame, grille bar rake teeth. If users require stainless steel material for shafts, it should be specified separately;
 3. It is not specified that the distribution control box is a conventional control. If there are special requirements, they should be noted separately;
 4. If users need stainless steel milling cutters, they should specify separately;
 5. When the crusher is working in deep water areas, it is necessary to add a long shaft to prevent the motor from being submerged in water. Users should specify this separately.

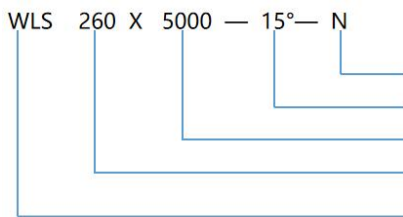
WLS型无轴螺旋输送机 WLS type shaftless screw conveyor

用途/USE TO

用于污水处理厂输送中、细格栅除污机栅渣和污泥脱水后泥饼等物料。

Used for transporting materials such as medium and fine grid debris and sludge cake after dewatering in sewage treatment plants.

型号表示方法/MODEL REPRESENTATION METHOD



输送物料: Z 栅渣, N 泥饼,
Q 其它
安装角度: 螺旋与地面夹角,
水平可省略
长度mm
螺旋槽宽度mm
无轴螺旋输送机

Conveying materials: Z-grid slag, N mud cake,
Q others
Installation angle: the angle between the
spiral and the ground, horizontal can be
omitted
Length mm
Spiral groove width mm
Shaftless screw conveyor

构造及输送过程/CONSTRUCTION AND TRANSPORTATION PROCESS

WLS型无轴螺旋输送机又无轴螺旋、U型槽、衬板、板盖、进出口和驱动装置组成。

物料由进料口输入，经螺旋推动后由出料口输出。

The WLS type shaftless screw conveyor consists of shaftless screw, U-shaped groove, lining plate, plate cover, inlet and outlet, and driving device.

The material is input through the feeding port and output through the discharging port after being pushed by the screw.

特点/CHARACTERISTICS

1. 构造简单、料槽中无轴承，物料输送流畅，维修简单。
2. 根据需要，可采用本公司独有的万向节联轴器，彻底根除断轴的隐患。
3. 除进口料口敞开外，其余部分均可加盖封闭，物料不会外溢，减少空气污染。

1. Simple construction, no bearings in the material tank, smooth material transportation, and easy maintenance.
2. As needed, our company's unique universal joint coupling can be used to completely eliminate the risk of shaft breakage.
3. Except for the open inlet, all other parts can be covered and sealed to prevent material overflow and reduce air pollution.

技术特性/TECHNICAL CHARACTERISTICS

型号 model	参考输送量m³/h Reference conveying capacity m³/h			尺寸 mm Size mm							输送长度 Conveying length (m)	安装角度 installation angle (度)	
	(转速为20r/min) (Speed is 20r/min)			A	B	H	L1	L2	L3	B1			
	0°	15°	30°										
WLS260—N	2.5	1.8	1.4	260	360	270	150	≤70	400	280	≤20	≤30	
WLS300—N	5	4	2.2	300	400	310	200		400	350	≤30		
WLS320—N	6	4.5	3	320	420	330	200		450	350			
WLS355—N	8.5	6.2	4.5	355	460	370	250		450	400			
WLS400—N	10.5	8.5	6	400	500	410	250		450	400			
WLS420—N	12	9.5	7	420	520	430	250		450	400			
WLS500—N	15	12	9	500	600	520	250		450	500			
WLS260—N	4	2.8	1.8	260	360	270	150	≤70	600	280	≤20		≤30
WLS300—N	7.5	5.5	4.5	300	400	310	200		600	350			
WLS320—N	10.6	7.4	5.6	320	420	330	200		600	350			
WLS355—N	12.6	8.9	6.4	355	460	370	250		650	400			
WLS400—N	15.2	11.5	6.5	400	500	410	250		650	400			
WLS420—N	16.8	12.3	7.6	420	520	430	250		650	400			
WLS500—N	21.5	17.5	10.5	500	600	520	250		650	400			

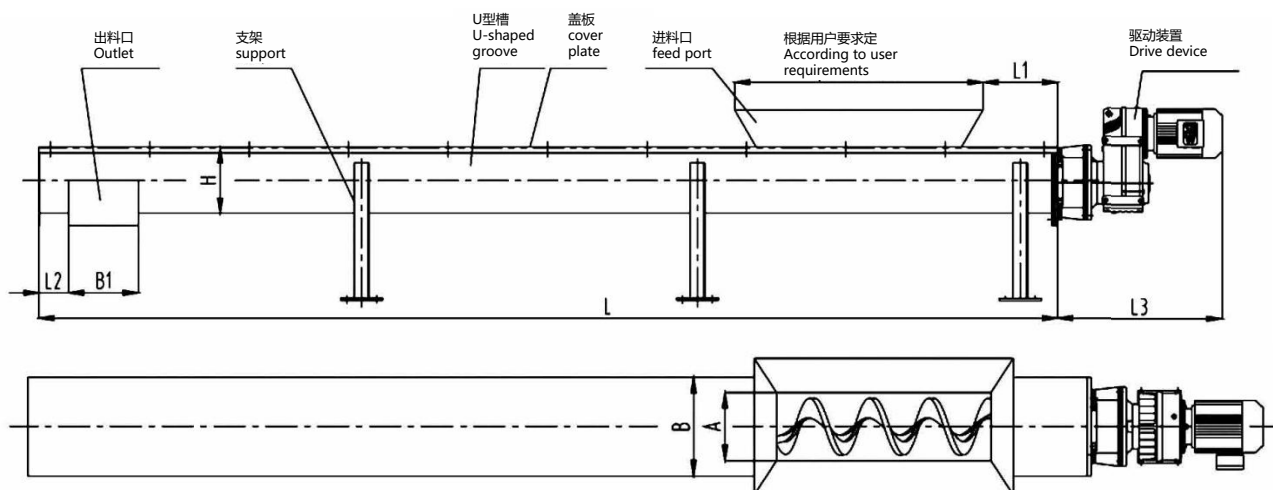
说明/ILLUSTRATE

1. 功率配套应根据工况、输送介质、安装角度和输送长度确定；
2. 可根据用户特定的尺寸及要求定制；
3. 因选用的减速机型号（或生产厂家）不同，尺寸L3有所变动。

1. The power matching should be determined according to the working conditions, conveying medium, installation angle, and conveying length;
2. Customizable according to user specific dimensions and requirements;
3. The size L3 may vary depending on the selected reducer model (or manufacturer).

无轴螺旋输送机主机外型尺寸

DIMENSIONS OF THE MAIN BODY OF THE SHAFTLESS SCREW CONVEYOR



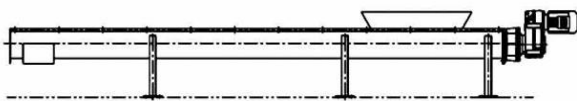
安装方式/INSTALLATION METHOD

本公司生产的无轴螺旋输送机正常为地面固定式。

根据需要可提供吊挂式：地面、吊挂混合式；移动式以及可绕进料口轴线回转式、转塔式。

The shaftless screw conveyor produced by our company is normally a ground fixed type.

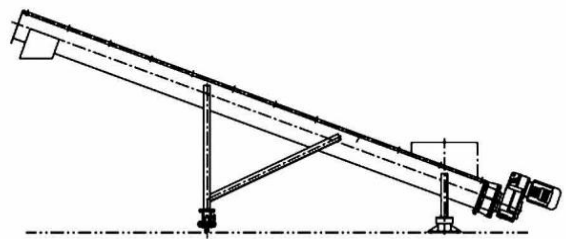
Hanging types can be provided as needed: ground mounted, mixed hanging type; Mobile, rotatable around the feed inlet axis, and turret type.



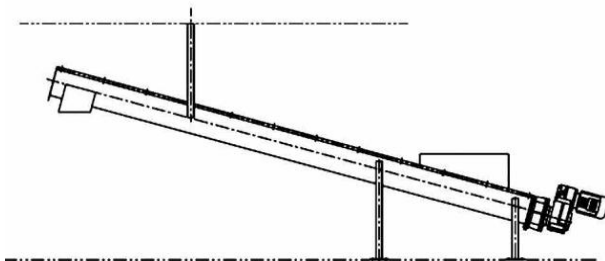
水平输送（地面固定式）
Horizontal conveying (ground fixed)



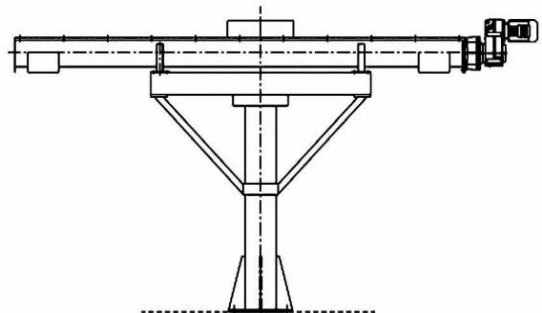
水平输送（吊挂固定式）
Horizontal conveying (hanging fixed type)



倾斜输送（移动式）
Tilt Conveyor (Mobile)



倾斜输送(地面、吊挂混合式)
Tilt conveying (ground, suspended mixed type)



水平输送（转塔式）
Horizontal conveying (turret)

WLSY型无轴螺旋输送压实一体机

WLSY type shaftless spiral conveying compaction integrated machine

用途/USE TO

WLSY型无轴螺旋输送压实一体机又称无轴螺旋输送压榨机，是污水处理流程中实现输送与挤压栅渣一体化新型设备，格栅除污机；捞出的栅渣经过输送和压实后有利于外运处理。

WLSY type shaftless spiral conveying compaction integrated machine, also known as shaftless spiral conveying press, is a new type of equipment in the sewage treatment process that integrates conveying and squeezing of grid slag, and is a grid cleaning machine; The retrieved slag is beneficial for external transportation and processing after being transported and compacted.

型号表示方法/MODEL REPRESENTATION METHOD

WLSY 320 X 6000 — 15 °



安装角度：螺旋与地面夹角
长度 mm
螺旋槽宽度 mm
无轴螺旋输送压实一体机

Installation angle: angle between the spiral
and the ground
Length mm
Spiral groove width mm
Shaftless spiral conveying compaction
integrated machine

构造及输送过程/CONSTRUCTION AND TRANSPORTATION PROCESS

WLSY型无轴螺旋输送压实一体机由驱动装置、无轴螺旋、U型槽、支架、衬板、盖板、进料口、挤压段、出料口和排水管组成。物料由进料口输入，在螺旋推动下栅渣前移到挤压段脱水后从出料口排出，挤压出的水流经排水管并引入栅渠中。

The WLSY type shaftless spiral conveying compaction integrated machine consists of a driving device, shaftless spiral, U-shaped groove, bracket, lining plate, cover plate, feed inlet, extrusion section, discharge outlet, and drainage pipe. The material is input through the feeding port, and under the screw pushing, the slag moves forward to the extrusion section for dehydration before being discharged from the discharge port. The squeezed water flows through the drainage pipe and is introduced into the grate channel.

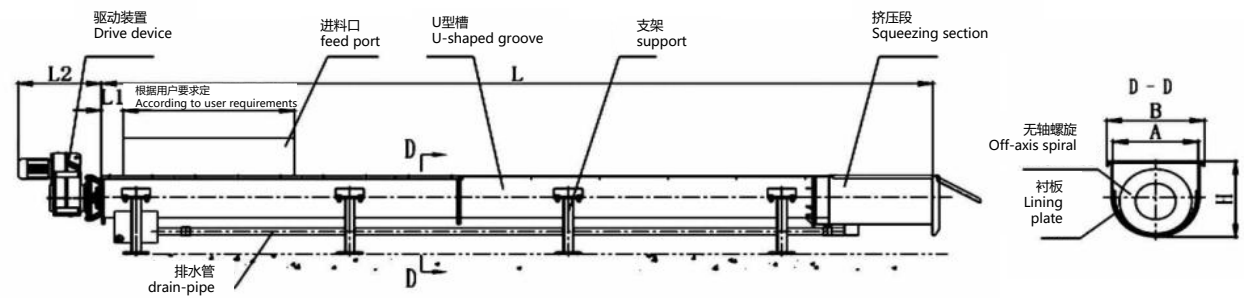
特点/CHARACTERISTICS

1. 构造简单、挤压段无轴承，物料输送流畅。维修简单；
2. 除进出料口敞开外，其余部分均可加盖封闭，物料不会外溢，减少空气污染；
3. 设计成一体化设备，一机多能，既能输送栅渣，又能挤压脱水。
1. Simple construction, no bearings in the extrusion section, and smooth material conveying. Easy maintenance;
2. Except for the open inlet and outlet, all other parts can be covered and sealed to prevent material overflow and reduce air pollution;
3. Designed as an integrated device with multiple functions, it can not only transport slag, but also squeeze and dehydrate.

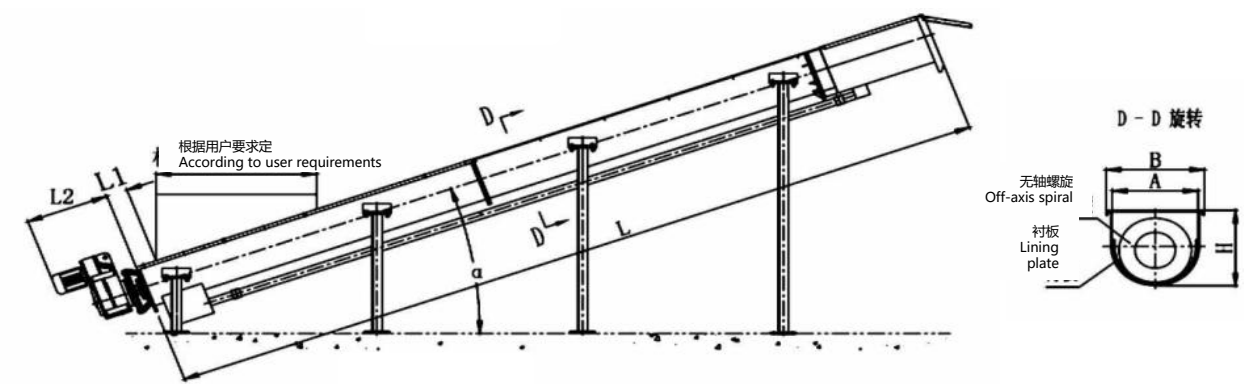
技术特性/TECHNICAL CHARACTERISTICS

型号 model	参考输送量m³/h Reference conveying capacity m³/h			尺寸 mm Size mm					输送长度 Conveyin g length (m)	安装角度 installati on angle (度)
	(转速为20r/min) (Speed is 20r/min)									
	0°	15°	30°	A	B	H	L1	L2		
WLSY260	2.2	1.5	1	260	370	270	150	400	≤15	≤30
WKS320	5.5	4	3	320	430	340	200	450	≤20	
WLSY355	8	5.5	4	355	465	380	250	450		
WLSY420	11	7.5	5.2	420	530	430	250	450	≤30	

主机外型尺寸/EXTERNAL DIMENSIONS



水平安装
Horizontal installation



倾斜安装
Tilt installation

LYZ螺旋压榨机 LYZ spiral press machine

用途/USE TO

螺旋压榨机为格栅机配套设备，把格栅机捞取的污物通过该机压榨以减少其水份和体积，便于运输。

The spiral press machine is a supporting equipment for the grid machine, which presses the dirt picked up by the grid machine to reduce its moisture and volume, making it easier to transport.

型号表示方法/MODEL REPRESENTATION METHOD

LYZ — 219 / 6



螺旋圈数

螺旋管公称尺寸 mm

螺旋压榨机

Number of spiral turns

Spiral tube nominal size mm

Spiral press machine

特点/CHARACTERISTICS

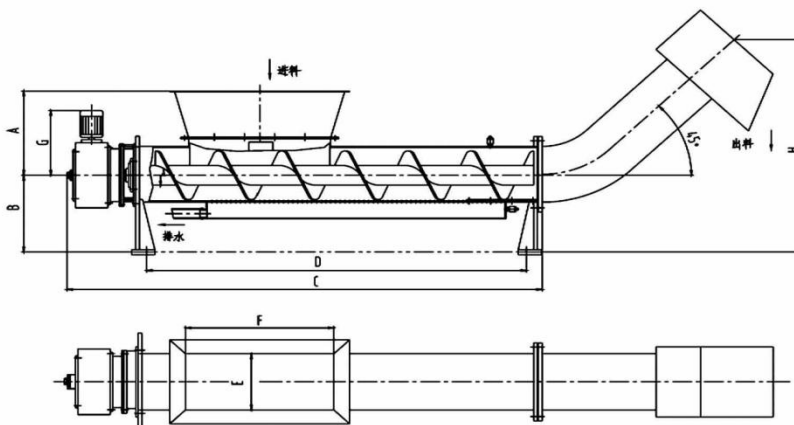
结构简单，占地面积小，安装维护方便；除进出口敞开外，其余部分均可加盖封闭，物料不会外溢，减少空气污染

Simple structure, small footprint, easy installation and maintenance; Except for the open inlet and outlet, all other parts can be covered and sealed to prevent material overflow and reduce air pollution

构造及输送过程/CONSTRUCTION AND TRANSPORTATION PROCESS

螺旋压榨机由挤压螺旋、螺旋管、传动部件、进料斗及卸料斗等组成。污物由进料斗进入螺旋管，在挤压螺旋的作用下，压缩、脱水后输送至出渣口。

The screw press is composed of an extrusion screw, a spiral tube, transmission components, a feeding hopper, and a discharging hopper. The waste enters the spiral tube from the feeding hopper, and is compressed and dehydrated by the squeezing screw before being transported to the slag outlet.



主要技术参数/MAIN TECHNICAL PARAMETERS

型号 model	螺旋圈数 Number of spiral turns	螺旋管尺寸 Spiral tube size	A	B	C	D	E	F	G	H	功率Kw Power Kw
LYZ21 9/6	6	219	400	380	1500	1030	400	540	422	1000	1.1
LYZ21 9/9	9	219	400		2100	1570	400	1080	422	1000	1.1
LYZ21 9/11	11	219	400		2500	1930	400	1440	422	1000	1.1
LYZ29 9/6	6	299	500		2150	1380	450	750	501	1200	3
LYZ29 9/9	9	299	500		3050	2240	450	1500	501	1200	3
LYZ29 9/11	11	299	500		3650	2740	450	2250	501	1200	3
LYZ40 2/6	6	402	600		2700	1940	750	900	622	1350	5.5
LYZ40 2/9	9	402	600		3900	2930	750	1980	622	1350	5.5
LYZ40 2/11	11	402	600		4700	3590	750	2640	622	1350	5.5

XS沉砂池吸砂机 XS sedimentation tank sand suction machine

用途/USE TO

S (D) XS型沉砂池吸砂机用于污水处理厂沉砂池和曝气沉砂池，将沉降在池底上的砂子。煤渣等重度较大的颗粒和污水的混合液提升并输送至于砂水分离器联结的渠道。

The S (D) XS sedimentation tank suction machine is used for sedimentation tanks and aeration sedimentation tanks in sewage treatment plants to remove sand that settles on the bottom of the tank. The mixture of heavy particles such as coal slag and sewage is lifted and transported to the channel connected to the sand water separator.

型号表示方法/MODEL REPRESENTATION METHOD

S(D) X S — 4 X 6



池深 m
池宽 m
螺旋压榨机

Pool depth m
Pool width m
Spiral press machine

注：可按用户要求制造三槽或多槽吸砂机。

Note:

We can manufacture three or more slot sand suction machines according to user requirements.

特点/CHARACTERISTICS

1. 采用本公司吸收德国技术专业生产的潜水无堵塞泵，提升和输送砂水混合液，比气提泵简单并可避免空压机运行时产生的噪音；
2. 采用电液（或电动）推杆驱动撇渣耙，结构紧凑；
1. We use our company's specialized submersible non clogging pump, which absorbs German technology, to lift and transport sand water mixtures. It is simpler than air lift pumps and can avoid the noise generated during the operation of air compressors;
2. Adopting electro-hydraulic (or electric) push rod to drive the scraper rake, with a compact structure;

构造及工作原理/CONSTRUCTION AND WORKING PRINCIPLE

XS型系列吸砂机由主梁、驱动装置、潜污泵，撇渣装置，轨道和控制箱等组成。

吸砂机在置于池顶的钢轨上根据设定的周期自动往返运行，将池底部砂水混合液提升并排至池边的集水渠。当顺水流行驶时，撇渣耙下降刮集浮渣并送至池末端的渣槽；反向行驶时，撇渣耙提升，离开液面以防浮渣逆行（亦可根据工艺要求，反向撇渣）。

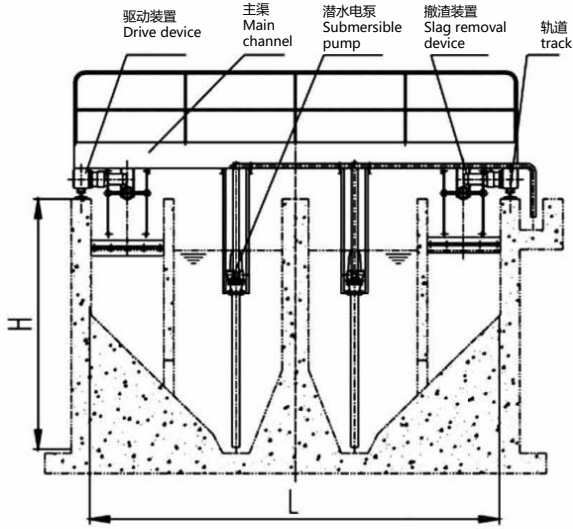
The XS series sand suction machine consists of a main beam, a driving device, a submersible sewage pump, a skimming device, a track, and a control box.

The sand suction machine automatically runs back and forth on the steel rail placed on the top of the pool according to the set cycle, lifting and discharging the sand water mixture at the bottom of the pool to the collection channel at the edge of the pool. When traveling along the water flow, the skimming rake descends to scrape and collect floating slag, and sends it to the slag tank at the end of the pool; When driving in reverse, the scraper is lifted and lifted away from the liquid surface to prevent the floating slag from reversing (or reverse scraping can be done according to process requirements).

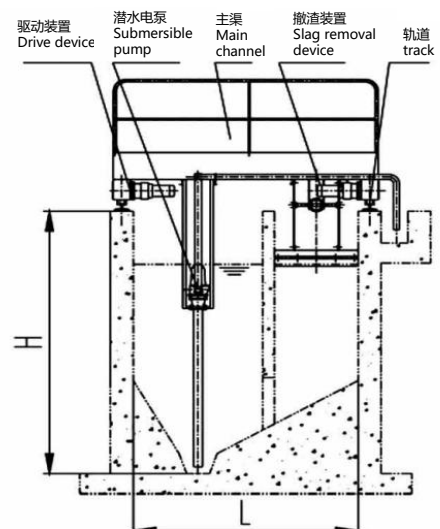
主要技术参数/MAIN TECHNICAL PARAMETERS

参数 parameter	XS—2	XS—4	XS—6	XS—8	XS—10	XS—12
池宽 (L) m Pool width (L) m	2~3	4	6	8	10	12
池深 (H) m Pool depth (H) m	1~3					
潜水电泵型号 Submersible electric pump model	AV14—4型潜水无堵塞泵 AV14-4 submersible unobstructed pump					
潜水电泵特征 Characteristics of submersible electric pump	扬程：2m 流量：54m ³ /h 功率：1.4KW Head: 2m Flow rate: 54m ³ /h Power: 1.4KW					
提耙装置功率Kw Power of rake lifting device (Kw)	≤0.55 (单耙) ≤ 0.55 (single rake)					
驱动装置功率Kw Drive device power Kw	≤2 X 0.37					
行驶速度 m/min Driving speed m/min	2~5					
钢轨型号 Rail model	15Kg/m (GB11264—89)					
轨道预埋件断面尺寸mm Section size of track embedded parts mm	(b1—20) X 60 X 10 (b1: 沉砂池墙壁厚) (b1-20) X 60 X 10 (b1: sedimentation tank wall thickness)					
轨道预埋件间距 mm Distance between track embedded parts mm	1000					

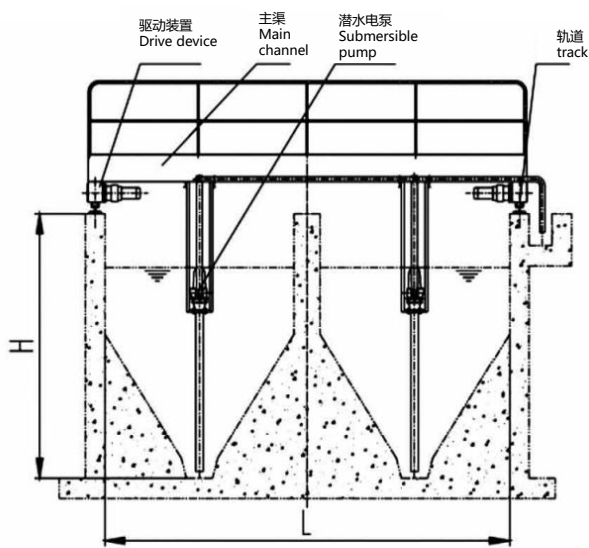
外形尺寸图 / OUTLINE DIMENSION DIAGRAM



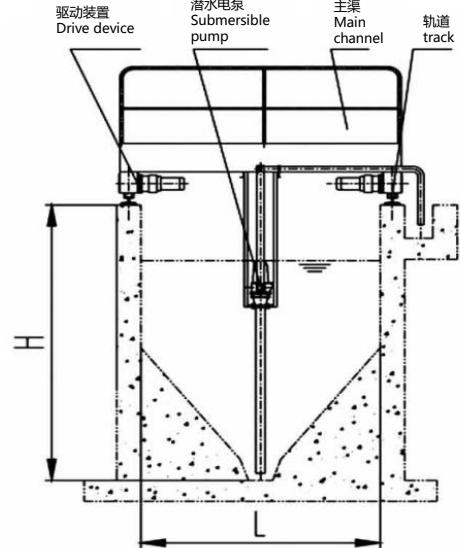
SXS型双槽吸砂机(带撇渣装置)
SXS type double slot sand suction machine (with slag removal device)



DXS型单槽吸砂机(带撇渣装置)
DXS type single slot sand suction machine (with slag removal device)



SXS型双槽吸砂机(不带撇渣装置)
SXS type double slot sand suction machine (without slag removal device)



DXS型单槽吸砂机 (不带撇渣装置)
DXS type single slot sand suction machine (without slag removal device)

电气控制/ELECTRICAL CONTROL

可根据用户需要对吸砂机吸砂次数及行程自动控制，亦可带PLC接口。

The sand suction frequency and stroke of the sand suction machine can be automatically controlled according to user needs, and it can also be equipped with a PLC interface.

订货说明/ORDERING INSTRUCTIONS

1. 可根据用户的尺寸制造;
 2. 提沙泵型号及参数特征可根据用户需要更改;
 3. 注明主体材质, 碳钢或不锈钢;
 4. 可根据需要提供轨道;
 5. 可根据需要配套滑导线或其他供电方式
-
1. Can be manufactured according to the user's size;
 2. The model and parameter characteristics of the sand pump can be changed according to user needs;
 3. Indicate the main material, carbon steel or stainless steel;
 4. Track can be provided as needed;
 5. Can be equipped with sliding wires or other power supply methods as needed

XLCS型旋流沉砂池除污机

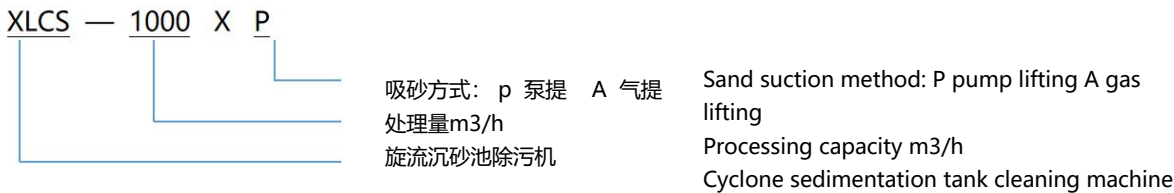
XLCS type cyclone sand removal machine

用途/USE TO

XLCS型旋流沉砂池除污机用于旋流沉砂池，是沉砂。洗砂效果好的先进设备。

The XLCS type cyclone sand removal machine is used for sedimentation in cyclone sand tanks. Advanced equipment with good sand washing effect.

型号表示方法/MODEL REPRESENTATION METHOD



构造及工作原理/CONSTRUCTION AND WORKING PRINCIPLE

XLCS型旋流沉砂池除污机由叶轮、传动轴、电机、减速器和吸砂系统组成。

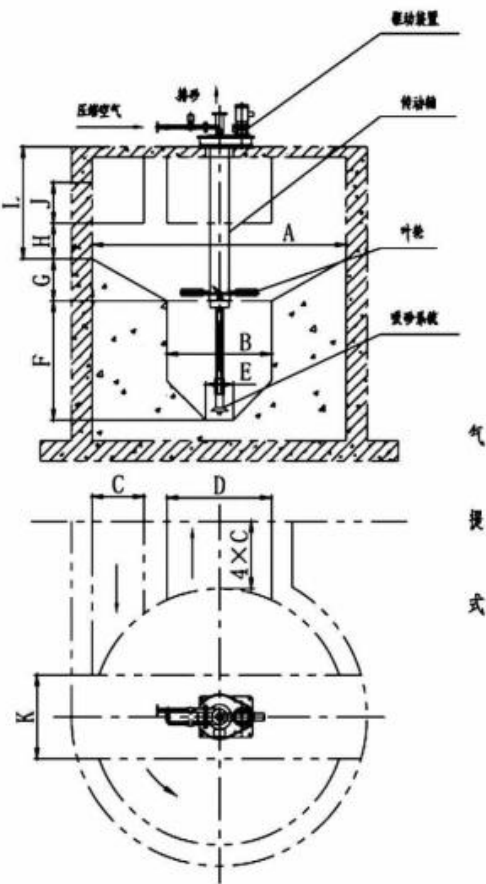
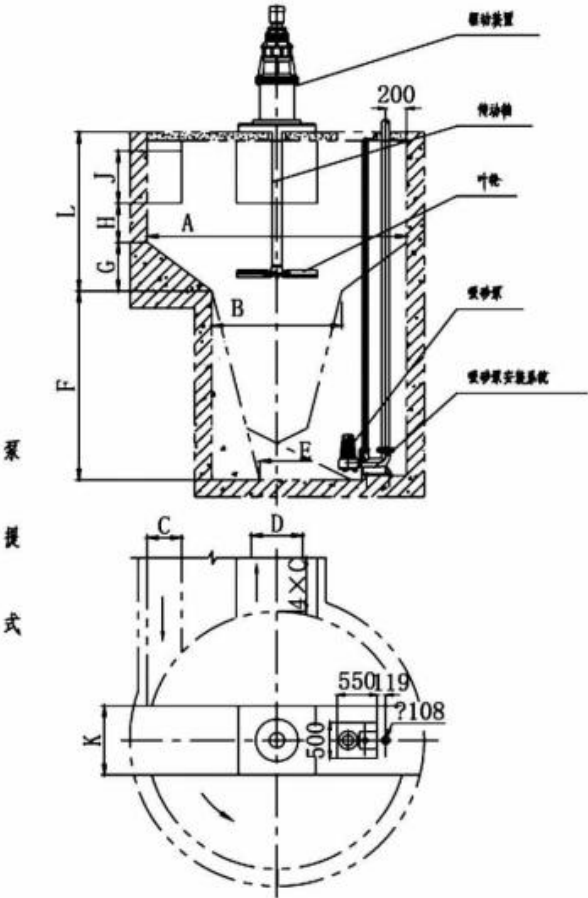
由于叶轮桨板向上倾斜，旋转时使池中污水作螺旋运动，加上因污水切向进入，产生与叶轮旋向一致的旋流，池中的污水形成涡螺旋流态。在适当的叶桨倾角和线速度条件下，污水中的砂粒将受到冲刷并保持最佳的沉降效果，而原来附着在砂粒上的有机物，以及重度小的物质将随污水一同流出旋流池。另外，由于叶轮旋转，减少旋流池因进水量变化导致流态变化的敏感程度，保证了沉砂池稳定、出砂的有机成分含量低等特点。

The XLCS cyclone sand removal machine consists of an impeller, a transmission shaft, a motor, a reducer, and a sand suction system.

Due to the upward inclination of the impeller blade, the sewage in the pool undergoes a spiral motion during rotation. In addition, due to the tangential entry of sewage, a vortex flow consistent with the rotation direction of the impeller is generated, resulting in the formation of a vortex flow state in the sewage in the pool. Under appropriate blade inclination and linear velocity conditions, the sand particles in the sewage will be washed away and maintain optimal settling effect, while the organic matter originally attached to the sand particles and heavy substances will flow out of the cyclone pool together with the sewage. In addition, due to the rotation of the impeller, the sensitivity of the swirl pool to changes in flow state caused by changes in water intake is reduced, ensuring the stability of the sedimentation tank and low organic content in the sand output.

技术参数及外形尺寸/TECHNICAL PARAMETERS AND EXTERNAL DIMENSIONS

型 号 model	流量m³/h Flow rate m³/h	A	B	C	D	E	F	G	H	J	K	L
XLCS—180	180	1.83	1	0.305	0.61	0.3	1.4	0.3	0.3	0.2	0.8	1.1
XLCS—360	360	2.13	1	0.38	0.76	0.3	4.4	0.3	0.3	0.3	0.8	1.1
XLCS—600	600	2.43	1	0.45	0.9	0.3	1.45	0.4	0.3	0.4	0.8	1.15
XLCS—1000	1000	3.05	1	0.61	1.2	0.3	1.55	0.45	0.3	0.45	0.8	1.35
XLCS—1800	1800	3.65	1.5	0.75	1.5	0.4	1.7	0.6	0.51	0.58	0.8	1.45
XLCS—3000	3000	4.87	1.5	1	2	0.4	2.2	1	0.51	0.6	0.8	1.85
XLCS—4600	4600	5.48	1.5	1.1	2.2	0.4	2.2	1	0.61	0.63	0.8	1.85
XLCS—6000	6000	5.8	1.5	1.2	2.4	0.4	2.5	1.3	0.75	0.7	0.8	1.95
XLCS—7800	7800	6.1	1.5	1.2	2.4	0.4	2.5	1.3	0.89	0.75	0.8	1.95



LSSF型螺旋式砂水分离器

LSSF spiral sand water separator

用途/USE TO

用于污水处理厂沉砂池，将沉淀池排出的砂水混合液进行砂水分离。

Used in the sedimentation tank of sewage treatment plants to separate the sand and water mixture discharged from the sedimentation tank.

型号表示方法/MODEL REPRESENTATION METHOD

LSSF — 260 — II



Water tank marking: Stainless steel water tank not marked/Reinforced concrete water tank II

U-shaped groove width mm

Spiral sand water separator

构造及工作原理/CONSTRUCTION AND WORKING PRINCIPLE

本产品综合了国内外该类型产品的使用情况后改进设计的，解决了衬条更换不便和螺旋轴向位置不可调的缺陷，其特点如下：

This product has been improved and designed based on the usage of this type of product both domestically and internationally. It solves the problems of inconvenient replacement of lining strips and non adjustable screw axial position. Its characteristics are as follows:

1. 分离效率可达96%~98%,可分离出粒径 ≥ 0.2 mm的颗粒;
 2. 采用无轴螺旋、无水中轴承，维护方便;
 3. 结构紧凑，重量轻;
 4. 新型传动装置，其关键产件—减速器为先进的轴装式，不用联轴器，安装对中方便;
 5. 衬条为快装式，便于更换;
 6. 螺旋轴向位置可调，便于调整其尾部和箱壁的安全间隙。
1. The separation efficiency can reach 96%~98%, and particles with a diameter of ≥ 0.2 mm can be separated;
 2. Adopting shaftless spiral and waterless bearings for easy maintenance;
 3. Compact structure and light weight;
 4. The key component of the new transmission device, the reducer, is an advanced shaft mounted type that does not require a coupling and is easy to install and align;
 5. The lining strip is of quick installation type, easy to replace;
 6. The axial position of the spiral is adjustable, making it easy to adjust the safety clearance between its tail and the box wall.

构造及工作过程/CONSTRUCTION AND WORKING PROCESS

螺旋式砂水分离器由无轴螺旋、衬条、U型槽、水箱、导流板、出水堰和驱动装置组成。

砂水混合物从分离器一端顶部输入水箱，混合液中重度较大的，如砂粒等将沉积于槽型底部，在螺旋的推动下，砂粒沿斜置的槽底提出升，离开液面后继续推移一段距离，在砂粒充分脱水后经排砂口卸至盛砂桶，而与砂水分离后的水从溢流口排除并送往厂内进水池。

The spiral sand water separator consists of a shaftless spiral, a lining strip, a U-shaped groove, a water tank, a guide plate, an outlet weir, and a driving device.

The sand water mixture is input into the water tank from the top of one end of the separator. The heavier components in the mixture, such as sand particles, will deposit at the bottom of the groove. Under the push of the spiral, the sand particles will rise along the inclined groove bottom and continue to move a certain distance away from the liquid surface. After the sand particles are fully dehydrated, they will be discharged into the sand bucket through the sand discharge port. The water separated from the sand water will be discharged from the overflow port and sent to the inlet water tank in the factory.

主要技术参数/MAIN TECHNICAL PARAMETERS

参数 parameter	LSSF—260	LSSF—320	LSSF—355	LSSF—420
处理量L/S Processing capacity L/S	5~12	12~20	20~27	27~35
功率Kw Power Kw	0.37	0.37	0.75	0.75

螺旋式砂水分离器订货要求 ORDERING REQUIREMENTS FOR SPIRAL SAND WATER SEPARATOR

1. 按型号表示方式书写全称：
2. 使用环境（户内，外及其它）；
3. 如采用钢筋混凝土水箱，应提供相关部分的工程设计资料。

1. Write the full name according to the model representation:
2. Usage environment (indoor, outdoor, and other);
3. If a reinforced concrete water tank is used, relevant engineering design materials should be provided.

主要技术参数/MAIN TECHNICAL PARAMETERS

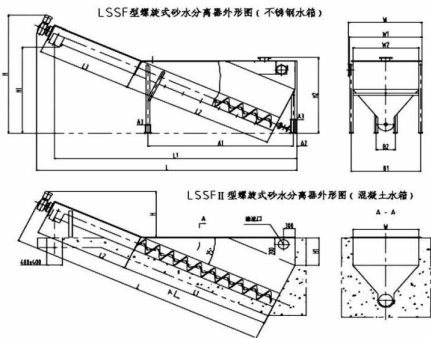
不锈钢水箱/STAINLESS STEEL WATER TANK

尺寸代号	LSSF—260	LSSF—320	LSSF—355	LSSF—420
L	4350	4770	6350	6700
L1	3840	4380	5890	6290
L2	3000		4000	
L3	1000	1500	2000	2500
W	1653	1748	1880	1920
W1	1320	1420	1580	1880
W2	1200	1260	1420	1720
H	2100	2350	3050	3250
H1	1670	1860	2480	2590
H2	1600	1800	2250	2250
B1	1260	1340	1506	1800
B2	326	406	441	506
A1	2700	2800	3900	3800
A2	100			
A3	130			
进水口直径 Inlet diameter	Φ100	φ150	Φ200	φ200
溢流口直径 Overflow outlet diameter	φ150	Φ200	φ250	Φ250

混凝土水箱/Concrete water tank

尺寸代号	LSSF—260Ⅱ	LSSF—320Ⅱ	LSSF—355Ⅱ	LSSF—420Ⅱ
L	4800	5300	7000	7400
L1	3000		4000	
L2	1000	1500	2000	2500
W	1200	1260	1420	1720
H	500	550	800	1000
H1	600	700	700	850

外形安装尺寸图/OUTLINE INSTALLATION DIMENSION DIAGRAM



ZBGN型周边传动桥式刮泥机

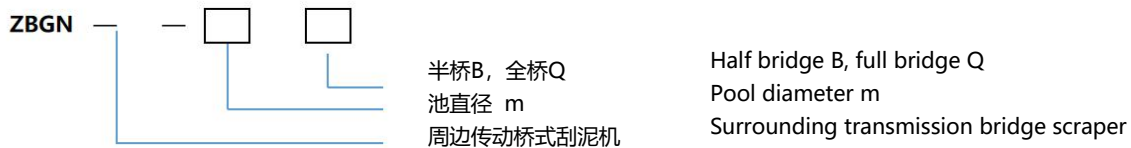
ZBGN type peripheral transmission bridge scraper

用途/USE TO

ZBGN 系列刮泥机用于污水处理厂圆形沉淀池，将沉降在池底的污泥刮集至池底集泥坑并将池面的浮渣撇向集渣斗，以便进一步处理。

The ZBGN series scraper is used in circular sedimentation tanks of sewage treatment plants to scrape and collect sludge settled at the bottom of the tank into a mud pit at the bottom of the tank, and skim the floating slag on the surface of the tank towards the slag hopper for further treatment.

型号表示方法/MODEL REPRESENTATION METHOD



构造及工作原理/CONSTRUCTION AND WORKING PRINCIPLE

ZBGN系列刮泥机如图1~2由主梁、中心支座及集电器、驱动装置、刮泥板、撇渣装置、导流筒、排渣斗和控制柜等组成。

在驱动装置推动下，主梁绕池中心轴线旋转，固定于刮臂上的刮板将沉积在池底的污泥刮集至池中心集泥坑。刮板曲线采用对数螺旋型，受力均匀，刮泥彻底，当池底遇有障碍物时，能自动让耙，保护机器不受伤害。驱动装置可设过扭保护装置，工作更加安全。

The ZBGN series scraper, as shown in Figures 1-2, consists of a main beam, a central support and collector, a drive device, a scraper plate, a skimming device, a guide tube, a slag hopper, and a control cabinet.

Driven by the driving device, the main beam rotates around the central axis of the pool, and the scraper fixed on the scraper arm scrapes the sludge deposited at the bottom of the pool to the central mud collection pit. The scraper curve adopts a logarithmic spiral type, with uniform force and thorough scraping of mud. When there is an obstacle at the bottom of the pool, it can automatically release the scraper to protect the machine from damage. The driving device can be equipped with a torque protection device for safer operation.

电气控制/ELECTRICAL CONTROL

可根据用户需要设定设备的启、听及运行时间，可带PLC接口。

The device's start, listen, and run time can be set according to user needs, and it can be equipped with a PLC interface.

订货说明/ORDERING INSTRUCTIONS

1. 需要撇渣装置、出水堰板、浮渣挡板、出水槽时请注明；
 2. 注明设备材质、防腐、电机及减速机要求；
 3. 订货时，需提供池子的土建工艺图并注明详细尺寸。
1. Please specify when a skimming device, effluent weir plate, scum baffle, and effluent tank are required;
 2. Specify equipment material, anti-corrosion, motor and reducer requirements;
 3. When placing an order, please provide the civil engineering process diagram of the pool and indicate the detailed dimensions.

主要技术参数/MAIN TECHNICAL PARAMETERS

型号 model		ZBGN—16	ZBGN—20	ZBGN—25	ZBGN—30	ZBGN—35	ZBGN—40	ZBGN—45	ZBGN—50
池直径D (m) Pool diameter D (m)		16	20	25	30	35	40	45	50
池边深度H (m) Pond edge depth H (m)		1~4.5							
刮板外缘线度 Scraper edge linearity m/min	初沉池 primary sedimen tation tank	≤3							
	二沉池 seconda ry sedimen tation tank	≤1.8							
单边驱动功率 Unilateral driving power (Kw)	初沉池 primary sedimen tation tank	1.1			1.5				2.2
	二沉池 seconda ry sedimen tation tank	0.37		0.55		0.75			1.1
D1 (mm)		3000	3000	3400	4000	4500	5000	5500	5800
D2 (mm)		2500	2500	2900	3400	3850	4300	4800	5000
B (mm)		300	300	300	300	400	400	450	450
B1 (mm)		500	500	500	500	600	600	600	650
H1 (mm)		800	800	900	1100	1300	1300	1400	1500
H2 (mm)		450	4500	500	500	500	500	500	500
H (mm)		3600	3600	3600	4000	4400	4400	4400	4600
		4000	44000	4000	4400	4800	4800	4800	500
n (个)		113	123	148	188	248	248	268	288

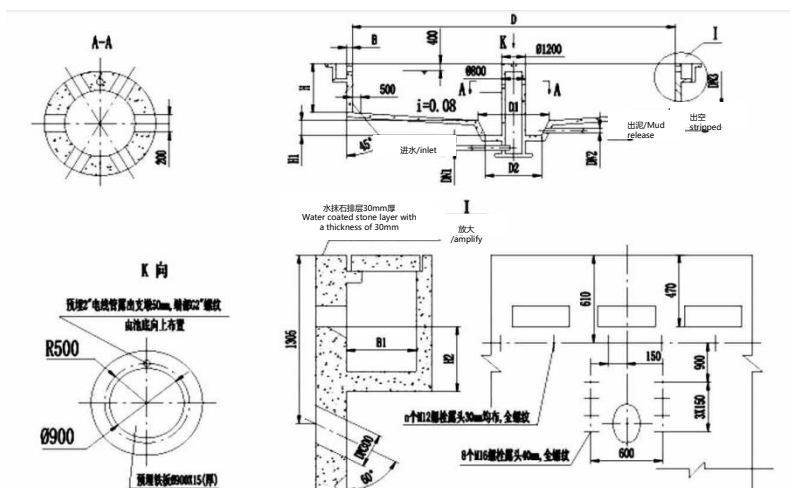


图1.刮泥机池型参考图

Figure 1: Reference diagram of scraper pool type

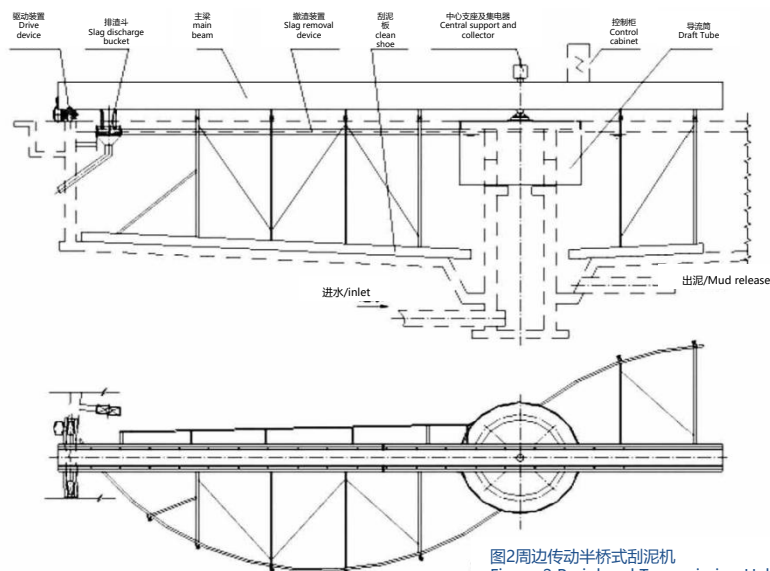


图2周边传动半桥式刮泥机

Figure 2 Peripheral Transmission Half Bridge Scraper

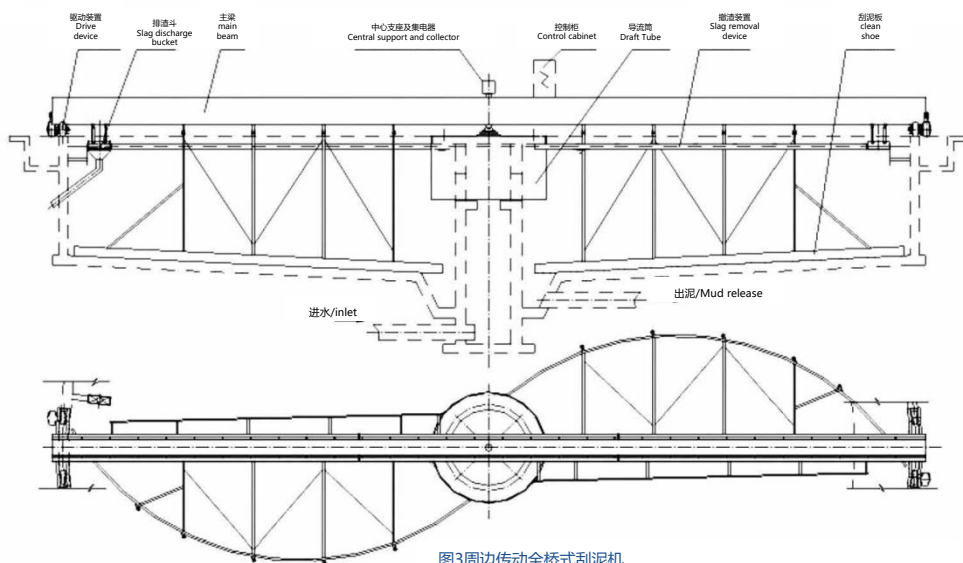


图3周边传动全桥式刮泥机

Figure 3 Surrounding transmission full bridge scraper

ZCGN型中心传动垂架式刮泥机

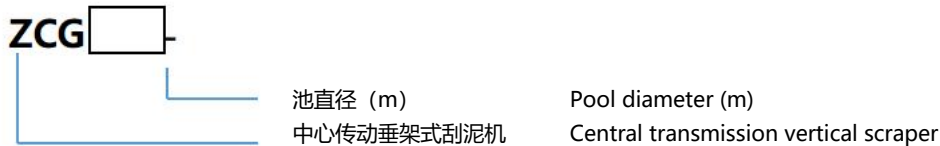
ZCGN type center drive vertical scraper

用途/USE TO

ZCGN型中心传动垂架式刮泥机多用于污水处理厂圆形沉淀池，将沉降在池底的污泥刮集至集泥坑并将池面的浮渣撇向集渣斗，以便进一步处理。

The ZCGN center drive vertical scraper is commonly used in circular sedimentation tanks of sewage treatment plants. It scrapes the sludge settled at the bottom of the tank to a mud collection pit and directs the floating slag on the surface of the tank towards the slag collection hopper for further treatment.

型号表示方法/MODEL REPRESENTATION METHOD



特点/CHARACTERISTIC

1. 由于本机采用中心传动，平台固定支墩式，比传统机构简单、重量减轻；
 2. 节约运行费用、维护管理方便；
 3. 可根据特定的要求配备过扭保护机构，当扭矩值达到设定值时自动报警停机，安全可靠。
1. Due to the use of central transmission and platform fixed support pier type, this machine is simpler and lighter than traditional mechanisms;
 2. Save operating costs and facilitate maintenance and management;
 3. An over torque protection mechanism can be equipped according to specific requirements, which automatically alarms and shuts down when the torque value reaches the set value, ensuring safety and reliability.

构造及工作原理/CONSTRUCTION AND WORKING PRINCIPLE

中心传动垂架式刮泥机如图1所示由集渣斗1、刮渣板2、支架3、撇渣板4、导流筒5、驱动装置6、工作桥7、旋转竖架8、刮臂9、小刮板10、刮泥板11等组成。

The center driven vertical scraper, as shown in Figure 1, consists of a slag hopper 1, scraper plate 2, bracket 3, skim plate 4, guide tube 5, driving device 6, working bridge 7, rotating vertical frame 8, scraper arm 9, small scraper 10, scraper plate 11, etc.

固定在旋转竖架上的刮臂在驱动装置带动下，绕池中心轴线旋转，将沉积在池底的污泥由刮泥板刮集至池中心集泥坑，同时，液面上的浮渣向随导流筒旋转的撇渣板和周边浮渣挡板形成的减缩区域内集中，直至其封闭边一刮渣摆臂。当摆臂抵达集渣斗时，由摆臂上的刮渣板刮集至集渣斗排出池外。

The scraper arm fixed on the rotating vertical frame is driven by the driving device to rotate around the central axis of the pool, collecting the sludge deposited at the bottom of the pool from the scraper plate to the mud collection pit at the center of the pool. At the same time, the floating slag on the liquid surface is concentrated in the reduced area formed by the skimming plate rotating with the guide tube and the surrounding floating slag baffle, until it is closed by a scraper swing arm. When the swing arm reaches the slag collection hopper, it is scraped by the scraper plate on the swing arm and discharged outside the slag collection hopper.

电气控制/ELECTRICAL CONTROL

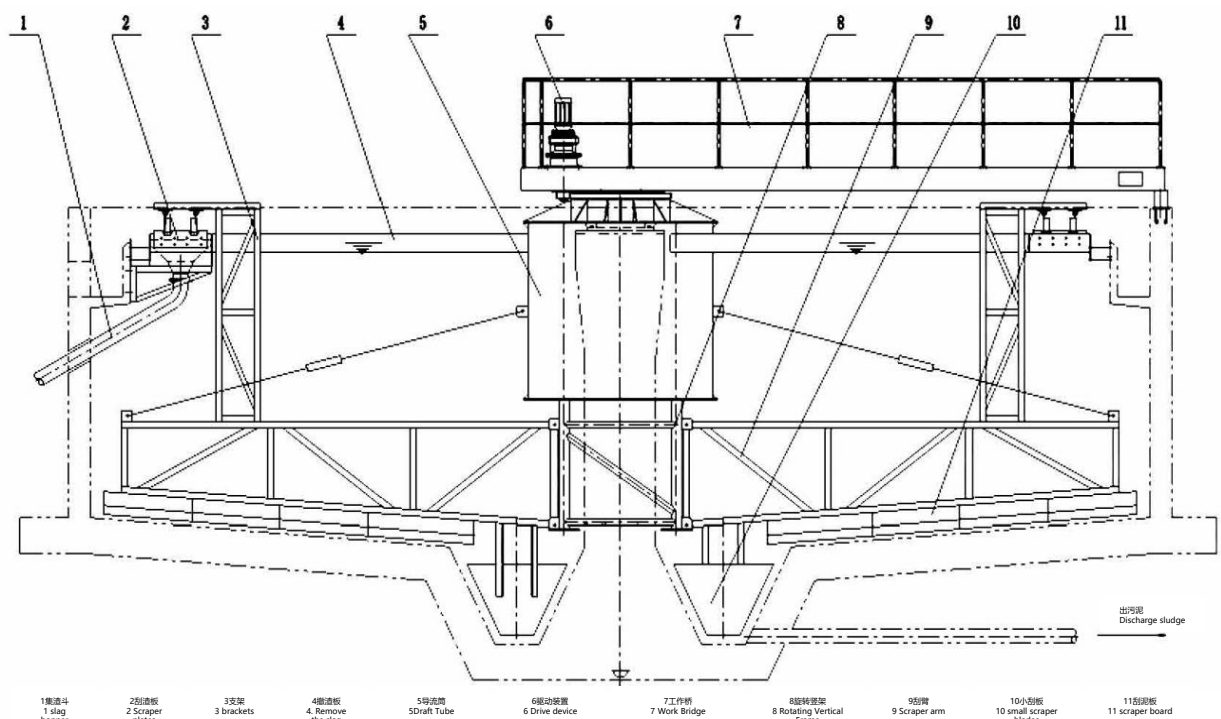
可根据用户需要设定设备的启、停及运行时间，可带PLC接口。

The start, stop, and operation time of the device can be set according to user needs, and it can be equipped with a PLC interface.

订货说明/ORDERING INSTRUCTIONS

1. 需要撇渣装置、出水堰板、浮渣挡板、出水槽时，请注明；
2. 注明设备材质、防腐、电机及减速机要求；
3. 订货时，需提供池子的土建工艺图并注明详细尺寸。

1. When a skimming device, effluent weir plate, scum baffle, and effluent tank are required, please specify;
2. Please specify the requirements for equipment material, anti-corrosion, motor and reducer;
3. When placing an order, please provide the civil engineering process diagram of the pool and indicate the detailed dimensions.



主要技术参数 见表 1
THE MAIN TECHNICAL PARAMETERS ARE SHOWN IN TABLE 1:

表 1/Table 1

参数 parameter	池直径 Pool diameter (m)	池 深 Pool depth (m)	周边线速度 Peripheral linear velocity (m/min)	电机功率 power (Kw)
ZCGN—8	8	2.5~3.5	≤3	0.55
ZCGN—10	10			0.75
ZCGN—12	12			0.75
ZCGN—14	14			1.1
ZCGN—16	16			1.1
ZCGN—18	18			1.5
ZCGN—20	20			1.5

刮泥机土建条件主要尺寸 见图 2 和表 2
THE MAIN DIMENSIONS OF THE CIVIL ENGINEERING
CONDITIONS FOR THE SCRAPER ARE SHOWN IN FIGURE 2 AND TABLE 2

表 2/Table 2

池直径 (D1) , m Pool diameter (D1), m	8.0	10.0	12.0	14.0	16.0	18.0	20.0
池边深度 (H) , m Pond edge depth (H), m	2.5~4.0						
D2, m	1.5		1.8		1.95		
H1, m	0.3						
D3, m	1.3		1.5		1.6		
D4, m	1.8		2.1		2.4		

说明：以上的
具体尺寸和要求将
根据用户的土建工
艺条件图来确定。

Explanation:
The specific
dimensions and
requirements
above will be
determined
based on the
user's civil
engineering
process
condition
diagram.

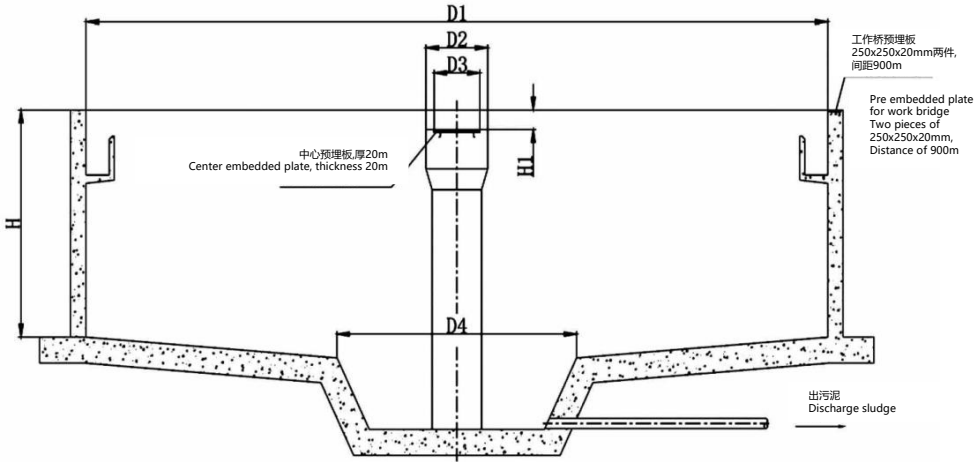


图2 刮泥机土建条件主要尺寸
Figure 2 Main dimensions of civil engineering conditions for scraper

ZBXN型周边传动半桥式吸泥机

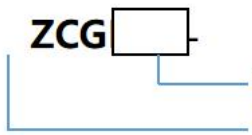
ZBXN type peripheral transmission half bridge suction dredger

用途/USE TO

ZBXN型吸泥机用于污水处理厂圆形二沉池，将沉降在池底的污泥刮集至一组沿半径方向布置的吸泥管管口，在通过中心排泥管排出，以便污泥回流或浓缩脱水，同时将池面的浮渣撇向集渣斗，通过集渣斗排出池外，以便进一步处理。

The ZBXN type sludge suction machine is used in circular secondary sedimentation tanks of sewage treatment plants to scrape and collect the sludge settled at the bottom of the tank to a set of suction pipe openings arranged along the radius direction, and then discharge it through the central discharge pipe for sludge reflux or concentration dewatering. At the same time, the floating slag on the tank surface is directed towards the slag hopper and discharged outside the tank through the slag hopper for further treatment.

型号表示方法/MODEL REPRESENTATION METHOD



特点/CHARACTERISTIC

ZBXN型系列吸泥机是在消化引进设备的基础上设计的新一代吸泥机，具有以下显著特点：

The ZBXN series suction machine is a new generation suction machine designed based on the digestion of imported equipment, with the following significant features:

1. 结构简单、重量轻：由于采用半桥式，只有一套驱动装置，而且主梁兼作输泥管槽，与目前国内大量使用的全桥式吸泥机比，重量显著下降；
2. 节约运行费用、维护管理方便：由于采用虹吸管将泥槽的污泥经不旋转的中心泥罐排至中心泥管，没有动密封，杜绝了上清液短流，既避免了回流泵能耗的浪费，又保证了回流污泥的浓度，为生化工艺正常运行创造条件。同时，也根除了由于动密封而带来的维护工作；
3. 可选新型的传动装置，驱动装置中关键部分—减速器采用先进的轴装式，无须对中，不用联轴器，结构紧凑、效率高、重量轻；
4. 可配置过扭保护机构，当扭矩达到设定值是自动报警停机，安全可靠。

1. Simple structure and light weight: Due to the use of a half bridge type, there is only one set of driving device, and the main beam also serves as a mud conveying pipe slot. Compared with the widely used full bridge suction machine in China, the weight is significantly reduced;
2. Save operating costs and facilitate maintenance and management: Due to the use of siphon pipes to discharge the sludge from the sludge tank through a non rotating central sludge tank to the central sludge pipe, there is no dynamic seal, which eliminates the short flow of supernatant, avoids the waste of energy consumption of the reflux pump, and ensures the concentration of reflux sludge, creating conditions for the normal operation of the biochemical process. At the same time, it also eliminates maintenance work caused by dynamic sealing;

3. A new type of transmission device can be selected, and the key part of the drive device - the reducer - adopts an advanced shaft mounted type, without the need for centering or coupling, with a compact structure, high efficiency, and light weight;
4. An over torque protection mechanism can be configured, which automatically alarms and shuts down when the torque reaches the set value, ensuring safety and reliability.

构造及工作过程/CONSTRUCTION AND WORKING PROCESS

ZBXN型系列吸泥机如图1所示为周边传动虹吸式，由兼作输泥槽的主梁、吸泥管系统、虹吸抽空系统、中心泥罐、中心回转轴承、驱动装置、撇渣装置、集电器、控制柜等构成。

主梁由置于周边的驱动装置带动，绕池中心轴线旋转，沉积在池底的污泥由刮泥板刮集至各吸泥口，在液位差的作用下，污泥经吸泥口，输泥槽、虹吸管、中心泥罐、中心排泥管排至污泥坑。每个吸管上端设有调节器，以调节各吸泥管的流量分配。同时，液面上的浮渣向随主梁旋转的撇渣板和周边浮渣挡板形成的渐缩区域内集中，直至其封闭边一刮渣摆臂。当摆臂抵达集渣斗时，由摆臂上的刮渣板刮至集泥斗。

The ZBXN series suction machine, as shown in Figure 1, is a peripheral transmission siphon suction machine, consisting of a main beam that also serves as a mud conveying tank, a suction pipe system, a siphon evacuation system, a central mud tank, a central rotary bearing, a driving device, a skimming device, a current collector, a control cabinet, etc.

The main beam is driven by a peripheral driving device and rotates around the central axis of the pool. The sludge deposited at the bottom of the pool is scraped and collected by a scraper plate to each suction port. Under the action of the liquid level difference, the sludge is discharged into the sludge pit through the suction port, sludge conveying tank, siphon tube, central sludge tank, and central sludge discharge pipe. Each straw is equipped with a regulator at the top to adjust the flow distribution of each suction pipe. At the same time, the floating slag on the liquid surface concentrates in the gradually shrinking area formed by the skimming plate rotating with the main beam and the surrounding floating slag baffle, until its closed edge is scraped by a slag swing arm. When the swing arm reaches the slag hopper, it is scraped to the mud hopper by the scraper plate on the swing arm.

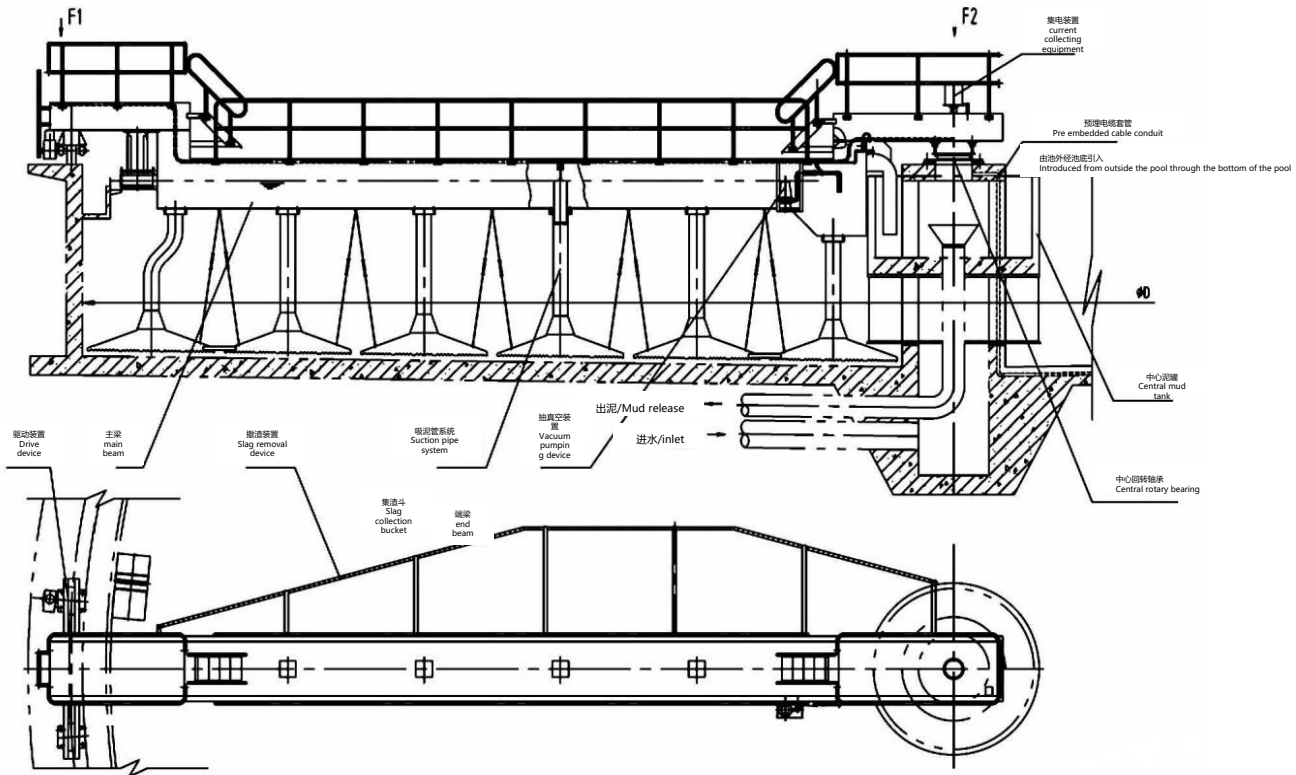
电气控制/ELECTRICAL CONTROL

可根据用户需要设定设备的启、停及运行时间，可带PLC接口。

The start, stop, and operation time of the device can be set according to user needs, and it can be equipped with a PLC interface.

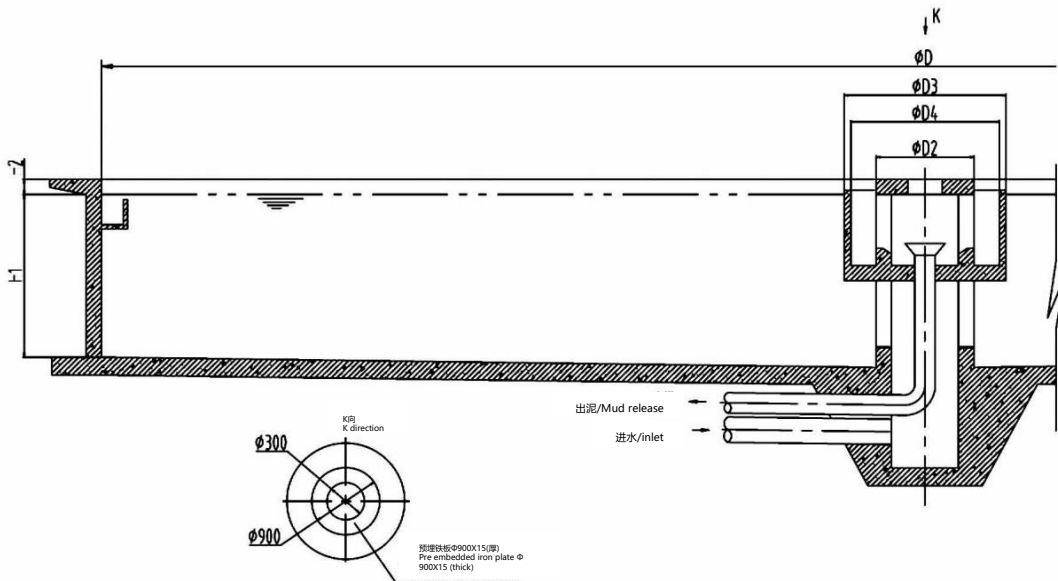
主要技术参数/MAIN TECHNICAL PARAMETERS

型号 model	参数 model	ZBXN —18	ZBXN —20	ZBXN —22	ZBXN —24	ZBXN —26	ZBXN —28	ZBXN —30	ZBXN —32	ZBXN —34	ZBXN —36	ZBXN —38	ZBXN —40
池直径D Pool diameter D	m	18	20	22	24	26	28	30	32	34	36	38	40
中心筒直径D2 Center cylinder diameter D2	mm	1250			1550			1900			1900		
D3	mm	2300			2600			2950			3150		
D4	mm	2100			2400			2750			3950		
池边深度H1 Pond edge depth H1	m	2.4			2.6			2.8			3.1		
池顶超高H2 Pool top ultra-high H2	m	0.45						0.55					
排泥管直径 Diameter of sludge discharge pipe	m	0.4			0.5			0.6			0.7		
滚动面载荷2xF1 Rolling surface load 2xF1	KN	2X6			2X14			2X20			2X28		
中心筒载荷F2 Central cylinder load F2	KN	16			22			33			44		
中心筒径向载荷F3 Radial load F3 on the central cylinder	KN	6			11			17			28		
滚道宽度L Roll width L	m	0.45			0.5			0.28					
周边线速度 m/minPeripheral linear velocity		≤1.8											
驱动装置电机功率KW Drive device motor power		0.37											
真空系统电机功率KW Vacuum system motor power		3											



周边传动半桥式吸泥机外形图

Outline drawing of peripheral transmission half bridge suction dredger



周边传动半桥式吸泥机土建尺寸图

Civil dimension drawing of peripheral transmission half bridge suction dredger

说明：以上的具体尺寸和要求将根据用户的土建工艺条件图来确定。

Explanation: The specific dimensions and requirements above will be determined based on the user's civil engineering process condition diagram.

ZQXN型周边传动全桥式吸泥机

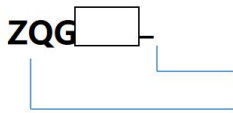
ZQXN type peripheral transmission full bridge suction dredger

用途/USE TO

ZQXN型周边传动全桥式吸泥机用于污水处理厂圆形二沉池，将沉降在池底的污泥刮集至一组沿半径方向布置的吸泥管管口，在通过中心排泥管排出，以便污泥回流或浓缩脱水，同时将池面的浮渣撇向集渣斗，通过集渣斗排出池外，以便进一步处理。

The ZQXN peripheral drive full bridge suction dredger is used in circular secondary sedimentation tanks of sewage treatment plants to scrape and collect the sludge settled at the bottom of the tank to a set of suction pipe openings arranged along the radius direction, and then discharge it through the central discharge pipe for sludge reflux or concentration dewatering. At the same time, the floating slag on the tank surface is directed towards the collection hopper and discharged outside the tank through the collection hopper for further treatment.

型号表示方法/MODEL REPRESENTATION METHOD



池直径 (m)
周边传动全桥式刮泥机

Pool diameter (m)
Peripheral transmission full bridge scraper

特点/CHARACTERISTIC

1. 结构简单、重量轻;
 2. 节约运行费用、维护管理方便;
 3. 新型的传动装置，安装方便，结构紧凑、效率高、重量轻;
 4. 可根据特定的要求配备过扭保护机构，当扭矩达到设定值时自动报警停机，安全可靠。
1. Simple structure and light weight;
 2. Save operating costs and facilitate maintenance and management;
 3. The new transmission device is easy to install, compact in structure, efficient, and lightweight;
 4. An over torque protection mechanism can be equipped according to specific requirements, which automatically alarms and shuts down when the torque reaches the set value, ensuring safety and reliability.

构造及工作原理/CONSTRUCTION AND WORKING PRINCIPLE

周边传动全桥式吸泥机如图1所示，为周边传动虹吸式，由主梁、端梁、驱动装置、吸泥管系统、抽真空系统、导流筒、撇渣装置、集渣斗、中心支座、集电器、控制柜等组成。

The peripheral transmission full bridge suction machine, as shown in Figure 1, is a peripheral transmission siphon suction machine, consisting of a main beam, end beam, driving device, suction pipe system, vacuum system, guide tube, skimming device, slag hopper, central support, collector, control cabinet, etc.

主梁由置于周边的驱动装置带动，绕池中心轴线旋转，沉积在池底的污泥由刮泥板刮集至各吸泥口，在液位差的作用下，污泥经吸泥口，输泥槽、虹吸管、中心泥罐、中心排泥管排至污泥坑。每个吸管上端设有调节器，以调节各吸泥管的流量分配。同时，液面上的浮渣向随主梁旋转的撇渣板和周边浮渣挡板形成的渐缩区域内集中，直至其封闭边一刮渣摆臂。当摆臂抵达集渣斗时，由摆臂上的刮渣板刮至集渣斗排出池外。

The main beam is driven by a peripheral driving device and rotates around the central axis of the pool. The sludge deposited at the bottom of the pool is scraped and collected by a scraper plate to each suction port. Under the action of the liquid level difference, the sludge is discharged into the sludge pit through the suction port, sludge conveying tank, siphon tube, central sludge tank, and central sludge discharge pipe. Each straw is equipped with a regulator at the top to adjust the flow distribution of each suction pipe. At the same time, the floating slag on the liquid surface concentrates in the gradually shrinking area formed by the skimming plate rotating with the main beam and the surrounding floating slag baffle, until its closed edge is scraped by a slag swing arm. When the swing arm reaches the slag hopper, it is scraped by the scraper plate on the swing arm to the outside of the slag hopper and discharged into the pool.

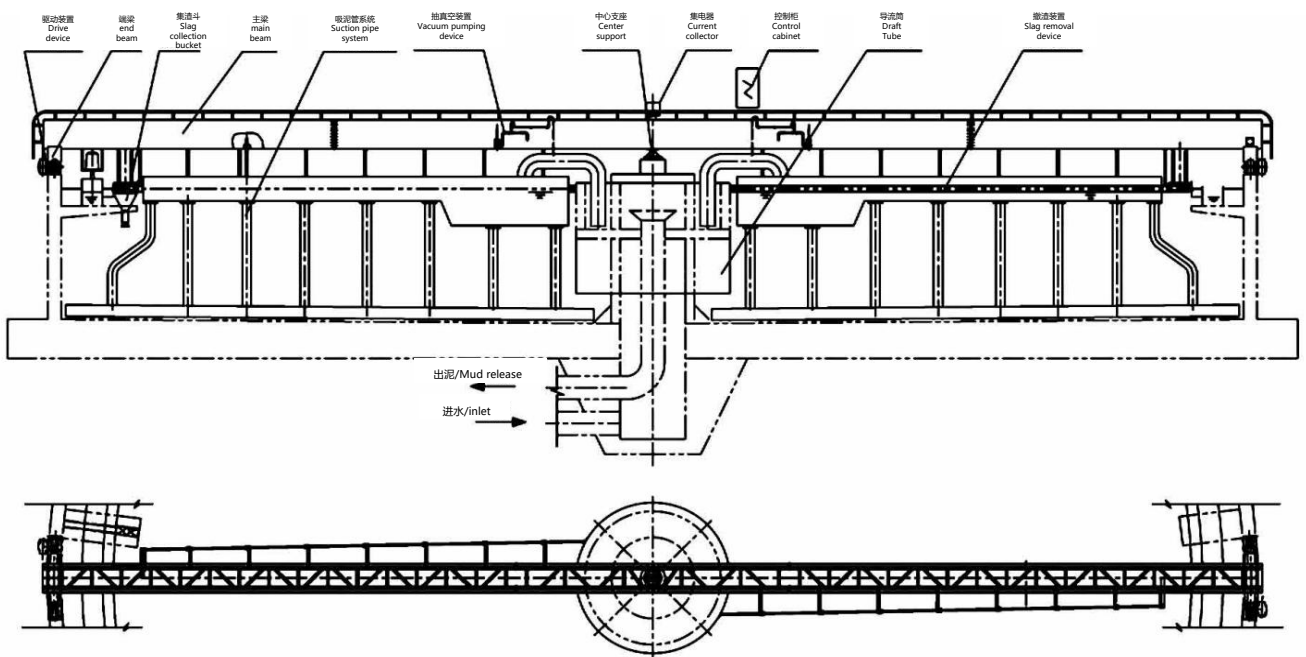


图1周边传动全桥式吸泥机外形图

Figure 1 Outline drawing of peripheral transmission full bridge suction dredger

电气控制/ELECTRICAL CONTROL

可根据用户需要设定设备的启、停及运行时间，可带PLC接口。

The start, stop, and operation time of the device can be set according to user needs, and it can be equipped with a PLC interface.

主要技术参数 见表 1
THE MAIN TECHNICAL PARAMETERS ARE SHOWN IN TABLE 1:

表 1/Table 1

参 数 Parameters	池直径D1 Pool diameter D1 (m)	驱动电机功率 Drive motor power (Kw)	真空系统电机功率 Vacuum system motor power (Kw)	周边线速度 Peripheral linear velocity (m/min)
ZQGN—20	20	2X0.37	2 X 3	≤1.8
ZQGN—25	25			
ZQGN—30	30			
ZQGN—35	35			
ZQGN—40	40			
ZQGN—45	45	2X0.55		
ZQGN—50	50			
ZQGN—60	60			

刮泥机土建条件主要尺寸 见图 2 和表 2：
THE MAIN DIMENSIONS OF THE CIVIL ENGINEERING
CONDITIONS FOR THE SCRAPER ARE SHOWN IN FIGURE 2 AND TABLE 2:

表 2/Table 2

池直径 (D1) , m Pool diameter (D1), m		20	25	30	35	40	45	50	60
池边深度 (H) , m Pond edge depth (H), m		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
		3.5	3.5	3.2	3.5	3.5	3.5	3.5	3.5
		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
中心 支墩 Centr al supp ort pier	H (m)	1.8							
	D2 (m)	3.65	3.85	4.05	4.25	4.45	4.65	4.85	5.05
	D3 (m)	1.0	1.1	1.2	1.6	1.8	2.1	2.3	2.5
	预埋铁 Pre embedded iron (mm)	Φ900 X φ200 X 15				Φ1000 x φ300 X 15			

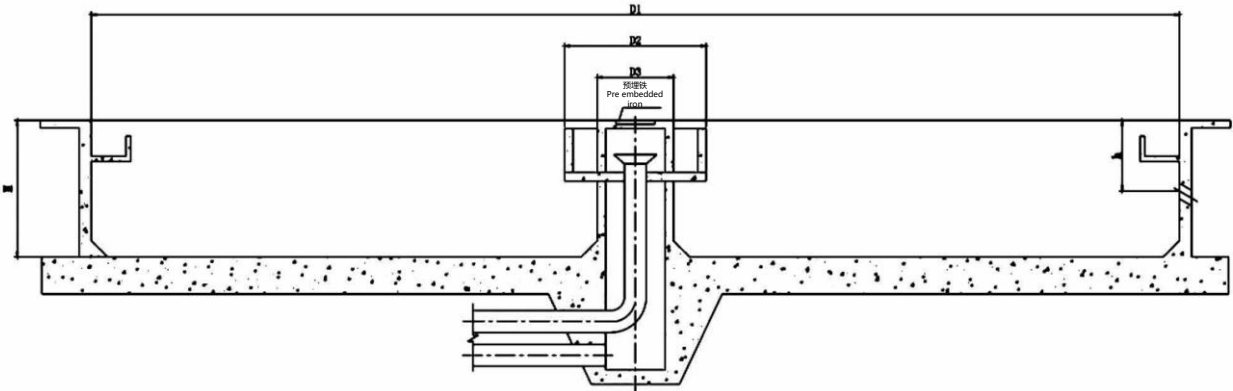


图2 周边传动全桥式吸泥机土建尺寸图
Figure 2 Civil dimension diagram of peripheral transmission full bridge suction dredger

WNG浓缩池悬挂式中心传动刮泥机

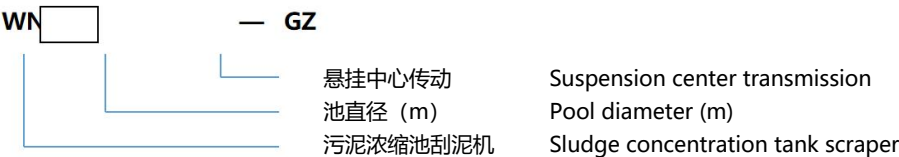
WNG Concentrator Suspended Center Drive Scraper

用途/USE TO

WNG浓缩池刮泥机用于污水处理厂重力式污泥浓缩池，将浓缩污泥刮集至池底中心集泥坑，以便进一步作污泥脱水处理。

The WNG concentration tank scraper is used in the gravity sludge concentration tank of sewage treatment plants to scrape the concentrated sludge to the central mud pit at the bottom of the tank for further sludge dewatering treatment.

型号表示方法/MODEL REPRESENTATION METHOD



特点/CHARACTERISTIC

1. 传动环节少，机械效率高，结构紧凑；

2. 根据需要可设过扭保护机构，当扭矩达到设定值时自动报警停机，保证设备安全可靠运行；

3. 主轴采用刚度大的管式构造，池底不设轴承，根除了环境极坏的池底维护工作。
1. Less transmission links, high mechanical efficiency, and compact structure;

2. An over torque protection mechanism can be installed as needed to automatically alarm and shut down the equipment when the torque reaches the set value, ensuring safe and reliable operation of the equipment;

3. The spindle adopts a rigid tubular structure, and there are no bearings at the bottom of the pool, eliminating the maintenance work of the pool bottom in extremely harsh environments.

构造及工作原理/CONSTRUCTION AND WORKING PRINCIPLE

WNG系列浓缩池刮泥机为悬挂中心传动，如图1所示，由带电动机立式减速器、带外齿的回转轴承、主轴刮臂、刮板、浓集栅条、稳流筒、控制柜等组成。

The WNG series concentration tank scraper is a suspended center drive, as shown in Figure 1, consisting of a vertical reducer with an electric motor, a rotary bearing with external teeth, a main shaft scraper arm, a scraper, a concentration grid bar, a steady flow cylinder, a control cabinet, etc.

刮臂在传动装置带动下绕池中心轴线旋转，刮臂上的刮板将沉积在池底的污泥由外向内推向池心集泥坑当运行过程中，由于刮板、刮臂受异物卡塞或积泥过多等意外原因导致传动过扭，在其扭矩达到设定值时，过扭保护机构动作，切断电源，自动报警停机。

The scraper arm rotates around the central axis of the pool under the drive of the transmission device. The scraper on the scraper arm pushes the sludge deposited at the bottom of the pool from the outside to the inside towards the mud collection pit at the center of the pool. During operation, due to unexpected reasons such as foreign objects jamming or excessive mud accumulation, the transmission is over twisted. When the torque reaches the set value, the over twist protection mechanism will act, cut off the power supply, and automatically alarm and stop the machine.

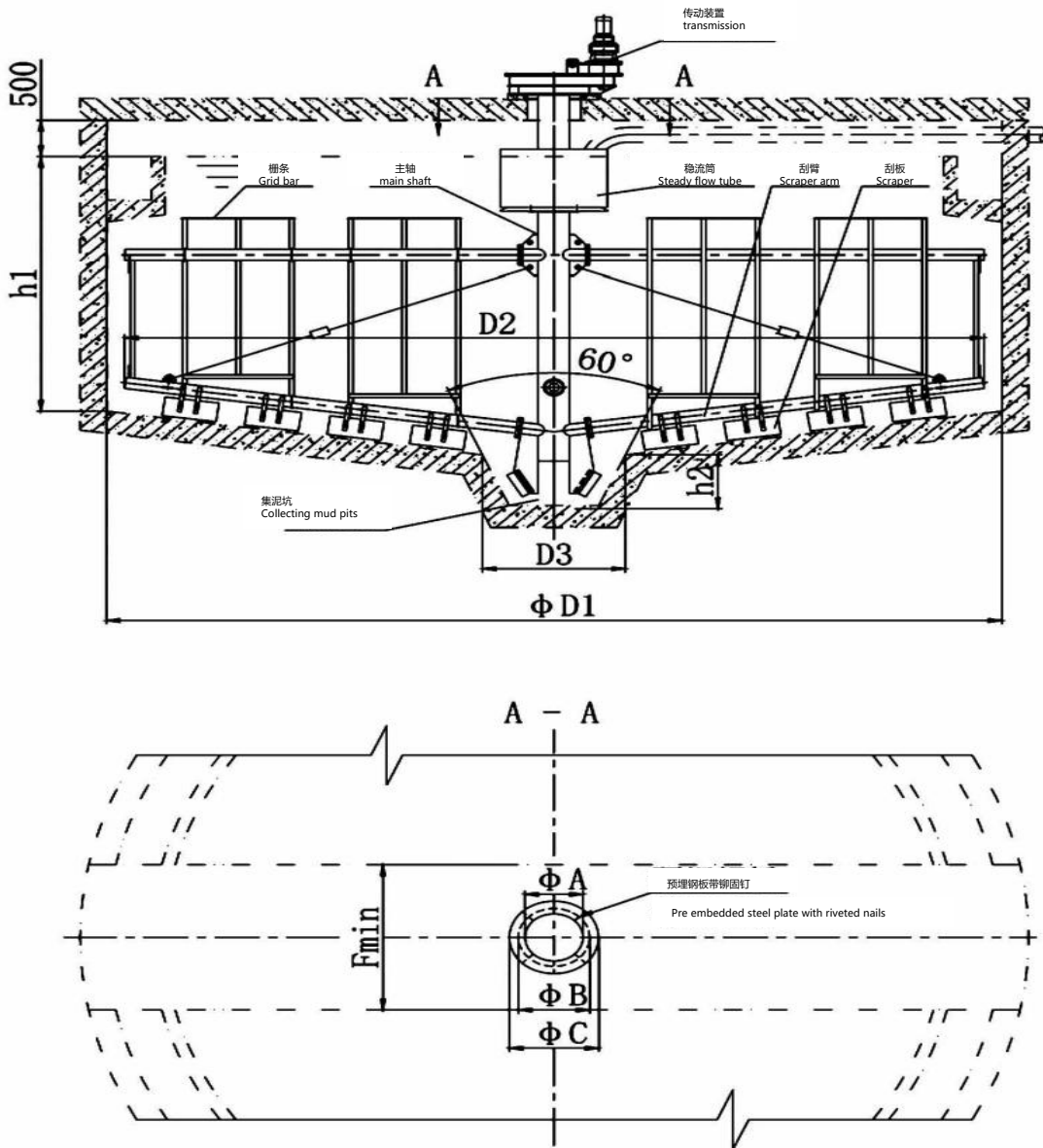
主要技术参数及尺寸/MAIN TECHNICAL PARAMETERS AND DIMENSIONS

主要参数 Parameters	WNG4	WNG5	WNG6	WNG7	WNG8	WNG9	WNG10	WNG12	WNG14	WNG16
池直径D1(m) Pool diameter D1 (m)	4	5	6	7	8	9	10	12	14	16
刮臂直径D2(m) Scraper arm diameter D2 (m)	3.6	4.6	5.6	6.6	7.6	8.6	9.6	11.6	13.6	15.6
池边深度h1(m) Pond edge depth h1 (m)	3		3.6				4		4.4	4.8
集泥坑高度h2(m) Mud pit height h2 (m)	0.5			0.6						
集泥坑上部直径D3(m) Upper diameter of mud pit D3 (m)	1.2			1.5			2			
预埋板内径φA mm Pre embedded plate inner diameter φ A mm	550					650				
螺栓孔所在圆φB mm The circle where the bolt hole is located is φ B mm	700					950				
预埋板外径φC mm Pre embedded plate outer diameter φ C mm	900					1100				
工作桥宽Fmin mm Working bridge width Fmin mm	≥1000							≥1200		
刮板外缘线速度m/min Scraper edge line speed m/min	1~3									
电机功率 Kw Motor power Kw	0.37~0.55									

电气控制/ELECTRICAL CONTROL

可根据用户需要设定设备的启、停及运行时间，可带PLC接口。

The start, stop, and operation time of the device can be set according to user needs, and it can be equipped with a PLC interface.



WNG型浓缩池刮泥机外形尺寸图
Outline dimension drawing of WNG type concentration tank scraper

订货说明/ORDERING INSTRUCTIONS

- 需要出流堰板请注明;
- 注明设备材质、防腐、电机及减速机要求;
- 可提供钢制桥架;
- 订货时, 请提供池子的土建工艺图并注明详细尺寸。
- Please indicate the need for an outflow weir plate;
- Specify equipment material, anti-corrosion, motor and reducer requirements;
- Can provide steel cable trays;
- When placing an order, please provide the civil engineering process diagram of the pool and indicate the detailed dimensions.

TGN型行车式刮泥机

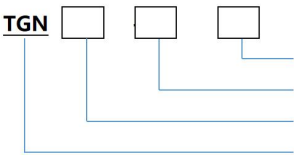
TGN type traveling rake scraper

用途/USE TO

TGN系列刮泥机用于污水处理厂平流沉淀池，将沉降在池底的污泥刮集至集泥槽，并将池面的浮渣撇向集渣槽。

The TGN series rake scraper is used in the horizontal sedimentation tank of sewage treatment plants to scrape and collect the sludge settled at the bottom of the tank into the sludge collection tank, and skim the floating slag on the tank surface towards the sludge collection tank.

型号表示方法/MODEL REPRESENTATION METHOD



集泥与集渣方向相同T 如图1b
集泥与集渣方向相反F 如图2b
池宽 (m)
带撇渣标Z不带撇渣不标注
污泥浓缩池刮泥机

The direction of collecting mud and slag is the same, as shown in Figure 1b
The direction of collecting mud and slag is opposite, as shown in Figure 2b
Pool width (m)
With skim mark Z, without skim mark or label
Sludge concentration tank scraper

注: 可按用户要求制造双槽刮泥机
Note: Double slot mud scraper can be manufactured according to user requirements

特点/CHARACTERISTIC

1. 结构简单、重量轻;

2. 维护简单方便、方便、运行费用低;

3. 根据用户需求, 行走轮可为橡胶轮、尼龙轮、钢轮。
1. Simple structure and light weight;

2. Easy and convenient maintenance, low operating costs;

3. According to user needs, the walking wheels can be rubber wheels, nylon wheels, or steel wheels.

构造及工作原理/CONSTRUCTION AND WORKING PRINCIPLE

TGN系列刮泥机如图1a、2a所示, 由行车、刮泥耙、撇渣耙、驱动装置和控制柜等组成。
集泥槽、集渣槽设置在沉淀池的同一端或分设两端, 刮泥机的工作过程分别如下:

The TGN series scraper, as shown in Figures 1a and 2a, consists of a crane, scraper rake, scraper rake, drive device, and control cabinet.
The mud collection tank and slag collection tank are set at the same end or separate ends of the sedimentation tank. The working process of the mud scraper is as follows:

a 两槽同设一端：刮泥耙下降、撇渣耙下降—刮泥机由池端（出水端）始点向泥、渣槽端行驶，将污泥、浮渣刮集输送至终点（进水端）—刮泥耙上提、撇渣耙上提—刮泥机由终端向始端换向行驶—抵达始端后停机或者进行另一循环。

a Two slots are set at the same end: the scraper rake descends and the skimmer rake descends - the scraper moves from the starting point of the pool end (outlet end) to the end of the mud and slag slot, scraping and transporting the sludge and floating slag to the end point (inlet end) - the scraper rake lifts up and the skimmer rake lifts up - the scraper changes direction from the end to the beginning - stops or performs another cycle after reaching the beginning.

b 两槽分设两端：刮泥耙下降、撇渣耙上提—刮泥机由出水端向泥槽端行驶，将污泥刮集输送至终点—刮泥耙上提而撇渣耙下降—刮泥机换向行驶将浮渣撇向浮渣槽—抵达始端后停机或进行；另一循环。

b Two slots are divided into two ends: the scraper descends and the scraper lifts up - the scraper travels from the outlet end to the end of the mud slot to scrape and transport the sludge to the end point - the scraper lifts up and the scraper descends - the scraper changes direction to skim the floating slag towards the floating slag slot - it stops or continues after reaching the starting end; Another cycle.

电气控制/ELECTRICAL CONTROL

可根据用户需要对刮泥机实现随机控制和远程控制。

Random and remote control of the scraper can be achieved according to user needs.

订货说明/ORDERING INSTRUCTIONS

1. 可根据用户的尺寸制造；
2. 结冰地区，请注明；
3. 注明主体材质，碳钢或不锈钢；
4. 可根据需要提供轨道；
5. 可根据需要配套滑导线或其他供电方式。

1. Can be manufactured according to the user's size specifications;
2. Ice covered areas, please indicate;
3. Indicate the main material, carbon steel or stainless steel;
4. Track can be provided as needed;
5. Sliding wires or other power supply methods can be matched as needed.

技术参数表/TECHNICAL PARAMETER TABLE

型号 model	池宽B (m) Pool width B (m)	池深H (m) Pool depth H (m)	电机总功率 (Kw) Total power of motor (Kw)	行驶速度 (m/min) Driving speed (m/min)
TGN—4~6	4~6	3.5~5.0	<1.5	~1
TGN—7~10	7~10			
TGN—11~14	11~14		<2	

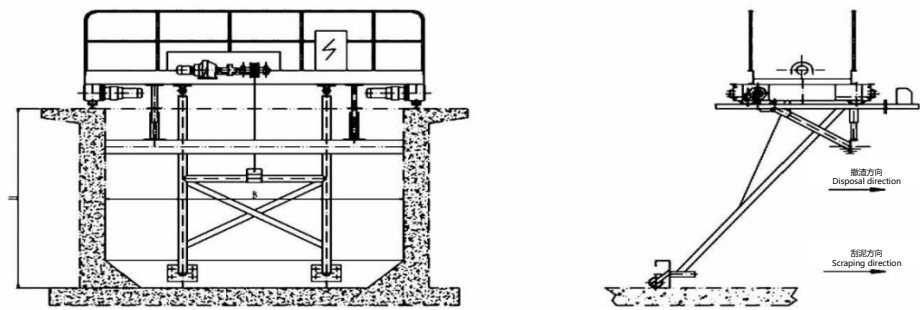


图1a TGN系列刮泥外形图
Figure 1a TGN series scraper appearance diagram

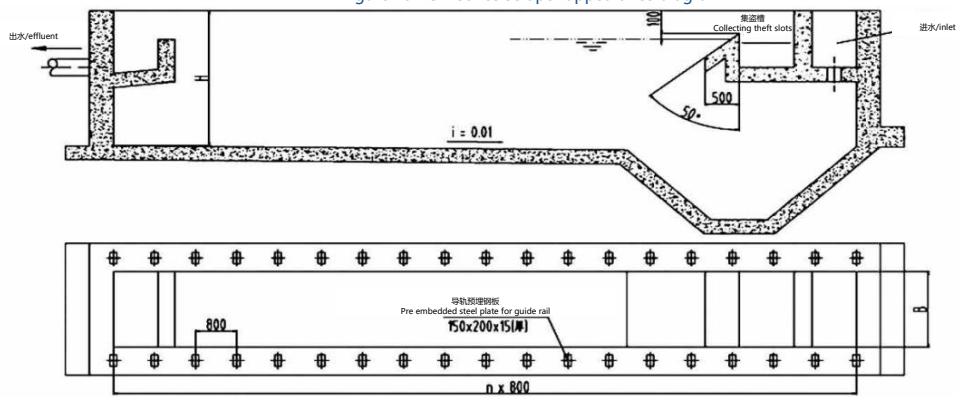


图1,b TGN系列刮泥机土建尺寸图
Figure 1, Civil dimension drawing of TGN series scraper

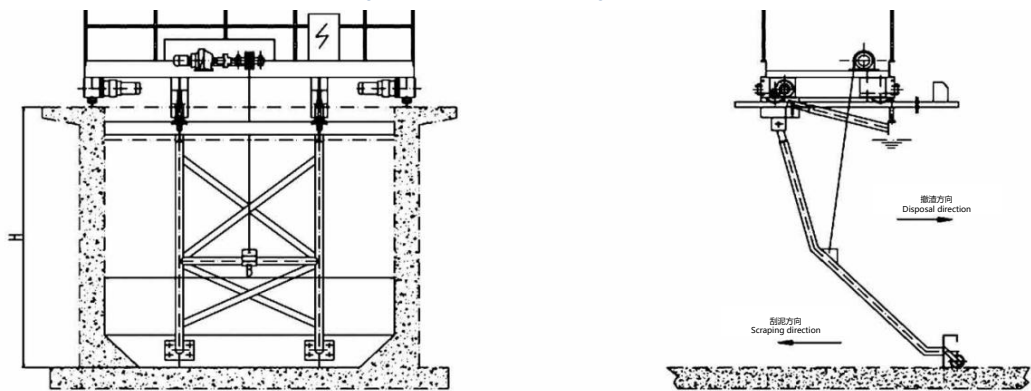


图2,a TGN系列刮泥机外机侧面
Figure 2, side view of TGN series scraper external machine

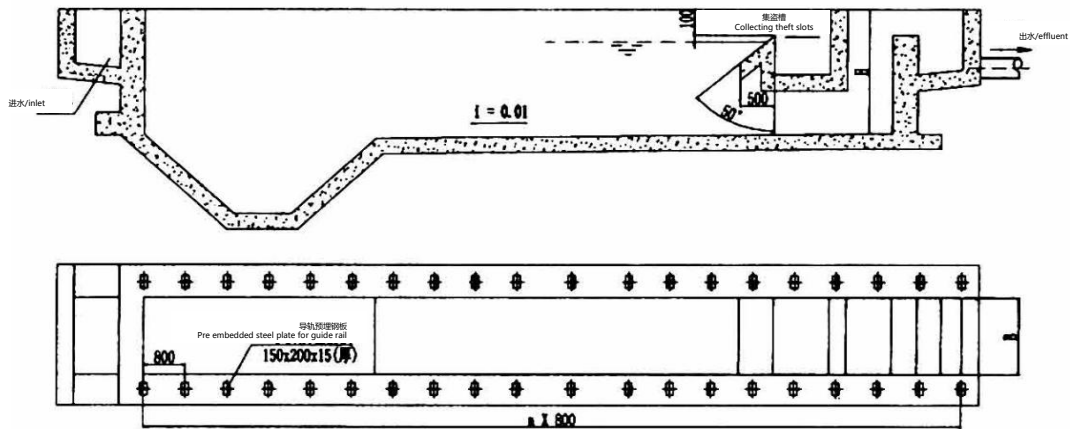


图2,b TGN系列刮泥机土建尺寸图
Figure 2, b Civil dimension diagram of TGN series scraper



蓝天碧水 有我领航

Blue sky and clear water, with me leading the way



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