

WN(Q) 系列挖泥泵

WN(Q) Series Dredging Pump



• 公司简介 Enterprise Profile

石家庄翔浩机械有限公司，是以矿山、电力用渣浆泵、脱硫泵、疏浚泵、清水泵为主的工业水泵专业生产企业，集研发、设计、制造、营销、服务为一体，具有严格的质量保证及科学完善的服务体系。

公司技术力量雄厚，拥有资深的水泵设计、制造、应用工程师团队，立足持续为用户带来更大价值，不断提高服务水平与质量。我们不单单向用户提供产品，还可依据客户的工矿需求，采用系统一体化的设计方法，为客户提供渣浆输送的一整套解决方案，使得用户在环保、节能、运营持久、降低产品使用成本等方面取得了显著效果。

公司坚持“技术创新化、管理严格化、生产定制化、服务专业化”的经营理念，全力提升企业现代化管理水平，使企业实现了持续快速发展。

公司的主要产品为ZGB、ZJ、AH、HH、M型渣浆泵、WN型挖泥泵、TL型脱硫泵、G型砂砾泵、

SP型液下泵、HDSN型双吸泵、WQ型潜污泵、IS型清水泵等，广泛应用于环境保护工程、污水处理、城市工厂给排水、各种水利工程、冶金、矿山、电力、煤炭、疏浚、采砂、石油化工、建材、火电烟气脱硫等等诸多领域。国内市场占有率逐年递增，国际市场的占有份额不断提升，产品出口至东南亚、北美、欧洲、中亚、东亚等多个国家和地区。

长期以来，本公司坚持“诚信为本、客户至上”的原则，与众多厂家建立了长期合作关系，并赢得了广大客户的一致好评！

坚信凭借我们更优的产品，完善的服务，良好的信誉，必将赢得更多用户！

Shijiazhuang Soarho Machinery CO.,LTD, is a professional manufacture base of slurry pump, mine pump, FGD pump, dredge pump and clean water pump, combining scientific research, design, manufacture, marketing and service in one, with strict quality control system and science complete service system.

Having strong technical force, the company which has a senior pump design, manufacturing and application engineer team, continues to improve level and quality of service in order to bring greater value to the users. We not only provide products to users, but also provide a complete solution for slurry transportation for user to achieve a significant effect in environmental protection , energy saving , lasting trouble-free operation and cost reduction and so on, adopting a systematic and integrated design method and according to the working condition and the needing of user.

Adhering to the concept of 'technical innovation', 'strict management', 'customized production' and 'professional service', we strive to improve the modern management level and make the enterprises achieve sustained and rapid development.

The main products of the company are ZGB,ZJ,AH,HH,M slurry pumps ,WN dredge pumps , TL FGD pumps, G gravel pumps, SP sump pumps, HDSN double suction pumps. WQ submersible sewage pumps, IS clean water pumps and so on. They are widely used in many fields, such as environmental protection engineering, sewage treatment, municipal factory and water supply and drainage, various water conservancy projects, metallurgy, mine, electric power, coal, dredging, sand mining, petrochemical, building materials, thermal power flue gas desulfurization etc. The share of domestic market is increasing year by year, and the share of the international market is increasing. Products exported to Southeast Asia, North America, Europe, Central Asia, East Asia and many other countries and regions.

For a long time, adhering to the principle of "honesty and customer first", our company has established a long-term cooperative relationship with many manufacturers, and has won the praise of the customers.

Firmly believe that we will win more users by virtue of our better products, perfect service and good reputation.

• 产品介绍 Product Introduction

WN(Q)型系列挖泥泵是针对江河湖海疏浚清淤吹填，应用国际先进技术开发的船用挖泥泵。该泵结构简单可靠，便于拆装维护，采用高铬耐磨合金材料，使用寿命长。该系列挖泥泵是单级、单吸、悬臂卧式离心泵，叶轮流道宽大通过能力强，抽送砂砾石或高塑性粘土不易发生堵塞，具有超强的开挖能力。

WN(Q)型系列挖泥泵适用于绞吸式挖泥船、耙吸式挖泥船的疏浚、吹填作业，也可用于江河采砂和采矿用船只。

WN(Q) series dredging pump is marine dredging pump for dredging of river and sea. This pump is simple and reliable in structure, easy to disassemble and maintain, and adopts high chromium wear-resistant alloy material. It has a long trouble-free life. This series of dredging pumps are single-stage, single-suction, cantilever, horizontal centrifugal pumps. The flow passage of the impeller is wide through the capacity, so it is difficult to block for pumping sand gravel or high plastic clay. It has super strong excavation and suction ability.

WN(Q) series dredging pump is suitable for dredging and filling operations of cutter-suction dredger and trailing suction dredger. It is also used for river sand mining and mining vessels.

• 产品特点 Product Feature

1、结构简单可靠。

200WN-500WN型挖泥泵采用单泵壳式结构，按齿轮箱的连接方式可提供两种典型结构，即自带托架式与泵箱合一式，自带托架式润滑方式为脂润滑或稀油润滑。

600WN~1200WN型舱内泵采用双泵壳结构，自带托架，润滑方式为强制稀油润滑。双泵壳的安全可靠性设计使护套一直可以使用至接近于磨穿，并且当护套破裂时，泵舱不会进水。

水下泵系列采用单泵壳结构，以减轻泵重，便于升降移动。

2、易于拆装，维修方便。采用前拆式结构，并配备专用拆装工具以利拆装。

- 3、挖泥性能优良。该泵流量、扬程曲线陡降，吸上能力强，具有良好的通过能力，对排距的变化有更强的适用性，并能达到更大的挖深和更高的输送浓度。
- 4、耐磨性能好，过流零部件寿命长。护套、叶轮、前后护板(耐磨衬套)采用超强抗磨蚀合金铸铁，硬度不小于58HRC，在具有很强的耐冲击能力的同时，更具有高度的抗磨蚀性能。
- 5、采用先进的水力模型，水力损失小，效率高，能耗低。在产品的设计过程中充分考虑零部件相互之间使用寿命匹配，耐磨件更换周期基本相同，减少了维修及更换成本。
- 6、轴封可靠，无泄漏。

200WN~500WN挖泥泵轴封采用机械密封或填料密封或机械密封加填料密封复合式密封。

600WN~1200WN型挖泥泵轴封采用螺旋套L型橡胶密封装置。该密封装置由3道L型密封圈及1个带螺纹的轴套组成。

1. The structure is simple and reliable.

Type 200WN-500WN dredging pump adopts single pump casing structure. According to the connecting way of gear box can provide two kinds of typical structures, one is connected with own bearing bracket, the other is combined with reduction gear box. The lubrication of pump with bearing bracket is grease lubrication or thin oil lubrication.

Type 600WN-1200WN inboard pump adopts double pump casing structure, with its own bracket. Lubrication way is mandatory thin oil lubrication. The safety and reliability of the double pump casing design keeps the volute liner can be used to close to wear out, and when the liner was broken, no water will enter the pump room.

Series underwater pump adopts single pump casing structure, in order to reduce the pump weight, easy to lift and move.

2. Easy to assemble and disassemble and easy to maintain. The front dismantling structure is adopted, and special disassembly tools are equipped to facilitate disassembly and assembly.
3. The performance of dredging is excellent. The flow and head curve of the pump are steep, the suction ability is strong, the ability of passing the pump is good, the change of the distance is more applicable, and the depth of digging and the higher transportation concentration can be reached.
4. Good wear resistance and long life of flow parts. The impeller, volute liner, throat bushing and rear plate liner (wearable liner) are made of strong wear resistant alloy cast iron whose

hardness is not less than 58HRC. It has not only impact on resistance but also high anti-abrasion performance.

- Using advanced hydraulic model, the pump has low hydraulic loss, high efficiency and low energy consumption. The service life of each part is full considered in the process of product design. The same replacement cycle reduce the maintenance and replacement costs.
- The shaft seal is reliable and no leakage.

Type 200WN-500WN dredging pump adopts mechanical seals or packing seals or combination of mechanical and packing seals.

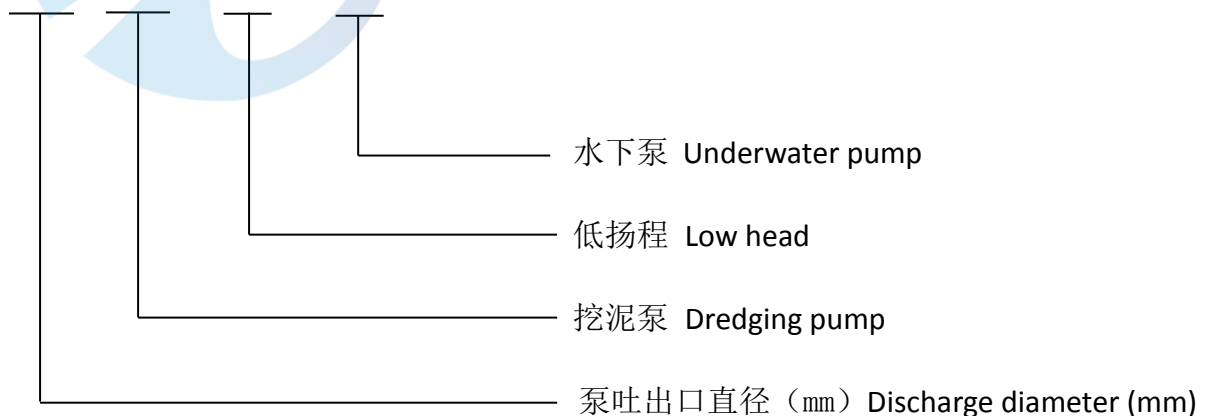
For the type 600WN-1200WN dredging pump, the shaft seals adopts screw shaft sleeve with L-shaped rubber seal device, which consists of three L-shaped seal rings and one threaded shaft sleeve.

- 性能范围 Range of Performance**

流量 Capacity Q: 600-30000m³/h
扬程 Head H: 15-90m
吐出口直径 Discharge diameter: 200-1200mm

- 型号说明 Model Code**

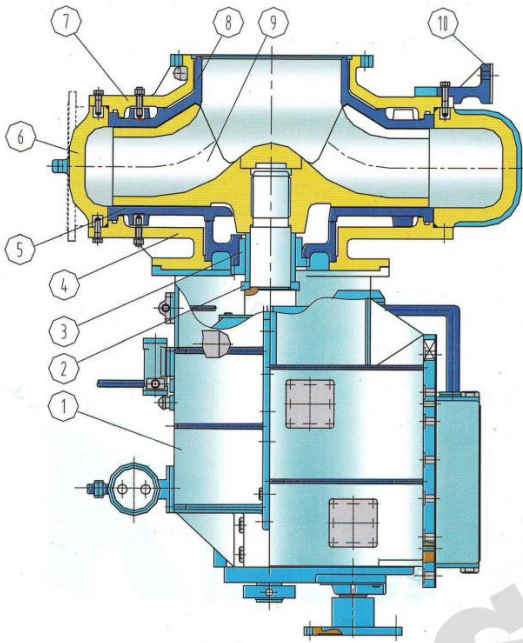
500 WN (D / Q)



• 结构图 Construction description

1、200WN ~500WN 型挖泥泵泵箱合一结构

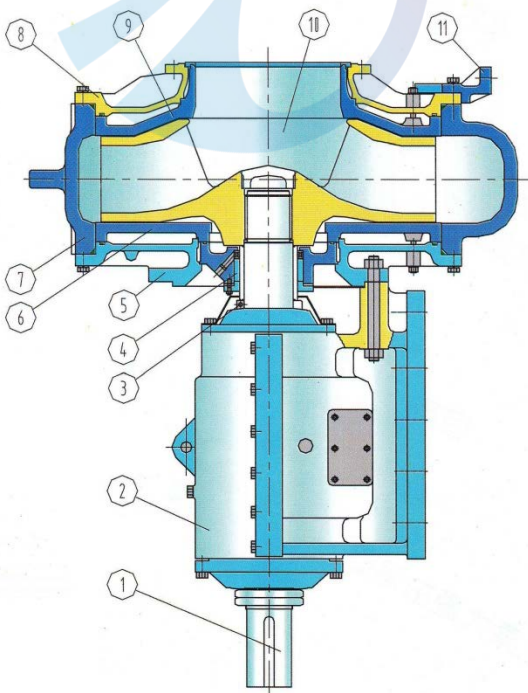
200WN~500WN Pump combined with gear box structure



- | | | |
|----|-------|-------------------------|
| 1 | 齿轮箱 | Gear box |
| 2 | 叶轮拆卸环 | Impeller release collar |
| 3 | 密封组件 | Seal assembly |
| 4 | 接合板 | Adaptor plate |
| 5 | 后护板 | Rear plate liner |
| 6 | 泵体 | Frame plate |
| 7 | 泵盖 | Cover plate |
| 8 | 前护板 | Throat bushing |
| 9 | 叶轮 | Impeller |
| 10 | 支撑板 | Supporting plate |

2、200WN ~500WN 型挖泥泵自带托架结构

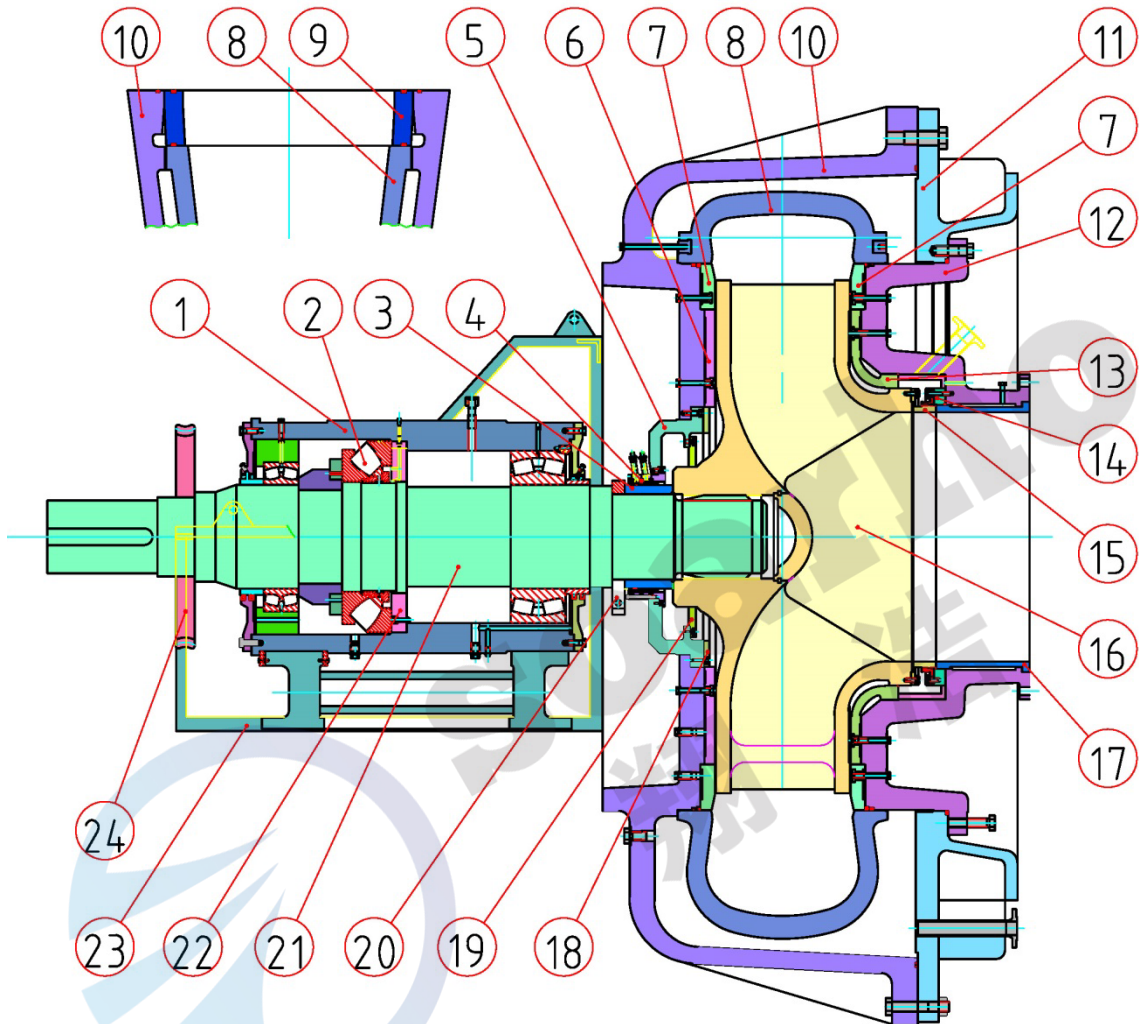
200WN~500WN Pump with own bearing bracket structure



- | | | |
|----|-------|-------------------------|
| 1 | 轴 | Shaft |
| 2 | 托架 | Support |
| 3 | 叶轮拆卸环 | Impeller release collar |
| 4 | 密封组件 | Seal assembly |
| 5 | 接合板 | Adaptor plate |
| 6 | 后护板 | Rear plate liner |
| 7 | 泵体 | Frame plate |
| 8 | 泵盖 | Cover plate |
| 9 | 前护板 | Throat bushing |
| 10 | 叶轮 | Impeller |
| 11 | 支撑板 | Supporting plate |

3、600WN ~1200WN 型挖泥泵结构图

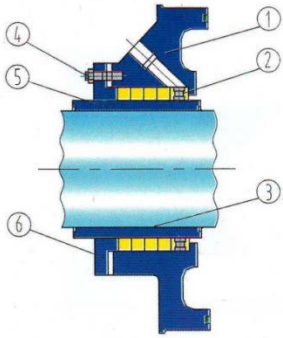
600WN ~1200WN Dredging pump structure chart



1	轴承体	Bearing box	13	前护板	Throat bushing
2	轴承	Bearing	14	水套	Water sleeves
3	螺旋套	Screw shaft sleeve	15	防磨环	Wear ring
4	L型密封组件	L-shaped seal assembly	16	叶轮	Impeller
5	密封箱	Seal box	17	进口衬管	Intake lining pipe
6	后护板	Rear plate liner	18	密封箱保护环	Seal box protecting ring
7	肩胛环	Shoulder ring	19	防砂板	Sand control plate
8	护套	Volute liner	20	叶轮拆卸环	Impeller release collar
9	出口衬管	Discharge lining pipe	21	轴	Shaft
10	泵体	Frame plate	22	推力盘	Thrust collar
11	大泵盖	Gland cover plate	23	托架	Impeller release collar
12	小泵盖	Cover plate	24	盘车盘	Turning plate

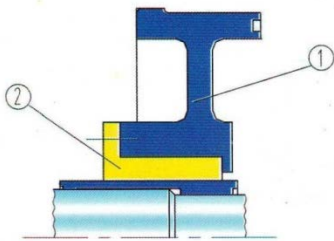
• 轴封形式 Shaft seal type

1、 填料密封形式 Packing seal



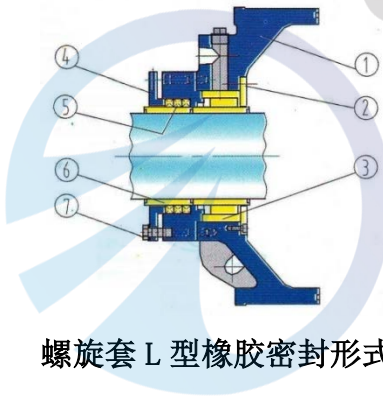
- | | | |
|---|--------|-----------------|
| 1 | 密封箱 | Seal box |
| 2 | 水封环 | Water seal ring |
| 3 | 填料 | Packing |
| 4 | 填料压盖螺栓 | Gland bolt |
| 5 | 轴套 | Shaft sleeve |
| 6 | 填料压盖 | Gland |

2、 机械密封形式 Mechanical seal



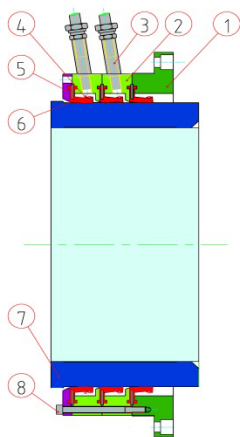
- | | | |
|---|------|-----------------|
| 1 | 密封箱 | Seal box |
| 2 | 机械密封 | Mechanical seal |

3、 机械密封加填料密封组合密封形式 Combination of mechanical and packing seal



- | | | |
|---|--------|-----------------|
| 1 | 密封箱 | Seal box |
| 2 | 密封挡板 | Seal retainer |
| 3 | 机械密封 | Mechanical seal |
| 4 | 填料压盖 | Gland |
| 5 | 填料 | Packing |
| 6 | 轴套 | Shaft sleeve |
| 7 | 填料压盖螺栓 | Gland bolt |

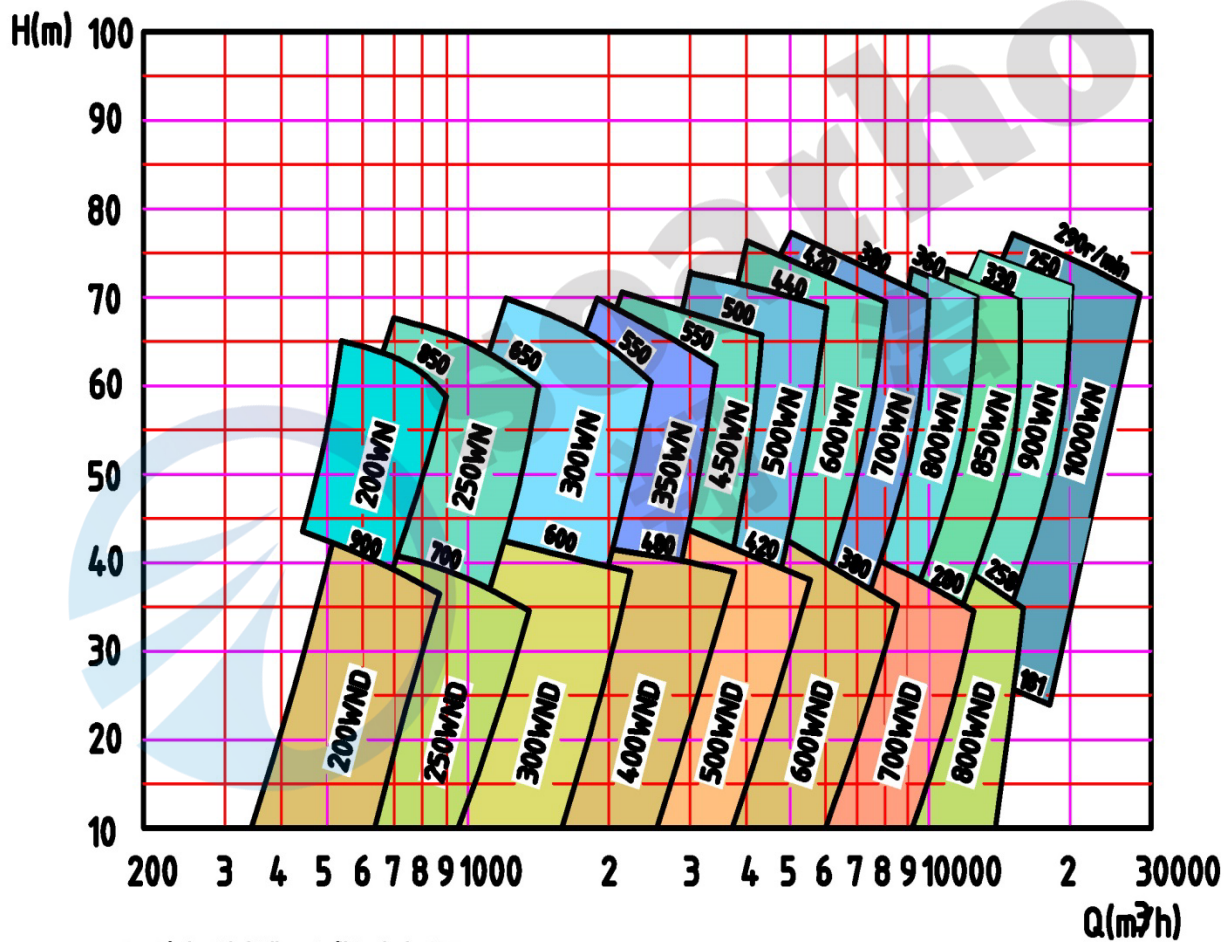
4、 螺旋套 L 型橡胶密封形式 Screw shaft sleeve with L-shaped rubber seal



- | | | |
|---|--------|----------------------|
| 1 | 法兰端盖 | Flange end cover |
| 2 | 密封圈座 | Seal ring seat |
| 3 | 管接头 | Pipe joint |
| 4 | 弹簧 | Spring |
| 5 | 密封压板 | Sealing clamp plate |
| 6 | L 型密封圈 | L-shaped rubber seal |
| 7 | 轴套 | Shaft sleeve |
| 8 | 螺钉 | Bolt |

• 型谱 Selection Chart

Cv	挖方量 (立方米/小时) amount of cut (m ³ /h)															
30%	60	9	12	15	18	24	300	6	9	12	15	18	24	3000	6000	9000
20%	40	6	8	10	12	16	200	4	6	8	10	12	16	2000	4000	6000
10%	20	3	4	5	6	8	100	2	3	4	5	6	8	1000	2000	3000



注:清水近似性能,仅供初步选型用。

Note: Approximate performance for clear water, to be used for primary selection only.

• 性能参数表 Performance List

型号 Type	流量 Capacity (m ³ /h)	扬程 Head (m)	转速 Speed (r/min)	效率 Eff. (%)	汽蚀余量 NPSHr (m)	最大过流粒径 MAX. diameter of flowed particle(mm)	出口直径/进口直径 Discharge diameter /Suction diameter(mm)	泵重 Pump weight (kg)
200WND	600~800	20~40	700~900	60~65	<4.5	178	200/250	2500
200WN	750~1000	40~65	700~850	70~72	<4	180	200/250	3000
250WND	950~1100	20~40	500~700	65~70	<4	220	300/250	3000
250WN	1100~1300	40~65	500~650	70~74	<4	144	350/250	3513
300WND	1500~1800	20~40	400~650	65~68	<4	241	300/350	6000
300WN	1800~2200	40~65	400~550	74~78	<4	241	300/450	7000
350WN	2600~3000	40~65	400~550	74~78	<4.5	245	350/450	7300
400WN	2800~3200	20~40	400~550	74~78	<4.5	250	400/450	7500
450WN	3200~3800	40~67	350~500	76~80	<4.5	254	450/600	7850
500WNQ	3600~4200	20~40	220~320	72~75	<4.8	330	500/650	8000
500WN	4500~5500	40~65	350~450	78~80	<4.8	250	500/650	11300
600WN	5000~9000	55~73	280~500	81~85	<6	220	600/660	30000
600WNQ	4600~8000	23~37	350~400	81~84	<6	220	600/700	16000
700WN	8000~12000	60~85	280~380	83~85	<6	280	700/760	45000
700WNQ	8000~12500	16~28	240~280	80~84	<6	280	700/760	21000
800WN	10000~15000	43~71	300~360	81~84	<6	300	750/800	40000
800WNQ	10000~14400	20~43	200~280	81~84	<6	300	750/800	23000
850WN	12000~18000	48~70	280~330	83~88	<6	320	850/900	65000
900WN	12000~19000	50~75	280~330	85~87	<6	320	900/960	80000
1000WN	16000~25000	23~76	181~290	83~86	<6	340	1000/1200	121000
1200WN	18000~33000	42~94	178~270	83~86	<6	350	11000/12000	150000