



全新高效耐磨系列挖泥泵

Series of New Design,
High Efficiency,
Wear-resistant Dredging Pump



石家庄耐普泵业有限公司
SHIJIAZHUANG NAIPU PUMP CO.,LTD



企业简介

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INTRODUCTION

石家庄耐普泵业有限公司位于河北省石家庄市高新开发区，是集设计、开发、生产、销售、服务为一体的企业，公司聚集了一批高素质的科技和管理人才，拥有水力机械、铸造、热处理、工程材料、机械加工等专业中高级工程技术人员。公司生产工艺先进、测试设备齐全、技术力量雄厚，有完善的管理、销售体系及良好的售后服务。

公司专业从事渣浆泵及其配件的生产销售，依托集团总公司的雄厚实力和国内知名科研机构的科研成果，特别专注于高耐磨防腐橡胶制品的开发生产，产品包括ZJ(R)、ZJM、ZJH、ZJL、ZJS系列渣浆泵，ZJG、ZG系列渣浆泵，WS(G)挖泥泵，TL(R)脱硫泵，PNJ衬胶泵。产品广泛应用于矿山、电力、冶金、煤炭、水利疏浚、建材等行业输送精矿、尾矿、灰渣、煤泥等强磨蚀、高浓度渣浆。满足了使用单位工艺要求，达到了延长设备寿命、降低成本、安全生产的目的。用户遍布国内三十多个省市，同时远销东南亚、北美、南美，俄罗斯等国际市场。

公司遵循“科技领先、质量为本、服务至上、满足用户”经营理念，以“团结求实、开拓创新”的企业精神，期待与国内外客户共创美好未来。

Company Profile

Shijiazhuang Naipu Pump Co., Ltd is a professional manufacturing enterprise of slurry pumps located in high and new technology development zone. The enterprise has one group of high quality technical and management talent working in Design, R & D, Production, Sales and Services. The technical team consists of talents specialized in hydraulic machinery, casting, heat treatment, engineering, material science and machining. The company manufactures its products using advanced technique based on well built management and sales & service system. Product quality is guaranteed with various test and inspection facilities.

Naipu is specialized in the manufacture and sales of slurry pump and pump parts, especially the design and manufacture of products made with high abrasive, anti corrosive rubber material, including ZJ(R)、ZJM、ZJH、ZJL、ZJS series slurry pump, ZJG.ZG series slurry pump, WS(G) series dredging pump, TL(R) Desulphurization pump and PNJ series slurry pump. The products are widely used in mining, power, metallurgy, coal, dredging, building material and other Industrial lines to pump concentrate, tailings, sludge and other abrasive, high density slurries. Meeting customers' technical requirements and with a long lifespan, lower cost and high safety. Our products are sold well all over of china and far to southeast Asia, North America, South America, Russia and etc.

We are confident that we can offer customers satisfying products and services with our continuous efforts in product research and improvement. We look forward to working with customers domestic and abroad to build a promising future.

Construction & Features

1. Advanced hydraulic model,CAD three-dimension design,high efficiency and obvious energy-saving;
2. Large dredging depth,high density of dredging mud,good NPSH and stronger suction lift ability;
3. Strong through-put.The pump can persistently discharge gravel,high plastic soil lump and so on;
4. The pump can be directly matched with either motor or diesel engine;
5. Wide application.It can be used in various kinds of soil quality;

Generally, the pump is matched with an impeller with 3 or 5 pieces of vane.At the same time,the impellers can be provided with various diameters and vane types to suit every kind of working condition.

6. Little hydraulic loss,high efficiency and low oil-consumption;
7. Little volume,light weight;

Adopt optimization-design and strength-analyses to the dredging pump from the whole set to each part.Wholeheartedly eliminate or shorten every unnecessary aided and technologic construction while ensuring the performance and the operating requirements.Adopted the half-double-casing construction,at the same time,the support part of the pump rotor and drive device(Frame and the gearbox)are integrated into one body so as to greatly reduce the pump weight and the unit volume.

8. Steady operating,little vibration,low noise;

During manufacturing the impeller, carry out the high standard of the static balance.At the same time,adopt the reasonable speed of the pump and set a support construction at the pump head so that the pump can operate steady.

9. Simple & reliable construction,easily disassembly & assembly,Convenient maintaining;

The whole pump construction is of single-stage,single-suction,cantilever,horizontal,and front-disassembly.It is easily assembly & disassembly and convenient maintaining.Screws for opening lid are set in all fitting places in favor of disassembly.According to the feature of every part,equip the specificity disassembling tools for disassembly.

The standard trapezoidal quadruple thread is adopted to connect between the impeller and the shaft.It both transfers stronger torque and disassembles & assembles conveniently.At the same time set an impeller release collar between the shaft sleeve and the labyrinth to aid disassemble the impeller conveniently.

10. Reliable sealing without leakage;

The rubber "O" sealing ring is adopted to seal all of static sealing places between the pump casing and pump cover,pump casing and connecting plate,pump cover and front liner, connecting plate and rear liner,rear liner and sealing box,shaft sleeve and shaft.The rubber gasket is adopted to seal between the pump inlet & outlet and their pipelines;the skeleton J-shape rubber sealing ring or mechanical sealing with high pressure flushing water is adopted to seal between the rotor and stator of the pump to ensure the pump operating normally in long time.

11. Long operating life of parts;

Adopt Series A wear-resistant material,whose hardness maximum is above 60HRC,to meet requirements of different kind of operating mode.

12. High reliability of whole set,long MTBF;

While designing the while set,sufficiently take into account and optimization-design every part malfunctioned easily to prolong greatly MTBF(Mean time between failure)of the whole set.

13. Obvious economic efficiency;

The pump is suited for wide range of application with strong through-put.It can transport clay,sand and gravel of various quality & sludge by matching different digging equipment(cutter or bucket wheel)and the relevant pump impeller.It easily meets requirements of different transport distance by matching gearboxes with various driving ratios.The good ability of through-put of the pump itself ensures the performances range of the dredge,It can persistently suck & discharge gravel,high plastic clay without clogging.

High hydraulic efficiency,little oil consumption.

Good NPSH performance,strong suction lift,large dredging depth,high density of dredged mud.It can increase total output of the sand & mud and output in per positioning and decrease consumption of time and energy of removing the dredge.

The pump parts have long operating life so as to greatly reduce maintenance,prolong continuous operating time,raise output in per unit time,and reduce cost.Reason matching of the working life among the parts makes the pump always operate at high efficiency to gain best ratio of investing to output.

The dredging pump with simple construction,easily disassembly & assembly,convenient maintenance can lower labor intensity,decrease working quantity & employee,increase economic efficiency.



Performance Curve of Series WS(G) Dredging Pump
(仅供初步选型用 Only for Primary Selection)



性能参数表:

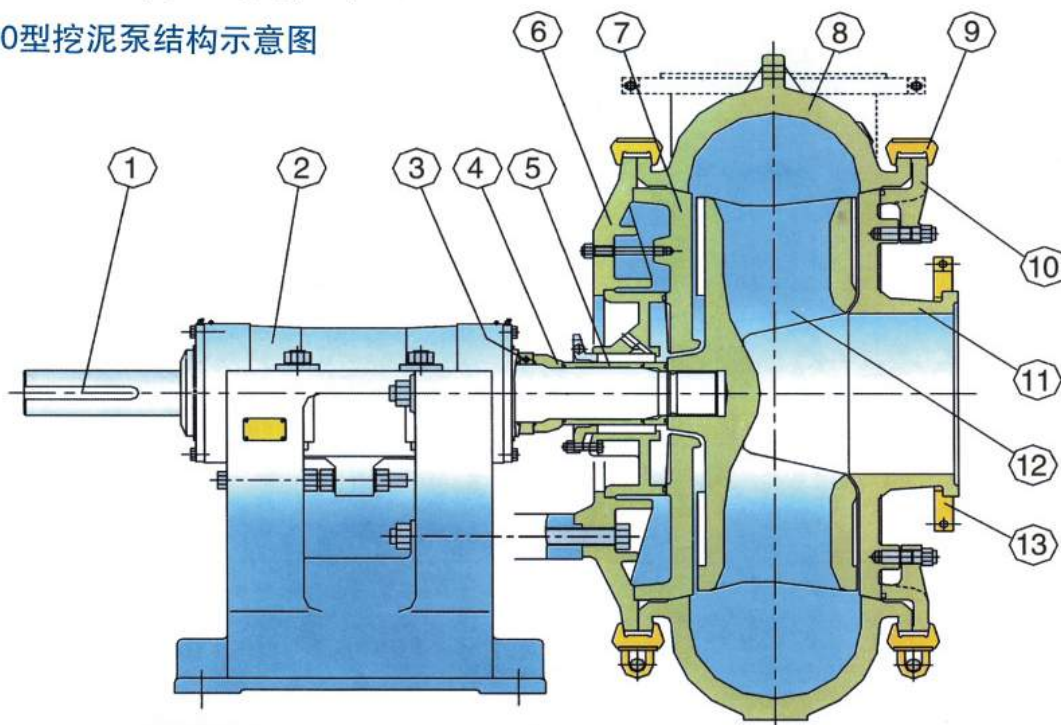
Clear Water Performance for WS Pumps

型 号 TYPE	流 量 CAPACITY (M ³ /h)	扬 程 HEAD (m)	叶轮转速 IMPELLER SPEED (r/min)	效率 EFFICIENCY (%)	进口直径 INLET DIAMETER (mm)	出口直径 OUTLET DIAMETER (mm)	汽蚀余量 NPSHR (m)	最大过流粒径 MAX. DIAMETER OF FLOWED PARTICLE(mm)		泵重量 PUMP WEIGHT (T)
								五枚 FIVE PIECES	三枚 THREE PIECES	
100WS	180-250	25-45	1000-1400	50-58	150	100	<3.5	50	82	0.5
150WS	250-550	20-40	1200-1400	58-60	200	150	<4	76	127	1.1
150WSG	350-700	40-65	800-980	68-71	200	150	<3.5	84	140	1.9
200WS	350-700	20-45	700-980	60-65	250	200	<4.5	105	178	2.3
200WSG	550-1000	40-65	700-850	70-72	250	200	<4	108	180	3.2
250WS	700-1100	20-45	500-750	65-70	300	250	<4	132	220	4.5
250WSG	900-1500	40-60	500-650	70-74	350	250	<4.5	86	144	4.6
300WS	1100-1800	20-40	400-600	65-68	350	300	<4.5	144	241	5.5
300WSG	1500-2200	30-65	400-550	74-78	450	300	<4	144	241	8.0
350WSG	2000-3000	40-65	400-550	74-78	450	350	<4	147	245	8.8
450WSG	3000-4000	35-67	350-500	76-80	600	450	<4.5	125	254	12
500WSG	4000-5500	40-65	350-450	78-80	650	500	<4.8	150	250	17
600WSG	5000-9000	55-80	320-400	81-85	650	600	<6	160	220	35
700WSG	8000-12000	60-85	280-380	83-85	750	700	<6	180	280	50
800WSG	10000-15000	50-70	260-360	79-80	850	800	<6	200	300	58
900WSG	12000-19000	50-75	280-330	83-85	950	900	<6	210	320	85
1000WSG	16000-25000	23-76	180-290	85-87	1100	1000	<6	230	350	126

挖泥泵结构示意图:

Construction sketch of WS(G) dredging pump

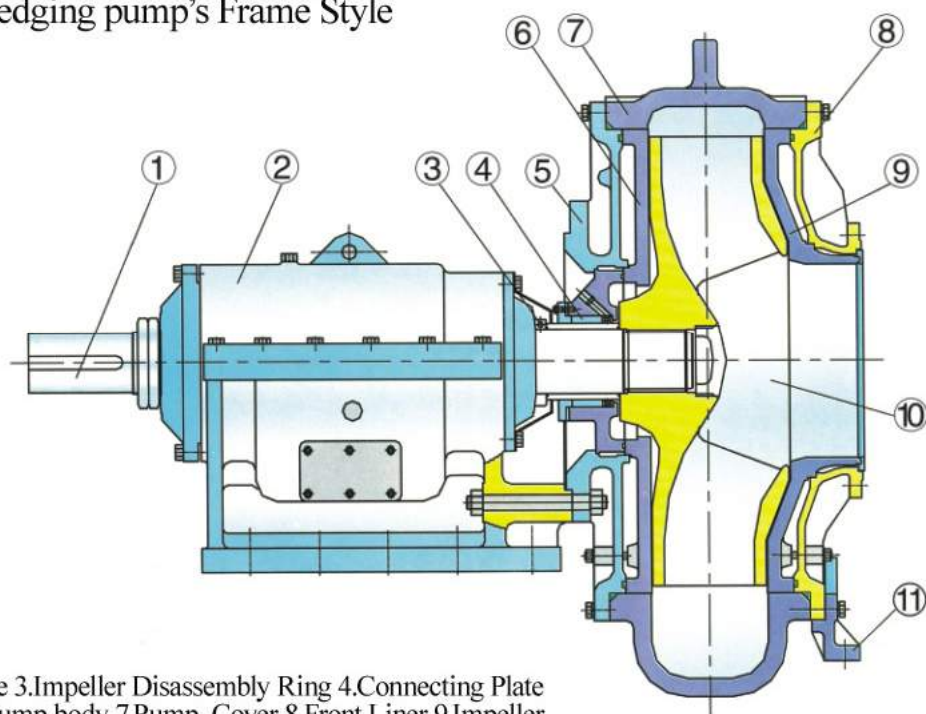
WS100~400型挖泥泵结构示意图



1. Shaft 2. Frame 3. Impeller Disassembly Ring 4. Locating Sleeve 5. Seal Assembly 6. Connecting Plate
7. Back Liner 8. Pump Body 9. Clamp 10. Pump Cover 11. Front Liner 12. Impeller 13. Split Flange

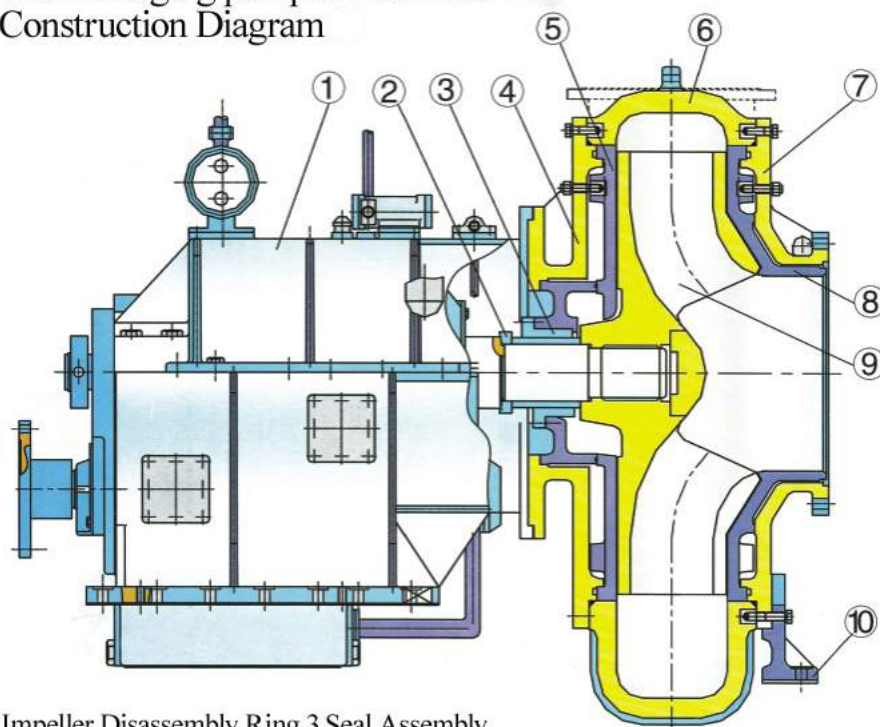


200-500WSG Dredging pump's Frame Style



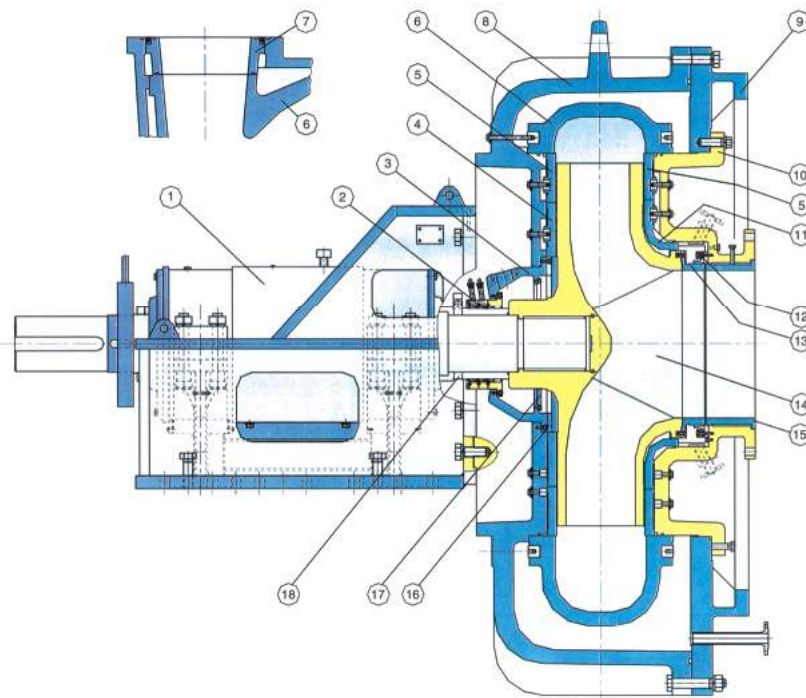
1. Shaft 2. Frame 3. Impeller Disassembly Ring 4. Connecting Plate
5. Back liner 6. Pump body 7. Pump Cover 8. Front Liner 9. Impeller
10. Supporting Plate

200-500WSG Dredging pump& Gear Box Construction Diagram



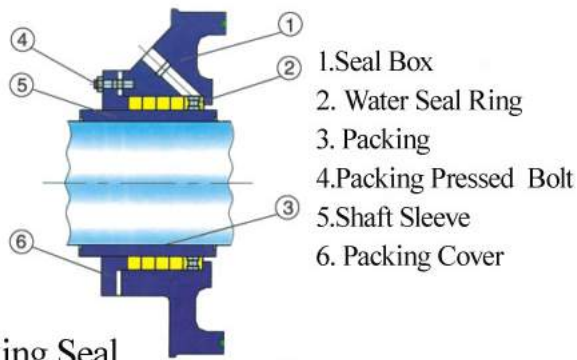
1. Gear Box 2. Impeller Disassembly Ring 3. Seal Assembly
4. Connecting Plate 5. Back Liner 6. Pump Body 7. Pump Cover
8. Front Liner 9. Impeller 10. Supporting Plate

600-1000WSG Dredging pump's Construction Diagram

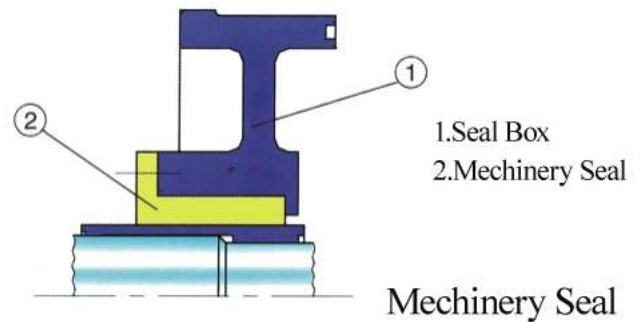


1. Frame
2. Seal Assembly
3. Seal Box
4. Back Liner
5. Blade Ring
6. Liner
7. Outlet Liner Tube
8. Pump Body
9. Big Pump Cover
10. Small Pump Cover
11. Front Liner
12. Water Sleeve
13. Wear-Resistant Ring
14. Impeller
15. Suction Liner Tube
16. Seal box Protecting Ring
17. Sand Protecting Plate
18. Impeller Disassembly Ring

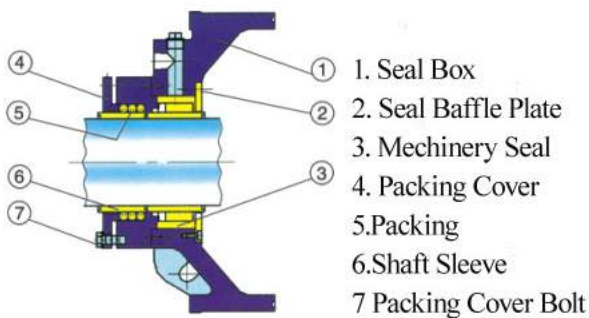
WS Dredging Pump's Shaft Seal Style



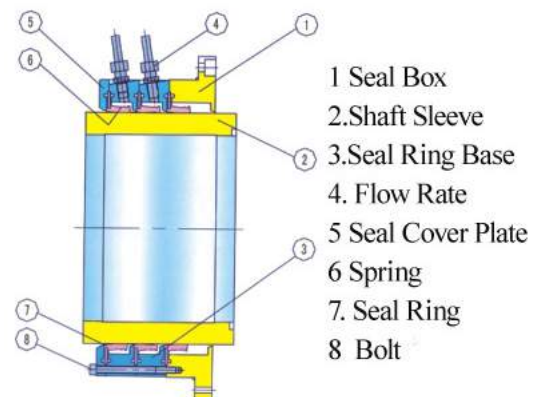
Packing Seal



Mechinery Seal



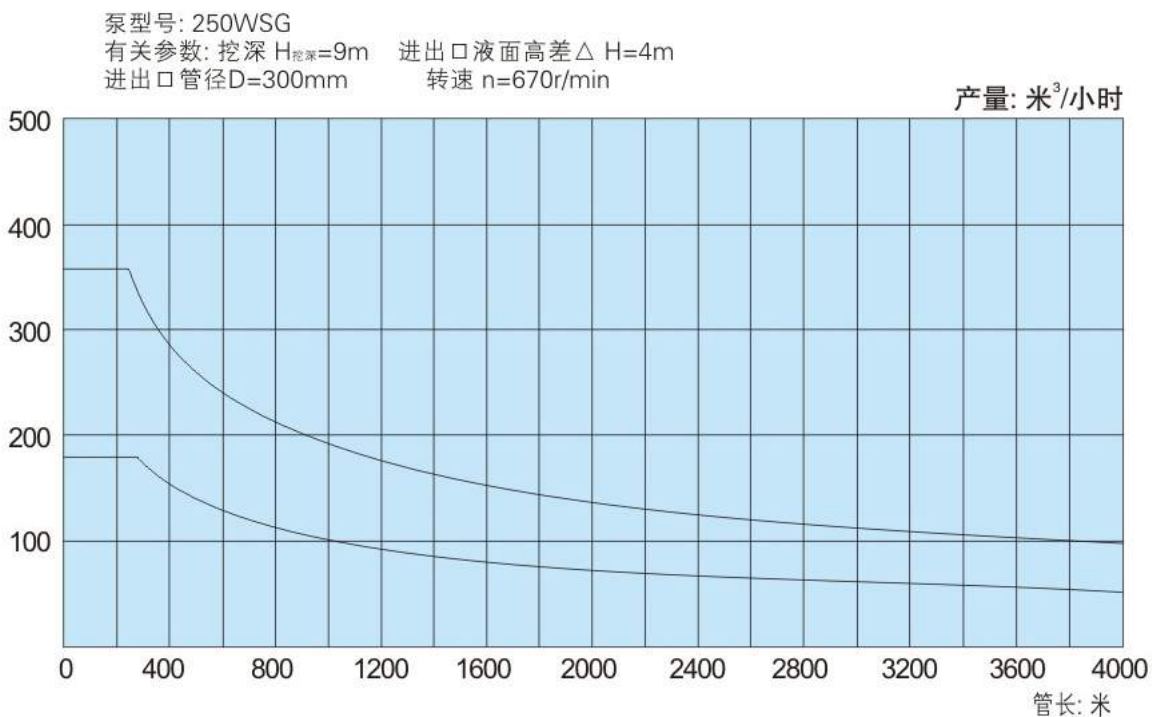
Packing Seal



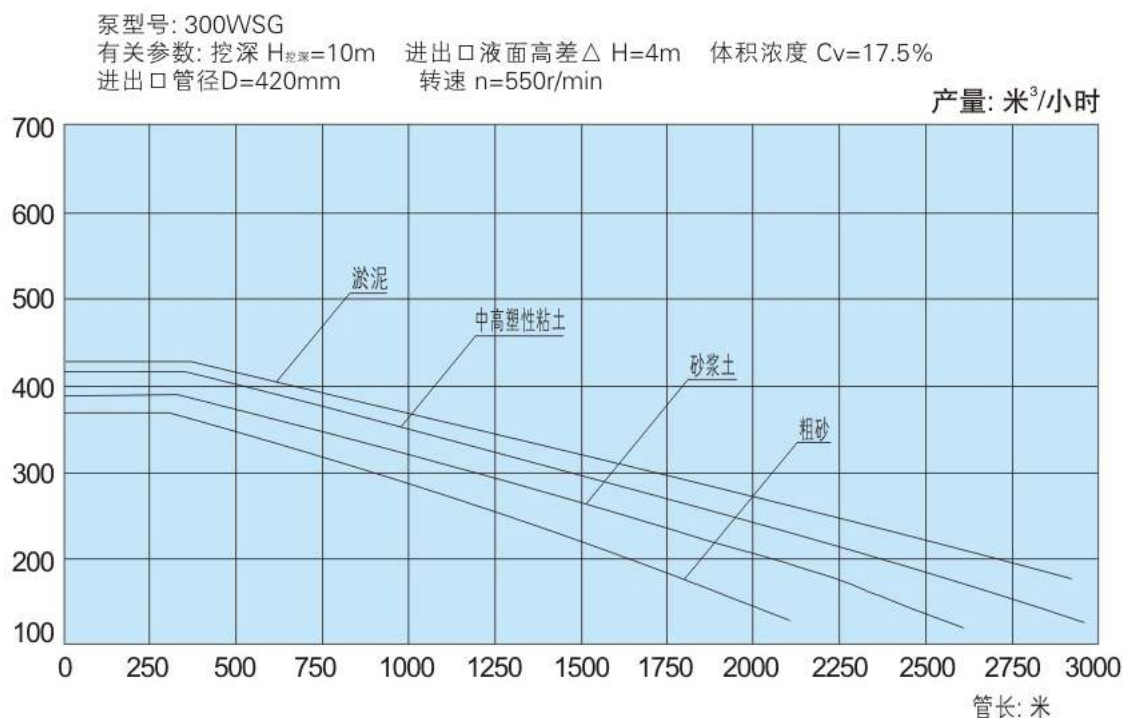
L Spiral Seal



Output Curves of Certain WSG series Dredging Pump



250WSG挖泥泵产量曲线 (Output Curve of 250WSG Dredging Pump)



300WSG挖泥泵产量曲线 (Output Curve of 300WSG Dredging Pump)

Output Curves of Certain WSG Series Dredging Pump

泵型号: 450WSG

有关参数: 挖深 $H_{挖深}=10m$ 进出口液面高差 $\Delta H=4m$

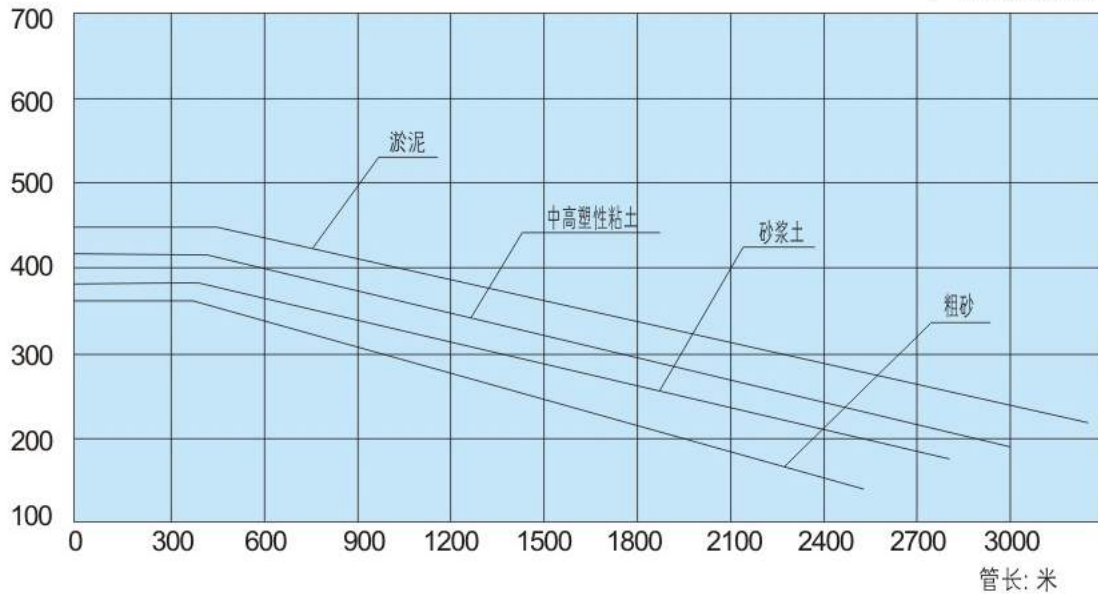
体积浓度 $C_v=10\%$

进口管径 $D=600mm$

出口管径 $D=450mm$

转速 $n=500r/min$

产量: 米³/小时



450WSG挖泥泵产量曲线 (Output Curve of 450WSG Dredging Pump)

泵型号: 500WSG

有关参数: 挖深 $H_{挖深}=13m$ 进出口液面高差 $\Delta H=4m$

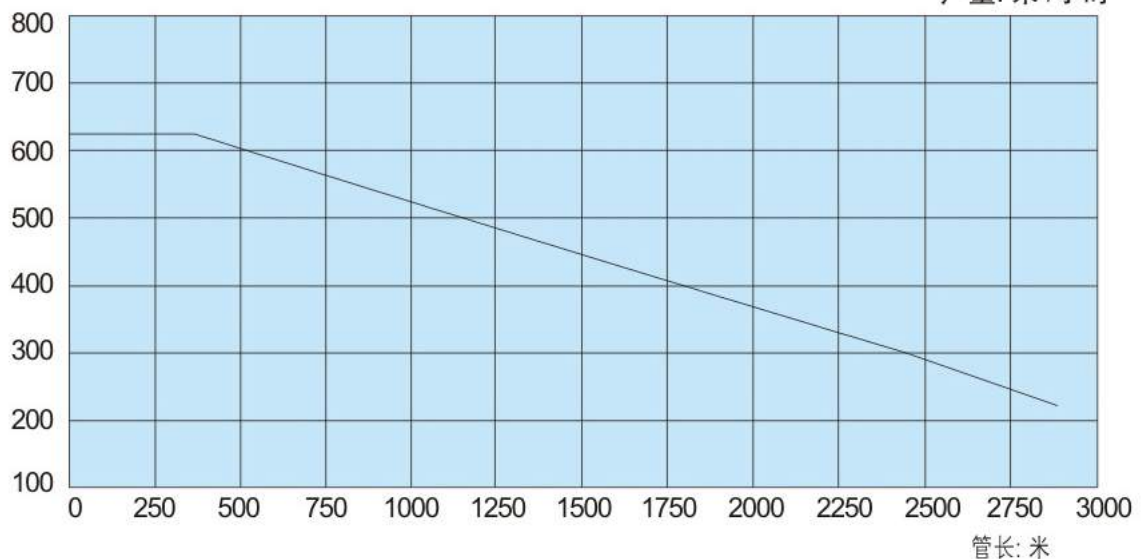
体积浓度 $C_v=10\%$

进口管径 $D=650mm$

出口管径 $D=500mm$

转速 $n=450r/min$

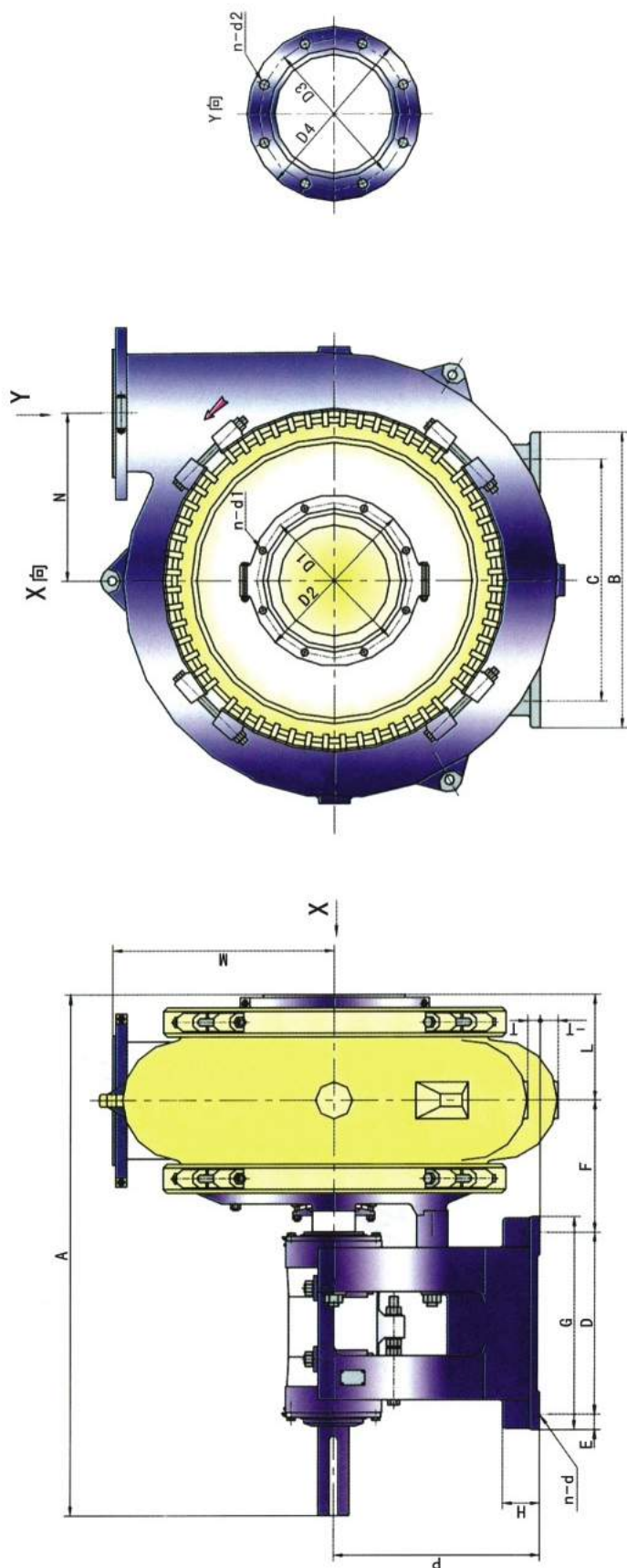
产量: 米³/小时



500WSG挖泥泵产量曲线 (Output Curve of 500WSG Dredging Pump)



Outline & Assembly Diagram of 100~450WS Dredging Pump

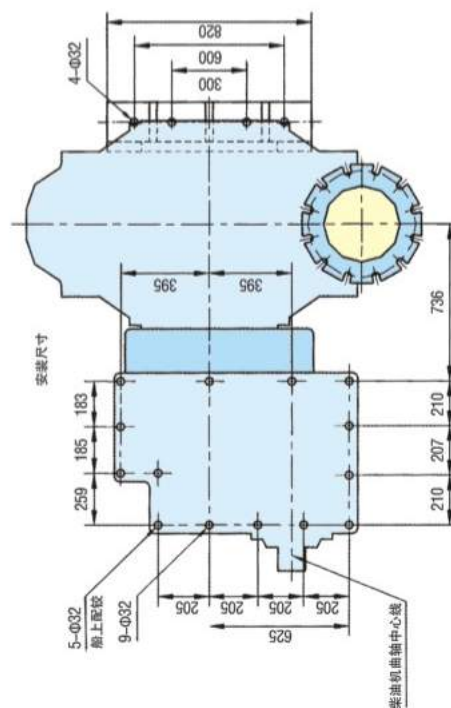
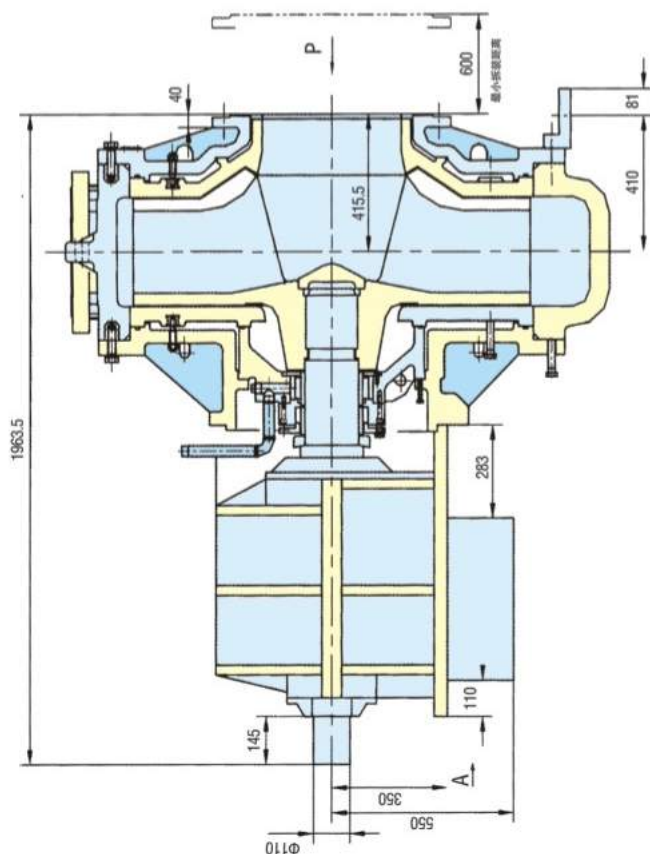
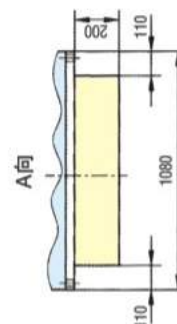
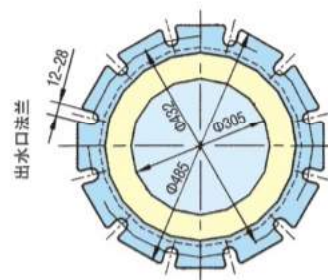
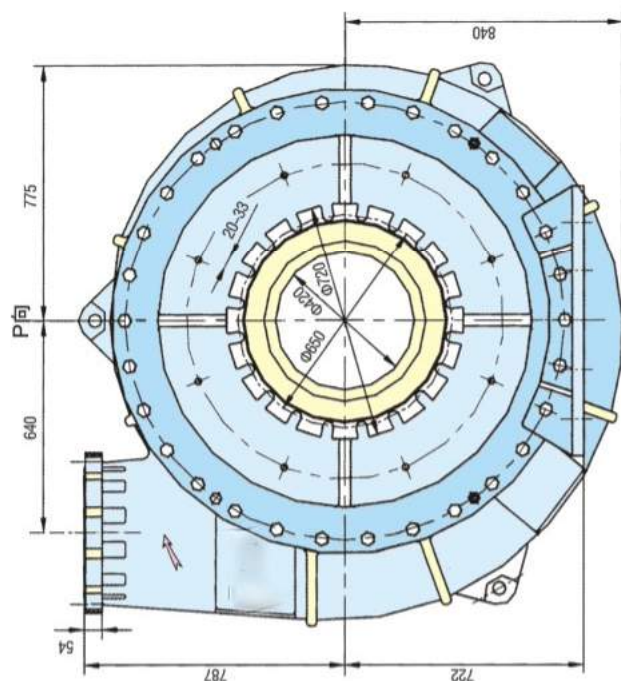


泵型号	外形尺寸												地脚孔		吸入口法兰			吐出口法兰			重量 Kg
	A	B	C	D	E	F	G	H	L	M	N	P	T	N-d	D1	D2	n-d1	D3	D4	n-d2	
100WS	1006	492	432	213	38	330	289	54	203	343	260	330	16	4-φ22	260	305	8-φ19	210	254	4-φ19	460
150WS	1286	622	546	257	54	392	365	75	295	503	352	457	54	4-φ29	324	368	8-φ19	260	305	8-φ19	1120
200WS	1720	920	760	640	70	378	780	90	330	533	416	450	-102	4-φ35	406	457	8-φ22	324	368	8-φ19	2285
250WS	2010	1207	851	749	64	473	876	152	368	665	522	851	238	4-φ41	470	527	12-φ22	406	457	8-φ22	4450
300WS	2096	1207	851	749	64	502	876	152	424	787	610	851	121	4-φ41	495	552	8-φ22	470	527	12-φ22	5400
200WSG	1774	920	760	640	70	455	780	90	330	620	475	450	-206	4-φ35	406	457	8-φ22	324	368	8-φ19	3188
250WSG	2062	1219	851	749	64	496	876	152	400	800	605	851	40	4-φ41	476	533	8-φ29	432	483	8-φ25	4638
350WSG	2367	1460	1200	860	95	649	1050	150	448	1008	765	900	-120	4-φ79	600	650	12-φ28	540	600	12-φ28	12247

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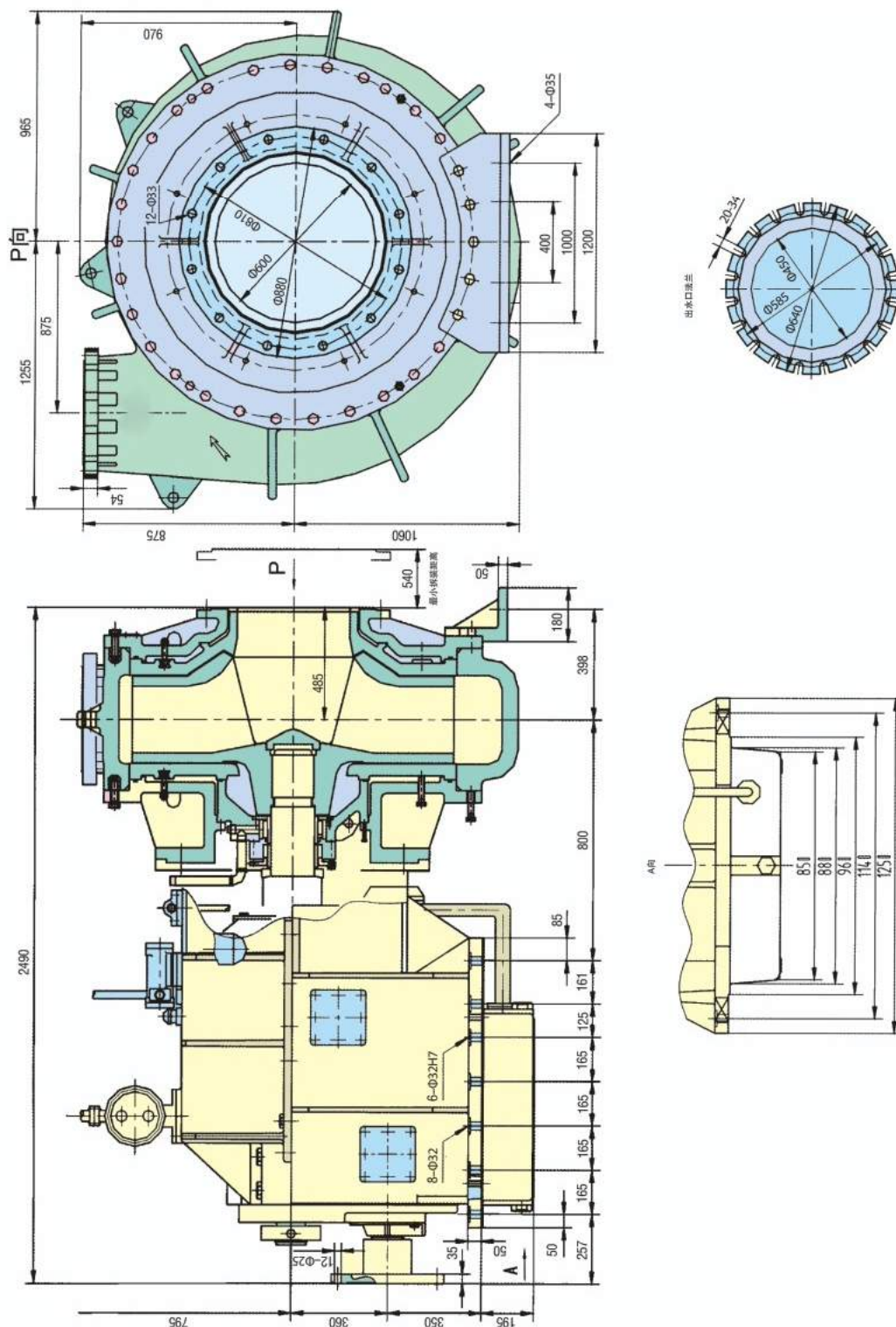
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Outline & Assembly Diagram of 300WSG Dredging Pump



Set JLH395 Gear Box

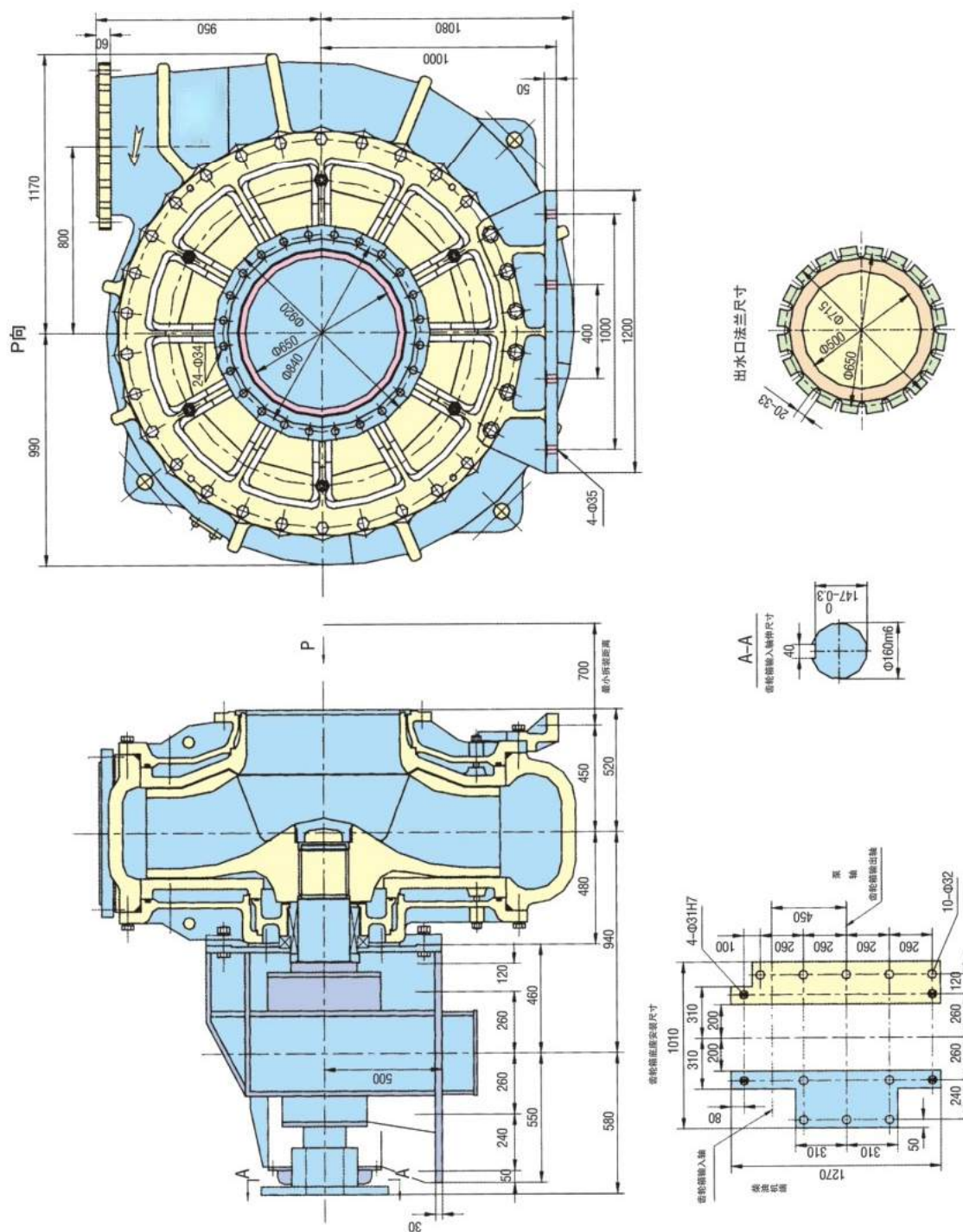
Outline & Assembly Diagram of 450WSG Dredging Pump



Pump & Gear Box Together
(JLH Gear Box)

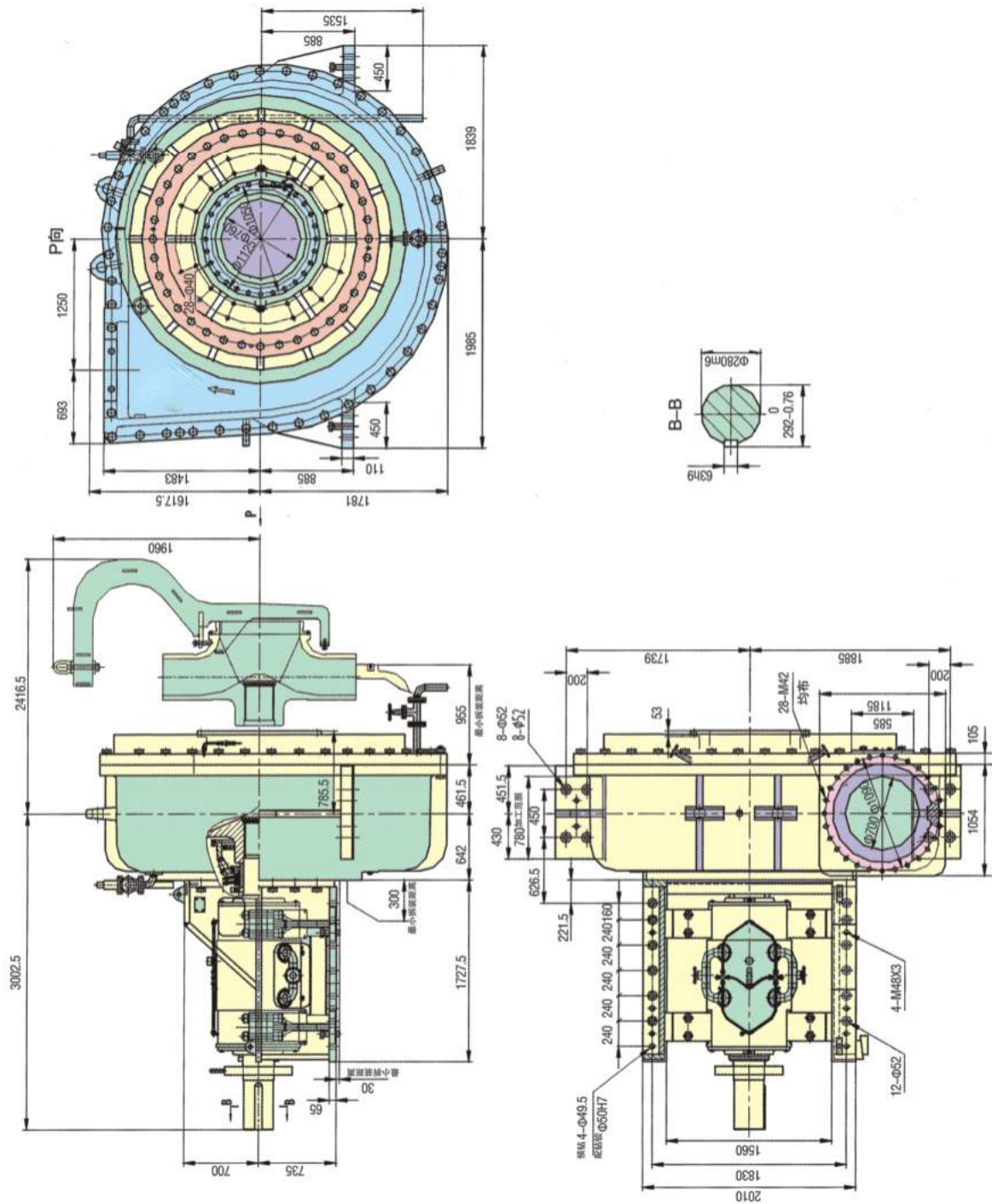


Outline & Assembly Diagram of 500WSG Dredging Pump



Pump & Gear Box Together(Set Special Gear Box)

Outline & Assembly Diagram of 700WSG Dredging Pump



Pump & Gear Box Together
Set JLH395 Gear Box

NAIPU PUMP

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