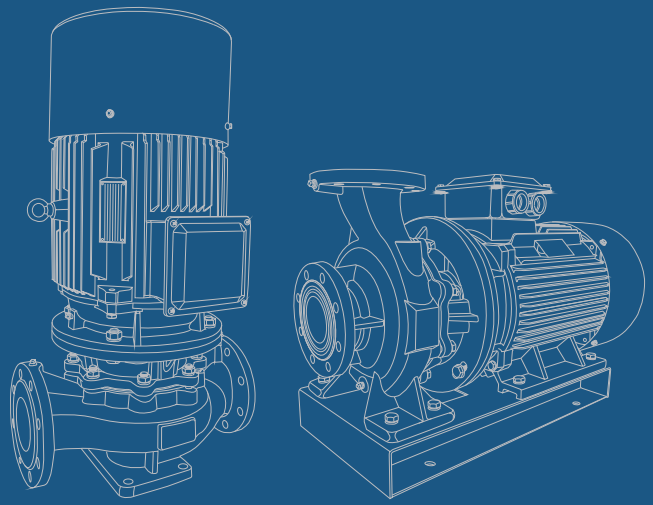
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海洋水泵



ISG、ISW
管道离心泵
PIPELINE CENTRIFUGAL PUMP

使用说明书
Operating instructions

SEAPUMP

上海海洋泵阀制造有限公司
SHANGHAI SEA PUMP & VALVE MFG CO.,LTD

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企业简介 + AOBUTS

上海海洋泵阀制造有限公司是专业从事水泵、生活消防设备及水泵智能控制开发、生产、销售为一体的股份制企业，本公司运用先进的软件开发、设计产品保证了向顾客提供更优质的产品。

“海洋水泵，泵的海洋”，海洋产品在全国各地设有分公司以及售后服务处，产品已应用于工矿企业、城市污水处理、城市供水、石油化工、农业灌溉等行业。本厂资金雄厚，生产设备先进，检测手段完善，并拥有一批高素质的专业人才队伍，同时ISO9001:2000国际质量管理体系的良好动作，为制造出优质、可靠的产品打下坚实基础。

本公司在“以人为本，科技兴业；以诚为用，质量立业；勇于开拓，锐意进取；追求卓越，走向未来”的方针指导下，不断开拓进取创新发展，在长期的实践中形成了一套完整的质量体系，并配备了一支安装调试维护的售后服务队伍。销售网点辐射全国各大城市，产品行销全国各省、市、自治区，并出口东南亚等国。并以一流的产品、一流的服务赢得了国内外广大用户的信赖和好评。本公司以“一切为了顾客的满意”为宗旨，继往开来，与时俱进。服务于人类建设美好家园。

Shanghai HAIYANG pump & valve Co., Ltd. Is a joint-stock enterprises which specializes in the manufacture of water pumps, fire fighting equipment and pumps intelligent controlling production, sales in one. our company uses advanced software to develop and design products to ensure that customers provide better quality products.

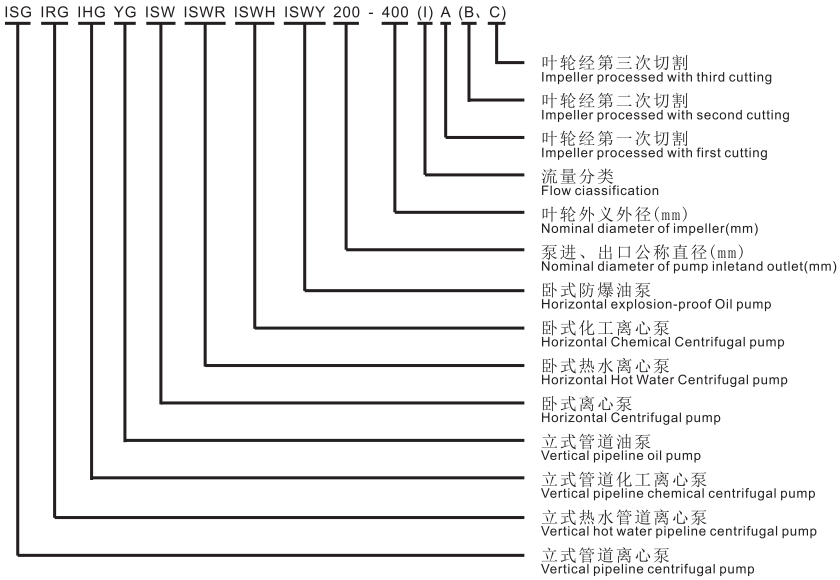
" HAIYANG water pumps, pump of the sea", the HAIYANG products throughout the country with more than 30 branch offices as well as after-sales service, products have been used in industrial and mining enterprises, urban sewage treatment, urban water supply, petrochemicals, agriculture and irrigation sectors. Factory with a strong financial background, advanced production equipment and means of improving the detection and has a number of high-quality professional talent, while ISO9001: 2000 international quality management system of good moves, in order to create high-quality, reliable products to lay a solid foundation.

In this "people-oriented, Industrial Science and Technology; to use for Prudential, the quality of establishing themselves; to open up the courage to strive for progress; the pursuit of excellence, into the future" under the guidance of continuous innovation and development to forge ahead in long-term practice of the formation of a complete set of The quality system and is equipped with an installation of the maintenance of after-sales service team. Radiation sales outlets in major cities nationwide, product marketing provinces, municipalities and autonomous regions, and exports in countriessuch as South-East Asia. And first-class products, first-class service to win customers at home and abroad trust and praise. The Company take "everything for the customer satisfied" as the purpose, advance with the times, in the service of humanity home.

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型号意义 Type designation



产品概述

ISG，ISW系列单级单吸管道离心泵是本公司参照国际标准ISO2858和国家标准JB/T6878.2-93所规定的性能参数，结合本公司多年生产经验而设计的第二代高效节能产品，是替代SG型管道离心泵、IS型离心泵、D型多级离心泵等常规泵的理想产品。系列流量范围1.5~1600m/h，扬程范围5~150m，分基本型、分流型、切割型等多种规格。根据使用场合介质和温度的不同，过流部份的材质变化及结构变化，设计制造成同性能参数的热水泵、管道化工泵、管道油泵，使该系列产品的使用得到普及。完全可以替代常规离心泵在所有场合使用。

Product Introduction

ISG and ISW series single-stage single suction pipeline centri-fugal pumps are the second generation of high-efficiency and energy-saving products designed by our company with reference to the performance parameters specified in the international standard ISO2858 and the national standard JB / t6878.2-93 and combined with our many years of production experience. They are ideal products to replace SG pipeline centrifugal pumps, is centrifugal pumps, D-type multistage centrifugal pumps and other conventional pumps. The series has a flow range of 1.5 ~ 1600 cubic meters per hour and a lift range of 5 ~ 150 meters. It is divided into basic type, shunt type, cutting type and other specifications. According to the different medium and temper-ature of the application occasion, the material change and str-uctural change of the overflow part, the hot water pump, pipeline chemical pump and pipeline oilpump with the same energy parameters are designed and manufactured to popularize the use of this series of products. It can completely replace the conventional centrifugal pump and be used in all occasions.

ISG、ISW 管道离心泵
ISG、ISW PIPELINE CENTRIFUGAL PUMP
海洋泵阀
SEA PUMP & VALVE

产品特点

1、泵结构紧凑、体积小、外形美观，其立式结构决定安装占地面积小。

2、安装方便，进、出口径相同并在同一中心线上，无需改变管路。

3、泵运行平稳、噪音低、组件同心度高。

4、密封可靠、无泄漏。轴封采用硬质合金及碳化硅等耐磨材质机械密封。

5、维修方便，勿需拆卸管道，只要拆下泵盖螺母，取出电机及传动组件即可进行检修维护。

6、其独特结构，完美设计，不仅缩小泵房面积，改善了空间，而且大大节省基建投资。

主要用途

1、ISG，ISW管道泵，供输送清水物理化学性质类似于清水的其他液体之用,使用介质温度不超过80℃。适用于工业和城市给排水、高层建筑增压送水、园林喷灌、消防增压、远距离送水、采暖、浴室等冷暖水循环增压及设备配套等。

2、IRG，ISWR热水循环泵，适用于能源、冶金、木材加工、化工、纺织、造纸及饭店、浴室、宾馆等锅炉热水增压循环输送及城市采暖系统循环用泵，使用温度不超过120℃。

3、IHG，ISWH化工离心泵适用于有腐蚀介质的增压输送，使用介质温度不超过80℃。

4、YG，ISWY管道油泵供输送汽油、煤油、柴油等石油产品，被输送介质温度为-20℃~+120℃。

Product Features

1. The pump has compact structure, small volume and beautiful appearance.Its vertical structure determines that the installation area is small.
2. It is easy to install. The inlet and outlet diameters are the same and on the same center line. There is no need to change the pipeline.
3. The pump operates stably with low noise and high concentricity of components.
4. Reliable sealing without leakage. The shaft seal is made of wear -resistant materials such as cemented carbide and silicon carbide.
5. It is convenient for maintenance. It is not necessary to disassemble the pipe. Just remove the pump cover nut and take out the motor and transmission components for maintenance.
6. Its unique structure and perfect design not only reduce the pump room area and mprove the space, but also greatly save the capital construction investment.

Chief Usage

1. ISG and ISW pipeline pumps are used to transport other liquids with physical and chemical properties similar to clean water, and the temperature of the medium shall not exceed 80℃. It is suitable for industrial and urban water supply and drainage, pressurization and water supply of high-rise buildings, garden sprinkler irrigation,fire pressurization, long-distance water supply, heating, bathroom and other cold and warm water circulation pressurization and equipment matching.
2. IRG, iswr hot water circulating pump is applicable to boiler hot water pressurization circulating transmission and urban heating system circulating pump in energy, metallurgy, wood processing, chemical industry, textile,papermaking, restaurants, bathrooms, hotels, etc. the operating temperature shall not exceed 120 ℃.
3. IHG and iswh chemical centrifugal pumps are applicable to pressurized transportation with corrosive media, and the temperature of the media shall not exceed 80 ℃.
4. YG and iswy pipeline oil pumps are used to transport gasoline, kerosene, diesel and other petroleum products. The temperature of the transported medium is -20 ℃ ~+120 ℃.

工作条件

1、泵系统工作压力≤16MPa，即泵吸入口压力加泵扬程≤16MPa，订货时请注明系统工作压力。当进口压力>0.4MPa，或泵系统工作压力>16MPa时，应在订货时另行提出，以便在制造时，泵的过流部分和连接部分采用相应材质满足要求。

2、适用介质：固体不溶物体积含量不超过单位体积的0.1%。

3、周围环境温度不超过40℃，相对湿度不超过95%。

结构说明

ISG泵结构见图。该泵由电机和泵两部分组成，泵结构包括泵体、叶轮、泵盖、机械密封等部件组成。泵为立式单级单吸离心式，进、出口设在同一水平轴线上，且口径规格相同可直接象阀门一样安装在管路的任何部位上，装卸方便，占地面积小。泵设有底座，增加泵安装的稳固性。泵体、进、出口法兰上设有取压孔，可直接将压力表装上，以保证泵长期在额定性能范围运行。

ISW结构见图。该机组由泵、电机和底座三部分组成.泵结构包括泵体、叶轮、泵盖、机械密封等零部件组成。泵为单级单吸卧式离心式，泵体和泵盖两部份是从叶轮背面处剖分的，即为后开门结构形式。大多数泵的叶轮前、后均设有密封环，并在叶轮后盖板上设有平衡孔，以平衡作用在转子上的轴向力。泵进口为轴向水平吸入，出口为垂直向上布置。泵和电机同轴，电机轴伸端采用双角接触球轴承结构可部分平衡泵的残余轴向力.泵与电机直联，安装时无需校正，具有共同底座，并用JG型隔振器进行隔振。

Working Conditions

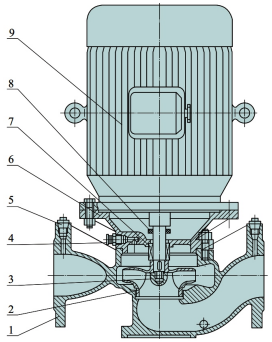
1. The working pressure of the pump system is≤16MPa, that is, the pump suction pressure plus the pump lift is≤16MPa. Please indicate the working pressure of the system when ordering. When the inlet pressure is >0.4mpa, or the working pressure of the pump system is>16mpa, it shall be put forward separately when ordering, so that the flow passage part and connecting part of the pump can be made of corresponding materials to meet the requirements during manufacturing.
2. Applicable medium: the volume content of solid insoluble matter shall not exceed 0.1% per unit volume.
3. The ambient temperature shall not exceed 40 ℃, and the relative humidity shall not exceed 95%.

Stricture Description

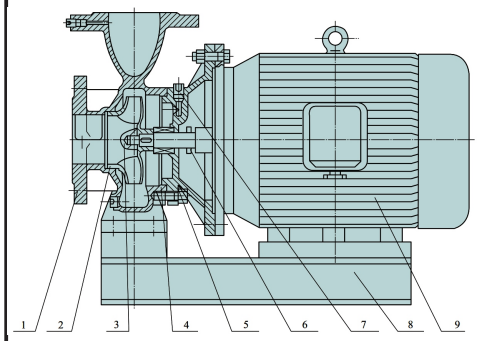
ISG structure is shown in the figure. The pump is composed of motor and pump.The pump structure consists of pump body, impeller, pump cover, mechanical seal and other components. The pump is a vertical single-stage single suction centrifugal type. The inlet and outlet are set on the same horizontal axis, and the diameter and specification are the same. It can be directly installed on any part of the pipeline like a valve. It is convenient for loading and unloading and covers a small area. The pump is equipped with a base to increase the stability of pump installation. Pressure tapping holes are set on the pump body, inlet and outlet flanges, and the pressure gauge can be directly installed to ensure that the pump operates within the rated performance range for a long time.

ISW structure is shown in the figure. The unit consists of pump, motor and base.The pump structure consists of pump body, impeller, pump cover, mechanical seal and other parts. The pump is a single-stage single suction horizontal centrifugal type. The pump body and pump cover are divided from the back of the impeller, that is, the back door structure. Most pump impellers are equipped with sealing rings at the front and rear, and balancing holes are set on the rear cover plate of the impeller to balance the axial force acting on the rotor. The pump inlet is axial horizontal suction, and the outlet is vertical upward. The pump and motor are coaxial, and the motor shaft extension end adopts a double angle contact ball bearing structure to partially balance the residual axial force of the pump. The pump and motor are directly connected without correction during installation. They have a common base and use JG vibration isolator for vibration isolation.

结构示意图 Structure diagram



序号 NO.	名称 Name	序号 NO.	名称 Name
1	泵体 Pump casing	6	泵盖 Pump cover
2	叶轮 Impeller	7	机械密封 Mechanical seal
3	叶轮螺母 Impeller nut	8	挡水圈 Water-bolching ring
4	放气阀 Air discharge valve	9	电机 Motor
5	螺塞 Plug		



序号 NO.	名称 Name	序号 NO.	名称 Name
1	泵体 Pump casing	6	挡水圈 Water-bolching ring
2	叶轮 Impeller	7	螺塞 Plug
3	叶轮螺母 Impeller nut	8	底座 Fundation
4	机械密封 Mechanical seal	9	电机 Motor
5	泵盖 Pump cover		

结构材料表 List of structural materials

材料 material / 零部件 Parts / 型号 Type	ISG	IRG	IHG	YG	ISW	ISWR	ISWH	ISWY
泵体 Pump casing	铸铁 HT200 Cast Iron HT200	铸铁 HT200 Cast Iron HT200	不锈钢304 Ss304	铸铁 HT200 Cast Iron HT200	铸铁 HT200 Cast Iron HT200	铸铁 HT200 Cast Iron HT200	不锈钢304 Ss304	铸铁 HT200 Cast Iron HT200
叶轮 Impeller	铸铁 HT200 Cast Iron HT200	铸铁 HT200 Cast Iron HT200	不锈钢304 Ss304	黄铜 Brass	铸铁 HT200 Cast Iron HT200	铸铁 HT200 Cast Iron HT200	不锈钢304 Ss304	黄铜 Brass
泵盖 Pump cover	铸铁 HT200 Cast Iron HT200	铸铁 HT200 Cast Iron HT200	不锈钢304 Ss304	铸铁 HT200 Cast Iron HT200	铸铁 HT200 Cast Iron HT200	铸铁 HT200 Cast Iron HT200	不锈钢304 Ss304	铸铁 HT200 Cast Iron HT200
挡水圈 Water bloching ring	橡胶 Rubber	橡胶 Rubber	橡胶 Rubber	橡胶 Rubber	橡胶 Rubber	橡胶 Rubber	橡胶 Rubber	橡胶 Rubber
机械密封 Mechanical	碳化硅/石墨 Sic/Graphite	合金/石墨 Alloy / Graphite	合金/石墨 Alloy / Graphite	合金/石墨 Alloy / Graphite	碳化硅/石墨 Sic/Graphite	合金/石墨 Alloy / Graphite	合金/石墨 Alloy / Graphite	合金/石墨 Alloy / Graphite
螺塞 Plug	碳钢 Carbon steel	碳钢 Carbon steel	碳钢 Carbon steel	碳钢 Carbon steel	碳钢 Carbon steel	碳钢 Carbon steel	碳钢 Carbon steel	碳钢 Carbon steel
放气阀 Air discharge valve	黄铜 Brass	黄铜 Brass	黄铜 Brass	黄铜 Brass	黄铜 Brass	黄铜 Brass	黄铜 Brass	黄铜 Brass
底座 Fundation	/	/	/	/	碳钢 Carbon steel	碳钢 Carbon steel	碳钢 Carbon steel	碳钢 Carbon steel

性能参数

Performance parameter

序号 NO.	型号 Type	流量 Flow		扬程 Head	效率 Eff.	转速 Speed	功率 Power	汽蚀 NPSH
		m^3/h	L/s	m	%	r/min	kW	m
1	20-110	1.8 2.5 3.3	0.5 0.69 0.91	16 15 13.5	25 34 35	2800	0.37	2.3
2	20-160	1.8 2.5 3.3	0.5 0.69 0.91	33 32 30	19 25 23	2800	0.75	2.3
3	25-110	2.8 4 5.2	0.78 1.11 1.44	16 15 13.5	34 42 41	2900	0.75	2.3
4	25-125	2.8 4 5.2	0.78 1.11 1.44	20.6 20 18	28 36 35	2900	0.75	2.3
5	25-125A	2.5 3.6 4.6	0.69 1.0 1.28	17 16 14.4	35	2900	0.75	2.3
6	25-160	2.8 4 5.2	0.78 1.11 1.44	33 32 30	24 32 33	2900	1.5	2.3
7	25-160A	2.6 3.7 4.9	0.12 1.03 1.36	29 28 26	31	2900	1.1	2.3
8	32-100	3.5 5 6.5	0.97 1.39 1.8	13.2 12.5 11.3	34 42 41	2900	0.75	2.3
9	32-125	3.5 5 6.5	0.97 1.39 1.8	22 20 18	40 44 42	2900	0.75	2.5
10	32-125A	3.1 4.5 5.8	0.86 1.25 1.61	17.6 16 14.4	43	2900	0.75	2.5
11	32-160	3.5 5 6.5	0.97 1.39 1.8	33 32 30	34 39 39	2900	1.5	2.3
12	32-160A	3.1 4.5 5.8	0.86 1.25 1.61	29 28 26	41 46 43	2900	1.1	2.3
13	32-200	3.5 5 6.5	0.97 1.39 1.8	51 50 48	26 31 30	2900	3	2.3
14	32-200A	3.1 4.5 5.8	0.86 1.25 1.61	44.6 44 42.7	34 40 42	2900	2.2	2.3
15	32-100(I)	4.4 6.3 8.3	1.22 1.75 2.31	13.2 12.5 11.3	48 54 53	2900	0.75	2.3
16	32-125(I)	4.4 6.3 8.3	1.22 1.75 2.31	22 20 18	41 46 43	2900	1.1	2.3
17	32-160(I)	4.4 6.3 8.3	1.22 1.75 2.31	33.2 32 30.2	34 40 42	2900	2.2	2.3
18	32-200(I)	4.4 6.3 8.3	1.22 1.75 2.31	50.5 50 48	26 33 35	2900	4	2.3
19	40-100	4.4 6.3 8.3	1.22 1.75 2.31	13.2 12.5 11.3	48 54 53	2900	0.75	2.3
20	40-100A	4.1 5.9 7.8	1.08 1.56 2.06	10.6 10 9	52	2900	0.75	2.5
21	40-125	4.4 6.3 8.3	1.22 1.75 2.31	21 20 18	41 46 43	2900	1.1	2.3
22	40-125A	3.9 5.6 7.4	1.08 1.56 2.06	17.6 16 14.4	40 45 41	2900	0.75	2.3
23	40-160	4.4 6.3 8.3	1.22 1.75 2.31	33 32 30	35 40 40	2900	2.2	2.3
24	40-160A	4.1 5.9 7.8	1.14 1.64 2.17	29 28 26.3	34 39 39	2900	1.5	2.3
25	40-160B	3.8 5.5 7.2	1.06 1.53 2.0	25.5 24 22.5	34 38 37	2900	1.1	2.3
26	40-200	4.4 6.3 8.3	1.22 1.75 2.31	51 50 48	26 33 32	2900	4	2.3
27	40-200A	4.1 5.9 7.8	1.14 1.64 2.17	45 44 42	26 31 30	2900	3	2.3
28	40-200B	3.7 5.3 7.0	1.03 1.47 1.94	38 36 34.5	29	2900	2.2	2.3
29	40-250	4.4 6.3 8.3	1.22 1.75 2.31	82 80 74	24 28 28	2900	7.5	2.3
30	40-250A	4.1 5.9 7.8	1.14 1.64 2.17	72 70 65	24 28 27	2900	5.5	2.3
31	40-250B	3.8 5.5 7.0	1.06 1.53 1.94	61.5 60 56	23 27 26	2900	4	2.3
32	40-100(I)	8.8 12.5 16.3	2.44 3.47 4.53	13.2 12.5 11.3	23 27 26	2900	1.1	2.3
33	40-100(I)A	8 11 14.5	2.22 3.05 4.03	10.6 10 9	55 62 60	2900	0.75	2.3
34	40-125(I)	8.8 12.5 16.3	2.44 3.47 4.53	21.2 20 17.8	60	2900	1.5	2.3
35	40-125(I)A	8 11 14.5	2.22 3.05 4.03	17 16 14	49 58 57	2900	1.1	2.3
36	40-160(I)	8.8 12.5 16.3	2.44 3.47 4.53	33 32 30	57	2900	3	2.3
37	40-160(I)A	8.2 11.7 15.2	2.28 3.25 4.22	29 28 26	45 52 51	2900	2.2	2.5
38	40-160(I)B	7.3 10.4 13.5	2.38 2.89 3.75	23 22 20.5	44 51 50	2900	1.5	2.5
39	40-200(I)	8.8 12.5 16.3	2.44 3.47 4.53	51.2 50 48	50	2900	5.5	2.3
40	40-200(I)A	8.3 11.7 15.3	2.31 3.25 4.25	45 44 42	38 46 46	2900	4	2.3
41	40-200(I)B	7.5 10.6 13.8	2.08 2.94 3.83	37 36 34	37 45 45	2900	3	2.3
42	40-250(I)	8.8 12.5 16.3	2.44 3.47 4.53	81.2 80 77.5	44	2900	11	2.3
43	40-250(I)A	8.2 11.6 15.2	2.28 3.22 4.22	71 70 68	31 38 40	2900	7.5	2.3
44	40-250(I)B	7.6 10.8 14	2.11 3.0 3.89	61.4 60 58	38	2900	7.5	2.3
45	40-250(I)C	7.1 10.0 13.1	1.97 2.78 3.64	53.2 52 50.4	37	2900	5.5	2.3
46	50-100	8.8 12.5 16.3	2.44 3.47 4.53	13.6 12.5 11.3	36	2900	1.1	2.3
47	50-100A	8 11 14.5	2.22 3.05 4.03	11 10 9	55 62 60	2900	0.75	2.3
48	50-125	8.8 12.5 16.3	2.44 3.47 4.53	21.5 20 17.8	60	2900	1.5	2.3
49	50-125A	8 11 14.5	2.22 3.05 4.03	17 16 14	49 58 57	2900	1.1	2.3
50	50-160	8.8 12.5 16.3	2.44 3.47 4.53	33 32 30	57	2900	3	2.3
51	50-160A	8.2 11.7 15.2	2.28 3.25 4.22	29 28 26	45 52 51	2900	2.2	2.3
52	50-160B	7.3 10.4 13.5	2.38 2.89 3.75	23 22 20.5	44 51 50	2900	1.5	2.3
53	50-200	8.8 12.5 16.3	2.44 3.47 4.53	52 50 48	50	2900	5.5	2.3
54	50-200A	8.3 11.7 15.3	2.31 3.25 4.25	45.8 44 42	38 46 46	2900	4	2.3
55	50-200B	7.5 10.6 13.8	2.08 2.94 3.83	37 36 34	37 45 45	2900	3	2.3
56	50-250	8.8 12.5 16.3	2.44 3.47 4.53	82 80 77.5	44	2900	11	2.3
57	50-250A	8.2 11.6 15.2	2.28 3.22 4.22	71.5 70 68	38	2900	7.5	2.3
58	50-250B	7.6 10.8 14	2.11 3.0 3.89	61.4 60 58	37	2900	7.5	2.3
59	50-250C	7.1 10.0 13.1	1.97 2.78 3.64	53.2 52 50.4	36	2900	5.5	2.3
60	50-100(I)	17.5 25 32.5	4.86 6.94 9.03	13.7 12.5 10.5	67 69 69	2900	1.5	2.5
61	50-100(I)A	15.6 22.3 29	4.3 6.19 8.1	11 10 8.4	65 67 68	2900	1.1	2.5
62	50-125(I)	17.5 25 32.5	4.86 6.94 9.03	21.5 20 18	60 68 67	2900	3	2.5
63	50-125(I)A	15.6 22.3 29	4.33 6.19 8.1	17 16 13.5	58 66 65	2900	2.2	2.5
64	50-160(I)	17.5 25 32.5	4.68 6.94 9.03	34.4 32 27.5	54 63 60	2900	4	2.5
65	50-160(I)A	16.4 23.4 30.4	4.56 6.5 8.44	30 28 24	54 62 59	2900	4	2.5
66	50-160(I)B	15.0 21.6 28	4.17 6.0 7.78	26 24 20.6	58	2900	3	2.5
67	50-200(I)	17.5 25 32.5	4.86 6.94 9.03	52.7 50 45.5	49 58 59	2900	7.5	2.5
68	50-200(I)A	16.4 23.5 30.5	4.56 6.53 8.47	46.4 44 40	48 57 58	2900	7.5	2.5
69	50-200(I)B	15.2 21.8 28.3	4.22 6.06 7.86	40 38 34.5	55	2900	5.5	2.5
70	50-250(I)	17.5 25 32.5	4.86 6.94 9.03	82 80 76.5	39 50 52	2900	15	2.5
71	50-250(I)A	16.4 23.4 30.5	4.56 6.5 8.47	71.5 70 67	39 50 52	2900	11	2.5
72	50-250(I)B	15 21.6 28	4.17 6.0 7.78	61 60 57.4	38 49 54	2900	11	2.5
73	50-315(I)	17.5 25 32.5	4.86 6.94 9.03	128 125 122	30 40 44	2900	30	2.5
74	50-315(I)A	16.6 23.7 31	4.61 6.58 8.6	115 113 110	30 40 44	2900	22	2.5
75	50-315(I)B	15.7 22.5 29.2	4.36 6.25 8.0	103 101 98	39	2900	18.5	2.5
76	50-315(I)C	14.4 20.6 26.8	4.0 5.72 7.44	86 85 83	38	2900	15	2.5
77	65-100	17.5 25 32.5	4.86 6.94 9.03	13.7 12.5 10.5	67 69 69	2900	1.5	2.5
78	65-100A	15.6 22.3 29	4.3 6.19 8.1	11 10 8.4	65 67 68	2900	1.1	2.5
79	65-125	17.5 25 32.5	4.86 6.94 9.03	21.5 20 18	60 68 67	2900	3	2.5
80	65-125A	15.6 22.3 29	4.33 6.19 8.1	17 16 14.4	58 66 65	2900	2.2	2.5
81	65-160	17.5 25 32.5	4.86 6.94 9.03	34.4 32 27.5	54 63 60	2900	4	2.5
82	65-160A	16.4 23.4 30.4	4.56 6.5 8.44	30 28 24	54 62 59	2900	4	2.5
83	65-160B	15.0 21.6 28	4.17 6.0 7.78	26 24 20.6	58	2900	3	2.5
84	65-200	17.5 25 32.5	4.86 6.94 9.03	52.7 50 45.5	49 58 59	2900	7.5	2.5
85	65-200A	16.4 23.5 30.5	4.56 6.53 8.47	46.4 44 40	48 57 58	2900	7.5	2.5
86	65-200B	15.2 21.8 28.3	4.22 6.06 7.86	40 38 34.5	55	2900	5.5	2.5
87	65-250	17.5 25 32.5	4.86 6.94 9.03	82 80 76.5	39 50 52	2900	15	2.5
88	65-250A	16.4 23.4 30.5	4.56 6.5 8.47	71.5 70 67	39 50 52	2900	11	2.5
89	65-250B	15 21.6 28	4.17 6.0 7.78	61 60 57.4	38 49 54	2900	11	2.5
90	65-315	17.5 25 32.5	4.86 6.94 9.03	127 125 122	32 40 44	2900	30	2.5
91	65-315A	16.6 23.7 31	4.61 6.58 8.6	115 113 110	32 40 44	2900	22	2.5
92	65-315B	15.7 22.5 29.2	4.36 6.25 8.0	103 101 98	39	2900	18.5	2.5
93	65-315C	14.4 20.6 26.8	4.0 5.72 7.44	86 85 83	38	2900	15	2.5
94	65-100(I)	35 50 65	9.72 13.9 18.1	13.8 12.5 10	67 73 70	2900	3	3.0
95	65-100(I)A	31.3 44.7 58	8.7 12.4 16.1	11 10 8	66 72 69	2900	2.2	3.0
96	65-125(I)	35 50 65	9.72 13.9 18.1	22 20 17	67 72.5 70	2900	5.5	3.0
97	65-125(I)A	31.3 45 58	8.7 12.5 16.1	17.5 16 13.6	66 71 69	2900	4	3.0
98	65-160(I)	35 50 65	9.72 13.9 18.1	35 32 28	63 71 70	2900	7.5	3.0
99	65-160(I)A	32.7 46.7 61	9.1 13.0 16.9	30.6 28 24	62 70 69	2900	7.5	3.0
100	65-160(I)B	30.3 43.3 56.3	8.4 12.0 15.6	26 24 21	69	2900	5.5	3.0
101	65-200(I)	35 50 65	9.72 13.9 18.1	53.5 50 46	55 67 68	2900	15	3.0
102	65-200(I)A	32.8 47 61	9.1 13.1 16.9	47 44 40	54 66 67	2900	11	3.0
103	65-200(I)B	30.5 43.5 56.6	8.5 12.1 15.7	40.6 38 33.4	65	2900	7.5	3.0
104	65-250(I)	35 50 65	9.72 13.9 18.1	83 80 72	52 59 60	2900	22	3.0
105	65-250(I)A	32.5 46.7 61	9.0 13.0 16.9	73 70 63	52 59 60	2900	18.5	3.0
106	65-250(I)B	30 43.3 56	8.3 12.0 15.6	62 60 54	58	2900	15	3.0
107	65-315(I)	35 50 65	9.72 13.9 18.1	128 125 121	44 54 57	2900	37	3.0
108	65-315(I)A	32.5 46.5 60.5	9.0 12.9 16.8	112.6 110 106.4	43 54 57	2900	30	3.0
109	65-315(I)B	31 44.5 58	8.6 12.4 16.1	102.5 100 98	53	2900	30	3.0
110	65-315(I)C	29 41 53.6	8.1 11.4 14.9	87 85 83	51	2900	22	3.0
111	80-100	35 50 65	9.72 13.9 18.1	13.8 12.5 10	67 73 70	2900	3	3.0
112	80-100A	31.3 44.7 58	8.7 12.5 16.1	11 10 8	66 72 69	2900	2.2	3.0

性能参数

Performance parameter

序号 NO.	型号 Type	流量 Flow		扬程 Head	效率 Eff.	转速 Speed	功率 Power	汽蚀 NPSH
		m³/h	L/s	m	%	r/min	kW	m
113	80-125	35 50 65	9.72 13.9 18.1	22 20 17	67 72.5 70	2900	5.5	3.0
114	80-125A	31.3 45 58	8.7 12.5 16.1	17.5 16 13.6	66 71 69	2900	4	3.0
115	80-160	35 50 65	9.72 13.9 18.1	35 32 28	63 71 70	2900	7.5	3.0
116	80-160A	32.7 46.7 61	9.1 13.0 16.9	30.6 28 24	62 70 69	2900	7.5	3.0
117	80-160B	30.3 43.3 56.3	8.4 12.0 15.6	26 24 21	69	2900	5.5	3.0
118	80-200	35 50 65	9.81 13.9 18.1	53.5 50 46	55 67 68	2900	15	3.0
119	80-200A	32.8 47 61	9.1 13.1 16.9	47 44 40	54 66 67	2900	11	3.0
120	80-200B	30.5 43.5 56.6	8.5 12.1 15.7	40.6 38 33.4	65	2900	7.5	3.0
121	80-250	35 50 65	9.72 13.9 18.1	83 80 72	52 59 60	2900	22	3.0
122	80-250A	32.5 46.7 61	9.0 13.0 16.9	73 70 63	52 59 60	2900	18.5	3.0
123	80-250B	30 43.3 56	8.3 12.2 15.6	62 60 54	58	2900	15	3.0
124	80-315	35 50 65	9.72 13.9 18.1	128 125 122	43 54 57	2900	37	3.0
125	80-315A	32.5 46.5 60.5	9.0 12.9 16.8	112.6 110 107.4	43 54 57	2900	30	3.0
126	80-315B	31 44.5 58	8.6 12.4 16.1	102.5 100 98	53	2900	30	3.0
127	80-315C	29 41 53.6	8.1 11.4 14.9	98 85 83	51	2900	22	3.0
128	80-350	35 50 65	9.72 13.9 18.1	146 150 142	55 66 67	2900	55	3.0
129	80-350A	31 44.5 58	8.6 12.4 16.1	138.4 142 134.8	65	2900	45	3.0
130	80-350B	29 41 53.6	8.1 11.4 14.9	131.4 135 127.8	63	2900	37	3.0
131	80-100(I)	70 100 130	19.4 27.8 36.1	13.6 12.5 11	66 76 75	2900	5.5	4.5
132	80-100(I)A	62.6 89 116	17.4 24.7 32.2	11 10 8.8	64 74 74	2900	4	4.5
133	80-125(I)	70 100 130	19.4 27.8 36.1	23.5 20 14	70 76 65	2900	11	4.5
134	80-125(I)A	62.6 89 116	17.4 24.7 32.2	19 16 11	68 74 65	2900	7.5	4.5
135	80-160(I)	70 100 130	19.4 27.8 36.1	36.5 32 24	70 76 65	2900	15	4.5
136	80-160(I)A	65.4 93.5 121.6	18.2 26.0 33.8	32 28 21	68 74 67	2900	11	4.5
137	80-160(I)B	60.6 86.6 112.5	16.8 24.1 31.3	27 24 18	72	2900	11	4.5
138	80-200(I)	70 100 130	19.4 27.8 36.1	54 50 42	65 74 73	2900	22	4.0
139	80-200(I)A	65.4 93.5 121.6	18.2 26.0 33.8	47.5 44 37	64 73 72	2900	18.5	4.0
140	80-200(I)B	61 87 113	16.9 24.2 31.4	41 38 32	71	2900	15	4.0
141	80-250(I)	70 100 130	19.4 27.8 36.1	87 80 68	65 69 68	2900	37	4.0
142	80-250(I)A	65.4 93.5 121.6	18.2 26.0 33.8	76 70 59.5	61 68 67	2900	30	4.0
143	80-250(I)B	61 87 113	16.9 24.2 31.4	65 60 51	66	2900	30	4.0
144	80-315(I)	70 100 130	19.4 27.8 36.1	132 125 114	55 66 67	2900	75	4.0
145	80-315(I)A	66.5 95 123.6	18.5 26.4 34.3	119 113 103	55 66 67	2900	55	4.0
146	80-315(I)B	63 90 117	17.5 25 32.5	106.6 101 92	65	2900	45	4.0
147	80-315(I)C	58 82 107	16.1 22.7 29.7	90 85 76	63	2900	37	4.0
148	100-100	70 100 130	19.4 27.8 36.1	13.6 12.5 11	66 76 75	2900	5.5	4.5
149	100-100A	62.6 89 116	17.4 47 32.2	11 10 8.8	64 74 74	2900	4	4.5
150	100-125	70 100 130	19.4 27.8 36.1	23.5 20 14	70 76 65	2900	11	4.5
151	100-125A	62.6 89 116	17.4 24.7 32.2	19 16 11	68 74 63	2900	7.5	4.5
152	100-160	70 100 130	19.4 27.8 36.1	36.5 32 24	70 76 65	2900	15	4.5
153	100-160A	65.4 93.5 121.6	18.2 26.0 33.8	32 28 21	68 74 67	2900	11	4.5
154	100-160B	60.6 86.6 112.5	16.8 24.1 31.3	27 24 18	72	2900	11	4.5
155	100-200	70 100 130	19.4 27.8 36.1	54 50 42	65 74 73	2900	22	4.0
156	100-200A	65.4 93.5 121.6	18.2 26.0 33.8	47.5 44 37	64 73 72	2900	18.5	4.0
157	100-200B	61 87 113	16.9 24.2 31.4	41 38/ 32	71	2900	15	4.0
158	100-250	70 100 130	19.4 27.8 36.1	87 80 68	62 69 68	2900	37	4.0
159	100-250A	65.4 93.5 12..6	18.2 26.0 33.8	76 70 59.5	61 68 67	2900	30	4.0
160	100-250B	61 87 113	16.9 24.2 31.4	65 60 51	66	2900	30	4.0
161	100-315	70 100 130	19.4 27.8 36.1	132 125 114	55 66 67	2900	75	4.0
162	100-315A	66.5 95 123.6	18.5 26.4 34.3	119 113 103	65 66 67	2900	55	4.0
163	100-315B	63 90 117	17.5 25 32.5	106.6 101 92	65	2900	45	4.0
164	100-315C	58 82 107	16.1 22.8 29.7	90 85 76	63	2900	37	4.0
165	100-350	60 100 120	16.7 27.8 33.3	153.6 150 142	72 57 74	2900	90	4.0
166	100-350A	61 87 113	16.9 24.2 31.4	145.6 142 134	75	2900	75	4.0
167	100-350B	58 82 107	16.1 22.8 29.7	138.6 135 127	75	2900	55	4.0
168	100-100(I)	96 160 192	26.7 44.4 53.3	14 12.5 10	64 73 70	2900	11	4.5
169	100-125(I)	96 160 192	26.7 44.4 53.3	24 20 14	62 74 69	2900	15	4.5
170	100-125(I)A	84 140 168	23.3 39 49.7	20 17 12	64 72 68	2900	11	4.5
171	100-160(I)	96 160 192	26.7 44.4 53.3	36 32 27	69 79 75	2900	22	5.0
172	100-160(I)A	84 140 168	23.3 39 46.7	32 28 23.5	66 76 72	2900	18.5	5.0
173	100-200(I)	96 160 192	26.7 44.4 53.3	53 50 45	69 79 78	2900	37	5.2
174	100-200(I)A	84 140 168	23.3 39 46.7	48 45 40	64 74 73	2900	30	4.5
175	100-200(I)B	60 100 120	16.7 27.8 33.3	43 40 36	72	2900	22	4.5
176	100-250(I)	96 160 192	26.7 44.4 53.3	83 80 72	65 77 74	2900	55	4.8
177	100-250(I)A	84 140 168	23.3 39 46.7	75 70 65	60 72 69	2900	45	4.5
178	100-250(I)B	60 100 120	16.7 27.8 33.3	68 63 58	70	2900	37	4.5
179	125-100	96 160 192	26.7 44.4 53.3	13 12.5 12	82	2900	11	4.0
180	125-100A	86 143 172	23.9 39.7 47.8	10.4 10 9.6	77	2900	7.5	4.0
181	125-125	96 160 192	26.7 44.4 53.3	22.6 20 17	80	2900	15	4.0
182	125-125A	86 143 172	23.9 39.7 47.8	18 16 13.6	77	2900	11	4.0
183	125-160	96 160 192	26.7 44.4 53.3	36 32 28	78	2900	22	4.0
184	125-160A	90 150 180	25 41.7 50	31.5 28 24.5	76	2900	18.5	4.0
185	125-160B	83 138 166	21.7 38.3 46.1	27 24 21	73	2900	15	4.0
186	125-200	96 160 192	26.7 44.4 53.3	55 50 46	77	2900	37	5.5
187	125-200A	90 150 180	25 41.7 50	48.4 44 40.5	76	2900	30	5.5
188	125-200B	83 138 166	21.7 38.3 46.1	41.3 37.5 34.5	75	2900	22	5.5
189	125-250	96 160 192	26.7 44.4 53.3	87 80 73	75	2900	55	5.0
190	125-250A	90 150 180	25 41.7 50	76 71 84	74	2900	45	5.5
191	125-250B	83 138 166	21.7 38.3 46.1	65 60 55	73	2900	37	5.5
192	125-315	96 160 192	26.7 44.7 53.3	133 125 119	70	2900	90	5.0
193	125-315A	90 150 180	25 41.7 50	117 110 104.6	70	2900	75	5.0
194	125-315B	86 143 172	23.9 39.7 47.8	106.4 100 95.5	69	2900	75	5.0
195	125-315C	80.5 134 161	22.4 37.2 44.7	96 88 86	67	2900	55	5.0
196	150-125	96 160 192	26.7 44.4 53.3	22.6 24 17	71 76 75	2900	11	4.0
197	150-125A	90 150 180	25 41.7 50	18 16 13.6	66 74 73	2900	7.5	4.0
198	150-160	96 160 192	26.7 44.4 53.3	36 32 27	71 75 76	2900	22	4.0
199	150-160A	90 150 180	25 41.7 50	32 28 23.5	67 73 74	2900	18.5	4.0
200	150-160B	84 140 168	23.3 39 46.7	27 24 21	64 70 71	2900	15	4.0
201	150-200	96 160 192	26.7 44.4 53.3	54 50 42	72 77 78	2900	37	4.0
202	150-200A	90 150 180	25 41.7 50	47 44 39	68 75 76	2900	30	4.0
203	150-200B	84 140 168	23.3 39 46.7	41 38 33	67 72 73	2900	22	4.0
204	150-250	120 200 240	33.3 55.6 66.7	87 80 72	60 73 70	2900	75	4.5
205	150-250A	112 187 224	31.1 51.9 62.2	76 70 63	58 70 71	2900	55	4.5
206	150-250B	104 173 208	28.9 48.1 57.8	65 60 54	58 71 71	2900	45	4.5
207	150-315	120 200 240	33.3 55.6 66.7	133 125 120	60 75 77	2900	110	4.5
208	150-315A	112 187 224	31.1 51.9 62.2	116 110 105	63 74 72	2900	90	4.5
209	150-315B	104 173 208	28.9 48.1 57.8	100 95 91	60 72 71	2900	75	4.5
210	150-350	96 160 192	26.7 44.4 53.3	153.6 150 142.8	69 70 67	2900	110	4.5
211	150-350A	90 150 180	25 41.7 50	145.6 142 134.8	70	2900	90	5.5
212	150-350B	84 140 168	23.3 39 46.7	138.6 135 127.8	65 70 74	2900	75	5.5
213	40-125(I)	3.75 6.3 7.5	1.04 1.75 2.08	5.4 5 4.6	53	1450	0.75	2.5
214	40-160(I)	3.75 6.3 7.5	1.04 1.75 2.08	8.4 8 7.5	48	1450	0.75	2.5
215	40-160(I)A	3.2 5.5 6.4	0.89 1.53 1.78	6.3 6 5.6	46	1450	0.75	2.5
216	40-200(I)	3.75 6.3 7.5	1.04 1.75 2.08	13 12.5 12	40	1450	0.75	2.5
217	40-200(I)A	3.5 5.8 7.0	0.97 1.61 1.94	11.4 11 10	39	1450	0.75	2.5
218	40-250(I)	3.75 6.3 7.5	1.04 1.75 2.08	20.5 20 19.5	32	1450	1.5	2.5
219	40-250(I)A	3.5 5.8 7.0	0.97 1.61 1.94	17.4 17.0 16.5	32	1450	1.1	2.5
220	50-125	3.75 6.3 7.5	1.04 1.75 2.08	5.4 5 4.6	53	1450	0.75	2.5
221	50-160	3.75 6.3 7.5	1.04 1.75 2.08	8.4 8 7.5	48	1450	0.75	2.5
222	50-160A	3.2 5.5 6.4	0.89 1.53 1.78	6.3 6 5.6	46	1450	0.75	2.5
223	50-200	3.75 6.3 7.5	1.04 1.75 2.08	13 12.5 12	40	1450	0.75	2.5
224	50-200A	3.5 5.8 7.0	0.97 1.61 1.94	11.4 11.0 10	39	1450	0.75	2.5

性能参数

Performance parameter

序号 NO.	型号 Type	流量 Flow m³/h	流量 Flow L/s	扬程 Head m	效率 Eff. %	转速 Speed r/min	功率 Power kW	汽蚀 NPSH m
225	50-250	3.75 6.3 7.5	1.04 1.75 2.08	20.5 20 19.5	32	1450	1.5	2.5
226	50-250A	3.5 5.8 7.0	0.97 1.61 1.94	17.4 17.0 16.5	32	1450	1.1	2.5
227	50-125(I)	7.5 12.5 15	2.08 3.47 4.17	5.5 5 4.6	64	1450	0.75	2.5
228	50-160(I)	7.5 12.5 15	2.08 3.47 4.17	8.7 8 7.5	60	1450	0.75	2.5
229	50-160(I)A	7 11 14	1.94 3.1 3.9	6.7 6 5.5	58	1450	0.75	2.5
230	50-200(I)	7.5 12.5 15	2.08 3.47 4.17	13.2 12.5 11.7	55	1450	1.1	2.5
231	50-200(I)A	6.5 11.2 13.0	1.8 3.11 3.61	11.0 10 9	54	1450	0.75	2.5
232	50-250(I)	7.5 12.5 15	2.08 3.47 4.17	20.5 20 19.5	45	1450	2.2	2.5
233	50-250(I)A	7.0 11.7 14	1.94 3.25 3.89	18 17.5 17	44	1450	1.5	2.5
234	50-250(I)B	6.0 10 12	1.67 2.78 3.33	13.5 13 12.5	43	1450	1.1	2.5
235	50-315(I)	7.5 12.5 15	2.08 3.47 4.17	32.4 32 31.5	36	1450	4	2.5
236	50-315(I)A	7.0 11.7 14	1.94 3.25 3.89	28.3 28 27.5	36	1450	3	2.5
237	50-315(I)B	6 10 12	1.67 2.78 3.33	21.5 21 20.5	34	1450	3	2.5
238	65-125	7.5 12.5 15	2.08 3.47 4.17	5.5 5 4.6	64	1450	0.75	2.8
239	65-160	7.5 12.5 15	2.08 3.47 4.17	8.7 8 7.5	60	1450	0.75	2.8
240	65-160A	7 11 14	1.94 3.1 3.9	6.7 6 5.5	58	1450	0.75	2.8
241	65-200	7.5 12.5 15	2.08 3.47 4.17	13.2 12.5 11.7	55	1450	1.1	2.8
242	65-200A	6.5 11.2 13.0	1.8 3.11 3.61	11 10 9	54	1450	0.75	2.8
243	65-250	7.5 12.5 15	2.08 3.47 4.17	20.5 20 19.5	45	1450	2.2	2.8
244	65-250A	7.0 11.7 14	1.94 3.25 3.89	18 17.5 17	44	1450	1.5	2.8
245	65-250B	6 11 12	1.67 2.78 3.33	13.5 13 12.5	43	1450	1.1	2.8
246	65-315	7.5 12.5 15	2.08 3.47 4.17	32.4 32 31.5	36	1450	4	2.8
247	65-315A	7.0 11.7 14	1.94 3.25 3.89	28.3 28 27.5	36	1450	3	2.8
248	65-315B	6 10 12	1.67 2.78 3.33	21.5 21 20.5	34	1450	3	2.8
249	65-125(I)	15 25 30	4.17 6.94 8.33	5.6 5 4.5	70	1450	0.75	2.8
250	65-160(I)	15 25 30	4.17 6.94 8.33	9 8 7.2	68	1450	1.5	2.8
251	65-160(I)A	14 22 28	3.89 6.1 7.8	7 6 5.5	67	1450	1.1	2.8
252	65-200(I)	15 25 30	4.17 6.94 8.33	13.2 12.8 11.8	64	1450	2.2	2.8
253	65-200(I)A	14 23.3 27.9	3.89 6.47 7.75	15 11 10.2	63	1450	1.5	2.8
254	65-250(I)	15 25 30	4.17 6.94 8.33	21 20 18.8	58	1450	3	2.8
255	65-250(I)A	13.3 22.2 26.6	3.69 6.17 7.39	16.6 15.8 14.8	58	1450	2.2	2.8
256	65-250(I)B	12 20 24	3.33 5.56 6.67	13.6 12.8 12.2	57	1450	1.5	2.8
257	65-315(I)	15 25 30	4.17 6.94 8.33	32.5 32 31.5	51	1450	5.5	2.8
258	65-315(I)A	13.5 22.5 27	3.89 6.39 7.78	26.4 26 25.6	50	1450	4	2.8
259	65-315(I)B	12 20 24	3.33 5.56 6.67	20.4 21 20.6	49	1450	3	2.8
260	80-125	15 25 30	4.17 6.94 8.33	5.6 5 4.5	70	1450	0.75	2.8
261	80-160	15 25 30	4.17 6.94 8.33	9 8 7.2	68	1450	1.5	2.8
262	80-160A	14 22 28	3.89 6.1 7.8	7 6 5.5	67	1450	1.1	2.8
263	80-200	15 25 30	4.17 6.94 8.33	13.2 12.5 11.8	64	1450	2.2	2.8
264	80-200A	14 23.3 27.9	3.89 6.47 7.75	11.5 11 10.2	63	1450	1.5	2.8
265	80-250	15 25 30	4.17 6.94 8.33	21 20 18.8	58	1450	3	2.8
266	80-250A	13.3 22.2 26.6	3.69 6.17 7.39	16.6 15.8 14.8	58	1450	2.2	2.8
267	80-250B	12 20 24	3.33 5.56 6.67	13.6 12.8 12.2	57	1450	1.5	2.8
268	80-315	15 25 30	4.17 6.94 8.33	32.5 32 31.5	51	1450	5.5	2.8
269	80-315A	13.5 22.5 27	3.38 6.25 6.75	26.4 26 25.6	50	1450	4	2.8
270	80-315B	12 20 24	3.33 5.56 6.67	21.4 21 20.6	49	1450	3	2.8
271	80-350	15 25 30	4.17 6.94 8.33	39 37.5 36.5	40 50 48	1450	7.5	3.0
272	80-350A	14 23.4 28	3.89 6.5 7.8	34 32.5 31.5	38 46 45	1450	5.5	3.0
273	80-350B	13 21.5 26	3.6 5.98 7.2	29 28 27	37 46 45	1450	5.5	3.0
274	80-125(I)	30 50 50	8.33 13.9 16.7	6 5 4	74	1450	1.5	3.0
275	80-160(I)	30 50 60	8.33 13.9 16.7	9.2 8 6.8	74	1450	2.2	3.0
276	80-160(I)A	28 46 56	7.78 12.8 15.6	6.7 6 5.5	73	1450	1.5	3.0
277	80-200(I)	30 50 60	8.33 13.9 16.7	13.5 12.5 11.8	72	1450	4	3.0
278	80-200(I)A	26.4 44.7 52.8	7.33 12.4 14.7	10.5 10 9.5	71	1450	3	3.0
279	80-250(I)	30 50 60	8.33 13.9 16.7	21.3 20 19	67	1450	5.5	3.0
280	80-250(I)A	28 46 56	7.78 12.8 15.6	18.2 17.0 16.5	66	1450	4	3.0
281	80-250(I)B	24 40.5 48	6.67 11.3 13.3	14.0 13.0 12.5	64	1450	3	3.0
282	80-315(I)	30 50 60	8.33 13.9 16.7	34 32 30	62	1450	11	3.0
283	80-315(I)A	28 46 56	7.78 12.8 15.6	29.6 27.9 26.1	61	1450	7.5	3.0
284	80-315(I)B	24 40.5 48	6.67 11.3 13.3	22.5 21 19.3	60	1450	5.5	3.0
285	100-125	30 50 60	8.33 13.9 16.7	6 5 4	74	1450	1.5	3.0
286	100-160	30 50 60	8.33 13.9 16.7	9.2 8 6.8	74	1450	2.2	3.0
287	100-200	30 50 60	7.78 12.8 15.6	13.5 12.5 11.8	72	1450	4	3.0
288	100-200A	26.4 44.7 52.8	7.33 12.4 14.7	10.5 10 9.5	71	1450	3	3.0
289	100-250	30 50 60	8.33 13.9 16.7	21.3 20 19	67	1450	5.5	3.0
290	100-250A	28 46 56	7.78 12.8 15.6	18.2 17.0 16.5	66	1450	4	3.0
291	100-250B	24 40.5 48	6.67 11.3 13.3	14 13 12.5	64	1450	3	3.0
292	100-315	30 50 60	8.33 13.9 16.7	34 32 30	62	1450	11	3.0
293	100-315A	28 46 56	7.78 12.8 15.6	29.6 27.9 26.1	61	1450	7.5	3.0
294	100-315B	24 40.5 48	6.67 11.3 13.3	22.5 21 19.3	60	1450	5.5	3.0
295	100-350	30 50 60	8.3 13.9 16.7	39 37.5 36.5	45 58 56	1450	11	4.0
296	100-350A	28 46.8 56	7.78 13.0 15.6	34 32.5 31.5	43 57 55	1450	11	4.0
297	100-350B	26 43.2 52	7.2 12.0 14.4	29.5 28.5 27.5	44 57 55	1450	7.5	4.0
298	100-125(I)	50 80 100	13.9 22.2 27.8	5.6 5 4.25	75	1450	2.2	3.0
299	100-160(I)	50 80 100	13.9 22.2 27.8	8.8 8 7	75	1450	3	3.0
300	100-160(I)A	45 72 90	12.5 20 25	7.2 6.5 5.6	74	1450	2.2	3.0
301	100-200(I)	50 80 100	13.9 22.2 27.8	13.5 12.5 11.5	75	1450	5.5	3.0
302	100-200(I)A	45 72 90	12.5 20 25	11 10 9.3	73	1450	4	3.0
303	100-250(I)	50 80 100	13.9 22.2 27.8	21.5 20 18.3	72	1450	11	3.0
304	100-250(I)A	46.8 75 93.6	13 20.8 26	18.7 17.5 16	71	1450	7.5	3.0
305	100-250(I)B	45.5 69 85	11.8 19.2 23.6	16 15 13.7	70	1450	5.5	3.0
306	100-315(I)	50 80 100	13.9 22.2 27.8	33.2 32 29.5	68	1450	15	3.0
307	100-315(I)A	45 75 90	12.5 20.8 25	28.2 27.5 26	66	1450	11	3.0
308	100-315(I)B	42 70 84	11.7 19.4 23.3	24.8 24 22.6	65	1450	11	3.0
309	100-400(I)	50 80 100	13.9 22.2 27.8	52 50 48.5	65	1450	22	3.0
310	100-400(I)A	45 75 90	12.5 20.8 25	46 44 43	65	1450	18.5	3.0
311	100-400(I)B	42 70 84	11.7 19.4 23.3	39.5 38 36	63	1450	15	3.0
312	100-400(I)C	40 64 80	11.1 17.8 22.2	33.3 32 31	63	1450	11	3.0
313	125-125	60 100 120	16.7 27.8 33.3	6.5 5 4	78	1450	2.2	3.0
314	125-160	60 100 120	16.7 27.8 33.3	10 8 7	78	1450	4	3.0
315	125-160A	52 87 104	14.4 24.2 28.9	7.5 6 5.2	76	1450	3	3.0
316	125-200	60 100 120	16.7 27.8 33.3	14.5 12.5 11	75	1450	7.5	3.0
317	125-200A	54 89 108	15 24.7 30	11 10 8.9	73	1450	5.5	3.0
318	125-250	60 100 120	16.7 27.8 33.3	21.5 20 18.5	75	1450	11	3.0
319	125-250A	56 93.3 112	15.6 25.9 31.1	18.5 17.5 16.0	73	1450	7.5	3.0
320	125-250B	52 87 104	14.4 24.2 28.9	16 15 14	71	1450	7.5	3.0
321	125-315	60 100 120	16.7 27.8 33.3	33.5 32 30.5	71	1450	15	3.0
322	125-315A	55 91 110	15.3 25.3 30.6	28 27 25.6	71	1450	11	3.0
323	125-315B	52 87 104	14.4 24.2 28.9	25 24 23	70	1450	11	3.0
324	125-400	60 100 120	16.7 27.8 33.3	52 50 48.5	53 69 67	1450	30	3.0
325	125-400A	56 94 112	15.6 26.1 31.1	45.8 44 42	64	1450	22	3.0
326	125-400B	52 87 104	14.4 24.2 28.9	39 37.5 36.7	62	1450	18.5	3.0
327	125-200(I)	100 160 200	27.8 44.4 55.5	13 12.5 11	82	1450	11	3.0
328	125-200(I)A	88 143 176	24.4 39.7 48.9	10.5 10 8.8	81	1450	7.5	3.0
329	125-250(I)	100 160 200	27.8 44.4 55.5	22.5 20 17	81	1450	15	3.0
330	125-250(I)A	92 147 184	25.6 40.8 51.1	19 17 14.5	80	1450	11	3.0
331	125-250(I)B	84 134 168	23.3 37.2 46.6	15.5 14 12	79	1450	7.5	3.0
332	125-315(I)	100 160 200	27.8 44.4 55.5	35 32 28	63 74 73	1450	22	3.0
333	125-315(I)A	93.5 150 187	26 41.7 51.9	30.5 28 24.5	72	1450	18.5	3.0
334	125-315(I)B	85 138 170	23.6 37.3 47.2	26 24 18.5	71	1450	15	3.0
335	125-400(I)	100 160 200	27.8 44.4 55.5	53 50 46	62 71 72	1450	37	3.0
336	125-400(I)A	93.5 150 187	26 41.7 51.9	46.5 44 40.5	70	1450	30	3.0

性能参数

Performance parameter

序号 NO.	型号 Type	流量 Flow		扬程 Head	效率 Eff.	转速 Speed	功率 Power	汽蚀 NPSH
		m³/h	L/s	m	%	r/min	kW	m
337	125-400(I)B	85 138 170	23.6 38.3 47.2	40 38 35	70	1450	30	3.0
338	125-400(I)C	80 128 160	22.2 35.5 44.4	34 32 29.5	68	1450	22	3.0
339	150-200	100 160 200	27.8 44.4 55.5	13 12.5 11	82	1450	11	3.0
340	150-200A	88 143 176	24.4 39.7 48.9	10.5 10 8.8	81	1450	7.5	3.0
341	150-250	100 160 200	27.8 44.4 55.5	22.5 20 17	81	1450	15	3.0
342	150-250A	92 147 184	25.6 40.8 51.1	19 17 14.5	80	1450	11	3.0
343	150-250B	84 134 168	23.3 37.2 46.6	15.5 14 12	79	1450	7.5	3.0
344	150-315	100 160 200	27.8 44.4 55.5	35 32 28	63 74 73	1450	22	3.0
345	150-315A	93.5 150 187	26 41.7 51.9	30.5 28 24.5	72	1450	18.5	3.0
346	150-315B	80 128 170	23.6 38.3 47.2	26 24 18.5	71	1450	15	3.0
347	150-400	100 160 200	27.8 44.4 55.5	53 50 46	62 71 72	1450	37	3.0
348	150-400A	93.5 150 187	26 41.7 51.9	46.5 44 40.5	70	1450	30	3.0
349	150-400B	85 138 170	23.6 38.3 47.2	40 38 35	70	1450	30	3.0
350	150-400C	80 128 160	22.2 35.5 44.4	34 32 29.5	68	1450	22	3.0
351	150-200(I)	120 200 240	33.3 55.6 66.7	14 12.5 11	66 76 76	1450	15	3.0
352	150-200(I)A	108 179 216	30 49.7 60	11.3 10 8.9	63 75 74	1450	11	3.0
353	150-250(I)	120 200 240	33.3 55.6 66.7	22.5 20 17.5	65 76 74	1450	18.5	3.0
354	150-250(I)A	112 187 224	31.1 51.9 62.2	19.5 17.5 15.2	64 75 75	1450	15	3.0
355	150-250(I)B	104 173 208	28.9 48.9 57.8	16 14 12	73	1450	11	3.0
356	150-315(I)	120 200 240	33.3 55.6 66.7	34 32 29	68 78 80	1450	30	3.0
357	150-315(I)A	112 187 224	31.1 51.9 62.2	29.5 28 25	65 76 76	1450	22	3.0
358	150-315(I)B	104 173 208	28.9 48.1 57.8	25.5 24 21.5	65 76 76	1450	18.5	3.0
359	150-400(I)	120 200 240	33.3 55.6 66.7	53 50 46	64 74 73	1450	45	3.0
360	150-400(I)A	112 187 224	31.1 51.9 62.2	46 44 40	62 73 73	1450	37	3.0
361	150-400(I)B	104 173 208	28.9 48.1 57.8	40 37.5 34.5	62 73 72	1450	30	3.0
362	200-200	120 200 240	33.3 55.6 66.7	14 12.5 11	66 76 76	1450	15	3.5
363	200-200A	108 179 216	30 49.7 60	11.3 10 8.9	63 75 74	1450	11	3.5
364	200-250	120 200 240	33.3 55.6 66.7	22.5 20 17.5	65 76 74	1450	18.5	3.5
365	200-250A	112 187 224	31.1 51.9 62.2	19.5 17.5 15.2	63 75 75	1450	15	3.5
366	200-250B	107 173 208	28.9 48.9 57.8	16 14 12	62 73 73	1450	11	3.5
367	200-315	120 200 240	33.3 55.6 66.7	34 32 29	68 78 80	1450	30	3.5
368	200-315A	112 187 224	31.1 51.9 62.2	29.5 28 25	65 76 76	1450	22	3.5
369	200-315B	107 173 208	28.9 48.1 57.8	25.5 24 21.5	65 75 76	1450	18.5	3.5
370	200-400	120 200 240	33.3 55.6 66.7	53 50 46	64 74 73	1450	45	3.5
371	200-400A	112 187 224	31.1 51.9 62.2	46 44 40	62 73 73	1450	37	3.5
372	200-400B	104 173 208	28.9 48.1 57.8	40 37.5 34.5	62 73 72	1450	30	3.5
373	200-400C	96 160 192	26.6 44.4 53.3	34 32 29.5	71	1450	22	3.5
374	200-500	140 233 280	38.9 64.8 66.7	83 80 75	61 69 67	1450	90	3.5
375	200-500A	127 192 218	35.3 50.6 60.5	73 70.5 66	59 67 65	1450	75	3.5
376	200-500B	116 166 199	32.2 46.1 55.3	64.5 52 58	57 65 63	1450	55	3.5
377	200-200(I)	240 400 480	66.7 111.1 127.8	14 12.4 11	70 80 79	1450	22	4.0
378	200-200(I)A	216 358 432	60 99.4 120	11.4 10 9	65 78 78	1450	18.5	4.0
379	200-250(I)	240 400 480	66.7 111.1 127.8	22 20 16.5	70 80 78	1450	30	4.0
380	200-250(I)A	216 358 432	60 99.4 120	17.8 16 13.4	65 78 76	1450	22	4.0
381	200-250(I)B	195 322 390	54.2 89.4 108.3	14.5 13 11	66 76 76	1450	18.5	4.0
382	200-315(I)	240 400 480	66.7 111.1 127.8	37 32 28.5	70 80 80	1450	55	4.0
383	200-315(I)A	220 374 440	61.1 103.9 122.2	31 28 24	68 70 78	1450	45	4.0
384	200-315(I)B	204 346 408	56.7 93.1 113.3	26.5 24 20.5	65 78 78	1450	37	4.0
385	200-400(I)	240 400 480	66.7 111.1 127.8	55 50 46	72 80 73	1450	90	4.0
386	200-400(I)A	220 374 440	61.1 103.9 122.2	46 44 38.5	78	1450	75	4.0
387	200-400(I)B	204 347 408	56.7 96.1 113.3	39.5 38 33	76	1450	55	4.0
388	200-400(I)C	224 320 416	62.2 88.9 115	34.9 32 25	70 76 72	1450	45	4.0
389	200-500(I)	280 400 520	77.8 111.1 144	87 82 72	73 80 77	1450	132	4.0
390	200-500(I)A	262 374 486	72.8 103.9 135	76 70 63	72 79 76	1450	110	4.0
391	200-500(I)B	242 346 250	67.2 96.1 125	65 60 54	71 78 75	1450	90	4.0
392	200-500(I)C	224 320 416	62.2 88.9 115	53.2 50 43.8	73 75 73	1450	75	4.0

性能参数

Performance parameter

序号 NO.	型号 Type	流量 Flow		扬程 Head	效率 Eff.	转速 Speed	功率 Power	汽蚀 NPSH
		m³/h	L/s	m	%	r/min	kW	m
393	250-250	320 550 640	88.9 152.8 177.8	23 20 17	70 82 80	1450	45	5.0
394	250-250A	285 490 570	79.2 136.1 158.3	18 16 13.5	81	1450	37	5.0
395	250-315	320 550 640	88.9 152.8 177.8	35 32 28	65 80 81	1450	75	5.0
396	250-315A	300 515 600	83.3 143 166.7	31 28 24.5	80	1450	55	5.0
397	250-315B	277 476 554	76.9 132.2 153.9	26 24 21	78	1450	45	5.0
398	250-400	320 550 640	88.9 152.8 177.8	54 50 46	72 81 80	1450	110	5.0
399	250-400A	300 515 600	83.3 143 166.7	47.5 44 40.5	80	1450	90	5.0
400	250-400B	277 476 554	76.9 132.2 153.9	40.5 37.5 34.7	78	1450	75	5.0
401	250-500	400 550 660	111.1 152.8 183.3	84 80 70	68 76 71	1450	200	5.5
402	250-500A	368 606 607	102.2 141.7 168.6	75 71 62.5	67 75 70	1450	160	5.5
403	250-500B	339 466 559	94.2 129.4 155.2	66.5 63.5 55.5	65 73 68	1450	132	5.5
404	300-235	450 720 900	125 200 250	21 18 15.5	76 81 74	970	55	5.0
405	300-235A	410 657 820	113.9 182.5 227.8	17.5 15 12.8	72 79 72	970	45	5.0
406	300-300	450 720 900	125 200 250	31.5 28 25	75 81 77	970	75	5.0
407	300-300A	416 666 832	115.6 185 231.1	27 24 21.5	75 80 76	970	75	5.0
408	300-300B	390 624 780	108.3 173.3 216.7	23.5 21 18.5	79	970	55	5.0
409	300-315	500 720 860	138.9 200 238.9	35 32 27	76 82 76	1450	90	6.0
410	300-315A	460 662 791	127.8 183.9 219.7	30.5 28 23.5	74 80 74	1450	75	6.0
411	300-315B	414 596 712	115 165.6 197.8	25.5 23.5 20	72 78 72	1450	55	6.0
412	300-380	450 720 900	125 200 250	48 44 34	84	970	132	5.0
413	300-380A	416 666 832	115.6 185 231.1	42 38 30	80	970	110	5.0
414	300-400	500 720 900	138.9 200 250	54.5 50 42	80	1450	132	5.5
415	300-400A	460 662 791	127.8 183.9 219.7	47 44 37	78	1450	110	5.5
416	300-400B	423 609 728	117.5 169.2 202.2	41 38 32	72 77 75	1450	90	5.5
417	300-400C	389 561 670	108.1 155.8 186.1	35.5 33 27.5	69 74 72	1450	75	5.5
418	300-500	540 720 900	150 200 250	85 80 70	78 80 78	1450	250	5.5
419	300-500A	506 675 720	140.6 187.5 320	74.4 70 61.2	77 79 77	1450	200	5.5
420	300-500B	468 625 667	130 173.6 185.3	63.8 60 52.5	76 78 76	1450	160	5.5
421	300-500C	425 570 605	118 158.3 168	53.2 50 43.8	75 77 75	1450	110	5.5
422	350-250	480 800 960	133.3 222.2 266.7	23 20 16	80	970	75	5.0
423	350-250A	430 715 860	119.4 198.6 238.9	18.5 16 13.0	78	970	55	5.0
424	350-315	480 800 960	133.3 222.2 266.7	35 32 27	80	1450	90	5.0
425	350-315A	450 748 900	125 207.8 250	30.5 28 23.5	79	1450	75	5.0
426	350-315B	416 692 832	115.6 192.2 231.1	26 24 20	78	1450	75	5.0
427	350-400	480 800 960	133.3 222.2 266.7	53 50 46	74	1450	160	5.0
428	350-400A	450 750 900	125 208.3 250	46.5 44 40	72	1450	132	5.0
429	350-400B	418 697 836	116.1 193.6 232.2	40 38 34.5	75 81 79	1450	110	5.0
430	350-460	1000 1670 1450	277.8 463.3 402.8	55 50 43	74	1450	250	6.0
431	350-460A	900 1080 1300	250 300 360	47 44 39	72	1450	200	6.0
432	350-460B	745 985 1182	206.9 273.6 328.3	42 38.5 34	60 70 68	1450	160	6.0
433	400-400	650 1080 1300	180.6 300 361	15 12.5 11.0	80	970	55	5.5
434	400-400A	580 966 1160	161.1 268.3 322.2	12 10 8.5	78	970	45	5.0
435	400-500	650 1080 1300	180.6 300 361	23.5 20 18	82	970	90	5.0
436	400-500A	600 996 1200	166.7 276.8 33.3	20 17 15	81	970	75	5.0
437	400-500B	560 935 1120	155.6 259.7 311.1	17.5 15 13.2	80	970	55	5.0
438	400-625	650 1080 1300	180.6 300 361	35 32 29	81	970	132	5.0
439	400-625A	600 996 1200	166.7 276.7 333.3	30 27 25	80	970	110	5.0
440	400-625B	560 935 1120	155.6 259.7 311.1	26 24 21.5	82	970	90	5.0
441	500-400	750 1200 1500	208.3 333.3 416.7	14.5 12.5 11	80	970	75	5.0
442	500-400A	670 1073 1340	186.1 298.1 372.2	11.5 10 8.8	80	970	55	5.0
443	500-500	750 1200 1500	208.3 333.3 416.7	24 20 18	81	970	110	5.0
444	500-500A	690 1106 1380	191.7 307.2 383.3	20 17 15	80	970	90	5.0
445	500-500B	648 1040 1296	180 288.9 360	17.5 15 13.5	79	970	75	5.0
446	500-625	750 1200 1500	208.3 333.3 416.7	35 32 29	80	970	160	5.0
447	500-625A	690 1106 1380	191.7 307.2 383.3	29.5 27 24.5	80	970	132	5.0
448	500-625B	648 1040 1296	180 288.9 360	26 24 22	78	970	110	5.0

安装

1、安装前应仔细检查流道内有无硬质物，以免运行时损坏叶轮和泵体。

2、安装时管路重量不允许加在泵上，以免使泵变形，影响正常运行。

3、拧紧地脚螺栓，以免起动时振动对泵性能的影响。

4、在泵的进、出口管路上安装调节阀，在泵出口附近安装压力表，以控制泵在额定工况内运行，确保泵的正常使用。

5、排出管路如装逆止阀应装在闸阀的外面。

6、泵的安方分为硬性联接和柔性联接安装。

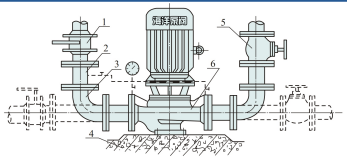
Installation

1. Before installation, carefully check whether there are hard objects in the flow passage to avoid damaging the impeller and pump body during operation.
2. During installation, the pipeline weight is not allowed to be added to the pump to avoid deformation of the pump and affecting the normal operation.
3. Tighten the foundation bolts to avoid the impact of vibration on pump performance during startup.
4. Install regulating valves on the inlet and outlet pipelines of the pump, and install pressure gauges near the pump outlet to control the operation of the pump within the rated working conditions and ensure the normal use of the pump.
5. If the discharge pipeline is equipped with a check valve, it shall be installed outside the gate valve.
6. The installation of the pump is divided into hard connection and flexible connection installation.

安装方式

硬性联接

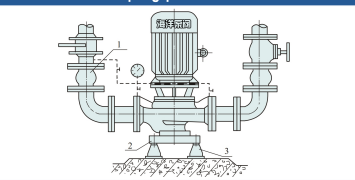
直接安装 Direct Installation



1	2	3
进口阀门 inlet valve	直管 straight pipe	弯管 Elbow pipe

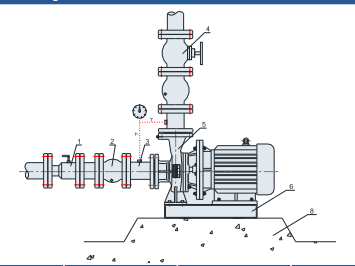
柔术联接

联接板，加隔振器 Coupling plate with vibration isolator



1	2
挠性接头 Flexible joint	联接板 connection board

硬性联接 Rigid connection

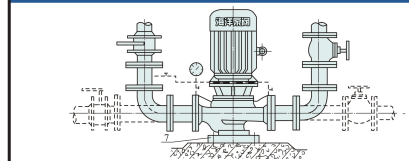


1	2	3	4
进口阀门 inlet valve	挠性接头 Flexible joint	直管 straight pipe	出口阀门 outlet valve

Installation Mode

Rigid Connection

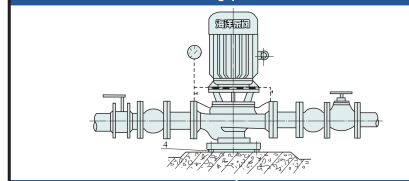
配LB型联接板安装 Installed with LB type connection board



4	5	6	7
浇注基础 Pouring foundation	出口阀门 outlet valve	泵 pump	联接板 connection board

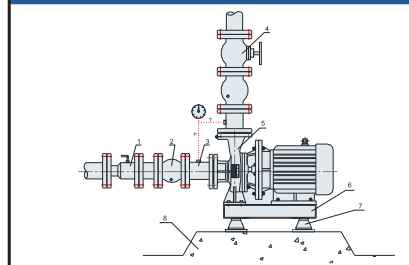
Flexible Connection

联接板,加隔振垫 Connecting plate with vibration isolation pad



3	4
隔震器 vibration isblator	隔震垫 vibration-insulating pads

柔性联接 Flexible connection



5	6	7	8
泵 pump	底座 base	隔震器 Vibration isolator	浇注基础 Pouring foundation

起动与停车

(一)起动前准备

1、用手拔转电机风叶，叶轮应无卡磨现象，转动灵活。

2、打开进口阀门、打开排气阀使液体充满整个泵腔，然后关闭排气阀。

3、用手盘动泵以使润滑液进入机械密封端面。

4、点动电机，确定转向是否正确。

(二)起动与运行

1、全开进口阀门，关闭吐出管路阀门。

2、接通电源，当泵达到正常转速后，再逐渐打开吐出管路上阀门，并调节到所需工况。

3、注意观察仪表读数，检查轴封泄漏情况，止吊时机械密封泄漏量<3调/分，检查电机、轴承处温度≤70℃，如果发现异常情况，应及时处理。

(三)停车

1、逐渐关闭吐出管路阀门，切断电源。

2、关闭进口阀门。

3、如环境温度低于0℃，应将泵内液体放尽，以免冻裂。

4、如长期停用，应将泵拆卸清洗，包装保管。

泵的维护

(一)运行中的维护

1、进口管道必须充满液体,禁止泵在汽蚀状态下长期运行。

2、定时检查电机电流值,不得超过电机额定电流。

3、泵进行长期运行后,由于机械磨损,使机组噪音及振动增大时，应停车检查，必要时可更换易损件,机组大修期一般为一年。

(二)机械密封维护

1、机械密封润滑应清洁无固体颗粒。

2、严禁机械密封在干磨情况下工作。

3、起动前应先盘动泵(电机)几圈,以免突然起动造成石墨环断裂损坏。

4、密封泄漏允差3滴/分,否则应检修。

Start and stop of the pump

(1)Preparation before starting

1. Manually pull and rotate the fan blade of the motor, and the impeller shall be free of jamming and grinding, and the rotation shall be flexible.
2. Open the inlet valve, open the exhaust valve to fill the whole pump chamber with liquid, and then close the exhaust valve.
3. Turn the pump by hand to make the lubricating fluid enter the mechanical seal face.
4. Jog the motor to determine whether the steering is correct.

(2)Start up and operation

1. Fully open the inlet valve and close the outlet pipeline valve.
2. Turn on the power supply. When the pump reaches the normal speed, gradually open the valve on the discharge pipeline and adjust it to the required working condition.
3. Pay attention to the reading of the instrument, check the leakage of the shaft seal, check that the leakage of the mechanical seal is less than 3 adjustments/min when stopping the lifting, and check that the temperature at the motor and bearing is less than or equal to 70 ℃. If any abnormality is found, it shall be handled in time.

(3)Parking

1. Gradually close the discharge pipeline valve and cut off the power supply.
2. Close the inlet valve.
3. If the ambient temperature is lower than 0 ℃, the liquid in the pump shall be drained to avoid frost cracking.
4. If the pump is out of service for a long time, it shall be disassembled, cleaned, packaged and kept.

Maintenance of pump

（1）Maintenance in operation

1. The inlet pipe must be filled with liquid, and it is forbidden to operate the pump for a long time under cavitation condition.
2. Regularly check the motor current value, which shall not exceed the motor rated current.
3. After long-term operation of the pump, if the noise and vibration of the unit increase due to mechanical wear, the pump shall be stopped for inspection, and the vulnerable parts can be replaced if necessary. The overhaul period of the unit is generally one year.

(2)Mechanical seal maintenance

1. Mechanical seal lubrication shall be clean and free of solid particles.
2. It is forbidden to work the mechanical seal under dry grinding.
3. Before starting, the pump (motor) shall be turned for several turns to prevent the graphite ring from being broken and damaged due to sudden starting.
4. The seal leakage tolerance is 3 drops / min, otherwise it shall be repaired.

故障原因和解决办法 Causes of failure and solutions

故　障 fault	可能的原因 Possible causes	排除方法 Exclusion method
1、水泵不出水 **1. The water pump does not discharge water**	a 进出口阀门未打开，进出管路阻塞，叶轮流道阻塞 b 电机运行方向不对，电机缺相转速很慢。 c 吸入管漏气。 d 泵没灌液体，泵腔内有空气。 e 进口供水不足，吸程过高，底阀漏水。 f 管路阻力过大，泵选型不当。 **A the inlet and outlet valves are not opened, the inlet and outlet pipelines are blocked, and the impeller passage is blocked** **B the motor runs in the wrong direction, the motor is out of phase and the speed is very slow.** **C the suction pipe leaks.** **D the pump is not filled with liquid and there is air in thepump chamber.** **E the water supply at the inlet is insufficient, the suction lift is too high, and the bottom valve leaks.** **F excessive pipeline resistance and improper pump selection.**	a 检查，去除阻塞物 b 调整电机方向，紧固电机接线。 c 拧紧各密封面，排除空气。 d 打开泵上盖或打开排气阀，排尽空气。 e 停机检查、调整（带吸程使用易出现此现象）。 f 减少管路弯道，重新选泵。 **A check and remove obstructions** **B adjust the motor direction and fasten the motor wiring.** **C tighten all sealing surfaces to remove air.** **D open the upper cover of the pump or open the exhaust valve to exhaust the air.** **E stop the machine for inspection and adjustment (this phenomenon is easy to occur when using with suction lift).** **F reduce pipeline bends and reselect pumps.**
2、水泵流量不足 **2. Insufficient water pump flow**	a 先按1原因检查 b 管道、泵流产叶轮部分阻塞，水垢沉积、阀门开度不足。 c 电压偏低。 d 叶轮磨损。 **A check according to 1 reason first** **B the pipeline and impeller of the pump are partially blocked, the scale is deposited, and the valve opening is insufficient.** **C the voltage is low.** **D impeller is worn.**	a 先按1排除 b 去除阻塞物，重新调整阀门开度 c 稳压。 d 更换叶轮. **A press 1 to exclude** **B remove the blockage and readjust the valve opening** **C. voltage stabilization.** **D replace the impeller**
3、功率过大 **3. Excessive power**	a 超过额定流量使用 b 吸程过高 c 泵轴承磨损 **A use in excess of rated flow** **B suction lift too high** **C pump bearing is worn**	a 调节流量关小出口阀门 b 降低吸程 c 更换轴承 **A adjust the flow and turn down the outlet valve** **B lower suction lift** **C replace the bearing**
4、噪音振动 **4. Noise vibration**	a 管路支撑不稳 b 液体混有气体 c 产生汽蚀 d 轴承损坏 e 电机超载发热运行 **A. unstable pipeline support** **B liquid mixed with gas** **C cavitation** **D bearing damage** **E. motor overload heating operation**	a 稳固管路 b 提高吸入压力排气 c 降低真空度 d 更换轴承 e 调整按5 **A secure the pipeline** **B increase suction pressure and exhaust** **C reduce vacuum** **D replace the bearing** **E adjust by 5**
5、电机发热 **5. Motor heating**	a 流量过大，超载运行 b 碰擦 c 电机轴承损坏 d 电压不足 **A. excessive flow and overload operation** **B collision** **C. motor bearing is damaged** **D insufficient voltage**	a 关小出口阀门 b 检查排除 c 更换轴承 d 稳压 **A turn down the outlet valve** **B check and eliminate** **C replace the bearing** **D voltage stabilization**
6、水泵漏水 **6. Water pump leakage**	a 机械密封磨损 b 泵体有砂孔或破裂 c 密封面不平整 d 安装螺栓松懈 **A mechanical seal is worn** **B. the pump body has sand holes or cracks** **C. uneven sealing surface** **D loose mounting bolts**	a 更换 b 焊补更更换 c 修整 d 坚固 **A replacement** **B. welding repair and replacement** **C finishing** **D ruggedness**

管路损耗参考表 Pipeline friction loss table

管径 pipe diameter (mm)	流量 Flow (L/s) 1	2	4	6	8	10	15	20	25	30	40	50	60	70	80	90	100	110	120	130	140	160	180	200
25	3.27	13.0																						
40	3.5	14	15																					
50	0.8	3.1	13	29																				
65		0.8	3.2	7.1	13	20																		
75		0.4	1.6	3.3	5.9	9.6	21.6																	
100			0.4	0.8	1.3	2.1	6.8	8.6	13	19.4														
125				0.23	0.4	0.83	1.3	2.7	4.1	5.9	10.7													
150					0.16	0.26	0.58	1.1	1.6	2.3	4.2	6.4	9.4											
175						0.11	0.27	0.5	0.74	1.05	1.9	2.9	4.3	5.8	7.7	9.6								
200							0.13	0.26	0.37	0.53	0.93	1.5	2.1	2.9	3.7	4.7	6.1	7.2	8.5					
250								0.07	0.12	0.18	0.30	0.48	0.68	0.93	1.2	1.5	1.9	2.3	2.8	3.3	3.7	4.9	5.2	
300										0.07	0.12	0.19	0.27	0.37	0.49	0.6	0.76	0.9	1.1	1.3	1.5	2.0	2.4	3.0

一定管路直径之最大流量限制
Maximum flow limit of a certain pipeline diameter

管路直径 Pipe diameter (mm)	最大流量 Maximum flow (L/s)	最大流速 Maximum velocity (m/s)
25	1	2.04
38	2.5	1.69
50	4.17	2.12
65	6.67	2.01
75	10.0	2.26
100	18.4	2.33
125	30.0	2.44
150	43.0	2.45
175	60.0	2.49
200	83.3	2.69
250	133.3	2.72
300	192.0	2.71

超过此限使管路损失显著增加。
Exceeding this limit will significantly increase the pipeline loss

阀及弯管折合直管长度(每个)
Length of straight pipe converted from valve and elbow (each)

种类 type	折合直管直径倍数 Multiple of converted straight pipe diameter	备注 remarks
全开闸阀 Fully open gate valve	12	未畅开加倍 Not open double
全开弯管 Full opening elbow	25	
逆止阀 Check valve	100	
底阀 Bottom valve	100	部分堵塞加倍 Partial blockage doubling

注：例如100mm直径管，底阀折100倍直径等于100×100=10000mm=10m直径长度，假定流量为8L/S查上表，直管每100m损失1.3m，则10m损失0.13m，即一个100m底阀，流量为8L/S时，则损失扬程0.13米。

Note: for example, for 100mm diameter pipe, 100 times the diameter of the bottom valve is equal to 100 × 100 = 10000mm = 10m diameter length, assuming that the flow is 8L / s. according to the above table, if the loss of straight pipe is 1.3m per 100m, the loss of 10m is 0.13M, that is, a 100m bottom valve. When the flow is 8L / s, the loss head is 0.13M.