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As we are constantly endeavouring to improve the performance of our equipment.

The company reserves the right to make alteration from time to time and equipment differ from that detailed in this brochure.

D型卧式多级离心泵

D-type horizontal multistage centrifugal pump



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使用该产品前，请仔细阅读说明书！
Please read the instructions carefully before using this product!

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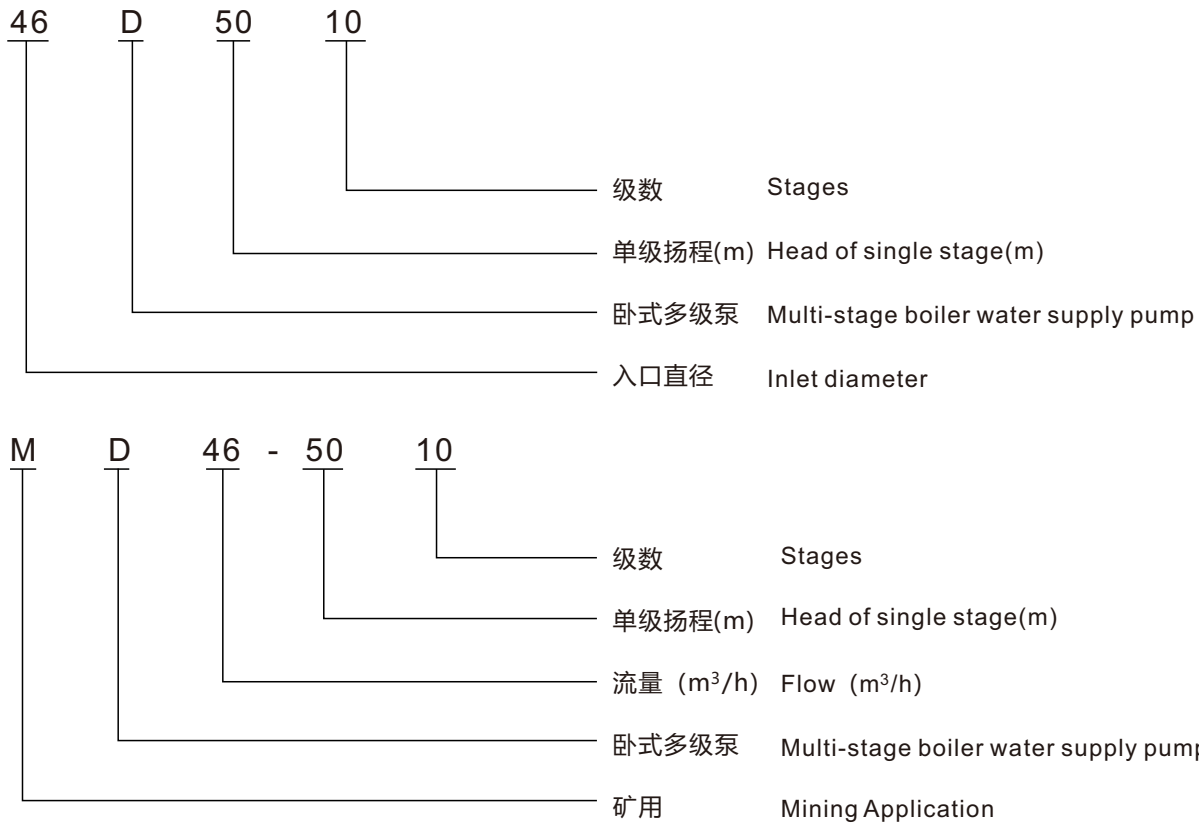
■ 概述

D型卧式多级离心泵具有效率高、性能范围广、运行安全稳定、噪音低、寿命长、安装维护方便等特点，适用于输送洁净水或其他理化性质与水相似的液体。它还可以通过改变泵流动部件的材料、密封形式和增加冷却系统来输送热水、油、腐蚀性或磨蚀性介质。本产品执行JB/T1051-93《多级清水离心泵的型式和基本参数》标准。公司拥有雄厚的技术力量、丰富的生产经验和完善的检测手段，确保产品质量稳定可靠。

■ 产品用途

D系列泵是卧式多级离心泵，主要用于输送无固体颗粒的清水，以及具有相似物理和化学性质的液体。
介质温度不超过80度。适用于矿山，工厂，城市的给排水，广泛应用于多个领域。

■ 型号意义 Model Meaning



■ Summary

D-type horizontal multistage centrifugal pump has the characteristics of high efficiency, wide performance range, safe and stable operation, low noise, long life, convenient installation and maintenance, etc. For conveying clean water or other liquids with physical and chemical properties similar to water. It can also be used to transport hot water, oil, corrosive or abrasive media by changing the material of the pump flow parts, the sealing form and increasing the cooling system. The product implements the standard of JB/T1051-93 "Type and Basic Parameters of Multistage Clean Water Centrifugal Pump". We company has strong technical force, rich production experience and perfect testing methods to ensure stable and reliable product quality.

■ Application

D series pump is the horizontal multistage single suction sectional centrifugal pump, mainly used to delivery the clear water without solid particles, and the liquid that have the similar quality in physical and chemical nature.
The media temperature can not exceed 80 degree.centi, suit for water supply and drainage in mines, factories, city, widely used in many field.

■ 性能范围

流量：3.75~650m³/hr
扬程：19~700 m

■ 结构说明

本系列的卧式多级离心泵为两端支承，壳体部分是节段式，泵的传动方式是通过弹性联轴器与电动机联接，泵的旋转方向，从驱动端看，泵为顺时针方向旋转。泵的结构说明参见图1

定子部分

主要由吸入段、中段、吐出段、导叶、填料函体等分别拉紧螺栓联接成一体，吐出口及吸入口均为垂直向上。

转子部分

主要由轴、叶轮、平衡盘及轴套等零件组成。

轴承部分

整个转子由轴两端的滚柱轴承或滑动轴承来支承，轴承采用油脂润滑或20#机油。

密封及冷却

泵壳体中的吸入段、中段、吐出段之间的结合面涂以二硫化钼润滑脂密封。转子部分与固定部分之间靠密封环、导叶套、填料等密封。轴封的填料松紧程度必须适当，以液体能一滴一滴渗出为宜。禁止空车下运行。当密封环和导叶套的磨损程度已影响泵的工作和性能时，应予以及时更换。在轴的轴封处装有可更换的轴套保护泵轴。

使用时当被输送的介质温度高于80℃时，必须向水冷填料压盖和轴封冷却室通入冷却水。冷却水为常温清水，水压为1.5-3Kg/cm²。各型泵冷却水管路接口位置不同，管路接口沿轴向位置见泵结构图，径向位置见表1。

轴封分为填料密封和机械密封，填料密封的水封水为常温软化水，压力为2-3Kg/cm²。机械密封的冲洗水亦为常温软化水，压力须比进口压力大3Kg/cm²以上。

■ Performance Range

Flow rate:3.75-650m³/hr
Head:19-700m

■ About the structure

For this series horizontal multi-stage centrifugal pump, both ends of it are supported, the casing portion is in a sectional form, it is connected to and actuated by a motor via a resilient clutch and the rotating direction of it,viewing from the actuating end, is clockwise. Refer to Fig. 1 for the structure of it.

Stator portion

Consists of suck-in section,middle-section,spitting section.guidevane,packing etc.,which arelinked together with a take-up bolt,with both suck-in and spitting mouths vertically upward.

Rotor portion

Consists of a shaft, impeller, balancing disk, muff etc.

Bearing portion

The whole rotor is supported by the roller bearings or sliding bearings on both ends of the shaft and the bearings are lubricated with grease or 20 engin oil.

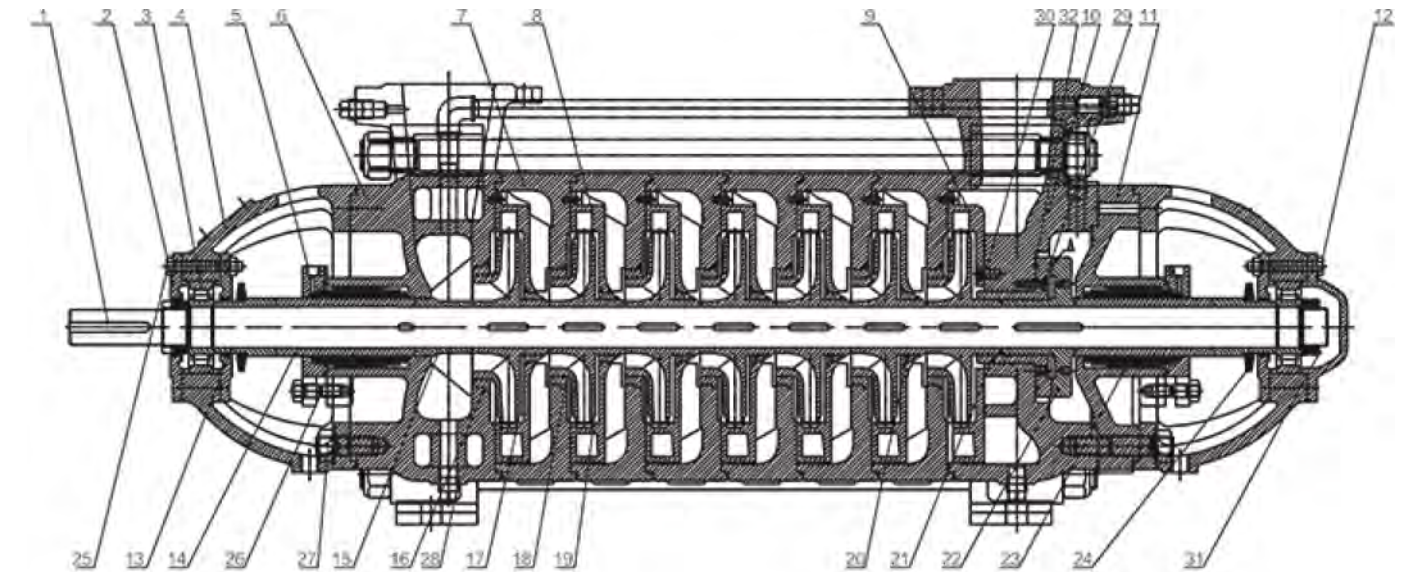
Bearing portion

The joint-part between suction section, intermediate section and discharge section with be coated with molybdenum disulfide lubricating grease as seal. Rotor and fixed parts will be sealed by seal ring, guide-vane jacket and packing. The packing tensile degree of shaft seal should be proper and seep should be feasible dip by dip Unload run should be forbid. The seal ring and quide vane jacket should be replaced if they are too worn to be used any more and even do harm to pump work. There is spare shaft sleeve near shaft seal to protect shaft of pump.

When temperature of the liquid transferred is above 80, cooled water should be filled to the water cooling packing gland and shaft seal cooling chamber. Cooled water should be clean water in normal degree. The pressure of water should be 1.5-3Kg/cm². The positions of cooling water pipe joints are different for various kind of water pump. Please refer to construction drawing of pump for axial position, and refer to chart 1 for radial position.

Shaft seals are classified as packing seal and mechanical seal. The water seal water of packing seal is softened water, with pressure of 2 3ka/cm² The flushing water of mechanical seal is softened water, whose pressure shall be 3kg/cm² higher than the inlet pressure.

■ 结构图 Structure



1	轴 Shaft	8	导叶 Guide impeller	15	定位套 Locating sleeve	22	平衡盘 Balance disk	29	埋头螺丝 Countersink head screw
2	轴承盖 Bearing cover	9	导叶端面 Guide impeller end	16	密封环 Sealing ring	23	双端面机封 Doubel mechanical seal	30	螺钉 Bolt
3	圆柱滚子轴承 Cylindrical roller bearing	10	出水段 Discharge stage	17	一级叶轮 First stage impeller	24	水保护环 Water protection ring	31	圆球母 Round nut
4	油承架 Bearing bracket	11	尾盖 Tail hood	18	二级密封环 Second stage sealing ring	25	六角螺母 Hex nut	32	O型圈 O-ring
5	密封压盖 Seal gland	12	轴承盖 Boa ring cover	19	二级叶轮 Second stage impeller	26	双头螺栓 Double nut		
6	进水段 Suction stage	13	轴承隔离套 Bearing isolation sleeve	20	导叶套 Diffusor sleeve	27	六角球母 Hex nut		
7	中级 middle stage	14	机封轴套 Mechanical seal sleeve	21	平衡环套 Balance ring sleeve	28	插塞 Plugs		

■ 性能参数表 Parameter Table

型号 Type	级数 No. Of Stage	转速 Speed (r/min)	流量 Flow (m³/h)	扬程 Head (m)	功率Power(KW)		效率 EFF. (%)	必需汽 蚀余量 NPSH (m)
					轴功率 Shaft	电机 功率 Power		
D6-25	3	2950	3.75	76.5	2.37		31	2
			6.3	75	2.86	5.5	42	2
			7.5	73.5	3.19		45	2.5
	4		3.75	102	3.16		31	2
			6.3	100	3.81	7.5	42	2
			7.5	98	4.26		45	2.5
	5		3.75	127.5	3.95		31	2
			6.3	125	4.77	7.5	42	2
			7.5	122.5	5.32		45	2.5
	6		3.75	153	4.73		31	2
			6.3	150	5.72	11	42	2
			7.5	147	6.39		45	2.5
7	3.75	178.5	5.52		31	2		
	6.3	175	6.67	11	42	2		
	7.5	171.5	7.45		45	2.5		
D6-50	2	2950	3.75	204	6.31		31	2
			6.3	200	7.63	15	42	2
			7.5	196	8.52		45	2.5
	3		3.75	229.5	7.1		31	2
			6.3	225	8.58	15	42	2
			7.5	220.5	9.58		45	2.5
	4		3.75	255	7.89		31	2
			6.3	250	9.53	18.5	42	2
			7.5	245	10.65		45	2.5
	5		3.75	280.5	8.68		31	2
			6.3	275	10.5	18.5	42	2
			7.5	269.5	11.71		45	2.5
6	3.75	306	9.47		31	2		
	6.3	300	11.44	18.5	42	2		
	7.5	294	12.78		45	2.5		
D6-100	2	2950	3.75	104			28	3.0
			6.3	100	5.72	11	30	3.0
			7.5	96			29	3.5
	3		3.75	106			28	3.0
			6.3	150	8.58	15	30	3.0
			7.5	144			29	3.5
	4		3.75	208			28	3.0
			6.3	200	11.4	18.5	30	3.0
			7.5	192			29	3.5
	5		3.75	260			28	3.0
			6.3	250	14.3	22	30	3.0
			7.5	240			29	3.5
6	3.75	312			28	3.0		
	6.3	300	17.2	30	30	3.0		
	7.5	288			29	3.5		
7	3.75	364			28	3.0		
	6.3	350	20.0	30	30	3.0		
	7.5	336			29	3.5		
8	3.75	416			28	3.0		
	6.3	400	22.9	37	30	3.0		
	7.5	384			29	3.5		

■ 性能参数表 Parameter Table

型号 Type	级数 No. Of Stage	转速 Speed (r/min)	流量 Flow (m³/h)	扬程 Head (m)	功率Power(KW)		效率 EFF. (%)	必需汽 蚀余量 NPSHR (m)
					轴功率 Shaft	电机 功率 Power		
D12-50	6	2950	7.5	324	17.6		37	2
			12.5	300	21.3	30	54	2
			15	279	23.7		53	2.5
	7		7.5	378	20.4		37	2
			12.5	350	24.8	37	54	2
			15	325.5	27.7		53	2.5
	8		7.5	432	23.3		37	2
			12.5	400	28.4	45	54	2
			15	372	31.7		53	2.5
	9		7.5	468	26.3		37	2
			12.5	450	31.9	45	54	2
			15	418.5	35.7		53	2.5
10	7.5	540	29.2		37	2		
	12.5	500	35.5	55	54	2		
	15	465	39.6		53	2.5		
11	7.5	594	32.1		37	2		
	12.5	550	39.0	55	54	2		
	15	511.5	43.5		53	2.5		
12	7.5	648	35.0		37	2		
	12.5	600	42.6	75	54	2		
	15	558	47.8		53	2.5		
D25-30	3	2950	15	102	8.33		50	2.2
			25	90	9.88	15	62	2.2
			30	82.5	10.7		63	2.6
	4		15	136	11.1		50	2.2
			25	120	13.1	18.5	62	2.2
			30	110	14.26		63	2.6
	5		15	170	13.89		50	2.2
			25	150	16.47	22	62	2.2
			30	137.5	17.83		63	2.6
	6		15	204	16.67		50	2.2
			25	180	19.17	30	62	2.2
			30	165	21.4		63	2.6
7	15	238	19.44		50	2.2		
	25	210	23.1	30	62	2.2		
	30	192.5	24.96		63	2.6		
8	15	272	22.22		50	2.2		
	25	240	26.4	37	62	2.2		
	30	220	28.53		63	2.6		
9	15	306	25		50	2.2		
	25	270	29.65	37	62	2.2		
	30	247.5	32.1		63	2.6		
10	15	340	27.8		50	2.2		
	25	300	32.9	45	62	2.2		
	30	275	35.7		63	2.6		
D25-50	3	2950	15	154.5	15.78		44	2.4
			25	150	18.91	30	54	2.6
			30	144	20.64		55	2.8
	4		15	206	21.04		44	2.5
			25	200	25.22	30	54	2.8
			30	192	27.5		55	3.2

型号 Type	级数 No. Of Stage	转速 Speed (r/min)	流量 Flow (m³/h)	扬程 Head (m)	功率Power(KW) 轴功率 Shaft 电功率 Power	效率 EFF. (%)	必需汽 蚀余量 NPSHR (m)	
D25-50	5	2950	15	257.5	26.2		44	2.5
			25	250	31.52	37	54	2.8
			30	240	34.40		55	3.2
	6		15	309	31.56		44	2.5
			25	300	37.82	45	54	2.8
			30	288	41.28		55	3.2
	7		15	380.5	38.86		44	2.5
			25	350	44.1	55	54	2.8
			30	336	48.16		55	3.2
	8		15	412	42		44	2.5
			25	400	50.45	75	54	2.8
			30	384	55.04		55	3.2
	9		15	463.5	47.33		44	2.5
			25	450	56.74	75	54	2.8
			30	432	61.92		55	3.2
	10		15	515	52.59		44	2.5
			25	500	63.04	75	54	2.8
			30	480	68.8		55	3.2
	11		15	566	57.8		44	2.5
			25	550	69.3	90	54	2.8
			30	528	75.68		55	3.2
	12		15	618	63.11		44	2.5
			25	600	75.65	110	54	2.8
			30	576	82.56		55	3.2
D46-30	3	2950	30	102	13.02		64	2.4
			46	90	16.11	22	70	3
			55	81	18.84		68	4.6
	4		30	136	17.36		64	2.4
			46	120	21.48	30	70	3
			55	108	23.79		68	4.6
	5		30	170	21.7		64	2.4
			46	150	26.85	37	70	3
			55	135	29.74		68	4.6
	6		30	204	26.04		64	2.4
			46	180	32.21	37	70	3
			55	162	35.68		68	4.6
	7		30	238	30.38		64	2.4
			46	210	37.58	45	70	3
			55	189	41.63		68	4.6
	8		30	274	34.72		64	2.4
			46	240	42.95	55	70	3
			55	216	47.58		68	4.6
	9		30	306	39.06		64	2.4
			46	270	48.32	55	70	3
			55	243	53.53		68	4.6
	10		30	340	43.3		64	2.4
			46	300	53.7	75	70	3
			55	270	59.5		68	4.6
D46-50	3	2950	30	166.5	25.19		54	2.5
			46	150	29.83	37	63	2.8
			55	138	32.3		64	3.2

■ 性能参数表 Parameter Table

型号 Type	级数 No. Of Stage	转速 Speed (r/min)	流量 Flow (m³/h)	扬程 Head (m)	功率Power(KW)		效率 EFF. (%)	必需汽 蚀余量 (%)
					轴功率 Shaft	电机 功率 Power		
D46-50	4	2950	30	222	33.59		54	2.5
			46	200	39.77	45	63	2.8
			55	184	43.06		64	3.2
	5		30	277.5	41.98		54	2.5
			46	250	49.71	55	63	2.8
			55	230	53.85		64	3.2
	6		30	333	50.38		54	2.5
			46	300	59.65	75	63	2.8
			55	276	64.59		64	3.2
	7		30	388.5	58.78		54	2.5
			46	350	69.6	90	63	2.8
			55	322	75.36		64	3.2
	8		30	440	67.18		54	2.5
			46	400	79.54	90	63	2.8
			55	368	86.12		64	3.2
	9		30	499.5	75.57		54	2.5
			46	450	89.48	132	63	2.8
			55	414	96.89		64	3.2
	10		30	555	83.97		54	2.5
			46	500	99.42	132	63	2.8
			55	460	107.66		64	3.2
	11		30	610.5	92.37		54	2.5
			46	550	109.36	132	63	2.8
			55	506	118.42		64	3.2
	12		30	666	100.8		54	2.5
			46	600	119.3	132	63	2.8
			55	552	129.2		64	3.2
D85-45	2	2950	55	102	24.25		63	3.2
			85	90	28.94	37	72	4.2
			100	78	30.33		70	5.2
	3		55	153	36.38		63	3.2
			85	135	43.4	55	72	4.2
			100	117	45.52		70	5.2
	4		55	204	48.5		63	3.2
			85	180	57.87	75	72	4.2
			100	156	60.7		70	5.2
	5		55	255	60.63		63	3.2
			85	225	72.34	90	72	4.2
			100	195	75.86		70	5.2
	6		55	306	72.75		63	3.2
			85	270	86.81	110	72	4.2
			100	234	91.04		70	5.2
	7		55	357	84.88		63	3.2
			85	315	101.3	132	72	4.2
			100	273	106.2		70	5.2
	8		55	408	97		63	3.2
			85	360	115.7	132	72	4.2
			100	312	121.4		70	5.2
	9		55	459	109.1		63	3.2
			85	405	130.2	160	72	4.2
			100	351	136.6		70	5.2

型号 Type	级数 No. Of Stage	转速 Speed (r/min)	流量 Flow (m³/h)	扬程 Head (m)	功率Power(KW)		效率 EFF. (%)	必需汽 蚀余量 NPSH (m)
					轴功率 Shaft	电机 功率 Power		
D85-67	3	2950	55	222	57.3	90	54	3.3
			85	201	68.4		65	4.0
			100	183	73.3		64	4.4
	4		55	296	76.4	110	54	3.3
			85	268	91.2		65	4.0
			100	244	97.7		64	4.4
	5		55	370	95.6	132	54	3.3
			85	335	114		65	4.0
			100	305	122.2		64	4.4
	6		55	444	114.7	160	54	3.3
			85	402	136.9		65	4.0
			100	366	146.6		64	4.4
7	55	518	133.8	185	54	3.3		
	85	469	159.6		65	4.0		
	100	427	171		64	4.4		
8	55	592	152.9	220	54	3.3		
	85	536	182.4		65	4.0		
	100	488	195.4		64	4.4		
9	55	666	172	250	54	3.3		
	85	603	205.2		65	4.0		
	100	549	219.9		64	4.4		
D120-50	2	2950	96	110	44.5	55	73	3.2
			120	100			73.3	5.1
			140	84.5			67.5	6.7
	3		96	165	66.9	90	73	3.2
			120	150			73.3	5.1
			140	127			67.5	6.7
	4		96	220	111.5	110	73	3.2
			120	200			73.3	5.1
			140	169			67.5	6.7
	5		96	275	89.1	132	73	3.2
			120	250			73.3	5.1
			140	211			67.5	6.7
6	96	330	133.8	160	73	3.2		
	120	300			73.3	5.1		
	140	254			67.5	6.7		
7	96	385	156.0	200	73	3.2		
	120	350			73.3	5.1		
	140	296			67.5	6.7		
8	96	440	178.3	200	73	3.2		
	120	400			73.3	5.1		
	140	338.5			67.5	6.7		
9	96	495	200.6	220	73	3.2		
	120	450			73.3	5.1		
	140	381			67.5	6.7		
D155-30	2	1480	119	64	28.76	55	73	3.0
			155	60	32.84		77	3.5
			190	54	36.68		75	4.2
	3		119	96	43.14	75	73	3.0
			155	90	49.26		77	3.5
			190	81	55.02		75	4.2
	4		119	128	57.52	90	73	3.0
			155	120	65.68		77	3.5
			190	108	73.36		75	4.2

■ 性能参数表 Parameter Table

型号 Type	级数 No. Of Stage	转速 Speed (r/min)	流量 Flow (m³/h)	扬程 Head (m)	功率Power(KW)		效率 EFF. (%)	必需汽 蚀余量 NPSHR (m)
					轴功率 Shaft	电机 功率 Power		
D155-30	5	1480	119	160	71.90	110	73	3.0
			155	150	82.10		77	3.5
			190	135	91.70		75	4.2
	6		119	192	86.28	132	73	3.0
			155	180	98.52		77	3.5
			190	162	110.04		75	4.2
	7		119	224	100.66	160	73	3.0
			155	210	114.97		77	3.5
			190	189	128.38		75	4.2
	8		119	256	115.04	185	73	3.0
			155	240	131.36		77	3.5
			190	216	146.72		75	4.2
9	119	288	129.42	200	73	3.0		
	155	270	147.78		77	3.5		
	190	243	165.06		75	4.2		
10	119	320	143.80	220	73	3.0		
	155	300	164.20		77	3.5		
	190	270	183.40		75	4.2		
D155-67	3	1480	100	228	97.0	132	64	3.2
			155	201	114.7		74	5.0
			185	177	123.9		72	6.6
	4		100	304	129.3	200	64	3.2
			155	268	152.9		74	5.0
			185	236	165.1		72	6.6
	5		100	380	161.6	220	64	3.2
			155	335	191.1		74	5.0
			185	295	206.4		72	6.6
	6		100	456	194	280	64	3.2
			155	402	229.3		74	5.0
			185	354	247.7		72	6.6
7	100	532	226.3	315	64	3.2		
	155	469	267.5		74	5.0		
	185	413	289		72	6.6		
8	100	608	258.6	355	64	3.2		
	155	536	305.7		74	5.0		
	185	472	330.3		72	6.6		
9	100	684	290.9	400	64	3.2		
	155	603	344		74	5.0		
	185	531	371.6		72	6.6		
D280-43	3	1480	185	141	103.0	160	69	2.0
			280	129	127.7		77	4
			335	114	138.7		75	5.2
	4		185	188	137.3	200	69	3.0
			280	172	170.3		77	4.7
			335	152	184.9		75	6.0
	5		185	235	171.6	250	69	3.0
			280	215	212.9		77	4.7
			335	190	231.1		75	6.0
	6		185	282	205.9	315	69	3.0
			280	258	255.5		77	4.7
			335	228	277.3		75	6.0
7	185	329	240.2	355	69	3.0		
	280	301	298.1		77	4.7		
	335	266	323.6		75	6.0		

■ 性能参数表 Parameter Table

型号 Type	级数 No. Of Stage	转速 Speed (r/min)	流量 Flow (m³/h)	扬程 Head (m)	功率 Power(KW)		效率 EFF. (%)	
					轴功率 Shaft	电机 功率 Power		
D360-40	10	1480	300	420	490.2	630	77	4.65
			360	400			80	4.7
			440	355			77	5.4
D450-60	2		335	134	193.4	280	72	4.1
			450	120			79	5.0
			500	112			78	5.8
	3		335	201	279.4	355	72	4.1
			450	180			79	5.0
			500	168			78	5.8
	4		335	268	372.5	450	72	4.1
			450	240			79	5.0
			500	224			78	5.8
	5		335	335	465.6	560	72	4.1
			450	300			79	5.0
			500	280			78	5.8
	6	1450	335	402	558.8	710	72	4.1
			450	360			79	5.0
			500	336			78	5.8
	7		335	469	651.9	800	72	4.1
			450	420			79	5.0
			500	392			78	5.8
	8		335	536	745.1	900	72	4.1
			450	480			79	5.0
			500	448			78	5.8
	9		335	60	838.2	1000	72	4.1
			450	354			79	5.0
			500	0504			78	5.8
	10		335	670	931.32	1120	72	4.1
			450	600			79	5.0
			500	560			78	5.8
D550-50	2		450	120	190	250	78	5.2
			550	100			79	5.8
			590	90			75	6.5
	3		450	180	284	355	78	5.2
			550	150			79	5.8
			590	135			75	6.5
	4		450	240	379	450	78	5.2
			550	200			79	5.8
			590	180			75	6.5
	5		450	300	474	560	78	5.2
			550	250			79	5.8
			590	225			75	6.5
	6	1480	450	360	569	710	78	5.2
			550	300			79	5.8
			590	270			75	6.5
	7		450	420	663	800	78	5.2
			550	350			79	5.8
			590	315			75	6.5
	8		450	480	758	900	78	5.2
			550	400			79	5.8
			590	360			75	6.5
	9		450	540	853	1000	78	5.2
			550	450			79	5.8
			590	405			75	6.5

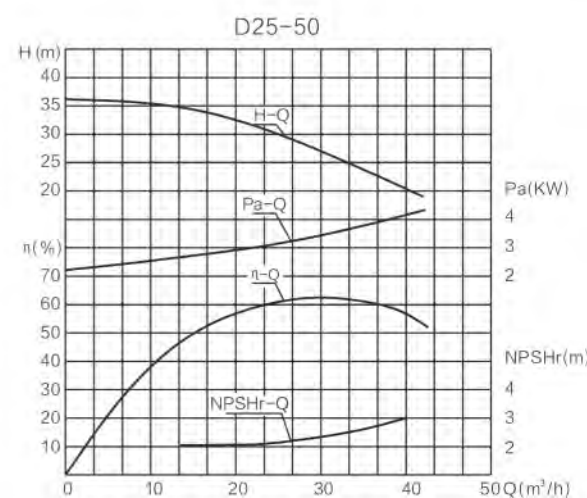
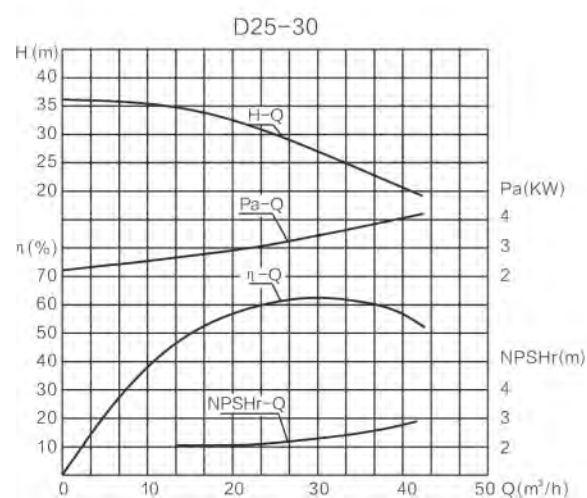
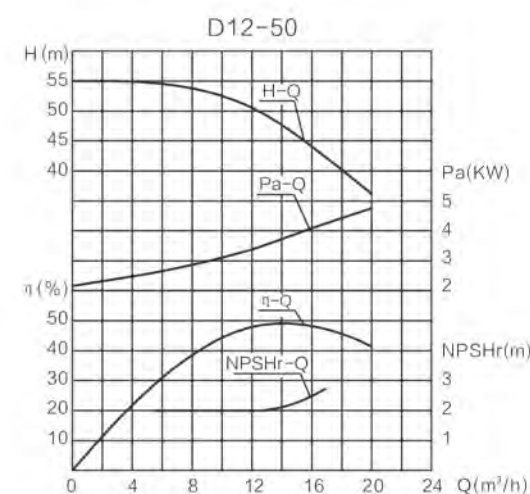
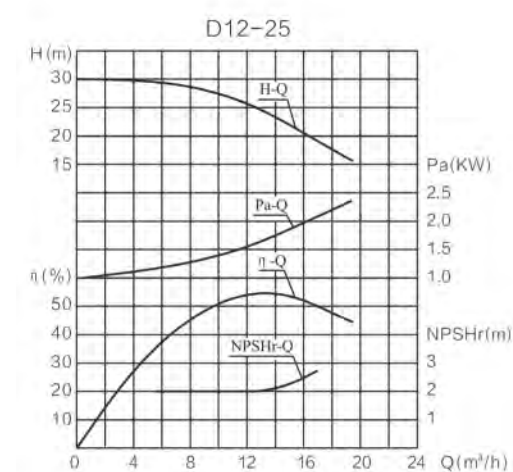
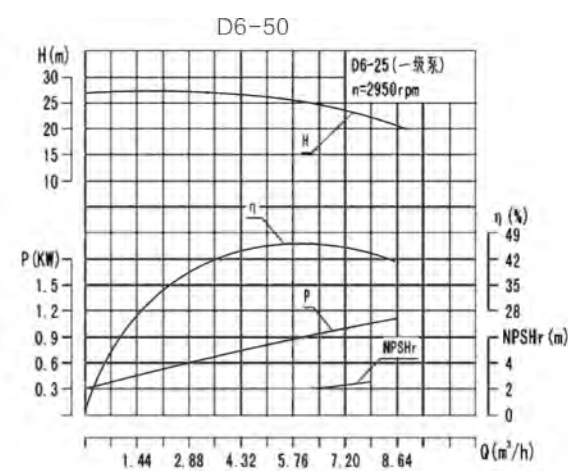
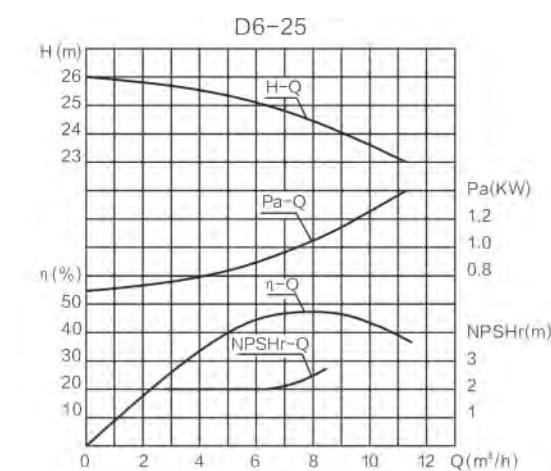
型号 Type	级数 No. Of Stage	转速 Speed (r/min)	流量 Flow (m³/h)	扬程 Head (m)	功率 Power(KW)		效率 EFF. (%)	必需汽 蚀余量 NPSHR (m)
					轴功率 Shaft	电机 功率 Power		
D650-67	2		550	148	324	400	75	5.8
			650	140			77	6.2
			750	120			75	6.5
	3		550	220	486	560	75	5.8
			650	210			77	6.2
			750	180			75	6.5
	4		550	294	648	710	75	5.8
			650	280			77	6.2
			750	240			75	6.5
	5	1480	550	368	810	900	75	5.8
			650	350			77	6.2
			750	300			75	6.5
	6		550	441	972	1120	75	5.8
			650	420			77	6.2
			750	360			75	6.5
	7		550	515	1133	1250	75	5.8
			650	490			77	6.2
			750	420			75	6.5
	8		550	588	1295	1600	75	5.8
			650	560			77	6.2
			750	480			75	6.5

80D-30	3		26	102	15.06	18.5	60	3
			43	90			70	3.9
			48	83			69	4.3
	4		26	136	20.08	22	60	3
			43	120			70	3.9
			48	111			69	4.3
	5		26	170	25.1	30	60	3
			43	150			70	3.9
			48	139			69	4.3
	6	1480	26	204	30.12	37	60	3
			43	180			70	3.9
			48	167			69	4.3
80D-30	7		26	238	35.14	45	60	3
			43	210			70	3.9
			48	195			69	4.3
	8		26	272	40.16	55	60	3
			43	240			70	3.9
			48	222			69	4.3
	9		26	306	45.18	55	60	3
			43	270			70	3.9
			48	250			69	4.3
	10		26	340	50.3	55	60	3
			43	300			70	3.9
			48	278			69	4.3
80D12 X	2	2950	21.6	28.8	2.84	4	69	3.2
			34.6	22.8			75	3.3
			39.6	19.0			72	3.4
	3		21.6	43.2	4.26	5.5	69	3.2
			34.6	34.2			75	3.3
			39.6	28.5			72	3.4

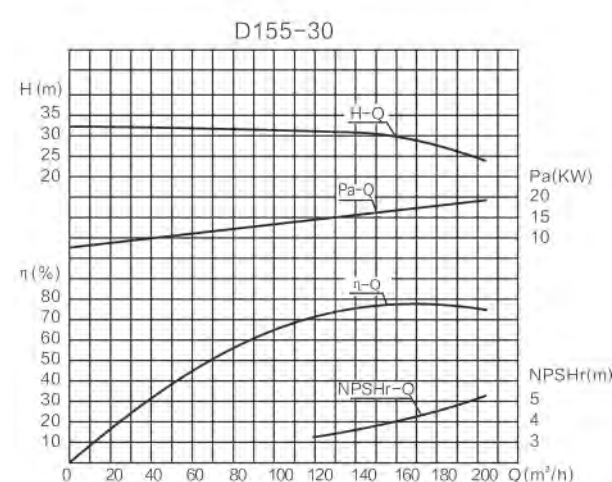
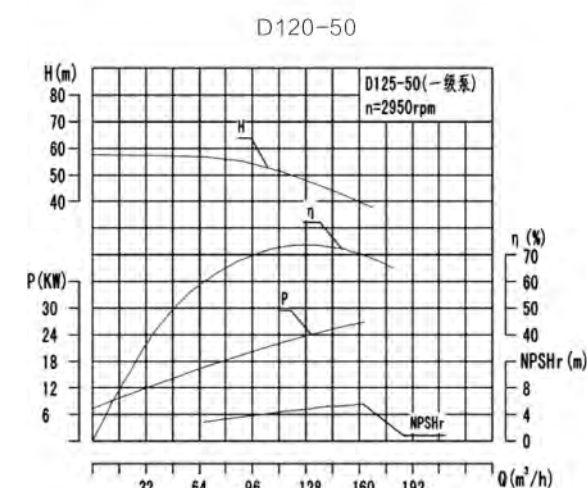
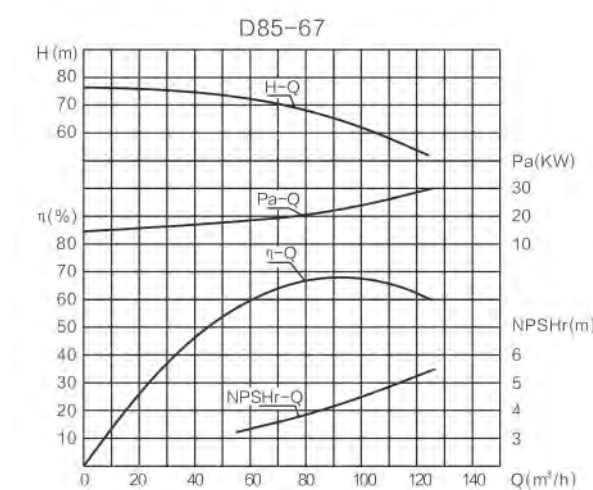
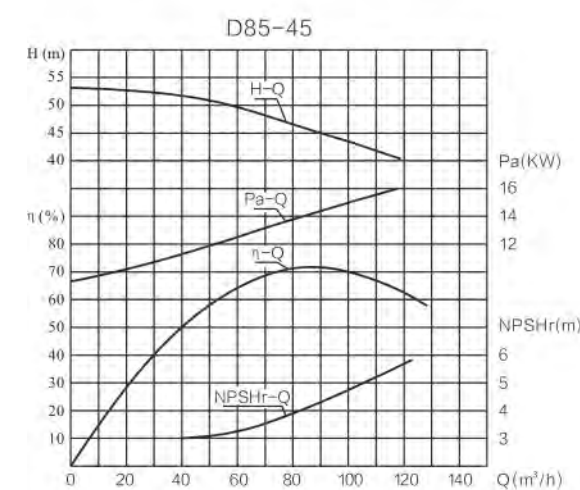
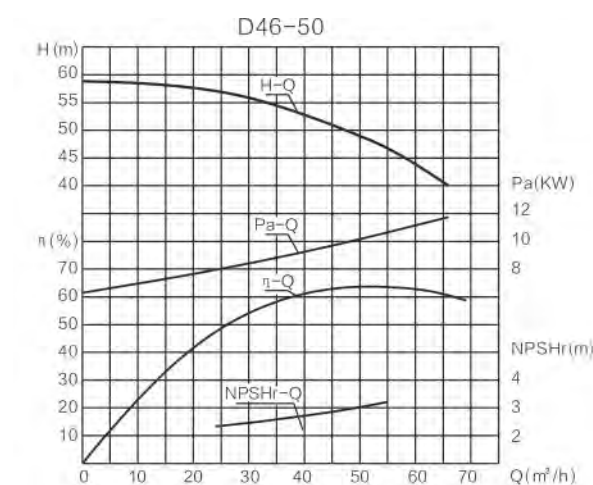
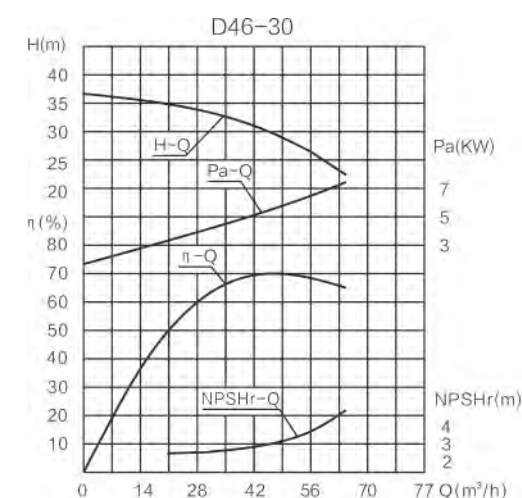
■ 性能参数表 Parameter Table

型号 Type	级数 No.Of Stage	转速 Speed (r/min)	流量 Flow (m³/h)	扬程 Head (m)	功率Power(KW)		效率 EFF. (%)	必需汽 蚀余量 NPSHR (m)
					轴功率 Shaft	电机 功率 Power		
80D12 X	4	2950	21.6	57.6	5.69	7.5	69	3.2
			34.6	45.6			75	3.3
			39.6	38.0			72	3.4
	5		21.6	72.0	7.10	11	69	3.2
			34.6	57.0			75	3.3
			39.6	47.5			72	3.4
	6		21.6	86.4	8.52	11	69	3.2
			34.6	68.4			75	3.3
			39.6	57.0			72	3.4
	7		21.6	100.8	9.94	15	69	3.2
			34.6	79.8			75	3.3
			39.6	66.5			72	3.4
8	21.6	115.2	11.36	15	69	3.2		
	34.6	91.2			75	3.3		
	39.6	76.0			72	3.4		
9	21.6	129.6	12.78	18.5	69	3.2		
	34.6	102.6			75	3.3		
	39.6	85.5			72	3.4		
100D16 X	2	2950	36	40	6.44	7.5	66	3.7
			54	32			73	3.9
			72	22			66	4.3
	3		36	60	9.67	15	66	3.7
			54	48			73	3.9
			72	34			66	4.3
	4		36	80	12.89	18.5	66	3.7
			54	64			73	3.9
			72	45			66	4.3
	5		36	100	16.11	22	66	3.7
			54	80			73	3.9
			72	56			66	4.3
6	36	120	19.33	22	66	3.7		
	54	96			73	3.9		
	72	67			66	4.3		
7	36	140	22.55	30	66	3.7		
	54	112			73	3.9		
	72	78			66	4.3		
8	36	160	25.78	30	66	3.7		
	54	128			73	3.9		
	72	90			66	4.3		
9	36	180	29.00	37	66	3.7		
	54	144			73	3.9		
	72	101			66	4.3		
125D25 X	2	2950	72	51.2	15.2	22	70.5	3.2
			101	43.0			77.5	3.6
			119	35.0			77.0	4.3
	3		72	76.8	22.8	30	70.5	3.2
			101	64.5			77.5	3.6
			119	52.5			77.0	4.3
	4		72	102.4	30.4	37	70.5	3.2
			101	86.0			77.5	3.6
119		70.0	77.0	4.3				
5	72	128.0	38.0	45	70.5	3.2		
	101	107.5			77.5	3.6		
	119	87.5			77.0	4.3		

■ 性能曲线图 Performance graph



■ 性能曲线图 Performance graph



■ D型多级泵尺寸表 D type multistage pump size chart

型号 Model	级数 Stage	电机Motor	a	L	L1	L2	L3	L4	L6	B1	B3	B4	b	G	F	H	n-4φdo
D DG DF6—25 DY DM	3	Y132S-2/5.5	93	1175	885	180	695	600	—	440	390	390	170	140	230	170	4—φ24
	4	Y132S-2/7.5	143	1225	985	230	745	650	—	440	390	390	170	140	230	170	4—φ24
	5	Y132S-2/7.5	143	1275	985	280	795	650	—	440	390	390	170	140	230	170	4—φ24
	6	Y160M-2/11	194	1450	1206	330	845	785	—	485	435	435	170	176	240	170	4—φ24
	7	Y160M-2/11	194	1500	1206	380	895	785	—	485	435	435	170	176	240	170	4—φ24
	8	Y160M-2/15	244	1550	1306	430	945	835	—	485	435	435	170	176	240	170	4—φ24
	9	Y160M-2/15	244	1600	1306	480	995	835	—	485	435	435	170	195	240	170	4—φ24
	10	Y160L-2/18.5	319	1695	1500	530	1045	935	—	485	435	435	170	195	240	170	4—φ24
	11	Y160L-2/18.5	319	1745	1500	580	1095	935	—	485	435	435	170	195	240	170	4—φ24
	12	Y160L-2/18.5	319	1795	1500	630	1145	935	—	485	435	435	170	195	240	170	4—φ24
	3	Y132S-2/7.5	70	1175	874	180	695	600	—	445	395	395	170	134	230	170	4—φ24
D DG DF12—25 DY DM	4	Y160M-2/11	115	1350	1090	230	745	730	—	480	430	430	170	168	240	170	4—φ24
	5	Y160M-2/11	138	1400	1090	280	795	730	—	480	430	430	170	168	240	170	4—φ24
	6	Y160M-2/15	148	1450	1190	330	845	780	—	480	430	430	170	168	240	170	4—φ24
	7	Y160M-2/15	188	1500	1190	380	895	780	—	480	430	430	170	168	240	170	4—φ24
	8	Y160L-2/18.5	214	1595	1334	430	945	850	—	480	430	430	170	188	240	170	4—φ24
	9	Y160L-2/18.5	255	1645	1334	480	995	850	—	480	430	430	170	190	240	170	4—φ24
	10	Y180M-2/22	294	1720	1447	530	1045	900	—	510	460	460	170	200	260	170	4—φ24
	11	Y180M-2/22	313	1770	1447	580	1095	900	—	510	460	460	170	200	260	170	4—φ24
	12	Y200L-2/30	313	1925	1571	630	1145	980	—	550	500	500	170	220	280	170	4—φ24
D DG DF12—50 DY DM	2	Y160M-2/11	145	1412	1230	160	789	845	—	520	460	460	215	175	260	215	4—φ24
	3	Y160L-2/18.5	145	1517	1230	220	849	845	—	520	460	460	215	175	260	215	4—φ24
	4	Y180M-2/22	150	1597	1310	280	909	880	—	525	465	465	215	190	260	215	4—φ24
	5	Y200L-2/30	220	1762	1650	340	969	990	—	570	510	445	215	245	280	215	4—φ24
	6	Y200L-2/30	215	1822	1650	400	1029	990	—	570	510	445	215	245	280	215	4—φ24
	7	Y200L-2/37	215	1882	1650	460	1089	990	—	570	510	445	215	245	280	215	4—φ24
	8	Y225M-2/45	465	1982	1750	520	1149	1305	—	605	545	470	215	225	315	215	4—φ24
	9	Y225M-2/45	525	2042	1750	580	1209	1305	—	605	545	470	215	225	315	215	4—φ24
	10	Y250M-2/55	352	2204	1870	640	1269	1200	—	655	595	460	215	250	330	215	4—φ24
	11	Y250M-2/55	352	2264	1870	700	1329	1200	—	655	595	460	215	250	330	215	4—φ24
	12	Y280S-2/75	431	2407	2000	760	1389	1300	—	705	645	460	215	300	360	215	4—φ24
D DG DF25—30 DY DM	3	Y160M-2/15	148	1450	1219	230	845	760	—	530	460	460	210	165	250	210	4—φ30
	4	Y160L-2/18.5	148	1560	1219	295	910	850	—	530	460	460	210	165	250	210	4—φ30
	5	Y180M-2/22	180	1650	1297	360	975	880	—	530	460	460	210	180	260	210	4—φ30
	6	Y200L-2/30	253	1825	1497	425	1040	970	—	575	505	460	210	200	280	210	4—φ30
	7	Y200L-2/30	253	1885	1497	490	1105	1000	—	575	505	460	210	200	280	210	4—φ30
	8	Y200L-2/37	333	1950	1627	555	1170	1080	—	575	505	460	210	200	280	210	4—φ30
	9	Y200L-2/37	333	2015	1627	620	1235	1080	—	575	505	460	210	200	280	210	4—φ30
	10	Y225M-2/45	350	2150	1728	685	1300	1120	—	610	540	460	210	210	305	210	4—φ30
D、DG、DF DY、DM25—50	3	Y200L-2/30	120	1716	1429	245	937	925	—	560	500	500	300	320	320	370	4—φ24
	4	Y200L-2/37	170	1776	1429	305	997	925	—	560	500	500	300	320	320	370	4—φ24
	5	Y225M-2/45	220	1836	1429	365	1057	925	—	560	500	500	300	345	320	370	4—φ24

■ D型多级泵尺寸表 D type multistage pump size chart

型号 Model	级数 Stage	电机Motor	a	L	L1	L2	L3	L4	L6	B1	B3	B4	b	G	F	H	n-4φdo
D DG DF25—50 DY DM	6	Y250M-2/55	300	1966	1524	425	1117	1040	—	620	550	550	300	395	335	370	4—φ24
	7	Y250M-2/55	360	2111	1675	485	1177	1110	550	660	600	500	300	395	360	370	6—φ24
	8	Y280S-2/75	430	2241	1932	545	1237	1300	650	720	650	500	300	425	390	370	6—φ24
	9	Y280S-2/75	480	2301	1932	605	1297	1300	650	720	650	500	300	425	390	370	6—φ24
	10	Y280M-2/90	530	2361	1932	665	1357	1300	650	720	650	500	300	425	390	370	6—φ24
	11	Y280M-2/90	600	2471	2158	725	1417	1400	700	720	650	500	300	425	390	370	6—φ24
	12	Y315S-2/110	660	2531	2158	785	1477	1400	700	720	650	500	300	460	390	370	6—φ24
D DG DF46—30 DY DM	3	Y180M-2/22	157	1520	1167	230	845	845	—	520	460	460	210	192	260	210	4—φ30
	4	Y200L ₁ -2/30	198	1690	1432	295	910	935	—	570	505	460	210	210	280	210	4—φ30
	5	Y200L ₂ -2/37	198	1755	1432	360	975	935	—	570	505	460	210	210	280	210	4—φ30
	6	Y200L ₃ -2/37	198	1820	1432	425	1040	935	—	570	505	460	210	210	280	210	4—φ30
	7	Y225M-2/45	250	1925	1532	490	1105	1010	—	610	545	460	210	220	305	210	4—φ30
	8	Y250M-2/55	300	2105	1759	555	1170	1140	—	670	594	460	210	235	330	210	4—φ30
	9	Y250M-2/55	300	2170	1759	620	1235	1140	—	670	594	460	210	235	330	210	4—φ30
	10	Y280S-2/75	349	2305	1897	685	1300	1245	—	730	650	460	210	250	360	210	4—φ30
D DG DF46—50 DY DM	3	Y200L ₁ -2/37	123	1717	1317	245	937	875	—	570	500	500	300	227	420	270	4—φ24
	4	Y225M-2/45	108	1817	1415	305	997	925	—	620	550	500	300	197	420	270	4—φ24
	5	Y250M-2/55	183	1992	1571	365	1057	1020	—	670	600	500	300	270	420	270	4—φ24
	6	Y280S-2/75	263	2122	1758	425	1117	1130	565	730	650	500	300	307	420	270	6—φ24
	7	Y280S-2/75	263	2182	1758	485	1177	1130	565	730	650	500	300	307	420	270	6—φ24
	8	Y280M-2/90	313	2292	1869	545	1237	1180	590	730	650	500	300	358	420	270	6—φ24
	9	Y315S-2/110	418	2473	2046	605	1297	1330	665	820	750	500	300	356	515	270	6—φ24
	10	Y315S-2/110	418	2533	2046	665	1357	1330	665	820	750	500	300	356	515	270	6—φ24
	11	Y315M ₁ -2/132	528	2641	2222	725	1417	1480	740	820	750	500	300	372	515	270	6—φ24
	12	Y315M ₂ -2/132	528	2701	2222	785	1477	1480	740	820	750	500	300	372	515	270	6—φ24
D DG DF80—30 DY DM	3	Y160L-2/18.5		1149	1140	229	774	785	—	500	440	440	200	155	280	270	4—φ24
	4	Y180M-2/22		1530	1200	290	835	785	—	500	440	440	200	200	275	270	4—φ24
	5	Y200L1-2/30		1698	1415	315	896	1010	—	555	490	430	200	210	300	270	4—φ24
	6	Y200L2-2/37		1759	1415	412	957	1010	—	555	490	430	200	210	300	270	4—φ24
	7	Y225M-2/45		1860	1520	473	1018	995	—	610	540	440	200	260	335	270	4—φ24
	8	Y225M-2/45		2036	1820	534	1079	1330	665	675	600	455	200	250	350	270	4—φ24
	9	Y250M-2/55		2097	1820	595	1140	1330	665	675	600	455	200	250	350	270	4—φ24
	10	Y250M-2/55		2158	1820	656	1201	1330	665	675	600	455	200	250	350	270	4—φ24
D DG DF85—45 DY DM	3	Y250M-2/55	141	1842	1400	277	906	950	—	530	470	470	250	248	365	250	4—φ24
	4	Y280S-2/75	174	1986	1540	351	980	1060	530	580	520	520	250	242	426	250	6—φ24
	5	Y280M-2/90	218	2110	1670	425	1054	1120	560	580	520	520	250	277	426	250	6—φ24
	6	Y315S-2/110	332	2324	1760	499	1128	1300	650	670	604	604	250	230	459	250	6—φ24
	7	Y315M ₁ -2/132	417	2448	1910	573	1202	1440	720	670	610	610	250	241	475	250	6—φ24
	8	Y315M ₂ -2/132	477	2522	1980	647	1276	1500	750	670	610	610	250	241	475	250	6—φ24
	9	Y315M ₃ -2/160	536	2596	2050	721	1350	1540	770	670	610	610	250	260	475	250	6—φ24
D DG DF85—67 DY DM	3	Y280M-2/90	150	2427	1830	371	1422	1400	700	580	520	520	350	230	426	350	6—φ24
	4	Y315M ₁ -2/132	220	2825	2030	459	1510	1540	770	670	610	610	350	250	475	350	6—φ24
	5	Y315M ₂ -2/160	290	2913	2150	547	1598	1640	820	670	610	610	350	250	475	350	6—φ24
	6	Y315L ₁ -2/185	350	3001	2270	635	1686	1720	860	670	610	610	350	250	475	350	6—φ27
	7	Y315L ₂ -2/200	420	3089	2350	723	1774	1800	900	670	610	610	350	250	475	350	6—φ27

D型多级泵尺寸表 D type multistage pump size chart

型号 Model	级数 Stage	电机Motor	a	L	L1	L2	L3	L4	L6	B1	B3	B4	b	G	F	H	n-4φdo
Model	stage	motor	a	L	L1	L2	L3	L4	L6	B1	B3	B4	b	G	F	H	n-φdo
D DG DF120—50 DY DM	2	Y250M-2/55	—	1912	1430	260	918	900	—	655	595	595	300	265	355	316	4—φ28
	3	Y280M-2/90	—	2119	1635	347	1005	1000	—	710	650	545	300	335	385	316	4—φ28
	4	Y315S-2/110	—	2466	1895	434	1092	1200	700	815	735	550	300	395	435	316	6—φ40
	5	Y315M-2/132	—	2253	1895	521	1179	1200	700	815	735	550	300	395	435	316	6—φ40
	6	Y315L-2/160	—	2640	2210	608	1266	1350	800	83	750	550	300	460	435	316	6—φ40
	7	Y315L-2/200	—	2727	2210	695	1353	1350	800	830	750	550	300	460	435	316	6—φ40
	8	Y315L-2/200	—	2814	2210	782	1440	1350	800	830	750	550	300	460	435	316	6—φ40
	9	Y355M-2/220	—	2901	2370	869	1527	1600	800	940	860	550	300	370	485	316	6—φ40
	3	Y280S-4/75	325	2209	1660	425	1205	1100	550	570	525	525	350	580	426	350	6—φ24
D DG DF155—30 DY DM	4	Y280M-4/90	223	2374	1830	540	1320	1260	630	570	525	525	350	286	426	350	6—φ24
	5	Y315S-4/110	315	2709	2020	655	1435	1420	710	660	615	615	350	287	461	350	6—φ24
	6	Y315M-4/132	455	2864	2180	770	1550	1600	800	660	615	615	350	298	461	350	6—φ24
	7	Y315L-4/160	515	3009	2350	885	1665	1720	860	660	615	615	350	289	461	350	6—φ24
	8	Y315L-4/185	635	3324	2460	1000	1780	1840	920	660	605	605	350	289	461	350	6—φ24
	9	Y355M-4/220	735	3439	2710	1115	1895	2000	1000	755	705	705	350	354	520	350	6—φ27
	10	Y355M-4/220	835	3654	2820	1230	2010	2100	1050	755	705	705	350	354	520	350	6—φ27
	3	Y315L-2/185	300	2737	2200	371	1422	1300	650	660	615	615	350	300	480	350	6—φ27
	4	Y355M-2/220	400	3055	2300	459	1510	1460	730	755	705	705	350	320	520	350	6—φ27
D DG 80DF12 DY DM	5	Y355M-2/250	460	3143	2350	547	1598	1640	820	755	705	705	350	330	520	350	6—φ27
	2	Y112M-2/4	235	1153	1120	195	740	785	—	440	410	410	170	155	260	210	4—φ24
	3	Y132S-2/5.5	245	1298	1120	265	810	785	—	440	410	410	170	155	260	210	4—φ24
	4	Y132S-2/7.5	255	1368	1120	335	880	785	—	440	410	410	170	155	260	210	4—φ24
	5	Y160M-2/11	420	1574	1400	405	953	1060	—	460	430	430	170	175	280	210	4—φ24
	6	Y160M-2/11	420	1644	1400	475	1023	1060	—	460	430	430	170	175	280	210	4—φ24
	7	Y160M-2/15	405	1714	1580	545	1093	1065	—	460	430	430	170	170	270	210	4—φ24
	8	Y160M-2/15	405	1784	1580	615	1163	1065	—	460	430	430	170	170	270	210	4—φ24
	9	Y160L-2/18.5	405	1899	1580	685	1233	1065	—	460	430	430	170	170	270	210	4—φ24
D DG 10DF16 DY DM	2	Y132S-2/7.5	94	1260	1010	229	770	635	—	270	220	500	220	185	250	230	4—φ27
	3	Y160M-2/15	271	1470	1260	306	847	850	—	270	220	480	220	220	285	230	4—φ25
	4	Y160L-2/18.5	273	1589	1260	383	924	850	—	270	220	480	220	220	285	230	4—φ25
	5	Y180M-2/22	410	1696	1415	460	1011	1020	—	270	220	450	220	190	295	230	4—φ23
	6	Y180M-2/22	582	1773	1415	537	1088	1020	—	270	220	450	220	190	325	230	4—φ23
	7	Y200L1-2/30	389	1967	1820	614	1177	1000	—	270	220	545	220	410	300	230	4—φ26
	8	Y200L1-2/30	416	2046	1820	691	1254	1000	—	270	220	545	220	410	300	230	4—φ26
	9	Y200L2-2/37	453	2123	1820	768	1329	1000	—	270	220	545	220	410	300	230	4—φ26
	2	Y180M-2/22	137	1477	1180	262	794	740	—	570	520	520	280	230	335	300	4—φ24
D DG 125DF25 DY DM	3	Y200L1-2/30	307	1676	1480	352	884	1010	—	605	555	555	280	220	315	300	4—φ24
	4	Y200L2-2/37	307	1766	1480	442	974	1010	—	605	555	555	280	220	315	300	4—φ24
	5	Y225M-2/45	417	1906	1560	532	1074	1060	530	610	560	560	280	265	365	300	6—φ24
	6	Y250M-2/55	347	2111	1740	622	1164	1115	560	610	600	530	280	265	350	300	6—φ24
	7	Y280S-2/75	552	2271	2210	712	1254	1410	710	755	705	610	280	420	395	300	6—φ24
	8	Y280S-2/75	587	2361	2210	802	1344	1410	710	755	705	610	280	420	395	300	6—φ24
	9	Y280M-2/90	597	2501	2210	892	1434	1410	710	755	705	610	280	420	395	300	6—φ24

D型多级泵尺寸表 D type multistage pump size chart

型号 Model	级数 Stage	电机Motor	H1	B×A	K	D1×D2	L	L2	L3	L4	B4	b	F	H	do	a
D、DG、DF DY、DM85—67	8	Y355M-4/220/380V	355	560×610	28	1000×450	3407	811	1862	760	400	350	450	350	27	35
	9	Y355M-4/250/380V	355	560×610	28	1100×450	3490	899	1950	760	400	350	450	350	27	70
	10	Y355L-4/250/380V	355	630×610	28	1200×450	4443	987	2038	850	400	350	450	350	27	80
D、DG、DF DY、DM155—30	9	Y355M-4/220/380V	355	560×610	28	1200×500	3439	1115	1895	950	450	350	460	350	27	60
	10	Y355M-4/220/380V	355	560×610	28	1300×500	3654	1230	2110	1050	450	350	460	350	27	80
	4	Y355M-2/220/380V	355	560×610	28	600×500	3055	459	1510	400	450	350	450	350	27	40
D DG DF155—67 DY DM	5	Y355M-2/250/380V	355	560×610	28	700×500	3143	547	1598	400	450	350	450	350	27	100
	6	Y400-2/315/6KV	400	1000×710	35	850×500	4091	635	1686	580	450	350	470	350	27	50
	7	Y400-2/355/6KV	400	1000×710	35	900×500	4179	723	1774	580	450	350	470	350	27	110
	8	Y400-2/400/6KV	400	1000×710	35	1000×500	4267	811	1862	700	450	350	470	350	27	70
	9	Y400-2/450/6KV	400	1000×710	35	1150×500	4355	899	1950	700	450	350	470	350	27	130
	3	Y400-4/280/6KV	400	1000×710	35	600×690	4045	475	1638	350	640	500	540	500	24	63
	4	Y400-4/355/6KV	400	1000×710	35	730×690	4175	605	1768	450	640	500	540	500	24	78
	5	Y400-4/450/6KV	400	1000×710	35	860×690	4305	735	1898	550	640	500	540	500	24	93
	6	Y450-4/500/6KV	450	1120×800	35	990×690	4635	865	2028	650	640	500	560	500	27	108
D DF280—65 DY DM	7	Y450-4/630/6KV	450	1120×800	35	1120×690	4765	995	2158	850	640	500	560	500	27	73
	8	Y450-4/710/6KV	450	1120×800	35	1250×690	4895	1125	2288	950	640	500	560	500	27	88
	9	Y500-4/800/6KV	500	1250×900	42	1390×690	5425	1255	2418	1050	630	500	580	500	27	103
	10	Y500-4/900/6KV	500	1250×900	42	1510×690	5555	1385	2548	1150	630	500	580	500	27	118
	2	Y315S-4/110/380V	315	406×508	28	735×760	2423	373	1145	435	700	450	480	400	30	
	3	Y315L-4/160/380V	315	457×508	28	735×760	2623	503	1275	435	700	450	480	400	30	
	4	Y315L-4/200/380V	315	508×508	28	735×760	2753	633	1405	435	700	450	480	400	30	
	5	Y355M-4/250/380V	355	560×610	28	1125×760	3113	763	1535	800	700	450	480	400	30	
	6	Y355L-4/315/380V	355	630×610	28	1125×760	3243	893	1665	800	700	450	480	400	30	
D DF280—43 DY DM	7	Y4001-4/355/6KV	400	1000×710	35	1125×760	3815	1023	1827	800	700	450	480	400	30	
	8	Y4003-4/450/6KV	400	1000×710	35	1385×760	3945	1153	1957	1060	700	450	480	400	30	
	9	Y4003-4/450/6KV	400	1000×710	35	1385×760	4075	1283	2087	1060	700	450	480	400	30	
	2	Y315M-4/132/380V	315	457×508	28	505×770	2539	390	1191	200	700	450	450	400	40	
	3	Y315M-4/185/380V	355	560×610	28	645×770	2909	530	1331	340	700	450	450	400	40	

■ D型多级泵尺寸表 D type multistage pump size chart

型号 Model	级数 Stage	电机Motor	H1	B×A	K	D1×D2	L	L2	L3	L4	B4	b	F	H	do	a
D DF650—70 DY DM	2	Y4002-4/400/6KV	400	1000×710	35	697×1000	3691	599	1702	317	950	615	620	540	42	
	3	Y4005-4/560/6KV	400	1000×710	35	875×1000	3869	777	1880	495	950	615	620	540	42	
	4	Y4502-4/710/6KV	450	1120×800	35	1053×1000	4236	955	2058	673	950	615	620	540	42	
	5	Y4504-4/900/6KV	450	1120×800	35	1231×1000	4414	1133	2236	851	950	615	620	540	42	
	6	Y5002-4/1120/6KV	500	1250×900	42	1409×1000	4795	1311	2414	1029	950	615	620	540	42	
	7	Y5003-4/1250/6KV	500	1250×900	42	1587×1000	4973	1489	2592	1207	950	615	620	540	42	
	8	Y5603-4/1600/10KV	560	1400×1000	42	1765×1000	5679	1677	2780	1385	950	615	620	540	42	

■ 成套供应范围

气动给水泵组的成套供应范围包括：
■其入口滤前置泵（根据具体要求）及给水泵
■前置泵驱动电动机，电动机与前置泵共用底座
■给水泵出口逆止阀
■最小流量装置，包括再循环阀、截止阀以及流量测量装置
■联轴器及其它附件
■稀油站

电动给水泵组的成套供应范围包括：
■给水泵、前置泵及入口滤网
■电动机
■液力耦合器及工作油、润滑油冷油器
■给水泵出口逆止阀
■最小流量装置，包括再循环阀、截止阀以及流量测量装置
■联轴器及其它附件
■稀油站

其中电动机、再循环阀、液力耦合器、稀油站、逆止阀、前置泵、截止阀、及流量测量装置等配套设备也可由客户自行采购，我公司负责技术协调。

■ 订货须知

客户订购我公司产品，需提供以下参数：

- 给水泵出口、抽头（增压级）流量
- 给水泵出口、前置泵入口压力（或泵组扬程）
- 给水温度
- 泵组形式（气动泵或电动泵）
- 安装尺寸订货时根据合同要求提供

■ Range of completed supply

The completed supply of steam-powered water supply pump group includes:
■Its inlet filtering pre-pump(upon the real requirement) and water supply pump
■Actuating motor for the pre-pump,motor and prepump mutually used foundation
■Check valve at the outlet of the water supply pump
■ Minimum flow device: includes recycling valve, stop valve and flow measurer
■Clutch and other accessories
■Oil thinnig station

The completed supply of electric water supply pump group includes:
■Water supply pump, pre-pump and its inlet filtering screen
■Motor
■Hydraulic coupler and oil cooler for both working and lubricating oils
■Check valve at the outlet of the water supply pump
■ Minimum flow device: includes recycling valve, stop valve and flow measurer
■Clutch and other accessories
■Oil thinnig station

Of which the motor, recycling valve, hydraulic coupler, oil thinning station, check valve,pre-pump, stop valve and flow measurer can also be purchased by clients and this Co.will be in charge of technical coordination.

■ Notice at order

Please provide the following parameters when to order the product of this Co.:
Flows at the outlet of the water supply pump and the tap (boosting class)
Pressures(or the pump group's head) at the outlet of the water supply pump and the inlet of the pre-pump
Water supply temperature
Pump group's type(steam-powered or electric pump)
The installation dimensions are to be provide at order upon the contract requirement

■ 泵的拆卸

1、当拆卸泵时应注意下列事项：

- a、按5条停泵程序停泵；
- b、将泵壳内的液体放掉（如有冷却水套时也应放掉水）；
- c、如果轴承部件是稀油润滑时应将润滑油放掉；
- d、拆去妨碍拆卸的附属管路，如平衡管、水封水管等管路相引线；
- e、应用加热的方法拆卸联轴器（当需要拆卸电机联轴器时亦应如此）。

2、拆卸顺序

泵的拆卸步骤应从吐出侧的轴承部件开始，其顺序大体如下：

- a、拧下吐出侧轴承压盖上的螺栓和吐出段、填料函体、轴承体三个之间的联接螺母，卸下轴承部件；
- b、拧下轴上的圆螺母，依次卸下轴承内圈，轴承压盖和挡套后，卸下吐出段（包括填料压盖、填料环、填料等在 内）；
- c、依次卸下轴上的O型密封圈、轴套、平衡盘和键后，卸下吐出段（包括末级导叶、平衡板等在内）；
- d、卸下末级叶轮和键后，卸下中段（包括导叶在内），按同样方法继续卸下其余各级的叶轮、中段和导叶，直至卸下首级叶轮为止；
- e、拧下吸入段和轴承体的联接螺母和拧下轴承压盖上的螺栓后，卸下轴承部件（在这之前应预先将泵联轴器卸下）；
- f、将轴从吸入段中抽出，拧下轴上固定螺母，依次将轴承内圈、O型密封圈、轴套、挡套等卸下。

至此拆卸工作基本完成，但在上述拆卸过程中，还有部分零件互相是联接在一起的，一般情况下拧下联接螺母后即可卸下。

3、清洗和检查

- 1、用煤油清洗全部的零件，在空气中干燥或用布擦干；
- 2、检查全部零件的磨损情况，对不能确保正常运转的零件应更换新的；
- 3、检查轴是否有尘或生锈，用千分表检查轴的跳动度（轴的径向跳动值不大于8级精度）；
- 4、当密封间隙超过推荐值的最大值50%时，应更换密封元件。

■ Removal of pump

1. Cautions in the removal

- a.Stop the pump upon the pump stopping procedure in 5.
- b.Drain the liquid inside of the pump casing out (for the cooling water sleeve too if it is available).
- c.Drain out the thinned oil if it is used for lubricating the bearings.
- d.Remove the additional pipelines obstructing the removal, such as the balancing pipe, water sealed water pipe etc.
- e.Remove the clutches by way of heating (for the motor's clutch too if necessary to remove it).

2. Sequence of removal

Start the pump removal from the bearing on the spitting side, the sequence comes as below:

- a.Screw out the bolts on the bearing gland on the spitting side and the linking nuts between the spitting section, packing and bearing to remove the bearing.
- b.Screw out the circular nut on the shaft, thenin turn remove the inner ring of the bearing, gland and baffling sleeve, then the spitting section (including the packing gland, packing ring, packing etc.).
- c.Remove the O-seal ring, muff, balancing disk and key on the shaft in turn, then the spitting section (including the guide vane on the last stage, balancing board etc.).
- d.After removing the last-stage impeller and key, remove the middle section (including the guide vane), then the impeller, middle section, guide vane on the rest stages in the same way till the impeller on the first stage.
- e.Screw out the linking nuts between the suck-insection and the bearing and the bolt on the bearing gland to remove the bearing (remove the pump clutch prior to this).
- f.Draw out the shaft from thesuck-insection,screw out the fixing nut on it, then remove the inner ring of the bearing, O-seal ring, muff, baffling sleeve etc. in turn).

Ther emoval has then been finished generally. However some parts are still linked together during the removaland can be removed once the linking nuts are screwed out, in general.

2. Clean and check

- 1.Clean all the parts with coal oil and let them dried in the air or with a cloth.
- 2.Check the worn-out conditions on the all parts and replace those unable to make sure of normal work.
- 3.Check if there is dust or rust on the shaft and usea dial gauge to check thenon-straightness of it (the radialjumping valve of it not more than the 8-class accuracy).
- 4.Replace the sealing element when the sealing interval is over the maximum value of the recommended one by 50%.

■ 泵的装配与检测

本型泵装配质量的好坏对泵的性能及运行稳定性影响特别显著。诸如叶轮出口中心与导叶进口中心的对准，泵的转子部分与定子部分的各个密封间隙值大小均匀等，装配时应按图纸的技术要求，方能保证装配质量。

1、转子部件

以两轴承为支承分别测量叶轮口环，叶轮挡套（或叶轮后脐子），平衡挡套和轴套的圆跳动值及平衡盘端面的跳动值应符合转子结合部件图纸（图4）的要求。

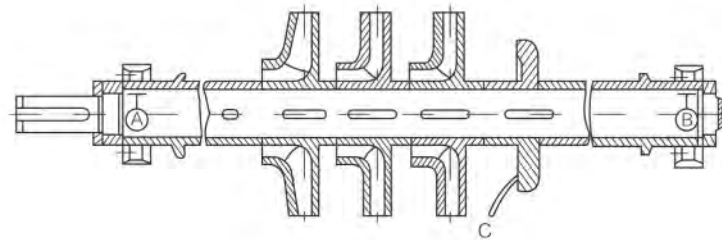


图4 Fig.4

泵体密封环与叶轮密封环的名义径向间隙，按下表：

For the nominal radial intervals of the seal rings of both pump casing and impeller, upon the table below:

名义尺寸(mm) Nominal size(mm)	30~90	>90~120	>120~180	>180~250	>250~500	>500~800	>800~1250	>1250
直径间隙(mm) Diameter interval(mm)	0.3~0.4	0.4~0.5	0.5~0.6	0.6~0.7	0.7~0.85	0.85~1.2	1.2~1.6	1.6~2.0

装配好的转子部件，各零件的径向跳动允差，按下表：

For the allowed radial jumping error of each part of the assembled rotor, upon the table below:

部位Part 名义直径 Nominal diameter	≤50	>50~120	>120~260	>260~500	>500~800
叶轮密封环(A-B) Seal ring of impeller(A-B)	0.08	0.10	0.10	0.12	0.15
平衡盘C的端面跳动(A-B) End-face jumping of disk C(A-B)	0.05	0.05	0.06	0.08	0.08

2、定子部件

测量转子轴向串量、平衡环（套）的端面跳动值，应符合总装图的要求。

■ Assembly and detection of pump

The assembly quality of the pump will result in a notable affection to the performance and the running stability of it and can not be guaranteed unless the technical requirements in the drawings are strictly followed in the assembly, such as on the alignment between the centers of the impeller's outlet and the guide vane's inlet, the uniform values of the sealing intervals of both rotor and stator portions etc.

1.Rotor

It takes two bearings as the support and measure the circle jumping values of the oral ring of the impeller, the impeller's baffling sleeve (or rear navel), the balancing baffling sleeve and the muff, respectively, and the jumping value of the balancing disk's end-face, which should conform the requirements in the figure of the jointed parts of rotor (Fig. 4).

2.Stator

Measure the axial serial amount of the rotor and the end-face jumping value of the balancing ring (sleeve), which should conform the requirements in the overall assembly drawing.

3、装配完毕，用手转动转子，检查泵内是否有摩擦声或转动不灵活等不正常现象。

■ 泵的安装

1、泵的安装步骤

泵的安装步骤一般包括把泵放到地基上，找水平、调正和联接泵的管路等。

2、泵安装需要的设备

泵安装时需要下列常规的设备和工具：

- a、有合适负载能力而且安全的起重设备；
- b、每个地脚螺钉处都必须备有一块钢的垫铁或楔铁，作找平底座可用；
- c、灌浆的材料必须是不收缩的灌浆料，为了灌浆需准备一个木盒，而且需配有漏斗；
- d、为了安装和拆卸填料，需要一套专用的工具，如带钩的夹具等。

3、泵的搬运

在搬运时要注意安全以防事故发生，搬运时要注意下列事项：

- a、在搬运泵时，起重机的吊钩应挂在底座下面，也可用叉式起重机搬运泵，不允许吊在泵和原动机和螺栓孔或吊泵的轴承体，更不能再泵轴处起吊；
- b、起重负载应均匀平衡，且应注意起重设备的承载能力，起吊时应小心谨慎，防止泵件的碰撞，特别应避免泵联轴器处轴加工配合面的损坏；
- c、严禁异物或灰尘在搬运过程中进入泵和电动机内。

4、泵的开箱检查

泵运到使用单位后应开箱检查泵的零件是否丢失，是否在运输过程中有损坏，如果出现丢失或损坏时，应立即向运输部门和泵制造厂声明。

5、暂时库存

如果泵需要在安装以前库存一段时间，泵仍然需要包装，而且应放在干燥、防雨、防灰尘的合适的地面上，泵的吐出口和吸入口应盖住，以防异物进入。泵的轴、轴承和其它精加工的零件应注意防潮，应涂保护层。



注：半个月盘车一次，保证盘车灵活。

3.At the end of assembly, move the rotor with hand to check if there is frictional sound, non-flexible movement etc. abnormal condition inside of the pump.

■ Installation of pump

1.Installation steps

Generally covering the placement of the pump on the foundation, leveling, adjustment and connection of the pump's pipeline.

2.Facilities necessary for installation

The following common facilities and tools are required in installation:

- a.Safe lifters available with a proper loading capacity.
- b.Set a steel horn or weDe horn on every foot screw for leveling foundation.
- c.The grouting material must be a non-shrinking one and it is necessary to prepare a wood case for grouting, which has to be fitted with a hopper.
- d.To mount and remove the packing, a set of special tools is required, such as the clamp with hooks.

3.Pump transportation

When to transport the pump, take care of safety to prevent any accident from occurring and the following cautions:

- a.Place the hook of the lifter under the foundation or use a folk lifter, do not lift it with the hook in the pump, the prime mover and bolt holes or on the bearing, furthermore, on the pump shaft.
- b.Make the lifted load even and balanced, take care about the lifting capacity and not to let the pump parts collided with each other, especially the processed fitting-surface of the shaft on the pump clutch, not to let it damaged.
- c.Prohibited foreign matters or dust from getting into both pump and motor during transportation.

4.Unpacking and check of pump

Unpack and check, when the pump arrives, if any part is lost and if there is any damage, report it to the transporter and the pump manufacturer at once if any.

5.Temporary storage

If the pump is to be stored for a period of time before installation, pack it and place it on a dry, rain-proof and dust-proof ground with both spitting and suck-in mouths covered to prevent foreign matters in. Pay attention not to let the shaft, bearing and other precisely processed parts of the pump getting wet and coat them with a protective oil layer.



Note: turn the pump once per two weeks and make sure it can be turned flexibly.

6. 泵的基础

6.1 泵的基础必须具有足够强度和尺寸的混凝土地基，基础的质量约等于机组质量3~5倍，泵的地基就比泵的底座长出50~70mm，且要留出地脚孔（为地脚螺栓3~4倍的钢管直径）；

6.2 打地基包括如下内容：地基的地脚螺栓孔的定位，灌浆和留出联接管路位置，然后在其余空间灌浆；

6.3 地基的表面可以是2粗糙的，以使灌浆效果好；

6.4 地基完全固化再安装设备。

7. 搬运和找水平

7.1 在底座下面放置钢的垫铁和楔铁或调整垫，一般都放置在地脚螺栓处，如果底座较长，在两地脚螺栓中间可放置一块垫铁；

7.2 检查底座下面的地基，清洗灰尘、油和其它杂物；

7.3 起重吊钩底座的四个角上，把底座吊在地基上方，慢慢地把2底座放在每个螺栓孔的位置上（对地脚螺栓孔的位置）；

7.4 用一个刀口平尺和机械水平仪放到泵和电机底部加工平面上，用调整楔铁或帖偶正垫的厚度来确定底座在各个方位上的水平，推荐每100mm长不平度小于0.25mm，这时地脚螺栓的螺母拧到适当的程度（不能过紧），楔铁或调整垫片应紧固；

7.5 底座找平，而且和地基配合较紧后再灌浆。

8. 底座的灌浆

8.1 灌浆时，确保做到每个空间的空气必须全部排出；

8.2 当灌浆材料固化后，拧紧地脚螺栓的螺母，然后再对灌浆材料涂油漆防潮；

8.3 灌浆后，进行泵和电动机的调正工作。

9. 设备的调整

设备调正包括角度调正和中心线位置的调正，至少应在下面三个小时检查设备，进行调正：

第一次，泵和底座已经紧固，但电动机没紧固；

第二次，泵和电动机已紧固，但吸入和吐出管路法兰的螺栓没紧固；

第三次，在泵运转24小时后，再检查一次，检查后把泵和电动机最后紧固。

6. Basis for the pump

6.1 The basis should be a concrete one of sufficient strength and size, with the mass of it 3~5 times that of The second time, both pump and motor are secured while the bolts on the suck-in and spitting pipeline flanges are not. The third time is in 24 hours after the pump starts running, then secure both pump and motor, the unit one, and 50~70mm longer than that of the pump foundation, plus the foot bolt holes (a steel pipe's diameter 3~4 times that of the foot bolt).

6.2 The job to set the basis covers: locating the foot bolt hole, grouting and leave the place for the pipeline connection, then grouting into the other space.

6.3 The rougher the surface of the basis, the better the grouting effect.

6.4 Do not install any equipment until the basis gets completely solidified.

7. Movement, placement and leveling

7.1 Place steel and weDe horns or regulating iron at the foot bolts under the pump foundation, in general, place a horn in between two bolts in case of a longer foundation.

7.2 Check the basis under the pump foundation and clear dust, oil and other foreign matters.

7.3 Place lifting hooks on the four corners of the foundation to lift it above the basis and then slowly put it on the position with the bolt holes aligned.

7.4 Place a knife eDe flat ruler and a mechanical leveler under the processed planes of both pump and motor's foundations and use the thickness of a regulating weDe iron or pad to decide the levelness of the foundation on every respect, for which, non-flatness less than 0.25mmper 100mm is recommended. Then tighten the nut of the foot bolt to a proper extent (not over-tightened) and secure the weDe iron or regulating pad.

7.5 Level the foundation, donotgrout until it is more closely fitted with the basis.

8. Grout the foundation

8.1 Make sure the air inside of each space is completely exhausted when to grout.

8.2 Tighten the nut of the foot bolt when the grouted material is solidified and then coat the material with paint for wet resisting.

8.3 After grouting, adjust both pump and motor.

9. Adjustment of equipments

Covering angle and central line position adjustment. check the equipments at least in the following three periods and take adjustment:

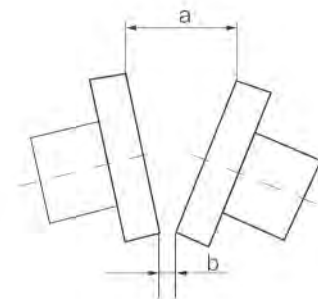
The first time, both pump and foundation are secured while the motor is not. The second time, both pump and motor are secured while the bolts on the suck-in and spitting pipeline flanges are not. The third time is in 24 hours after the pump starts running, then secure both pump and motor.

在调正工作中应注意以下事宜：

a、在调正以前，检查全部的管线，保证它们不对泵座产生作用或力矩；

b、在调正泵和电动机时，垫片应垫在电动机的下面。角度调正是保证联轴器的两个平行度，用一块千分表去检查联轴器法兰端面上四点，千分表读数为0.02~0.03，检查其平行度也可用塞尺，两联轴器平面间的差值（a-b）≤0.06（见图5）。

中心线对中指泵和电机轴中心线的对正程度，应使c=0.08（见图5）。



Pay attention to the following cautions in the adjustment:

a. Before adjusting, check all pipelines to make sure they will not produce any action or moment on the pump foundation.

b. Put the pad under the motor while to adjust both pump and motor. Angle adjustment is to guarantee the parallelism of the two planes of the clutches. Use a dial gauge to check four points on the end-face of the clutch flange, the reading on the gauge is 0.02~0.03, and use a feeler to check the parallelism, the difference (a-b) between the two planes is ≤0.06 (see Fig. 5).

Central line alignment means the aligned degree between the central lines of both pump and motor's shafts, c should be ≤0.08 (see Fig. 5).

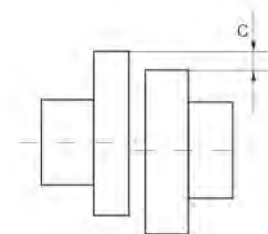


图5 Fig.5

10. 主要管路的联接

泵灌浆且紧固在地基上以后，在不受外力条件下对正并联接泵法兰和管路的法兰，这个对正联接不能依靠法兰螺栓的力。

对管路支撑（附加）应避免管路系统的振动，应减少对管路系统进行清洗。

安装管道，应注意事项：

a、使用管路的规格和长度应适合，且有足够的承压能力，尽量减少管路的转弯和附件；

b、泵的吸入管路应是短而直，管路直径应大于或等于泵的吸入口的直径，泵的吸入管路的弯曲半径应做的尽量大。

11. 附加设备的联接

11.1 压力表

在吸入管路和吐出管路上用的压力表必须是质量好性能合格的仪表了。吐出压力表最好装配在泵和主管路的吐出法兰2倍直径长的距离上，不能装在弯管和阀的旁边，以防受不稳定流动的干扰。

10. Link the main pipelines

After grouting and securing the pump on the basis, align and link the flanges of both pump and pipeline without subject to an external force, i.e. the force from the flange bolt.

For the pipeline support (additional), it should be able to avoid the pipeline vibration and reduce the cleaning to the pipeline.

Cautions in the installation of the pipeline:

a. The pipeline used should be of a proper norm and length and a sufficient bearing capacity, reducing both bends and fittings of the pipeline as can as possible.

b. The suck-in pipeline of the pump should be short and straight, the diameter of it should be equal or more than that of the pump's suction inlet and the bent radius of the suck-in pipeline should be made as big as possible.

11. Link the additional equipments

11.1 Pressure gauge

The pressure gauges used on both suck-in and spitting pipelines must be good quality and certified performance. It is better for the spitting pressure gauge to be mounted at the distance 2 times of the diameter of the spitting flange of both pump and main pipeline while not by both elbow and valves so as to prevent the disturbance from unstable flowing.

11.2 联轴器

泵和电机联轴器联接以前重新检查其对中性；检查电动机的转向是否符合要求，泵轴的转向：从联轴器方向看泵为顺时针方向旋转，如果电动机转向不符合泵轴的转向，必须把电动机转向调正。

11.3 轴封

如果需要，在泵转动以前，重新调整轴封或重新装配。

■ 泵的运转

1、操作注意事项

- 1.1 泵只能允许在规定的参数范围内运转；
- 1.2 泵不允许在吐出阀门关闭或关到很小开度下运转，否则导致泵发热，降低寿命，如果泵是安装在一个并联系统中，每台泵都要在特定的参数下运行以保证泵流量；
- 1.3 泵不能关闭吸入阀运行，否则使泵发生干转，导致泵零件损坏；
- 1.4 泵输送介质不能含有空气或气体，否则会使泵的流量和扬程不可能准确地测出，同时会产生研磨损坏零件；
- 1.5 该型泵不能输送带颗粒的材料，否则会降低泵的效率 and 零件的寿命；
- 1.6 启泵以前应对泵进行开车前检查。

2、启泵前检查

- 2.1 启泵前，检查全部螺栓、管路及引线的联接是否紧固；
- 2.2 检查全部仪表、阀门及仪器是否正常；
- 2.3 检查油环位置、油位计的油是否正常；
- 2.4 检查电动机的转向是否正确。
- 2.5 启动前，应进行盘车，确保无磨卡现象。

3、泵的启动

3.1 泵启动时注意事项

- a、该型泵输送介质温度较高（ < 160℃ ）；
- b、启动时观察压力表和开关的指示，以便调整；
- c、泵启动后，不能使吐出阀关闭或接近关闭较长时间，否则会使泵内液体过热。

11.2 Clutch

Recheck the alignment before linking the clutches of both pump and motor; check if the motor moves in the correct direction, and the pump shaft as well; viewing from the clutch, the pump moves clockwise and adjust it if the motor moves in a direction not in line with the pump's.

11.3 Shaft seal

Readjust or reassemble the shaft seal before the pump starts moving if necessary.

■ Running of the pump

1. Cautions in operation

- 1.1 The pump is allowed to run within the set parameter range only.
- 1.2 The pump is not allowed to run with the spitting valve closed or closed to a little opening, or it will be caused heated and duration lowered. Each pump is required to run under the special parameters so as to guarantee the flow of it if mounted in a parallel system.
- 1.3 The pump can not run with the suck-in valve closed, or it may be dried moving to cause parts damaged.
- 1.4 The medium the pump transports can not contain air or gas, or both flow and head of the pump may not be accurately measured and, meanwhile, grinding may be produced to damage parts.
- 1.5 This pump is not allowed to transport any material with grains, or both pump efficacy and part duration may be lowered.
- 1.6 Check the pump before starting it.

2. Check before starting the pump

- 2.1 Before starting the pump, check if all the bolts, pipelines and the lead-wires are securely connected.
- 2.2 Check if all the meters, valves and instruments are normal.
- 2.3 Check if the oil ring's position and the oil in the oil leveler are normal.
- 2.4 Check if the motor moves in the correct direction.
- 2.5 Turn the pump before starting it to make sure it does not get stuck.

3. Start the pump

3.1 Cautions therein

- a. The temperature of the medium this pump transports is higher (< 160℃).
- b. Look at the indications of both pressure gauge and switch during starting so as to adjust them.
- c. After starting the pump, do not let the spitting valve closed or nearly closed for a longer time, or the liquid inside of the pump may become overheated.

3.2 启动步骤

- a、首先进行启动前检查（按前述步骤）；
- b、打开泵的吸入阀和水封水管路的阀；
- c、关闭吐出管路，使泵内充满液体；
- d、启动电机，接着打开吐出管路的阀。

4、泵运转检查

泵运转后，应立即按2.2条的程序每隔一定时间检查仪表，以此确定泵的工作是否正常，而且要检查泵的转速，此外，检测泵的流量、扬程、温度及润滑状况。泵在发生故障时，应停泵，且参照故障排除表进行维修。

5、停泵

- 5.1 将泵的吐出阀关到最小流量，但决不允许关闭泵的吸入阀；
- 5.2 关闭电动机；
- 5.3 关闭泵的吐出阀；
- 5.4 当泵停稳后再关闭泵的吸入阀。



警告：水泵禁止空运转！

■ 泵的维修



泵维护与维修前切断电源！

1、概述

为了保持泵高效稳定的工作状态，泵必须经常维修，维修的项目和每次维修间隔时间取决于泵的工作条件和泵的运行状况。

2、泵的维护

定期检查泵的性能（如流量、扬程、振动等）而且做好记录，按这些记录数据去分析泵是否工作正常，是否需要维修，或确定要修的哪一个部位。

在一般条件下，如果坚持精确地测试、记录、定期的总结记录，那么每隔几个月就可以得到泵是否需要维修的可靠资料。

除在规定时间内对泵检测之外，下面的维护是经常的：

- a、检查泵底座、泵、电动机是否紧固，如果松动会引起泵的振动；
- b、检查仪表、引线的状况；检查管路是否泄漏或松动，或其它形式的损坏，如果需要维修应立即检修；
- c、填料压盖不能压的过紧，否则会影响填料的寿命；
- d、轴承润滑油每工作1000小时更换一次。

3.2 Steps to start the pump

- a. First do the before-starting check (as above mentioned).
- b. Open the pump's suck-in valve and the water sealed water pipeline's valve.
- c. Close the spitting pipeline to have inside of the pump full of liquid.
- d. Start the motor and then open the valve on the spitting pipeline.

4. Check of the pump movement

After the pump starts moving, check the meters every certain time upon the procedure in 2.2 to see if it works normally and the rotating speed of it. In addition, check the flow, head, temperature and lubrication of it. In case of a failure, stop it and repair it by referring the table of troubleshooting.

5. Stop the pump

- 5.1 Close the pump's spitting valve to the smallest flow, but do not close the pump's suck-in valve.
- 5.2 Turn off the motor.
- 5.3 Close the pump's spitting valve.
- 5.4 Then close the suck-in valve when the pump stops stably.



Warning: Idle running is forbidden!

■ Repair of pump



Turn off the power before maintenance!

1. General

To keep the pump in a high effective and stable work, it must be often repaired, the items of repair and the interval between every repair depend on the working condition and running state of it.

2. Maintenance of pump

Hold a periodic check of the pump's performance (as the flow, head, vibration etc.) And make a record, then analyze the pump upon these recorded data to see if it works normally, needs repairing or decide which portion needs repairing. In general conditions, reliable information whether the pump needs repairing can be gained every several months provided that insistent and accurate tests and records as well as periodic summarizing of the records have been made. In addition to the monitor of the pump at the set time, the followings need to be maintained often:

- a. Check if the pump, foundation and moto rare secured, causing the pump vibrated if loose.
- b. Check the meters and leading-wires' state; check if the pipeline leaks or loosens or gets damaged in any other forms, repair it at once if necessary.
- c. Do not let the packing gland pressed too tightly, or the duration of it may be affected.
- d. Replace the lubricating oil on the bearings every 1000h of work.

■ 故障原因及排除方法 Failures causes and troubleshooting

故障Failure	原因Possible causes	排除方法Troubleshooting
1、水泵不吸水，压力表及真空表指针剧烈跳动。 Pump not suck water, both pointers of manometer and vacuometer severely jump.	注入水泵的水不够，进水管与仪表等处漏气。 Water injected into the pump insufficient, air leaks from water inlet pipe, meters etc.	再往水泵内注水，拧紧堵塞漏气处。 Inject water into pump, tighten the leaking places.
2、水泵不吸水，真空表已显示高度真空。 Pump not suck water, high v-acuum shown on vacuometer	底阀没有打开或已淤塞，吸水管阻力太大，吸入高度太大。 Foot valve not opened or blocked up, too big resistance with water sucking pipe, too high suck-in height.	校正或更改底阀，清洗或更换吸水管，降低吸水高度。 Correct or replace foot valve, clean or replace water sucking pipe, lower the height.
3、看压力表水泵出口处是有压力而水泵不出水。 Pressure available at pump outlet viewing from pressure gauge while no water out of pump	出水管阻力太大，旋转方向不对，叶轮淤塞，或损坏水泵，转数不够。 Too big resistance with water outlet pipe, wrong rotating direction, impeller blocked up, or pump damaged, insufficient r.p.m.	检查或缩短水管及检查电机取下水管接头，清洗或更换叶轮提高转数。 Check or shorten outlet pipe, check motor, remove the pipe union, clean or replace impeller, raise r.p.m.
4、流量不足。 Insufficient flow.	水泵淤塞，密封环磨擦过多，转数不足。 Pump blocked up, too much friction with seal ring, insufficient r.p.m.	清洗水泵及管子更换密封环提高转数。 Clean pump and pipe, replace seal ring, raise r.p.m.
5、水泵消耗的功率过大。 Too large power loss of pump.	填料压盖压得过紧，填料室发热，叶轮磨损，水泵供水量增加。 Too tightly pressed packing gland, packing room heated, impeller worn out, water supply quantity of the pump increases.	拧松填料压盖或更换填料，更换叶轮，增加出水管阻力来减少流量 Loosen packing gland or replace packing, replace impeller, increase resistance with outlet pipe to reduce the flow.

■ 故障原因及排除方法 Failures causes and troubleshooting

故障Failure	原因Possible causes	排除方法Troubleshooting
6、水泵内部声音反常，水泵吸不上水。 Abnormal sound inside of pump, no water out of it.	流量太大，吸水管内阻力太大，吸水高度过大，在吸水处有空气渗水，所输送液体温度过高。 Too big flow, too big resistance inside of water sucking pipe, too high water-sucking height, air gets in the water-sucking place, too high temperature of the liquid being transported.	增加出水管内的阻力以减低流量，检查水管和底阀，减少吸水高度，拧紧堵塞漏气处。 Increase the resistance inside of water outlet pipe to reduce the flow, check water-sucking pipe and foot valve, lower the height, tighten the air leaking places.
7、水泵振动 Pump vibrates	泵轴与电机轴线不在同一条中心线上，脏物或水浸入轴承。 Axes of pump and motor not on one central line, dirt or water gets into the bearing.	把水泵和电机的轴中心线对准，清洗轴承更换润滑脂 Align the two central lines, clean bearing, replace lubricating grease.
8、电机发热。 Motor become hot.	润滑脂干固或脏了，水泵轴与电机轴不在同一条中心线上。 Lubricating grease dried or dirty, axes of pump and motor not on one central line.	检查或清洗轴承体更换润滑脂把轴中心对正。 Check or clean bearing, replace lubricating grease, align the central lines.
9、平衡水中断，平衡室发热，电机功率增加。 Balancing water stops, balancing room heated, motor's power increased.	水泵在大流量低扬程运转，平衡盘与平衡板产生研磨。 Pump runs under a big flow and low head, grinding occurs between balancing disk and board.	关小出口阀至设计工况运转，拆卸平衡盘进行检修。 Close outlet valve to the designed working condition, remove balancing disk for repAiring.