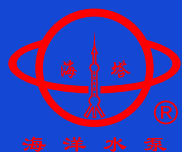
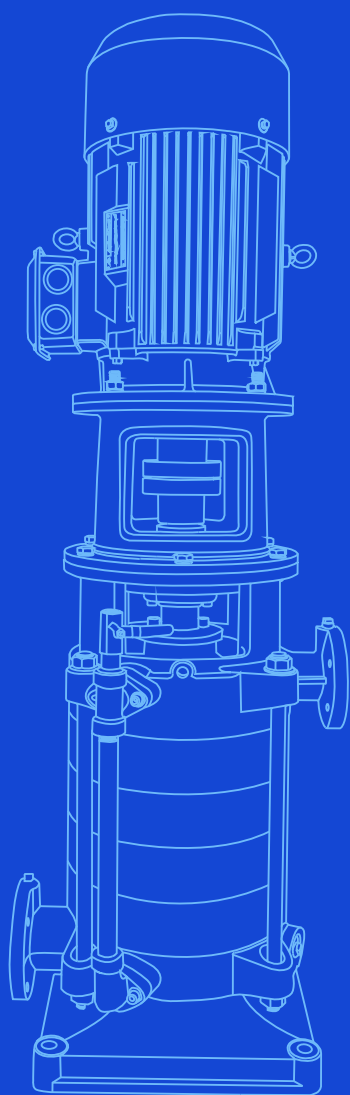


由于我们在不断努力改进产品，我们保留样本数据更改的权利，敬主谅解。

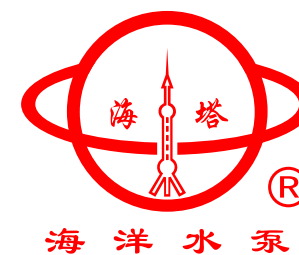


Shanghai Sea
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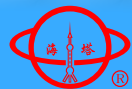
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DL型立式多级离心泵
DL vertical multistage centrifugal pump

SEAPUMP

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



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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产品简介

DL、DLR系列立式多级离心泵(低转速n=1450 r/min)是本厂根据高层建筑给水市场的实际需要和国家消防局GB 6245-2006《消防泵》标准而研制的产品。供输送不含坚硬颗粒及物理化学性质类似于水的介质之用。流量范围为5~360m³/h,扬程范围为22~300m,配套功率范围为1.5~220KW,口径范围为φ40~φ200mm。同一台泵的出口可设多个出口。

产品特点

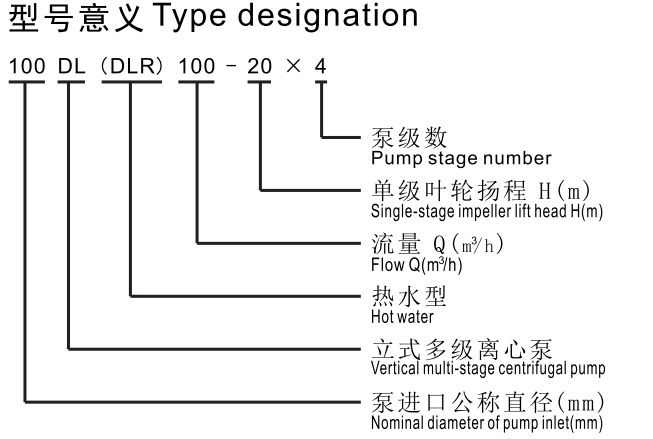
DL、DLR系列立式多级离心泵采用有效的水力模型,具有效率高,性能曲线平缓,运行范围广,符合消防局的有关规定,满足不同用户的使用需要;采用立式分段式紧凑结构,且运转平稳、噪音低、使用寿命长、占地面积少、安装维护方便等优点。

产品用途

DL、DLR系列立式多级离心泵主要用于高层建筑生活给水、消防恒压供水、自动喷淋水、自动水幕供水等,也可应用于厂矿给排水、远距离送水,各种设备配套使用以及各种生产工艺用水等。DL立式多级泵介质使用温度不超过80℃,DLR型介质使用温度不超过120℃。

工作条件

- 使用的介质应类似水,运动粘度<150mm²/s,且无坚硬颗粒,无腐蚀性性质;
- 使用的环境海拔高度<1000米,超过时应在订货进提出,以便本厂为您提供更为可靠的产品;
- 介质使用温度-15至120℃;
- 系统工作压力≤2.5MPa;
- 周围环境温度应低于40℃,相对湿度低于95%。



Product introduction

DL, DLR Series Vertical Multistage Centrifugal Pumps (Low Speed) N = 1450r/min) is based on the water supply market of high-rise buildings. Practical Needs and National Fire Bureau GB 6245-2006 Fire Pump Standard and developed products. No Hard Particles and Material for Transportation Physicochemical properties are similar to those used in water media. Flow range 5-360 m³/h, head range 22-300 m, matching power norm Circumference is 1.5-220 KW, caliber range is 40-200 M. The outlet of the same pump can have multiple outlets.

Product features

DL, DLR Series Vertical Multistage Centrifugal Pumps Use Effective Hydraulic Force.The model has the advantages of high efficiency, smooth performance curve, wide operation range and conformity. The relevant regulations of the fire department shall be adopted to meet the needs of different users. Vertical piecewise compact structure, stable operation, low noise, use It has the advantages of long service life, less floor area and convenient installation and maintenance.

Product use

DL, DLR series vertical multi-stage centrifugal pumps are mainly used for high-rise building domestic water supply, constant pressure water supply for fire fighting, automatic sprinkler water, automatic water curtain water supply and so on. They can also be used for plant and mine water supply and drainage, long-distance water supply, various equipment supporting use and various production process water. DL vertical multi-stage pump medium use temperature does not exceed 80 C, DLR medium use temperature does not exceed 120 C.

Working Conditions

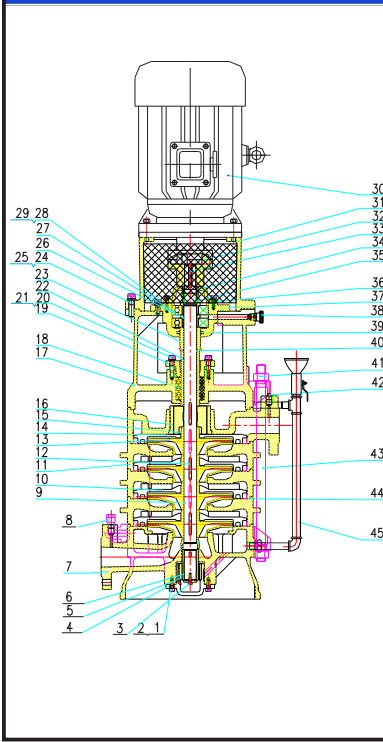
- The medium used should be similar to water, with kinematic viscosity less than 150 mm²/s, without hard particles and corrosive properties.
- The altitude of the environment used is less than 1000 meters. When exceeding the altitude, it should be put forward in order to provide you with more reliable products.
- The service temperature of the medium is - 15 ~120 C.
- The working pressure of the system is less than 2.5 MPa.
- The ambient temperature should be lower than 40 C and the relative humidity should be lower than 95%.

结构说明

此泵由电机和泵两部分组成,电机为三相异步电机,泵和电机采用联轴器连接,整体为刚性连接,使用时无需校正。泵由定子部分和转子部分组成。泵定子部分由进水段、中段、导叶、出水段、填料函体等零件组成。为防止定子磨损,定子上装有密封环、平衡套等,磨损后可用备件更换。转子部分由轴、叶轮、平衡毂等组成。转子下端为水润滑轴承,上部为角接触球轴承,轴向力绝大部分由平衡鼓来承担,其余小部分残余轴向力幅角接触球轴承来承受。进水段和出水段和结合面用纸垫通过接紧达到密封。轴封采用填料或机械密封,用户可根据需要选择。泵旋转方向从驱动端向下看为逆时针方向转动。

- 1、结构紧凑,体积小,外形美观,占地面积小,节省建筑费用;
- 2、吸入口和出水口在同一中心线上,简化管路的连接;
- 3、根据实际情况,进出口可装配成90°、180°、270°不同的方向;
- 4、根据实际情况,出口可装配成1~5个出口,以满足同一台泵上获得不同的扬程;

结构示意图

图样 pattern	序号 No.	名称 Name	序号 No.	名称 Name	序号 No.	名称 Name	序号 No.	名称 Name	序号 No.	名称 Name
	01	轴承螺钉 Bearing Screw	10	导叶 Guide vane	19	机封压盖 Machine seal cap	28	螺栓 Bolt	37	轴承座 Bearing seat
	02	弹垫 Spring washer	11	中段 Middle part	20	螺钉 Screw	29	弹垫 Spring washer	38	油杯 Oil cup
	03	圆螺帽 Round nut	12	键 Key	21	垫圈 Washer	30	电动机 Motor	39	毡圈 Felt ring
	04	轴端压盖 Axis end cap	13	叶轮 Impeller	22	机封轴套 Seal sleeve	31	电机架 Motor frame	40	O型密封圈 O-ring
	05	水润滑轴承 Water lubricated bearing	14	末导叶 Terminal guide vane	23	挡水套 Water retaining jacket	32	联轴器 Coupling	41	螺母 Nut
	06	下轴套 Lower axle sleeve	15	平衡鼓 Balance drum	24	螺栓 Bolt	33	键 Key	42	堵头 Plug
	07	进水段 Inlet section	16	平衡套 Balance sleeve	25	垫圈 Washer	34	背螺母 Back nut	43	拉杆 Pull rod
	08	堵头 Plug	17	函体 Function	26	轴承套 Bearing sleeve	35	轴背帽 Axle-back cap	44	密封垫 A seal
	09	轴 Axis	18	机械密封 Mechanical seal	27	滚动轴承 Rolling bearing	36	轴承压盖 bearing cover	45	引水管 Drainage pipe

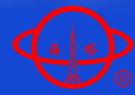
Structure description

The pump is composed of motor and pump. The motor is three-phase asynchronous motor. The pump and motor are connected by coupling. The whole pump is rigid, and there is no need to correct when using. The pump consists of a stator and a rotor. The stator part of the pump is composed of the parts of the intake section, the middle section, the guide vane, the outlet section and the packing box. In order to prevent stator wear, the stator is equipped with sealing rings, balance sleeves, etc., which can be replaced by spare parts after wear. The rotor part is composed of shaft, impeller, balance hub, etc. The lower end of the rotor is a water lubricated bearing and the upper part is an angular contact ball bearing. The majority of the axial force is borne by the balance drum, while the remaining small part of the residual axial force is borne by the angular contact ball bearing. Paper cushions are used to seal the inlet and outlet sections and the joint surface through tightening. Shaft seals are packed or mechanically sealed. Users can choose them according to their needs.

The rotation direction of the pump is anticlockwise from the driving end down.

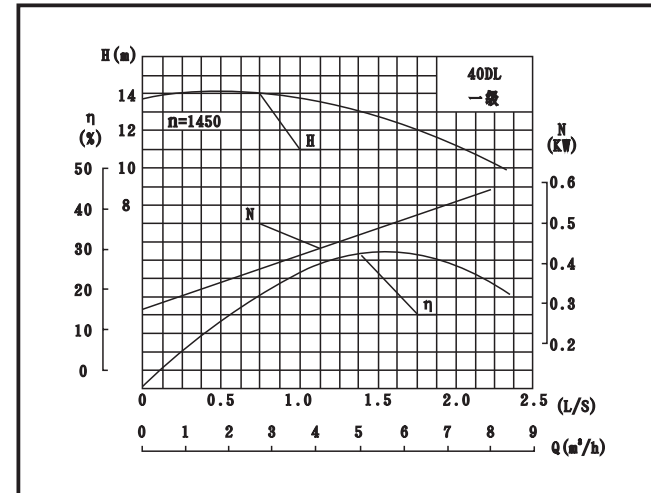
1. Compact structure, small size, beautiful appearance, small area, saving construction costs;
2. Simplify the connection of the pipeline with the suction and outlet on the same central line.
3. According to the actual situation, the import and export can be assembled in different directions of 90 degrees,180 degrees and 270 degrees.
4. According to the actual situation, the outlet can be assembled into 1-5 outlets to meet the different lift of the same pump.

Structure diagram



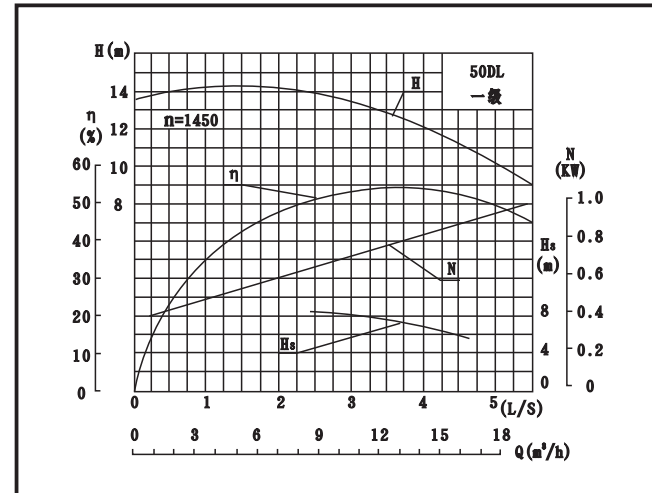
40DL性能曲线图及性能参数

40DL Performance Curve and Performance Parameters



50DL性能曲线图及性能参数

50DL Performance Curve and Performance Parameters

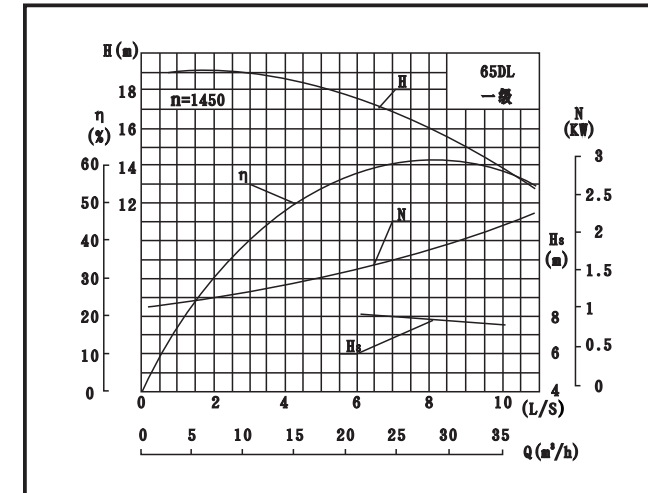


型 号 Type	级数 Stage	流量Q Flow		扬程 Head	转速 Speed	电机功率 Motor power		效率 Eff.	必需汽蚀余量 NPSH
		m³/h	L/s	m	r/min	轴功率 Shaft power	功率 power	%	m
						kW	kW		
40DL6.2-11.8	2	4.90 6.20 7.40	1.36 1.72 2.06	24.8 23.6 21.6	1450	0.83 0.92 1.03	1.5	37 40 39	3.19
	3	4.90 6.20 7.40	1.36 1.72 2.06	37.2 35.4 32.4	1450	1.25 1.38 1.55	2.2	37 40 39	3.19
	4	4.90 6.20 7.40	1.36 1.72 2.06	49.6 47.2 43.2	1450	1.67 1.84 2.07	3	37 40 39	3.19
	5	4.90 6.20 7.40	1.36 1.72 2.06	62.0 59.0 54.0	1450	2.08 2.30 2.58	4	37 40 39	3.19
	6	4.90 6.20 7.40	1.36 1.72 2.06	74.4 70.8 64.8	1450	2.50 2.76 3.10	4	37 40 39	3.19
	7	4.90 6.20 7.40	1.36 1.72 2.06	86.8 82.6 75.2	1450	2.91 3.22 3.62	5.5	37 40 39	3.19
	8	4.90 6.20 7.40	1.36 1.72 2.06	99.2 94.4 86.4	1450	3.33 3.68 4.14	5.5	37 40 39	3.19
	9	4.90 6.20 7.40	1.36 1.72 2.06	111.6 106.2 97.6	1450	3.75 4.14 4.65	7.5	37 40 39	3.19
	10	4.90 6.20 7.40	1.36 1.72 2.06	112.4 118 108	1450	4.16 4.60 5.17	7.5	37 40 39	3.19
	11	4.90 6.20 7.40	1.36 1.72 2.06	136.4 129.8 118.8	1450	4.58 5.06 5.69	7.5	37 40 39	3.19
	12	4.90 6.20 7.40	1.36 1.72 2.06	148.8 141.6 129.6	1450	5.00 5.52 6.20	11	37 40 39	3.19

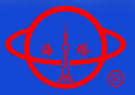
型号 Type	级数 Stage	流量Q Flow		扬程 Head	转速 Speed	电机功率 Motor power		效率 Eff.	必需汽蚀余量 NPSH
		m³/h	L/s			轴功率 Shaft power	功率 power		
50DL12.6-12.2	2	9.00	2.50	26.6	1450	1.30	3	50	2.58
		12.6	3.50	24.4		1.55		54	2.66
		16.2	4.50	21.2		1.80		52	3.16
	3	9.00	2.50	39.9	1450	1.96	3	50	2.58
		12.6	3.50	36.6		2.33		54	2.66
		16.2	4.50	31.8		2.70		52	3.16
	4	9.00	2.50	53.2	1450	2.61	4	50	2.58
		12.6	3.50	48.8		3.10		54	2.66
		16.2	4.50	42.4		3.60		52	3.16
	5	9.00	2.50	66.5	1450	3.26	5.5	50	2.58
		12.6	3.50	61.0		3.88		54	2.66
		16.2	4.50	53.0		4.50		52	3.16
	6	9.00	2.50	79.8	1450	3.91	5.5	50	2.58
		12.6	3.50	73.2		4.65		54	2.66
		16.2	4.50	63.6		5.39		52	3.16
	7	9.00	2.50	93.1	1450	4.56	7.5	50	2.58
		12.6	3.50	85.4		5.43		54	2.66
		16.2	4.50	74.2		6.30		52	3.16
	8	9.00	2.50	106.4	1450	5.22	7.5	50	2.58
		12.6	3.50	97.60		6.20		54	2.66
		16.2	4.50	84.80		7.20		52	3.16
	9	9.00	2.50	119.7	1450	5.87	11	50	2.58
		12.6	3.50	109.8		6.98		54	2.66
		16.2	4.50	95.40		8.10		52	3.16
	10	9.00	2.50	133	1450	6.52	11	50	2.58
		12.6	3.50	122		7.75		54	2.66
		16.2	4.50	106		9.00		52	3.16

65DL性能曲线图及性能参数

65DL Performance Curve and Performance Parameters

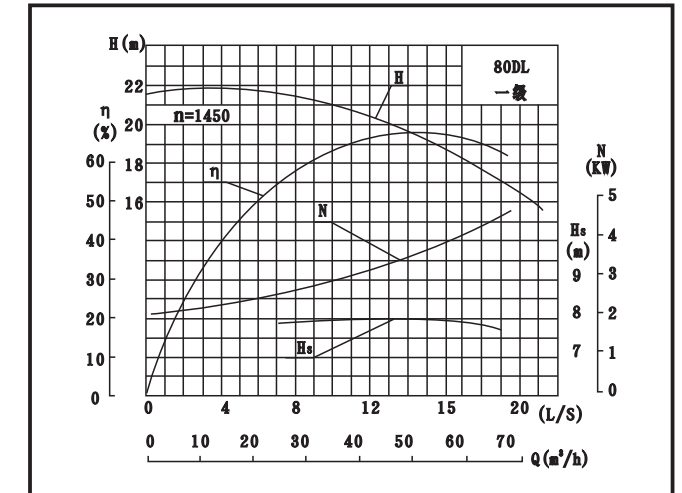


型号 Type	级数 Stage	流量Q Flow		扬程 Head	转速 Speed	电机功率 Motor power		效率 Eff.	必需汽蚀余量 NPSH
		m³/h	L/s			轴功率 Shaft power	功率 power		
65DL30-16	2	18	5.00	37.0	1450	3.24	5.5	56	2.41
		30	8.33	32.0		4.22		62	
		35	9.72	29.0		4.60		60	
	3	18	5.00	55.5	1450	4.86	7.5	56	2.41
		30	8.33	48.0		6.33		62	
		35	9.72	43.5		6.90		60	
	4	18	5.00	74.0	1450	6.48	11	56	2.41
		30	8.33	64.0		8.44		62	
		35	9.72	58.0		9.20		60	
	5	18	5.00	92.5	1450	8.10	15	56	2.41
		30	8.33	80.0		10.55		62	
		35	9.72	72.5		11.50		60	
	6	18	5.00	111.0	1450	9.72	15	56	2.41
		30	8.33	96.0		12.6		62	
		35	9.72	87.0		13.8		60	
	7	18	5.00	129.5	1450	11.3	18.5	56	2.41
		30	8.33	112.0		14.7		62	
		35	9.72	101.5		16.1		60	
	8	18	5.00	148.0	1450	12.9	22	56	2.41
		30	8.33	128.0		16.8		62	
		35	9.72	116.0		18.4		60	
	9	18	5.00	166.5	1450	14.6	22	56	2.41
		30	8.33	144.0		18.9		62	
		35	9.72	130.5		20.7		60	
	10	18	5.00	185	1450	16.2	30	56	2.41
		30	8.33	160		21.1		62	
		35	9.72	145		23		60	



80DL性能曲线图及性能参数

80DL Performance Curve and Performance Parameters

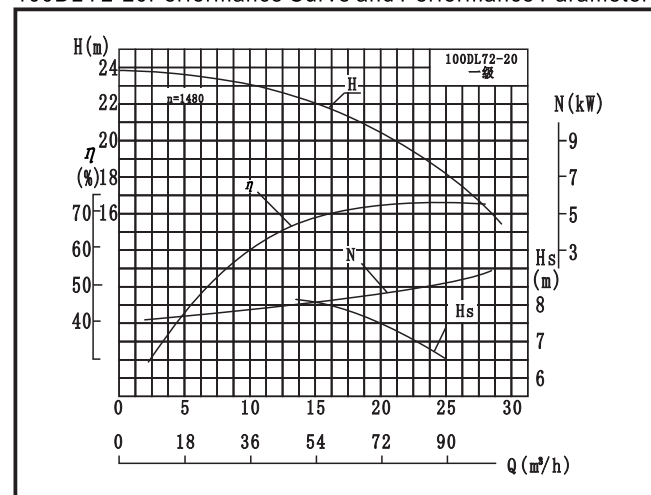


型号 Type	级数 Stage	流量Q Flow		扬程 Head	转速 Speed	电机功率 Motor power		效率 Eff.	必需汽蚀余量 NPSH
		m³/h	L/s	m	r/min	轴功率 Shaft power	功率 power	%	m
						kW	kW		
80DL50-20	2	32.4	9.00	43.2	1450	6.28	11	60	2.2
		50.0	14.0	40.0		7.84		70	2.5
		65.2	18.1	34.2		9.12		66	2.8
	3	32.4	9.00	64.8	1450	9.42	15	60	2.2
		50.0	14.0	60.0		11.8		70	2.5
		65.2	18.1	51.3		13.7		66	2.8
	4	32.4	9.00	86.4	1450	12.6	22	60	2.2
		50.0	14.0	80.0		15.7		70	2.5
		65.2	18.1	68.4		18.2		66	2.8
	5	32.4	9.00	108.0	1450	15.7	30	60	2.2
		50.0	14.0	100.0		19.6		70	2.5
		65.2	18.1	85.5		22.8		66	2.8
	6	32.4	9.00	129.6	1450	18.9	30	60	2.2
		50.0	14.0	120.0		23.6		70	2.5
		65.2	18.1	102.6		27.4		66	2.8
	7	32.4	9.00	151.2	1450	21.9	37	60	2.2
		50.0	14.0	140.0		27.5		70	2.5
		65.2	18.1	119.7		31.9		66	2.8
8	32.4	9.00	172.8	1450	25.1	45	60	2.2	
	50.0	14.0	160.0		31.4		70	2.5	
	65.2	18.1	136.8		36.5		66	2.8	
9	32.4	9.00	194.4	1450	28.3	45	60	2.2	
	50.0	14.0	180.0		35.3		70	2.5	
	65.2	18.1	153.9		41.1		66	2.8	
10	32.4	9.00	216	1450	31.4	55	60	2.2	
	50.0	14.0	200		39.2		70	2.5	
	65.2	18.1	171		45.6		66	2.8	



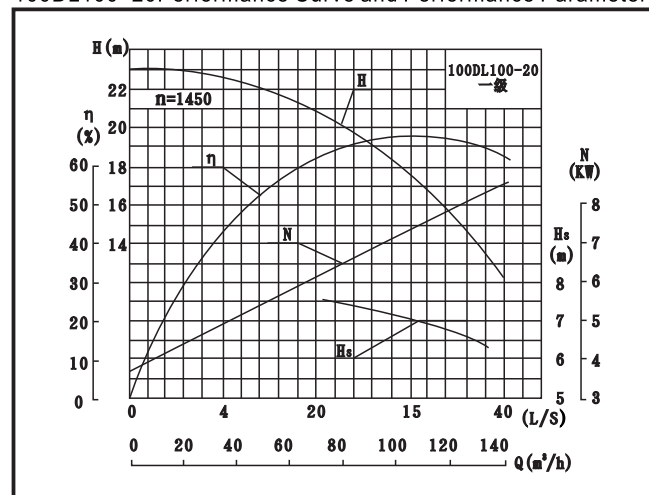
100DL72-20性能曲线图及性能参数

100DL 72-20Performance Curve and Performance Parameters



100DL100-20性能曲线图及性能参数

100DL100-20Performance Curve and Performance Parameters

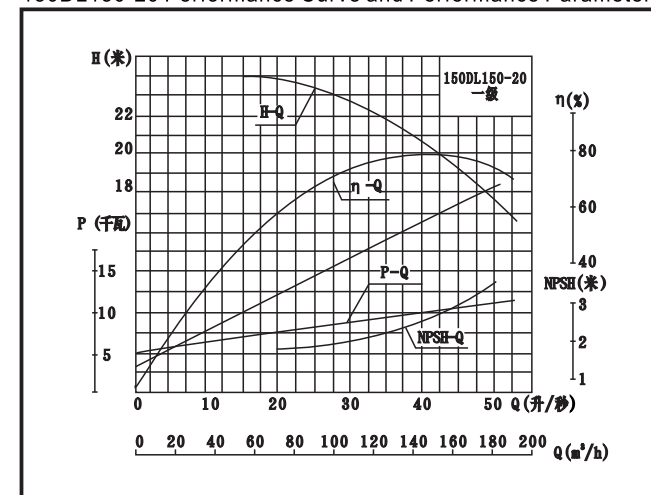


型号 Type	级数 Stage	流量Q Flow		扬程 Head	转速 Speed	电机功率 Motor power		效率 Eff.	必需汽蚀余量 NPSH
		m³/h	L/s	m	r/min	轴功率 Shaft power	功率 power	%	m
						kW	kW		
100DL72-20	2	50.4 72.0 86.4	14.0 20.0 24.0	46.0 40.0 36.0	1450	10.2 10.9 11.9	15	62 72 71	2.2 2.8 3.1
	3	50.4 72.0 86.4	14.0 20.0 24.0	69.0 60.0 54.0	1450	15.3 16.4 17.9	18.5	62 72 71	2.2 2.8 3.1
	4	50.4 72.0 86.4	14.0 20.0 24.0	92.0 80.0 72.0	1450	20.4 21.8 23.9	30	62 72 71	2.2 2.8 3.1
	5	50.4 72.0 86.4	14.0 20.0 24.0	115 100 90	1450	25.5 27.3 29.8	37	62 72 71	2.2 2.8 3.1
	6	50.4 72.0 86.4	14.0 20.0 24.0	138 120 108	1450	30.6 32.7 35.8	37	62 72 71	2.2 2.8 3.1
	7	50.4 72.0 86.4	14.0 20.0 24.0	157 140 126	1450	34.8 38.2 41.8	45	62 72 71	2.2 2.8 3.1
	8	50.4 72.0 86.4	14.0 20.0 24.0	1184 160 144	1450	40.6 43.6 47.8	55	62 72 71	2.2 2.8 3.1
	9	50.4 72.0 86.4	14.0 20.0 24.0	207 180 162	1450	45.9 49.1 53.7	55	62 72 71	2.2 2.8 3.1
	10	50.4 72.0 86.4	14.0 20.0 24.0	230 200 180	1450	50.9 54.5 59.7	75	62 72 71	2.2 2.8 3.1

型 号 Type	级 数 Stage	流 量Q Flow		扬 程 Head	转 速 Speed	电 机 功 率 Motor power		效 率 Eff.	必 需 汽 蚀 余 量 NPSH	
		m³/h	L/s	m	r/min	轴 功 率 Shaft power	功 率 power		%	m
						kW	kW			
100DL100-20	2	72 100 126	20.0 27.8 35.0	43.4 40 34	1450	13.1 15.1 16.7	18.5	65 72 70	2.83 3.53 4.40	
	3	72 100 126	20.0 27.8 35.0	65.1 60 51	1450	19.7 22.7 25.1	30	65 72 70	2.83 3.53 4.40	
	4	72 100 126	20.0 27.8 35.0	86.8 80 68	1450	26.2 30.3 33.4	37	65 72 70	2.83 3.53 4.40	
	5	72 100 126	20.0 27.8 35.0	108.5 100 85	1450	32.8 37.8 41.7	45	65 72 70	2.83 3.53 4.40	
	6	72 100 126	20.0 27.8 35.0	130.2 120 102	1450	39.3 45.4 45.8	55	65 72 70	2.83 3.53 4.40	
	7	72 100 126	20.0 27.8 35.0	151.9 140 119	1450	25.9 53.0 58.4	75	65 72 70	2.83 3.53 4.40	
	8	72 100 126	20.0 27.8 35.0	173.6 160 136	1450	52.4 60.6 66.7	75	65 72 70	2.83 3.53 4.40	
	9	72 100 126	20.0 27.8 35.0	195 180 153	1450	58.9 68.1 75.1	90	65 72 70	2.83 3.53 4.40	
	10	72 100 126	20.0 27.8 35.0	217 200 170	1450	65.5 75.7 83.4	90	65 72 70	2.83 3.53 4.40	

150DL150-20性能曲线图及性能参数

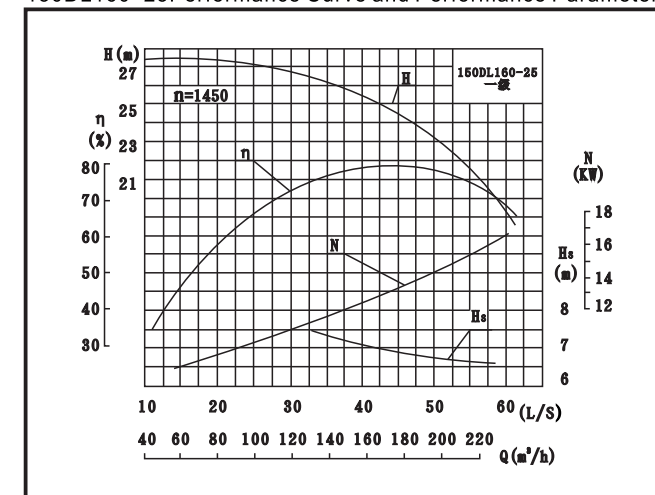
150DL150-20 Performance Curve and Performance Parameters



型号 Type	级数 Stage	流量Q Flow		扬程 Head	转速 Speed	电机功率 Motor power		效率 Eff.	必需汽蚀余量 NPSH
		m³/h	L/s	m	r/min	轴功率 Shaft power	功率 power	%	m
						kW	kW		
150DL150-20	2	108 150 180	30 40 50	45 40 34	1450	17.6 20.4 21.3	30	75 80 78	2.2 2.8 2.7
	3	108 150 180	30 40 50	67 60 51	1450	26.5 30.6 33.3	37	75 80 78	2.2 2.8 2.7
	4	108 150 180	30 40 50	90 80 68	1450	35.3 40.9 42.7	45	75 80 78	2.2 2.8 2.7
	5	108 150 180	30 40 50	112 100 85	1450	44.1 51.1 53.4	55	75 80 78	2.2 2.8 2.7
	6	108 150 180	30 40 50	135 120 102	1450	52.9 61.3 66.7	75	75 80 78	2.2 2.8 2.7
	7	108 150 180	30 40 50	157 140 119	1450	61.7 71.5 74.8	75	75 80 78	2.2 2.8 2.7
	8	108 150 180	30 40 50	180 160 135	1450	70.6 81.7 85.9	90	75 80 78	2.2 2.8 2.7
	9	108 150 180	30 40 50	202 180 153	1450	79.2 91.9 96.2	110	75 80 78	2.2 2.8 2.7

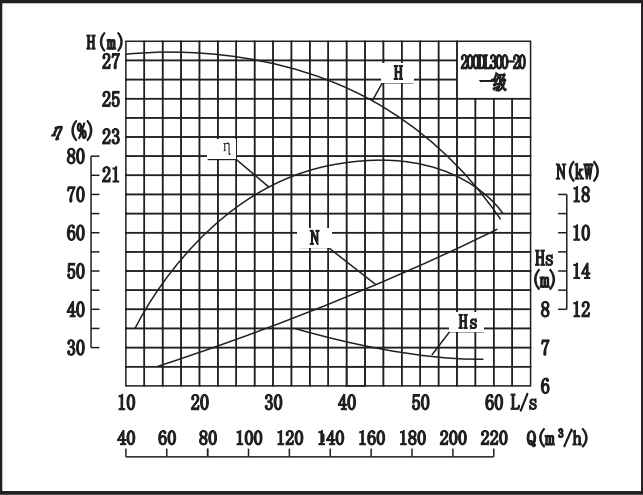
150DL160-25性能曲线图及性能参数

150DL160-25Performance Curve and Performance Parameters



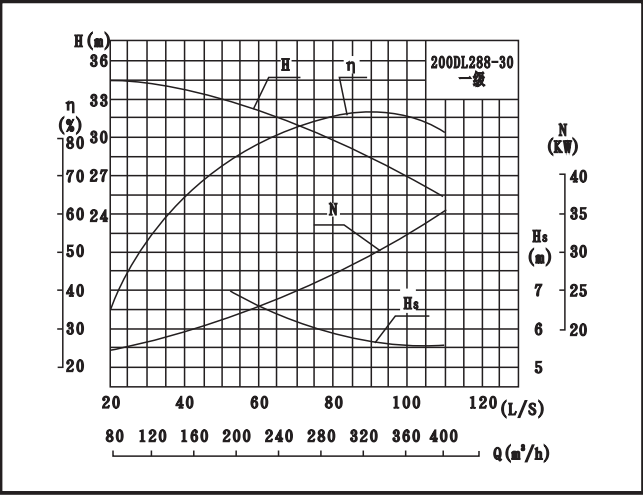
型号 Type	级数 Stage	流量Q Flow		扬程 Head	转速 Speed	电机功率 Motor power		效率 Eff.	必需汽蚀余量 NPSH		
		m³/h	L/s			m	r/min			轴功率 Shaft power	功率 power
										kW	kW
150DL160-25	2	120	33.3	53	1450	24.1	37	72	3.1		
		160	44.4	50		28.7		76	3.5		
		200	55.6	44		32.8		73	3.8		
	3	120	33.3	79	1450	36.1	55	72	3.1		
		160	44.4	75		43.0		76	3.5		
		200	55.6	66		49.2		73	3.8		
	4	120	33.3	106	1450	48.1	75	72	3.1		
		160	44.4	100		57.3		76	3.5		
		200	55.6	88		65.7		73	3.8		
	5	120	33.3	133	1450	60.1	90	72	3.1		
		160	44.4	125		71.7		76	3.5		
		200	55.6	110		82.1		73	3.8		
	6	120	33.3	159	1450	72.2	110	72	3.1		
		160	44.4	150		86.0		76	3.5		
		200	55.6	132		98.5		73	3.8		
	7	120	33.3	186	1450	84.2	132	72	3.1		
		160	44.4	175		100		76	3.5		
		200	55.6	154		115		73	3.8		
8	120	33.3	212	1450	96.2	132	72	3.1			
	160	44.4	200		115		76	3.5			
	200	55.6	176		132		73	3.8			
9	120	33.3	239	1450	108	160	72	3.1			
	160	44.4	225		129		76	3.5			
	200	55.6	198		148		73	3.8			

200DL300-20性能曲线图及性能参数
200DL300-20 Performance Curve and Performance Parameters



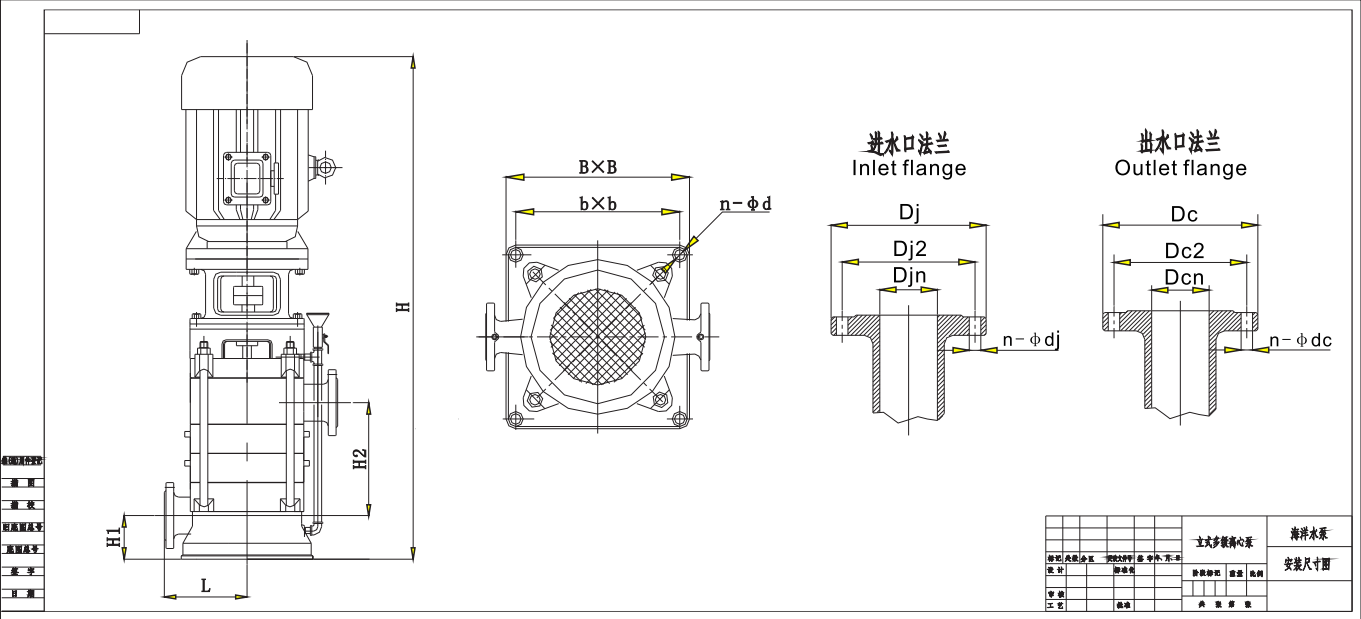
型号 Type	级数 Stage	流量Q Flow		扬程 Head	转速 Speed	电机功率 Motor power		效率 Eff.	必需汽蚀余量 NPSH
		m³/h	L/s			轴功率 Shaft power	功率 power		
200DL300-20	2	210	58.3	45	1450	36.7	55	70	4.2
		300	83.3	40		41.4		79	5.0
		360	100	36		45.3		78	5.5
	3	210	58.3	65	1450	53.5	75	70	4.2
		300	83.3	60		62.1		79	5.0
		360	100	54		68.5		78	5.5
	4	210	58.3	86	1450	70.3	110	70	4.2
		300	83.3	80		82.8		79	5.0
		360	100	72		93.1		78	5.5
	5	210	58.3	106	1450	86.7	132	70	4.2
		300	83.3	100		103.5		79	5.0
		360	100	90		119.5		78	5.5
	6	210	58.3	127	1450	103.8	160	70	4.2
		300	83.3	120		124.2		79	5.0
		360	100	108		135.7		78	5.5

200DL288-30性能曲线图及性能参数
200DL288-30 Performance Curve and Performance Parameters



型号 Type	级数 Stage	流量Q Flow		扬程 Head	转速 Speed	电机功率 Motor power		效率 Eff.	必需汽蚀余量 NPSH
		m³/h	L/s			轴功率 Shaft power	功率 power		
200DL288-30	2	180	50.0	63.8	1450	43.91	90	71.2	3.0
		288	80.0	60.0		58.71		77.9	3.7
		324	90.0	55.6		63.77		76.9	4.4
	3	180	50.0	95.7	1450	65.86	110	71.2	3.0
		288	80.0	90.0		88.06		77.9	3.7
		324	90.0	83.4		95.66		76.9	4.4
	4	180	50.0	127.6	1450	87.81	132	71.2	3.0
		288	80.0	120.0		117.4		77.9	3.7
		324	90.0	111.2		127.5		76.9	4.4
	5	180	50.0	159.5	1450	109.8	160	71.2	3.0
		288	80.0	150.0		146.8		77.9	3.7
		324	90.0	139.0		159.5		76.9	4.4
	6	180	50.0	191.4	1450	131.8	200	71.2	3.0
		288	80.0	180.0		176.2		77.9	3.7
		324	90.0	166.8		191.4		76.9	4.4

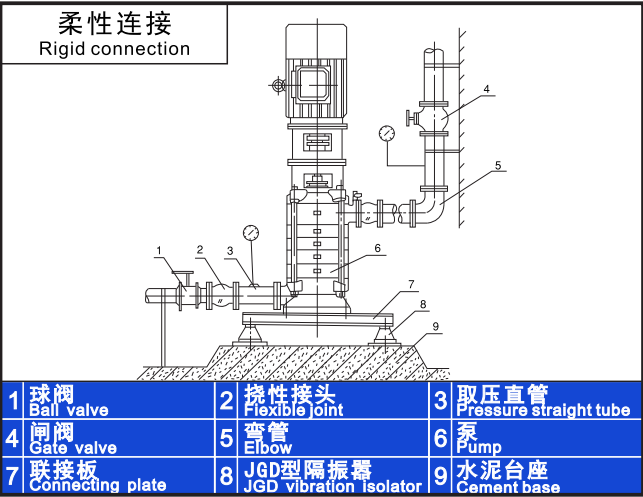
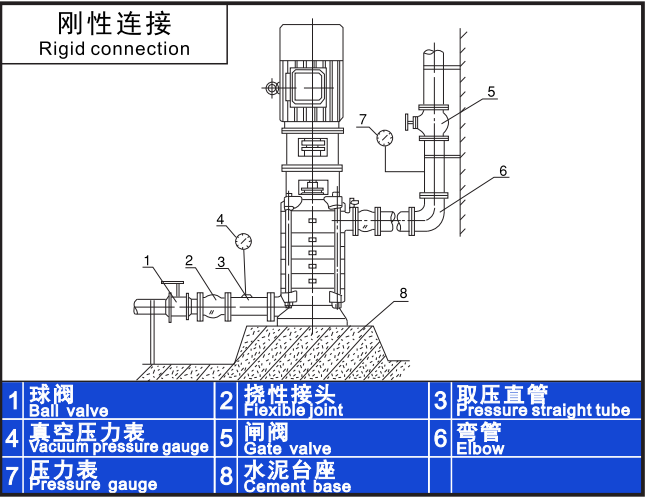
安装尺寸及外形示意图



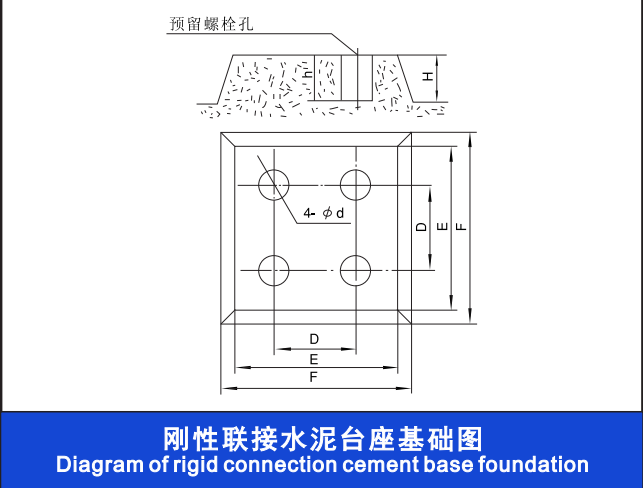
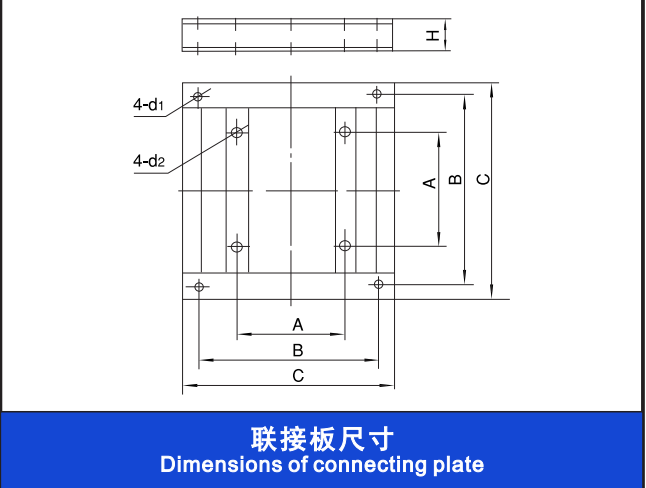
DL型泵外型及安装尺寸表 DL pump shape and installation dimensions

型号 Type	级数 Stage	功率 Power	H	H1	H2	L	B×B	b×b	n-φd	Djn	Dj	Dj2	n-φdj	Dcn	Dc	Dc2	n-φdc
40DL6.2-11.2	2	1.5	2	112	2	225	350×350	300×300	4-φ18	40	150	110	4-φ18	40	150	110	4-φ18
	3	2.2	3	112	3	225	350×350	300×300	4-φ18	40	150	110	4-φ18	40	150	110	4-φ18
	4	3	4	112	4	225	350×350	300×300	4-φ18	40	150	110	4-φ18	40	150	110	4-φ18
	5	4	5	112	5	225	350×350	300×300	4-φ18	40	150	110	4-φ18	40	150	110	4-φ18
	6	4	6	112	6	225	350×350	300×300	4-φ18	40	150	110	4-φ18	40	150	110	4-φ18
	7	5.5	7	112	7	225	350×350	300×300	4-φ18	40	150	110	4-φ18	40	150	110	4-φ18
	8	5.5	8	112	8	225	350×350	300×300	4-φ18	40	150	110	4-φ18	40	150	110	4-φ18
	9	7.5	9	112	9	225	350×350	300×300	4-φ18	40	150	110	4-φ18	40	150	110	4-φ18
	10	7.5	10	112	10	225	350×350	300×300	4-φ18	40	150	110	4-φ18	40	150	110	4-φ18
	11	7.5	11	112	11	225	350×350	300×300	4-φ18	40	150	110	4-φ18	40	150	110	4-φ18
	12	11	12	112	12	225	350×350	300×300	4-φ18	40	150	110	4-φ18	40	150	110	4-φ18
	50DL12.6-12.2	2	3	2	104	2	220	360×360	305×305	4-φ18	50	165	125	4-φ18	40	150	110
3		3	3	104	3	220	360×360	305×305	4-φ18	50	165	125	4-φ18	40	150	110	4-φ18
4		4	4	104	4	220	360×360	305×305	4-φ18	50	165	125	4-φ18	40	150	110	4-φ18
5		5.5	5	104	5	220	360×360	305×305	4-φ18	50	165	125	4-φ18	40	150	110	4-φ18
6		5.5	6	104	6	220	360×360	305×305	4-φ18	50	165	125	4-φ18	40	150	110	4-φ18
7		7.5	7	104	7	220	360×360	305×305	4-φ18	50	165	125	4-φ18	40	150	110	4-φ18
8		7.5	8	104	8	220	360×360	305×305	4-φ18	50	165	125	4-φ18	40	150	110	4-φ18
9		11	9	104	9	220	360×360	305×305	4-φ18	50	165	125	4-φ18	40	150	110	4-φ18
10		11	10	104	10	220	360×360	305×305	4-φ18	50	165	125	4-φ18	40	150	110	4-φ18
65DL30-16		2	5.5	2	120	2	260	430×430	370×370	4-φ24	65	185	145	4-φ18	50	165	125
	3	7.5	3	120	3	260	430×430	370×370	4-φ24	65	185	145	4-φ18	50	165	125	4-φ18
	4	11	4	120	4	260	430×430	370×370	4-φ24	65	185	145	4-φ18	50	165	125	4-φ18
	5	15	5	120	5	260	430×430	370×370	4-φ24	65	185	145	4-φ18	50	165	125	4-φ18
	6	15	6	120	6	260	430×430	370×370	4-φ24	65	185	145	4-φ18	50	165	125	4-φ18
	7	18.5	7	120	7	260	430×430	370×370	4-φ24	65	185	145	4-φ18	50	165	125	4-φ18
	8	22	8	120	8	260	430×430	370×370	4-φ24	65	185	145	4-φ18	50	165	125	4-φ18
	9	22	9	120	9	260	430×430	370×370	4-φ24	65	185	145	4-φ18	50	165	125	4-φ18
	10	30	10	120	10	260	430×430	370×370	4-φ24	65	185	145	4-φ18	50	165	125	4-φ18
	80DL50-20	2	11	2	120	2	280	450×450	400×400	4-φ24	80	200	160	8-φ18	65	185	145
3		15	3	120	3	280	450×450	400×400	4-φ24	80	200	160	8-φ18	65	185	145	4-φ18
4		22	4	120	4	280	450×450	400×400	4-φ24	80	200	160	8-φ18	65	185	145	4-φ18
5		30	5	120	5	280	450×450	400×400	4-φ24	80	200	160	8-φ18	65	185	145	4-φ18
6		30	6	120	6	280	450×450	400×400	4-φ24	80	200	160	8-φ18	65	185	145	4-φ18
7		37	7	120	7	280	450×450	400×400	4-φ24	80	200	160	8-φ18	65	185	145	4-φ18
8		45	8	120	8	280	450×450	400×400	4-φ24	80	200	160	8-φ18	65	185	145	4-φ18
9		45	9	120	9	280	450×450	400×400	4-φ24	80	200	160	8-φ18	65	185	145	4-φ18
10		55	10	120	10	280	450×450	400×400	4-φ24	80	200	160	8-φ18	65	185	145	4-φ18
100DL72-20		2	15	2	140	2	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160
	3	18.5	3	140	3	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
	4	30	4	140	4	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
	5	37	5	140	5	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
	6	37	6	140	6	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
	7	45	7	140	7	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
	8	55	8	140	8	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
	9	55	9	140	9	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
	10	75	10	140	10	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
	100DL100-20	2	18.5	2	140	2	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160
3		30	3	140	3	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
4		37	4	140	4	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
5		45	5	140	5	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
6		55	6	140	6	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
7		75	7	140	7	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
8		75	8	140	8	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
9		90	9	140	9	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
10		90	10	140	10	285	470×470	410×410	4-φ24	100	220	180	8-φ18	80	200	160	8-φ18
150DL150-20		2	30	2	150	2	300	470×470	410×410	4-φ24	150	285	240	8-φ18	125	245	210
	3	37	3	150	3	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
	4	45	4	150	4	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
	5	55	5	150	5	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
	6	75	6	150	6	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
	7	75	7	150	7	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
	8	90	8	150	8	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
	9	110	9	150	9	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
	150DL160-25	2	37	2	150	2	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210
3		55	3	150	3	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
4		75	4	150	4	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
5		90	5	150	5	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
6		110	6	150	6	300	470×470	410×410	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
7		132	7	150	7	300	550×550	480×480	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
8		132	8	150	8	300	550×550	480×480	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
9		160	9	150	9	300	550×550	480×480	4-φ24	150	285	240	8-φ23	125	245	210	8-φ18
200DL300-20		2	55	2	182	2	380	600×600	550×550	4-φ24	200	340	295	12-φ23	150	285	240
	3	75	3	182	3	380	600×600	550×550	4-φ24	200	340	295	12-φ23	150	285	240	8-φ23
	4	110	4	182	4	380	600×600	550×550	4-φ24	200	340	295	12-φ23	150	285	240	8-φ23
	5	132	5	182	5	380	600×600	550×550	4-φ24	200	340	295	12-φ23	150	285	240	8-φ23
200DL288-30	6	160	6	182	6	380	600×600	550×550	4-φ24	200	340	295	12-φ23	150	285	240	8-φ23
	2	75	2	182	2	380	600×600	550×550	4-φ24	200	340	295	12-φ23	150	285	240	8-φ23
	3	110	3	182	3	380	600×600	550×550	4-φ24	200	340	295	12-φ23	150	285	240	8-φ23
	4	132	4	182	4	380	600×600	550×550	4-φ24	200	340	295	12-φ23	150	285	240	8-φ23
	5	160	5	182	5	380	600×600	550×550	4-φ24	200	340	295	12-φ23	150	285	240	8-φ23
	6	200	6	182	6	380	600×600	550×550	4-φ24	200	340	295	12-φ23	150	285	240	8-φ23

安装方法 Installation Method



附件及安装尺寸 Accessories and Installation Dimensions



型号 Type	联接板尺寸 Dimensions of connecting plate						联接板尺寸 Dimensions of connecting plate					
	A×A	B×B	C×C	H	d1	d2	D×D	E×E	F×F	H	d	h
40DL	300	540	600	80	φ 14/ φ 18	φ 18	300	500	560	250	60	200
50DL	305	540	600	80	φ 14/ φ 18	φ 18	305	500	560	250	60	200
65DL	370	740	800	80	φ 14/ φ 18	φ 24	370	500	560	250	80	250
80DL	400	740	800	80	φ 18/ φ 22	φ 24	400	600	660	350	80	250
100DL	410	740	800	80	φ 18/ φ 22	φ 24	410	600	660	350	80	250
150DL	550	840	900	80	φ 18/ φ 22	φ 24	550	700	760	350	80	250
200DL	600	840	900	80	φ 18/ φ 22	φ 24	600	800	880	350	80	250

DL型泵的装配和拆卸

部件组装

- 将铜轴承装入进水段及出水段上。
- 将密封环装到中段上。
- 将导叶套在导叶上，然后将导叶装到所有的中段上去。
- 将填料压进出入段上，并装上出水段导叶，拧上双头螺栓，装上填料压盖。
- 装好灌水回水管部件。
- 在轴上镶上短键，将上轴套穿和轴上，装上滚动轴承用挡圈和螺栓压紧固定。

总装

- 将轴穿入出水段，并将键放在轴键槽内，顺着泵轴装上第一叶轮和叶轮档套。
- 将已装好的导叶的中段装上，再装上第二级键、叶轮和叶轮档套重复以上所有步骤，直至将所有键、叶 轮、叶轮档套和中段装完。
- 用拉紧螺栓将进水段、中段、出水段紧固定在一起。
- 装入挡水套，将轴承盒装在出水段上，并用螺栓紧固。
- 往轴承盒内注入适量黄油，并将纸垫套在轴承盖上，用螺栓紧固。再装上泵联轴器。并用手盘转子，检查转子是否灵活。
- 将电机座装到出水段上，用螺栓紧固。并在电机座上安装好电机。
- 在泵上装好灌水回水部件，如轴封为机械密封，还应装上机械密封泄水用的泄流软管。
- 装上联轴器柱销和填料。餐上放气阀、黄油杯和所有四方螺塞。
- 泵的拆卸按上述相反步骤进行。

DL型泵的安装

- 安装前检查水泵和电机的完好情况。安装高度=10.09-(NPSH)r-0.5-hw。hw为吸入管路水阻损失。
- 检查泵基础，并准备好起重工具。泵房应通风良好，避免太阳照射和雨淋。
- 将泵安放在基础上垫高30-40mn,准备填充水泥浆之用。进行找正,并穿好地脚螺栓。充填水泥砂浆。地脚螺栓长度约150-200mn即可。
- 经3-5天水泥干固，重新找正，并紧固地脚螺栓。
- 预试底阀严密性，安装进出水管及阀门。
- 泵出口处应装上压力表，以便观察和控制泵运行情况。

Assembly and Disassembly of DL Pumps

Component assembly

- The copper bearing is loaded into the water inlet section and the water outlet section.
- Install the sealing ring into the middle section.
- Set the guide leaf on the guide leaf, and then install the guide leaf on all the middle sections.
- Press the filler into the entrance and exit section, and install the guide leaves of the water section, screw the double head bolts, and install the filler pressure cover.
- Fill well the parts of the irrigation back pipe.
- Set the short key on the shaft, put the upper shaft cover through and on the shaft, and install the roll bearing with a ring and bolt to tighten and fix.

Total assembly

- The shaft is inserted into the outlet water section and the key is placed in the shaft key slot. The first impeller and impeller envelope are installed along the pump shaft.
- Install the middle section of the guide leaf that has been installed, and then install the second stage key, impeller and impeller gear to repeat all the above steps until all the keys, impeller, impeller gear and the middle section are finished.
- Tighten the inlet, middle and outlet sections together with a tension bolt.
- Load the cover, box the bearing on the discharge section and tighten it with bolts.
- Pour appropriate amount of butter into the bearing box and cover the paper pad on the bearing cover. Fasten with bolts. And install the pump coupling. Use the hand disc rotor to check whether the rotor is flexible.
- Install the motor seat onto the outlet section and tighten it with bolts. And install the motor on the motor seat.
- Install irrigation and return parts in the pump. If the shaft seal is a mechanical seal, the discharge hose for mechanical seal discharge should also be installed.e motor seat.
- Install coupling pin and packing. Meal discharge valves, butter cups and all quadrangles.
- The disassembly of the pump is carried out in accordance with the opposite steps mentioned above.

Installation of DL pumps

- Check the integrity of pumps and motors before installation.Install height = 10.09-(NPSH)r-0.5-HW. Hw is the loss of water resistance in the inhalation pipeline.
- Check the pump base and prepare lifting gear. Pumping stations should be well ventilated to avoid sun and rain.
- Place the pump on the base with a height of 30-40 MN, ready to fill the cement slurry. Carry out the correction and put on the anchor bolt. Fill cement mortar. The length of the foot bolt is about 150-200mn.
- After 3 to 5 days of cement consolidation, re-find and tighten the anchor bolt.
- The pre-test bottom valve is tight and fitted with water pipes and valves.
- Pressure gauges should be installed at the exit of the pump to observe and control the operation of the pump.

泵起动、运转、停止和维修保养

- 将泵周围清洁干净。
- 在轴承盒内加入钙基黄油。用手盘动转子应灵活无卡研现象。
- 试开电机，检查电机转向是否与泵相符。
- 打开出口法兰处的放气阀，往泵内灌注水，或用真空泵引水。
- 关闭吐出管上的闸阀及压力计旋塞。
- 上述工作完毕后,启动电机,打开压力表旋塞。
- 当泵以正常转速运转后,压力计显示出压力时,打开真空表旋塞并逐渐打开出口闸阀,直到所需压力为止。
- 在运行中，泵的轴承温度不得超过外界35℃,其极限温度不得超过75℃。每运行500小时用高压油枪往轴承中注入黄油。
- 填料室内正常的漏水程度以每分钟30-60滴为宜，否则整填 料压盖的压紧程度。
- 定期检查联轴器，注意轴承的温升。
- 关闭水泵,应先关闭出口管路上的闸阀,关闭真空珍旋塞,并停止电机,然后关闭压力表旋塞。
- 泵在运行中出现不正常噪音时，应立即停机检查其原因。
- 在冬季冷冻季节,如短期停用水泵时,应拧开进水段上的四方螺塞。将存水放掉,避免冻裂水泵。
- 水泵经过长期使用后性能有显著下降时,应拆开水泵检查，更换易损部件。
- 水泵如果长期不用,应将水泵拆卸开,将零件的擦干,除去锈垢后,涂上防锈油脂,妥善保存。

Start-up, operation, stop and maintenance

- Clean the pump around.
- Add calcium-based butter to the bearing box. The motion of the rotor with the hand disk should be flexible and non-stuck.
- Test the motor, check whether the motor steering is consistent with the pump.
- Open the exit valve of Falanchu, fill the pump with water, or use a vacuum pump to divert water.
- Close the gate valve and pressure gauge cock that spit out Guanshang.
- After the above work is finished, start the motor and turn on the pressure gauge cock.
- When the pump is running at normal speed and the pressure gauge shows pressure, the vacuum gauge cock is opened and the exit valve is gradually opened until the required pressure is reached.
- During operation, the bearing temperature of the pump must not exceed 35 °C, and its limit temperature must not exceed 75 °C. Use a high-pressure oil gun to inject butter into the bearing every 500 hours of operation.
- The normal leakage degree in the filling room should be 30-60 drops per minute, otherwise the pressure degree of the filling pressure cover.
- Check the coupling regularly and pay attention to the temperature rise of the bearing.
- When the pump is shut down, the valve on the exit channel should be closed first, the vacuum cock should be closed, the motor should be stopped, and the pressure gauge cock should be closed.
- When abnormal noise occurs in the operation of the pump, it should be stopped immediately to check the cause.
- During the winter freeze season, such as the short-term decommissioning of water pumps, the quadrangle screw on the intake segment should be unscrewed. Water storage will be released to avoid freezing water pumps.
- When the performance of the pump has significantly decreased after long-term use, the pump should be opened for inspection and the vulnerable parts should be replaced.
- If the pump is not used for a long time, the pump should be removed and the parts dried. After the rust is removed, the antirust oil should be applied and properly preserved.

DL、DLR系列立式多级离心泵

DL、DLR SERIES VERTICAL MULTISTAGE CENTRIFUGAL PUMP

清水泵系列 Clean water pump series

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
泵不出水，压力表及真空表指针剧烈跳动。 No water coming out of thepump,the pressure gaugeand the vacuumgauge needle beat violently	注入泵的水不够；进水管漏气。 Not enough water is injected into the pump; Drain leaks.	检查底阀是否漏水；再往泵内注水；堵塞漏气处。 Check bottom valve for leakage; Then inject water into the pump; Block the leak.
泵不吸水,但真空表显示高度真空 The pump does not absorb water, but the vacuum meter shows a high vacuum.	底阀没打开或堵塞；吸水管阻力太大，吸水高度太高。 The bottom valve is not open or blocked; The resistance of suction pipes is too large, and the height of absorption of water is too high.	校平或更换底阀，清洗或更换吸水管，降低吸水高度。 Flatten or replace bottom valve, clean or replace suction pipe, reduce the height of water absorption.
泵不出水，压力表显示有压力。 The pump does not produce water, and the pressure gauge shows pressure.	泵轴旋转方向不对;出水管阻力太大;叶轮淤塞；转速不够。 The rotation direction of the pump shaft is not correct; Too much resistance of the outlet pipe; Impeller blockage; Not enough speed.	改正转向；检查水管长度；清洗叶轮；增加转速。 Correction of steering; Check the length of water pipes; Cleaning impellers; Increase speed.
泵流量减少或扬程下降。 Lower pump flow or lower lift.	叶轮或管路阻塞,密封环或叶轮磨损严重;转速低于规定值。 Impeller or pipeline obstruction, sealing ring or impeller wear; The speed is below the specified value.	清洗叶轮或管路;更换损坏的零件;调整到规定的转速。 Cleaning impellers or pipelines; Replacement of damaged parts; Adjust to specified speed.
泵消耗的功率过大。 The power consumption of the pump is too large.	填料压得太紧引至发热;叶轮与密封环磨损;流量过大。 The packing is pressed too tight to bring heat; Impeller and sealing ring wear; Too much traffic.	调整填料压盖;消除机械磨擦,关小出水闸阀。 Adjustment of packing pressure cover; Eliminate mechanical friction and close the sluice valve.
泵内声音反常，吸不上水。 The sound inside the pump is abnormal and can not absorb water.	吸水高度过高,发生汽蚀;吸水管漏气,流量过大。 The height of water absorption is too high, and cavitation occurs; Absorption pipe leakage, excessive flow.	减小吸水高度,堵塞漏水处,调节出水闸阀在规定工况使用。 Reduce the height of water absorption, plug the leak, adjust the use of the water gate valve in specified conditions.
泵振动厉害。 The pump vibrates badly.	泵发生汽蚀,叶轮不平衡,泵与电机不同心,地脚螺栓松动。 Pump cavitation,impeller imbalance, pump and motor different heart, foot bolt loose.	消除汽蚀,叶轮校平衡,校泵与电机的同轴度,拧紧地脚螺栓。 Eliminate cavitation, Yelunxiao balance, coaxial degree of pump and motor, tighten foot bolt.
轴承过热。 Bearing overheating.	润滑油不足或过多或变质,泵与电机轴不同心。 Lubricating oil is insufficient or excessive or spoiled, pump and motor shaft different heart.	检查油量,清洗轴承并换油,校泵轴与电机的同轴度。 Check oil quantity, clean bearing and change oil, adjust coaxial of pump shaft and motor.