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01 产品概述

该系列泵系卧式单吸多级分段式离心泵，采用了国家推荐使用的高效节能产品的水力模型，具有效率高、性能范围广、运转安全平稳、噪音低，寿命长、安装维修方便等优点。我公司是专门生产D、DF、DY、MD等单吸多级节段式离心泵的专业厂家，是中南地区生产多级泵的专业厂家，具有二十多年的生产历史，产品系列规格齐全，应用范围广泛。

产品可供输送不含固体颗粒（磨料）、不含悬浮物的清水或物理化学性质类似于清水的其它液体之用。也可通过改变泵的材质（或泵过流部件的材质）、密封形式和增加冷却系统用于输送热水、油类、腐蚀性或含磨料的介质等。

泵进口允许压力小于0.6Mpa。

product Overview

This series of pump is of sub-horizontal,multi-stage single-suction and centrifugal,using state-recommended hydro-module.The pump is efficient,reliable,and durable with low noise performance ,easy maintenance and wide scope of usages. We specialize in manufacturing D,DF,DY and MD series of single-suction multistage centrifugal pumps based on our 20 years plus history and fame of biggest multistage pump manufacturer in Middle-Southern Area .Our pumps are widely applicable.

Our pump is applicable to deliver those fluid without solid,particles or any other suspended stuff,water for instance.While oily and corrosive or solid-contained fluid can be pumped by means of material modification,sealing methods,and cooling system adding.

The max,inlet pressure shall be 0.6MPa.

按其使用范围主要分为以下几个类型：

D型:用于输送不含固体颗粒、温度低于80℃的清水或物理化学性质类似于清水的液体。适合于矿山、工厂和城市给排水工程之用。

DF型:用于输送不含固体颗粒、温度为-20℃~105℃的腐蚀性液体。用户可根据输送介质的名称、浓度、比重、使用温度及泵进口压力等合理选用泵的材质、密封形式、泵的结构及确定电机的容量等。

DY型:用于输送不含固体颗粒、温度为-20℃~105℃、粘度小于120厘泡的油类和石油产品。

MD型:用于输送颗粒含量≤1.5%，粒度≤0.5mm温度为-20～80℃的中性矿井水及其他类似的污水。

Horizontal multi-stage centrifugal pumps according to their scope of use can be divided into the following types:

D type: Used for transmission of water free of solid particles and temperature below 80℃,or similar physical and chemical liquid.Suitable for mining,mill and city water supply and drainage.

DF type: Used for transmission of corrosive liquid with temperature range of -20℃~105℃ and non-solid particles. Material,sealing methods,structure of the pump and motor model can be determined by medium,gravity,density,working temperature and the suction pressure.

DY type: Used for transmission of non-solid oily liquid and petroleum product with temperature range of -20℃ ~105℃ and viscosity less than 120 cst.

MD type: Used for transmission of neutral liquid from mining well or other similar liquid.The density and size of particles of the sewage shall be less than I.5% and 0.5mm respectively.The temperature range of the sewage shall be -20～80℃.

02 技术特点

● 高效节能 ●

坚持专业化生产，在产品的模型选择，模具的制作、水力部件的铸造工艺方面均有独特的方法，所有过流部件均采用精密铸造，保证流道尺寸与流道光洁度，具有很好的节能效果。

● 先进的工艺设备 ●

我公司为保证产品的装配性能，每个零件在最终装配前均进行认真清洗。除正常的材质检测、水静压试验、静平衡试验外，所有6级以上的泵转子部件均进行小装后检查轴的跳动，并控制跳动值在5丝内，然后按G2.5级做动平衡试验。总装后再次检查轴与联轴器的跳动和轴向窜动，保证产品的装配质量。

● 结构独特 ●

在平衡环与泵配合面加装O型密封圈，防止高压水进入平衡室，减少平衡盘磨损，延长产品使用寿命。口径在DN200以上的泵，在轴端设置平衡盘磨损指示器，随时监视平衡盘或平衡环的磨损量，以便及时更换，保证设备的正常运行。

● 合理选择材质 ●

根据不同用户需要，平衡盘及平衡环材质可采用堆焊硬质合金、合金钢或QT600Mn2合金球墨铸铁，表面硬度高，耐磨性好，提高产品使用寿命。MD型泵流道采用高合金耐磨铸铁或高牌号耐磨球铁材质，具有很好的耐磨性。

● 表面质量好 ●

采用精铸模铸造工艺及自动喷涂机喷涂油漆，表面质量好，外形美观。

Technical Features

High efficiency and Energy saving

We have developed our unique technology for manufacturing,model designing and making,foundry techniques of hydraulic parts in that we take advantage.of precise foundry on all wets parts to assure their brightness,cleanliness,and accurate dimensions.So the pump has very good Energy-saving effect.

Advanced process equipment

Every single processed part will have cleaned by means of advanced imported cleaning equipment for better assembling concern.Besides material inspection,hydraulic test,static balancing testing,all pump rotors beyond 6 grades will have axial movement tested controlled within 5 millisecond,and then the balancing test shall be made according to G2.5 grade.Recheck axial movements of all shafts after assembly to assure the quality of the pump.

Unique structure

A sealing O-ring is set between balancing ring and fitting surface of the pump to avoid high pressure water coming into balancing stage and wear and tear of the balancing plate to obtain better durability.Wear indicator of balancing plate is set at the end of the shaft for wear monitoring for pumps beyond DN200.This makes the replacement of balancing plate reasonably to assure fine operation.

Material choosing

Balancing plate and the area around can be made of welding alloy,alloy steel or ductile cast iron QT600Mn2 concerning their high surficial hardness and fine durability.Flowing-over part of MD pump is of abrasion resistant by using material of alloy wear resistant ductile cast iron or high-grade wear- resistant ductile cast iron.

Fine appearance

The appearance of the pump is fine taking advantage of precise mold casting procedures and automatic painting.

03 型号意义

如D (DF、DY、MD) 600–60x6
D --表示多级清水离心泵
DF --表示矿用耐腐多级离心泵
DY --表示多级离心油泵
MD --表示矿用耐磨多级离心泵
600--表示设计点流量为600m³/h
60 --表示设计点单级扬程为60m
6 --表示级数为6级

如150 MD 30x7
150--表示泵吸入口直径为150mm
MD--表示矿用耐磨多级离心泵
30--表示泵设计点单级扬程为30m
7--表示级数为7级

注：D (DF、DY、MD) 80–30为习惯表示方法，其中80表示泵吸入口直径为80mm，30表示泵设计点单级扬程为30m，其它含义与上述表示方法相同。

proNomenclature

EX: D(DF、 DY、MD)600–60x6
D––multi–stage clean water centrifugal pump
DF––corrosion–resistant multi–stage centrifugal mining pump
DY––multi–stage centrifugal oil pump
MD––wear–resistant multi–stage centrifugal mining pump
600––the design point of capacity is 600m³ /h
60 ––the design point of single–stage head is 60m
6 ––the pump stage is 6

EX: 150 MD 30x7
150––the pump inlet diameter is 150mm
MD––wear– resistant multi–stage centrifugal mining pump
30 ––the design point of single–stage head is 30m
7 ––the pump stage is 7

Note: D(DF. DY. MD) 80~30 is the customary method,of which 80 means the inlet diameter is 80mm, 30 means single–stage pump design point head is 30m,others meaning is the same method as above.

04 性能范围

D、DF、DY、MD型泵具有相同的性能参数和安装尺寸
泵吸入、排出口径40～300mm
流量Q=3.75～850m³/h
扬程H =19~816m
（注：本册中所列性能参数值为常温清水测试所得的值。）

Performance Range

D、DF、DY、MD–type pump has the same performance parameters and installation size Inlet and outlet diameter of the pump:40~300mm
Capacity Q=3.75~850m³ /h
Head H=19~816m

Note:The performance parameters in this book are the normal temperature water testing values.

05 配套电机

电机常规配制为Y系列电机。对用于含有可燃易爆气体的矿井下运行的泵，必须采用防爆电机并要求具有相应的防护等级和防爆标志。

Auxiliary Motor

Y series of motors are for common use.Explosive–proof motor is a must under circumstances of inflammable and explosive while insulation class and explosive–proof mark shall be indicated.

06 执行标准

GB/T5657–95《离心泵技术条件（Ⅲ类）》
JB/T 1051–93《多级清水离心泵型式及基本参数》
GB/T 2316–2005
《回转动力泵 水力性能验收试验1级和2级》
MT/T 114–2005《煤矿用多级离心泵》

Executive Standard

GB/T5657-1995	Technical Specifaications of Centrifugal Pump(Cat.Ⅲ)
JB/T1051-2006	Type and Basic Parameters of Multi-level Fresh Water Centrifugal Pump
GB/T3216-2005	Hydraulic Performance Acceptance Test of Rotodynamic Pumps Level 1 and Level 2
MT/T114-2005	Coal Mine Multi-stage Centrifugal Tump

07 结构特点

D、DF、DY、MD型泵系卧式、单吸、分段式多级离心泵，吸入口为水平方向，吐出口为垂直向上。泵的进水段、中段、出水段等泵壳体部分通过拉紧螺栓联结成一体，并根据泵的扬程选择泵的级数。

该系列泵转子部分主要由轴及安装在轴上的叶轮、轴套、平衡盘等零件组成，其中叶轮的数量根据泵的级数而定。轴上零件通过平键和轴螺母紧固使之与轴联为一体。整个转子由两端滚动轴承或滑动轴承支承。轴承按型号不同而定，均不承受轴向力，其轴向力由平衡盘平衡，并且在泵端安装有平衡盘磨损指示器，以监视平衡盘磨损情况。

泵的进水段、中段、出水段之间的密封面均采用密封胶或“O”型圈密封，转子部分与固定部分之间装有密封环、导叶套等进行密封，当密封环和导叶套的磨损程度已影响泵的工作性能时应及时予以更换。

轴的密封形式有机械密封和填料密封两种。泵采用填料密封时，填料环的位置安放要正确，填料的松紧程度必须适当，以液体能一滴一滴渗出为宜。泵的各种密封元件装在密封腔内，腔内要通入一定压力的水，起水封、水冷或水润滑作用。在轴封处装有可更换的轴套，以保护泵轴。

泵在运行中允许转子在泵壳中轴向游动，该型泵一般采用滚动轴承、干油润滑结构(D85–67、D155-67型泵可采用滑动轴承、稀油润滑结构，也可采用滚动轴承、干油润滑结构）。

该系列泵通过弹性联轴器由原动机直接驱动。从原动机方向看，泵为顺时针方向旋转。

（用户如对泵的材料和结构有特殊要求，可与本公司协商解决，本公司可根据用户需求变换水泵进出口方向，并可实现该系列泵的多出口结构和功能。）

Structural Characteristics

That suction inlet is set horizontally while discharging outlet vertically is one of pecularities for D、DF、DY and MD horizontal,single suction,segmental multistage pumps.The segments of suction,middle,discharging are connected by means of bolt.The head employs the stages of the pump.

The rotor of the pump is mainly composed of shaft and impeller,bushing,and balancing plate,which are balanced and connected to the shaft by means of straight key and shaft nut.The stages of the pump employ the impeller.The whole rotor is supported by rolling contact bearing or sliding bearing which varies themselves according to certain situation.The rotor does not sustain any axial force.which is balanced by balancing plate.Balancing plate wear indicator is set at the end of the pump for wearing monitoring to avoid any excessive abrasion.

Fluid sealants or O–ring sealing is set between sealing surfaces of segments of inlet,middle,and discharging,while sealing ring and guide vane are set between rotor and stator.The sealing ring and guide vane are advised to be replaced when they decrease the pumping efficiency.

Mechanical sealing and material filling sealing are two options,in which tightness of material shall be filled properly to reach a performance of drop by drop leaking .All sealing parts are integrated in sealing housing which is under pressure of water used for water sealing,cooling and lubricating.A replaceable guide vane is necessary to protect the shaft.

The rotor of the pump during operation is allowed to swin axially.This series of pump often integrates with rolling contact bearing and grease lubricating construction,(D85–67 and D155–67 types however can adopt sliding bearing and thin oil lubricating structure or rolling contact bearing and grease lubricating structure.)

This series of pump is driven directly by prime motor by Flexible coupling.The pump rotates clockwise from perspective of prime motor.

(Special requirement in material and constructure are all available on request,for example)

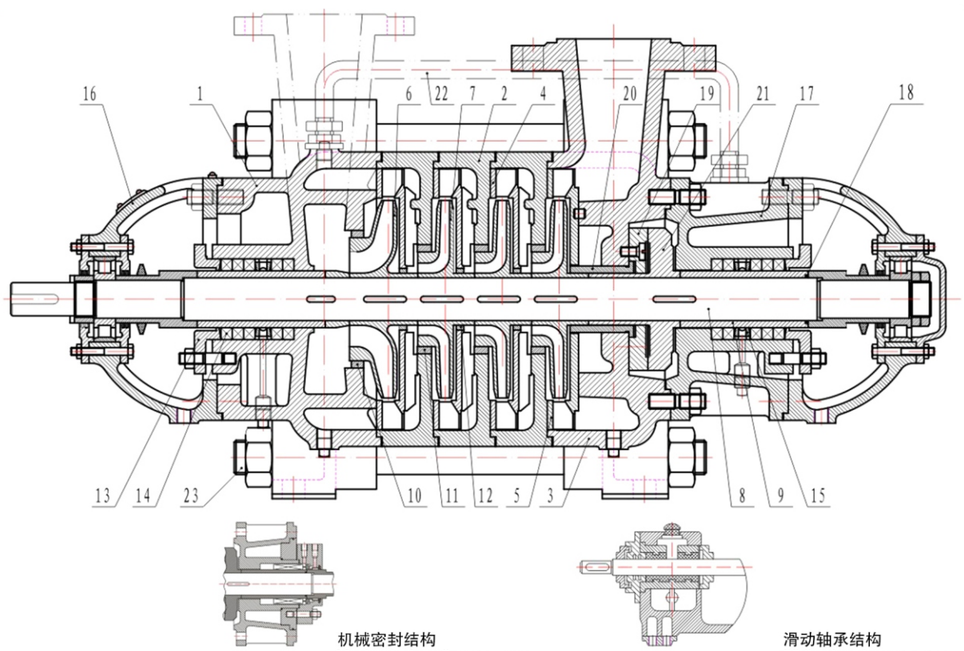
08 过流部件材质

D 型:过流部件为铸铁，轴为45#钢；
DF型:过流部件按使用要求分为铸钢和铸不锈钢，根据输送介质温度及腐蚀性决定材质。
DY型:过流部件按使用要求分为铸铁、铸钢和铸不锈钢，根据输送介质温度决定材质。
MD型：过流部件材质为耐磨铸铁或球墨铸铁。

Material of wet Parts

D type: Castiron material wet parts;1045,080M46 ASTM steel for shaft.
DF type: Availabilities of cast steel and stainless steel for wet parts are chosen according to temperature and corrosiveness ofthe medium.
DY type: Availabilities of cast steel and stainless steel for wet parts are chosen according to temperature and corrosiveness of the medium.
MD type: Wear–resistant cast iron or ductile iron for wet parts.

结构图 Chart

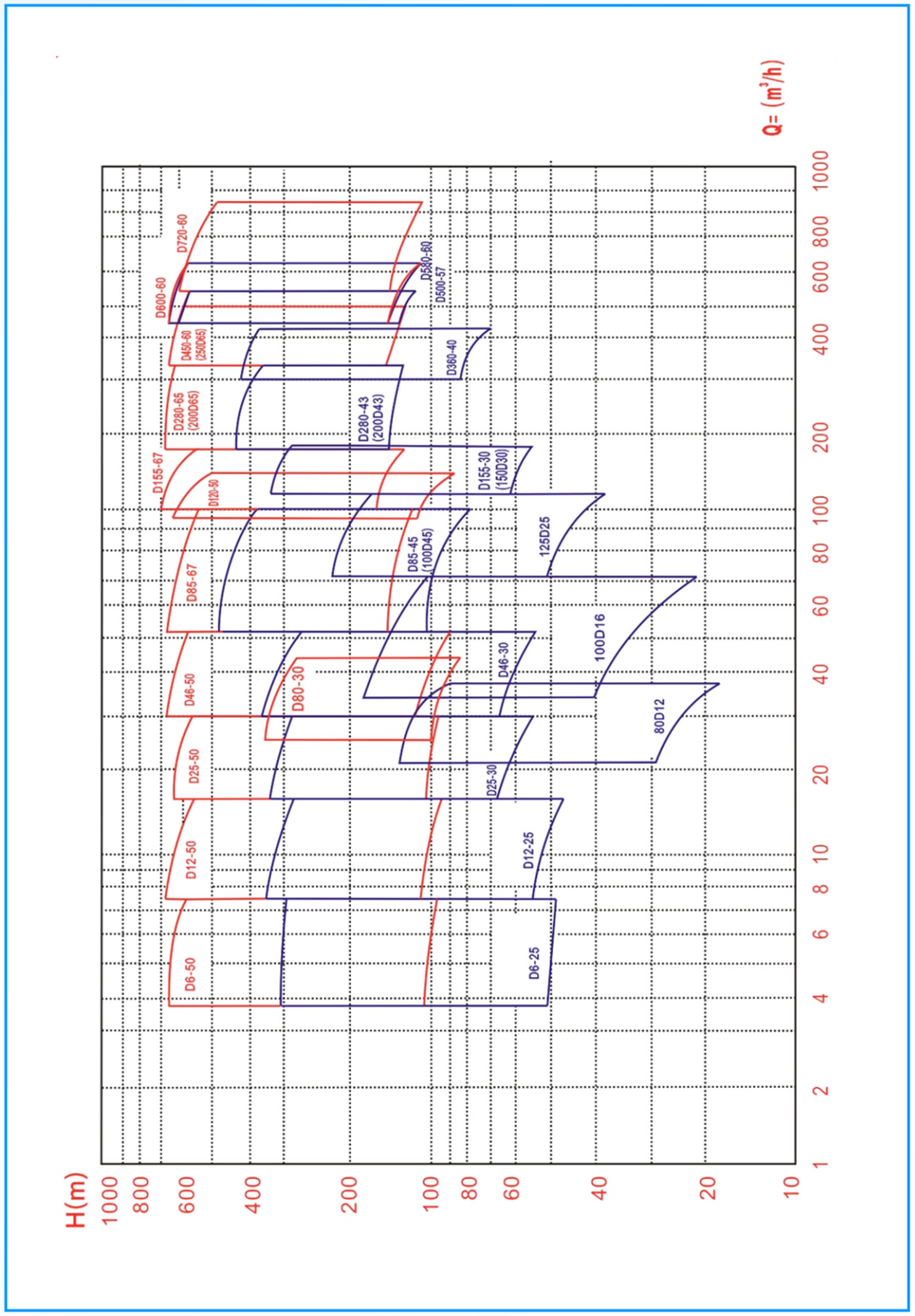


机械密封结构
Mechanical sealing structure

滑动轴承结构
Sliding bearings structure

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
1	进水段 suction stage	6	前级叶轮 front stage impeller	11	（末级）密封环 end sealing ring	16	轴承部件 bearing components	21	平衡盘 balance disc
2	中段 middle stage	7	末级叶轮 last stage impeller	12	导叶套 guide vane sleeve	17	尾盖 end gland	22	平衡管部件 balance tude parts
3	出水段 discharge stage	8	轴 shaft	13	填料压盖/机封压盖 gland packing/mechanical seal gland	18	0形密封圈 0-ring	23	拉紧螺栓 tighten bolts
4	导叶 guide vane	9	轴承 sleeve	14	填料/机封 packing/mechanical seal	19	平衡环 balance ring		
5	末导叶 end of guide vane	10	前级密封环 front sealring	15	填料环 packing ring	20	平衡（环）套 balance ring/sleeve		

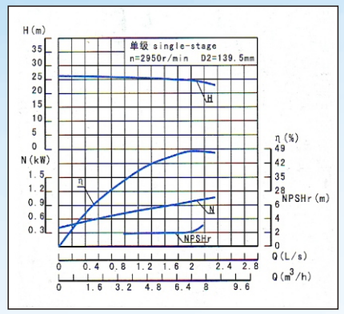
型谱图 Type spectrum



GAOTIAN
高田

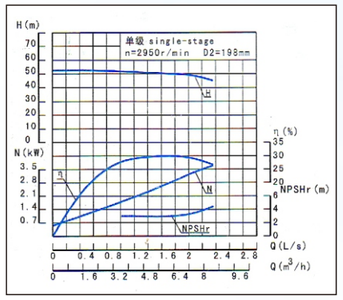
Pump performance curve and performance table
泵的性能曲线和性能表

D(DF、DY、MD)6-25



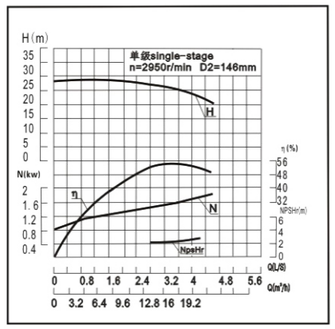
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor 功率 Power	配用电机Motor 型号 Type	必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2			51 50 49			1.49 1.84 2.08	3	Y100L-2			77.2	33
3			76.5 75 73.5			2.23 2.77 3.12	5.5	Y132S1-2			85.5	64
4			102 100 98			2.98 3.69 4.16	7.5	Y132S2-2			94.4	70
5	3.75	1.04	127.5 125 122.5		35	3.73 4.61 5.20	7.5	Y132S2-2	2.0		102.9	70
6			153 150 147			4.47 5.53 6.24	11	Y160M1-2			111.5	117
7	6.3	1.75	178.5 175 171.5	2950	46.5	5.22 6.45 7.28	11	Y160M1-2	2.0	Φ139.5	120.0	117
8			204 200 196			5.96 7.37 8.32	15	Y160M2-2			128.6	125
9	7.5	2.08	229.5 225 220.5		48	6.71 8.29 9.36	15	Y160M2-2	2.5		137.1	125
10			255 250 245			7.45 9.21 10.40	18.5	Y160L-2			145.7	147
11			280.5 275 269.5			8.20 10.13 11.44	18.5	Y160L-2			154.2	147
12			306 300 294			8.94 11.05 12.48	18.5	Y160L-2			162.8	147

D(DF、DY、MD)6-50



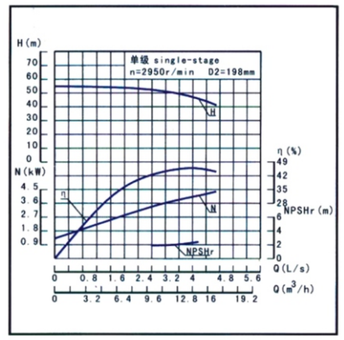
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor 功率 Power	配用电机Motor 型号 Type	必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2			104 100 96			3.79 5.72 6.76	11	Y160M1-2			142.0	117
3			156 150 144			5.69 8.58 10.1	15	Y160M2-2			156.0	125
4			208 200 192			7.58 11.4 13.5	18.5	Y160L-2			170.0	147
5			260 250 240			9.48 14.3 16.9	22	Y180M-2			183.6	180
6	3.75	1.04	312 300 288		28	11.4 17.2 20.3	30	Y200L1-2	3.0		197.2	240
7			364 350 336			13.3 20.0 23.7	30	Y200L1-2			210.9	240
8	6.3	1.75	416 400 384	2950	30	15.2 22.9 27.0	37	Y200L2-2	3.0	Φ198	224.5	260
9			468 450 432			17.1 25.7 30.4	37	Y200L2-2			238.1	260
10	7.5	2.08	520 500 480		29	19.0 28.6 33.8	45	Y225M-2	3.5		251.7	325
11			572 550 528			20.8 31.4 37.2	45	Y225M-2			265.3	325
12			624 600 576			22.7 34.3 40.6	55	Y250M-2			279.0	395
13			676 650 624			24.6 37.1 43.9	55	Y250M-2			293.0	395
14			728 700 672			26.5 40.0 47.4	55	Y250M-2			308.0	395

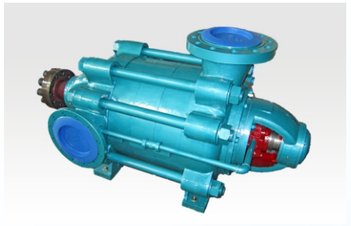
D(DF、DY、MD)12-25



级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor 功率 Power	配用电机Motor 型号 Type	必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2			56.4 50 46			2.62 3.15 3.55	5.5	Y132S1-2			78.7	64
3			84.6 75 69			3.93 4.73 5.32	7.5	Y132S2-2			87.3	70
4			112.8 100 92			5.24 6.30 7.09	11	Y160M1-2			95.9	117
5	7.5	2.05	141 125 115		44	6.55 7.88 8.86	11	Y160M1-2	2.0		104.4	117
6			169.2 150 138			7.85 9.46 10.64	15	Y160M2-2			113.0	125
7	12.5	3.47	197.4 175 161	2950	54	9.16 11.0 12.41	15	Y160M2-2	2.0	Φ146	121.5	125
8			225.6 200 184			10.47 12.61 14.18	18.5	Y160L-2			130.1	147
9	15	4.17	253.8 225 207		53	11.78 14.18 15.95	18.5	Y160L-2	2.5		138.6	147
10			282 250 230			13.09 15.76 17.73	22	Y180M-2			147.2	180
11			310.2 275 253			14.4 17.34 19.5	22	Y180M-2			155.7	180
12			338.4 300 276			15.7 18.9 21.3	30	Y200L1-2			164.3	240

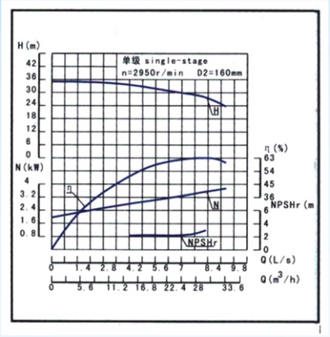
D(DF、DY、MD)12-50





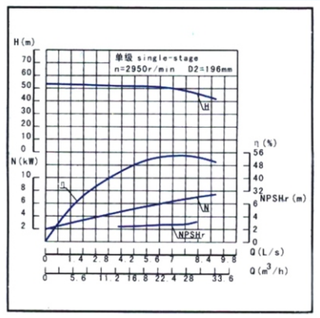
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor 功率 Power	配用电机Motor 型号 Type	必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2			108 100 93			5.8 7.6 8.3	11	Y160M1-2			142.0	117
3			162 150 139.5			8.8 11.3 12.4	18.5	Y160L-2			156.0	147
4			216 200 186			11.7 15.1 16.6	22	Y180M-2			170.0	180
5			270 250 232.5			14.6 18.9 20.7	30	Y200L1-2			183.6	240
6	7.5	2.08	324 300 279		37.8	17.5 22.7 24.8	30	Y200L1-2	2.0		197.2	240
7			378 350 325.5			20.4 26.5 29.0	37	Y200L2-2			210.9	260
8	12.5	3.47	432 400 372	2950	45	23.3 30.3 33.1	45	Y225M-2	2.0	Φ198	224.5	325
9			486 450 418.5			26.3 34.0 37.3	45	Y225M-2			238.1	325
10	15	4.17	540 500 465		45.9	29.2 37.8 41.4	55	Y250M-2	2.5		251.7	395
11			594 550 511.5			32.1 41.6 45.5	55	Y250M-2			265.3	395
12			648 600 558			35.0 45.4 50.0	75	Y280S-2			279.0	500
13			702 650 604.5			37.9 49.2 54.2	75	Y280S-2			293.0	500
14			756 700 651			40.8 52.9 58.3	75	Y280S-2			307.0	500

D(DF、DY、MD)25-30



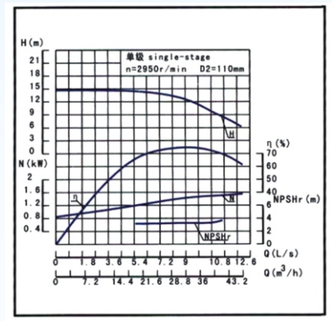
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	15	4.17	68 60 55	2950	50	5.56 6.58 7.14	11	Y160M1-2	2.2	φ160	150.7	117
3			102 90 82.5			8.33 9.88 10.7	15	Y160M2-2			166.3	125
4			136 120 110			11.11 13.1 14.26	18.5	Y160L-2			181.8	147
5			170 150 137.5			13.89 16.47 17.83	22	Y180M-2			197.3	180
6	25	6.94	204 180 165		62	16.67 19.77 21.4	30	Y200L1-2	2.2		212.9	240
7			238 210 192.5			19.44 23.1 24.96	30	Y200L1-2			228.4	240
8	30	7.78	272 240 220		63	22.22 26.4 28.53	37	Y200L2-2	2.4		244.0	260
9			306 270 247.5			25.0 29.65 32.1	37	Y200L2-2			259.5	260
10			340 300 275			27.8 32.9 35.7	45	Y225M-2			275.0	325

D(DF、DY、MD)25-50



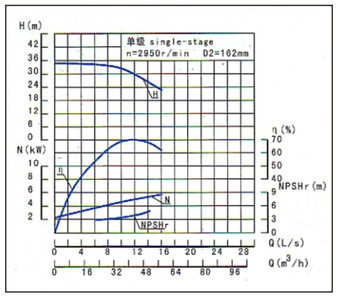
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	15	4.17	103 100 93	2950	44	9.6 12.6 14.3	18.5	Y160L-2	2.4	φ196	261.2	147
3			154.5 150 144			14.3 18.9 21.5	30	Y180M-2			280.0	180
4			206 200 192			19.1 25.2 28.7	30	Y200L1-2			298.8	240
5			257.5 250 240			23.9 31.5 35.8	37	Y200L2-2			317.7	260
6			309 300 288			28.7 37.8 43.0	45	Y225M-2			336.5	325
7	25	6.94	360.5 350 336		54	33.5 44.1 50.2	55	Y250M-2	2.7		355.3	395
8			412 400 384			38.3 50.4 57.3	75	Y280S-2			374.2	500
9	28	8.33	463.5 450 432		53	43.0 56.7 64.5	75	Y280S-2	2.8		393.0	500
10			515 500 480			47.8 63.0 67.8	75	Y280S-2			411.8	500
11			566 550 528			52.5 69.3 78.8	90	Y280M-2			430.7	550
12			618 600 576			57.4 75.6 86.0	110	Y315S-2			449.5	875

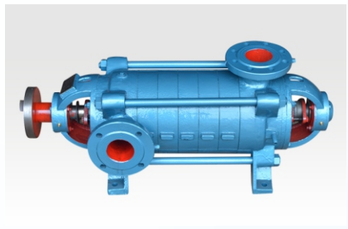
80D(DF、DY、MD)12



级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	21.6	6.0	28.8 22.8 19.0	2950	69	2.46 2.84 2.82	4	Y112M-2	3.2	φ110	102.1	45
3			43.2 34.2 28.5			3.69 4.26 4.23	5.5	Y132S1-2			118.1	64
4			57.6 45.6 38.0			4.92 5.69 5.64	7.5	Y132S2-2			134.1	70
5	34.6	9.6	72.0 57.0 47.5		75	6.15 7.10 7.05	11	Y160M1-2	3.3		150.1	117
6			86.4 68.4 57.0			7.38 8.52 8.46	11	Y160M1-2			166.2	117
7	39.6	11	100.8 79.8 66.5		72	8.61 9.94 9.87	15	Y160M2-2	3.4		182.2	125
8			115.2 91.2 76.0			9.84 11.36 11.28	15	Y160M2-2			198.2	125
9			129.6 102.6 85.5			11.07 12.78 12.69	18.5	Y160L-2			214.2	147

D(DF、DY、MD)80-30





级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
3	26	7.22	102 90 83	2950	60	12.0 15.1 15.7	18.5	Y160L-2	3.0	φ162	119.1	147
4			136 120 111			16.0 20.1 20.96	22	Y180M-2			132.0	180
5			170 150 139			20.1 25.2 26.2	30	Y200L1-2			144.9	240
6	43	11.94	204 180 167		70	24.1 30.2 31.44	37	Y200L2-2	3.9		157.9	260
7			238 210 195			28.1 35.2 36.68	45	Y225M-2			170.8	325
8	48	13.33	272 240 222		69	32.1 40.2 41.96	55	Y250M-2	4.3		183.8	395
9			306 270 250			36.1 45.3 47.16	55	Y250M-2			196.7	395
10			340 300 278			40.1 50.3 53.0	55	Y250M-2			209.6	395

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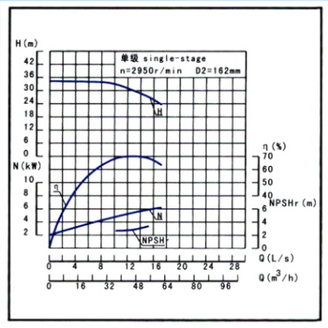
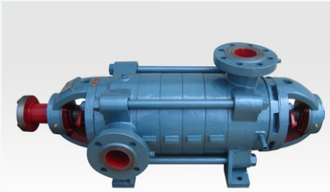
Pump performance curve and performance table
泵的性能曲线和性能表

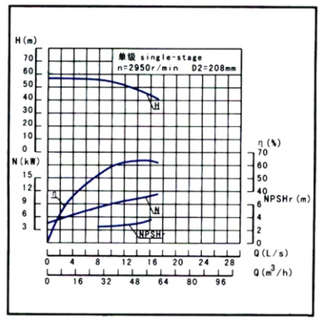
D(DF、DY、MD)46-30





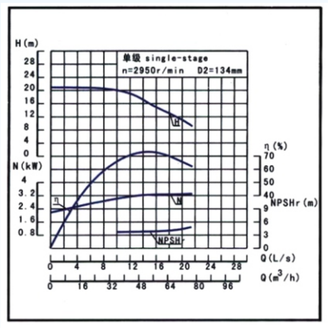
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2			68 60 54			8.68 10.74 11.89	15	Y160M2-2			152.2	125
3			102 90 81			13. 16.11 17.84	22	Y180M-2			167.8	180
4	30	8.33	136 120 108		64	17.36 21.48 23.79	30	Y200L1-2	2.4		183.3	240
5			170 150 135			21.7 26.85 29.74	37	Y200L2-2			198.8	260
6	46	12.8	204 180 162	2950	70	26.04 32.21 35.68	37	Y200L2-2	3.0	φ162	214.4	260
7			238 210 189			30.38 37.58 41.63	45	Y225M-2			229.9	325
8	55	15.3	272 240 216		68	34.72 42.95 47.58	55	Y250M-2	4.6		245.5	395
9			306 270 243			39.06 48.32 53.53	55	Y250M-2			261.0	395
10			340 300 270			43.4 53.69 59.47	75	Y280S-2			276.5	500

D(DF、DY、MD)46-50



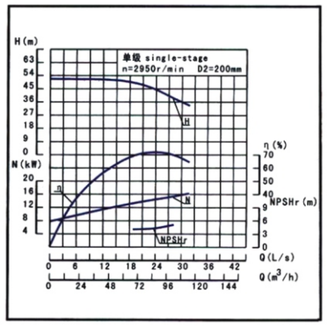
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2			111 100 92			16.78 19.88 21.52	30	Y200L1-2			262.7	240
3			166.5 150 138			25.19 29.83 32.28	37	Y200L2-2			281.5	260
4			222 200 184			33.59 39.77 43.04	45	Y225M-2			300.3	325
5	30	8.33	277.5 250 230		54	41.98 49.71 53.80	55	Y250M-2	2.5		319.2	395
6			333 300 276			50.38 59.65 64.56	75	Y280S-2			338.0	500
7	46	12.78	388.5 350 322	2950	63	58.78 69.60 75.32	90	Y280M-2	2.8	φ208	356.8	550
8			444 400 368			67.20 79.52 86.08	90	Y280M-2			375.7	550
9	55	15.28	499.5 450 414		64	75.56 89.48 96.84	110	Y315S-2	3.2		394.5	875
10			555 500 460			83.97 99.42 107.60	132	Y315M-2			412.3	950
11			610.5 550 506			92.37 109.36 118.36	132	Y315M-2			432.2	950
12			666 600 552			100.8 119.28 129.12	160	Y315L1-2			451.0	1070

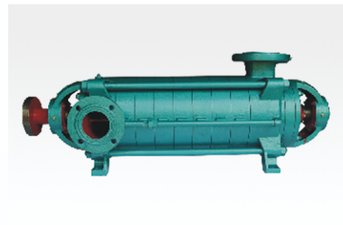
100D(DF、DY、MD)16



级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2			43 32 22			5.94 6.44 6.53	7.5	Y132S2-2			158.4	70
3			60 48 34			8.91 9.67 9.80	15	Y160M2-2			179.9	125
4	36.0	10	80 64 45		66	11.88 12.89 13.07	18.5	Y160L-2	3.7		201.3	147
5			100 80 56			14.85 16.11 16.33	22	Y180M-2			222.7	180
6	54.0	15	120 96 67	2950	73	17.82 19.33 19.60	22	Y180M-2	3.9	φ134	244.1	180
7			140 112 78			20.79 22.55 22.87	30	Y200L1-2			265.6	240
8	72.0	20	160 128 90		66	23.76 25.78 26.13	30	Y200L1-2	4.3		287.0	240
9			180 144 101			26.73 29.00 29.40	37	Y200L2-2			308.4	260

D(DF、DY、MD)85-45
100D(DF、DY、MD)4]





级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2			102 90 78			24.25 28.92 30.35	37	Y200L2-2			210.7	260
3			153 135 117			36.38 43.37 45.52	55	Y250M-2			232.0	395
4	55	15.3	204 180 156		63	48.5 57.82 60.7	75	Y280S-2	3.2		253.3	500
5			255 225 195			60.63 72.25 75.86	90	Y280M-2			274.6	550
6	85	23.6	306 270 234	2950	72	72.75 86.73 91.04	110	Y315S-2	4.2	φ200	295.9	875
7			357 315 273			84.88 101.2 106.2	132	Y315M-2			317.2	950
8	100	27.8	408 360 312		70	97.0 115.6 121.4	132	Y315M-2	5.2		338.5	950
9			459 405 351			109.1 130.1 136.6	160	Y315L1-2			359.8	1070

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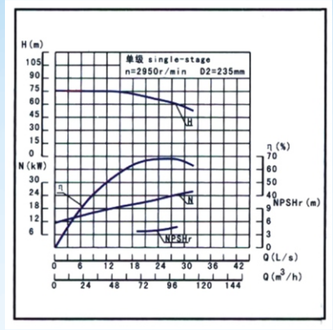
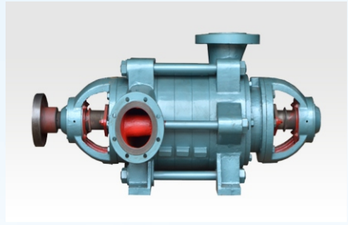
Pump performance curve and performance table
泵的性能曲线和性能表

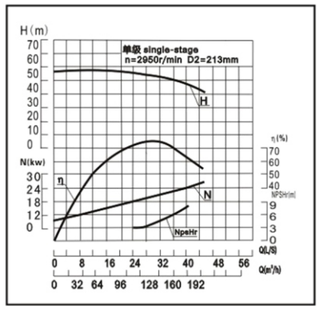
D(DF、DY、MD)85–67

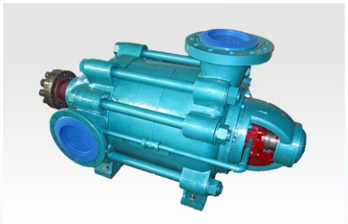




级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	55	15.3	148 134 122	2950	58	38.2 45.6 48.9	55	Y250M–2	3.7	φ134	428	395
3			222 201 183			57.3 68.4 73.3	90	Y280M–2			498	550
4			296 268 244			76.4 91.2 97.7	110	Y315S–2			568	875
5	85	23.6	370 335 305		68	95.6 114 122.2	132	Y315M–2	3.9		638	950
6			444 402 366			114.7 136.9 146.6	160	Y315L1–2			708	1070
7	100	27.8	518 469 427		68	133.8 159.6 171	185	Y315M1–2 (b23)	4.3		778	915
8			592 536 488			152.9 182.4 195.4	220	Y355M1–2			848	1350
9			666 603 549			172 205.2 219.9	250	Y355M2–2			918	1400

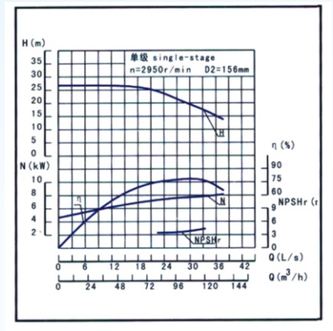
D(DF、DY、MD)120–50





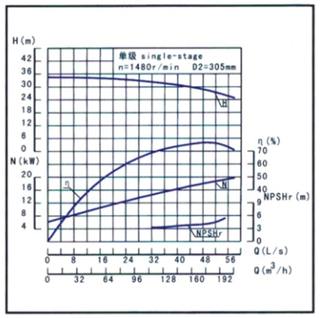
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	96	26.7	110 100 84.6	2950	73	39.44 44.54 48.8	55	Y250M–2	3.2	φ213	312	395
3			165 150 126.9			59.09 66.88 71.68	90	Y280M–2			377	550
4			220 200 169.2			78·79 89.17 95.57	110	Y315S–2			442	875
5			275 250 211.5			98.49 111.46 119.46	132	Y315M–2			507	950
6			330 300 253.8			118.18 133.75 143.36	160	Y315L1–2			572	1070
7	120	33.3	385 350 296.1		73.3	137.88 156.04 167.25	200	Y315L2–2	5.1		637	1190
8			440 400 338.4			157.58 178.33 191.14	200	Y315L2–2			702	1190
9	140	38.9	495 450 380.7		67.5	177.28 200.63 215.03	220	Y355M1–2	6.7		767	1350
10			550 500 423			196.97 222.92 238.93	280	Y355L1–2			832	1550
11			605 550 465.3			216.67 245.21 262.82	280	Y355L1–2			897	1550
12			660 600 507.6			236.37 267.50 287.71	315	Y355L2–2			962	1650

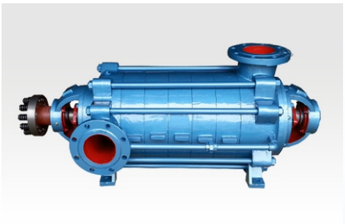
125D(DF、DY、MD)25



级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 Impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	72	20	51.2 43.0 35.0	2950	70.5	14.20 15.20 15.30	22	Y180M–2	3.2	φ156	183	180
3			76.8 64.5 52.5			21.30 22.80 22.90	30	Y200L1–2			219	240
4			102.4 86.0 70.0			28.40 30.40 30.60	37	Y200L2–2			256	260
5	101	28	128.0 107.5 87.5		77.5	35.50 38.00 38.25	45	Y225M–2	3.6		292	325
6			153.6 129.0 105.0			42.60 45.60 45.90	55	Y250M–2			328	395
7	119	33	179.2 150.5 122.5		77	49.70 53.20 53.55	75	Y280S–2	4.3		365	500
8			204.8 172.0 140.0			56.80 60.80 61.20	75	Y280S–2			401	500
9			230.4 193.5 157.5			63.90 68.40 68.85	90	Y280M–2			438	550

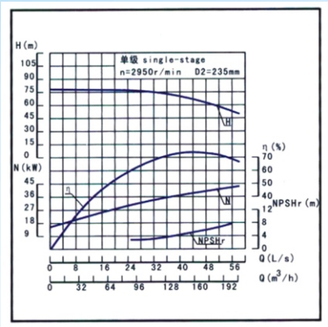
D(DF、DY、MD)155–30
150D(DF、DY、MD)30





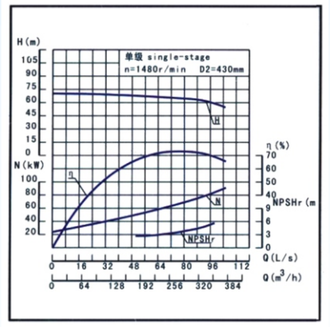
S	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	119	33	64 60 54	1480	69.5	29.8 33.71 36.95	45	Y225M–4	3.2	φ305	476	325
3			96 90 81			44.7 50.57 55.42	75	Y280S–4			546	500
4			128 120 108			59.6 67.42 73.9	90	Y280M–4			617	550
5			160 150 135			74.5 84.28 92.37	110	Y315S–4			687	875
6	155	43	192 180 162		75	89.4 101.1 110.8	132	Y315M–4	3.9		757	950
7			224 210 189			104.3 118.0 129.3	160	Y315L1–4			827	1070
8	190	52.8	256 240 216		76	119.2 134.8 147.8	200	Y315L2–4	4.8		897	1190
9			288 270 243			134.1 151.7 166.3	200	Y315L2–4			968	1190
10			320 300 270			149 168.6 184.7	220	Y355M1–4			1038	1350

D(DF、DY、MD)155–67



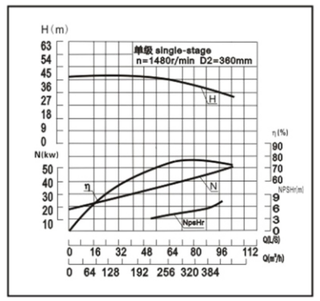
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor 功率 Power	配用电机Motor 型号 Type	必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	100–155	27.8–43.1	152 134 118	2950	64–74	64.7 76.5 82.6	90	Y280M–2	3.2–5.0	φ235	432	550
3			228 201 177			97.0 114.7 123.9	132	Y315M–2			502	950
4			304 268 236			129.4 152.9 165.1	185	Y315M1–2 (Ip23)			572	915
5			380 335 295			161.7 191.2 206.4	220	Y355M1–2			642	1350
6			456 402 354			194 229.5 247.7	280	Y355L1–2			712	1550
7	155–185	43.1–51.4	532 469 413		74–72	226.4 267.7 288.9	315	Y355L2–2	6.6		782	1650
8			608 536 472			258.8 305.9 330.2	355	Y355L1–2 (Ip23)			852	1545
9			684 603 531			291.1 344.2 371.5	450	Y4001–2 (Ip23/6KV)			922	2750

D(DF、DY、MD)280–65



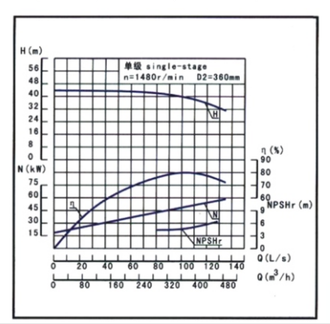
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor 功率 Power	配用电机Motor 型号 Type	必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	185–280	51.4–77.8	136 130 124	1480	67–73	102.2 135.8 159.3	185	Y315M1–4 (Ip23)	2.8–5.0	φ430	824	915
3			204 195 186			153.4 203.7 238.9	280	Y3555–4 (Ip23/6KV)			1006	1890
4			272 260 248			204.5 271.6 318.6	355	Y4001–4 (Ip23/6KV)			1188	2480
5			340 325 310			255.7 339.5 398.3	450	Y4003–4 (Ip23/6KV)			1370	2640
6			408 390 372			306.6 407.4 477.8	500	Y4004–4 (Ip23/6KV)			1552	2730
7			476 455 434			357.9 475.3 577.7	630	Y4501–4 (Ip23/6KV)			1734	3550
8			544 520 496			409.1 543.2 637.3	710	Y4502–4 (Ip23/6KV)			1916	3670
9	335–280	93.1–77.8	612 585 558		71–73	460.2 611.1 716.9	800	Y4503–4 (Ip23/6KV)			2098	3930
10			680 650 620			511.3 678.9 769.7	900	Y4504–4 (Ip23/6KV)			2280	3960
11			748 715 682			562.5 746.9 876.3	900	Y4504–4 (Ip23/6KV)			2460	3960
12			816 780 744			613.6 814.8 955.9	1000	Y5001–4 (Ip23/6KV)			2645	4660

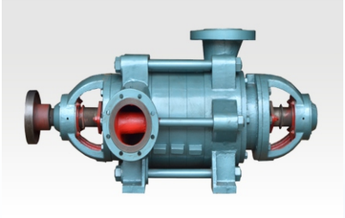
200D(DF、DY、MD)43



级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor 功率 Power	配用电机Motor 型号 Type	必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	185–280	51.4–77.8	94 86 76	1480	69–77	68.6 85.2 92.5	110	Y315S–4	3.0–4.7	φ360	667	875
3			141 129 114			102.9 127.7 138.8	160	Y315L1–4			787	1135
4			188 172 152			137.7 170.3 185.0	200	Y315L2–4			908	1255
5			235 215 190			171.6 212.9 231.3	250	Y355M2–4			1028	1450
6			282 258 228			205.9 255.5 277.5	315	Y355L2–4			1149	1650
7	335	93.1	329 301 266		75	240.2 298.1 323.8	355	Y4001–4 (Ip23/6KV)	6.0		1271	2480
8			376 344 304			274.5 340.7 370.0	450	Y4003–4 (Ip23/6KV)			1391	2640
9			423 387 342			308.8 383.3 416.3	450	Y4003–4 (Ip23/6KV)			1512	2640

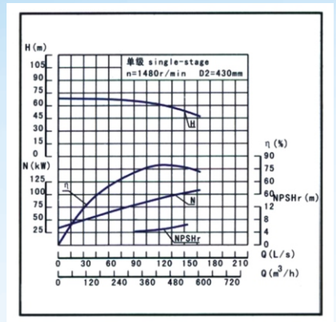
D(DF、DY、MD)360–40

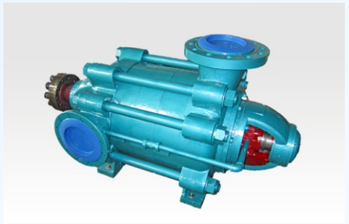




级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor 功率 Power	配用电机Motor 型号 Type	必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	300–440	83.3–122.2	84 80 71	1480	77–80–77	89.1 98.1 110.5	132	Y315M–4	4.65–5.4	φ360	676	1025
3			126 120 106.5			133.7 147.2 165.8	185	Y315M1–4 (Ip23)			807	915
4			168 160 142			178.2 196.2 221.1	250	Y355M2–4			938	1450
5			210 200 177.5			222.8 245.3 276.3	315	Y355L2–4			1069	1650
6	360	100	252 240 213			257.4 294.1 331.5	400	Y4002–4 (Ip23/6KV)	4.7		1200	2560
7			294 280 248.5			311.9 343.1 386.7	450	Y4003–4 (Ip23/6KV)			1331	2640
8	440	122.2	336 320 284			356.5 392.2 441.9	500	Y4004–4 (Ip23/6KV)	5.4		1462	2730
9			378 360 319.5			401.1 441.2 497.2	560	Y4005–4 (Ip23/6KV)			1593	2880
10			420 400 355			445.6 490.2 552.4	630	Y4501–4 (Ip23/6KV)			1724	3550

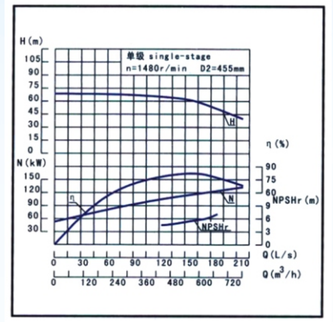
D(DF、DY、MD)450-60





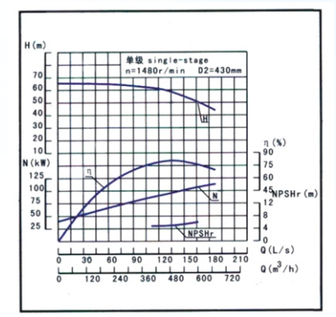
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	335	93.1	130 120 113	1480	72	164.7 186.1 197.3	250	Y3554-4 (Ip23/6KV)	4.1	φ430	1500	1820
3			195 180 171			247.1 279.2 296.0	355	Y4001-4 (Ip23/6KV)			1750	2480
4			260 240 228			329.5 372.2 394.7	500	Y4004-4 (Ip23/6KV)			2000	2730
5			325 300 285			411.8 465.4 493.4	630	Y4501-4 (Ip23/6KV)			2250	3550
6	450	125	390 360 342		79	494.2 558.3 592.0	710	Y4502-4 (Ip23/6KV)	5.2		2500	3670
7			455 420 399			576.5 651.5 690.7	800	Y4503-4 (Ip23/6KV)			2750	3930
8	500	138.9	520 480 456		78	658.9 744.4 789.4	900	Y4504-4 (Ip23/6KV)	6.3		3000	3960
9			585 540 513			741.2 837.5 888.0	1000	Y5001-4 (Ip23/6KV)			3250	4660
10			650 600 570			823.6 930.8 995.1	1120	Y5002-4 (Ip23/6KV)			3500	4830

D(DF、DY、MD)580-60



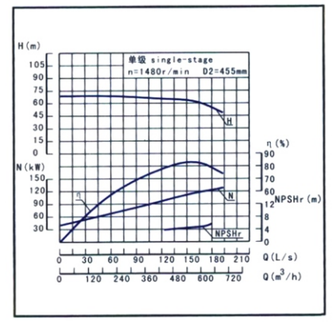
级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	450	125	130 120 110	1480	79	202 231 239	280	Y3554-4 (Ip23/6KV)	3.8	φ455	1750	1890
3			195 180 165			302 346 359	450	Y4003-4 (Ip23/6KV)			1950	2640
4			260 240 220			403 462 479	560	Y4005-4 (Ip23/6KV)			2260	2880
5			325 300 275			504 578 599	710	Y4502-4 (Ip23/6KV)			2570	3670
6	500	161.1	390 360 330		82	605 694 718	800	Y4503-4 (Ip23/6KV)	4.84		2880	3930
7			455 420 385			706 809 838	900	Y4504-4 (Ip23/6KV)			3190	3960
8	638	177.2	520 480 440		80	806 924 958	1120	Y5002-4 (Ip23/6KV)	5.16		3500	4830
9			585 540 495			907 1040 1077	1250	Y5003-4 (Ip23/6KV)			3810	4930
10			650 600 550			1008 1155 1197	1250	Y5003-4 (Ip23/6KV)			4120	4930

D(DF、DY、MD)500-57



级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	450	125	120 114 108	1480	80	184 192 205	250	Y3554-4 (Ip23/6KV)	4.4	φ430	1500	1820
3			180 171 162			276 287.5 307.5	355	Y4001-4 (Ip23/6KV)			1750	2480
4			240 228 216			368 383.5 410	500	Y4004-4 (Ip23/6KV)			2000	2730
5			300 285 270			460 479.5 512	630	Y4501-4 (Ip23/6KV)			2250	3550
6	500	138.9	360 342 324	1480	81	551.5 575 614.5	710	Y4502-4 (Ip23/6KV)	5		2500	3670
7			420 399 378			643.5 671 716.7	800	Y4503-4 (Ip23/6KV)			2750	3930
8	550	152.7	480 456 432		79	735.5 767 819	1000	Y5001-4 (Ip23/6KV)	5.8		3000	4660
9			540 513 486			827.5 862.5 921.5	1120	Y5002-4 (Ip23/6KV)			3250	4830
10			600 570 540			919.5 958.5 1024	1250	Y5003-4 (Ip23/6KV)			3500	4930

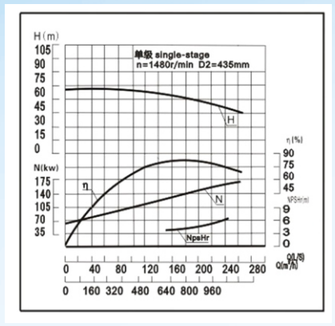
D(DF、DY、MD)600-60

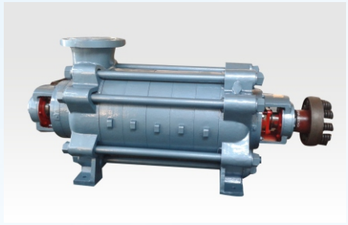


级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m³/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	450	125	130 120 110	1480	79	201.4 238.8 241.6	280	Y3554-4 (Ip23/6KV)	4.0	φ455	1750	1890
3			195 180 165			321.6 358.2 362.4	450	Y4003-4 (Ip23/6KV)			1950	2640
4			260 240 220			428.8 477.6 483.2	560	Y4005-4 (Ip23/6KV)			2260	2880
5			325 300 275			536 597 604	710	Y4502-4 (Ip23/6KV)			2570	3670
6	600	166.6	390 360 330	1480	82	643.2 716.4 724.8	800	Y4503-4 (Ip23/6KV)	4.8		2880	3930
7			455 420 385			750.4 835.8 845.6	900	Y4504-4 (Ip23/6KV)			3190	3960
8	638	177.2	520 480 440		79	857.6 955.2 966.4	1120	Y5002-4 (Ip23/6KV)	5.2		3500	4830
9			585 540 495			964.8 1074.6 1087.2	1250	Y5003-4 (Ip23/6KV)			3810	4930
10			650 600 550			1072 1194 1208	1250	Y5003-4 (Ip23/6KV)			4120	4930

GAOTIAN 高田

D(DF、DY、MD)720-60

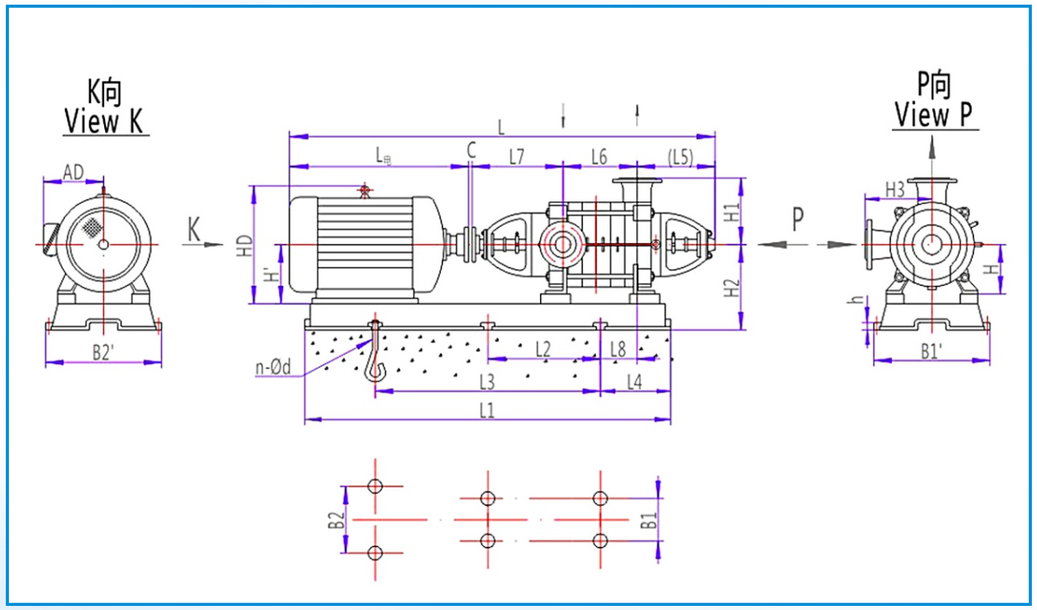




级数 Stage	流量Q Capacity		扬程H Head	额定转速n Rating speed	效率n Efficiency	轴功率pa Shaft power	配用电机Motor		必需汽蚀余量 NPSHr	叶轮名义直径 impeller Dia	泵重 Pump Weight	电机重 Motor Weight
							功率 Power	型号 Type				
	m^3/h	L/s	(m)	r/min	%	kw	kw		m	mm	kg	kg
2	550 720 850	152.8 200 236.1	132 120 108	1480	76 80 78.5	260 294 318.4	355	Y4001-4 (Ip23/6KV)	3.8 4.5 5.5	Φ435	1830	2480
3			198 180 162			390 441 477.6	560	Y4005-4 (Ip23/6KV)			2040	2880
4			264 240 216			520 588 636.8	710	Y4502-4 (Ip23/6KV)			2350	3670
5			330 300 270			640 735 796	800	Y4503-4 (Ip23/6KV)			2650	3930
6			396 360 324			780 882 955.2	1000	Y5001-4 (Ip23/6KV)			2960	4660
7			462 420 378			910 1029 1114.4	1250	Y5003-4 (Ip23/6KV)			3280	4930
8			528 480 432			1040 1176 1273.6	1400	Y5004-4 (Ip23/6KV)			3595	5100
9			594 540 486			1170 1323 1432.8	1600	Y5601-4 (Ip23/6KV)			3900	5900

泵+电机外形安装尺寸图（公用底座）

Pump+Motor Overall installation dimension diagram（common base）



Pump performance curve and performance table

泵的性能曲线和性能表

泵+电机外形安装尺寸图（公用底座）

pump+Motor Overall installation dimensions table(common base)

单位(unit)：mm

泵型号 Pump model	级数 stage	L	L电	L1	L2	L3	L4	(L5)	L6	L7	L8*	C	H	H1	H2	H3	H'	HD	AD	B1	B1'	h	B2	B2'	n-Φd
D DF DY MD 6-25	2	996	380	820	—	575	145	238	130	272	67	2	150	170	230	170	100	245	180	350	400	30	350	400	4-Φ24
	3	1181	475	1020		645	190		180		5						132	315	210	370	420		370	420	
	4	1231							230		55														
	5	1281							280		105														
	6	1467	605	1240		820	230		330	275	100				270		160	385	265	360	410	35	430	480	
	7	1517							380		150														
	8	1567		1390		920	300		430		180									410	460		480	530	
	9	1617							480		230														
	10	1712	650	1540		990	350		530		162						365	415	40	460	510				
	11	1762							580		212														
	12	1812							630		262														
D DF DY MD 6-50	2	1407	605	1275	—	845	220	284	160	339	0	2	170	215	250	215	160	385	265	460	530	35	460	530	4-Φ24
	3	1647							220		60														
	4	1572	650						280		120														
	5	1652	670	1325		880	240		340		160				260		180	430	285	465	535		465	535	
	6	1821	775	1520		930	310		400	341	180				280		200	475	315				510	580	
	7	1881							460		240									445	515				
	8	1941		1685		1075	350		520		180														
	9	2001							580		240														
	10	2101	815	1765		1105	440		640		329				305		225	530	345	465	535		545	615	
	11	2161							700		389														
	12	2336	930	2020	600	1300	400		760		329				330		250	575	385	460	530		595	665	6-Φ30
D DF DY MD 12-25	2	1132	475	855	—	575	150	238	130	272	80	2	150	170	230	170	132	315	210	370	420	35	370	420	4-Φ24
	3	1182		1020		645	190		180		5														
	4	1366	605	1130		745	205		230	275	83				260		160	385	265	360	410		440	490	
	5	1416							280		133														
	6	1466		1240		820	230		330		100												430	480	
	7	1516							380		150														
	8	1611	650	1390		920	300		430		180									410	460		480	530	
	9	1661							480		230														
	10	1731	670	1475		975	355		530		254				280		180	430	285	340	390		450	500	
	11	1781							580		304														
	12	1940	775	1620		965	445		630	277	390				300		200	475	315	350	400	45	500	550	
D DF DY MD 12-50	2	1407	605	1275	—	845	220	284	160	339	15	2	170	215	250	215	160	385	265	460	530	35	460	530	4-Φ24
	3	1512	650						220		60														
	4	1592	670	1325		880	240		280		100				260		180	430	285	465	535		465	535	
	5	1761	775	1520		930	310		340	341	120				280		200	475	315				510	580	
	6	1821							400		180									465	535				
	7	1881							460		240														
	8	1981	815	1765		1105	440		520		209				305		225	530	345				545	615	
	9	2041							580		269														
	10	2216	930	1895	500	1200	420		640		280				330		250	575	385	460	530		595	665	6-Φ28
	11	2276							700		340														
	12	2406	1000	2020	600	1300	400		760	340	320				360		280	640	410				645	715	

GAOTIAN 高田

泵+电机外形安装尺寸图（公用底座）

pump+Motor Overall installation dimensions table(common base)

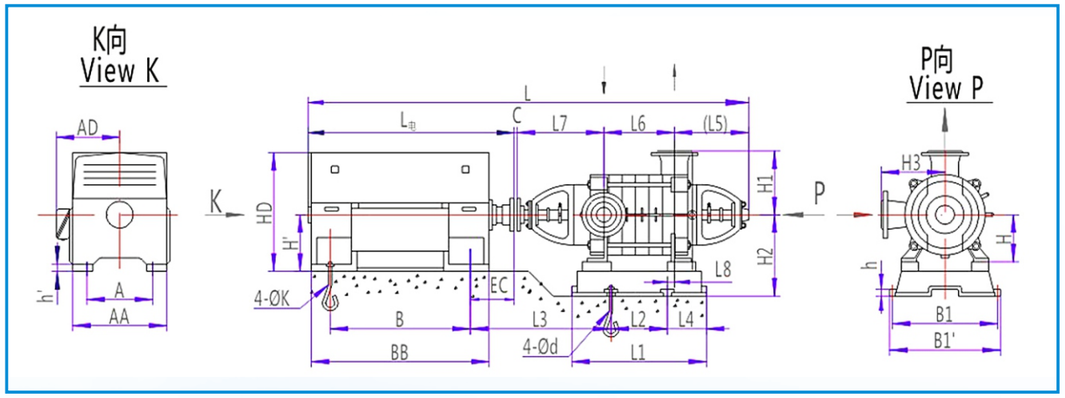
单位(unit)：mm

泵型号 Pump model	级数 stage	L	L电	L1	L2	L3	L4	(L5)	L6	L7	L8*	C	H	H1	H2	H3	H'	HD	AD	B1	B1'	h	B2	B2'	n–φd
D DF DY MD 25-30	2	1414	605	1170	––	840	190	285	165	342	40	2	170	210	250	210	160	385	265	480	550	35	480	550	4–φ24
	3	1479							230		105														
	4	1589	650	1275		845	220		295		125									460	530		460	530	
	5	1674	670	1325		880	240		360		180				260		180	430	285	465	535		465	535	
	6	1848	775	1520		930	310		425	344	204				280		200	475	315				510	580	
	7	1913		1685		1075	350		490		150									445	515				
	8	1978							555		215														
	9	2043							620		280														
	10	2148	815	1765		1105	440		685		374				305		225	530	345	465	535		545	615	
D DF DY MD 25-50	2	1552	650	1180	––	665	280	356	183	346	179	2	210	270	330	300	160	385	265	480	540	40	480	540	4–φ24
	3	1632	670	1240					243		194						180	430	285	500	560		500	560	
	4	1801	775	1430		900	250		303	349	114						200	475	315	520	580	45	520	580	
	5	1861							363		174														
	6	1961	815	1570	530	1060	235		423		103				325		225	530	345	560	620		560	620	
	7	2136	930	1760	555	1125	270		483		100				340		250	575	385	530	590		600	660	6–φ24
	8	2266	1000	2060	725	1470	380		543		100				380		280	640	410	500	560	50	670	730	
	9	2326							603		160														
	10	2386							663		220														
	11	2446	1050						723		280														
	12	2752	1240	2230	745	1490	360		783		260				440		315	865	576	510	580	60	730	800	
D DF DY MD 80 12	2	1133	400	1100	–	785	180	254	192	277	–40	2	160	210	260	170	112	265	190	410	470	40	410	470	4–φ24
	3	1278	475						262		14						132	315	210						
	4	1348							332		84														
	5	1554	605	1340		1060	165		402		14				280		160	385	265	430	490		430	490	
	6	1624							472		84														
	7	1694		1580		1065	345		542		134														
	8	1764							612		204				260										
	9	1834	650						682		274														
	10	1904		1660			420		752		340				270										
D DF DY MD 80-30	3	1465	650	1160	–	785	200	245	229	315	115	2	200	205	280	200	160	385	265	440	490	30	440	490	4–φ24
	4	1546	670	1225			215		290		125						180	430	285						
	5	1716	775	1440		1010	195		351	317	46.5				300		200	475	315	430	480	40	490	540	
	6	1777							412		102.5														
	7	1878	815	1515		995	265		473		182.5				345		225	530	345	440	490		540	590	
	8	2045	930	1810	665	1330	240		534		31.5				350		250	575	385	460	510		620	670	6–φ24
	9	2106							595		92.5														
	10	2167							656		153.5														
D DF DY MD 46-30	2	1414	605	1170	–	840	190	285	165	340	40	2	170	210	250	210	160	385	265	480	550	35	480	550	4–φ24
	3	1544	670	1325		880	240		230		50				260		180	430	285	465	535		465	535	
	4	1718	775	1520		930	310		295	342	74				280		200	475	315				510	580	
	5	1783							360		139														
	6	1848							425		204														
	7	1953	815	1575		1000			490		240				305		225	530	345	460	530		540	610	
	8	2133	930	1810		1130	390		555		240				330		250	575	385	480	550		610	680	
	9	2198							620		305														
	10	2263	1000	1945		1240	410		685		327				360		280	640	410	460	530		650	720	
D DF DY MD 46-50	2	1681	775	1430	–	900	250	356	183	346	–6	2	210	270	330	300	200	475	315	520	580	45	520	580	4–φ24
	3	1741							243		54														
	4	1841	815	1570	530	1060	235		303		–17				325		225	530	345	560	630		560	630	
	5	2016	930	1760	555	1115	270		363		–21.5				340		250	575	385	530	590		600	660	
	6	2146	1000	2060	725	1470	380		423		–20				380		280	640	410	500	560	50	670	730	6–φ24
	7	2256	1050						483		40														
	8	2316							543		100														
	9	2572	1240	2230	745	1490	360		603	349	61				440		315	865	576	510	580	60	730	800	
	10	2632	1310						663		121														
	11	2692							723		181														
	12	2752							783		241														

泵型号 Pump model	级数 stage	L	L电	L1	L2	L3	L4	(L5)	L6	L7	L8*	C	H	H1	H2	H3	H'	HD	AD	B1	B1'	h	B2	B2'	n–φd
D DF DY MD 100 16	2	1252	475	975	–	635	190	263	229	264.5	114	2	185	230	285	220	132	315	210	500	560	40	500	560	4–φ25
	3	1459	605	1285		850			306		35						160	385	265	450	510		450	510	
	4	1581	650						383		110														
	5	1688	670	1450		1020	205		460	274.5	53						180	430	285						
	6	1765							537		130														
	7	1947	775	1780		1000	410		614	286.5	170				300		200	475	315	545	605		545	605	
	8	2038							691		245														
	9	2115							768		320														
D DF DY MD (100D-45) 85-45	2	1640	775	1265	–	840	200	303	203	337	120	3	210	250	325	250	200	475	315	520	580	40	520	580	4–φ24
	3	1869	930	1485		1040	230		277		130				360		250	575	385	530	590		635	695	
	4	2013	1000	1740	560	1120	310		351		145				380		280	640	410	520	580		670	730	6–φ24
	5	2137	1050						425		220														
D DF DY MD 125 25	2	1475	670	1180	–	740	210	241	262	283.5	133.5	2	210	300	320	280	180	430	285	560	620	40	560	620	4–φ24
	3	1674	775	1445		950	250		352	285.5	85				300		200	475	315						
	4	1764							442		175														
	5	1904	815	1570	530	1060	235		532	295.5	155				325		225	530	345			50	600	660	6–φ24
	6	2109	930	1760	555	1115	270		622		187				340		250	575	385	530	590				
	7	2269	1000	2170	700	1410	380		712		115				410		280	640	410	610	710		705	805	
	8	2359							802		205														
	9	2499	1050						892		295														
D DF DY MD 120-50	2	1915	930	1430	–	900	265	364	260.5	353	180	4	230	300	355	300	250	575	385	595	655	50	595	655	4–φ28
	3	2122	1050	1635		1000	300		347.5		210				385		280	640	410	545	605		650	710	
	4	2399	1240	1895	500	1200			434.5		156.5				435		315	865	576				735	815	
	5	2556	1310	2200	675	1350	400		521.5		243									550	630				6–φ40
	6	2643							608.5		170												750	830	
	7	2730							695.5		255														
	8	2817							782.5		345														
	9	3134	1540	2420	800	1600			869.5		340				475		355	1035	680				860	940	
D DF DY MD 155-30	2	1937	845	1500	–	1050	220	355	315	403	138	4	280	350	390	350	225	530	345	600	680	35	600	680	4–φ24
	3	2181	1000	1920	600	1200	315		430	388	90				400		280	640	410	660	730		660	730	6–φ26
	4	2346	1050						545		210														
	5	2711	1270	2420	750	1500	530		660	418	220				445		315	865	576	580	660		720	800	
	6	2896	1340						775		335														
	7	3011							890		450														

泵+电机外形安装尺寸图（本身底座）

Pump+Motor Overall installation dimension diagram（Pump's own base)



泵+电机外形安装尺寸图（本身底座）

pump+Motor Overall installation dimensions table(pupmp´ sown base)

单位(unit)：mm

泵型号 Pump model	级数 stage	L	L电	L1	L2	L3	L4	(L5)	L6	L7	L8*	C	H	H1	H2	H3	H'	HD	AD	B1	B1'	h	n-Φd	A	AA	B	BB	4-Φk	EC
D DF DY MD 85-45 (100D-45)	6	2284	1258	750	380	795	190	303	499	340	58	4	210	250	345	250	315	865	576	540	600	40	4-Φ26	508	628	406	609	28	392
	7	2428				832			573		95															457	660		
	8	2502	1328	900	525	798			647		58																		
	9	2576				837			721		95															508	711		
D DF DY MD 85-67	2	2268	930	765	400	814.5	182.5	490	283	557	−58.5	4	270	350	420	350	250	575	385	600	670	50	4-Φ30	406	490	349	455	24	308
	3	2476	1050			880.5			371		−14						280	640	410					457	550	419	581		330
	4	2754	1240			950.5			459		29.5						315	865	576					508	628	406	609	28	356
	5	2912	1310			994.5			547		73.5															457	660		
	6	3000		945	580	948.5			635		27.5															508	711		
	7	3000	1222			992.5			723		71.5							740	532							457	600		
	8	3408	1540	1125	760	986.5			811		25.5						355	1035	680					610	740	560	830		394
	9	3496				1028.5			899		69.5																		
D DF DY MD 155-30 (150D30)	2	1937	858	730	450	629	140	355	315	388	−70	4	280	350	400	350	255	530	345	600	680	50	4-Φ26	356	435	311	393	19	302
	3	2181	1000			718.5			430		−12.5						280	640	410					457	550	368	530	24	330
	4	2346	1050			776			545		45															419	581		
	5	2711	1270	1075	795	743			660	418	−70						315	865	576					508	628	406	609	28	386
	6	2896				800.5			775		−12.5															457	660		
	7	3011	1340			862			890		45															508	711		
	8	3126		1420	1165	722			1005		−70																		
	9	3242				780.5			1120		−12.5	5																	
	10	3587	1570			876			1235		45						335	1035	680					610	740	560	830		424
D DF DY MD 155-67	2	2388	1050	765	400	836.5	182.5	490	283	557	−58.5	4	270	350	420	350	280	640	410	600	670	50	4-Φ30	457	550	419	581	24	330
	3	2736	1310			906			371		−14						315	865	576					508	628	457	660	28	356
	4	2736	1222			950.5			459		29.5							740	532								600		
	5	3142	1540	945	580	1032.5			547		73.5						335	1035	680					610	740	560	830		394
	6	3230				987.5			635		27.5															630			
	7	3319				1031			723		71.5	5																	
	8	3277	1410	1125	760	985.5			811		25.5							720	610								855		
	9	4045	2090			1180.5			899		69.5						400	1200	790					710	900	1000	1500	35	545

泵+电机外形安装尺寸图（本身底座）

pump+Motor Overall installation dimensions table(pupmp´ sown base)

单位(unit)：mm

泵型号 Pump model	级数 stage	L	L电	L1	L2	L3	L4	(L5)	L6	L7	L8*	C	H	H1	H2	H3	H'	HD	AD	B1	B1'	h	n-Φd	A	AA	B	BB	4-Φk	EC
D DF DY MD 120-50	10	3221	1540	1270	970	828.5	150	364	956.5	353	−91	4	230	300	350	300	355	1035	680	550	630	40	4-Φ40	610	740	630	830	28	394
	11	3308				828.5			1043.5		−4																		
	12	3395				828.5			1130.5		83																		
D DF DY MD 280-43 (200D43)	2	2421	1270	735	435	770	150	384	373	385	−52	5	330	400	450	450	315	865	576	700	770	50	4-Φ30	508	628	406	609	28	386
	3	2621	1340			835			503		13															508	711		
	4	2751				900			633		78																		
	5	3111	1570	1125	800	820.5	162.5		763		−39.5						355	1035	680					610	740	560	830		424
	6	3241				886.5			893		25.5															630			
	7	3702	1900	1385	1060	1100.5			1023	417	90.5	6					400	1200	790					710	900	1000	1500	35	545
	8	3832				1035.5			1153		25.5																		
	9	3962				1100.5			1283		90.5																		
D DF DY MD 280-65 (200D65)	2	2736	1260	555	235	1076.5	160	536	345	623	52.5	6	380	500	530	500	315	740	532	790	870	50	4-Φ30	508	628	457	600	28	386
	3	3444	1800	670	310	1243	180		475		80						355	1070	740					630	800	900	1420		525
	4	3674	1900	1060	700	1003			605								400	1200	790					710	900	1000	1500	35	545
	5	3804				1133			735																				
	6	3935				1263			865			7																	
	7	4315	2150	1190	830	1274			995								450	1350	840					800	1000	1120	1760		565
	8	4445		1450	1090	1154			1125																				
	9	4575				1284			1255																				
	10	4704		1580	1220	1284			1385																				
D DF DY MD 360-40	2	2539	1340	645	340	779.5	150	384	390	415	83	6	330	400	450	450	315	865	576	700	780	50	4-Φ40	508	628	457	660	28	386
	3	2599	1260			919.5			530									740	532								600		
	4	3049	1570	925	620	817.5			670								355	1035	680					610	740	560	830		424
	5	3189				957.5			810																	630			
	6	3659	1900	1065	760	1078.5			950								400	1200	790					710	900	1000	1500	35	545
	7	3799		1205	900	1078.5			1090																				

泵+电机外形安装尺寸图（本身底座）

pump+Motor Overall installation dimensions table(pupmp´sown base)

单位(unit)：mm

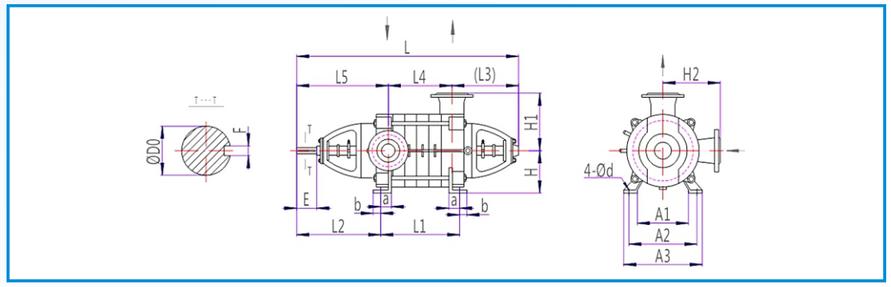
泵型号 Pump model	级数 stage	L	L电	L1	L2	L3	L4	(L5)	L6	L7	L8*	C	H	H1	H2	H3	H'	HD	AD	B1	B1'	h	n–φd	A	AA	B	BB	4–Φk	EC
D DF 450-60 DY MD	2	3357	1800	615	235	1223	190	536	421	589	88	7	410	550	560	500	355	1070	740	850	950	50	4–φ42	630	800	900	1420	28	525
	3	3610	1900	770	390	1241			574								400	1200	790					710	900	1000	1500		545
	4	3763		920	540	1244			727								450	1350	840					800	1000	1120	1760	35	565
	5	4166		1230	850	1185			880		10																		
	6	4319	2150			1260			1033		88						500	1520	900	900	1040	50		900	1120	1250	1940	42	725
	7	4472		1530	1150	1188			1186		13																		
	8	4625				1266			1339		88																		
	9	5048	2420	1840	1460	1353			1492		10																		
	10	5201				1506			1645		88																		
D DF 500-57 DY MD	2	3357	1800	615	235	1223	190	536	421	589	88	7	410	550	560	500	355	1070	740	850	950	50	4–φ42	630	800	900	1420	28	525
	3	3610	1900	770	390	1241			574								400	1200	790					710	900	1000	1500		545
	4	3763		920	540	1244			727								450	1350	840					800	1000	1120	1760	35	565
	5	4166		1230	850	1185			880		10																		
	6	4319	2150			1260			1033		88						500	1520	900	900	1040	50		900	1120	1250	1940	42	725
	7	4472		1530	1150	1188			1186		13																		
	8	4625				1422			1339		88																		
	9	5048	2420	1840	1460	1343			1492		10																		
	10	5201				1418			1645		88																		
D DF 580-60 DY 600-60 MD	2	3605	1880	757	377	1205	190	599	490	625	65	7	430	550	580	500	355	1070	740	930	1030	50	4–φ42	630	800	900	1420	28	525
	3	3825	1900	957	577	1225			690								400	1200	790					710	900	1000	1500		545
	4	4025		1157	777				890								450	1350	840					800	1000	1120	1760	35	565
	5	4475		1357	977				1090																				
	6	4675	2150	1557	1177	1245			1290								500	1520	900	900	1040	50		900	1120	1250	1940	42	725
	7	4875		1757	1377				1490																				
	8	5345	2420	1957	1577	1405			1690																				
	9	5545		2157	1777				1890																				
	10	5745		2357	1977				2090																				
D DF 720-60 DY MD	2	3655	1900	712	412	1226	150	618.5	518.5	607	39.5	7	520	629	700	620	400	1200	790	970	1050	50	4–Φ35	710	900	1000	1500	35	545
	3	3840		897	597				703.5								450	1350	840					800	1000	1120	1760		565
	4	4275	2150	1082	782	1246			888.5																				
	5	4460		1267	967				1073.5								500	1520	900	1040	1150	50		900	1120	1250	1940	42	725
	6	4915	2420	1452	1152	1406			1258.5																				
	7	5100		1637	1337				1443.5																				
	8	5285		1822	1522				1628.5																				

*注：“L8”尺寸中带“-”号者表示尺寸在另一侧。

Note: the dimensions “L8” has “-”, indicating the dimensions is in the other side.

泵砣外形安装尺寸图

Pump Installation Dimension Diagram



泵砣外形安装尺寸表

Pump Installation Dimensions Table

单位(unit)：mm

泵型号 Pump model	级数 stage	L	L1	L2	(L3)	L4	L5	H	H1	H2	I	A1	A2	A3	a	b	4–Φd	E	F	Do
D DF 6–25 DY 12–25 MD	2	630	135	262	238	130	262	150	170	170	5	140	210	250	35	20	Φ14.5	60	8	Φ25
	3	680	185			180														
	4	730	235			230														
	5	780	285			280														
	6	830	335			330														
	7	880	385			380														
	8	930	435			430														
	9	980	485			480														
	10	1030	535			530														
	11	1080	585			580														
	12	1130	635			630														
D DF 6–50 DY 12–50 MD	2	770	185	309	284	160	326	170	215	215	0	200	295	350	40	30	Φ18.5	80	8	Φ30
	3	830	245			220														
	4	890	305			280														
	5	950	365			340														
	6	1010	425			400														
	7	1070	485			460														
	8	1130	545			520														
	9	1190	605			580														
	10	1250	665			640														
	11	1310	725			700														
	12	1370	785			760														
	13	1430	845			820														
	14	1490	905			880														
D DF 25–30 DY 46–30 MD	2	777	180	312	285	165	327	170	210	210	0	205	295	340	40	30	Φ18.5	80	8	Φ30
	3	842	245			230														
	4	907	310			295														
	5	972	375			360														
	6	1037	440			425														
	7	1102	505			490														
	8	1167	570			555														
	9	1232	635			620														
	10	1297	700			685														
D DF 25–50 DY 46–50 MD	2	870	249	298	356	183	331	210	270	300	33	170	320	360	45	25	Φ23	62	10	Φ35
	3	930	309			243														
	4	990	369			303														
	5	1050	429			363														
	6	1110	489			423														
	7	1170	549			483														
	8	1230	609			543														
	9	1290	669			603														
	10	1350	729			663														
	11	1410	789			723														
	12	1470	849			783														
	13	1530	909			843														
	14	1590	969			903														

泵砣外形安装尺寸表

Pump Installation Dimensions Table

单位(unit)：mm

泵型号 Pump model	级数 stage	L	L1	L2	(L3)	L4	L5	H	H1	H2	I	A1	A2	A3	a	b	4-Φd	E	F	Do
80 D DF DY MD 12	2	707	177	291	254	192	261	160	210	170	15	200	275	320	40	22	Φ18	45	8	Φ28
	3	777	247			262														
	4	847	317			332														
	5	917	387			402														
	6	987	457			472														
	7	1057	527			542														
	8	1127	597			612														
	9	1197	667			682														
	10	1267	737			752														
D DF DY MD 80-30	3	760	285	258	245	229	300	200	205	200	28	210	284	330	40	24	Φ18	58	8	Φ30
	4	821	346			290														
	5	882	407			351														
	6	943	468			412														
	7	1004	529			473														
	8	1065	590			534														
	9	1126	651			595														
	10	1187	712			656														
100 D DF DY MD 16	2	743.5	224	277.5	263	229	251.5	185	230	220	21	250	315	355	35/33	26/18	Φ18	40	8	Φ30
	3	820.5	301			306														
	4	897.5	378			383														
	5	984.5	455	287.5		460	261.5											50		
	6	1061.5	532			537														
	7	1138.5	609			614														
	8	1225.5	686	297.5		691	271.5											60		
	9	1302.5	763			768														
D DF DY MD 85-45 (100D45)	2	828	249	305	303	203	322	210	250	250	29	280	345	385	40	20	Φ18.5	78	10	Φ35
	3	902	323			277														
	4	976	397			351														
	5	1050	471			425														
	6	1124	545			499														
	7	1198	619			573														
	8	1272	693			647														
	9	1346	767			721														
D DF DY MD 85-67 155-67	2	1330	283	557	490	283	557	270	350	350	0	250	400	480	65	50	Φ24	110	16	Φ55
	3	1418	371			371														
	4	1506	459			459														
	5	1594	547			547														
	6	1682	635			635														
	7	1770	723			723														
	8	1858	811			811														
	9	1946	899			899														
125 D DF DY MD 25	2	773.5	272	280.5	241	262	270.5	210	300	280	20	260	380	420	65	20	Φ18	60	8	Φ30
	3	863.5	362			352														
	4	953.5	452			442														
	5	1053.5	542	290.5		532	280.5											70		
	6	1143.5	632			622														
	7	1233.5	722			712														
	8	1323.5	812			802														
	9	1413.5	902			892														
D DF DY MD 120-50	2	977.5	242	359.5	364	260.5	353	230	300	300	−12	260	360	420	55	30	Φ17.5	110	12	Φ45
	3	1064.5	329			347.5														
	4	1151.5	416			434.5														
	5	1238.5	503			521.5														
	6	1325.5	590			608.5														
	7	1412.5	677			695.5														
	8	1499.5	764			782.5														
	9	1586.5	851			869.5														
	10	1673.5	938			956.5														
	11	1760.5	1025			1043.5														
	12	1847.5	1112			1130.5														

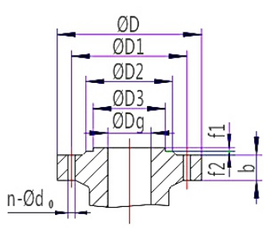
泵砣外形安装尺寸表

Pump Installation Dimensions Table

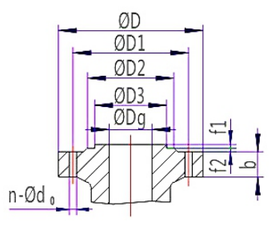
单位(unit)：mm

泵型号 Pump model	级数 stage	L	L1	L2	(L3)	L4	L5	H	H1	H2	I	A1	A2	A3	a	b	4-Φd	E	F	Do
D DF DY MD 155-30 (150D30)	2	1058	330	383	355	315	388	280	350	350	10	335	420	480	50	30	Φ18	68	16	Φ50
	3	1173	445			430														
	4	1288	560			545														
	5	1433	675	413		660	418											98		
	6	1548	790			775														
	7	1663	905			890														
	8	1778	1020			1005														
	9	1893	1135			1120														
	10	2008	1250			1235														
D DF DY MD 280-43 (200D43)	2	1142	295	445	384	373	385	330	400	450	18	430	520	600	60	60/40	Φ24	108	18	Φ65
	3	1272	425			503														
	4	1402	555			633														
	5	1532	685			763														
	6	1662	815			893														
	7	1822	945	475		1023	417											138		
	8	1952	1075			1153														
	9	2082	1205			1283														
D DF DY MD 280-65 (200D65)	2	1504	320	638	536	345	623	380	500	500	−10	430	600	670	65	65	Φ24	170	22	Φ85
	3	1634	450			475														
	4	1764	580			605														
	5	1894	710			735														
	6	2024	840			865														
	7	2154	970			995														
	8	2284	1100			1125														
	9	2414	1230			1255														
	10	2544	1360			1385														
D DF DY MD 360-40	2	1189	212	475	384	390	415	330	400	450	−18	430	520	600	60	60/40	Φ24	138	18	Φ65
	3	1329	452			530														
	4	1469	592			670														
	5	1609	732			810														
	6	1749	872			950														
	7	1889	1012			1090														
	8	2029	1152			1230														
	9	2169	1292			1370														
	10	2309	1432			1510														
D DF DY MD 450-60 500-57	2	1547	355	627	537	421	589	410	550	500	−28	450	620	710	70	70	Φ32	170	25	Φ90
	3	1700	508			574														
	4	1853	661			727														
	5	2006	814			880														
	6	2159	967			1033														
	7	2312	1120			1186														
	8	2465	1273			1339														
	9	2618	1426			1492														
	10	2771	1579			1645														
D DF DY MD 580-60 600-60	2	1714	497	613	599	490	625	430	550	550	−5	550	700	800	75	40	Φ33	168	25	Φ90
	3	1914	697			690														
	4	2114	897			890														
	5	2314	1097			1090														
	6	2514	1297			1290														
	7	2714	1497			1490														
	8	2914	1697			1690														
	9	3114	1897			1890														
	10	3314	2097			2090														
D DF DY MD 720-60	2	1744	486	642	618.5	518.5	607	520	629	620	2.5	500	700	840	110	70	Φ33	172	25	Φ95
	3	1929	671			703.5														
	4	2114	856			888.5														
	5	2299	1041			1073.5														
	6	2484	1226			1258.5														
	7	2669	1411			1443.5														
	8	2854	1596			1628.5														
	9	3039	1785			1813.5														

泵的进、出口法兰尺寸图、表
Pump inlet and outlet flange dimensions figure, table



进口法兰
Inlet Flange



出口法兰
Outlet Flange

单位(unit)：mm

泵型号 Pump model	进口法兰								出口法兰							
	Dg	D	D1	D2	D3	b	f1/f2	n–Φdo	Dg	D	D1	D2	D3	b	f1/f2	n–Φdo
D、DF、MD6–25	40	130	100	80	–	18	–/3	4–13.5	40	150	110	88	75	20	4/3	4–17.5
D、DF、MD6–50	50	140	110	88	–	30	–/3	4–13.5	50	195	145	112	87	30	4/3	4–26
D、DF、MD12–25	50	140	110	90	–	18	–/3	4–13.5	40	150	110	88	75	20	4/3	4–17.5
D、DF、MD12–50	50	140	110	88	–	30	–/3	4–13.5	50	195	145	112	87	30	4/3	4–26
D、DF、MD25–30	65	160	130	110	–	20	–/3	4–13.5	65	185	145	122	109	28	4/3	8–17.5
D、MD25–50	80	190	150	128	–	18	–/3	4–17.5	80	215	170	140	120	30	4/3	8–23
DF25–50	80	215	170	140	120	30	4/3	8–23								
D、DF、MD46–30	80	190	150	128	–	22	–/3	4–17.5	65	185	145	122	109	28	4/3	8–17.5
D、MD46–50	80	190	150	128	–	18	–/3	4–17.5	80	215	170	140	120	30	4/3	8–23
DF46–50	80	215	170	140	120	30	4/3	8–23								
D、DF、MD80–30	80	195	160	135	–	22	–/3	4–17.5	80	195	160	135	–	26	–/3	8–17.5
D、DF、MD85–45	100	210	170	148	–	24	–/3	4–17.5	100	235	190	160	149	30	4.5/3	8–22
D、MD85–67	150	265	225	202	–	33	–/3	8–18	150	345	280	242	203	38	4.5/3	8–33
DF85–67	150	345	280	242	203	38	4.5/3	8–33								
D、DF、MD120–50	125	270	220	184	175	30	4.5/3	8–26	125	295	240	184	175	30	4.5/3	8–30
D、MD155–67	150	265	225	202	–	33	–/3	8–18	150	345	280	242	203	38	4.5/3	8–33
DF155–67	150	345	280	242	203	38	4.5/3	8–33								
D、DF、MD280–43	200	340	295	268	–	28	–/3	8–22	200	375	320	285	259	38	4.5/3	12–30
D、DF、MD280–65	200	340	295	268	–	30	–/3	12–22	200	415	345	285	259	44	4.5/3	12–36
D、DF、MD360–40	200	340	295	268	–	28	–/3	8–22	200	375	320	285	259	38	4.5/3	12–30
D、DF、MD450–60	250	405	355	320	–	32	–/3	12–26	250	470	400	345	312	48	4.5/3	12–36
D、DF、MD500–57	250	405	355	320	–	32	–/3	12–26	250	470	400	345	312	48	4.5/3	12–36
D、DF、MD580–60	300	460	410	370	–	32	–/3	12–26	250	445	385	345	312	40	4/3	12–30
D、DF、MD600–60	300	460	410	370	–	32	–/3	12–26	250	445	385	345	312	40	4/3	12–30
D、DF、MD720–60	300	460	410	370	–	34	–/4	12–24	300	530	460	412	363	54	4.5/4	12–39
80D、DF、MD12	80	190	150	125	–	18	–/3	4–17.5	80	195	160	135	–	26	–/3	8–17.5
100D、DF、MD16	100	210	170	148	–	18	–/3	4–17.5	100	220	180	158	–	24	–/3	8–17.5
125D、DF、MD25	125	240	200	178	–	20	–/3	4–17.5	125	270	220	184	175	30	4.5/3	8–26
150D、DF、MD30	150	285	240	212	–	26	–/3	8–22	150	300	250	212	203	34	4.5/3	8–26

09 泵的装配与拆卸

(A)泵的装配

泵的装配顺序一般与拆卸顺序相反。装配质量的好坏直接影响泵能否正常运行，并影响泵的使用寿命和性能参数。

装配时应注意以下几点：

1)应保护好零件的加工精度和表面粗糙度，不允许有碰伤、划伤等现象，作密封用的密封部件要干净，紧固螺钉和螺栓应受力均匀；

2)叶轮出口流道与导叶进口流道的对中性是依各零件的轴向尺寸来保证，流道对中性的好坏直接影响泵的性能，故泵的尺寸不能随意调整；

3)泵装配完毕后，在未装填料前，用手转动泵转子，检查转子在泵中旋转是否灵活，轴向窜动量是否达规定要求；

4)检查合格后，压入填料，并注意填料环在填料腔的相对位置。

(B)泵拆卸时应注意的事项

1)按停车顺序停车；

2)泵壳内液体（包括冷却水）应放掉；轴承部件是稀油润滑时，应放掉润滑油：

3)拆去妨碍拆卸的附属管路，如平衡管、水封管等管路和引线；

4)拆卸应严格保护零件的制造精度不受损伤，拆卸拉杆的同时应将各中段用垫块垫起，以免各中段止口松动下沉将轴压弯。

(C)泵的拆卸顺序

1)卸下联轴器后，拧下吐出侧轴承端盖上的螺栓和出水段、尾盖、轴承体三个部件之间的联接螺栓，卸下轴承端盖、轴承体等轴承部件；

2)拧下轴上圆螺母并依次卸下轴承内圈、轴承压盖和挡圈后，卸下填料体（包括填料压盖、填料环、填料等在内）或机械密封部件；

3)依次卸下轴上的O型密封圈、轴套、平衡盘和平键后，卸下出水段、末导叶、平衡环套等；

4)卸下末级叶轮和平键后，卸下中段、导叶；按此依次卸下各级叶轮、中段和导叶，直到卸下前级叶轮为止：

Pump assembly and disassembly

(A)The pump assembly

Assembly sequence reverses that of disassembly.Following points shall be concerned as they will have effect on normal operation,durability and performance of the pump:
1)Machining accuracy and surface roughness shall be checked and protected.Avoid any scratch and the sealing part shall be clean;Stress on bolts shall be even and well distributed.

2)Concentricity of discharging path of impeller and inlet path of guide vane depends on dime,nsions of all parts;It affects the performance of the pump,and therefore the dimension of it shall not be modified freely.

3)Rotate the rotor of the pump manually to check its flexibility before filling ang material after assembly.

4)Press the filling materil after qualification of axial movement during which position of filling ring shall be concerned.

(B)Precautions of disassembly:

1)Terminate the power of the p.ump accordingly;
2)Discharge any liquid inside the pump including cooling water thin lubricating oil;
3)Any pipelines and wires shall be dismounted or removed including balancing tube,water sealing tube and lead wire.
4)Any harm to producing precision shall be avoided to protect the parts;Cushion blocks are being used when the pulling bar is dismounted for the purpose of any segments loosening which may bend the shaft.

(C)Pump disassembly sequence

1)Dismount the coupling joint and unscrew the bolts of bearing gland at the discharging side and between the segments of discharging,end gland and bearing part.Dismount bearing gland and bearing parts then;
2)Unscrew nuts of the shaft and dismount the internal ring,pressing gland of the bearing and the washer sequentially;And dismount filling material part (including filling gland,filling ring,filling material)or mechnical sealing part;
3)Dismount sealing O-ring,sleeve,balancing plate,and straight key of the shaft and then dismount the discharging part,end guide vane,and balancing sleeve and ring;
4)Dismount end guide vane and straight key and then middle segments,guide vane squentially till front guide vane;

5)卸下泵联轴器后，拧下进水段和轴承体的联接螺母和轴承压盖上的螺栓后，卸下进水段侧轴承部件；

6)将轴从进水段中抽出，拧下轴上的固定螺母，依次将轴承内圈、O形密封圈、轴套等卸下；

7)采用滑动轴承的泵，其拆卸顺序基本相同，仅在拆卸轴承部件时略有不同。

5)Unscrew the bolts between inlet segment and bearing part and then shaft pressing gland;Dismount the side bearing part then;

6) Withdraw the shaft from the inlet segment and unscrew nuts on the shaft;Then dismount internal bearing ring,sealing O-ring.and shaft sleeve sequentially;

7) Above dismounting sequences are applicable to the pump with sliding bearing,but it is only different when dismounting the bearing part

10 泵的安装

本型泵安装时除满足一般要求外，还应注意以下几点：

1)安装泵的基础平面应当用水平仪找平。基础水泥凝固后，应检查底座和地脚螺栓孔是否松动；

2)电机、泵和底座组装后，应严格检查泵轴和电机轴的同心度，保证两轴心线在同一轴线上；

3)电机和水泵组装时，应将泵联轴器端轴伸向外拉出，保证泵和电机两半联轴器端面的轴向间隙值；

4)泵只能承受自身内力，不能承受任何外力，所以泵的吸入管路和压出管路应有各自的支架，以免将泵压坏。

5)用于含有可燃易爆气体的矿井下运行的D、MD型泵，必须采用防爆电机并要求具有相应的防护等级和防爆标志。

Pump installation

Additional points are advised apart from general requirements:

1)Horizontal instrument is advised for installation foundation.Assure the foundation bolts are tight sufficiently into the foundation.

2)Concentricity of shafts of pump and motor shall be checked strictly to make sure that these two shafts are on the same line after assembly of motor,pump and foundation.

3)Pull the shaft out from the coupling joint side during assembly of pump and motor to leave axial gap width of Coupling joints of motor and pump.

4)Independent brackets for inlet pipelines and discharging pipelines are necessary in that the pump can sustain its own stress only.This avoids possible damage to the pump from external pressure.

5)Explosive-proof motor is a must for D and MD pump under circumstances of inflammable and explosive,mining well for instance,while insulation class and explisive-proof mark shall be indicated.

11 泵的起动、运行和停机

(A)起动

1)泵起动前应转动泵转子，检查转子是否灵活；

2)检查电机转向是否与泵转向一致；

3)打开泵的吸入阀（如果装有吸入阀时），关闭泵出口管路闸阀及压力表旋塞，使泵内充满液体，或用真空系统排除吸入管路和泵内空气；

4)检查泵和电机联接螺栓的松紧程度和泵周围的安全情况，使泵处于准备起动状态；

5)起动电机，待泵运转正常后，打开压力表旋塞，慢慢开启泵出口闸阀，直到压力表指针指到所需压力为止（按出口压力表读数控制泵给定的扬程）。

(B)运行

1)该泵靠泵内的平衡机构平衡轴向力，平衡装置内有平衡液体流出，平衡液体通过平衡水管接至进水段，或在平衡室外设计一短管，平衡液体经短管流向泵外。为保证泵正常运行，平衡水管绝对不允许堵塞；

2)在启动和运行过程中，必须注意观察仪器表读数，轴承温度、填料漏水和温度及泵的振动和声音等是否正常，如发现异常情况，应及时处理；

3)轴承温升变化反映了泵的装配质量，轴承温升不得高于环境温度35℃，轴承的最高温度不得高于75℃；

4)泵转子在运行中存在一定的轴向游动，轴向窜动应在允许范围内，应保证电机和水泵两半联轴器端面间的间隙值；

5)泵在服役期间应定期检蛮叶轮、密封环、导叶套、轴套、平衡盘等零件的磨损情况，磨损过大时应及时更换。

(C)停机

1)停机前应先关闭压力表的旋塞，慢慢关闭出口闸阀，待泵停稳后再关闭泵的吸入阀（如果装有吸入阀时）；

2)如长期停用，应将泵的进水段、中段、出水段下方的放水旋塞全部卸下，放掉余水，并将泵拆卸清洗上油，包装保管。

Start-up.Operating and Halting of Pump

(A)Start-up

1)Rotate the rotor of the pump to make sure it is flexible;

2)Check and assure the rotation direction of the motor and the pump is identical;

3)Open the suction valve.if any,and close the gate valve of outlet pipelines and faucet of the pressure meter to fill the pump with liquid;Or use vacuum to expel all air out of the pump and pipelines.

4)Make the pump ready for initializing after qualification of tightness of bolts between the pump and the motor and surroundings of the pump.

5)Open the faucet of the pressure meter after normal operation of the pump and open the gate valve slowly till pointer of the pressure meter to the right value.(Control the head 'of the pump according to the discharging pressure)

(B)Operating

1)Axial force is balanced by balancing system inside the pump in which balancing fluid flows out.The balancing fluid connects to inlet segment by balancing pipe or a short pipe can be integrated outside of the balancing housing,and the balancing fluid can flow out by this means.Balancing pipe is not allowed to be blocked to keep normal operation of the pump.

2)Attention shall be made for all meters,temperature of bearing,leakage of filling,vibration and noise of the pump and immediate action shall be made if anything happens as following:

3)Temperature rise of bearing reflects assembly quality of the pump;Temperature shall not be 350C higher than that of ambient while the max.temperature of the bearing is 75℃.

4)Axial movement of the rotor of the pump is possible and shall be within allowable range.Gad width between end surface of the Coupling joints of the motor and the pump.

5)1mpelfer,sealing ring,guide vance,shaft sleeve and balancing plate shall be checked regularly during operation and immediate replceament shall be made if any wearing parts found.

(C) Halting

1)Close the faucet of the pressure meter and close the discharging gate valve slowly;Halt the motor till discharging valve is totally closed;Close the suction valve,if any,after halting of the pump.

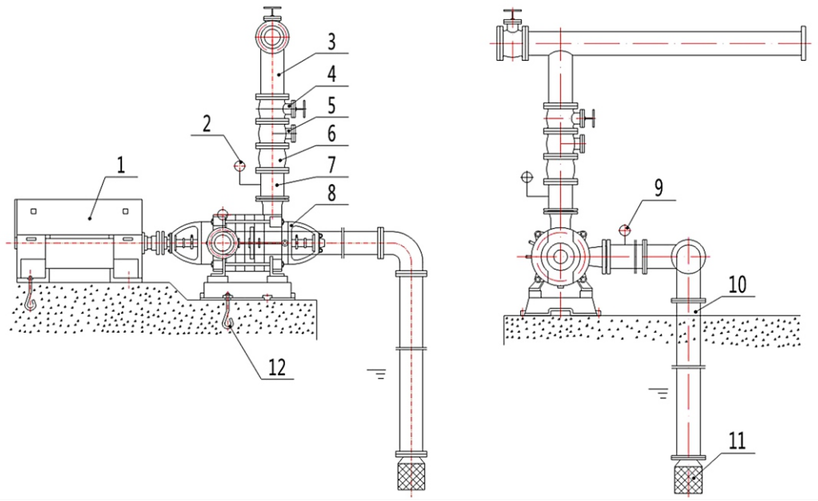
2)For long time halting of the pump,all water shall be discharged by means of opening of all faucets of inlet segments,the middle,and the discharging;Disassemble the pump and oil all parts for long time keeping.

附：矿用泵配套电机表 Attachment: mining pump motor list

2级电机 2 poles motor			
功率 Pover (KW)	泵型号 Model	功率 Pover (KW)	泵型号 Model
3	YB2-100L-2	90	YB2-280M-2
4	YB2-112M-2	110	YB2-315S-2
5.5	YB2-132S1-2	132	YB2-315M-2
7.5	YB2-132S2-2	160	YB2-315L1-2
11	YB2-160M1-2	185	YB2-355S1-2
15	YB2-160M2-2	200	YB2-355L2-2
18.5	YB2-160L-2	220	YB2-355M1-2
22	YB2-180M-2	250	YB2-355M2-2
30	YB2-200L1-2	280	YB2-355L1-2
37	YB2-200L2-2	315	YB2-355L2-2
45	YB2-225M-2	355	YB450S2-2(6KV)
55	YB2-250M-2	450	YB450M1-2(6KV)
75	YB2-280S-2		

4级电机 4 poles motor			
功率 Pover (KW)	泵型号 Model	功率 Pover (KW)	泵型号 Model
45	YB2-225M-4	400	YB450S3-4(6KV)
75	YB2-280S-4	450	YB450M1-4(6KV)
90	YB2-280M-4	500	YB450M2-4(6KV)
110	YB2-315S-4	560	YB560S2-4(6KV)
132	YB2-315M-4	630	YB560M1-4(6KV)
160	YB2-315L1-4	710	YB560M2-4(6KV)
185	YB2-355S1-4	800	YB630S1-4(6KV)
200	YB2-315L2-4	900	YB630S2-4(6KV)
220	YB2-355M1-4	1000	YB630M1-4(6KV)
250	YB2-355M2-4	1120	YB630M2-4(6KV)
280	YB2-355L1-4	1250	YB710S1-4(6KV)
315	YB2-355L2-4	1400	YB710S2-4(6KV)
355	YB450S2-4	1600	YB710M1-4(6KV)

管道安装示意图 Pipeline installation diagram



序号 No.	1	2	3	4	5	6
名称 Name	电机 Motor	压力表 Pressure Gauge	出水管路 Outlet Pipe Rd	闸阀 Gate Valve	止回阀 Check Valve	伸缩节 Expansion Joint
序号 No.	7	8	9	10	11	12
名称 Name	出水短管 Outlet Short Piping	水泵 Pump	真空表 Vacuum Gauge	进水管路 Water Inlet Pipe Rd	滤网 Filter	地脚螺栓 Anchor bolt

可能发生的故障、原因及其解决方法

故障现象	原因分析	排除方法
泵不吸水，压力表、真空表指针剧烈震动，或真空表呈高度真空	1. 泵充水不够 2. 吸水管或表漏气 3. 底阀未开 4. 吸水管堵塞 5. 吸水高度过高	1. 注水放气 2. 上紧螺扣 3. 修理或更换底阀 4. 清洗吸水管 5. 降低吸水高度
压力表有压力，但不出水或流量过小	1. 流道堵塞 2. 泵转速低于规定值 3. 泵总扬程高于系统设计扬程 4. 泵中进入气体 5. 泵转向不对 6. 零件磨损，内部泄漏过大	1. 清洗流道 2. 提高泵转速 3. 增加泵级数或减少管路损失 4. 堵塞进气部位 5. 电机重新接线 6. 更换磨损零件
电机电流过大	1. 泵总扬程大大低于系统设计扬程 2. 管路破裂跑水 3. 启动时未关闭出口闸阀 4. 泵轴与电机轴不同心 5. 旋转件与固定件发生摩擦 6. 轴承磨损 7. 转子不平衡，产生振动 8. 电压过低	1. 关闭闸阀进行调节，或减少泵级数 2. 停泵，处理管路 3. 关闭闸阀，重新启动 4. 重新找正，避免系统力作用于泵上 5. 拆泵重新调整 6. 更换轴承 7. 拆卸转子做静平衡、动平衡检测 8. 提高电压
填料函泄漏多，填料发热冒烟，填料寿命短	1. 泵轴与电机轴不同心 2. 轴发生弯曲 3. 填料处轴套损伤，或填料安装不当，或填料型号不对 4. 填料与轴套间有杂质	1. 重新找正 2. 拆卸、矫正轴 3. 打磨或更换轴套，或重新安装填料、均匀压紧或更换填料 4. 更换填料
泵震动或有噪音	1. 泵发生汽蚀 2. 流道有堵塞 3. 管路破裂跑水 4. 出口阀打开启动 5. 泵与电机轴不同心，或轴弯曲 6. 基础刚性不足 7. 旋转件与固定件发生摩擦 8. 叶轮缺损 9. 轴承内润滑脂过多或过少 10. 轴承磨损或内有脏物	1. 提高倒灌高度，减少吸水管阻力 2. 清理流道 3. 停泵处理管路 4. 关闭闸阀，重新启动 5. 重新找正，或检修、换轴 6. 加固基础 7. 拆卸、重新调整泵 8. 更换叶轮 9. 添加润滑脂要适量 10. 更换或清洗轴承，并注意密封轴承
轴承发热	1. 泵轴和电机轴不同心，或轴弯曲 2. 旋转件与固定件摩擦 3. 轴承损坏，或轴承内有脏物或进水 4. 轴承内润滑脂过多或过少	1. 重新找正，或检修、换轴 2. 拆卸、重新调整泵 3. 添加润滑脂要适量 4. 更换或清洗轴承，并注意密封轴承
中段等处结合面漏液	1. 穿杠螺拴紧固力不够或用力不均 2. 零件的制造精度（粗糙度，跳动或垂直度）未达到设计要求，或残余应力使零件变形 3. 结合面不洁或损坏	1. 重新紧固穿杠 2. 拆泵检查 3. 检修结合面

Failure Symptoms	Cause Analysis	Troubleshooting
No suction. Pointer of pressu re gauge or Vacuum gauge vibrates severely or vacuum gauge indicates high vacuum	a) Insufficient water filling into pump b) Leakage in suction pipe or gauge c) Bottom valve not pen d) Suction pipe blocked e) Suction height too big	a) Fill water and exhaust air b) Fasten bolts c) Repair or replace bottom valve d) Clean suction pipe e) Reduce suction height
Thereis discharge pressure but no water discharge orflow too small	a) Flow channel blocked b) Pump speed lower than specified value c) Total system lift greater than design lift of pump d) Air in pump e) Incorrect pump direction f) Worn parts and too much internal leakage	a) Clean flow channel b) Increase pump speed c) Increase pump level or reduce pipeline loss d) Seal air leakage e) Re-connect motor f) Replace worn parts
Excessive current of motor	a) Total system lift far below design lift of pump b) Pipeline breaks and leaks c) Outlet gate valves not closed during start-up d) Eccentric pump shaft and motor shaft e) Abrasion between rotating parts and fixed parts f) Worn bearings g) Unbalanced rotor causes vibration h) Voltage too low	a) Close gate valve for adjustment or reduce pump level b) Shut down pump and repair pipeline c) Close gate valve and start-up again d) Re-align to avoid system force on pump e) Disassemble pump and re-adjust f) Replace bearings g) Disassemble rotor for static and dynamic balance check h) Increase voltage
Excessive leakaga of packing packing becomes hot and smokes, shortlife of packing	a) Eccentrlc pump shaft and motor shaft b) Shaft bended c) Shaft sleeve damaged at packing location or packing installed improperly or packing type incorrect d) Impurities between packing and shaft	a) Re-align b) Disassemble shaft and straighten c) Machine or replace shaft sleeve or re-install packing, compact evenly or replace packing d) Replace packing
Pump vibration or noise	a) Cavitation of pump b) Flow channel blocked c) Pipeline breaks and leaks d) Start-up with outlet valve opened e) Eccentric pump shaft and motor shaft or shaft bended f) Insufficient rigidity of foundation g) Abrasion between fixed parts and rotating parts h) Impeller missing I) Too much or too little grease in bearings j) Bearings worn or impurities inside	a) Improve the flow backward height, reduce resistance on suction pipe b) C1earflow channel c) Shut down pump and repair pipeline d) Close gate valve and start up again e) Re-align, repair or replace shaft f) Rejnforce foundation g) Disassemble pump and re-adjust h) Replace impeller I) Apply adequate grease only i) Replace or clean bearings and seal bearings
Bearing becomes hot	a) Eccentric pump shaft and motor shaft or shaft bended b) Abrasion between fixed parts and rotating parts c) Damaged bearings or impurities or water in bearings d) Too much or too little grease in bearings	a) Re-align, repair or replace shaft b) Disassemble pump and re-adjust c) Apply adequate groase only d) Replace or clean bearings and seal bearings
Liquid leakage at junction of middle sections	a) Pole bolt secured insufficiently or uneven forced b) Manufacturing accuracy(roughness, jumping or verticality)of parts not reaching design requirement, or remaining stress deforms parts c) Junction face not clean or damaged	a) Re-tighten pole bolt b) Disassemble pump and check c) Repairjunction face

SUCCESS STORIES

Customer name	Pump sold
South graphite co, Ltd	Wear resistant multistage pump
Shanxi Fengxi huarui coal chemical Industry co, Ltd	Chemical pump
Taojiang Jiutong Antimony Industry Co, Ltd	Corrosion resistant pump
Chongqing Xiushan Open River Manganese Industry Co, Ltd	MD(P)multistage pump
Yuanqu Wulong Magnesium Industry Co, Ltd	Self balancing multistage pump
Tonghua Jien Nickel Industry Co, Ltd	Wear resistant multistage pump
Shanxi Zhongmei Huajin energy co, Ltd	Pipe multistage pump
Songxian Shanjin Mining Co, Ltd	Self balancing multistage pump
Zhaotong Jinhuang Mining Co, Ltd	Wear resistant multistage pump
Jiangxi Yifeng Wanguo Mining Co, Ltd	Self balancing multistage pump
Changde Chifeng Industrial Corporation	Stainless steel multistage pump
Inner Mongolia huangtaolegai coal co, Ltd	Self balancing multistage pump
Ezhou Longqi mining Co, Ltd	DY multistage pump
Luoning Jijiawa Gold Mine Co, Ltd	Wear resistant multistage pump
Heitoushan Copper-Molybdenum Mine	DF(P)multistage pump
Peony Mining Industry in Dongshi City, Lixian Count	Stainless steel multistage pump
Beijing Zhongchengcheng Trading Co, Ltd	Wear resistant multistage pump
Youxian Heli Mining Co, Ltd	Wear resistant multistage pump
Shanxi Luan Group Puxian Heilongguan Coal Industry Co, Ltd	Self balancing multistage pump
Xuancheng Hongjun Mining Co, Ltd	Wear resistant multistage pump
Inner Mongolia Hongtai shunda mining Engineering Co, Ltd	DY multistage pump
nner Mongolia Ordos Electric Power Metallurgy Group Co, Ltd	Wear resistant multistage pump
Puyang Coal Mine, Wenshan Coal Industry Co, Ltd	Self balancing multistage pump