



认可注册号: CNAB007-Q

单级双吸离心泵中开式 S

SPLIT CENTRIFUGAL PUMP TYPE



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S型泵执行标准 EXECUTIVE STANDARD: Q/GYGZ56-2008

概述

S型单级双吸泵为中开式离心泵，供抽送清水或物理化学性质类似于水的其它液体之用。被输送液体温度不得高于80℃，适用于工厂、矿山、城市给水、电站、农田排灌和各种水利工程。

Brief introduction

Series S Pumps are a single stage, double suction and axially split centrifugal pump and are used to pump clean water or Similar liquids in physical and chemical properties. The temperature of the pumped liquid should not be exceeded 80℃. And The pump is mainly suitable for water supply in factories, mines, cities, hydropower stations, various conservancy projects and irrigation in farms, etc.

结构说明

本型泵的吸入口与吐出口均在水泵轴心线下方，与轴线垂直成水平方向。检修时无需拆卸进出口水管及电动机。从传动方向看去，水泵为顺时针方向旋转（根据用户需要亦可改为逆时针方向旋转。）

泵的主要零件有：泵体、泵盖、叶轮、轴、双吸密封环、轴套等。除轴的材料为优质碳钢外，其余主要零件为铸铁制成。

泵体与泵盖构成叶轮的工作室。在进出水法兰上，制有安装真空表和压力表的管螺孔。进出水法兰的下部，制有放水的水管螺孔。

经过静平衡校验的叶轮，用轴套和两边的轴套螺母固定在轴上，其轴向位置可通过轴套螺母进行调整。叶轮的轴向力利用其叶片对称布置、两面进水达到平衡。

泵轴由两个单列向心球轴承支承。轴承装在轴承体内，安装在泵体两端，用黄油润滑。

双吸密封环用以减少水泵压水室的水漏回吸水室。

泵通过弹性联轴器由电动机直接传动，必要时亦可用内燃机转动。

轴封采用软填料密封时，为了防止空气进入泵内和冷却润滑密封腔，在填料之间装有填料环，水泵工作时少量高压水，通过泵盖中开面上的梯形凹槽流入填料腔，起水封作用。（根据用户需要亦可改装机械密封。）

Construction description

The inlet and outlet of the pump are both under the centreline of the pump shaft, they are vertical to the shaft centreline and go to horizontal direction. You needn't dismount the outlet and inlet pipes for inspection. Looking from the driven direction the rotation direction is clockwise (Or can change to counterwise as user's requirement).

Main parts of the pump: (1) Pump casing (2) Pump cover (3) Impeller (4) Shaft (5) Double suction seal ring (6) Shaft sleeve, etc. They are made of cast iron except the shaft material being made of fine steel.

The impeller working house is composed of pump casing and pump cover. The threaded holes for installing the vacuum gauge and manometer are separately located at the suction flange and the discharge flange. At the bottom of the inlet or outlet flange a drain threaded hole is equipped here.

The impeller checked by static equilibrium is fixed on the shaft by the shaft sleeves and the shaft nuts, which axial position can be adjusted by the sleeve nuts. And for the axial force of the impeller, it can be adjusted by using the symmetrical distribution of the impeller and the balance of the two sides water.

The pump shaft is supported by two single radial ball bearings.

The bearing fitted on the ends of the pump casing is installed in the bearing body and is lubricated by oil grease.

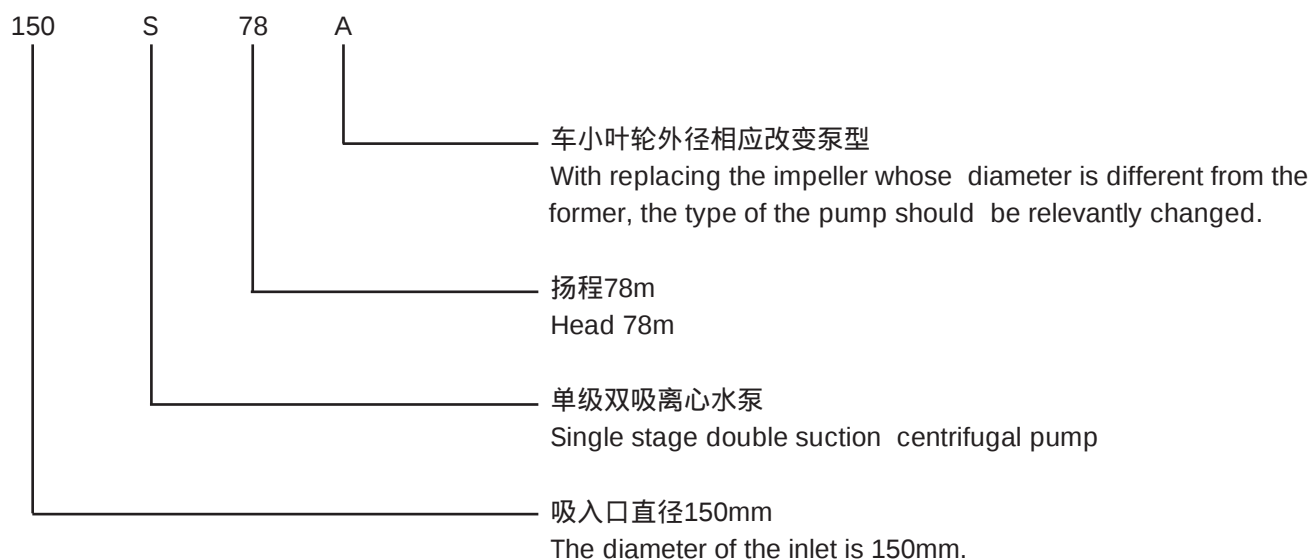
The double suction seal ring is used to reduce the leaking water from the pressure water house which would flow back to the suction water house.

The pump is driven by the motor though the flexible coupling (It also can be driven by diesel engine if it is necessary).

The shaft seal is soft stuff. The packing ring is installed among the packings in order to prevent air from coming into the pump and cooling lubricating sealing case, and while the pump working, it is allowed to let a little high-pressure water going through the trapeziform concave groove on the horizontally split face of the pump cover and flow into the packing case, function as water seal (Mechanical seal is available as the customer's requirement).

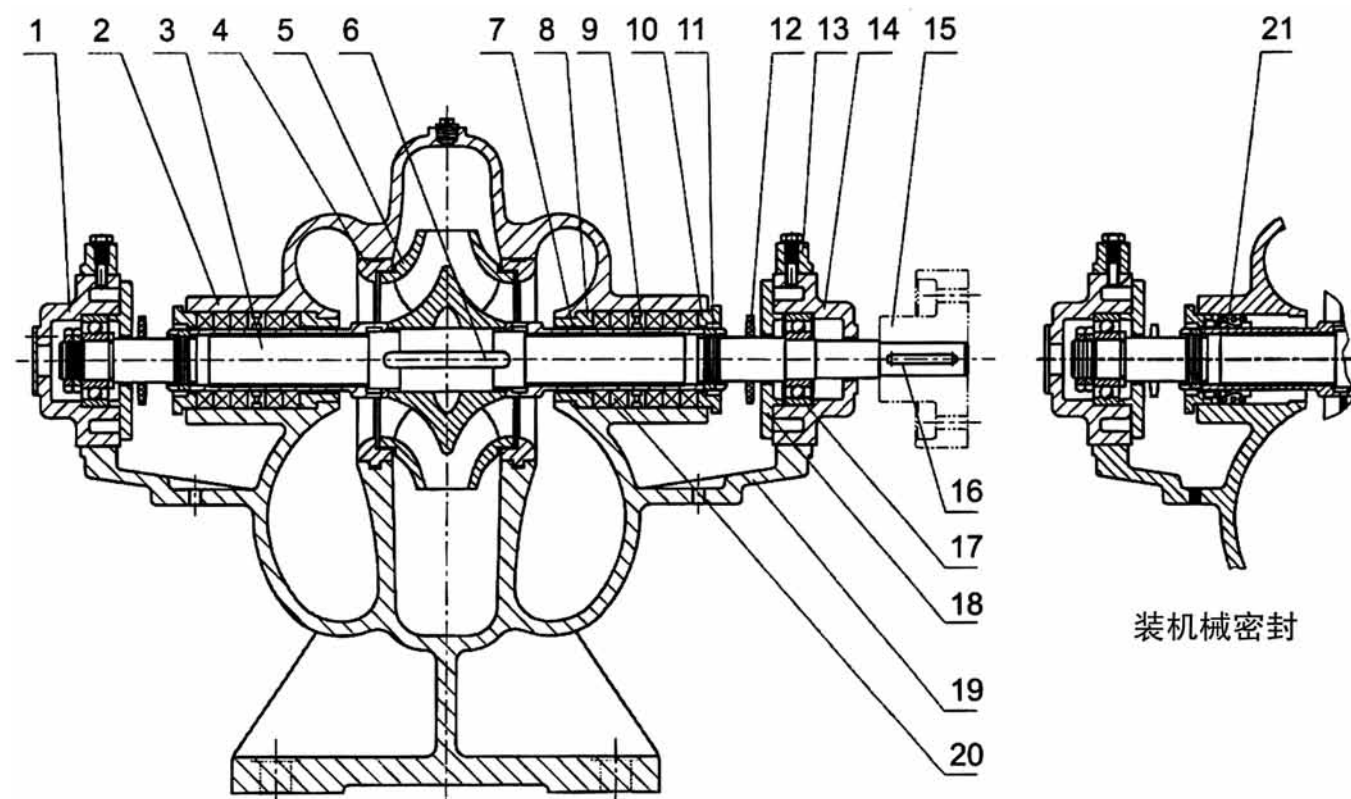
泵型号意义

The meaning of the model



结构图

Construction drawing



- | | | |
|-------------------------------|------------------------------|--------------------------------|
| 1. 轴承体甲 Bearing body A | 8. 填料套 Packing sleeve | 15. 联轴器 Pump coupling |
| 2. 轴盖 Pump Cover | 9. 填料环 Packing ring | 16. 键 Key |
| 3. 泵轴 Shaft | 10. 填料压盖 Packing gland | 17. 单列向心球轴承 Bearing |
| 4. 双吸密封环 Double suction ring | 11. 轴套螺母 Shaft sleeve nut | 18. 轴承端盖 Bearing section cover |
| 5. 叶轮 Double suction impeller | 12. 挡水圈 Slinger | 19. 泵体 Pump casing |
| 6. 平键 Key | 13. 轴承体压盖 Bearing body cover | 20. 填料 Packing |
| 7. 轴套 Shaft sleeve | 14. 轴承体乙 Bearing body B | 21. 机械密封 Mechanical seal |

装机械密封

装配与拆卸

1. 装配转子部件：依次将键、叶轮、轴套、轴套螺母、填料压盖、挡水圈装在轴上，套上双吸密封环，装上轴承部件和联轴器。

2. 分别检查转子部件上叶轮的密封部位外圆及轴套外圆的径向跳动，不超过下表规定：

名义直径	≤ 50	> 50 - 120	> 120 - 260	> 260 - 500	> 500 - 800	> 800 - 1250
跳动量	0.06	0.08	0.10	0.12	0.15	0.20

3. 将转子部件和螺柱装在泵体上，装好轴承体压盖。用轴套螺母调整叶轮的轴向位置到泵体流道的中间，加以固紧。

4. 装上填料，放好中开面纸垫，盖上泵盖，拧紧螺尾锥销拧紧泵盖螺母。压紧填料压盖。但不要将填料压得太紧。过紧会使轴套发热，同时耗能增多；民不要压得太松，过松会使液体渗漏大，水泵效率降低。

5. 装配用手转动转子，无卡擦、轻滑均匀即可。

6. 拆卸可按上述装配顺序相反进行。

Assembly and disassembly

(Please use the following procedures to assemble)

1. Assemble keys. Impeller sleeves, sleeve nuts packing rings, and block water ring in order on the pump shaft. Afterwards sleeve the suction seal ring, and then the bearing part and coupling.

2. Individually inspect the radial beats of the excircle of the impeller seal position and the sleeve excircle on the rotor part, which is not allowed to exceed its provisions as following:

Normal - Diameter	≤ 50	> 50 - 120	> 120 - 260	> 260 - 500	> 500 - 800	> 800 - 1250
Beats	0.06	0.08	0.10	0.12	0.15	0.20

3. Assemble the rotor part and studs on the pump casing, and well install the bearing gland and tighten it with bolts, then you can adjust the axial position of the impeller with shaft sleeve nuts up to middle flow passage way of the pump casing and tighten it.

4. Feed the packing into the packing box. Place the horizontal joint paper gasket, cover the pump, hammer (or other things) the taper pin with external thread tightly, the following, screw its nuts and mount the packing gland which degree of the packing tightness must be suitable (if too light, the shaft sleeve would be over heated, namely more power would be consumed; if too loose, the leakage of liquid would be found from here, and thus would decrease the pump efficiency.)

5. After finish assembling the pump, turn the rotor with hands, it should be flexible and smooth as well as no block and no rubbing, that is OK! And then you can operate it freely.

(Disassemble it according to the opposite order of assembling)

安装

- 1.检查水泵和电机应无损坏。
 - 2.水泵的安装要保证装置提供的汽蚀余量大于泵给定的汽蚀余量值。基础尺寸应符合泵机组的安装尺寸。
 - 3.安装顺序：
 - (1) 将水泵和电机套上地脚螺栓，戴上螺母，放在预留地脚螺栓孔的混凝土基础上。用调整基间楔形垫块的方法，校正水平，并较好泵与电机轴的同轴度。然后将全部地脚螺孔灌满混凝土。
 - (2) 待混凝土干固后，再较泵与电机轴的同轴度。在两联轴器外圆上校正，误差不大于0.1mm。端机间隙沿圆周不均匀度允差0.3mm。紧固地脚螺母后查校正精度，然后在电机与泵脚底部灌满混凝土，但楔形块周围必须空出。
 - (3) 检查电机旋向与泵相符合，装上联轴器的连接柱销。
 - 4.进出水管应另设支撑，不得借泵体支承。
 - 5.泵与管路之间结合面，应保持良好密封性，尤其是进水管路必须严格保证不漏气，并在装置上应无窝存空气的可能。
 - 6.如水泵装置在进水水位以上时，为了灌水起动，应装底阀。也可采用抽真空引水的方法。
- 以上为不带公共底座的泵机组的安装方法和要求。对于配带公共底座的泵组的安装，参照上述方法进行。

Installation

- 1.Check whether the pump and the motor are in good condition.
 - 2.Make sure that the value of NPSH must be higher than the one that have been given, and its foundation dimensions should be in conformity with the installation drawing.
 - 3.The steps of installation:
 - (1)Sleeve the foot bolts and hat the nuts on the pump and the motor, place the pump on the concret foundation where some foot bolt holes are pre-built, correct the horizontal and the coaxial degree between the pump shaft and the motor shaft by means of adjusting the wedge-shaped cushion, then fully pour the concrete into all the foot bolt holes.
 - (2)After the concret solidified, again correct the coaxial degree in the excircle of the two couplings, the error of the correction is not more than 0.1mm, the allowable error of the inhomogeneous degree of the endface clearance along the circle is 0.3mm, Re-inspect the correct precision after tightening the foot nuts, finally, pour concrete fully under the foot of the pump and the motor except the around of the wedge shaped cushion.
 - (3)After check the rotary direction of the motor which is now in keeping with that of the pump, you can install the connecting parallel pin of the coupling.
 - 4.The inlet pipe and outlet pipe should be supported by a bracket instead of the pump casing.
 - 5.The combination between the pump and the pipe must be keeping good sealing, especially no leakage of air occurs from the inlet pipe and no possible remained air in it in the cause of installation.
 - 6.If the pump is installed above the suction water level, it should be equipped foot valve for pouring water and driving and it also can suck water by suction vacuum.
- Above all the mentioned methods and requirements are suitable for the pump set without common bedplate; namely, for the pump set with common bedplate, you also can refer to the above mention methods.

启动、停止和运行

一、启动与停止

- (1)启动前、转动机组转子应轻滑均匀。
- (2)关闭出水闸阀，灌引水(若无底阀则用真空泵抽气引水)，要保证泵内充满水，无空气窝存。
- (3)如果泵水装有真空泵，要关闭其与泵连接管路上的旋塞，再启动电机时，待转速正常后再打开。然后逐渐打开出水闸阀，达到所需流量。
- (4)均匀地拧紧填料压盖上的螺母，使液体少量漏出，同时注意填料腔的温升。
- (5)当水泵停运转时，在先关闭真空表的旋塞和排水管路上的闸阀，然后停止电动机。所处环境的温度较低时，应将泵体下部的四方螺塞打开，以免冻裂泵体。
- (6)长期停止使用时，应拆开水泵，将零件的水擦干，在加工表面上涂上防锈油。

二、运行

- (1)水泵轴承最高温度不应超过75℃。
- (2)润滑轴承用的钙基黄油的数量，以占轴承体空间1/3~1/2为宜。并应定期更换。
- (3)填料磨损时，可适当压紧填料盖。若磨损过多，应更换。
- (4)定期检查弹性联轴器部件，注意电机轴承温升。
- (5)运转过程中，如发现噪声或其他不正常声响时，应立即停车，检查原因，加以消除。
- (6)不得任意提高水泵的转速，但可以降速使用。

Starting stopping and running

Starting and stopping:

- 1.Before starting, turning the rotor, it should be flexible.
- 2.Close the discharge valve, pour water in it (if no foot valve, with a vacuum pump for drawing water instead). Be sure the pump full of water and no air remained in it.
- 3.If there is a vacuum gauge installed on the pump, the cocks on the pipe passage way which connect the pump should be turned off. Then start the motor. It is not allowed to turn on the motor until the running speed is normal, and then open gradually the brake valve until the suction water of the two sides reach to balance.
- 4.Screw equably the nuts on the pump packing gland so as to the leakage of liquid is in small quantity, at the same time, pay more attention to the packing case temperature rising.
- 5.While stopping the pump running, first turn off the cocks of the vacuum gauge and manometer and turn off the brake valve on the discharge pipe passage way. If the ambient temperature is low, the casing under the pump should be loosened to drain away the rest water so as to keep the pump casing from being split by frost.
- 6.If it will not be used for a long time, the pump must be disconnected and all the parts should be kept dry, and smear the machining face with rust-proof grease oil.

Running:

- 1.The temperature of the pump bearing should not be exceeded 75℃.
- 2.The suitable quantity of calcium grease which is used to lubricate the bearing occupies 1/3 to 1/2 space of the bearing body, and it should be changed periodically.
- 3.When the packing worn, tighten the packing gland properly or change it if necessary.
- 4.Check the flexible coupling part, care more for the motor bearing temperature rising.
- 5.During running, if any noise or abnormal sounds are heard, stop the pump immediately, and look for the causes, then clear out.
- 6.It is not allowed to increase the running speed at will, but you can decrease the running speed of the pump for working.

故障及消除方法

Possible troubles & remedies

故障 Troubles	原因 Beacuses	消除方法 Remedies
1、泵不出水，压力表及真空表指针剧烈跳动。 After the pump starting, no water is drawn in, and the hands of vacuum gauge and manometer beat heavily.	注入泵的水不够，进水管漏气。 *The water poured in the pump is not enough. *Leakage of air found from the suction pipe.	再往泵内注水，堵塞漏气处。 *Pour water into the pump again. *Block the leaking place.
2、泵不吸水，但真空显示高度真空。 The pump doesn't draw any water erbut a high degree vacuum is indicated on the vacuum gauge.	底阀没打开或淤塞，吸水管阻力太大，吸水高度太高。 *The foot valve is not opened. *The resistance of suction is too high. *The suction head is too high.	校平或更换底，清洗或更换吸水管，降低吸水高度。 *Correct or renew the foot valves. *Clean or renew the suction pipe. *Make the suction head lower.
3、泵不出水，压力表显示有压力。 No water is pumped out, but high pressure is shown on the outlet manometer.	泵轴旋转方向不对，出水管阻力太大，叶轮淤塞，转数不够。 *The direction of the rotation is not right. *The suction resistance is too high. *The impeller flow passage is clogged. *The revolution is not enough.	改正转向，减少水管长度或清除淤塞，清洗叶轮，增加转数。 *Change the direction of the rotation. *Check the length of the pipe. *Whether if clogged. *Clean the impeller. *Increase the revolution.
4、泵流量减少或扬程下降。 The flow rate is decreasing or the head is low.	叶轮或管路阻塞，密封环或叶轮磨损严重，转速低于规定值。 *The impeller flow passage or(inlet pipe and outlet pipe) in - out - let pipes are clogged. *The seal ring or the impeller is worn out. *The running speed of the pump is lower than the rated.	清洗叶轮或管路，更换损坏的零件，调整到额定转速。 *Clean the impeller and the pipe passage way. *Renew the worn parts. *Increase the revolution.
5、泵消耗的功率过大。 Over consumption of the pump power.	填料压得太紧，叶轮与双吸密封环磨损，流量过大。 *Packing is too tight and the impeller is rubbed by double suction seal ring. *The flow rate is too large.	拧松填料压盖，消除机械摩擦，关小出水闸阀。 *Loosen the packing gland. *Clear out the mechanical friction. *Turn the discharge valve brake smaller.
6、泵内声音反常，吸不上水。 Unexpected noises are heard and no water is drawn.	吸水高度过高，吸水管漏气，流量过大，发生汽蚀。 *The suction resistance is too high. *The suction head is too high. *Leakage of air found from the suction pipe. *Error is found.	减少吸水高度，堵塞漏气处，调节出水闸阀在规定工况用。 *Check the pipe and the foot valve. *Make the suction head lower. *Block the leaking place. *Adjust the use of discharge breake valve in specific working condition.
7、泵振动厉害。 The pump vibrates heavily.	泵发生汽蚀，叶轮不平衡，泵与电机不同心，地脚螺栓松动。 *Error is found. *The impeller is not balance. *The pump shaft is not concentric with the motor. *The nuts of foundation are 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。 *Clear out the error. *Correct impeller static balance. *Screw the nuts of the foot bolt tightly. *Correct the coaxial degree between pump and motor shaft.
8、轴承过热。 The bearing is overheated.	润滑油不足或过多，或变质，泵与电机轴不同心。 *The grease is not enough or too much or goes bad. *The pump and the motor shaft is not concentric.	检查油量，清洗轴承并换油，校泵轴与电机的同轴度。 *Clean the bearing and renew the oil. *Correct the pump and the motor shaft coaxial degree.

性能表

Table of Standard Performance

型号 Type	流量 Capacity Q (m ³ /h)	扬程 Head H (m)	转速 Speed n (r/min)	功率 Power(kW)		效率 Efficiency (%)	必需汽 蚀余量 (NPSH)r (m)
				轴功率 Shaft	电机功率 Motor		
100S90	60 80 95	95 90 84	2950	25.5 30.1 33.7	37	61 65 64.5	2.5
100S90A	50 72 86	78 75 70	2950	17.7 23 26	30	60 64 63	2.5
150S10	78 130 156	12.5 10 8.5	1450	3.64 4.49 4.88	7.5	73 79 74	3.0
150S14	120 200 240	19.5 14 9.5	1450	8.28 9.44 9.73	11	77 80.8 64	3.9
150S18	96 160 192	23 18 15.5	1450	9.25 9.81 10.95	15	65 80 74	3.5
150S100	126 160 202	102 100 93	2950	50 59.8 68.8	75	70 73 74.4	3.5
150S78	126 160 198	82 78 70	2950	40 45 52.4	55	70.3 75.5 72	3.5
150S78A	112 144 180	67 62 55	2950	30 33.8 38.5	45	68 72 70	3.5
150S50	132 160 220	52 50 40	2950	25.3 27.3 31.1	37	72.9 80 77.2	3.9
150S50A	112 144 180	44 40 35	2950	18.5 20.9 24.5	30	72.5 75 70	3.9
150S50B	108 133 160	38 36 32	2950	17.2 18.6 19.4	22	65 70 72	3.9
200S95	183 280 324	103 95 87	2950	83.1 91.7 100	110	62 79.2 76.8	5.3
200S95A	198 270 310	82 75 68	2950	65 73.5 77.6	90	68 75 74	5.3
200S63	216 280 351	69 63 53	2950	54.8 58.3 66.4	75	74 82.7 76.3	5.8
200S63A	180 270 324	54.5 46 37.5	2950	38.2 45.1 47.3	55	70 75 70	5.8
200S42	216 280 342	48 42 35	2950	34.8 38.1 40.2	45	81 84.2 81	6
200S42A	198 270 310	43 36 31	2950	30.5 33.1 34.4	37	76 80 76	6
250S28	192 320 384	29.5 28 26.5	1450	23.73 29.69 32.99	37	65 82.2 84	3.5
250S65	360 485 612	71 65 58	1450	92.8 109 129.6	132	75 78.6 74.6	3
250S65A	342 468 540	61 54 50	1450	76.8 89.4 98	110	74 77 75	3
250S39	360 485 612	42.5 39 32	1450	54.8 61.5 68.6	75	76 83.6 79	3.2
250S39A	324 468 576	35.5 30.5 25	1450	42.5 49.3 50.9	55	74 79 77	3.2
250S24	360 485 576	27 24 19	1450	33.1 36.9 36.4	45	80 85.8 82	3.5

性能表

Table of Standard Performance

型号 Type	流量 Capacity Q (m³/h)	扬程 Head H (m)	转速 Speed n (r/min)	功率 Power(kW)		效率 Efficiency (%)	必需汽 蚀余量 (NPSH) _r (m)
				轴功率 Shaft	电机功率 Motor		
250S24A	342	22.2	1450	25.8	37	80	3.5
	414	20.3		27.6		83	
	482	17.4		28.6		80	
250S14	360	16	1450	19.6	30	80	3.8
	485	14		21.5		85.8	
	576	11		22.1		78	
250S14A	320	13.7	1450	15.4	18.5	78	3.8
	432	11		15.8		82	
	504	8.6		15.8		75	
300S110	590	113	1450	248.6	440	73	4.0
	790	110		295.7		80	
	936	105		326.3		82	
300S90	590	93	1450	202	315	74	4.0
	790	90		242.8		79.6	
	936	82		279		75	
300S90A	576	86	1450	190	280	71	4.0
	756	78		217		74	
	918	70		247		71	
300S90B	540	72	1450	151	220	70	4.0
	720	67		180		73	
	900	57		208		70	
300S58	576	63	1450	136	180	72.7	4.4
	790	58		149.9		84.2	
	972	50		165.5		80	
300S58A	529	53	1450	99.9	160	76.4	4.4
	720	49		118.6		81	
	893	42		131		78	
300S58B	504	46	1450	88.8	132	71.1	4.4
	684	43		100		80	
	835	37		108		78	
300S32	612	36	1450	75	110	80	4.6
	790	32		79.2		86.6	
	900	28		86		80	
30032A	551	31	1450	58.1	75	80	4.6
	720	26		60.7		84	
	810	24		68		78	
300S19	612	22	1450	45.9	55	80	5.2
	790	19		47		86.8	
	935	16		47.6		85.6	
300S19A	504	20	1450	38.7	45	71	5.2
	720	16		39.2		80	
	829	13		39.1		75	
300S12	612	14.5	1450	30.2	37	80	5.5
	790	12		30.4		84.8	
	900	10		33.1		74	
300S12A	522	11.8	1450	23.3	30	72	5.5
	684	10		23.9		78	
	792	8.7		24.7		76	
350S125	850	140	1450	462	710	70	5.4
	1260	125		534		80.5	
	1660	100		623		72.5	
350S125A	803	125	1450	391	63	70	5.4
	1181	112		462		78	
	1570	90		550		70	
350S125B	745	108	1450	313	500	70	5.4
	1098	96		373		77	
	1458	77		422		72.5	
350S75	972	80	1450	271	355	78	5.8
	1260	75		302		85.2	
	1440	65		319		80	
350S75A	900	70	1450	220	280	78	5.8
	1170	65		247		84	
	1332	56		257		79	
350S75B	828	59	1450	177	220	75	5.8
	1080	55		197		82	
	1224	47.5		206		77	
350S44	972	50	1450	164	220	81	6.3
	1260	44		173		87.5	
	1476	37		189		79	

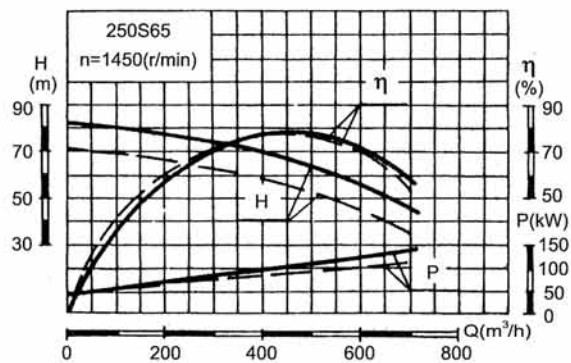
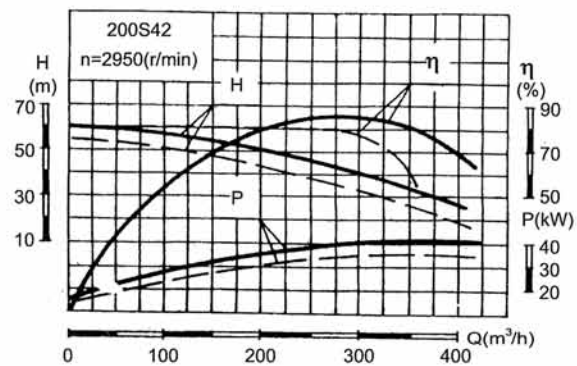
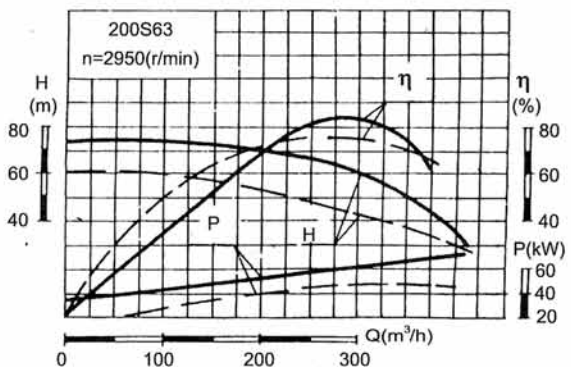
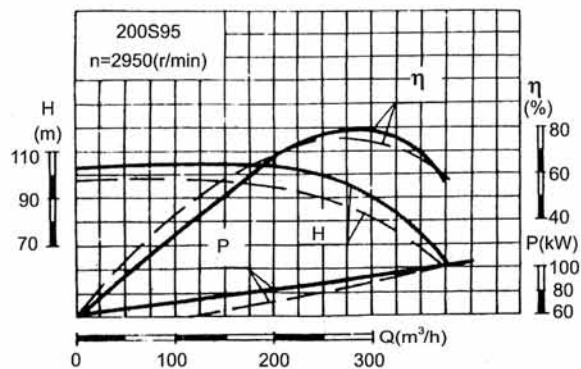
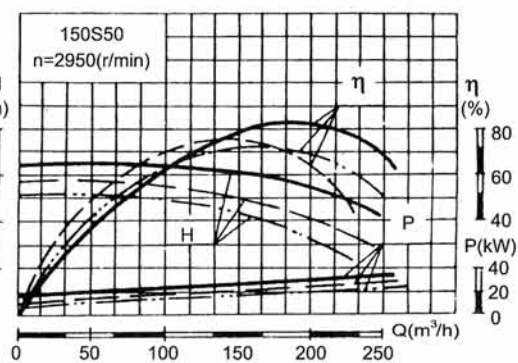
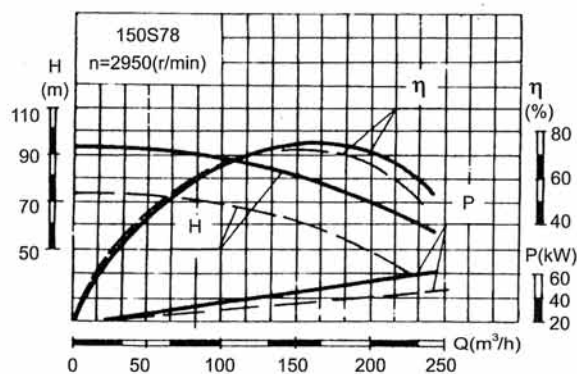
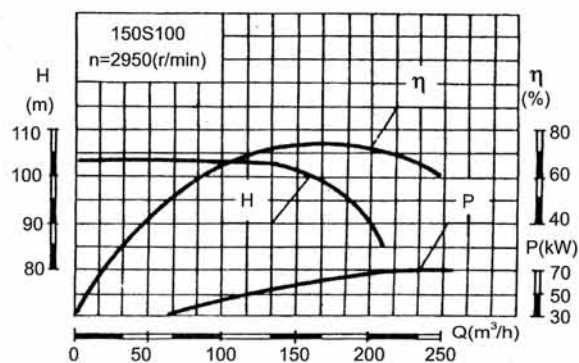
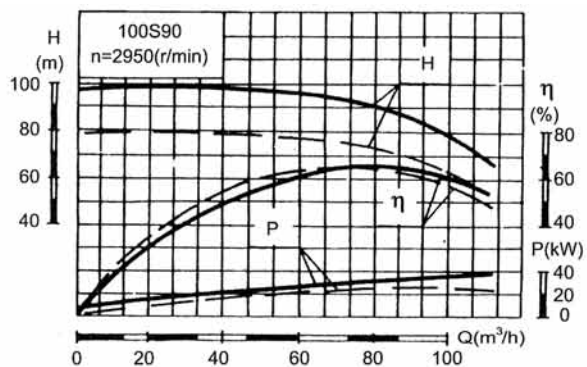
性能表

Table of Standard Performance

型号 Type	流量 Capacity Q (m³/h)	扬程 Head H (m)	转速 Speed n (r/min)	功率 Power(kW)		效率 Efficiency (%)	必需汽 蚀余量 (NPSH)r (m)
				轴功率 Shaft	电机功率 Motor		
350S44A	864 1116 1332	41 36 30	1450	121 131 136	160	80 84 80	6.3
350S26	972 1260 1440	30 26 22	1450	99.7 102 105	132	79.7 87.5 82	6.7
350S26A	864 1116 1296	26 21.5 16.5	1450	76.5 78.8 80	90	80 83 73	6.7
350S16	972 1260 1440	20 16 13.4	1450	64 64.5 71	75	83 85.3 74	7.1
350S16A	864 1044 1260	16 13.4 10	1450	51 48.8 49	55	74 48 70	7.1
500S98	1620 2020 2340	114 98 79	970	644.8 678 680.3	800	78 79.5 74	4
500S98A	1500 1872 2170	96 83 67	970	509.3 540 542.4	630	77 78.5 73	4
500S98B	1400 1746 2020	86 74 59	970	431.4 452 432.8	560	76 78 75	4
500S59	1620 2020 2340	68 59 47	970	379.7 391 374.4	450	79 83 80	4.5
500S59A	1500 1870 2170	57 49 39	970	315 333 320	400	74 75 72	4.5
500S59B	1400 1746 2020	46 40 32	970	240.2 254 247.9	315	73 74 71	4.5
500S35	1620 2020 2340	40 35 28	970	207.6 219 209.9	280	85 88 85	4.8
500S35A	1400 1746 2020	31 27 21	970	144 151 116.9	220	83 85 84	4.8
500S22	1620 2020 2340	24.5 22 19.4	970	140.4 144.1 145.4	185	77 84 85	5.2
500S22A	1400 1746 2020	20 17 14	970	103 101 93.9	132	74 80 82	5.2
500S13	1620 2020 2340	15 13 10.4	970	83.8 86.2 82.8	110	79 83 80	5.7
600S75	3170	75	970	727	800	89	7.5
500S75A	2880	65	970	580	630	88	7.5
600S47	2500 3170 3500	56 47 38	970	460 465 426	560	83 88 80	7.5
600S32	2520 3170 3960	37 32 22	970	295 310 279	400	86 89 85	7.5
600S32A	2304 2880 3600	31.5 27 20	970	235 238 231	280	89	7.5
600S22	3170	22	970	223	280	85	7.5
600S22A	2880	18.2	970	168.5	200	84.5	7.5

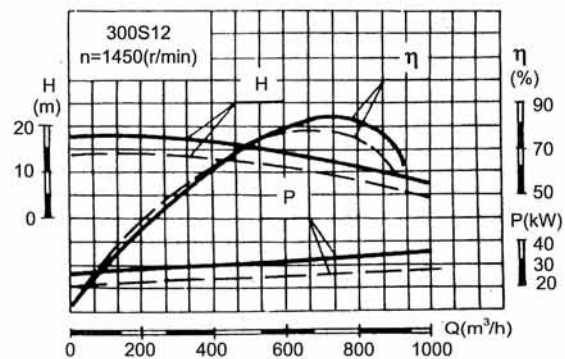
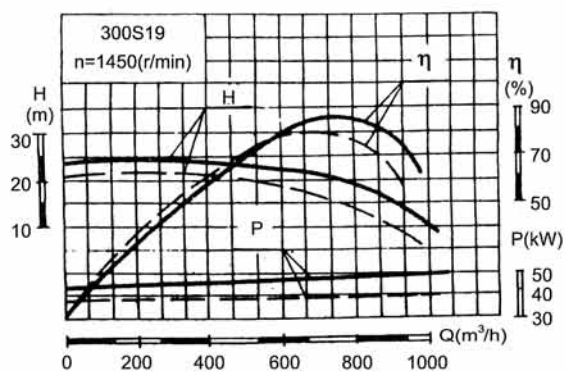
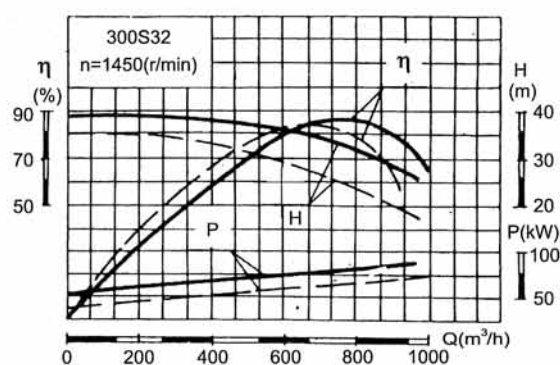
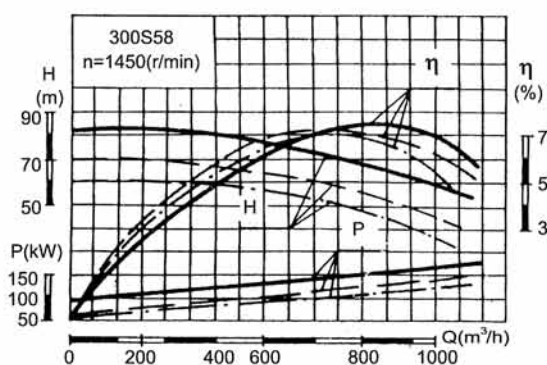
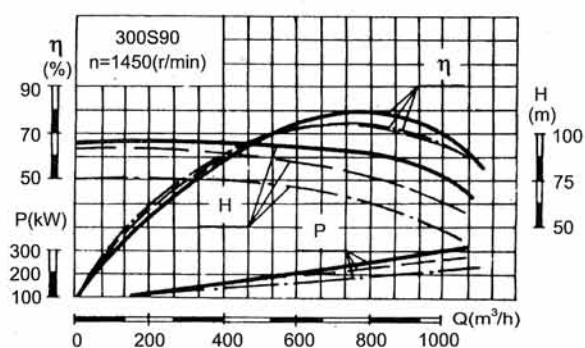
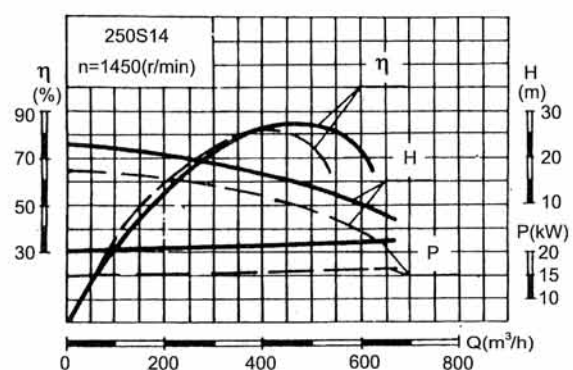
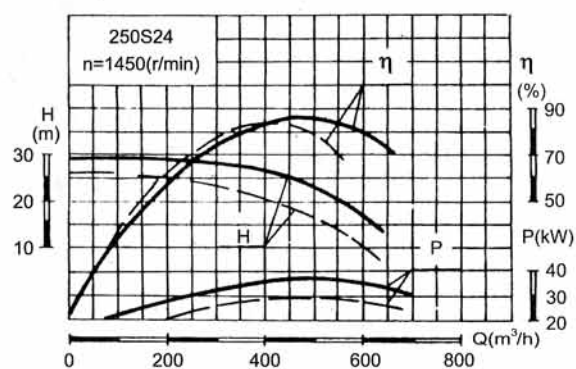
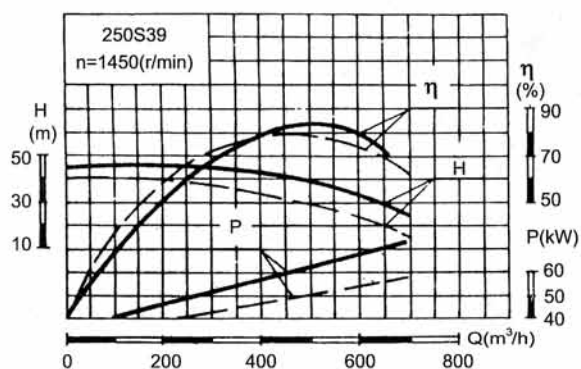
性能曲线图

Performance Curves



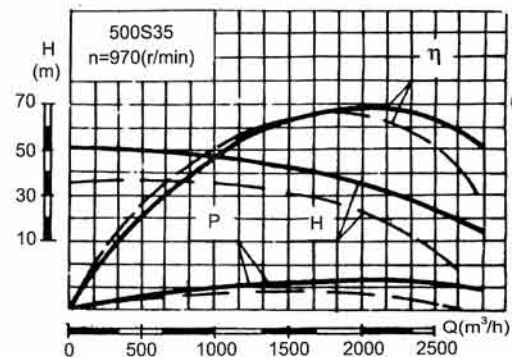
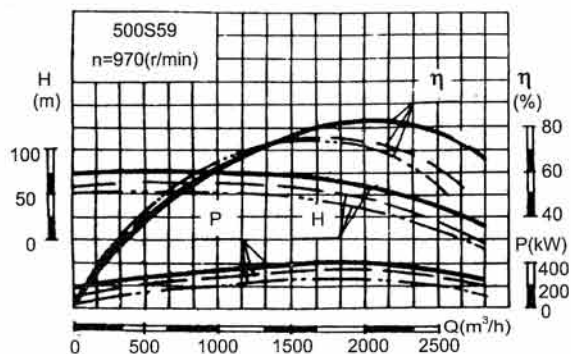
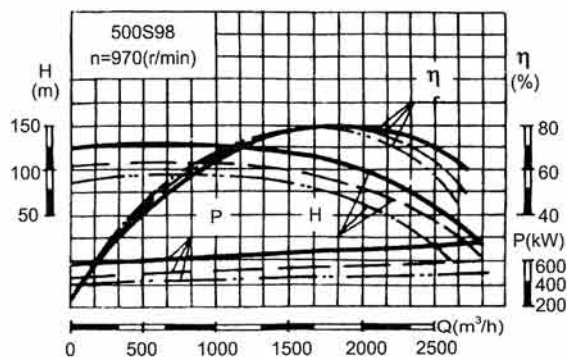
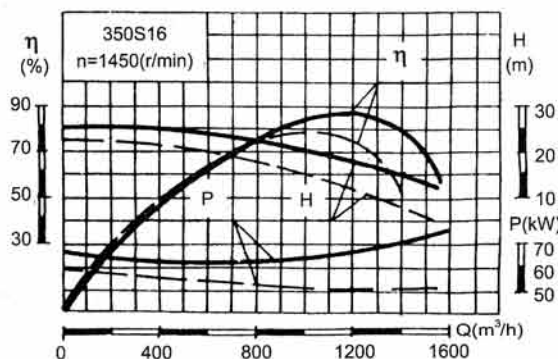
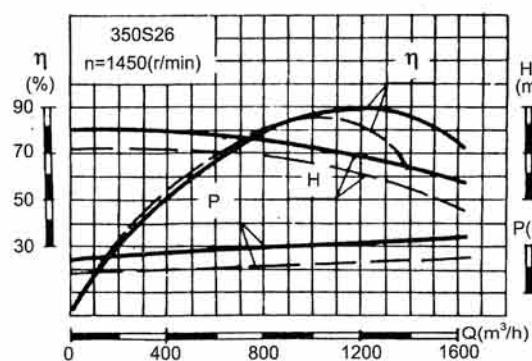
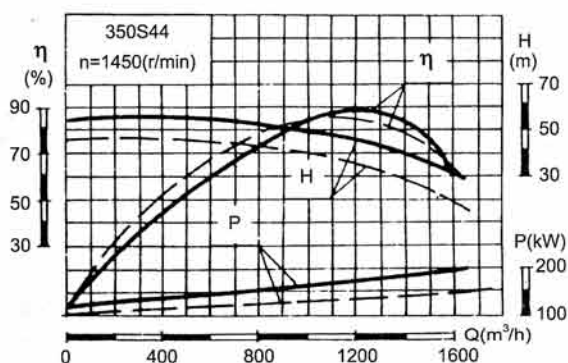
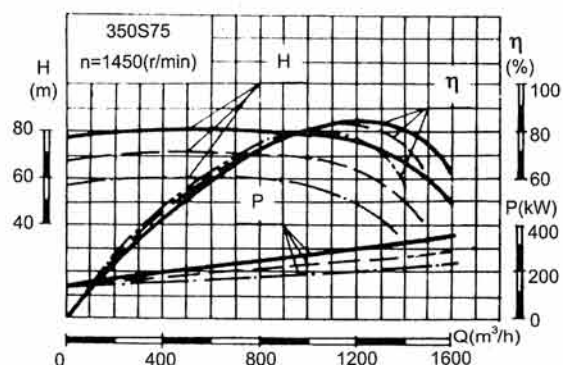
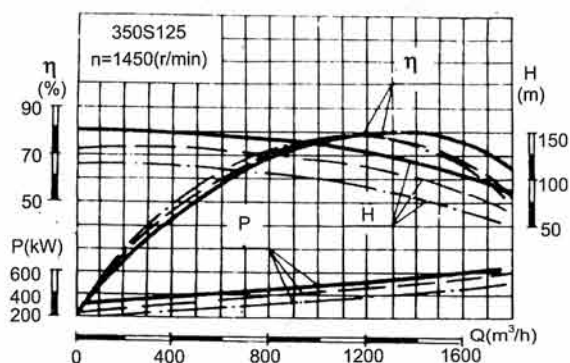
性能曲线图

Performance Curves



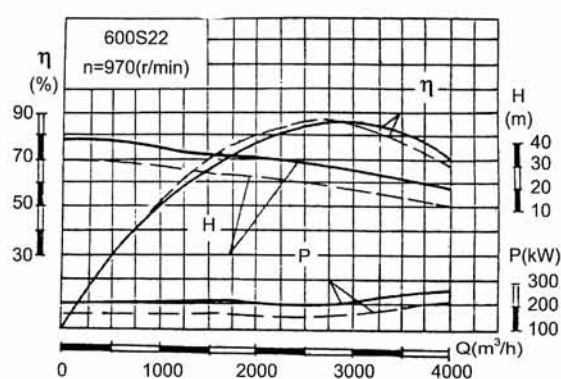
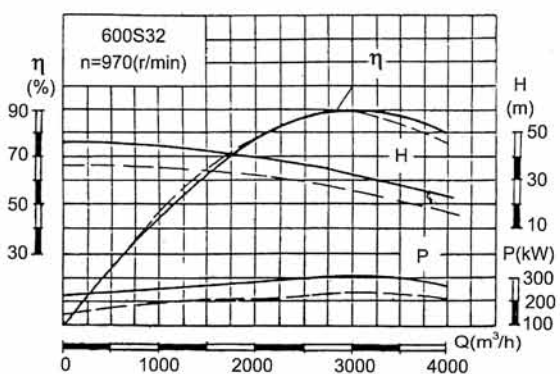
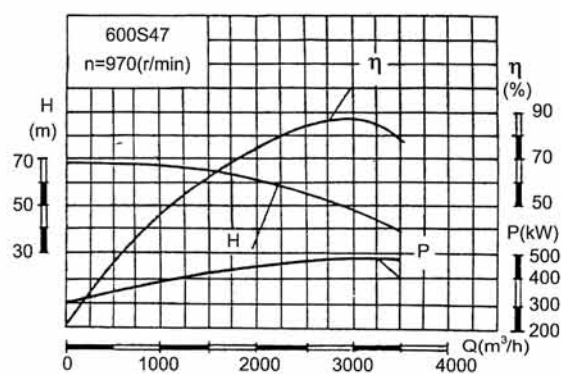
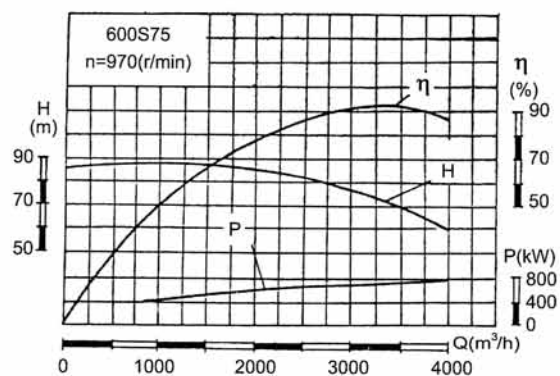
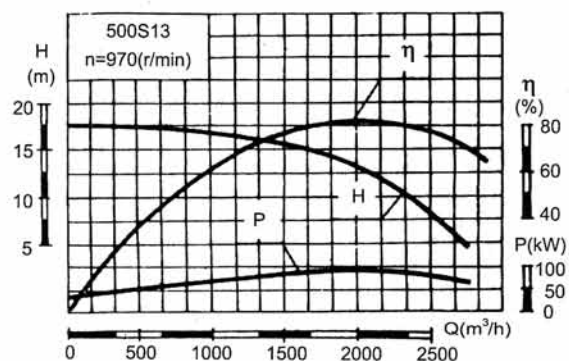
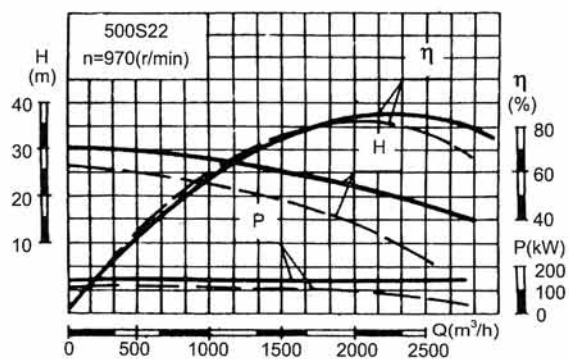
性能曲线图

Performance Curves



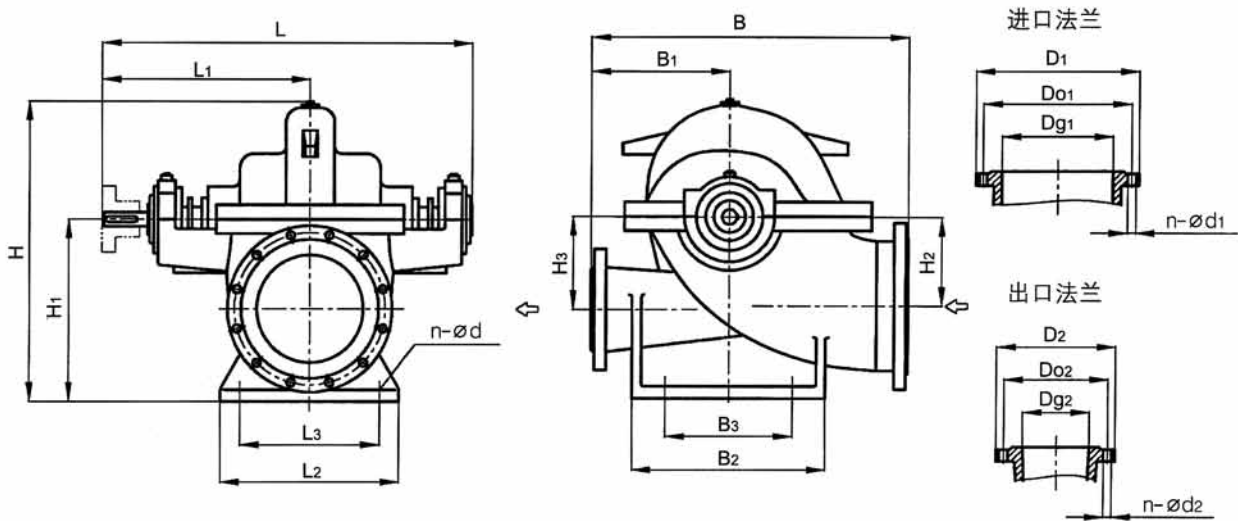
性能曲线图

Performance Curves



外形尺寸

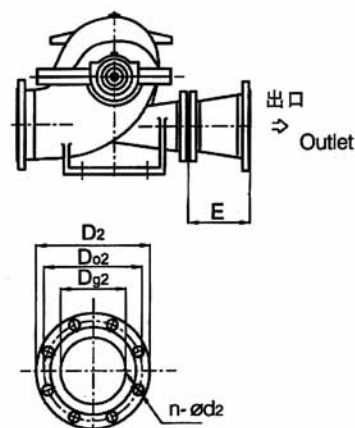
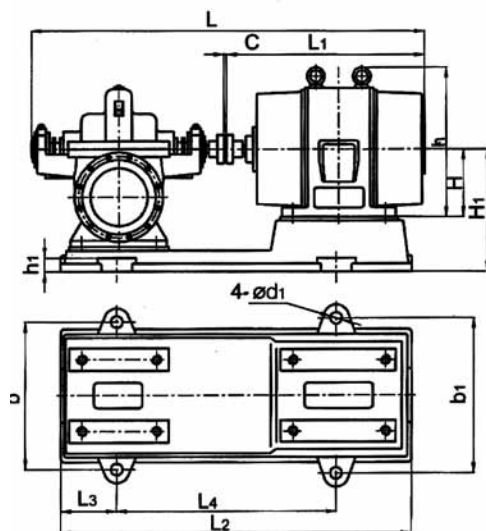
The form for the outline dimensions



型号 Type	泵尺寸 Pump dimensions													进口法兰尺寸 Inlet flange dimensions				出口法兰尺寸 Discharge flange dimensions			
	L	L ₁	L ₂	L ₃	B	B ₁	B ₂	B ₃	H	H ₁	H ₂	H ₃	n-Φd	Dg ₁	Do ₁	D ₁	n-Φd ₁	Dg ₂	Do ₂	D ₂	n-Φd ₂
100S90	700.5	382	240	190	520	250	300	210	455	265	140	149	4-18	100	180	215	8-18	70	150	185	4-18
150S10	706	388	300	250	550	250	340	250	506	300	140	170	4-18	150	240	280	8-23	125	210	245	8-18
150S14	706	388	300	250	550	250	340	250	506	300	140	170	4-18	150	240	280	8-23	125	210	245	8-18
150S18	706	388	300	250	520	300	340	250	485	300	155	155	4-18	150	240	280	8-23	125	210	245	8-18
150S100	740.5	410	300	250	550	250	340	250	490	285	140	174	4-18	150	240	280	8-23	100	180	215	8-18
150S78	704.5	388	300	250	550	250	340	250	473	285	140	155	4-18	150	240	280	8-23	100	180	215	8-18
150S50	704.5	388	300	250	550	250	340	250	455	285	140	140	4-18	150	240	280	8-23	100	180	215	8-18
200S95	861.5	485	300	250	680	330	340	250	643	355	170	170	4-18	200	295	335	8-23	125	210	245	8-18
200S63	744.5	410	300	250	620	300	340	250	549	355	170	170	4-18	200	295	335	8-23	150	240	280	8-23
200S42	744.5	410	300	250	620	300	340	250	547	355	170	170	4-18	200	295	335	8-23	150	240	280	8-23
250S28	923.5	502	410	350	850	400	510	400	738	450	230	230	4-27	250	350	390	12-23	200	295	335	8-23
250S65	1046.5	581	410	350	880	400	510	400	796	450	240	300	4-27	250	350	390	12-23	150	240	280	8-23
250S39	983.5	552	410	350	890	440	510	450	750	450	200	260	4-27	250	350	390	12-23	200	295	335	8-23
250S24	923.5	502	410	350	850	400	510	400	738	450	230	230	4-27	250	350	390	12-23	200	295	335	8-23
250S14	882.5	475	410	350	745	330	510	400	709	450	210	215	4-27	250	350	390	12-23	200	295	335	8-23
300S110	1198.5	647	520	450	1152	576	600	450	935	535	268	350	4-27	300	400	440	12-23	200	295	335	12-23
300S90	1188.5	664	520	450	1046	470	600	450	898	510	268	325	4-27	300	400	440	12-23	200	295	335	8-23
300S58	1132	626	520	450	1070	530	620	550	860	510	240	310	4-27	300	400	440	12-23	250	350	390	12-23
300S32	1062.5	574	520	450	880	410	600	450	824	510	260	270	4-27	300	400	440	12-23	250	350	390	12-23
300S19	958.5	517	520	450	900	400	600	450	803	510	250	260	4-27	300	400	440	12-23	250	350	390	12-23
300S12	978.5	522	520	450	1000	500	660	550	808	510	265	265	4-27	300	400	440	12-23	300	400	440	12-23
350S125	1431.5	809	600	500	1210	550	690	500	1080	620	330	410	4-34	350	460	500	16-23	200	295	335	12-23
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350S16	1090.5	584	600	500	1168	584	690	500	970	620	310	310	4-34	350	460	500	16-23	350	460	500	16-23
500S98	1639.5	912	760	580	1550	750	1020	800	1381	800	425	545	4-41	500	620	670	20-25	300	400	440	12-23
500S59	1637.5	905	760	580	1640	810	1020	800	1300	800	370	480	4-41	500	620	670	20-25	350	460	500	16-23
500S35	1373.5	766	760	580	1350	630	1020	800	1270	800	415	415	4-41	500	620	670	20-25	350	460	500	16-23
500S22	1375.5	750	760	580	1460	640	1020	800	1266	800	410	410	4-41	500	620	670	20-25	400	515	565	16-23
500S13	1311.5	717.5	760	580	1550	775	1020	800	1251	800	410	410	4-41	500	620	670	20-25	500	620	670	20-25
600S75	1694.5	940	940	760	1900	940	1020	800	1550	950	425	555	4-41	600	725	780	20-30	400	515	565	16-25
600S47	1694.5	940	940	760	1595	745	1020	800	1505	950	490	490	4-41	600	725	780	20-30	400	515	565	16-25
600S32	1609.5	882	940	760	1600	750	1020	800	1490	950	480	480	4-41	600	725	780	20-30	500	620	670	20-25
600S22	1471.5	810	940	760	1790	840	1020	800	1476	950	460	460	4-41	600	725	780	20-30	500	620	670	20-25

安装尺寸图(带底座)

The drawing for the installation dimensions (with bedplate)



吐出锥管法兰 The flange of discharge cone pipe

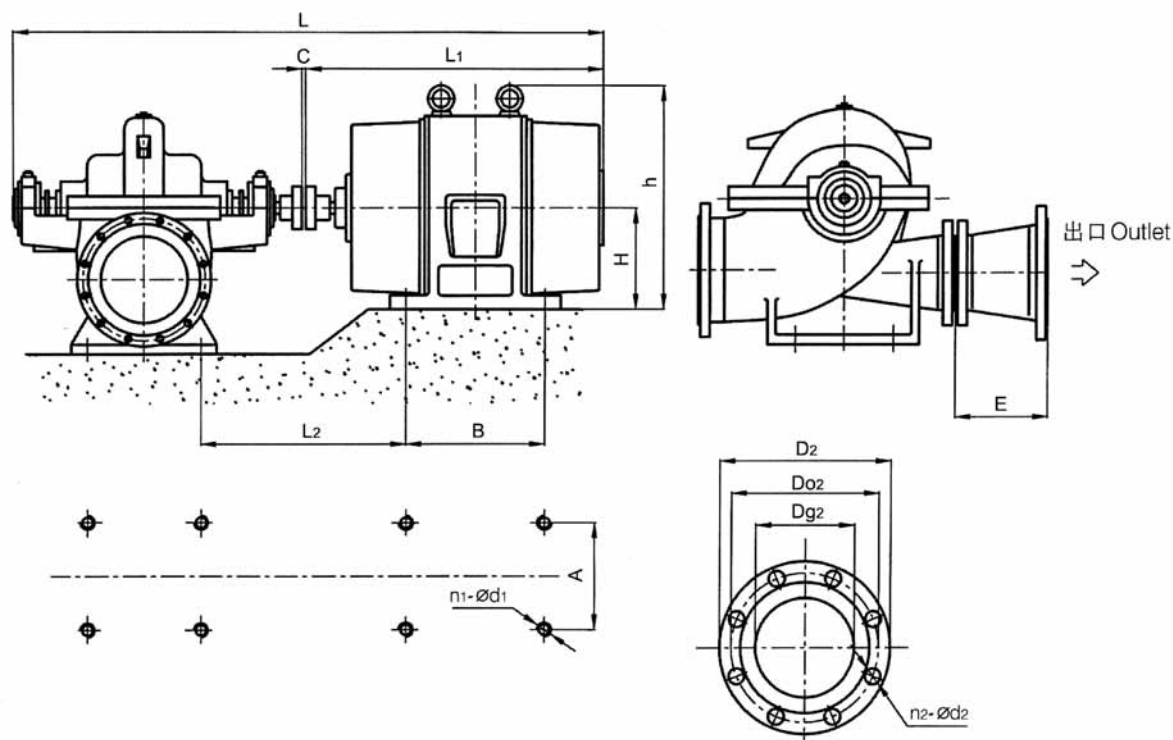
安装尺寸表(带底座)

The table for the installation dimensions (with bedplate)

型号 Type	电动机 Motor			电动机尺寸 Motor Dimensions			底座尺寸 Bedplate Dimensions						E	H ₁	L	吐出锥管法兰尺寸 Discharge Cone Flange Dimensions			
	型号 Type	功率 Power (kW)	电压 Voltage (V)	L ₁	h	H	L ₂	L ₃	L ₄	b	b ₁	d ₁				Dg2	Do2	D2	n-Φd ₂
100S90	Y200L ₂ -2	37	380	775	475	200	1140	141	780.5	385	490	25	150	365	1479.5	100	180	215	8-18
100S90A	Y200L ₁ -2	30	380	775	475	200	1140	141	780.5	385	490	25	150	365	1479.5	100	180	215	8-18
150S10	Y132M-4	7.5	380	515	132	315	1200	200	800	475	475	20	150	385	1221	150	240	280	8-23
150S14	Y160M-4	11	380	600	160	385	1200	200	800	475	475	20	150	385	1306	150	240	280	8-24
150S18	Y160L-4	15	380	645	160	385	1200	200	800	475	475	20	150	385	1306	150	240	280	8-25
150S100	Y280S-2	75	380	1000	640	280	1390	173	930	430	640	25	300	385	1744.5	150	240	280	8-23
150S78	Y250M-2	55	380	930	575	250	1345	196	875	472	630	25	300	385	1638.5	150	240	280	8-23
150S78A	Y250M-2	45	380	815	530	225	1256	196	807	472	590	25	300	385	1523.5	150	240	280	8-23
150S50	Y200L ₂ -2	37	380	775	475	200	1228	196	790	452	530	25	300	385	1483.5	150	240	280	8-23
150S50A	Y200L ₁ -2	30	380	775	475	200	1228	196	790	452	530	25	300	385	1483.5	150	240	280	8-23
150S50B	Y180M-2	22	380	670	730	180	1168	196	755	452	502	25	300	385	1378.5	150	240	280	8-23
200S95A	Y280M-2	90	380	1050	640	280	1573	196	1028.5	472	702	25	350	470	1915.5	200	295	335	8-23
200S63	Y280S-2	75	380	1000	640	280	1448	196	930	472	702	25	350	455	1748.5	200	295	335	8-23
200S63A	Y250M-2	55	380	930	575	250	1395	196	900	472	650	25	350	455	1678.5	200	295	335	8-23
200S42	Y225M-2	45	380	815	530	225	1283	196	828	472	595	25	350	455	1563.5	200	295	335	8-23
200S42A	Y200L ₂ -2	37	380	775	475	200	1233	173	810	430	515	25	350	455	1523.5	200	295	335	8-23
250S28	Y225S-4	37	380	820	225	530	1420	228	950	640	640	30	300	550	1747.5	250	350	390	12-23
250S39	Y280S-4	75	380	1000	640	280	1620	258	1005	600	675	25	300	550	1948	250	350	390	12-23
250S39A	Y250M-4	55	380	930	575	250	1586	258	1005	600	675	25	300	550	1878	250	350	390	12-23
250S24	Y225M-4	45	380	845	530	225	1480	257	950	640	640	30	300	570	1772.5	250	350	390	12-23
250S24A	Y225S-4	37	380	820	530	225	1420	228	950	640	640	30	300	550	1747.5	250	350	390	12-23
250S14	Y200L-4	30	380	775	475	200	1376	248	874.4	646	606	30	300	550	1661.5	250	350	390	12-23
250S14A	Y180M-4	18.5	380	670	430	180	1305	248	830.5	646	606	30	300	550	1556.5	250	350	390	12-23
300S58	Y315M ₁ -4	180	380	1210	865	315	1965	312	1245	760	870	30	300	630	2346	300	400	440	12-23
300S32	Y315S-4	110	380	1240	780	315	1845	317	1160	785	785	30	300	610	2146.5	300	400	440	12-23
300S32A	Y280S-4	75	380	1000	640	280	1753	317	1092	785	785	30	300	610	2096.5	300	400	440	12-23
300S19	Y250M-4	55	380	930	575	250	1616	307	1005	735	735	30	300	610	1892.5	300	400	440	12-23
300S19A	Y225M-4	45	380	845	530	225	1548	305	965	735	626	30	300	610	1807.5	300	400	440	12-23
300S12	Y225S-4	37	380	820	530	225	1566	305	1000	770	685	30	---	630	1802.5	---	---	---	---
300S12A	Y200L-4	30	380	775	475	200	1530	305	950	770	645	30	---	610	1757.5	---	---	---	---
350S26	Y315M ₁ -4	132	380	970	655	280	1995	347	1250	806	806	30	300	740	2135	350	460	500	16-23
350S16	Y280S-4	75	380	1000	640	280	1735	347	1102	790	720	30	---	740	2100	---	---	---	---
350S16A	Y250M-4	55	380	930	575	250	1732	347	1070	790	670	30	---	740	2030	---	---	---	---

安装尺寸图(不带底座)

The drawing for the installation dimensions (without bedplate)



吐出锥管法兰

The flange of discharge cone pipe

安装尺寸表(不带底座)

The table for the installation dimensions (without bedplate)

型号 Type	C	电动机 Motor			电机尺寸 Motor Dimensions						E	L	L ₂	吐出锥管法兰尺寸 Discharge Cone Flange Dimensions			
		型号 Type	功率 Power (kW)	电压 Voltage (V)	L ₁	H	h	B	A	n ₁ - Φ d ₁				Dg2	Do2	D2	n ₂ - Φ d ₂
200S95	4	Y250M-2(IP23)	110	380	825	250	600	349	460	4-24	375	1690	672	200	295	335	8-23
		Y315S-2	110	380	1270	315	865	406	508	4-28	375	2055	720	200	295	335	8-23
Y280M-4(IP23)		132	380	970	280	655	419	457	4-24	500	2020	770	250	350	390	12-23	
Y315M ₁ -4		132	380	1270	315	865	457	508	4-28	500	2320	796	250	350	390	12-23	
JS115-4		135	380	1300	375	875	590	620	4-26	500	2350	870	250	350	390	12-23	
JR115-4		135	380	1740	375	875	590	620	4-26	500	2790	870	250	350	390	12-23	
250S65A		Y280S-4(IP23)	110	380	920	280	655	368	457	4-24	500	1970	770	250	350	390	12-23
		Y315S-4	110	380	1220	315	865	406	508	4-28	500	2270	796	250	350	390	12-23
		JS114-4	115	380	1200	375	875	490	620	4-26	500	2250	870	250	350	390	12-23
		JR114-4	115	380	1640	375	875	490	620	4-26	500	2690	870	250	350	390	12-23
300S110	5	YS148-4	440	6000	1780	560	1270	870	940	4-42	300	2984	1019	300	400	440	12-23
300S90		Y355M ₂ -4(IP23)	315	380	1290	355	704	560	610	4-28	300	2464	888	300	400	440	12-23
300S90A		Y355M ₁ -4(IP23)	280	380	1290	355	704	560	610	4-26	300	2464	888	300	400	440	12-23
300S90B		Y315M ₂ A-4(IP23)	220	380	1210	315	865	457	508	4-28	300	2384	810	300	400	440	12-23
		JS126-4	225	380	1300	450	1005	550	710	4-32	300	2474	899	300	400	440	12-23
		JR126-4	225	380	1740	450	1005	550	710	4-32	300	2914	899	300	400	440	12-23
300S58	6	Y315M ₁ A-4(IP23)	185	380	1210	315	865	457	508	4-28	300	2348	791	300	400	440	12-23
		JS117-4	180	380	1345	375	875	640	620	4-26	300	2483	865	300	400	440	12-23
		JR117-4	180	380	1785	375	875	640	620	4-26	300	2923	865	300	400	440	12-23
300S58A	6	Y315S-4(IP23)	160	380	1160	315	865	409	508	4-28	300	2298	791	300	400	440	12-23
		Y315M ₂ -4	160	380	1270	315	865	457	508	4-28	300	2408	791	300	400	440	12-23
		JS116-4	155	380	1300	375	875	590	620	4-26	500	2438	865	300	400	440	12-23
		JR117-4	155	380	1740	375	875	590	620	4-26	300	2878	865	300	400	440	12-23

安装尺寸表(不带底座)

The table for the installation dimensions (without bedplate)

型号 Type	C	电动机 Motor			电机尺寸 Motor Dimensions						E	L	L ₂	吐出锥管法兰尺寸 Discharge Cone Flange Dimensions			
		型号 Type	功率 Power (kW)	电压 Voltage (V)	L ₁	H	h	B	A	n ₁ - Φ d ₁				Dg2	Do2	D2	n ₂ - Φ d ₂
300S58B	6	Y280M - 4(IP23)	132	380	970	280	655	479	457	4 - 24	300	2108	765	300	400	440	12 - 23
		Y315M ₁ - 4	132	380	1270	315	865	475	508	4 - 28	300	2408	791	300	400	440	12 - 23
		JS115 - 4	135	380	1300	375	875	590	620	4 - 26	300	2438	865	300	400	440	12 - 23
		JR117 - 4	135	380	1740	375	875	590	620	4 - 26	300	2878	865	300	400	440	12 - 23
350S125	7	Y450 - 46 - 4	710	6000	2035	450	1350	1120	800	4 - 35	750	3474	1131	350	470	520	16 - 25
		Y400 - 50 - 4	680	6000	1920	630	1435	1020	1100	4 - 42	750	3359	1106	350	470	520	16 - 25
		JS1410 - 4	680	6000	2330	630	1435	1020	1100	4 - 42	750	3769	1106	350	470	520	16 - 25
350S125A	7	JR1410 - 4	630	6000	2035	450	1350	1120	800	4 - 35	750	3474	1131	350	470	520	16 - 25
350S125B		Y355L - 4(IP23)	500	6000	1860	400	1200	1000	710	4 - 35	750	3299	1131	350	470	520	16 - 25
		JS147 - 4	500	6000	1880	560	1270	970	940	4 - 42	750	3319	1106	350	470	520	16 - 25
350S75	6	JR147 - 4	500	6000	2310	560	1270	970	940	4 - 42	750	3749	1106	350	470	500	16 - 25
		Y315M ₁ - 4(IP23)	355	380	1360	355	704	630	610	4 - 28	500	2640	929	350	460	500	16 - 23
		JS128 - 4	360	6000	1780	560	1270	870	940	4 - 42	500	3060	1030	350	460	500	16 - 23
350S75A	6	JR128 - 4	360	6000	2210	560	1270	870	940	4 - 42	500	3490	1030	350	460	500	16 - 23
		Y315M ₂ A - 4(IP23)	280	380	1290	355	704	560	610	4 - 28	500	2570	929	350	460	500	16 - 23
		JS128 - 4	300	380	1395	450	1005	650	710	4 - 32	500	2675	940	350	460	500	16 - 23
350S75B	6	JR128 - 4	300	380	1840	450	1005	650	710	4 - 32	500	3120	940	350	460	500	16 - 23
		Y315M ₂ A - 4(IP23)	220	380	1210	315	865	457	508	4 - 28	500	2790	851	350	460	500	16 - 23
		JS126 - 4	225	380	1295	450	1005	550	710	4 - 32	500	2575	940	350	460	500	16 - 23
350S44	5	JR126 - 4	225	380	1740	450	1005	550	710	4 - 32	300	3020	940	350	460	500	16 - 23
		Y315M ₂ A - 4(IP23)	220	380	1210	315	865	457	508	4 - 28	300	2450	816	350	460	500	16 - 23
		JS126 - 4	225	380	1295	450	1005	550	710	4 - 32	300	2535	905	350	460	500	16 - 23
350S44A	5	JR126 - 4	225	380	1740	450	1005	550	710	4 - 32	300	2980	905	350	460	500	16 - 23
		Y315S - 4(IP23)	160	380	1160	315	865	406	508	4 - 28	300	2400	816	350	460	500	16 - 23
		YM15M ₂ - 4	160	380	1270	315	865	457	508	4 - 28	300	2510	816	350	460	500	16 - 23
		JS116 - 4	155	380	1300	375	875	590	620	4 - 26	300	2540	890	350	460	500	16 - 23
350S26	7	JR116 - 4	155	6000	1740	375	875	590	620	4 - 26	300	2980	890	350	460	500	16 - 23
		Y280M - 4(IP23)	132	380	970	280	655	419	457	4 - 24	300	2140	747	350	460	500	16 - 23
		Y315M ₁ - 4	132	380	1270	315	865	457	508	4 - 28	300	2440	773	350	460	500	16 - 23
		JS115 - 4	135	380	1300	375	875	590	620	4 - 26	300	2470	847	350	460	500	16 - 23
350S26A	6	JR115 - 4	135	380	1740	375	875	590	6620	4 - 26	300	2910	847	350	460	500	16 - 23
		Y280M - 4	90	380	1050	280	640	419	457	4 - 24	300	2220	717	350	460	500	16 - 23
		Y315S - 4	110	380	1220	315	865	406	508	4 - 28	300	2390	773	350	460	500	16 - 23
350S16	6	Y280S - 4	75	380	1000	280	640	368	457	4 - 24		2100	668				
350S16A		Y250M - 4	55	380	930	250	575	349	406	4 - 24		2030	646				
500S98	6	Y500 - 54 - 6	800	6000	2220	500	1500	1250	900	4 - 42	880	3865	1354	500	620	670	20 - 25
		JS1512 - 6	780	6000	1920	630	1435	1920	1100	4 - 42	880	3565	1169	500	620	670	20 - 25
		JR1512 - 6	780	6000	2330	630	1435	1020	1100	4 - 42	880	3975	1169	500	620	670	20 - 25
500S98A	6	Y450 - 64 - 6	630	6000	2080	450	1350	1120	800	4 - 35	880	3725	1234	500	620	670	20 - 25
		Y500 - 50 - 6	630	6000	2220	500	1900	1250	900	4 - 42	880	3865	1354	500	620	670	20 - 25
		JS1510 - 6	650	6000	1920	630	1435	1020	1100	4 - 42	880	3565	1169	500	620	670	20 - 25
		JR1510 - 6	650	6000	2330	630	1435	1020	1100	4 - 42	880	3975	1169	500	620	670	20 - 25
500S98B	5	JR1510 - 6	650	6000	2330	630	1435	1020	1100	4 - 42	880	3975	1169	500	620	670	20 - 25
		Y450 - 54 - 6	560	6000	2080	450	1350	1120	800	4 - 35	880	3725	1234	500	620	670	20 - 25
		Y450 - 64 - 6	560	6000	2080	450	1650	1120	800	4 - 35	880	3725	1234	500	620	670	20 - 25
		JS158 - 6	550	6000	1920	630	1435	1020	1100	4 - 42	880	3565	1169	500	620	670	20 - 25
500S59	5	JR158 - 6	550	6000	2330	630	1435	1250	1100	4 - 42	880	3925	1169	500	620	670	20 - 25
		Y450 - 46 - 6	450	6000	2080	450	1350	1120	800	4 - 35	800	3725	1227	500	620	670	20 - 25
		Y450 - 50 - 6	450	6000	2080	450	1650	1120	800	4 - 35	800	3725	1227	500	620	670	20 - 25
		JS157 - 6	460	6000	1720	630	1435	820	1100	4 - 42	800	3365	1157	500	620	670	20 - 25
		JR157 - 6	460	6000	2130	630	1435	820	1100	4 - 42	800	3775	1157	500	620	670	20 - 25

安装尺寸表(不带底座)

The table for the installation dimensions (without bedplate)

型号 Type	C	电动机 Motor			电机尺寸 Motor Dimensions						E	L	L ₂	吐出锥管法兰尺寸 Discharge Cone Flange Dimensions			
		型号 Type	功率 Power (kW)	电压 Voltage (V)	L ₁	H	h	B	A	n ₁ - Φ d ₁				Dg2	Do2	D2	n ₂ - Φ d ₂
500S59A	5	Y400-54-6	400	6000	1860	400	1200	1000	610	4-35	800	3505	1167	500	620	670	20-25
		Y400-46-6	400	6000	2080	450	1650	1120	800	4-35	800	3725	1227	500	620	670	20-25
		JS1410-6	380	6000	1880	560	1270	970	940	4-42	800	3525	1157	500	620	670	20-25
		JR1410-6	380	6000	2130	560	1270	970	940	4-42	800	3955	1187	500	620	670	20-25
500S59B	7	Y400-46-6	315	6000	1860	400	1200	1000	710	4-35	800	3505	1167	500	620	670	20-25
		Y400-50-6	315	6000	1860	400	1450	1000	710	4-35	800	3505	1167	500	620	670	20-25
		JS148-6	310	6000	1780	560	1270	870	940	4-42	800	3425	1187	500	620	670	20-25
		JR148-6	310	6000	2210	560	1270	870	940	4-42	800	3855	1187	500	620	670	20-25
500S35	6	YS355L ₁ -6(IP23)	280	380	1360	355	704	630	610	4-28	800	2740	946	500	620	670	20-25
		YR355L ₁ -6(IP23)	280	380	1670	355	855	630	610	4-28	800	3505	946	500	620	670	20-25
		JS137-6	280	380	1520	500	1125	760	790	4-32	800	2900	987	500	620	670	20-25
		JR137-6	280	380	1960	500	1125	760	790	4-32	800	3340	987	500	620	670	20-25
500S35A	6	YS355M ₃ -6(IP23)	220	380	1290	355	704	560	610	4-28	800	2670	946	500	620	670	20-25
		YR355M ₃ -6(IP23)	220	380	1670	355	835	560	610	4-28	800	3505	946	500	620	670	20-25
		JS128-6	215	380	1310	450	1005	650	710	4-32	800	2690	972	500	620	670	20-25
		JR128-6	215	380	1760	450	1005	650	710	4-32	800	3140	972	500	620	670	20-25
500S22	5	Y355M ₁ -6(IP23)	185	380	1290	355	704	560	610	4-28	600	2670	929	500	620	670	20-25
		JS127-6	185	380	1410	450	1005	650	710	4-32	600	2790	955	500	620	670	20-25
		JR127-6	185	380	1860	450	1005	650	710	4-32	600	3240	855	500	620	670	20-25
500S22A	5	Y355M ₁ -6(IP23)	132	380	1210	315	865	457	508	4-28	600	2590	851	500	620	670	20-25
		Y315M ₃ -6	132	380	1270	315	865	457	508	4-28	600	2650	951	500	620	670	20-25
		JS125-6	130	380	1310	450	1005	550	710	4-32	600	2690	955	500	620	670	20-25
		JR125-6	130	380	1760	450	1005	550	710	4-32	600	3140	955	500	620	670	20-25
500S13	5	Y355S-6(IP23)	110	380	1160	315	865	406	508	4-28	600	2480	818.5	500	620	670	20-25
		Y315M ₂ -6	110	380	1270	315	865	457	508	4-28	600	2590	818.5	500	620	670	20-25
		JS117-6	115	380	1200	355	875	590	620	4-26	600	2520	892.5	500	620	670	20-25
		JR117-6	115	380	1640	355	875	590	620	4-26	600	2960	892.5	500	620	670	20-25
600S75	7	Y500-54-6	800	6000	2220	500	1500	1250	900	4-42	600	3921	1294	500	620	670	20-25
		Y500-64-6	800	6000	2220	500	1900	1250	900	4-42	600	3921	1294	500	620	670	20-25
		JS1512-6	780	6000	1920	630	1435	1020	1100	4-42	600	3621	1109	500	620	670	20-25
		JR1512-6	780	6000	2330	630	1435	1020	1100	4-42	600	4031	1109	500	620	670	20-25
600S75A	7	Y450-64-6	630	6000	2080	450	1350	1120	800	4-35	600	3781	1174	500	620	670	20-25
		Y500-50-6	630	6000	2220	500	1900	1250	900	4-42	600	3921	1294	500	620	670	20-25
		JS1510-6	650	6000	1920	630	1435	1020	1100	4-42	600	3621	1109	500	620	670	20-25
		JR1510-6	650	6000	2330	630	1435	1020	1100	4-42	600	4031	1109	500	620	670	20-25
600S47	7	Y450-4-6	560	6000	2080	450	1350	1120	800	4-35	600	3781	1174	500	620	670	20-25
		Y450-64-6	560	6000	2080	450	1650	1120	800	4-35	600	3781	1174	500	620	670	20-25
		YS158-6	550	6000	1920	630	1435	1020	1100	4-42	600	3621	1109	500	620	670	20-25
		JR158-6	550	6000	2330	630	1435	1020	1100	4-42	600	4031	1109	500	620	670	20-25
600S32	7	Y400-54-6	400	6000	1860	400	1200	1000	710	4-35	600	3475	1055	500	620	670	20-25
		Y450-64-6	400	6000	2080	450	1650	1120	800	4-35	600	3695	1115	500	620	670	20-25
		JS1410-6	380	6000	1880	560	1270	970	940	4-42	600	3495	1075	500	620	670	20-25
		JR1410-6	380	6000	2310	560	1260	970	940	4-42	600	3925	1075	500	620	670	20-25
600S32A	6	Y400-43-6	280	380	1860	400	1200	1000	710	4-35	600	3475	1055	500	620	670	20-25
		Y355L ₁ -6(IP23)	280	380	1360	355	704	630	610	4-28	600	2975	974	500	620	670	20-25
		YS137-6	280	380	1520	500	1125	760	790	4-32	600	3135	1015	500	620	670	20-25
		JR137-6	280	380	1960	500	1125	760	790	4-32	600	3575	1015	500	620	670	20-25
600S22	6	Y355L ₁ -6(IP23)	280	380	1360	355	704	630	610	4-28	600	2837	902	500	620	670	20-25
		YR355L ₁ -6(IP23)	280	380	1760	355	704	630	610	4-28	600	3237	902	500	620	670	20-25
		YS137-6	280	380	1520	500	1125	760	790	4-32	600	2997	943	500	620	670	20-25
		JR137-6	280	380	1960	500	1125	760	790	4-32	600	3437	943	500	620	670	20-25
600S32A	6	Y355M ₂ -6(IP23)	200	380	1290	355	704	560	610	4-28	600	2767	902	500	620	670	20-25
		YR355M ₂ -6(IP23)	200	380	1690	355	704	560	610	4-28	600	3167	902	500	620	670	20-25

