



## LIANSHENG DATA BOOKLET



莲盛

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LTB冷却塔专用水泵  
LTB Type Centrifugal IN-line  
pump for Cooling Tower

# 企业简介Company Profile

上海莲盛泵业制造有限公司上海莲盛水泵厂创建于六十年代，是国内著名的大型给排水设备生产制造企业。上海莲盛泵业拥有专业的研制开发、生产销售、测试鉴定团队，优质的服务，先进的技术发展理念；提供泵、阀和流体输送系统、电气控制系统设备和解决方案，产品广泛适用于城市、矿山、化工、锅炉、空调、消防等行业给排水以及适用宾馆、酒店、大厦、旅游、娱乐场所、军事等工程领域的应用。不断前进中的莲盛泵业正与同行与时俱进，销售市场网络遍及全国各地。

竞争中的莲盛泵业，技术力量雄厚、拥有一支高素质的管理层和员工队伍及配套齐全的现代化生产、管理控制设备，并拥有高科技的集信息、科研、设计、试制、鉴定于一体的水泵研究所，可随时根据市场(顾客)动态，不断研发新产品，满足市场(顾客)的不断变化需求。

发展中的莲盛泵业是最早得到ISO9001:2008国内、国际质量体系认证，并以中国泵业协会、上海市商标协会、上海市先进企业、中国名牌产品为企业形象维护准则，制造出了一个又一个的优秀产品成果。产品在上海市第三、第四、第五、第六届技术交流会上获“节能产品奖”，全国星火杯成果适用技术展览会上获“银奖”、上海市科学成果“三等奖”，全国创造发明竞赛“优秀产品奖”，上海市第五届科学技术博览会上莲盛牌系列产品获“金奖”，并在2003年成为首届国家级“重合同、守信用”企业，获得了中国政府的LC(信用证)。“莲盛”牌商标连续两届被上海市认定为“上海市著名商标”的称号。

奋进中的莲盛泵业以“实实在在的产品、实实在在的质量、实实在在的服务、实实在在的诚信”为宗旨、不断推出“莲盛”牌卓越产品面向市场，共创未来共同发展的市场和辉煌。

Shanghai Liansheng Pump Making Co., Ltd. (Shanghai Liansheng Pump Factory), established in the sixties, is well-known large-scale domestic water supply and drainage equipment manufacturing enterprise. Shanghai Liansheng Pump Industry has professional research and development, production and sales, test and identification team, high-quality service, advanced technology development concept; provide pumps, valves and fluid delivery systems, electrical control system equipment and solutions. Its products are widely used in cities, mines, chemical, industry, boilers, air conditioning and other fields for water supply and drainage as well as in guesthouses, buildings, tourism, entertainment places, and other engineering fields. The everongoing company is advancing with the times together with its peers. Its sales network covers the whole country. The company has a strong technical force in competition, high quality management and ordinary employees, complete modern production, management and control equipment and a high-tech water pump research institute integrating information, research, design, trial production and identification, which enables it to keep developing new products according to the market(customer)trends to meet their ever-changing market (customer)needs.

As one of the enterprises passing the domestic and international ISO9001: 2008 quality system certifications, this growing company maintains its image in line with the requirements of the China General Machinery Industry Association pump Association, Shanghai Trademark Association, Advanced Enterprise of Shanghai and China Top-Brand Products, and has produced many excellent products. Some of its products were granted the “Energy-saving Product Award” of the third, fourth fifth and sixth technical exchanges of Shanghai, the Silver Award of the National Spark Cup Achievement Application Technology Exhibition, the third prize of the Scientific Achievement Award of Shanghai, and the “Excellent Product Award” on the National Invention Contest. Several products from Liansheng Brand were granted the golden prize on the Fifth Science and Technology Exhibition of Shanghai. In 2003, the company was selected as a First National “trustworthy” Enterprise and obtained the LC(letter of credit) of the Chinese government. The Liangsheng trademark was, for two consecutive times, granted the title of “Famous Trademark of Shanghai” by Shanghai Adhering to the tenet of “Concrete Products, Quality, Services and Good Faith”, the enterprising company always launches excellent products of the Liansheng brand to the market, creating common development based market and splendor in the future.

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莲盛泵业

*LIANSHENG PUMP*



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## 用途(Application)

- 1. 闭式冷却塔、冷凝器的水循环
  - 2. 各种机组设备的冷却用
  - 3. 一般供水
1. Water cycle in closed cooling towers or condenser  
 2. Cooling for various kinds equipment  
 3. General water supply

## 安装注意事项(Erection of the pump)

- 1. 安装时管路重量不应承受在泵上，否则易损坏水泵。
- 2. 泵与电机是整体结构，出厂时已由厂家校正，安装时无需调整，因此安装十分方便；
- 3. 安装时必须拧紧地脚螺柱，且每隔一定时段对其进行检查，防止其松动，以免水泵启动时发生震动而影响泵的性能；
- 4. 安装泵前应仔细检查泵流道内有无影响水泵运行的硬物（如石块、铁砂等），以免水泵运行时损坏过流部件，
- 5. 为了维修方便及安全使用，在泵的进出口管路上安装一只调节阀及在泵出口附近安装一只压力表，从而确保水泵在最佳工况下运行、延长水泵的使用寿命；
- 6. 泵用于吸程场合，应装有底阀，且进口管不应有过多弯头，同时不得有漏水、漏气现象，以免影响水泵的吸入性能；
- 7. 安装管路前转动水泵的转子部件，应无摩擦声或卡死现象，否则应将泵拆开检查原因。

1. Do not let the pump subjected to the pipeline weight in erection, or it may be easily damaged;  
 2. Both pump and motor are intergrally structured and calibrated by the manufacturer, so there is no need to adjust them, leaving a very convenient erection ;  
 3. Tighten the foot bolts in erection and periodically check the pump to prevent it from being loose and its performance from being affected due to the vibration at the starting of it ;  
 4. Prior to erection, carefully check if there is any hard matters(such as stones, iron sand etc.) Inside of the flow path of the pump which may affect its running top event its flowing parts from being damaged during its running;  
 5. For an easy service and safe use, mount an adjusting valve on both Inlet and outlet pipelines and speedometer near the inlet.so as to make sure of the pump to run in the best working conditions to extend its duration ;  
 6. A foot valve should be mounted in case of the pump to be used in the occasion with a suction stroke and there should not be too many elbows wth the inlet pipe and any water and air leaks to avoid its performance of suction being affected ;  
 7. Before mounting the pipeline, move the pump's rotor and there should be no friction sound or block-up, otherwise the pump has to be removed to check and find the causes.

## 水泵维护(Pump maintenance)

### 启动前 :

- 1、应先用手盘动泵，以使润滑油进入机封端面；
- 2、用手拨转电机轴，检查叶轮有无磨擦和卡死现象，转动应灵活；
- 3、点动电机，检查电机转向是否正确，从电机顶端往泵底部看，应为顺时针方向旋转，但时间要短，以免机械密封干磨；
- 4、打开进口阀门与排气阀，使液体充满整个泵腔，然后关闭排气阀；
- 5、如输送热介质时，应先预热(即用所输送的液体不断循环来达到，其升温速度为50°C/h)，保证各部受热均匀。

### 运行中 :

- 1、进口阀门全开。关闭吐出管路阀门；
- 2、当泵达到正常转速后，再逐渐打开吐出管路上的阀门，并调节到所需工况；
- 3、注意观察仪表读数，检查轴封泄漏情况，正常时，机械密封泄漏应小于3滴/分；
- 4、水泵环境温度为-15s-40°C. 检查电机与轴承处的温升应不大于85°C，如发现异常现象，应及时处理。

### 停车 :

- 1、逐渐关闭吐出管阀门，切断电源；
- 2、关闭进口阀门；
- 3、如环境温度低于0°C,应将泵体内液体排净，以免冻裂；
- 4、若泵长期停用，应将泵体内液体排净，定期维护。

## Preparations before starting

1. Turn the fan blade of the motor with hand, the impeller must be flexibly to move without block-up;
2. Fully open the Inlet valve and the exhaust valve to let the pump cavity full of liquid, then close the exhaust valve;
3. Check if every part is normal, the bearing well lubricated, the bolts on every part tightened: the suck-in pipe smooth and soon;
4. Preheat has to be taken in case of a medium with a higher temperature , with a rate of temperature rise 50°C/h, to make sure of every part to be heated evenly

## Starting and running

1. Fully open the inlet valve and close the outlet pipeline's valve;
2. Start the motor.(take care of the rotating direction)
3. Adjust the opening of the outlet valve when the rotating speed of the unit gets stable and take a look at the piezometer and the flowmeter and check if the shaft seal leaks;
4. Check the temperature at both motor and bearing, which should less than 85 °C, and deal with it in time in case of an abnormal condition.



## Stopping

- 1.Close the valve on the discharge pipe and shut off power.
- 2.Close the inlet valve.
- 3.If the ambient temperature is below 0°C,it would dry up the liquid in the pump body.
- 4.It should dry up the liquid in the pump body before stopping for a long time and also make regular maintenance.

## 水泵电机 ( Operation of the motor)

1、电机应妥善接地，接线盒内有接地装置

The motor should be grounded properly.The terminal box should have grounding mark.

2、电动机接线盒内接线板上有6个接线柱对应机内绕组引出线，接电源线对应相序，具体标记如下

There are six terminals on the terminal board, the identifications are as follows;

相序 Phase sequence	A	B	C
头 Head of phase winding	U1	V1	W1
尾 Tail of phase winding	U2	V2	W2

3、按电动机铭牌规定接法，接成△或Y。按图中相序接线时，从轴伸端视之，电动机的转向为顺时针，任意调换三相电源中两相的相序，电动机则反之旋转

According to the nameplate, the connection of stator winding should be delta or star. When phase sequence A.B.C of the power supply is accord with winding sequence U1,V1,W1,motor rotate direction is C.W, as viewed from the shaft extension end. With any of the two phase of the power line changed, the motor rotates in the opposition direction.



4、电动机使用时应有热保护装置，并根据电动机铭牌电流调整保护装置的额定值

The motor should have an overheat protection device and a short-circuit protection device. According to the current given by the name-plate, reset the relays for protecting devices.

## 规格(Specification)

型号Menu		LTB
流体 Medium	介质 LC	清水 Clarified water
	水温 Temperature	0-100°C
材质 Material	叶轮 Impeller	不锈钢 stainless steel
	泵体 Casing	铸铁 ( HT200 ) Cast iron(HT200)
电机 Motor	种类 Species	高效低压三相异步/自启动永磁同步电机
	电压频率 Voltage frequency	220~380~480V & 50~60HZ
	绝缘等级 Insulation	F级 Class F
	防护等级 Degree of protection	IP55
	防爆等级 Degree of Explosion proof	ExdIIBT4Gb & ExdIIIBT4Gb
构造 Structure	叶轮 Impeller	闭式叶轮 Closed impeller
	密封 Seal	机械密封 Mechanical seal
	轴承 Bearing	滚珠轴承 Ball bearing
	设置场所 Location	室内 & 室外 Indoor & outdoor
	颜色 Color	黑色 black

选配异步电机性能参数表(Optional asynchronous motor performance parameter table)

口径 caliber mm	型号 Type	流量 flow m³/h	扬程 Head m	额定功率 Power kw	额定转速 Speed r/min	额定电流 Rated current A	额定电压 Rated voltage v	电机效率 EFF %	功率因数 Factor COSφ	重量 Weight kg
50	LTB23-4	23	4	0.55	2800	1.4	380	74.0	0.82	15
65	LTB28-4	28	4	0.75	2860	1.66	380	80.7	0.83	23
	LTB36-4	36	4	1.1	2880	2.31	380	82.7	0.83	25
80	LTB53-4	53	4	1.1	2880	2.31	380	82.7	0.83	36
	LTB70-4	70	4	1.5	2890	3.08	380	84.2	0.84	37
	LTB84-4	84	4	2.2	2890	4.39	380	85.9	0.85	39
100	LTB100-5	100	5	2.2	1450	4.65	380	86.7	0.81	61
	LTB120-5	120	5	3	1450	6.2	380	87.7	0.82	63
125	LTB150-5	150	5	3	1450	6.2	380	87.7	0.82	76
	LTB180-5	180	5	4	1450	8.23	380	88.6	0.82	84
150	LTB233-5	233	5	5.5	1450	10.9	380	89.6	0.82	151
	LTB286-5	286	5	7.5	1450	14.6	380	90.4	0.83	161

选配自启动永磁同步电机性能参数表

(Optional self-starting permanent magnet synchronous motor performance parameter table)

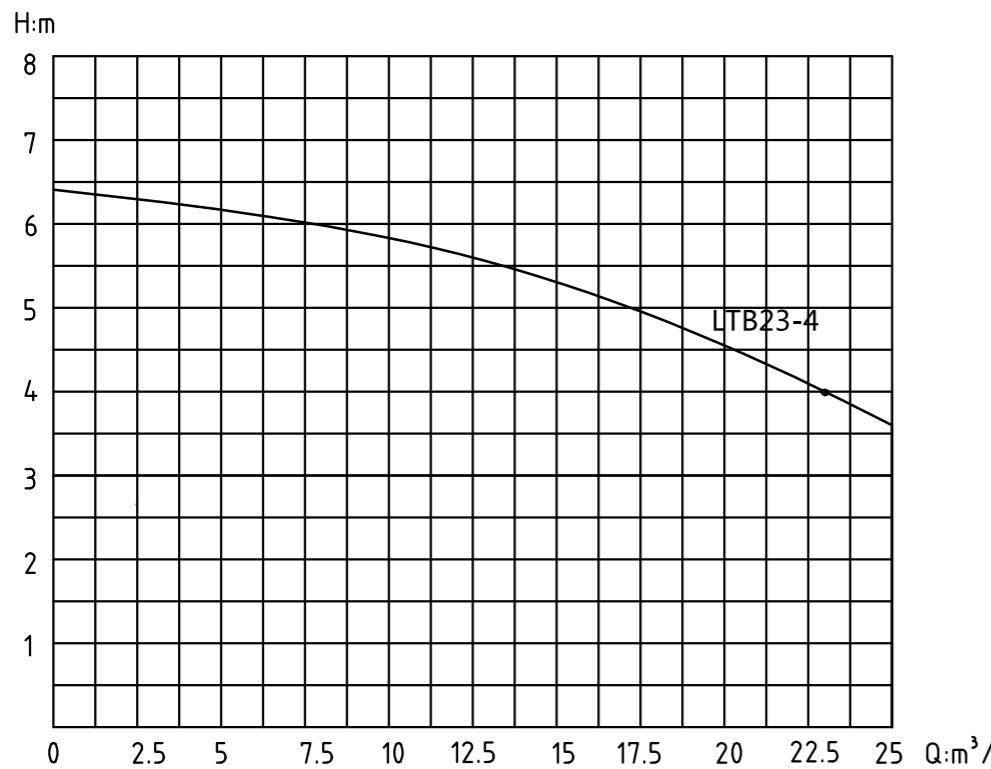
口径 caliber mm	型号 Type	流量 Flow m³/h	扬程 Head m	额定功率 Power kw	额定转数 Speed r/min	额定电流 Rated current A	额定电压 Rated voltage v	电机效率 EFF %	功率因数 Factor COSφ	重量 Weight kg
50	LTB23-4	23	4	0.55	3000	1.0	380	84.5	0.96	15
65	LTB28-4	28	4	0.75	3000	1.4	380	84.9	0.96	23
	LTB36-4	36	4	1.1	3000	2.0	380	86.7	0.96	25
80	LTB53-4	53	4	1.1	3000	2.0	380	86.7	0.96	36
	LTB70-4	70	4	1.5	3000	2.7	380	87.5	0.96	37
	LTB84-4	84	4	2.2	3000	3.9	380	89.1	0.96	39
100	LTB100-5	100	5	2.2	1500	3.9	380	89.7	0.96	61
	LTB120-5	120	5	3	1500	5.3	380	90.3	0.96	63
125	LTB150-5	150	5	3	1500	5.3	380	90.3	0.96	76
	LTB180-5	180	5	4	1500	7.0	380	90.9	0.96	84
150	LTB233-5	233	5	5.5	1500	9.5	380	92.1	0.96	151
	LTB286-5	286	5	7.5	1500	12.8	380	92.6	0.96	161



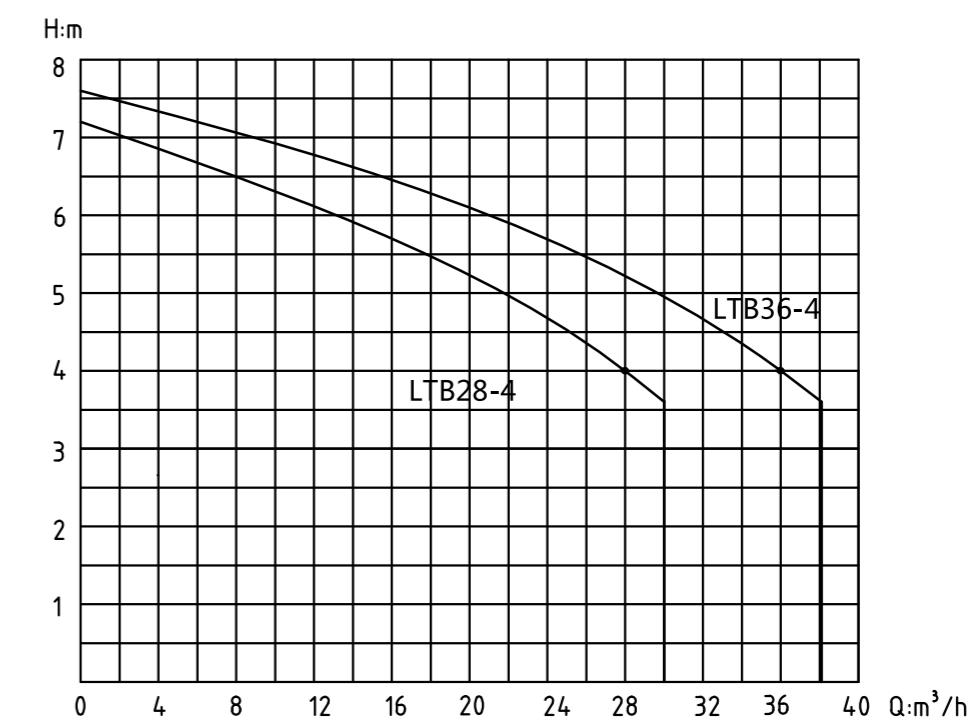
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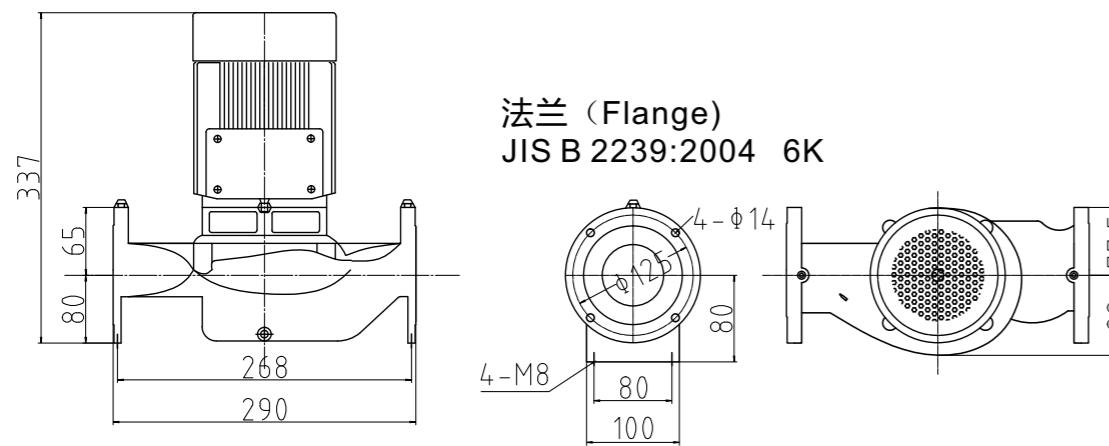
50LTB型谱图(Pattern Pedigree Figure)



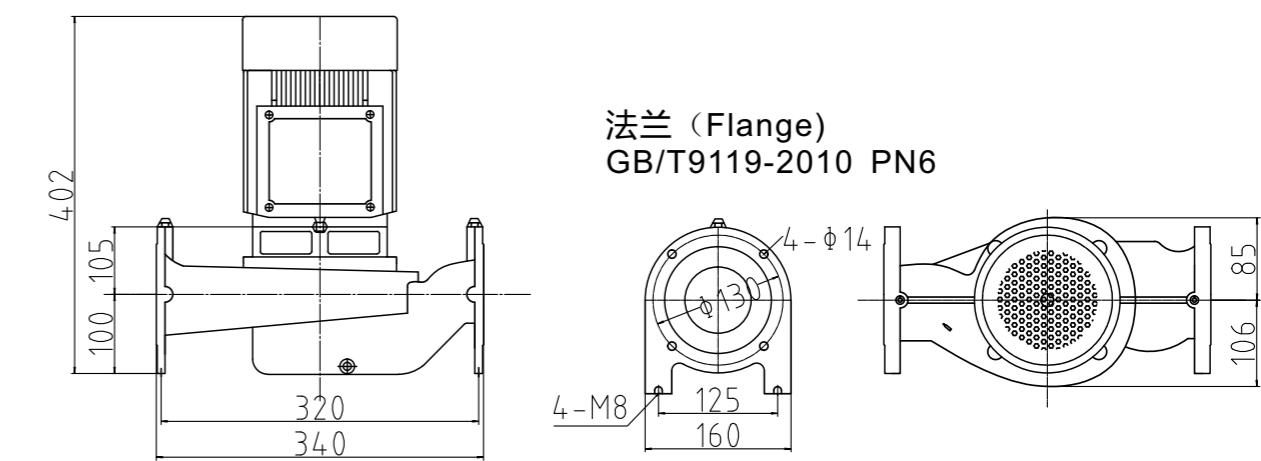
65LTB型谱图(Pattern Pedigree Figure)



50LTB安装尺寸图(Installation Dimensions)



65LTB安装尺寸图(Installation Dimensions)

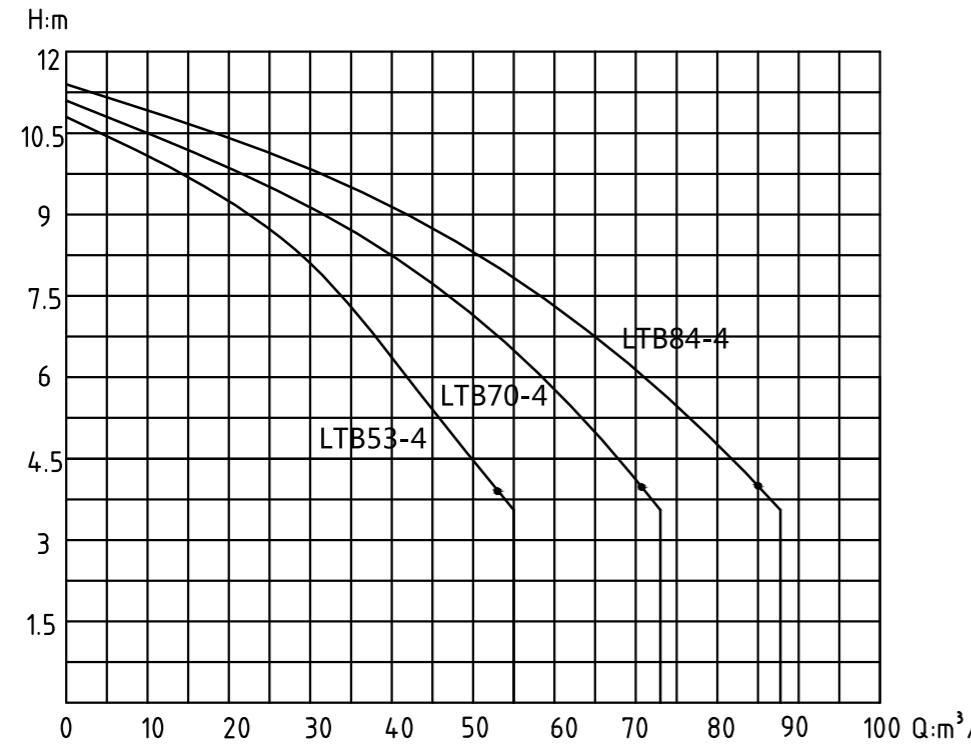




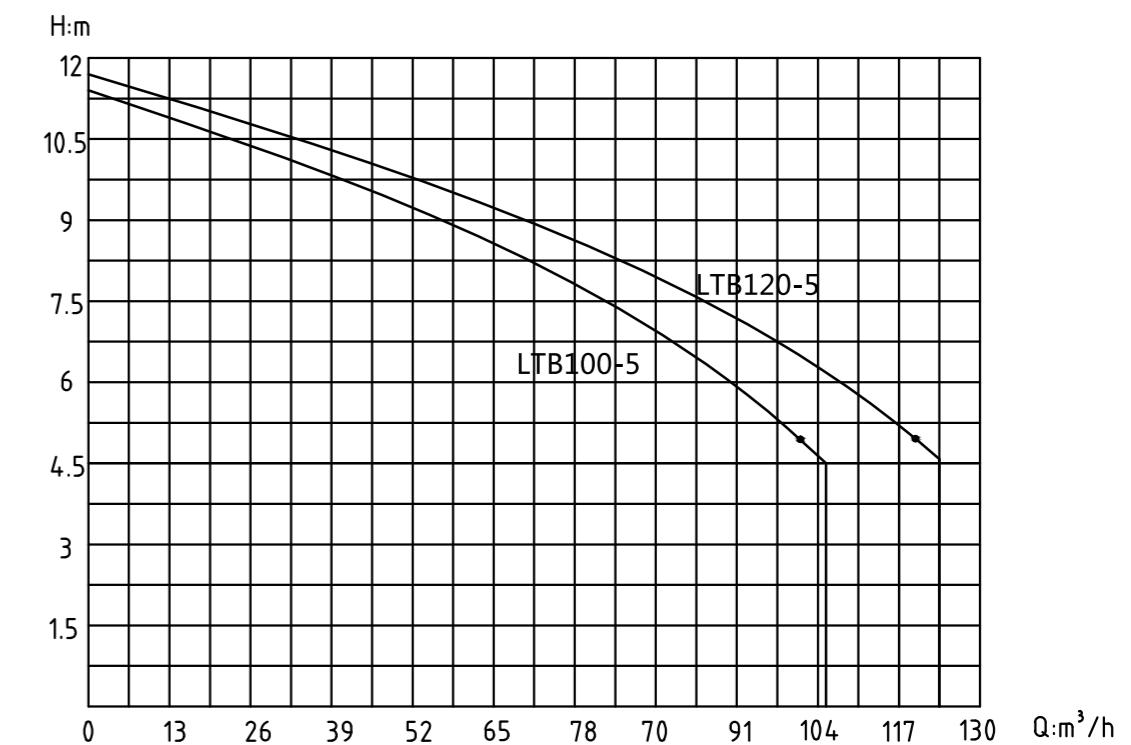
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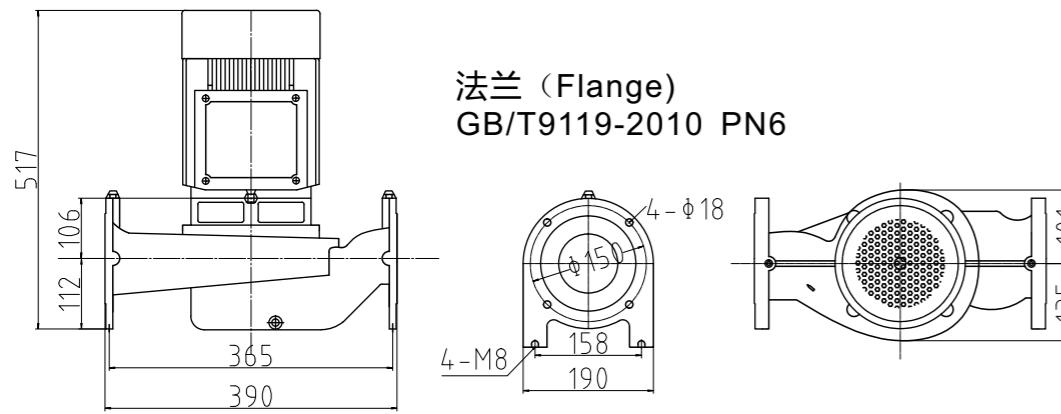
80LTB型谱图(Pattern Pedigree Figure)



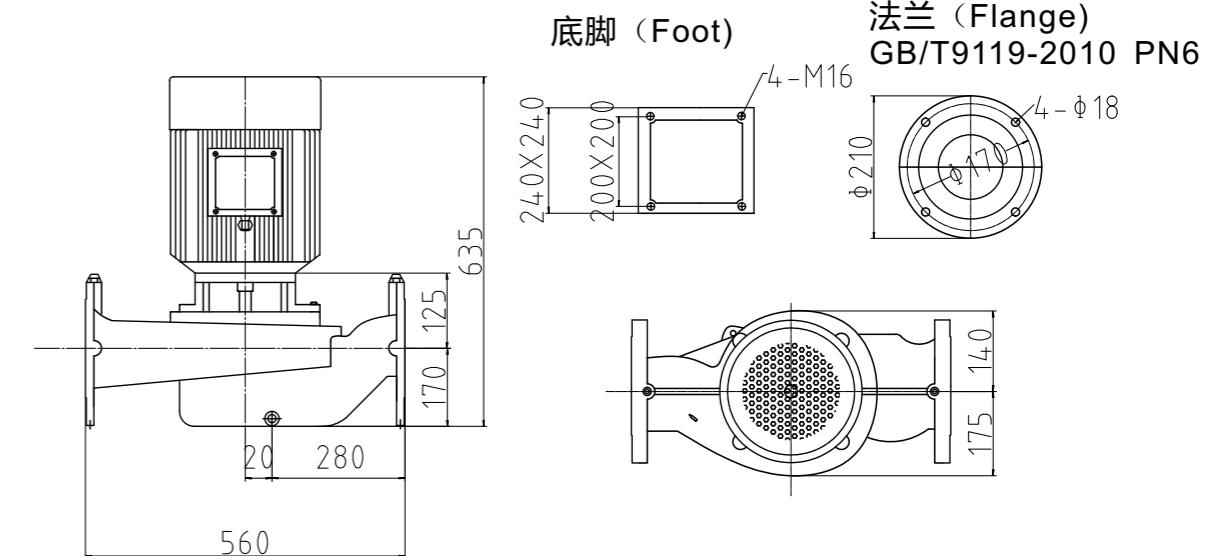
100LTB型谱图(Pattern Pedigree Figure)



80LTB安装尺寸图(Installation Dimensions)



100LTB安装尺寸图(Installation Dimensions)



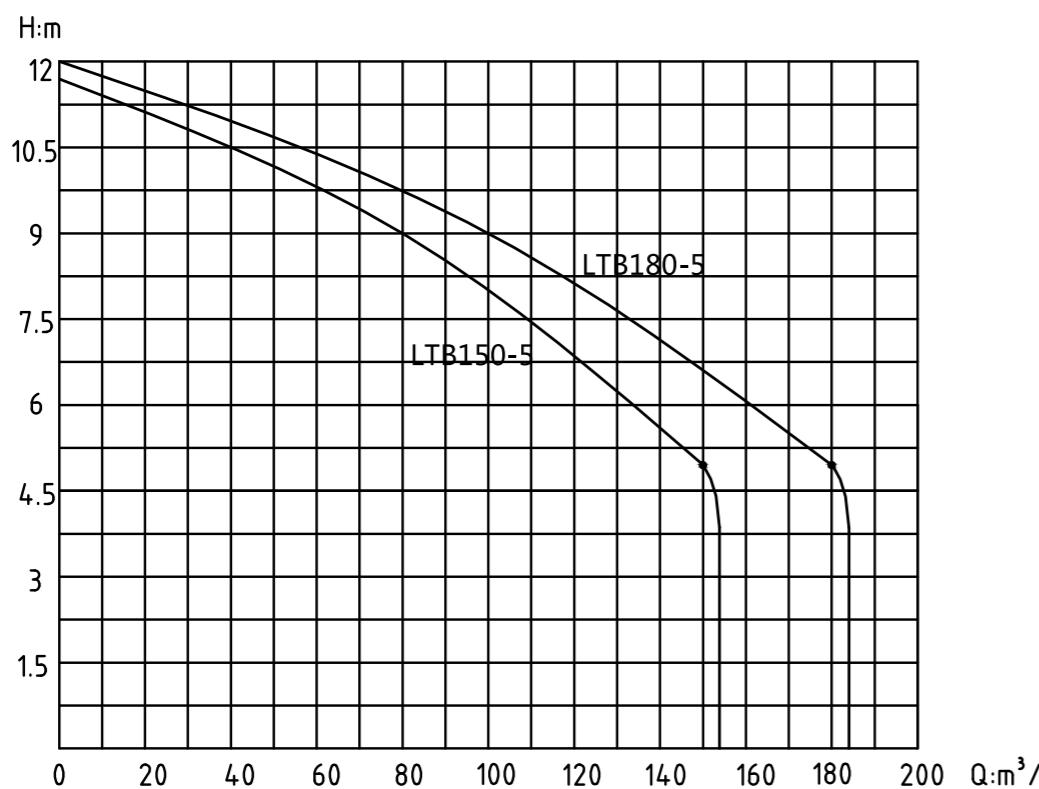


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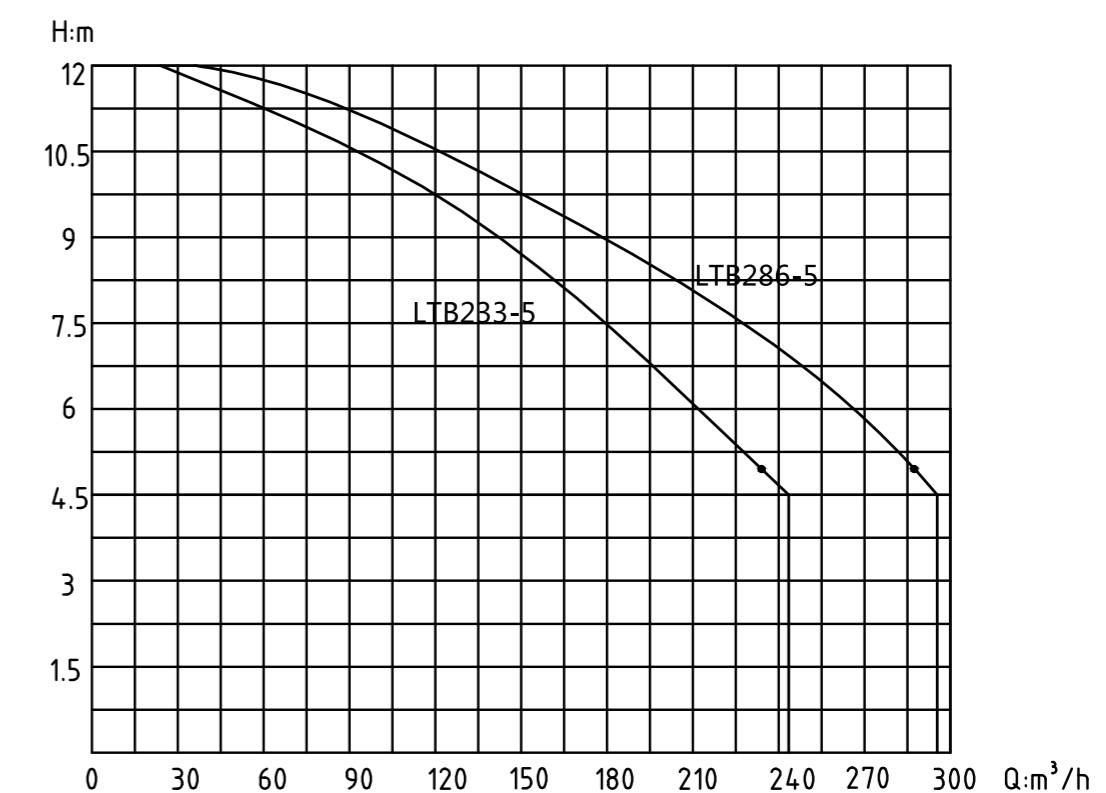
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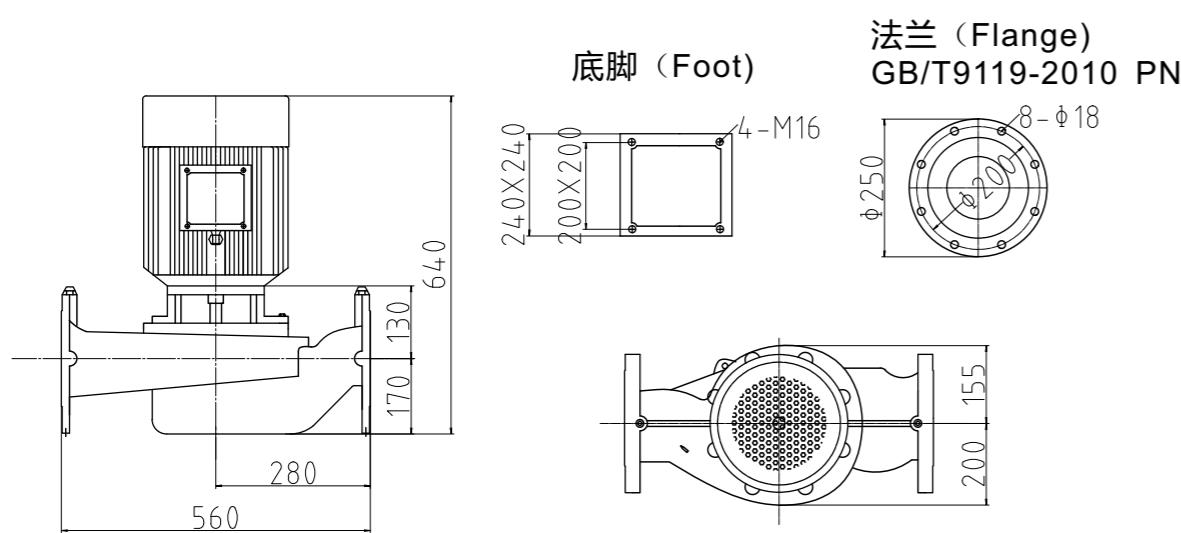
125LTB型谱图(Pattern Pedigree Figure)



150LTB型谱图(Pattern Pedigree Figure)



125LTB安装尺寸图(Installation Dimensions)



150LTB安装尺寸图(Installation Dimensions)

