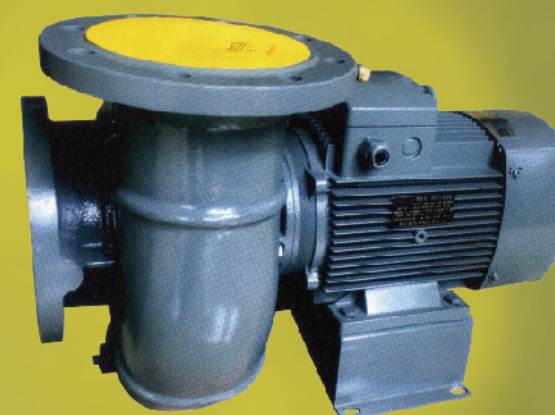




## 上海凯太泵业制造有限公司 SHANGHAI KAITAI PUMP MANUFACTURER CO.,LTD

公司地址：上海市青浦区华新镇纪鹤公路2928弄229号(沪宁高速路嘉松路出口处)  
电话总机：0086-21-59795533 59795656  
传真：0086-21-59795656 邮编：201708  
Http://www.sh-kaitai.com



## KTW卧式系列闭式冷却塔 蒸发冷凝器专用泵

KTW Horizontal Series Pump For Closed Circuit  
Cooling Tower And Evaporative Condenser

上海凯太泵业制造有限公司  
SHANGHAI KAITAI PUMP MANUFACTURER CO.,LTD

### 用途 Application

1. 闭式冷却塔、蒸发式冷凝器水循环系统
2. 各类制冷机组的水循环系统
3. 中央空调供暖制冷等机组的水循环系统

1. closed circuit Cooling Towers system
2. evaporative condenser system
3. closed circle water system

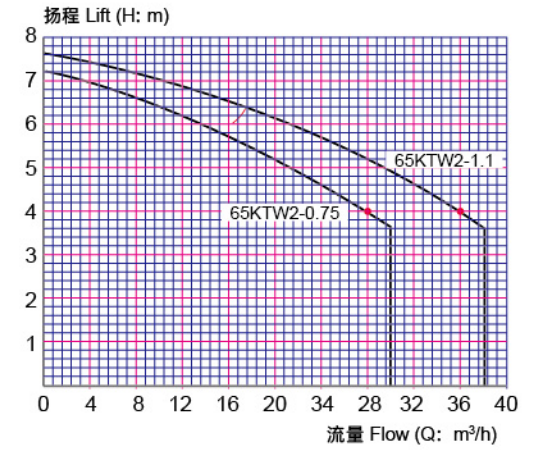
### 外形结构 Outside view



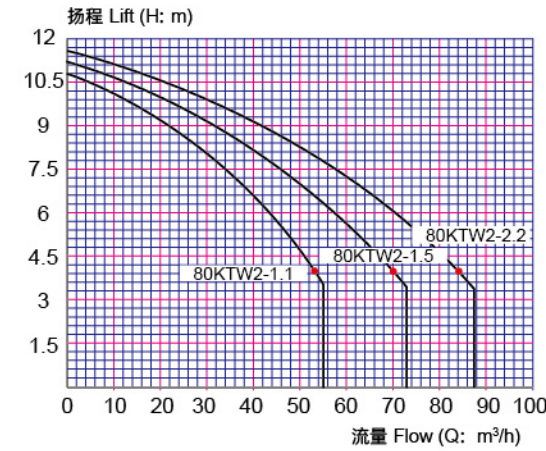
### 规格 Specification

型号 Menu		KTW	
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	高效三相异步电动机 High-Efficiency Motor
	规格	Specification	IE2-GB2-4极系列 IE2 series
	电源方式	Power supply mode	三相380V Three phase current 380V
	绝缘等级	Insulation	F级 Class F
构造 Structure	防护等级	Degree of protection	IP55 IP55
	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 and outdoor
	颜色	Color	中灰色 In gray

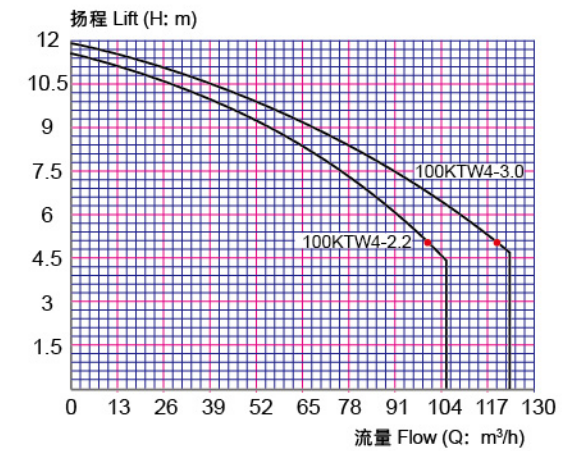
### 65KTW型谱图 Patter Pedigree Figure



### 80KTW型谱图 Patter Pedigree Figure



### 100KTW型谱图 Patter Pedigree Figure

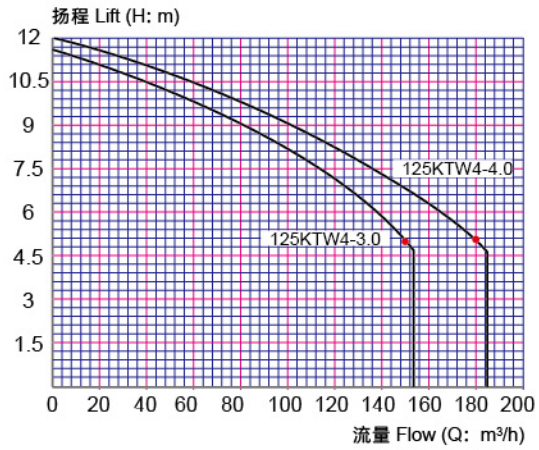


### 性能参数表 Performance Parameters

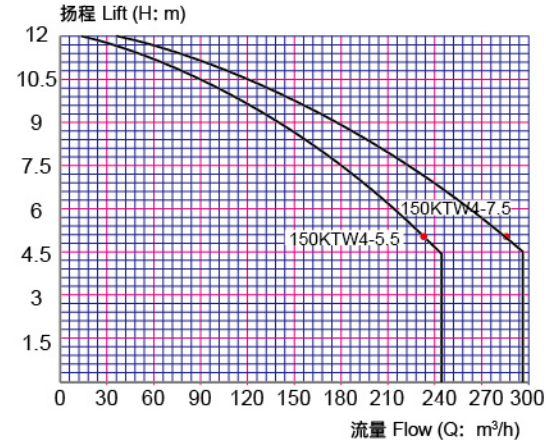
口径 Caliber mm	型号规格 Type	流量 Capacity m³/h	扬程 Head m	额定功率 Power kw	额定转速 Speed r/min	额定电流 Current A	额定电压 Voltage V	电机效率 Efficiency 75%	功率因数 Factor cosφ	重量 Weight Kg
65	65KTW2-0.75	28	4	0.75	2795	1.75	380	78.5	0.84	41.6
	65KTW2-1.1	36	4	1.1	2835	2.5	380	80.6	0.84	42.9
80	80KTW2-1.1	53	4	1.1	2835	2.5	380	80.6	0.84	52
	80KTW2-1.5	70	4	1.5	2890	3.35	380	81.7	0.84	53.3
100	80KTW2-2.2	84	4	2.2	2890	4.75	380	83.7	0.85	55.9
	100KTW4-2.2	100	5	2.2	1435	5.0	380	85	0.79	84.5
125	100KTW4-3.0	120	5	3	1435	6.7	380	86.3	0.79	87.1
	125KTW4-3.0	150	5	3	1435	6.7	380	86.3	0.79	104
150	125KTW4-4.0	180	5	4	1445	8.9	380	87.1	0.79	114.4
	150KTW4-5.5	233	5	5.5	1460	12.1	380	88.2	0.79	201.5
	150KTW4-7.5	286	5	7.5	1460	15.7	380	89.4	0.82	214.5

注：本产品电机可按实际需求定制，本表仅以西门子电机为例仅供参考。

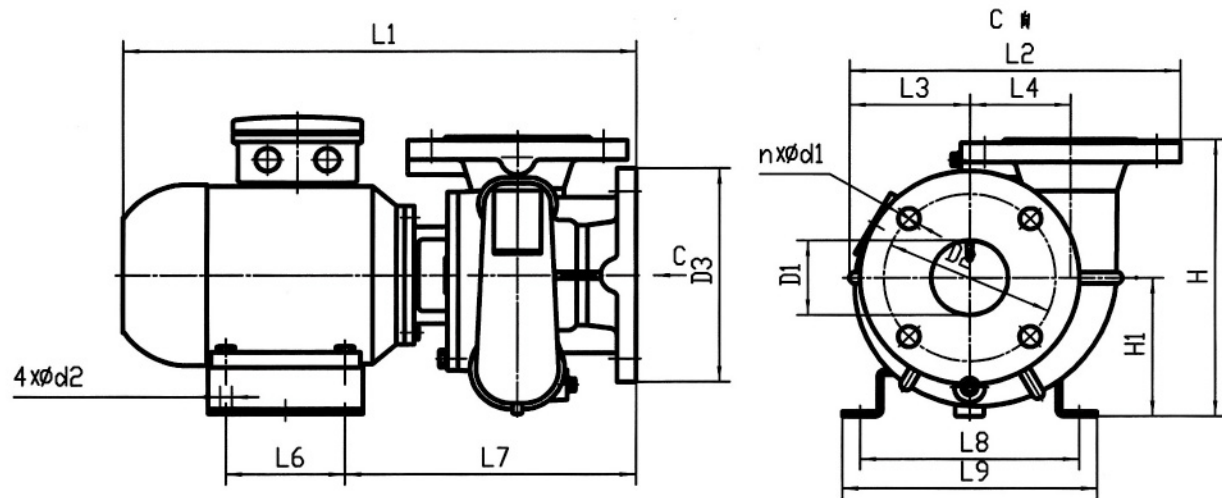
125KTW型谱图 Patter Pedigree Figure



150KTW型谱图 Patter Pedigree Figure



安装尺寸图 Installation Dimensions



型号规格	外形尺寸					安装尺寸						进出水法兰尺寸					
	L1	L2	L3	H	H1	L4	L5	L6	L7	L8	L9	d2	D1	D2	D3	n	d1
65KTW2-1.1	431	278	100	240	120	85	100	100	245	185	215	10	65	145	185	4	4
80KTW2-1.5	459	297	107	270	130	90	110	100	261	200	230	10	80	160	200	8	8
100KTW4-2.2	545	397	152	380	180	135	120	140	293	225	250	12	100	180	220	8	8
125KTW4-3.0	566	450	175	432	212	150	135	140	308	225	250	12	125	210	250	8	18
125KTW4-4.0	315								225								
150KTW4-5.5	652	503	190	473	238	170	150	140	359	310	350	12	150	240	285	8	22

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、泵用于有吸程场合，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 easy to be made 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 in let 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 with 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.

使用方法 Start and stop of the pump

**启动前:**

- 1、应先用手动盘动泵，以使润滑液进入机封端面；
- 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、检查电机与轴承处的温升，应不大于70°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、高温型应先降温，其降温速度小于10°C/min,当温度降至80°C以下才能停车；
- 4、如环境温度低于0°C,应将泵内液体放尽，以免冻裂；
- 5、若泵长期停用，应将泵内液体放尽，最好拆卸清洗包装保管。

### 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 rise at both motor and bearing, which should be 70°C, and deal with it on time in case of an abnormal condition.

### Stopping

1. First lower the temperature with a rate 10 °C/min in case of a higher temperature of the medium and do not stop running until it lowers below 80°C;
2. Close the outlet valve and both vacuum meter and screw cork of the piezometer;
3. Cut off the power;
4. Close the inlet valve;
5. Completely drain out the liquid inside of the pump in case of a long time stop, especially when the ambient temperature is below 0°C, then the liquid must be completely out at once stopping to prevent the parts from being frozen.

### 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.

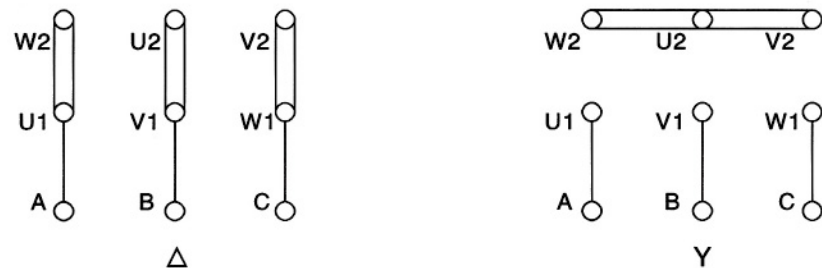
2. 电动机接线盒内接线板上有6个接线柱对应机内绕组引出线，接电源线对应相序，具体标记如下：

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 has an overheat protecting device and a short-circuit protection device. According to the current given by the name-plate, reset the relays for protecting device.

### 水泵电机的维护 Maintenance about the motor

1. 电机应该安装在干燥的环境中，并保持表面清洁，电机周围良好的通风。

Motors should be installed where atmosphere is relatively clean, dry, well ventilated.

2. 当电动机的热保护及短路保护连续发生动作时，应判别故障来自电动机，还是超负荷，或是保护装置整定值太低。清除故障后，才可继续运行。

If the overheat protecting device or short circuit protecting device comes to function continually, judgement must be made to determine whether the motor is over-loaded or the protecting value is set too low. Only after the trouble are eliminated. The motor is allowed to resume operation.

3. 应保证电动机在运行过程中轴承有良好的润滑，一般运行5000小时左右。既应补充或更换润滑脂。运行中若发现轴承过热或沉没脂变质应及时更换润滑脂，更换润滑脂时，应清除旧的润滑脂，并用汽油洗净轴承盖的油槽，然后将润滑脂填充轴承内外圈之间空腔1/2 (对2极) 或2/3 (对4.6.8极)。

Correct lubrication must be maintained during operation Normally, bearing grease should be replace or replenish every 5000 hours of operation(For totally enclosed bearings, no lube change is necessary during their life span). Bearing grease should be replaced when its lubricant deteriorates or when excessive heat of bearing occurs. Before fresh grease is use, bearing and oil slot If bearing cover should be removed the dirty grease and cleaned with gasoline, then filled with lubricant, grease up to a half volume(for 2 pole motors)or 2/3 volume(for 4, 6 and 8 pole motors)of the bearing inner space.