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TAE 蒸发式冷凝器

Evaporative Condenser

注意

使用本公司产品时, 请阅读产品的使用说明书, 并请确认注意事项, 安全检查、清扫等; 由产品的改良引起的样本数据改动, 恕不另行通知; 本样本内容未经同意不得擅自转载、拷贝。

2012年9月 第一版

目录/Contents

- 01 产品构造 / Structure
- 02 运行原理 / Operation Principle
- 03 性能特点 / Feature
- 04 结构介绍 / Construction Details
- 05 客户可选部件 / Optional Accessories
- 07 工程数据 / Engineering Data
- 19 选型步骤 / Selection steps
- 22 基础布置 / Support Layout
- 23 技术方案 / Engineering Consideration

公司介绍

About Us

廷亚致力于冷却设备的开发、设计、生产、销售、咨询与服务。作为冷却设备的优秀制造服务商，我们拥有一批优秀的科研开发、制造人才，并与上海理工大学合作成立了冷却塔研发中心。在开发高性能、高质量产品的同时，与顾客分享我们的经验，以保持对大量已投入运行的冷却塔的支持。

廷亚冷却设备涉足于石油化工、制药、钢铁、汽车、铸造、核电站、发电厂、玻璃制造、IT工厂、食品等领域，与空调系统、感应电炉、连铸设备的结晶器、玻璃熔化炉、空压机、注塑机、焊接设备、涂装设备等配套。我们向各领域的合作伙伴提供专业的技术支持与服务，这为客户带来了实实在在的附加值。廷亚是您在换热领域忠诚的合作伙伴。

廷亚温控长期专注于为工艺过程中流体传热领域提供-120~400℃范围的温度控制系统的工程设计、系统集成、维护及相关工艺和环境配套工程解决方案，具有设计开发、项目配套并施工的能力。我们的优势在于具专业的研发设计团队和丰富的项目经验。

廷亚产品系列 / Products

闭式冷却塔——TCC、TAC、TMC系列
 开式冷却塔——TCT、TAT系列
 蒸发冷凝器——TAE、TME系列
 工业冷却塔——TCI、TAI系列

Tyacht, a specialist in refrigeration and air conditioning, is engaged professionally in the research and development, design, manufacturing, sales, and service. Tyacht established the cooling tower R&D Center with Shanghai University for Science and Technology. While developing high-quality, high-performance products, we like to share our experience with our customers.

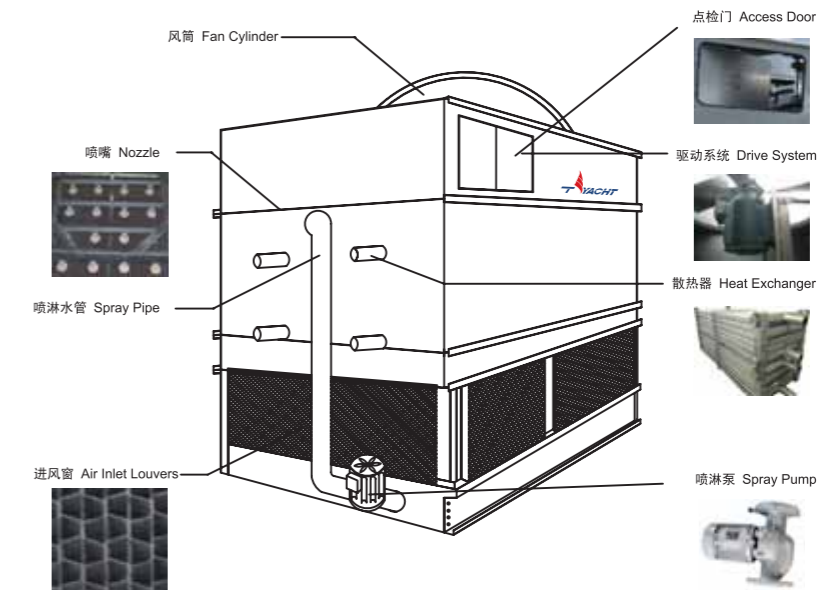
Tyacht cooling equipment are designed for use at the following markets: petrochemical industry, pharmaceutical, steel, automobile, power plant, glass manufacturing, IT factories, food, and air-conditioning system. By providing professional technical support and service, we believe Tyacht is your sincere cooperator in heat-transfer field.

Tyacht Temperature Control has been long engaged professionally in providing engineering solutions for the system of -120 to 400 °C temperature control in the field of industrial process fluid heat transfer. The solutions includes project engineering, system integration, construction, maintenance and related technology and the environment supporting engineering. The company has capacity from concept development to the finally accomplish. Our strength lies in the professional R & D team and rich experience of the project.

Closed Circuit Cooler——TCC, TAC, TMC series
 Cooling Tower——TCT, TAT series
 Evaporative Condenser——TAE, TME series
 Field Erected Cooling Tower——TCI, TAI series

产品构造

Structure



换热效率高

高效的换热器采用独特的换热设计，空气与水在盘管内外侧逆流换热使换热效率达到最佳。整个换热器采用整体热镀锌处理来提高防腐能力。在设备出厂前，每根管子经过三次2.5MPa严格的气压测试。

High-efficient Heat Exchanger

To protect the heat exchanger coil against corrosion, it is hot-dip galvanized, and assembles in unit after 3 times of the most stringent pneumatically tested at 2.5MPa. Air is drawn in though the air inlet louvers at the base of the cooler and travels upward over the coil opposite the water flow.

可靠的驱动系统

采用全封闭电动机，具有一定的超负荷运转能力，且使用寿命长。
 机翼型宽叶片的铝合金通风机，使机组运行噪音低，功耗小，效率高。
 重载型通风机轴承，其L10使用寿命为75,000小时。
 按照电机铭牌功率负荷的150%设计的高强度皮带，使设备运行更可靠。
 内部采用耐腐蚀的铝制风叶和电机皮带轮。

Drive System

Heavy duty bearings.
 Non-corroding cast aluminum sheaves.
 Shaft bearings shall be designed for a minimum L10 life for 75,000 hours.
 High quality belt with 150% of design loading stress.
 Aluminum Fan Blades, corrosion-resistant aluminum blade and motor pulley for internal use.

高效的进风窗

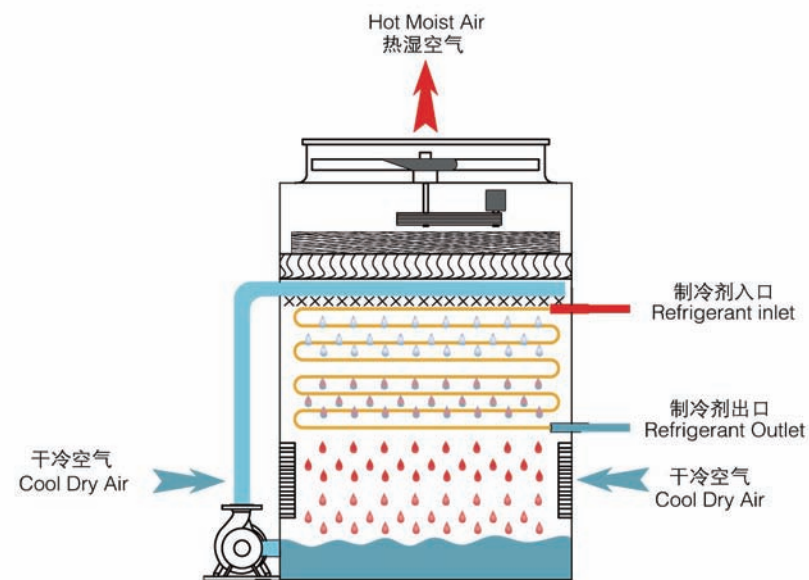
采取三通道独特设计的进风窗可有效减少大气中的尘埃进入水盘，同时减少水槽中积灰、沉淀、细菌和藻类滋生。

Air Inlet Louvers

The Triple-pass design inlet louver can reduce the atmospheric dust enter into water distribution system. And reduce the sedimentation, bacteria of breeding.

运行原理

Operation Principle



运行原理

蒸发式冷凝器可在多种冷却系统中配套应用。根据制冷剂和排热量的不同可选择对应型号的蒸发式冷凝器。蒸发式冷凝器与空冷设备的区别在于被冷却工质会发生相变，且冷凝温度较低，能耗比可降低30%。

TAE蒸发式冷凝器最大特点是空气与喷淋水逆向流动且同时均匀掠过换热器盘管，使换热效率达到最高，所以设计紧凑，塔体较小。

内循环

热的（气态）制冷剂流从上部进入换热器盘管内，管外的喷淋水与空气逆向流动且掠过盘管外壁与管内制冷剂进行换热，冷凝后的液态制冷剂由系统循环泵送再往热源。

外循环

喷淋水由水泵从下部水盘送至上部布水管道，喷淋水与冷凝盘管及下部进入的干冷空气接触换热，通过小部分喷淋水蒸发带走热量，随即喷淋水落入下部水盘再次循环。

Operation Principle

Evaporative condensers provide heat rejection for many types of systems, and the specific application will largely determine which Tyacht Evaporative Condenser is best suited for a project.

Evaporative condensers are applied to provide lower condensing temperatures and compressor kilowatts savings of up to 30 percent when compared with air-cooled systems.

The refrigerant vapor from the compressor to be condensed is circulated through a condensing coil, which is continually wetted on the outside by a re-circulating water system. Cold dry air is pulled or pushed over the coil, causing a small portion of the re-circulating water to evaporate. The evaporation removes heat from the vapor in the coil, causing it to condense.

In a counter-flow evaporative condenser design, the flow of the air is in the opposite direction of the spray water. In Tyacht's counter-flow evaporative condensers, air travels vertically up through the unit while the spray water travels vertically down over the coil.

性能特点

performance Features

能耗低

引风逆流式蒸发冷凝器允许较低的冷凝温度，且风机比离心式风机能耗低，可使整套系统总功耗最小化。

制冷剂耗量少

独特的换热器盘管设计，空气与水在盘管外侧逆流动使换热效率达到最佳。且制冷消耗量小，不存在壳管式冷凝器在夏季冷凝压力过高，采用“放空降压”法来放出不凝性气体，同时排除大量的制冷剂，而造成的制冷剂浪费以及环境的污染。

运行维护操作简便

上部检修通道：塔体上部铰链式检修门，为维护人员塔体上部的维护工作提供了简易的检修通道，使得日常的轴承润滑，驱动部件、水分配系统检修更加方便。

冷水盘检修：便于拆卸的进风格栅使水盘清理工作，零部件拉紧装置、浮球装置等维护更便捷。机组配备电动机吊架，维修平台和安全扶梯，方便检修人员现场维修操作。

占地面积小

引风逆流式蒸发冷凝器由于其结构紧凑、塔体体积小，占地面积小，钢板用量省，相对重量轻，钢支撑的要求量少。

现场安装便利

TAE引风逆流式蒸发冷凝器在工厂内进行加工装配后，分成风机-盘管和水盘两部分运输，至使用地现场安装，避免了整塔运输时的不便，保证品质、节省时间和劳动成本。

运转寿命长

塔体结构材质—多种耐腐蚀材质可满足不同环境及预算要求。
动力驱动部件—采用品牌配置确保设备长时间的稳定运行。

Low Energy Consumption

Induced draft counter-flow evaporative condensers minimize the energy consumption of the entire system by providing lower condensing temperature and providing lower fan energy than centrifugal fan counter-flow units.

Low Refrigerant Charge

The specially designed heat transfer coils are designed to ensure the superior thermal performance. The design features of lower operating refrigerant charge.

Easy Operation And Maintenance

Access to upper section – The large hinged access doors on unit side provide easy access to the unit upper section interior so that the technicians are able to do the bearing lubrication, to check the drive components and to do maintenance on water distribution system.

Access to cold water basin section – The removable air inlet louvers are designed for quick release so that the basin cleaning and maintenance on components such as strainers, float valve and ball are easily available. Maintenance platform and ladder as accessories shall be supplied for convenient inspection.

Smaller Footprint

Induce draft counter-flow design requires less plan area than cross-flow unit. As the condenser size results in less steel used, its reduced weight requires less support structure.

Simple Site Rigging And Assembly

TAE condenser is a factory assembled equipment to make sure the quality. Each unit is transported by two sections—fan-coil section and basin section. In this way, it is easy for assembly at jobsite that saves the local labor cost.

Long Service Life

Material of construction— Various materials are available to meet the corrosion resistance and budgetary requirements of any project.

结构介绍

Construction Details

重载型结构

热浸镀锌钢板结构

独特的风机驱动系统

高性能皮带强度大、寿命长
全封闭风机电动机可延长运转时间
重载型风机轴承，L-10寿命为至少75000小时
内部耐腐蚀的铝制皮带轮
低马力运行的铝合金风机叶

喷淋水分布系统

采用大口径喷嘴，以螺纹连接在喷淋集管上，方便维护。
加压喷雾设计，整套盘管组完全包容于喷淋水流中。
可拆卸的PVC散水管便于清洗，保证防腐性能。

换热器

换热盘管采用整体热浸锌处理来提高防腐能力，并且每根管都经过3次2.5MPa严格的气压测试后才能被安装在设备中。
倾斜式的设计利于气体的排出。

挡水器

高速度、低漂滴除水器，防腐PVC材质，可拆卸式设计能够快速接近盘管。

进风窗

采取3通道设计的进风窗，采用防腐的聚氯乙烯材，可以有效减少大气中的尘埃会进入循环水系统。减少在水槽中积灰，沉淀和细菌孳生。

检修门

电动机座可通过铰链使电动机移动到机组外部，使驱动部件的维修及轴承润滑更方便。

下部水盘

采用耐腐蚀的热浸镀锌钢材。标准水盘附件应包括溢流管、排水管、浮球阀、304不锈钢过滤网。
倾斜式设计易于脏物的清洁，可从四面进入水盘检修。

Heavy-duty Construction

Mill hot-dip galvanized steel panels

Advanced Fan Drive System

Premium quality-solid backed, multi-groove belt for long operation life
Totally enclosed fan motors assures long life
Heavy-duty fan shaft bearings with L-10 life of 75,000 hours
Corrosion resistant cast aluminum sheaves
Low HP aluminum fan blades

Water Distribution System

Water shall be distributed evenly over the coil at a flow rate sufficient to ensure complete wetting of the coil at all times. The spray header shall be constructed of polyvinyl chloride pipe for corrosion resistance. All spray branches shall be removable for cleaning. Large orifice non-clog spray nozzles shall be threaded into spray header to provide easy removal for maintenance.

Heat Transfer Coil

The coils shall be all prime surface steel, be tested at 2.5 MPa air pressure under the water and constructed of hot-dip galvanized steel encased in a steel frame. The coils are designed with sloping tubes for free drainage of liquid refrigerant.

Drift Eliminators

The eliminators shall be constructed entirely of inert PVC in easily handled sections, impervious to rot, decay and biological attack. They shall be removable for quick access to the coil.

PVC Air Inlet Louvers

Air inlet louvers shall be constructed from PVC for corrosion resistance. The louvers shall have triple changes in air direction to prevent splash-out, debris and sunshine.

Hinged Access Door

Swinging access door on unit side, Accessible to drive components maintenance and bearing lubrication.

Cold Water Basin

Slopped cold water basin for easy cleaning Accessible from louver side. The basin shall be constructed of heavy-gauge hot-dip galvanized steel. Standard basin accessories shall include type 304 stainless steel strainers, stainless steel float valve with plastic float ball, overflow and drain connection.

客户可选附件

Optional Accessories

电加热器

冷凝器如果暴露在低于结冰温度的环境中，需要采用相应的保护措施，以防止设备在停运时水盘中的水结冰。选配在工厂内预装的水盘电加热器可使水盘中的水温始终保持不低于4°C的状态，这是一种简单而廉价的保护措施。标准的电加热器是基于环境温度-18°C时设计的。电加热器组件包括电加热器、温度继电器和低水位切断开关。

双速电机

双速电动机能够提供更加精确的容量控制。当负荷减少或随季节变化湿球温度降低时，通风机无需满负荷运行，这时由高速向低速切换即可，同时达到节能及降低噪音的作用。

变频电机

变频电动机用于对风机进行变频驱动从而达到容量控制的目的。变频电动机可实现能量无极调节。

水位控制器

冷却塔可配备电子水位控制器来替代标准的机械式浮球补水装置。其特点是控制水位更精确而无需现场调节。

不锈钢换热盘管

廷亚公司可提供304号不锈钢换热盘管作为可选件。不锈钢材料制造的高效换热器可最大程度地为机组提供防腐保护。

操作平台

冷却塔可配备操作平台以便维护人员能在安全的环境下对驱动部件进行维护。该平台配有一直梯，且现场安装方便。安装位置一般在机组箱体段检修门侧。

爬梯和安全围栏

为方便维护人员到上部检修门检修风机等部件，用户可选配扶梯和安全围栏确保维护人员安全。

电动机吊架

镀锌钢材质的电动机吊架结构结实。利用该辅件可以轻松更换电动机。维护人员只需用一个手扳葫芦即可将电动机落至地面。

Electric Heaters

Evaporative condensers which are exposed to below freezing ambient temperatures require to prevent freezing of the water in the cold water basin when then unit is idle. Factory-installed electric immersion heaters, which maintain 4 °C or above water temperature, are a simple and inexpensive way of providing such protection.

Two Hpeed Fan Motors

Two speed fan motors can provide an excellent means of capacity control. In periods of reduced wet bulb temperatures, the fans can operate at low speed. In addition, the sound levels of the units will be greatly reduced at low speed.

Inverter Duty Fan Motors

Inverter duty fan motors are available for condenser applications which use variable frequency drive systems for capacity control.

Electric Water Level Control Package

The electric water level control replaces the standard mechanical make-up valve when a more precise water level control is required. This package consists of a conductance-acturate level control mounted in the basin and a solenoid valve in the make-up water line.

Stainless Steel Coils

Tyacht offers the option of type 304 stainless steel coils for the ultimate corrosion protection.

External Service Platforms

For external service, access door platforms can be added to the unit when purchased or as an aftermarket item. The service platforms include vertical ladders which are designed for easy field installation.

Slopped Ladders And Safety Cage

In the event the end-user elects to provide access to the fan deck, TAE condenser can be furnished with slopped ladders extending from the access door. Safety cages are also available.

Motor Davit With Base

In the event that a fan motor needs to be replaced, a motor davit is available from which a chain fall can be mounted to easily lower the motor to the ground.

Optional Stainless Steel Construction

Cold water basin, Steel panels are constructed of type 304 or 316 stainless steel with higher corrosion resistance.

不锈钢结构

水盘、外板可由304或316不锈钢材料制成。相对其他结构材料，不锈钢具有更高的耐腐蚀性。

多路循环盘管

多路循环盘管满足不同系统冷凝（冷却）要求。如某个系统在冷凝制冷剂同时，需冷却压缩机水套的循环水，这时冷凝器可配多路循环盘管一部分用于冷凝制冷剂，其他用于冷却水套循环水。

消声器

水盘消音器安装在机组水盘中，可大大减少水盘内落水噪音。

震动跳脱开关

冷却塔可配备机械式或电子式的震动跳脱开关，以便有效防止设备由于机械驱动系统的振动过大而出现的故障。

Multiple Circuit Coils

Multiple circuit coils are generally required to match various systems such as split system or individual compressor systems. The quantity of circuits, capacity per circuit, and desired connection size should be specified when requesting this option.

Water Silencer

The water silencer option, constructed of PVC sections, is located in the falling water area of the cold water basin. This option will reduce the overall sound levels around 4 to 7 dBA, measured 1.5 m from the side or end of the unit.

Vibration Cut-off Switch

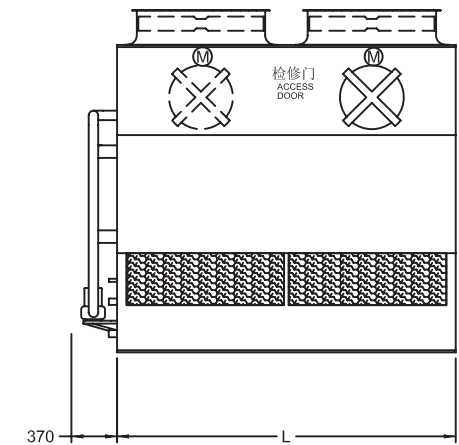
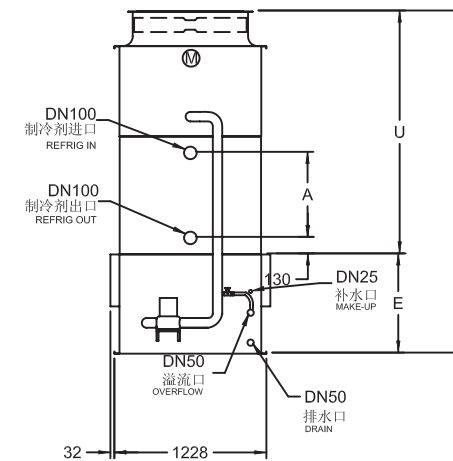
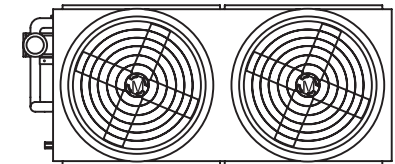
Mechanical and electronic vibration cut-off switch could prevent the equipment from breakdown due to excessive vibration from mechanical drive system.



- ① 不锈钢换热盘管 Stainless Steel Coils
- ② 水位控制器 Electric Water Level Control Package
- ③ 电加热器 Electric Heaters
- ④ 操作平台 Operating platform

工程数据

Engineering Data



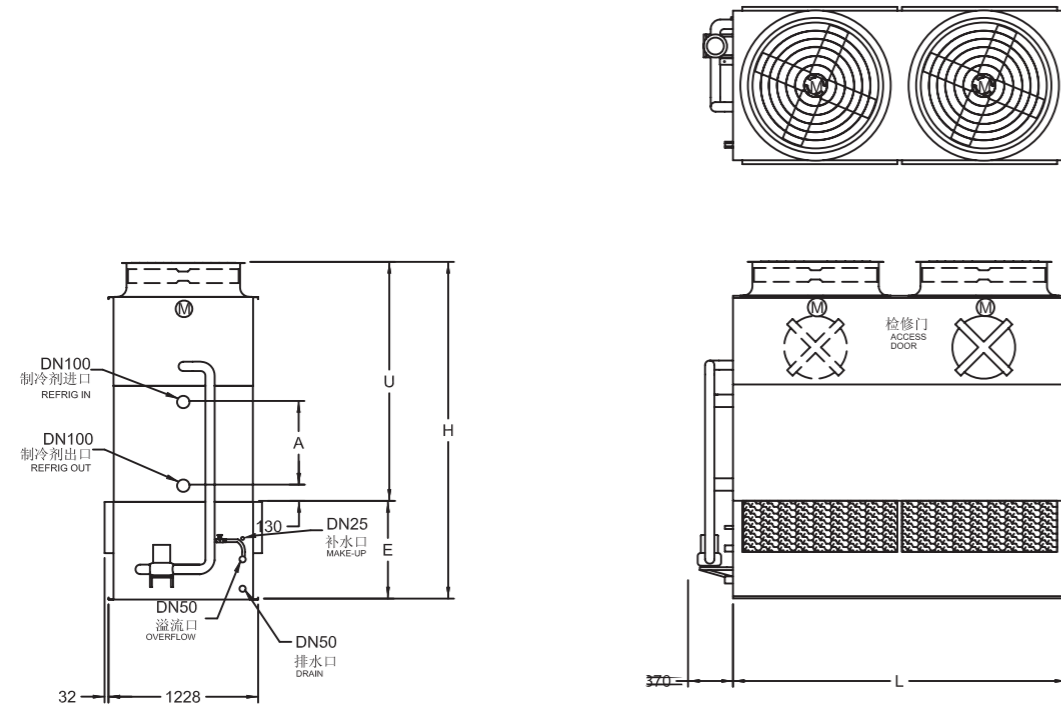
TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans KW	风机 Pump KW	电加热器 Heater KW
	净重 Shipping	运行 Opening	H	U	E	A	L			
TAE-B42	1198	1747	2570	1770	800	500	1830	2.2	0.55	3
TAE-B55	1386	1955	2760	1960	800	690	1830	4	0.55	3
TAE-B68	1584	2168	2950	2150	800	880	1830	4	0.55	3

注:

- 表中电热器的功率是基于-18℃的大气温度而设计。
- 表中的参数仅供参考，如需其他型号请直接与公司联系：由于产品的改进部分数据可能改变，恕不另行通知。

Note:

- The HP of electric heater is determined per the -18℃ ambient temperature.
- As for detail information on above chart, please consult us. The data might be subjected to amendment. This will not be informed.



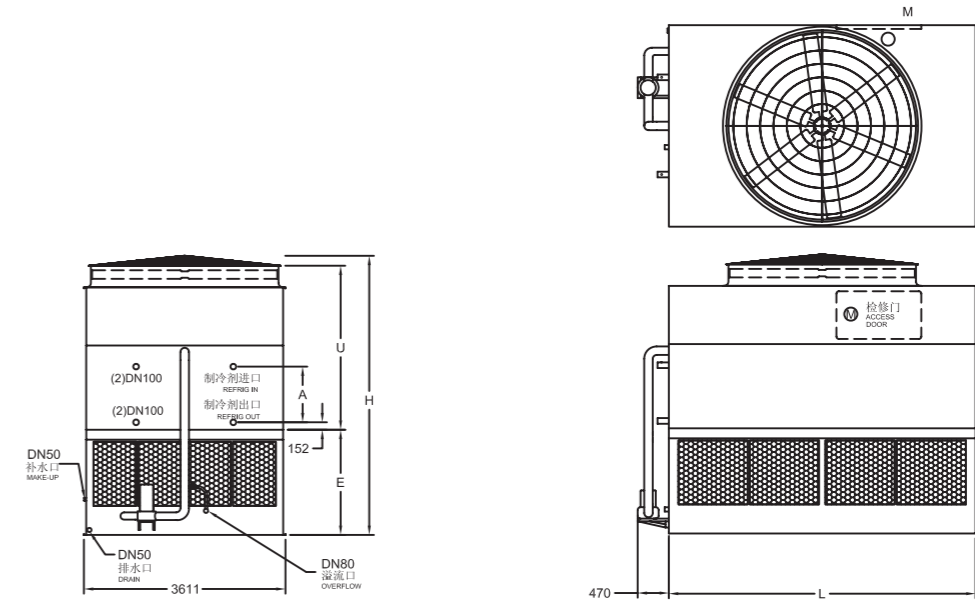
TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans KW	风机 Pump KW	电加热器 Heater KW
	净重 Shipping	运行 Opening	H	U	E	A	L			
TAE-C76	1767	2559	2570	1770	800	500	2730	(2)2.2	0.75	4
TAE-C89	2034	2851	2760	1960	800	690	2730	(2)2.2	0.75	4
TAE-C102	2322	3168	2950	2150	800	880	2730	(2)2.2	0.75	4
TAE-D115	2534	3609	2760	1960	800	690	3650	(2)2.2	1.1	5
TAE-D127	2921	4034	2950	2150	800	880	3650	(2)2.2	1.1	5
TAE-D140	2935	4049	2950	2150	800	880	3650	(2)4.0	1.1	5

注:

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- 2、表中的参数仅供参考，如需其他型号请直接与公司联系：由于产品的改进部分数据可能改变，恕不另行通知。

Note:

- 1.The HP of electric heater is determined perthe -18℃ ambiart temperature.
- 2.As for detail information on above chart,please consult us. The data might be subjected to amendment.This will not be informed.



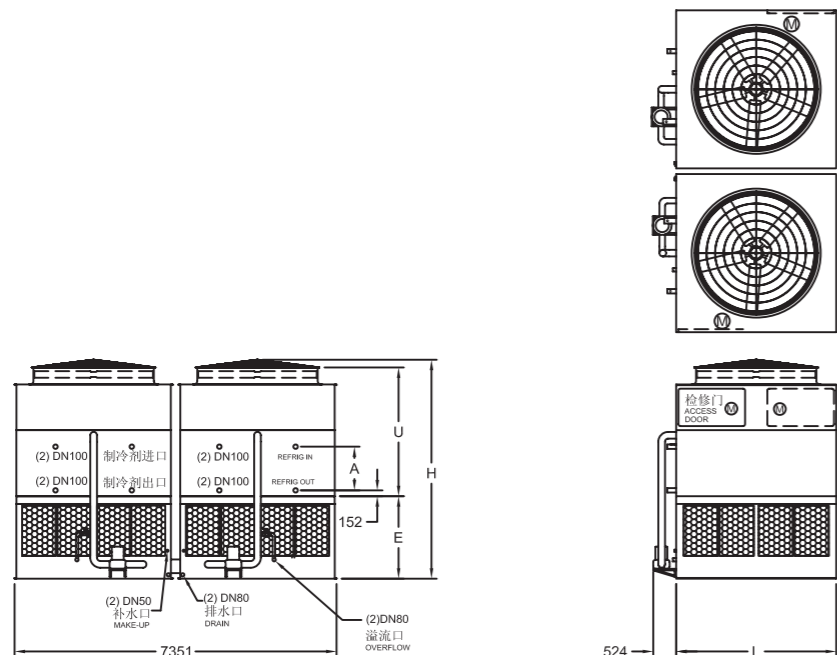
TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans KW	风机 Pump KW	电加热器 Heater KW
	净重 Shipping	运行 Opening	H	U	E	A	L			
TAE-V389	7722	10880	4478	2720	1580	780	3650	15	4	(2) 6
TAE-V365	7702	10860	4478	2720	1580	780	3650	11	4	(2) 6
TAE-V404	7747	10905	4478	2720	1580	780	3650	18.5	4	(2) 6
TAE-V429	8776	12048	4698	2940	1580	1000	3650	15	4	(2) 6
TAE-V446	8796	12073	4698	2940	1580	1000	3650	18.5	4	(2) 6
TAE-V459	8841	12118	4698	2940	1580	1000	3650	22	4	(2) 6
TAE-V476	10083	13469	4908	3150	1580	1210	3650	22	4	(2) 6
TAE-V497	10192	13578	4908	3150	1580	1210	3650	30	4	(2) 6
TAE-W464	8846	12568	4628	2720	1730	780	4260	22	4	(2) 7
TAE-W474	10004	13860	4848	2940	1730	1000	4260	15	4	(2) 7
TAE-W495	10034	13885	4848	2940	1730	1000	4260	18.5	4	(2) 7
TAE-W512	11474	15459	5058	3150	1730	1210	4260	18.5	4	(2) 7
TAE-W528	11504	15494	5058	3150	1730	1210	4260	22	4	(2) 7
TAE-W551	11623	15607	5058	3150	1730	1210	4260	30	4	(2) 7
TAE-X547	11068	15840	4778	2720	1880	780	5490	15	5.5	(2) 9
TAE-X581	11093	15860	4778	2720	1880	780	5490	18.5	5.5	(2) 9
TAE-X608	11142	15909	4778	2720	1880	780	5490	22	5.5	(2) 9
TAE-X637	12702	17642	4998	2940	1880	1000	5490	18.5	5.5	(2) 9
TAE-X666	12751	17691	4998	2940	1880	1000	5490	22	5.5	(2) 9
TAE-X687	14588	19701	5218	3160	1880	1210	5490	22	5.5	(2) 9
TAE-X705	12870	17810	4998	2940	1880	1000	5490	30	5.5	(2) 9
TAE-X728	14702	19815	5218	3160	1880	1210	5490	30	5.5	(2) 9
TAE-X760	14731	19845	5218	3160	1880	1210	5490	37	5.5	(2) 9

注:

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Note:

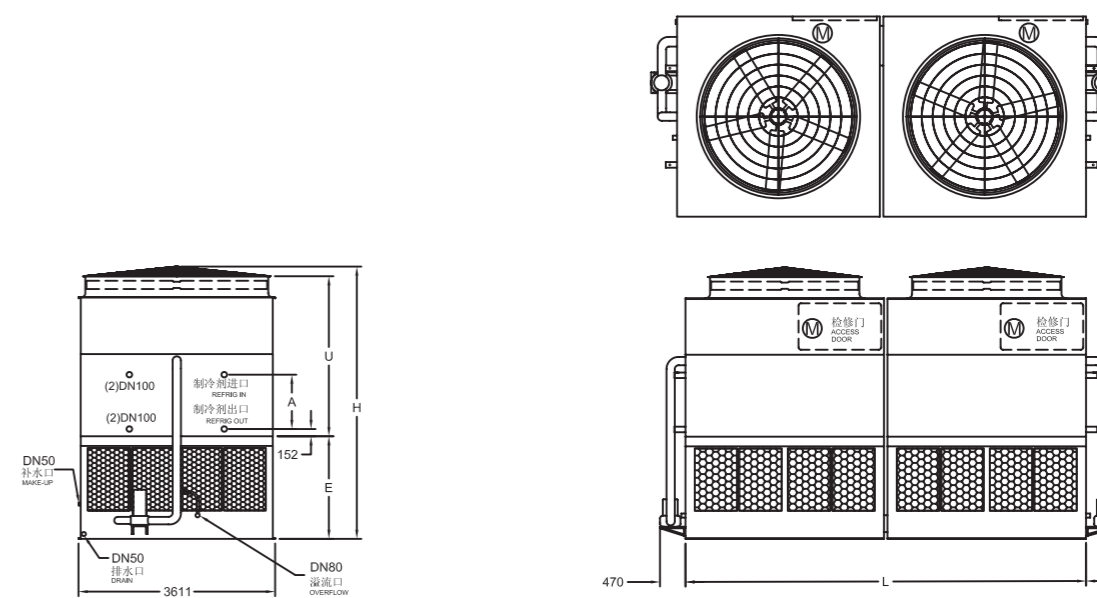
- 1.The HP of electric heater is determined perthe -18℃ ambiart temperature.
- 2.As for detail information on above chart,please consult us. The data might be subjected to amendment.This will not be informed.



TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans KW	风机 Pump KW	电加热器 Heater KW
	净重 Shipping	运行 Opening	H	U	E	A	L			
TAE-V731R02	15375	21691	4778	2720	1880	780	3650	(2)11.0	(2)4.0	(4) 6
TAE-V777R02	15419	21735	4778	2720	1880	780	3650	(2)15.0	(2)4.0	(4) 6
TAE-V835R02	19958	26730	5218	3160	1880	1210	3650	(2)11.0	(2)4.0	(4) 6
TAE-V858R02	17523	24072	4998	2940	1880	1000	3650	(2)15.0	(2)4.0	(4) 6
TAE-V892R02	17568	24116	4998	2940	1880	1000	3650	(2)18.5	(2)4.0	(4) 6
TAE-V918R02	17657	24208	4998	2940	1880	1000	3650	(2)22.0	(2)4.0	(4) 6
TAE-V952R02	20137	26908	5218	3160	1880	1210	3650	(2)22.0	(2)4.0	(4) 6
TAE-V994R02	20359	27131	5218	3160	1880	1210	3650	(2)30.0	(2)4.0	(4) 6
TAE-W992R02	20102	27804	5298	2930	2190	1000	4260	(2)18.5	(2)4.0	(4) 7
TAE-W1026R02	22983	30957	5518	3150	2190	1210	4260	(2)18.5	(2)4.0	(4) 7
TAE-W1056R02	23047	31022	5518	3150	2190	1210	4260	(2)22.0	(2)4.0	(4) 7
TAE-W1102R02	23280	31254	5518	3150	2190	1210	4260	(2)30.0	(2)4.0	(4) 7
TAE-X1015R02	19102	28299	5158	2490	2490	570	5490	(2)22.0	(2)5.5	(4) 9
TAE-X1094R02	22275	31809	5374	2706	2490	780	5490	(2)15.0	(2)5.5	(4) 9
TAE-X1163R02	22320	31858	5374	2706	2490	780	5490	(2)18.5	(2)5.5	(4) 9
TAE-X1215R02	22419	31957	5374	2706	2490	780	5490	(2)22.0	(2)5.5	(4) 9
TAE-X1275R02	25542	35422	5590	2922	2490	1000	5490	(2)18.5	(2)5.5	(4) 9
TAE-X1331R02	25641	35521	5590	2922	2490	1000	5490	(2)22.0	(2)5.5	(4) 9
TAE-X1410R02	25874	35754	5590	2922	2490	1000	5490	(2)30.0	(2)5.5	(4) 9
TAE-X1456R02	29537	39768	5828	3160	2490	1210	5490	(2)30.0	(2)5.5	(4) 9
TAE-X1521R02	29591	39818	5828	3160	2490	1210	5490	(2)37.0	(2)5.5	(4) 9

注:
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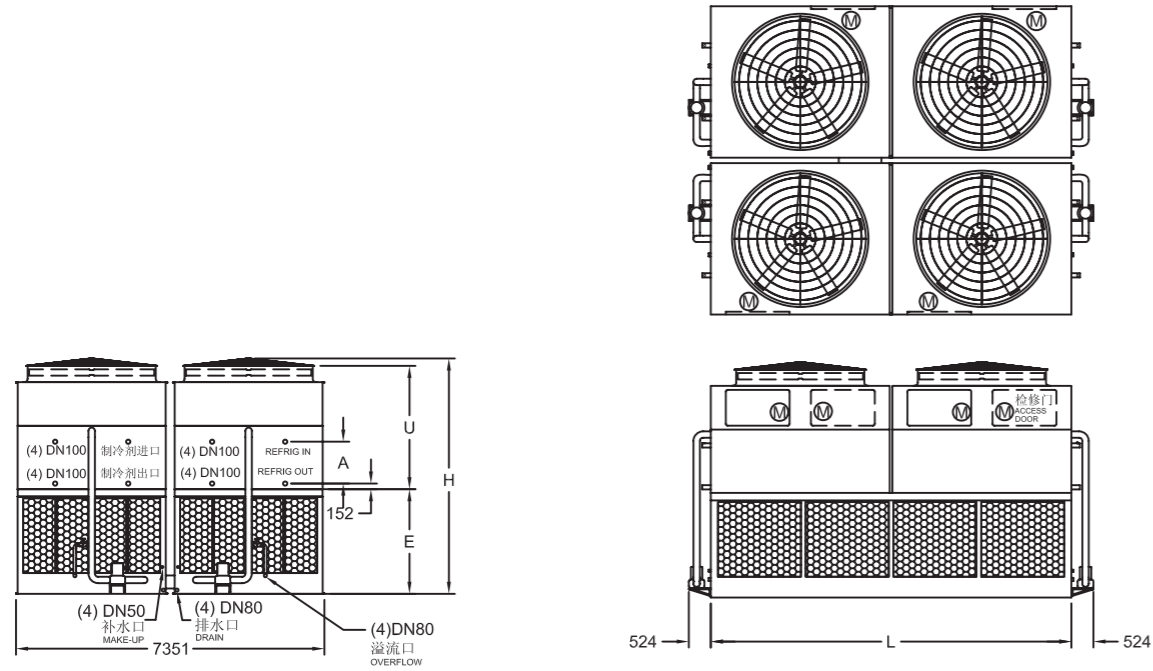
Note:
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 2.As for detail information on above chart,please consult us. The data might be subjected to amendment.This will not be informed.



TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans KW	风机 Pump KW	电加热器 Heater KW
	净重 Shipping	运行 Opening	H	U	E	A	L			
TAE-V732R02	15385	21701	4778	2720	1880	780	7370	(2)11.0	(2)4.0	(4) 6
TAE-V778R02	15429	21745	4778	2720	1880	780	7370	(2)15.0	(2)4.0	(4) 6
TAE-V809R02	15474	21790	4778	2720	1880	780	7370	(2)18.5	(2)4.0	(4) 6
TAE-V836R02	19963	26735	5218	3160	1880	1210	7370	(2)11.0	(2)4.0	(4) 6
TAE-V859R02	17533	24077	4998	2940	1880	1000	7370	(2)15.0	(2)4.0	(4) 6
TAE-V893R02	17577	24121	4998	2940	1880	1000	7370	(2)18.5	(2)4.0	(4) 6
TAE-V919R02	17667	24215	4998	2940	1880	1000	7370	(2)22.0	(2)4.0	(4) 6
TAE-V925R02	20052	26839	5218	3160	1880	1210	7370	(2)18.5	(2)4.0	(4) 6
TAE-V953R02	20147	26918	5218	3160	1880	1210	7370	(2)22.0	(2)4.0	(4) 6
TAE-V995R02	20369	27141	5218	3160	1880	1210	7370	(2)30.0	(2)4.0	(4) 6
TAE-W993R02	20082	27789	5298	2930	2190	1000	8590	(2)18.5	(2)4.0	(4) 7
TAE-W1027R02	22963	30942	5518	3150	2190	1210	8590	(2)18.5	(2)4.0	(4) 7
TAE-W1057R02	23027	31002	5518	3150	2190	1210	8590	(2)22.0	(2)4.0	(4) 7
TAE-W1103R02	23260	31235	5518	3150	2190	1210	8590	(2)30.0	(2)4.0	(4) 7
TAE-X1016R02	19087	28279	4868	2500	2190	570	11040	(2)22.0	(2)5.5	(4) 9
TAE-X1095R02	22255	31794	5088	2720	2190	780	11040	(2)15.0	(2)5.5	(4) 9
TAE-X1164R02	22300	31838	5088	2720	2190	780	11040	(2)18.5	(2)5.5	(4) 9
TAE-X1216R02	22399	31937	5088	2720	2190	780	11040	(2)22.0	(2)5.5	(4) 9
TAE-X1276R02	25522	35402	5298	2930	2190	1000	11040	(2)18.5	(2)5.5	(4) 9
TAE-X1332R02	25621	35501	5298	2930	2190	1000	11040	(2)22.0	(2)5.5	(4) 9
TAE-X1411R02	25859	35734	5298	2930	2190	1000	11040	(2)30.0	(2)5.5	(4) 9
TAE-X1457R02	29522	39749	5518	3150	2190	1210	11040	(2)30.0	(2)5.5	(4) 9
TAE-X1522R02	29576	39803	5518	3150	2190	1210	11040	(2)37.0	(2)5.5	(4) 9

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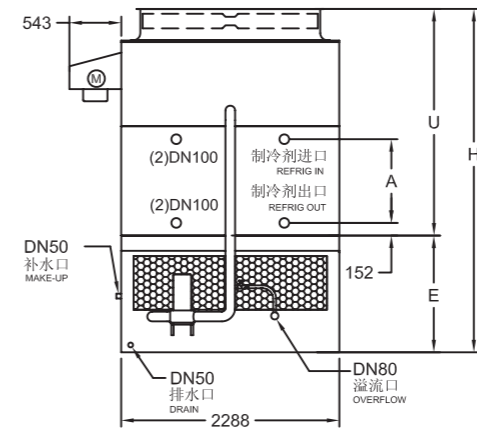
Note:
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TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans	风机 Pump	电加热器 Heater
	净重 Shipping	运行 Opening	H	U	E	A	L	KW	KW	KW
TAE-V1603R04	35204	48307	5608	2762	2490	1000	7370	(4)11.0	(4)4.0	(4) 12
TAE-V1707R04	35294	48401	5608	2762	2490	1000	7370	(4)15.0	(4)4.0	(4) 12
TAE-V1776R04	35388	48490	5608	2762	2490	1000	7370	(4)18.5	(4)4.0	(4) 12
TAE-V1841R04	40343	53896	5828	2982	2490	1210	7370	(4)18.5	(4)4.0	(4) 12
TAE-V1896R04	40521	54074	5828	2982	2490	1210	7370	(4)22.0	(4)4.0	(4) 12
TAE-V1979R04	40971	54524	5828	2982	2490	1210	7370	(4)30.0	(4)4.0	(4) 12
TAE-W1924R04	41362	55846	5608	2940	2490	1000	8590	(4)18.5	(4)4.0	(4) 15
TAE-W1982R04	40496	55970	5608	2940	2490	1000	8590	(4)22.0	(4)4.0	(4) 15
TAE-W2050R04	46263	62276	5828	3160	2490	1210	8590	(4)22.0	(4)4.0	(4) 15
TAE-W2140R04	46728	62741	5828	3160	2490	1210	8590	(4)30.0	(4)4.0	(4) 15
TAE-X2124R04	44674	63840	5388	2720	2490	780	11040	(4)15.0	(4)5.5	(4) 18
TAE-X2258R04	44674	63929	5388	2720	2490	780	11040	(4)18.5	(4)5.5	(4) 18
TAE-X2358R04	44961	64127	5388	2720	2490	780	11040	(4)22.0	(4)5.5	(4) 18
TAE-X2474R04	51213	71057	5608	2940	2490	1000	11040	(4)18.5	(4)5.5	(4) 18
TAE-X2584R04	51406	71255	5608	2940	2490	1000	11040	(4)22.0	(4)5.5	(4) 18
TAE-X2738R04	51876	71726	5608	2940	2490	1000	11040	(4)30.0	(4)5.5	(4) 18
TAE-X2826R04	59202	79754	5828	3160	2490	1210	11040	(4)30.0	(4)5.5	(4) 18
TAE-X2950R04	59311	79848	5828	3160	2490	1210	11040	(4)37.0	(4)5.5	(4) 18

注:
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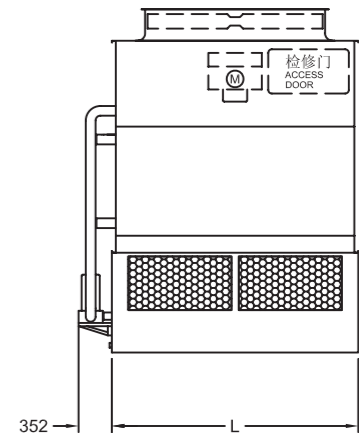
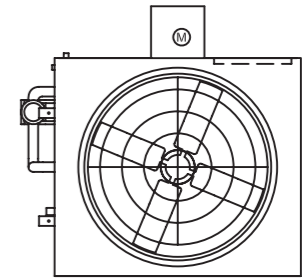
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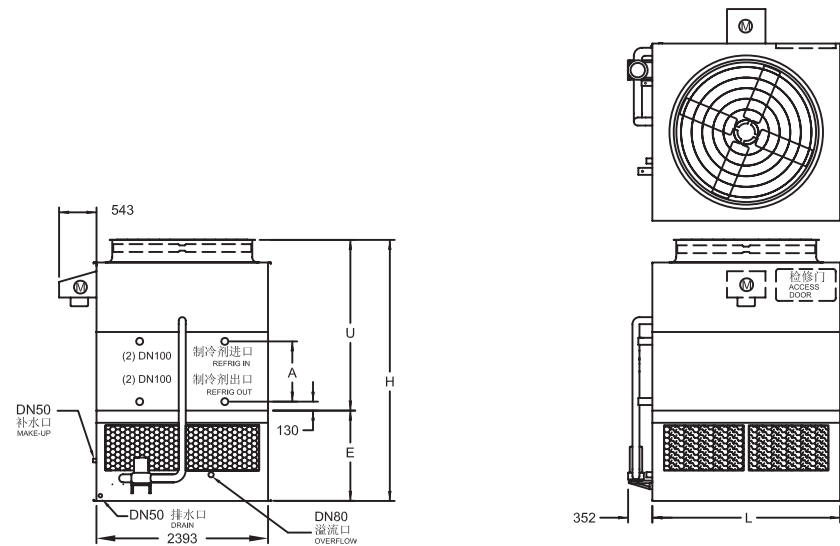


TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans	风机 Pump	电加热器 Heater
	净重 Shipping	运行 Opening	H	U	E	A	L	KW	KW	KW
TAE-L145	3703	4896	3400	2180	1220	690	2580	4	3	6
TAE-L159	3722	4910	3400	2180	1220	690	2580	5.5	3	6
TAE-L169	3737	4925	3400	2180	1220	690	2580	7.5	3	6
TAE-L160	4232	5465	3590	2370	1220	880	2580	4	3	6
TAE-L188	4262	5495	3590	2370	1220	880	2580	7.5	3	6
TAE-L203	4287	5524	3590	2370	1220	880	2580	11	3	6
TAE-L166	4757	6034	3780	2560	1220	1070	2580	4	3	6
TAE-L210	4816	6093	3780	2560	1220	1070	2580	11	3	6

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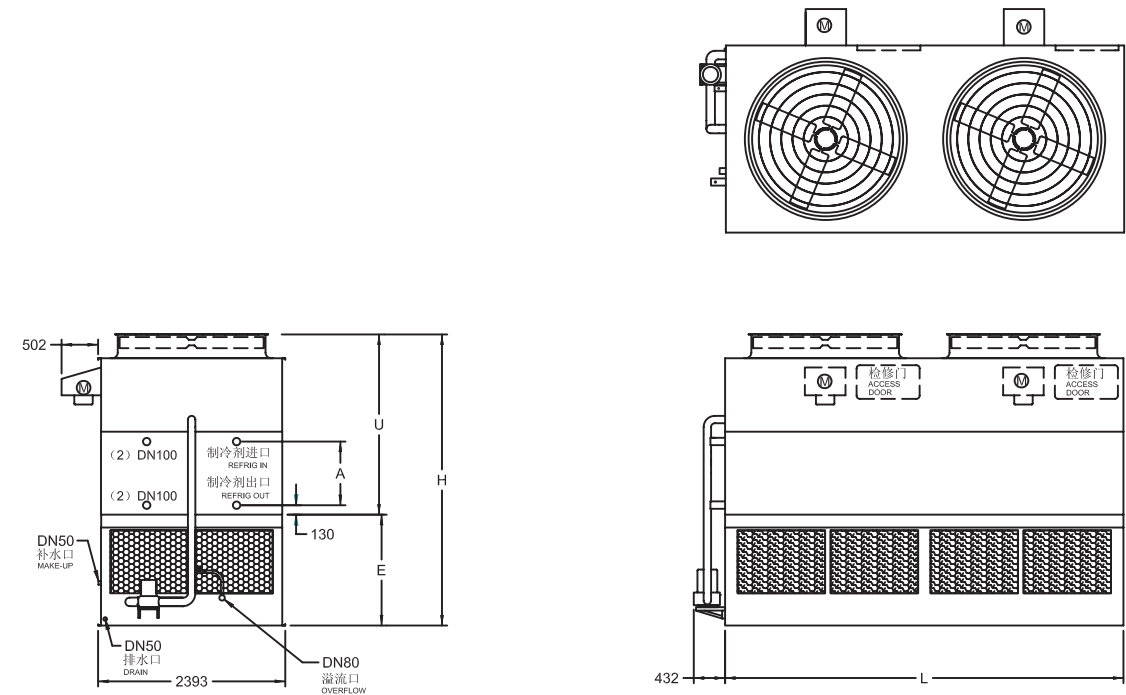
TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans KW	风机 Pump KW	电加热器 Heater KW
	净重 Shipping	运行 Opening	H	U	E	A	L			
TAE-E173	4044	5376	3610	2290	1320	690	2730	5.5	3	6
TAE-E191	4613	5994	3800	2480	1320	880	2730	5.5	3	6
TAE-E198	5168	6603	3990	2670	1320	1070	2730	5.5	3	6
TAE-F214	4668	6237	3610	2290	1320	690	3190	7.5	3	7
TAE-F233	4703	6267	3610	2290	1320	690	3190	11	3	7
TAE-F237	5336	6965	3800	2480	1320	880	3190	7.5	3	7
TAE-F258	5366	6994	3800	2480	1320	880	3190	11	3	7
TAE-F273	5391	7019	3800	2480	1320	880	3190	15	3	7
TAE-F282	6034	7727	3990	2670	1320	1070	3190	15	3	7
TAE-G256	5148	6975	3610	2290	1320	690	3650	11	3	(2) 4
TAE-G259	5831	7732	3800	2480	1320	880	3650	7.5	3	(2) 4
TAE-G300	5881	7786	3800	2480	1320	880	3650	15	3	(2) 4
TAE-G267	6579	8554	3990	2670	1320	1070	3650	7.5	3	(2) 4
TAE-G293	6608	8588	3990	2670	1320	1070	3650	11	3	(2) 4
TAE-G324	6648	8623	3990	2670	1320	1070	3650	18.5	3	(2) 4
TAE-H287	5831	7960	3720	2290	1430	690	4260	11	3	(2) 5
TAE-H305	5856	7984	3720	2290	1430	690	4260	15	3	(2) 5
TAE-H318	5871	7999	3720	2290	1430	690	4260	18.5	3	(2) 5
TAE-H316	6658	8875	3910	2480	1430	880	4260	11	3	(2) 5
TAE-H335	6683	8895	3910	2480	1430	880	4260	15	3	(2) 5
TAE-H349	6697	8910	3910	2480	1430	880	4260	18.5	3	(2) 5
TAE-H326	7524	9826	4100	2670	1430	1070	4260	11	3	(2) 5
TAE-H347	6658	9846	4100	2670	1430	1070	4260	15	3	(2) 5
TAE-H361	7564	9860	4100	2670	1430	1070	4260	18.5	3	(2) 5
TAE-H374	7574	9870	4100	2670	1430	1070	4260	22	3	(2) 5

注:

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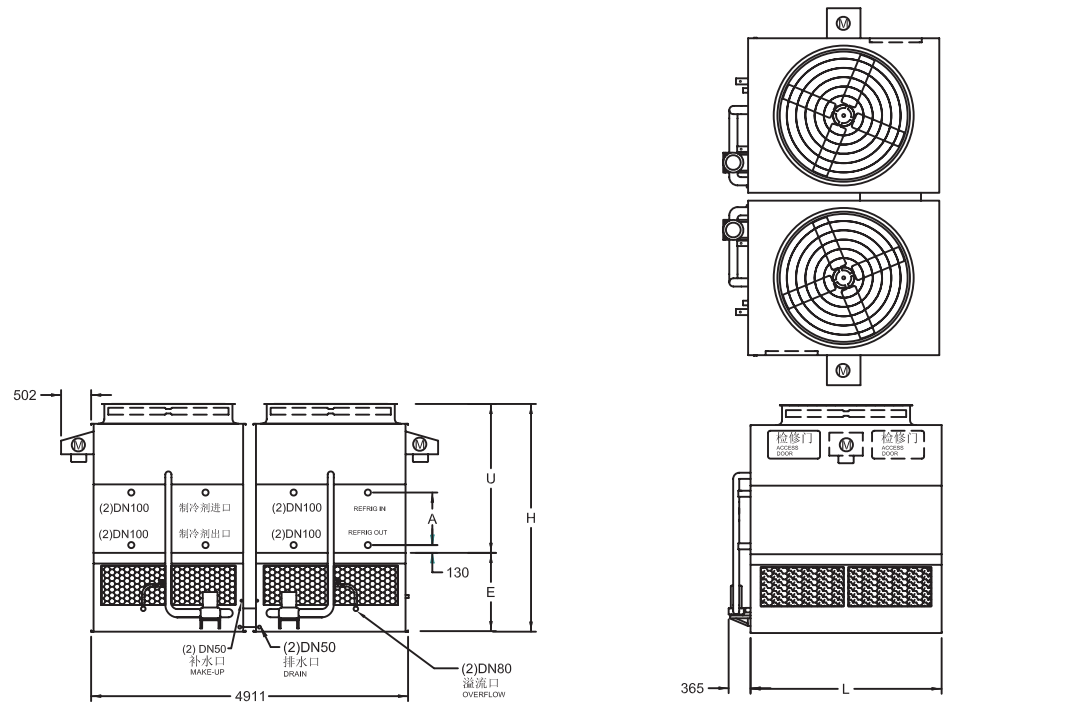
TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans KW	风机 Pump KW	电加热器 Heater KW
	净重 Shipping	运行 Opening	H	U	E	A	L			
TAE-J363	7796	10558	3820	2290	1530	690	5490	(2)5.5	4	(2) 6
TAE-J389	7821	10583	3820	2290	1530	690	5490	(2)7.5	4	(2) 6
TAE-J421	7885	10647	3820	2290	1530	690	5490	(2)11.0	4	(2) 6
TAE-J398	8851	11727	4010	2480	1530	880	5490	(2)5.5	4	(2) 6
TAE-J426	8880	11751	4010	2480	1530	880	5490	(2)7.5	4	(2) 6
TAE-J461	8940	11816	4010	2480	1530	880	5490	(2)11.0	4	(2) 6
TAE-J412	9979	12959	4200	2670	1530	1070	5490	(2)5.5	4	(2) 6
TAE-J504	10113	13093	4200	2670	1530	1070	5490	(2)15.0	4	(2) 6

注:

- 1、表中电热器的功率是基于-18℃的大气温度而设计。
- 2、表中的参数仅供参考，如需其他型号请直接与公司联系：由于产品的改进部分数据可能改变，恕不另行通知。

Note:

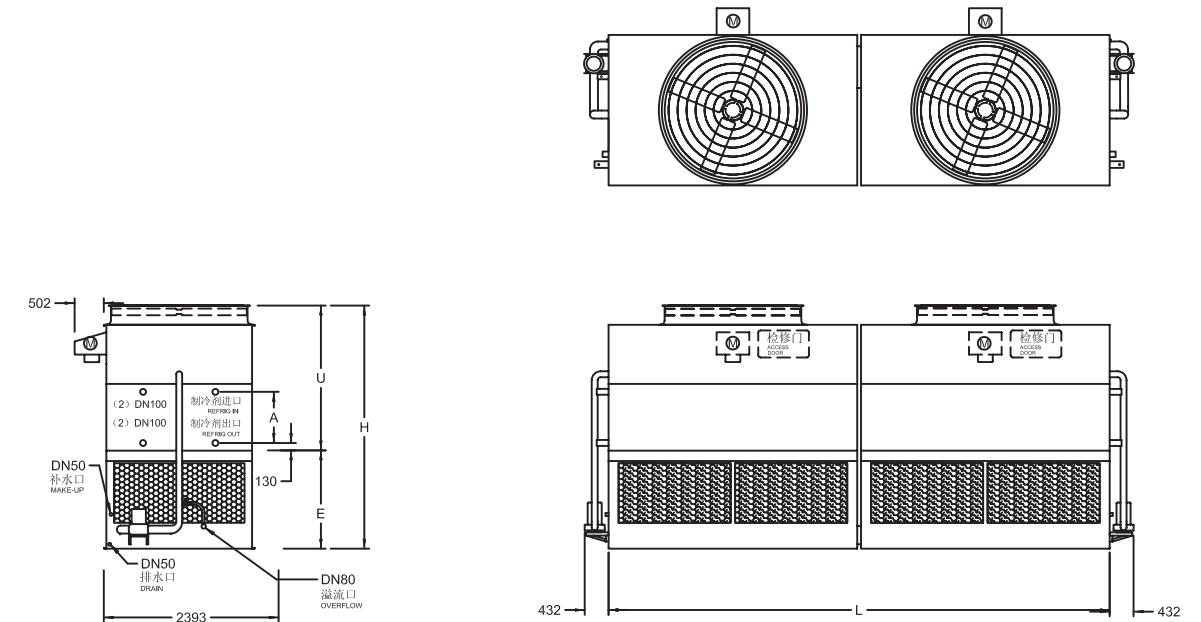
- 1.The HP of electric heater is determined perthe -18℃ ambiart temperature.
- 2.As for detail information on above chart,please consult us. The data might be subjected to amendment.This will not be informed.



TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans	风机 Pump	电加热器 Heater
	净重 Shipping	运行 Opening	H	U	E	A	L	KW	KW	KW
TAE-F427R02	9316	12449	3820	2290	1530	690	3190	(2)7.5	(2) 3	(2) 7
TAE-F465R02	9341	12474	3820	2290	1530	690	3190	(2)11.0	(2) 3	(2) 7
TAE-F514R02	10667	13929	4010	2480	1530	880	3190	(2)11.0	(2) 3	(2) 7
TAE-F542R02	10732	13994	4010	2480	1530	880	3190	(2)15.0	(2) 3	(2) 7
TAE-F561R02	12024	15409	4200	2670	1530	1070	3190	(2)15.0	(2) 3	(2) 7
TAE-G540R02	10336	13994	3820	2290	1530	690	3650	(2)15.0	(2) 3	(4) 4
TAE-G515R02	11657	15464	4010	2480	1530	880	3650	(2)7.5	(2) 3	(4) 4
TAE-G565R02	11722	15528	4010	2480	1530	880	3650	(2)11.0	(2) 3	(4) 4
TAE-G598R02	11766	15573	4010	2480	1530	880	3650	(2)15.0	(2) 3	(4) 4
TAE-G533R02	13157	17107	4200	2670	1530	1070	3650	(2)7.5	(2) 3	(4) 4
TAE-G584R02	13221	17172	4200	2670	1530	1070	3650	(2)11.0	(2) 3	(4) 4
TAE-G644R02	13291	17246	4200	2670	1530	1070	3650	(2)18.5	(2) 3	(4) 4
TAE-H607R02	11712	15969	3970	2290	1680	690	4260	(2)15.0	(2) 3	(4) 5
TAE-H632R02	11736	15993	3970	2290	1680	690	4260	(2)18.5	(2) 3	(4) 5
TAE-H667R02	13365	17790	4160	2480	1680	880	4260	(2)15.0	(2) 3	(4) 5
TAE-H695R02	13390	17820	4160	2480	1680	880	4260	(2)18.5	(2) 3	(4) 5
TAE-H690R02	15098	19696	4350	2670	1680	1070	4260	(2)15.0	(2) 3	(4) 5
TAE-H720R02	15122	19721	4350	2670	1680	1070	4260	(2)18.5	(2) 3	(4) 5

注:
 1、表中电热器的功率是基于-18℃的大气温度而设计。
 2、表中的参数仅供参考，如需其他型号请直接与公司联系；由于产品的改进部分数据可能改变，恕不另行通知。

Note:
 1.The HP of electric heater is determined perthe -18℃ ambiart temperature.
 2.As for detail information on above chart,please consult us. The data might be subjected to amendment.This will not be informed.



TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans	风机 Pump	电加热器 Heater
	净重 Shipping	运行 Opening	H	U	E	A	L	KW	KW	KW
TAE-G543R02	10331	13984	3820	2290	1530	690	7370	(2)15.0	(2) 3	(4) 4
TAE-G517R02	11647	15459	4010	2480	1530	880	7370	(2)7.5	(2) 3	(4) 4
TAE-G567R02	11712	15518	4010	2480	1530	880	7370	(2)11.0	(2) 3	(4) 4
TAE-G600R02	11756	15563	4010	2480	1530	880	7370	(2)15.0	(2) 3	(4) 4
TAE-G535R02	13147	17003	4200	2670	1530	1070	7370	(2)7.5	(2) 3	(4) 4
TAE-G587R02	13212	17162	4200	2670	1530	1070	7370	(2)11.0	(2) 3	(4) 4
TAE-G647R02	13281	17236	4200	2670	1530	1070	7370	(2)18.5	(2) 3	(4) 4
TAE-H575R02	11692	15949	3970	2290	1680	690	8590	(2)11.0	(2) 3	(4) 5
TAE-H610R02	11732	14013	3970	2290	1680	690	8590	(2)15.0	(2) 3	(4) 5
TAE-H636R02	11766	16023	3970	2290	1680	690	8590	(2)18.5	(2) 3	(4) 5
TAE-H631R02	13345	17775	4160	2480	1680	880	8590	(2)11.0	(2) 3	(4) 5
TAE-H670R02	13390	17820	4160	2480	1680	880	8590	(2)15.0	(2) 3	(4) 5
TAE-H698R02	13419	17845	4160	2480	1680	880	8590	(2)18.5	(2) 3	(4) 5
TAE-H654R02	15167	19676	4350	2670	1680	1070	8590	(2)11.0	(2) 3	(4) 5
TAE-H693R02	15122	19721	4350	2670	1680	1070	8590	(2)15.0	(2) 3	(4) 5
TAE-H723R02	15152	19751	4350	2670	1680	1070	8590	(2)18.5	(2) 3	(4) 5
TAE-H748R02	15167	19765	4350	2670	1680	1070	8590	(2)22.0	(2) 3	(4) 5

注:
 1、表中电热器的功率是基于-18℃的大气温度而设计。
 2、表中的参数仅供参考，如需其他型号请直接与公司联系；由于产品的改进部分数据可能改变，恕不另行通知。

Note:
 1.The HP of electric heater is determined perthe -18℃ ambiart temperature.
 2.As for detail information on above chart,please consult us. The data might be subjected to amendment.This will not be informed.

选型步骤

Selection steps

以下选型步骤适用于活塞式或螺杆式制冷压缩机组成的制冷系统（如采用离心式机组系统，请与我公司取得联系）。制冷系统的总排热量=压缩机制冷量+压缩机电动机消耗功率（均以KW计）。该计算适用于开启式和半封闭式压缩机。

一旦确定出了总排热量，将之乘上相对应运行工况的系数（由冷凝温度及湿球温度确定，见表1和表2）。根据上述计算结果，从表3选择适当的型号。

例：已知：压缩机制冷量：1500KW，制冷剂：R22，
冷凝温度：38℃，湿球温度：28℃，
压缩机所耗功率：420 KW

选型：压缩机制冷=1500KW
压缩机所耗功率=420KW
总计：=1920KW（总排热量）

由表1查得冷凝温度38℃，湿球温度28℃的排热系数=1.47

$1920 \times 1.47 = 2822.4$
（总排热量）×（排热系数）=修正后的排热负荷
由此，选型为TAE-F561R02。

注意：螺杆式制冷压缩机，如采用水冷式油冷却器，如果按照上面例子的总排热量选择蒸发式冷凝器，这台冷凝器可按下述方式进行运作。

- 1) 水盘中的水可直接用于压缩机油冷却器，此时应另用一水泵将回水接至水盘中与该水泵吸入口相对的一端；
- 2) 用于油冷却器的水或乙二醇与水的混合液可在单独的一组盘管内进行冷却。应注明确切的热负荷和水流量。

螺杆制冷压缩机如采用制冷剂冷却油冷却器，冷凝器的选型可按照示例所述的步骤进行。

如果油冷却器的冷却水是从其他方面来的，则上面例子的总排热量应减去油冷却器的热量（负荷），然后再进行选型。

In the heat of rejection method, a factor for the specified operating conditions (condensing temperature and wet bulb) are obtained from Table 1 or 2 and multiplied times the heat of rejection.

The resultant figure is used to select a unit from Table 3. Unit capacities are given in Table 3.

Example

Given: 1500 kW evaporator load, R22 refrigerant, 38°C condensing temperature, 28°C wet bulb temperature with a 420 kW compressor.

Selection: Evaporator Load = 1500 kW
Compressor Load = 420 kW
Total = 1920 kW (Heat of Rejection)

From Table 1, the capacity factor for 38°C condensing temperature and 28°C wet bulb temperature = 1.47

$1920 \times 1.47 = 2822.4$
(Total Heat of Rejection) X (Capacity Factor) = (Corrected Heat Rejection Load)

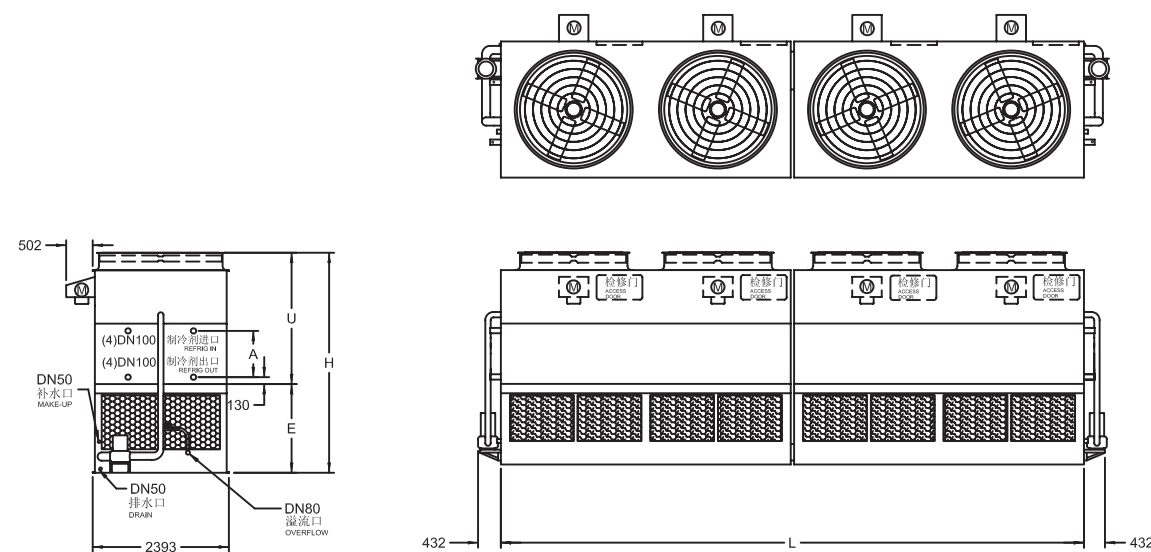
Therefore, select TAE-F561R02

Note: For screw compressor selections employing water cooled oil cooling, select a condenser for the total kW as in the example. The condenser can then function in one of two ways:

- (1) Recirculation water from the water sump can be used directly in the oil cooler. A separate pump should be employed and the return water should be directed into the water sump at the opposite end from the pump suction.
- (2) The condenser coil can be circuited so that water or a glycol-water mixture for the oil cooler can be cooled in a separate section of the coil. Specify load and water flow required.

For refrigerant injection cooled screw compressors, select the condenser in the same manner as shown in the example.

If the oil cooler is supplied by water from a separate source, then the oil cooling load should be deducted from the heat of rejection before making the selection.



TAE 型号 Model	重量 Weights(kg)		尺寸 Dimensions(mm)					水泵 Fans KW	风机 Pump KW	电加热器 Heater KW
	净重 Shipping	运行 Opening	H	U	E	A	L			
TAE-J726R02	15593	21117	3970	2290	1680	690	11040	(4)5.5	(2)4.0	(4) 6
TAE-J778R02	15647	21166	3970	2290	1680	690	11040	(4)7.5	(2)4.0	(4) 6
TAE-J842R02	15771	21295	3970	2290	1680	690	11040	(4)11.0	(2)4.0	(4) 6
TAE-J796R02	17701	23448	4160	2480	1680	880	11040	(4)5.5	(2)4.0	(4) 6
TAE-J853R02	17756	23503	4160	2480	1680	880	11040	(4)7.5	(2)4.0	(4) 6
TAE-J923R02	17879	23631	4160	2480	1680	880	11040	(4)11.0	(2)4.0	(4) 6
TAE-J1005R02	20226	26190	4350	2670	1680	1070	11040	(4)15.0	(2)4.0	(4) 6

注：

- 1、表中电热器的功率是基于-18℃的大气温度而设计。
- 2、表中的参数仅供参考，如需其他型号请直接与公司联系：由于产品的改进部分数据可能改变，恕不另行通知。

Note:

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- 2.As for detail information on above chart,please consult us. The data might be subjected to amendment.This will not be informed.

表一 R22和R134a的排热系数

冷凝压力 KPa		冷凝 温度℃	湿球温度℃																	
R22	R134a		10	12	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1090	669	30	1.07	1.15	1.25	1.38	1.47	1.57	1.69	1.83	2.00	2.23	2.50	2.86	3.36	—	—	—	—	—
1154	718	32	0.94	1.01	1.09	1.19	1.26	1.32	1.40	1.49	1.60	1.74	1.90	2.11	2.36	—	—	—	—	—
1220	759	34	0.85	0.90	0.97	1.04	1.09	1.14	1.20	1.26	1.34	1.43	1.54	1.66	1.81	2.02	2.31	—	—	—
1253	785	35	0.80	0.85	0.91	0.97	1.02	1.06	1.11	1.15	1.21	1.29	1.37	1.46	1.56	1.71	1.89	2.13	2.41	2.77
1287	814	36	0.77	0.81	0.86	0.92	0.96	1.00	1.04	1.07	1.13	1.19	1.26	1.34	1.43	1.56	1.71	1.90	2.14	2.43
1359	856	38	0.70	0.74	0.78	0.82	0.85	0.86	0.90	0.93	0.96	1.01	1.06	1.11	1.18	1.26	1.35	1.47	1.62	1.78
1431	915	40	0.65	0.67	0.70	0.72	0.76	0.78	0.80	0.83	0.86	0.89	0.93	0.97	1.02	1.08	1.14	1.22	1.32	1.44
1508	978	42	0.59	0.62	0.64	0.67	0.68	0.70	0.72	0.74	0.77	0.80	0.83	0.86	0.89	0.94	0.98	1.04	1.11	1.19
1587	1026	44	0.54	0.56	0.59	0.61	0.62	0.63	0.65	0.66	0.68	0.70	0.73	0.75	0.78	0.82	0.85	0.89	0.92	0.97

表二 氨 (R717) 的排热系数

冷凝 压力 KPa	冷凝 温度℃	湿球温度℃																		
		10	12	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
1063	30	0.95	1.03	1.12	1.23	1.31	1.40	1.51	1.63	1.79	1.99	2.24	2.56	3.00	—	—	—	—	—	—
1133	32	0.84	0.90	0.97	1.06	1.12	1.18	1.25	1.32	1.43	1.55	1.70	1.88	2.11	—	—	—	—	—	—
1206	34	0.76	0.81	0.86	0.93	0.98	1.02	1.07	1.12	1.19	1.28	1.36	1.48	1.61	1.80	2.06	—	—	—	—
1245	35	0.71	0.76	0.81	0.87	0.91	0.95	0.99	1.03	1.08	1.15	1.23	1.30	1.39	1.53	1.69	1.90	2.15	2.47	—
1284	36	0.69	0.73	0.77	0.82	0.86	0.89	0.92	0.96	1.01	1.07	1.13	1.20	1.28	1.39	1.53	1.70	1.91	2.17	—
1365	38	0.63	0.66	0.69	0.73	0.76	0.78	0.81	0.83	0.86	0.90	0.94	0.99	1.05	1.12	1.21	1.31	1.44	1.59	—
1451	40	0.58	0.60	0.62	0.65	0.67	0.70	0.72	0.74	0.76	0.80	0.83	0.87	0.91	0.96	1.02	1.09	1.18	1.29	—
1539	42	0.53	0.55	0.57	0.60	0.61	0.63	0.64	0.66	0.68	0.71	0.74	0.76	0.80	0.84	0.88	0.93	0.99	1.06	—
1630	44	0.49	0.50	0.52	0.54	0.56	0.56	0.58	0.59	0.61	0.63	0.65	0.67	0.70	0.73	0.76	0.79	0.83	0.86	—

表三 机组排热能力

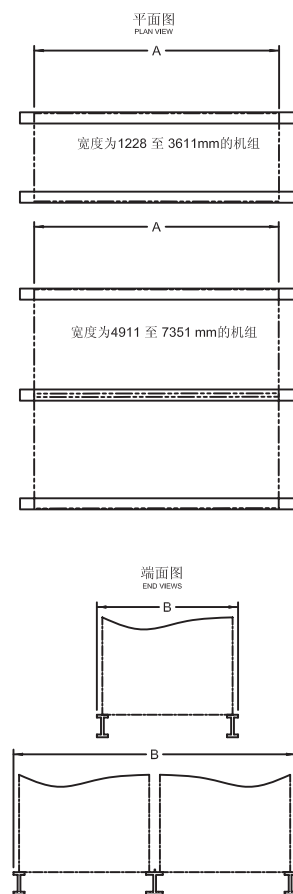
型号	排热量	TAE 型号	排热量	TAE 型号	排热量	TAE 型号	排热量
B42	215	H349	1766	G587R02	2968	V953R02	4817
B55	280	H361	1827	G598R02	3020	V994R02	5023
B68	345	J363	1835	G600R02	3033	V995R02	5028
C76	388	H374	1891	H607R02	3067	J1005R02	5079
C89	453	J389	1965	X608	3072	X1015R02	5131
C102	517	V389	1965	H610R02	3081	X1016R02	5135
D115	582	J398	2012	H631R02	3193	W1056R02	5338
D127	646	V404	2042	H632R02	3197	W1057R02	5342
D140	711	J412	2081	G644R02	3252	W1102R02	5571
L159	806	J421	2128	G647R02	3270	W1103R02	5575
L169	857	J426	2154	H654R02	3305	X1163R02	5877
E173	875	F427R02	2159	X666	3365	X1164R02	5881
L188	952	V446	2253	H667R02	3369	X1215R02	6140
E191	970	V459	2322	H670R02	3386	X1216R02	6144
E198	1004	J461	2331	H690R02	3485	X1331R02	6725
L203	1025	W464	2348	H693R02	3503	X1332R02	6729
L210	1064	F465R02	2352	H695R02	3511	X1410R02	7126
F214	1086	V476	2408	H698R02	3528	X1411R02	7130
F233	1181	V497	2512	X705	3563	X1456R02	7359
F237	1198	J504	2546	H720R02	3636	X1457R02	7363
G256	1297	F514R02	2598	H723R02	3654	X1521R02	7682
F258	1305	G515R02	2602	J726R02	3671	X1522R02	7686
G259	1310	G517R02	2615	X728	3679	V1776R04	8970
G267	1353	W528	2671	H748R02	3778	V1896R04	9577
F273	1379	G533R02	2693	X760	3843	V1979R04	9995
F282	1426	G535R02	2706	J778R02	3929	W1982R04	10013
H287	1452	G540R02	2732	J796R02	4024	W2050R04	10357
G293	1482	F542R02	2740	V809R02	4089	W2140R04	10809
G300	1516	G543R02	2744	J842R02	4252	X2258R04	11404
H305	1542	W551	2788	J853R02	4308	X2358R04	11913
H316	1598	F561R02	2835	V892R02	4506	X2584R04	13050
H318	1607	G565R02	2856	V893R02	4511	X2738R04	13830
G324	1637	G567R02	2869	V918R02	4640	X2826R04	14273
H326	1650	H575R02	2904	V919R02	4644	X2950R04	14902
H335	1693	X581	2938	J923R02	4666		
H347	1754	G584R02	2951	V952R02	4812		

基础布置

Support Layout

廷亚TAE冷却塔推荐采用的“工”字钢梁应置于设备定位折边下方，与设备长度相等。设备应采用钢架结构架高到一定高度以便维护人员能进出设备下部或进行房顶维护。水盘底部折边上有直径19mm的安装孔供螺栓与工字钢固定之用（请同工厂联系以获取详细的安装孔位置图）。

在安装设备之前，应该首先对钢结构支撑进行水平校正。不允许在工字钢与设备之间使用垫片。设备尺寸、重量和其他数据随技术的发展而变更，恕不另行通知。请以廷亚公司正式提供的图纸为准。



Structural "I" beams is recommended support for Tyacht evaporative condenser, which locate under the outer flanges and running the entire length of the units. The unit should be elevated to allow access underneath the unit and to the roof below. Mounting holes 19mm in diameter are located in the bottom flanges of the pan section to provide for bolting to the structure steel. Please refer to factory certified drawings for bolt hole locations.

Beams should be level before setting the unit in place. Do not level the unit by shimming between the unit and the structural steel. Dimensions weights and data are subject to change without notice. Please refer to the factory certified drawings for exact dimensions.

钢结构支撑尺寸 Steel Support dimensions		
机组 Model	A	B
TAE B42R-B68R	1830	1228
TAE C76R-C102R	2730	1228
TAE D115R-D140R	3650	1228
TAE L145R-L210R	2580	2288
TAE E173R-E198R	2730	2393
TAE F214R-F282R	3190	2393
TAE G256R-G324R	3650	2393
TAE H287R-H374R	4260	2393
TAE J363R-J504R	5490	2393
TAE G543R02-G647R02	7370	2393
TAE H575R02-H748R02	8590	2393
TAE J726R02-J1005R02	11040	2393
TAE F427R02-F561R02	3190	4911
TAE G540R02-G644R02	3650	4911
TAE H607R02-H720R02	4260	4911
TAE V365R-V497R	3650	3611
TAE W464R-W551R	4260	3611
TAE X547R-X760R	5490	3611
TAE V732R02-V995R02	7370	3611
TAE W993R02-W1103R02	8590	3611
TAE X1016R02-X1522R02	11040	3611
TAE V731R02-V994R02	3650	7351
TAE W992R02-W1102R02	4260	7351
TAE X1015R02-X1521R02	5490	7351
TAE V1603R04-V1979R04	7370	7351
TAE W1924R04-W2140R04	8590	7351
TAE X2124R04-X2950R04	11040	7351

技术方案

Engineering Consideration

TAE蒸发式冷凝器是重载性结构，换热性能卓越，为确保设备的使用寿命，合理的选择塔型、正确的安装维护工作非常重要。以下是设备运行时需注意的事项。

位置排布

蒸发式冷凝器的安装位置最好是在楼宇的顶部或远离墙壁和障碍物通风良好的地面上，以确保有充足的新空气进入设备，避免发生回流现象。因周围有墙壁或障碍物导致冷凝器排出的湿热空气回流到新风入口，提高了进风的湿球温度，导致冷凝压力高于设计压力，会引起冷却效果的不足。可使用排风筒将风机排风加高来解决此问题，详情请咨询廷亚公司。

排污

蒸发式冷凝器通过一部分喷淋水蒸发带走热量达到冷却。随着这部分水蒸发，矿物质和杂质会残留且沉积，可能导致结垢和腐蚀。因此需要排放掉相当于蒸发水量的水以防止污染。机组侧面装有散水水泵并设有排污管和排污阀。排污阀应全开以排放适量的水。

水处理

为控制补充水中潜在的污染物，定期进行水处理是必要的。一般情况下采用简单的排放法足以控制结垢及腐蚀现象；

采用生物灭杀剂可防止藻类等微生物的滋生，应在机组运行起定期使用。

当持续的排放法不能控制水垢或腐蚀时，可考虑使用化学处理的方法，但须满足下列要求：

- 1.所使用的化学品需与换热器、管路的材质兼容。
- 2.循环水的PH值须保持在6.5至8.0之间，对于采用镀锌钢材质的装置，循环水的PH值为8.0以上时，需对镀锌钢采取钝化处理，以防止“白锈”。
- 3.所使用化学品应通自动添加装置持续均匀添加到循环水中，以防止局部化学品浓度高所导致的腐蚀。
- 4.除非耐腐蚀材质冷却塔，不推荐进行酸处理。具体的水处理方式，可请专业的水处理厂家进行操作。

TAE evaporative condensers are heavy-duty construction and feature of superior performance providing long operation. The proper unit selection, installation and maintenance are very important to ensure optimum unit performance. There're several considerations when designing and operating a evaporative condenser installation in the following paragraphs.

Layout

The condenser should be located on a roof or at ground level away from building walls and other obstructions. Because the units need large air and adequate spacing around the evaporative condenser is necessary for it to perform properly. When evaporative condensers are located adjacent to high walls, or in wells, enclosures, care must be taken to avoid the effects of air recirculation. The recirculation happens when the hot, saturated discharge air leaving the evaporative condenser is drawn back to the airinlet(s). The recirculation will cause the inlet air wet bulb temperature to the evaporative condenser to be increased so that the capacity of evaporative condenser is decreased. For the detailed recommendations on layout, please consult your local Tyacht representative.

Bleed Off

Evaporative condenser removes heat by evaporating a portion of the circulated spray water. As water evaporates in an evaporative cooling unit, the dissolved solids (mineral content and impurities) present in the water remain in the system. The concentration of these dissolved solids increases rapidly and can cause scale and corrosion. it is important to bleed off an amount equal to that which is evaporated to prevent the buildup of impurities. Each condenser supplied with a pump mounted on the side is furnished with a clear bleed line for visual inspection and a valve which, when fully open, will bleed off the proper amount of water.

Water Treatment

Tyacht recommends that all evaporative condenser users should consult with a reputable water treatment company familiar with local water conditions in order to determine the extent and type of water treatment recommended for each specific application. When a water treatment program is employed, it must be compatible with construction materials. The pH of the circulating water must be maintained between 6.5 and 8.0. Units constructed of galvanized steel operating with circulating water having a pH of 8.0 or higher will require periodic passivation of the galvanized steel to prevent the formation of "White Rust". For more information about the water quality, Please refer to the guidelines in the Operation and Maintenance Manual.

容量控制

冷凝器只有一段时间是在设计湿球温度下满负荷运行，大多时间是在低于设计湿球温度下运行，如当负荷减少或随季节变化湿球温度降低时，通风机无需满负荷运行，这时可通过容量控制来满足需求。

1. 对于多台运行蒸发冷凝器，最简单的方法是变化塔的运行台数来控制容量。
2. 装有变频驱动装置的设备，可按变频等级调节风机运转达到容量控制目的，需注意避免在接近风机“临界速度”时运行。在降低转速的控制容量的同时，可降低噪音。
3. 不建议采用启停水泵来控制容量，虽对容量控制效果明显，但换热器盘管外壁因交替性的湿润和干燥，会加速盘管表面结垢，最终会影响冷却塔的换热性能。

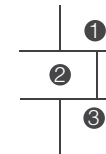
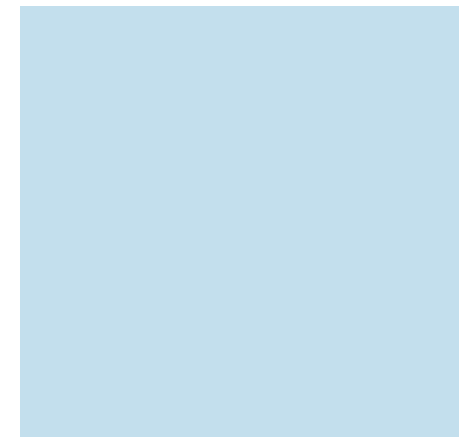
Capacity Control

Condenser only for a period of time is in the design of wet bulb temperature under full load operation, most of the time is less than the design in the wet bulb temperature, such as when the load to reduce or the seasons change wet bulb temperature low, fan without full load operation, then can through the capacity control to meet demand.

1. For many sets of operation condenser, the most simple method is to change the tower Numbers to control capacity.
2. Equipped with variable frequency drive equipment, according to frequency conversion level adjustment fan operation to achieve capacity control purpose, it is necessary to pay attention to avoid the close to fan "critical speed" on. In the lower speed control capacity at the same time, can reduce the noise.
3. Not recommended rev. Stop water pump to control capacity, although to capacity control effect is obvious, but the outer wall heat exchanger coil by alternation of wet and dry, will accelerate coil surface scaling, and ultimately affect the heat exchange performance of the cooling tower.



包头山晟现场实景图



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