



上海廷亚冷却系统有限公司

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上海廷亚冷却系统有限公司

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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。

2011年1月 第二版

引风逆流密闭式冷却塔
Induced Draft Counterflow Closed Circuit Cooler
TAC SERIES

公司介绍

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。

廷亚冷却塔涉足于石油化工、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。

ABOUT US

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 closed circuit coolers are designed for use at the following markets: petrochemical industry, pharmaceutical industry, steel, automobile, foundry, 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.

廷亚产品系列

- 闭式冷却塔——横流型TCC、逆流型TAC、混流型TMC
- 开式冷却塔——横流型TCT、逆流型TAT
- 蒸发冷凝器——逆流型TAE、混流型TME(氟利昂、氨系统用)
- 工业冷却塔——横流型TCI、逆流型TAI

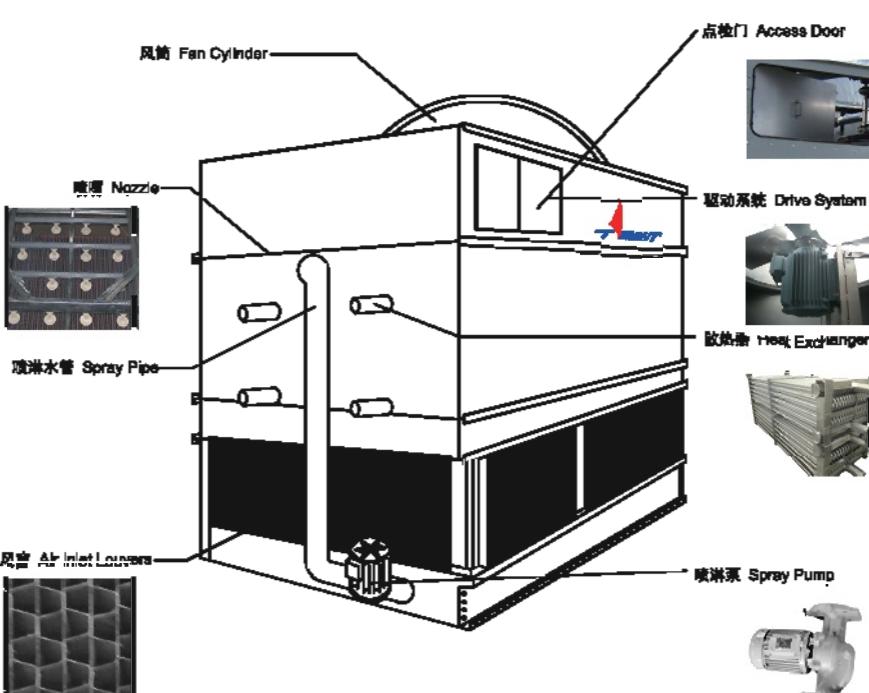
PRODUCTS

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

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性能特点 Features



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漫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-efficiency 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 25MPa. Air is drawn in through 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以有效地减少大气中的尘埃进入水盘，同时也减少水盘中积灰、沉淀、细菌和藻类的滋生。

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.

维护简便

- 冷水盘是倾斜式设计，便于清洗，并可将脏物轻易从水盘内排出。
- 机组四面的进风窗全部为可拆卸设计，方便维护人员进入水盘内进行水盘清洗和水盘内部的检查与维护。
- 机组箱体段配有滑动式检修门，维护人员进入检修门后可对机组的驱动部件进行检查和维修，且外伸的油管方便轴承的润滑。
- 机组配备电机吊架、维修平台和扶梯，方便检修人员现场维修操作。

Easy Maintenance

- Cold water basin with leaning design makes dirt easily discharged from the water basin.
- Four sides air inlet louvers shall be mounted in easily removable frames for access to pan for inspection.
- Hinged Access door is designed for maintenance on the drive system and the unit is equipped with extended lubrication line.
- Maintenance platform and ladder as free accessories shall be supplied for convenient inspection.

占地面积小

与其他厂家的冷却塔相比，TAC冷却塔占地面积较小，节约占地空间。

Space Saving

Compared with other manufacturers, TAC is smaller and space-saving.

可选部件 Optional Accessories

水盘电加热器组件 Electric Heater

冷却塔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在不低于4°C的状态，这是一种提供这项保护措施的简单而廉价的解决方案。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。标准的电加热器是基于环境温度在零下18°C时设计的。

Standard heaters are sized to maintain a 4°C or above pan water temperature which shall include electric heater, temperature relay and water level cut off switch. Standard heater selection is based on ambient air temperature of -18°C.

铜管换热器 Copper Coils Heat Exchanger

廷亚公司可提供铜盘管作为换热器可选件。铜的导热系数较高，且壁面光滑，不易结垢。铜材质的换热器可为机组提供防腐功能，保证管内工艺水质洁净。

Tyacht offers option of red copper coils for higher thermal conductivity and scaling resistance.

不锈钢管换热器 Stainless Steel Coils

廷亚公司可提供304号不锈钢换热器作为可选件。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。

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

双速电动机 Two Speed Fan Motors

双速电动机能够提供更加精确的容量控制。当负荷减少或当地的湿球温度发生变化时，通风机无需满负荷运行，这种情况可通过双速电动机来实现，达到节能的作用。此外，风机在低速运行时还可大大降低机组的噪音。

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.

变频电动机 Inverter Duty Fan Motors

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。

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

电子水位控制器 Electric Water Level Control Package

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。

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-accurate level control mounted in the basin and a solenoid valve in the make-up water line.

维护操作平台 External Service Platforms

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。该操作平台配有一直梯，且现场安装方便。安装位置一般在机组箱体段检修门侧。

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.

电动机吊架 Motor Davit With Base

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

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.

水盘消音器 Water Silencer

水盘消音器安装在机组水盘中。该装置可大大减少水盘内落水的噪音，距机组1.5m处噪音值降低4-7分贝。

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.

不锈钢水盘 Optional Stainless Steel Cold Water Basin

水盘可由不锈钢材料制成。相对其他结构材料，不锈钢具有更高的耐腐蚀性。

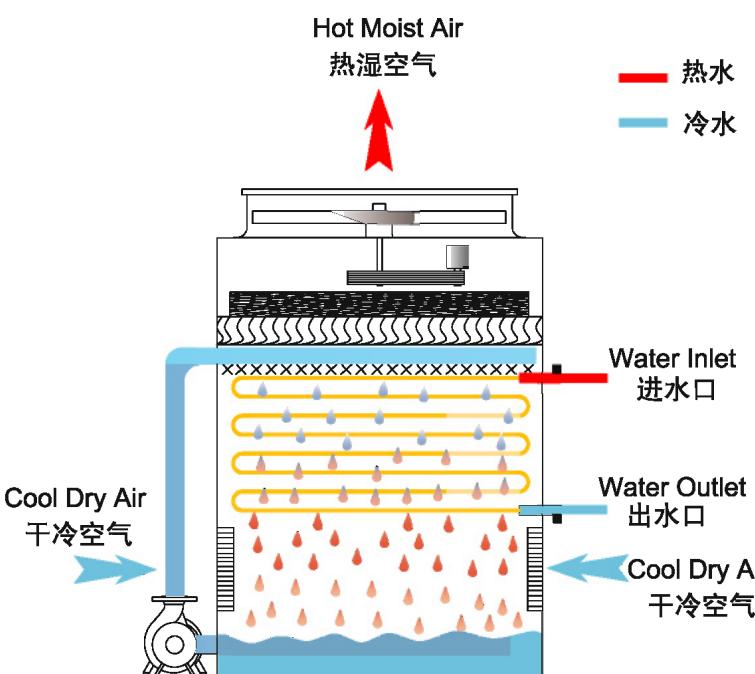
Stainless steel cold water basin is available. This provides superior corrosion resistance over other materials of construction.

振动切断开关 Vibration Cut-off Switch

冷却塔可配备机械式和电子式的振动跳脱开关，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。

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

运行原理 Operation Principle



原理图

循环水系统分为：

内循环水系统:

循环水经过热源换热升温进入热浸锌热交换器，通过热交换器管将热量送入外界，冷却后的循环水由系统循环水泵送往热源。

外循环水系统:

喷淋水由散水泵从下部水槽送至布水管道，水喷出后和热交换器管接触，部分水蒸发后带出热量。冷却后的喷淋水落入下部水槽再次循环。

内循环水通过热交换器管进行换热，避免了被外循环水和空气直接接触而导致水质污染。

Recirculation Water :

Process fluid circulatory system:

The process fluid is circulated through the heat exchanger coil of the closed circuit cooler. Heat from the process fluid is dissipated through the heat exchanger coil tubes to the air, the cooled water is pumped back to heat source by system pump.

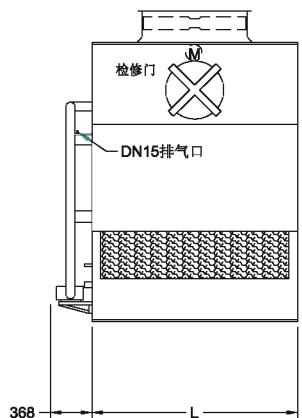
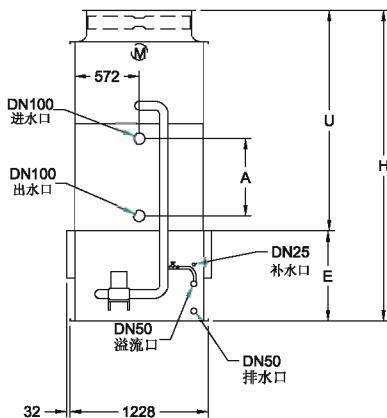
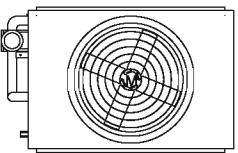
Spray water system:

Spray water is pumped up to water distribution system, a small portion of the water is evaporated which removes the heat.

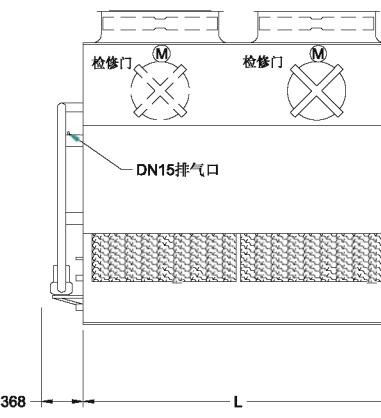
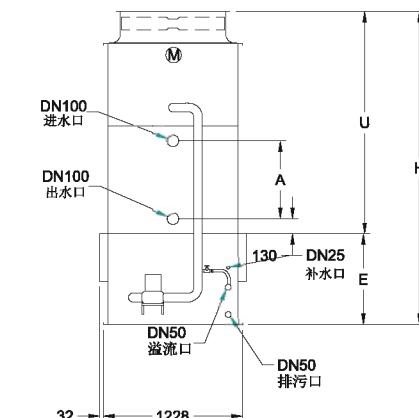
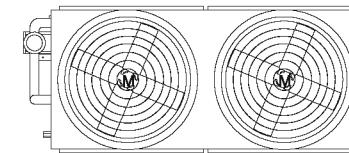
The remaining water falls to the sump at the bottom of the cooler where it is recirculated by the pump.

The process fluid will not contact the atmosphere and dust to keep it out of contamination.

工程数据
Engineering Data



工程数据
Engineering Data



型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater			
	长 Length (mm) L	高 Width (mm) H	净重 Net (kg)	运行 Operating (kg)									
				功率 Power (kw)				功率 Power (kw)	功率 Power (kw)				
TAC-B28R	1830	2570	1173	1901	1770	800	500	4	0.55	3			
TAC-B32R	1830	2760	1361	2153	1960	800	690	4	0.55	3			
TAC-B36R	1830	2950	1559	2421	2150	800	880	4	0.55	3			

注:

1. 表中电加热器的功率是基于-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本公司联系; 由于产品的改进部分数据有可能改变, 恕不另行通知。

Note:

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

型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater			
	长 Length (mm) L	高 Width (mm) H	净重 Net (kg)	运行 Operating (kg)									
				功率 Power (kw)				功率 Power (kw)	功率 Power (kw)				
TAC-C43R	2730	2570	1673	2723	1770	800	500	2.2x2	0.75	4			
TAC-C51R	2730	2760	1945	3099	1960	800	690	2.2x2	0.75	4			
TAC-C57R	2730	2950	2242	3495	2150	800	880	2.2x2	0.75	4			
TAC-D56R	3650	2570	2133	3554	1770	800	500	2.2x2	1.1	5			
TAC-D71R	3650	2570	2149	3570	1770	800	500	4x2	1.1	5			
TAC-D80R	3650	2760	2525	4079	1960	800	690	4x2	1.1	5			
TAC-D88R	3650	2950	2896	4584	2150	800	880	4x2	1.1	5			

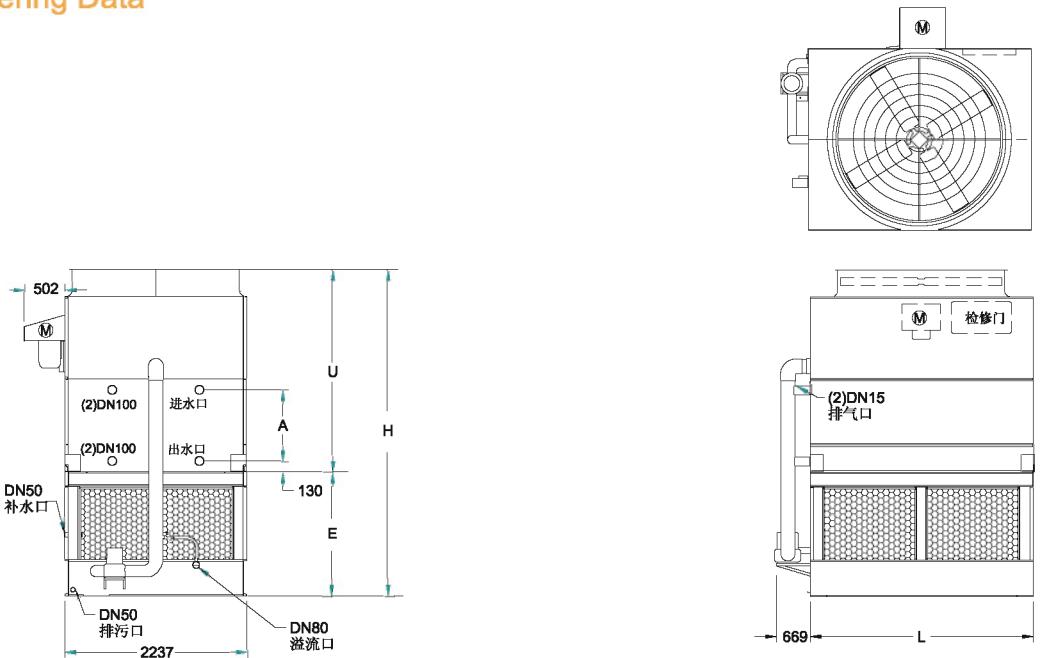
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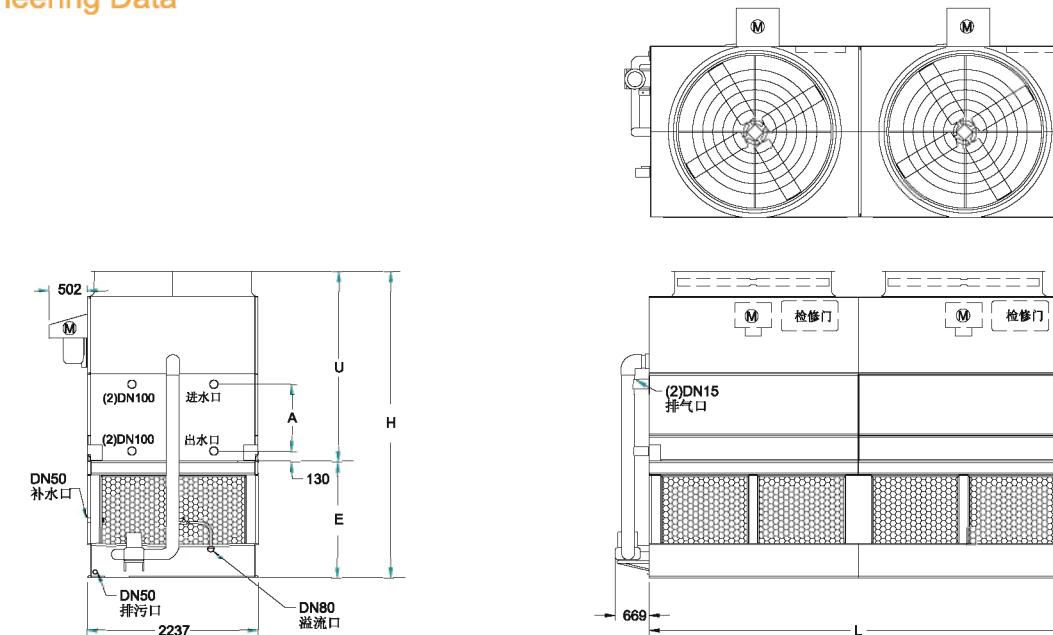
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	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)						
	L	H	U	E	A					
TAC-Z73R	2730	3430	3504	4666	2110	1320	500	5.5	1.5	6
TAC-Z82R	2730	3430	3517	4679	2110	1320	500	7.5	1.5	6
TAC-Z99R	2730	3620	4009	5356	2300	1320	690	7.5	1.5	6
TAC-Z115R	2730	3620	4068	5415	2300	1320	690	11	1.5	6
TAC-Z109R	2730	3810	4533	6067	2490	1320	880	7.5	1.5	6
TAC-Z126R	2730	3810	4593	6116	2490	1320	880	11	1.5	6
TAC-Z132R	2730	4000	5117	6826	2680	1320	1070	11	1.5	6
TAC-Z128R	3650	3430	4325	5936	2110	1320	500	11	3	7x2
TAC-Z152R	3650	3620	5011	6863	2300	1320	690	11	3	8x2
TAC-Z142R	3650	3810	5677	7781	2490	1320	880	7.5	3	9x2
TAC-Z183R	3650	3810	5707	7810	2490	1320	880	15	3	10x2
TAC-Z191R	3650	4000	6403	8747	2680	1320	1070	15	3	11x2
TAC-Z186R	4260	3920	6540	8956	2490	1430	880	11	3	5x2
TAC-Z204R	4260	3920	6560	8975	2490	1430	880	15	3	5x2
TAC-Z212R	4260	4110	7363	10063	2680	1430	1070	15	3	5x2
TAC-Z227R	4260	4110	7373	10073	2680	1430	1070	18.5	3	5x2

注:

- 表中电加热器的功率是基于-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本公司联系; 由于产品的改进部分数据有可能改变, 恕不另行通知。

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	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)						
	L	H	U	E	A					
TAC-Z189R	5480	3640	6512	8957	2110	1530	500	11x2	4	6x2
TAC-Z211R	5480	3640	6521	8967	2110	1530	500	15x2	4	6x2
TAC-Z245R	5480	3830	7550	10357	2300	1530	690	15x2	4	6x2
TAC-Z278R	5480	3830	7659	10475	2300	1530	690	22x2	4	6x2
TAC-Z266R	5480	4020	8569	11757	2490	1530	880	15x2	4	6x2
TAC-Z302R	5480	4020	8688	11865	2490	1530	880	22x2	4	6x2
TAC-Z277R	5480	4210	9617	13167	2680	1530	1070	15x2	4	6x2
TAC-Z314R	5480	4210	9736	13275	2680	1530	1070	22x2	4	6x2

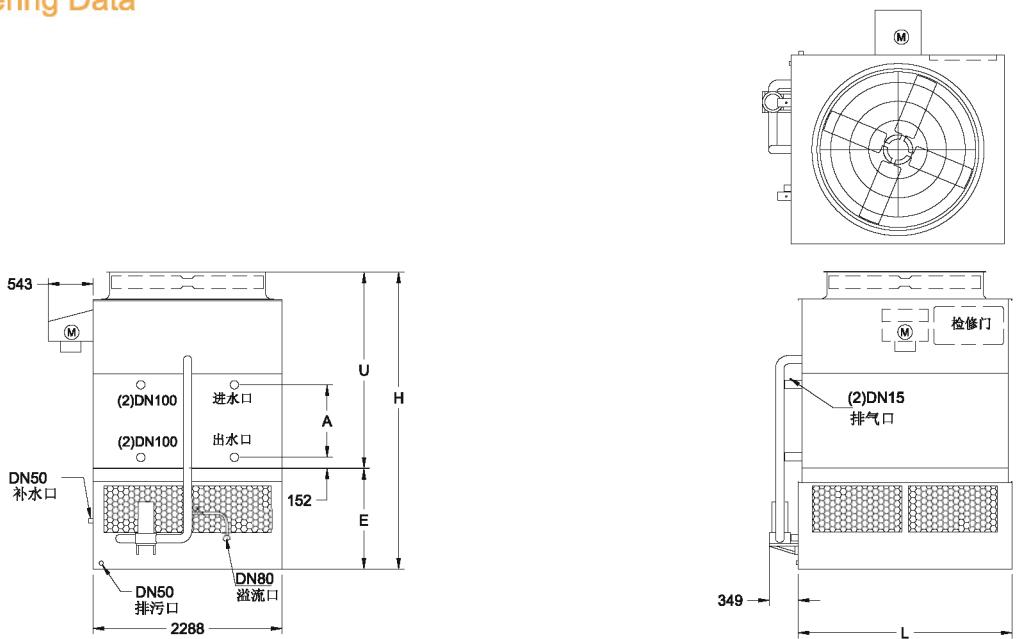
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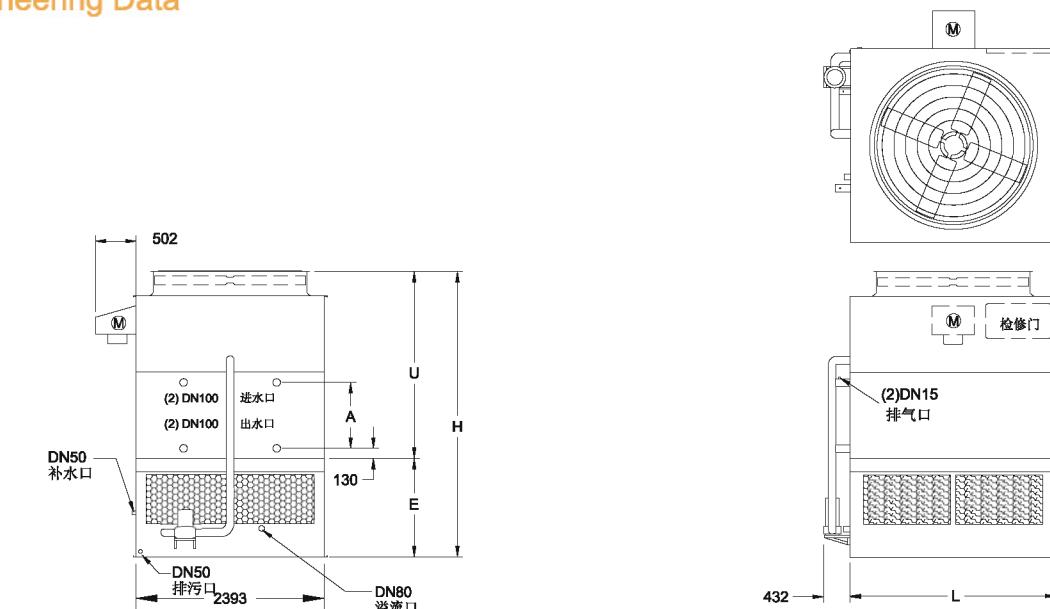
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工程数据
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型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater	
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)							
	L	H	U	E	A	功率 Power (kw)	功率 Power (kw)	功率 Power (kw)			
TAC-L76R	2580	3210	3227	4752	1990	1220	500	5.5	1.5	6	
TAC-L81R	2580	3210	3242	4767	1990	1220	500	7.5	1.5	6	
TAC-L85R	2580	3400	3722	5405	2180	1220	690	5.5	1.5	6	
TAC-L97R	2580	3400	3737	5420	2180	1220	690	7.5	1.5	6	
TAC-L107R	2580	3590	4262	6103	2370	1220	880	7.5	1.5	6	
TAC-L125R	2580	3590	4287	6128	2370	1220	880	11	1.5	6	
TAC-L113R	2580	3780	4787	6791	2560	1220	1070	7.5	1.5	6	
TAC-L131R	2580	3780	4816	6816	2560	1220	1070	11	1.5	6	

注:

1. 表中电加热器的功率是基于-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本公司联系; 由于产品的改进部分数据有可能改变, 恕不另行通知。

Note:

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

型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater	
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)							
	L	H	U	E	A	功率 Power (kw)	功率 Power (kw)	功率 Power (kw)			
TAC-E76R	2730	3420	3693	5499	2110	1310	500	5.5	1.5	6	
TAC-E87R	2730	3420	3703	5514	2110	1310	500	7.5	1.5	6	
TAC-E91R	2730	3610	4262	6267	2300	1310	690	5.5	1.5	6	
TAC-E104R	2730	3610	4277	6277	2300	1310	690	7.5	1.5	6	
TAC-E121R	2730	3610	4307	6311	2300	1310	690	11	1.5	6	
TAC-E101R	2730	3800	4881	7079	2490	1310	880	5.5	1.5	6	
TAC-E115R	2730	3800	4896	7088	2490	1310	880	7.5	1.5	6	
TAC-E133R	2730	3800	4925	7123	2490	1310	880	11	1.5	6	
TAC-E106R	2730	3990	5485	7871	2680	1310	1070	5.5	1.5	6	
TAC-E120R	2730	3990	5495	7885	2680	1310	1070	7.5	1.5	6	
TAC-E140R	2730	3990	5529	7915	2680	1310	1070	11	1.5	6	
TAC-E154R	2730	3990	5549	7940	2680	1310	1070	15	1.5	6	
TAC-F102R	3190	3420	4257	6381	2110	1310	500	7.5	3	7	
TAC-F121R	3190	3420	4287	6410	2110	1310	500	11	3	7	
TAC-F122R	3190	3610	4920	7272	2300	1310	690	7.5	3	7	
TAC-F144R	3190	3610	4955	7301	2300	1310	690	11	3	7	
TAC-F135R	3190	3800	5648	8227	2490	1310	880	7.5	3	7	
TAC-F158R	3190	3800	5683	8257	2490	1310	880	11	3	7	
TAC-F174R	3190	3800	5702	8281	2490	1310	880	15	3	7	
TAC-F142R	3190	3990	6351	9153	2680	1310	1070	7.5	3	7	
TAC-F166R	3190	3990	6381	9182	2680	1310	1070	11	3	7	
TAC-F182R	3190	3990	6405	9207	2680	1310	1070	15	3	7	

注:

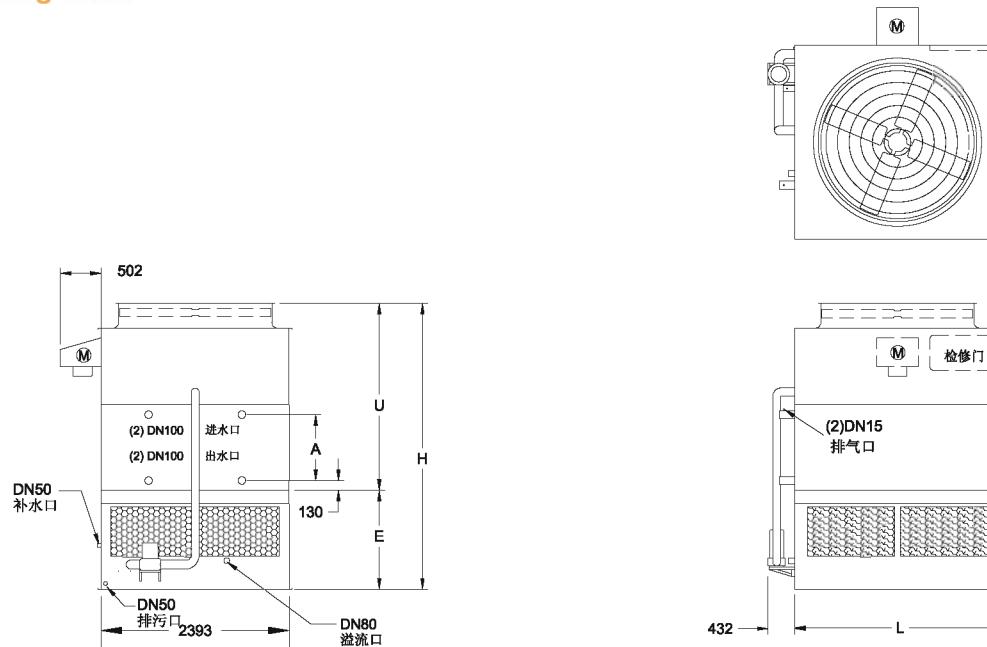
1. 表中电加热器的功率是基于-18℃的大气温度而设计。
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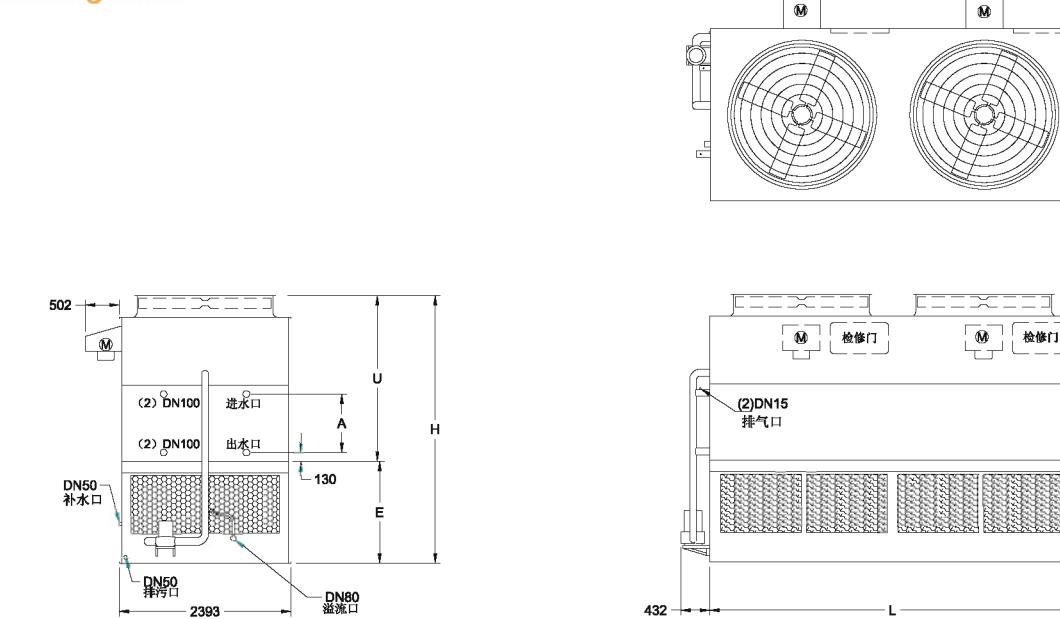
工程数据

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型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater			
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)									
				U				E	A	功率 Power (kw)			
TAC-G113R	3650	3420	4618	7088	2110	1310	500	7.5	3	4x2			
TAC-G134R	3650	3420	4658	7123	2110	1310	500	11	3	4x2			
TAC-G135R	3650	3610	5396	8123	2300	1310	690	7.5	3	4x2			
TAC-G160R	3650	3610	5435	8158	2300	1310	690	11	3	4x2			
TAC-G177R	3650	3610	5450	8177	2300	1310	690	15	3	4x2			
TAC-G149R	3650	3800	6173	9158	2490	1310	880	7.5	3	4x2			
TAC-G175R	3650	3800	6212	9192	2490	1310	880	11	3	4x2			
TAC-G193R	3650	3800	6227	9212	2490	1310	880	15	3	4x2			
TAC-G156R	3650	3990	6980	10222	2680	1310	1070	7.5	3	4x2			
TAC-G184R	3650	3990	7014	10256	2680	1310	1070	11	3	4x2			
TAC-G201R	3650	3990	7034	10276	2680	1310	1070	15	3	4x2			
TAC-G216R	3650	3990	7039	10281	2680	1310	1070	18.5	3	4x2			
TAC-H150R	4260	3540	5267	8138	2110	1430	500	11	3	5x2			
TAC-H167R	4260	3540	5287	8153	2110	1430	500	15	3	5x2			
TAC-H177R	4260	3730	6168	9336	2300	1430	690	11	3	5x2			
TAC-H196R	4260	3730	6183	9356	2300	1430	690	15	3	5x2			
TAC-H211R	4260	3730	6192	9360	2300	1430	690	18.5	3	5x2			
TAC-H194R	4260	3920	6653	10123	2490	1430	880	11	3	5x2			
TAC-H214R	4260	3920	6668	10138	2490	1430	880	15	3	5x2			
TAC-H230R	4260	3920	6678	10148	2490	1430	880	18.5	3	5x2			
TAC-H203R	4260	4110	8004	11776	2680	1430	1070	11	3	5x2			
TAC-H224R	4260	4110	8019	11791	2680	1430	1070	15	3	5x2			
TAC-H240R	4260	4110	8029	11801	2680	1430	1070	18.5	3	5x2			
TAC-H253R	4260	4110	8039	11811	2680	1430	1070	22	3	5x2			

注:

- 表中电加热器的功率是基于-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本公司联系；由于产品的改进部分数据有可能改变，恕不另行通知。

Note:

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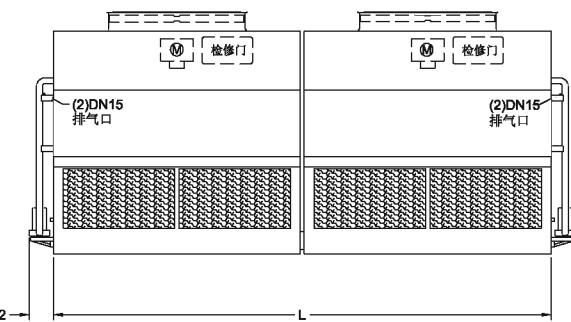
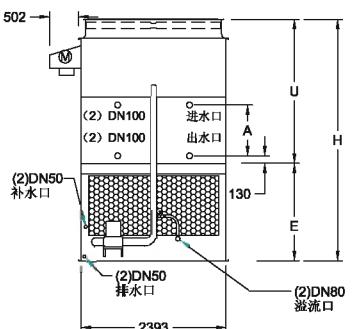
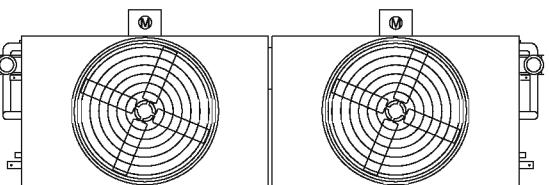
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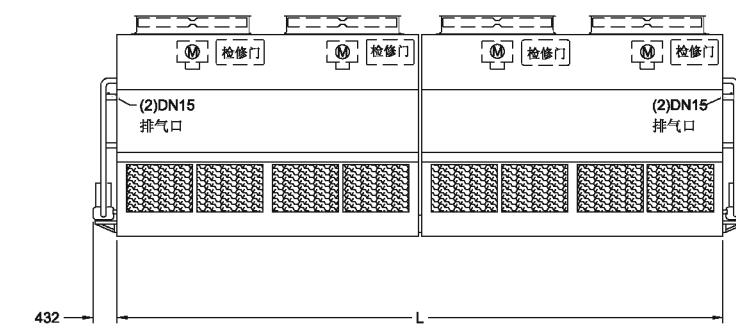
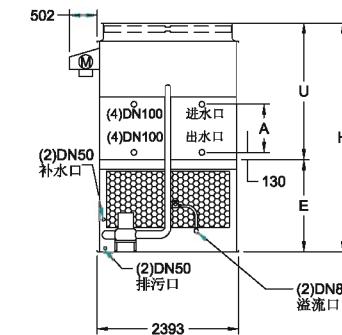
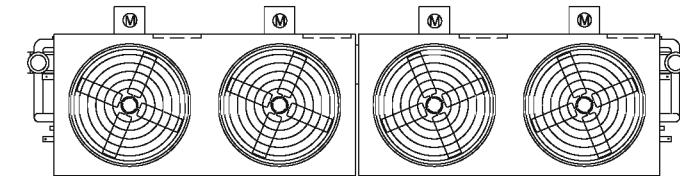
Note:

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工程数据
Engineering Data



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型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater			
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)									
				L				H	功率 Power (kw)				
TAC-G225R02	7370	3640	9232	14162	2110	1530	500	7.5x 2	3x2	4x4			
TAC-G269R02	7370	3640	9306	14236	2110	1530	500	11.0x 2	3x2	4x4			
TAC-G270R02	7370	3830	10786	16236	2300	1530	690	7.5x 2	3x2	4x4			
TAC-G320R02	7370	3830	10860	16310	2300	1530	690	11x 2	3x2	4x4			
TAC-G353R02	7370	3830	10895	16345	2300	1530	690	15x 2	3x2	4x4			
TAC-G298R02	7370	4020	12340	18305	2490	1530	880	7.5x 2	3x2	4x4			
TAC-G351R02	7370	4020	12410	18374	2490	1530	880	11x 2	3x2	4x4			
TAC-G386R02	7370	4020	12449	18409	2490	1530	880	15x 2	3x2	4x4			
TAC-G313R02	7370	4210	13949	20434	2680	1530	1070	7.5x 2	3x2	4x4			
TAC-G367R02	7370	4210	14018	20503	2680	1530	1070	11x 2	3x2	4x4			
TAC-G403R02	7370	4210	14053	20538	2680	1530	1070	15x 2	3x2	4x4			
TAC-G432R02	7370	4210	14073	20557	2680	1530	1070	18.5x 2	3x2	4x4			
TAC-H300R02	8590	3790	10563	16300	2110	1680	500	11x 2	3x2	5x4			
TAC-H334R02	8590	3790	10598	16335	2110	1680	500	15x 2	3x2	5x4			
TAC-H355R02	8590	3980	12360	18701	2300	1680	690	11x 2	3x2	5x4			
TAC-H393R02	8590	3980	12395	18736	2300	1680	690	15x 2	3x2	5x4			
TAC-H389R02	8590	4170	13330	20270	2490	1680	880	11x 2	3x2	5x4			
TAC-H429R02	8590	4170	13365	20305	2490	1680	880	15x 2	3x2	5x4			
TAC-H460R02	8590	4170	13380	20325	2490	1680	880	18.5x 2	3x2	5x4			
TAC-H407R02	8590	4360	16033	23577	2680	1680	1070	11x 2	3x2	5x4			
TAC-H447R02	8590	4360	16068	23612	2680	1680	1070	15x 2	3x2	5x4			
TAC-H479R02	8590	4360	16088	23631	2680	1680	1070	18.5x 2	3x2	5x4			
TAC-H507R02	8590	4360	16102	23646	2680	1680	1070	22x 2	3x2	5x4			

注:

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Note:

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型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater			
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)									
				L				H	功率 Power (kw)				
TAC-J400R02	11040	3790	14063	21473	2110	1680	500	5.5x4	4x2	6x4			
TAC-J449R02	11040	3790	14117	21528	2110	1680	500	7.5x4	4x2	6x4			
TAC-J468R02	11040	3980	16419	24606	2300	1680	690	5.5x4	4x2	6x4			
TAC-J522R02	11040	3980	16474	24661	2300	1680	690	7.5x4	4x2	6x4			
TAC-J592R02	11040	3980	16597	24790	2300	1680	690	11x4	4x2	6x4			
TAC-J510R02	11040	4170	18706	27680	2490	1680	880	5.5x4	4x2	6x4			
TAC-J567R02	11040	4170	18761	27735	2490	1680	880	7.5x4	4x2	6x4			
TAC-J642R02	11040	4170	18889	27859	2490	1680	880	11x4	4x2	6x4			
TAC-J532R02	11040	4360	21122	30878	2680	1680	1070	5.5x4	4x2	6x4			
TAC-J591R02	11040	4360	21176	30933	2680	1680	1070	7.5x4	4x2	6x4			
TAC-J669R02	11040	4360	21305	31056	2680	1680	1070	11x4	4x2	6x4			
TAC-J730R02	11040	4360	21394	31145	2680	1680	1070	15x4	4x2	6x4			

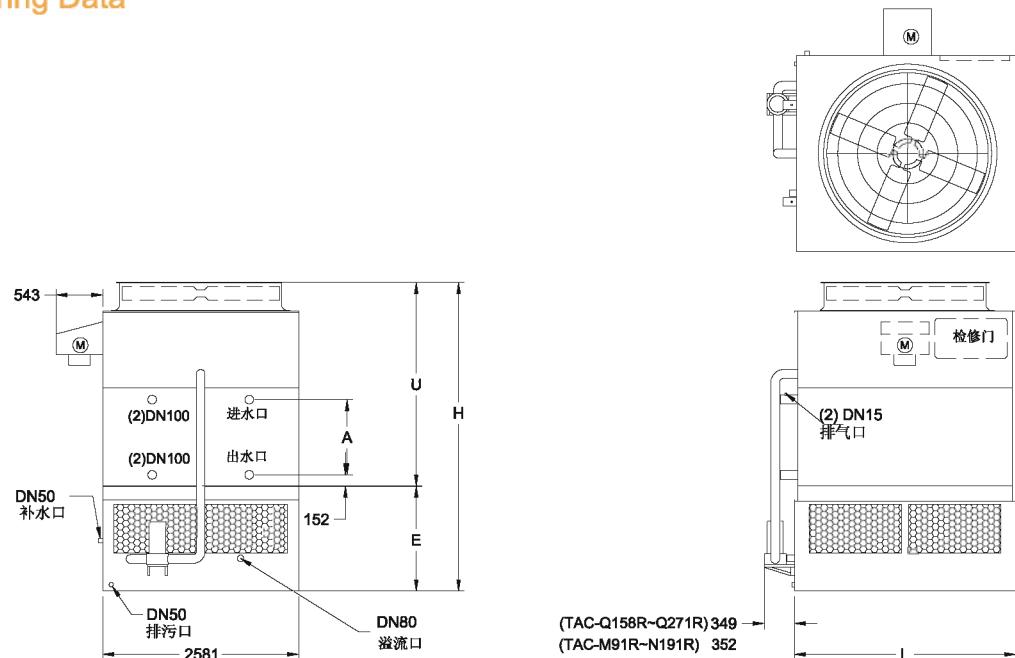
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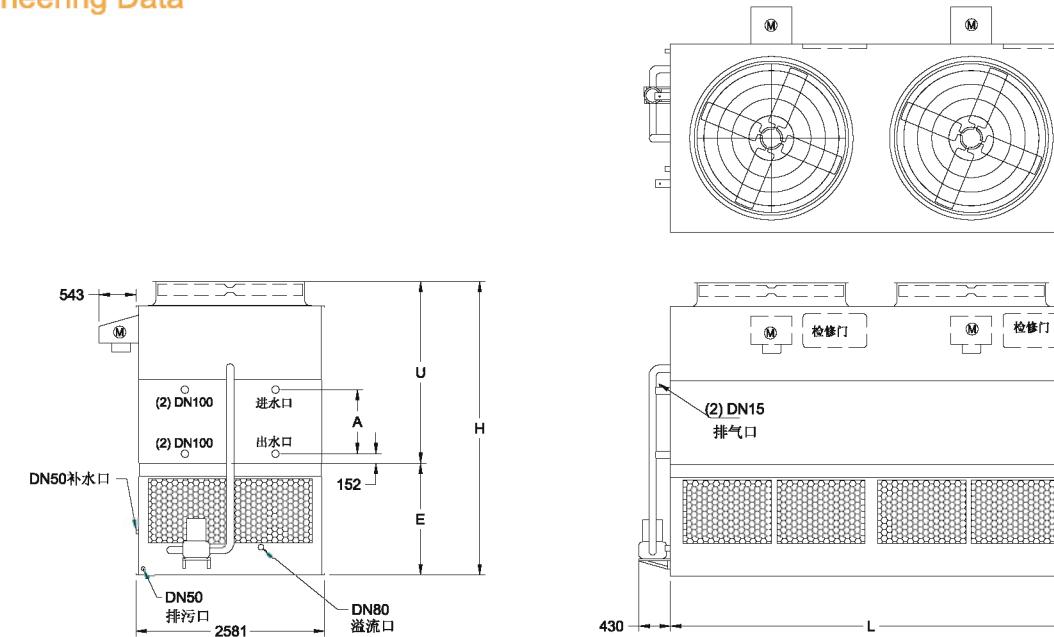
Note:

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工程数据
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型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater						
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)												
TAC-Q158R	4260	3550	5054	7834	2120	1430	500	11	3	5x2						
TAC-Q178R	4260	3550	5069	7854	2120	1430	500	15	3	5x2						
TAC-Q209R	4260	3740	5886	8959	2310	1430	690	15	3	5x2						
TAC-Q225R	4260	3740	5895	8964	2310	1430	690	18.5	3	5x2						
TAC-Q229R	4260	3930	6712	10070	2500	1430	880	15	3	5x2						
TAC-Q246R	4260	3930	6722	10075	2500	1430	880	18.5	3	5x2						
TAC-Q256R	4260	4120	7574	11219	2690	1430	1070	18.5	3	5x2						
TAC-Q271R	4260	4120	7583	11224	2690	1430	1070	22	3	5x2						
TAC-M91R	2730	3440	5543	2120	1320	500	7.5	1.5	6							
TAC-M108R	2730	3440	3740	5572	2120	1320	500	11	1.5	6						
TAC-M109R	2730	3630	4275	6316	2310	1320	690	7.5	1.5	6						
TAC-M128R	2730	3630	4310	6346	2310	1320	690	11	1.5	6						
TAC-M121R	2730	3820	4890	7134	2500	1320	880	7.5	1.5	6						
TAC-M141R	2730	3820	4919	7164	2500	1320	880	11	1.5	6						
TAC-M148R	2730	4010	5519	7971	2690	1320	1070	11	1.5	6						
TAC-M164R	2730	4010	5539	7991	2690	1320	1070	15	1.5	6						
TAC-N126R	3650	3430	4325	5936	2110	1320	500	11	3	7						
TAC-N150R	3650	3620	5011	6863	2300	1320	690	11	3	7						
TAC-N166R	3650	3810	5677	7781	2490	1320	880	11	3	7						
TAC-N183R	3650	3810	5707	7810	2490	1320	880	15	3	7						
TAC-N191R	3650	4000	6403	8747	2680	1320	1070	15	3	7						

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型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater						
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)												
TAC-R235R	5490	3650	6782	10376	2120	1530	500	7.5x2	4	6x2						
TAC-R270R	5490	3650	6846	10440	2120	1530	500	11x2	4	7x2						
TAC-R274R	5490	3840	7861	11825	2310	1530	690	7.5x2	4	8x2						
TAC-R312R	5490	3840	7920	11889	2310	1530	690	11x2	4	9x2						
TAC-R298R	5490	4030	8900	13240	2500	1530	880	7.5x2	4	10x2						
TAC-R339R	5490	4030	8964	13299	2500	1530	880	11x2	4	11x2						
TAC-R353R	5490	4220	10068	14773	2690	1530	1070	11x2	4	12x2						
TAC-R385R	5490	4220	10113	14817	2690	1530	1070	15x2	4	13x2						

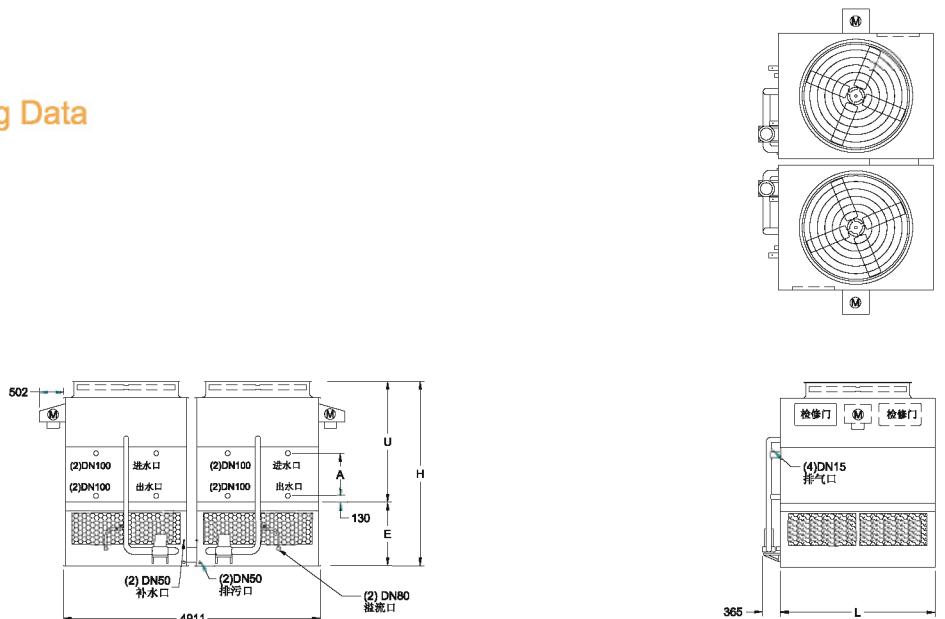
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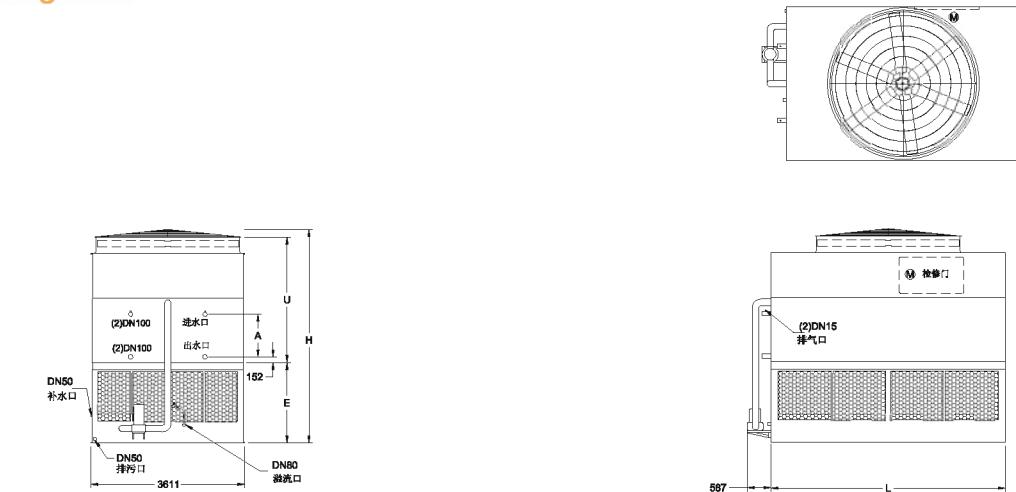
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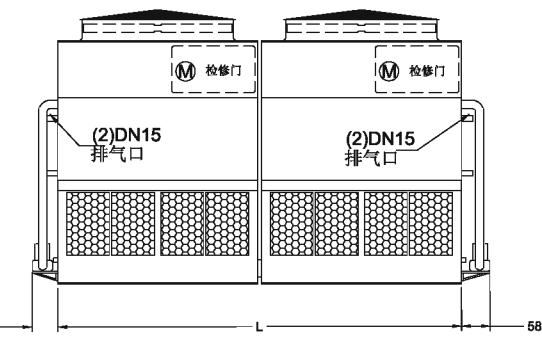
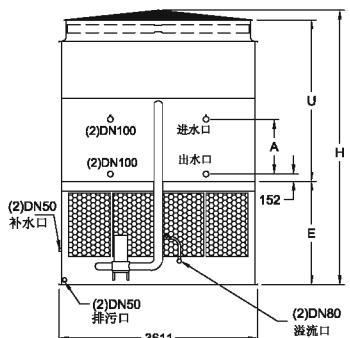
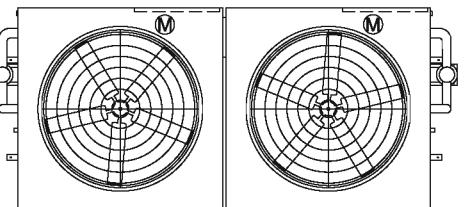
型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater						
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)												
TAC-F202R02	3190	3640	8489	12736	2110	1530	500	7.5x2	3x2	7x2						
TAC-F240R02	3190	3640	8514	12761	2110	1530	500	11x2	3x2	7x2						
TAC-F243R02	3190	3830	9816	14513	2300	1530	690	7.5x2	3x2	7x2						
TAC-F285R02	3190	3830	9846	14538	2300	1530	690	11x2	3x2	7x2						
TAC-F268R02	3190	4020	11271	16424	2490	1530	880	7.5x2	3x2	7x2						
TAC-F314R02	3190	4020	11296	16454	2490	1530	880	11x2	3x2	7x2						
TAC-F346R02	3190	4020	11360	16518	2490	1530	880	15x2	3x2	7x2						
TAC-F282R02	3190	4210	12672	18275	2680	1530	1070	7.5x2	3x2	7x2						
TAC-F329R02	3190	4210	12702	18305	2680	1530	1070	11x2	3x2	7x2						
TAC-F362R02	3190	4210	12761	18365	2680	1530	1070	15x2	3x2	7x2						
TAC-G223R02	3650	3640	9242	14172	2110	1530	500	7.5x2	3x2	4x4						
TAC-G267R02	3650	3640	9316	14246	2110	1530	500	11x2	3x2	4x4						
TAC-G268R02	3650	3830	10796	16246	2300	1530	690	7.5x2	3x2	4x4						
TAC-G317R02	3650	3830	10865	16320	2300	1530	690	11x2	3x2	4x4						
TAC-G350R02	3650	3830	10905	16355	2300	1530	690	15x2	3x2	4x4						
TAC-G296R02	3650	4020	12350	18310	2490	1530	880	7.5x2	3x2	4x4						
TAC-G348R02	3650	4020	12420	18384	2490	1530	880	11x2	3x2	4x4						
TAC-G383R02	3650	4020	12459	18419	2490	1530	880	15x2	3x2	4x4						
TAC-G310R02	3650	4210	13959	20444	2680	1530	1070	7.5x2	3x2	4x4						
TAC-G364R02	3650	4210	14028	20513	2680	1530	1070	11x2	3x2	4x4						
TAC-G400R02	3650	4210	14063	20547	2680	1530	1070	15x2	3x2	4x4						
TAC-G429R02	3650	4210	14083	20567	2680	1530	1070	18.5x2	3x2	4x4						
TAC-H289R02	4260	3790	10534	16276	2110	1680	500	11x2	3x2	5x4						
TAC-H323R02	4260	3790	10573	16310	2110	1680	500	15x2	3x2	5x4						
TAC-H343R02	4260	3980	12330	18671	2300	1680	690	11x2	3x2	5x4						
TAC-H380R02	4260	3980	12365	18706	2300	1680	690	15x2	3x2	5x4						
TAC-H410R02	4260	3980	12385	18726	2300	1680	690	18.5x2	3x2	5x4						
TAC-H377R02	4260	4170	13301	20246	2490	1680	880	11x2	3x2	5x4						
TAC-H416R02	4260	4170	13335	20280	2490	1680	880	15x2	3x2	5x4						
TAC-H446R02	4260	4170	13355	20295	2490	1680	880	18.5x2	3x2	5x4						
TAC-H394R02	4260	4360	16003	23547	2680	1680	1070	11x2	3x2	5x4						
TAC-H434R02	4260	4360	16038	23587	2680	1680	1070	15x2	3x2	5x4						
TAC-H465R02	4260	4360	16058	23602	2680	1680	1070	18.5x2	3x2	5x4						

注:

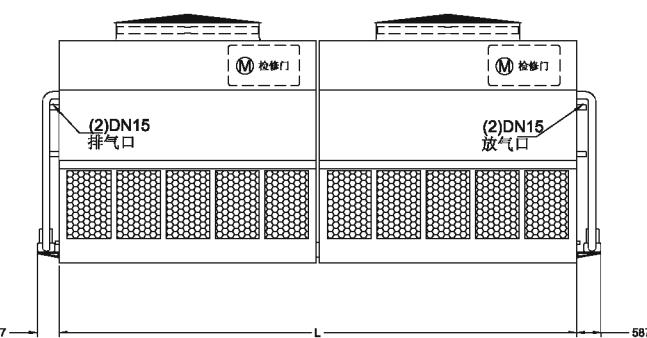
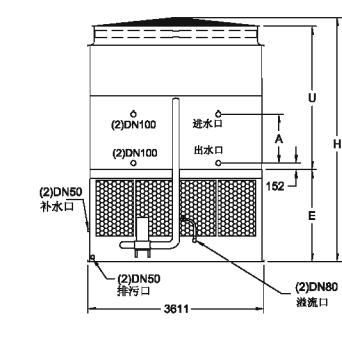
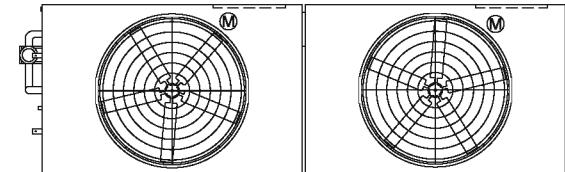
- 表中电加热器的功率是基于-18℃的大气温度而设计。
- 表中的参数仅供参考, 如需其他型号请直接与本公司联系; 由于产品的改进部分数据有可能改变, 恕不另行通知。

型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater						
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)												
TAC-V200R	3650	4258	6608	10593	2510	1580	570	15	4	6x2						
TAC-V218R	3650	4258	6628	10613	2510	1580	570	18.5	4	6x2						
TAC-V238R	3650	4478	7727	12113	2720	1580	780	15	4	6x2						
TAC-V258R	3650	4478	7747	12137	2720	1580	780	18.5	4	6x2						
TAC-V275R	3650	4478	7791	12182	2720	1580	780	22	4	6x2						
TAC-V283R	3650	4698	8801	13593	2940	1580	1000	18.5	4	6x2						
TAC-V300R	3650	4698	8846	13637	2940	1580	1000	22	4	6x2						
TAC-V313R	3650	4908	10083	15276	3150	1580	1210	22	4	6x2						
TAC-V343R	3650	4908	10197	15390	3150	1580	1210	30	4	6x2						
TAC-W241R	4260	4418	7514	12192	2510	1730	570	18.5	4	7x2						
TAC-W258R	4260	4418	7549	12222	2510	1730	570	22	4	7x2						
TAC-W285R	4260	4628	8816	13964	2720	1730	780	18.5	4	7x2						
TAC-W304R	4260	4628	8851	13999	2720	1730	780	22	4	7x2						
TAC-W331R	4260	4848	10068	15687	2940	1730	1000	22	4	7x2						
TAC-W363R	4260	4848	10182	15800	2940	1730	1000	30	4	7x2						
TAC-W346R	4260	5058	11509	17597	3150	1730	1210	22	4	7x2						
TAC-W378R	4260	5058	11623	10311	3150	1730	1210	30	4	7x2						
TAC-X327R	5490	4568	9440													

工程数据
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型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater			
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)									
				U				E	A				
TAC-V399R02	7370	4568	13197	21166	2510	1880	570	15x2	4x2	6x4			
TAC-V435R02	7370	4568	13241	21211	2510	1880	570	18.5x2	4x2	6x4			
TAC-V515R02	7370	4778	15479	24255	2720	1880	780	18.5x2	4x2	6x4			
TAC-V549R02	7370	4778	15568	24344	2720	1880	780	22x2	4x2	6x4			
TAC-V564R02	7370	4998	17582	27166	2940	1880	1000	18.5x2	4x2	6x4			
TAC-V599R02	7370	4998	17672	27255	2940	1880	1000	22x2	4x2	6x4			
TAC-V626R02	7370	5218	20151	30537	3150	1880	1210	22x2	4x2	6x4			
TAC-V685R02	7370	5218	20374	30759	3150	1880	1210	30x2	4x2	6x4			
TAC-W482R02	8590	4868	15048	24399	2510	2190	570	18.5x2	4x2	7x4			
TAC-W515R02	8590	4868	15112	24463	2510	2190	570	22x2	4x2	7x4			
TAC-W569R02	8590	5088	17652	27948	2720	2190	780	18.5x2	4x2	7x4			
TAC-W606R02	8590	5088	17716	28012	2720	2190	780	22x2	4x2	7x4			
TAC-W662R02	8590	5298	20151	31388	2940	2190	1000	22x2	4x2	7x4			
TAC-W725R02	8590	5298	20384	31621	2940	2190	1000	30x2	4x2	7x4			
TAC-W691R02	8590	5518	23032	35214	3150	2190	1210	22x2	4x2	7x4			
TAC-W755R02	8590	5518	23270	35452	3150	2190	1210	30x2	4x2	7x4			

注:

- 表中电加热器的功率是基于-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本公司联系; 由于产品的改进部分数据有可能改变, 恕不另行通知。

Note:

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

型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater			
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)									
				U				E	A				
TAC-X652R02	11040	4868	18993	30957	2510	2190	570	18.5x2	5.5x2	9x4			
TAC-X701R02	11040	4868	19092	31056	2510	2190	570	22x2	5.5x2	9x4			
TAC-X760R02	11040	5088	22305	35487	2720	2190	780	18.5x2	5.5x2	9x4			
TAC-X815R02	11040	5088	22404	35586	2720	2190	780	22x2	5.5x2	9x4			
TAC-X893R02	11040	5088	22641	35818	2720	2190	780	30x2	5.5x2	9x4			
TAC-X886R02	11040	5298	25631	40021	2940	2190	1000	22x2	5.5x2	9x4			
TAC-X969R02	11040	5298	25864	40253	2940	2190	1000	30x2	5.5x2	9x4			
TAC-X1009R02	11040	5518	29532	45144	3150	2190	1210	30x2	5.5x2	9x4			
TAC-X1080R02	11040	5518	29581	45198	3150	2190	1210	37x2	5.5x2	9x4			

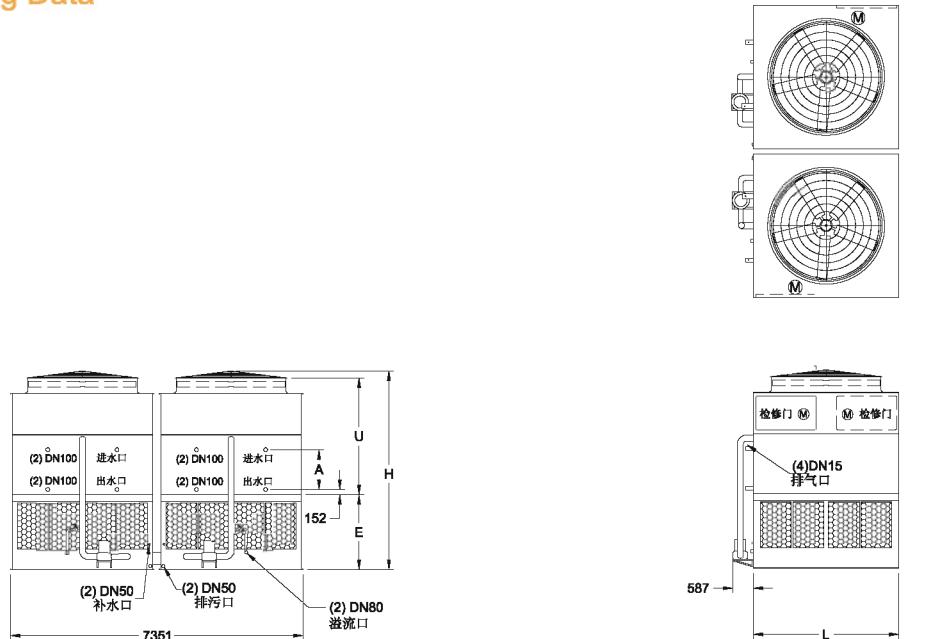
注:

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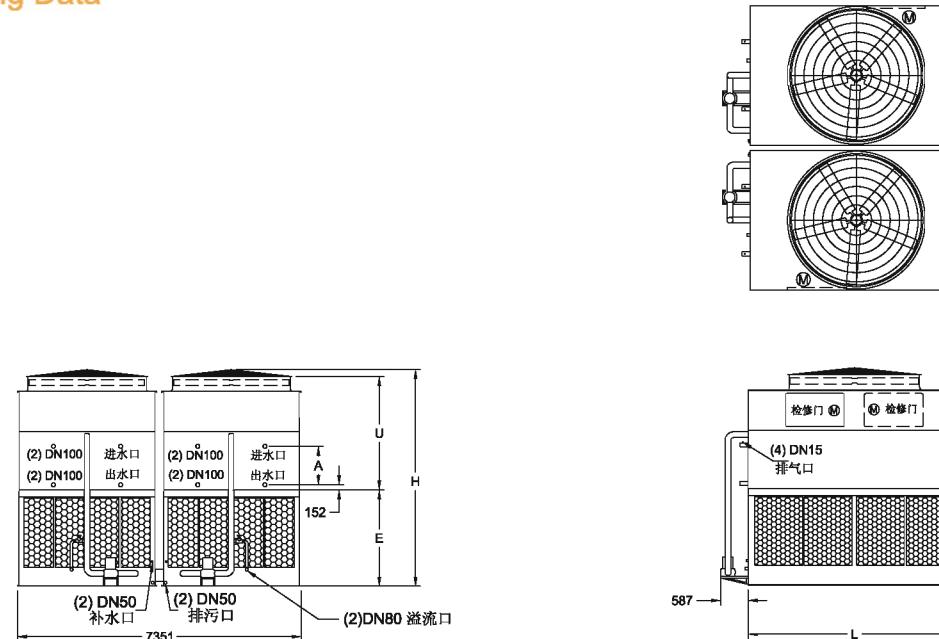
Note:

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工程数据
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Engineering Data



型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater			
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)									
				U				E	A				
TAC-V400R02	3650	4568	13187	21156	2510	1880	570	15x2	4x2	6x4			
TAC-V436R02	3650	4568	13231	21201	2510	1880	570	18.5x2	4x2	6x4			
TAC-V516R02	3650	4778	15469	24245	2720	1880	780	18.5x2	4x2	6x4			
TAC-V550R02	3650	4778	15558	24339	2720	1880	780	22x2	4x2	6x4			
TAC-V565R02	3650	4998	17573	27156	2940	1880	1000	18.5x2	4x2	6x4			
TAC-V600R02	3650	4998	17662	27250	2940	1880	1000	22x2	4x2	6x4			
TAC-V627R02	3650	5218	20142	30527	3150	1880	1210	22x2	4x2	6x4			
TAC-V686R02	3650	5218	20364	30749	3150	1880	1210	30x2	4x2	6x4			
TAC-W483R02	4260	4868	15068	24418	2510	2190	570	18.5x2	4x2	7x4			
TAC-W516R02	4260	4868	15127	24483	2510	2190	570	22x2	4x2	7x4			
TAC-W570R02	4260	5088	17672	27968	2720	2190	780	18.5x2	4x2	7x4			
TAC-W607R02	4260	5088	17736	28027	2720	2190	780	22x2	4x2	7x4			
TAC-W663R02	4260	5298	20166	31408	2940	2190	1000	22x2	4x2	7x4			
TAC-W726R02	4260	5298	20404	31640	2940	2190	1000	30x2	4x2	7x4			
TAC-W692R02	4260	5518	23052	35234	3150	2190	1210	22x2	4x2	7x4			
TAC-W756R02	4260	5518	23285	35467	3150	2190	1210	30x2	4x2	7x4			

注:

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Note:

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型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater			
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)									
				U				E	A				
TAC-X653R02	5490	5208	19008	30967	2530	2500	570	18.5x2	5.5x2	9x4			
TAC-X702R02	5490	5208	19107	31066	2530	2500	570	22x2	5.5x2	9x4			
TAC-X761R02	5490	5418	22325	35496	2750	2500	780	18.5x2	5.5x2	9x4			
TAC-X816R02	5490	5418	22424	35595	2750	2500	780	22x2	5.5x2	9x4			
TAC-X894R02	5490	5418	22656	35828	2750	2500	780	30x2	5.5x2	9x4			
TAC-X887R02	5490	5638	25646	40031	2960	2500	1000	22x2	5.5x2	9x4			
TAC-X970R02	5490	5638	25884	40263	2960	2500	1000	30x2	5.5x2	9x4			
TAC-X1010R02	5490	5848	29547	45149	3180	2500	1210	30x2	5.5x2	9x4			
TAC-X1081R02	5490	5848	29601	45203	3180	2500	1210	37x2	5.5x2	9x4			

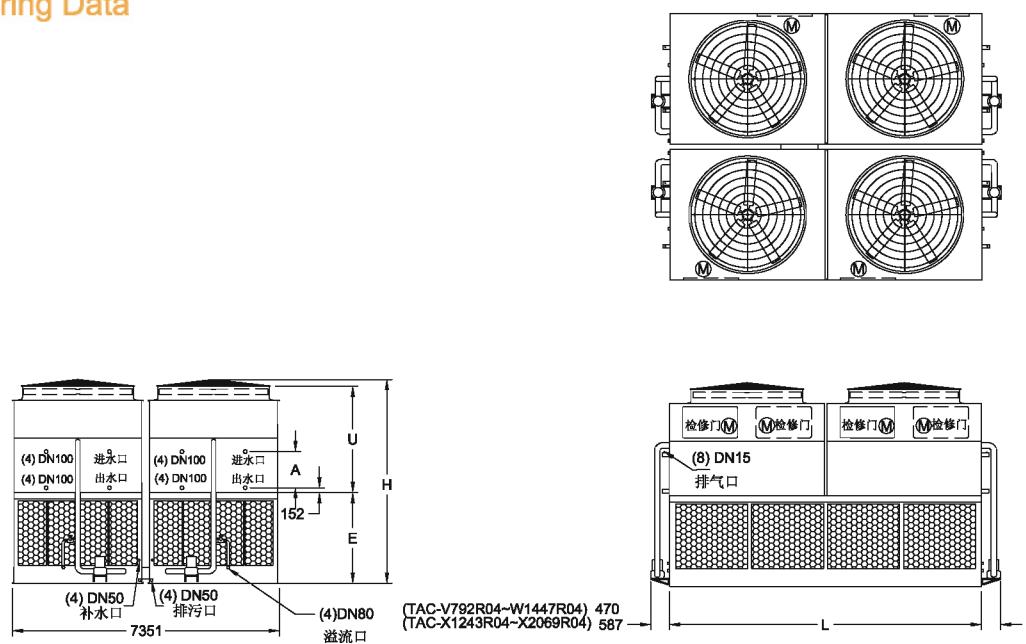
注:

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工程数据 Engineering Data



型号 Model	外形尺寸 Dimension		重量 Weight		上部 高度 Upside Height (mm)	下部 高度 Underpart Height (mm)	进出口 间距 Space In/Out (mm)	风机 Fan	水泵 Pump	电加热器 Heater						
	长 Length (mm)	高 Width (mm)	净重 Net (kg)	运行 Operating (kg)												
TAC-V792R04	7370	5178	26626	42560	2510	2490	570	15x4	4x4	12x4						
TAC-V865R04	7370	5178	26715	42649	2510	2490	570	18.5x4	4x4	12x4						
TAC-V944R04	7370	5388	31101	48649	2720	2490	780	15x4	4x4	12x4						
TAC-V1024R04	7370	5388	31190	48743	2720	2490	780	18.5x4	4x4	12x4						
TAC-V1090R04	7370	5388	31373	48921	2720	2490	780	22x4	4x4	12x4						
TAC-V1121R04	7370	5608	35397	54559	2940	2490	1000	18.5x4	4x4	12x4						
TAC-V1191R04	7370	5608	35576	54742	2940	2490	1000	22x4	4x4	12x4						
TAC-V1244R04	7370	5828	40536	61296	3150	2490	1210	22x4	4x4	12x4						
TAC-V1361R04	7370	5828	40981	61746	3150	2490	1210	30x4	4x4	12x4						
TAC-W913R04	8590	5178	30304	49055	2510	2490	570	18.5x4	4x4	15x4						
TAC-W979R04	8590	5178	30428	49183	2510	2490	570	22x4	4x4	15x4						
TAC-W1085R04	8590	5388	35511	56148	2720	2490	780	18.5x4	4x4	15x4						
TAC-W1156R04	8590	5388	35640	56277	2720	2490	780	22x4	4x4	15x4						
TAC-W1264R04	8590	5608	40506	63028	2940	2490	1000	22x4	4x4	15x4						
TAC-W1387R04	8590	5608	40976	63499	2940	2490	1000	30x4	4x4	15x4						
TAC-W1321R04	8590	5828	46273	70681	3150	2490	1210	22x4	4x4	15x4						
TAC-W1447R04	8590	5828	46743	71146	3150	2490	1210	30x4	4x4	15x4						
TAC-X1243R04	11040	5178	38135	62152	2510	2490	570	18.5x4	5.5x4	18x4						
TAC-X1338R04	11040	5178	38333	62345	2510	2490	570	22x4	5.5x4	18x4						
TAC-X1453R04	11040	5388	44763	71201	2720	2490	780	18.5x4	5.5x4	18x4						
TAC-X1558R04	11040	5388	44961	71399	2720	2490	780	22x4	5.5x4	18x4						
TAC-X1695R04	11040	5608	51411	80274	2940	2490	1000	22x4	5.5x4	18x4						
TAC-X1856R04	11040	5608	51876	80739	2940	2490	1000	30x4	5.5x4	18x4						
TAC-X1933R04	11040	5828	59202	90511	3150	2490	1210	30x4	5.5x4	18x4						
TAC-X2069R04	11040	5828	59311	90620	3150	2490	1210	37x4	5.5x4	18x4						

注:

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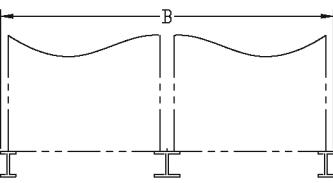
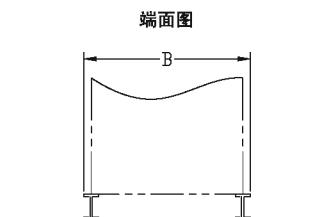
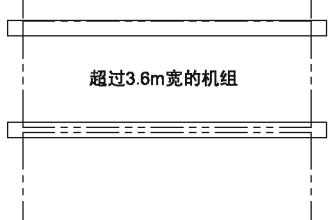
基础布置 Basic Layout

廷亚闭式冷却塔推荐采用的“工”字钢梁应置于设备定位折边下方，与设备长度相等。设备采用的钢架结构应当架高到一定高度，以便维护人员能进出设备下部或进行房顶维护。水盘底部折边上有一系列直径19mm的安装孔供螺栓与工字钢固定之用（请同公司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 counterflow closed circuit cooler, 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.



TAC 钢结构支撑尺寸		
机组	A	B
TAC B28R-36R	1826	1226
TAC C43R-57R	2731	1226
TAC Z73R-132R	2730	2237
TAC Z128R-191R	3650	2237
TAC Z186R-227R	4620	2237
TAC Z189R-314R	5480	2237
TAC D56R-88R	3651	1226
TAC L76R-131R	2578	2283
TAC M91R-164R	2731	2578
TAC N126R-191R	3188	2578
TAC E76R-154R	2731	2388
TAC F102R-182R	3188	2388
TAC G113R-216R	3651	2388
TAC H150R-253R	4261	2388
TAC J200R-365R	5486	2388
TAC G225R02-432R02	7366	2388
TAC H300R02-507R02	8586	2388
TAC H400R02-730R02	11063	2388
TAC Q158R-225R	4260	2581
TAC R235R-312R	5490	2581
TAC F202R02-362R02	3188	4906
TAC G233R02-429R02	3651	4906
TAC H289R02-465R02	4261	4906
TAC V200R-343R	3651	3607
TAC W241R-378R	4261	3607
TAC X327R-541R	5486	3607
TAC V399R02-685R02	7366	3607
TAC W482R02-755R02	8585	3607
TAC X652R02-1080R02	11036	3607
TAC V400R02-686R02	3651	7344
TAC W483R02-756R2	4261	7344
TAC X653R02-1081R02	5486	7344
TAC V792R04-1367R04	7366	7344
TAC W913R04-1447R04	8585	7344
TAC X1243R04-2069R04	11306	7344

技术方案 Engineering Consideration

水处理 Water Treatment

在某些情况下补充水中矿物质含量很高，为控制潜在的污染，定期进行水处理是必要的。例如当简单的排放法已难以防止水垢，这时应请当地有经验的水处理公司进行处理。

无论采用何种水处理方法，都不应影响冷却塔的镀锌构件质量。循环水PH值必须保持在6.5到8.0之间，如果水的PH值高于8.3时，则冷却塔的镀锌构件将需要周期性的钝化，以防止“白锈”。镀锌构件不适合大剂量使用化学试剂。如果用酸清洗应特别小心，对于镀锌构件只推荐使用含缓蚀剂的酸。

In some cases the make-up water will be high in mineral content that a normal bleed-off will not prevent scaling. Water treatment is necessary and a qualified water treatment company familiar with the local water conditions should be consulted.

The PH of the water should be maintained between 6.5 and 8.0. If the PH is higher than 8.3, galvanized components should be passivation in certain period to prevent "white rust". If acid cleaning is required, only inhibited acids recommended for use with galvanized construction should be used.

冬季运行注意事项 Consideration During Winter Operation

防冻原因 Freeze Reason

冬季运行时（尤其在寒冷地区），循环水、喷淋水易发生冻结引起配管、塔内部的破裂，因此冬季需要对冷却塔进行必要的防冻。Freeze protection is necessary for the heat exchanger coil in the unit as well as for the recirculating water system if the units are installed in cold winter and operated year-round.

防冻措施 Freeze Prevention

1. 冬季运行时的防冻措施 Running Freeze Prevention

周围温度低于0°C时，即使没有喷淋水，热交换盘管本身的散热量也相当大，导致没有外加热负荷的循环水容易冰冻。

为了防止盘管冰冻，我们推荐乙二醇和丙二醇溶液来防止盘管冰冻。如果不能使用防冻液，保持循环水有足够的流量和热负荷是防止盘管冰冻的另一种方法。流出盘管的循环水温度必须保持或高于7°C。如果热负荷无法达到这一要求，可以增加热负荷。盘管可以干式或湿式间歇式运行，但不要经常间歇运行，否则会产生过量积垢，引起效率下降。

When the ambient temperature falls below 0°C, heat loss from the coil be substantial even without recirculating water. The process fluid, without an applied heat load, may be freezing.

Ethylene and propylene glycol solutions are the best means to protect against coil freezing. If the use of an industrial antifreeze solution is not compatible with the system, another accepted method is to maintain a sufficient flow rate and heat load on the process fluid. The fluid exiting the coil must be maintained at or above 7°C at the full process flow rate. If the process load does not yield such a heat load, it may be necessary to apply a supplementary heat load to the process fluid.

Coils may be used for dry operation and wet operation, but not for frequent cycling of the recirculating water pump. Such operation may lead to an excessive scale buildup resulting in a decrease in efficiency.

2. 冬季停运时的防冻措施 Shutdown Freeze Prevention

冷却塔在冬季停机期间，积聚的水会冻结。可用电加热器或蒸汽加热留在下水槽里的水，或者在停机期间把冷却塔和所有暴露在外管道内的水放到其它的储水池中。

During shutdown, water collects in the basin and may freeze solid. You can prevent freezing by electric heater or steam to the water left in the basin—or, you can drain the tower and all exposed pipework to remote sump at shutdown.

技术方案 Engineering Consideration

安装和试运行 Installation and Commissioning

- (1) 请在通风良好、清洁的场所安装。
- (2) 请避开灰尘、酸性气体排放多的场所。
- (3) 请注意不要使从冷却塔内排出的空气再次被吸入塔内，发生回流现象。在围墙的高度比塔体高的场合，以及多台塔不同高度的场合，推荐安装排风筒或增加基础高度。
- (4) 试运行前，请先打开循环水管道的排气口，使热交换器盘管和管道内充满水。密闭回路不充分排出空气会引起排热量不足。
- (5) 新设备中的风机轴承已经在出厂前注满了润滑油，如果是停机一段时间后重新开机请注意加油。
- (6) 请确认喷淋水泵和风机电机的转动方向与标记的一致。在接线时从地线开始接。用手转动风机叶片和水泵轴，看是否有阻碍。
- (7) 在往下水槽注水前，请先清扫下水槽部分，防止杂物堵塞管路。注水量以到达溢水口为准，并将补水管路中的阀门全开。
- (8) 开机后请检查风机电机和水泵电机的三个接线柱的电流，不应超过电机的铭牌电流。

(1) Select well-ventilated and clean area for installation.

(2) Avoid the dusty or acidic location.

(3) Exercise care to prevent discharged air from being re-circulated and sucked into the tower. If the wall is higher than towers or more than one different height towers, use fan hood or add foundation height are recommended for most installations. Please ask your Tyacht sales representative for the detail.

(4) Open air vent valve of process fluid pipework before commissioning, and fill all pipework with water Any Air in pipework will cause heat rejection loss.

(5) Prior to seasonal start-up, lubricate the fan shaft bearings. Note this is not required at initial start-up since the fan bearings have been lubricated at the factory prior to shipment.

(6) Tune the fan and pump by hand to ensure rotation without obstruction, and check for proper fan rotation.

(7) At initial start-up, or before start-up when the sump is completely drained, clean the sump and fill the sump with fresh water to the overflow level. Keep the makeup valve open.

(8) Check the voltage and current of all three legs of the fan and pump motor wiring. The current must not exceed the nameplate rating.