



2 热交换系列 HEX (Heat Exchanger)

气热交换器拥有一个交叉气流或逆向的塑性铝箔换热装置，该换热装置能在机柜温度超过周围温度时就将热量分散掉，外部空气通过外循环被抽入核心外循环通道，内部热风经内循环进入核心内通道，冷热风在核心内外通道壁进行热交换，外风将内部热风冷却，带走热量，两个内外循环系统被小心地分开，以保证内循环的封闭性。

水气热交换器拥有一个水气的换热器，冷却液与机柜内热风经过风扇驱动在水气换热器进行热交换，只有内循环是其特点，拥有很好的防尘、防水等效果。如冷却液加入一定防冻能力的防冻剂为工作介质，可以再低温-25至0°C范围内工作，突破传统制冷机低温难以工作的局限。

Air and air heat exchanger has a cross flow or reverse plastic aluminum foil heat exchanger, the heat exchanger can dissipate heat when the temperature in the cabinet exceed the ambient temperature. The outside air through the outer loop to be pumped into the core circulation channel. The internal hot air enters the inner core channel through the inner circulation. Heat exchange of cold and hot air happened in the inner and outer channel wall of the core. External wind cooling the internal hot air, and the wind will take away the heat. Two internal and external circulation systems are carefully separated to ensure the closure of the internal circulation.

The water and air heat exchanger have a water and air heat exchange device. The cooling liquid and the hot air in the cabinet are driven by the fan to heat exchange in the heat exchanger. Only the internal circulation is characterized by its good dustproof and waterproof effect. For example, if the coolant is added to a working medium with a certain anti freezing capacity, it can work at a low temperature of -25°C to 0 °C, breaking through the limitations of traditional cooling unit cannot at low temperature.



壁装气/气热交换器 Wall mounted air/ air heat exchanger



性能特点 Features

- 柜体内外空气循环完全隔绝，保持内循环的密封性，避免外界水气及灰尘的侵入；
 - 防雨、防雷、防虫、防盗、防辐射等五防功能为户外柜带来最好的保障；
 - 特别适合户外柜应用；
 - 可选加热集成功能；
 - 易如反掌的安装方式突显产品人性化，半内嵌安装或完全外挂安装。
- The inside and outside air circulation of the cabinet is completely cut off, maintaining the sealing of the internal circulation and avoiding the invasion of the outside water, air and dust.
 - Five protective design functions such as rain proof, lightning protection, insect proof, anti-theft, radiation protection and so on bring the best protection for outdoor cabinets.
 - Especially suitable for outdoor cabinets.
 - Optional heating integration function.
 - Installation easy which highlight the product of human nature, semi embedded installation or complete external installation.

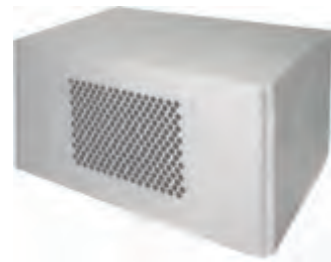
| ID.NO. | 型号(半内嵌安装) Model(embedded) | 可用制冷量 Available cooling capacity | 尺寸 WxHxD Size WxHxD | 额定电压 Rated voltage |
|-------------------|------------------------------|-------------------------------------|------------------------|-----------------------|
| 30300209/30300210 | TAP60 | 60W/K | 403x968x158mm | 230VAC/48VDC |
| 30300211/30300212 | TAP60-HE | 60W/K | 403x968x158mm | 230VAC/48VDC |
| 30300213/30300214 | TAP90 | 90W/K | 403x968x158mm | 230VAC/48VDC |
| 30300215/30300216 | TAP90-HE | 90W/K | 403x968x158mm | 230VAC/48VDC |
| 30300217/30300218 | TAP110 | 110W/K | 465x1186x220mm | 230VAC/48VDC |
| 30300219/30300220 | TAP110-HE | 110W/K | 465x1186x220mm | 230VAC/48VDC |
| 30300221/30300222 | TAP120 | 120W/K | 465x1186x220mm | 230VAC/48VDC |
| 30300223/30300224 | TAP120-HE | 120W/K | 465x1186x220mm | 230VAC/48VDC |
| 30300225/30300227 | TAP150 | 150W/K | 650x1430x220mm | 230VAC/48VDC |
| 30300226/30300228 | TAP150-HE | 150W/K | 650x1430x220mm | 230VAC/48VDC |
| 30300229/30300231 | TAP200 | 200W/K | 650x1430x220mm | 230VAC/48VDC |
| 30300230/30300232 | TAP200-HE | 200W/K | 650x1430x220mm | 230VAC/48VDC |

| ID.NO. | 型号(完全外挂安装) Model(external hanging installation) | 可用制冷量 Available cooling capacity | 尺寸 WxHxD Size WxHxD | 额定电压 Rated voltage |
|-------------------|----------------------------------------------------|-------------------------------------|------------------------|-----------------------|
| 30300184/30300190 | TAP60P | 60W/K | 403x968x158mm | 230VAC/48VDC |
| 30300197/30300203 | TAP60P-HE | 60W/K | 403x968x158mm | 230VAC/48VDC |
| 30300185/30300191 | TAP90P | 90W/K | 403x968x158mm | 230VAC/48VDC |
| 30300198/30300204 | TAP90P-HE | 90W/K | 403x968x158mm | 230VAC/48VDC |
| 30300186/30300192 | TAP110P | 110W/K | 465x1186x220mm | 230VAC/48VDC |
| 30300199/30300205 | TAP110P-HE | 110W/K | 465x1186x220mm | 230VAC/48VDC |
| 30300187/30300193 | TAP120P | 120W/K | 465x1186x220mm | 230VAC/48VDC |
| 30300200/30300206 | TAP120P-HE | 120W/K | 465x1186x220mm | 230VAC/48VDC |



| ID.NO. | 型号(完全外挂安装) Model(external hanging installation) | 可用制冷量 Available cooling capacity | 尺寸 WxHxD Size WxHxD | 额定电压 Rated voltage |
|-------------------|----------------------------------------------------|-------------------------------------|------------------------|-----------------------|
| 30300188/30300194 | TAP150P | 150W/K | 650x1430x220mm | 230VAC/48VDC |
| 30300201/30300207 | TAP150P-HE | 150W/K | 650x1430x220mm | 230VAC/48VDC |
| 30300189/30300195 | TAP200P | 200W/K | 650x1430x220mm | 230VAC/48VDC |
| 30300202/30300208 | TAP200P-HE | 200W/K | 650x1430x220mm | 230VAC/48VDC |

顶装气/气热交换器 Top mounted air/air heat exchanger



性能特点 Features

- 采用板换式结构设计的TAP热交换器具有高效率的热交换能力；
- 能耗低，重量轻，外形美观大方；
- 完全独立的两个空气循环系统，确保控制柜内空气洁净；
- 结构精致，不会因为过冷而结霜，免维护；
- 可提供不同电压要求
- The TAP heat exchanger designed with plate structure which has high efficiency of heat exchange.
- Low energy consumption, light weight, beautiful appearance.
- Completely independent two air circulation systems to ensure the air cleanliness in the control cabinet.
- Fine structure, not frosting for too cold, maintenance free.
- Different voltage requirements can be provided.

| ID.NO. | 型号 Model | 可用制冷量 Available cooling capacity | 尺寸 WxHxD Size WxHxD | 额定电压 Rated voltage |
|-------------------|-------------|-------------------------------------|------------------------|-----------------------|
| 30300091/30300146 | TAP50T | 50W | 600x420x250mm | 230VAC/48VDC |
| 30300057/30300060 | TAP60T | 60W | 600x420x250mm | 230VAC/48VDC |
| 30300061/30300064 | TAP90T | 90W | 600x480x280mm | 230VAC/48VDC |
| 30300065/30300068 | TAP110T | 110W | 600x480x280mm | 230VAC/48VDC |
| 30300069/30300072 | TAP120T | 120W | 600x480x300mm | 230VAC/48VDC |

壁装水/气热交换器 Wall mounted water / air heat exchanger



性能特点 Features

- 免维护，杜绝更换过滤网的烦恼；
- 需配备冷却水使用；
- 特别适用于极端环境条件下使用；
- 连接简单，安装方便；
- 管道全部采用铜部件；
- 紧凑型超薄设计，小尺寸大制冷量



性能特点 Features

- Avoid maintenance, eliminate the trouble of replacing the filter net.
- Need to be equipped with cooling water.
- It is especially suitable for use under extreme environmental conditions.
- Easy to be connected, easy to be installed.
- All pipes adopt copper parts.
- Compact ultra-thin design, small size and large refrigeration capacity.

| ID.NO. | 型号 Model | 可用制冷量 Available cooling capacity | 尺寸 WxHxD Size WxHxD | 额定电压 Rated voltage |
|----------|-------------|-------------------------------------|------------------------|-----------------------|
| 30400056 | TAW1000 | 1000W | 328x550x135mm | 230 VAC /50Hz |
| 30400058 | TAW1500 | 1500W | 328x550x135mm | 230 VAC /50Hz |
| 30400060 | TAW2250 | 2250W | 400x900x175mm | 230 VAC /50Hz |
| 30400062 | TAW3000 | 3000W | 400x900x175mm | 230 VAC /50Hz |
| 30400065 | TAW5000 | 5000W | 450x1300x250mm | 230 VAC /50Hz |
| 30400068 | TAW7000 | 7000W | 450x1300x250mm | 230 VAC /50Hz |

顶装水/气热交换器 Top mounted water / air heat exchanger



性能特点 Features

- 安全运行，来自于完美的冷凝水收集系统；
- 免维护，杜绝更换过滤网的烦恼；
- 空间紧凑场合仍能保持良好的冷却效果；
- 特别适用于极端的环境条件下使用；
- 使用价格低廉的水作为载冷剂获取更低的运行成本
- Safe operation, from the perfect condensate collectionsystem.
- Avoid maintenance, eliminate the trouble of replacing the filter net.
- It can keep good cooling effect in compact space.
- It is especially suitable for use under extreme environmental conditions.
- Operation cost of the coolant gets lower by using water.

| ID.NO. | 型号 Model | 可用制冷量 Available cooling capacity | 尺寸 WxHxD Size WxHxD | 额定电压 Rated voltage |
|----------|-------------|-------------------------------------|------------------------|-----------------------|
| 30400071 | TAW1700T | 1700W | 547x280x404mm | 230VAC/50Hz |
| 30400073 | TAW2250T | 2250W | 547x280x404mm | 230VAC/50Hz |
| 30400075 | TAW3500T | 3500W | 600x400x400mm | 230VAC/50Hz |
| 30400092 | TAW5000T | 5000W | 600x600x420mm | 230VAC/50Hz |
| 30400093 | TAW7000T | 7000W | 600x600x420mm | 230VAC/50Hz |



板装水冷热交换器 Plate water cooling heat exchanger



性能特点 Features

- 最直接的制冷方式，板式传导制冷，直接替换控制柜底板；
- 25mm的超薄尺寸，满足对空间有苛刻要求的场合；
- 无噪音，无冷凝水设计，让用户毫无后顾之忧；
- 模块化的设计满足不同环境的要求，选型更加简单；
- 特别适合于变频器密集安装场合；
- 机柜中的电气元件的节省空间的安装；
- 客户需冷却的电气设备，可选安装方式：直接在T型槽固定或通过螺纹钻孔固定
- The most direct cooling mode; Plate conduction refrigeration; Direct replacement of the bottom board of the control cabinet.
- The ultra-thin size of the 25mm to meet the harsh requirements for space.
- No noise, no condensation water design, so that the users have no worries.
- Modular design meets the requirements of different environments, and model the selection is simpler.
- It is especially suitable for dense installation of frequency converter.
- The space saving of the electrical components in the cabinet.
- Electrical equipment that needs to be cooled by customers, optional installation: fixed directly in T grooves or fixed by threaded holes.

| ID.NO. | 型号 Model | 可用制冷量 Available cooling capacity | 尺寸 WxHxD | 适合柜体尺寸WxD |
|----------|----------|----------------------------------|---------------|-------------|
| 30400161 | PAW2500 | 2500W | 500x400x25mm | 600x600mm |
| 30400162 | PAW3200 | 3200W | 700x400x25mm | 800x800mm |
| 30400163 | PAW5000 | 5000W | 900x400x25mm | 1000x1000mm |
| 30400164 | PAW7000 | 7000W | 1100x400x25mm | 1200x1000mm |

P型热交换器核心 Air/air heat exchanger core



性能特点 Features

- 铝制或者环氧树脂涂层铝；
- 交叉型换热器采用纯铝或者环氧树脂涂层铝制成的波纹形金属板，以及同样高的传热系数；
- 交叉型换热器的特点是加强型构造，以应付1800帕的压差，这时压降变化幅度不会超出50%；
- 单程热交换可以提供60 - 70%的效率
- Aluminum or epoxy resin coated aluminum.
- The heat exchange core of cross-flow type adopts the ripple metal plate made of aluminum or epoxy resin coated aluminum at the parallel heat transmission coefficient.
- The heat exchange core of cross-flow type features its reinforced construction to endure the extreme pressure difference up to 1800Pa and the change of pressure difference range is not more than 50%.
- One-way heat exchange provides the efficiency 60~70%.

| 型号 Model No. | 尺寸Dimensions (WxHxD) | | | 片距 Space between fins |
|--------------|----------------------|-----------|-------|-----------------------|
| | W | H | D | |
| HEX001 | 200mm | 100-600mm | 200mm | 2.1/2.4/2.7 |
| HEX002 | 300mm | 100-600mm | 300mm | 1.8/2.2/3.0/4.0/5.0 |

| 型号 Model No. | 尺寸Dimensions (WxHxD) | | | 片距 Space between fins |
|--------------|----------------------|------------|--------|-----------------------------------|
| | W | H | D | |
| HEX003 | 350mm | 200-700mm | 350mm | 3.3/4.2/5.0/6.5 |
| HEX004 | 415mm | 200-1000mm | 415mm | 3.3/4.2/5.0/6.5 |
| HEX005 | 500mm | 250-1000mm | 500mm | 3.3/4.2/5.0 |
| HEX014 | 600mm | 250-1200mm | 600mm | 3.3/4.5/6.0/7.5/9.0/10.5/12.0 |
| HEX015(P) | 750mm | 300-1200mm | 750mm | 3.3/4.5/6.0/7.5/9.0/10.5/12.0 |
| HEX016 | 800mm | 300-1200mm | 800mm | 2.7/3.0/4.5/6.0/7.5/9.0/10.5/12.0 |
| HEX017 | 850mm | 300-1200mm | 850mm | 3.3/4.2/5.0/6.5/7.5 |
| HEX018(P) | 1000mm | 350-1200mm | 1000mm | 5.0/6.5/7.5/9.0/10.5/12.0 |
| HEX019(P) | 1200mm | 350-1200mm | 1200mm | 4.5/6.5/7.5/9.0/10.5/12.0 |

逆流型热交换器核心 Counter Flow Heat Exchangers core



性能特点 Features

- 铝制或者环氧涂层；
- 逆流型换热器的特点是采用纯铝或环氧涂层铝制成得波纹形金属板。其表面形成得湍流可以促进热传递。湍流的增大不会造成污物滞留点和速度变化。这样就能充分利用整个热交换器，发挥其最佳性能；
- 逆流型热交换其可以根据客户的要求提供双L型流动，双U型流动，或L+U型流动结构
- Aluminum or epoxy resin coated aluminum ;
- The heat exchange core of counter-flow type adopts the ripple metal plate made of aluminum or epoxy resin coated aluminum which forms the turbulence to expedite the heat transmission. The increase on the turbulence will not produce any dirt stagnation point and speed change and thus make full use of the heat exchanger in its best performance ;
- The construction of dual L type, dual U type, or L+U type flow may be selected on request for counter-flow heat exchanger

| 型号 Model No. | 尺寸 WxHxD | | | 片距 Space between fins |
|--------------|----------|-------|-----------|-----------------------|
| | W | H | D | |
| HEX400095 | 400mm | 95mm | 100-600mm | 3.0/4.5/6.0 |
| HEX500095 | 500mm | 95mm | 100-600mm | 3.0/4.5/6.0 |
| HEX400140 | 400mm | 140mm | 100-600mm | 3.0/4.5/6.0 |
| HEX500140 | 500mm | 140mm | 100-600mm | 3.0/4.5/6.0 |
| HEX600140 | 600mm | 140mm | 100-600mm | 3.0/4.5/6.0 |
| HEX500190 | 500mm | 190mm | 100-700mm | 3.0/4.5/6.0/7.5 |
| HEX600190 | 600mm | 190mm | 100-700mm | 3.0/4.5/6.0/7.5 |
| HEX700190 | 700mm | 190mm | 100-700mm | 3.0/4.5/6.0/7.5 |
| HEX800190 | 800mm | 190mm | 100-700mm | 3.0/4.5/6.0/7.5 |
| HEX600235 | 600mm | 235mm | 100-700mm | 3.0/4.5/6.0/7.5 |
| HEX700235 | 700mm | 235mm | 100-700mm | 3.0/4.5/6.0/7.5 |
| HEX800235 | 800mm | 235mm | 100-700mm | 3.0/4.5/6.0/7.5 |
| HEX900235 | 900mm | 235mm | 100-700mm | 3.0/4.5/6.0/7.5 |
| HEX1000235 | 1000mm | 235mm | 100-700mm | 3.0/4.5/6.0/7.5 |