


！重要提示 Reminder

* 交流型和直流型热交换器的选择

1. 首推使用直流变频风机，直流型综合能耗比交流型可节约 50% 以上；
2. 直流风机通过变频调速等方法，来降低设备噪音，在城市宽带接入EPON等人口稠密地区极其重要；
3. 使用直流型号的额外好处是在交流断电时仍可以使用紧急冷却功能（利用蓄电池供电），避免设备挂机；

* 热交换器能力大小的选择

1. 换热能力通常用 xxx W/K 表达，代表机柜内部每比环境温度高 1 度，可以带走 xxx W 的热量，对应户外机柜，推荐机柜内部温度和环境温度的温差为 $\Delta T = 10 \sim 15$ 度，温差越大，热交换器型号可以越小，相应成本降低，反之亦然。
2. 热交换器选型简易公式：1.1~1.3（考虑到机柜大小、太阳辐射、柜体结构设计等因素的综合因子）* Q（机柜内部负载） $\div \Delta T$

* 加热器的选配

1. 在寒冷的地区，通常需配电热器，加热器功率需根据机柜大小、机柜内自身发热量及外界最低环境温度等相关参考条件进行选择；
2. 加热器的启停温度一般以控制机柜内部温度不超过 10 度为准；

* 安装注意事项

1. 在超高温、多尘、多油污、含腐蚀性气体或爆炸性气体的环境下使用本设备时，环境温度不得超过 70°C，并注意定期进行清洁维护；
2. 选择安装位置时，应确保本设备周围通风良好，使内、外循环进出风通畅，勿使其它物件遮拦或阻挡内、外循环的进出风口，以免降低冷却效果。
3. 在社区内安装，强烈建议安装时考虑到噪音对周围居民的影响，一定要选择合适的站点，远离住户！！
4. 设备安装时，应确保与机柜的接触面密封良好，无缝隙，以免产生漏风现象。

* 其他

1. 除了标准品外，还可根据客户要求订制 OEM 产品，包括超高温、海洋使用等特殊场合；
2. 具备物联网接入功能，用户可选配远程监控、无线互联终端模块（通过 GPRS、MODBUS 协议等）；

* DC version vs. AC version HEX

1. DC version is recommended comparing AC version HEX since it is PWM speed controlled and much more efficiency.
2. DC version is very suitable especially for residential area since the noise can be controlled under acceptable level.
3. DC version can provide emergency cooling when mains loss.

* How to select cooling capacity

1. The HEX capacity normally expressed in XXX W/K method, it means the product can dissipate XXX W heat load for every one degree temperature difference between inside cabinet and ambient.
2. A quick method for find out cooling capacity: = 1.1 ~ 1.3 (factor considering the size and structure of cabinet, solar radiation) * Q (heat load of cabinet) $\div \Delta T$ (expected temperature difference between inside cabinet and ambient)

* The Heating function selection

1. Normally heater need to have for cold area, the size of heater need to be considered per cabinet size, temp. level, site location
2. Normally the inside temp. should be kept under 10 degree when selecting heater size

* Tips for Installation

1. When install the product under severe condition like dusty, high temperature, please make sure the ambient temperature not over 70 degree, and make sure clean product quarterly.
2. Make sure the external circle well ventilated, not been blocked by surrounding obstacles, make sure no air short cutting.
3. Make sure the product well mounted and attached on your enclosure, make sure sealing tight enough to avoid air leakage.

* Others

1. Tailor made design also available such like for ocean environment usage
2. Option items: Wireless connection module through GPRS, Ethernet access, MODBUS protocol communication

