Shanghai WTL Heat Pipe Technology Co., Ltd

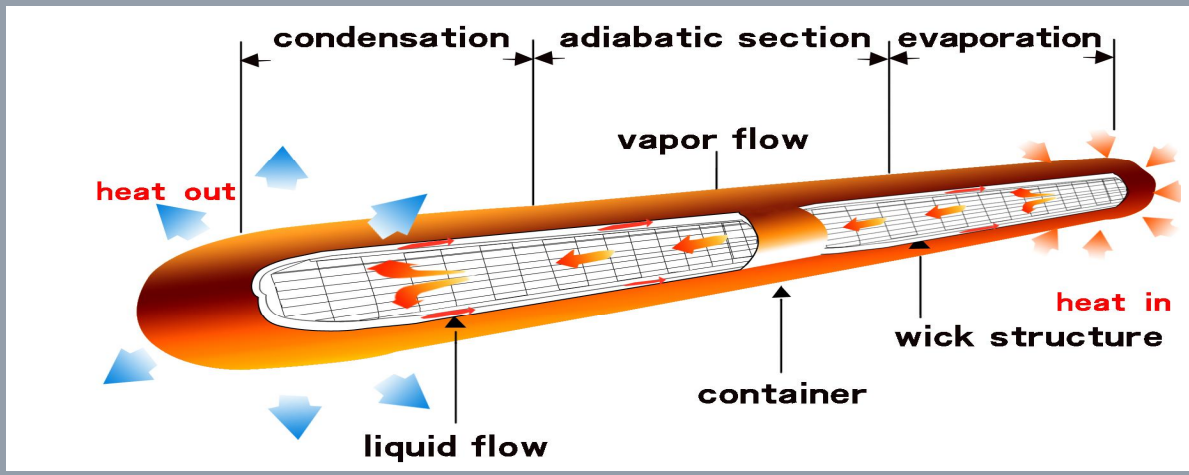
Product Introduction

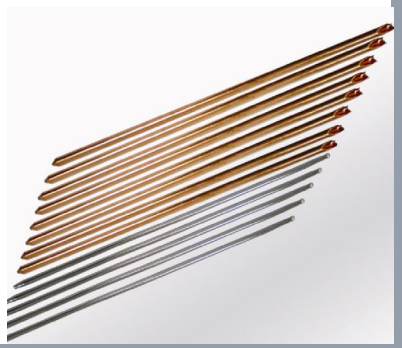
—— Heat Pipe Heat Sink for Inverter

v Products

Heat Pipe

Heat pipe (HP) is celebrated as an excellent heat transfer component, consisting of three parts called evaporating section, adiabatic section and condensation section. The main part is a sealed metal tube in which the air and other impurities must have been excluded out to maintain a micro-negative pressure and certain working fluid was filled in. When in operation, the liquid near heat source section evaporates after absorbing heat and becomes vapor, which carries latent heat and flows to the condensation section. After releasing heat through HP shell and outer cooling medium, the vapor then rechanges into liquid, which flows back into evaporating section at the pressure of capillary structure, and starts another working cycle. For the super heat transfer capability endued from its critically designed capillary structure, HP can carry large quantities of heat from heat source instantly and it is acclaimed super heat conductor.





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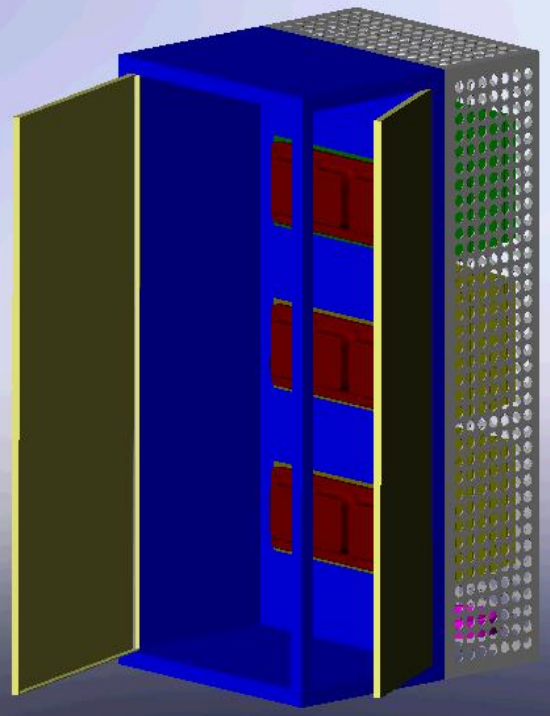
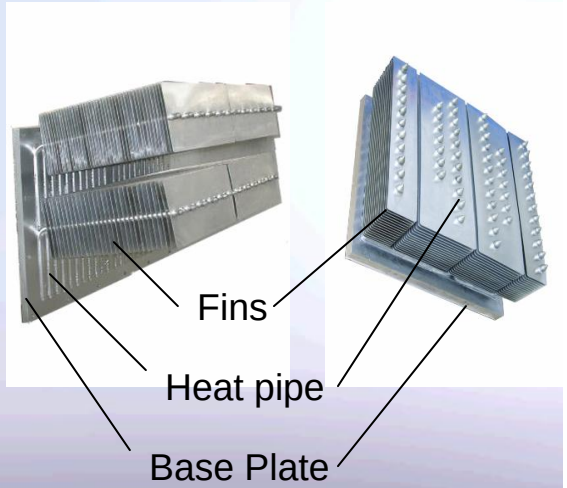
- Heat Pipe Heat Sink Using in Cabinet

It is used to dissipate the heat for power modules such as IGBT, Inverter, etc.
The modules which generated the heat are usually assembled on one side of the heat sink, called base plate.
When it works, the heat sink can transfer the heat to the outside cooling air or water immediately.

A flash for easy understanding

Tips: Please Click the Cabinet

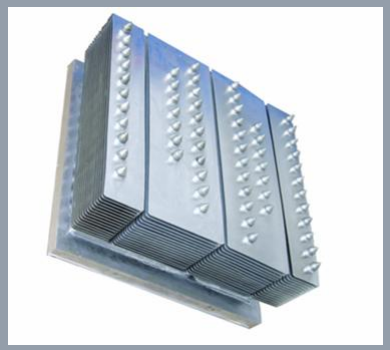




Products

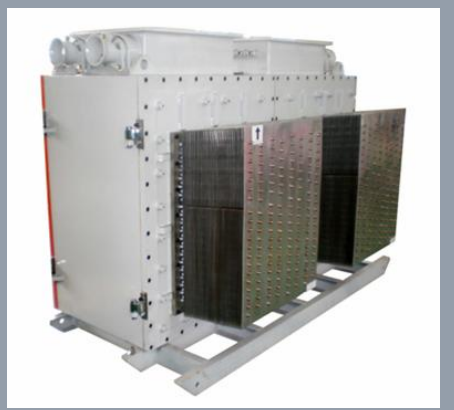
- **HP Heat Sink for Power Devices (SVG, SVC)**

- **HP Heat Sink for Medium/High-Voltage Inverter**



- **HP Heat Sink for Inverter Arc Welding Power Source**

- **HP Heat Sink for Explosion-Proof Inverter**



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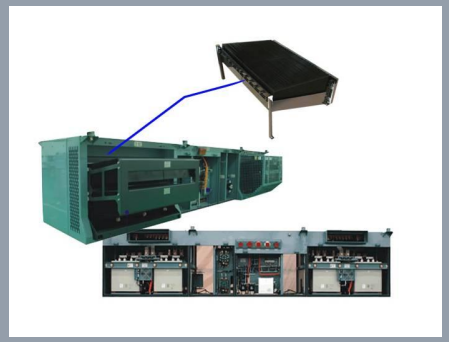
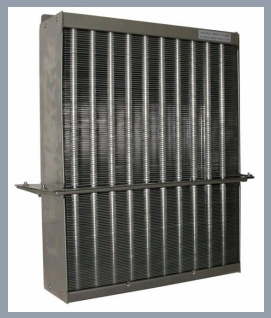
HP Heat Sink for Locomotive



- a successful solution to heat dissipating of VVVF inverter and SIV assisted inverter in speed control system of Line 6 & Line 8 of Shanghai Metro
- Will be used to SIV assisted inverter system of Xi'an line 2

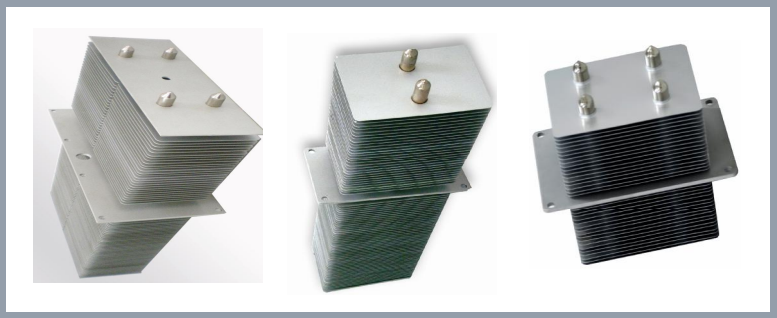
More…

- HP Heat Exchanger for CI Modules Cabinet of Locomotive



- HP Heat Exchanger for Inverter Cabinet

- Variable Types of HP Heat Exchanger



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v Input Requirements of Design Process

<u>According to the applications, the heat pipe heat sink can be designed flexibly.</u>

ø To get a customized solution, the following information is necessary to be completed.

1) Installation space constraints (including three dimensions);

2) The ambient temperature range, the upper temperature limit of the base plate/device;

3) Cooling conditions: air cooling or water cooling? the expected flow rate(m^3/h) / velocity (m/s) or the P-Q characteristics of the fan.

4) The overall structure of the whole system. Especially, make sure each unit is connected in series or parallel in air-duct, which may have an important impact on temperature distribution.

5) Heat source (power modules) distribution and the total heat of each modules. If the generated heat varies with time, Please describe in detail..

6) More details that likely to help.

The End

Thanks !

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