



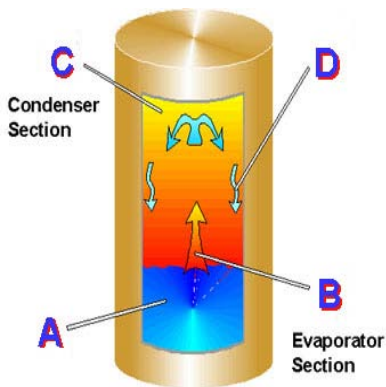
Stan Weaver & Company

# ENGINEERING [FOCUS]



Florida's Premier HVAC Representative

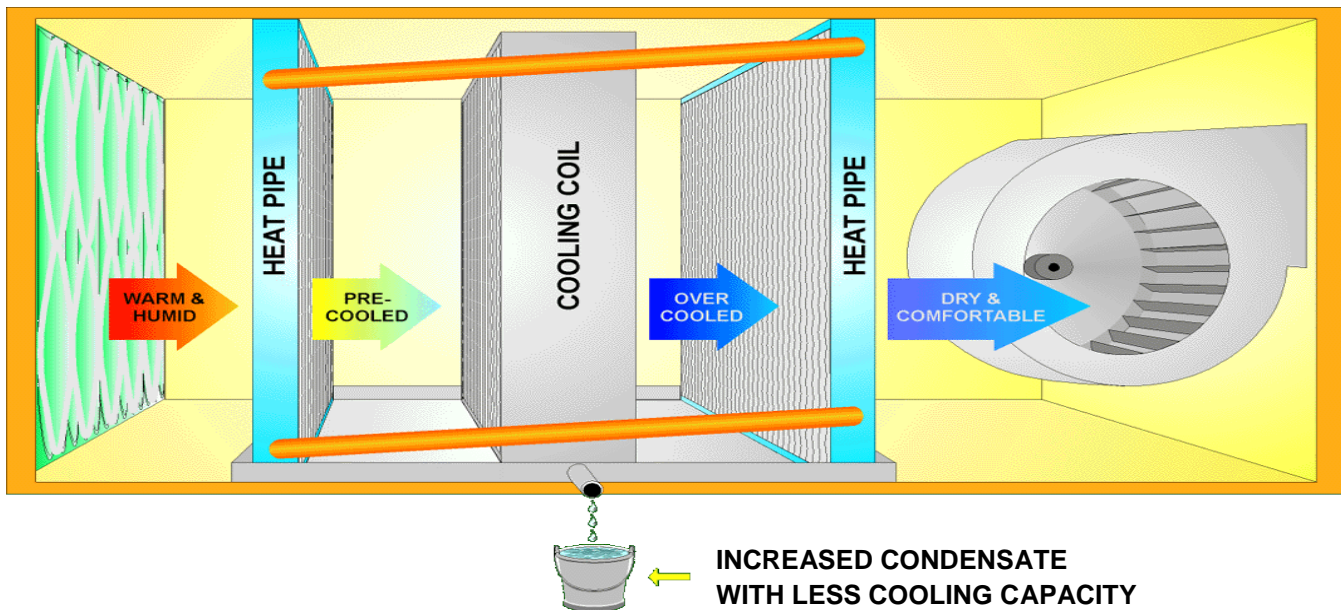
VOLUME 1, ISSUE 2 | MARCH 2009



## What Are Heat Pipes?

A traditional heat pipe is a hollow cylinder filled with a vaporizable liquid.

- Heat is absorbed in the evaporating section.
- Fluid boils to vapor phase.
- Heat is released from the upper part of cylinder to the environment; vapor condenses to liquid phase.
- Liquid returns by gravity to the lower part of cylinder (evaporating section).



TAMPA OFFICE PH: 813.879.0383  
4607 N. Cortez Ave Tampa, FL 33614

JACKSONVILLE OFFICE PH: 904.695.9295  
5220 W. Beaver St, Jacksonville, FL 32254

ORLANDO OFFICE PH: 407.581.6940  
3663 All American Blvd, Orlando, FL 32810

Serving Construction and Industry Through Experience & Integrity



## Heat Pipes (Continued)

Heat pipes may be described as having two sections: **precool and reheat**. The first section is located in the incoming air stream. When warm air passes over the heat pipes, the refrigerant vaporizes, carrying heat to the second section of heat pipes, placed downstream. Because some heat has been removed from the air before encountering the evaporator coil, the incoming air stream section is called the **precool heat pipe**.

Air passing through the evaporator coil now sees a lower entering air temperature, resulting in greater condensate removal. The "overcooled" air is then reheated to a comfortable temperature by the **reheat heat pipe section**, using the heat transferred from the precool heat pipe.

This entire process of precool and reheat is accomplished with no additional energy use. The result is an air conditioning system with the ability to **remove 50 to 100% more moisture than regular systems**.



## Benefits of Heat Pipes for Building Owners and Engineers

As an owner or manager of any type of building, whether it be a hotel, a school or a manufacturing facility, you need to maintain a comfortable, safe, and efficient indoor environment. Heat pipes in the air conditioning system provide the most economical means available to maintain superior indoor air quality, while providing a return on investment.

Because heat pipes are passive, with no moving parts, they are virtually maintenance free. This aspect is a welcome change for maintenance personnel and owners alike. Typically, heat pipes outlast the HVAC system itself. Heat Pipes can be used in numerous applications including Hotels, Schools, Restaurants and Industry.

- Less operational costs/ quick payback on investment
- Free precool and reheat
- Increases latent capacity without additional energy consumption
- Dehumidification and superior indoor air quality
- Comfort greatly enhanced
- Prevents costly damage to interiors by moisture/saves remodelling costs
- Prevents odours caused by moisture (mould growth)



Heat Pipe Technology has been manufacturing heat pipe equipment since 1983 for commercial, institutional and industrial market applications.

[www.heatpipe.com](http://www.heatpipe.com)

Have any questions about this newsletter? Want more information about these products?

Contact us at [mtosh@stanweaver.com](mailto:mtosh@stanweaver.com)



TAMPA OFFICE PH: 813.879.0383  
4607 N. Cortez Ave Tampa, FL 33614

JACKSONVILLE OFFICE PH: 904.695.9295  
5220 W. Beaver St, Jacksonville, FL 32254

ORLANDO OFFICE PH: 407.581.6940  
3663 All American Blvd, Orlando, FL 32810

Serving Construction and Industry Through Experience & Integrity