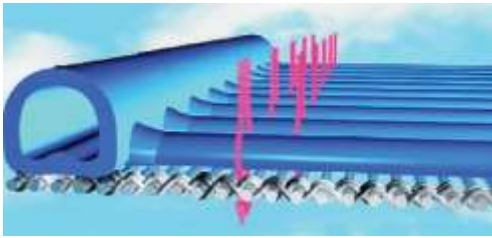
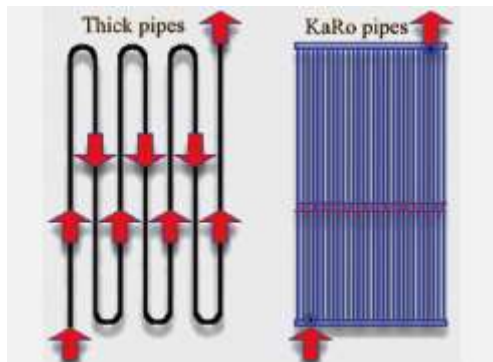


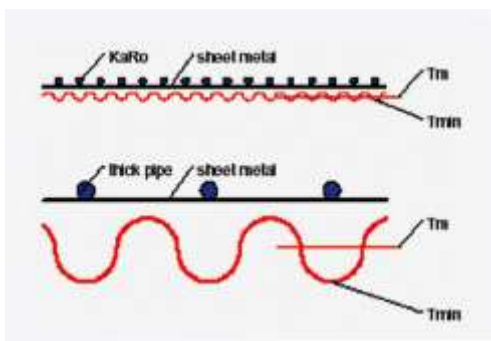
CAPILLARY TUBES



The heart and center of the capillary system is the capillary mat. This is a mesh of conduits, with a diameter of just 1/16" (2mm) through which water is circulated into collecting pipes. Capillary mats are extremely flexible so that they can be installed in convex ceilings or around a column.



Capillary mats can be imbedded into walls, ceilings, and floors. They transform these parts of your building into heating and cool-ing surfaces, which can be regu-lated easily



Because the Capillary Tubes are so close together (3/8" inches apart) the ceiling temperature remains even. The cooling capacity is limited by the dew point temperature. (FIG.1)

Higher ripples or oscillations mean then less cooling capacity.

The illustration above shows the temperature of the chilled water in the capillary tube system is about the same as the mean ceiling temperature. Despite their smaller diameter, capillary mats experience very little loss of pressure, rather than running through just one tube, as in a system with thicker tubes. The typical velocity of flow with the capillary tubes averages only 4" to 8" inches/second. The velocity in the capillary tubes is always laminar and grows linear with the amount of extra water and not quadratic.

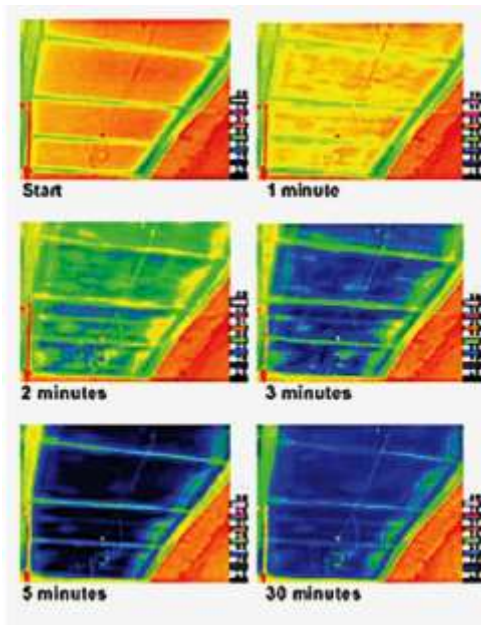


Illustration Below:

Capillary tube cooling can be switched on quickly. After a few minutes, the capillary ceiling begins to cool the room effectively. This is brought about by the very small amount of water in the capillary tubes and the positioning of the mats close to the surface. In addition, the capillary ceiling is able to regulate itself easily. The illustration below shows how quickly the temperature changes.