Radiant Cooling... Feel the difference

Creating a chilled ceiling to pull thermal energy away from your body.

To provide radiant cooling, an air-to-water heat pump is typically used to generate cold water. Then, this cold water is then pumped through Ray Magic® radiant ceiling panels, resulting in a cold ceiling surface temperature.

Thermal energy can only move from hot objects to cooler ones. So, in radiant cooling, thermal energy is being radiated from your body to the ceiling panels, resulting in a cooling sensation.

Consequently, this slightly increases the temperature of the panels, which are then cooled back down as we continue to pump chilled water through the ceiling.

But how do you avoid condensation?

Luckily, since our panels have a low thermal mass, we can quickly change their temperature to avoid condensation. Messana Controls uses mSense room comfort sensors to monitor the dew point temperature, and then adjusts the radiant surface temperature to avoid condensation. Additionally, Messana ATUs can perform neutral temperature dehumidification to lower the dew-point within an environment, allowing us to use colder water with the radiant ceiling panels.

Read more ›

Messana's Radiant Cooling

Italy

A system that uses chilled water circulated through pipes in a building's ceiling or walls to provide comfortable cooling without the use of fans or ducts.

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