



TECHNOLOGY

Waterfall Cooling and Heating Systems

OVERVIEW

This invention provides cooling and dehumidification during hot and humid conditions and heating and humidification during cold and dry conditions. While conventional decorative waterfalls provide humidity to dry air winter spaces, they add to humidity levels during the summer. Conventional vapor compressor systems provide heating and cooling via fan coil units or air ducts, respectively. However, these systems do not provide humidification during the winter because heat and mass transfer is performed indirectly through a heat exchanger wall.

Researchers at the University of Maryland have developed an improved method of cooling and dehumidification during hot and humid conditions, and heating and humidification during cold and dry conditions. The use of valve switching controls, combined with the waterfall system applying a direct heat and mass transfer between space air and chilled (or warm) water, provides desirable humidity and temperature levels, all while incorporated into a decorative display.

For additional information, please contact the Office of Technology Commercialization, University of Maryland College Park, via e-mail at otc@umd.edu or phone at 301-405-3947.

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Additional Information

INSTITUTION

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LICENSE STATUS

Contact OTC for licensing information

CATEGORIES

- Clean Technology
- Engineering
- Chemical
- Industrial Processing

EXTERNAL RESOURCES

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