

MSP[®] TECHNOLOGY IS SIMPLY THE MOST EFFICIENT HUMIDITY CONTROL SOLUTION FOR SUPERMARKETS

Control Frost, Reduce Energy Costs and Maintenance



Supermarkets require dehumidification to prevent frosting on refrigerated display cases. Ambient air enters the freezer cases each time a shopper opens the door to make a food selection. If the air is not sufficiently dehumidified, condensation will occur and ice will form on the doors and refrigeration coils. This leads to frequent energy-intensive defrost cycles, and reduced shelf life. Additionally, frost formation inside freezer case and on food products, leads to product deterioration. This condition results in less than optimal presentation, impacting the shopping experience.

MSP[®] Dehumidification Technology is perfectly suited for Supermarkets

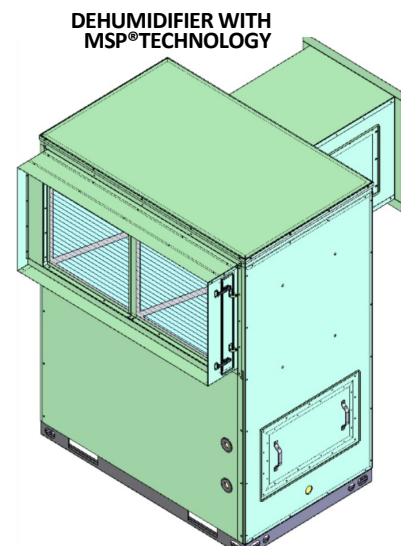
Our high efficiency dehumidification design can reduce energy consumption by 25% to 50% over competitive systems, which is significant in light of the typically long operating hours and high air volume requirements. Our energy efficiency beats that of both desiccant wheel and heat-pipe technology,

through the use of our patented Multiple Small Plate design. In addition, desiccant wheels are subject to breakdown and heat-pipe efficiency degrades significantly with lower temperature differences. MSP heat transfer performance remains consistent, and significantly higher than that of heat-pipe technology (over 80% for MSP, vs. under 40% for heat-pipe).

MSP[®] Dehumidification units are also designed to optionally leverage technologies such as the new secondary Brine/Glycol solutions which are becoming more common. By making use of this on premise cooling source, MSP units can dehumidify without dedicated compressors. This solution also highlights a unique feature of MSP Technology, namely built-in reheat. The MSP design uses the warm incoming air stream as the reheat energy source.

▶ Key Benefits & Features

- **Makes food products more presentable**
- **Reliable** Simple Technology, No Moving Parts, Low Maintenance
- **Performs** Delivers consistent low dew-point temperatures
- **Sanitary** Full Draining, No Standing Water
- **Efficient** Cuts dehumidification operating costs by up to 50%
- **Fast ROI** Lower capital costs, Competitively priced
- **Versatile** Chilled Water and Refrigerant units
- **Advanced** Single unit provides dehumidification, sensible cooling, heating and ventilation air
- **Flexible** Horizontal, Vertical and Modular configurations for uses with space or access issues
- **Cutting-Edge Control Systems**



ABOUT MSP® DEHUMIDIFICATION TECHNOLOGY

MSP® Dehumidification Technology is offered in a wide range of super-efficient, industrial grade dehumidification equipment under the MSP Technology brand, and others. Designed specifically for green applications, MSP products are engineered for high performance, guaranteed.

SOME APPLICATIONS FOR MSP TECHNOLOGY

CONDENSATION CONTROL

Supermarkets • Indoor Ice Rinks • Water Treatment
Wastewater Treatment Facilities

INDUSTRIAL DRYING

Leather • Food Drying • Paper Production
Investment Casting • Lumber

PRESERVATION

Dry Storage Warehouses • Paper Storage
Museums • Archives • Libraries • Film Storage

EXPLOSIVE & FLAMMABLE ENVIRONMENTS

Paint Spray Booths • Military • Munitions Storage

CRITICAL ENVIRONMENT

Semiconductor Manufacturing • Pharmaceuticals
Health Care • Laboratories • Clean Rooms

INDOOR FARMING

Produce • Medical Marijuana

ATMOSPHERIC WATER GENERATION

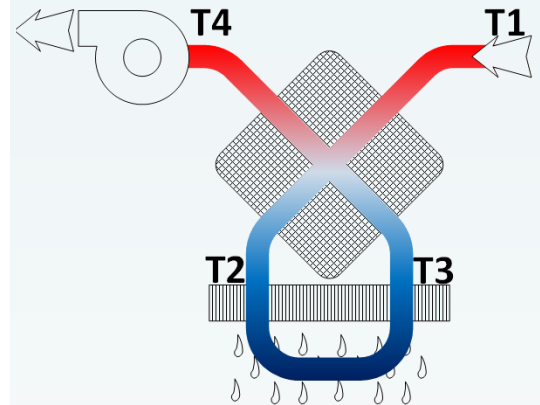
OUR CLIENTS INCLUDE



and many more...

HOW IT WORKS

MSP® DEHUMIDIFICATION AND ATMOSPHERIC WATER GENERATION TECHNOLOGY



STEP 1 Warm, humid incoming air (T1) flows through the first pass of the plate type air-to-air heat exchangers for pre-cooling and initial condensing and water production. This is accomplished by regenerative thermal exchange with the cooler air that is leaving the heat exchanger. (see step 3)

Advantage: Pre-cooling, condensing and water production by regenerative thermal exchange are "free" and involve no additional equipment.

STEP 2 Pre-cooled air (T2) then passes twice over conventional cooling coils for final cooling, condensing and water production

Advantage: Pre-conditioned air can be treated much more efficiently, using smaller compressors that require as little as one-half the power.

STEP 3 The cool, now dry air (T3) is then drawn back through the opposite side of the heat exchanger where it absorbs some heat from incoming air (see step 1) and continues on to possibly serve a secondary purpose.

Advantage: No heating coil—and no energy penalty—needed to reheat the dehumidified air before it enters the conditioned environment.