Air Conditioning | Heating | Refrigeration

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The Supermarket Humidity Hang-Up

BY PETER POWELL OF THE NEWS STAFF

Humidity in the ambient atmosphere being refrigerated — can that ever be a good thing?

Yes, according to a new technology that is refrigerating humidity as a way to maintain consistent temperatures over time.

"In medium-temperature applications, we have dramatically reduced or eliminated defrost requirements," said Robert Johnson, who is with system developer XDX Innovative Refrigeration, Arlington Heights, IL.

The new system is said to be more efficient in its use of electricity, saving 18% to 24% over conventional refrigeration. It also is easier on the equipment, so it does not have the normal problems associated with oil, according to XDX officials.

BROAD APPLICATIONS

Among some of its applications are refrigerated display cases for fresh meat. The technology can increase shelf life by up to 66% because the temperatures remain consistent (not fluctuating 6° to 26°F, as in conventional applications).

Another application is with cases that are used for gas-packed, fresh vegetables. Such cases can run at a consistent temperature, thus ending moisture build-up in the package.

Flower display cases also can hold a constant humidity, thus not deteriorating the flowers by drying them out.

Cooler boxes, where product preparation is performed, can remain cold and hold humidity, allowing all products to remain in their delivered state, the company says.

Freezers can hold product without forming frost, neither inside the package nor outside on cartons.

In production facilities, where the cooling of product requires a temperature below which bacteria cannot grow, the system takes a minimal amount of moisture from the product and controls moisture loss.

When freezing product, the system is said to be able to control moisture

Consistent temperature in a processing plant not only saves shrinkage, but creates an atmosphere in which bacteria cannot grow.

While plants often have duplicate refrigeration systems, so that when one system is in defrost, the other cools, the new system does not need this redundancy.

And air conditioning can use the XDX system to control excess in cooling needs, allowing smaller compressors to accomplish peak demand.

For more information, contact XDX Innovative Refrigeration, 3176 N. Kennicott Ave., Arlington Heights, IL 60004; 800-939-0250; 847-398-1365 (fax). N

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