



INCOMING

FRONT

Capitalizing On Climate Control

By Jennifer LeClaire

Like multistory facilities and retail offices, climate-controlled units were once a new self-storage frontier. Some considered it risky business. Would tenants really pony up extra bucks to air condition their stuff? Nevertheless, the concept not only caught on, it is changing the face of the industry.

Climate-controlled storage is no longer a rarity. In fact, it is fast becoming the norm for at least a portion of a facility to be reserved for climate control. According to the *2007 Self-Storage Almanac*, the number of facilities with climate-controlled units has increased from 24.3 percent in 2005 to 39.1 percent in 2006. That's more than double the 16.7 percent recorded in 1999. And, increasingly, entire facilities are being developed with heating, cooling, and dehumidification equipment. The self-storage industry has proven that there is a demand for

the growing supply. Indeed, beyond niches such as wine and cigar storage, a growing number of consumer types are craving climate control.

The overarching question for many self-storage developers is this: Has climate control transitioned from merely a competitive advantage to a must-have amenity? The answer is yes and no. Climate-controlled storage is not necessarily an automatic amenity that all self-storage developers should include in their facility designs by default. However, many in the industry believe that it is becoming necessary to offer at least a percentage of climate-controlled units in parts of the country that are known for extreme temperature and humidity.

"Fifteen years ago climate control was truly rare," recalls Diane Piegza, a spokesperson for Sovran Self Storage, Inc., a self-storage Real Estate Investment Trust (REIT) and the Buffalo, N.Y.-based

parent company of Uncle Bob's Self Storage. "We are buying properties now that are entirely climate-controlled. There is still a demand for traditional drive-up space, but people are looking more and more for dehumidified storage."

Collectors, antique lovers, and pharmaceutical reps who need to store samples of medicines within a specific temperature range by law are atop the list of "typical" climate-controlled storage candidates.

Additionally, the concept is popular with those who need to store sensitive equipment or expensive seasonal clothing such as furs. Even records storage customers are looking to climate-controlled units in order to avoid the possibility of paper rot. The possibilities are budding across the industry, but there are some definite regional trends worth noting.

Regional Cold Fronts

Air conditioned space is more popular in southern states than northern states, though operators in northern states are beginning to see a demand for heated space, according to Clark Edgecomb, principal of Houston-based Edgecomb & Associates, Inc., a full-service architectural and planning firm that serves the self-storage industry.

"The key issue is to make sure that climate-controlled storage is viable for your region and demographics," Edgecomb says. Some of his clients initially thought high-end, high-income communities were obvious candidates for climate-controlled storage facilities; however, this can be a costly assumption when the units sit empty in favor of the lower-cost, non-climate-controlled space. Oftentimes,

upper-class neighborhoods have three-car garages and large homes that eliminate the need for storage, or at least for climate-controlled storage for wine and art collections. As such, Edgecomb suggests that middle-income neighborhoods are a better opportunity for climate-controlled storage.

Hard data on regional occupancy rates back up Edgecomb's findings. When it comes to physical occupancy, non-climate-controlled facilities still have the upper hand in many regions. Indeed, according to the *Almanac*, non-climate-controlled facilities recorded higher occupancy levels in most states, with the exception of the West North Central and East South Central regions, where extreme cold and humidity are potential threats to stored goods.

A major difference was noted in the Mountain region, where occupancy was more than 12 percentage points higher in 2006 at non-climate-controlled facilities. Of course, seasons play a role in the occupancy rates of non-climate-controlled facilities, which show their lowest occupancy levels in the Mountain states and the North Central and East North Central regions during the fourth quarter of the year. The highest occupancy levels for non-climate-controlled facilities in the North Central and West South Central were noted in the temperate spring months, from April to June.

A look at the bigger picture helps put these *Almanac* findings into context. The percentages of climate-controlled facilities range from 10.3 percent in the Mountain region to nearly 58 percent in the West South Central region, with more than 57 percent of the facilities in the Southeast/South Atlantic regions providing these climate-controlled options.

One obvious differentiator in the study of climate-controlled versus non-climate-controlled facilities is age. Nearly 65 percent of the facilities built between 2001 and 2004 have climate-controlled units, versus approximately 15 for older facilities. The largest percentage of climate-controlled units are 10-by-10 and 10-by-15, with 10-by-10s dominating the national landscape and 20-by-20 accounting for the lowest share. This mix can impact profits. Most developers feel safe

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with 120 square feet average unit size of non-climate-controlled and 100 square feet for climate-controlled.

Components And Specifications

Once your feasibility study demonstrates an opportunity for climate-controlled storage, your homework isn't done. It now becomes time to select the system and components you are going to use. Today, there are many heating, ventilation, and air conditioning or HVAC contractors, not to mention numerous systems on the

market. There are also design and building factors to consider. Climate control, for instance, demands more insulation and a thicker roof. Moreover, the building's orientation to the sun, along with the number of units, can impact how much air conditioning is needed.

What is more, that approach runs up the cost of electricity and eats into the operator's return on investment.

control that need to be planned for early on. For instance, Caesar Wright, president of Mako Steel, Inc., a self-storage construction company based in Carlsbad, Calif., says "Climate control mandates allowing an extra foot of height to make room for the ductwork. Also, a six-inch-thick roof and four inches of wall installation is recommended in most areas of the country, with additional insulation in the coldest climates."

It is important to recognize that there are other specific requirements for climate

control that need to be planned for early on. For instance, Caesar Wright, president of Mako Steel, Inc., a self-storage construction company based in Carlsbad, Calif., says "Climate control mandates allowing an extra foot of height to make room for the ductwork. Also, a six-inch-thick roof and four inches of wall installation is recommended in most areas of the country, with additional insulation in the coldest climates."

Logis-Tech and Munters offer climate-controlled systems especially for the

self-storage industry. Although the relative humidity may have been 30 percent or lower during the heat of the day, it could rise well into the 70 percent to 80 percent range during cooler nights when climate control system runs less often. Unlike traditional HVAC systems, these companies offer an added layer of protection with humidity control.

Many operators are opting for this technology because the wrong load calculation can cause the air conditioner to cycle on and off more often and for shorter periods of time than it should—even in the hottest weather. That prevents the HVAC system from removing as much moisture from the air as it should.

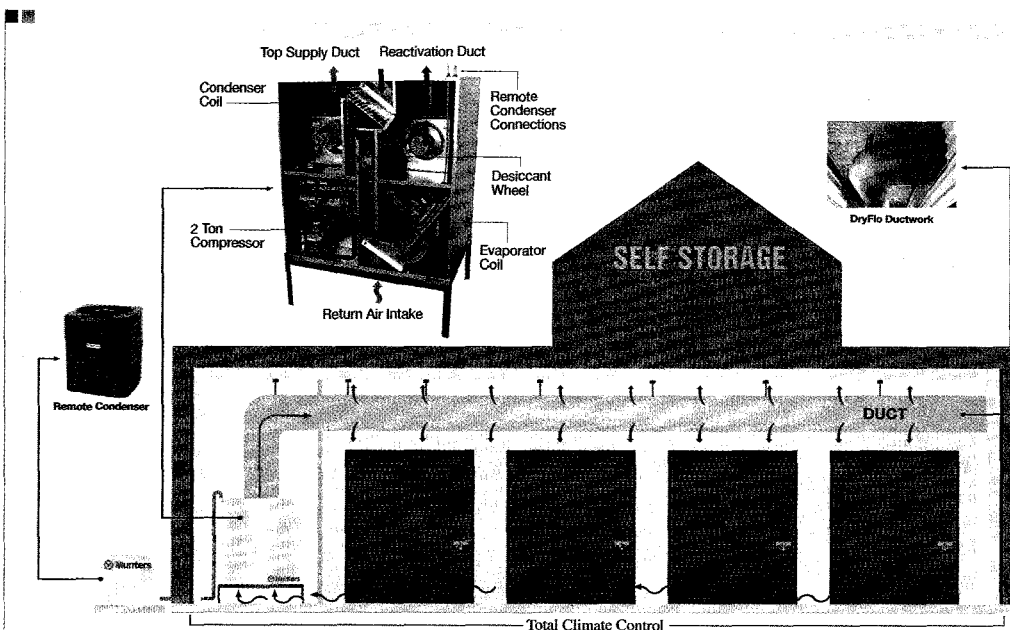
The Humidity Dilemma

High-volume ducted dehumidification systems solve problems with mold, mildew, rust, and mites. These systems have a separate humidistat controlling their operation. It uses the fan from the base unit to circulate the air and uses the existing ductwork to reach moisture in the far reaches of the building.

"We lean toward automatically installing Dri-guard in all of our facilities unless it's just not possible or it's too cost prohibitive to retrofit," says Sovran's Piegza. "Dri-guard even works at storage facilities with roll-up doors and drive-up access.

Dri-guard offers the best protection for artwork and other items that are sensitive to moisture. Moisture-retardant cans aren't the solution."

Logis-Tech's patented Environmental Stabilization System®, or ESS, controls the facility throughout to a relative humidity of 50 percent or lower and to a temperature of 80 degrees or below year round. At the heart of the ESS is a sophisticated automated control system that offers visibility of the performance of the systems to customers via the World Wide Web and allows for remote management. The major equipment component is the fully-integrated Air Dehydration Unit, manufactured by Munters.



Source: Munters Corporation

Built to exacting specifications, these units offer a stable environment while simultaneously reducing energy consumption.

The HCUc2400-5-ton split system was developed by Munters strictly for the self-storage industry, with the first two systems being installed at one of Sovran's Uncle Bob's facilities in May 2007. It consists of an indoor air handler and an outside condensing unit. The air handler contains a two-ton compressor, desiccant wheel, supply fan, reactivation condenser coil, and DX cooling coil. The condensing unit is three tons and is located outside. The unit has an optional 10kw electric heater. An optional Munters supplied thermostat is installed in the space to control the unit. The thermostat will automatically shift between cooling and heating. The unit operates in temperature priority mode; if the space temperature exceeds 80 degrees, the desiccant wheel shuts off until temperature is less than 80 degrees.

When the unit temperature rises to 78 degrees, the two-stage thermostat starts the two-ton compressor in the air handler. If the space temperature rises to 80 degrees, the thermostat starts the outside condensing unit. If the fan switch on the thermostat is set to "on," the supply fan runs continuously. If it is set to "auto," the supply fan runs only when cooling, dehumidification, or heating is called for. When the space humidity rises to 50 percent relative humidity, both compressors and the desiccant wheel run. If the thermostat calls for the second stage of cooling, the desiccant wheel shuts off until the call for second stage cooling is gone. When space temperature drops to 50 degrees, the electric heater starts and runs until the space temperature rises above 50 degrees.

Dehumidification systems can add up to 25 percent to the cost of traditional climate-control systems, according to Rich Orr, national accounts manager for Munters, a leading provider of humidity control products headquartered in Amesbury, Mass., but he reports up to 46 percent greater energy efficiency because controlling the humidity is not dependent on running the air conditioner. The end user can save up to \$4,000 per year on electrical

costs, and that covers the cost difference in the equipment within 12 to 18 months. "In the past, people have tried to control the humidity by running the air conditioning longer, but you'll never get the humidity level below 65 percent that way," Orr explains. "It will be cool, but it won't be dry because the air coming off the cooling coil is moist."

Raking In The Rent

Whether you decide to install traditional climate control or dehumidified climate control, your facility can rake in significantly higher rents—25 percent to 50 percent more than non-climate controlled units, according to the *Self Storage Almanac*, with dehumidified units fetching the highest rates. Uncle Bob's, for example, typically puts a 25 percent premium on units with its Dri-guard system. So while you may lose up to 25 percent of your total building's square footage by implementing climate control, Edgecomb says, you can quickly recoup the investment by offering tenants peace of mind that their furniture and other items will be preserved.

Breaking it down by unit size demonstrates the obvious boost in profits climate-controlled units offer. For example, in the case of a 10-by-30 unit, the rate is over \$100 higher for a climate-controlled unit from coast to coast. The highest rents for climate-controlled units are generally in the western states, where extreme temperatures make clients' goods vulnerable to damage and where rents are already comparatively high on the national scale.

Climate control also has a significant impact on rental rates in the hot and humid South Central states. For example, in the 10-by-20 segment, rental rates at climate-controlled facilities are about 56 percent higher nationally, and 40 to 50 percent higher in most regions. However, in the Southeast region, the average rent for a climate-controlled 10-by-20 unit is \$180.20, nearly 82 percent above the overall average of \$125.10 for 10-by-20 units in the region. The lesson: Many consumers in this region and in other parts of the U.S. that are subject to extreme temperatures, are willing to pay more to protect their goods from the effects of heat and humidity.

Considerations For Climate Control

Developers should consider these factors when planning for climate-controlled units at a self-storage facility:

- Installed cost
- Energy consumption
- Space requirements
- Freeze prevention
- Precision
- Building height
- Size and shape
- System cooling and heating capacity
- Centralized maintenance
- Stability of control of HVAC systems

The considerations are the same whether developers are building new facilities or retrofitting older facilities with climate control, however, retrofitting also demands assuring that the building offers adequate power to service the HVAC. Keep in mind that there may be a cost to upgrade the utilities infrastructure to accommodate the additional electricity load.

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With the mold factor becoming a bigger issue in many states, it may soon be time to revisit the question of whether or not climate control has transitioned from merely a competitive advantage to a must-have amenity.

Although it's true that some regions of the country may not experience as extreme temperatures as others, and some consumers would rather not pay higher rents, if mold legislation and mold lawsuits continue to rise, new developments may well begin incorporating these systems as a standard part of the design. ■

Jennifer LeClaire is a freelance writer based in Hallandale Beach, Florida, and a regular contributor to the *Mini-Storage Messenger* and *Self-Storage Now!* Her clients include The Associated Press, *The New York Times*, and CBS Television/Winstar Communications.

