

CASE STUDY



ARCHIVAL PRESERVATION:
PRICELESS PORTUGUESE EXHIBIT PROTECTED
AT THE SAN DIEGO MUSEUM OF ART.

BACKGROUND

With 120 of the world's most valuable art objects at stake, the government of Portugal was not willing to take any chances with humidity control when it lent the exhibit to the prestigious San Diego Museum of Art.

Priceless pieces included several paintings of 18th century Lisbon, fine silver, elaborate furniture, porcelain, unusual and beautiful scientific instruments, and spectacular selections from the Portuguese crown jewels. A treasury of rare religious items included rarely seen silk vestments from the Lisbon Cathedral, precious altar furnishings in both gold and silver, and a spectacular gilded wood altarpiece that measured over 22 feet high.

Prior to its arrival in San Diego, the exhibit was on display only at one other American location, the National Gallery of Art in Washington, DC. There, permanently installed, state-of-the-art technology enabled the Gallery to tightly control the environment. Curators in San Diego won the exhibit only after they agreed to maintain the same temperature and humidity conditions.

THE PROBLEM

Many of the items in the exhibit were vulnerable to moisture. The gilded altar, the smaller wooden artifacts that were trimmed with genuine gold leaf, the tapestries — all of these pieces extremely hygroscopic. Because of the risk, the Portuguese government required a guarantee that the temperature would not vary more than two degrees from 72 degrees and that the humidity would not vary more than 5% from 55% RH. Not only did the Museum have to prove it could meet the standards, but every two weeks charts detailing around the clock conditions were shipped to Portugal as continuing proof.

Complicating the problem, the gallery area, nearly 400,000 cubic feet of space, would be visited by up to 2000 people during each day. This, plus the constant infiltration of outside air from opening doors and the natural leakage of the seventy-year old building, created the need for a fail-safe system.

Above: A gilded coach built in the 17th century was a centerpiece of the exhibit.

THE SOLUTION

The exhibit would run in San Diego for five months. So, the only practical solution for the Museum was a temporary humidity control system. Learning that Munters MCS specialized in temporary humidity control applications for both industrial and commercial environments, and that Munters had solved a similar problem in Texas, preserving Russia's "Catherine the Great" exhibit, Museum officials turned to Munters for a consultation.

As soon as Munters completed its walk-through, it was clear that the old HVAC system could not meet the conditions required. This was confirmed by chart recorders used to measure the temperature and humidity throughout the Museum, which clearly indicated that the building's humidity control was not meeting the specs spelled out by the Portuguese government. The chiller system that the museum had in place was built in 1966. It had not been engineered to provide "tight" control of humidity levels.

To solve the problem, Munters installed two HoneyCombe® 4500-GA gas-fired desiccant dehumidifiers and a 44-ton chiller with two 20-ton coils.

Munters had to build the system working against a tight deadline. The exhibit was due to open just two weeks after Munters was given the project.

Complicating the installation was the need for a crane to hoist the equipment on to the roof, where it would be integrated with the existing HVAC system and also kept out of sight.

But the day US military transport aircraft airlifted the valuable artifacts to San Diego, the Munters temporary system was finished and running to spec. Throughout the entire exhibit, the Munters system maintained the conditions perfectly.



Munters' temporary humidity/temperature control system was built up from equipment hoisted on to the Museum roof with a crane. It kept an area nearly 400,000 cubic feet at 72° F and 55% RH.

THE BENEFITS

■ Absolute Protection

Temporary humidity control by Munters means you can achieve your objectives without disruption. Munters has both the engineering skill and practical experience to develop a temporary system that will handle any climatic change that might occur during the time you need to control humidity. Competitors may rent dehumidification equipment, but only Munters guarantees that the systems will always meet the conditions of a difficult spec.

■ Solve Any Problem

Munters can solve any humidity related problem. From safe-guarding fine art work to preserving inventories of peanuts, Munters has unmatched experience. We control humidity during NHL playoff games, maintain conditions for pharmaceutical manufacturing, and keep lollipops from sticking together. No one knows more about humidity control than Munters.

■ An On-site Test Before Purchase

If your temporary humidity control problem is recurrent, you may wish to purchase a Munters permanent system. If so, temporary humidity control permits an on-site test. When it's time to purchase, you'll have the data to ensure the system you install is satisfactory in every way.

■ Flexible Configuration

Munters services allows you to blend both temperature and humidity control into an integrated system. Should your requirements increase or decrease, you can add or subtract equipment without problems. Munters has the largest rental fleet in North America, so no compromises are required to build or change your temporary system.

■ Turnkey Service

Munters systems are turnkey. From initial consultation, to engineering, to installation, Munters does it all. Munters supports the installation with 24-hour service, and 50 years of expertise.

Moisture Control Services — Munters Corporation ISO 9002 Certified

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