



Case study: Air Treatment
Pacific Titles Archives Vault
Burbank, CA, USA

Quick facts

By installing the HCD Plus, the Pacific Titles Archives' film vault has been able to:

- Stop mold and mildew growth
- Stabilize conditions
- Prevent "vinegar syndrome" and color fading
- Minimize pollutants
- Achieve an energy cost reduction
- Allow for quick access for easy maintenance

HCD Plus Desiccant Dehumidifier Controls Climate for Film Vault

Munters industrial dehumidification equipment is delivering temperature and humidity control for Pacific Title Archives, a major storage provider for the motion picture industry.

The film preservation facility includes a 2,300-square-foot vault where up to 80,000 film canisters can be stored. This project required an advanced system that employed

state-of-the-art technology to keep the media collection safe and secure so items would remain in flawless condition when accessed in the future. The vault sits inside a warehouse and requires the optimal use of space while still allowing ease of access to multiple clients.

The process of storing film is more nuanced than traditional items due to its delicate nature.

Long-term archiving is a valuable commodity for motion picture clients because film can't be replicated but can be tampered with and ruined without proper handling. An industry term that is used to refer to films that become defective is "vinegar syndrome," which gets its name from the smell that the films expel. The actual condition is cellulose triacetate degradation,

which is a result of high heat and moisture levels in storage areas. Should this condition begin to occur, one bad film emitting acetic acid would pose a serious threat to surrounding films. Essentially, a minor breach in safety precautions and proper handling could ruin an entire collection.

McMurray Stern, a design build contractor offering high density shelving and mobile filing systems was brought in to offer a solution. First, in order to secure the regulation of temperature and humidity in the vault, McMurray Stern contacted Munters to design a dehumidification unit for installation just outside of the vault vestibule. The Munters HCD-600 Plus custom-designed dehumidification and filtration system was selected as it can remove moisture from the air through a desiccant rotor and guarantee precise humidity control by modulating face and bypass dampers. The system also ensures the vault is kept at a precise temperature of 45°F with a relative humidity of 25% which was required to ensure the preservation of the film canisters for up to 75 years. The low-temperature storage helps to preserve the film at a level where the humidity is manageable. The unit provides over four air changes per hour and removes pollutants and particles by carbon and HEPA filtration.

The vault is regulated by a passive smart system, which automatically monitors climate activities and sends a notification if there is a breach or change of any kind inside. This provides a level of security that would allow for a quick response in case of emergency so that the contents will maintain their condition.

An additional safety precaution McMurray Stern implemented featured a fire-prevention



The HCD Plus provides a precise temperature of 45°F with a relative humidity of 25% which was required to ensure the preservation of the film canisters for up to 75 years.

gas system which pulls oxygen from the vault in case of a fire. An important aspect of the fire-prevention unit is that it provided an alternative to a fire-sprinkler system, which was not an option because of the damage that a wet climate would cause to the film. "We presented the plan to the City (of Burbank) prior to proposing to the client," said Jim Burkart, Senior Design Consultant of McMurray Stern. "When you're building a climate-controlled vault from the design phase to execution, planning is critical."

The film, stored in canisters, is held on a total of 20 mechanically assisted mobile carriages

inside of the vault that operate on a recessed-rail unit, manufactured by Spacesaver. The recessed-rail tracks are laid to allow the carriages to be easily navigated so the canisters can be accessed, while taking up a minimal amount of space.

"Maximum use of space is the biggest need to be able to store as many cans of film as possible," said John Bragg, Branch Manager of Pacific Title Archive, a company who has been storing entertainment media since 1935. "Long-term retention of their content is what it's all about."

Proposing a quick timeline and following through as planned was crucial to the construction of the storage vault. The project took two months to be completed, a quick turnaround that was tailored to Pacific Title Archives' requirements.

"We're very happy with [McMurray Stern]," said Bragg. "From start to finish, they were perfect in everything. They did everything on time, actually finishing ahead of schedule."



Doors leading to the vault open to the HCD-600 unit (left) and the film storage (right). This solution will keep the 80,000 films in flawless condition when accessed in the future.

Australia Munters Pty Limited, Phone +61 2 6025 6422, Fax +61 2 6025 8266, **Austria** via sales organization in Germany, **Brazil** Munters Brasil Industria e Comercio Ltda, Phone +55 41 3317 5050, Fax +55 41 3317 5070, **China** Munters Air Treatment Equipment (Beijing) Co., Ltd., Phone +86 10 80 481 121, Fax +86 10 80 483 493, **Denmark** via sales organization in Sweden, **Finland** Munters Oy, Phone +358 9 83 86 030, Fax +358 9 83 86 0336, **France** Munters France S.A., Phone +33 1 34 11 57 50, Fax +33 1 34 11 57 51, **Germany** Munters Euroform GmbH, Phone +49 241 89 00 0, Fax +49 241 89 00 5199, **Indonesia** Munters, Phone +62 21 9105446-7, Fax +62 21 5310509, **Italy** Munters Italy S.p.A., Phone +39 0183-52 11, Fax +39 0183-521 333, **Japan** Munters K.K., Phone +81 3 5970 0021, Fax +81 3 5970 3197, **Kingdom of Saudi Arabia** and **Middle East** Hawa Munters, c/o Hawa United Cooling Syst. Co. Ltd., Phone +966 1 477 15 14, Fax +966 1 476 09 36, **Korea** Munters Korea Co., Ltd, Phone +82 2 761 8701, Fax +82 2 761 8777, **Mexico** Munters Mexico Phone +52 722 270 40 30, Fax +52 722 270 41 95, **Norway** via sales organization in Sweden, **South Africa** and **Sub-Saharan Countries** Munters (Pty) Ltd, Phone +27 11 997 2000, Fax +27 11 608 3501, **Spain** Munters Spain S.A., Phone +34 91-640 09 02, Fax +34 91-640 11 32, **Sweden** Munters Europe AB, Phone +46 8 626 63 00, Fax +46 8 754 56 66, **Switzerland** via sales organization in Germany, **Thailand** Munters (Thailand) Co. Ltd., Phone +66 2 645 2708-12, Fax +66 2 645 2710, **United Kingdom** Munters Ltd, Phone +44 845 644 3980, Fax +44 845 644 3981, **USA** Munters Corporation, Phone +1 800 843 5360, **Export & other countries** Munters, Phone +46 8 626 63 00, Fax +46 8 754 56 66.



Your closest distributor

Munters Corporation

Tel: (800) 843-5360 E-mail: dhinfo@munters.com www.munters.us