

Munters Provides Students Fresh Air

Schools and Universities are a prime candidate for Munters' Humidity Control Units (HCU). Fresh air requirements for classrooms have changed dramatically in the past few years. Where 5 cfm per student of fresh air was once allowed and was adequately conditioned by packaged systems, today's 15 cfm per student of fresh air poses an uneconomical and almost impossible challenge for these same systems.

Munters has quickly become recognized as the solution provider for effectively and efficiently conditioning outside air before it is brought into the school's classrooms. But what about the fresh air required for school dormitories? Dormitories are similar to hotels and are used by many schools and universities to house their students. Unlike hotels, dorms typically have a higher occupancy per square foot throughout most of the year.

Dormitory Problem

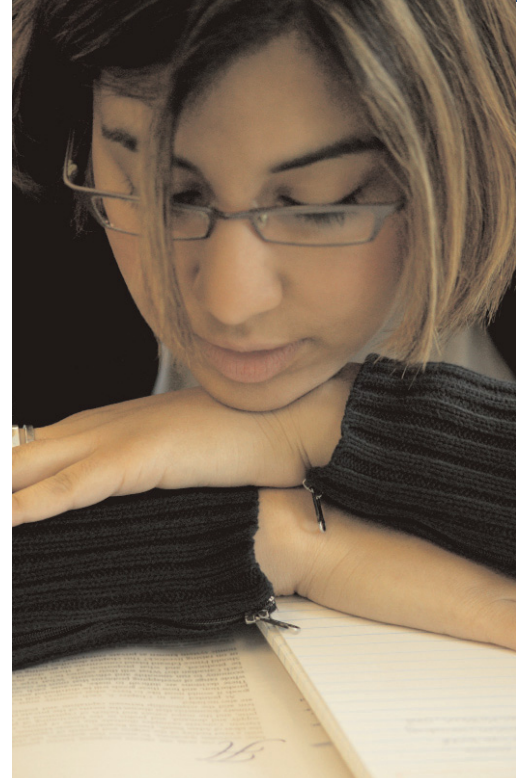
Like classrooms, 15 cfm of fresh air per student is also required to be brought into the dormitories. This fresh air requirement generates a substantial moisture load and a potential for indoor air quality problems if not properly conditioned. One such university facing moisture related problems was Fairfield University in Fairfield Connecticut.

The Fairfield University campus consists of 200 acres with 34 major buildings including 8 student residence halls and 105 town-house units. Fairfield University houses approximately 2600 students, and over 95% of the incoming class lives on campus. First year students live in one of four traditional residence halls. All halls are coed by floor or by wing and have commonly shared lounges, usually on each floor.



Fairfield University houses approximately 2600 students.

Case Study: Fairfield University



Benefits

- **Healthy, Clean Dry Air**
- **Reduced Liability/Risk**
- **Improved Learning Environment**
- **Independent Humidity and Temperature Control**



The Humidity Expert

Munters HCU units were used to dehumidify the outside air before it was supplied to the Fairfield University dormitory.



"We had a terrible problem in the dorm related to the makeup air system. The students had operable windows and the make up air was not conditioned in the summer time. This was causing gross condensation problems on all metal surfaces that were being cooled by the air conditioner," explained Bill Romatzick, Plant Systems Supervisor for Fairfield University.

In conventional cooling, heating and ventilation air conditioning systems (HVAC), generally only cooling coils are used to control humidity. But that approach can cause many problems. Humidity cannot be controlled independently of temperature by conventional cooling systems. Cooling-based dehumidification can result in cold, clammy buildings during spring, summer and fall. Also, saturated ducts promote biological growth that can lead to costly health problems.

"The building runs off of our central plant chilled water system and at times the dew point in the space would be so high, even the insulated piping would haze and get damp on the surface."

To meet the challenge of increas-



ing ventilation air, Munters uses two time proven technologies in its HCU system: refrigeration and desiccant dehumidification to bring the humidity to the center of the ASHRAE comfort zone.

"My first contact was with Munters portable rental division, MCS. We rented four 2,500 cfm dehumidifiers for two weeks. We closed the building and dried it out. After replacing damaged materials, we installed permanent Munters HCU systems in series with our makeup air units. The HCUs were integrated with our energy management system to allow us to use them when the outdoor dew point and

indoor conditions warranted it."

Munters' HCU systems allow customers to meet code requirements of 15 cfm per person using less energy than is used by conventional systems. Facilities can comply with the new codes, thus providing students and residents with superb indoor air quality.

"Munters rentals and sales divisions are to be commended, the knowledge and input from all with what we had to deal with was of the highest caliber. I was an outside contractor for 27 years before I came to Fairfield. I had seen Munters units in action before; they are definitely the Cadillac of their class."



Fairfield University provides campus tours to new students and their parents.

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