Munters scores an A+ at Maine elementary school

Fairview Elementary School is located in Auburn, Maine, a small city on the banks of the Androscoggin River in the southwestern region of the state. Part of the Auburn school district, Fairview employs 45 teachers and professional staff to provide a positive learning environment for 503 students in grades K-6. In the riverside community of Auburn, humidity levels can reach as high as 94% during the summer. Because of this, indoor moisture control is essential to protect the structural integrity of school buildings. For health reasons, schools must also be kept free from harmful mold and bacteria that can run rampant under damp conditions. It took the installation of two Munters Humidity Control Units to solve Fairview Elementary School's excess indoor moisture problem.

School Problem

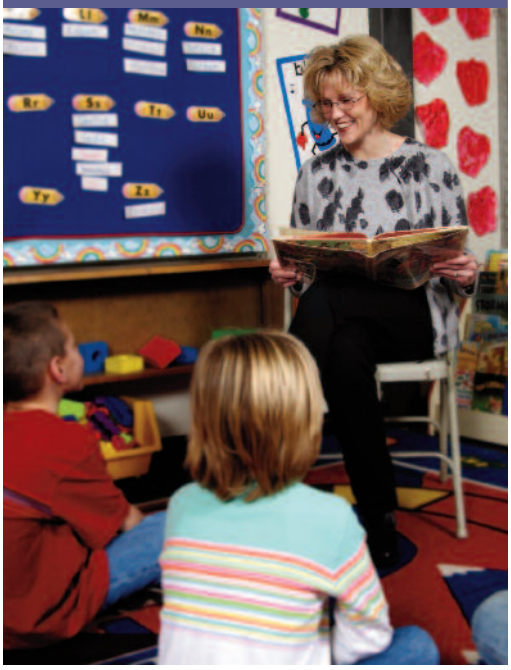
Before Munters came to the rescue, Fairview Elementary's indoor moisture situation was so serious that mold was growing in classrooms and the gymnasium floor was beginning to buckle.

"We had a terrible moisture and humidity issue, to the point that water was pooling on the floors," recalls Cathy Folan, Principal of Fairview Elementary.

Fairview's situation was made worse because of ongoing construction and because the back portion of the school is built into the side of a hill. As a result, exterior walls are exposed to moisture trapped in the soil.

Fairview Elementary School had a serious indoor moisture problem that produced mold in classrooms and buckled an expensive gymnasium floor. Adding Munters' desiccant dehumidification equipment solved the problem.

Case Study:
Fairview Elementary School



BENEFITS

- Mold-Free Environment
- Healthy, Clean Dry Air
- Reduced Liability/Risk
- Assured Structural Integrity
- Easier Building Maintenance
- Independent Humidity and Temperature Control

The school was attempting to rely on conventional air cooling for humidity control. However, the air conditioning system was unable to control the large amount of moisture. Even portable dehumidifiers were tried, but without success.

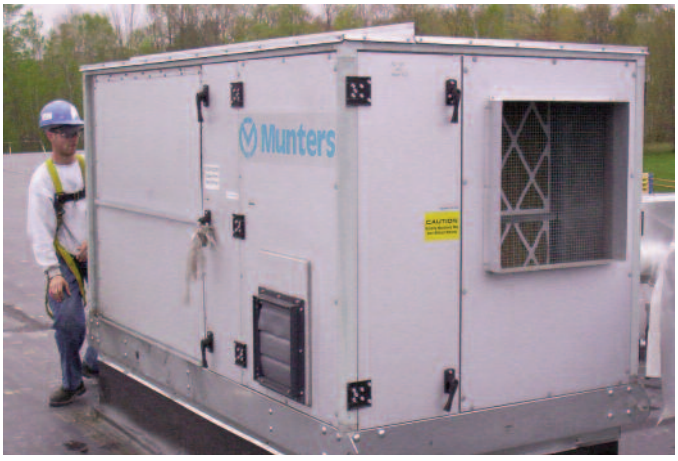
Moisture-induced mold was found growing in classrooms, making it imperative that the excess moisture be addressed quickly so students would not return to a dangerously unhealthy environment in the fall semester of 2006. Due to the high humidity levels, the expensive wood floor in the school's gymnasium was beginning to warp and buckle.

"Before the Munters' units were installed, refinishing the gym floor was a nightmare. The wax used on the floor would not dry properly," Folan says.

"The school maintenance staff came to us looking for a solution to the problem," says Paul Cleaves, Project Manager for Siemens Building Technologies in Scarborough, Maine. "They had gone through replacing drywall and damaged floor tiles." Siemens provides maintenance services for the Auburn School District's building automation controls and HVAC systems.

Directly Above: Two Munters DryCool units were installed on the roof of the school to correct the moisture problems and successfully salvage the gym floor. *Top:* The school is built into the side of a hill, exposing the exterior walls to moisture trapped in the soil.

Siemens contacted Dick Alper, owner of Oak Hill Marketing Associates, Stoughton, Massachusetts about purchasing dehumidification equipment to solve Fairview's excess moisture problem. Oak Hill Marketing is an independent sales agency representing Munters Commercial and Industrial desiccant dehumidification systems. Alper assisted with load calculations and reviewed the overall design. He recommended Munters DryCool units.



Solution

In May 2006, two Munters DryCool units units were installed on the roof of Fairview — one to address the gymnasium floor; the other to dry out the classrooms. Two sets of new fire doors were installed to physically isolate the affected first-floor wing, which encompasses about one-fourth of the school, because the rest of the building did not have the same moisture problems.

The DryCool unit provides the most economical way to bring makeup air into a space and control temperature and humidity independently at the same time. The DryCool unit conditions up to 16,000 cfm of makeup air and can be operated in night setback recirculation mode. It recycles waste energy from cooling components to provide a cost effective and energy efficient way to control humidity and temperature.

The units operated successfully throughout the summer and will continue to protect the school for many years to come.

Results

Fairview is now happy to report a salvaged, unwarped gym floor, and a safe and healthy classroom environment for its students.