



**CONSTRUCTION
DRYING**

Case Study: Minnesota Twins Ballpark



**Property Damage
Restoration**



**Temporary
Humidity Control**



**Property Performance
Services**



Polygon steps up to the plate to provide temporary dehumidification for new ballpark in Minneapolis.

Climate control expert Polygon stepped up to the plate to assure that the high-end millwork that adorns the indoor sections of Target Field, the new home of baseball's Minnesota Twins, was a hit with fans when the ballpark opened.

Located in the historic Warehouse District of downtown Minneapolis, the 40,000-seat openair ballpark will feature a natural limestone exterior, baseball-themed restaurants, state-of-the-art locker rooms, 54 private suites and 3,400 club seats. Target Field also will feature one of the closest

seating bowls to the playing field in all of professional baseball, and a 360-degree open main concourse giving fans an uninterrupted view of the action.

The indoor portions of the new facility - the ornate millwork, cabinetry and high-end finishes in the lounges, clubs, bars, locker rooms, executive suites and restaurants - required special care during construction in 2009.

With summer approaching, Eric Keleny, mechanical, electrical and plumbing coordinator (MEP) with Minneapolis-based M. A. Mortenson, the construction firm, needed a game plan for

protecting the sensitive indoor materials from high humidity and warm weather.

"The manufacturer had specifications for temperature and humidity for the wide variety of wood and laminate being installed," said Keleny. "Extremes in the indoor environment could potentially expand or shrink the wood, causing warping."

Having worked together on several previous projects, Keleny called on Polygon, North America's largest temporary humidity control company, to provide a controlled environment during construction.

Keleny requested that relative humidity levels indoors remain below 50 percent and that temperatures remain below 80 degrees Fahrenheit. John Pfeffer, industrial accounts manager for Polygon, called up three 6000-cfm Humidity Control Units (HCU), in combination with several blowers, for shipment to the site.

The HCU combines cooling and desiccant dehumidification technologies in one energy efficient system to control dew point temperatures in hot, humid climates. It is ideal for use in structural drying, temporary humidity control in building construction, and condensation and corrosion control in surface preparation and coating applications.



Temperature and relative humidity readings are collected by Polygon operations technician to determine performance of the HCU-6000.



Keep Construction on Schedule with Temporary Climate Control



“The HCU is capable of delivering dew points as low as 40 degrees Fahrenheit in even the highest humidity load conditions,” said Pfeffer. “Because the unit utilizes reactivation energy, it uses less energy while providing comfortable outlet temperatures.”

When the equipment arrived, accessibility presented a challenge. Using the ballpark’s inner field to reach the indoor spaces was not an option, so the units were placed in small areas on different parts of the main concourse and flexible duct was used to move air to the inside of the building. Twelve 48-inch turbofans moved the air around the club level spaces that required humidity control.

The quick timeline of the construction project required that Polygon have all systems up and running in spaces that were ready for temperature control.

“We moved quickly to make sure indoor spaces were conditioned as millwork was installed in bar areas, administration offices, board rooms, executive and corporate suites and throughout locker room areas,” said Pfeffer.

M. A. Mortenson realized additional benefits from the use of the temporary dehumidification. Lower temperatures made the environment more comfortable for workers, especially during the warm summer months. In addition, the dry air decreased the drying times of building materials. These extra benefits helped keep the construction timeline on “target” during these construction phases.

In total, Polygon conditioned 150,000-square feet of the 500,000-square foot structure. Throughout the project, Polygon’s technicians periodically monitored conditions and handled maintenance work such as filter replacement.

“Polygon stepped up to the plate to keep the high-end millwork safe from high humidity levels during the hot and humid summer and fall months, while keeping our workers comfortable,” said Keleny. “We are very pleased with the performance of the units, their easy installation and the monitoring by Polygon’s technicians.”

The Polygon HCU’s used on site also will help the contractor obtain a LEED point. The units were used in conjunction with the permanently



To prevent warping and bending, HCU-6000 dehumidifiers were used to maintain the manufacturer’s specified conditions for the high-end millwork and construction materials.

installed HVAC systems to flush out the building prior to occupancy, per LEED guidelines.

The ballpark was scheduled to open in time for the 2010 baseball season.



Polygon technician Joe Schmitz (left) and Eric Keleny from M. A. Mortenson Co. check the performance of the Polygon humidity control unit.

The Polygon Advantage

Polygon helps you meet your indoor air quality needs and earn LEED credits by:

- Improving climate conditions for higher productivity
- Eliminating mold growth
- Protecting stored materials from moisture damage
- IAQ flush out before occupancy
- Preserving the HVAC system
- Assisting in qualification for LEED credits
- Providing advice from certified LEED AP personnel
- Developing a moisture management plan
- Maintaining warranties on HVAC equipment.

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