

Natural gas desiccant dehumidifier

Reduces humidity, lowers costs

McDonald's Long Lake, MN

Usually we associate large dehumidification systems with ice arenas or grocery stores, facilities where humidity is inherently high. Now, working with CenterPoint Energy, the McDonald's in Long Lake, Minnesota, has become the first fast-food restaurant in the area to use desiccant technology to improve indoor air quality and lower operating costs.

A Fresh Air Solutions natural gas desiccant dehumidifier was mounted on the rooftop of the restaurant to reduce humidity and lower costs.



This McDonald's in Long Lake now uses a natural gas-powered desiccant system to improve indoor air quality in the play and dining areas.

The challenge in maintaining high indoor air quality at the restaurant stems from the Play Place adjacent to the dining area. Behind a soaring glass enclosure, Play Place heats up quickly in warm, humid weather and holds the odors produced by active children. Health is another concern. High humidity increases the growth of bacteria and fungi, often responsible for causing infectious diseases.

The idea was to add a desiccant dehumidifying partner to the existing electric HVAC system to reduce humidity and lower costs. A Fresh Air Solutions (FAS) desiccant dehumidifier was installed on the roof next to the three conventional electric York units to pre-treat ventilation for the play and dining areas.

Comfort and savings

After monitoring the FAS unit in a four-month on/off test, it was found that the system has cut energy use for cooling at the Long Lake McDonald's by as much as 25 percent and the total energy use by 10 percent. Furthermore, the FAS unit has been proven in laboratory test to reduce airborne levels of bacteria and fungi by 15 to 92 percent*. In general, a higher level of comfort is noticeable in the restaurant, with clean, healthy air circulating throughout the play and dining areas.



***McDonald's Uses FAS Dehumidification to Improve Dining Environs." CoolTimes. September/October 1999, p 12-13.*