

# Greenheck Project Profile

## Moraine Park Technical College

Fond du Lac, WI

- **Engineering Firm:**

Holland & Kurtz  
Brookfield, WI

- **Architectural Firm:**

Brummel Architectural Group  
De Pere, WI

- **Representative Firm:**

Vyron Corporation  
Brookfield, WI



### The Challenge

- **Create a comprehensive, energy-efficient kitchen ventilation system that integrates 20 separate work stations and three separate kitchens.**
- **Install state-of-the-art ventilation equipment to accommodate all types of cooking used for training in the culinary arts.**
- **Provide quality indoor air by removing high levels of grease.**

In March of 2006, Moraine Park Technical College in Fond du Lac, Wisconsin, began expanding its Culinary Arts Center by remodeling an existing Production Kitchen and by adding on a new Gallery Kitchen and a new Learning Kitchen. The Culinary Arts Program with working kitchens offers students hands-on, practical experience in all aspects of food preparation and production. Because this was not a 24-hour kitchen operation, peak use occurred only during

scheduled instructional periods followed by extremely low levels of operation. Achieving energy efficiency during non-peak times and effectively exhausting smoke and grease during high use periods were primary concerns. Also, outdoor air during the school year in Wisconsin can range from -20 degrees F in the winter to 90 degrees F in the early fall and late spring, so student comfort in the classroom kitchens needed to be addressed.

### Greenheck's Solution

- **Two Make-up Air units, Model DGX-122-H35**
- **Two Low profile fan coils, Model LFC-30-FC-15**
- **Two Type II non-filtered condensate hoods, Model GD2**
- **Six Model CUBE fans**
- **One Model GB fan**
- **Seven Type 1 Grease Grabber dual filtration system hoods, Model GGEW with variable volume and fire suppression**

This project had many challenges due to the multiple kitchens and cooking stations. A meeting at Greenheck to coordinate the project was instrumental in solving those challenges and included building facility

# Greenheck's Solution

manager Tim Flood (Moraine Park), John Longden (Vyron Corporation), Stan Knysak (H&K), John LaChance (H&K), Marc Brummel (Brummel Architectural Group), and representatives of Groeschel Heating and Johnson Controls.

The facility manager wanted the kitchen to be air conditioned, but did not want to condition all the make-up air. Therefore, two make-up air units were provided with each unit providing approximately 50% of the make-up air for the kitchen hoods. One Greenheck make-up air unit provided heated air directly to the seven hoods, while the second unit provided heating



and cooling to the hoods and also delivered air to the kitchen space. The make-up air supplied to the hoods was regulated by Variable Air Volume (VAV) boxes controlled by a Melink system to match the precise volume of make-up air to exhaust air drawn from hoods while in use during classroom sessions. The make-up air unit also maintained duct static

pressure to ensure that the VAV boxes were adequately supplied. Grease Grabber dual filtration systems within the hoods captured up to 80% of the grease particulate while as many as seven student chefs at one time practiced grilling and frying skills. Six Model CUBE fans with easy-to-clean grease ports were installed to exhaust the grease and smoke filled air.

## The Results

- **Pat Olson, dean of culinary arts, said the new kitchens opened in time and have performed well. "Faculty and students are very pleased with the functionality of the new kitchens. Our college and Culinary Arts Program are gaining a great deal of recognition thanks to the new, state-of-the-art kitchens we can now offer our students."**

Facility manager Tim Flood reports that energy costs are as expected. The low-maintenance features of the grease extraction filters and CUBE fans are very much appreciated by the company contracted to clean the units. During the 2007-2008 school year, Moraine Park Technical College expects more than 300 people to receive training in culinary arts, food service production, specialty breads and a host of other culinary opportunities. Much of

this training will take place in the new kitchens. School officials believe their state-of-the-art kitchen environment ensures a quality training experience for students and will prepare them well for positions in top level restaurants and food service operations.



*Make-up Air Model DGX-122-H35*

