

## **Blain's Supply Headquarters, Controlling Costs with Ice Storage**

Blain's Supply, headquartered in Janesville, Wisconsin, is the sole source of management, merchandising and distribution services for the Blain's Farm & Fleet retail stores. When this family owned business decided to expand and remodel its headquarters building, they were looking for a larger capacity HVAC system without expanding their current electrical system. Additionally, they were looking to save money on their utility bills. Henneman Engineering, along with Tri-Cor Mechanical and Masters Building Solutions provided a robust Ice Storage system to fulfill their needs.

The Ice Storage solution kept Blain's from needing to add a second chiller to feed their expansion. While similar in cost to the ice tanks, a new chiller would have required a new electrical feed to be installed, thus adding to the project costs. Due to the off-peak ice build cycle and the lower utility rates at night, the payback for Ice Storage was just about one year.



FAFCO Ice Storage, utilizing underground piping to yield a clean appearance (Above)

Masters provided equipment and controls to serve the HVAC system; a single source responsibility for the owner. Masters' extensive knowledge of the existing Trane controls system permitted easy integration to the existing controls. Masters also introduced Remote Monitoring capabilities to Blains, which greatly aided the commissioning process.



Blain's Supply Headquarters (Above).

Masters' highly responsive service technicians had been working with Blain's Supply prior to this remodel by servicing all of Blains HVAC equipment. Superior responsiveness and outstanding Service Technicians bolstered Masters' position on the project.

A Daikin-McQuay Air Cooled Chiller, model AGZ160 forms the backbone of the new system. The most robust, efficient, and cost effective chiller in its size range, the AGZ160 utilizes scroll compressor technology which grants most service contractors the ability to support the equipment. This flexibility reduces costs to the owner over the life of the unit.

Four Fafco Ice Storage tanks are used to shift the electrical demand to off peak hours, balancing the load on the local Power Plant and earning Blain's Supply energy rebates and lower electrical costs. These tanks, size 420C, generate 1,500 ton-hours of latent storage. With no moving parts and non-corrosive heat exchangers, these tanks yield high durability with low life-cycle maintenance costs.

Together, the chiller and ice storage tanks provide the ton-hours to cover a Peak load of 300 tons.

Masters also provided two Daikin-McQuay Variable Air Volume Air Handling Units, wet heat units and a Daikin mini-split that serves the data closet.

[www.MastersHVAC.com](http://www.MastersHVAC.com)

### Appleton

3912 N Providence Ave  
Appleton, WI 54913  
Ph: (920) 997-1600  
Fax: (920) 997-1601

### Chippewa Falls / Eau Claire

4674 County Highway P  
Chippewa Falls, WI 54729  
Ph: (715) 738-1970  
Fax: (715) 738-1980

### LaCrosse

1219 Caledonia St.  
LaCrosse, WI 54603  
Ph: (608) 782-7030  
Fax (608) 782-7031

### Madison

908 Stewart Street  
Madison, WI 53713  
Ph: (608) 275-7001  
Fax: (608) 275-7002

### Milwaukee

2241 S. 116th Street  
West Allis, WI 53227  
Ph: (414) 546-5050  
Fax (414) 546-5051