




IDEA TECHNOLOGY DEMONSTRATION OVERVIEW

<p>COMPANY Heat Timer Corporation</p> <p>TECHNOLOGY Boiler Controls</p> <p>DEMONSTRATION SITE(S) 137 Centre Street and the Hansborough Recreation Center, 35 West 134th Street</p> <p>DEMONSTRATION PERIOD October 2014 – October 2015</p>	<p> SYSTEM(S) INVOLVED HEATING</p> <hr/> <p>  TYPE OF SAVINGS GENERATED FUEL OIL/GAS</p>	<p>VENDOR'S POTENTIAL FOR SAVINGS 10%-25% in HVAC energy consumption</p> <p>SAVINGS ACHIEVED IN THIS DEMONSTRATION 7% in fuel oil consumption</p> <p>SAVINGS</p>
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Technology Description

Heat Timer controls reduce energy consumption in hydronic and steam heating boilers. The Heat Timer HWR and Multi-Mod Platinum hydronic controls installed at the Hansborough Recreation Center monitor the average space temperature and automatically adjust the circulating water temperature based on how cool or warm the spaces are, thus maintaining occupant comfort. The Multi-Mod and HWR controls will also prevent system overheating and excessive fuel use. The MPCQ control system installed at 137 Centre Street uses set points and heat adjustments to regulate the amount of steam heat being sent to the building, based on feedback from an outdoor air temperature sensor and wireless indoor air temperature sensors.

Heat Timer controls allow for night setback, which works with systems to lower the night time temperature and provide a boost to fuel savings. Heat Timer may also incorporate fuel oil monitoring and control valves in the system installation. Heat Timer controls offer remote monitoring with a monitoring alert program and can be used in sites with multiple boilers.

Optimum Facility Characteristics

- Hydronic or steam heating systems with or without BMS
- Uneven temperature distribution among spaces
- Engaged building operation and maintenance staff
- Stable internet connection for remote monitoring

Demonstration Results

The Heat Timer Multi Mod Platinum and HWR controls installed at the Hansborough Recreation Center demonstrated savings of 7.4% from the 2013-2014 heating season to the 2014-2015 heating season. This saved 3,061 gallons of fuel oil. The demonstration at 137 Centre Street was less successful. Although the MPQC control system worked well while placed in the proper operating mode, the facility operators reset the heat control to the highest setting sending more heat than necessary through the facility. The space lockout feature was also disabled, which prevented the temperature averaging function from

operating. No appreciable savings were observed as a result. It is important that the users fully understand how the system works to get the most out of the control. This allows the saving potential to be maximized while maintaining comfort throughout the facility.

Recommendations for Implementation

- There were no major challenges during the installation phase of these demonstrations.
- Training of facility operators is critical to the proper functioning of the Heat Timer controls.
- Fuel consumption data from utility bills or monthly tank dipping, in the case of oil, can be analyzed to determine baseline energy usage.

www.heat-timer.com