

New York College Lowers Operating Costs With High-Efficiency Heating, Hot Water

Hamilton upgrades systems in ice rink, dormitories

Much like its namesake—Alexander Hamilton, the first U.S. Treasury secretary—Hamilton College has a keen eye for finances. When administrators of the small liberal-arts school in Clinton, N.Y., set out to upgrade heating and hot-water systems, they sought a local company that manufactures reliable, high-efficiency products that deliver lower operating costs and bring a high return on investment (ROI): AERCO International Inc., maker of Benchmark boilers and SmartPlate water heaters.

AERCO and Hamilton College have a history. Three years ago, Eells House, one of the college's residence halls, lost heat during the cold holiday season because its boiler's aluminum heat exchanger failed. Needing to solve the problem quickly, the director of physical plant for building services for Hamilton College visited a school with an AERCO heating solution in nearby Utica, N.Y. The director concluded the AERCO Benchmark 1000 would be a good fit for Hamilton College because of its reliability, compact footprint, energy savings, and low operating costs.

It proved to be a wise choice. The maintenance staff no longer had to worry about the extra cost and time associated with maintaining pH levels. Because the Benchmark 1000 is a high-efficiency condensing boiler with 20:1 turndown, the college has been saving more than \$8,000 a year in operating costs.

Campuswide Upgrade

Periodic improvements and retrofits over the years had seen the college install boilers and water heaters from multiple manufacturers. Using AERCO as primary supplier would save time, simplify training of the maintenance staff, and streamline the college's formerly large parts inventory. Another benefit concerned the compact footprint of AERCO units, which meant no structural modifications would need to be made to existing mechanical rooms, which would keep installation costs down.

Upgrades were needed at the college's ice rink and in several residence halls. Requirements at the sites included space heating, domestic hot water, radiant floor heating, makeup-air heating, and hot water for ice resurfacing and snowmelt.

Combination Plant Solution

"Because of the varied applications needed, we chose an AERCO combination system because it would provide us with reliability, flexibility, and high efficiency while lowering our operating and maintenance costs," William Huggins, current



The AERCO boiler/water-heater solution at Sage Rink.

associate director of physical plant for building services for Hamilton College, said.

In both Sage Rink and the 52-bed Morris House dormitory, the college installed Benchmark boilers and SmartPlate water heaters for domestic hot water and hot water for isolating glycol loops that provide snowmelt at the entrances. In Sage Rink, the Benchmark also delivers hot water for ice resurfacing and to melt ice collected from resurfacing, while in Morris House, the Benchmark also provides hot water for space heating and the glycol loop for radiant floor heating and air-handling units.

In Minor Residence Hall, which includes laundry facilities and a kitchenette for students, a Benchmark boiler provides hot water for space heating and is integrated with an existing third-party indirect storage tank for domestic-hot-water generation. Similar solutions exist in other residence halls across campus.

The AERCO Control System was utilized for easy integration of the units with the college's existing building automation system.

Hamilton College hopes to upgrade additional buildings with AERCO solutions. Although it is too early to determine the savings the recently installed systems will provide, the systems share efficiency and reliability similar to that of the AERCO solution installed in Eells House three years ago. Hamilton College is looking forward to seeing similar savings and ROI.

Information and photograph courtesy of AERCO International Inc.