

Case Study

AERCO Rescues Fraternity that Calls Renovated Firehouse Home

Customer	Theta Chi Fraternity, NJIT Chapter
Location	Newark, NJ
Industry	Multifamily Housing
AERCO Product Installed	Modulex 454



What the Client Needed

The New Jersey Institute of Technology (NJIT) chapter of Theta Chi Fraternity, a national organization with a distinguished history that counts Steven Spielberg and Lee Iacocca as alumni, was in dire need of a new HVAC solution to replace the old failing equipment in their home – an older, renovated firehouse. With several alumni well-read in HVAC, they knew the best choice to rescue the current members from high energy bills and costly repairs was to graduate to a more efficient, reliable heating system.

AERCO's Solution

The HVAC-experienced alumni concluded that the best solution was to install an AERCO Modulex boiler system. A fundamental benefit of the Modulex design is its high reliability, which allowed the students to concentrate on their grades, not the heating system. The Modulex MLX-454 has three independent modules that provide a level of redundancy that is unsurpassed by other single unit boilers.

The design established five heating zones throughout the fraternity, allowing heat to be provided to each area of the three-story building, as needed. One unique element of the design was the large base in which the boiler sits. In most installations, the foundation for the unit is about 6" above the ground, however to accommodate for the regular basement flooding a custom base rising two feet off the floor was used.

AERCO also provided flexible polypropylene venting that was snaked through the existing masonry chimney. To maximize the inherent benefits associated with the Modulex boiler, a variable speed primary pump was installed, helping to achieve optimal energy savings and maintain maximum efficiency.

Though the Modulex MLX-454 has a capacity of 454 MBTU, its advanced modulation technology allows it to operate as low as 45 MBTU to precisely match any load. The extra capacity and compact footprint of the Modulex boiler will allow the fraternity members to replace an aging water-heating system easily by coupling the Modulex unit to an indirect water heating tank, at the appropriate time.

Return on Investment

Despite the fact that the first winter after the installation was colder than normal in Newark, the Modulex helped to achieve savings of between 20%-30% in fuel costs. Because a single Modulex unit replaced two 200 MBTU boilers, it provides significant space savings and creates the flexibility to realize similar economic benefits when it replaces the current water heating system.