

Case Study

Dialysis Provider Replaces Ailing Equipment with AERCO's Modulex and AM Series Boilers, Expects Healthy ROI

Customer	Dialysis Center
Location	Northeast Ohio
Industry	Healthcare
AERCO Product Installed	AM 1000 Boilers, Modulex 1060



What the Client Needed

For 40 years, a Northeast Ohio dialysis center, an independent non-profit healthcare organization, has been providing outstanding patient-focused treatment, education, support, and training. The center became the largest dialysis treatment organization in the region, in part, because of its commitment to provide unparalleled levels of care and assuring that every detail of a patient's treatment is administered with skill and compassion. This pledge begins the moment a patient enters the front door. While the treatments for each patient vary, the temperature of each in-care center needs to remain stable. Administrators were adamant that every facility have a reliable heating system to establish a warm and relaxing experience for patients while they undergo care.

When it was discovered that the original boiler systems at two of its facilities were beginning to fail, AERCO developed a solution featuring their Modulex and AM Series boilers that provided high efficiency and reliability for a very healthy Return on Investment (ROI).

"Having a boiler unit that ensured a high level of comfort could be maintained was a key factor through our decision process," the facilities manager for the dialysis center said. "Additionally, we sought a solution that was easy to maintain, had greater efficiency, and could fit in a very small, confined space. We knew AERCO could provide the peace of mind necessary."

AERCO's Solution

Following a thorough walk-through of both facilities, Jeff Young and Jim Firlein of AERCO recommended the aging systems be replaced with high-efficiency Modulex 1060 and AM 1000 boilers.

Modulex and AM Series boilers feature multiple combustion chambers, a burner, gas valves, and combustion controls in a single enclosure. This not only adds a level of redundancy the facilities did not have previously,



it improves efficiency and lowers operating costs. Another advantage of the units is whisper-quiet operation of less than 50 dBA—even at full fire—which makes for a more relaxed and peaceful patient experience. The design of the Modulex and AM Series boilers makes them easy to install and service. Each has a compact footprint that proved invaluable on this retrofit project, as space in the mechanical rooms was tight.

A Modulex 1060 boiler was specified for the first facility, which has 46 dialysis stations. The old equipment was an atmospheric four-stage burner with 4:1 turndown in increments of 250 MBtu only. Modulex can modulate up to a 23:1 turndown smoothly, delivering greater fuel savings. Additionally, the internal redundancy of the Modulex unit makes it highly reliable.

The Modulex offers greater modularity (seven heat exchangers vs. four) than the old system, but occupies only a third of the space. Its compact 42-in.-high-by-49-in.-wide-by-27-in.-deep size allowed it to fit through a standard doorway. Installation was simplified with flexible piping and venting connections. Front access makes servicing the boiler easier. For the second facility, which has 35 dialysis stations, an AM 1000 boiler was specified. The AM Series design allows one unit essentially to serve as a prepackaged boiler plant that delivers 20:1 turndown, which is five times better than the dialysis center's previous system. With a compact 71-in.-high-by-23.6-in.-wide-by-35.3-in.-deep footprint, the AM 1000 provides the same modularity as the previous system in about a quarter of the space.

The AM Series' durable variable-radial-circulation heat exchanger and its 316Ti stainless-steel construction will help to reduce future maintenance costs and prolong the life of the boiler.

Return on Investment

AERCO provided a detailed calculation showing payback in about three-and-a-half years. The estimate was based on actual running conditions of the sites, more-efficient equipment, and local gas prices. Both facilities can expect even greater return from energy savings and lower operating and maintenance costs because of the boilers' high efficiency, reliability, and high-quality construction. Most importantly, management now has peace of mind it will be able to continue to deliver outstanding patient-focused treatment in warm, relaxing, comfortable environments.



Heating and Hot Water Solutions

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