

# Dialysis Provider Replaces Ailing Boilers, Expects Healthy Return on Investment

## Swaps out non-condensing units at two facilities

Recently, a Northeast Ohio dialysis provider discovered the original boiler systems at two of its locations were failing. Both facilities had old, inefficient non-condensing boiler systems that were extremely unreliable, resulting in higher energy bills.

“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.”

### Cost Benefits

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 EXT 1060 and AM 1000 boilers.

Modulex EXT and AM Series boilers feature a combustion chamber, 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 EXT 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.

### Fuel Savings

A Modulex EXT 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 EXT can modulate up to a 23:1 turndown smoothly, delivering greater fuel savings. Additionally, the internal redundancy of the Modulex EXT unit makes it highly reliable.

The Modulex EXT offers the same modularity (four heat exchangers) as the old system, but occupies only a third of the space (photos A and B). 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.

### Prepackaged Boiler Plant

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 (photos C and D).

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.



PHOTOS A and B. The first facility’s mechanical room before (left) and after (right) the installation of a Modulex EXT 1060 boiler.



PHOTOS C and D. The second facility's mechanical room before (above) and after (right) the installation of an AM 1000 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.

*Information and photographs courtesy of AERCO International Inc.*

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