Central Station Delivers Comfort and Convenience Through Large-scale Laars Implementation

Case Study

Summary

Building Specs	362 unit, 22 and 33 story multi-family residence
Location	Phoenix, AZ
Scope	Water heating system for commercial development
Laars Product	MagnaTherm HTD
Contractor	Hayes Mechanical

Project Overview

More than a decade ago, developers in Phoenix, Arizona began a project that would change the city's downtown area forever. The project, called Central Station, ranks among the most ambitious commercial developments in the city's history, encompassing two massive towers strategically located at Central Avenue and Van Buren Street.

The first tower, standing at 33 stories, has 362 units for multi-family housing and apartments; the second, at 22 stories, is designed to provide affordable housing for 655 students at nearby Arizona State University. On the ground floor, space is set aside for restaurants, shops and more.

Following over 10 years of construction, Central Station opened its doors in early 2026—an amazing achievement that involved some significant troubleshooting for the facility's hot water needs. Through a large-scale implementation of Laars® Heating Systems volume water heaters and tanks, Central Station is ready to provide tenants with the utmost comfort and convenience.

The Challenge

The design for Central Station accommodates a large number of residents, with more than 600 apartments in the two towers combined. To ensure consistent comfort and convenience for each apartment, the initial plans called for the use of small, on-demand water heaters. A small mechanical room was built to house these heaters.

The initial design for this water heating system relied on incomplete information regarding hot water use. Once construction was well underway, it was determined that larger commercial volume water heaters and tanks were needed. This would ensure that enough hot water would be delivered at peak demand while having the ability to recover quickly.

The problem: The mechanical room had already been designed with lighter duty tankless water heaters in mind, which meant the space was fairly confined. Spatial limitations made it more difficult to install the volume water heaters and tanks required to properly service such an expansive facility.

The Solution

Hayes Mechanical, the contractor developing Central Station, enlisted Mechanical Products Southwest (MPSW), the Laars representative in AZ, to help them select and install water heating products that could keep pace with the facility's demand—while also fitting into the cramped quarters of the existing mechanical room.

MPSW engineered a powerful yet space-efficient water heating system, which called for the installation of a trio of 3 million BTU/hr volume water heaters along with three, 310-gallon storage tanks for each of the towers. To ensure adequate capacity in such a limited space, MPSW chose the Laars MagnaTherm®HTD. Not only does the MagnaTherm HTD offer 95% thermal efficiency, but the vertical design is tailored to fit into smaller mechanical rooms.

Controls that interlock the heaters with the tanks tell the heaters when the storage tanks need to be heated. The hot water from each heater is pumped into the storage tanks, and is ready for a call for domestic water from anywhere in the building.

As for recovery rate: with all three heaters running at full-fire the system can recover their storage tanks in around 15 minutes. A single unit can heat one of the tanks from 80°F to 160°F in around five minutes' time.

Even with this more flexible design, the MSPW team had to redesign the plumbing in the mechanical room, making significant revisions to the original scheme to ensure the proper installation of the MagnaTherm HTD units and to leave sufficient access for equipment servicing and maintenance. The revised piping configuration was reviewed by the Laars engineering team, with the final design made by the project's Engineer of Record.

Conclusion

Central Station sits at the heart of Phoenix's busy transit district—meaning that it's a very public project, developed partially with government funds. Its sheer scale calls for truly robust water heating solutions.

The Laars MagnaTherm HTD answers that call; this is a volume water heater and tank configuration, designed to provide consistent and reliable hot water for the hundreds of tenants at Central Station for years to come.