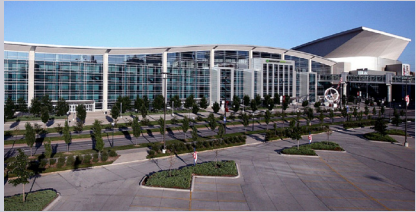


Case Study

Stadium Upgrades on Performance and Saves on Storage with PVI Cobrex Water Heaters

Customer	Century Link Center	
Location	Omaha, NE	
Industry	Stadiums/Arenas	
PVI Product Installed	Cobrex® Storage; 400 gal. AquaPLEX® Storage Tanks	

What the Customer Needed

The motto for the greater Omaha area is “We Don’t Coast.” It was selected by the Greater Omaha Economic Development Partnership to tell the world that Omaha is a “vibrant place to live and work.” The Century Link Center is a great illustration of this adage. The people of Nebraska enjoy going to the Center for events ranging from concerts to college basketball games. The arena is big enough that a six-story building can fit inside the space. It seats over 18,000 people and requires hot water for 60-70 showers, food preparation areas, and bathroom groups.

When the multi-use arena’s existing polymer-lined 2000-gallon storage tank with a steam bundle failed after ten years of service, they were in a bad situation. The tank contained relatively low temperature water at 120°F and exhibited accelerated pinhole corrosion at points where the lining material was compromised. Scale precipitant was very evident on and below the heat exchanger and cleaning was required draining and opening the tank or pulling the heat exchanger out of the tank. Scale accumulation was due to apparent low water velocity around the heat exchanger which allowed scale to build up between the heating tubes reducing heat transfer.



PVI Solution

Mark Reinhardt of Specified Design Consultants in Omaha specified two Cobrex Storage water heaters with 400 gallon AquaPLEX storage tanks to replace it. The arena was busy that summer, offering events like college volleyball and Lady Antebellum in concert, so it had to keep operating during the change out. Since the heat exchangers and storage tanks could be separated, PVI’s Cobrex units were easily installed in the existing space. Although access to the space in the mechanical room was difficult, no doors, existing equipment, or ductwork had to be moved to get the new units into place.



“Since the heat exchangers and storage tanks could be separated, PVI’s Cobrex units could easily be put in to the existing space. Although access to the space in the mechanical room was difficult, no doors, existing equipment, or ductwork had to be moved to get the new units into place.” Mark Reinhardt, Specified Design Consultants.

Return on Investment

The new Cobrex system was a 60% reduction in storage compared to the old water heating system. The system is now a semi-instantaneous design and provides a higher ratio of Btu input to stored water resulting in a higher

turnover of water contained in the system. Additionally, the tank surface area of the new Cobrex system is reduced by approximately 50% and will result in lower standby heat losses.

Externally configured heat exchangers provide for simpler heat exchanger maintenance with clean-in-place fittings and no additional space required for HX pull. Circulating pumps generate high velocity flow through the heat exchangers improving heat transfer efficiency and helping to keep the exchangers clean. The Cobrex water heater comes standard with an electronic controls that can connect to building automation system for periodic temperature reset for tank sterilization if desired.

AquaPLEX storage tanks come with a 25-year tank corrosion warranty standard. Fully pickle-passivated; naturally immune to corrosion in all potable waters. No linings, no anode rods or induced current anodes needed for corrosion protection. Unlike 316L or 304L stainless tanks, there is no concern about chloride stress corrosion cracking.



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