

KEMCO SYSTEMS
A CECO ENVIRONMENTAL BRAND

CASE STUDY

RELIABLE HOT WATER AND FASTER FILL TIMES FOR GROWING COMMERCIAL LAUNDRY, SANICO SERVICES

CHALLENGE:

UNPREDICTABLE CITY WATER LIMITING THROUGHPUT AND EFFICIENCY

Sanico Services, a growing commercial laundry operation with processing facilities across the Southeast, launders mats, mops, towels, aprons and uniforms for a variety of customers.

Sanico's reliance on city water came with unpredictable water pressure from the municipality, leading to disrupted washer fill times and increased operating costs. Pressure drops caused burners to cycle on and off, burning gas inefficiently and adding wear to the equipment.

That same unpredictable pressure experienced from the municipality at existing locations was a lesson to Sanico when expanding. When Sanico opened its new facility, the team turned to Kemco Systems for equipment that could scale across multiple locations, pairing a Direct Contact Water Heating System with a Cold-Water Storage System to avoid those same pressure issues from the beginning, while delivering consistent hot water reliably.

SOLUTION:

KEMCO DIRECT CONTACT WATER HEATERS AND COLD-WATER STORAGE SYSTEMS

Kemco Systems, a CECO Environmental brand, has provided seven systems across Sanico's facilities, including two Direct Contact Water Heaters and two Cold-Water Storage systems.

The Kemco Cold-Water Storage System has the ability to hold cold water arriving from the city and pumps it downstream on demand, maintaining steady pressure on the water heater and filling washers directly for a quicker fill time, so washers are no longer waiting on water provided at unpredictable pressures from the city. Working in conjunction with Kemco's Direct Contact Water Heater, the two systems keep water moving at the right pressure and temperature consistently, across every shift, with minimal maintenance required.

"The Kemco cold-water system has been one of the biggest ROIs we've seen in a laundry," said John Sandras, President of Sanico Services. "We've purchased seven pieces of Kemco equipment in total, and they've all been reliable. And that's why we keep buying more."

HOW KEMCO'S DIRECT CONTACT WATER HEATER AND COLD-WATER STORAGE WORK TOGETHER

A Direct Contact Water Heater uses a direct-contact combustion process, where hot combustion gases transfer heat straight into the water rather than passing through a heat exchanger first. Because the Kemco unit is a non-pressurized vessel, it does not require a dedicated licensed boiler operator, nor the costs associated with board registration or insurance on high-pressure devices. By eliminating the need for a traditional heat exchanger, the system minimizes heat loss and provides highly efficient hot water generation. This process is significantly more efficient than boilers, enabling commercial laundries the ability to lower fuel costs, maintain consistent temperatures and reduce labor costs. A Direct Contact Water Heater depends on a steady, predictable water supply. Heaters are designed to meet the volume and temperature requirements of the facility they serve, which matters for laundries running multiple wash cycles back-to-back across every shift.

Hot water delivery depends on more than the heater itself. A Direct Contact Water Heater still depends on a steady, predictable supply of water to work with. When that supply fluctuates, the problems outlined above follow, including slower washer fill times, burners cycling on and off, wasted gas and added equipment wear. Correcting pressure and volume inconsistencies upstream of the heater through storage and controlled distribution removes the root cause rather than requiring the heating system to compensate for it.

Kemco's cold-water storage system addresses the issues by holding water in reserve and pumping it on demand, rather than requiring the water heater to work around an inconsistent supply. Maintaining constant pressure on the water heater offers the measurable benefit of a direct reduction in monthly gas costs. Faster fill times mean more loads per hour. Storing both cold and hot water achieves this for any portion of the wash cycle.

For example; in the case of a mat cycle that runs 20 minutes load to unload, shaving time off the fill means more cycles are completed and more pounds are processed, increasing the overall load capacity and equipment ROI for the laundry. Kemco's cold-water storage and distribution systems are built to eliminate the pressure and volume fluctuations that initially cause these issues, delivering consistent flow at the pressure downstream equipment requires.

Tanks are available in a range of configurations, including cylindrical, flat or conical bottom, vertical or oblong with prefabricated stainless-steel options up to 30,000 gallons. The steadier supply is what eliminates the burner short cycling that drives up gas costs and adds wear to the equipment, and this solution is what allowed Sanico the ability to reduce fill cycles across every shift.





INSTALLING KEMCO'S DIRECT CONTACT WATER HEATERS AND COLD-WATER STORAGE SYSTEMS HAS ALLOWED SANICO TO ACHIEVE THE FOLLOWING:

- Increased throughput at one facility from approximately 3,000 pounds per hour to over 3,200 pounds per hour, a gain of 200 to 300 pounds every hour
- Increased weekly processing capacity by approximately 5,000 pounds from faster washer fill times alone
- Lower monthly gas costs, driven by steadier burner operation instead of repeated stop-start cycling
- Full system ROI achieved within one year of installation

Whether you're processing mats, uniforms, linens or other textiles, unpredictable municipal water pressure can limit throughput, increase gas costs and add wear to equipment prematurely. If your laundry facility is running multiple wash cycles per shift, expanding, opening a new facility or simply looking to increase pounds processed per operational hour without adding unnecessary wear and tear to your existing system, Kemco's Cold-Water Storage System paired with our Direct Contact Water Heater can offer your industrial laundry the same measurable ROI experienced by Sanico.



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