Customer Success Story

Sizzling Skillets Meet Cool Solution

SOUTH PITTSBURG, TENN., October 2003 – For more than a century, Lodge Manufacturing has been in the foundry business, perfecting the process of making cast-iron cookware. Nestled along the banks of the Tennessee River in South Pittsburg, Tenn. near Chattanooga, Lodge Manufacturing remains the oldest family-owned cookware manufacturer in America.

A fire in the early 1900s destroyed the original building. However the century-old foundry was rebuilt in a new location where it has remained for more than 80 years, occupying 181,000 square feet of space.

Founded in 1896 by Joseph Lodge, the company has maintained its commitment to people, quality and product innovation for four generations. By formulating the right metal chemistry and creating exacting mold tolerances, Lodge offers the finest line of cast-iron cookware available.

In the past, cooking countless batches of fried chicken, catfish and crispy-crusted cornbread left cast-iron skillets burnished to a treasured black patina. With the same reverence given to the family silver, those pieces of cast iron have been handed down from generation to generation. Many of us wouldn't know where to begin to recreate that prized cast-iron finish. We only know that grandmother's cast-iron skillet magically became black and silky smooth, and nothing, not even cornbread or pineapple upside down cake, ever stuck.

Lodge Manufacturing has been in the foundry business for more than 100 years.

Today, Lodge produces a revolutionary new line of seasoned, ready-to-use cast-iron cookware. Workers coat the entire surface of the cookware with a proprietary vegetable oil formula, baking the oil onto the utensil in very hot industrial ovens. The high temperature (above 600 degrees) then allows the oil to penetrate into the cast-iron surface, creating that prized heirloom finish that in the past took generations to create.

Although the finished product appears effortless, foundry workers invest sweat and labor into each and every Lodge cookware item. In the past, as skillets came off the production line, intense heat was emitted , forcing employees to wear thick gloves to combat the heat. Even so, most still were exposed to severe discomfort.

In addition to employee concerns, the lack of cooling equipment put the product at high risk as well. If hot skillets were packaged too soon, condensation on the product would cause it to rust.

> *"After evaluating several cooling solutions, we concluded that the Larkin refrigeration system was the perfect fit for the blast cooler at Lodge Manufacturing."*

Lodge Manufacturing values the comfort and safety of its more than 180 employees and the quality of its product. Keith Nunley, Lodge project engineer, thus sought an innovative solution to cool the skillets in post-production.

Nunley collaborated with installer Dan Berry, founder and owner of Air Trim Control, to analyze the situation and discuss alternative solutions. He selected Air Trim Control because of the company's reputation for reliable and consistent customer service and support.

Air Trim Control concentrates on engineering and specialty design applications, and Dan Berry specifically devised a system to fit the needs of Lodge Manufacturing. Berry contacted wholesaler Mark Countess of Wittichen Supply, based in Huntsville, Ala., to determine the best system for the job. Countess recommended the Larkin line of Heatcraft Refrigeration Products, and worked with Heatcraft manufacturer's representative Ron Andrews and Larkin account engineer Louis Miro on the specifics of the project.

With the help of Wittichen Supply and Heatcraft Refrigeration Products, Berry, Countess and Miro devised a unique solution to Lodge's cooling needs. Berry installed a monorail in the shape of a horseshoe that runs through the cooling system. The monorail carries the product through the factory much like a hanging rack at the dry cleaner's. Near the end of the monorail just before packaging, evaporator coils and fans blast cold air on the product during the cooling cycle. Once the hot skillets pass through the 4-6 minute cooling cycle, the skillets are approximately 85° Fahrenheit and safe to handle.

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"After evaluating several cooling solutions, we concluded that the Larkin refrigeration system was the perfect fit for the blast cooler at Lodge Manufacturing," said Berry.

The cooler box measures 18'x16' for the cooling system that includes Larkin evaporator (model # LHA61100SA) and Larkin condensing unit model (LDV-2000H2C). The Larkin condensing unit was placed on the exterior of the building in order to effectively use limited available space. This line of Larkin products, manufactured by Heatcraft Refrigeration Products, guarantees maximum performance and reliability.

"The Larkin system has improved safety and productivity substantially," said Nunley. "Before the system was installed, our product had to be picked off of the monorail at 140° F. Now, products are handled well within the safety factor at approximately 85° F."

Skillets are baked at over 600° F before passing through the Larkin cooling system which reduces skillet temperatures to a safe-to-handle 85° F.

As a result, Lodge Manufacturing employees are safer and more productive, and package the product much faster, a direct benefit of the reduced cooling time.

"We are constantly trying to set the standard for our business by utilizing new technology and unique ideas," said Nunley. "We have a great team here at Lodge and that's what sets us apart from anyone else. That's what makes this facility unique."

(From left to right): Ron Andrews, Heatcraft Refrigeration Products; Mark Countess, Wittichen Supply; Dan Berry, Air Trim Control; and Keith Nunley, Lodge Manufacturing.

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