LENNOX

TRUST ▪ INNOVATION ▪ QUALITY

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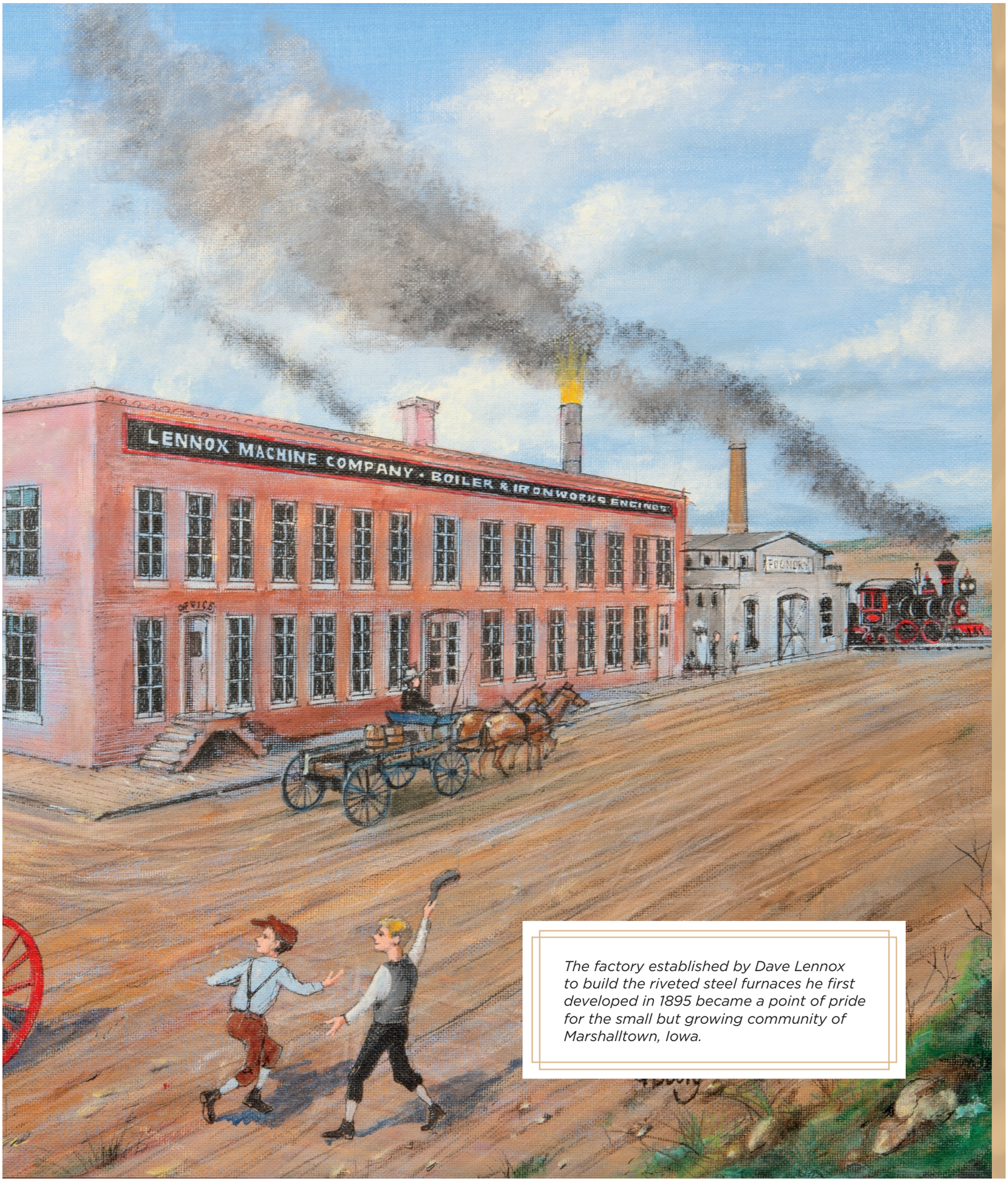

The factory established by Dave Lennox to build the riveted steel furnaces he first developed in 1895 became a point of pride for the small but growing community of Marshalltown, Iowa.

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FOREWORD

As we prepared to celebrate Lennox's 125th anniversary, we suspected the corporate culture of our organization today was shaped by the individuals, events, relationships, and innovations that can be traced back to our founding. That's because while our company has undoubtedly undergone tremendous growth and change, there is no denying many qualities of our business established our position in the market. What, other than a cultural through-line from our very start, could be responsible for what makes Lennox so special?

The stories and images presented in the following pages bear out this theory in no uncertain terms.

Every defining characteristic of Lennox International—our values, our brand promise, the successes for which we are rewarded, and the challenges we strive to sort out—can be recognized in the values, promises, successes, and struggles that defined us more than a century ago. Reading about events from our earliest days doesn't feel like slogging through ancient history; the characters in our story are recognizable and relatable, and their actions offer lessons and insights for how we function as an organization today.

It's my hope that you will take the time to read these stories over the weeks, months, even years following our anniversary celebration. Rather than a linear chronological history, the book we commissioned is broken into lively, topic-based essays that tell important standalone stories. You do not need to read this book from cover to cover but instead can jump in wherever you see something that interests you.

It's also my hope that you will feel connected to the people, initiatives, and innovations that make up our past stories, and that you understand the critical role you play in how Lennox's story will continue.



Todd Bluedorn
Chief Executive Officer

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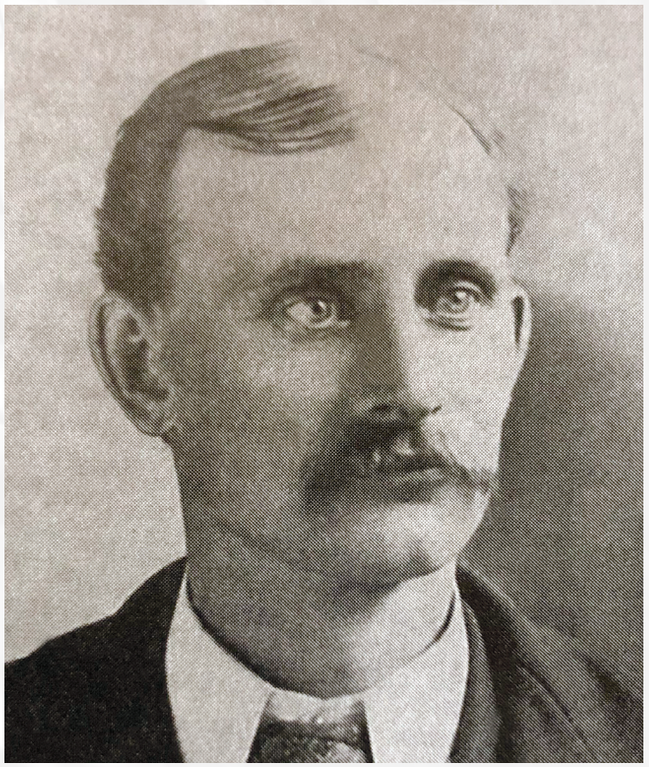





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INTRODUCTION

THE INVENTOR AND THE INVESTOR

Lennox International formed out of the inspiration and efforts of two men: Dave Lennox, who invented a novel solution for home heating, and D.W. Norris, who parlayed Lennox's innovation into a sprawling, successful business. Without the particular talents of either man, Lennox International's potential of indoor comfort control solutions would never have been realized.

Lennox was born in Detroit, Michigan, on April 15, 1856, the first child to Martin Lennox, who had come to the United States from Scotland, and Ellen Talbot Lennox, who had emigrated from Ireland. Martin was a machinist at a railroad shop in Detroit until he moved with his family to Aurora, Illinois, in the late 1850s. When the Civil War broke out, Martin enlisted; he was killed in battle on May 16, 1863.

D.W. Norris, top right, formed a group to purchase the Lennox Furnace Company from Dave Lennox—top left and standing against the wall in top right corner of bottom photo—in 1904. During the first year under Norris's ownership, the Lennox workforce produced six hundred furnaces.

Dave Lennox was seven years old when his father died. His mother must not have been able to care for him after she became widowed, because Lennox lived in the Soldiers' Orphans Home in Springfield, Illinois, for two years before returning to his mother in Aurora. After being reunited, the fatherless family did not have an easy go of it: young Lennox was forced to work as a rivet beater in a railroad shop, earning 50 cents a day, until the family relocated to Chicago in 1868. In Chicago, Lennox sold newspapers and helped his mother operate a small grocery store. He attended a business night school for a short time in the early 1870s before the Panic of 1873 forced him to take a job as an assistant to a lather, installing the supports used to affix plaster.

Lennox was a tinkerer. "He was a young man with unusual mechanical skill and imagination," wrote John Norris Sr., son of D.W., in the unpublished memoir he produced with the help of Terry Frederickson, senior human resources generalist at the Marshalltown plant, in 1984. Handy with tools thanks to his

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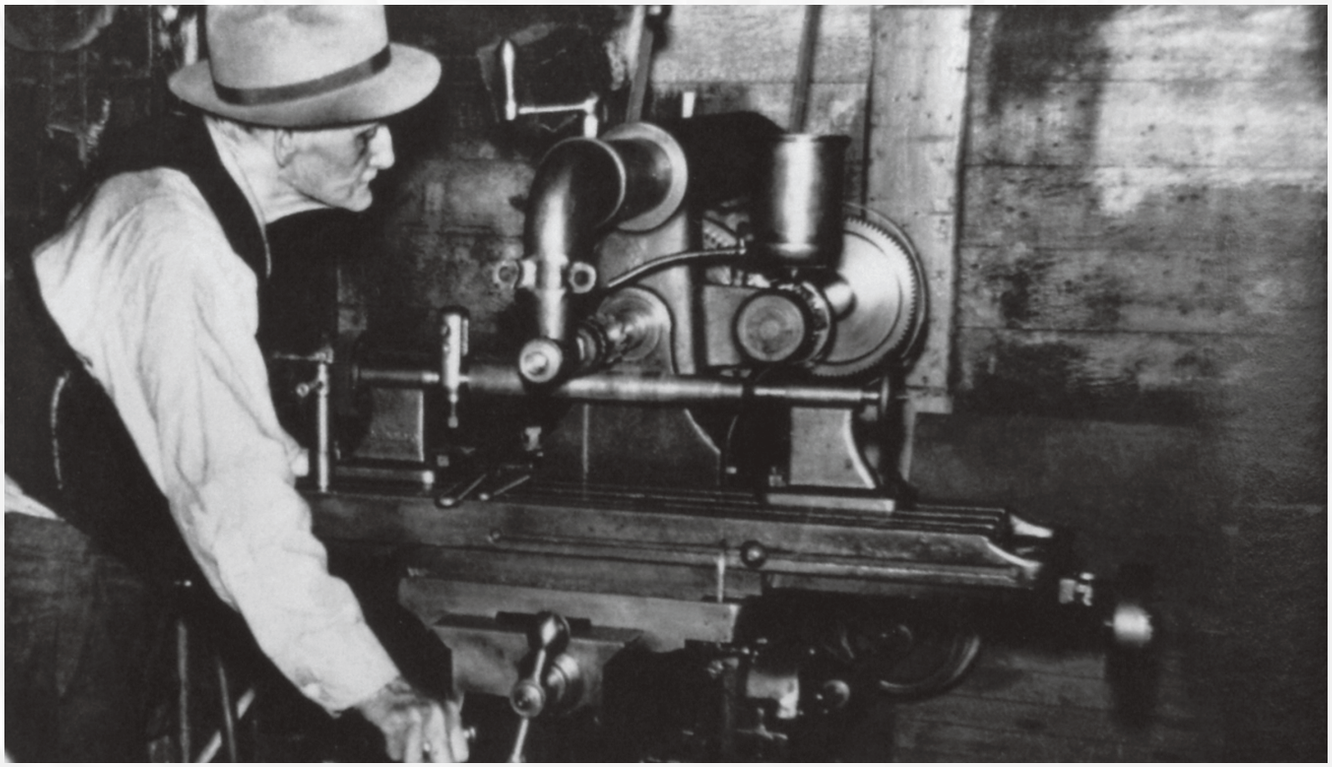

Selling the furnace company allowed Dave Lennox, shown here with a No.2 Aurora milling machine, to continue his passion for inventing new tools, engines, and measuring devices until his death, at age ninety, in 1947.

early employment in tool shops and on construction sites, Lennox had an innate understanding of all things mechanical. When not working in the lather's assistant role, he repaired sewing machines out of the back of his mother's grocery store. There, customers told Lennox about a town in central Iowa, named Marshalltown, where they thought he could carve out a good living for himself.

In July 1880, Lennox traveled to Marshalltown and opened his own machine shop on the corner of Linn and Third Avenue. He barely eked out a living until he devised a machine that allowed him to rapidly produce steel barbs for the Iowa Steel Barbed Wire Company and another that quickly churned out staples for local businessman Ed Sears. Lennox sent for his family to join him in Marshalltown, and with the help of his brother, Talbot, Lennox expanded his machine shop. Lennox married in 1891, and he and his wife, Jessie Reynolds Lennox, would go on to raise two daughters, Fama and Grayce, and two sons, David Junior, who went by "Edgar," and George.

Lennox became the go-to source for innovative solutions required by the area's farmers, tradesmen, and manufacturers.

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For a plasterer, he created a custom trowel that was so superior to what was available on the market that he was encouraged to manufacture and distribute them. Lennox agreed but soon turned the business over to two friends, Lester and Jessie Williams, who formed the Marshalltown Trowel Company. For a farmer, Burt Wilson, he concocted a livestock watering system that the farmer used to launch the Ritchie Manufacturing company. In 1895, for two men from the town of Oskaloosa, Iowa, Ernest Bryant and Ezra Smith, he fabricated iron castings for a revolutionary coal furnace they were developing—one that utilized riveted steel instead of the standard cast iron, which tended to leak coal smoke into homes.

When Smith and Bryant couldn't afford to pay Lennox for his work, they turned over their patents to him as settlement. He modified their original designs to produce Lennox furnaces. The steel furnaces were so popular that Lennox expanded his manufacturing operation, gaining the attention of the local newspaper publisher, D.W. Norris.

David Windsor Norris was born on February 2, 1876, in Chicago. His parents were David Washington Norris, a lawyer who was one of twelve children born to an Iowa farmer and his wife, and Elizabeth Gifford Norris, who had been born in Elgin, Illinois, and met her husband while teaching school in Tama County, Iowa.

Shortly after D.W. Norris was born, his father left Chicago and the law to take over his family farm in Grinnell, Iowa. He attended Grinnell public schools, completing his secondary education at age sixteen and graduating from Grinnell College at age twenty. Because he suffered from failing eyesight, Norris sought treatment in Chicago, where he worked as a newspaper reporter and stockyard worker. After a year in Chicago, Norris pursued his newspaper career in Washington D.C., where he began to dream of owning his own paper back in Iowa. He returned to Grinnell and set his sights on *The Cedar Rapids Gazette*, figuring he would start as a reporter and manage to buy into the paper at some point down the road.

The train trip to Cedar Rapids Norris embarked on in 1898 required that he change trains in Marshalltown. During the four-hour stopover, he checked out the town, stopping in at the local paper, *The Times-Republican*. Seeing a straighter path to ownership there, Norris abandoned his plans to travel on to Cedar Rapids and instead accepted a job at the Marshalltown paper. A year later, he owned it.

Norris married Flora May Wasson, the daughter of a Marshalltown bookkeeper who worked for Iowa Central Railroad, in 1900. They had two sons, Dana and John, and three daughters, Loraine, Hollis, and Margaret.

In 1904, five years after Norris became owner and publisher of *The Times-Republican,* Dave Lennox had grown weary of running a furnace manufacturing

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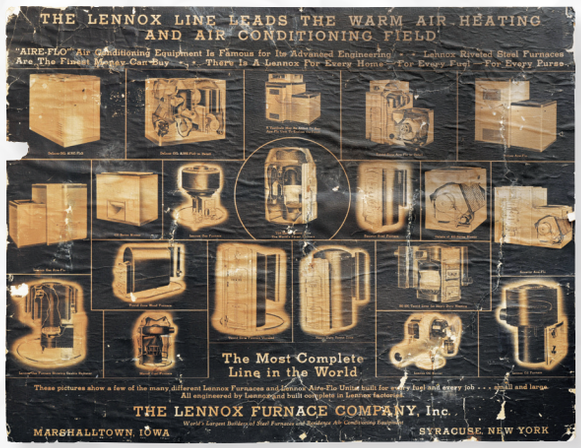
Though he remained engaged in critical business decisions until his death in 1949 at age seventy-three, D.W. Norris, left, turned much of the day-to-day management of Lennox over to his son John Norris Sr., right, during the 1920s. Facing page: An ad that appeared sometime between the mid-1920s and mid-1930s.

operation; instead, he wanted to concentrate on developing new and innovative products. At that same time, Norris was concerned with finding work for his father-in-law, whose bookkeeping job had moved to Minneapolis when the local railroad was acquired. Norris figured his father-in-law could oversee a furnace business, so he partnered with two other investors to make an offer of just under $55,000, which Lennox accepted.



Norris must have held deep admiration for Lennox's talents. Not only did flattering articles appear in Norris's newspaper before he had any financial interest in the company, but he kept Lennox's name front and center in the business after he bought out his two partners.

Lennox continued on with the Lennox Machine Company, focusing on gasoline engines, temperature gauges, scales, and industrial sheet metal shears that had been developed by his brother. Lennox sold that business in 1912 but continued to operate a small machine shop behind his house until his death in 1947 at the age of ninety.

Norris let others oversee the day-to-day operations of the Lennox Furnace Company and focused on more strategic matters while he continued on as publisher. "He was a super financier and able to talk our bankers into loaning us more money than was probably good banking at that time," wrote John Norris, who took on a leadership role in the company. Although he had purchased the company ostensibly to keep his father-in-law occupied, D.W. Norris had a strong desire to see the business expand.

Recognizing that the high cost of shipping furnaces was limiting Lennox's reach on the East Coast, Norris built a warehouse and distribution center in Syracuse, New York, in 1924, building a factory there a year later. He entered semi-retirement in the late 1920s, moving with his wife and younger children to Pasadena, California. The Great Depression forced him to return frequently to Marshalltown, though, to assist his son. In the mid-1930s, Norris purchased a smaller furnace company headquartered between Columbus and Cincinnati, Ohio, naming it Armstrong Furnace Company. In 1938 he decided to build an Armstrong factory in Columbus, Ohio, and another in Des Moines, Iowa, in the mid-1940s. But communications never left D.W. Norris's heart: in 1946 he purchased Marshalltown's local AM radio station, KFJB. Norris died in 1949 at the age of seventy-three.

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TIMELINE

1856
Dave Lennox is born in Detroit, Michigan, on April 15 to Martin Lennox and Ellen Talbot Lennox

1876
David Windsor Norris is born in Chicago, Illinois, on February 2 to David Washington Norris and Elizabeth Gifford Norris

1880
Lennox moves to Marshalltown and opens his own machine shop

1895
Dave Lennox receives design and patents for a steel furnace from Ernest Bryant and Ezra Smith in a debt settlement; Lennox improves the design and builds a safer riveted steel furnace

The Torrid Zone furnace makes obsolete old cast-iron furnaces prone to cracking

1898
D.W. Norris moves to Marshalltown for a job at the local newspaper. A year later, he purchases *The Times-Republican* paper.

1901
Lennox's engine and furnace factory employs 150 workers

1904
D.W. Norris and a group of investors purchase the Lennox Furnace Company for $54,789.14 and incorporate the business; they immediately begin to sell direct to installing contractors

1924
Due to high shipping costs, Lennox builds a warehouse and distribution center in Syracuse, New York; a factory is built there one year later

1927
John Norris Sr. joins Lennox following his graduation from M.I.T.

1929
Lennox's training book, *The Torrid Zone Manual of Warm Air Engineering*, is published, signaling the start of a focused effort to train and grow business owners and technicians

1935
John Norris Sr. launches the first commercially produced forced warm air furnace, called the Lennox Equator

mid-1930s
Lennox purchases a small company headquartered between Columbus and

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Cincinnati, Ohio, and names it Armstrong Furnace Company

1938
Armstrong factory is built in Columbus, Ohio

1943
Lennox retools its factories to support the World War II effort, making tail fins for the Martin Flying Boat patrol bomber airplane

mid-1940s
A second Armstrong factory is built in Des Moines, Iowa

1949
D.W. Norris dies at the age of seventy-three

Lennox places first national co-op advertising campaign in major city newspapers

1950
An animated character spokesperson named Lennie Lennox is introduced at the annual dealer meeting

1952
Lennox changes its name to Lennox Industries Inc. to reflect a national marketing view

LII introduces its first Aire-Flow branded central air conditioning unit

Lennox follows the wave of post-WWII building boom by expanding into Canada

1960
John Norris Jr. joins Lennox following his graduation from MIT

1964
The Duracurve heat exchanger is developed and launched, substantially reducing noise in gas furnaces.

1965
After seventy years, Lennox stops production of the Torrid Zone coal furnace parts and exits the coal fuel market

Lennox releases the industry's first direct multizone system, a combined heating and cooling rooftop unit with multiple commercial applications

1969
John Norris Sr. retires as president and is succeeded by Ray C. Robbins, the first non-family member to lead the company

1972
The first two-speed hermetic compressor is introduced and produced

The Dave Lennox character appears in his first Lennox advertising campaign; Los Angeles actor Bill Tracy plays the first Dave

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1977
Lennox Research and Development Lab relocates to Carrollton, Texas

1978
Lennox Corporate Headquarters relocates to Dallas suburb Richardson, Texas

1982
Lennox introduces the revolutionary Pulse combustion gas furnace, delivering efficiency levels of 98 percent, never reached before; modern "high-efficiency" furnace category is born

1986
St. Louis–based actor Bob Tibbetts succeeds the retiring Bill Tracy as the Dave Lennox character

1990
Lennox opens its new World Headquarters in Richardson, Texas

1991
CEO Bob Schjerven executes Project 21 to centralize company support functions in Richardson, Texas, closing five regional headquarters

1993
Marshalltown is chosen over Columbus, Ohio, as primary manufacturing facility in restructuring plan

1995
Lennox commercial business launches the configure-to-order L Series product line, with a staggering number of unique configuration combinations and easy service access

Lennox celebrates its centennial with then-governor of Texas, George Bush, delivering the keynote and twelve-year-old LeAnn Rimes singing the U.S. and Canadian national anthems

1999
Lennox International completes an initial public offering of stock, ringing the opening bell on Wall Street July 28, and moves from family ownership to public ownership

2000
Lennox follows utility industry lead into dealer consolidation and negotiates purchase of contracting business Service Experts

2002
Lennox International launches its new corporate logo

2003
Lennox launches the HSX19, marketed as "the quietest, most efficient air conditioner on the market"

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2005
Lennox introduces the first 20+ SEER air conditioner XC21, “the quietest, most efficient two-stage central air conditioner you can buy”

Lennox Commercial business unit is created under the leadership of Harry Bizios

2006
John Norris Jr. retires as chairman of the board

Lennox Industries reveals an update to its historic brand logo design

2007
Todd Bluedorn joins Lennox as CEO, succeeding Bob Schjerven

2010
Lennox breaks ground in Saltillo, Mexico, to build a factory for the Merit product line

Lennox introduces the iComfort® smart thermostat

2013
Service Experts is sold to a private equity firm as Lennox exits the contracting business

Lennox launches the Ultimate Comfort System, marketed as “the most advanced, most efficient, most capable heating and air conditioning system ever created”

2015
Lennox Introduces the iComfort® S30 ultra smart thermostat, with features like Smart Away™ mode, Allergen Defender, and Amazon® Alexa compatibility

2016
Bob Tibbetts retires after thirty years representing brand values like craftmanship, innovation, quality, and trust to dealers and consumers as the Dave Lennox character

2018
An EF3 Tornado passes over Marshalltown factory on July 19, at 4:41 p.m., causing major damage. By March 2019, all core products are back at full production.

2019
Lennox introduces latest brand refresh with “Air is Life” campaign

2020
Lennox celebrates its 125th anniversary with about four thousand dealers attending Lennox LIVE® 125 in Las Vegas at the Mandalay Bay conference center

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Customers have come to trust Lennox's strong reputation for standing behind the products it develops and builds. Selene del Mar Tapia Orozco laces an evaporator coil at Lennox's facility in Saltillo, Mexico.



TRUST

MARSHALLTOWN STRONG · DIRECT LINK TO DEALERS · WARTIME EFFORTS

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Mike Yilek, a machine operator at Lennox's plant in Marshalltown, Iowa, uses a drill press to produce copper fittings. Facing page: Lennox's brick-clad factory at Main Street and Twelfth Avenue under construction in 1916.

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MARSHALLTOWN STRONG

When Dave Lennox **arrived in Marshalltown**, Iowa, in 1881, the county seat of 6,240 people **brimmed with promise.**

Founded in 1853 on prairie land between the Iowa River and Linn Creek, it had not only secured a rail line through its town—beating out town rival Marietta—but also served as the main office of Iowa Central Railroad. The town also had a newspaper, the weekly *Times-Republican*, which was formed in 1880. It was for the *Times-Republican* that D.W. Norris first worked—and soon owned—when he settled in Marshalltown in 1898.

By 1901, Lennox's engine and furnace factory was employing 150 workers. "One of the first sights of Marshalltown," as an admiring *Times-Republican* called it, "the foundry spreads over an entire block of three acres." A 1915 *Times-Republican* article boasted the Lennox Furnace Company's Marshalltown plant as the largest factory for steel furnaces in the world.



Like much of the country, Marshalltown's economic fate was tied to national and international events. The years following World War I brought prosperity, and by 1925 Marshalltown grew to Iowa's thirteenth largest city. It had a bustling downtown with numerous civic as well as retail buildings, and its streets and parking spaces were often filled with automobiles. In October 1928, its tallest building, the seven-story Hotel Tallcorn, opened to great fanfare. Its construction had been underwritten by a fundraising campaign promoted by Norris; a similar campaign to build an eight-story office building and theater facility was undertaken the next year before the Black Thursday stock market crash undermined business leaders' confidence in the project.

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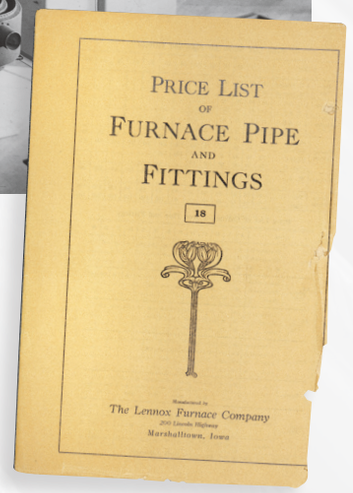

During the Great Depression, Lennox continued to provide information and training for its dealers, in hopes of keeping as many of its manufacturing employees working as possible. Dealers attended the 1937 annual dealer meeting, above, held at Marshalltown High School's auditorium, surrounded by heating equipment. Inset: A price book from the early twentieth century. Facing page: A Lennox welder.

At Lennox, the Great Depression took its toll. "An important part of reducing costs was to let people go unless they were absolutely necessary," wrote John Norris Sr. "Having to do this was a heart-breaking experience for both my father and me. The few of us left worked long hours and were glad to do it because having a job at that time was a great blessing."

Work slowed, but it did not halt. During the 1930s, the Marshalltown Coliseum hosted groups of two to three hundred dealers attending Lennox's earliest dealer schools to learn about installing furnace blowers. "These were serious Depression years, and Lennox dealers were hungry to learn anything new that would enable them to expand their business in some way," wrote Norris.

As the workers' rights movement gained traction under President Franklin Delano Roosevelt, Lennox employees in Marshalltown began to explore their options. Ultimately, an independent union formed in the mid-1930s to gain collective bargaining rights—a strategy that Norris and his factory manager, Bill Atwater, could appreciate. "Both Bill and I recognized that, as a manufacturing operation grows, the

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> ***These were serious Depression years, and Lennox dealers were hungry to learn anything new that would enable them to expand their business in some way.***
> ***—John Norris Sr.***

individual employee could feel somewhat inadequate to bargain alone with his management on matters of his wage and working conditions." Still, Norris remained grateful that no national union organization took over the Marshalltown Independent Union until after his retirement in 1969.

The town of Marshalltown and Lennox both rebounded following the end of the Great Depression, with Lennox producing materials for World War II and then benefiting from the post-War housing boom. While Lennox expanded its manufacturing locations around the country, Marshalltown remained Lennox's largest facility and beating heart of its operations.

In the late 1970s, Marshalltown's position atop the Lennox structure was shaken by a surprise move. A year after relocating the research and development department to Carrollton, Texas, a town in the growing metro region of Dallas, Lennox announced that its top executives and support staff would also be moving to Dallas. Lennox's headquarters would no longer be located in Marshalltown. "The corporate headquarters move was a very well-kept secret," recalls Harry Bizios, who served as director of manufacturing for Marshalltown before moving into an executive role with the company. "It was surprising that there were no rumors floating at the time regarding the corporate move. It certainly was a shock to the town of Marshalltown."

Keeping the news quiet until all the details were finalized was necessary, explains John Norris Jr. "We wanted to be very careful about who knew what was going on because it was really disruptive to Marshalltown. And then once the decision was made, we told people fairly quickly."

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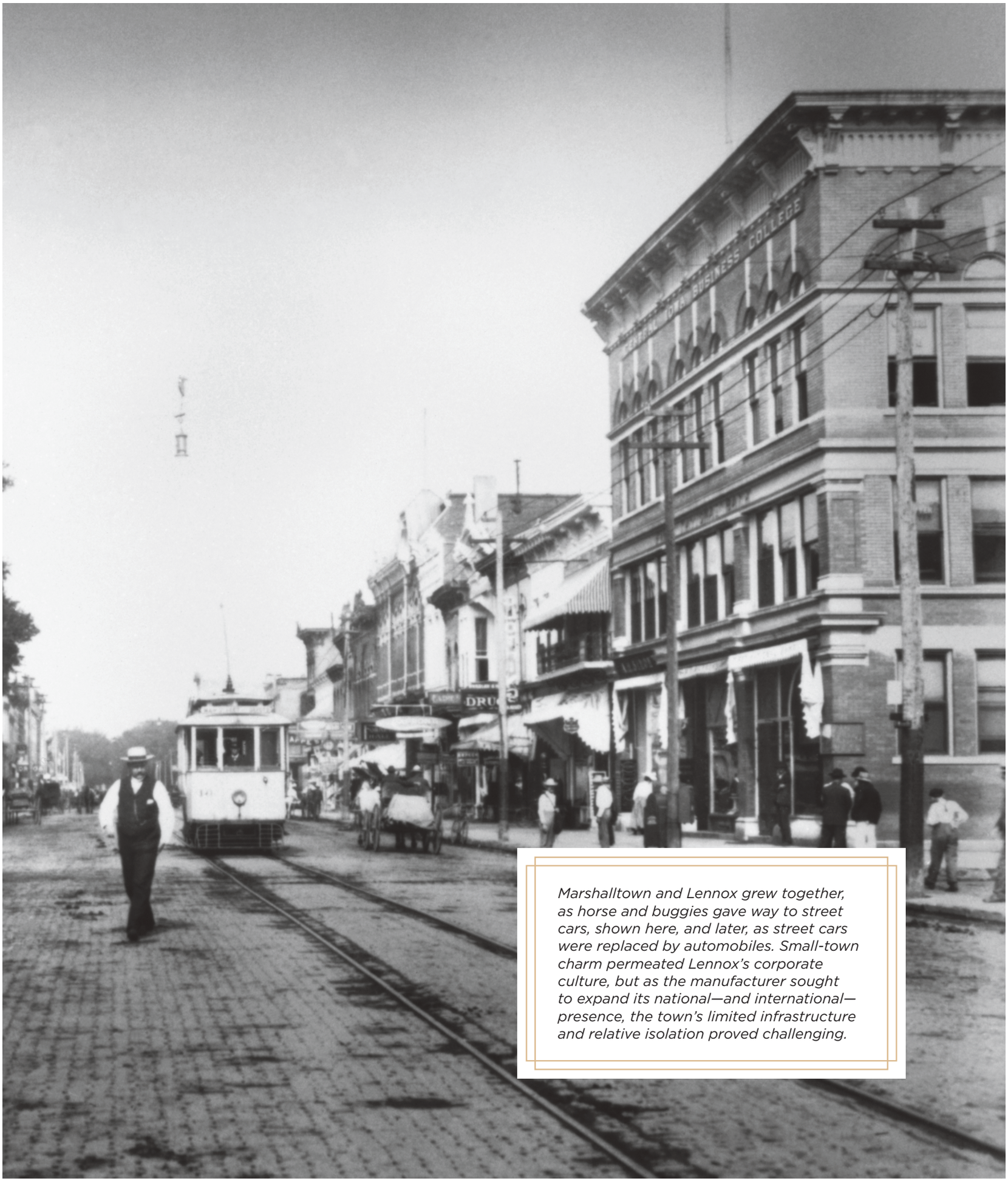

Marshalltown and Lennox grew together, as horse and buggies gave way to street cars, shown here, and later, as street cars were replaced by automobiles. Small-town charm permeated Lennox's corporate culture, but as the manufacturer sought to expand its national—and international—presence, the town's limited infrastructure and relative isolation proved challenging.



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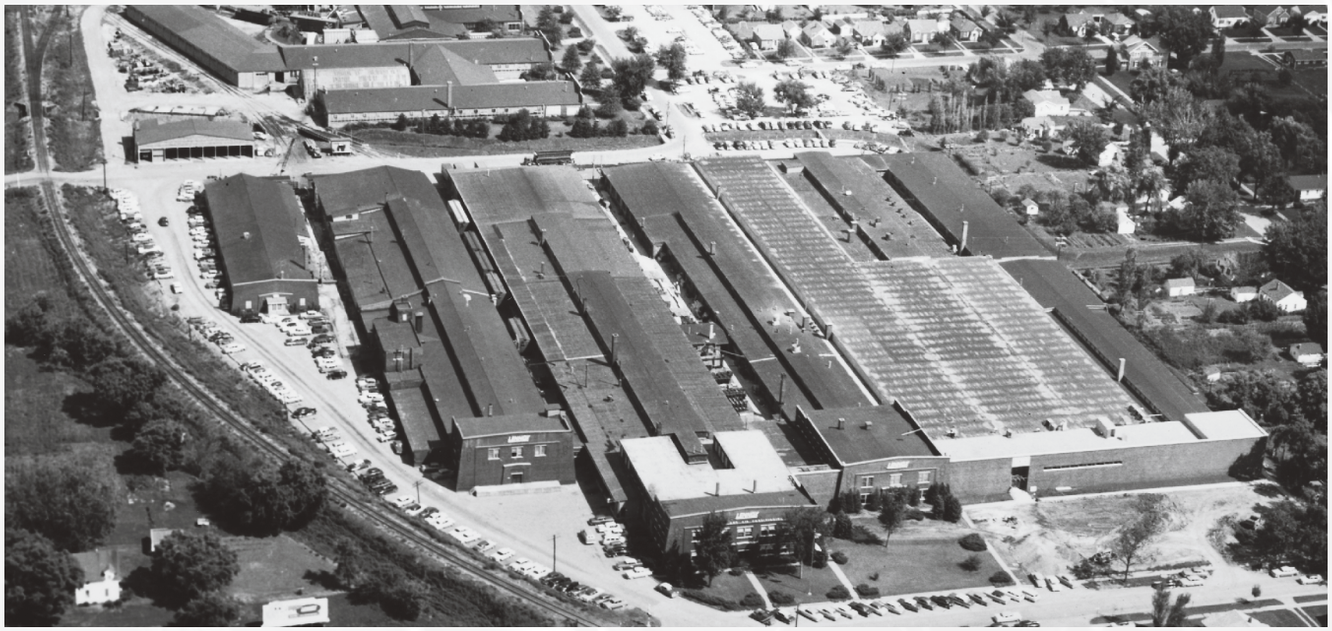

The Marshalltown plant, above, expanded by adding on to existing structures. Although it would become one of several manufacturing facilities Lennox operated around the country, it remained the company's largest. Facing page: John Norris Sr., center, headed the company until his retirement in 1969.

The exodus of Lennox's executive class was indeed disruptive. In addition to a rush of houses that went on the market, Marshalltown's retail landscape began to change. "It truly affected the community," says Terry Frederickson, senior human resources generalist for Marshalltown. "We used to have three or four fine men's clothing stores and, little by little, they closed because the corporate people were the ones who needed the suits and that kind of garb. The rest of us really didn't."

In the mid-1980s, Marshalltown was one of nine manufacturing facilities in the Lennox family, focusing on residential furnaces, with some residential air conditioner and humidifier capabilities as well. Japanese quality management practices were influencing a number of American manufacturing facilities, Marshalltown included. "Now we give our people, especially factory employees, more control over what they do and a stronger desire to do a job correctly and better," Norris told *Contracting Business* in 1985. "This makes Lennox a more exciting place to work."

In 1991, a reorganization initiative named Project 21 consolidated nearly all administrative employees from Marshalltown's regional headquarters with those of the four other regional offices around the country. Although eliminating redundancies made sense, the move took

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a toll on affected employees, remembers Frederickson. “That was probably the lowest point I think in Lennox history, it truly was,” says Frederickson. “We were shown a video from the president announcing that our jobs were being moved to Texas. We might be offered a job there, but some of the jobs were going to be done away with. It would all be turned around in a two- or three-month program.” Some employees were offered jobs in Dallas and took them; others were offered them but declined. Those whose positions were eliminated were provided severance packages, training, and incentives to stay on until the completion of the transition. “The company treated us really well, and they offered everything imaginable. But it was the emotional part that just got to everybody. In fact, I was part of a local support group that kind of started meeting weekly just to keep each other up and afloat.”

Two years later, in 1993, Marshalltown was again facing change. Lennox leadership announced that the manufacturing operations of Marshalltown and Columbus, Ohio—which specialized in air conditioner condensing units and evaporator coils but also had some residential furnace capabilities—would be consolidated. They would be relocated in Marshalltown, Columbus, or some other location, likely in the Southeast. The consolidation was prompted by the seasonality of Lennox’s heating and cooling products; instead of laying off workers at the two locations

> ***“Columbus is a big city, and Lennox is not a big thing there. Marshalltown, being a small town, jumped all over [the consolidation bid] and offered a number of solutions and a number of proposals.”***
> ***—Harry Bizios***

when demand for their product line was at a seasonal low, workers could be shifted between heating and cooling.

Marshalltown’s employees sprang into action, mustering city and state officials as well as local media to make the pitch for selecting Lennox’s original location for the combined operations. “We did unbelievable things,” recalls Frederickson, who served on the committee that worked with Marshalltown’s Chamber of Commerce on the effort. “We had courthouse rallies on two or three Sundays, Senator Grassley came and spoke one Sunday, the governor came and spoke. We had every grade school student make a little postcard with a drawing showing why Lennox should come to Marshalltown and we sent those down to the board of directors. The head of the chamber and the economic development

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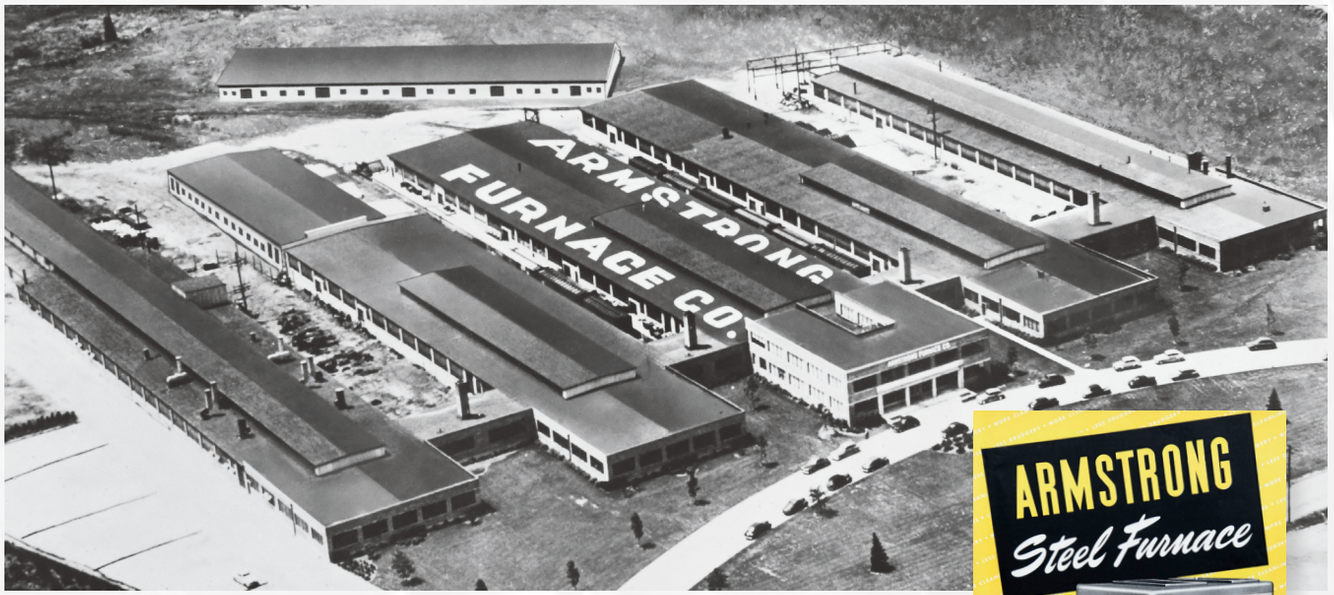

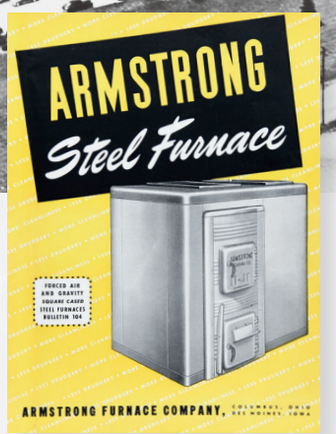

In 1938, D.W. Norris built the Armstrong Furnace Factory in Columbus, Ohio, seeking to bring manufacturing of the heavy coal furnaces farther west to cut delivery costs. His son thought this was unnecessary: "I could see that our industry was headed for gas and oil furnaces that were light in weight," wrote John Norris Sr.

person flew to Dallas to meet with the board; they took Maid Rites, which is a local delicacy. We had a mom-and-pop group that made hand-made chocolates and sent them to all the board of directors. We pulled out all the stops trying to convince the board to come to Marshalltown."

Columbus, however, was nearly silent. "There was very little effort on the part of the city of Columbus," says Bizios, who was in charge of the consolidation. "Columbus is a big city, and Lennox is not a big thing there. Marshalltown, being a small town, jumped all over it and offered a number of solutions and a number of proposals."

The efforts paid off: Lennox's board decided to consolidate operations in Marshalltown.

As the 1990s came to a close, despite the executive and administrative shifts from Marshalltown to Texas, Lennox remained an integral partner within the community. "What I noticed was that the plant leadership was very involved in the community, whether it was Chamber of Commerce, or economic development activities or charitable organizations," says Alan Anselman, who started in Marshalltown in 1999 as an engineering manager. "There were a lot of board members for those organizations that came from plant leadership. Lennox was heavily invested in the community."

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When the decision was made that Lennox would expand its operations in Saltillo, Mexico, teams of American and Mexican employees worked together to share and develop best practices that ultimately benefited both plants. Above: Miguel Gutierrez, Marshalltown plant manager, talks with heating line assembler Maria Garza. Facing page: Employees from the Saltillo, left column of photos, and Marshalltown, right column, facilities.

The Marshalltown facility continued to expand in the twenty-first century, and eventually Lennox's leaders began to look at options for expansion beyond the country's southern border. "There was obviously a lot of legitimate concern from the union as well as the community when Lennox announced we were going to build a factory in Mexico and start moving some of our products there," says Anselman. "What we were up against, though, was we had actually grown to the point where we were going to run out of capacity to supply what was needed for customers. The town could not supply enough people to work at that factory. Even if we had room to grow, we wouldn't have been able to hire enough people."

Lennox selected Saltillo, Mexico, an industrial region known as the "Detroit of Mexico" for the number of automotive plants in the area. "Lennox chose Saltillo because the infrastructure the area offers, in terms of skilled labor, energy, water, logistics, transportation, and educational institutions, is better than the national average," says Luis Gerardo Rodríguez Páder, managing director of the Saltillo plant. Marshalltown employees, as well as employees from Lennox's other American entities, participated in a push-pull program of sharing best practices as the Saltillo plant broke ground in 2007.

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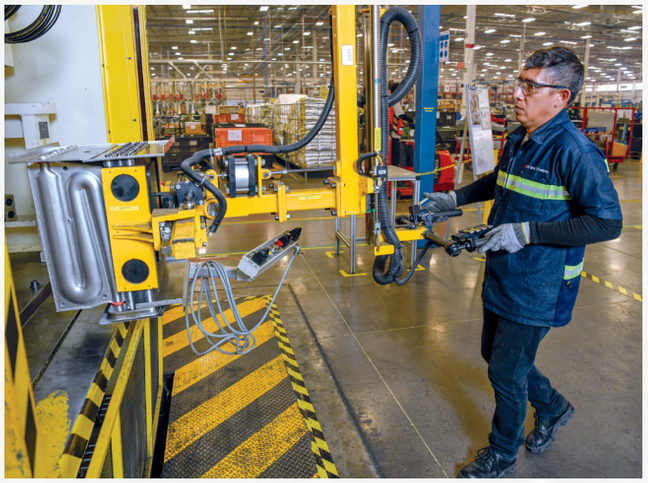











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HyFlex



As Lennox's heating and cooling units have become increasingly complex, employees have expanded their technical know-how. Here, Marshalltown assembler Irma Cervantes connects electronic components on one of Lennox's residential furnace lines.

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"Lennox's strengths are not only the talent we have across the organization, but also the willingness to share that knowledge," continues Páder. "I think employees' willingness and professional engagement really helped us bring innovation to the new facility, things that had been thought about in the past, but never tried before."



Despite being limited by a physical footprint that was the legacy of multiple expansions over the decades, Marshalltown began instituting many of the lean manufacturing processes developed during its collaboration with the Saltillo plant. Marshalltown's HL2 fire/run tester Charles Damman, above, runs a test performed on every furnace Lennox builds. Facing page: Cheri Phipps, an HL1 assembler in the Marshalltown facility, installs burner components on one of Lennox's furnace lines.

"We basically were implementing the things that were being done here in Marshalltown," says Miguel Gutierrez, who was the materials manager of the Saltillo plant before becoming Marshalltown's general plant manager in 2015. "Lennox started in Marshalltown, everything started here. We have employees here with more than twenty, thirty, forty years of service, expertise, and knowledge. A lot of what Lennox is today is built on the knowledge and talent of people who are still working in Marshalltown."

The relationship of knowledge sharing became reciprocal, with the lean material flow practices launched in Saltillo eventually implemented in Marshalltown. "The fundamentals were exactly the same, but they had to be applied differently because the building was different," explains Gutierrez. "The Marshalltown plant was expanded by adding different buildings over the decades, just growing, growing, growing. So, the internal logistics weren't ideal."

Those limitations were removed in a way no one would have foreseen or wanted on July 19, 2018. At 3:30 in the afternoon, just as the second shift was arriving, tornado alarms sounded. Some employees got back in their cars to head home while others went into the facility's designated shelters, just as they had practiced in tornado drills many times before.

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On July 19, 2018, the Marshalltown plant took a direct hit from a tornado. Every employee remained safe during the storm, but the damage to the rear section of the factory was catastrophic.

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Those employees waited for more than an hour for the all clear to sound. Instead, at 4:41 p.m., a tornado descended on the facility.

It lingered for less than a minute, and no one in the plant was injured, but the damage it did was devastating. "When we first emerged from the shelter, I think everybody was in shock," recalls Tracy Leavy, supervisor for quality assurance in Marshalltown. "Everybody felt the same emotion, just shock at the devastation. And then, after that, our thoughts all turned to, 'What are we going to do for a living?'" Leavy and her coworkers were told not to return to work the next day, so her fears for her job mounted over the weekend. On Monday night, Marshalltown's employees were told to report to work on Tuesday and were assigned jobs to assist with the recovery and clean-up effort. "We got geared up with our PPE, with our hard hats and lights, because there was no power. My job was to work with the materials department and determine what parts were good and salvageable and what parts were bad."

Doug Young, president and chief operating officer for the residential division, traveled to Marshalltown to assess the destruction. "It looked as bad as I had ever envisioned," recalls Young. "Large steel bars that had to be seventy feet long and twelve inches wide were twisted like pretzels. There was insulation hanging from every imaginable place, water everywhere. Walls had tipped in and the ceiling was gone. It looked like somebody had intentionally just tried to destroy it, like it had been bombed."

> ***"Our guiding principle is what's best for the customer. And the best thing for the customer was to produce our product as quickly as we humanly could. So, there was no discussion about not rebuilding."***
> ***—Todd Bluedorn***

Despite the extent of loss, Lennox quickly determined the Marshalltown plant would be rebuilt. Young discussed his assessment with Todd Bluedorn, Lennox's chief executive officer, and the two began moving ahead on a plan to rebuild. "Our guiding principle is what's best for the customer," says Bluedorn. "And the best thing for the customer was to produce our product as quickly as we humanly could. So, there was no discussion about not rebuilding; we never even pulled out a pencil and paper and said, 'Well, what if we move here, what if we do this?' It was immediately obvious to us that the best way to get product to our customers as quickly as possible was to rebuild Marshalltown. That was the only thing that drove the decision."

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After the storm, employees emerged from shelters to find daylight streaming in through missing sections of ceiling, insulation hanging from twisted rafters, and water damage throughout. Despite the damage, the plant was back in operation within a week. Inset: A banner signed by Allied employees in West Columbia, South Carolina, to support the Marshalltown team's rebuilding efforts.

Within a week—seven days and thirty minutes after the tornado struck—Marshalltown was again producing critical parts, with equipment protected by sheets of plastic instead of ceiling and walls. Bringing the plant fully online would take time, though. By the end of the following year, 2019, Marshalltown was still operating in a facility 70 percent of the size before the tornado.

For Gutierrez, the tornado galvanized the Lennox community. "Any tragedy has the opportunity to build you up or destroy you. Every employee in Lennox, at every level and every part of the organization, chose to make the tornado an event that was going to make us stronger."

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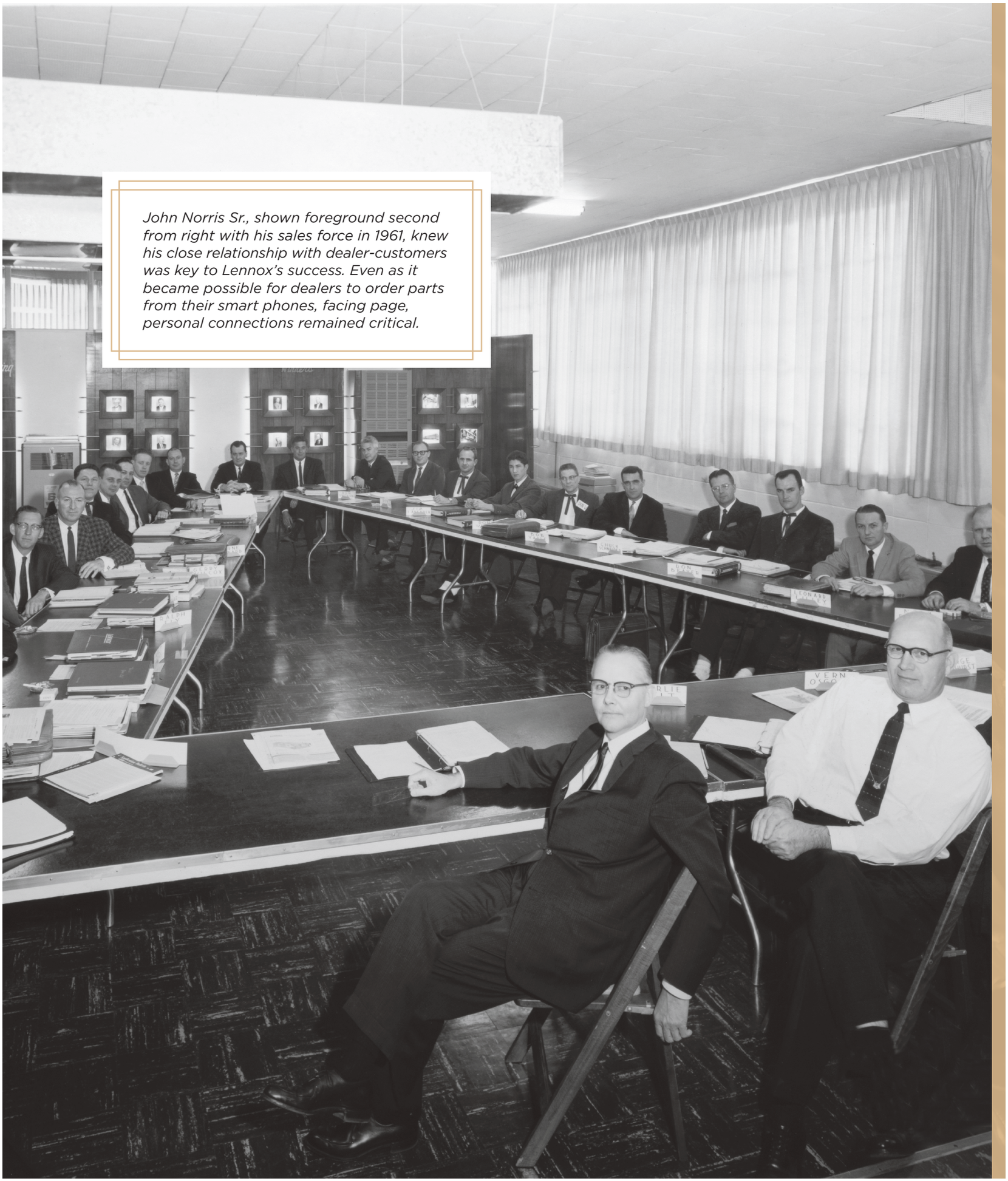

John Norris Sr., shown foreground second from right with his sales force in 1961, knew his close relationship with dealer-customers was key to Lennox's success. Even as it became possible for dealers to order parts from their smart phones, facing page, personal connections remained critical.

DIRECT LINK TO DEALERS

When **D.W. Norris purchased Lennox in 1904**, he codified a distribution structure that would come to **define and differentiate** Lennox International through and, by all indications, far **beyond the company's 125th year** in business.

Norris is reported to have said, "Build the best product and get me the best salesman. The best salesman will get me the best dealer, and the best dealer will get me the most business." This statement is striking for what it highlights and what it ignores. For Norris, it was not enough to have the best product and best sales team; the lynchpin for maximized business was the dealer. And what was not mentioned: a wholesaler. Norris did not state, "Build the best product and establish a distribution network to get that product to customers." Norris hung his aspirations on the close relationship his sales force would forge with dealers.

"To be truthful I can't really say that it was a conscious decision to sell direct to the dealer," explains his grandson, John Norris Jr., who served in a leadership capacity from 1977 to 2006. "I think the company started out that way when he bought the business from Dave Lennox, who had been selling direct to the contractors putting them in." But D.W. Norris was known for making bold strategic decisions he felt would maximize sales—he built a manufacturing facility in New York and another in Ohio to get his product closer to customers—so it was unlikely just happenstance that he retained the one-step distribution model. Instead, he probably analyzed the system he inherited and determined it was ideal.



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Over the years, Lennox's direct-to-dealer model has provided a competitive advantage. "Our one-step distribution model is a significant competitive advantage for Lennox," says Mike Hart, vice president of residential sales. "It allows us to have a direct relationship with our customers and their employees and provides the opportunity for accurate and timely input on products, programs, and market conditions. In most cases our competitor's brands are defined by the policies of independent distributors, not the manufacturer." The distribution model also allows Lennox to serve large national and regional customers with consistent service levels from coast to coast. "We are one Lennox, and our distribution strategy allows us to define our brand promise in the market," continues Hart. "Whether it's Lennox Commercial or Lennox Residential or some function in Lennox Stores, the customer doesn't care; they want their problems solved, and all they see is Lennox."

This direct control Lennox maintained helped engender loyalty between Lennox and its dealers was observed by Gary Bedard, who worked for a competitor before joining Lennox in 1998. "Lennox had an exceptional reputation as a firm that was very good at branding, knew who they were, and didn't change," says Bedard. "They had very good quality and extremely close relationships with their dealers. Lennox, from my point of view at the time, was a company where you really couldn't convert their dealers; they just wouldn't move."

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By the mid-twentieth century, Lennox dealers were closely aligned with the brand, above. Education efforts like dealer meetings, above right; dinner meetings, facing page left; and trade shows, facing page right, gave dealers the sales and service knowledge required to represent the product line to end users.

Scott Lindsey, who served as a territory manager for a distributor before moving to Lennox in 2005, frequently bumped up against the loyalty of Lennox dealers. "When I would call on Lennox dealers, I would get to the point where I'd be like, 'Look, my products and pricing are just as good as Lennox's, so why won't you buy from me?' And invariably they would respond, 'We're Lennox guys. We're with Lennox.' Many of them were second- and third-generation dealerships whose fathers and grandfathers started the business and knew the Norrises personally. They grew up on Lennox trips, dealer meetings, award trips, and special dinners with the leaders of the company. There was such a culture of trust that the dealers were unwilling to even entertain a move to another brand."

Today, Lennox's one-step distribution model is still the organizing principle for residential and commercial sales. While the size of the modern organization has necessarily altered aspects of the relationship, a close connection to Lennox dealers remains central.

This point was made clear to Quan Nguyen when he took over the role of vice president and general manager of the residential division in 2017. When he arrived at his new office, he found a letter dated February 11, 1972, had been left on his otherwise empty desk. "It was a letter written to Sid Kalin who was a dealer in Sioux City, Iowa, from John Norris Sr.," says Nguyen. "But what was interesting were all the things that still apply today in terms of working with our dealers, and what a big part they play in having great success."

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From the time of the Torrid Zone furnace, facing page, Lennox has sought ways to support dealers' own marketing efforts. The company's mascot in the 1950s, Lennie Lennox, would make special appearances at trade shows, above, while signage like the plaque below bolstered consumer confidence.

Norris's letter recounts working with Kalin's father, praises Kalin's own contributions to expanding air conditioning sales, and mentions getting together with Kalin and his wife, Gerry, the next time they were in Marshalltown. "One of the things that has given me the deepest satisfaction in Lennox is the fact that outstanding installation contractors, certainly like Kalin's, have chosen to continue their loyalty to Lennox, . . ." wrote Norris. "But really, Sid, it is this working together that has brought success to all of us."



Today, Kalins Indoor Comfort, the dealership started by Sid's father, Jacob, is operated by his son, Bruce. "Lennox and Kalins have always been synonymous in our area," says Bruce Kalin. "We've had people come in and say, 'Can I have a filter for that Kalins furnace?' We know they're talking about a Lennox furnace." That interchangeability in the customer's mind speaks to the close bond that has been nurtured over the years. "When I think back, it's really been about relationships," says Kalin, who has a copy of the letter Norris wrote to his father.

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Opportunities to deepen dealers' understanding abound. Here, inside technical support manager Leslie Wood, center with red lanyard, welcomes dealers on a tour of the corporate facility in Richardson.


LENNOX
LENNOX
ENERGY STAR

"That letter was written forty-five years ago, and we still espouse the same type of partnership with our dealers today," says Nguyen. Among the key components of this long partnership are education, marketing assistance, and communication.

Lennox has a long history of providing educational resources to further dealers' understanding of its products. Norris's first job out of MIT, in 1927, was as a salesman based in Syracuse. This role not only gave him an appreciation for the relationship between Lennox and its dealers, but also the level of technical information important for the sales force and dealers to access. "I carried a typewriter with me while on the road," recalled Norris. "Nights and weekends, I organized and wrote the material that I thought was needed for teaching the rather simple art of gravity warm air heating to new Lennox salesmen as well as to Lennox dealers and new employees that Lennox dealers would hire." The book, *The Torrid Zone Manual of Warm Air Engineering*, was completed in 1929.

> ***We ran a fairly sophisticated education department for a while, and it was a major effort at Lennox to educate the dealer on all aspects of his business.***
> ***—John Norris Jr.***



Lennox educated its own territory managers so that they, in turn, could support their dealer-customers' business aspirations. "Back in the day, when air conditioning wasn't available in new homes, Lennox had only thirty or forty people representing the factory who had to cover the country," says Hart. "So, Lennox produced training kits on how to apply heating products but also how to treat people and speak with contractors about their business. We have all the same things today—just digital."

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From film strips in the mid-twentieth century, facing page, to interactive trade shows today, Lennox's sales force has always sought out the best tools to support their network of dealers.

Over the decades the education and training Lennox made available to dealers and their employees broadened to include application schools in Marshalltown and online programs like Build a Salesperson and BuildATech®. "We did a lot of service training, including on how the dealer should market to his customer," recalls John Norris Jr. "We ran a fairly sophisticated education department for a while, and it was a major effort at Lennox to educate the dealer on all aspects of his business."

Annual dealer meetings not only provided product and application education, but networking opportunities that helped dealers refine sales strategies. In 2016, the annual dealer meetings evolved into Lennox LIVE®, a dynamic two-day conference that goes beyond product information presentations to provide dealer interaction, instant polling, hands-on product demonstrations, simulations, and breakout sessions. "Lennox LIVE stands for Leadership, Innovation, Vision, and Education, and it provides our customers the opportunity to learn from Lennox as well as their fellow professional contractors," says Hart. "It's an opportunity for our customers to see our new products and programs and meet the new members of the Lennox team," continues Hart. "We also provide them the opportunity to network with three to four hundred of the best professional contractors in our industry.

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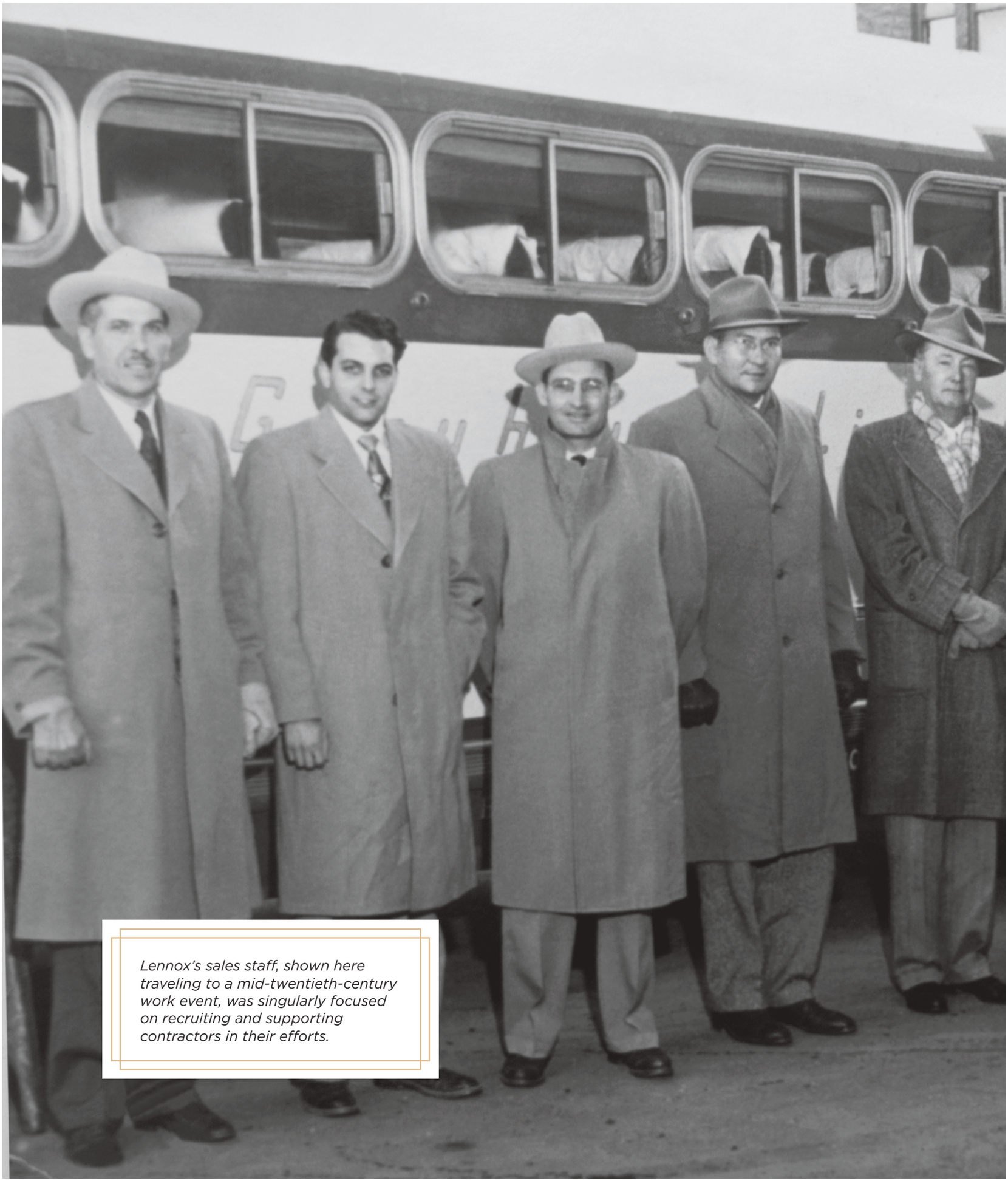

Lennox's sales staff, shown here traveling to a mid-twentieth-century work event, was singularly focused on recruiting and supporting contractors in their efforts.



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With the advent of Lennox Live, the sales and marketing team brought a new level of engagement to dealer education. Above: Scott Lindsey, regional sales director, right, speaks with former director of training Mike Moore at a Lennox Live event. Facing page left: Kim McGill, vice president of residential sales, center, is flanked by fellow executive hosts vice president and general manager of residential Quan Nguyen, left, and Mike Hart, vice president of residential sales. James Koehn, field operations coordinator, facing page right, demonstrates augmented reality training and troubleshooting.

Our customers' engagement in Lennox LIVE has made it an amazing success."

Providing business development education is a high priority of Lennox Live. "We focus a lot now on providing valuable insights, tools, information, and training programs," says Bedard. "At the end of the day, we really don't care where they get trained in terms of the kinds of things they can do to build their business. We just care that they invest in their businesses and their employees. We try to expose them to great ideas and recognize that other dealers are among their best resources. Providing events where people can network and learn from one another is one of the most powerful things we can do."

Ross Albert has found the networking opportunities Lennox provides to be key to growing Arctic Air. His father, Howard Albert, was a math teacher who started the business in 1977 in Old Bridge, New Jersey, as a summer job. "I have a group of dealers across the country that have really helped me understand business, personal aspects of my life, and what it means to take it from here," says Albert, who has built the dealership to 135 employees serving seven counties in the state of New Jersey. "I think a lot of the ideas come from the stage and

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also from events afterwards that allow you to have good, healthy conversations. When things are going great you talk to these people about what they're doing, and when things aren't great, you have a backbone of people that you can lean on."

Lennox also sought to strengthen the dealers' understanding of its manufacturing processes and corporate culture by expanding its Marshalltown dealer tour program in 2009. "We want them to see our processes and see our quality system," says Tracy Leavy, supervisor for quality assurance in Marshalltown, who conducts many of the tours. "We want them to meet the people who are building the product. When those dealers come through and talk to the people that are, for example running screws in the furnaces, both of them enjoy it. And the dealers think it's pretty cool."

Dealers who have qualified for and opted into the Lennox Premier Dealer program receive greater access to training and on-site events. They also receive a greater level of marketing support, preferred pricing, and rebate incentives. "The program is built around customer advocacy," explains Lindsey. "We measure and monitor Premier Dealers' reviews, require them to attend a certain number of training hours and go to a certain number of classes. They have to be licensed and have all their certifications. They also have to participate in our marketing programs and all of our consumer promotions. And if they do all that, then we called them Premier Dealers."

For John Christin, president and owner of Wolfer's Inc. in Woodburn, Oregon, the value of becoming a Premier Dealer was immediately apparent. "If you're going to be a dealer, why wouldn't you want to be at the top?" reasons Christin, who purchased Wolfer's in 2009 after serving as an area manager for Lennox.

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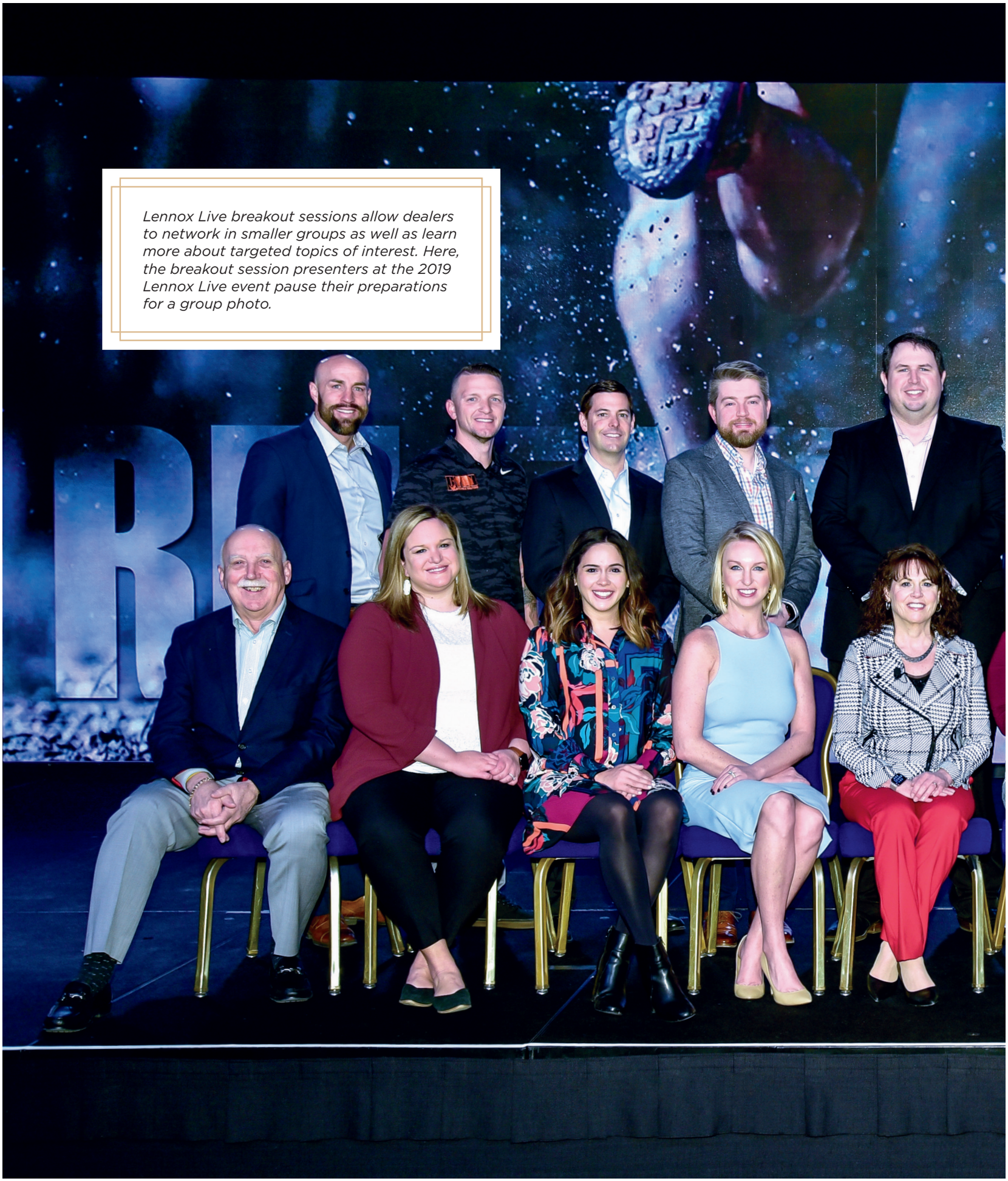

Lennox Live breakout sessions allow dealers to network in smaller groups as well as learn more about targeted topics of interest. Here, the breakout session presenters at the 2019 Lennox Live event pause their preparations for a group photo.



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"Some of the benefits include a little deeper discount on stocking programs and more recognition on their website when a consumer goes to look for a dealer.

"The HVAC Learning Solutions program would normally have had a cost to it, but for a Premier Dealer it does not, continues Christin. "They bundle several products into that Premier Dealer program that makes sense. And when there are consumer promotions, Lennox picks up a greater portion of that cost for Premier Dealers than they do for non-Premier ones."

Perhaps the most important component of the relationship Lennox has enjoyed with its dealers over the years is the commitment to transparency and strong communication. "At any given time, if I get a phone call from a consumer about an issue, I can call any of those I consider my 'family members' within Lennox and get something resolved," explains Albert. "That's really, to me, what makes Lennox different."

Lennox's sales teams are deliberate in cultivating that open-door policy. "My field salespeople are required to do twelve to fifteen face-to-face sales calls per week," says John Cain, district manager for residential and commercial in Western Canada. "We still believe today that, regardless of the digital tools available to us, face-to-face meetings still carry weight when it comes to doing business. People still like to be talked to, be seen, and know they're appreciated. You can say thank you a gazillion times on an email, but unless you walk in, shake their hand, and sit down with them—or have a business lunch or attend an industry function together—they won't get that personalized touch."

Strong two-way communication has long allowed Lennox to learn about and resolve issues faster than competitors who employ a wholesaler distribution model. "By selling direct to the contractor, you were selling to the guy that was putting it in the house," says John Norris Jr. "So, we knew in very short order what was working right or what wasn't. We would know things six to eighteen months earlier than other people in the industry would."

That holds true today, says Dennis Wood, senior manager of product support. "If we start getting a rash of calls or see a pattern in warranty parts that have been replaced, we can identify very quickly that we have an issue popping up in the field. Being dealer direct, there is no middleman to filter that out, so we can address issues really quickly."

Establishing such strong transparency and communication helped lessen the hurdles related to keeping dealers informed in the aftermath of the 2018 tornado that hit the Marshalltown plant. "The people at Lennox, they came to us very quickly and said, 'Here's what's happened, and here's the plan that we have in place,'" recalls Frank Arnold Jr., co-owner of Prudential Heating and Air Conditioning, which was founded in Louisville, Kentucky, by Arnold's

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Jason Harris, technical support manager, conducts equipment training in the Richardson headquarters Link Building for employees who are new to Lennox or recently transferred to the company's customer service team.

father in 1947. "Then Lennox kept us informed about what they were going to be short on so we could prepare. Yes, there were some hiccups—some product delays and some stuff we thought we could get but ultimately didn't—but Lennox kept us in a place where we really didn't miss a beat."

For many dealers, working together through the tough times reinforces the successes enjoyed over the decades. "It's a true partnership," says Christin. "We care about Lennox and they care about us. We both succeed. There has never been a time when I've ever felt that because we won, they lost or vice versa. We both get to win at this game. At the same time, we all make mistakes. The great thing about a relationship like ours with Lennox is that whoever made the mistake, we both work at fixing it together. That is the essence of a true partnership. Many manufacturers build great products, but I think it's the relationship component that really cements who we are to one another."

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Lennox provides dealers with technical knowledge and training through its online Buildatech program. Here, a tech tests a Lennox unit installed in a residential attic.



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The U.S. entry into World War II had a double impact on Lennox: much of its male workforce left to join the military, prompting Lennox to hire women for manufacturing jobs for the first time; and the company retooled a portion of its operation to provide materials for the war effort.

WARTIME EFFORTS

World War II marked **a turning point** for American manufacturers.

It bolstered the country's economic recovery after the dark days of the Great Depression, represented the entry of women in the workforce in unprecedented numbers, and solidified the United States' dominance as an industrial force. Lennox was one of the many manufacturers who partnered with the government to support its wartime efforts.

Even before the U.S. entered World War II, Lennox played a role by successfully bidding to become the supplier of large coal-burning forced-air furnaces for the barracks buildings that were being built in army camps around the country. "We were busy in late 1939, 1940, and 1941 building what we referred to as 'army camp furnaces,'" recalled John Norris Sr. in his memoir. By January 1942, Lennox could claim credit for supplying about half of all furnaces used in the army's temporary housing program.



After the country was drawn into the war in December 1941, the steel Lennox used to manufacture furnaces was among the materials allocated for wartime materials, halting furnace production. Yet Lennox's manufacturing skillset did not readily translate to production of vehicles and weapons. "The management in all of our plants went to work to sell their way into any kind of war production that they could get and thought we could handle," wrote Norris. While Marshalltown won contracts for some small machine parts, the Columbus factory scored Lennox's most complicated wartime manufacturing job: building tail fins for the Martin Flying Boat patrol bomber. Other factories produced perforated steel landing mats, which were used for temporary airfields, battery boxes, parts for an anti-submarine vessel, tank parts, airplane hangar frames, and tool kits.

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The Lennox News Page 4

THE SPRINGBOARD OF ATTACK

. . . PORTABLE LANDING FIELDS . . .

Built at the Lennox Plant at Syracuse, New York

Now that the cloak of restriction can be thrown off, Lennox proudly reveals another one of the major war efforts—the fabrication during the past year, of millions of square feet of airplane landing mats at the Syracuse Factory.

Many Lennox Dealers will recognize the interior shots shown on these pages as being taken in the steel shop and some of the machinery as that on which we used to make furnaces, and on which we will again as soon as Hitler and Tojo are folded up.

Production planning for such a large program was of major importance. Not the least of these problems by far was to find some method by which we could handle 80 tons of 10 gauge material every day from machine to machine in addition to getting rid of an accumulation of approximately 26 tons of scrap per day. Incidentally, the 80 ton figure alone is enough steel to fabricate about 200 complete TZ-10-24's per day. These and all other attendant problems such as die and fixture design were turned over to Bill DuPree and Pat Isenhour who did a superb job.

They began by arranging all machinery both new and old in a straight production line and connected each by conveyors at machine bed height. Sheets are started on the conveyor at the first piece of production equipment, a Niagara Punch Press, which with its special die, notches and square shears the ends of each sheet. They move rapidly through a huge ribbing press that slide along the conveyors to a battery of two Kling Presses which, never missing a stroke, punch out 87-21/64" diameter holes, 60-21/2" x slots and 60-21/64" x 1 3/4 bayonet hooks. The big Niagara Press, working as much in one day as used to in two months on furnace production, performs the final operation extruding the 21/64" diameter holes and forming the bayonet hooks.

Since the line is not usually in operation on Sunday, we use that opportunity to substitute dies in the big Niagara and produce body and radiator hoods for your Defense Housing and other priority rated orders.

After the forming operation, the planks are swung directly on to another conveyor which dips them successively in a hot solvent bath, hot water rinse point tank, and then carries them through a gas-fired infra-red baking ove

to be finally delivered back to the same point at which they were loaded. Only two men are required to put a full day's production through the oven in addition to stocking it in bundles of 30 pieces as it comes off the conveyor in preparation for shipment.

Bundles are then slid away from the oven on a conveyor to be strapped together in lifts of about one ton, rolled out to the loading platform and dropped into gondolas bound for the fighting fronts.

Simple, isn't it?—but wait—we've left with 26 tons of scrap on the floor after a day's run. Here again Bill and Pat used their ingenuity by building pits under the punch press and running a conveyor into each pit. These two conveyors converge a few feet below the roof of the monitor and empty into a third unit that carries the scrap to a huge bin just above, and to one side of our railroad siding, there to accumulate until a car is available to haul it away.

In combat areas Army Engineers prepare a landing field adequate for the largest bomber or fastest fighter plane in a matter of hours through the use of these mats. Bayonets hooks of one piece are slid through the slots of another, and the two are locked together by use of special spring clips. Repeat the recipe a sufficient number of times and presto—a landing field emerges out of the mire, or the sand, or one of the bomb torn fields just captured from the enemy. It's easy to see why these mats have become such an important factor in assisting Uncle Sam's Air Corps keep the Nazis and the Nips on the run.

As we write this article word is received that in addition to assuring "happy landings" for our airmen, the mat is also being used with much success in road building and repairing in many of the world's war outposts, and on occasions has been the means of salvaging planes forced down in spots where take-offs is impossible without them because of the uneven contour of the ground.

And so through experience with jobs of this kind, Lennox has learned that sky high hurdles only look that big. Just as you have learned through your successful efforts to keep the wheels of your own organization turning. With records like this behind us, we'll make a team that can't be beat.

Description of pictures above: Top: The production line, connected by conveyors at machine bed height. Second, or center above, the big Niagara Press, doing her part in the war effort. Above, bottom picture, loading the assembled parts into gondolas for quick shipment to war boats and the nations flying fields as well. At the right, Filling another gondola with the scrap material to be reshipped to the mills.

Pictures by J. K. Rennie.

Description of pictures above: Top: One of the Douglas B-18 bombers, well known to fighting flyers of our nation, shown on acres of the landing mats built by Lennox. Center, Natives on a south seas island happily help to put coral over the top of the landing mats, making one of the jumping off spots for our heavily loaded bombers and sturdy fighters. Below: On another island in the Pacific, natives work diligently laying out a new field. Left: Pulling the 2,000 pound bundle on to the future landing field. Pictures courtesy Army Air Forces.

Among the wartime manufacturing Lennox provided to the U.S. military was the fabrication of steel mats that could be interlocked to create portable landing strips, which were produced at the Syracuse facility.

"Our first problem in getting the aircraft program underway was acquiring the necessary special tools, jigs, and fixtures required," wrote Norris. "Every independent tool-making shop in the country was deluged with manufacturers like us who were needing tools for their new war production."

Lennox ended up identifying a tool manufacturer in Lima, Ohio, that was owned by two brothers who were Mennonite bishops. Precluded from participating in violent activities such as war, they would not agree to have their facility or fifty-some journeymen toolmakers be used to produce wartime materials. At the same time, they could not keep their business afloat because essentially all manufacturers in need of tools at that time were entrenched in defense work. So, when Norris offered to purchase their company, the brothers accepted. "This, of course, gave Lennox a source of tooling that was tremendously valuable to all our Lennox plants during the war," recounted Norris.

Almost as complicated as mastering the skills required to produce the bomber tail fins was navigating the entry of women into Lennox's workforce. "When the men went off to war that's really when we had women working in the Lennox factory for the first time," explains Terry Frederickson, who manages Marshalltown's archives as senior human resources generalist. "Prior to

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that time, I don't think we had any women in the factory, but of course women were practically the only labor at that time."

Norris's written account confirms that women were indeed new to Lennox's workforce. "This certainly was a new experience for our factory management people, but one we were able to adjust to satisfactorily," recalled Norris. "Fortunately, the workers and the management people that we were able to acquire at the time were hard-working and resourceful and we learned together, as I am sure was true in almost all war production plants of that era."

Lennox anticipated that after the war, the company would return to its traditional manufacturing pursuits and there would be great demand for its products. "Regardless of Hitler, old furnaces wear out and must be replaced," D.W. Norris wrote in a 1943 memo to employees. "People are enjoying the highest buying power in all history and there is little they can buy with their surplus money except replacements for worn-out heating units. . . . A government survey shows nearly three million families plan to buy or build new homes after the war, and millions more are thinking about it . . . . Young man, when you get back from this war, go into the furnace business!"

Norris's predictions largely panned out. Following the defeat of the Axis powers in 1945, Lennox dealt with material shortages and order backlogs by refashioning the Lima tool-making facility into the Lima Register Company. "We knew that the pent-up demand for housing would result in an enormous amount of new home building which would need registers and grills for the forced warm air heating systems that we wanted to sell," wrote John Norris in his memoir. "Making good registers economically and in volume required precise and automated tooling. Our Lima shop could do it."

> ***"Fortunately, the workers and the management people that we were able to acquire at the time were hard-working and resourceful and we learned together, as I am sure was true in almost all war production plants of that era."***
> ***—John Norris Sr.***

Lennox made the most of the post-war building boom by expanding into air conditioning—and into Canada—in 1952. Many of Lennox's longtime dealers were launched into their business during this time.

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After peacetime resumed, women returned to office positions, such as data entry. Facing page: Other wartime parts produced by Lennox were used in a navy anti-aircraft and anti-submarine destroyer.

We knew that the pent-up demand for housing would result in an enormous amount of new home building which would need registers and grills for the forced warm air heating systems that we wanted to sell.
—John Norris Sr.



The LENNOX-AIRE

SYRACUSE NEW YORK

MARSHALLTOWN IOWA

COLUMBUS, OHIO

Vol. 1—Number 2 Published By The Lennox Furnace Company August, 1943

DESTROYER ESCORT—This is a port side view of the U. S. Navy's new Destroyer Escort. These fast, well-armed ships are especially designed to protect convoys.

"Swords from Plowshares"—Battleships Instead of Furnaces

We LIKE the furnace business! We'd rather be in it than any other field of endeavor. But, faced with present circumstances brought about by the war, we have put aside the tools of this industry, and are devoting a great portion of our time to manufacturing the necessary materials of war.

As a dealer, you are probably not aware of the extensive part LENNOX is taking in the war effort. We have never before published it, but now, with the permission of proper authorities, we are presenting some of it to you.

We have a part in the building of the above submarine killer, which is strictly designed to combat submarines and aircraft. It is the answer to Hitler's submarine threat. Fast, streamlined, and seaworthy, it is fitted with the deadliest armament ever mounted on a ship its size.

As these ships cruise the oceans, protecting convoys, and dealing with Axis air and undersea craft, you, as a Lennox Dealer, may be proud that through your patient waiting for orders, or your inability to get furnaces for civilian use, are contributing an important part to this program!

LANDING MATS - - - - HANGARS - - - - TANK PARTS - - - - AIRPLANE PARTS

"Prior to the post-war era, my father's business was hand-to-mouth," explains Frank Arnold Jr. of Prudential Heating and Air Conditioning. "He probably sold whatever somebody was offering, getting the job, running to the bank, borrowing the money, buying the stuff, putting it in, getting paid, going back to the bank to pay the loan back. But in 1953, a man from New Jersey came to Louisville to build a bunch of houses on land he had purchased. He had asked the real estate agent, for recommendations on a good electrician, a good plumber, framers, and who can do some heating work. The real estate agent knew my father well so said, 'I'd call Frank over at Prudential to do the heating stuff.' The gentleman called my father, let him know the size of the job—I think he wanted him to do the installation on about ten houses a day—and asked him if he could use Lennox equipment. My father said he could, and that job put Prudential on its feet and made the company a going concern."

As Cold War tensions replaced the conflicts of World War II, Lennox would continue to provide manufacturing support to the U.S. military. Until the 1960s, Lennox manufactured parts for weapons systems and military vehicles at its Lennox Military Fabrication Division based at the Columbus, Ohio, plant.

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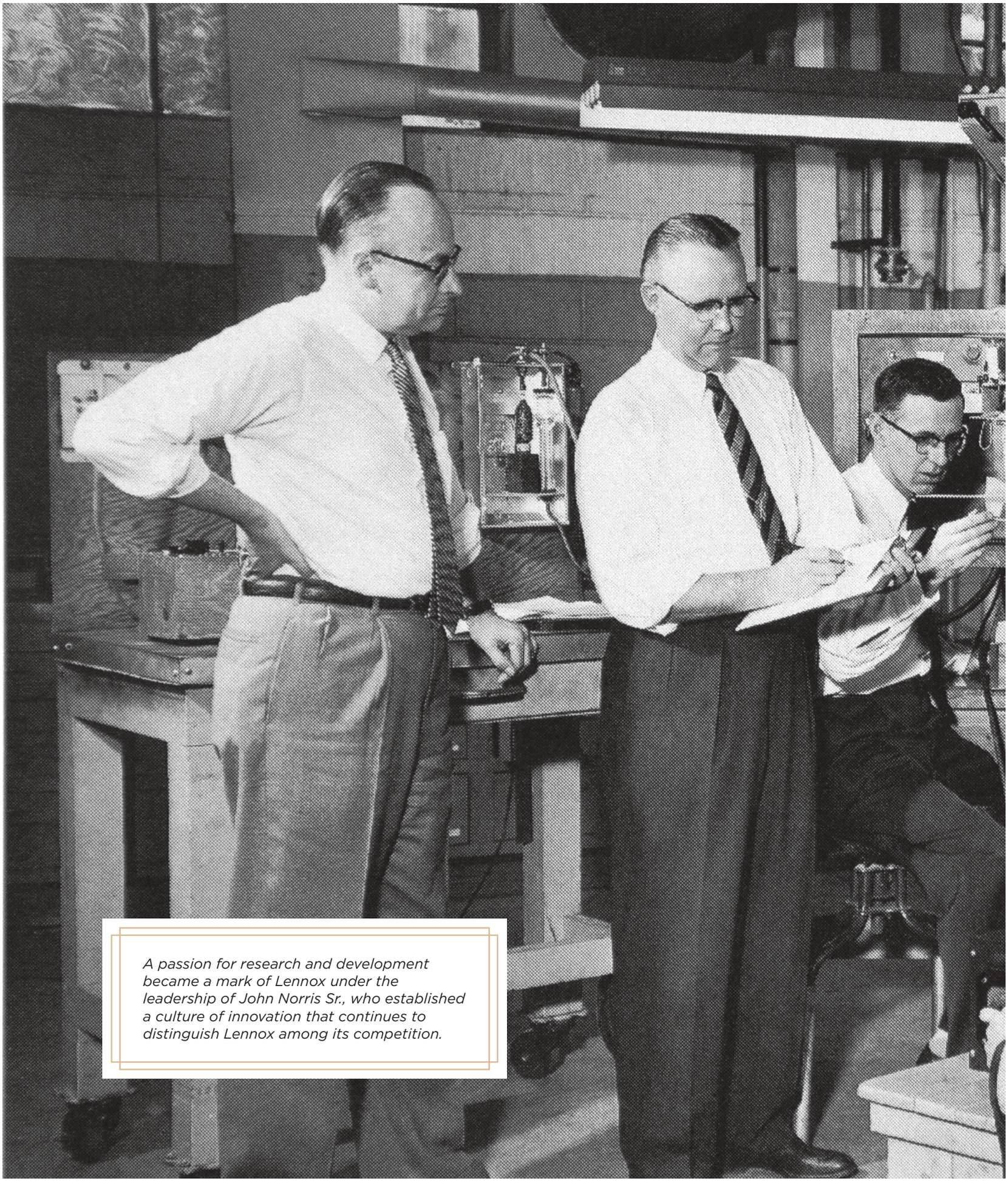

A passion for research and development became a mark of Lennox under the leadership of John Norris Sr., who established a culture of innovation that continues to distinguish Lennox among its competition.

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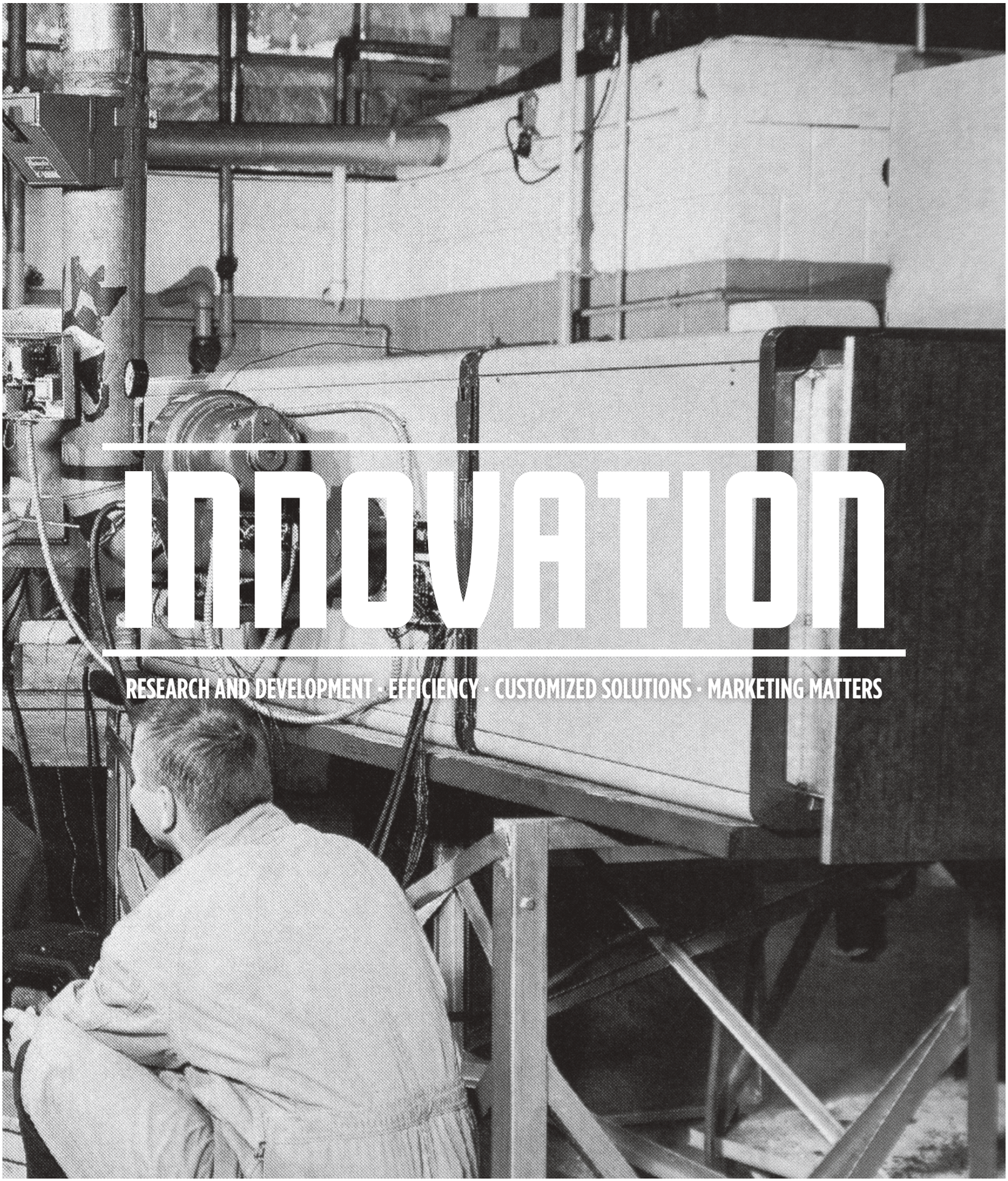

INNOVATION

RESEARCH AND DEVELOPMENT · EFFICIENCY · CUSTOMIZED SOLUTIONS · MARKETING MATTERS

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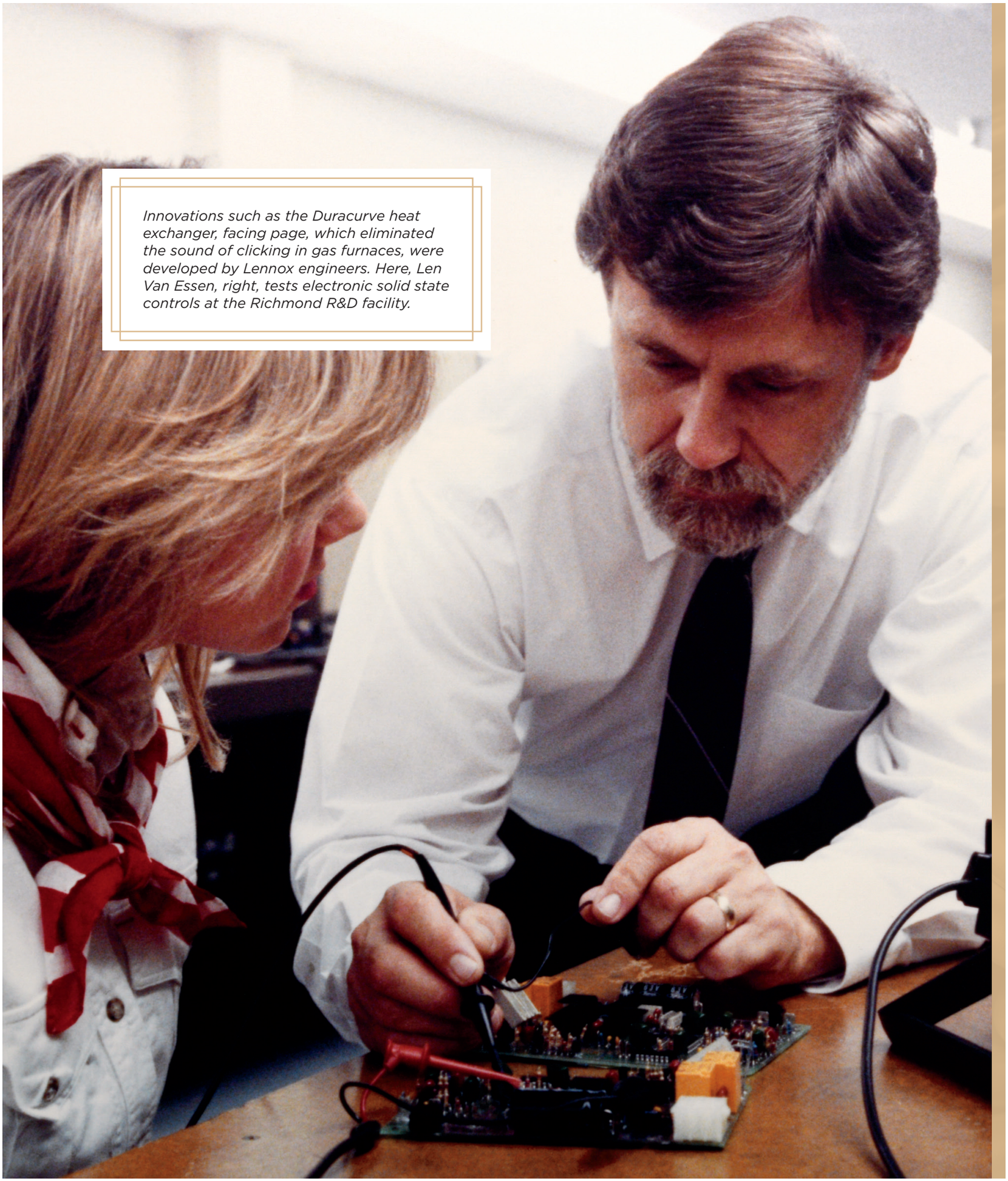

Innovations such as the Duracurve heat exchanger, facing page, which eliminated the sound of clicking in gas furnaces, were developed by Lennox engineers. Here, Len Van Essen, right, tests electronic solid state controls at the Richmond R&D facility.

RESEARCH AND DEVELOPMENT

Lennox has **a long history** of supporting bold and long-range **research** and **development.**

Founded by Dave Lennox, a man with a genius for mechanics and passion for problem-solving, the company eventually passed into the hands of John Norris Sr., whose engineering abilities would usher in a Renaissance of innovation. But not before he could maneuver around his father, D.W. Norris.

Norris followed his father to Grinnell College before transferring to Massachusetts Institute of Technology. D.W. had been the one to encourage him to attend the prestigious research university. After graduating with a degree in engineering and starting out as a salesman based out of the Lennox-owned Syracuse dealership, Norris was asked to figure out why Torrid Zone furnaces sold in Upstate New York were performing more poorly than those sold in the Midwest. Norris suspected the difference related to the hard coal used in the East, which burned cleaner and more slowly than the soft coal that fueled Midwest furnaces.



Norris found a corner of the Syracuse manufacturing plant in which to set up a makeshift lab. He assembled samples of hard and soft coal, testing equipment that he had learned to use at MIT, and a Torrid Zone furnace. When Norris tested the makeup of the flue gases, he discovered that the hard coal was producing excess oxygen, but little carbon dioxide compared to what the soft coal gave off. Norris immediately struck on the solution, which was to create a tighter seal on the firebox for the Torrid Zones that would be distributed in the East.

This would not be the last time Norris would develop an innovative solution in a hidden corner of the factory floor.

After Norris returned to Marshalltown in 1930, he soon took an interest in developing a blower to turn a furnace into a forced warm air heating system. Years earlier, D.W. had authorized the development of a blower for an industrialized furnace

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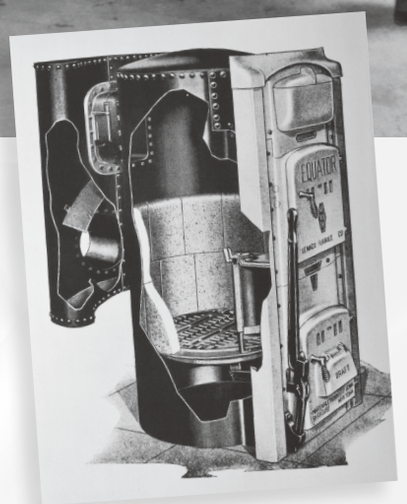

sold to schoolhouses. “This was before automatic controls for starting blowers were generally available, so there were no controls or safety controls on these big coal-burning schoolhouse furnaces,” Norris wrote in his unpublished memoir. “They had to depend upon the school janitor to turn the blower on when there was heat in the furnace. Obviously, this arrangement didn’t work, so these schoolhouse Lennox furnaces were burned up one after another.” D.W. felt burned himself by the short-lived venture.

Mindful of his father’s reservations but confident that developments in automatic control technology provided a solution to earlier blower issues, Norris determined to proceed with research. “I found a space in the back end of one of the Lennox buildings that was not in use and, consequently, a place my dad never visited when he returned to Marshalltown. We put up a cardboard partition to separate it from the rest of the building and developed a little laboratory there where we set up complete forced warm air furnace systems with duct work and blowers and everything needed.” Norris began communicating to like-minded dealers how a forced warm air system could be designed.

The manager of one such dealer, Ed Stahler, took Norris’s findings and began

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John Norris Sr.'s father, D.W., above, was unconvinced of the value of furnace blowers and preferred the traditional technology of the Torrid Zone furnaces, facing page top. The younger Norris set up a hidden lab to experiment on blowers, resulting in the development of the Lennox Equator forced air furnace, facing page inset.

to install the systems in stately homes throughout the Chicago area. The real-world applications were a success, so Norris, Stahler, and Norris's uncle Roy Wasson devised a plan to secure the confidence of more dealers, as well as D.W. himself. While Norris and Wasson made a presentation to a group of Lennox's top dealers, Stahler took D.W. to lunch to explain the success of the experiment. D.W. was sold, and in 1935 the company released the Lennox Equator, the industry's first commercially produced forced warm air furnace. "From that time on [D.W.] was an enthusiastic supporter of everything that I wanted to do and the development of new products and new systems," wrote Norris.

> ***"From that time on [D.W.] was an enthusiastic supporter of everything that I wanted to do and the development of new products and new systems. —John Norris Sr."***

The development brought Norris recognition within the industry and transformed the development of heating, ventilation and air conditioning (HVAC) systems moving forward. "If you think of the entire residential heating and cooling in the U.S. and Canada, it's based on forced air," says Alan Anselman, vice president of supply chain. "Well, Lennox was the one who brought in that technology."

For the rest of the years that Norris oversaw Lennox's business, the characteristic he was most known for was his enthusiasm. "He loved design, and he loved making new things," recalls Jim Mullen, a retired engineer who started at Lennox in 1968. Norris's passion for engineering was infectious and his

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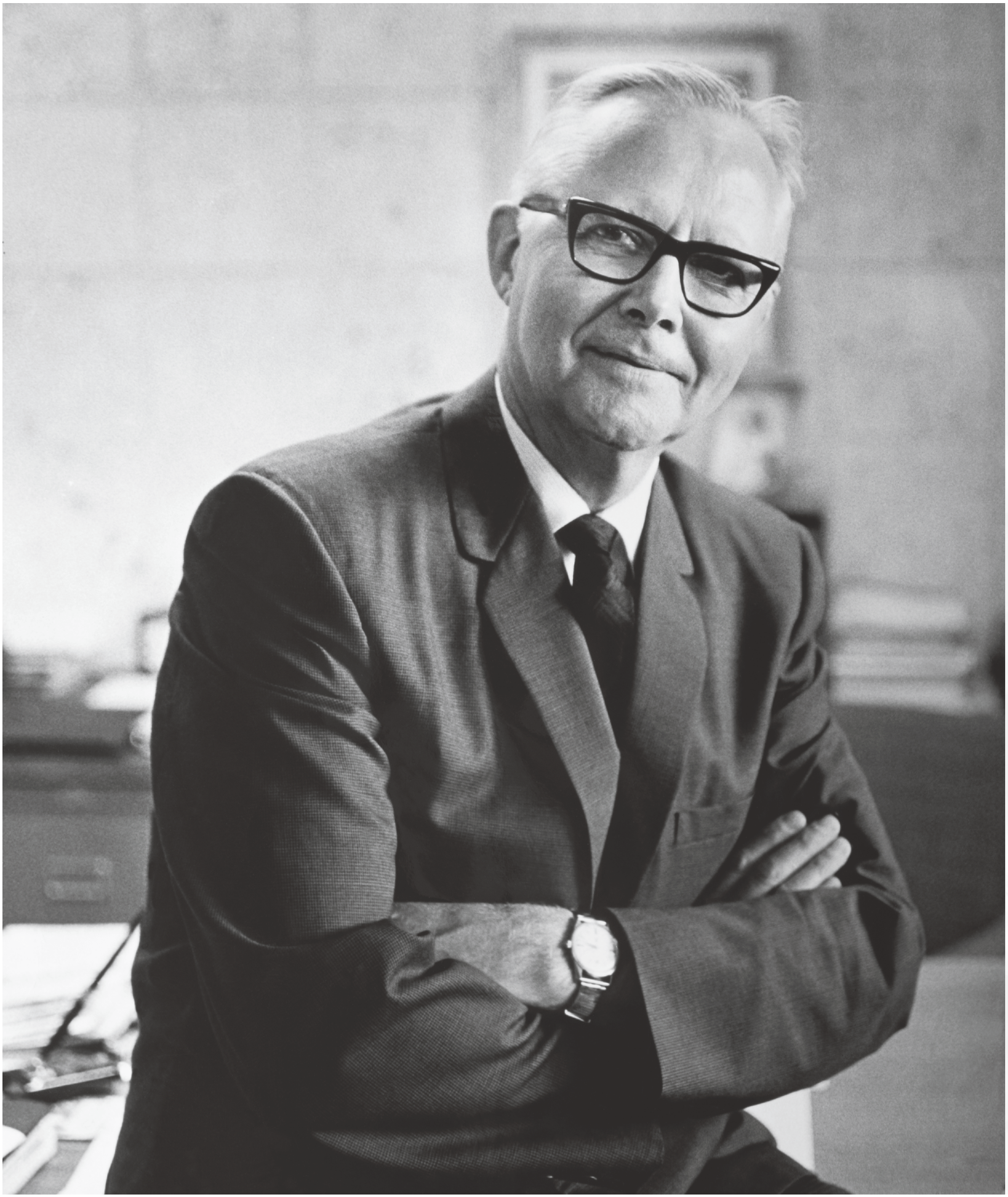

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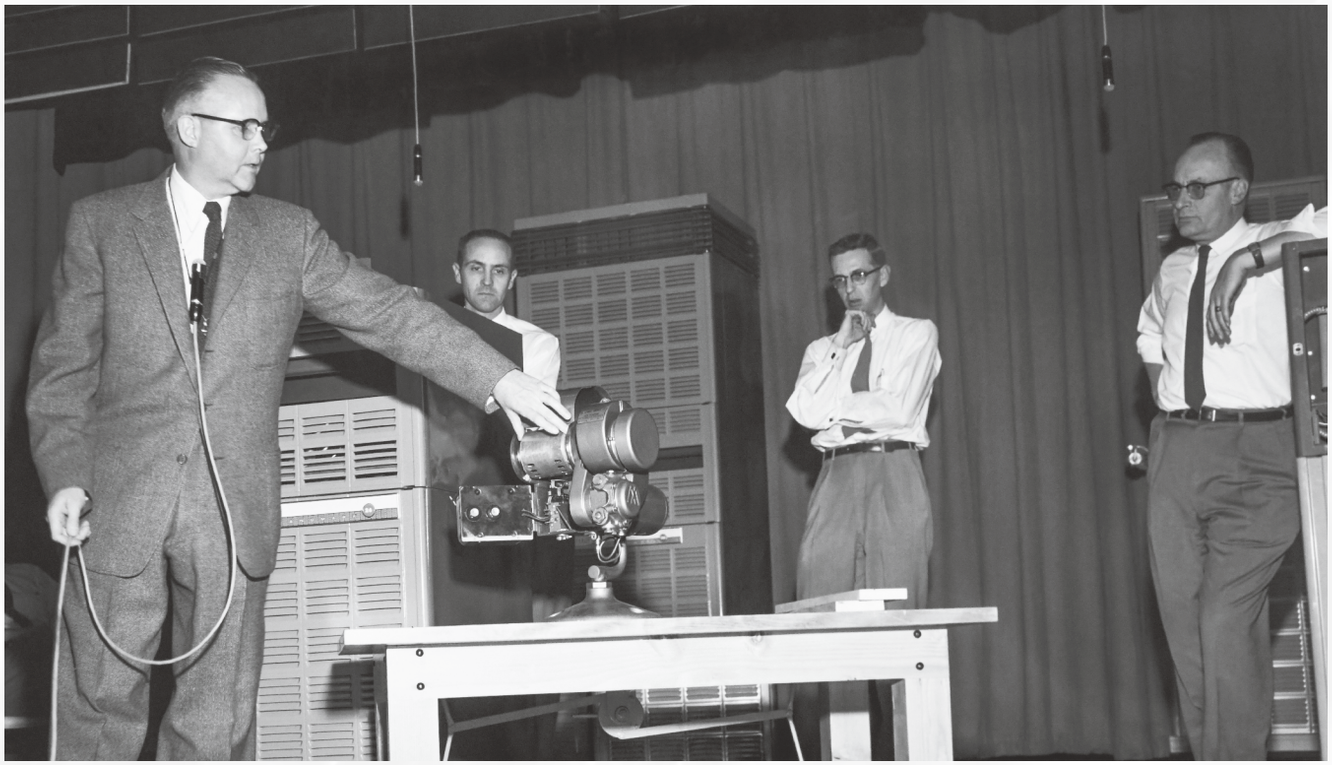

John Norris Sr., facing page and above left, had an infectious enthusiasm for Lennox product development that made him a favorite of fellow engineers and dealers alike.

appreciation of employees was effusive. "That was one of the reasons I stayed at Lennox for almost forty years," says Mullen. "About six months into my tenure, I was walking down the hallway back in the engineering part of the building. John Sr. came walking down the hall, stopped, and said, 'Jim Mullen, how do you like working for Lennox?' I couldn't believe he knew who I was. But he probably knew the names of most of the people out in the plant, foundry, marketing department, and engineering department."

Norris's enthusiasm was perhaps at its peak when he was in conversation with dealers about new products—as well as ideas for possible future ones. "My father was a brilliant sales and product engineer and a terrific salesman," recalls John Norris Jr. "He knew the customer so well: he knew what they needed before they knew what they needed, which was an advantage. The dealers loved hearing and talking about new products with him. One of the problems, though, arose whenever we would get a dealer who was really excited to hear about new stuff that we weren't quite ready to build yet: getting my father to keep his mouth shut. That was a nearly impossible task."

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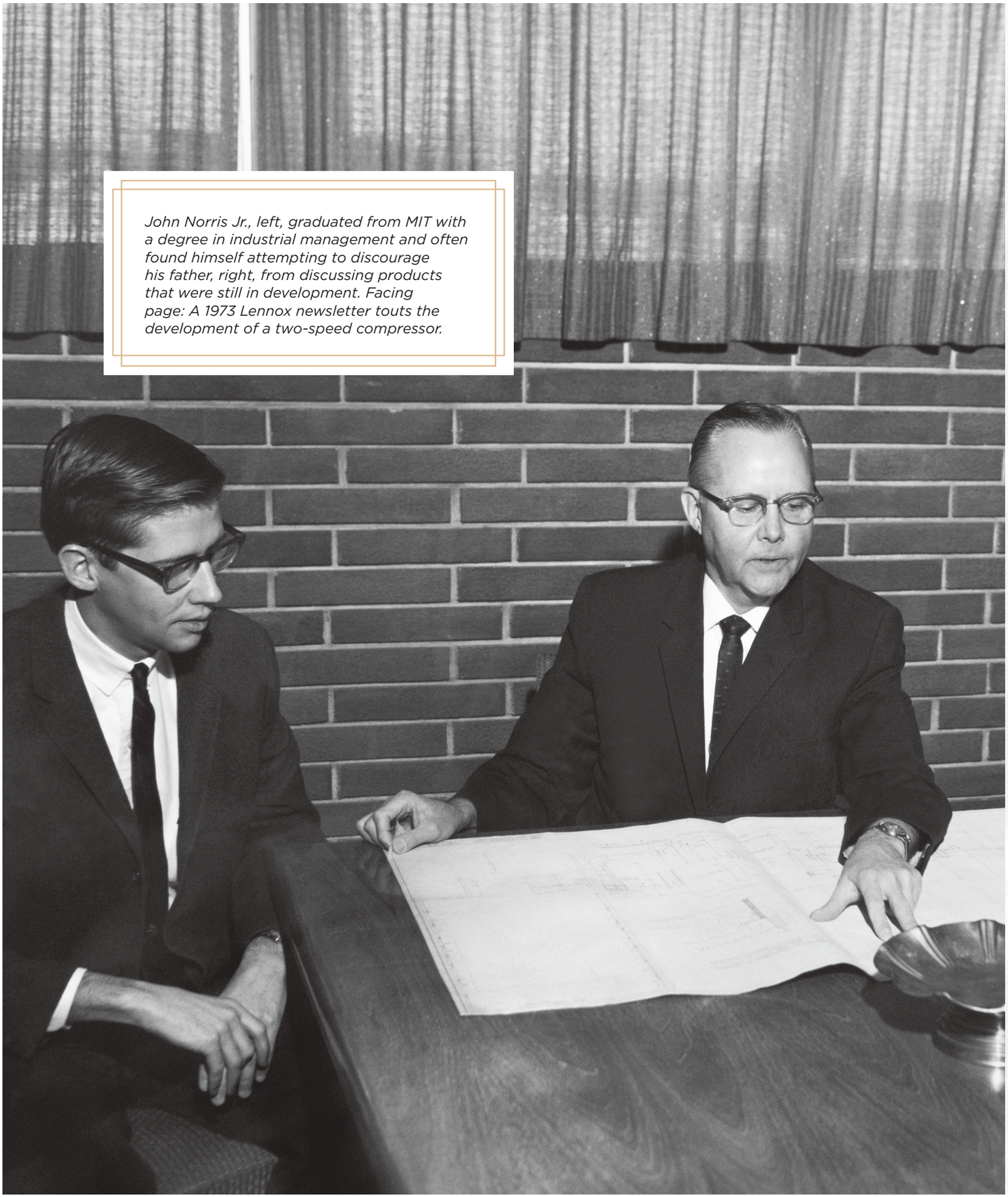
Software engineer Lillit Geborkyan inspects a commercial rooftop unit at Lennox's lab controls facility in Carrollton, Texas.


SAMPLE
ZP61K5E – TFD – XXX
18KD2649N
R – 410A USE ONLY
Copeland Scroll
AVERTISSEMENT
ADVERTENCIA
ATTENTION
ATENCIÓN



John Norris Jr., left, graduated from MIT with a degree in industrial management and often found himself attempting to discourage his father, right, from discussing products that were still in development. Facing page: A 1973 Lennox newsletter touts the development of a two-speed compressor.

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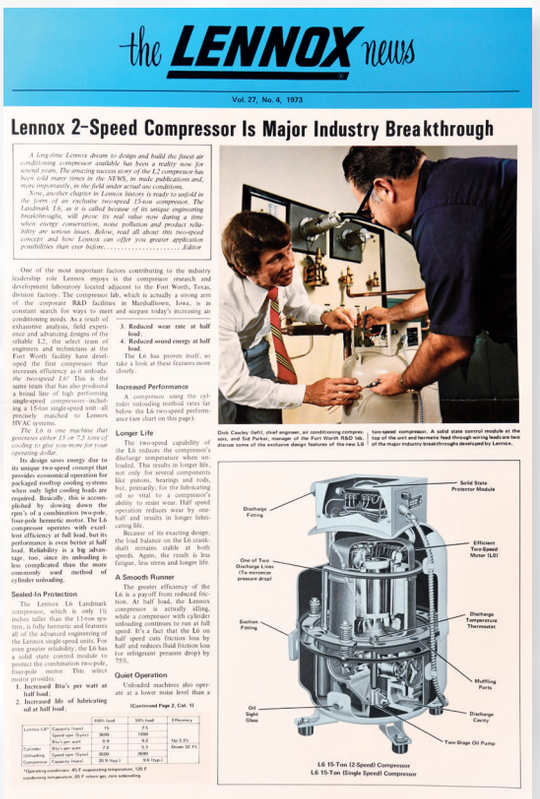
John Norris Sr.'s enthusiasm for engaging dealers in product talk was legendary. "I can remember my dad talking about going to Lennox meetings and being able to get in front of John Norris to talk about the development of products," recalls Bruce Kalin, a dealer out of Sioux City, Iowa. "According to my dad, John Norris would talk about a new product or new furnace with excitement and enthusiasm, and then the dealers would have an opportunity to ask questions. There would always be a great exchange."

Over the decades, Lennox developed numerous industry firsts. Perimeter heating distribution system was developed in 1950. In 1965, Lennox released the industry's first direct multizone system, a rooftop combined heating and cooling unit that had multiple commercial applications. In 1973, Lennox launched the industry's first air conditioners with two-speed hermetic compressors. Lennox's technological advances were remarkable enough that the company's heat pumps were featured in the 1962 World's Fair home exhibit. Ten million people visited Seattle for the exhibition, which included the Home of Living Light, a curved structure that was built of plywood.

In 1982 Lennox developed a product that was among the most revolutionary: the G14 Pulse furnace. Rather than being powered by a steady flow of natural gas, the Pulse operated on rapid explosions in the combustion chamber—sixty per second—to generate heat.

"So, it burns a small amount of gas," explains Mullen, who was the lead engineer on the Pulse project. "Since it's a rapid burning in essentially a closed space, the pressure goes up because the products of the combustion are hot and expanding. And that pressure going up is what closes the air valve and the gas valve to shut off the flow of stuff to make combustion, and it's what forces the combustion products through the rest of the heat exchanger and outside the building. The advantage of that was you didn't have to have a blower that sat in the condensate trying to push those products out of the building. Sitting in the condensate is tough because it can be very corrosive to some materials."



the LENNOX news

Vol. 27, No. 4, 1973

Lennox 2-Speed Compressor Is Major Industry Breakthrough

A long-time Lennox dream to design and build the finest air conditioning compressor available has been a reality now for several years. The amazing success story of the L2 compressor has been told many times in the NEWS, in trade publications and, more importantly, in the field under actual use conditions.

Now, another chapter in Lennox history is ready to unfold in the form of an exclusive two-speed 15-ton compressor. The Landmark L6, as it is called because of its unique engineering breakthroughs, will prove its real value now during a time when energy conservation, noise pollution and product reliability are serious issues. Below, read all about this two-speed concept and how Lennox can offer you greater application possibilities than ever before. ..... Editor

One of the most important factors contributing to the industry leadership role Lennox enjoys is the compressor research and development laboratory located adjacent to the Fort Worth, Texas, division factory. The compressor lab, which is actually a strong arm of the corporate R&D facilities in Marshalltown, Iowa, is in constant search for ways to meet and surpass today's increasing air conditioning needs. As a result of ——— exhaustive analysis, field experience and advancing designs of the reliable L2, the select team of engineers and technicians at the Fort Worth facility have developed the first compressor that increases efficiency as it unloads: *the two-speed L6!* This is the same team that has also produced a broad line of high performing single-speed compressors—including a 15-ton single-speed unit—all precisely matched to Lennox HVAC systems.

The L6 is one machine that generates either 15 or 7.5 tons of cooling to give you more for your operating dollar.

Its design saves energy due to its unique two-speed concept that provides economical operation for packaged rooftop cooling systems when only light cooling loads are required. Basically, this is accomplished by slowing down the rpm's of a combination two-pole, four-pole hermetic motor. The L6 compressor operates with excellent efficiency at full load, but its performance is even better at half load. Reliability is a big advantage, too, since its unloading is less complicated than the more commonly used method of cylinder unloading.

Sealed-In Protection

The Lennox L6 Landmark compressor, which is only 1½ inches taller than the 11-ton system, is fully hermetic and features all of the advanced engineering of the Lennox single-speed units. For even greater reliability, the L6 has a solid state control module to protect the combination two-pole, four-pole motor. This select motor provides:

1. Increased Btu's per watt at half load;
2. Increased life of lubricating oil at half load;
3. Reduced wear rate at half load;
4. Reduced sound energy at half load.

The L6 has proven itself, so take a look at these features more closely.

Increased Performance

A compressor using the cylinder unloading method rates far below the L6 two-speed performance (see chart on this page).

Longer Life

The two-speed capability of the L6 reduces the compressor's discharge temperature when unloaded. This results in longer life, not only for several components like pistons, bearings and rods, but, primarily, for the lubricating oil so vital to a compressor's ability to resist wear. Half speed operation reduces wear by one-half and results in longer lubricating life.

Because of its exacting design, the load balance on the L6 crankshaft remains stable at both speeds. Again, the result is less fatigue, less stress and longer life.

A Smooth Runner

The greater efficiency of the L6 is a payoff from reduced friction. At half load, the Lennox compressor is actually idling, while a compressor with cylinder unloading continues to run at full speed. It's a fact that the L6 on half speed cuts friction loss by half and reduces fluid friction loss (or refrigerant pressure drop) by 75%.

Quiet Operation

Unloaded machines also operate at a lower noise level than a

(Continued Page 2, Col. 1)

		100% load	50% load	Efficiency
Lennox L6**	Capacity (tons)	15	7.5	
	Speed (rpm)	3600	1800	
	Btu's per watt	8.9	9.2	Up 3.3%
Cylinder Unloading	Btu's per watt	7.8	5.3	Down 32.1%
	Speed (rpm Type)	3600	3600	
Compressor	Capacity (tons)	20.9 (typ.)	9.6 (typ.)	

*Operating conditions: 45 F suspending temperature, 105 F conditioning temperature, 65 F return gas, zero subcooling.

Dick Cawley (left), chief engineer, air conditioning compressors, and Sid Parker, manager of the Fort Worth R&D lab, discuss some of the exclusive design features of the new L6 two-speed compressor. A solid state control module at the top of the unit and hermetic lead-through wiring leads are two of the major industry breakthroughs developed by Lennox.

L6 15-Ton (2-Speed) Compressor
L6 15-Ton (Single Speed) Compressor

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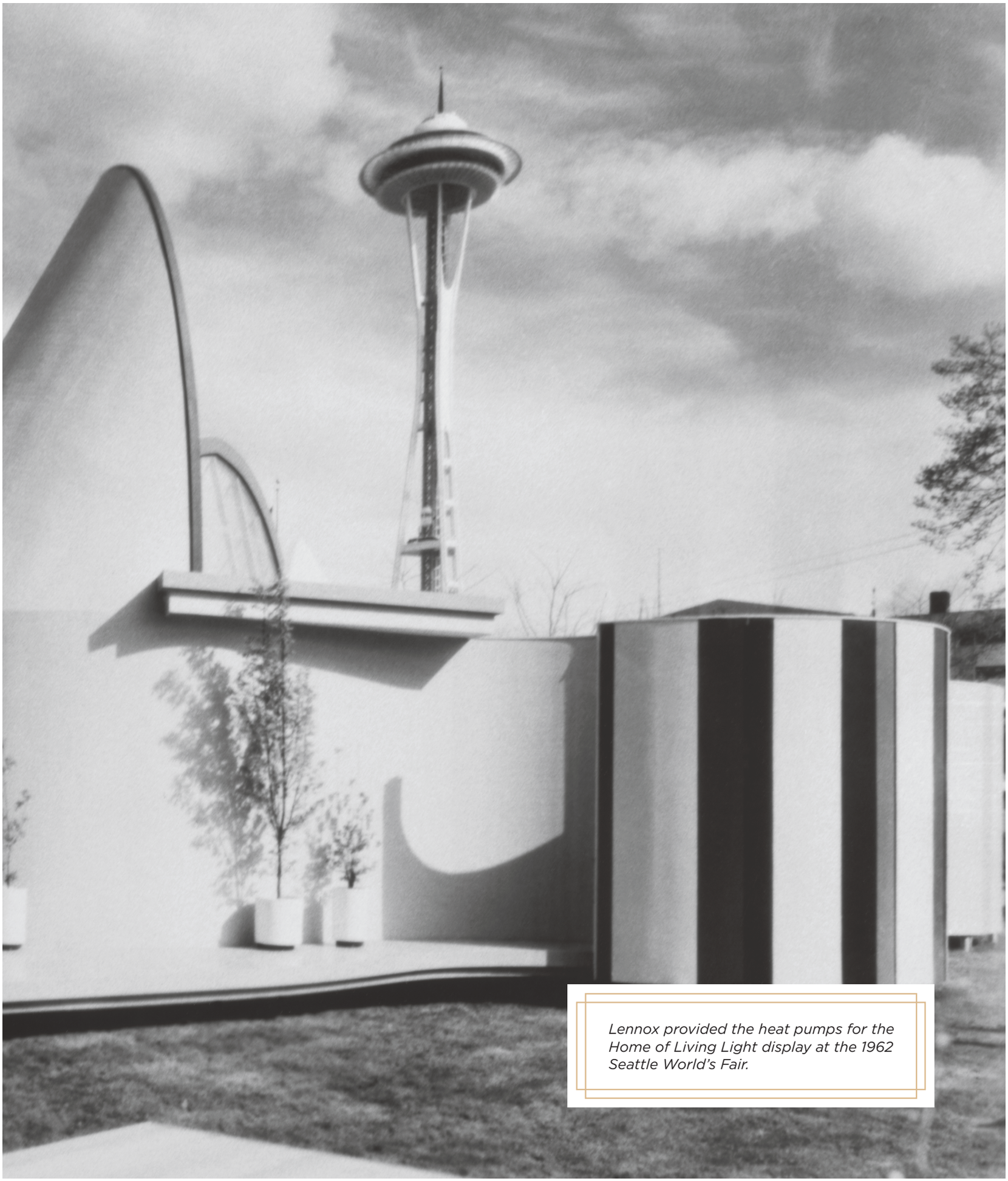

Lennox provided the heat pumps for the Home of Living Light display at the 1962 Seattle World's Fair.

R&D on the Pulse had started during the energy crisis of the 1970s. Lennox partnered with the American Gas Association and Gas Research Institute to develop more efficient pulse combustion technology. Between 1975 and 1982 Lennox invested millions of dollars in researching the potential application. When the product was complete, testing showed the Pulse was able to achieve ratings of 97 percent energy efficiency, far above the industry average of 58 percent. Soon after the Pulse went on the market, it was so sought after that demand outpaced production—not a surprise considering the cost of natural gas had almost tripled during the six years prior to the Pulse's release.

John Norris Jr., who by then had taken on a leadership role at Lennox, believed the cost savings Pulse owners would realize from its energy efficiency presented an opportunity for Lennox and its dealers. "The profitability of the heating business had gotten quite low," recalls Norris. "But when we invented the high-efficiency furnace, we decided we'd price it differently and figure out how to have a terrific margin for the dealer and a much-increased margin on our end. We could take advantage of this opportunity because it was pretty easy to tell a payback story. We basically changed the industry pricing structure on heating products, and the dealers and manufacturers both benefited from it." Lennox was so confident about the reliability of the Pulse that in 1986 it offered a limited lifetime warranty, and by 1992, Lennox had produced its one millionth Pulse unit.



> ***"The Pulse rewrote the rules of efficiency in a market that was our core, and it challenged the idea that you'd never get paid for that type of efficiency."***
> ***—Gary Bedard***

"The Pulse rewrote the rules of efficiency in a market that was our core, and it challenged the idea that you'd never get paid for that type of efficiency," explains Gary Bedard, president and chief operating officer for the refrigeration division, who served as the vice president and general manager of the residential division from 2007 to 2017. "But what Lennox did was

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John Norris Jr., above, championed innovation from a financial and operational standpoint, investing in the development of breakthrough products like the Pulse furnace, facing page, and then pricing it to maximize profitability.

couple that technology with an enormous marketing campaign, and I think that, more than anything else, really set up who Lennox was. But the Pulse was also a feat of leadership: understanding where the technical boundaries are and pushing and driving the execution end of it: not only that we could do it but also that we could sell it. Because it doesn't do any good to create something for which you can't come up with a value equation and teach people how to monetize it."

Industry-leading developments have continued to be achieved at Lennox over the decades since the Pulse's release, among them the two-stage air conditioner in 1973 and variable speed modulating furnace in 2013. Developments like these continue to be made because the leaders that joined Lennox, even after it had become a publicly traded company, held onto the same commitment to and enthusiasm for innovation that Dave Lennox, John Norris Sr., and John Norris Jr. nurtured.

"There are always ups and downs in this market, like any market," says Todd Bluedorn, chairman and chief executive officer. "I'm proud that over the last thirteen years since I've been here, we've always spent more on product development and IT than we did the year before. So, even in down markets, we're investing more than we did the year before. Larger conglomerates often slash and burn in down cycles and then it takes them a couple of years once the market comes back to regroup. We know that, even in the depths of financial crisis, we invest because the customers are counting on us to do so."

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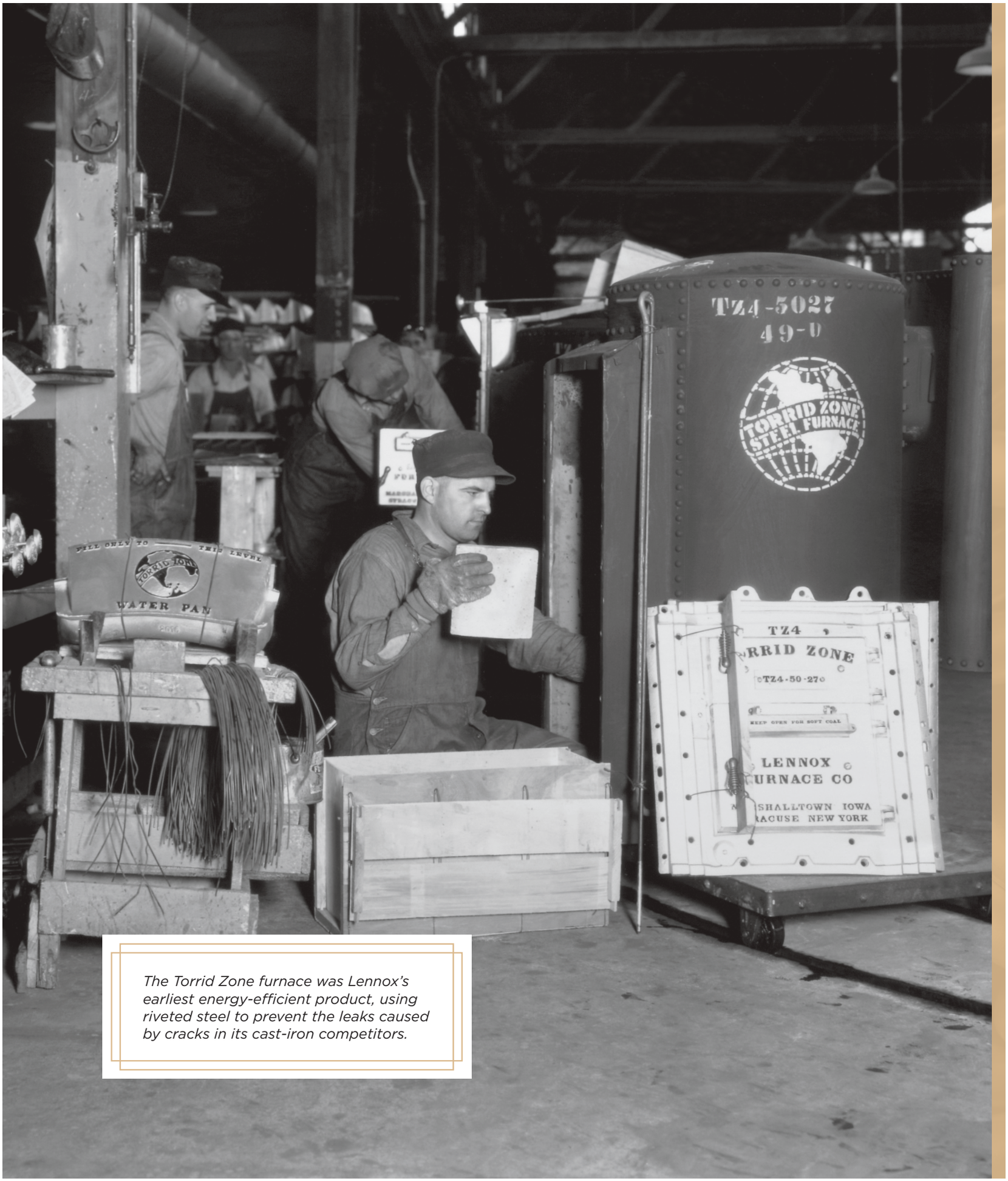


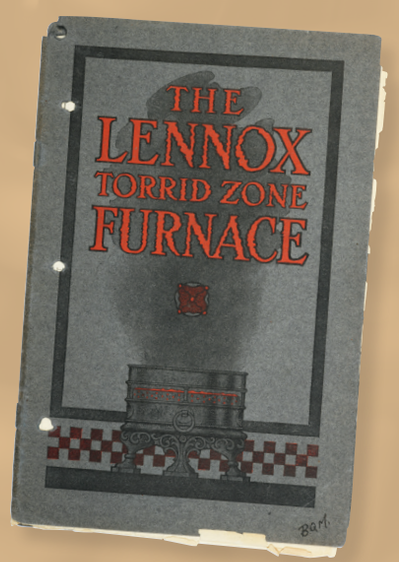
The Torrid Zone furnace was Lennox's earliest energy-efficient product, using riveted steel to prevent the leaks caused by cracks in its cast-iron competitors.

EFFICIENCY STARTS HERE

When Lennox was **founded in 1895**, the United States was in the midst of the Second Industrial Revolution.

It was a time of refinement of the country's move from an agrarian society to an industrial one, and it was defined by rapid expansion of manufacturing: American manufacturers saw the value of their businesses explode from $3 billion in 1869 to $13 billion in 1910.

That growth brought with it fraught issues of labor unrest and income equality, but there was little concern about the environmental impact of manufacturing or the need to develop sustainable business practices. Fossil fuels were plentiful and, while many cities had coal-blackened skies, generally the only time the word "efficiency" was used in relation to manufacturing practices was in the context of the new role of the "efficiency expert" in helping companies manage the production process—the work flow and physical movement of employees on the factory floor.



Coal was the fuel of the day, and although there was not yet anxiety about the planet's finite supply of it or the lasting environmental effects of its consumption, coal cost money and it was dirty. Therefore, Dave Lennox's Torrid Zone furnace did offer features and benefits that can be recognized as falling under consumers' desire for efficiency as the term is recognized in the industry today. In a 1901 feature on the Lennox foundry that appeared in Marshalltown's *Times-Republican*, the company's efficiency claims are apparent. "No soot collects, and no fumes escape into the pipes . . . thereby reducing the cost of fuel and making the furnace a money-saver over the old-fashioned cast iron furnaces that are still doing business on the advertised reputation of twenty years ago."

As the decades passed, efficiency claims became increasingly important within the industry, and Lennox became increasingly known as an industry leader. "Efficiency is a key

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DOE Official Visits Lennox

A high ranking official with the U.S. Department of Energy (DOE) visited the Marshalltown facilities of Lennox Industries in May. Jackson Gouraud, who serves as DOE deputy under secretary for commercialization of alternative energy sources, met with Lennox executives to discuss and review Lennox' progress in the development of solar energy products.

Gouraud, who joined DOE in March, is responsible for promoting solutions to our energy problems through private industry. One of the reasons he was appointed to the position, Gouraud has said, was because there existed at DOE a genuine desire to get energy sources development into the hands of industry and out of the hands of the government. The only way this can be done is if the industrial community can develop solutions which produce a profit.

During the visit Gouraud toured the solar collector assembly line in the Marshalltown factory as well as the residential solar space and domestic water heating system installed recently to provide solar training to Lennox dealers.

U.S. Department of Energy official Jackson Gouraud (left) observes packaged solar collector during a recent tour of Lennox solar manufacturing and education facilities at the Midwest Division facility in Marshalltown, Iowa. With Gouraud (on his left) on the solar assembly line site are Fred Kotter, director of business development at Honeywell; Norton Saude, Honeywell manager of solar heating and cooling; Graydon Peoples, Lennox corporate marketing manager for solar products and Barr Pritchard, Lennox Midwest manufacturing engineer.

In 1992, Lennox celebrated ten years and one million units of the revolutionary Pulse furnace, above, which used a fraction of the natural gas of standard steady-flame furnaces. In 1978, Lennox received a visit from Department of Energy officials interested in the company's work with solar-powered equipment, right.

want for the homeowner, and Lennox has been trademarked as being the most efficient in the marketplace," says John Whinery, vice president of product management for the residential segment.

Lennox has been both responsive to societal concerns around energy and a leader in devising innovative solutions to boost efficiency. Three years after Rachel Carson's book *Silent Spring* used the dangers of pesticides to create awareness of humans' impact on the environment, Lennox broke its ties to coal. Lennox announced it would cease production of its coal furnace parts on September 14, 1965, ending support for the fossil fuel that had powered the first furnaces created by the company's founder. Other developments followed: In the 1970s, Lennox experimented with the introduction of solar-powered air conditioning and hot water heating. In 1973, Lennox released the industry's first air conditioners with two-speed hermetic compressors.

Developing an air conditioner with more sophisticated functionality than just on or off not only improved indoor comfort, it effected energy cost savings for the consumer. "Initially, our high-end air conditioning had two speeds," explains Tom Towe, director of field marketing for the residential division. "When it wasn't too hot it would run on low speed, about 60 percent capacity, and save you a lot of energy. Then, if it got really hot it could kick up." In 2008, Lennox expanded this principle. "Today the same kind of unit has true variable speed in that it runs anywhere from 35 percent capacity up to 100 percent, so it has around sixty-five speeds. It will adjust to the conditions and, with a control that is measuring humidity, the consumer can set a temperature and it will adjust to a 'feels-like temperature.' Inside your house, a traditional

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unit may be cooling it down to 74 degrees, but if the humidity inside is still 75 percent, you are not comfortable. You might need to cool it down to 68 to feel comfortable. A variable-speed unit runs at less capacity over a longer period of time, allowing it to continually take moisture out of the air and allowing the house to get to that optimum comfort level."

This marriage of increased efficiency and increased comfort means that Lennox can offer consumers more virtuous heating and cooling solutions without the sacrifice. "In the last fifteen years, instead of concentrating just on efficiencies of the products and understanding consumer cues, Lennox has done a great job at understanding the importance of a quiet outdoor unit and consistent temperatures in the home through variable capacity products and the controls side of the business," says John Christin, president and owner of Wolfer's Inc. "In my home, if I get within five miles of my house, the unit recognizes my phone and turns my heating system on to where I've set it to be. And then, when my wife and I leave, it backs down into the lower mode because it doesn't need to maintain the temperature."

Providing more efficient heating and cooling solutions are important to Lennox's commercial customers as well. "A big part of what we do and what we promote is efficiency," explains John Carino, regional director for the commercial division in Toronto. "Especially with national accounts.

> ***"Efficiency is a key want for the homeowner, and Lennox has been trademarked as being the most efficient in the marketplace."***
> ***—John Whinery***

If you can imagine one of North America's largest big box retailers, which has well over two thousand stores, the second biggest source of its energy usage in the stores after lighting is heating and air conditioning. So, a 5 percent gain in efficiency on heating and air conditioning is an incredible amount of savings for a retailer like that. So, for commercial customers, efficiency is one of the most important things but the rest of it is similar to what a homeowner thinks about: reliability, they want their bills to be as little as possible, and they just want to be comfortable."

Just as Lennox has found a balance of providing energy efficiency without sacrificing comfort, so has it sought to work within the industry to balance robust corporate responsibility with reasonable regulatory requirements. Lennox's leaders are proud of the sustainability improvements the company has made over

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Lennox has made significant investments in its R&D facilities through the decades, relocating its lab from Marshalltown, facing page, to Carrollton in 1977. Above: Carrollton's calorimeter test rooms, which were transported from Marshalltown.

the years. "We make significant investments in reducing our energy usage, water usage, and greenhouse gas emissions," says Todd Bluedorn, chairman and CEO. "Adjusted for volume, those usage and emissions figures are down about 50 percent from where they were a decade ago."

At the same time, Lennox leaders are active in industry organizations that advocate against government regulations that they feel would be unduly burdensome. Doug Young, executive vice president and chief operating officer for the residential division, was elected chairman of the Air Conditioning, Heating, and Refrigeration Institute (AHRI), a trade association for the HVAC industry, in 2016. He has been a vocal opponent of some of the comfort equipment standards that had been put in place or were in the works prior to his chairmanship. In a November 2015 speech before AHRI members, Young warned, "It's probably no surprise to you that the current administration is very effectively using energy-related legislation to aggressively regulate test procedure and efficiency standards for just about every product manufactured by our membership. The federal agencies have been working overtime to shape our industry's future, and it's a future you may not like."

But Young explains that his concern is not just the impact strong regulations

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have on Lennox's profitability; it is primarily about keeping products affordable for the consumer. "The efficiency issue is relative to consumers in their affordability," says Young. "Every time you go up in efficiency you add some mass to the product or technology that is more costly than the prior generation. The concern that we have is we want our industry to be priced such that consumers can afford heating and air conditioning and don't have to resort to either inefficient methods to heat and cool their home or to go without. As you increase regulation on efficiency you certainly do one thing for the environment, but you also make it very challenging on the consumer."

And if the challenges to consumer affordability become too great, unintended consequences can have a negative effect on the environment, explains Bluedorn. "If you raise the minimum efficiency too far too fast, you'll add too much cost to the unit and then people won't be able to buy it." In 2015, the U.S. Department of Energy raised the seasonal energy efficiency ratio (SEER) minimum standard to 13 or 14, depending on region. "What you might have, then, is a middle-class home where they have a fifteen-year-old unit that probably has a SEER rating of just 5. From an environmental standpoint, you would naturally want them to replace it. We want to sell them a unit with that new minimum efficiency of 13 or 14 SEER because we believe that helps environment, helps us, and helps the homeowner. But if the minimum efficiency becomes 15 or 16 and that makes the new unit too expensive for them to buy, they'll hang on to the old unit."

> ***"Energy efficiency for us is good because we make more money. I don't have to make a choice between sustainability in how we produce our products and making money because they, quite frankly, line up."***
> ***—Todd Bluedorn***

According to Bluedorn, Lennox's involvement in governmental regulatory matters is not about rolling back standards, but about helping manage the pace of stricter requirements to come. "We want to be as efficient as we can, and efficiency is measured by doing the same with less or doing more with the same. So, energy efficiency for us is good because we make more money. I don't have to make a choice between sustainability in how we produce our products and making money because they, quite frankly, line up. In our commercial, residential, and refrigeration segments, we position our brand as being

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Ty Winkler, software test engineer, conducts testing in the product design and research controls lab in Carrollton.

the most efficient, and we have literally the most efficient products in the marketplace. But I'm also cognizant that with all the things we do, 55 to 60 percent of homeowners buy the least efficient product that the law allows them to. So, you have to be able to produce for the masses, because unless you think people are going to go without air conditioning, what they're going to end up doing is just hanging on to old units that have lower efficiency."

For Bluedorn, his priority is on ensuring the minimum standards will be met. "Rational and enforceable regulations will result in the most technically innovative solutions in any industry. I don't want standards that aren't enforced because others cheat, and we won't. And I don't want them to be irrational—say, requiring a zero-carbon footprint unit—because no one knows how to do that, and no one will pay if they could figure it out. But we are committed to increasing efficiency because it's good for the country and it's good for us."

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Lennox's strong footing in the commercial market, touted in a 1961 article, facing page, continues to be supported by operations like Lennox's National Account Services, which provides service to its larger commercial clients.

CUSTOMIZED SOLUTIONS

While Lennox's **residential division** has created a well-defined tiered line of products to **meet consumer needs**, its commercial division prides itself in the ability to provide engineers, architects, and design-build firms with **customized solutions** to meet their clients' needs.

"Our product is an applied product," says John Carino, regional director for the commercial division in Toronto. "You don't just plug it in, and it works on its own. It has to be designed and installed and configured to a specific building. The easier you make it for the contractor to install and service the unit efficiently, then the more likely they are to buy your product compared to anybody else's."



Carino joined Lennox in 1985 as a systems engineer tasked with modifying standard units that came off the line at the factory Lennox operated in Toronto at the time. "Back then a standard unit was really a standard," says Carino. "My job would be to work with either the consulting engineers or sales team to develop a solution to a problem that a customer might otherwise have to install on the unit out on the field. It's easier to do it in a controlled environment than out on a roof."

By 1993, Lennox realized this was not a sufficient solution to meet the increasingly sophisticated needs for its commercial clients—especially its national accounts—

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Lennox's commercial manufacturing facility in Stuttgart, Arkansas, above and facing page, began producing rooftop units in 1974.

so it convened multifunctional teams representing marketing, manufacturing, and engineering employees to arrive at a more tailored solution. The result was the 1995 rollout of the configure-to-order L Series, which offered a staggering number of unique configuration combinations: about 88 million possible configurations in the fifteen- to twenty-ton L Series units alone. The results were immediate: commercial sales grew by 30 percent in 1995.

During this same time frame, Lennox overhauled how it marketed to commercial customers. "We did a Voice of the Customer survey in the U.S. in 1993 and then a similar project in Canada," recalls Carino. "And one of the things that came out of that survey was that we had commercial customers who were being sold to by full-line managers who didn't have the expertise to call on the commercial side. They were trained basically to call on residential and commercial was an afterthought."

The decision was made to conduct an experiment in the smaller market of Canada: Beginning in 1995 Lennox would see if creating parallel commercial and residential sales districts in the same region would improve commercial sales. "We had so much success in Toronto our first year that we expanded to Dallas, Chicago, and Atlanta in

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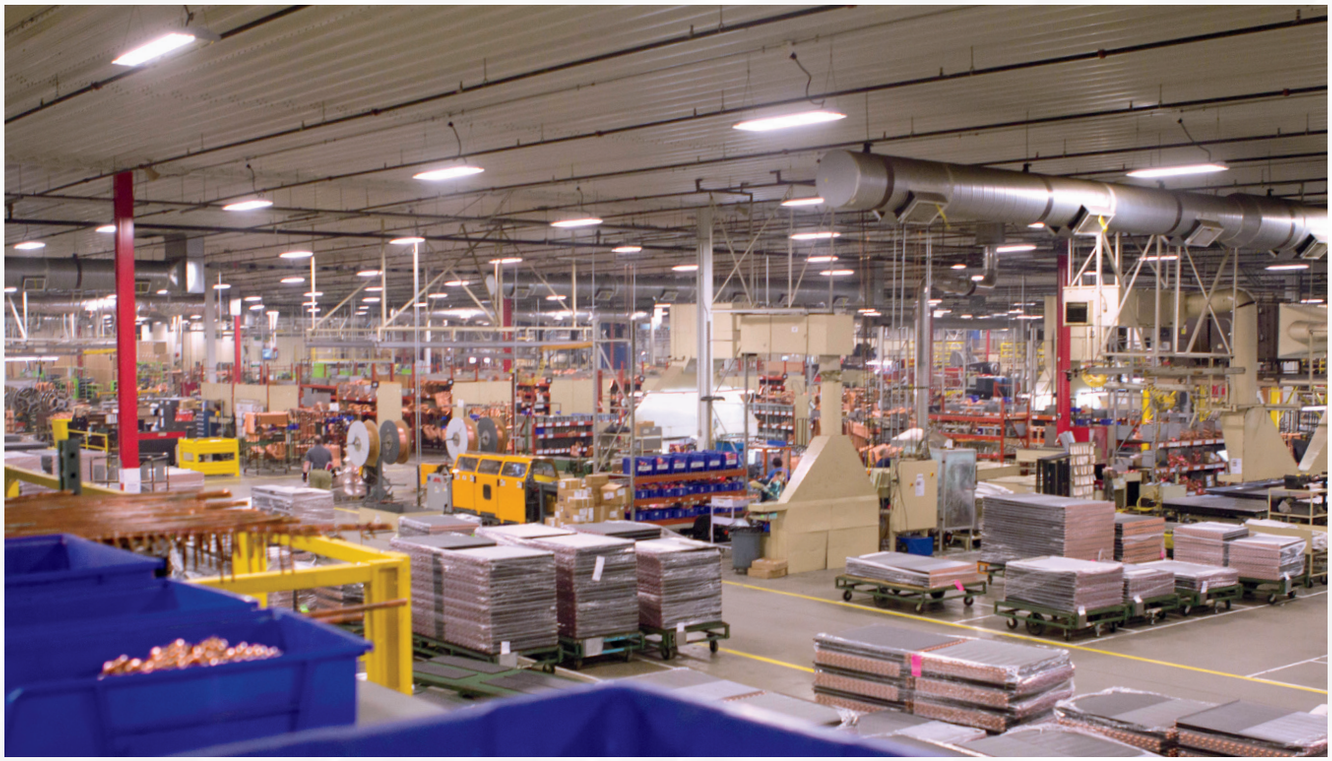

1997 and then in 1998, commercial was split completely away from residential," says Carino.

Creating this entirely separate business unit, which includes a factory in Stuttgart, Arkansas, and engineering, business administration, sales, and marketing staff, has allowed the commercial division to create a deeply collaborative relationship with customers. "Having that direct relationship with them allows us to ask specifically what's important to them as a builder-owner, contractor, or service company," says Carino. "We can ask them, 'What's important to you, what makes it easier for you to install it? What makes it easier for you to service your equipment? What makes it easier for you to commission the equipment after it's been installed?' So seemingly small details like a hinged access panel as opposed to a screwed-on panel come to light. With a hinged panel, if you need to get inside the unit, you just twist the handle, open the door, and stick your head in as opposed to having to unscrew the panel on a roof in what could be 120 degree or minus-40 degree temperatures."

The commercial division saw further segmentation with the creation of a regional sales force, which worked with locally based dealers and contractors, and one focused on national accounts, which handled large customers, usually retail chains, spread across the country.

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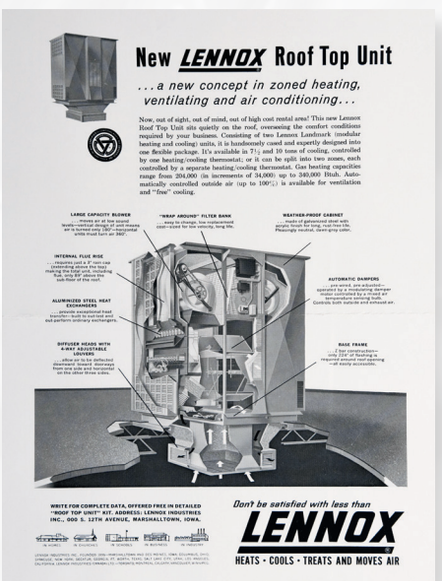
Employees assist with crane installation of an air conditioning unit on the rooftop of Peter Pendleton Elementary School, circa 1960s. For buildings that made crane installation impracticable, helicopters are also used.



Today, cranes as well as helicopters are used to place rooftop units on schools, hospitals, factories, and stores. Facing page: An early rooftop unit spec sheet.

"A big part of their customer base are big box retail national accounts," says John Whinery, who joined Lennox in 1996 as a research and development engineer and soon specialized in commercial rooftop product design. "The national accounts team has a very close relationship with national retailers, national theaters, and national restaurant chains, so we got to meet with the 'Chick-fil-A's,' the 'Cinemarks,' and the 'Wal-Marts,' of the national chains to understand their requirements and develop products to meet their specific needs." Beginning in 2000, with the acquisition of HVAC contracting company Service Experts, the national accounts team was able to extend national service contracts as well. This allowed the national chains to work with a single service provider with expertise in Lennox products. The primary business unit within Service Experts providing those services, IBS, was later renamed Lennox National Account Services (Lennox NAS). Lennox NAS continues to handle maintenance work like filter replacement as well as repair of failed components or replacement of equipment, a break from Lennox's traditional direct-to-dealer sales model.



> ***Having that direct relationship with them allows us to ask specifically what's important to them as a builder-owner, contractor, or service company.***
> ***—John Carino***

Other exceptions to the one-step distribution model exist within Lennox International's organization, allowing the company to capture a wider market. Allied Air Enterprises—which comprises brands Armstrong Air, AirEase, Concord, Ducane, Allied Commercial, and Magic-Pak—provides a channel to dealers who prefer to work with a wholesaler. And those distributorship relationships are often just as deep, with many customers who come from the same mom-and-pop roots as the dealers with which the Lennox brand sales force has partnered. "Our customers are almost exclusively family-owned, second, third, fourth generation companies," says Joe Nassab,

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Lennox's factory in Stuttgart, Arkansas, manufactures the company's commercial units, including those in the Landmark and Energence rooftop lines.

vice president and general manager of Allied Air, which is headquartered in Columbia, South Carolina. "Those distributors then, within their own markets, sell to contractors, and then the contractors sell to homeowners and businesses. Many distributors have been with us thirty, forty, fifty years and take great pride and ownership in helping to build our brand in their market."

For Allied Air, the distributor network takes on duties that otherwise would need to be handled in-house. "The distributors' role in the market is to stock inventory of equipment and parts, process warranties, train contractors, and finance contractors," says Nassab. "They have physical stores and they are the tech support arm for the contractor. They serve an essential role in our industry's value chain."

Having both sales models represented between the Lennox and Allied Air brands allows the umbrella organization to capture a wider swath of the residential market, explains Nassab. "About 60 percent of the units that move to the homeowner in the industry do so through independent distribution. At the end of the day, contractors buy from whom they want. Some contractors want to buy from original

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equipment manufacturers like Lennox; some contractors want to buy from their local independent distributor. That's how it works. The strategy of our company is to be well represented in both of those segments of the market."

Even within its traditional one-step distribution model, Lennox has looked for opportunities to customize the experience to meet customer needs.

"We continue to work with our sales team to get into some segmentation and tailor some of our services since we sell directly to the contractors and not distributors," says Alan Anselman, vice president of supply chain for the residential division. "We're looking at delivery options like same-day job site delivery as unique solutions that would help us become more valuable to our customers."

Lennox has the ability to explore ideas like these because of two major initiatives: the development of an online sales platform in 1998 and the expansion of its physical stores in 2008.

Online ordering began as a rudimentary website called DaveNet, which allowed customers to plug in a unit number and purchase parts or equipment. "This was not akin to the Amazon user experience," explains Quan Nguyen, who joined Lennox in 2010 as director of customer support. "It was just a long list. You would check a box and hit the order button—I mean, really just first-generation technology to allow our customers who wanted to the ability to buy online." Nguyen spearheaded an overhaul of DaveNet, replacing the dealer portal in 2015 with LennoxPros.com, a site that combines digital resources like training tools and a documents library with a visual, intuitive online purchasing platform. By 2018, the online sales site had 3.3 million annual site visits while the online technical tools had 3.6 million.

Lennox's physical retail presence saw a similar evolution. The company began augmenting its regional distribution centers with what were then called Parts Plus stores, giving dealers easier access to parts and equipment. Then, Lennox embarked on a more aggressive roll-out of the retail spaces, now called Lennox Stores. "One of the biggest variables for market share is your physical presence," explains Gary Bedard, vice president and general manager of the residential division until 2017, when he became president and chief operating officer of refrigeration. "In 2008, we only had sixty-four physical locations while our competitors all had in the hundreds. The supply chain transformation that we undertook between 2008 and 2014 created a hub-and-spoke network very similar to the airlines with eight large regional distribution centers to serve a number of smaller storefront locations. We improved our service level to our customers dramatically from something in the mid-80s, meaning that 15 percent of the customers were dissatisfied with their delivery, to the high 90s. We executed and we were able to do

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LENNOX
USE 28" BLADE
USE 21" BLADE
12"
DO NOT TRUCK THIS SIDE
Yale





Lennox Stores, above left, serve commercial and residential installers who need quick and convenient access to parts. Above right: Lanessa Bannister, vice president of Lennox Stores, attends an executive leadership staff meeting. Facing page: Marshalltown forklift operator Shannon Gard moves furnaces into inventory.

what we said we were going to do, which is ultimately what investors care about."

Lennox went about the location decisions and store design thoughtfully. "We put Lennox Stores in two or three locations in major centers so that dealers didn't have to drive an hour across the city to the one store," explains John Cain, district manager for residential and commercial in Western Canada. "The stores are set up like auto-parts stores, are located in industrial parks, and have a large sign outside and very professional appearance. When you walk through the doors, the store managers and counter clerks are very astute at not only helping the customer get a part but helping them sell up, too. It's all very professional and welcoming." By the end of 2018, Lennox was operating 237 locations.

"Part of the way we're growing is through our parts stores," explains Terry Johnston, who retired as president and chief operating officer of Lennox North American Commercial in 2019. "There had always been perception that access to Lennox parts was limited. In reality, as you could always get parts, you just had to know how to do it. We weren't on every corner, which is what the contractors in many cases were used to seeing. But through the Lennox Stores initiative, we make sure that the stores are stocked with Lennox residential and commercial parts. There's visibility, signage, and end-cap displays, and our customers have better access to Lennox aftermarket parts. It has been a big, big part of our growth strategy."

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Lennox Stores began undergoing a design refresh in 2018. Counter sales associate Artice Crow, left, assists a customer at the Lennox Store in a refreshed South Fort Worth, Texas.


WHEREVER YOU ARE,
WE'RE HERE TO HELP
CLICK
CALL
1-800-4LENNOX
LENNOX



The use of the Dave Lennox character, portrayed here by Bob Tibbetts, imbued Lennox's marketing campaigns with the values of quality, reliability, and tradition from the early 1970s through the mid-2010s.

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MARKETING MATTERS

Advertising, mascots, and programs have long been **key ingredients** in Lennox's marketing efforts, which have combined a consistent **message of quality and reliability** with information tailored to the priorities of the day.

And for Lennox, there have always been two audiences for its marketing: the dealers who are their direct customers and the end consumers who live with Lennox products in their businesses or homes.

Dave Lennox owned the furnace company he founded for less than a decade, and little can be determined of his skills as a marketer. Much has been made about his mechanical genius but a knack for sales and marketing is not part of the legend. Still, if Lennox was not responsible for coming up with the evocative name Torrid Zone for his signature furnace, he at least had the savvy to approve it. And someone was responsible for selling the more than 130 furnaces in a single month noted in a 1901 feature on Lennox in Marshalltown's *Times-Republican*—not to mention the sale of the furnace portion of his business in 1904 for around $54,789.14, more than $1.6 million in 2020 dollars.

One of the purchasers of that business, D.W. Norris, was heralded for his marketing talents. A newspaper journalist and publisher, Norris knew how to communicate. Norris "demonstrated very quickly that he not only understood proper financial planning of a business, but that he also knew the essential of making money: a top-quality product at a fair price aggressively sold," wrote Norris's nephew E.H. Norris in 1976. It's likely that Norris's writing skills were pressed into service for a 1905 pamphlet



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Early Lennox print advertisements, above, appealed to homeowners' desires for a clean, comfortable, and well-functioning home. Beginning in 1950, mascot Lennie Lennox, facing page, began to appear in advertising.

urging pastors to consider the Torrid Zone furnace to heat their churches. Most of the marketing materials produced prior to World War II were intended for dealers, with well-designed, informative bulletins describing the features and benefits of a Lennox product.

During post-war years, Lennox followed industry trends in terms of expanding its advertising to consumers eager to spend again after the restrictions of World War II. In 1949, Lennox placed ads in major city newspapers around the country as part of its first national cooperative advertising campaign. The campaign was a success, and a second followed in 1950. That same year, a new mascot for the company, Lennie Lennox, was unveiled in the company's advertising. The pie-faced cartoon character appeared in advertisements and attended dealer events. Advertisements with Lennie Lennox appeared in such publications as the *Saturday Evening Post*, *Better Homes and Gardens*, *Time*, and *Newsweek*.

The company was not represented by another character until 1972, when actor Bill Tracy portrayed Dave Lennox in Lennox's "Nifty Weather Machine" national ad campaign. Tracy donned overalls, a newsboy cap, long sideburns, and a mustache, and the banner behind him married Victorian era drawings arranged in a vaguely psychedelic manner. The ad was also the first use of the tagline "Attaboy, Dave!"

Tracy appeared as the Dave Lennox character for more than a decade before ill health forced him to retire. The character

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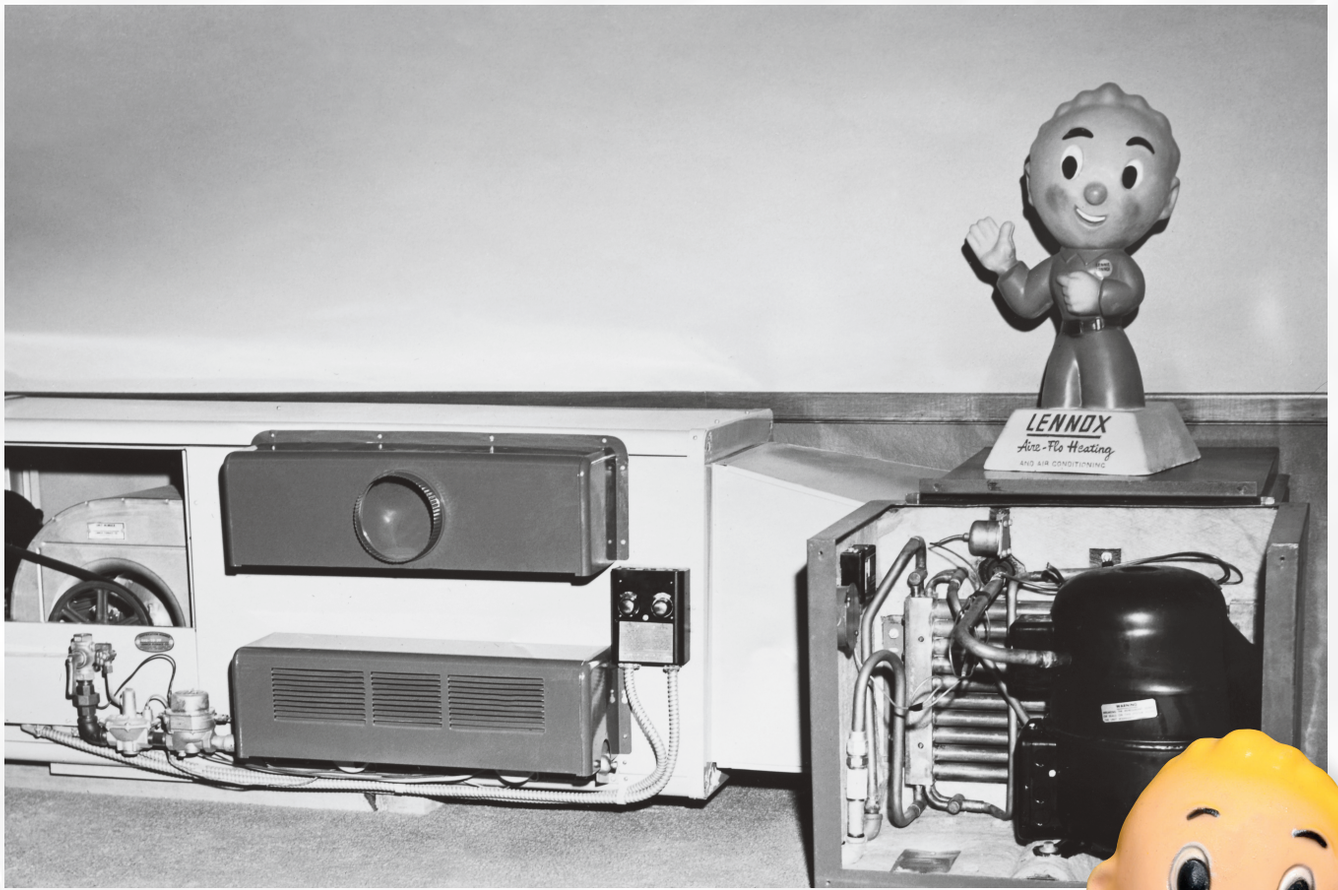



was then taken over by Bob Tibbetts, an actor and radio disc jockey based in St. Louis, Missouri, who won the role after auditioning in 1985 by conducting an interview in costume, making a commercial with one of Lennox's Chicago-based dealers, and meeting with John Norris Jr. Tibbetts was quickly pressed into service, traveling at a peak of five or six times a week from the mid-1980s through early 1990s to film television commercials with dealers around the country. "The dealers, obviously, they were the boss; they were the big guys," says Tibbetts. "I started out working to make the dealers feel comfortable being on television, getting to know them and getting to know their families. And then, the whole job progressed. We all just became friends. We'd fly into a location and the production company would have the facilities all set up, and then the dealers would come in and would shoot the commercials. Some of them were very good; for some of them it

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Bill Tracy—above left with vice president of the southwest region Hoot Brannon, second from left; district manager Roger Easter, second from right; and sales manager Jim Albritton, right—originated the Dave Lennox character in 1972. When Tracy retired, Bob Tibbetts, facing page, took over in 1985.

was their first time and you could tell they were nervous. I felt part of my job could put them at ease a little bit."

Through filming the commercials and attending Lennox events, dealers developed a deep affection for the Dave Lennox character and the man who portrayed him. "He was Dave Lennox to our customers," says Scott Lindsey, regional sales director. "They loved having their picture taken with him, filming a commercial, or having a cocktail with him and listening to that powerful, booming voice the night before they saw him on stage at Lennox LIVE."

Over time, Tibbetts transcended his role as an actor playing a character, becoming almost a brand ambassador, furthering corporate messaging in a speech to dealers or meeting with members of the public at trade shows. "I represented a company that makes the best product they can," says Tibbetts. "They charge a fair price for it. They stand behind every product that they sell, and they stand behind all the dealers that represent them. That was basically the purpose of the Dave Lennox character on television. He was in the modern era, but he was representing the quality that's been proven over time, the longevity, and the trustworthiness. If you ever have a problem with Lennox products, you can rest assured the dealers and the corporation will stand behind it 100 percent."

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That passion for the product and the company made dealers feel Tibbetts was one of them. “The dealers love Bob Tibbetts,” agrees Kim McGill, vice president of marketing for the residential division. “Using the Dave Lennox character was part of our competitive advantage in the industry because we are the only brand with a human face attached to it. And Dave Lennox isn’t some made up character; he goes all the way back to our founder, and he’s a real person.”

When Tibbetts decided to retire in 2016, Lennox’s marketing team was faced with the options of either replacing him or retiring the Dave Lennox character itself. The decision was made by Quan Nguyen, vice president of marketing at the time, to forgo hiring a new actor but continuing to use a drawing of Tibbetts on product packaging.

“I think it really goes to Quan’s ability to recognize the changing demographics of his customer, retail and end user, and adjust accordingly,” says dealer John Christin, president and owner of Wolfer’s Inc. in Oregon. “As much as I miss Bob—he’s a personal friend of mine—I understand that from a marketing and brand point of view, there probably needed to be a change, and I think he made the right move.”

Balancing what will appeal to dealers with what will appeal to consumers requires a clarity of purpose. At the same time, there is the question of for which audience Lennox should prioritize its messaging. For

> ***“Homeowners began putting a little more thought into what they’re buying, which has opened the door a smidge for us to speak differently to the consumer.”***
> ***—Kim McGill***

McGill, that answer has shifted over time. “Traditionally the thinking has been that the dealers are the ones who buy direct from us, so we should work to influence the person who is going to buy fifty units from us instead of the homeowner who is going to buy one in their lifetime, two maybe.” This thinking was based on a presumption that homeowners would trust the product picked out by the dealer rather than research it themselves, resulting in a focus on technical aspects in marketing materials Lennox produced for its dealers.

This blind trust by homeowners shifted following the drop in home values tied to the Great Recession that began in 2008, says McGill. “All of a sudden, the age of the conscious consumer comes forward. The equipment is more expensive because there’s a lot more research and development that goes into designing

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Ad campaigns emphasizing comfort and efficiency followed the retirement of the Dave Lennox character in 2016 and represented a renewed focus on influencing homeowner preferences.

around regulations. At the same time, homeowners are rattled by how quickly they can lose home value. And last, the world has gotten a little smaller and with the Internet, consumers no longer have to rely on the dealer for their information. For all those reasons, homeowners began putting a little more thought into what they're buying, which has opened the door a smidge for us to speak differently to the consumer."

After moving from Allied to take the top marketing role in Lennox's residential division in 2017, McGill identified the need to reshape the way dealers communicate to consumers. "What I started evangelizing is for dealers to quit asking consumers what they want and start asking them how they want to feel. You may not be able to tell me the features that you want, but you can tell me where it's uncomfortable in your home, you can tell me the things you don't like about how your house feels and the things you do like. Now I can figure out what's the right solution for you. Now we can have an educated discussion. And now you're going to get not just what you need, but you're probably going to get more of what you want."

Along with tweaking the communication with consumers, McGill also sought to

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Precise Control



iComfort® S30, E30 and M30

Smart Thermostats

Taking comfort control to the next level.

iComfort
So simple. So smart. So comfortable.

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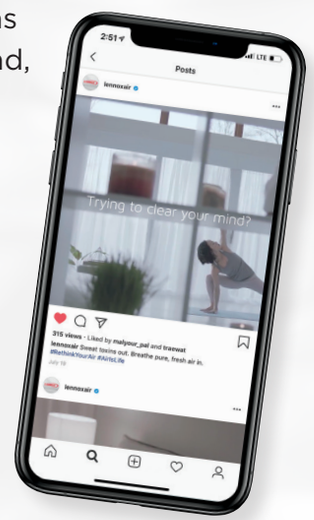
In addition to launching the Rethink Your Air campaign, Lennox also moved into greater use of social media, above, to appeal to modern homeowners' wishes for their home environment. Facing page: Lennox's home comfort controls offered homeowners the promise of precision and convenience.

recraft the message for dealers, which led to rolling change of Lennox's tag line and ad campaign. "If I say, 'We're in pursuit of perfect air,' people know what that means. Then, when we tell people, 'Air is life, make it perfect,' they know what that means. And so, Pursuit of Perfect Air is our why, Air Is Life, Make It Perfect is our tag line, and Rethink Your Air is the campaign."

While McGill has pressed for a marketing message that keeps the consumer's desires front and center, she understands the importance of keeping the dealer front and center in advertising. "We've created a whole line of ads that are consistent with our new look and feel but have that dealer footprint on them," says McGill. "It looks like them because, while we want to advertise Lennox, consumers can't buy direct from us. Similarly to the automotive business, we present the brand and then introduce the dealer as the access to the brand, the representative of Lennox in the local market."

> ***We present the brand and then introduce the dealer as the access to the brand, the representative of Lennox in the local market.***
> ***—Kim McGill***



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Lennox's unmatched reputation for quality for 125 years has earned the company esteem among dealers as well as the general public.



QUALITY

MODERN COMFORT - CONTINUING GROWTH - THE STANDARD FOR PERFORMANCE



From the Magic Dial thermostat, facing page, to the digital controls of today, Lennox has been at the forefront of defining homeowners' relationship to the air temperature of their homes.

MODERN COMFORT

World War II produced **technological innovations,** pent-up consumer demand caused by wartime rationing, and a **celebration** of specifically defined concepts of **home and family.**

These combined to create an immediate wave of robust consumerism, particularly around creating modern and comfortable housing, and a lasting cultural appetite for ease and convenience. As a leader in the heating and cooling industry, Lennox helped establish those post-war standards of modern comfort, and it has continued to inform how people think about their relationship to indoor air.

During the 1940s and '50s, Lennox's standard of indoor climate comfort centered on even heating. No longer should consumers expect their families to huddle around a heat source; a home that one could be proud of had a pleasant temperature throughout—floor to ceiling, wall to center. Forced warm air heating provided air circulation, and the tasteful registers and grills used in perimeter heating distribution systems ensured every part of the house was free of cold spots and stale air. Lennox's advertisements of this era reinforced cultural notions of the time that securing such modern appointments for one's home not only provided a healthful environment for one's family but reflected favorably on one's character.



Broader cultural change informed consumers' expectations for indoor air in warmer months and warmer regions as well, and in the early 1950s Lennox was again there to

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In 1952, Lennox parlayed its reputation for home heating into a foray within air conditioning with the Aire-Flo air conditioning unit.

meet those raised expectations for modern comfort. "Industrialization had moved south, and you just needed air conditioning to get people to live in the South," explains John Norris Jr. "Carrier invented air conditioning as we know it today, but we had a bright general manager who was in charge of the southwest region who insisted that we had to get into air conditioning. He talked my father into doing it."

Lennox unveiled the Aire-Flo air conditioning unit in 1952 and was met with immediate success. That success wasn't necessarily expected. "At the time, it was thought to be very risky for us because nobody in the heating industry understood refrigeration," says Norris. "It turns out the industry underestimated our ability to understand air conditioning. We learned it pretty fast and trained our dealer organization on how to handle it. Ultimately, the air conditioning industry on the residential side needed the skill sets of the heating contractor who knew how to put ductwork in and install heating and air conditioning, and so the industry evolved. Dealers today are all heating and air conditioning technicians."

Tom Towe, the residential division's director of field marketing, grew up in the 1960s and '70s in Marshalltown, where his father was a Lennox engineer. He remembers a time when his home did not have air conditioning and he understands first-hand the shift in consumer mindset

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from air conditioning being an option to a must-have. “We got air conditioning in our house about 1970, when I was around ten years old, but I wouldn’t think about not having air conditioning today.” Lennox tracked its consumer messaging along this shifting mindset. “Once it became understood that pretty much everybody was going to get air conditioning, the message became, ‘Look to Lennox because we’ve been doing this since 1895.’” Air conditioning was refined through the decades, with Lennox having the ability to give consumers more control over their indoor climate. “Many people have lived in houses that have air conditioning but they are not comfortable,” continues Towe. “They didn’t know why and didn’t know they could fix it until a Lennox dealer told them, ‘You don’t have to be extra cold to get the humidity out of your house. You don’t need to have all these uncomfortable parts of your house that don’t work.’ That sort of natural evolution is really about comfort. Today we make it so you don’t know that the air conditioning is running in your house; you’re just comfortable.”

At the turn of the millennium, Lennox gave consumers the ability to tailor their HVAC systems to their needs and budgets like never before. Between 2001 and 2006, three distinct product lines were defined and refined, providing consumers with a very clear good/better/best product selection. Terry Johnston was hired by Doug Young in 2001 as vice president of marketing and product management. Johnston defined the top line, which he dubbed the Dave Lennox Signature Collection, as carrying industry-leading claims and then worked closely with Gary Bedard, then director of product management, to lead the design teams through the creation of the Elite line, which offered premium but not industry-leading technology and features, and the Merit line, which provided consumers an entry-level Lennox product.

> ***“It turns out the industry underestimated our ability to understand air conditioning.”***
> ***—John Norris Jr.***

The product line initiative not only represented a move to a tiered product approach, but it was also tied to a renewed commitment to designing products with the end consumer in mind. “Terry mapped out more of a consumer-focused approach on the marketing side, and I worked with the engineering team to develop the right products with the end user in mind,” explains Bedard. “We hired an industrial designer to change the look of the product, the shape and the color scheme. We also

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Lennox's product art allows homeowners to envision the surfaces where units, above, will be placed in their home. Facing page: Saltillo brazing operator Aracely Morquecho brazes the plumbing that connects to the compressor of a heat pump condensing unit.

changed the brand logo, which hadn't changed since 1947, in 2005. Prior to this there was more of a focus on how the installers would look at the product—more of a technical view of the product line—as opposed to looking at it from the dealer/sales person's point of view. The technical aspect is certainly one important quality, but you also have to focus on why the homeowner would get excited about it and choose to install it. In that period of time, from around the late 1990s and early 2000s, there was a shift where appliances started being offered in stainless steel and everything was moving from a more utilitarian approach to being much more consumer oriented. In this industry we've always lagged several years behind the appliance industry, but we were trying to do the same thing: find out what people wanted and really focus on consumers in addition to the installation of the product."

For Johnston, the success of rolling out the three product lines hinged on three critical components: making clear distinctions among the product lines, raising the aesthetic value across the board, and enacting a product design strategy based on cooperation between engineering and marketing.

"Prior to my coming on board, there were some product tiers but there were really no brand rules around what products belong in which tier," explains Johnston. They had Merit, Elite, and Innovator—

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> ***The technical aspect is certainly one important quality, but you also have to focus on why the homeowner would get excited about it and choose to install it.***
> ***—Gary Bedard***

which is what the top-end product line then was called—but there was movement in and out of the product tiers. If a sales manager wanted to promote something, he would call it Elite or Innovator but there were really no rules, no rhyme or reason, as to what went into which product tier." Johnston and his team established those clear rules, especially around the Dave Lennox Signature Collection (DLSC). "For it to be a DLSC product, it had to have a leadership claim that was meaningful and would resonate with the consumer. We wanted to really limit the number of products that could be included in the Dave Lennox Signature Collection. You may have something that is really, really quiet and really, really efficient but if it's not the quietest and it is not the most efficient, it would fall then into the Elite category."

The industrial designer that Lennox hired not only improved the appearance of the top-line products but provided a makeover for Elite and Merit as well. "The industrial design firm we hired had a lot of experience working with the manufacturability of their designs, so we were able to make sure we didn't create something that looked great but we couldn't build it in the factory—too many bends or curves, for example," says Johnston. "We did make it a little bit more challenging for them, though. They had to get additional tooling to make certain kinds of bends in the sheet metal that they had not had to make before. On the Merit product prior to the new design, there was basically just a wire going around the coil on the condensing unit and so it didn't look that good. We improved it aesthetically by adding louvered cabinetry. So we made even the lower-end product look better." One thing that wasn't a differentiator among the product lines was quality. "I think durability is something we would always hang our hats on at Lennox," says Johnston. "Regardless of the line, our products still go through the same level of testing and are all going to be the best quality we can put out."

"No matter what line you decide is right for your budget, the standards for building Lennox products is the same," agrees Towe. "We resource the same grade of component, they are manufactured in the same manufacture facility by the same people. The difference is tied to the features and technology that are available."

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New product plans go through a formal review process. Above: Quan Nguyen, vice president and general manager of residential, center, responds to a presentation by the marketing and engineering teams. At the table with him are program manager Roni Issa, left, and president of residential Doug Young, right.

The strategy to determine those features and technologies was informed by the "M Process"—for "marketing process"—that was formalized collaboration between design engineers and the marketing team. "The M Process forced everyone to think about how we are going to go sell this, what do we need, and when do we need it," says Johnston, who instituted the practice. "Do we need pictures of the product? Do we need engineering handbooks, and by when? Do we need samples we can take to customers? Do we need to have samples before we're in production to take to a trade show? All those things that you do to merchandise and market a product weren't formalized before M Process; they were done on a very ad hoc basis. The M Process considers everything that has to happen and when in order to launch a new product, then it ensures we're doing all those things at the appropriate time."

Lennox's pioneering advances and success in bringing them to market have helped consumers attain ever increasing levels of indoor air comfort through the years. As today's homeowners seek to optimize their experiences, especially

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LENNOX

Air is life. Make it perfect.™



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Today's homeowners have unprecedented control over the quality and temperature of their indoor environments. Vice president of marketing Kim McGill, above right, has made this connection the centerpiece of Lennox's ad campaigns.

related to their personal spaces, Lennox is again keeping pace with consumer trends. "Home is the place we create to be our own special place," says Kim McGill, vice president of marketing for the residential division. "It's where we celebrate with friends, where we raise our families, where we go to breathe. And so we do all these things around our home to make it perfect.

Maybe the air ought to be what we focus our attention on because there is science behind it: there are perfect temperatures for studying and productivity, for sleeping, for relaxing, for creativity, and we have the ability to manipulate our home to create those environments that are perfect for whatever activity we want to do."

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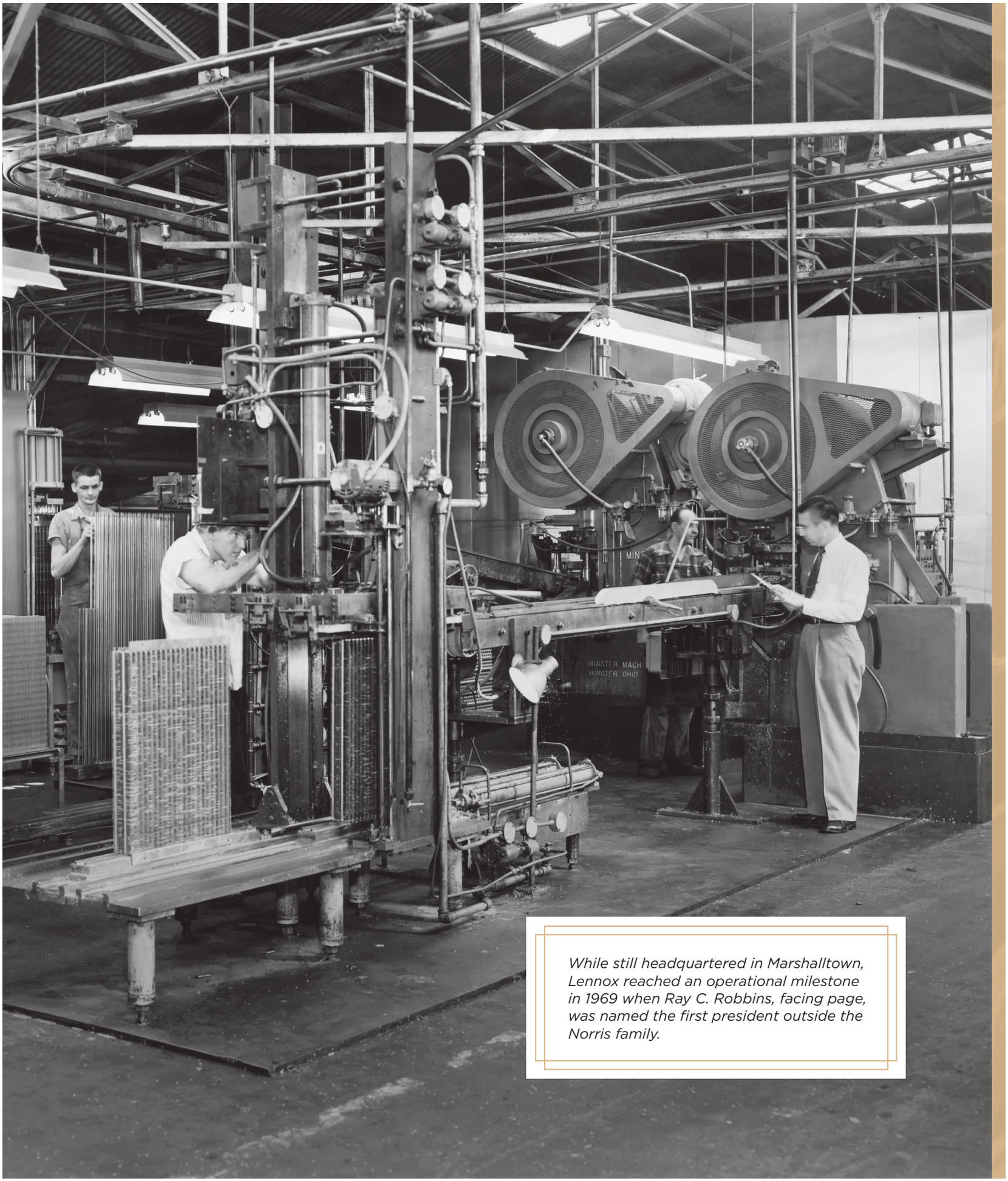

While still headquartered in Marshalltown, Lennox reached an operational milestone in 1969 when Ray C. Robbins, facing page, was named the first president outside the Norris family.

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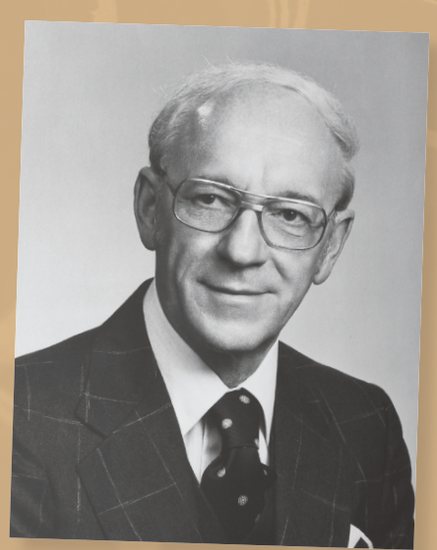
CONTINUING GROWTH

By the time **John W. Norris Sr.** began considering retirement in 1968, the company **his father purchased in 1904** had grown from a small steel furnace manufacturer to a leading **multinational** heating and air conditioning corporation.

Yet the evolution Lennox would undergo through the end of the twentieth century would radically alter some aspects of the company's culture while leaving much of its long-held values system intact.

The first major shift in Lennox culture was at the senior Norris's own hand: he turned the reins over to the first non-family member, naming the head of Lennox's Canadian operation, Ray C. Robbins, as president in 1969. According to Norris Sr.'s unpublished memoir, the appointment was made because none of the Norris third generation was quite ready to take on the top leadership position. And although Norris Sr. referred to Robbins's role as "interim," Robbins would serve as president until 1977, CEO until 1980, then chairman of the board until his retirement in 1991. Alongside John W. Norris Jr., who would be named president in 1977 and president and CEO in 1980, Robbins would preside over some of the most transformative periods of Lennox's history.



The opening salvo of change came in the form of consolidation and relocation of Lennox's research and development department to Carrollton, Texas, in 1977.

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In 1990 Lennox built a 356,000-square-foot campus in Richardson, Texas, to house its worldwide headquarters.

"At the time, we were told we were moving R&D because we could attract more talent in a metropolitan area than we could in a very rural town, which all made sense," recalls Harry Bizios, who had started at the company as an industrial engineer just months before the move. "At the time, R&D was moving and that was the extent of it."

It was not. The following year, Lennox's headquarters was relocated to Dallas, with the company's executives and support staff moving from a town of 26,000 to a metropolis of nearly a million. The reason for the relocation was twofold: talent and travel. "The corporate office had kind of outgrown Marshalltown," explains Dick Booth, who served as Lennox's chief financial officer at the time. "It was hard to bring top-tier people into a small town in Iowa."

"It was hard to get the top-level executives," agrees John Norris Jr. "If you received ten applications for a job, five of the applicants would take themselves out of the running before they even interviewed. And then, after the remaining ones met with us, four or five of the wives would refuse to move. So, it was tough to get people." A lack of non-employee professionals familiar with issues facing a large corporation

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compounded the issue. “You didn’t have the level of sophistication that you needed from your subcontractors—your attorneys and accountants,” continues Norris Jr.

Marshalltown’s rural isolation was to blame. Although Marshalltown was a pleasant place to live, travel to and from the area was difficult, making the town unappealing to those from outside the region. “It was a wonderful town to raise a family, but you had a big transportation problem,” says Norris. Lack of transportation infrastructure made conducting national and international business challenging. “You had a sixty-mile drive from Marshalltown to Des Moines, then you would hop on the plane in Des Moines to take you to a place—usually Chicago—where you could catch the plane to where you wanted to go,” says Norris, who considered Chicago, Minneapolis, Denver, Atlanta, and Houston as possible locations before settling on Dallas. “So, for an industry meeting in Washington D.C., it was a day to get in there, a day to meet, and a day to get back. From Dallas, we could fly commercially in the morning and be back at night. The reality was that Iowa is a good place to have a factory: it had a good, productive work force but it was a tough place to run a worldwide company from.”

In the second half of the 1980s, Lennox made a series of acquisitions that widened its footing in the industry. The acquisition of the heat transfer division of Snyder General in 1986 by Heatcraft (a manufacturer of heating elements itself acquired in 1973)

“It was a wonderful town to raise a family, but you had a big transportation problem.”
—John Norris Sr.

was followed in December 1988 by the purchase of Magic Chef Air Conditioning from Maytag; that division was renamed Armstrong Air Conditioning, reviving the moniker of an Ohio furnace plant the company had acquired in 1927. In 1989, Lennox International Inc. (LII) was formed as the parent company of Heatcraft, Armstrong, and Lennox Industries.

LII operated out of rented office space in Richardson, Texas until 1990, when a corporate headquarters was constructed in the north Dallas suburb. The 356,000-square-foot campus had all the amenities one would expect in a worldwide headquarters, including a walnut-paneled, state-of-the-art boardroom, cafeteria, training center with five classrooms, and fitness center. “It’s a big facility, but it doesn’t seem that big to me,” says Tammy Meadows, customer service manager, who joined Lennox as a customer service representative in 1992. “It seems more like a small company when you walk around: everyone seems to know each other and

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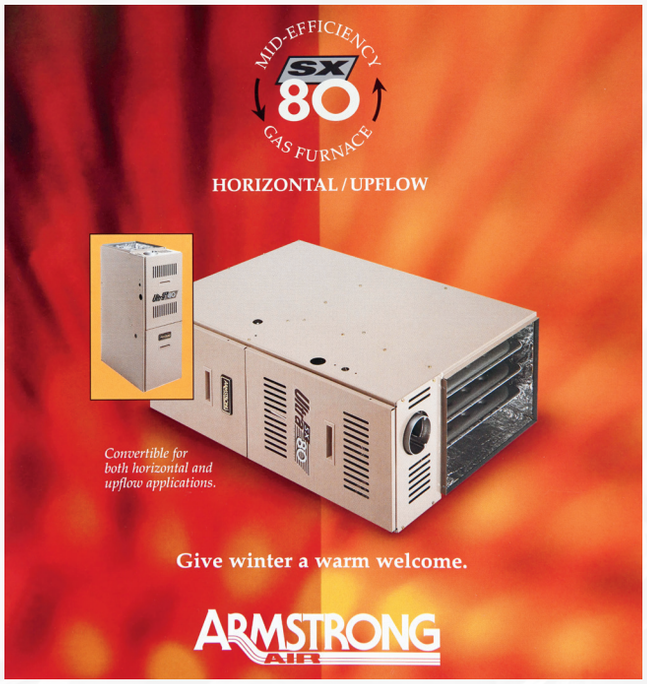

Lennox International Inc. was formed in 1989 as the parent company to a resurrected Armstrong Air, above, as well as Heatcraft and Lennox Industries. Facing page: An employee in Lennox Commercial's Stuttgart plant brazes an evaporator coil.

everyone's very friendly. I know it's a big corporation, but it doesn't feel like one when you are here."

In 1991, a year after moving into its new home, John Norris Jr. was appointed chairman of the board and Lennox embarked on a massive reorganization, dubbed Project 21. Prior to this initiative, Lennox had been organized regionally, with five U.S. divisional headquarters—Columbus, Ohio, serving the Northeast; Marshalltown, Iowa, for the Midwest; Atlanta, Georgia, for the Southeast; Sacramento, California, along the West Coast; and Fort Worth covering the Southwest—with five standalone operational structures. In addition, Lennox Industries Canada Ltd., headquartered in Etobicoke, Ontario, was held as a separate operating company and functioned as a sixth division. "They had their own service departments, financial departments, credit departments, and marketing departments," explains Lee Eft, district manager for Des Moines, who joined Lennox in 1975. "Project 21 came along and they consolidated all of those departments and moved a couple of hundred families from throughout the country to Dallas. We became more of a corporate culture at that point. I think the biggest change was getting everybody acclimated that we were now a national company, even though we always were. It had just been run as regional pockets."

"Project 21 came along and they consolidated all of those departments and moved a couple of hundred families from throughout the country to Dallas. We became more of a corporate culture at that point. —Lee Eft"

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Rather than being overseen by division general managers, LII's centralized structure fell under vice presidents with functional responsibilities like manufacturing, research and development, and finance.

Project 21 was one of the most disruptive initiatives of Lennox's first century of business. "There was a lot of uncertainty and unknowns when it was first announced," says Dennis Wood, senior manager of product support, who left his brother's Lennox dealership in 1987 to begin work as a field service consultant. "But once you considered, 'Why do we have five accounting departments; they are all doing the same thing,' then it made sense. And once you started seeing the growth—this company just grew by leaps and bounds after Project 21—you realized we wouldn't be where we are today without the sacrifices that were made."

Project 21 sought to make Lennox a twenty-first-century multinational corporation. With a robust operation in Canada, an export division dating back to the 1950s, and a manufacturing facility in Northampton, England, LII was no stranger to international business. However, when Lennox Global was formed in May 1995, it was with big plans for expanding Lennox's worldwide business. The company had taken part in enough ventures around the globe to understand that modifying domestic products for the international market was untenable: houses outside the U.S. were often not

"Once you started seeing the growth—this company just grew by leaps and bounds after Project 21—you realized we wouldn't be where we are today without the sacrifices that were made."
—Dennis Wood

built in a way that allowed for American-style ductwork. Instead, Lennox would need to grow internationally through acquisition of companies tailored to serve localized HVAC needs and by moving into an adjacent category, refrigeration. With the formation of HCF-Lennox in 1996, Lennox sought to become a major player in international refrigeration, with Lennox Global's leadership team expecting half of the company's revenue to come from outside the United States within the span of a decade.

By 2020, about 45 percent of Lennox's refrigeration segment sales came from overseas. "Today, we're the leading rooftop unit provider in Europe and we remain the leading commercial refrigeration supplier in North America," says Gary Bedard, president and chief operating officer of

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Following the Project 21 initiative, Bob Schjerven, right with John Norris Jr., became president of Lennox in 1995 and soon instituted a reorganization of the company into separate business units for residential and commercial.

the refrigeration division. “We are also at the forefront of technology to convert to environmentally friendly refrigerants in Europe and the U.S.”

Another structural change came in 1997, when Bob Schjerven, who had become president and chief operating officer of LII in 1995, devised a plan to reorganize the company into separate business units rather than by function. “What he accomplished by that was he created a process organization that focused toward the customer instead of a functional organization that was very much inwardly focused toward the objectives of each function,” explains Bizios. “As vice president of manufacturing, I had five factories reporting to me and I was very interested in meeting and exceeding the objectives of manufacturing. Having said that, we—manufacturing, sales, R&D—were not always connected and therefore not focused on the ultimate customer. The business unit structure that Bob Schjerven brought on board broke down the functions. He said, ‘We’re going to have a business unit for commercial that’s going to be focused toward the commercial customer and a residential business unit focused toward the residential customer. They will have their own manufacturing. They will have their own engineering. They will have their

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Lennox's close relationships and esteem for its dealer-customers was thrown into sharp relief in 1999 when Lennox acquired Service Experts, made up of more than two hundred dealerships around the country. Service Experts was divested in 2013.

own marketing. In that way, they can move swiftly to respond to the needs of those customers.'"

In addition to becoming more customer oriented, the reorganization injected profitability into the faltering commercial line. "When they started measuring commercial as a separate business unit and started allocating expenses to it, it was somewhat eye-opening in terms of the opportunity," explains Terry Johnston, retired vice president and chief operating officer of the commercial division. "But the financials were probably not as good as what they thought they were. So the focus became making this thing profitable and growing."

That task fell to Bizios, who served as the commercial line's first vice president before becoming president of the business unit. "In a time span of three years, we doubled the business and became the most profitable segment, in terms of earnings before interest and taxes as a percentage of sales, within Lennox," says Bizios.

In 1999, Lennox responded to an industry trend—one in which utility companies throughout North America began

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purchasing retail HVAC contractors—by negotiating to acquire Service Experts. The company was made up of two hundred dealerships: those that came along with the acquisition and previously Lennox dealers who had agreed to sell their companies to Lennox. The father of Julie Berdin, president of Calgary's Arpi's Industries, was one such dealer. "Lennox came around, as did other suitors, courting my dad for the purchase of the company," explains Berdin. "But we believed the Lennox group had the best alignment with what we believed in. So my father sold to Lennox." Berdin was promoted to president of the dealership, which retained the same eponymous name it had, Arpi's, when her father had founded it in 1963. "It was through that I learned a tremendous amount about being in a big company. We had a Canadian head office in Toronto and we had Dallas corporate headquarters. So it was a wonderful experience, and I learned a ton." That education proved helpful when Berdin's father received word that Lennox planned to sell off Arpi's commercial business and successfully negotiated to buy the company back. Arpi's Industries continues on as a Lennox dealer.



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When the acquisition of Service Experts was completed in 2000, the division immediately became the largest residential/light-commercial HVAC retailer in the United States. But by 2013, Lennox would complete the divestment of the company. "We tried to operate that business for about a dozen years, but we weren't really able to fold it into what we did," explains John Carino, regional director for the commercial division in Toronto.


The New York Stock Exchange
Warmly Congratulates
Lennox International Inc.
on its
10th Anniversary
as a Member of the NYSE Community of Listed Companies
July 29, 1999 – July 29, 2009
and looks forward with pride and pleasure to a continuing mutually rewarding association
Chief Executive Officer
Corporate Secretary



Lennox had its initial public offering just before the turn of the millennium. Above, Bob Tibbetts, appearing as the Dave Lennox character, joined John Norris Jr. at the New York Stock Exchange opening bell ceremony on July 28, 1999. Members of the Norris family continue to hold stock in Lennox and remain represented on the board. Facing page: Bo Norris, John Norris Jr.'s son, has served on the board of directors since 2001.

Around the same time of the Service Experts acquisition, John Norris Jr. was not only overseeing sweeping organizational changes and global expansion; he was planning a new ownership structure for the business his family had owned for nearly a century. His father had not favored many of the structural and geographical changes that occurred since 1970, and he remained a staunch proponent of family ownership until his death in 1994.

About one hundred members of the Norris family held stock in Lennox in the mid-1990s. Although the Lennox initial public offering would not go through until 1999, Norris was speaking publicly about plans for an IPO as early as 1996. The family's initial hope was to have the benefits an IPO's cash infusion could provide while continuing to operate the company much like it always had. "We don't expect the public offering—no more than 20 percent—to impact the way we approach research and development," Norris told Appliance Manufacturer in 1996. "We're not going to go into the business of hyping next quarter's earnings."

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> *We may be a large public company now, but we still have that family feel.*
> *—Lee Eft*



By the time the stock was offered on the New York Stock Exchange, 30 percent, not 20, of the family's stock was made available to the public in the form of 8.5 million shares priced at $18.75. And Norris's prediction about the focus on quarterly earnings also proved fairly accurate—for a time. "For a short period of time, one to three years, Lennox tried to operate as a private company while they were a public company," says Bizios. "The views of management at the time was the analysts be damned."

But a focus on quarterly earnings reports ended up being one of the most defining differences between Lennox when it was under family ownership and the public company. "The company was always looking for success and always looking for results," says Eft. "But when we were a private company, it wasn't so much an emphasis on, 'How are you doing this month? How are you doing this quarter?' It was more, 'How did you do for the year?' Now, as a publicly traded company, obviously, we've got to report to Wall Street every quarter, and that certainly changes that dynamic. It doesn't make it worse or better, it just changes the dynamic. From a cultural standpoint, I think it has had an impact."

However, according to Eft, while the cultural shift was perceptible, it was not seismic. "We may be a large public company now, but we still have that family feel," says Eft. "They care a lot about our employees and customers. At the end of the day, I always feel like Lennox tries to do what's right, for our customers for the consumer, and for the employees."

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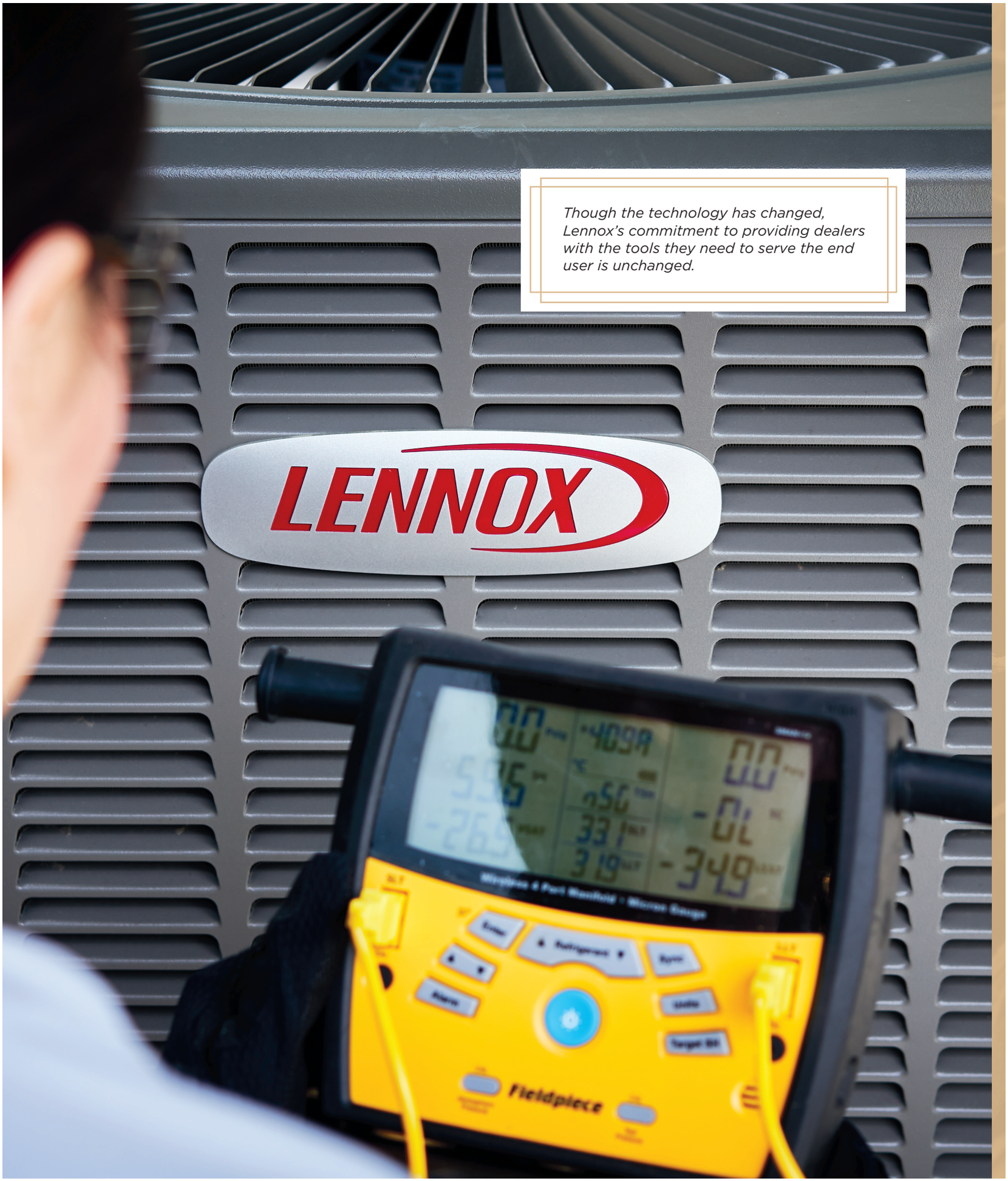

Though the technology has changed, Lennox's commitment to providing dealers with the tools they need to serve the end user is unchanged.

THE STANDARD FOR PERFORMANCE

When **Dave Lennox** founded his furnace company **in 1895**, he did so without strategy: the business fell into his lap because a customer could not pay its bill.

Yet for nearly a decade he built the business through a focus on thoughtful design and rigorous quality control of a single product. When the Norris family took ownership in 1904, they began a three-generation reign that was characterized by bold expansion, innovative entry into new product categories, and a devotion to relationships. Since 2000, ownership has been open to the public, and Lennox's leaders have strived to maintain the company's longheld core values while developing the organization's full potential.

Although Bob Schjerven served as Lennox International's chief executive officer after its initial public offering, it was not until his retirement in 2007 that Lennox saw its first true leader of the post-IPO era. While Schjerven had extensive experience outside Lennox—he had begun his career as a materials manager for Trane in 1970 and come over to Lennox with the acquisition of the heat transfer division of Snyder General in 1986—he was enmeshed in the legacy culture of Norris family ownership.

John Norris Jr., who served as chairman of the Lennox International board until his retirement in July 2006, recognized the qualities Todd Bluedorn possessed and helped determine that they fit LII's needs. "I had a chance to meet with him after he was identified as the top candidate by the search committee, and I enthusiastically endorsed their choice," says Norris. "He's turned on by product innovation, had already done exceedingly well as a businessman, and showed the capacity to guide Lennox through its cultural maturity in terms of how he could continue to improve everything from purchasing and supply chain to developing new lines of business."



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Todd Bluedorn, who became chief executive officer in 2007, steered Lennox through the Great Recession soon after joining the organization. He focused on cutting costs while increasing investment in R&D.

"When Todd came on board, he brought a discipline of performance: every month, every quarter, we went through financial reviews," recalls Harry Bizios, who served as executive vice president and president of the commercial division until his retirement in 2012. "Under him, Lennox became a team-focused organization where performance mattered above all else. As an outsider, he was able to take Lennox to a very performance-focused organization where those who didn't perform should prepare to be gone. When Lennox went first public, we weren't very good at it, and it wasn't until Bluedorn came on board that we were good at being a public company."

"I think there's a strong aspect of stability that comes along with the performance aspect of the strategies we have put in place under Todd's leadership," adds Doug Young, executive vice president and president and chief operating officer of the residential division. Young agrees that Bluedorn's leadership style is conducive to success at a public company—and particularly well suited to one that had enjoyed steady, long-range investment support during its near-century under family

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ownership. "Unlike other public companies where you have CEOs who get in and have this mindset of 'I've got to make a dramatic return on this. I've got to get the shareholders excited,' Todd's leadership style has been, 'We're going to be here. Let's make the right investments—short term and long term—and if they pan out like we expect them to, they will deliver the return to the shareholder that we expect.'"

Bluedorn arrived just as the Great Recession was taking hold on the economy. From his perspective, the economic downturn presented the opportunity to enact change that might have been difficult to achieve during an upswing. "Even if the recession hadn't happened, we needed to take cost out," explains Bluedorn. "I know it's a cliché line, but I believe one should never waste a crisis, and so I knew it was an opportunity to drive cost out by selling corporate aircrafts, reducing overhead here at headquarters, freezing salaries, and cutting visible things so people could see that we were sharing in the pain. At the same time, I grew up on a farm in a rural area, and I knew of another cliché that applied: we will not eat our seed corn. We were very clear as a team that we had to continue to invest in ideas."

For Bluedorn, this didn't mean that he would still invest in research and development, but he would support investing in operational initiatives. "Doug wanted to build up the distribution but he had been told in the past we couldn't do it because we didn't have enough cash. I don't know why he was ever told that; we had lots of cash. So I said put together the plan and show me. Let's go!" Bluedorn also authorized spending on digitization and building a new plant in Mexico. "So, the team had ideas that we racked and stacked and decided what's most important. We put resources against it as a team and then we cut out everything else. The board was supportive because they had a similar longer-term view."

This strategy diverged from how competitors were deciding to proceed at the time. "When we were in the recession the leadership team made a conscious decision to invest in the business at a time when all of the other manufacturers were pulling back," says Mike Hart, vice president of sales for residential. "Todd and Doug and Terry Johnston and Gary Bedard went

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to the board and said, 'We're going to geographically expand and we're going to build a world-class distribution network and we're going to put 250 stores out in the market and get our product closer to the customer.' Soon we were building out a distribution network that was second to none, we opened two new factories and refurbished another, we re-did our cooling line, re-did our heating line, and we invested in technology to support our customers' ability to buy our product."

The results were evident, says Hart. "We were able to expand our capacity and expand our production. The product coming out of Mexico put us in a better situation to compete in the market for new construction. Our retail space exploded through Costco, Home Depot, and Lowes, and that 15 to 18 percent growth in retail was fueling hundreds of millions of dollars in growth in our customers' business because we were driving leads to our customers, providing tremendous opportunities."

Bluedorn's focus on performance, driving down costs, and investing in aggressive structural change did not preclude him from maintaining a commitment to Lennox's values, especially its dedicated workforce. "We aspire to be a great place to work, and perhaps the most fundamental element of that is that Lennox has to be a safe place to work," says Bluedorn. "We're at about one-tenth the number of accidents that we had ten or eleven years ago; we reduced accidents by 90 percent. Being a great place to work is also about diversity, and the representation of people of color and women within our salaried ranks has doubled over the last eight or nine years; we've gone from lagging benchmarks to being on top of them. There's a lot more to do, but we're headed in the right direction. Another piece I think of being a great place to work is, whether you just want to be an individual contributor for the rest of your life or you want to be CEO someday, you need to have a career plan and you need to have a path to get there by receiving honest, constant feedback on your performance. We have put together systems and processes online so people can track their career paths, we have frank conversations, and we keep track of those frank conversations. I meet twice a year with my direct reports, going two or three levels down depending on the organizations to review all the key

> ***"Soon we were building out a distribution network that was second to none, we opened two new factories, and refurbished another."***
> ***—Mike Hart***

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Lennox came out of the Great Recession with strong residential sales. Mike Hart, vice president of sales for residential, above left, credits the investment in Lennox's distribution network and technology as key to this expansion.

people, all their career paths, all the things that need to be done. And then the final piece that everyone wants to have a great place to work is communication about what's happening and what's going on. We've made investments to do that in video, online, and in town halls and we have metrics that track employee satisfaction, attrition, and diversity."

Lennox has also managed to maintain its culture of strong relationships with dealers. "The thing about Lennox people and their culture, they are highly ethical, top-quality folks who are fantastic business people," says Julie Berdin, president of Arpi's Industries in Calgary. "They're very successful, straight-talking, and transparent, and they promote innovation. But what's most important is their people have an alignment of values, not only within their organization but with us." For Berdin, this spirit is most evident in the partnership between Lennox and dealers in the Feel the Love philanthropic program. Each year, during Canada's Thanksgiving weekend, the employees of Arpi's Industries donate their labor to install a heating system, provided free of charge by Lennox, for a homeowner struggling under the weight of financial or other hardship. "It's not just the furnace installation, because we have so many folks who want to participate that we are doing fall yard cleanups, little repairs around the house, and tidying up the garage. It's a great event."

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Saltillo production supervisor Hugo Vasquez, center with microphone, leads a morning production meeting, where the team reviews the prior day's quality and production results and receives a briefing on the plans for the current day.

Continuing these sorts of programs is critical to maintaining Lennox's culture, says Young. "Holding onto our culture is something that is very important not just to me, but I think a lot of people that were here before the company went public and are still here now. We believe our culture is an asset that we own; we own it individually and collectively, and it's not something that we should take lightly. If something is happening that we don't like, it's up to us to fix it. If we do like it, it's up to us to nurture it—to preserve it and grow it." Young believes this spirit of cultural ownership drives the longevity of Lennox's workforce. "We have many employees who have twenty, thirty, forty, some approaching fifty years with the company. And we have a leadership team that still wants Lennox to be a company where people can approach others, all the way through the ranks. Yes, there is greater accountability and higher focus on performance and results, but we have not lost out on integrity and respect. We've grown but we've matured as a public company, I think, pretty nicely."

Johnston, retired vice president and chief operating officer of the commercial division, believes the key to maintaining Lennox's legacy values is to celebrate them. "Besides being in business for 125 years and building great products, we have a tradition of standing for what we stand for. Everybody's got great products, but not everybody has the same values as we do. And we talk about them all the time, and they are given high visibility around our plants and offices. When we start meetings, we throw our values up on a screen and review them. We are not a perfect company, but one of the things I always like to look at is, what happens when something goes wrong? How does our company behave? And what do we do to try to make it right? In my Lennox experience, our default position has been: let's take care of the customer and then we'll deal with the whats and the whys later. I'm very, very proud of that."

> ***"Holding onto our culture is something that is very important not just to me, but I think a lot of people that were here before the company went public and are still here now."***
> ***—Doug Young***

For Bedard, president and chief operating officer of the refrigeration division, Lennox's history is directly tied to its future. "We've always owned our own distribution, and fifty years ago, perhaps that made us odd. But nowadays, the convergence of logistics, e-commerce,

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New managers at Lennox receive training at the Link Building. Such ongoing enrichment is key not only to improving employees' skills and knowledge but also to maintaining the company's cultural values.

and distribution has really positioned Lennox in a very powerful way for the future. That, in combination with the investments in technology and innovation on the product side, makes for a very exciting time at Lennox. We've made all these investments in the physical infrastructure, and now we are able to tie that in with e-tools. There are a lot of exciting things that you can kind of see are forward looking, but they also go back to some of those core values we've developed over time. So I'm very, very excited to see how that's all going to come together."

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125 YEARS
LENNOX

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