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BUSINESS

## Japan's Daikin to Build \$410 Million Air-Conditioner Factory Near Houston

Manufacturer Claims More Efficient Units But Installation Costs May Be Barrier



Takashi Ebisu, chief executive of Daikin's Goodman Manufacturing unit, at Daikin headquarters in Tokyo. ERIC PFANNER/THE WALL STREET JOURNAL

By TAKASHI MOCHIZUKI and ERIC PFANNER  
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Japan's Daikin to Build \$410 Million Air-Conditioner Factory Near Houston - WSJ

A Japanese maker of air conditioners said it would build a \$410 million factory near Houston, in a bet that energy-efficient Japanese-style units can take share from American designs.

Daikin Industries Ltd. said the factory, set to start operating in early 2016, would expand the capacity of its U.S. subsidiary, Goodman Global, and serve as a hub for Osaka-based Daikin to try to spread the technology it sells at home.

As it opens the new site, in Hockley, Texas, Goodman plans to close other sites in Texas and Tennessee. While Daikin plans no layoffs, about 3,000 employees in Texas and 1,000 in Tennessee will be asked to relocate, and there will be no net addition of jobs, the company said.

"The current Goodman facilities don't have capacity to assemble all the value-added models that Daikin is selling elsewhere," Takashi Ebisu, chief executive of Goodman, said in an interview.

Mr. Ebisu said the new 90-acre Texas factory will reduce manufacturing costs and allow faster customization for U.S. consumers.



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Japan's Daikin Industries, which is targeting the U.S. where air conditioning was invented and popularized, has long had a significant global presence. Shown, a Daikin air-conditioning factory in India. REUTERS

In the U.S., where air conditioning was invented and popularized, many systems today are old-fashioned, electricity-gulping designs, in Daikin's view.

U.S. air-conditioning systems—both commercial and residential—tend to chill air or water in a central unit installed outdoors. The air or water is then moved around to cool individual rooms or areas. Air conditioners from Daikin and other Asian makers deliver chilled chemical refrigerant from a central condenser, also generally installed outdoors, to individual units in separate parts of buildings, where the air is then cooled.

Advocates of the Japanese technology say it provides substantial energy savings and greater temperature control. Among other advantages, heat from the air-conditioning process can be recycled—which is useful in spring or fall, when one side of a building can be too cool and the other too hot.

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The Japanese-style systems could generate energy savings of as much as 34% over conventional U.S. air conditioning, according to a December 2012 study by the U.S. Department of Energy's Pacific Northwest National Laboratory.

Potential downsides cited by critics include the possible need for separate ductwork to bring in outside air for ventilation, which the Japanese systems do not do, though the need for this can vary based on regulations.

Daikin's products also may cost more to install—especially in U.S. buildings fitted for traditional cooling systems.

The recent decline in energy prices, though, may limit interest in conservation among building owners.

In 2012, Daikin bought Goodman for \$3.7 billion from Hellman & Friedman LLC, a private-equity firm, in a deal that vaulted it into the top tier in the U.S., alongside companies such as Ingersoll-Rand PLC's Trane unit and Carrier Corp.

During the fiscal year ended in March, Daikin generated sales of \$3.63 billion in the U.S. The company estimates \$16 billion of air-conditioning equipment is sold in the U.S. annually, one-fifth of the global total.

The 90-year-old Daikin has long had a significant presence in Japan, China and Europe.

So far, U.S. interest is low, with industry data showing well below 10% of commercial units in the U.S. using Daikin's "variable refrigerant volume," or VRV, technology, or comparable systems from other manufacturers.

"The biggest challenge for us is to raise awareness," said Mr. Ebisu, who has been leading Goodman since last May.

In addition to increasing use in commercial buildings, Daikin wants to sell more premium systems to residential users in the U.S., where Goodman has focused on the lower end of the market, Mr. Ebisu said.

Daikin has begun airing TV commercials aimed at consumers, an unusual strategy for the industry. In the U.S., most air-conditioning systems are sold via contractors or dealers, rather than directly to home or building owners, a more common approach in Japan.

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The company is also inviting distributors to Goodman's headquarters in Texas for training. Mr. Ebisu said a major reason for the purchase of Goodman was to obtain the company's sales network, which does business with more than 60% of contractors and dealers in the U.S.

"Most building owners look at price when installing air conditioning," said Don Emanuel, a contractor in New York City, who recently installed a VRV system in a prewar apartment complex on Park Avenue when it was renovated. "However, when the advantages of VRV are explained to them, most of them change their minds because of the saving and versatility."

Benjamin Freas, an analyst at Navigant Research, said Daikin could struggle to stand out. U.S. makers such as Trane and Carrier, as well as South Korean giants Samsung Electronics and LG, have begun making Japanese-style systems. Daikin already faces challenges from other Japanese makers.

Write to Takashi Mochizuki at [takashi.mochizuki@wsj.com](mailto:takashi.mochizuki@wsj.com) and Eric Pfanner at [eric.pfanner@wsj.com](mailto:eric.pfanner@wsj.com)