

## **DAIKIN ADOPTS R-32 FOR KEY HVAC PRODUCTS IN NORTH AMERICA TO REDUCE GREENHOUSE GAS EMISSIONS AND CLIMATE IMPACTS**

Sept. 26, 2019, Washington, D.C. – Daikin companies in North America (Goodman Global Group, Inc.; Daikin North America LLC; Daikin Applied Americas Inc.; Daikin America, Inc.; and Daikin U.S. Corporation) today announced they are developing ducted and ductless residential, light-commercial, and applied products utilizing R-32 refrigerant.

In evaluating alternative, low global-warming-potential (GWP) refrigerants for North America, Daikin—a global technology leader in the heating, ventilation, and air conditioning (HVAC) industry—is focused on reducing greenhouse gas emissions and climate impacts. The company also took a holistic approach to include safety, energy efficiency, and cost-effectiveness. Based on comprehensive evaluation and testing, Daikin concluded R-32 is the ideal low-GWP alternative to R-410A for many key residential, light-commercial, and applied products in North America.

Daikin’s choice of R-32 is based on the beneficial attributes of the refrigerant. Compared to R-410A and certain alternative refrigerants, R-32 can mitigate effects of direct refrigerant emissions by reducing the equipment refrigerant charge. Daikin has found that in comparison to R-410A, R-32 has a drastically lower GWP and could reduce refrigerant charge in certain equipment by up to 40 percent. The company has also found that equipment using R-32 can be more energy efficient and compact—thereby consuming fewer manufacturing resources—when compared to equipment using R-410A or certain alternative refrigerants. Daikin believes that R-32—a pure, single component refrigerant available globally from multiple suppliers—is easier to reuse, reclaim, and recycle when compared to other refrigerants that are blends of R-32 and other components. In summary, Daikin believes R-32 can effectively help to minimize the environmental impact of HVAC equipment.

The choice of R-32 for the North American region is consistent with the wide global acceptance of the refrigerant. In Japan, R-32 is the dominant refrigerant for residential HVAC equipment while in other Asian countries—including China—and in many European countries, the refrigerant has become an increasingly popular choice for HVAC equipment. Daikin has estimated that more than 84 million R-32 residential units have been installed by the industry across 70 countries. According to a Japan Air Conditioning, Heating & Refrigeration News, Ltd. (JARN) report, in 2018 alone, over 25 million residential units using R-32 were sold worldwide, accounting for more than 25 percent of total residential units sold in that year. This number is expected to increase in 2019. Furthermore, in the United States, acceptance of the refrigerant has already begun in some HVAC applications: JARN reports that in 2018, almost half of window air conditioning units sold across the U.S. used R-32.

By selecting R-32 for various ducted and ductless residential, light-commercial, and applied products, Daikin is extending its leadership position in North America. The company was the first to introduce R-32 residential air conditioners and heat pumps globally and has, since 2012, sold more than 21 million R-32 residential units worldwide.

To advance the adoption of R-32, Daikin has committed to share its knowledge and expertise. Earlier this year, Daikin announced its patent non-assertion pledge<sup>i</sup> of identified patents to further facilitate the use of the R-32 in HVAC products. Daikin has also provided education and training programs for the refrigerant—programs that have been supported by many governmental agencies. Daikin’s overarching goal is to ensure that North America can benefit from the use of a refrigerant that provides measurable environmental and performance qualities that will advantage the environment and consumers.

“We know that the net effect of air conditioning on the environment is a combination of the refrigerant used and energy consumed,” said Daikin Applied Americas’ President and CEO Mike Schwartz. “R-32 enables home and building owners to achieve reduced climate impact, superior performance, and operational savings. Daikin is in a unique position as a manufacturer of both HVAC equipment and refrigerants. Our approach has always been to use our expertise to choose the right refrigerant for each application. R-32 is the right low GWP refrigerant choice for many of our residential, light-commercial, and applied products in North America.”

Goodman Global’s President and CEO Satoru Akama said, “Daikin’s choice of R-32 demonstrates our strong commitment as a U.S. HVAC manufacturer to minimize environmental impacts of our equipment including the reduction of greenhouse gas emissions. R-32 brings many benefits including energy efficiency, resource reduction, and overall environmental mitigation. Based on our global experience, we are confident R-32 is the right choice for HVAC manufacturers, contractors, and consumers.”

Daikin’s North American production of R-32 products is the latest step in its efforts to advance technologies that reduce environmental impact and provide consumers superior technology. These efforts will take account of the developments in various North American jurisdictions as they enact appropriate regulations, codes, and standards.

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**About Daikin in North America:**

In North America, several Daikin subsidiaries — including Goodman Global Group, Inc., Daikin North America LLC, Daikin Applied Americas, Inc., Daikin America, Inc., and Daikin U.S. Corporation — work together to advance the future of the heating, ventilation and air conditioning industry. Customers turn to Daikin with confidence that they will experience outstanding performance, reliability, and energy efficiency through industry leading technologies, like the inverter compressor, magnetic bearings, and VRV systems, that create

better outcomes for residential, commercial and industrial applications. All Daikin subsidiaries are subsidiaries of Daikin Industries, Ltd.

**About Daikin Industries, Ltd.**

Daikin Industries, Ltd. is a Forbes Global 2000 company with more than 70,000 employees worldwide and is recognized as one of the largest HVAC manufacturers in the world.

For additional information, visit [www.daikin.com](http://www.daikin.com).

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<sup>i</sup> Details for Daikin's patent pledge can be found at <https://www.daikin.com/patent/r32/pledge/>