

Daikin Exhibits at the COP28 Japan Pavilion

To exhibit “high-efficient inverter air conditioners”
which contributes to 50% energy savings toward achieving carbon neutrality

Daikin Industries, Ltd. will exhibit its “high-efficient inverter air conditioners” which contributes to 50% energy savings at the Japan Pavilion established by the Ministry of the Environment, Japan (MOEJ), at the 28th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 28) held in Dubai, United Arab Emirates (UAE) from November 30 to December 12, 2023.

The Conference of the Parties to the United Nations Framework Convention on Climate Change (COP) is an international conference that brings together leaders from international organizations, national and local governments, NGOs, and leading companies to discuss international trends and the necessary rules for mitigating global warming. The conference has been held since 1995, and this year marks its 28th meeting. The MOEJ hosts the Japan Pavilion at COP 28 and uses the exhibition and side events to globally showcase the excellent products, services, and initiatives for combating climate change from Japan. This will be the first exhibit for Daikin at a COP-related event.

With variable speed technology, “high-efficient inverter air conditioners” precisely control the rotation speed of the air conditioner compressor in line with ambient conditions to reduce electric power consumption by more than 50%^{*1} compared to non-inverter air conditioners. Currently, air conditioners account for about 10%^{*2} of the world’s total electricity demand, but development in emerging countries has been increasing energy demand for air conditioners on average 4% per year.^{*3} The G7 Summit in May and G20 Energy Transitions Ministers’ Meeting in July 2023 highlighted the importance of enhanced energy efficiency and savings as the “first fuel” to achieve net-zero emissions by 2050 at the latest and energy transitions. The role of energy efficiency is becoming further significant internationally, with the International Energy Agency (IEA) indicating the need to double energy efficiency.

While the ratio of air conditioners equipped with energy-saving “inverter technology” has reached nearly 100% of the market in both Japan and Europe, such levels are still low in the whole world including the U.S., Middle East and Africa, and Asia. In order to increase market adoption, it is necessary to raise awareness in each country that “high-efficient inverter air conditioners” can be introduced immediately and are a technology with immediate effects.

Daikin, as a leading company expanding worldwide in the air conditioning industry, understands the importance for the entire industry to reduce the environmental impact of air conditioners to realize a sustainable society. Based on these thoughts, Daikin has not only promoted the expansion of sales and service networks and technology and product development of “high-efficient inverter air conditioners” globally, but also provided the necessary support in each country for the introduction of energy-saving regulations and the training of after sales service engineers to promote the use of these products. To facilitate the spread of high-efficient inverter air conditioners, demand side energy policies are necessary. Utilizing the opportunity of COP 28, Daikin hopes to appeal to COP participants such as Parties, world leaders and observers to contribute to the realization of carbon neutrality through their worldwide use.

*1 Calculated based on Daikin’s demonstration testing

*2 Calculated by Daikin based on IEA/UNEP “Cooling Emissions and Policy Synthesis Report”

*3 Sourced from the IEA Space Cooling Tracking report

Exhibition Summary

Dates: November 30 to December 12, 2023

Theme: High-efficient inverter air conditioners which contributes to 50% energy savings

Main Exhibition Details (Plan)

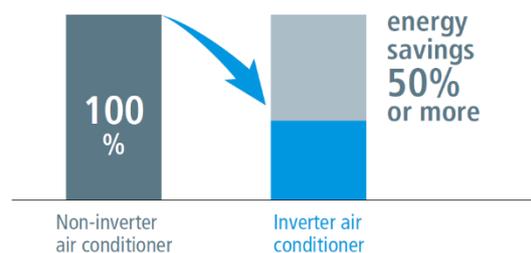
- Video that shows the inverter structure
- Inverter demonstration model
- Outdoor unit of a high-efficient inverter air conditioner (presentation of internal structure)
- Overview of Daikin global sales and after sales service networks and related information

About Spreading the Use of Inverter Products

Inverters are frequency conversion devices that control electrical voltage, current, and frequency. Inverters precisely control the compressor motor, the heart of an air conditioner. Furthermore, in addition to having modified conventional motors and heat exchangers, inverter air conditioners reduce by 50% or more less energy usage than non-inverter models.

To promote the spread of inverter products in homes worldwide, Daikin has partnered with China's largest air conditioner manufacturer since 2008 and developed an inverter air conditioner at a relatively low price especially for the Asian cooling-only air conditioner market in 2014. Daikin has also worked to develop a mechanism for evaluating the energy efficiency performance of inverter products. To ensure this performance is measured properly, Daikin worked alongside Japan's air conditioning industry to propose the adoption of the seasonal energy efficiency ratio (SEER) as an indicator. This approach has been used in ISO standards since 2013. In emerging countries, the use of SEER is starting to spread. Daikin is also working with governments and industry groups in Latin America, the Middle East, and other areas to introduce indicators and standards as well as create energy labelling systems as part of support for creating evaluation standards.

Comparison of Energy Consumption (example)



*Calculated based on Daikin's demonstration testing.

Inverter Products as Percentage of All Residential Air Conditioners Worldwide

Market	Inverter percentage
Japan	100%
EU	100%
Australia	100%
China	97%
India	70%
Brazil	55%
Saudi Arabia	37%

Source: BSRIA World Air Conditioning Overview 2023