

Air conditioners are heat pumps. How air conditioning systems can play a key role in lowering gas consumption this winter

Amidst uncertainty over supply and pricing of natural gas, European member states are looking for ways to reduce their gas demand by 15% in the upcoming winter. Part of the solution lies in alternative sources of heating, such as using air conditioning systems already in place today. In fact **an air conditioning system is an air-to-air heat pump**, capable of heating buildings in a very efficient and effective way. In the case of a 600m² building, using the air conditioning system as an air-to-air heat pump to heat can help save up to 112,880kWh of natural gas and **reduce heating costs by 25%**.

Vienna, October 2022 – Given the challenges the EU is currently facing, the European Commission drew up the European Gas Demand Reduction plan¹, recommending member states to reduce gas use voluntarily by 15% between now and March 2023. According to the EU, large savings can be achieved in the way we heat and cool our buildings. It is estimated that nearly 30% of commercial buildings in the EU are still heated by gas² while some are also equipped with an air conditioning system. It is often not understood that an air conditioning system is an air-to-air heat pump, which can be used for efficient and effective space heating. **Buildings can significantly and immediately decrease their gas demand by using their air conditioning system in heating mode and simultaneously lower overall costs.**

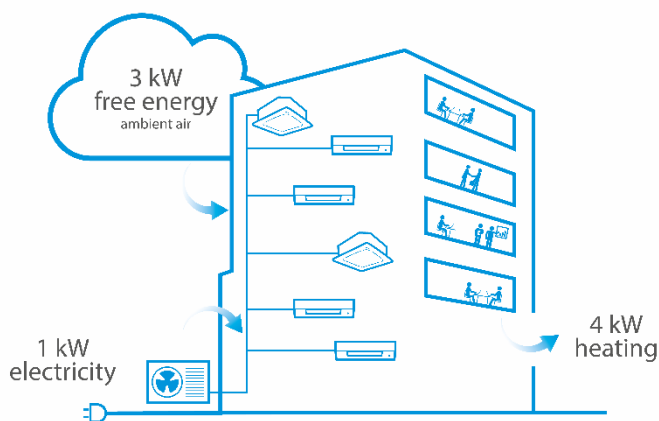
Reducing the gas bill

Calculations from leading heat pump manufacturer Daikin show that using an air conditioning system for heating significantly reduces natural gas demand. In the example of a 600m² office building, a VRV air-to-air heat pump avoids up to 112,880kWh of natural gas use compared to traditional space heating³. On top of that, businesses can reduce their energy cost with nearly 30% thanks to a heat pump. For a business operating in Belgium this means reducing its heating cost from 25,237 Euro to 17,695 euro per year⁴.



Why is a heat pump so efficient?

An air-to-air heat pump has both an indoor and an outdoor unit. When operating in cooling mode, the indoor unit extracts heat from the inside and transfers it to the outdoor unit, which rejects the heat to the outside. The operation can, however, be reversed to heat indoors, using heat extracted from the outdoor air by the outdoor unit. Even at outdoor temperatures well below 0°C, an air-to-air heat pump will still efficiently provide heating. **A heat pump is up to four times more efficient than a gas system** as three-quarters of the energy used for heating comes for free from the outside air while only consuming a quarter in electricity use.



Further reducing energy use

If a building already has a heat pump installed, it can be optimized by using energy-saving systems that will further reduce the energy bill. Intelligent cloud systems like **Daikin's Cloud Service** provides clients with access to tools that not only detect excessive energy use in parts of their building, as these systems also allow them to act fast and intervene where needed.

Daikin, front runner of sustainable transformation in HVAC market

As a leading heat pump company, Daikin supports the European energy transition with its various heat pump solutions developed and manufactured in Europe. With its Environmental Vision 2050, the company aims to be carbon neutral throughout its entire value chain and life cycle of products and solutions by 2050. With a network of locally trained experts, the company will help its customers to decarbonize buildings and create a healthy environment for generations to come.



References

¹ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS "Save gas for a safe winter" <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0360>

² Energy balance – Final consumption – other sectors – commercial and public services – energy use: <https://ec.europa.eu/eurostat/databrowser/bookmark/5463efac-cd35-4d4c-b027-d706050cdf7f?lang=en>

³ Calculated by Daikin's Seasonal calculator available on Daikin's business portal (registration needed) https://my.daikin.eu/denv/en_US/home/applications/software-finder/solutions-seasonalsimulator.html, calculated for a 28HP VRV heat pump with 15 indoor units connected, with estimated heat load of 100W/m²

⁴ Based on V-test performed on 05/10/2022 at <https://vtest.vreg.be/> with Engie Flow gas PRO Gas contract: 25,236.90 euro/year for traditional heating (112,880kWh of gas) vs Engie Flow PRO electricity contract: 17,694.78 euro/year for using a VRV systems for heating (28,192kWh of electricity) (prices include energy cost, distribution cost, taxes, excl. VAT for Ostend, Belgium)

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About

Daikin Airconditioning Central Europe

Daikin Airconditioning Central Europe was founded in 1999 with headquarters in Vienna, Austria, as a subsidiary of Daikin Europe N.V.. The company's portfolio comprises products and solutions for heating, cooling, ventilation, air purification and refrigeration. More than 560 employees and 2,500 partners are responsible for sales and service activities in 16 countries in Central and Eastern Europe (Austria, Albania, Bosnia Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Kosovo, Montenegro, Moldova, North Macedonia, Poland, Romania, Serbia, Slovakia and Slovenia). With Your Daikin World at the Vienna headquarters, the HVAC-R industry and the construction sector has access to a modern experience center for co-creating tailor-made solutions for hotels, retail, offices or large commercial applications. It also includes one out of 9 trainings-centers in the region of Daikin Central Europe.

Daikin Europe N.V.

Daikin Europe N.V. is a subsidiary of Daikin Industries Ltd. and the leading provider of heating, cooling, ventilation, air purification and refrigeration technology. The company designs, manufactures and brings to market a broad portfolio of equipment, as well as tailored-made solutions for residential, commercial and industrial purposes in Europe, Middle East and Africa. To date, Daikin Europe N.V. has over 12,000 employees across more than 59 consolidated subsidiaries. It has 12 major manufacturing facilities based in Belgium, the Czech Republic, Germany, Italy, Spain, Turkey, Austria and the UK. The headquarters of the Daikin Europe Group are in Belgium, Ostend. The company was established in 1972, production in Europe started in 1973.

Daikin Industries Ltd.

Daikin Industries Ltd. based in Osaka, Japan, employs around 89,000 people worldwide and achieved sales of around 23,7 billion Euro in



fiscal year 2021 (April 21 – March 22). The company is the global market leader for heat pump and air conditioning systems, as well as air filtration. Daikin Industries Ltd. is the only air conditioning manufacturer in the world that develops and produces all important components such as refrigerants, compressors and electronics in-house.

Media contact

Doris Passler
Corporate Communications Central Europe
T.: +43 664 24 56 444
Mail: passler.d@daikin.at
Daikin Airconditioning Central Europe HandelsgmbH
Lemböckgasse 59/1/1
1230 Vienna
Austria

