**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%.**

Given the challenges the EU is currently facing, the European Commission drew up the European Gas Demand Reduction plan (1), 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 gas (2) 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 heating (3). 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 year (4).

**CALL OUT BOX**

**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.

Find out more here <https://www.daikin.eu/en_us/press-releases/your-ac-is-a-heat-pump.html>

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-seasonal-simulator.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)

**About Daikin Europe**

Daikin Europe N.V. is a major European producer of air conditioners, heat pumps and refrigeration equipment, with approximately 10,000 people employed throughout Europe and 14 major manufacturing facilities based in Belgium, the Czech Republic, Germany, Italy, Turkey, Austria and the UK.

Globally, Daikin is renowned for its pioneering approach to product development and the unrivalled quality and versatility of its integrated solutions. With more than 90 years‘ experience in the design and manufacture of heating and cooling technologies, Daikin is a market leader in heat pump technology.

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