HARP FACTSHEET

Heat Pump

Heat my home and water with the heat pump

If your heating system is older than 15 years, it might be inefficient and highly energy consuming. Replacing your heating system with a more efficient solution will help you reduce your energy bill and additionally keep your home more comfortable, improve air quality, increase your home's market value and contribute to reducing global CO_2 emissions.

60% of the heating appliances installed in the EU are old and inefficient (energy class C or lower) — **60%**

A heat pump can cover the complete needs for heating and hot water, as well as for cooling — **100%**

In 2019, the European geothermal heat pump market reached a milestone of 2 million heat pumps installed — **2 millions**

Aero and geothermal heat pumps can reach efficiencies on primary energy between 110/130 and 140/190, respectively, meaning they produce more useful energy than they consume. — **110-190%**

✓CHECKLIST

Heat pump fits my home because

- ✓ I need a water and/or space heating system
- ✓ I want to reduce my energy bill by using energy that can be extracted from the ambient air, water or ground
- ✓ I want to install the most efficient technology
- ✓ I have access to a stable electricity network
- ✓ I have space for the installation
- ✓ Improving air quality is important to me
- ✓ A system with the cooling function would be a great option for my house
- ✓ I want to reduce my environmental footprint
- ✓ I want to increase my house value

HOW DOES THE HEAT PUMP WORK?

A heat pump is a well-known technology that can provide heating, cooling and hot water. Using a heat exchanger, it can extract energy from air (aerothermal), ground (geothermal) or water (hydrothermal) and use it to provide heat for space heating and hot water. This conversion is done via a compressor, which needs electricity to run but the global balance is fair and positive for environment and climate. The efficiency is above 100% and it is the most efficient technology that exists. There are diverse models and types of heat pumps that can be easily adapted to the needs and spaces of every house. Combined storage tanks are often installed to stock heat for hot water and space heating

DID YOU KNOW?

Aerothermal heat pumps make good use of the heat drawn from the air but are more sensitive to variations in the outside temperature, differently from geothermal heat pumps that benefit from the ground's stable temperature all year round.

Photos: ©EHI

DID YOU KNOW?

Aerothermal heating systems need less investment and are easy to install, but geothermal heat pumps, despite higher initial cost, guarantee a quick return on investment if the heating needs are high enough. Thus, aerothermal heat pumps can be a better choice when renovating, while geothermal heating systems are often chosen for new constructions.

BENEFITS

- ✓ Heat pumps use local renewable energy
- ✓ Any geothermal heat pump substantially contributes to the reduction of greenhouse gases emissions and combined with renewable electricity the technology is carbon free during operation
- ✓ Heat pumps are easy to use
- ✓ Improved surrounding air quality
- ✓ Highly energy efficient
- ✓ Higher real estate value
- ✓ Suitable for different buildings and needs due to the high variety of heat pumps models and technologies.

DISADVANTAGES

- × Noise pollution from outdoor units of air heat pumps
- × Air heat pumps are less efficient at low outside temperatures, a further heat generator can be necessary if insulation is insufficient
- × The energy cost will depend on electricity price
- × A good insulated home is needed to benefit the high energy savings

HEAT PUMP ONLY FOR DOMESTIC HOT WATER, IS IT POSSIBLE?

If you are only looking to renew your water heater, there are also diverse heat pumps solutions on the market solely for domestic hot water preparation. The most efficient solutions on the market present an A or A+ energy class, on a F to A+ scale, and can be very competitive, allowing you to reduce your electricity bill.

…and if heat pump is not the best option for me?

Check up on numerous efficient heating technologies options (such as biomass boilers, solar heating system, hybrid heating, among others)!

Do not hesitate to consult a professional to find the most suitable heating option for your home.

Where can I find more information about the functioning, installation, national situation, financial help, and other heating systems?

Visit:

www.heating-retrofit.eu

HARP (Heating Appliances Retrofit Planning) project gathers 18 partners from six European countries. The goal is to motivate consumer to plan the replacement of their old and inefficient heating system, with more efficient and renewable heating solutions.
The HARP online tool will help you check the energy efficiency of your current heating system and find a suitable replacement solution based on the most efficient alternatives available on the market. Furthermore, the HARP will straiten your contact with professionals that can support you on the replacement process, as well as provide more information on available incentives. Learn more about energy efficient heating in: www.heating-retrofit.eu

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