

## Hybrid system

*Heat my home and water with a Hybrid appliance*

*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 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<sub>2</sub> emissions.*

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

**60%**

A hybrid system covers complete needs for heating, cooling and hot water

**100%**

### WHAT IS HYBRID HEATING?

A hybrid is an appliance or a system of appliances which combines at least 2 different energy sources and whose operation is managed by a common control. The most common product is the hybrid heat pump (electric heat pump + gas condensing boiler) – in some countries referred to as hybrid boiler.

Hybrids are versatile: they combine some of the best features of various heating technologies, to provide high thermal comfort in various building types. This makes hybrids particularly suitable to substitute old and inefficient heaters in existing buildings.



### DID YOU KNOW?

Hybrid systems can be installed in almost any building, regardless of its energy demand. For a lot of existing buildings, a simple switch from a gas or oil boiler to renewable heat is often not possible. Relying exclusively on a heat pump or solar thermal collectors – delivering low-temperature heat – is often not possible, as most existing buildings are not equipped with an adequate low-temperature heat transfer system.

## ✓ CHECKLIST

### Hybrid heating system fits my home because

- ✓ I need a water and/or space heating system
- ✓ I want to reduce my energy bill by using renewable energy sources, such as air, water or the ground source heat
- ✓ Improving air quality is important to me
- ✓ I want to reduce my environmental footprint
- ✓ I want to increase the value of my house
- ✓ I don't want to be dependent on a single energy source



Photos: ©EHI

## DID YOU KNOW?



Mix and match for optimal results: each technology and each energy source has its own advantages as well as downsides. This has led manufacturers to consider the feasible combinations of existing technologies and energy sources, in order to maximise their benefits and compensate their weaknesses. Hybrid systems can offer tailor-made solutions to respond to diverse heating needs.

### BENEFITS

- ✓ Reducing energy consumption
- ✓ Great energy efficiency and CO2 emissions reduction: up to 80% less than with an old and inefficient non-condensing boiler
- ✓ Combining two efficient heating technologies allows reaching optimised efficiency of the whole system and incorporating renewable energies
- ✓ Help manage the pressure on the electricity grid, limiting electricity demand peaks thanks to condensing technology
- ✓ Where dynamic prices are implemented, people may save on electricity bill, shifting their consumption to times when demand, and prices, are low

### DISADVANTAGES

- ✗ An outdoor space is required
- ✗ Noise pollution from outdoor units of hybrid heat pumps
- ✗ Cost of final energy consumption depends on two energy carriers (i.e. two different prices)
- ✗ Requires a broader skill set of installers

### HELPING THE GRID MANAGE MORE RENEWABLE ELECTRICITY SOURCES

The energy transition in Europe is a big opportunity but also a challenge for the electricity grid. Naturally, renewable sources like solar and wind power provide volatile electricity. Hence, an unbalanced grid is the biggest challenge here. An increased market share of hybrids offers an opportunity for the heating sector to do its part to help manage the pressure on the electricity grid of the future, primarily based on renewables. Such balancing can happen as 'load shedding' when switching from the heat pump to the condensing boiler, at times when electricity demand is high, and the grid is stressed.

*...and if hybrid heating system is not the best option for me?*



*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:*

[EN](#)

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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 [our website](#).



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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 847049. The sole responsibility for this content lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.

[www.heating-retrofit.eu](http://www.heating-retrofit.eu)



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