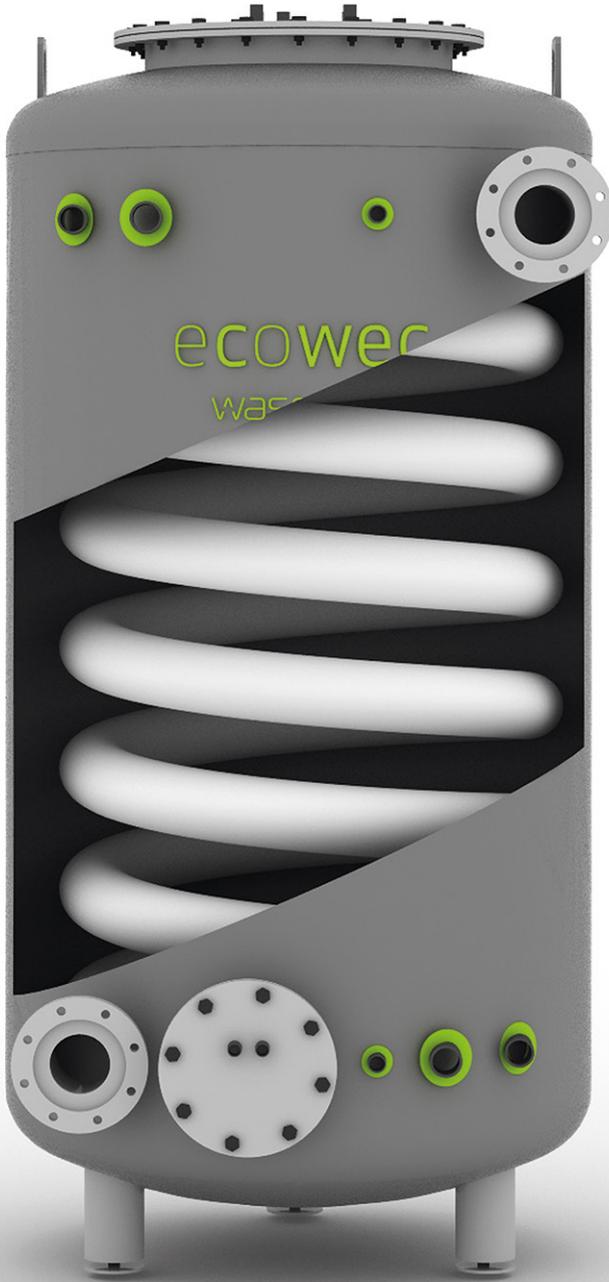


A new  
**innovation**  
from Finland



Recover and reuse energy with  
the **eCOWEC** hybridheat  
exchanger

## Savings tip

Don't lose energy down the drain.

Buildings, including residential housing, are a major source of emissions.

Finns use up to 155 litres of water a day, around 40% of which is hot water.

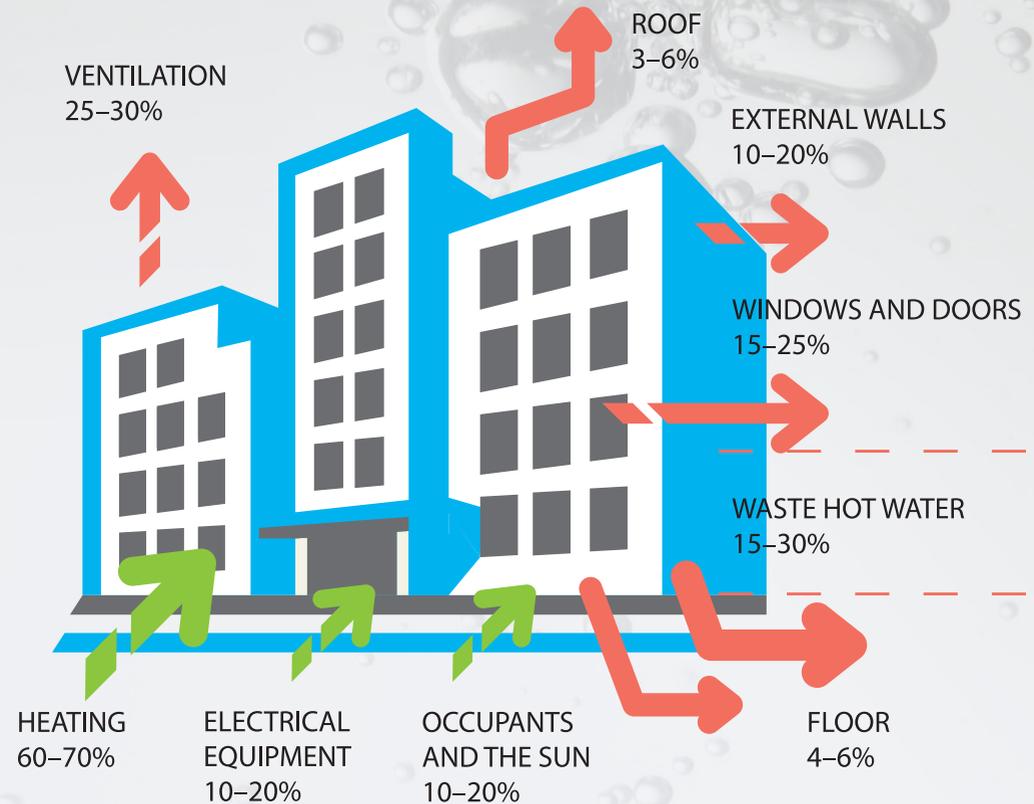
Currently, around 30% of the energy used to heat blocks of flats is lost down the drain with hot domestic water. In new zero-energy blocks of flats, the energy tied up in the hot water will soon account for more than 50% of the building's thermal balance.

In Finland, homes lose 7.1 TWh of energy down the drain each year.

This is equivalent to around a million tonnes of coal, which is more than 25% of the coal used in Finland. Burning this amount of coal in a power plant results in up to 2.5 million tonnes of CO<sub>2</sub> emissions (Source: Motiva, Statistics Finland)

In addition, even more emissions are generated by residential buildings, hotels, spas, public buildings, and industry, all of which lose energy in the form of heat from refrigeration, exhaust air, and wastewater.

## THERMAL BALANCE OF A RESIDENTIAL BLOCK OF FLATS



## The Ecowec™ hybrid heat exchanger is a building-specific wastewater heat recovery solution.

The Ecowec system recovers heat from wastewater and cycles it back to the heating system.

Performed via a simple heat-transfer process, the heat recovery does not require electricity or any purification procedures in order to function. And, for an added bonus, the system is almost maintenance-free. **What makes the system unique is its ability to process blackwater (wastewater from toilets),** rendering the device suitable even for use with one-pipe drainage systems.

In addition to wastewater systems, the Ecowec hybrid heat exchanger can be connected to other heat sources and various combinations of them.

It can transfer the heat recovered from these sources easily and efficiently to various applications. **With an Ecowec solution, energy recovered from wastewater can be reused to heat the building or produce hot water.** The Ecowec hybrid heat exchanger is suitable for use both in new buildings and on properties undergoing renovation, and it works with all types of heating systems.

### Heat sources



Wastewater



Exhaust air



Vapour and heat from refrigeration systems



Process water



Solar heating and electricity



Pools

### Applications



Heat pump



Domestic water



Heating



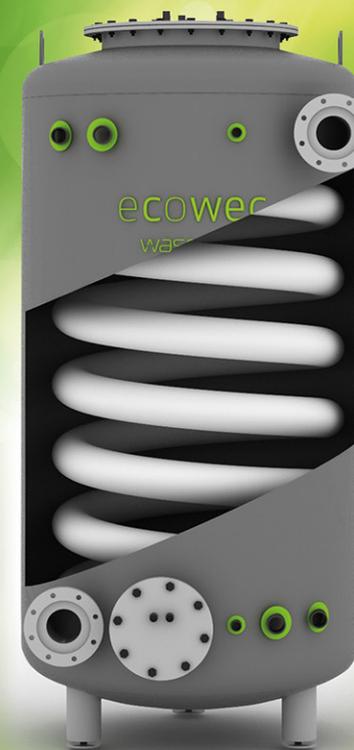
Processes



Heating for air conditioning



Pools



## ■ Savings through the Ecowec™ hybrid heat exchanger

- It helps you shave up to 25% off your heating-energy costs
- It enables the installation of a smaller heating system
- It improves your heating system's efficiency
- It helps to reduce emissions
- It is more cost-efficient than many other energy-saving solutions
- The investment pays for itself in 10 years or even much less
- It pays for itself many times over, with a return on investment (ROI) of more than 100

## ■ Applications

- Residential buildings
- Industrial facilities
- Public buildings
- Hospitals
- Office premises
- Public pools and spas
- Both new buildings and renovated ones
- Properties with any kind of heating system

## ■ Features

- Suitability for use even with one-pipe drain systems
- No storage of wastewater at any point
- Compactness – the unit requires only 1 m<sup>2</sup> of floor space
- Suitability for both new construction and renovation projects
- Quick and easy installation
- An impact of 14 kWh/m<sup>2</sup> per year on the building's energy-efficiency
- Suitability for use with all heating systems
- No need for purification
- No need for electricity
- Nearly maintenance-free operation
- Recovery of, in general, 30–70% of the heat from the wastewater
- Manufactured in Finland

An energy-efficient solution, the Ecowec hybrid heat exchanger is easy on the wallet and the environment alike.

It helps you shave up to 25% off your heating-energy costs

The Ecowec system is an eco-friendly solution that pays for itself in a very short period of time. With it, you can shave up to 25% off your heating-energy costs in an environmentally friendly way, without using electricity or causing added emissions. At the same time, the system helps to decrease carbon dioxide emissions and reduce the property's carbon footprint.

A high-speed photograph of water being poured, creating a dense spray of bubbles and droplets. The water is clear and bright, with many small, spherical bubbles of varying sizes scattered throughout the scene. The background is a light, neutral color, making the water and bubbles stand out prominently.

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