

# Save energy Reduce opex Improve comfort




## Improve efficiency and comfort in your hospital with Grundfos Energy Optimization

Grundfos energy optimization services help you dramatically reduce energy consumption and consequently the carbon footprint of your hospital by identifying opportunities to increase the overall efficiency of your pumping systems. In addition to energy savings, the optimization will also improve HVAC system reliability and occupant comfort.

**GRUNDFOS** 

Possibility in every drop





**73%**

Energy consumption currently accounts  
for 73% of the world's CO<sub>2</sub> emissions\*

\*Source: United Nations Water



# Pave the way for a greener future with energy optimization

There is a strong global focus on environmental consciousness and responsibility. As a consequence, governments in most countries now strongly encourage companies to take steps to reduce their energy consumption and consequently their carbon footprint.

## Climate change calls for increased responsibility

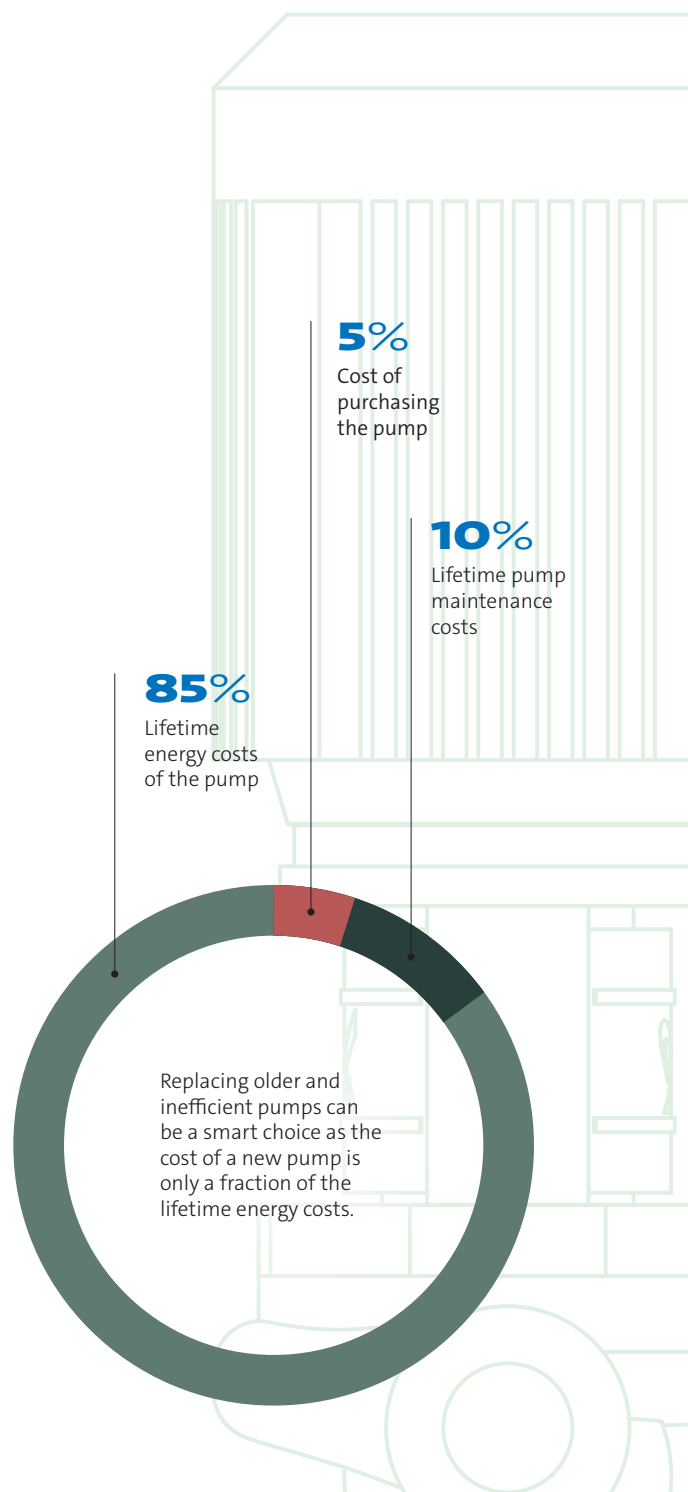
Most companies have targets around reducing operating costs, energy consumption and lowering CO<sub>2</sub> emissions. By replacing existing systems with optimized and sustainable solutions, you can fulfil your sustainability targets while supporting the global effort to tackle climate change.

## Assessing your pumps and systems can reveal a hidden potential for both energy savings and improved comfort

Energy optimization is the process of evaluating relevant pumping systems to identify opportunities for improvements that will reduce energy consumption. In addition to energy savings, Grundfos optimization will ensure peace of mind by also substantially increasing reliability.

## Legislative pressure creates an urgency for action

All over the world, governmental entities are setting up intensified legislative frameworks; buildings, appliances and even entire corporations must live up to certain norms and standards for resource consumption as well as for their impact on the societies and environments in which they operate. Let Grundfos help you reduce your energy consumption and reach your efficiency targets.



# Get an estimate of how much energy can be saved in your buildings

## Energy Optimization Service Options

The Grundfos Energy Optimization portfolio consists of multiple tools depending on each customer's needs. From the easily and quickly employed Energy Check to the more advanced and tailored Energy Audit. Common for all tools is that they can tell you how much energy you are able to save in your buildings.

## Energy Check

The Energy Check is a theoretical approach that uses pump data taken from the nameplate. The flow, head and the pump's motor power are included along with the age of the pump and its operating hours. The advantage of the Energy Check lies in the quick process of gathering the necessary data to determine the potential savings. If more specific information is required, the Energy Check Advanced is recommended.



## Energy Check Advanced

The Energy Check Advanced uses actual pump data including the flow, head and the pump's motor power along with the age of the pump and its operating hours. The data is taken from the customer's own measuring equipment, Building Management System or from spot measurements. The main advantage is that actual pump-related data is used, thus giving a more precise energy saving potential. It's a relatively quick process to gather the necessary pump data and calculate the potential savings. If more specific information is required, an Energy Audit is recommended.

## Energy Audit

In an Energy Audit, measuring equipment is attached to the pump and surrounding pipe work and left to monitor the activities of the pumping system during a relatively short and well-defined period. This data is stored on a data logger and inputted into a diagnostic tool developed by Grundfos, specifically designed to identify excessive energy consumption in any kind of pumping system. The result lets you compare the energy consumed by your present pumping system to that of a more efficient pumping system using the data collected during the monitoring period. The whole system is audited to establish the full energy saving potential.



# Attractive payback time

A comprehensive report will disclose how much energy can be saved and at which cost.

The energy optimization process will mostly take place in utility rooms and will not disturb your operations.



# Changing a pumping system affects the energy consumption

Based on Grundfos' extensive history within optimizing pump operations globally, the largest energy savings potential for pump operation is found in the control system and system design.

Grundfos delivers the optimal combination of pumps, drives and auxiliary components for a specific application, incorporating intelligent control features and functions and building on application knowledge and experience. Grundfos application control allows easy integration of pumps, drives, measurement, controls, protections, and communication, saving valuable engineering, installation and commissioning time.

## Energy optimization ensures peace of mind

The optimization process is all about finding ways to reduce your energy consumption, lower your carbon footprint and ultimately reach your sustainability targets. Let Grundfos free up your resources and ensure total peace of mind.

Besides providing energy savings, energy optimization will also improve reliability, lower operating costs and extend the lifetime of both pumps and system.



## Discover your energy savings potential

If you want to read more about how you can optimize energy consumption in your hospital, please visit:

[grundfos.us/energy-optimization](https://grundfos.us/energy-optimization)



## Health care facility reduces CO<sub>2</sub> emissions by 41.23 ton per year

In an Italian health care facility, the heating and cooling water system data showed they were able to substantially reduce the energy consumption and carbon footprint of their buildings.

A Grundfos Energy Check revealed a potential to reduce emissions by 41.23 CO<sub>2</sub> t/yr. The pump upgrade could save 126,477 kWh per year with an initial investment cost of \$98,000.

The payback time of the investment amounted to 2.85 years.

Application  
**Heating and  
Cooling Water  
System**

Country  
**Italy**

Energy savings (kWh/yr)

**126,477**

Investment cost (\$)

**98,000**

Reduced emissions (CO<sub>2</sub> t/yr)

**41.23**

Payback time (yr)

**2.85**



# We believe it's possible to reduce energy consumption and improve indoor comfort.

Grundfos energy optimization services can help you dramatically reduce energy consumption and CO<sub>2</sub> emissions, while significantly improving HVAC system performance and occupant comfort. Schedule a no-obligation energy optimization consultation with a Grundfos Service Specialist at: [grundfos.us/energy-optimization](https://grundfos.us/energy-optimization)

Visit [grundfos.us/pei](https://grundfos.us/pei) to learn more about Department of Energy (DOE) pump energy index (PEI) requirements and PEI ratings on specific Grundfos models.