



Case | Healthcare in Italy

# Energy check reveals substantial energy savings potential

Italian healthcare clinic slashes energy consumption with Grundfos Advanced Energy Check

With a customised OpEx solution, Grundfos Italy quoted an end-to-end project to the customer, a highly specialised healthcare

centre, Policlinico di Monza, who was able to pay for the new pumps and services with the money saved from the upgrade.

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Possibility in every drop

## Executive summary

With a customised OpEx solution, Grundfos Italy quoted an end-to-end project to the specialised healthcare centre, Policlinico di Monza, to help them reduce their energy consumption. A Grundfos Advanced Energy Check quickly revealed a huge energy savings potential and just one year after the installation, the customer is able to pay for the new pumps and services with the money saved from the upgrade. Based on substantial energy savings amounting to EUR 31,619\* per year, the customer is looking at upgrading other clinics as well.

## The situation

Policlinico di Monza is a privately owned, highly specialised healthcare centre situated in northern Italy, close to Milan. It's part of a healthcare group consisting of 22 clinics in Italy and Romania and offers a wide range of personalised healthcare treatments.

The state-of-the-art hospital was spending an excessive amount of energy due to high-consumption pumps with IE2 motors and no VFDs. As part of their aftermarket sales activities with the customer, Grundfos Italy conducted an on-site inspection in the clinic to discuss possible energy optimisation services and OpEx solutions.

## The solution

After the inspection, Grundfos collected existing pump data and working hours from

the 19 pumps installed in the clinic to prepare an energy check. An energy check is a detailed analysis of the current pump performance that helps identify potential energy savings in the pumping system. The energy check disclosed that the three main circuits in the system accounted for 55% of the total energy consumption and therefore showed the most promising savings potential.

To offer the customer more data and an even better foundation for informed decision making, Grundfos Italy proposed to do an Advanced Energy Check, monitoring the clinic's entire energy consumption over the course of one week. Using sensors to create the exact load profile helps predict more accurately the possible energy savings the energy optimisation activities will provide.

At the end of the monitoring period, it was clear to the Grundfos team of experts what needed to be done. They proposed to install new TPE3 pumps and NBE pumps in the clinic, replacing the existing pumps.

Convinced by the promising savings potential, Policlinico di Monza opted for the full customised Energy Optimisation Services package and OpEx solution including pumps, installation, commissioning, maintenance agreement and spare parts. A package deal offering the customer complete peace of mind.

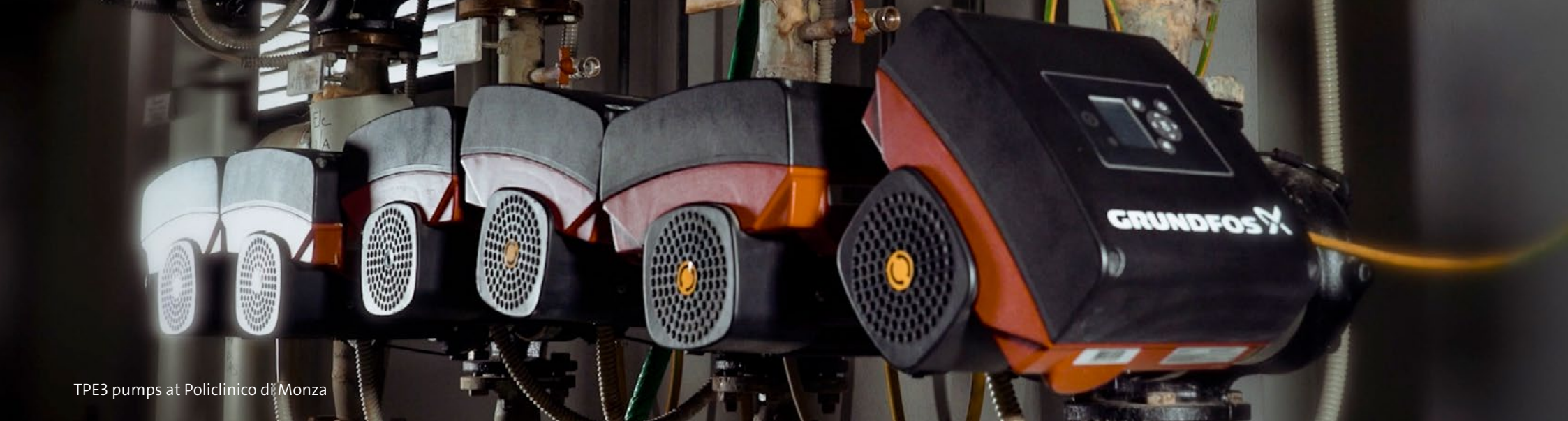


Enrico Chiozzi, Technical Director, Policlinico Di Monza SPA

**“We chose Grundfos because at the time of the upgrade, we didn’t have much budget to spare and this solution was the only one requiring zero budget (OpEx) and zero risk, so we could only see positives in this solution.”**

Enrico Chiozzi, Technical Director, Policlinico Di Monza SPA

\*Source: The calculations are derived from the Energy Check Report conducted by Grundfos on 20 September 2022.



TPE3 pumps at Policlinico di Monza

### The outcome

One year after the new and high energy-efficiency pumps had been installed and commissioned, Grundfos went back to the Policlinico di Monza clinic to collect new energy consumption data from the site. The Grundfos Report based on the initial Advanced Energy Check one year prior had calculated estimated savings of 123,000 kWh due to energy optimisation activities, but after the energy consumption had been measured once again on site, it was clear that the actual energy savings were even greater. Grundfos measured 126,000 kWh\* saved per year. That's a 49%\* energy reduction and an astounding EUR 31,619\* saved per year – a substantial amount for the clinic.

In fact, the clinic is able to pay for all the new pumps, the energy optimisations and services

with the money saved from the upgrade. This is possible because 95% of the life cycle cost of a pump is related to energy consumption and to service and maintenance (and only 5% relates to the pump's purchase price). After just 2.85 years\*, the investment will have paid for itself and it therefore makes good sense to invest in the most efficient pumps on the market.



But upgrading pumps can have other benefits as well. By deciding to invest in greener and more energy efficient pump solutions, Policlinico di Monza brings down its carbon emissions by 41.23 t/year\*. The remarkable savings achieved in the Italian healthcare centre have paved the way for a new possible project evaluation with the customer.

*“With this solution, we managed to reduce the energy consumption of our pumping systems by around 49%, which is about 126,000 kilowatts saved per year. We are now assessing another two hospitals with much greater potential in terms of savings hoping to see similar results.”*

Enrico Chiozzi, Technical Director, Policlinico Di Monza SPA



Explore the TPE3 pumps at Grundfos.com



\*Source: The energy savings calculations are derived from the Energy Check Report conducted by Grundfos on 20 September 2022.

## Grundfos supplied

Grundfos supplied an end-to-end project with Energy Optimisation Services and OpEx solution including pumps, installation, commissioning, maintenance agreement and spare parts.

The new pumps comprise:

- 2 TPE3 D 80-120
- 3 TPE3 D 50-150
- 2 TPE3 D 65-150
- 3 TPE3 D 40-120
- 2 NBE 100-200/178
- 2 NBE 150-200/218-208
- 2 NBE 80-160/161

**“I liked the Grundfos solution very much because it was a turnkey solution, so I didn’t have to manage several different suppliers. And the Grundfos solution meant we could move fast from design to installation.”**

Enrico Chiozzi, Technical Director  
Policlinico Di Monza SPA



Controlling the NBE pump



Explore the NBE pumps  
at Grundfos.com



NBE pumps at Policlinico di Monza

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