When Verdo needed to replace its main pumps, the plant chose a solution that involved bigger pumps, lower supply-pipe temperature and guaranteed energy savings.

THE RIGHT MAIN PUMPS

Main pumps are at the very heart of any district heating system and efficiency, strength and reliability is everything. When Verdo – a completely bio-fuelled CHP plant in Denmark – needed to replace its main pumps, the plant seized the opportunity to renew its fleet altogether.

Project Manager Jesper Thillemann Petersen was in charge of choosing the new solution, and he explains: “We supply district heating 365 days a year to more than 36,500 households, and our district is growing. We have a big responsibility towards existing customers, future customers and the environment. That means we have a very clear idea of what we want from our main pumps: extreme reliability, a strong track record, and a high hydraulic efficiency”.

THE GRUNDFOS SOLUTION

Grundfos was able to offer Verdo the perfect combination of size, reliability and efficiency. The plant was supplied with some of Grundfos’ largest HS pumps, complete with IE3 motors for high efficiency, top pull design for easy maintenance and double volute design for completely balanced hydraulics. The plant is now ready to supply the growing city of Randers with reliable, green district energy for decades to come.

THE GRUNDFOS DELIVERY

PRODUCTS:
- 10 HS and 2 NKG pumps
- Combined capacity: up to 9,700 m³/h in PN25
- Motors: up to 630 kW

LOWER SUPPLY-PIP TEMPERATURE:
- Winter: from 95 °C before replacement to 78 °C after replacement
- Summer: from 84 °C before replacement to 74 °C after replacement

INCREASED CAPACITY:
Verdo’s thermal supply capacity has been increased from 40 MW to 60 MW to handle the expected growth of one of the many districts that Verdo serves with district heating.

Photo: Distribution board technician Martin Gjesing keeps the engines running
VERDO FACTS

Verdo is a green energy provider based in Randers, Denmark. It is determined to be the greenest, most efficient energy provider in the country, which is why it is fuelled exclusively by biofuels in its CHP plant at Randers. Verdo is also one of the biggest traders in Europe within different types of biomass such as wood, cocoa pellets and olive stones.

Capacity: Net 48 MW power and 140 MW thermal energy, plus 133 MW capacity in form of peak load / back up boilers

Customers: 54,000 power customers, 36,500 heating customers

Pumps: With more than 80 pumps ranging from 0.12kW up to 630kW, pumps play a central role in the stability, reliability and efficiency of Verdo.
Grundfos is one of the world’s leading suppliers of solutions across the full range of pump applications – all the way from water supply to wastewater treatment.

In Grundfos District Heating, we think beyond the pump. We look at the entire system – from power plant to end user – to provide you with the most intelligent, reliable and adaptable solutions possible.

This approach has made us a preferred partner for district heating companies across the globe, and we look forward to helping you as well.

To learn more go to www.grundfos.com/districtenergy