CASE STORY

# REPLACING PUMPS IN A GEOTHERMAL PROJECT REQUIRES EXTENSIVE CUSTOMIZATION BY VAN DER ENDE GROUP

**On Voorne-Putten, six horticultural companies draw their energy from the ground via a joint geothermal project. Geothermal Energy Vierpolders operates 24/7, making reliability and continuity crucial. For the replacement of the existing injection and booster pumps, Managing Director Ronald Suurmond deliberately chose a new partner: Van der Ende Group. It was certainly no ordinary project, constrained by time and space. What began as a request to replace two injection pumps grew into a long-term collaboration.**

**PRODUCTS AND SERVICES PROVIDED:**

- Inline and block pumps
- Installation of Lowara e-MP 125A/06 560 kW and Lowara e-IXPC 125-100-250 75 kW pumps
- Custom modifications to the installation
- Maintenance and service (Lowara pumps and Danfoss variable frequency drives)



Geothermal Energy Vierpolders will celebrate its 10th anniversary in 2026. At a depth of 2,200 meters below ground, hot water at 80 tot 85 Celsius is pumped up from a porous sand layer. Frequent malfunctions made it necessary to replace the injection and booster pumps. It was not a simple one for one replacement. Manager of Inside Sales & Sales Operations Ferry van der Ende: “The installation was located in a compact pump room and could only be shut down for a short time. It’s not like you have weeks to spare. The complexity also lay in the choice of materials and the technical modifications. The geothermal water flowing through the pumps is extremely salty, which places specific demands on materials and sealing.”



## CUSTOMIZED ENGINEERING AND IMPLEMENTATION

In the summer, it gets quite hot in the room, partly due to the sound insulation installed around the pump house to meet noise standards. “To ensure the seal could be adequately cooled, we installed a custom seal system in accordance with API Standard 682, an industry standard,” explains Projects Manager Michaël Struijk.

The limited space, the piping, and the foundation also required custom solutions. Ferry: “We were able to modify and reuse the existing foundation frame, which was partially cast in concrete, on site. The pump and motor were then precisely aligned using laser alignment equipment. Correctly positioning the pumps is essential for optimal performance and a long service life. Otherwise, they wear out much faster than you’d like.”

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>
> **Ronald Suurmond,**
> Geothermal Energy Vierpolders

## ENGINEERING IS CRUCIAL

The solution didn’t start with selecting a pump, but with an analysis of the entire installation. Ferry: “Engineering has been very important here. Before we make a proposal, we conduct thorough research. What is the current situation, why are there malfunctions? What makes geothermal projects challenging is that every source is different. Each source also responds differently over time. That’s why you have to account for the capacity range of the pumps in advance. You have to select them hydraulically so that you can accommodate upward and downward fluctuations. We’re always transparent about what might happen, partly because we have so much experience. We are involved in most geothermal projects in the Netherlands, always with a dedicated crew for both indoor and outdoor work.”





## VAN DER ENDE GROUP'S EXPERIENCE WAS THE DECIDING FACTOR

Ronald Suurmond is Managing Director of Geothermal Energy Vierpolders, responsible for energy management and environmental management. He chose to replace the pumps with a partner that is already well established in most geothermal projects in the Netherlands: Van der Ende Group. "What tipped the scales for me was the experience they had gained on other geothermal projects, such as Hoogweg. In geothermal energy, there is a great deal of collaboration and knowledge sharing. The way Van der Ende Group approached the project together with Hoogweg led to great satisfaction. The price performance ratio was also better."

## FROM PROJECT TO PARTNERSHIP

During the construction of the project in 2016, Van der Ende Group had already supplied inline and block pumps through an installer. But not the large models commonly used in geothermal projects. Following the replacement of the two 560 kW Lowara e-MP injection pumps, the 75 kW Lowara e-IXP booster pumps were also replaced. Van der Ende Group is now also responsible for maintaining the frequency converters from Danfoss, a brand for which the company is an authorized partner, as well as for the overall maintenance and service of the installation.

## STRONG IN REACTIVE AND PREVENTIVE MAINTENANCE

Van der Ende Group excels in both reactive and preventive maintenance, notes client Ronald. "On their advice, we modified the seal cooling system, which ensures that the salt water remains separated from the moving parts. Before that, we were used to replacing the bearings two or three times a year. Since the new pumps have been running, we haven't had to replace any bearings. That's why we've now entrusted all maintenance and service to Van der Ende Group."

Ronald looks forward to continued collaboration. "These days, the lead time for parts is very long. Suppliers have less and less in stock. And what's also important is the staffing capacity at the installation companies. That's also well taken care of at Van der Ende Group."



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**Ferry van der Ende,**
Van der Ende Group

## EFFICIENCY IN PRACTICE

The partnership goes beyond maintenance alone. Van der Ende Group remotely assesses where further optimizations are possible. Michaël: “We closely monitor how the system is operating and whether any improvements can be made. The injection and booster pumps, for example, run in parallel. Up to what level is it better to operate with a single pump to keep energy consumption as low as possible, and up to what level with two?”

## RESULT: RELIABILITY AND FUTURE-PROOFING

Ferry, concluding: “You want the system to be future-proof. The right selection of components affects the payback period. It is crucial that systems keep running. If part of theheat production goes down, Aardwarmte Vierpolders cannot supply heat and there is no revenue model. The consequences of not supplying hot water are therefore very severe.”

The system has since been technically optimized and better tailored to practical use. Critical components last longer, and malfunctions have been significantly reduced.

For the client, this means certainty and peace of mind. For Van der Ende Group, this project demonstrates what the company excels at: technical expertise, customized execution, and long-term commitment.

## WE WILL BE GLAD TO HELP YOU

Want to learn more about what we can do for your project?


Call our specialists at +31 174 51 50 50.
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