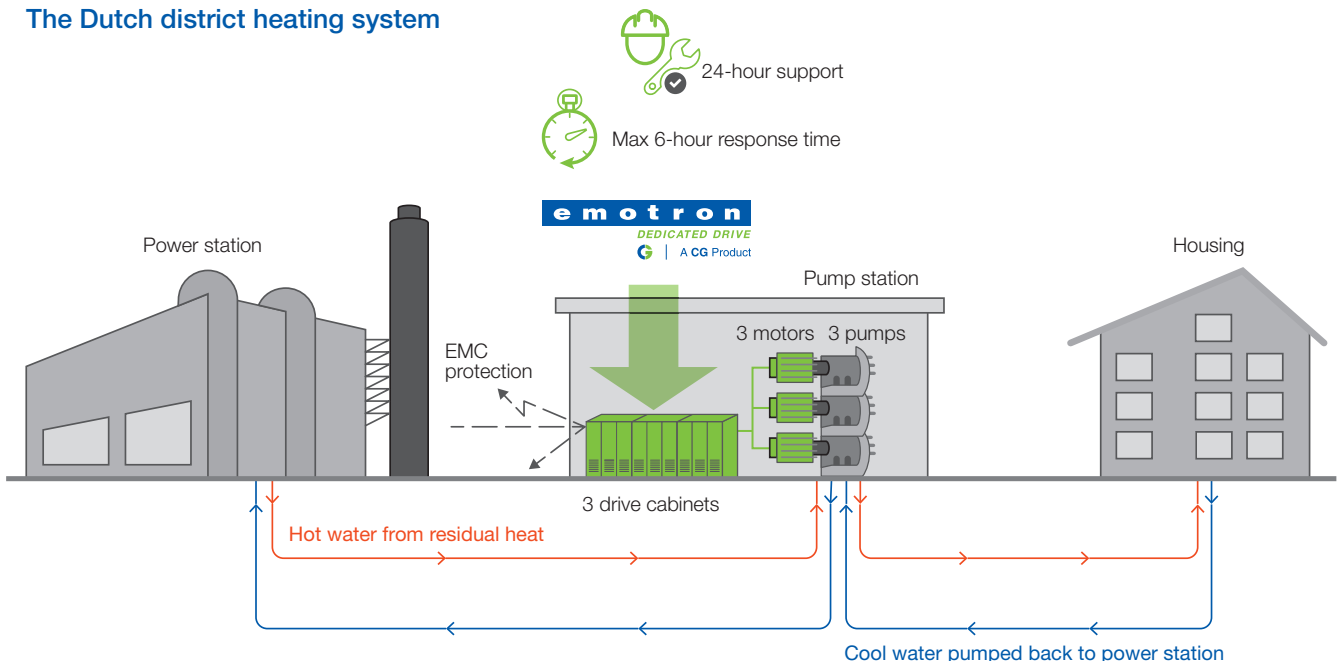


CG Emotron helps build sustainable district heating in the Netherlands

The Dutch government is aiming at a climate neutral economy by 2050. To achieve a more sustainable heat supply and shift away from the use of natural gas, the Netherlands has started to upgrade a part of its 40-year-old district heating network. CG Emotron was commissioned to replace some of the first pump drives. The project was a success and CG Emotron's solution has become the blueprint for this kind of replacement.

The Dutch district heating system



District heating winning ground

A few years ago, Dutch politicians regarded district heating as old-fashioned, but nowadays it is becoming increasingly popular since it enables the distribution of both surplus heat from industrial processes and renewable energy. However, when it comes to heating, reliability is vital.

Today, many Dutch district heating systems are equipped with older DC motors. Running in fixed-speed operation, the motors are subject to a lot of wear-and-tear and finding spare parts is difficult, which makes the pump lines vulnerable to breakdowns.

Turnkey project in Breda

In 2019, CG Emotron was commissioned to replace some pump drives at the Breda Noord pump station that supplies surplus heat from an energy plant. The project included not only the provision of motors and AC drives but also all mechanical and electrical work.

3 FDU69-720 IP54 450 kW





3 renovated pump lines with AC motors.

“We chose to install three 450 kW motors along with three 450 kW AC drives that would be able to work with 520 V”, says Jon de Leeuw, Sales Engineer at CG Emotron. “The new AC motors were exactly the same size as the old DC motors which minimized the adjustments to the motor frame. All the cables were replaced to ensure better electromagnetic shielding. With low electromagnetic disturbances (EMC) any disturbance on surrounding equipment is minimized, which ensures trouble-free operation.”

“This is a perfect example of how to use surplus heat that would otherwise be released as spillage water and thus lost”, continues Jon de Leeuw. “We are happy to be part of this truly green solution. The energy-efficiency



The pump station in Breda maintaining correct pressure and temperature.

of this project is further emphasized by the fact that our FDU drives have an energy loss of only 2%, which means a minimal total energy loss in the system.”

Blueprint for coming replacements

The installation went as planned and once in operation the Breda Noord pump station has become a blueprint for this kind of replacement projects.

Since a longer heating outage is unacceptable, CG Emotron assignment in Breda continues with a 24/7 service offering. CG Emotron guarantees response within a maximum of 6 hours, which is a unique offering on the market.

The project in brief:

- Supply 3 squirrel cage 450 kW motors
- Supply 3 Emotron FDU 450 kW AC drives
- New cabling
- Performing all mechanical work, incl. dismantling old motors and installing new motors
- Performing all electrical work
- 10-year 24/7 service contract
- Maximum 6-hour response time

CG Emotron's solution helps increase energy efficiency in several ways.

- Not only do we make use of heat that was previously lost as wastewater. We ensure the efficient transfer of energy with a complete new solution containing motors, drives and all the necessary connections.
- Emotron AC drives with an energy loss of only 2% complete this solution in the most energy efficient way.

We put all our energy into saving yours.



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DEDICATED DRIVE



A CG Product