

Örebro municipality saves 37% on energy with Emotron FlowDrive



Background

Örebro in south-central Sweden is one of the country's largest cities, and won the Quality Municipality award. There are nine sewage treatment plants and 114 pumping stations across the municipality, with the largest plant dimensioned for 180,000 households. The authorities have been working with CG Drives since 2010, and using the company's drives and soft starters in many of their facilities.

The challenge at Örebro

In one of the Örebro pump pits, the pump was controlled by an old non-Emotron softstarter. This was suffering from excessive wear due to frequent stop/start cycles, and hence performing poorly with regard to energy efficiency. The local authorities therefore wanted to remedy these deficiencies.

CG Drives & Automation's solution

An Emotron FlowDrive (FLD48-026) was installed in 2015 to replace the old softstarter. Automatic tank level control is a key feature of the FlowDrive, with benefits including optimised energy consumption, minimal maintenance requirements and real-time control. Since the installation, stop/start cycling has been reduced, and energy savings have started to increase as the pit's throughput increases.

Benefits

Detailed on-site testing carried out in spring 2016 highlighted the benefits of the Emotron FlowDrive solution. The lower speed delivers valuable energy savings (22%) during operation in the lower part of the sump and even greater savings (34%) in the higher part. The increased working area, i.e. the higher pressure to the pump, enables

a smaller lift height. This saves energy in high (4%) and low-frequency operations, where energy savings are an impressive 19%. Overall, energy savings of up to 37% are now being achieved.

There are also capital savings. Since the Emotron solution offers such accurate flow measurement, expensive external flow meters are not required. Moreover, stop/start cycling has been reduced, which minimizes pump wear, and sump cleaning is now automatic.

Jari Riihinen, from the Örebro Technical Management department, comments: "The best thing about Emotron products, apart from the obvious energy savings, is their ease of use. The menu system is very clear, making it easy to find information and create settings."



Jari Riihinen next to the Emotron FlowDrive installation.

IN BRIEF

Customer

Technical Management, Örebro Municipality, Sweden

Challenge

- Replacing an inefficient soft starter that was wearing a pump excessively

Solution

- Emotron FlowDrive (FLD48-026)

Benefits

- Up to 37% energy savings
- Reduced stop/start cycling
- Automatic sump cleaning
- Savings on capital expenditure

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