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# dp for Flowcontrolled Pumps

## The Situation

An uncontrolled pump will typically generate maximum pressure 24-7 to secure the adequate pressure to circulate water under various conditions. This means that the Energy consumption for running the pump is higher than actually needed. The whole idea behind electronic controlled pumps is to match the current output of the pump to the current conditions.

## The Grundfos Solution

An E-pump "only" generates the required pressure to circulate the water. In situations, where the temperature goes up outside, then the demand for heat in a building goes down. The E-pump will then reduce its speed to the required need, and hereby reduce the energy consumed from running the pump. And this constantly at a optimum, depending on the conditions, where we know that the speed of the pump is the most important factor with regards to energy saving. Besides this, others benefits such as enhanced comfort, less noise from pump and pipework and longer life of the system is achieved.

As the idea behind an E-pump is to adjust the speed of the pump to the current need, the pump needs to get a feedback from a sensor concerning the condition of the system. E.g. if we set the pump at a predetermined pressure, the sensor will feed this true status of the system back into the pump and thereby vary the speed, to keep the constant pressure. The most used type for circulating pumps is differential pressure sensors, due to their reliability and cost-performance. Incorporation of differential pressure sensors in the pump systems reduces the energy consumption considerably and increases pump performance.

The TPE2000 is intended for various applications.

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TOPIC:

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LOCATION:

United Kingdom

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COMPANY:

Grundfos

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Depending on the application and pump type savings of up to 50% or more are attainable.

#### The Outcome

The demand for E-pumps grows rapidly at the moment, due to their energy saving features, and the need for sensors have followed with it. With the Grundfos Direct Sensors™ we will in the future not only be able to control the differential pressure generated in the system. Combi-sensors will be able to measure more parameters in the water simultaneously. E.g. In hot-water circulating system, where a certain temperature is required for user comfort, the pump is constantly informed by different inputs and speed up the pump, if for example the temperature goes down.