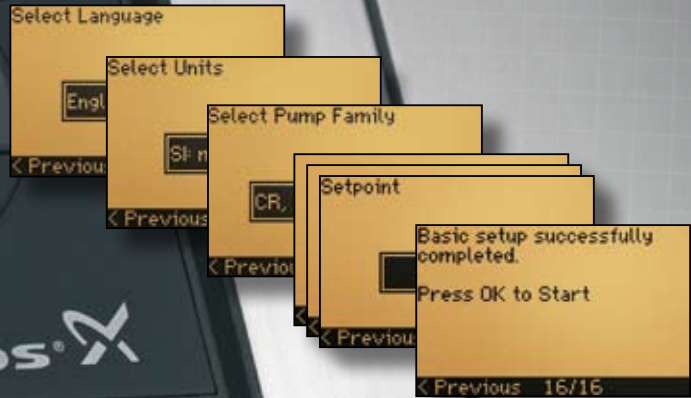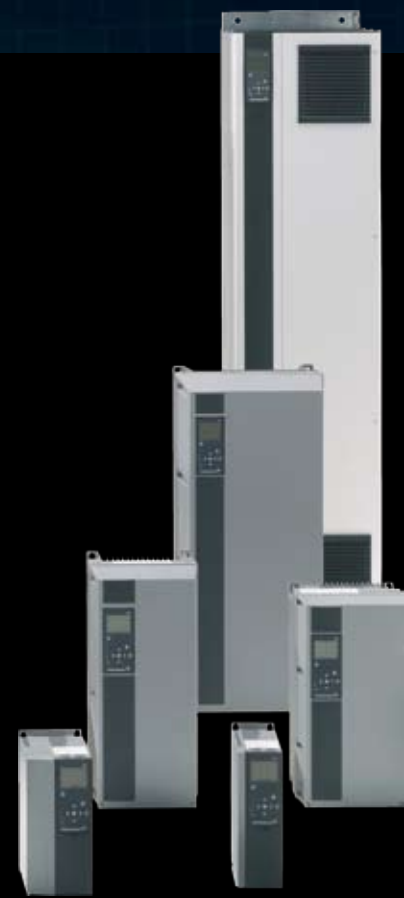# EASY AND EFFECTIVE SPEED CONTROL

COMPREHENSIVE AND VERSATILE RANGES OF FREQUENCY CONVERTERS

## AUTOMATIC PUMP CONTROL FOR ENERGY AND COST SAVINGS

Grundfos CUE represents one of the most comprehensive and versatile ranges of frequency converters currently on the market. Pre-programmed for Grundfos pump families, CUE requires a minimum of configuration to ensure the automatic control of pump speed and the energy savings that follow.

The CUE offers quick and easy set-up and commissioning compared to a standard frequency converter and requires only very few settings at start-up. Simply key in application-specific variables and CUE will automatically set all necessary parameters for effective pump speed control.

SUITABLE FOR DEMANDING APPLICATIONS

The CUE is a multi-purpose, wall-mounted frequency converter suitable for a variety of applications within industry, building services and water utilities, wherever there is a demand for reliable and cost-efficient pump operation.
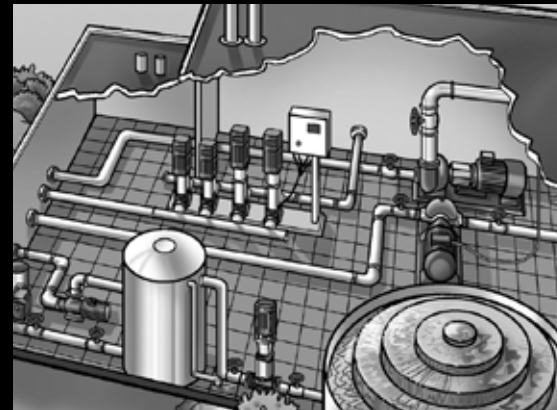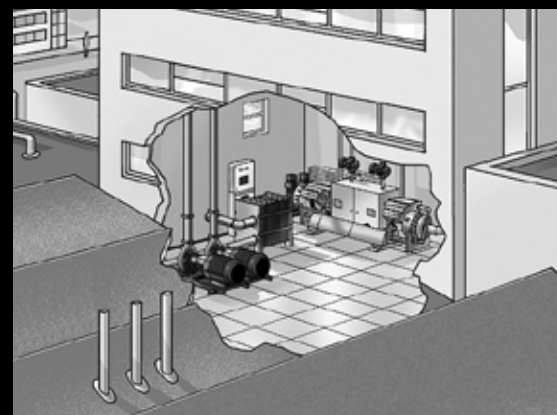
INDUSTRIAL AND MUNICIPAL WATER SUPPLY

Applications include:
*   water supply
*   pressure boosting
*   washing

Typical control modes are constant pressure and constant flow rate. Stop functions are used for stopping the pump when the water flow is low.

BUILDING SERVICES

Used for liquid transfer for building services:
*   heating applications
*   cooling and air-conditioning applications

Typical control modes are proportional pressure and constant temperature.

PROCESS AND SANITARY APPLICATIONS IN INDUSTRY

Used for liquid transfer in process and sanitary applications:
*   breweries and dairies
*   pure-water applications
*   process applications
*   purification applications

Controlled by an external controller, the typical control mode is open loop.

WATER INTAKE, DISTRIBUTION AND TRANSFER

Typical applications are:
*   groundwater supply to waterworks
*   irrigation in horticulture and agriculture
*   dewatering

Typical control modes are constant pressure, constant flow rate and constant level.

INDUSTRIAL AND MUNICIPAL WASTEWATER

Used for the transfer of:
*   effluent
*   sewage
*   stormwater
*   process water

Typical control mode is constant level (emptying function).

MINIMUM CONFIGURATION, MAXIMUM BENEFIT

Performance, reliability, and convenience are unmatched in the CUE series. It offers plug-and-pump installation and operation coupled with extensive control and monitoring possibilities.

*   **Easy to use**
    If you can start up your pump, then you can configure CUE. With its own intuitive start-up guide, you are only required to key in very few settings at start-up. CUE is pre-programmed for over 30 Grundfos pump families, meaning minimum and maximum speeds are already optimised for your pump, once you've selected the pump family.

*   **Save energy**
    Lower energy consumption means cost savings and reduced carbon emissions. Approximately 70% of the total costs incurred over a variable-speed pump's lifetime are attributed to power consumption. The addition of speed control can reduce your energy consumption and costs by up to 50% per year.

*   **Manage your processes**
    The important thing for any pumping solution is to keep liquids moving. Grundfos CUE presents the user with an array of features for increased control and precision. For example, soft start-up and stop reduce water hammer, as does the ability to maintain constant pressure independent of fluctuations in flow.

COMPLETE DATA FLOW FOR COMMUNICATION

Grundfos CUE is equipped with a standard RS485 GENIbus interface that can communicate with Grundfos Dedicated Controls, ensuring complete data flow to a SCADA system. Other bus systems such as LONWorks, Profibus, and Modbus can be connected via a Grundfos gateway.

Versatile and flexible range

With over 100 different configuration possibilities covering a power range from 0.55 kW to 250 kW, CUE represents one of the most comprehensive and versatile ranges of frequency converters for pump applications currently on the market. Whatever the requirements, there is a suitable CUE solution for the job at hand.

Connections

Grundfos CUE comes with four digital inputs, where one is dedicated input for external start/stop. Remaining inputs can be set to minimum/maximum curve, external fault, flow switch, alarm reset, dry running from an external sensor, and not active. In addition there are two analogue inputs – one for setpoint and one for sensor.

One analogue output and two digital relay outputs are also available.